FINAL
Assessment of Contaminated Sediments Site Characterization Report Phase 2 Lower Maumee River Site

Maumee Area of Concern, Toledo, Ohio

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LIST OF ACRONYMS AND ABBREVIATIONS

°C	Degrees Celsius
µg/kg	Micrograms per kilogram
AOC	Area of concern
AVS	Acid volatile sulfide
COC	Constituent of concern
cy	Cubic yard(s)
EA	EA Engineering, Science, and Technology, Inc.
EPA	U.S. Environmental Protection Agency
FS	Feasibility study
FSP	Field Sampling Plan
ft	Foot (feet)
GLLA	Great Lakes Legacy Act
GLNPO	Great Lakes National Program Office
GPS	Global positioning system
in.	Inch(es)
LMR	Lower Maumee River
mg/kg	Milligram(s) per kilogram
ND	Not detected
ng/g	Nanogram(s) per gram
Ohio EPA	Ohio Environmental Protection Agency
PAH	Polycyclic aromatic hydrocarbon
PCB	Polychlorinated biphenyl
PEC	Probable effects concentration
ppb	parts per billion
ppm	parts per million
QAPP	Quality Assurance Project Plan
RL	Reporting limit
SEM	Simultaneously extracted metals
SOP	Standard operating procedure

SRV	Sediment reference values
SVOA	Semivolatile organics analysis
SVOC	Semivolatile organic compound
TEC	Threshold effects concentration
TOC	Total organic carbon
WWTP	Wastewater treatment plant

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EXECUTIVE SUMMARY

This report presents the contaminated sediments site characterization for the Phase 2 Lower Maumee River Site (the Site), located within the Maumee Area of Concern (AOC), Toledo, Ohio (Figure ES-1). This work was conducted by EA Engineering, Science, and Technology, Inc. (EA) and the U.S. Environmental Protection Agency's (EPA) Great Lakes National Program Office (GLNPO) in accordance with the Quality Assurance Project Plan (QAPP) and Field Sampling Plan (FSP) for Phase 2 of the Lower Maumee River Site Characterization, Maumee River AOC, Toledo, Ohio (EA 2013a, b), finalized May 2013. The purpose of the field investigation was to determine the nature and extent of chemical contamination in the areas of soft sediment deposition. Primary objectives were to determine the approximate depth of contamination, provide information about depositional areas, and identify priority areas for remediation or for further investigation in the Phase 2 area of the Lower Maumee River. This site characterization report summarizes the findings from the field investigation and and includes data tables and figures, data comparisons to sediment benchmarks, and spatial analysis and data interpolation to identify primary areas for remediation. The results of this Phase 2 site characterization, as well as the results from the Phase 1 Maumee River Sediment Assessment (Weston 2012b) and from the Duck and Otter Creeks Sediment Assessment (Weston 2012a) site characterizations, were evaluated collectively to assess the overall sediment quality for the Lower Maumee River area.

E.1 SITE BACKGROUND

The Maumee River has a drainage area of 8,316 square miles, the largest of the Great Lakes rivers, and flows 130 miles from its headwaters in Fort Wayne, Indiana, to its mouth at Lake Erie in Toledo, Ohio. The Phase 2 Lower Maumee River Site Characterization took place in the lower-most reaches of the Maumee River, from the U.S. Route 280 bridge downstream to the southern coast of Grassy Island; approximately 4.6 miles (Figure ES-2). It is believed that contaminated sediments in the study area contribute to beneficial use impairments in the AOC.

The Lower Maumee River is an industrialized port with historical contamination due to industrial and commercial land use. Contamination sources include various coal industries, chemical plants, petroleum production, and wastewater outfalls. Sampling and testing by Ohio EPA and City of Toledo (Ohio EPA 1990), along with sediment investigations performed by GLNPO (AScI 1997; Weston 2012a; Weston 2012b), indicated elevated concentrations of polychlorinated biphenyls (PCBs), polycyclic aromatic hydrocarbons (PAHs), and heavy metals in surface sediments of the project area. To build on these existing historical studies and to clearly define the nature and extent of sediment contamination within the project area, additional sampling and chemical and physical analyses were undertaken during the Phase 2 investigation.

E.2 METHODOLOGY

This section provides the methodology for the incorporation of sediment chemistry data from previous sediment assessments conducted in the Lower Maumee River (LMR), as well as the methodology for the Phase 2 field effort.

Incorporation of Previous Sediment Data from the Maumee AOC

The results of two previous sediment investigations conducted by GLNPO in the Maumee AOC were used in conjunction with the results from the Phase 2 field effort to develop this site characterization report. The previous studies used were: (1) The AScI Sediment Quality Assessment for the Maumee River AOC (AScI 1997), and (2) The Duck and Otter Creeks Sediment Assessment (Weston 2012a). GLNPO conducted a sediment assessment in the Phase 1 area of the Lower Maumee River; however, because there were no distinct horizontal or vertical trends in the contamination found in the Phase 1 area, the sediment chemistry data collected during the Phase 1 effort were not incorporated/combined with the Phase 2 data, or with data from the other previous studies. The general findings from the Phase 1 study were used, in conjunction with the modeling of constituent of concern (COC) concentrations from the Phase 2 study and other studies, to help draw conclusions about the overall sediment quality within the LMR.

The 1997 sediment assessment identified three prominent hot spot areas with elevated concentrations of these constituents: (1) the area immediately adjacent to the eastern side of the sway bridge that is located north of the U.S. Route 280 bridge; (2) the wastewater treatment plant (WWTP) facility located on the western bank of the river approximately 1.5 miles downstream of the sway bridge; and (3) the outermost area of the Duck Creek confluence near the mouth of the Maumee River (Figure ES-3).

Sediment chemistry data from both surface and subsurface samples from the AScI and Duck and Otter Creeks reports were combined electronically with the Phase 2 analytical results. Figures were produced that present the COC distribution in the Maumee AOC using both the data from the previous studies and the Phase 2 investigation.

Phase 2 Site Investigation

The purpose of the Phase 2 site investigation was to collect chemical and physical information for the Maumee River downstream of the U.S. Route 280 bridge to determine the extent of chemical contamination in both surface and subsurface sediments, to provide information about depositional areas, and to identify priority areas for remediation or for further investigation. A total of 90 locations were successfully sampled using a vibracoring system and direct push corer. One core was collected from each location for physical and chemical analysis. The Phase 2 area was divided into three separate areas for sampling. Area A extends from the Grassy Island in Maumee Harbor upstream to the river area adjacent to the Toledo Yacht Club (Figure ES-4A), and is comprised of the cove west of the Grassy Island and the main river channel excluding the federal navigation channel. Area B extends from the Toledo Yacht Club upstream to the river area adjacent to the southernmost sway bridge (Figure ES-4B). Area C extends from the sway bridge upstream to the U.S. Route 280 bridge (Figure ES-4C).

A total of 359 sediment samples were collected from 90 sample locations. At 76 of the 90 sample locations, sediment samples were collected using a vibracoring system onboard the GLNPO sampling vessel *R/V Mudpuppy II*. Fourteen locations in the cove west of Grassy Island

were sampled by Ohio EPA using direct push coring from a small jon boat that could navigate the shallow depths. A global positioning system (GPS) with sub-meter accuracy was used to navigate to each location. Samples were collected from the following intervals: 0 to 12 inches (in.), 12 to 24 in., and every 24 in. thereafter [24 to 48 in., 48 to 72 in., etc.] to the end of each core. Sediment from each depth interval was homogenized prior to separation into individual containers for submittal to the laboratory for analysis.

Each sediment sample underwent the following analyses: PCBs – aroclors, total organic carbon (TOC), semivolatile organic compounds (SVOCs), oil and grease, total metals (arsenic, cadmium, chromium, copper, lead, nickel, zinc), and total mercury. In addition, based on a preliminary review of the PCB aroclor data, 10 percent of samples were selected and submitted for analysis of PCB congeners.

Sediment samples from the 0 to 1 foot (ft) interval were analyzed for: 34 PAHs (approximately 10 percent of total samples), acid volatile sulfide (AVS)/simultaneously extracted metals (SEM) (approximately 10 percent of total samples), grain size, and bulk density. These analyses were performed on surface sediment because the data they yield are useful for assessing toxicity to organisms that typically contact only the surface sediments.

Forty-four (44) locations were selected for the analysis of 34 PAHs and AVS/SEM; comprised of every other location sampled for the first 70 locations (35 samples) plus 9 judgmental sampling locations at the surface only. Additionally, following receipt and review of the preliminary results of the PCB aroclor results, EA and EPA collaborated to select 36 samples (10% of total samples) (based on highest total PCB concentrations) to be extracted and analyzed for PCB congeners.

Sample handling, chain-of-custody procedure, and quality assurance/quality control procedures were conducted in accordance with the procedures outlined in the FSP (EA 2013b). Sample labeling was performed in accordance with standard operating procedure (SOP) 001 (Appendix B of the QAPP [EA 2013a]). Individual sample containers were labeled with a unique designation that corresponded to the specific geographic location, year of collection, and subsample depth interval. Decontamination procedures were carried out in accordance with Appendix A of the QAPP (EA 2013a). Following collection of the sediment samples, investigation-derived waste was managed in accordance with the procedures described in Appendix A of the QAPP (EA 2013a).

E.3 SEDIMENT CHEMISTRY RESULTS

Lithology

The sediment cores collected within the Phase 2 Lower Maumee River site demonstrate a mixture of core profiles containing sediment types consistent with a fluvial system. Most cores were characterized by thick layers of silty clay overlain by a thin layer of silt. Native and non-native material—such as shells, creosote/diesel odor, and creosote-soaked woody debris—were frequently observed within various sediment types and depths.

Bulk Chemistry

The sediment chemistry results of the Phase 2 sediment samples were compared to TEC and PEC levels (Macdonald et al. 2000) and Sediment Reference Values (SRVs) (for metals only) (Ohio EPA 2008). In general, the highest concentrations of constituents were co-located in the areas of the WWTP, the sway bridge, and the outermost area of the Duck Creek confluence (Figure ES-3). The highest oil and grease concentrations were detected at locations close to the WWTP and the sway bridge areas. Total PCB concentrations were highest at location LMR13-46 with elevated concentrations also detected at locations LMR13-43, -45, and -93 near the WWTP, and at locations LMR13-63 and LMR13-91 near the outermost area of the Duck Creek confluence. For most samples from these locations, total PCB concentrations increased with depth. In the areas where total PCB concentrations exceeded the PEC, several individual aroclors appear to be predominant. Of the nine aroclors analyzed, aroclor 1242, aroclor 1254, and aroclor 1248 had the highest concentrations near both the WWTP and the Duck Creek confluence area. Concentrations of 17PAHs were highest at locations LMR13-87, -88, -94, and -95; with concentrations exceeding the PEC at most depth intervals. Of the 17 PAHs analyzed, anthracene, chrysene, fluoranthene, naphthalene, phenanthrene, and pyrene had the highest concentrations near the sway bridge area, and appear to be predominant. 34PAHs were measured in surface samples, and the highest concentration was detected at sample location LMR13-95. Other locations with elevated 34PAH concentrations were LMR13-55, -57, -88, and -94. The highest concentrations of each individual metal were found at sample locations LMR13-54 and LMR13-55 near the sway bridge area and/or at sample locations LMR13-43, -45, and -46 near the WWTP. The predominant metals within the Phase 2 area were cadmium, chromium, lead, and zinc.

E.4 SPATIAL ANALYSIS

To further define the hot spot areas within the Maumee AOC, analytes with concentrations exceeding their respective PEC in Phase 2 sediment samples were spatially interpolated using kriging to develop an estimate of the concentration and distribution of constituents across the study area. Determination of hot spots will allow priority areas to be targeted for remediation.

The kriging analysis identified several hot spots within the Phase 2 study area, where one or more analytes were present in concentrations exceeding the PEC at two or more adjacent locations. These hot spots were defined as either major impact hot spots or moderate impact hot spots. Major impact hot spots were defined as areas having concentrations of at least one constituent exceeding three times the PEC at a minimum of two adjacent sample locations. These areas have the largest estimated volumes of sediment with COCs exceeding the PEC. Moderate impact hot spot areas have less elevated constituent concentrations and smaller estimated sediment volumes exceeding the PEC.

Based on the interpolation results, three major impact hot spot areas are identified: (1) the Duck Creek confluence area; (2) the WWTP; and (3) the sway bridge area. The primary COCs, with concentrations exceeding three times the PEC in these areas, are total PCBs, total 17PAHs, and several metals (cadmium, chromium, nickel, lead, and zinc). There are 21 smaller areas with

measured concentrations of one or more constituents above the PECs; however, 15 of these smaller areas are not considered moderate impact hot spots as they have only a single sample with a constituent concentration elevated slightly above the PEC, and thus much smaller estimated volumes of contaminated sediments than the three major hot spot areas. The other six smaller areas are considered moderate impact hot spots; these areas either had concentrations of at least one constituent that exceeded the PEC by more than two times or were located in close proximity to one of the three major hot spot areas (Figures ES-5A, ES-5B, and ES-5C).

The major impact hot spots were discussed in further detail and were evaluated in conjunction with historical sediment data and with data on depth of impacted material below the sediment surface, as determined by the Phase 2 kriging analysis (Figures ES-6, ES-7, and ES-8).

When evaluated together, the Phase 2 sediment data, the historical sediment data, and the Phase 2 data modeled at depth identify the following three major impact hot spots:

- **Duck Creek confluence area**—Maximum total PCB concentrations in the Duck Creek hot spot exceeded three times the PEC for total PCBs; and nickel concentrations exceeded the PEC at LMR13-91. Evaluation of historical and recent data suggests that total PCB concentrations within the lower portion of Duck Creek have been elevated more than three times above the PEC since 1995, and that concentrations exceeding three times the PEC continue into the immediate confluence area at the discharge point, and into the outermost confluence area toward the river channel (Figure ES-6).

- **WWTP area**—The main COCs for the WWTP hot spot area were total PCBs and metals. Total PCB concentrations exceeded three times the PEC for all locations except for LMR13-81. Total 17PAHs and five metals each had at least one concentration exceeding the respective PEC, or two times the PEC. Evaluation of historical and recent data suggests that total PCB and metal concentrations within the WWTP hot spot have been elevated above the PEC since 1995, and that concentrations exceeding three times the PEC are present throughout the sediment profile. This suggests intervals of burial and deposition of contaminated sediments over the past 20 years (Figure ES-7).

- **Sway bridge area**—Total 17PAH concentrations exceeded three times the PEC in all samples from all locations with the exception of LMR13-86. Each Phase 2 sample location had at least one sample with a zinc concentration exceeding the respective PEC in the sway bridge hot spot; concentrations of five other metals also exceeded their PECs at this hot spot (arsenic, lead, mercury, nickel, and zinc). Evaluation of historical and recent data suggests that constituent concentrations within the sway bridge hot spot are fairly evenly distributed throughout the sediment profile, and that total 17PAH is the primary constituent at this hot spot. It is unclear whether or not historical PAH contamination existed at the sway bridge hot spot; the PAH data collected in the 1995 study were considered unreliable and were not used to assess sediment quality for that investigation (Figure ES-8).

E.5 CONCLUSIONS

Based on the data collected during the Phase 2 sediment assessment in the LMR, the major areas of concern for sediment contamination are the Duck Creek confluence area, the WWTP, and the sway bridge area. The following conclusions can be drawn for these hot spot areas:

- These three major hot spots have an estimated total of approximately 666,000 cubic yards (cy) of sediment with constituent concentrations greater than the PEC. Previous sediment investigations also found high concentrations of constituents located in these areas (AScI 1997; Weston 2012b).

- When evaluating both Phase 2 sediment data and historical sediment data together, it is evident that elevated concentrations of constituents in sediments at these hot spots have been present for several decades, and that burial of elevated concentrations has occurred to some degree at each of the three areas.

    - Both recent data from the Weston study and historical data from the AScI study show that the Duck Creek confluence hot spot has elevated total PCB concentrations that begin in the lower part of the creek itself and continue into the immediate confluence area.

    - Data from both the WWTP and sway bridge hotspots show burial of concentrations of constituents exceeding three times the PEC, as well as some surface deposits with elevated concentrations.

    - Sediment from both the WWTP and sway bridge hot spots had high concentrations of several metals with concentrations exceeding two and three times the PEC; however, the primary COCs for these areas are total PCBs and total 17PAHs due to both frequency and level of exceedance.

- There are several moderate impact hot spot areas that demonstrated concentrations of one or more constituents above PECs. The majority of these locations contained only a single sample with a constituent concentration elevated slightly above the PEC, or had less than half the volume of contaminated sediment as compared to the three major hot spot areas (Figures 5-1A through 5-1C). As a result, the majority of these areas are not considered indicative of hot spots warranting priority remediation.

1. INTRODUCTION

This report presents the contaminated sediments site characterization for the Phase 2 Lower Maumee River Site (the Site), located within the Maumee Area of Concern (AOC), Toledo, Ohio (Figure 1-1). This work was conducted by EA Engineering, Science, and Technology, Inc. (EA) and the U.S. Environmental Protection Agency's (EPA) Great Lakes National Program Office (GLNPO) in accordance with the Quality Assurance Project Plan (QAPP) and Field Sampling Plan (FSP) for Phase 2 of the Lower Maumee River Site Characterization, Maumee River AOC, Toledo, Ohio (EA 2013a, b), finalized May 2013.

1.1 WORK SCOPE AND OBJECTIVES

1.1.1 Project Objectives

The purpose of the field investigation was to determine the nature and extent of chemical contamination in the areas of soft sediment deposition. Primary objectives were to determine the approximate depth of contamination, provide information about depositional areas, and identify priority areas for remediation or for further investigation in the Phase 2 area of the Lower Maumee River (LMR). Major impact hot spot areas were defined by using kriging analysis on the Phase 2 data; this analysis identified areas of the LMR with high constituent concentrations and high volumes of contaminated sediment, and defined moderate impact hot spot areas with less elevated constituent concentrations and smaller volumes. These major and moderate impact areas are referred to as hot spots throughout this document and are further discussed in Sections 5 and 6.

1.1.2 Objectives of the Site Characterization Report

This site characterization report summarizes the findings from the field investigation and includes data tables and figures, data comparisons to sediment benchmarks, and spatial analysis and data interpolation to identify primary areas for remediation. The results of this Phase 2 site characterization, as well as the results from the Phase 1 Maumee River Sediment Assessment (Weston 2012b) and from the Duck and Otter Creeks Sediment Assessment (Weston 2012a) site characterizations, were evaluated collectively to assess the overall sediment quality for the Lower Maumee River area. The overall objective of this report is to identify priority areas within the Maumee AOC at which remediation efforts should be initiated.

1.2 SITE LOCATION AND HISTORY

The Maumee River has a drainage area of 8,316 square miles, the largest of the Great Lakes rivers, and flows 130 miles from its headwaters in Fort Wayne, Indiana, to its mouth at Lake Erie in Toledo, Ohio. The Maumee AOC does not include the river in its entirety; rather, it includes the lower reach and tributaries, as well as some of the neighboring watersheds (Figure 1-1). The Phase 2 Lower Maumee River Site Characterization took place in the lower-most reaches of the Maumee River, from the U.S. Route 280 bridge downstream to the southern coast of Grassy Island, approximately 4.6 miles (Figure 1-2).

It is believed that contaminated sediments in the study area contribute to beneficial use impairments in the AOC. Impairment of beneficial use means a change in the chemical, physical, or biological integrity of the Great Lakes ecosystem. The Maumee River Remedial Action Plan (Ohio Environmental Protection Agency [Ohio EPA] 1990) identifies the following beneficial use impairments for the Maumee AOC:

- Restrictions on fish and wildlife consumption
- Eutrophication or undesirable algae
- Restrictions on drinking water consumption, or taste and odor
- Degradation of fish and wildlife populations
- Beach closings
- Fish tumors or other deformities
- Degradation of aesthetics
- Degradation of benthos
- Restriction on dredging activities
- Loss of fish and wildlife habitat.

The LMR is an industrialized port with historical contamination due to industrial and commercial land use. Contamination sources include various coal industries, chemical plants, petroleum production, and wastewater outfalls. Sampling and testing by Ohio EPA and City of Toledo indicated elevated concentrations of polychlorinated biphenyls (PCBs), polycyclic aromatic hydrocarbons (PAHs), and heavy metals in surface sediments of the project area (Ohio EPA 1990). These sediments adversely impact the survival and viability of benthic organisms and fish communities, while placing restrictions on dredging. The sediment contamination may also impact human health due to consumption of fish containing elevated levels of PCBs, and heavy metals. The Maumee River Public Advisory Council, in coordination with the State of Ohio, indicate in the Maumee River Remedial Action Plan that "heavy metals and organic chemical sediment contamination are what led to the lower Maumee River being classified as an Area of Concern"(Ohio EPA 1990).

In 1995-1996, AScI performed a sediment investigation in the Maumee River, Ottawa River, Swan Creek, Otter Creek, Duck Creek, and Maumee Bay. Five constituents (chromium, lead, nickel, zinc, and total PCBs) were present in elevated concentrations from three distinct areas within the LMR (AScI 1997). In 2010, GLNPO performed a sediment investigation of the Duck Creek and Otter Creek confluence areas (Figure 1-2) (Weston 2012a). The Duck Creek confluence area, which is adjacent to the Phase 2 Maumee project area, has high concentrations of PCBs below the sediment surface. The Otter Creek confluence area, which is also adjacent to the Phase 2 Maumee project area, has high concentrations of PAHs below the sediment surface. In 2011 and 2012, GLNPO performed a sediment assessment of the Phase 1 area of the Lower Maumee River (Figure 1-2). Results of that sampling event are presented in a Sediment Assessment Report, Lower Maumee River, Maumee Area of Concern, Toledo, Lucas County, Ohio (Weston 2012b). Sampling results indicated that PAHs and metals are of concern in a few

isolated parts of the Phase 1 project area. These historical studies are further described in Section 2.

To build on these existing historical studies and to clearly define the nature and extent of elevated constituent concentrations in sediment within the project area, additional sampling and chemical and physical analyses were undertaken during the Phase 2 investigation.

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2. PREVIOUS INVESTIGATIONS

This section provides an overview of the previous sediment investigations conducted by GLNPO in the Maumee AOC that were used in conjunction with the results from the Phase 2 field effort to develop this site characterization report. Three previous studies were used: (1) The AScI Sediment Quality Assessment for the Maumee River AOC (AScI 1997); (2) The Duck and Otter Creeks Sediment Assessment (Weston 2012a); and (3) the Phase 1 Lower Maumee River Sediment Assessment (Weston 2012b).

2.1 ASCI SEDIMENT QUALITY ASSESSMENT FOR THE MAUMEE AOC

The AScI Corporation sediment assessment (conducted for GLNPO) for the Maumee AOC was performed in two field efforts, one during Spring 1995 and the other during Fall 1996. The objectives of the assessment were to investigate the distribution and magnitude of contamination in sediments from the Maumee AOC. Samples were collected from the LMR, Ottawa River, Swan Creek, Otter Creek, Duck Creek, and Maumee Bay (AScI 1997).

One hundred and forty-seven sediment cores were collected via Vibracore from the research vessel *R/V Mudpuppy*; these cores were divided into 338 samples that were submitted for analysis of metals, PCBs, and PAHs. The length of the cores varied among sampling area; cores collected from within the LMR and Duck Creek were a maximum of 66 inches (in.) in length. Table 2-1 presents the sampling scheme and analyses performed on samples collected during this effort. Screening analysis methods were used to measure the selected metals, total PCBs, and total PAHs; X-ray fluorescence was used to measure metals; and quantitative enzyme immunoassays were used to measure total PCBs and total PAHs (AScI 1997). A subset of the 338 samples was also analyzed for the same parameters using conventional laboratory techniques in order to investigate the reliability of the screening analysis methods (Table 2-1). Constituent concentrations were compared to two sets of sediment quality guideline values (AScI 1997). Samples were then ranked according to their overall contamination using the ranking procedure defined by GLNPO (EPA 1994 as cited in AScI 1997). Results for PAHs from this study were determined to be unreliable. The results from the enzyme immunoassay screening method used to detect PAHs did not correspond with the results from the confirmatory method. As a result, the PAH concentrations were determined to be inaccurate and were not used to assess sediment quality in the AScI report.

Five constituents (chromium, lead, nickel, zinc, and total PCBs) were present in elevated concentrations in a significant number of the samples collected from the Maumee AOC. Concentrations of these constituents increased with increasing depth in 20 percent of the cores collected. This sediment assessment identified three prominent hot spot areas of elevated concentrations of these constituents: (1) the area immediately adjacent to the eastern side of the sway bridge that is located north of the U.S. Route 280 bridge (sway bridge); (2) the wastewater treatment plant (WWTP) facility located on the western bank of the river approximately 1.5 miles downstream of the sway bridge; and (3) the outermost area of the Duck Creek confluence near the mouth of the Maumee River (Figure 2-1).

2.2 DUCK AND OTTER CREEKS SEDIMENT ASSESSMENT

The Duck and Otter Creeks sediment assessment was performed within the confluences of Duck and Otter Creeks in the LMR in Toledo, Ohio (Figure 2-1). Both creeks are urban creeks that flow northward and are part of the Maumee AOC; Duck Creek discharges to the Maumee River and Otter Creek discharges to Maumee Bay (Weston 2012a). The biological communities of both creeks have been identified as impaired; this impairment is thought to be a result of both historical habitat modification and chemical contamination. To understand the extent to which these physical and chemical stressors contribute to the biological impairment of Duck and Otter Creeks, GLNPO and the Duck and Otter Creeks Industrial Partners entered into an agreement under the Great Lakes Legacy Act (GLLA) to conduct a sediment investigation in these areas (Weston 2012a). The objectives were to determine the extent of contamination in surface and subsurface sediment, evaluate sediment toxicity and the causes of toxicity (where possible), and collect data to support a feasibility study (FS) if one were found to be necessary for the site.

Sediment sampling in Duck and Otter Creeks was conducted in two field efforts: the first in November 2010 was conducted using the research vessel *R/V Mudpuppy II*; the second in May 2011 was conducted using a pontoon vessel with a vibracore sampler to access shallow water areas (Weston 2012a). Sediment cores were collected at 11 locations in Duck Creek and 20 locations in Otter Creek. Ponar grab samples of the top 6 in. of sediment were collected at both Duck and Otter Creeks sample locations for toxicity and/or chemical testing. A total of 103 sediment samples were collected from the cores for chemical analyses. Table 2-2 presents the sampling scheme and analyses performed on samples from Duck and Otter Creeks.

Total PCBs were identified as the primary constituent of concern (COC) for the Duck Creek confluence area based on the widespread horizontal extent of PCB concentrations that exceeded probable effects concentrations (PECs). Total PCB exceedances were found between 24 in. below sediment surface and the deepest interval (varying from 6 feet [ft] to 14 ft) in the sediment cores. In Otter Creek, PAHs were the primary concern based on widespread exceedance of PAH PECs in the upper 24 in. of sediment. Further detail on the results of the Duck and Otter Creeks sediment assessment are presented in Section 4.3.1.

2.3 PHASE 1 LOWER MAUMEE RIVER SEDIMENT ASSESSMENT

The Phase 1 LMR Sediment assessment was conducted as part of the Maumee AOC GLLA project. The Phase 1 project area of the Maumee River extends 5 miles and is bound on the downstream end by the U.S. Route 280 bridge, and on the upstream end by Clark Island. The land surrounding the project area is largely industrial and commercial. The Phase 1 sewershed is also influenced by residential combined sewer overflows. The purpose of the Phase 1 sediment assessment effort was to collect and analyze sediment samples from the Phase 1 project area (Figure 1-2) for the chemical and physical properties necessary to support a full site characterization of the LMR and to support any potential remediation that may occur in the area (Weston 2012b).

Sediment cores were collected from 84 locations in the Phase 1 project area. Sediment samples were collected from intervals of: 0 to 6, 6 to 24, 24 to 48, 48 to 72, 72 to 96, 96 to 120, 120 to 144, and 144 to 168 in. below the sediment surface. A total of 337 sediment samples (including quality assurance samples) were analyzed for Target Analyte List metals and semivolatile organic compounds (SVOCs). Ten percent of the samples were also analyzed for PCB aroclors and pesticides (Table 2-3).

Neither total PCBs nor pesticides were identified as COCs for the Phase 1 project area. PCB aroclors were not detected in any of the 10 percent subset of sediment samples, and no samples had pesticide concentrations that exceeded PECs. Elevated concentrations of metals were found in isolated areas throughout the project area, extending horizontally along both the east and west shoreline of the river. Elevated concentrations of metals were also found at depth in several samples. High concentrations of SVOCs were found at one upstream sample location and one downstream sample location of the Phase 1 project area. Highest concentrations were found at the sampling location nearest to the confluence of Swan Creek and Maumee River; however, due to poor core recovery at this location, the vertical extent of SVOCs that exceed the PEC was not defined (Weston 2012b).

2.4 METHODOLOGY FOR INCORPORATION OF DATA FROM PREVIOUS INVESTIGATIONS INTO THE SITE CHARACTERIZATION REPORT

The results from the Duck and Otter Creeks sediment assessment (Weston 2012a) site characterization and the AScI sediment assessment were evaluated with the results from the Phase 2 sediment investigation to assess the sediment quality for the area (Figure 1-1). These studies provide recent data available on sediment chemistry and toxicity in the LMR area and helped to fill data gaps within the LMR and its nearby confluences. The only COCs identified in the Phase 1 study area were metals along the shoreline and SVOCs (which were found in elevated concentrations at two sample locations). Aside from source tracing of elevated constituents from Swan Creek into the Maumee River, there were no distinct horizontal or vertical trends in the elevated concentrations found in the Phase 1 area. Based on this information, the sediment chemistry data collected during the Phase 1 effort were not incorporated/combined with the Phase 2 data or with data from the other previous studies; rather, the general findings from the Phase 1 study were used, in conjunction with the modeling of COC concentrations from the Phase 2 study and other studies, to help draw conclusions about the overall sediment quality within the LMR.

Sediment chemistry data from both surface and subsurface samples from the AScI and Duck and Otter Creeks reports were combined electronically with the Phase 2 analytical results. Corresponding figures were produced that present the COC distribution in the Maumee AOC using both the data from these previous studies and the Phase 2 investigation (Section 5). While all relevant chemical data were incorporated with the Phase 2 analytical results, data modeling and interpretation focused on the three prominent hot spot areas (sway bridge, WWTP area, and Duck Creek confluence area) of elevated constituent concentrations as identified by previous sediment investigations. Pore water data and sediment toxicity data were evaluated in the Duck and Otter Creeks sediment assessment; while these data were not incorporated/combined into an

electronic database with the sediment chemistry data from the AScI study and Phase 2, they were summarized and interpreted to describe the overall distribution of elevated COCs in these areas of the Maumee AOC (Table 2-4).

3. PHASE 2 SITE INVESTIGATION

The purpose of the Phase 2 site investigation was to collect chemical and physical information for the Maumee River downstream of the U.S. Route 280 bridge to determine the extent of chemical contamination in both surface and subsurface sediments, to provide information about depositional areas, and to identify priority areas for remediation or for further investigation.

The Phase 2 Lower Maumee River site characterization was conducted in coordination with EPA and Ohio EPA. The investigations, including all sampling activities and analytical testing methods, were carried out in accordance with procedures outlined in the FSP and QAPP (EA 2013a, b).

3.1 SAMPLE DESIGN AND RATIONALE

The site-specific QAPP details the project data quality objectives and outlines how the sample collection will fulfill the project objectives (EA 2013a). Sampling was conducted to delineate the nature and extent of sediment contamination in the Phase 2 Area of the Maumee AOC.

3.1.1 Sample Locations

Ninety sample locations within the Phase 2 region of the AOC (Figure 3-1) were randomly chosen by a systematic sampling grid with a random start location using Visual Sample Plan 6.0. Assuming no false negative errors, the sampling scheme had the power to detect with a 95 percent probability of an elliptical hot spot with semi-major and semi-minor axes of approximately 526 and 316 feet (ft), respectively.

Based on information collected during the site reconnaissance effort, the location of some of the sample locations were adjusted to ensure that samples were collected outside of dredged areas and in locations not within or adjacent to utility crossings. Additionally, certain stations had to be abandoned and others created based on the site reconnaissance. Rationale for these location changes is presented in Table 3-1 of the FSP (EA 2013b). Variance from these coordinates was documented and difference between target and actual core location was quantified in feet and meters (Table 3-1).

A total of 90 locations were successfully sampled using a vibracoring system and direct push corer (Figures 3-1, 3-1A, 3-1B, 3-1C). One core was collected from each location for physical and chemical analysis. The Phase 2 area was divided into three separate areas for sampling. Area A extends from the Grassy Island in Maumee Harbor upstream to the river area adjacent to the Toledo Yacht Club (Figure 3-1A), and is comprised of the cove west of the Grassy Island and the main river channel excluding the federal navigation channel. Area B extends from the Toledo Yacht Club upstream to the river area adjacent to the southernmost sway bridge (Figure 3-1B). Area C extends from the sway bridge upstream to the U.S. Route 280 bridge (Figure 3-1C).

3.1.2 Number of Samples

A total of 359 sediment samples were collected from 90 sample locations (Table 3-2). Samples were collected from the following intervals: 0 to 12 in., 12 to 24 in., and every 24 in. thereafter [24 to 48 in., 48 to 72 in., etc.] to the end of each core. Sediment from each depth interval was homogenized prior to separation into individual containers for submittal to the laboratory for analysis. Sediment samples were collected at depth intervals by vibracore or by direct push (top 12 in. of sediment only) (Section 3.3). Because the initial proposed sampling intervals were adjusted in the field (after consultation with EPA), a ponar grab was not used to collect surface sediment. This deviation from the QAPP/FSP is further described in Section 3.3.

3.2 NAVIGATION AND SURVEY

The sampling vessels for this field effort included EPA's *R/V Mudpuppy II* and the Ohio EPA's smaller jon boat. Each vessel navigated to a proposed sampling location using a global positioning system (GPS) with sub-meter accuracy. When a handheld GPS was used (for coring at locations in the shallow cove of Area A), the unit was checked daily for accuracy prior to use, in accordance with the EPA's *Interim Guidance for Developing Global Positioning System Data Collection Standard Operating Procedures and Quality Assurance Project Plans* (EPA 2008) and the procedures outlined with the QAPP (EA 2013a). Once the vessel navigated to the proposed sample location, the sampling team visually confirmed the proximal location or surroundings to the location.

The onboard GPS of the *R/V Mudpuppy II* utilized the World Geodetic System 1984 to navigate and record each individual sampling location. For the 14 sample locations accessed from Ohio EPA's sediment sampling vessel, a handheld GPS that utilized the Ohio State Plan North, North American Datum 1983, was used. EA calibrated the GPS to three benchmarks in the morning prior to use by Ohio EPA, and then verified those benchmarks at the end of the day. The sample locations and coordinates are presented in Table 3-1.

3.3 SEDIMENT SAMPLING

Mobilization for the Lower Maumee River Phase 2 sediment sampling commenced on 09 June 2013. Sample collection was initiated on 10 June and continued through 20 June 2013. Modified Level D personal protective equipment (i.e., Saranex-coated Tyvek, safety glasses, work boots, and Nitrile gloves) were worn during core collection (EA 2013c). In addition, all personnel aboard the *R/V Mudpuppy II* had a respirator fit test within the last year, and respirators were onboard for each individual.

At each sampling location, surface water depth was measured to the nearest tenth of a foot prior to sediment sampling by using a rigid measuring device. Field books and sample collection data sheets were prepared in accordance with the procedures outlined in the FSP (EA 2013b) and EA standard operating procedures (SOPs) 016 and 059 (Appendix B of the QAPP).

3.3.1 Vibracore Sampling

A total of 76 of the 90 subsurface sediment samples were collected using a vibracoring system onboard the EPA's sampling vessel *R/V Mudpuppy II*. The onboard GPS of the *R/V Mudpuppy II* was used to navigate to each location. The vibracoring system consisted of a core liner with an inside diameter of 4 in. and a length of 10 or 15 ft fitted into the vibracoring unit with a one-way valve at the top to retain sediment during retrieval, and a plastic or stainless steel catcher inserted into the bottom of the core. Coring operations were conducted using an onboard crane, winch, and generator. Staging for the field effort took place at Brenner75 at Harrison Marina on N. Summit Street, Toledo, Ohio.

To obtain sediment samples, a dedicated, decontaminated cellulose acetate butyrate core liner was inserted directly into the vibracore unit and secured. The core was penetrated to the depth of refusal and then retrieved using the winch system. The core liner was removed from the vibracore unit and excess liner was cut to the sediment interface with an electric saw. The core was capped at both ends, sealed, and measured. Each core was labeled with the location number and direction of top and bottom of core.

A log of coring activities, sampling locations, water depths, and core recoveries was recorded in permanently bound logbooks in indelible ink. Personnel names, local weather conditions, and other information that impacted the field sampling program were also recorded. Each page of the logbook was numbered and dated by the personnel entering information. Copies of the field logbooks are provided in Appendix A.

3.3.2 Direct Push Core Sampling

Fourteen locations in the cove west of Grassy Island (LMR13-02, LMR13-05, LMR13-06, LMR13-09, LMR13-10, LMR13-11, LMR13-13, LMR13-16, LMR13-18, LMR13-19, LMR13-17, LMR13-20, LMR13-23, and LMR13-24) were sampled by Ohio EPA using direct push coring from a small jon boat that could navigate the shallow depths (Figure 3-1A). A Trimble GEOX Handheld GPS was used to navigate to each location. The handheld GPS unit was calibrated by EA personnel prior to sampling. Direct push cores were collected using an Argus Hazco© stainless steel Sludge Sampler with a one-way valve, and fitted with 3.25 in. by 12 in. core liner. Coring operations were conducted onboard a jon boat provided by Ohio EPA. Water depths are presented in Chapter 4.

To obtain sediment samples, a dedicated, decontaminated core liner was inserted into the direct push core unit and secured. The core was penetrated to the depth of 12 in., then retrieved. The core was capped at both ends, sealed, and measured. Each core was labeled with the location number and direction of top and bottom of core.

Following collection, sediment cores were transferred to a refrigeration truck (cooled to 4 degrees Celsius [°C]) at the on-shore staging area. The cores were stored in the secured refrigeration truck until they could be processed. A log of coring activities, sampling locations,

water depths, and core recoveries was recorded in permanently bound logbooks in indelible ink. Personnel names, local weather conditions, and other information that impacted the field sampling program were also recorded. Each page of the logbook was numbered and dated by the personnel entering information. Copies of the field logbooks are provided in Appendix A.

3.3.3 Sediment Core Processing

Sediment sample processing was performed onshore at a temporary location; Brenner75 at Harrison Marina. At the processing facility, cores were split lengthwise for examination and sampling. The cores were logged and photographed from the top of the core (sediment surface) to the bottom (recovery depth), representing a vertical profile of the soft sediment. Sediments were classified in general accordance with the Unified Soil Classification System under ASTM International D2487-11. These sediment logging activities were performed in accordance with SOP 016 (Appendix B of the QAPP).

After the log was completed, the sediment from each subsample interval was removed from the core or grab sampler with a clean stainless-steel spatula or spoon and placed in a clean disposable pan or stainless steel tray. Cores collected via vibracoring were subsampled at several depth intervals, while whole-core composites were created from the cores collected via direct push. Cores samples were homogenized by removing all material collected from the designated depth interval in a single core and mixing until consistency was uniform. Sediment samples were packaged and shipped in accordance with EA SOPs (EA 2013a). Equipment that was re-used (e.g., cutting tools, broad knife, spatula, bowls, etc.) were decontaminated in accordance with the decontamination procedures described in Section 3.6. Lithologic and photographic logs of sediment cores are included in Appendix B and C, respectively.

3.4 ANALYTICAL PROGRAM

Tables 3-2 and 3-3 summarize the analytical program. Each sediment sample underwent the following analyses:

- PCBs – aroclors
- Total organic carbon (TOC)
- SVOCs
- Oil and grease
- Total metals (arsenic, cadmium, chromium, copper, lead, nickel, zinc)
- Total mercury

In addition, based on a preliminary review of PCB aroclor data, 10 percent of samples were selected and submitted for analysis of PCB congeners.

Sediment samples from the 0 to 1 ft interval were analyzed for:

- 34 PAHs (approximately 10 percent of total samples)

- Acid volatile sulfide (AVS)/simultaneously extracted metals (SEM) (approximately 10 percent of total samples)
- Grain size
- Bulk density

These analyses were performed on surface sediment because the data they yield are useful for assessing toxicity to organisms that typically contact only the surface sediments. Grain size and bulk density analyses were performed at the sediment surface at each of the target locations collected by the *R/V Mudpuppy II*.

The 44 locations that were selected for the analysis of 34 PAHs and AVS/SEM are presented in Table 2-1 of the FSP (EA 2013b). The 44 sampling locations for both 34 PAHs and AVS/SEM comprised every other location sampled for the first 70 locations (35 samples) plus nine judgmental sampling locations at the surface only. Judgmental samples were selected in the field from locations with proximity to areas of potential historical contamination based on site features. Originally, seven judgmental sampling locations were planned; however, two judgmental sample locations were added (LMR13-94 and LMR13-95) after consultation with EPA.

EA collected and submitted a total of 359 samples for PCB aroclor analysis to TestAmerica laboratories. TestAmerica archived the samples at -10°C in darkness upon receipt. Following receipt and review of the preliminary results of the PCB aroclor results, EA and EPA collaborated to select 36 samples (based on highest total PCB concentrations) to be extracted and analyzed for PCB congeners. Matrix spike/matrix spike duplicate sample volumes were extracted from three of the 36 samples collected.

3.5 SAMPLE HANDLING, CHAIN-OF-CUSTODY, AND QUALITY ASSURANCE/QUALITY CONTROL

3.5.1 Sample Handling, Chain-of-Custody, and Documentation

Sediment samples analyzed for SVOCs, 34 PAHs, PCB aroclors, total metals (including mercury), TOC, AVS/SEM, density, and grain size were shipped from the site to TestAmerica's Burlington laboratory. Samples archived and analyzed for PCB-congeners were shipped to the Knoxville laboratory where they were stored in the freezer prior to extraction and analyses. Samples analyzed for oil and grease were shipped from site to TestAmerica's North Canton laboratory. Samples were placed in the appropriate sample containers (obtained from TestAmerica), preserved, and labeled in accordance with the QAPP/FSP (EA 2013a, b). In preparation for shipment to the laboratories, all samples were packaged in accordance with the procedures outlined in the FSP (EA 2013b).

Sample labeling was performed in accordance with SOP 001 (Appendix B of the QAPP). Individual sample containers were labeled with a unique designation that corresponded to the specific geographic location, year of collection, and subsample depth interval. The FSP (EA 2013b) outlines the specific sample identification procedures that were implemented. "LMR" was used for Lower Maumee River, and "13" was used to identify the sampling year 2013. Sample identifications included the location, LMR, year of sampling (13), location number, and the targeted end point of the interval in inches. An example of a sample identifier would be "LMR13-01-012." This identifier describes a sample taken at the LMR in 2013 at location 1, the depth interval of 0-12 in. below the sediment surface. Sample depths were from 0 to 12 in., 12 in. to 2 ft, and 2-ft intervals thereafter; therefore, the third field was identified as follows: 012, 024, 048, 072, 096, and 120.

Chain-of-custody forms were completed and used to track samples from the time of sampling to the arrival of samples at the laboratory. Completed chain-of-custody forms are provided in Appendix A of the Data Usability Assessment Report (Appendix D).

3.5.2 Quality Control

Throughout the project, various measures were implemented to ensure the overall quality, credibility, and usability of the collected data. The field investigation activities included collection of additional quality control samples (e.g., duplicates, matrix spike/matrix spike duplicate, etc.) sufficient to meet the requirements of the data quality objectives as defined in Section A.7 of the QAPP (EA 2013a). Duplicate samples were submitted as described in Appendix A of the QAPP, and field and laboratory quality control requirements were completed in accordance with Section B.5 of the QAPP. Deviations from the QAPP/FSP (EA 2013a, b) can be found in Section 3.8.

3.6 DECONTAMINATION

Decontamination procedures were implemented during the field investigation to prevent cross-contamination between sampling locations. During sampling activities, disposable or dedicated sampling tools and materials were utilized whenever possible to minimize the decontamination efforts. Decontamination procedures were carried out in accordance with Appendix A of the QAPP (EA 2013a).

3.7 INVESTIGATION-DERIVED WASTE

Following collection of the sediment samples, investigation-derived waste was managed in accordance with the procedures described in the Appendix A of the QAPP (EA 2013a). In general, residual sediments and decontamination water were returned to the respective sample location onsite. Disposable materials and personnel protective equipment that came into contact with site sediments were bagged and disposed of as general municipal waste.

3.8 DEVIATIONS FROM THE QAPP AND FSP

The sampling intervals in the QAPP were adjusted in the field after consultation with the EPA. This change affected the top two sample intervals only. Instead of sampling each core from 0 to 6 in. (with additional surface volume collected with a ponar) and 6 in. to 2 ft, each core was sampled from 0 to 1 ft, and 1 to 2 ft. A ponar was not used. This change provided adequate volume for analytical samples and increased efficiency onboard the *R/V Mudpuppy II*, and consistency with surface samples collected by Ohio EPA.

Actual coordinates are presented in Table 3-1. A total of seven of the target sample locations (LMR13-19, LMR13-29, LMR13-35, LMR13-40, LMR13-50, LMR13-56, and LMR13-77) were moved during the field activities (Table 3-1). Location LMR13-19 could not be accessed by the Ohio EPA direct push corer because of deep water and was moved approximately 80 ft perpendicular to the channel. Locations LMR13-29 and LMR13-35 were moved offshore from the proposed locations due to shallow water. Locations LMR13-40 and LMR13-50 were moved because of the close proximity to underground utilities crossing the river. Location LMR13-56 was moved slightly offshore due to the close proximity to ongoing work along the seawall at the proposed location. Location LMR13-77 was moved because it was determined to be too close to location LMR13-35. One location (LMR13-73) was removed as a target location due to the close proximity of location LMR13-27. Two judgmental sample locations were added (LMR13-94 and LMR13-95) after consultation with EPA, in accordance with the QAPP (EA 2013a). Core penetration and recovery for each subsurface coring location were recorded in a field logbook and are presented in Table 3-1.

On 14 June 2013, an EA-rented field vehicle was broken into and a backpack was stolen that contained the only copies of the 35 core logs created for locations that were logged during the period of 11-14 June 2013. The property was not recovered. A narrative describing the steps taken to re-create the stolen logs from the digital photographs is provided in Appendix B.

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4. RESULTS

4.1 DATA EVALUATION

The overall data quality objective for the project was to provide data of known and documented quality to characterize current site conditions. Data collected in the Phase 2 effort were validated by evaluating the completeness, correctness, and conformance of the data set against the method, SOP, or contract requirements documented in the QAPP/FSP (EA 2013a, b). The data review and validation achieved the project goals. The overall data review and validation program attained the project objectives with no adverse effects on data quality or usability.

The validated data collected under this Phase 2 investigation were compared to the consensus-based threshold effects concentrations (TECs) and the probable effects concentrations (PECs) of the Sediment Quality Guidelines for Freshwater Systems (MacDonald et al. 2000) to address the goals of this assessment. In addition to the TEC and PEC, metals detected in Phase 2 samples were also compared to Ohio EPA SRVs for metals (Ohio EPA 2008). Constituent concentrations exceeding the applicable sediment quality criteria were identified. Figures were prepared to visually present constituent concentrations and identify potential hot spots or focus areas within the study area. Hot spots are defined as any area where one or more constituents exceed the PEC at a minimum of two adjacent sample locations.

4.1.1 Comparison to Sediment Quality Guidelines

The Sediment Quality Guidelines were developed as informal (non-regulatory) guidelines for use in interpreting chemical data from analyses of sediments. Several biological-effects approaches have been used to assess freshwater sediment quality relative to the potential for adverse effects on benthic organisms, including the TEC/PEC (MacDonald et al. 2000) approach. The TEC and PEC levels were derived using concentrations with both effects and no observed effects (MacDonald et al. 2000). TECs typically represent concentrations below which adverse biological effects were rarely observed, while PECs typically represent concentrations in the middle of the effects range and above which effects were more frequently observed (MacDonald et al. 2000). Concentrations that are between the TEC and PEC represent the concentrations at which adverse biological effects occasionally occur.

The Ohio EPA has published SRVs for metals in Guidance for Conducting Ecological Risk Assessments (Ohio EPA 2008). Sediment concentrations from lotic surface water systems may be compared to the Ohio specific SRVs. These SRVs can be used in lieu of site-specific background concentrations for sediments for determining whether sediments have been impacted by anthropogenic activities.

4.1.2 Calculation of Total Polycyclic Aromatic Hydrocarbons and Total Polychlorinated Biphenyls

Detected values greater than or equal to the Method Detection Limit, but less than the laboratory Reporting Limit (RL), were J-qualified and are estimated. Analytes that were not detected were

U-qualified. When calculating total PAHs, results that were J-qualified were calculated using the result value, and results that were U-qualified were calculated using one-half the RL. Substituting one-half the RL (not detected [ND] = ½ RL) for each non-detect provides a conservative estimate of the concentration. This method, however, tends to produce results that are biased high; especially in data sets where many samples are non-detects. This overestimation is important to consider when comparing calculated total values to criteria. Total PCB aroclor concentrations were calculated by summing the concentrations of each PCB aroclor with non-detects set equal to zero (ND=0).

4.1.3 Simultaneously Extracted Metals /Acid Volatile Sulfide Ratio

The bioavailability of divalent metals to aquatic organisms is influenced by the presence of AVS. In low oxygenated environments (anaerobic), metals may precipitate with sulfides, making them unavailable for uptake by aquatic organisms. Using this method, six metals (cadmium, copper, lead, nickel, mercury, and zinc) were extracted, measured, and added together (including any values that were "J" qualified). If a metal was not detected, it was considered a zero in the calculation. The sum of the concentrations of these six metals was then compared to the amount of AVS detected in the same sediment sample. If AVS was not detected in the sample, the SEM/AVS ratio was not calculated.

An SEM/AVS ratio less than 1 indicates a high degree of probability that the metals are bound to organic material and not bioavailable to aquatic organisms. If the SEM/AVS is greater than 1, the metals in sediment exceed the sulfide binding ability and have a higher probability of being bioavailable to aquatic organisms.

4.2 RESULTS FROM THE PHASE 2 SEDIMENT INVESTIGATION

4.2.1 Core Recovery

The Phase 2 area was divided into three separate areas for sediment core collection. Area A extends from the Grassy Island in Maumee Harbor upstream to the river area adjacent to the Toledo Yacht Club (Figure 3-1A), and is comprised of the cove west of the Grassy Island and the main river channel, excluding the federal navigation channel. Area B extends from the Toledo Yacht Club upstream to the river area adjacent to the southernmost sway bridge (Figure 3-1B). Area C extends from the sway bridge upstream to the U.S. Route 280 bridge (Figure 3-1C).

The 14 cores collected by Ohio EPA in Area A had 1-ft maximum recovery due to limited site accessibility; limiting the length of the coring device that could be utilized. The shortest recovered core in this area was LMR13-09 (0.8 ft) (Table 4-1). The water depths at these core locations were too shallow to accommodate the *R/V Mudpuppy II*'s draft and were collected by direct push rather than vibracore.

The remaining 76 cores were collected to refusal depth aboard the *R/V Mudpuppy II*. Sediment recovery ranged from 0.8 (LMR13-56) to 15 ft (LMR13-34) (Table 4-1). Detailed lithographic

descriptions of the 90 collected cores are presented in Appendix B. Photographic logs are presented in Appendix C.

It is important to note that there is uncertainty associated with the depth to bedrock at each coring location. Very few cores were identified as having hit refusal at bedrock (Appendix B); therefore, it is uncertain if contaminated material exists below the maximum depths of the cores collected from each location.

4.2.2 Lithology

The sediment cores collected within the Phase 2 Lower Maumee River Site demonstrate a mixture of core profiles containing sediment types consistent with a fluvial system. Most cores were characterized by thick layers of silty clay overlain by a thin layer of silt. Native and non-native material such as shells, creosote/diesel odor, and creosote-soaked woody debris were frequently observed within various sediment types and depths.

Complete core logs and photographs are included in Appendices B and C. A general description of cores collected during the Phase 2 investigation is included in the text that follows.

Area A

Cores collected in Area A showed varying lithology. A majority of the cores were comprised mostly of silty clay that generally varied from about 4.5 ft to greater than 9.5 ft thick with layers of clayey sand, clay, or sand underneath, and frequently overlain by a top layer of brown/gray silt. Woody debris layers were found in several cores (LMR13-07, -13, -14) collected in the western portion of Area A just outside the cove. Layers of black silt and high shell density were found in cores LMR13-22 and -25 collected from the northernmost section of the river channel, and in cores LMR13-48 and -82 collected from the southern section of Area A. Large woody pieces and a thick layer of organic debris were also present in LMR13-82.

As discussed earlier, the 14 cores collected in the northwestern cove of Area A (Figure 3-1A) had 1-ft maximum recovery due to limited site accessibility. Cores from this area were comprised of silty clay, with the exception of LMR13-12 and LMR13-16; which were comprised primarily of thick, dense clay. Several cores collected from the southern end of the bay (LMR13-01, -03, -48) had a strong diesel odor in the silty clay, sandy clay, and clay layers. Whole shells and shell fragments were also commonly found in these cores.

Area B

The majority of cores collected in Area B were comprised of silty clay that generally varied from about 6 ft to greater than 10.5 ft thick, overlain either by a layer of silt or clayey silt that varied from 0.3 ft to 1.3 ft thick. Several cores demonstrate exceptions to this composition with intermixed layers of other sediment types such as clay, sandy clay, organics, and gravelly clay. LMR13-56, collected on the eastern side of the river adjacent to the sway bridge, was comprised only of gray, stiff clay with intermixed pebbles and gravel. Shell fragments and woody/organic

debris were often observed in the various sediment types such as silty clay, sandy clay, clay, and sand. The woody debris present in cores from Area B appeared to be creosote-soaked with a strong diesel odor. This woody debris and odor, along with visible contamination (e.g., black sheen in sediment), were observable in cores LMR13-55, -58, and -80.

Area C

Similar to Areas A and B, several cores collected in Area C were comprised mostly of silty clay. The thickness of the silty clay layers varied widely, from 0.6 ft to 8.5 ft. The top layer, ranging from 0.2 ft to 1 ft thick, was silt in nearly half of the cores collected in Area C. Other sediment types observed in the top layer included clayey silt, sandy silt, sandy clay, and gravely silt. Frequently, layers of other sediment types such as clay, sand, clayey sand, silty gravel, sandy clay, organics, and gravelly clay, were intercalated with the silty clay. Like sediment from Area B, shell fragments and woody/organic debris were often observed. Two cores collected in the northern portion of Area C (LMR13-88 and -95) near the sway bridge and a core collected just east of the lower turning basin (LMR13-30) showed visible contamination in the form of a black clayey layer that exhibited a strong creosote odor and a sticky hydrocarbon/non-aqueous phase liquid residue.

4.2.3 Bulk Sediment Results

A total of 359 sediment samples were submitted for oil and grease, TOC, PCB aroclors, and metals; 317 were submitted for semivolatile organics analysis (SVOA); 76 were submitted for particle size and density; 36 were submitted for PCB congeners; and 44 were submitted for single ion monitoring 34PAHs, and the ratio of SEM/AVS (Table 3-3). Detected concentrations of constituents were compared to TECs and PECs (MacDonald et al. 2000) where available. Detected concentrations of metals were also compared to SRVs (Ohio EPA 2008). Analytical results are presented in Tables 4-2 through 4-8 and are summarized in the following sections by analytical group. Analyte exceedances that were detected within one of the three prominent hot spot areas, as defined in previous sediment studies (see Section 2.1), are also described in the following sections.

Analytical samples were defined at 0 to 12 in. (0 to 1 ft), 12 to 24 in. (1 to 2 ft), and every 2 ft thereafter [24 to 48 in. (2 to 4 ft), 48 to 72 in. (4 to 6 ft), etc.] to the end of each core. Sample identifications included the location, LMR, year of sampling (13), location number, and the targeted end point of the interval in inches.

4.2.3.1 Grain Size, Particle Size, and Density

A total of 76 sediment samples were submitted for grain size, particle size, and density. Analytical results are presented in Table 4-2. Cores collected by direct push method in the cove of Area A (14 of the 90 total), and field duplicates were not submitted for grain size analysis in accordance with the QAPP and FSP (EA 2013a, b). The majority of samples (90 percent) were composed primarily (greater than 50 percent) of silt + clay; the remaining 10 percent were composed primarily of sand. Bulk density ranged widely across the samples from 0.6 to 1.7

grams per cubic centimeter. Most of the sediment samples collected had at least 50 percent of the sample pass through a 200-micron sieve. Particle size distribution graphs for each sample are presented in Appendix E.

4.2.3.2 Oil and Grease and Total Organic Carbon

A total of 359 sediment samples and 42 field duplicates were submitted for oil and grease and TOC analysis. Oil and grease were detected in 340 of the 359 samples submitted with concentrations ranging from 26 to 48,000 milligrams per kilogram (mg/kg) (parts per million [ppm]). Figures 4-1A (cove), Figure 4-1A (channel), 4-1B, and 4-1C display the oil and grease concentrations at each location and depth interval. The highest oil and grease concentrations (> 5,000 ppm) were observed in samples collected from locations LMR13-33, -43, -54, -57, -86, -87, -88, and -95; which were located near the sway bridge area (Figure 4-1B and 4-1C) and from LMR13-45, -46, and -93 near the WWTP (Figure 4-1A channel). Sediment in the Phase 2 area contained percent TOC ranging from 0.75 percent (LMR13-29-096) to 14.3 percent (LMR13-95-024). Oil and grease concentrations as well as TOC are provided in Tables 4-3A, 4-3B, and 4-3C.

4.2.3.3 PCB Aroclors

A total of 359 sediment samples and 42 field duplicates were submitted for PCB aroclor analysis. PCB aroclors were detected in 136 of the 359 samples submitted. Total PCB aroclor concentrations were calculated by summing the concentrations of individual PCB aroclors with non-detects set equal to zero (ND=0). Total PCB aroclor concentrations ranged from 5.3 micrograms per kilogram (µg/kg) (parts per billion [ppb]) (LMR13-72-072) to 12,860 ppb (LMR13-46-096). Figures 4-2A (cove), Figure 4-2A (channel), 4-2B, and 4-2C display the total PCB aroclor concentrations reported at each location and depth interval. The highest total PCB aroclor concentrations (> 3,200 ppb) were observed in samples collected from locations LMR13-43, -45, -46, and -93 near the WWTP area (Figure 4-2A channel) and from locations LMR13-63 and LMR13-91; which were collected near the Duck Creek confluence area (Figure 4-2A channel). Elevated concentrations were also detected at LMR13-13 and -14 near the cove in Area A. Individual PCB aroclor concentrations as well as total PCB aroclor concentrations are provided in Table 4-4A, 4-4B, and 4-4C.

In the areas where total PCB concentrations exceeded the PEC, several individual aroclors appear to be predominant. Of the nine aroclors analyzed, aroclor 1242, aroclor 1254, and aroclor 1248 had the highest concentrations near both the WWTP and the Duck Creek confluence area. Concentrations of these three aroclors exceeded two times the PEC in one or more samples from locations LMR13-43, -44, -46, and -93 near the WWTP, and locations LMR13-63 and -91 in the Duck Creek confluence. Aroclor 1242 had the highest concentration of any aroclor detected at both the WWTP (8,600 ppb at LMR13-46) and Duck Creek Confluence area (1,700 ppb at LMR13-91).

4.2.3.4 PCB Congeners

Following analysis of samples for PCB aroclors, the samples containing the highest concentrations of total PCBs were selected for analysis of PCB congeners. Thus, 36 of the samples sent to the laboratory (10 percent of the total number of samples submitted for PCB analysis) were analyzed for 209 individual PCB congeners.

PCB congeners were detected in each of the 36 samples submitted (Table 4-5). Ninety percent of the PCB congeners analyzed were detected in each sample. The highest individual congener concentrations were detected in samples collected within the WWTP area. The PCB congeners with consistently high concentrations were congeners 28, 70, 74, and 76, each with a maximum concentration of 1,700,000 ppb. Each of these congeners was detected at location LMR13-46 within the WWTP area in the deepest interval (Table 4-5). These four PCB congeners were detected in all other samples analyzed; however, concentrations detected in other parts of the Phase 2 study area (including the sway bridge and Duck Creek confluence areas), were comparatively low.

Maximum concentrations of 170 of the 209 PCB congeners were detected in samples from locations LMR13-43, -45, and -46; all of which are located in the WWTP area. The majority of these maximum detected concentrations were greater than 100,000 ppb (Table 4-5). The concentration of total PCB congeners was also highest at these locations (Table 4-5).

4.2.3.5 Semivolatile Organic Analysis

A total of 317 sediment samples and 37 field duplicates were submitted for SVOA analysis. SVOAs were detected in each of the samples submitted for analysis. Total 17PAH concentrations were calculated by summing the concentrations of individual PAHs with ND=½RL. Total 17PAH concentrations ranged from 534 µg/kg (ppb) (LMR13-35-072) to 27,950,000 ppb (LMR13-95-024). Nineteen percent of the submitted samples had concentrations that exceeded the PEC. It is important to note that in some samples, individual PAHs were detected in concentrations that exceeded the respective PEC; however, when these individual PAH concentrations were summed, the total did not exceed the PEC for total 17PAH. Figures 4-3A (cove), 4-3A (channel), 4-3B, and 4-3C display the total 17PAH (ND=½ RL) concentrations reported at each sample location and depth interval. The highest total 17PAH concentrations occurred at locations LMR13-87, -88, -94, and -95 (Figure 4-3C) in the vicinity of the sway bridge. LMR13-54 and -55, downstream of the sway bridge, also had high concentrations. Concentrations of individual SVOAs as well as total 17PAH concentrations are reported in Tables 4-6A, 4-6B, and 4-6C.

In the areas where total 17PAH concentrations exceeded the PEC, several individual PAHs appear to be predominant. Of the 17 PAHs analyzed, anthracene, chrysene, fluoranthene, naphthalene, phenanthrene, and pyrene had the highest concentrations near the sway bridge area. Concentrations of these six PAHs exceeded three times the PEC in one or more samples throughout the cores collected from locations LMR13-54, -55, -87, -88, -94, and -95. Napthalene had the highest concentration of any PAH detected at the sway bridge (12,000,000 ppb at LMR13-95). At each location in this area, concentrations of naphthalene were consistently the highest of the individual PAHs detected in each sample.

Although total 17PAH concentrations were significantly lower near the WWTP, several locations (LMR13-43 and -46) had total concentrations exceeding the PEC. Four individual PAHs (chrysene, phenanthrene, pyrene, and naphthalene) appear to be driving the high total 17PAH concentrations. Similar to the samples from the sway bridge area, napthalene had the highest concentration of any individual PAH detected at the WWTP (12,000 ppb at LMR13-43).

4.2.3.6 Polycyclic Aromatic Hydrocarbons

A total of 44 surface (0-12 in.) sediment samples and five field duplicates were submitted for 34PAH analysis. 34PAH analysis includes the 17PAHs analyzed in the 317 samples submitted for SVOA analysis (Section 4.2.3.5) and 17 additional PAHs. All of the 17 additional PAHs were detected in each of the samples submitted for 34PAH analysis; however, none of the additional 17PAHs have individual TEC or PEC values, and thus no comparison criteria are available for total 34 PAHs. Concentrations of individual PAHs as well as total 17PAH and total (ND=½RL) 34PAH concentrations for the 44 surface samples and five duplicates are reported in Table 4-7.

Total (ND=½RL) 34PAH concentrations ranged from 475 µg/kg at LMR13-78-012 to 4,371,000 µg/kg (ppb) LMR13-95-012 near the sway bridge. Concentrations were also elevated at sample locations LMR13-88, -55, -57, and -94. Although there are no TEC or PEC concentrations available for total 34PAHs, some trends can be noted from the total concentrations. In samples where total 17PAHs were elevated above the TEC or PEC, the total 34PAH concentration was also high (Table 4-7). In many cases, the total 34PAH concentration was approximately double the total 17PAH concentration for the same sample; which is expected given that double the number of compounds were analyzed during the 34PAH analysis. For a few samples (LMR13-21, -25, -51, -66, and -69), however, the 34PAH concentration is more than double the total 17PAH concentration. At location LMR13-21, this larger increase in concentration results in the 34PAH concentrations above the total 17PAH TEC, which suggests that PAH exceedances could potentially be missed if only the 17PAH analysis is performed on a sample.

4.2.3.7 Metals

A total of 359 sediment samples and 42 field duplicates were submitted for metals analysis. Each of the eight analyzed metals exceeded the respective PEC in at least one sample. Five of the eight metals (cadmium, chromium, lead, nickel and zinc) exceeded respective PECs in

greater than 5 percent of the samples. In some samples, individual metal concentrations exceeded the TEC, but were below the SRV. Individual metal concentrations that exceeded the respective PEC also exceeded the SRV, as SRVs were consistently more conservative than the PECs for each individual metal. The detected concentration for each metal at each location and depth interval is displayed in the following figures: 4-4A (cove), 4-4A (channel), 4-4B, 4-4C (cadmium); 4-5A (cove), 4-5A (channel), 4-5B, 4-5C (chromium); 4-6A (cove), 4-6A (channel), 4-6B, 4-6C (lead); 4-7A (cove), 4-7A (channel), 4-7B, 4-7C (nickel); and 4-8A (cove), 4-8A (channel), 4-8B, 4-8C (zinc). Concentrations of individual metals are reported in Tables 4-8A, 4-8B, 4-8C.

Arsenic concentrations ranged from 2.2 mg/kg (LMR13-75-024) to 38.4 mg/kg (ppm) (LMR13-33-012). Thirty-four percent of the arsenic sample concentrations exceeded the TEC, and only two individual samples had concentrations that exceeded the PEC (Tables 4-8A, 4-8B, 4-8C). Twenty-four percent of the arsenic sample concentrations exceeded the SRV.

Cadmium concentrations ranged from 0.19 ppm (LMR13-35-072, LMR13-62-096, LMR13-75-024, and LMR13-79-096) to 15.4 ppm (LMR13-43-024). Figures 4-4A (cove), Figure 4-4A (channel), 4-4B, and 4-4C display the cadmium concentrations reported at each location and depth interval. Forty-eight percent of the detected cadmium concentrations exceeded the TEC, 6 percent exceeded the PEC, and 1 percent were more than two times the PEC (Tables 4-8A, 4-8B, 4-8C). Fifty-five percent of the cadmium sample concentrations exceeded the SRV.

Chromium concentrations ranged from 8 ppm (LMR13-21-072) to 319 ppm near the WWTP (LMR13-45-072). Figures 4-5A (cove), Figure 4-5A (channel), 4-5B, and 4-5C display the chromium concentrations reported at each location and depth interval. Twenty-one percent of the detected chromium concentrations exceeded the TEC, 7 percent exceeded the PEC, and 3 percent were more than two times the PEC (Tables 4-8A, 4-8B, 4-8C). Twenty-five percent of the chromium sample concentrations exceeded the SRV.

Copper concentrations ranged from 3.4 ppm (LMR13-79-024) to 172 ppm (LMR13-45-072). Forty-seven percent of the copper sample concentrations exceeded the TEC and 1 percent exceeded the PEC (Tables 4-8A, 4-8B, 4-8C). Twenty-five percent of copper sample concentrations exceeded the SRV.

Lead concentrations ranged from 3.2 ppm (LMR13-79-024) to 665 ppm (LMR13-55-072). Fifty-three percent of the detected lead concentrations exceeded the TEC, 12 percent exceeded the PEC, and 2 percent were greater than two times the PEC. Figures 4-6A (cove), Figure 4-6 (channel), 4-6B, and 4-6C display the lead concentrations reported at each location and the depth interval. The highest lead concentrations were detected at locations LMR13-33, LMR13-54, LMR13-55, and LMR13-57 near the sway bridge (Figures 4-6B and 4-6C) (Tables 4-8A, 4-8B, 4-8C). Fifty-seven percent of lead sample concentrations exceeded the SRV.

Mercury concentrations ranged from 0.024 ppm (LMR13-79-048) to 2.1 ppm (LMR13-46-096). Forty percent of the mercury sample concentrations exceeded the TEC and 1 percent exceeded

the PEC (Tables 4-8A, 4-8B, 4-8C). Forty-one percent of mercury sample concentrations exceeded the SRV.

Nickel concentrations ranged from 7.2 ppm (LMR13-79-024) to 141 ppm (LMR13-45-072). Sixty-nine percent of the detected nickel concentrations exceeded the TEC, 6 percent exceeded the PEC, and 3 percent were greater than two times the PEC. Figures 4-7A, 4-7B, and 4-7C display the nickel concentrations reported at each location and the depth. The highest nickel concentrations were detected at locations LMR13-43, LMR13-45, and LMR13-46 near the WWTP (Figure 4-7A (channel) and 4-7B) (Tables 4-8A, 4-8B, 4-8C). Thirty-two percent of nickel sample concentrations exceeded the SRV.

Zinc concentrations ranged from 20.5 ppm (LMR13-79-024) to 1,210 ppm (LMR13-45-024FD). Sixty percent of the detected zinc concentrations exceeded the TEC, 7 percent exceeded the PEC, and 1 percent were greater than twice the PEC. Figures 4-8A, 4-8B, and 4-8C display the zinc concentrations reported at each location and the depth interval. The highest zinc concentrations were detected at locations LMR13-33, LMR13-45, and LMR13-87 (Tables 4-8A, 4-8B, 4-8C). Thirty-eight percent of zinc sample concentrations exceeded the SRV.

The predominant metals within the Phase 2 area are cadmium, chromium, lead, and zinc. These metals have the highest concentrations in samples collected from the WWTP area. Cadmium, chromium, and lead concentrations were higher than other metals at LMR13-42, -81, and -93, while zinc appeared to be the predominant metal at locations LMR13-43 and -46. Similarly, concentrations of lead and zinc were also highest of the detected metals at locations LMR13-54, -55, -57, and -87 in the sway bridge area.

4.2.3.8 Simultaneously Extracted Metals to Acid Volatile Sulfide Ratio

A total of 44 surface (0-12 in.) sediment samples and five field duplicates were submitted for the-ratio of SEM/AVS. Samples were only submitted for the surface (0-12 in.) interval. Nine locations (LMR13-15, -21, -30, -33, -39, -55, -70, -86, and -88) had a single sample with a ratio greater than 1. Locations LMR13-55, -86, and -88 are near the sway bridge area. These results suggest that the majority of metals are not bioavailable. SEM/AVS results are presented in Table 4-9.

4.2.4 Summary of Phase 2 Bulk Sediment Results

Sediment samples collected during the Phase 2 sampling effort were analyzed for oil and grease, TOC, PCB aroclors and congeners, metals, SVOAs, 34PAHs, particle size and density, and SEM/AVS. The cores collected were subsampled at up to six depth intervals depending on the length of the core.

In general, the highest concentrations of constituents were co-located in the areas of the WWTP, the sway bridge, and the outermost area of the Duck Creek confluence (Figure ES-3). The highest oil and grease concentrations were detected at locations close to the WWTP and the sway bridge areas. Total PCB aroclor concentrations were highest at location LMR13-46, with

elevated concentrations also detected at locations LMR13-43, -45, and -93 near the WWTP, and at locations LMR13-63 and LMR13-91 near the outermost area of the Duck Creek confluence. For most samples from these locations, total PCB aroclor concentrations increased with depth.

In the areas where total PCB concentrations exceeded the PEC, several individual aroclors appear to be predominant. Of the nine aroclors analyzed, aroclor 1242, aroclor 1254, and aroclor 1248 had the highest concentrations near both the WWTP and the Duck Creek confluence area. Concentrations of 17PAHs were highest at locations LMR13-87, -88, -94, and -95; with concentrations exceeding the PEC at most depth intervals. Of the 17 PAHs analyzed, anthracene, chrysene, fluoranthene, naphthalene, phenanthrene, and pyrene had the highest concentrations near the sway bridge area, and appear to be predominant. 34PAHs were measured in surface samples, and the highest concentration was detected at sample location LMR13-95. Other locations with elevated 34PAH concentrations were LMR13-55, -57, -88, and -94. The highest concentrations of each individual metal were found at sample locations LMR13-54 and LMR13-55 near the sway bridge area, and/or at sample locations LMR13-43, -45, and -46 near the WWTP. The predominant metals within the Phase 2 area were cadmium, chromium, lead, and zinc.

4.3 RESULTS FROM PREVIOUS INVESTIGATIONS

This section presents results from two previous sediment investigations conducted within the Maumee AOC: the 1995 screening survey conducted by AScI and the 2010 Duck and Otter Creeks sediment assessment conducted by Weston Solutions. The purpose of the Duck and Otter Creeks sediment assessment was to determine the extent of contamination in surface and subsurface sediment within the confluence area of these creeks (Weston 2012a). The objectives of the AScI assessment were to investigate the distribution and magnitude of contamination in sediments from the Maumee AOC. Samples were collected from the lower Maumee River, Ottawa River, Swan Creek, Otter Creek, Duck Creek, and Maumee Bay (AScI 1997) (Figure 2-1). While specific coordinates were not provided for the AScI samples, these locations were estimated to the highest degree of accuracy using the maps provided in the report.

Results for PAHs from the 1995 AScI study are not presented in the data summary of this report. This investigation measured total PAH concentrations; however, the results from the enzyme immunoassay screening method used to detect PAHs did not correspond with the results from the confirmatory method. As a result, the PAH concentrations were determined to be inaccurate and were not used to assess sediment quality in the AScI report, and are not considered in this site characterization.

The sediment chemistry results from the Phase 2 assessment (Section 4.2) have identified potential hot spot locations (locations of co-occurring constituents with concentrations elevated above the PEC) by the WWTP, sway bridge, and outer area of the Duck Creek confluence. Since these areas were also identified as potential hot spots in the previous sediment assessments, this results discussion will focus on these areas. Sample locations discussed in this section can be found in the figures of the corresponding reports presented in Appendix F.

4.3.1 Duck Creek Confluence Area

Both the screening survey conducted by AScI and the Duck and Otter Creeks sediment assessment identified an area of elevated concentrations of constituents located in the outermost portion of the Duck Creek confluence. This section discusses the primary COCs detected in this area.

Total PCBs

The 1995-1997 screening survey by AScl identified high concentrations of total PCB aroclors (greater than three times the PEC of 2,028 µg/kg [ppb]) throughout the sediment cores in six of the nine samples collected in the Duck Creek area. The highest total PCB concentrations were detected in surface sediments at sampling locations MR051 (11,400 ppb) and MR059 (16,800 ppb). MR059 was located near the center of the Maumee River at the Duck Creek confluence. MR051 was located approximately 600 ft south of MR059, at the outermost part of the Duck Creek confluence.

The 2010 sediment investigation by Weston identified lower total PCB aroclor concentrations than the AScI survey, although total PCB aroclors were still identified as the primary COC. The highest concentrations (greater than three times the PEC) were detected at depths of 6 to 14 ft along the center of the Duck Creek bay at sampling locations DC-16, DC-17, and DC-19. Total PCBs were not identified in surface sediments in this investigation; however, samples were not collected from the main body of the Maumee River where the high surface sediment PCB concentrations were detected in 1995.

Metals

Cadmium

Cadmium concentrations exceeding the TEC (0.99 mg/kg [ppm]) were reported in eight of the nine samples collected in the Duck Creek area in the AScI survey. The exceedances were identified in surface sediments of Duck Creek (DC01, DC02, DC05, and DC07) and throughout the sediment column in the main body of the Maumee River (DC03, DC04, MR051 and MR059). No exceedances of the PEC (4.98 ppm) were reported. The highest concentrations were detected in surface sediments at DC02 (4.42 ppm) and at a depth of 4-6 ft at MR059 (4.43 ppm).

The 2010 Weston investigation identified cadmium at concentrations exceeding the TEC in all 11 samples collected in the Duck Creek area. Concentrations exceeding the PEC (4.98 ppm) were detected at depths of 10-16 ft in three samples near the center of the bay (DC-14, DC-16, DC-17). Cadmium concentrations appeared to increase with depth.

Chromium

Chromium concentrations exceeding the TEC (43.4 ppm) were reported throughout the sediment column in all nine of the samples collected in the Duck Creek area in the 1995 AScI survey. Exceedances of the PEC (111 ppm) were reported in two of the samples (DC-02 and DC-03).

The 2010 Weston investigation identified chromium at concentrations exceeding the TEC in six of 11 samples collected in the Duck Creek area. These exceedances were primarily located near the center of the bay at the Duck Creek confluence at depths of 8-16 ft. One exceedance of the PEC was reported at DC-14 at a depth of 10-12 ft. Chromium concentrations appeared to increase with depth.

Nickel

Nickel concentrations exceeding the TEC (22.7 ppm) were reported throughout the sediment column in each of the nine samples collected in the Duck Creek area in the 1995 survey. Concentrations also exceeded the PEC (48.6 ppm) in eight of the samples. The highest nickel concentrations were detected in the main body of the river near the confluence at sampling locations DC-03 (113 ppm) and MR051 (103 ppm).

The 2010 Weston investigation reported lower nickel concentrations than the 1995 survey; however, nickel concentrations still exceeded the TEC at all 11 sampling locations. Four samples also had concentrations that exceeded the PEC.

Lead

Lead concentrations exceeded the TEC (35.8 ppm) in eight of the nine samples collected in the 1995 survey. One exceedance of the PEC (128 ppm) was reported at DC05 at a depth of 2-3 ft. Lead concentrations appeared to decrease further from the creek with the lowest concentrations in the main body of the Maumee River.

The 2010 investigation identified lead concentrations exceeding the TEC in eight of 11 samples collected in the Duck Creek area. One exceedance of the PEC was reported at DC-20 at a depth of 4-6 ft.

Zinc

Zinc concentration exceeded the TEC (121 ppm) at eight of the nine sampling locations in the Duck Creek area during the 1995 survey. No exceedances of the PEC were found. Within the creek, surface sediments contained higher concentrations of zinc than deeper sediments. Within the main body of the Maumee River, concentrations were evenly distributed within the sediment. Zinc concentrations exceeding the TEC were detected at 10 of the 11 sampling locations during the 2010 investigation. None of the detected concentrations of zinc exceeded the PEC.

PAHs

Total 17 PAH concentrations exceeding the TEC (1,610 µg/kg [ppb]) were detected at all 11 sampling locations in the Duck Creek area during the 2010 investigation. In addition, total 17 PAH concentrations exceeded the PEC (22,800 ppb) in three of the 11 samples. The 2010 investigation collected samples from surface sediments only. PAH results from the 1995 survey are not included in this analysis.

4.3.2 Wastewater Treatment Plant Area

Both the screening survey conducted by AScI and the Duck and Otter Creeks sediment assessment identified an area of elevated concentrations of constituents located on the western shore of the Maumee River immediately next to the WWTP facility. This section discusses the primary COCs detected in this area.

PCBs

The 1995-1997 screening survey by AScI identified high concentrations of total PCB aroclors (greater than three times the PEC = 2,028 µg/kg [ppb]) throughout the sediment cores in four of the six samples collected near the WWTP. Total PCB concentrations exceeding the PEC (676 ppb) were found in each of the six samples. The highest total PCB concentrations were detected in surface sediments at sampling locations MR054 (13,000 ppb) and MR041 (13,400 ppb). MR054 was located approximately 200 ft off of the northern bank of the river in the small bay near the plant. MR041 was located near the center of the river approximately 1,000 ft west of MR054. Exceedances of three times the PEC extended to approximately 1,900 ft south of MR054 at MR055. Generally, total PCB concentrations increased at depth with increasing distance from the main WWTP facility.

Metals

Cadmium

Cadmium concentrations exceeding the TEC were identified in five of the six samples collected in the WWTP area during the 1995 survey. Exceedances of the PEC were reported in four samples and exceedances of two times the PEC were reported in two samples. The highest cadmium concentrations were detected in surface sediments at MR-26 (15.8 mg/kg [ppm]) and at depth of 2-4 ft at MR-29 (11.2 ppm).

Chromium

Chromium concentrations exceeding two times the PEC (222 ppm) were detected in four of the six samples collected in the 1995 survey at depths of 0-6 ft. All samples exceeded the TEC (43.4 ppm). The highest concentrations were detected at sampling locations MR-29 and MR054, both located in the small bay adjacent to the WWTP.

Nickel

Nickel concentrations exceeding the TEC (22.7 ppm) were detected in all six samples collected in the WWTP area during the 1995 survey. In addition, five of the six samples exceeded the PEC (48.6 ppm) and four of the samples exceeded twice the PEC (97.2 ppm). The highest nickel concentrations were detected at sampling locations MR-29 and MR054, both located in the small bay adjacent to the WWTP.

Lead

Lead concentrations exceeding both the TEC and the PEC were detected in five of the six samples collected from the WWTP area during the 1995 survey. The highest lead concentrations were reported at sampling locations MR-29 (298 ppm) and MR054 (248 ppm) at depths of 3-6 ft.

Zinc

Zinc concentrations exceeding both the TEC (121 ppm) and the PEC (459 ppm) were detected at five of the six sampling locations during the 1995 survey. The highest zinc concentrations were reported at sampling locations MR-29 (1,310 ppm) and MR054 (1,120 ppm).

4.3.3 Sway Bridge Area

Both the screening survey conducted by AScI and the Duck and Otter Creeks sediment assessment identified an area of elevated concentrations of constituents located on the eastern shore of the Maumee River immediately adjacent to the southernmost sway bridge. This section discusses the primary COCs detected in this area.

PCBs

The 1995 screening survey identified high concentrations of PCBs (greater than three times the PEC = 2,028 µg/kg [ppb]) throughout the sediment cores in all six of the samples collected near the sway bridge. The area covered by these samples extends from approximately 1,000 ft downstream of the bridge (MR-49) to approximately 1,600 ft upstream of the bridge. The highest PCB concentration of 348,000 ppb (51 times greater than the PEC) was reported at a depth of 2-3 ft at MR-32. MR-32 was located approximately 800 ft upstream of the bridge and approximately 300 ft north of the south bank of the river.

Metals

Cadmium

Cadmium concentrations exceeding the TEC were identified in five of the six samples collected in the sway bridge area during the 1995 survey. Exceedances of the PEC were reported in two samples (MR-33 and MR-49) at depths of 2-4 ft.

Chromium

Chromium concentrations exceeding both the TEC (43.4 mg/kg [ppm]) and PEC (111 ppm) were detected in all six samples collected from the sway bridge area during the 1995 survey. There was no distinct difference in chromium concentrations between surface sediments and deeper sediments.

Nickel

Nickel concentrations exceeded both the TEC (22.7 ppm) and PEC (48.6 ppm) in all six of the samples collected in the sway bridge area during the 1995 survey. There was no distinct difference in nickel concentrations between surface sediments and deeper sediments. The highest nickel concentration (292 ppm) was reported at sampling location MR-49 at a depth of 3-4 ft.

Lead

Lead concentrations exceeding the TEC (35.8 ppm) were detected in all six samples collected from the sway bridge area during the 1995 survey. Lead concentrations also exceeded the PEC (128 ppm) at three of the sampling locations. The highest lead concentrations were reported at MR-12 (260-404 ppm). The data provided in this report do not indicate a trend in lead concentrations with depth at the sway bridge area.

Zinc

Zinc concentrations exceeding the TEC (121 ppm) were detected in all six samples collected from the sway bridge area during the 1995 survey. Zinc concentrations also exceeded the PEC (459 ppm) at three of the sampling locations. The highest zinc concentrations (943-1340 ppm) were reported at MR-12 and MR-49. There was no distinct difference in zinc concentrations between surface sediments and deeper sediments.

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5. SPATIAL ANALYSIS TO DETERMINE HOT SPOT AREAS WITHIN THE MAUMEE AOC

To further define the hot spot areas within the Maumee AOC, analytes with concentrations exceeding their respective PEC in Phase 2 sediment samples were spatially interpolated to develop an estimate of the concentration and distribution of constituents across the study area. Determination of hot spots will allow priority areas to be targeted for remediation.

Interpolation was performed by using a spatially explicit statistical method called kriging. This analysis focused on sediment data from the Phase 2 effort. Sediment data from previous investigations were not utilized in the model; however, these data were evaluated in combination with Phase 2 data in Section 6. Section 5.2 provides a brief overview of the areas identified by the kriging analysis as major impact hot spot areas and moderate impact hot spot areas with less elevated constituent concentrations.

5.1 METHODOLOGY

A three-dimensional model of each analyte measured in the Phase 2 sediment samples was constructed using the statistical interpolation method of kriging with C-Tech's Environmental Visualization System Pro Version. The model region excluded the navigation channel and was bounded on the bottom by the observed refusal depth at each core. Very few cores were identified as having hit refusal at bedrock; instead, refusal was typically at a clay layer. Output included each analyte's concentration at every location, and the results were combined to identify all locations with one or more analyte concentrations above the respective PEC levels, two times above the PEC levels, and three times above the PEC levels.

5.2 MODEL RESULTS FOR THE PHASE 2 STUDY AREA

The kriging analysis identified several hot spots within the Phase 2 study area where one or more analytes were present in concentrations exceeding the PEC at two or more adjacent locations. Figures 5-1A, 5-1B, and 5-1C present the results for all constituents exceeding their respective PECs in Areas A, B, and C. Model results for individual constituents are presented in Appendix G. Section 5.2.1 describes the major impact hot spots; major impact hot spots are defined as areas having concentrations of at least one constituent exceeding three times the PEC at a minimum of two adjacent sample locations. These areas have the largest estimated volumes of sediment with COCs exceeding the PEC. Section 5.2.2 describes moderate impact hot spot areas with less elevated constituent concentrations and smaller estimated sediment volumes exceeding the PEC. The volume estimations presented on Figures 5-1A, 5-1B, and 5-1C do not include contingency or overburden.

5.2.1 Major Impact Hot Spot Areas

Based on the interpolation results, three major impact hot spot areas are identified: (1) the Duck Creek confluence area; (2) the WWTP; and (3) the sway bridge area. The Duck Creek confluence area is located on the eastern side of the channel where Duck Creek empties into the

river (Figure 5-1A). The majority of this area has constituent concentrations of total PCBs and nickel exceeding two times above the PEC; while about one-quarter of the area has constituent concentrations exceeding three times above the PEC. The estimated volume of sediment with constituent concentrations exceeding the PEC is approximately 79,000 cubic yards (cy) (Figure 5-1A).

The WWTP area (Figures 5-1A and 5-1B) has constituent concentrations of total PCBs, total PAHs, and several metals (cadmium, chromium, nickel, lead, and zinc) exceeding three times above the PEC in spots both immediately next to the facility and in spots 500 ft upstream and downstream of the facility. Constituent concentrations exceeding the PEC and two times the PEC are present surrounding the areas where there are constituent exceedances of three times above the PEC. The estimated volume of sediment with total PCBs, total PAHs, and metals concentrations exceeding the PEC is approximately 337,000 cy (Figure 5-1B).

The sway bridge hot spot is located on the eastern side of the channel immediately flanking the upstream sway bridge in the Phase 2 study area (Figures 5-1B and 5-1C). Almost all of this area has concentrations of total PCBs and total PAHs exceeding three times above the PEC, with a small portion at the upstream end of the area exceeding two times above the PEC. The estimated volume of sediment with concentrations exceeding the PEC in the sway bridge area is approximately 125,000 cy (Figure 5 1B and 5-1C).

These major hot spots are discussed in further detail and are evaluated in combination with historical sediment data in Section 6.

5.2.2 Moderate Impact Hot Spot Areas

There are 21 smaller areas with measured concentrations of one or more constituents above PECs (Figures 5-1A, 5-1B, and 5-1C); however, 15 of these smaller areas are not considered moderate impact hot spots, as they have only a single sample with a constituent concentration elevated slightly above the PEC, and thus much smaller estimated volumes of impacted sediments than the three major hot spot areas described in Section 5.2.1.

The other six smaller areas are considered moderate impact hot spots; these either had concentrations of at least one constituent that exceeded the PEC by more than two times or were located in close proximity to one of the three major hot spot areas (Figures 5-1A, 5-1B, and 5-1C). These areas are:

- **A-1**: The majority of area A-1 (Figure 5-1A) has concentrations of total PCBs exceeding the PEC, with a small area exceeding two times and three times above the PEC. Samples at location A-1 were collected to the bottom of the core; however, the adjacent locations in the cove were only sampled at the surface by hand core. Since the model results from location A-1 show elevated total PCB concentrations at depth, there may be potential for elevated total PCB concentrations at depth in the cove samples.

- **B-3 and B-4**: Areas B-3 and B-4 are opposite from the WWTP and had constituent concentrations exceeding the PEC for the majority of both areas, with the exception of a small spot in area B-4 with concentrations exceeding two times greater than the PEC. COCs at these areas were total PCBs, lead, and nickel; which were all also COCs at the WWTP on the other side of the channel.

- **B-5**: Area B-5 is situated on the eastern side of the river and about halfway between the WWTP and sway bridge areas (Figure 5-1B and 5-1C). About one-quarter of this area has constituent concentrations exceeding three times above the PEC, and the remaining three-quarters exceeds either the PEC or two times above the PEC. COCs at this location are lead and total 17PAHs.

- **C-2**: Area C-2 is located on the western side of the river immediately opposite the sway bridge area. COCs at C-2 are arsenic, cadmium, chromium, lead, nickel, zinc, and total 17PAH (Figure 5-1C). These COCs are also present (with the exception of chromium) at elevated concentrations at the sway bridge area.

- **C-4**: Area C-4 is located on the western side of the river just downstream of the U.S. Route 280 bridge. COCs at C-4 are cadmium, lead, and total 17PAH (Figure 5-1C). These COCs are also present (with the exception of lead) at elevated concentrations at the sway bridge area.

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6. COMPARISON OF MAJOR HOT SPOT AREAS WITHIN THE MAUMEE AOC TO HISTORICAL DATA

This section compares the bulk sediment chemistry results and kriging analysis results from the three major impact hot spot areas (the Duck Creek confluence, the WWTP, and the sway bridge), defined in Section 5, to historical sediment data collected in these locations. Since these three locations are likely the priority areas for initial remedial investigations in the Maumee AOC, comparison of data collected in the Phase 2 effort to previous studies will help to refine and verify the magnitude and extent of constituents exceeding benchmarks.

Each individual hot spot identified as a potential target for remediation is described in detail in Sections 6.1, 6.2, and 6.3. The sample locations, the maximum concentration of each constituent greater than the respective PEC, and the comparison of Phase 2 data to historical data are presented for each major impact hot spot area (Figures 6-1, 6-3, and 6-5). No exact sampling coordinates were available for the AScI samples; therefore, the sample locations were estimated to the highest degree of accuracy using the maps provided in the report. Additionally, the estimated depth of impacted material below the sediment surface, as determined from the Phase 2 sediment results and kriging analysis, is presented (Figures 6-2, 6-4, and 6-6). It is important to note that there is uncertainty associated with the depth to bedrock at each coring location. Very few cores were identified as having hit refusal at bedrock (Appendix B); therefore, it is uncertain if impacted material exists below the maximum depths of the cores collected from each location.

6.1 DUCK CREEK CONFLUENCE

The Duck Creek confluence hot spot includes Phase 2 sample locations LMR13-63 and LMR13-91 at the outermost part of the confluence area (Figure 6-1). Maximum total PCB concentrations from both locations exceeded three times the PEC for total PCBs, and nickel concentrations exceeded the PEC by more than three times at LMR13-91.

Two previous sediment investigations were performed at sample locations in close proximity to the Duck Creek hot spot (Figure 6-1). The investigation performed in 2010-2011 found total PCB concentrations exceeding the PEC at six locations (DC-13, DC-16, DC-17, DC-19, DC-21, and DC-25) that extended in a straight line out into the confluence area from just upstream of the discharge point of Duck Creek (Figure 6-1). The highest total PCB concentrations were detected at DC-17 and DC-19 approximately 500 ft from the termination of Duck Creek, suggesting deposition of material from the creek at the confluence. Nickel concentrations exceeding the PEC were also detected at sample locations throughout the confluence area (Figure 6-1). Three locations from this study showed concentrations of cadmium above the PEC (Figure 6-1). Chromium and lead exceedances were detected at only one sample location each.

The 1995 AScI sediment investigation at Duck Creek measured total PCB concentrations from three sample locations within the main river channel, two sample locations near the confluence point of Duck Creek, and four locations from within Duck Creek (AScI 1997) (Figure 6-1).

Sediment collected from MR-51, MR-52, and MR-59 in the river channel had total PCB concentrations more than three times the PEC and approximately four to five times higher than concentrations detected at the Phase 2 sample locations LMR13-63 and LMR13-9, 400 to 600 ft away (Figure 6-1). Locations DC-03 and DC-04 were positioned near the center of the confluence area and also had total PCB concentrations three times the PEC. The elevated total PCB concentration extended upstream into the creek; samples from locations DC-05 and DC-07 had total PCB concentrations that exceeded three times the PEC and that were higher than several downstream concentrations detected in both the AScI and Weston investigations. Six of the sampling locations had concentrations of nickel that exceeded two times the PEC; two of these six locations had concentrations exceeding three times the PEC. These locations were at the mouth of Duck Creek (DC-03) and west of the confluence area in the river channel (MR-51) (Figure 6-1).

When the Phase 2 kriging results for the Duck Creek confluence hot spot are combined with depth data for each sample location, it is clear that the highest concentrations of COCs (three times the PEC) for this area are located in deep sediment; suggesting burial of PCBs and nickel over time (Figure 6-2). This is supported further by the lack of sediment exceeding any PEC at the surface of the Duck Creek hot spot.

Taken together, the Phase 2 sediment data, the historical sediment data, and the Phase 2 data modeled at depth suggest that total PCB concentrations within the lower portion of Duck Creek have been elevated three times above the PEC since 1995, and that concentrations exceeding three times the PEC continue into the immediate confluence area at the mouth of the creek and into the outermost confluence area toward the river channel. The total PCB concentrations are variable between the creek and the outermost confluence area and no distinct trend is discernible from the data available.

6.2 WASTEWATER TREATMENT PLANT

The WWTP hot spot includes Phase 2 sample locations LMR13-42, -43, -44, -45, -46, -81, and -93 (Figure 6-3). The main COCs for this hot spot area were total PCBs and metals. Total PCB concentrations exceeded three times the PEC for all locations except for LMR13-81. Total 17PAHs and five metals each had at least one concentration exceeding the respective PEC or two times the PEC (Figure 6-3).

The 1995 AScI sediment investigation of the Lower Maumee River measured total PCB concentrations from six sample locations in the WWTP hot spot (AScI 1997) (Figure 6-3). Sediment collected from locations MR-054, MR-041, MR-026, and MR-055 had total PCB concentrations greater than three times the PEC. Phase 2 sample locations LMR13-45 and LMR13-43 were collected in close proximity to previous sample locations MR-054 and MR-041. Total PCB concentrations at the Phase 2 locations were much lower than those detected at the 1995 sample locations (Figure 6-3). Four of the six 1995 locations also had metal concentrations (cadmium, chromium, nickel, lead, and zinc) that exceeded two times the PEC in at least one sample.

When the Phase 2 kriging results for the WWTP hot spot are combined with depth data for each sample location, it is clear that the highest concentrations of COCs (greater than three times the PEC) for this area are dispersed throughout the sediment profile, with several areas of high concentrations on the surface as well as areas with elevated concentrations present at depth (Figure 6-4).

Taken together, the Phase 2 sediment data, the historical sediment data, and the Phase 2 data modeled with depth suggest that total PCB and metal concentrations within the WWTP hot spot have been elevated above the PEC since 1995, and that concentrations exceeding three times the PEC are present throughout the sediment profile. This suggests intervals of burial and deposition of contaminated sediments over the past 20 years.

6.3 SWAY BRIDGE

The sway bridge hot spot includes Phase 2 sample locations LMR13-54, -55, -86, -87, -88, -94, and -95 as well as six historical sample locations (Figure 6-5). The Phase 2 sediment results showed that the main COC for this hot spot area was total 17PAH. Total 17PAH concentrations exceeded three times the PEC in all samples from all locations with the exception of LMR13-86. Each Phase 2 sample location had at least one sample with a zinc concentration exceeding the respective PEC in the sway bridge hot spot; concentrations of five other metals (arsenic, lead, mercury, nickel, and zinc) also exceeded their PECs at this hot spot. Total PCB concentrations were below the PEC at all locations except LMR13-86; which had concentrations greater than three times the PEC (Figure 6-5).

The 1995 AScI sediment investigation of the Lower Maumee River sediment measured total PCB and metals concentrations from six sample locations in the sway bridge hot spot area (AScI 1997) (Figure 6-5). All samples collected from each of the six locations had total PCB concentrations greater than three times the PEC, with a maximum concentration of 348,000 µg/kg [ppb]. Samples collected during the Phase 2 effort from this same hot spot had total PCB concentrations below the PEC with the exception of LMR13-86. Most of the 1995 locations also had metal concentrations (cadmium, chromium, nickel, lead, and zinc) that exceeded the PEC in at least one sample. Locations MR-49 and MR-12 both had nickel and zinc concentrations that exceeded two times the PEC in more than one sample (Figure 6-5).

When the Phase 2 kriging results for the sway bridge hot spot are combined with depth data for each sample location, it is clear that the concentrations of COCs exceeding three times the PEC for this area are continuous throughout the sediment profile at all but one of the sample locations (Figure 6-6).

Taken together, the Phase 2 sediment data and the data modeled with depth suggest that elevated constituent concentrations within the sway bridge hot spot are fairly evenly distributed throughout the sediment profile and that total 17PAH is the predominant constituent at this hot spot. The individual PAHs contributing the most to the high concentrations are anthracene, chrysene, fluoranthene, naphthalene, phenanthrene, and pyrene. It is unclear whether or not historical PAH contamination existed at the sway bridge hot spot; the PAH data collected in the

1995 study were considered unreliable and were not used to assess sediment quality for that investigation (see Section 4.3). Although a direct comparison of Phase 2 PAH data to historical data cannot be made, total 17PAH concentrations exceeded three times the PEC in the deepest samples from Phase 2 sway bridge locations, indicating that burial of contamination has occurred over time. The discrepancy in total PCB concentrations in the historical versus Phase 2 samples may be due to the closer proximity of the historical sample locations to the bridge (Figure 6-5); the higher concentrations seen closer to the bridge could indicate a distinct deposit of material containing elevated total PCBs that does not extend further up or downstream from the bridge.

7. CONCLUSIONS

Based on the data collected during the Phase 2 sediment assessment in the Lower Maumee River, the major impact hot spot areas for sediment contamination are the Duck Creek confluence area, the WWTP, and the sway bridge area. These three major hot spots have an estimated total of 666,000 cy of sediment with constituent concentrations exceeding the PEC. Previous sediment investigations also found high concentrations of constituents located in these areas (AScI 1997; Weston 2012a).

The three major impact hot spot areas should be considered priority areas to focus future remediation efforts in the LMR. When evaluating both Phase 2 sediment data and historical sediment data together, it is evident that elevated concentrations of constituents in sediments at these hot spots have been present for several decades, and that burial of elevated concentrations has occurred to some degree at each of the three areas. Both recent data from the Weston study and historical data from the AScI study show that the Duck Creek confluence hot spot has elevated total PCB concentrations that begin in the lower part of the creek and continue into the immediate confluence area. Samples collected during the Phase 2 effort in the river at the outermost part of the confluence area show that total PCB concentrations are elevated into the channel. The data collected in 2010 and 2011 by Weston could be merged into an Environmental Visualization System model with the Phase 2 data collected by EA to determine if additional data are needed to better characterize nature and extent of consituents in the confluence area. Additionally, since both previous investigations found elevated total PCB concentrations within the creek, further evaluation of total PCBs in the creek warrants consideration.

Data from both the WWTP and sway bridge hotspots show burial of elevated constituent concentrations exceeding three times the PEC as well as some surface deposits with elevated concentrations. Sediment from both the WWTP and sway bridge hot spots had high concentrations of several metals with concentrations exceeding two and three times the PEC; however, the primary COCs for these areas are total PCBs and total 17PAHs due to both frequency and magnitude of exceedance. The high total PCB concentrations detected in the 1995 samples from the immediate vicinity of the sway bridge should be confirmed, particularly if there is potential that the total PCB concentrations could exceed Toxic Substances Control Act levels.

As discussed in Section 5.2.2, there are several moderate impact hot spot areas that demonstrated concentrations of one or more constituents above PECs. The majority of these locations contained only a single sample with a constituent concentration elevated slightly above the PEC, or had less than half the volume of contaminated sediment as compared to the three major hot spot areas (Figures 5-1A through 5-1C). As a result, the majority of these areas are not considered indicative of hot spots warranting priority remediation. Both the proximity to one of the three major impact hot spots and the elevated constituent concentrations found at areas B-3, B-4, and C-2 indicate that the larger hot spots may be acting as a source to these smaller deposits. Additionally, the elevated total PCB concentrations in deep samples from area A-1 suggest that there may be a need to further delineate potential elevated total PCB concentrations

in the cove of Area A, as only surface samples were collected at these locations during the Phase 2 investigation.

8. REFERENCES

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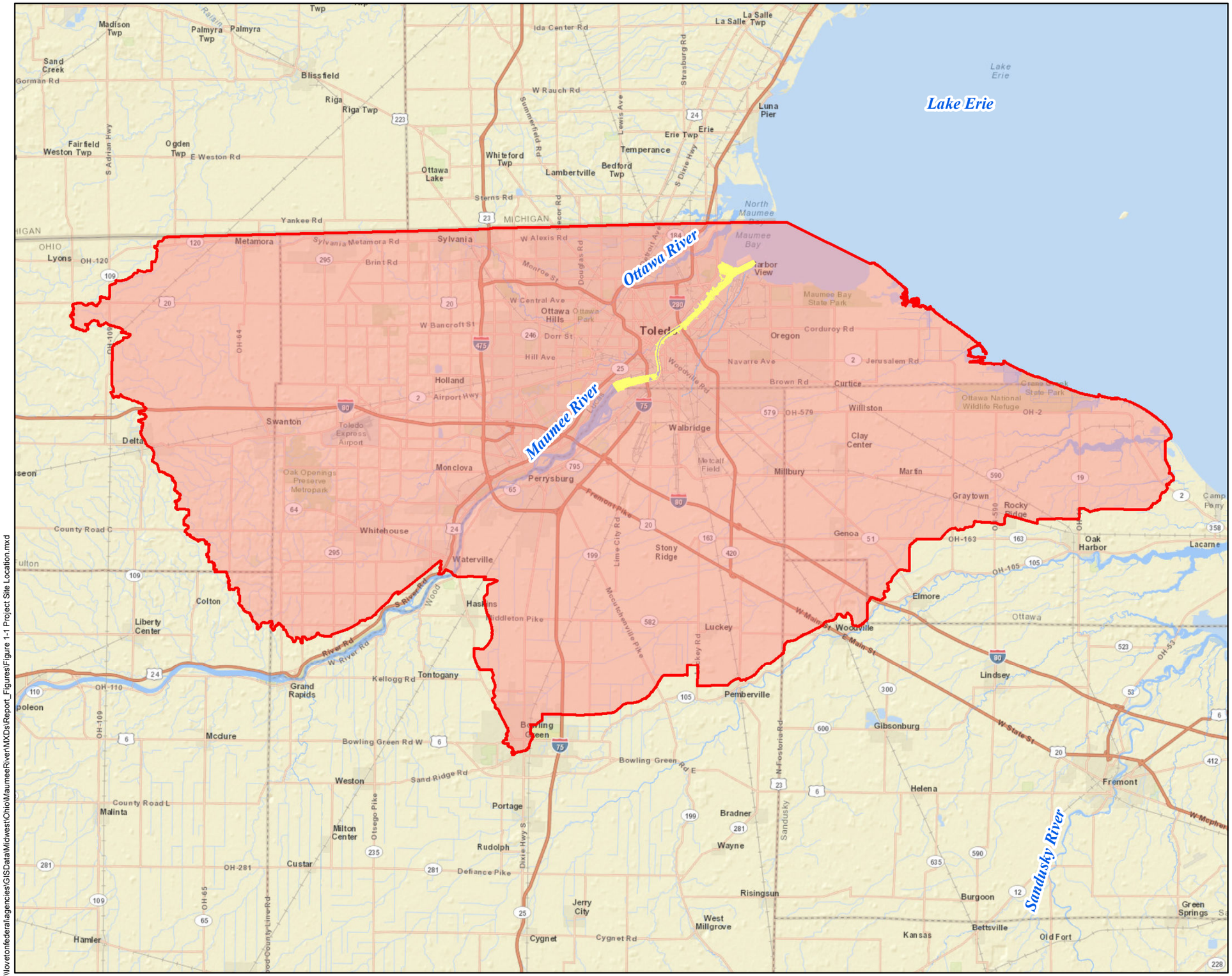
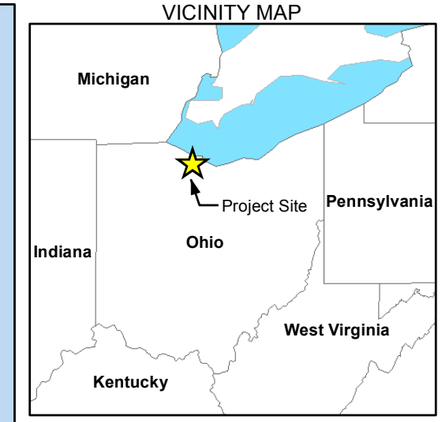


VICINITY MAP



Legend

Maumee AOC

Project Site

Phase I and II Study Area

Data Sources: EPA 2013, USGS 2013
Map Date: May 2014

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Miles

EA Engineering, Science, and Technology, Inc.

FIGURE ES-1
Project Site Location

Phase II Lower Maumee River
Assessment of Contaminated Sediments

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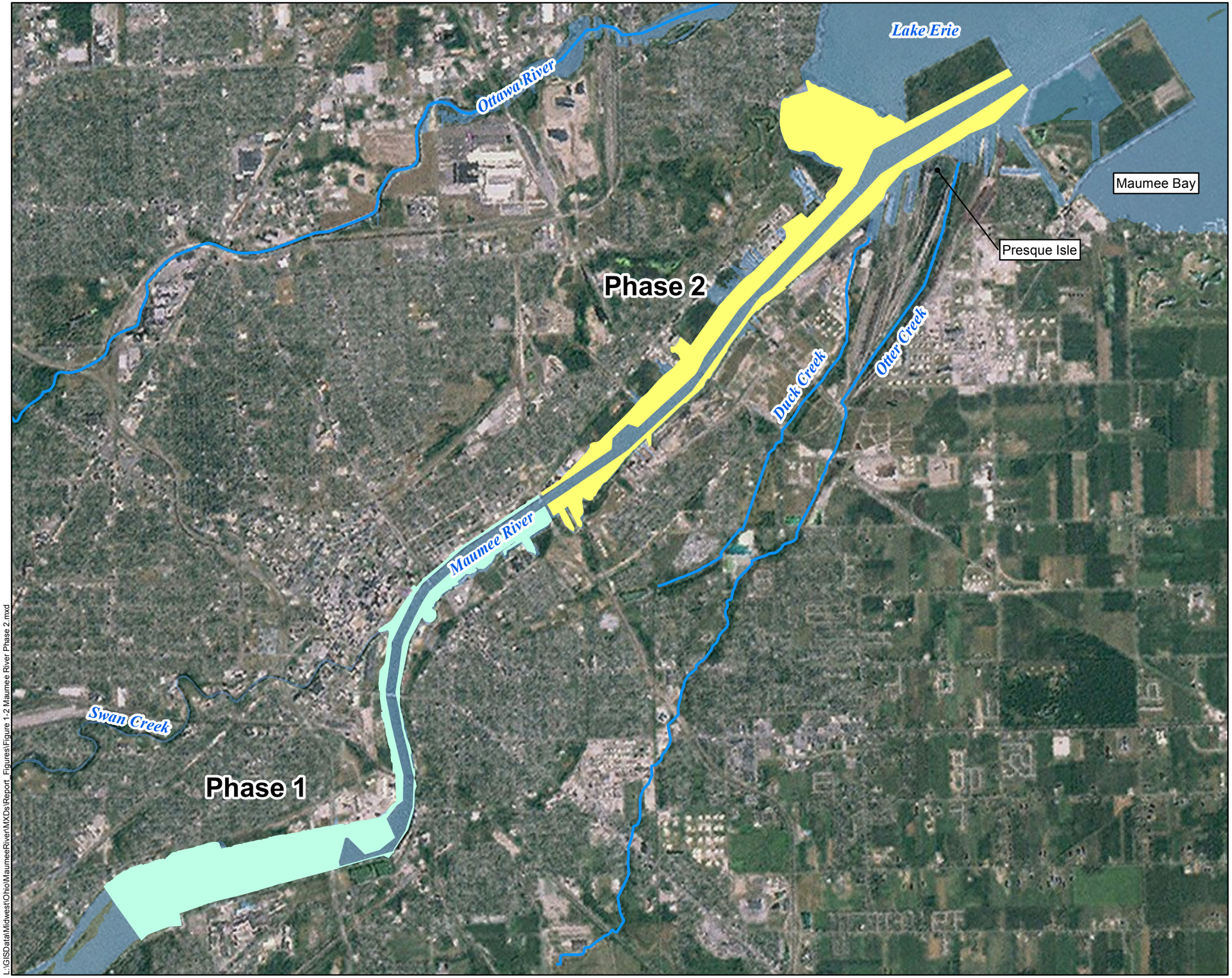

VICINITY MAP



Legend

- Phase 2 Study Area
- Phase 1 Study Area

Note: Phase 1 and 2 Study Areas do not include the federal navigation channel

Data Sources: EPA 2012, USGS 2013
Map Date: February 2014

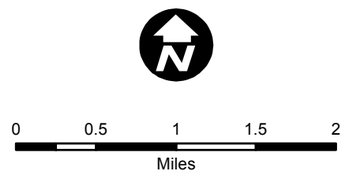

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FIGURE ES-2
Maumee River Phase 2

Phase II Lower Maumee River
Assessment of Contaminated Sediments

L:\GIS Data\Midwest\Ohio\MaumeeRiver\MXDs\Report_Figures\Figure 1-2 Maumee River Phase 2.mxd



VICINITY MAP

Legend

- Phase 2 Study Area
- Phase 1 Study Area

Note: Phase 1 and 2 Study Areas do not include the federal navigation channel

Data Sources: EPA 2012, USGS 2013
Map Date: February 2014

0 0.5 1 1.5 2
Miles

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FIGURE ES-3
Hot Spots within Phase I Area Identified in Previous Studies
Phase II Lower Maumee River Assessment of Contaminated Sediments

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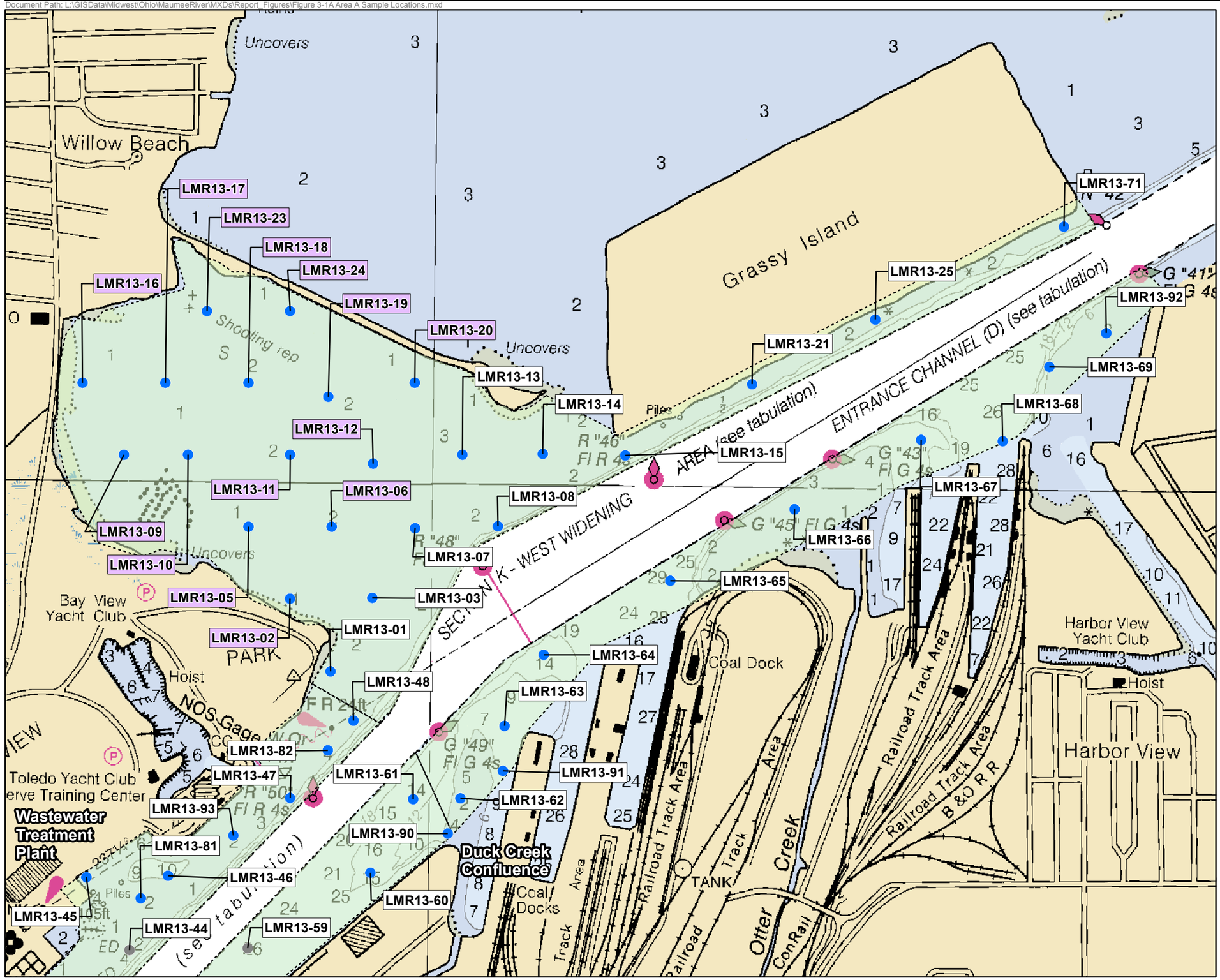
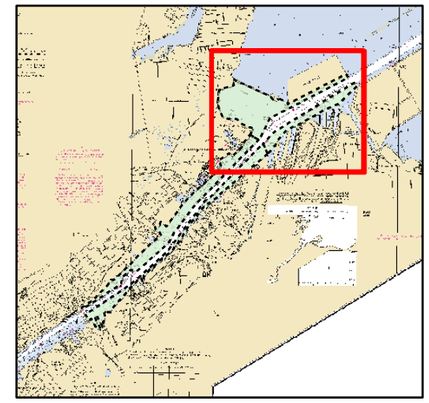


VICINITY MAP



Legend

- Area A Coring Location
- Area B Coring Location
- Phase 2 Study Area

LMR 13-XX — EA Sample Location

LMR 13-XX — Ohio EPA Surface Coring Location

0 250 500 750 1,000
Feet

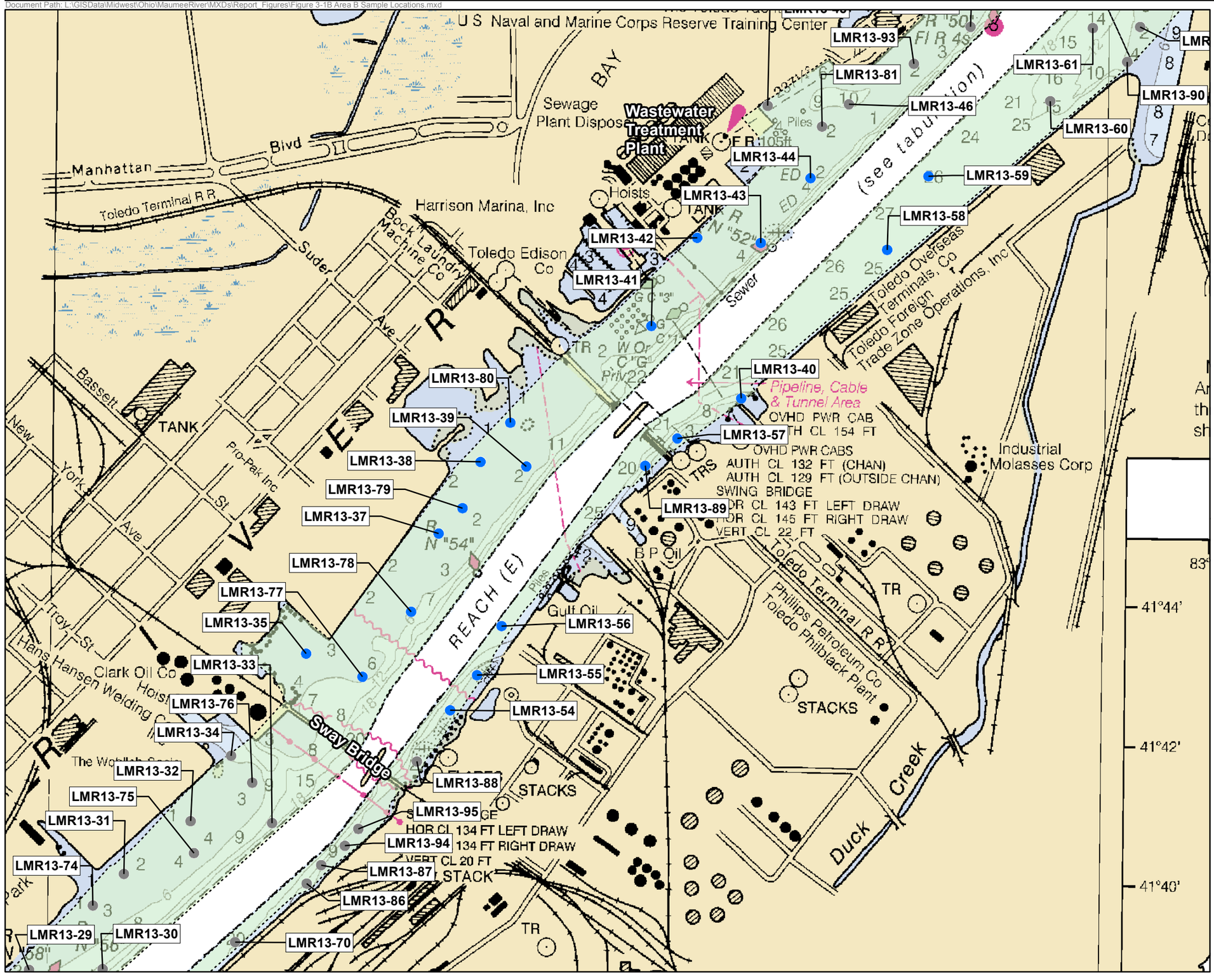
Map Created: 2/7/2014
Basemap: NOAA Navigational Chart: 14847, Edition: 31 February 2005

EA Engineering, Science, and Technology, Inc.

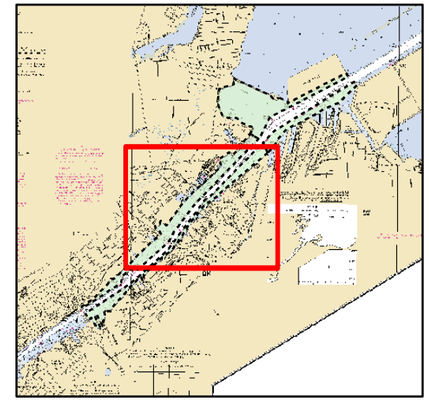
FIGURE ES-4A

Coring Locations in Area A for Phase 2 of the Lower Maumee River Site Characterization (June 2013)

Document Path: L:\GISData\Midwest\Ohio\MaumeeRiver\MXDs\Report_Figures\Figure 3-1B Area B Sample Locations.mxd



VICINITY MAP



Legend

- Area B Coring Location
- Areas A/C Coring Location
- Phase 2 Study Area

0 250 500 750 1,000
Feet

Map Created: 2/7/2014
Basemap: NOAA Navigational Chart: 14847, Edition: 31 February 2005

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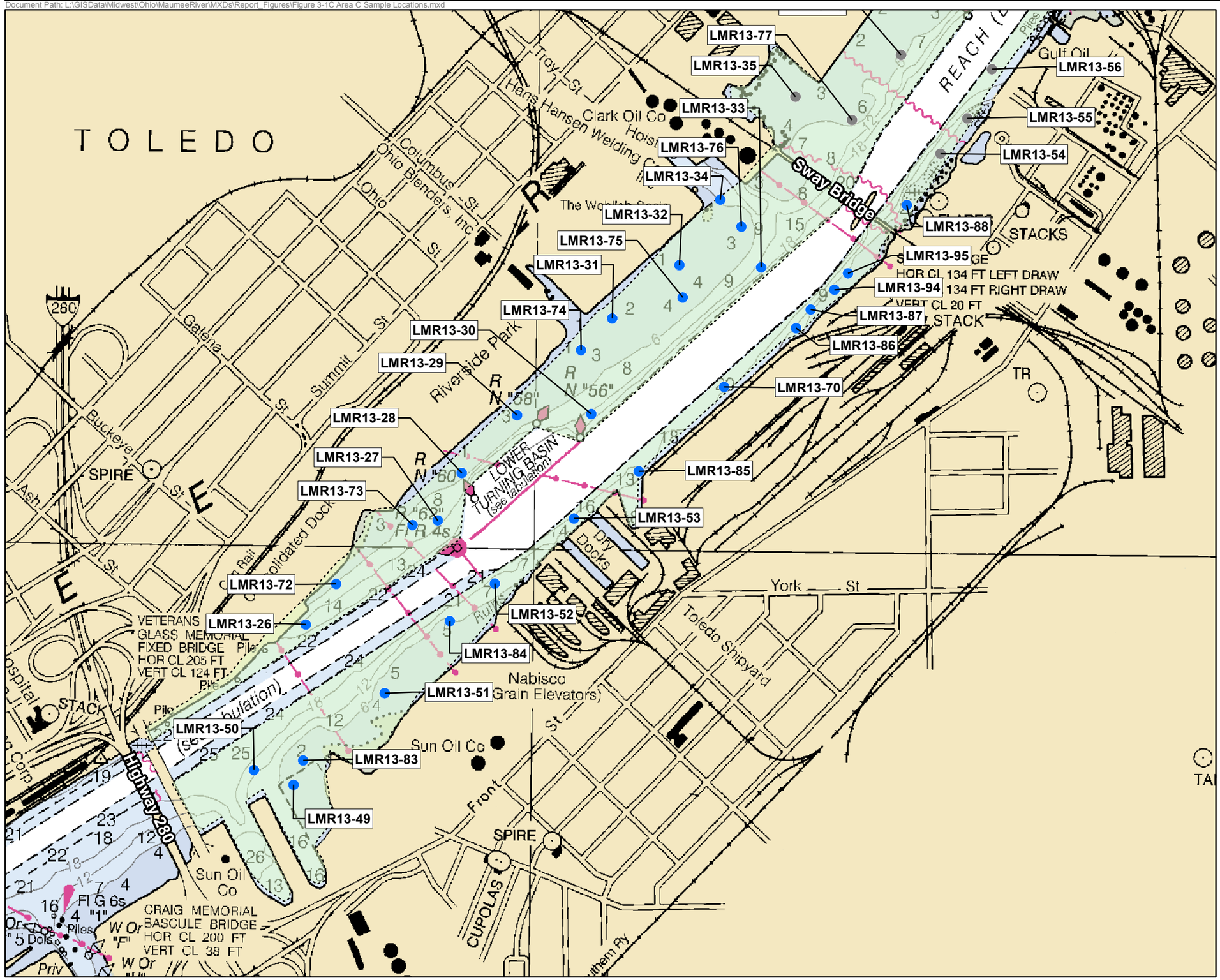
FIGURE ES-4B

Coring Locations in Area B for Phase 2 of the Lower Maumee River Site Characterization (June 2013)

Document Path: L:\GISData\Midwest\Ohio\MaumeeRiver\MXDs\Report_Figures\Figure 3-1C Area C Sample Locations.mxd



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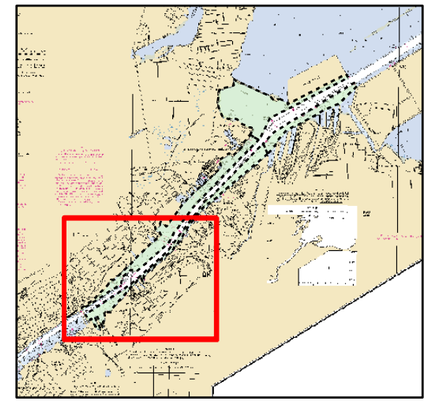

Legend

- Area C Coring Location
- Area B Coring Location
- Phase 2 Study Area

0 250 500 750 1,000
Feet

Map Created: 2/7/2014
Basemap: NOAA Navigational Chart: 14847,
Edition: 31 February 2005

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FIGURE ES-4C

Coring Locations in Area C for Phase 2 of the Lower Maumee River Site Characterization (June 2013)

Area A

LMR13-23 LMR13-24 LMR13-16 LMR13-17 LMR13-18 LMR13-19 LMR13-20 LMR13-09 LMR13-10 LMR13-11 LMR13-12 LMR13-13 LMR13-14 LMR13-15 LMR13-05 LMR13-06 LMR13-07 LMR13-08 LMR13-02 LMR13-03 LMR13-01 LMR13-48 LMR13-82 LMR13-47 LMR13-61 LMR13-62 LMR13-93 LMR13-90 LMR13-45 LMR13-46 LMR13-81 LMR13-44 LMR13-59 LMR13-60 LMR13-63 LMR13-91 LMR13-64 LMR13-65 LMR13-66 LMR13-67 LMR13-68 LMR13-69 LMR13-71 LMR13-92 LMR13-25 LMR13-21

A-1
23,300 cu yd
Total PCBs

A-2
1,300 cu yd
Total PAHs

A-3
1,200 cu yd
Total PAHs

A-4
5,100 cu yd
Total PCBs

A-5
5,100 cu yd
Total PAHs

A-6
1,000 cu yd
Total PAHs

A-7
2,300 cu yd
Cadmium
Total PCBs

A-8
500 cu yd
Total PCBs

A-9
300 cu yd
Pb

Duck Creek Confluence
79,500 cu yd
Ni, Total PCBs

Duck Creek Confluence

WWTP

VICINITY MAP



Legend

- Navigation Channel
- Sample Location
- Area of Spatial Analysis (Area A)
- ≥ 3x PEC
- ≥ 2x PEC
- ≥ PEC

0 300 600 900 1,200
Feet

1 inch = 800 feet

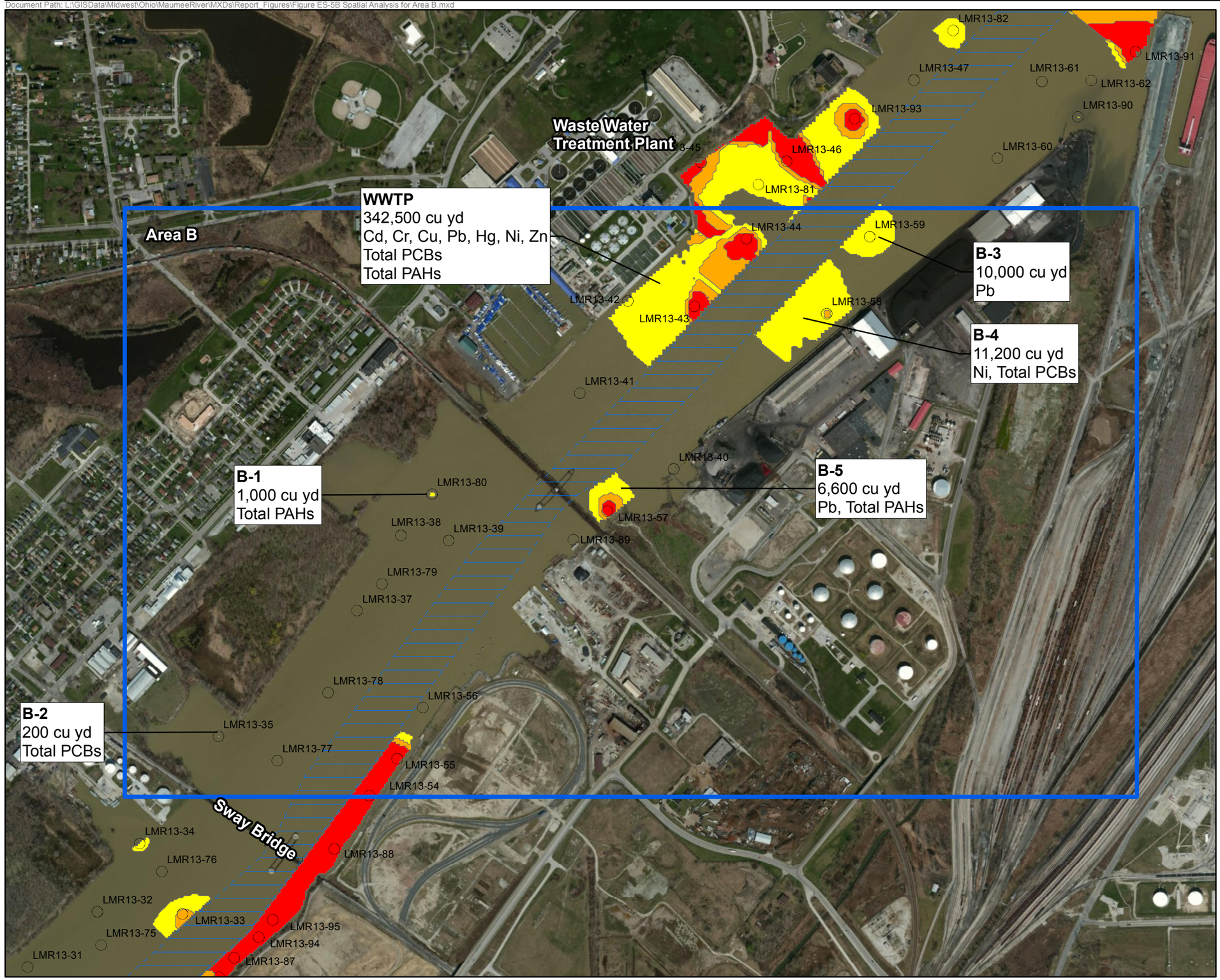
Map Created: 5/16/2014
Basemap: ESRI 2012

EA Engineering, Science, and Technology, Inc.

FIGURE ES-5A

Spatial Analysis for Area A-
Phase 2 Lower Maumee River

Document Path: L:\GISData\Midwest\Ohio\MaumeeRiver\MXDs\Report_Figures\Figure ES-5B Spatial Analysis for Area B.mxd



VICINITY MAP



Legend

- Navigation Channel
- Sample Location
- Area of Spatial Analysis (Area B)
- ≥ 3x PEC
- ≥ 2x PEC
- ≥ PEC

N

0 300 600 900 1,200
Feet

1 inch = 800 feet

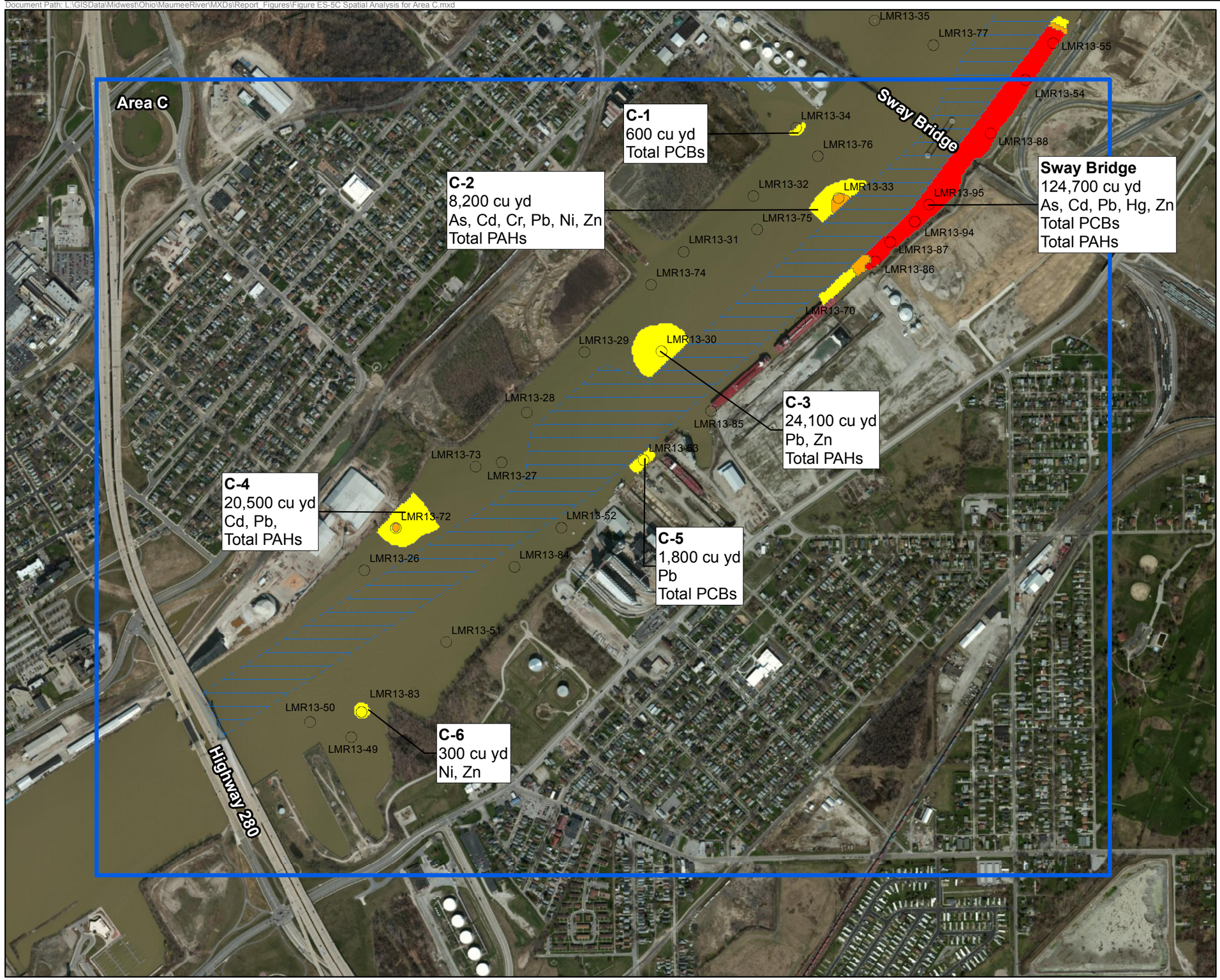
Map Created: 5/16/2014
Basemap: ESRI 2012

EA Engineering, Science, and Technology, Inc.

FIGURE ES-5B

Spatial Analysis for Area B-
Phase 2 Lower Maumee River

Document Path: L:\GISData\Midwest\Ohio\MaumeeRiver\MXDs\Report_Figures\Figure ES-5C Spatial Analysis for Area C.mxd



VICINITY MAP



Legend

- Navigation Channel
- Sample Location
- Area of Spatial Analysis (Area C)
- ≥ 3x PEC
- ≥ 2x PEC
- ≥ PEC

N

0 300 600 900 1,200
Feet

1 inch = 800 feet

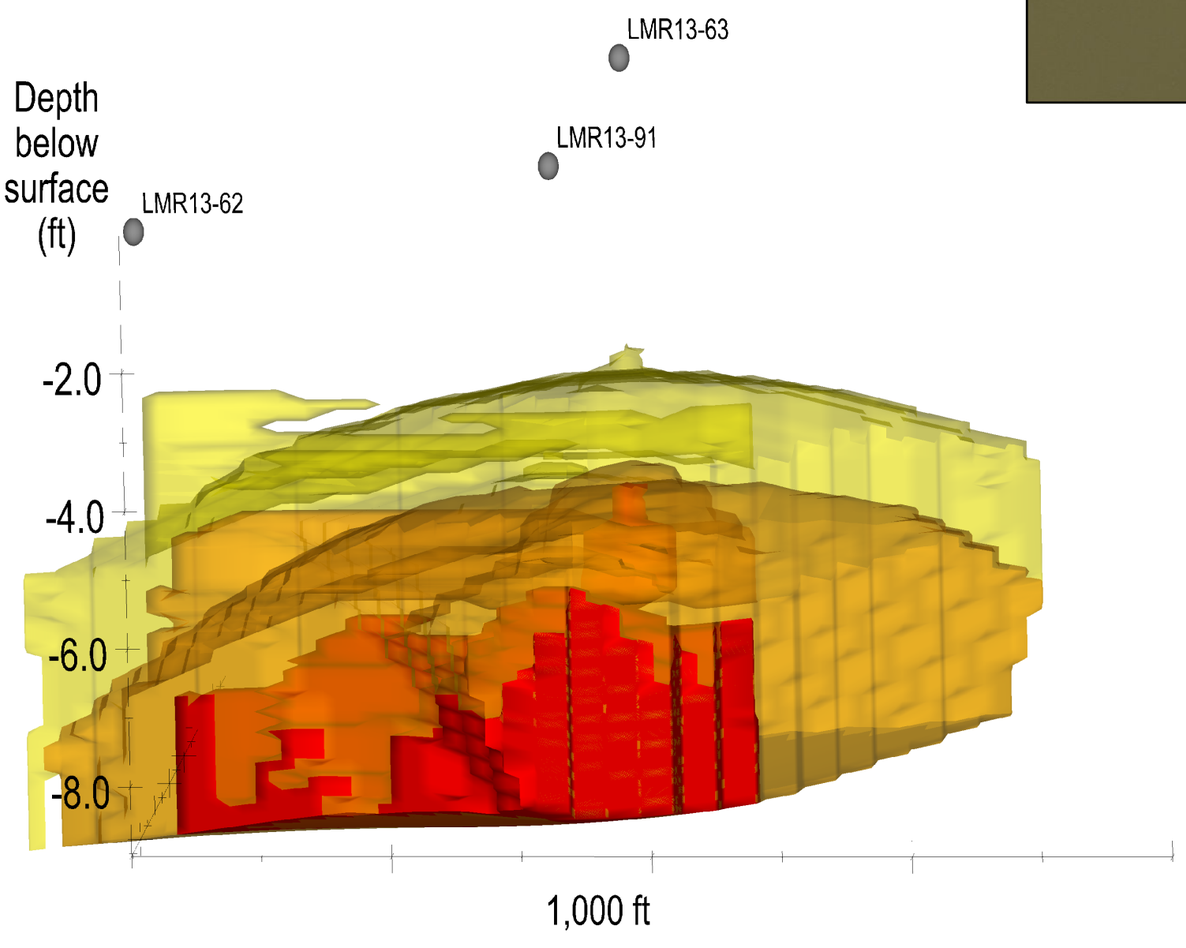
Map Created: 5/16/2014
Basemap: ESRI 2012

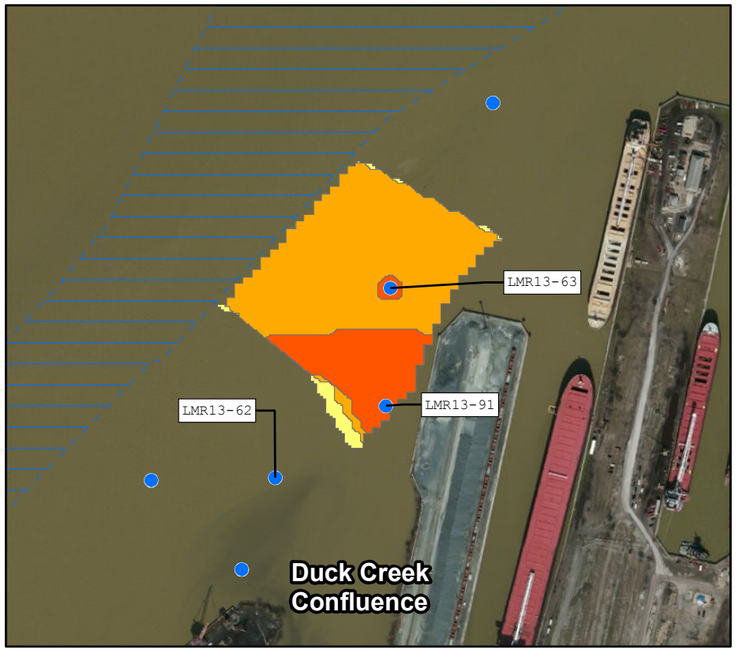
EA Engineering, Science, and Technology, Inc.

FIGURE ES-5C

Spatial Analysis for Area C-
Phase 2 Lower Maumee River

Sediment Benchmarks for Contaminants				
Analyte	**Unit**	**PEC**	**PECx 2**	**PEC x3**
Total PCBs ND=0	µg/kg	676	1352	2028
Total PAH 17 ND=1/2RL	ug/kg	22800	45600	68400
Arsenic	mg/kg	33.0	66.0	99.0
Cadmium	mg/kg	4.98	9.96	14.9
Chromium	mg/kg	111	222	333
Copper	mg/kg	149	298	447
Lead	mg/kg	128	256	384
Mercury	mg/kg	1.06	2.12	3.18
Nickel	mg/kg	48.6	97.2	146
Zinc	mg/kg	459	918	1377





VICINITY MAP



Legend

Sampling Locations

- EA 2013
- Navigation Channel

Interpolated Results

- 3x PEC Exceedance
- 2x PEC Exceedance
- PEC Exceedance

0 250 500 750 1,000
Feet

1 inch = 500 feet
Scale applies to aerial inset

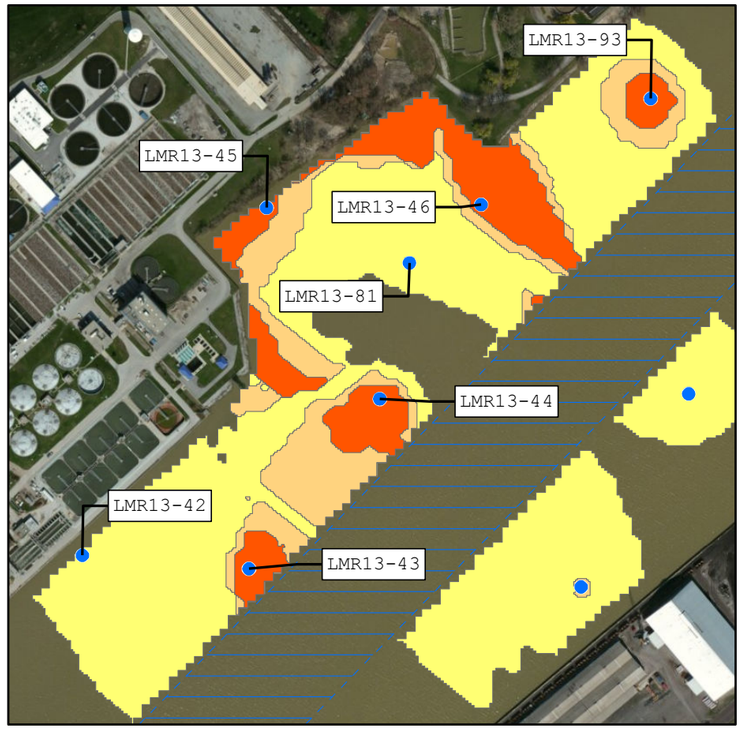
Map Created: 2/7/2014
Basemap: ESRI 2012

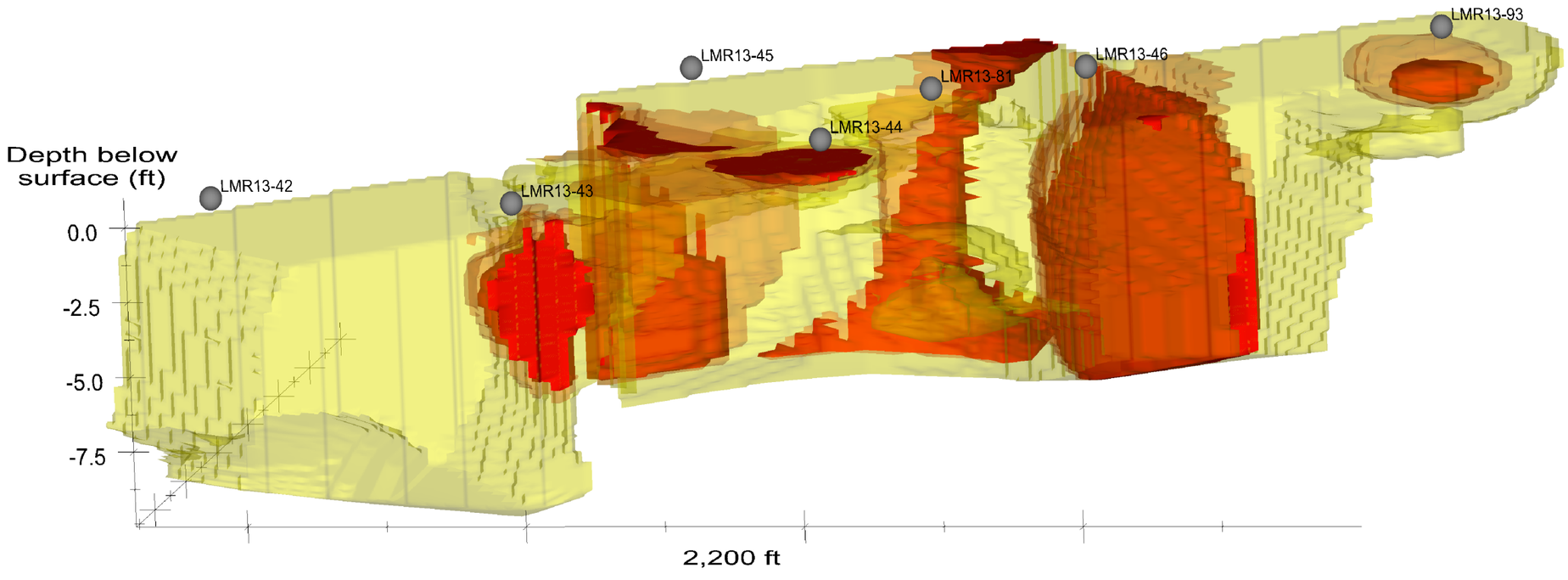
EA Engineering, Science, and Technology, Inc.

FIGURE ES-6

Spatial Analysis With Depth for the Duck Creek Confluence Hot Spot-Phase 2 Lower Maumee River

Sediment Benchmarks for Contaminants				
Analyte	**Unit**	**PEC**	**PECx 2**	**PEC x3**
Total PCBs ND=0	µg/kg	676	1352	2028
Total PAH 17 ND=1/2RL	ug/kg	22800	45600	68400
Arsenic	mg/kg	33.0	66.0	99.0
Cadmium	mg/kg	4.98	9.96	14.9
Chromium	mg/kg	111	222	333
Copper	mg/kg	149	298	447
Lead	mg/kg	128	256	384
Mercury	mg/kg	1.06	2.12	3.18
Nickel	mg/kg	48.6	97.2	146
Zinc	mg/kg	459	918	1377





VICINITY MAP



Legend

Sampling Locations

- EA 2013
- Navigation Channel

Interpolated Results

- 3x PEC Exceedance
- 2x PEC Exceedance
- PEC Exceedance

0 250 500 750 1,000
Feet

1 inch = 500 feet
Scale applies to aerial inset

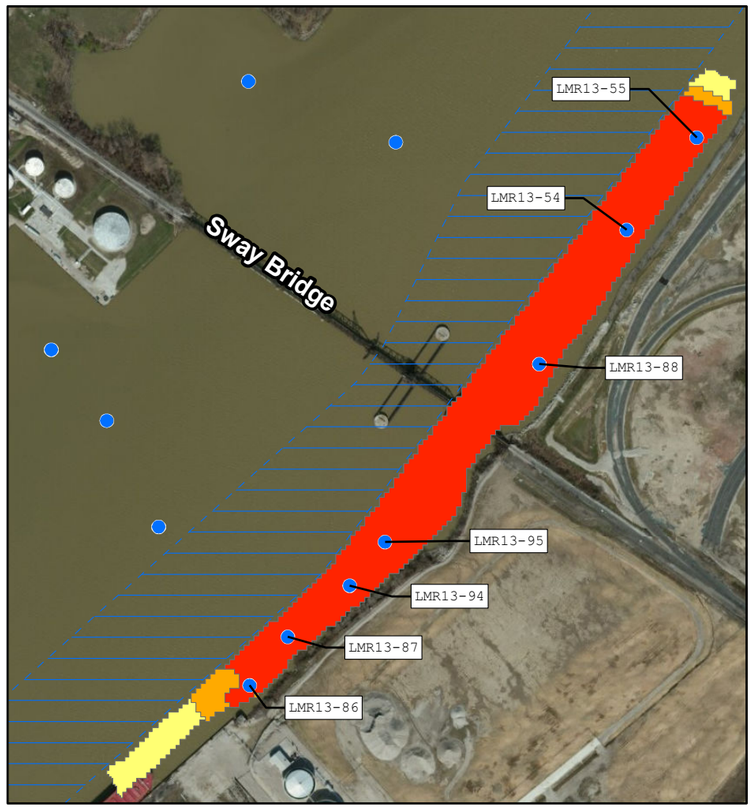
Map Created: 2/7/2014
Basemap: ESRI 2012

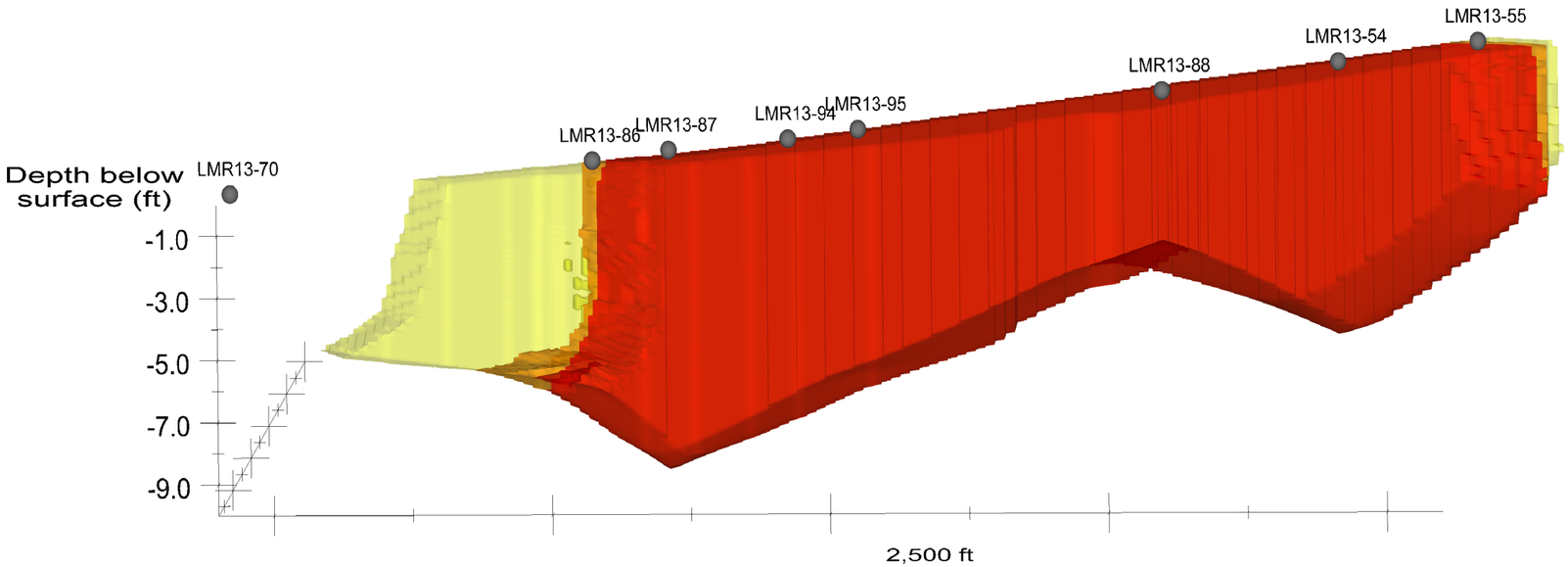
EA Engineering, Science, and Technology, Inc.

FIGURE ES-7

Spatial Analysis With Depth for the Wastewater Treatment Plant Hot Spot-Phase 2 Lower Maumee River

Sediment Benchmarks for Contaminants				
Analyte	**Unit**	**PEC**	**PECx 2**	**PEC x3**
Total PCBs ND=0	µg/kg	676	1352	2028
Total PAH 17 ND=1/2RL	ug/kg	22800	45600	68400
Arsenic	mg/kg	33.0	66.0	99.0
Cadmium	mg/kg	4.98	9.96	14.9
Chromium	mg/kg	111	222	333
Copper	mg/kg	149	298	447
Lead	mg/kg	128	256	384
Mercury	mg/kg	1.06	2.12	3.18
Nickel	mg/kg	48.6	97.2	146
Zinc	mg/kg	459	918	1377





VICINITY MAP



Legend

Sampling Locations

- EA 2013
- Navigation Channel

Interpolated Results

- 3x PEC Exceedance
- 2x PEC Exceedance
- PEC Exceedance

0 250 500 750 1,000
Feet

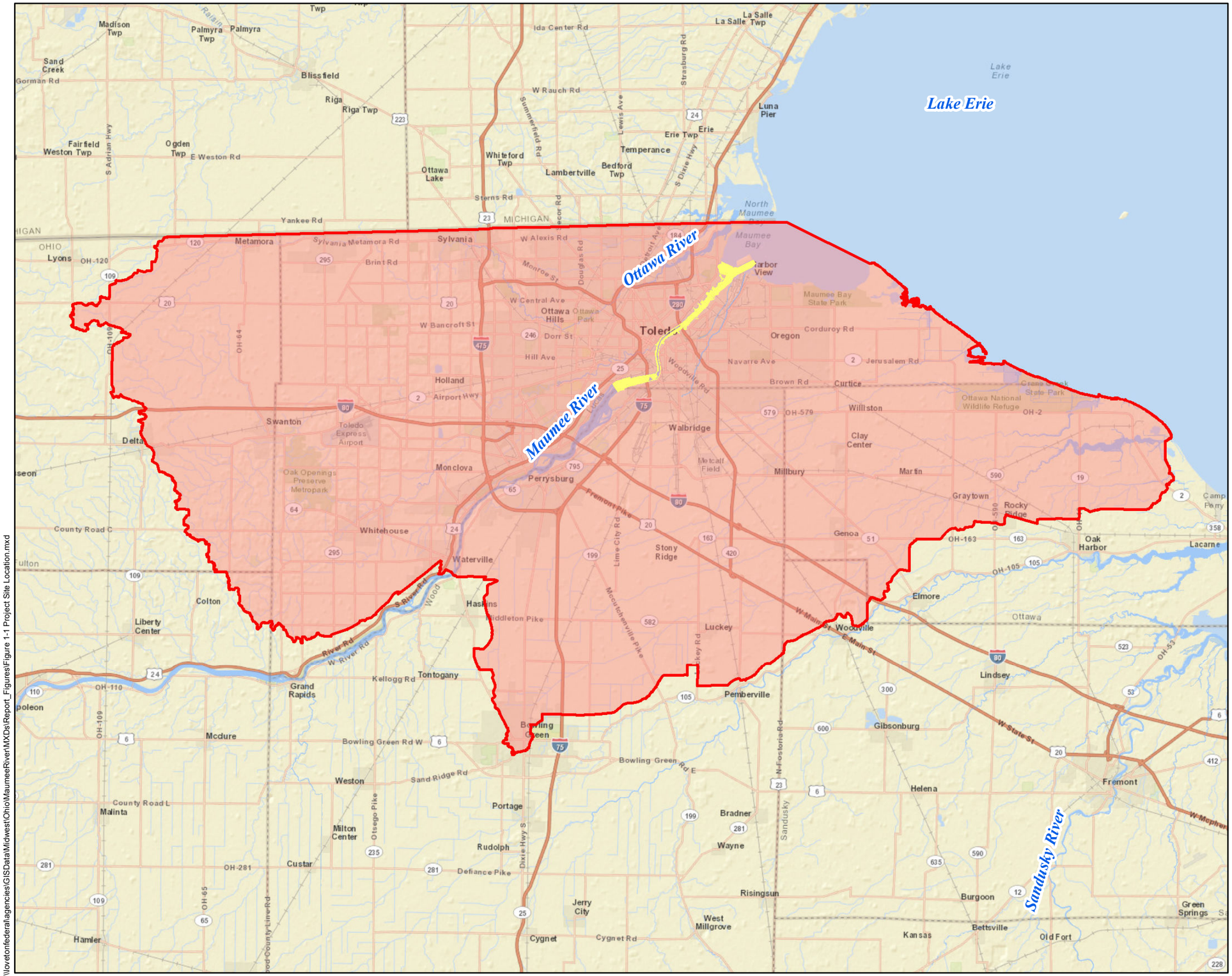
1 inch = 500 feet
Scale applies to aerial inset

Map Created: 2/7/2014
Basemap: ESRI 2012

EA Engineering, Science, and Technology, Inc.

FIGURE ES-8

Spatial Analysis With Depth for the Sway Bridge Hot Spot-
Phase 2 Lower Maumee River



VICINITY MAP



Legend

Maumee AOC

Project Site

Phase I and II Study Area

Data Sources: EPA 2013, USGS 2013
Map Date: May 2014

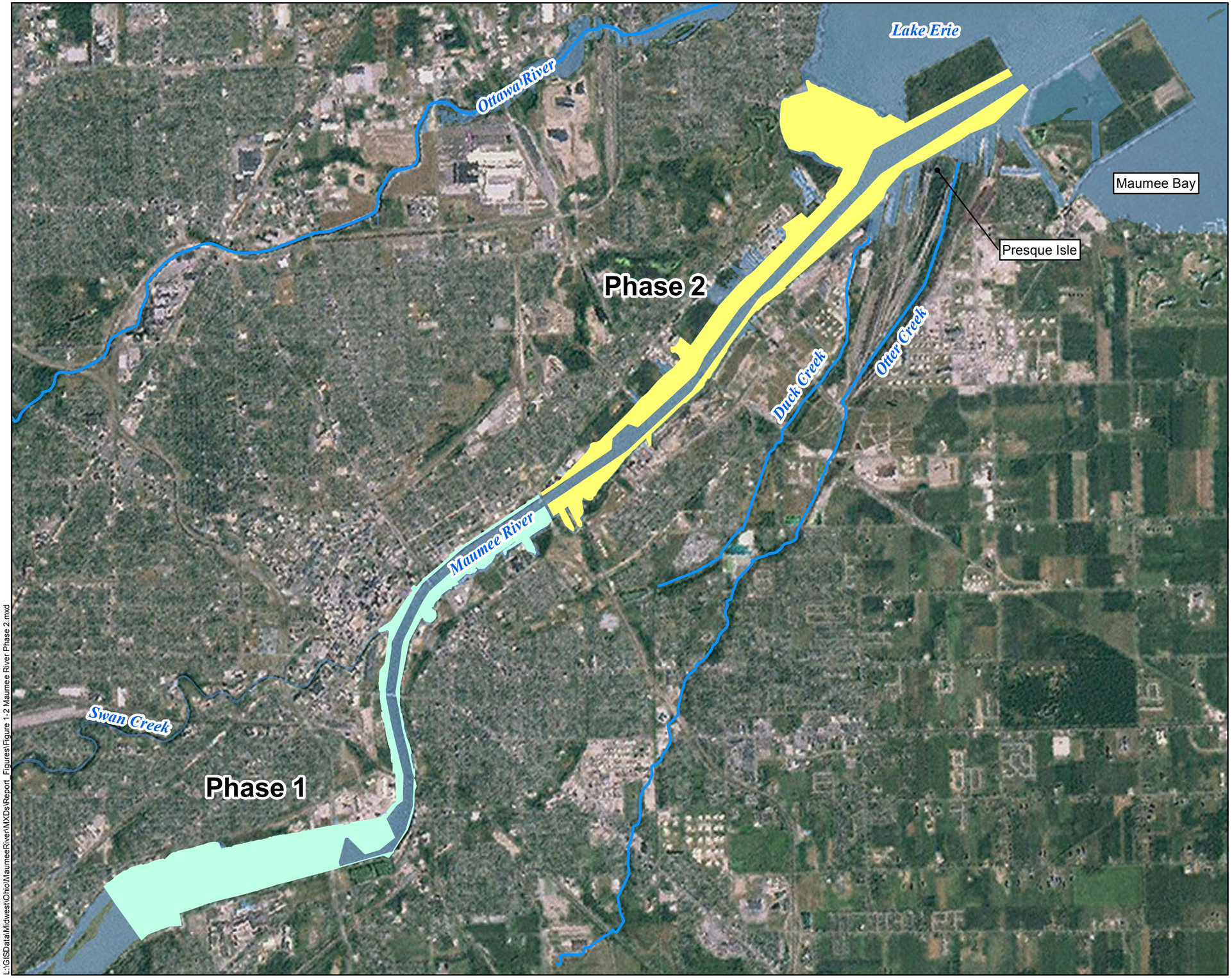
0 1 2 4 6 8
Miles

EA Engineering, Science, and Technology, Inc.

FIGURE 1-1
Project Site Location

Phase II Lower Maumee River
Assessment of Contaminated Sediments

\\lovetonfederalagencies\GISData\Midwest\Ohio\MaumeeRiver\MXDs\Report_Figures\Figure 1-1 Project Site Location.mxd



VICINITY MAP



Legend

- Phase 2 Study Area
- Phase 1 Study Area

Note: Phase 1 and 2 Study Areas do not include the federal navigation channel

Data Sources: EPA 2012, USGS 2013
Map Date: February 2014

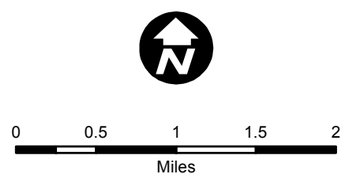


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FIGURE 1-2
Maumee River Phase 2

Phase II Lower Maumee River
Assessment of Contaminated Sediments

L:\GIS Data\Midwest\Ohio\MaumeeRiver\MXDs\Report_Figures\Figure 1-2 Maumee River Phase 2.mxd



VICINITY MAP



Legend

- Phase 2 Study Area
- Phase 1 Study Area

Note: Phase 1 and 2 Study Areas do not include the federal navigation channel

Data Sources: EPA 2012, USGS 2013
Map Date: February 2014

0 0.5 1 1.5 2
Miles

EA Engineering, Science, and Technology, Inc.

FIGURE 2-1
Hot Spots within Phase I Area Identified in Previous Studies
Phase II Lower Maumee River Assessment of Contaminated Sediments

L:\GIS\Data\Midwest\Ohio\MaumeeRiver\MXDs\Report_Figures\Figure 2-1 Site Features.mxd

Document Path: L:\GIS Data\Midwest\Ohio\MaumeeRiver\MXDs\Report_Figures\Figure 3-1 Overview of Sample Locations.mxd

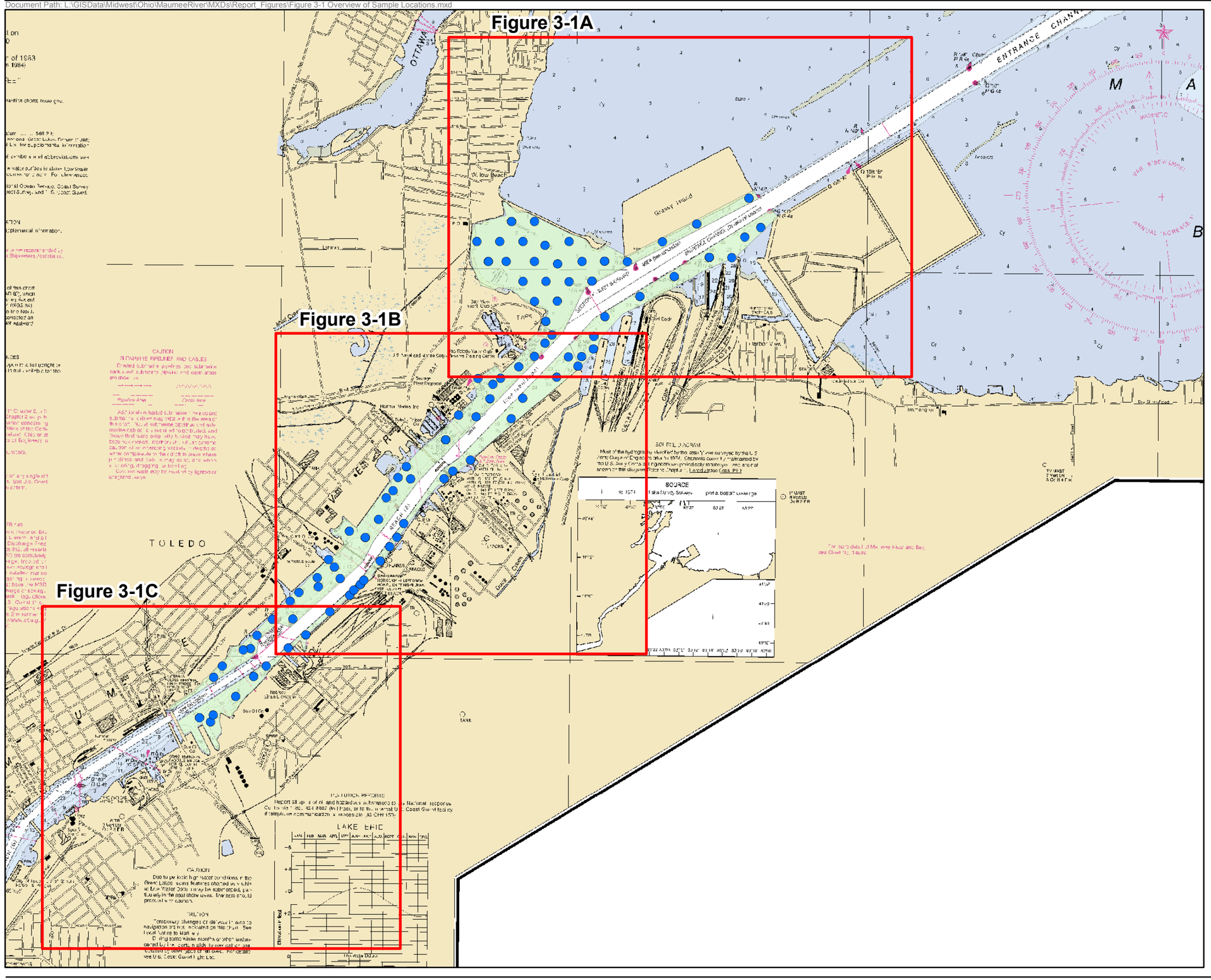
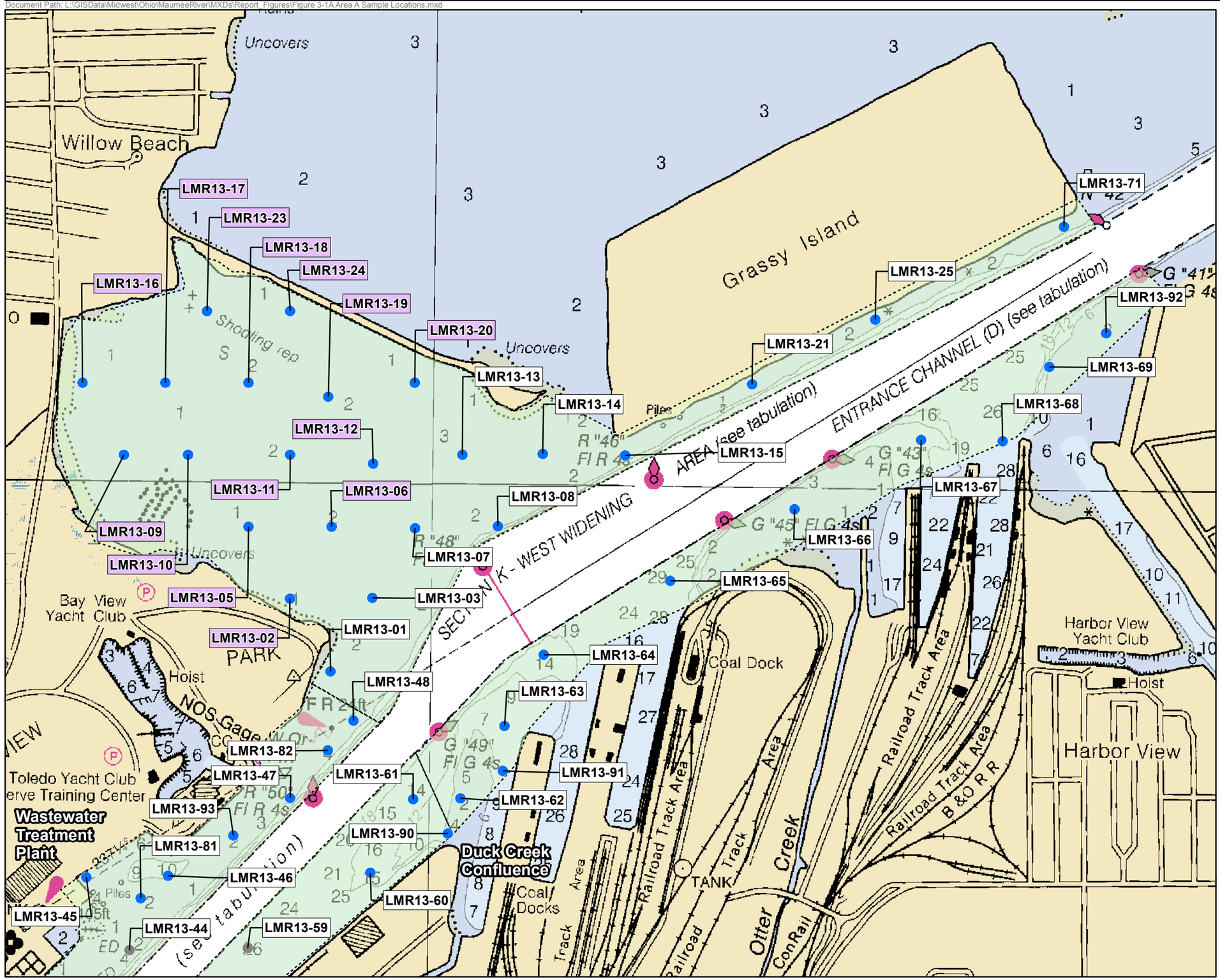
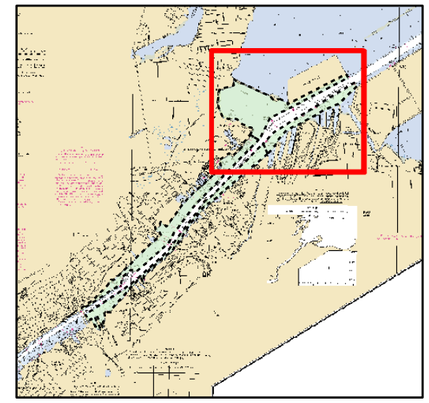


Figure 3-1A
Figure 3-1B
Figure 3-1C
TOLEDO
LAKE ERIE
ENTRANCE CHANNEL
MAIN CHANNEL
Grassy Island
Mud Creek
Ottawa River
Swan Creek
Maumee River
Turtle Creek
Otter Creek
Duck Creek
Ironton Channel
Immaculata
Horseshoe Marina Inc
Toledo Yacht Club
Toledo Edison Co Bayshore Power Plant
Toledo Edison Co Acme Power Plant
Toledo Coast Guard Station
Toledo Harbor Light
Toledo Shipping Pilots Association
Toledo Terminal R.R.
Toledo Edison Co

Document Path: L:\GISData\Midwest\Ohio\MaumeeRiver\MXDs\Report_Figures\Figure 3-1A Area A Sample Locations.mxd



VICINITY MAP



Legend

- Area A Coring Location
- Area B Coring Location
- Phase 2 Study Area

LMR 13-XX — EA Sample Location

LMR 13-XX — Ohio EPA Surface Coring Location

N

0 250 500 750 1,000
Feet

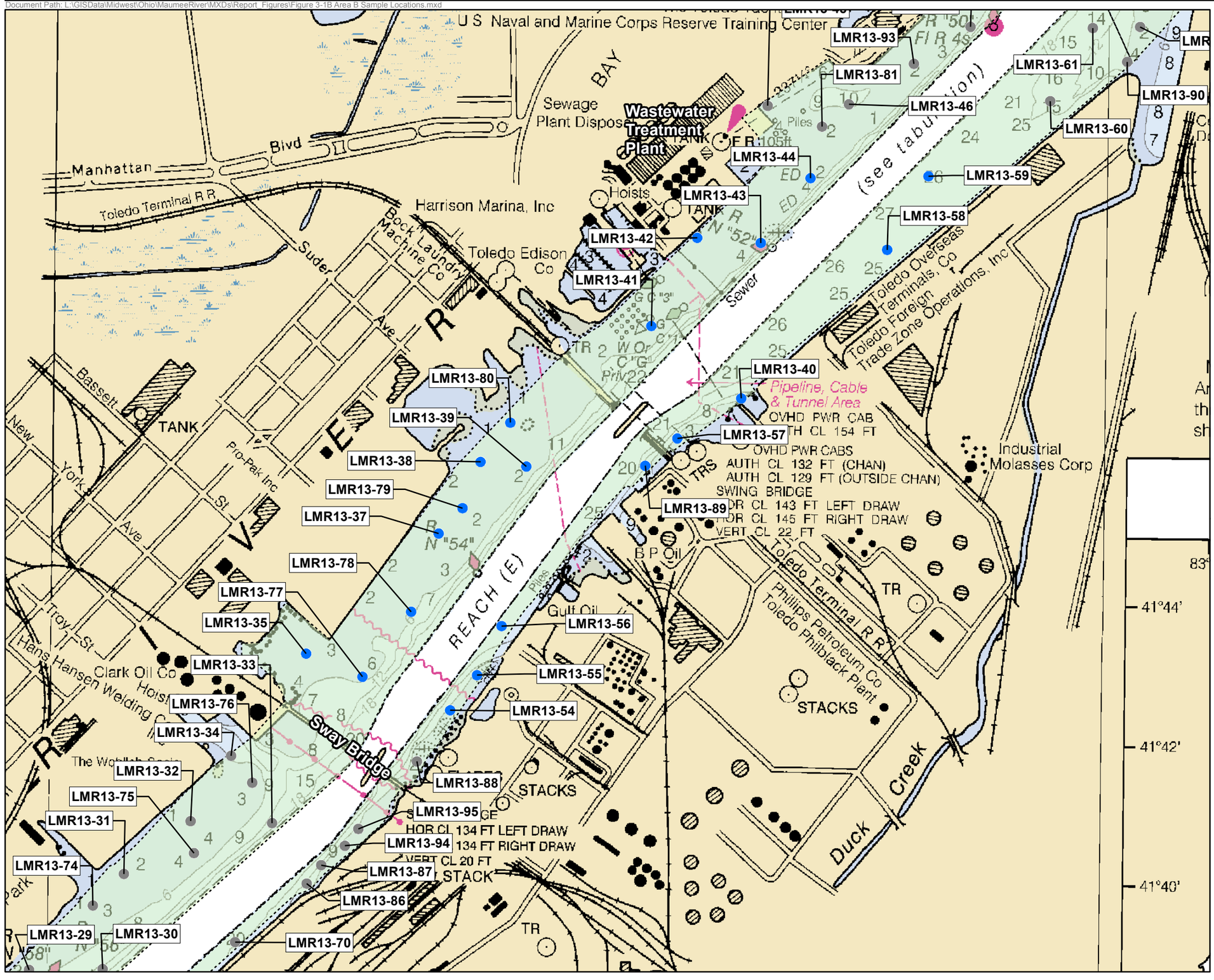
Map Created: 2/7/2014
Basemap: NOAA Navigational Chart: 14847, Edition: 31 February 2005

EA Engineering, Science, and Technology, Inc.

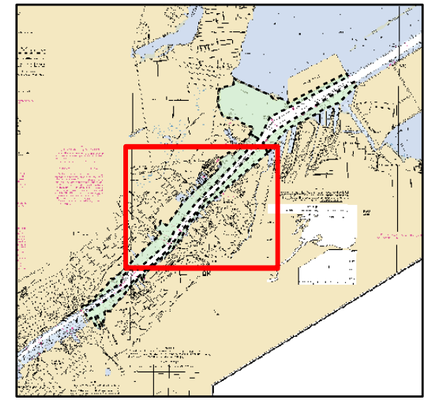
FIGURE 3-1A

Coring Locations in Area A for Phase 2 of the Lower Maumee River Site Characterization (June 2013)

Document Path: L:\GISData\Midwest\Ohio\MaumeeRiver\MXDs\Report_Figures\Figure 3-1B Area B Sample Locations.mxd



VICINITY MAP



Legend

- Area B Coring Location
- Areas A/C Coring Location
- Phase 2 Study Area

0 250 500 750 1,000
Feet

Map Created: 2/7/2014
Basemap: NOAA Navigational Chart: 14847, Edition: 31 February 2005

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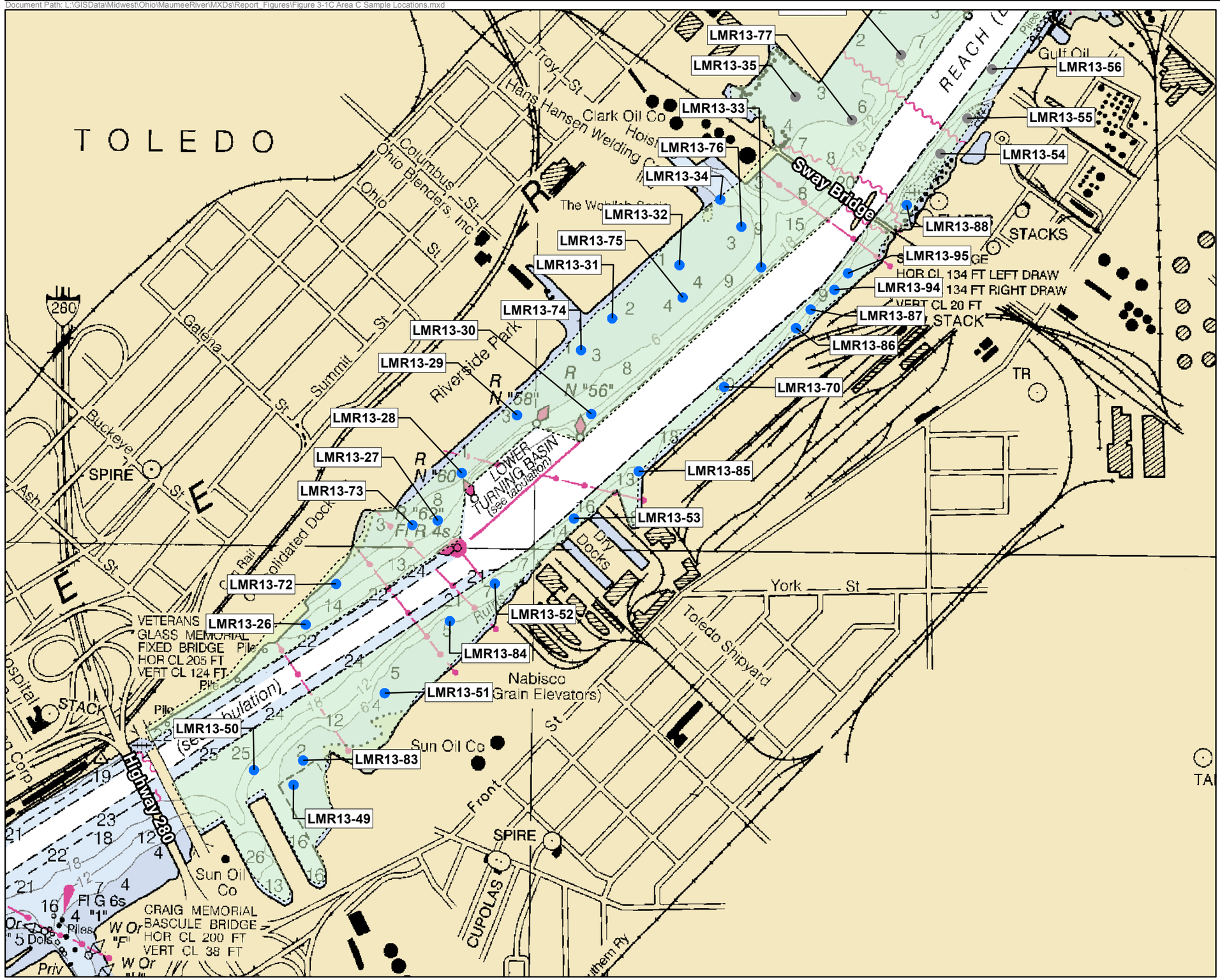
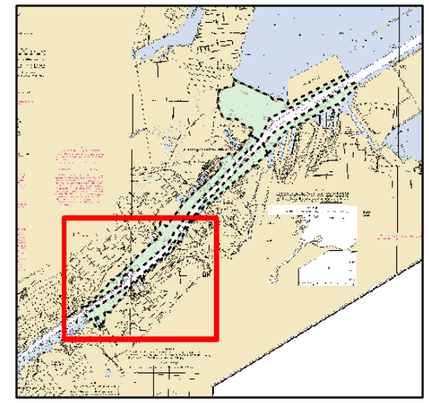
FIGURE 3-1B

Coring Locations in Area B for Phase 2 of the Lower Maumee River Site Characterization (June 2013)

Document Path: L:\GISData\Midwest\Ohio\MaumeeRiver\MXDs\Report_Figures\Figure 3-1C Area C Sample Locations.mxd



VICINITY MAP



Legend

- Area C Coring Location
- Area B Coring Location
- Phase 2 Study Area

N

0 250 500 750 1,000
Feet

Map Created: 2/7/2014
Basemap: NOAA Navigational Chart: 14847,
Edition: 31 February 2005

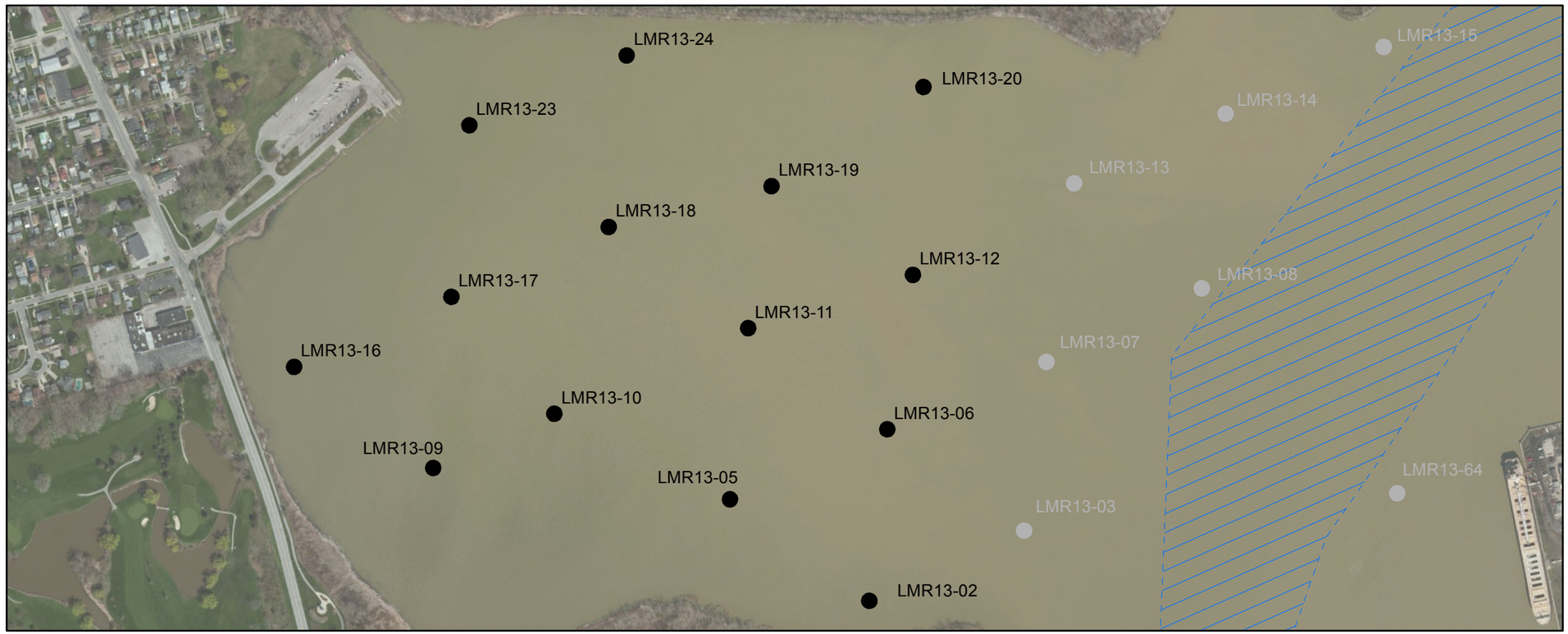
EA Engineering, Science, and Technology, Inc.

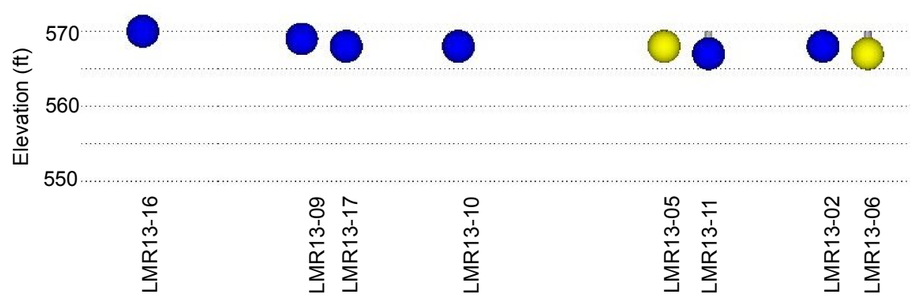
FIGURE 3-1C

Coring Locations in Area C for Phase 2 of the Lower Maumee River Site Characterization (June 2013)

Document Path: L:\GISData\Midwest\Ohio\MaumeeRiver\MXDs\Report_Figures\OilGrease_AreaA Cove.mxd







VICINITY MAP



Legend

- Sample Locations (Area A- Cove)
- Sample Locations (Area A- Channel)
- Navigation Channel

Oil and Grease Concentrations

- > 5,000 mg/kg
- 3,000 - 5,000 mg/kg
- 1,000 - 3,000 mg/kg
- < 1,000 mg/kg & Non-Detect

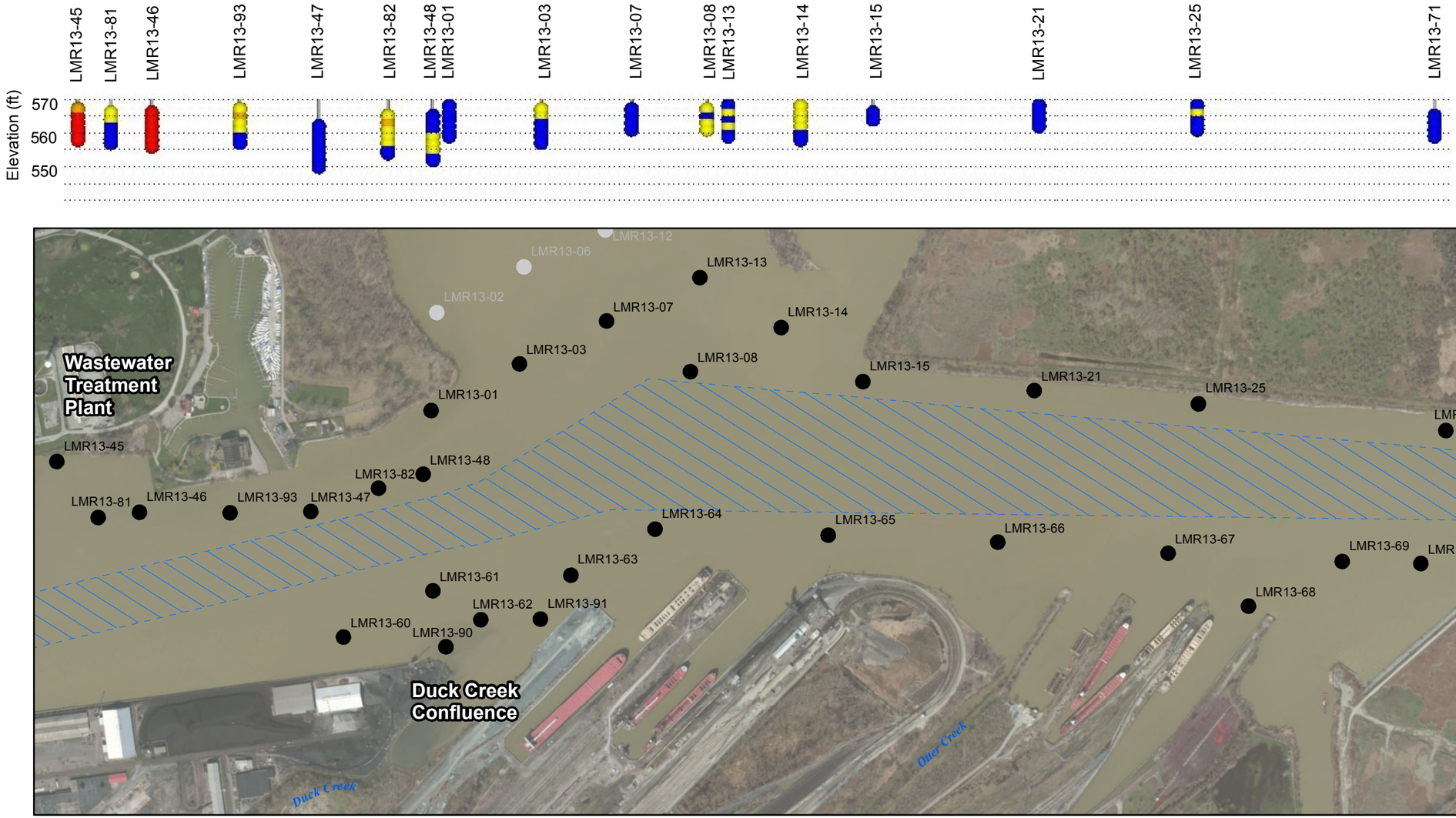
0 250 500 750 1,000
Feet

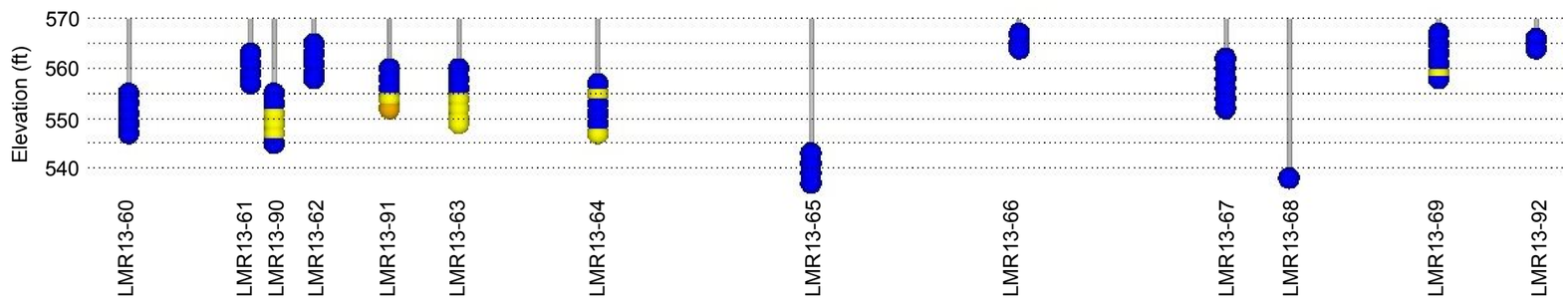
Map Created: 2/7/2014
Basemap: ESRI 2012

EA Engineering, Science, and Technology, Inc.

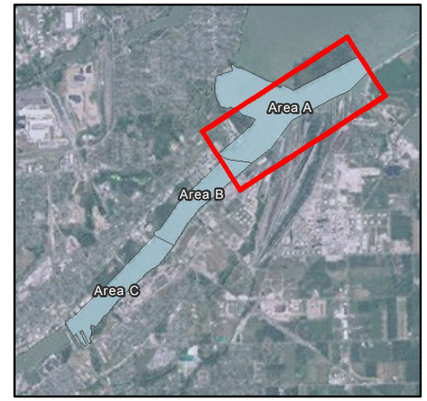
FIGURE 4-1A (Cove)

Oil & Grease Concentrations (mg/kg) Detected in Area A Cove - Phase 2 Lower Maumee River Assessment of Contaminated Sediments





VICINITY MAP



Legend

- Sample Locations (Area A- Channel)
- Sample Locations (Area A- Cove)
- Navigation Channel

Oil and Grease Concentrations

- > 5,000 mg/kg
- 3,000 - 5,000 mg/kg
- 1,000 - 3,000 mg/kg
- < 1,000 mg/kg & Non-Detect

0 250 500 750 1,000
Feet

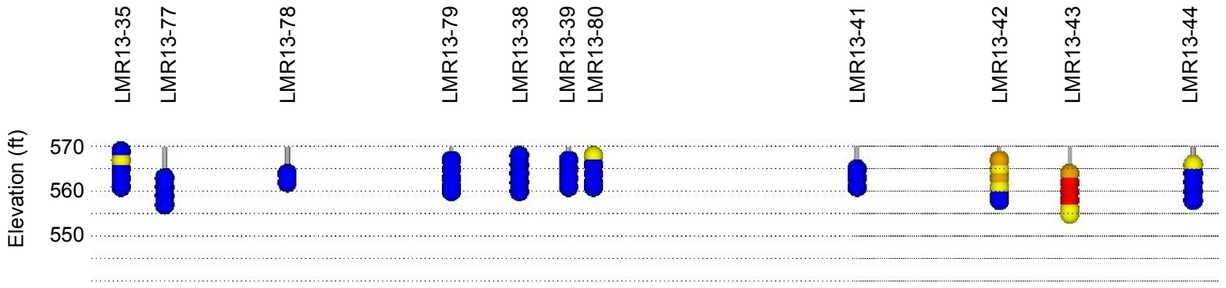
Map Created: 1/27/2014
Basemap: ESRI 2012

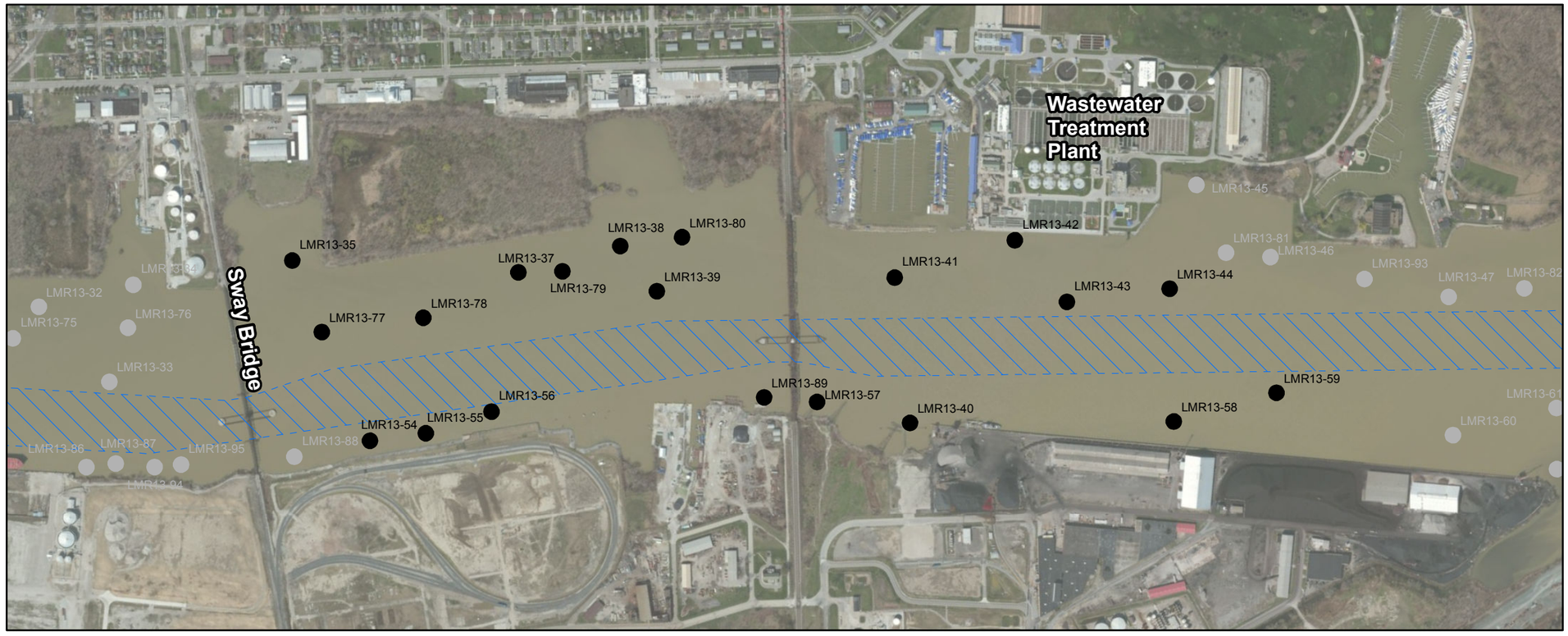
EA Engineering, Science, and Technology, Inc.

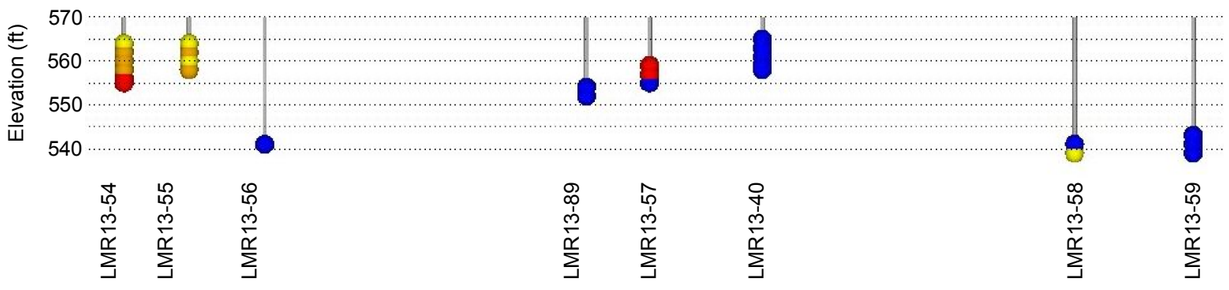
FIGURE 4-1A (Channel)

Oil & Grease Concentrations (mg/kg) Detected in Area A Channel - Phase 2 Lower Maumee River Assessment of Contaminated Sediments

Document Path: L:\GISData\Midwest\Ohio\MaumeeRiver\MXDs\Report_Figures\OilGrease_AreaB.mxd







VICINITY MAP



Legend

- Sample Locations (Area B)
- Sample Locations (Areas A/C)
- Navigation Channel

Oil and Grease Concentrations

- > 5,000 mg/kg
- 3,000 - 5,000 mg/kg
- 1,000 - 3,000 mg/kg
- < 1,000 mg/kg & Non-Detect

N

0 250 500 750 1,000
Feet

Map Created: 1/31/2014
Basemap: ESRI 2012

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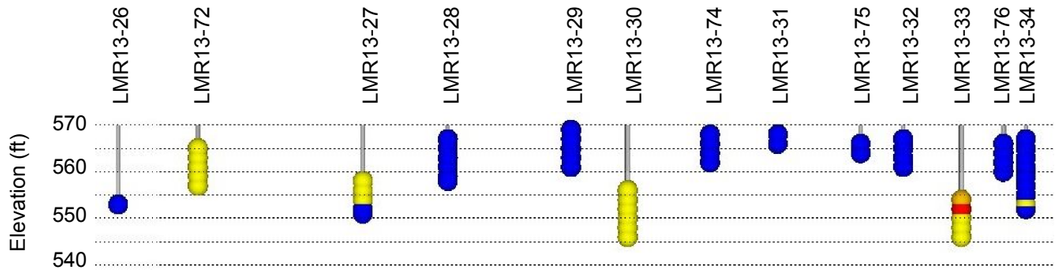
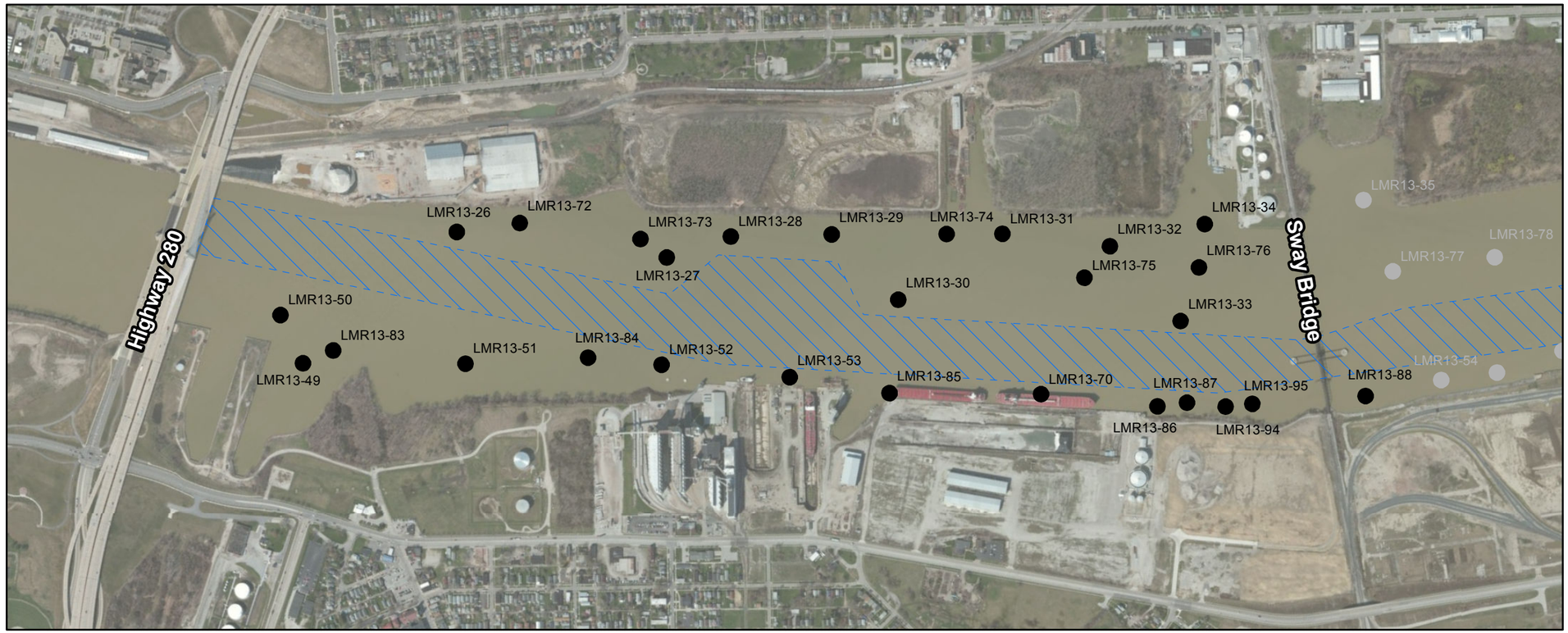
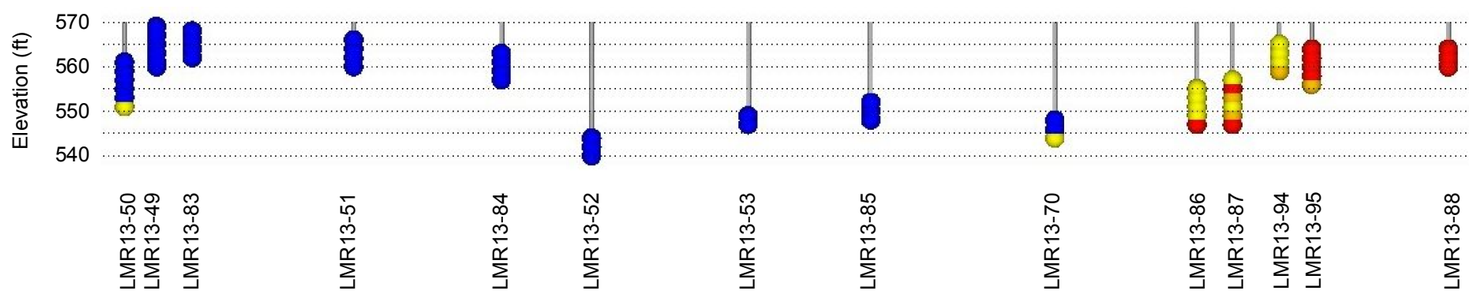
FIGURE 4-1B

Oil & Grease Concentrations (mg/kg) Detected in Area B - Phase 2 Lower Maumee River Assessment of Contaminated Sediments







VICINITY MAP



Legend

- Sample Locations (Area C)
- Sample Locations (Area B)
- Navigation Channel

Oil and Grease Concentrations

- > 5,000 mg/kg
- 3,000 - 5,000 mg/kg
- 1,000 - 3,000 mg/kg
- < 1,000 mg/kg & Non-Detect

0 250 500 750 1,000
Feet

Map Created: 1/31/2014
Basemap: ESRI 2012

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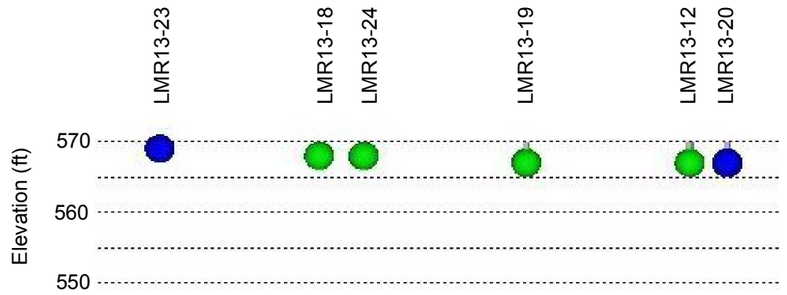
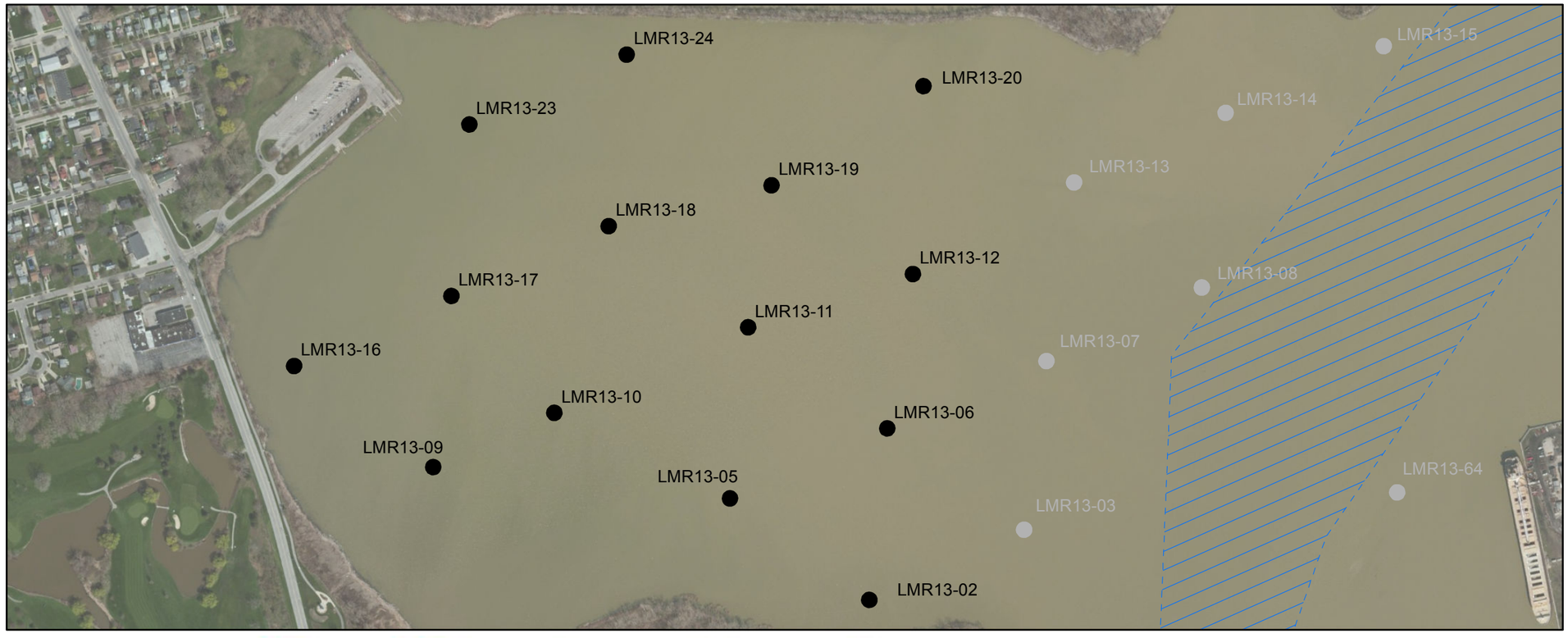
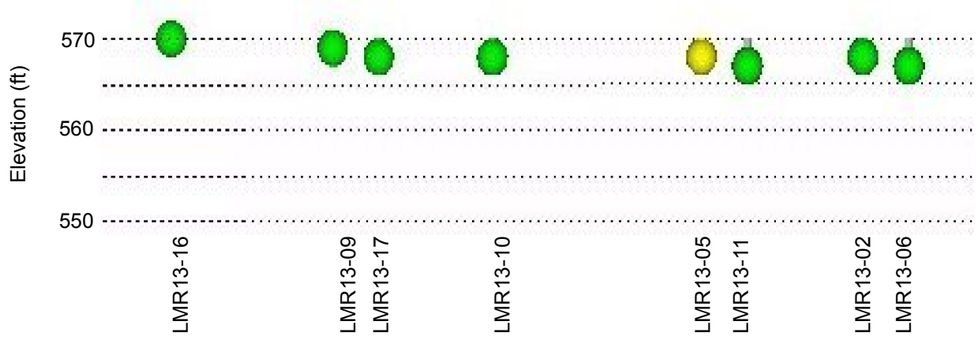
FIGURE 4-1C

Oil & Grease Concentrations (mg/kg) Detected in Area C -
Phase 2 Lower Maumee River
Assessment of Contaminated Sediments







VICINITY MAP



Legend

- Sample Locations (Area A- Cove)
- Sample Locations (Area A- Channel)
- Navigation Channel

PCB Concentrations

- ≥ 3x PEC (2,028 µg/kg)
- ≥ 2x PEC (1,352 µg/kg)
- ≥ PEC (676 µg/kg)
- ≥ TEC (59.8 µg/kg)
- < TEC

N

0 250 500 750 1,000
Feet

Map Created: 1/24/2014
Basemap: ESRI 2012

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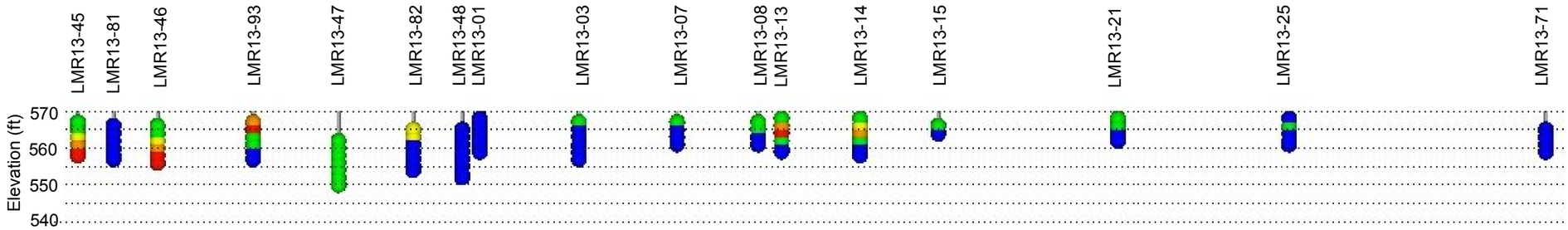
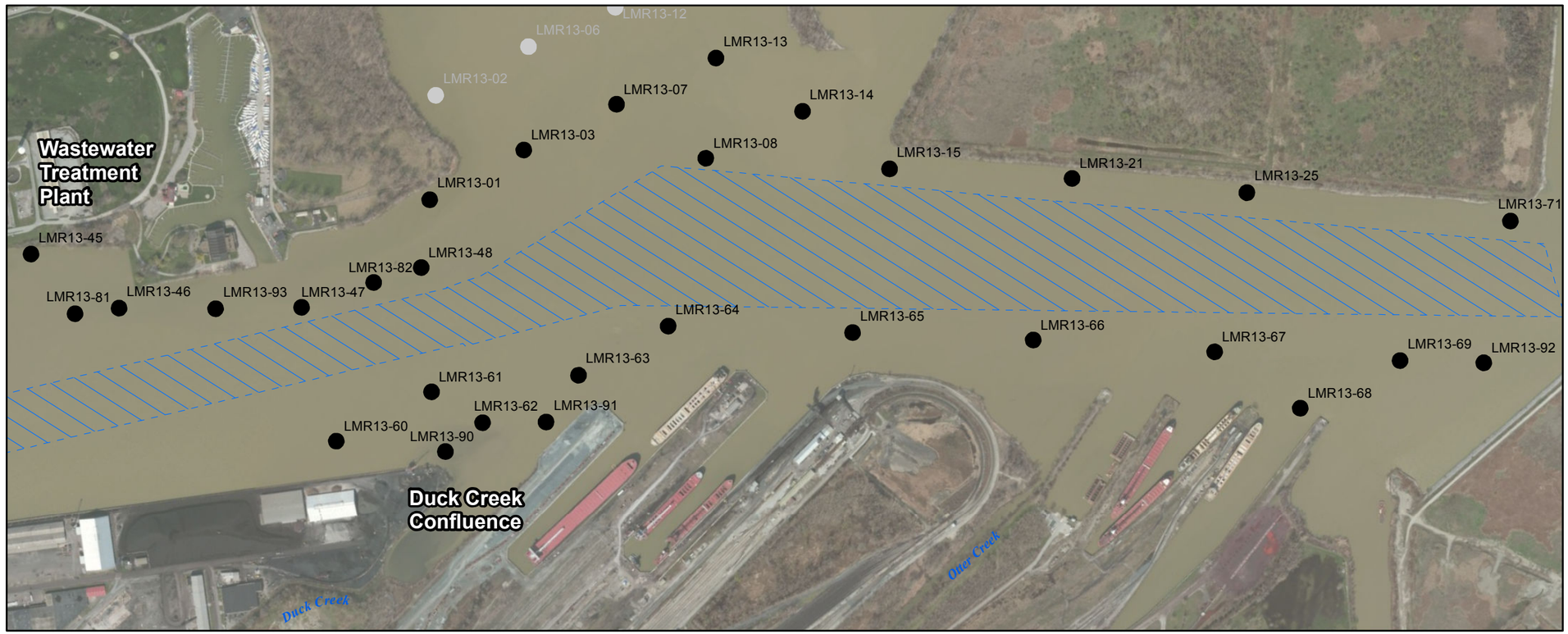
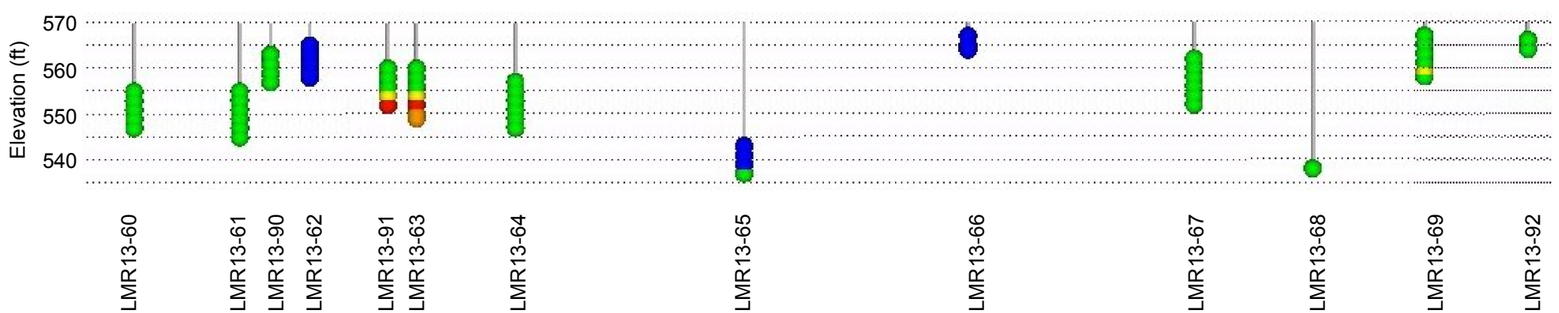
FIGURE 4-2A (Cove)

Total (ND=0) PCB Aroclor Concentrations (µg/kg) Detected in Area A Cove-
Phase 2 Lower Maumee River
Assessment of Contaminated Sediments







VICINITY MAP



Legend

- Sample Locations (Area A- Channel)
- Sample Locations (Area A- Cove)
- Navigation Channel

PCB Concentrations

- ≥ 3x PEC (2,028 µg/kg)
- ≥ 2x PEC (1,352 µg/kg)
- ≥ PEC (676 µg/kg)
- ≥ TEC (59.8 µg/kg)
- < TEC

0 250 500 750 1,000
Feet

Map Created: 1/31/2014
Basemap: ESRI 2012

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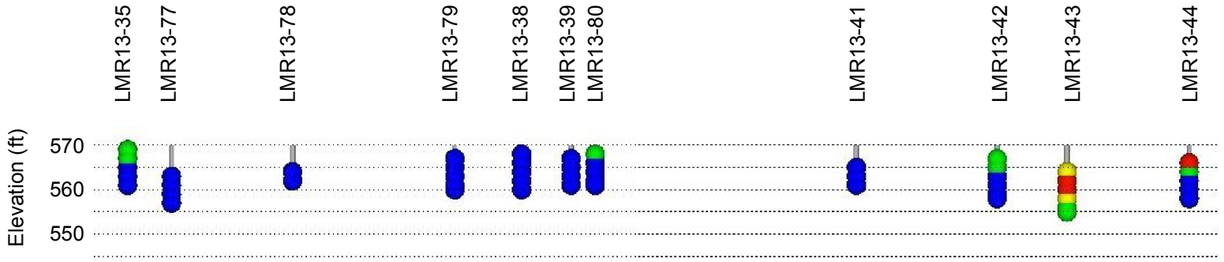
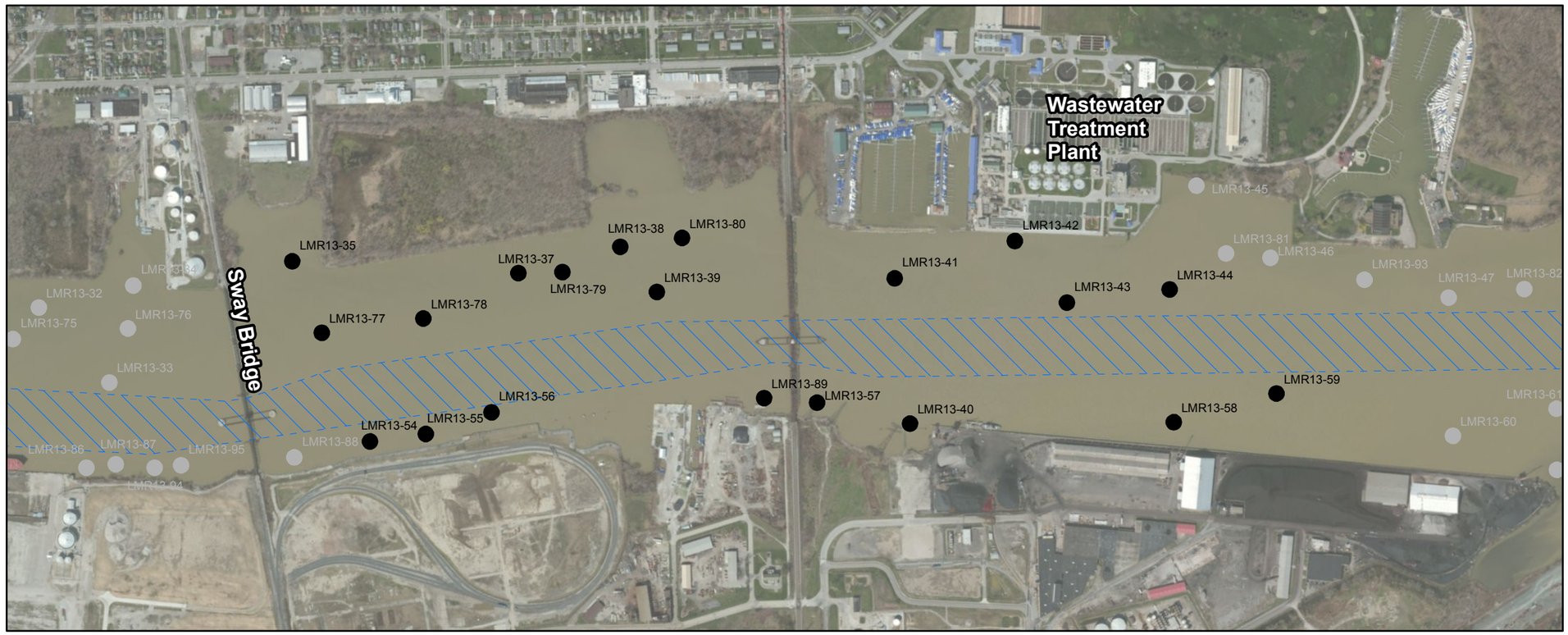
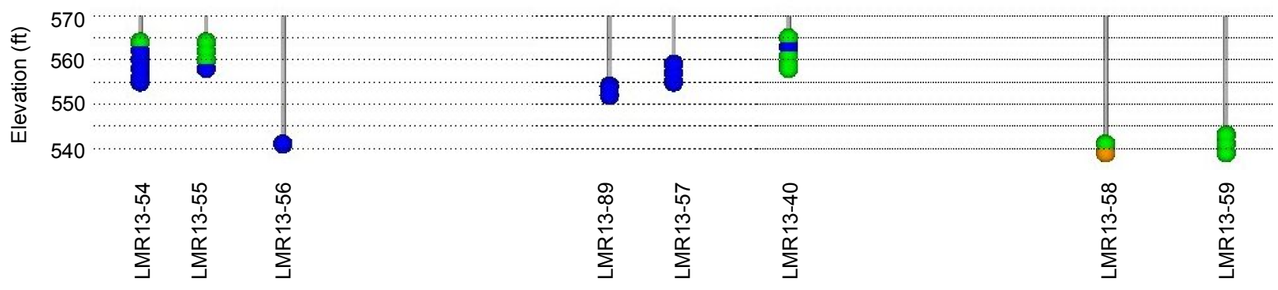
FIGURE 4-2A (Channel)

Total (ND=0) PCB Aroclor Concentrations (µg/kg) Detected in Area A Channel-Phase 2 Lower Maumee River Assessment of Contaminated Sediments

Document Path: L:\GISData\Midwest\Ohio\MaumeeRiver\MXDs\Report_Figures\PCB_AreaB.mxd







VICINITY MAP



Legend

- Sample Locations (Area B)
- Sample Locations (Areas A/C)
- Navigation Channel

PCB Concentrations

- ≥ 3x PEC (2,028 µg/kg)
- ≥ 2x PEC (1,352 µg/kg)
- ≥ PEC (676 µg/kg)
- ≥ TEC (59.8 µg/kg)
- < TEC

0 250 500 750 1,000
Feet

Map Created: 1/31/2014
Basemap: ESRI 2012

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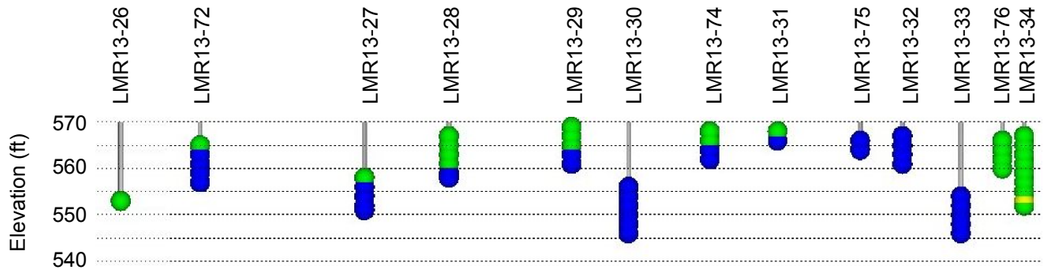
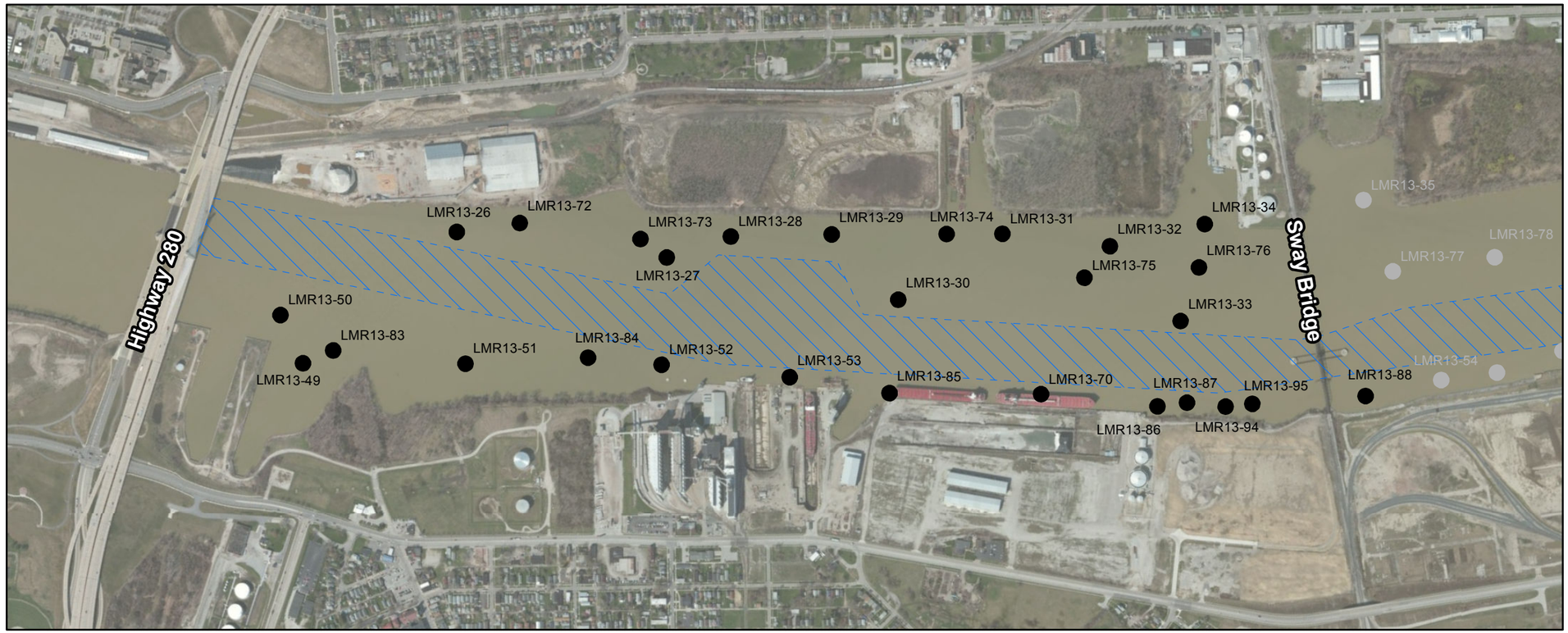
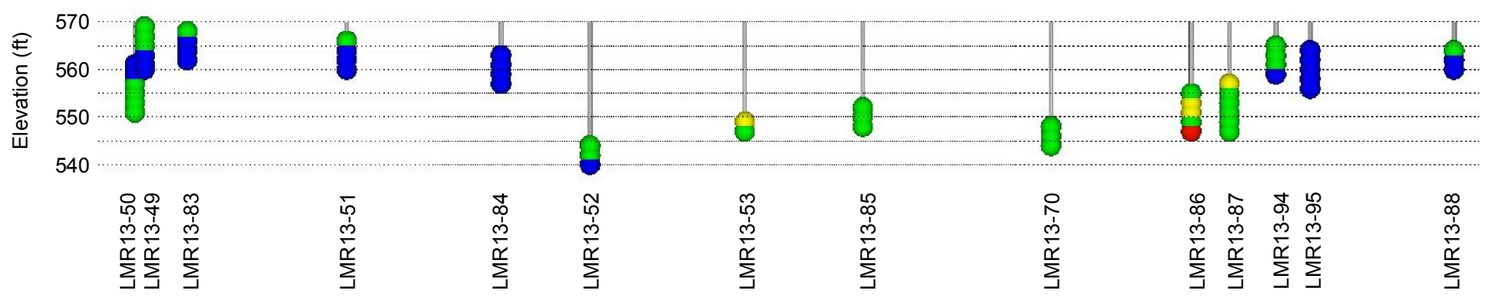
FIGURE 4-2B

Total (ND=0) PCB Aroclor Concentrations (µg/kg) Detected in Area B - Phase 2 Lower Maumee River Assessment of Contaminated Sediments







VICINITY MAP



Legend

- Sample Locations (Area C)
- Sample Locations (Area B)
- Navigation Channel

PCB Concentrations

- ≥ 3x PEC (2,028 µg/kg)
- ≥ 2x PEC (1,352 µg/kg)
- ≥ PEC (676 µg/kg)
- ≥ TEC (59.8 µg/kg)
- < TEC

0 250 500 750 1,000
Feet

Map Created: 1/31/2014
Basemap: ESRI 2012

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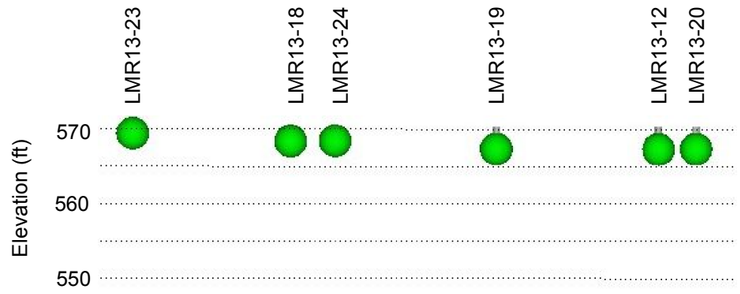
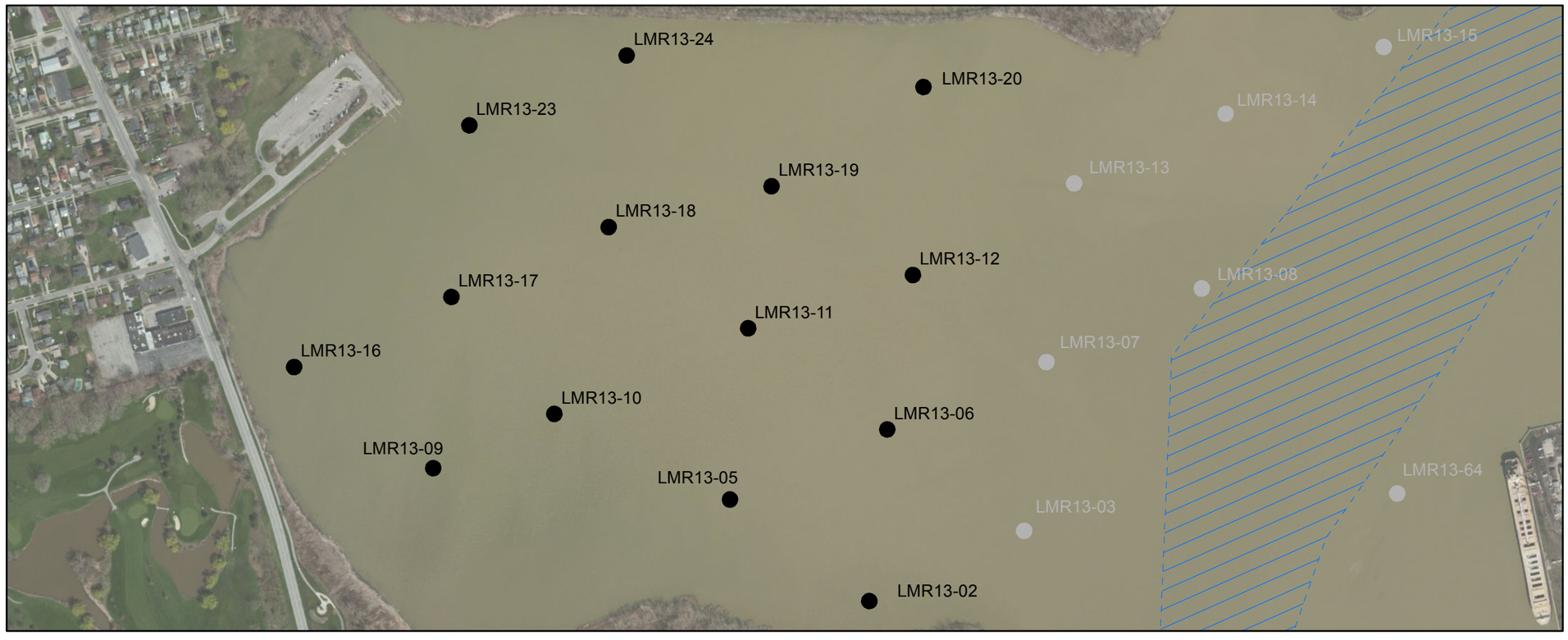
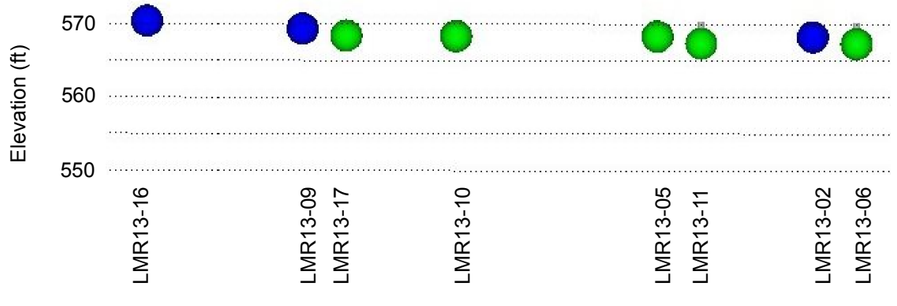
FIGURE 4-2C

Total (ND=1/2 RL) PCB Aroclor Concentrations (µg/kg) Detected in Area C - Phase 2 Lower Maumee River Assessment of Contaminated Sediments







VICINITY MAP



Legend

- Sample Locations (Area A- Cove)
- Sample Locations (Area A- Channel)
- Navigation Channel

PAH Concentrations

- ≥ 3x PEC (68,400 µg/kg)
- ≥ 2x PEC (45,600 µg/kg)
- ≥ PEC (22,800 µg/kg)
- ≥ TEC (1,610 µg/kg)
- < TEC

N

0 250 500 750 1,000
Feet

Map Created: 1/24/2014
Basemap: ESRI 2012

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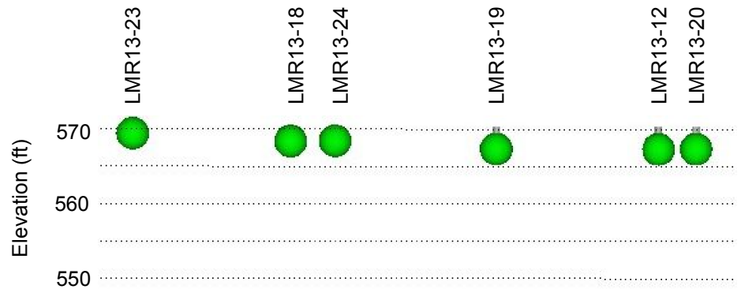
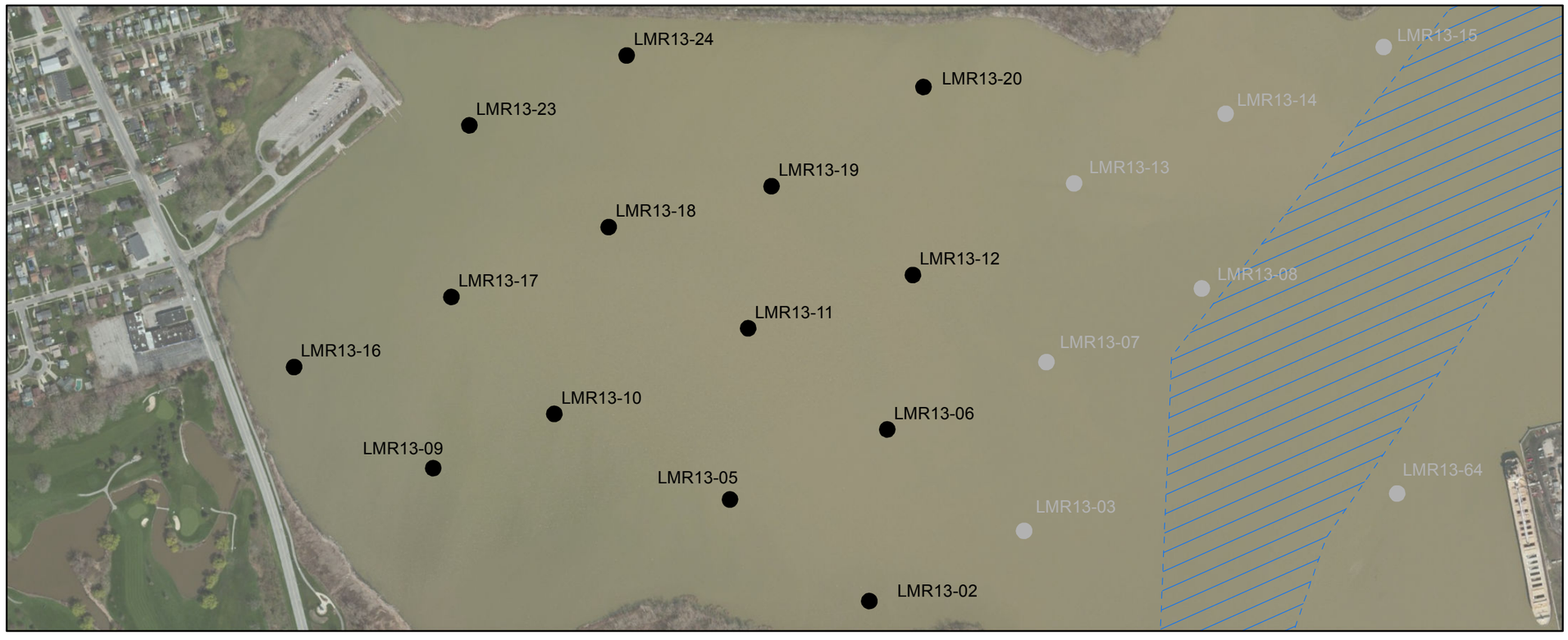
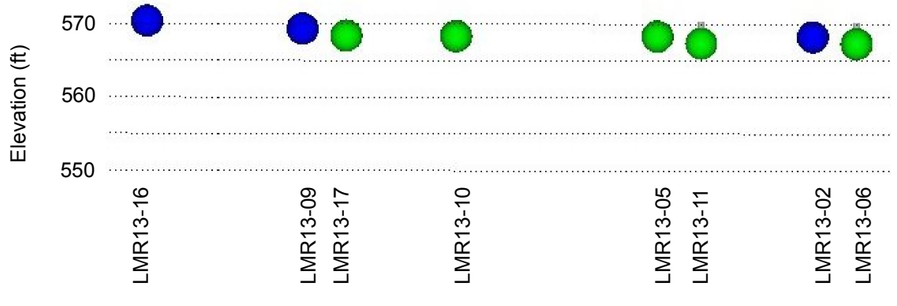
FIGURE 4-3A (Cove)

Total (ND=1/2 RL) 17PAH Concentrations (µg/kg) Detected in Area A Cove - Phase 2 Lower Maumee River Assessment of Contaminated Sediments







VICINITY MAP



Legend

- Sample Locations (Area A- Cove)
- Sample Locations (Area A- Channel)
- Navigation Channel

PAH Concentrations

- ≥ 3x PEC (68,400 µg/kg)
- ≥ 2x PEC (45,600 µg/kg)
- ≥ PEC (22,800 µg/kg)
- ≥ TEC (1,610 µg/kg)
- < TEC

N

0 250 500 750 1,000
Feet

Map Created: 1/24/2014
Basemap: ESRI 2012

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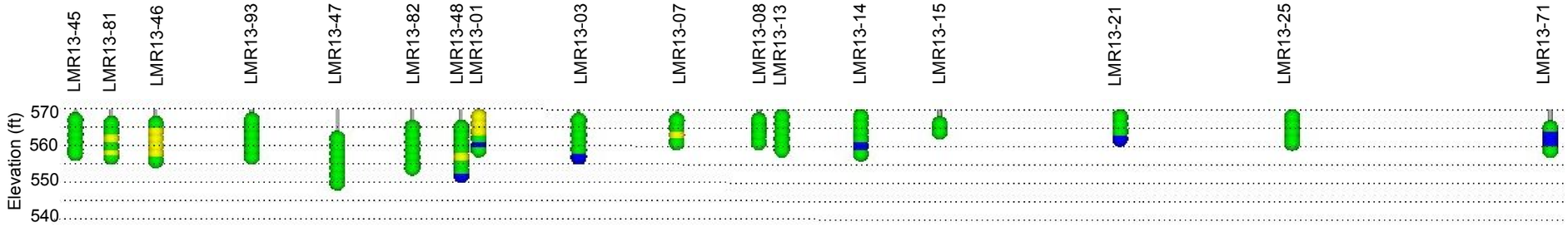
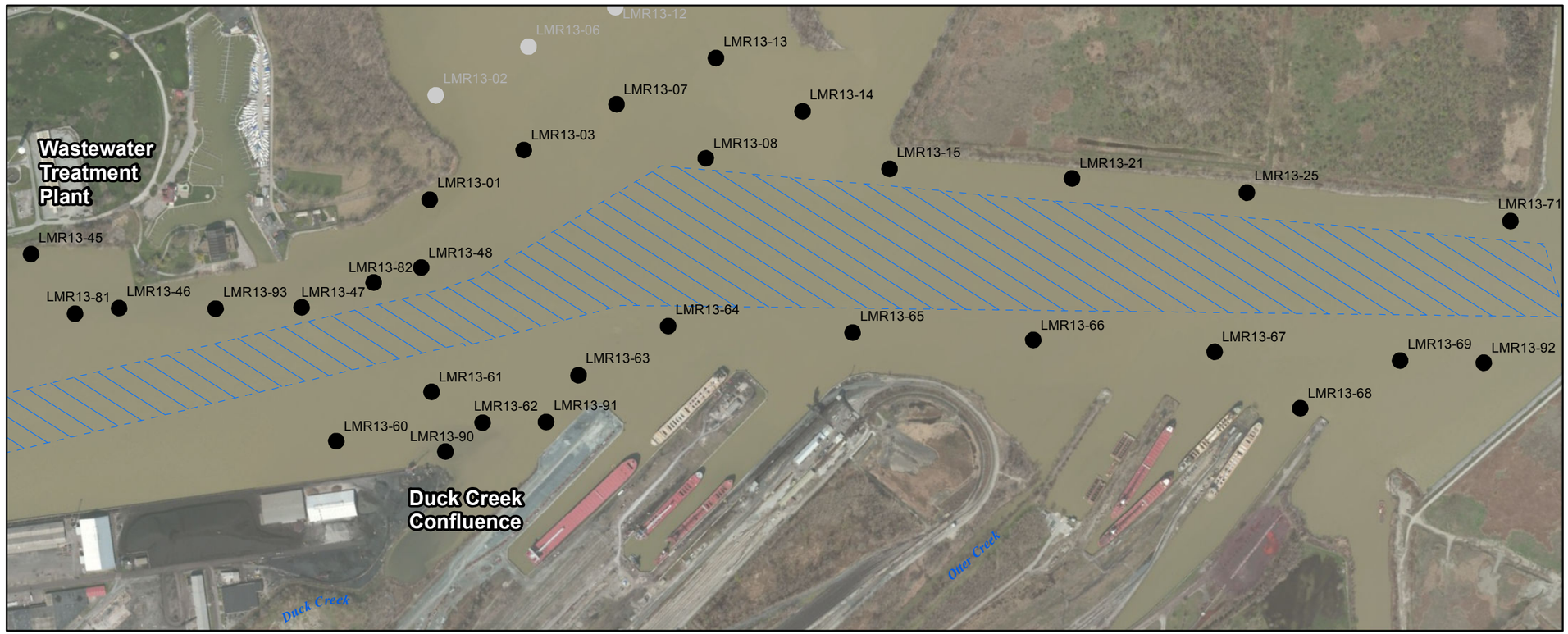
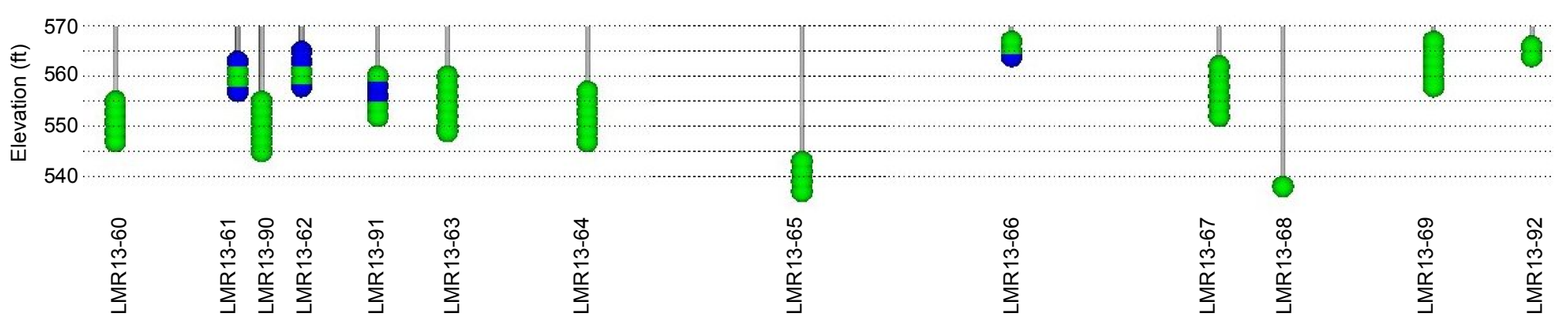
FIGURE 4-3A (Cove)

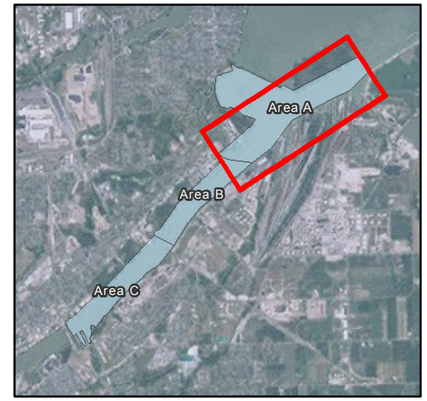
Total (ND=1/2 RL) 17PAH Concentrations (µg/kg) Detected in Area A Cove - Phase 2 Lower Maumee River Assessment of Contaminated Sediments







VICINITY MAP



Legend

- Sample Locations (Area A- Channel)
- Sample Locations (Area A- Cove)
- Navigation Channel

PAH Concentrations

- ≥ 3x PEC (68,400 µg/kg)
- ≥ 2x PEC (45,600 µg/kg)
- ≥ PEC (22,800 µg/kg)
- ≥ TEC (1,610 µg/kg)
- < TEC

0 250 500 750 1,000
Feet

Map Created: 1/24/2014
Basemap: ESRI 2012

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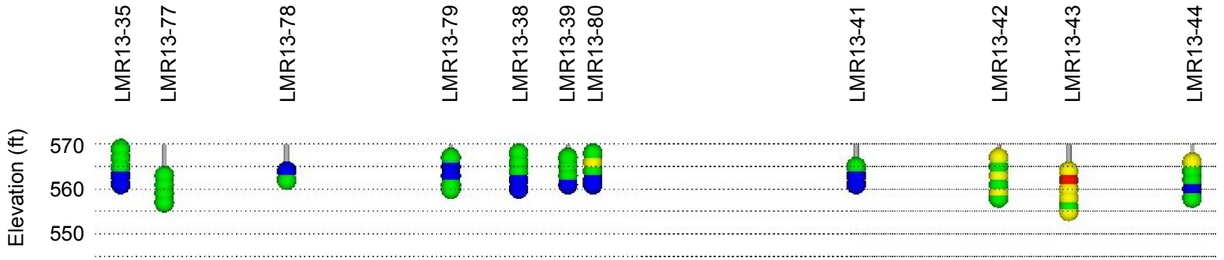
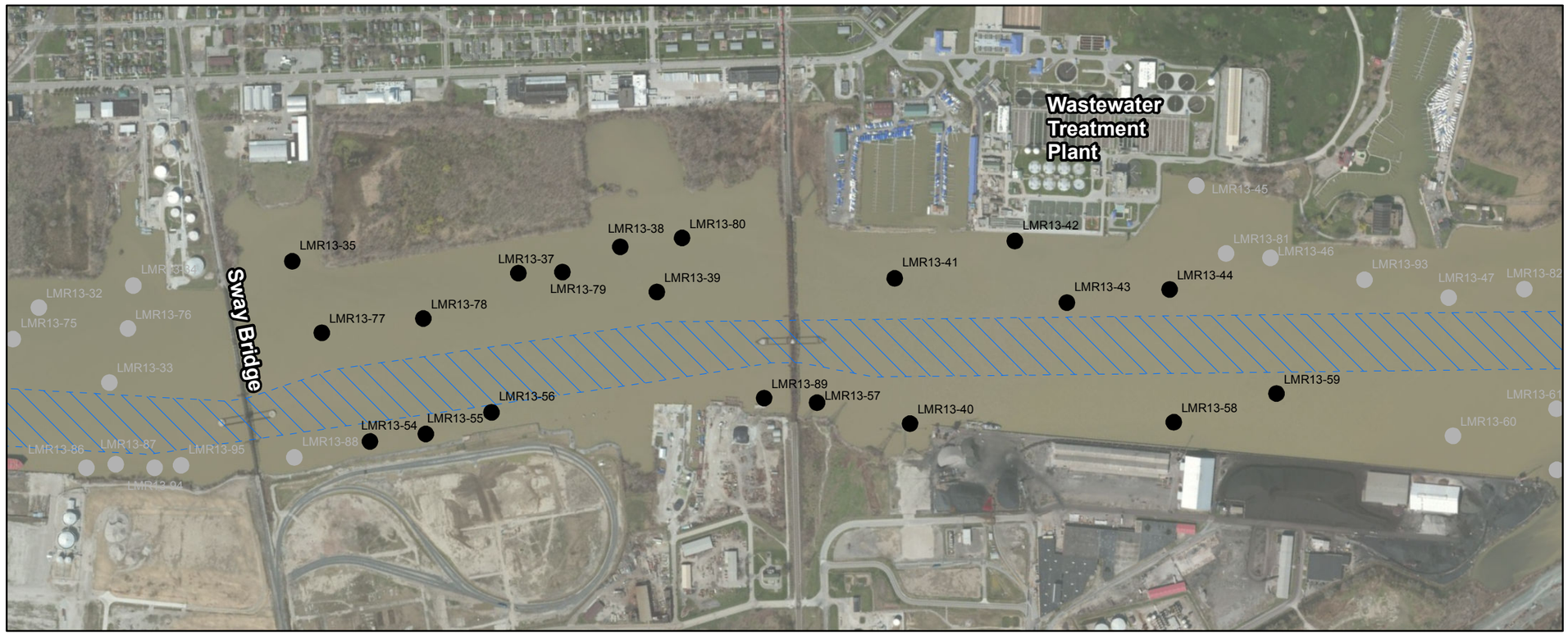
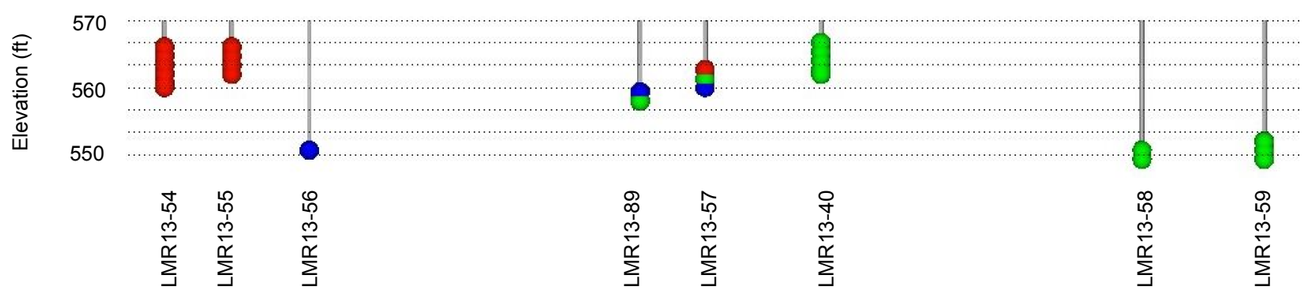
FIGURE 4-3A (Channel)

Total (ND=1/2 RL) 17PAH Concentrations (µg/kg) Detected in Area A Channel - Phase 2 Lower Maumee River Assessment of Contaminated Sediments

Document Path: L:\GISData\Midwest\Ohio\MaumeeRiver\MXDs\Report_Figures\PAH_AreaB.mxd







VICINITY MAP



Legend

- Sample Locations (Area B)
- Sample Locations (Areas A/C)
- Navigation Channel

PAH Concentrations

- ≥ 3x PEC (68,400 µg/kg)
- ≥ 2x PEC (45,600 µg/kg)
- ≥ PEC (22,800 µg/kg)
- ≥ TEC (1,610 µg/kg)
- < TEC

N

0 250 500 750 1,000
Feet

Map Created: 1/24/2014
Basemap: ESRI 2012

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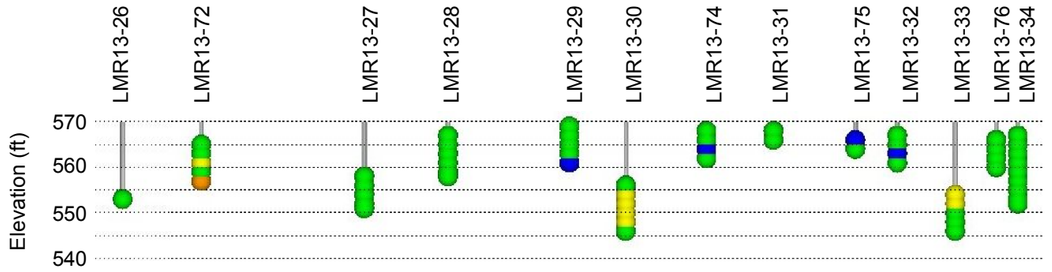
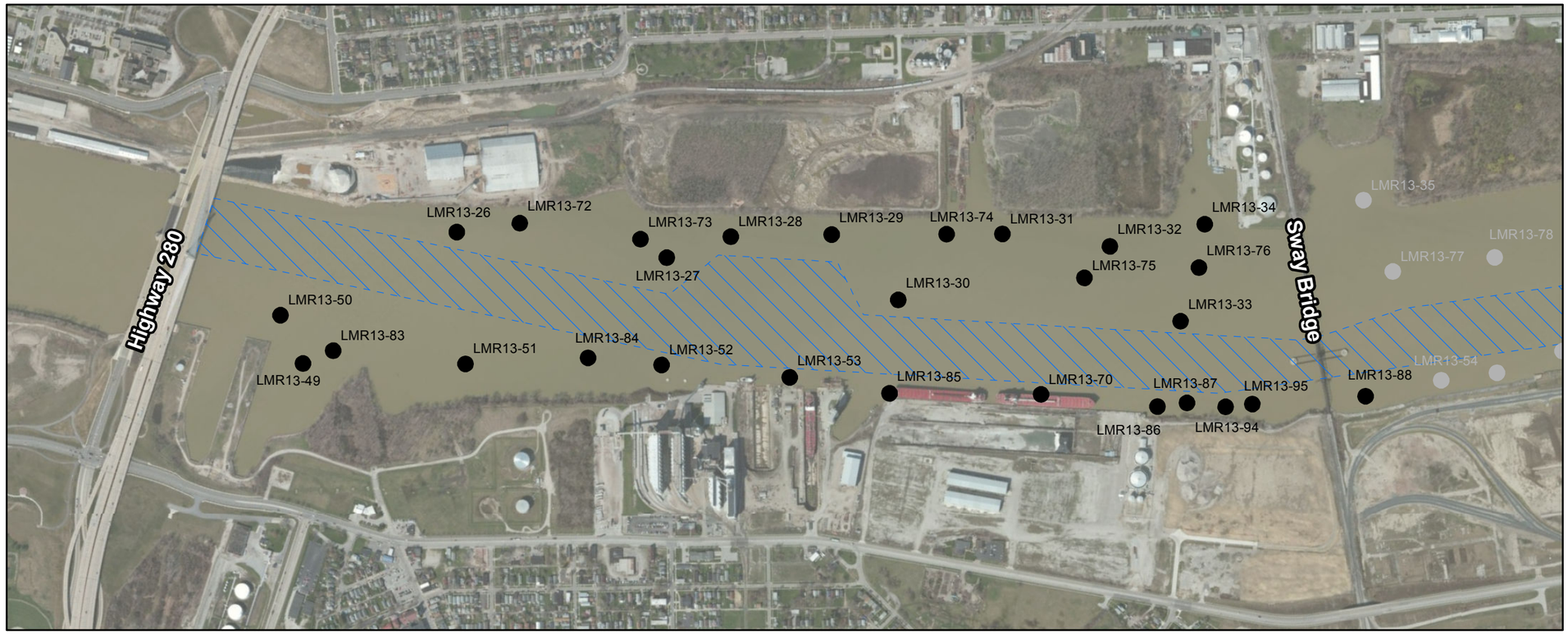
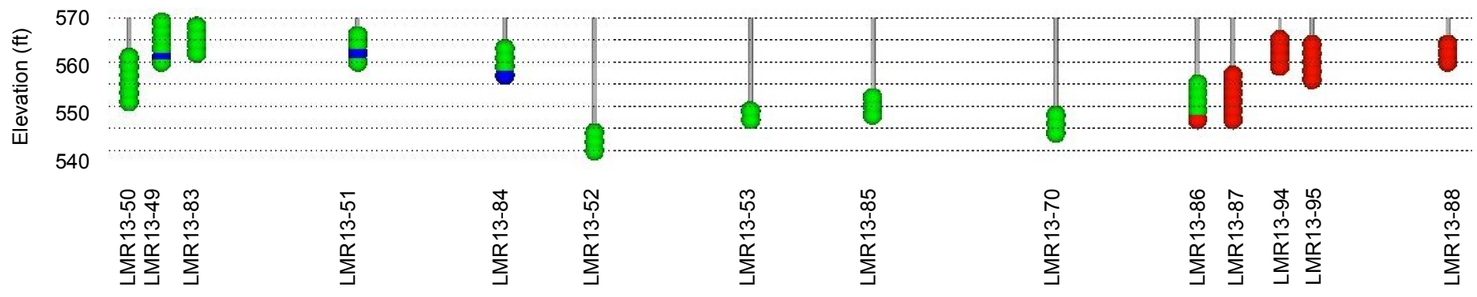
FIGURE 4-3B

Total (ND=1/2 RL) 17PAH Concentrations (µg/kg) Detected in Area B - Phase 2 Lower Maumee River Assessment of Contaminated Sediments







VICINITY MAP



Legend

- Sample Locations (Area C)
- Sample Locations (Area B)
- Navigation Channel

PAH Concentrations

- ≥ 3x PEC (68,400 µg/kg)
- ≥ 2x PEC (45,600 µg/kg)
- ≥ PEC (22,800 µg/kg)
- ≥ TEC (1,610 µg/kg)
- < TEC

0 250 500 750 1,000
Feet

Map Created: 1/31/2014
Basemap: ESRI 2012

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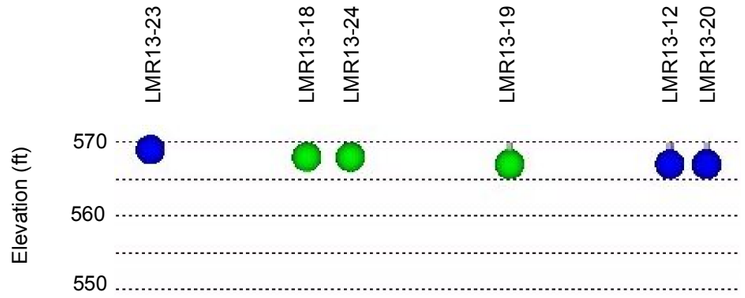
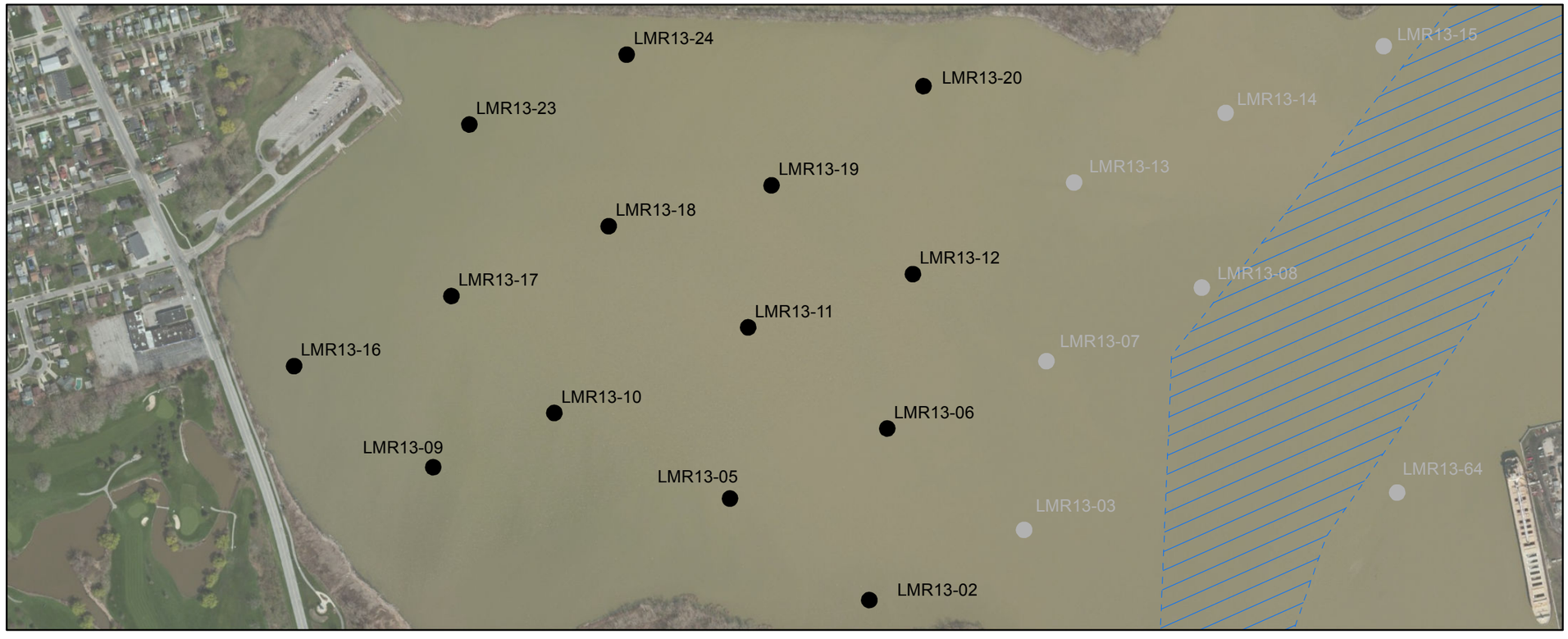
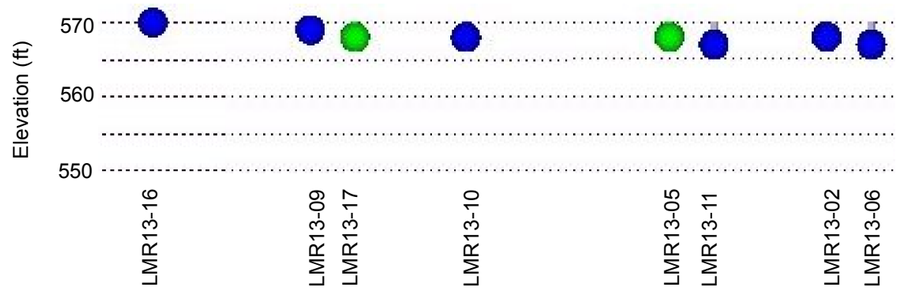
FIGURE 4-3C

Total (ND=1/2 RL) 17PAH Concentrations (µg/kg) Detected in Area C - Phase 2 Lower Maumee River Assessment of Contaminated Sediments







VICINITY MAP



Legend

- Sample Locations (Area A- Cove)
- Sample Locations (Area A- Channel)
- Navigation Channel

Cadmium Concentrations

- ≥ 3x PEC (14.94 mg/kg)
- ≥ 2x PEC (9.96 mg/kg)
- ≥ PEC (4.98 mg/kg)
- ≥ TEC (0.99 mg/kg)
- < TEC

N

0 250 500 750 1,000
Feet

Map Created: 1/27/2014
Basemap: ESRI 2012

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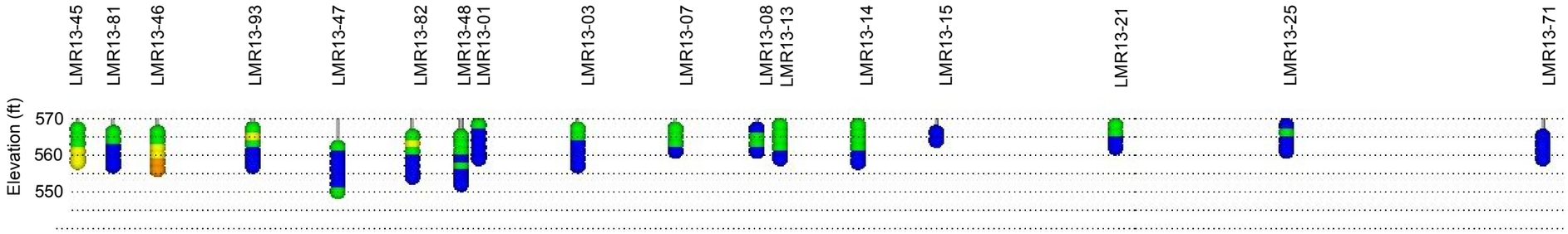
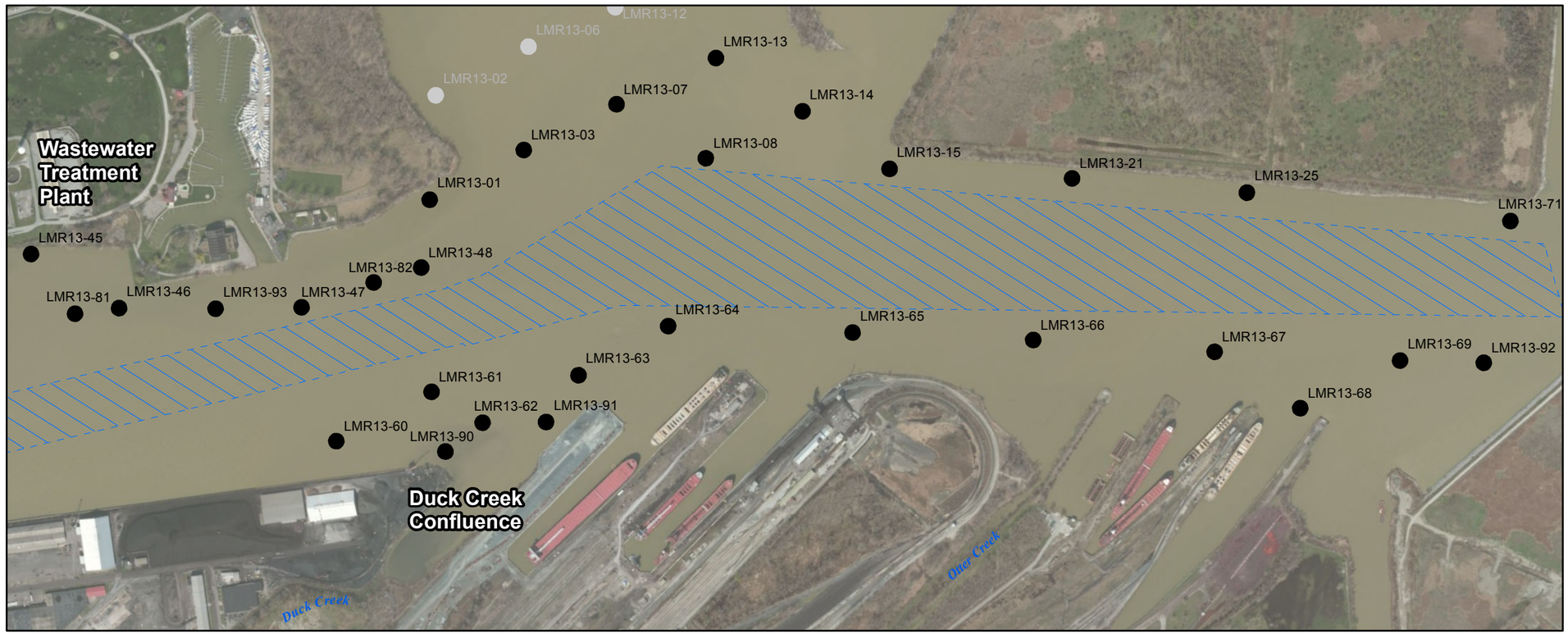
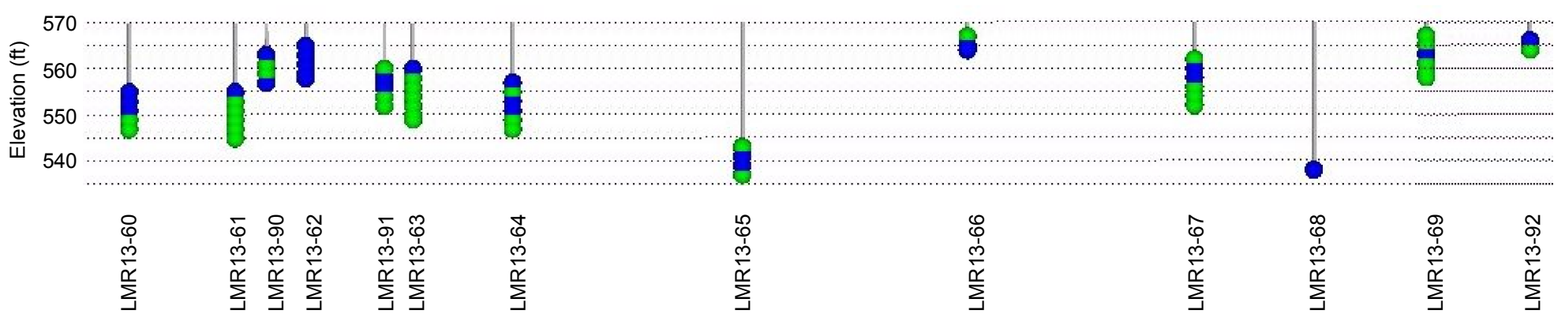
FIGURE 4-4A (Cove)

Cadmium Concentrations (mg/kg) Detected in Area A Cove- Phase 2 Lower Maumee River Assessment of Contaminated Sediments







VICINITY MAP



Legend

- Sample Locations (Area A- Channel)
- Sample Locations (Area A- Cove)
- Navigation Channel

Cadmium Concentrations

- ≥ 3x PEC (14.94 mg/kg)
- ≥ 2x PEC (9.96 mg/kg)
- ≥ PEC (4.98 mg/kg)
- ≥ TEC (0.99 mg/kg)
- < TEC

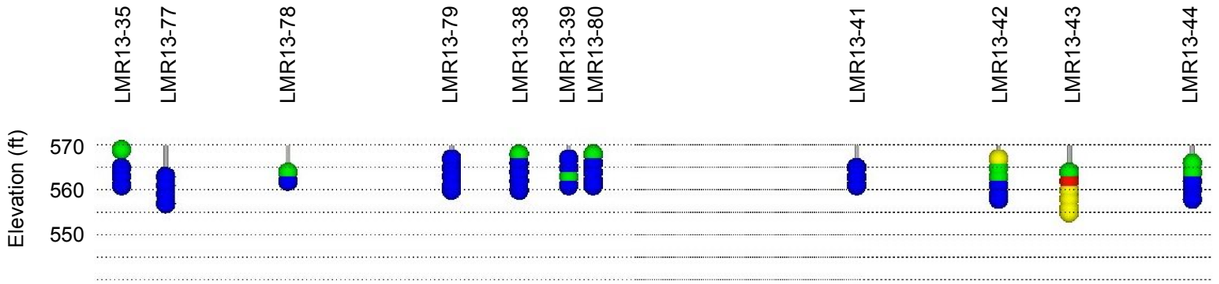
0 250 500 750 1,000
Feet

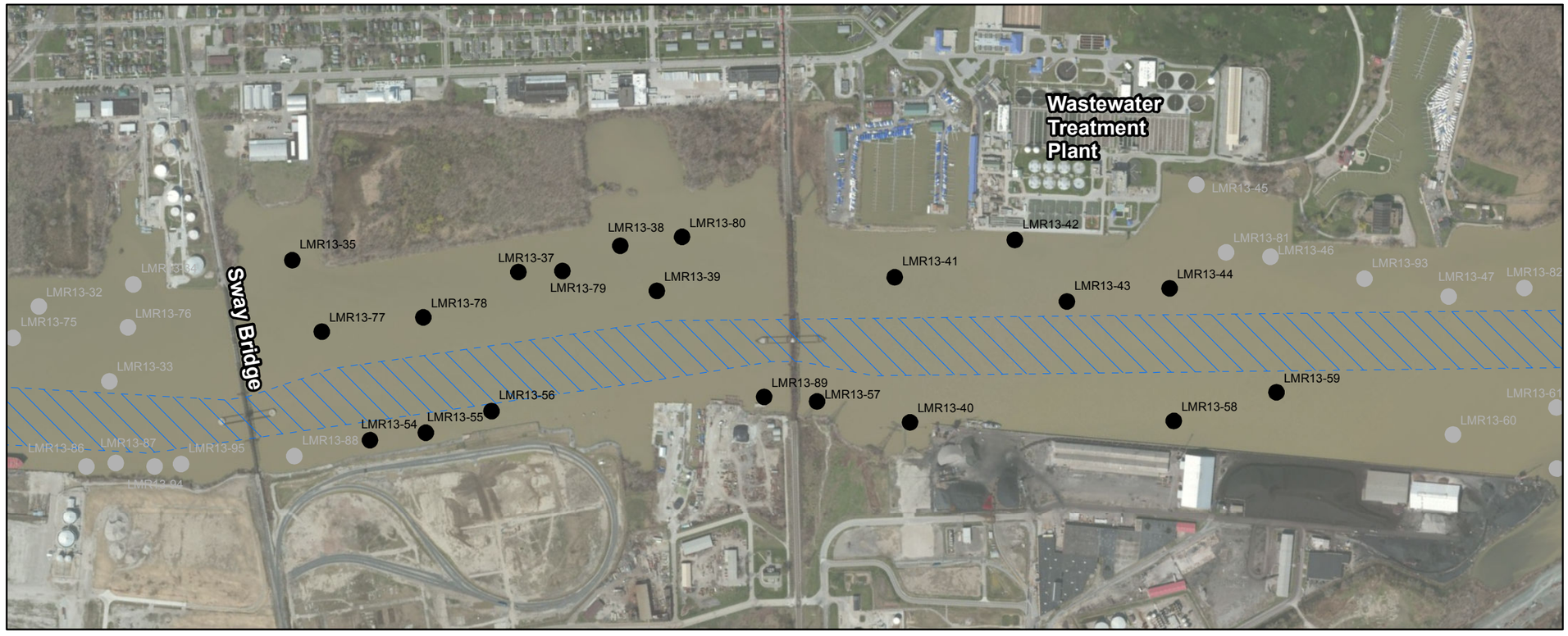
Map Created: 1/31/2014
Basemap: ESRI 2012

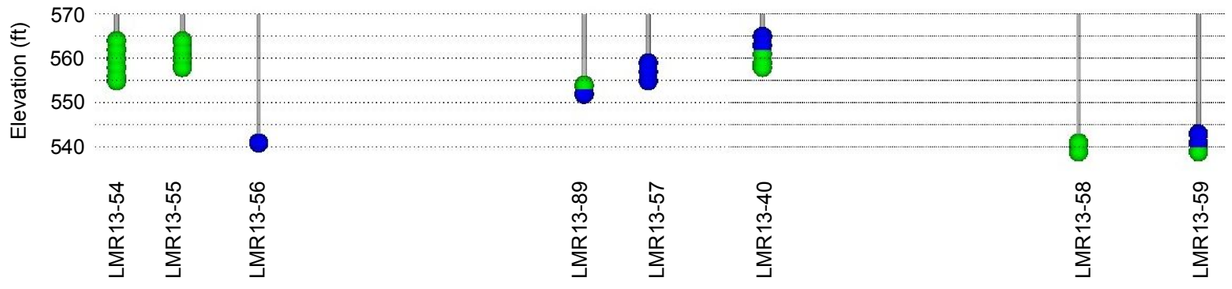
EA Engineering, Science, and Technology, Inc.

FIGURE 4-4A (Channel)

Cadmium Concentrations (mg/kg) Detected in Area A Channel- Phase 2 Lower Maumee River Assessment of Contaminated Sediments







VICINITY MAP



Legend

- Sample Locations (Area B)
- Sample Locations (Areas A/C)
- Navigation Channel

Cadmium Concentrations

- ≥ 3x PEC (1.174 mg/kg)
- ≥ 2x PEC (0.998 mg/kg)
- ≥ PEC (0.697 mg/kg)
- ≥ TEC (-0.004 mg/kg)
- < TEC

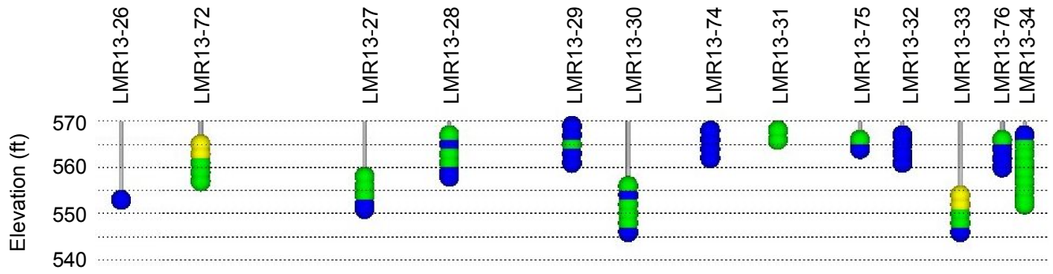
0 250 500 750 1,000
Feet

Map Created: 1/27/2014
Basemap: ESRI 2012

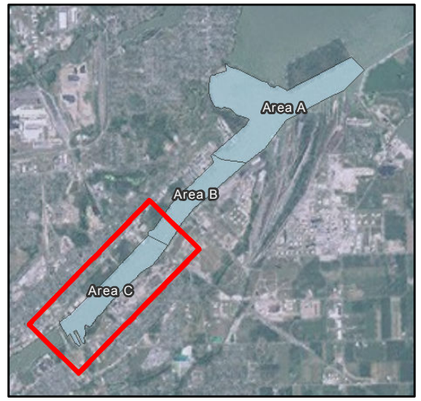
EA Engineering, Science, and Technology, Inc.

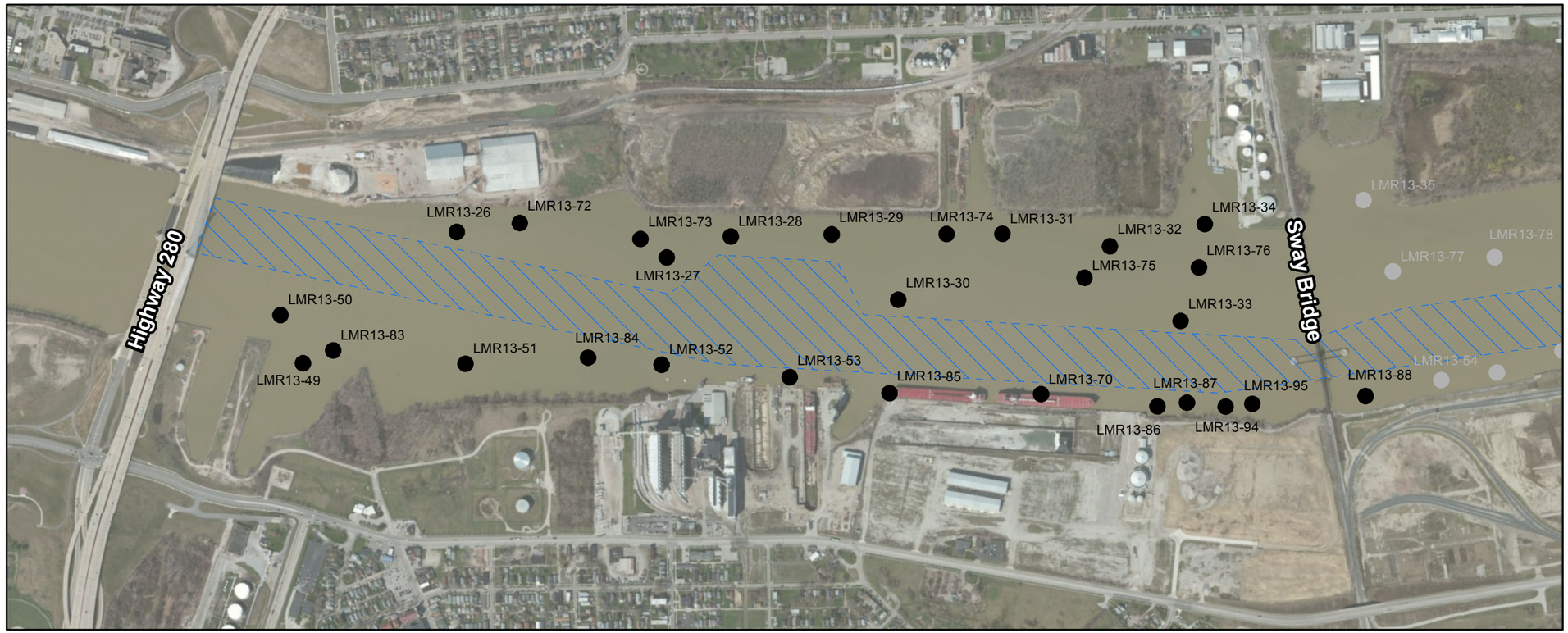
FIGURE 4-4B

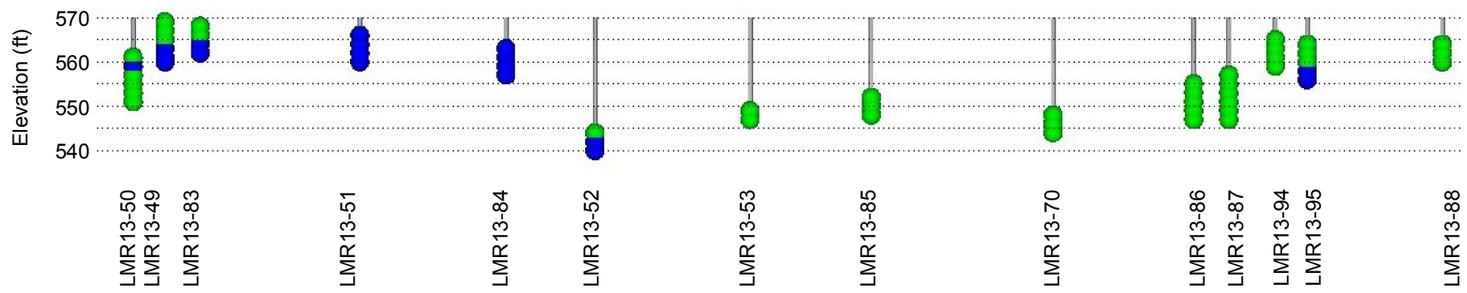
Cadmium Concentrations (mg/kg) Detected in Area B - Phase 2 Lower Maumee River Assessment of Contaminated Sediments



VICINITY MAP







Legend

- Sample Locations (Area C)
- Sample Locations (Area B)
- Navigation Channel

Cadmium Concentrations

- ≥ 3x PEC (1.174 mg/kg)
- ≥ 2x PEC (0.998 mg/kg)
- ≥ PEC (0.697 mg/kg)
- ≥ TEC (-0.004 mg/kg)
- < TEC

0 250 500 750 1,000
Feet

Map Created: 1/31/2014
Basemap: ESRI 2012

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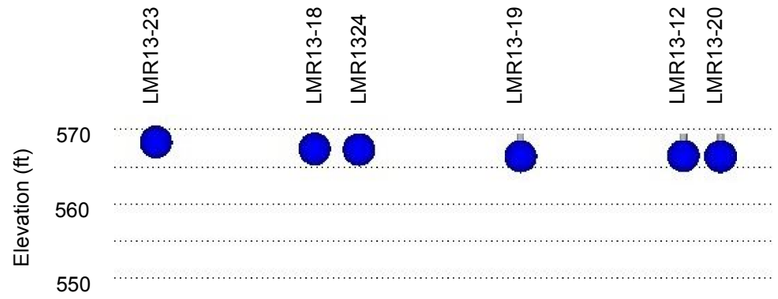
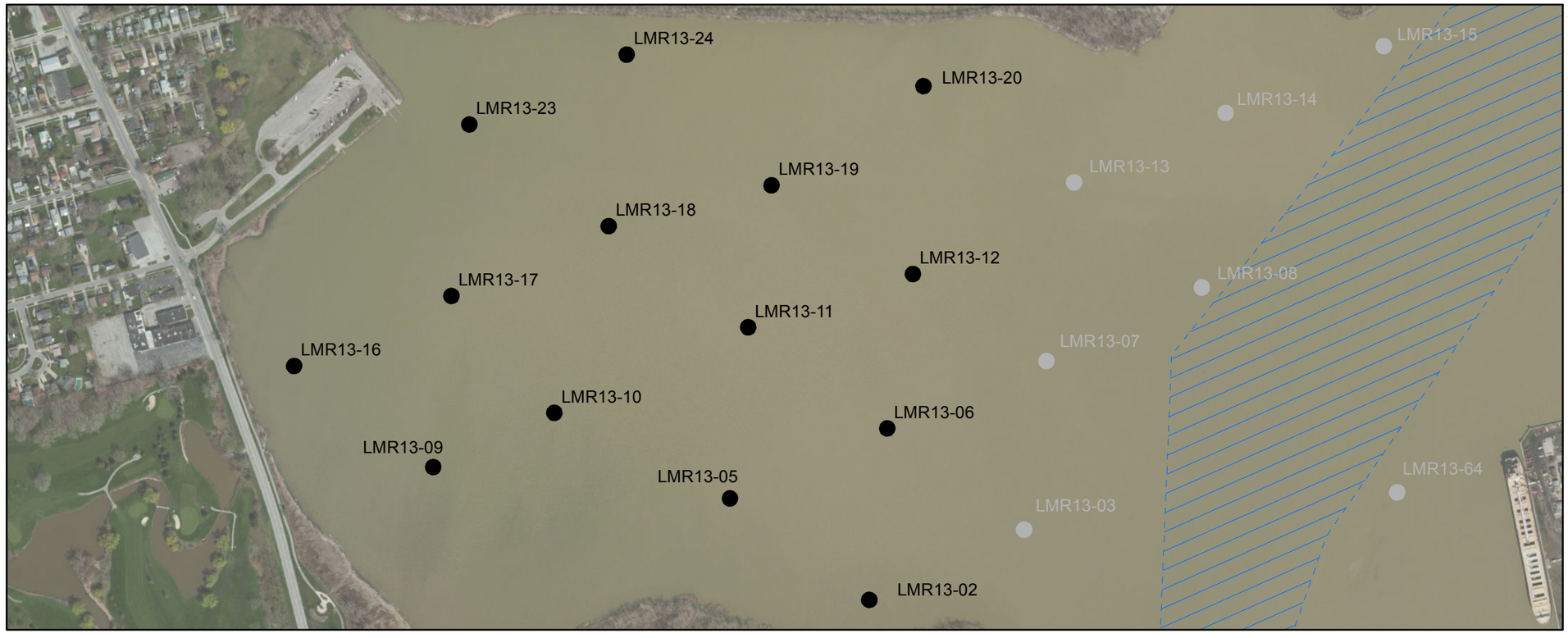
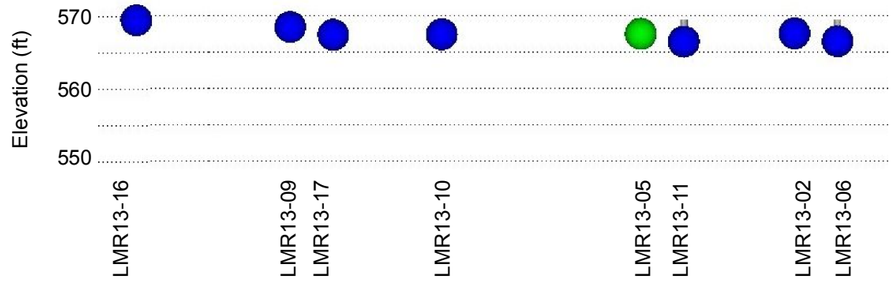
FIGURE 4-4C

Cadmium Concentrations (mg/kg) Detected in Area C - Phase 2 Lower Maumee River Assessment of Contaminated Sediments







VICINITY MAP



Legend

- Sample Locations (Area A- Cove)
- Sample Locations (Area A- Channel)
- Navigation Channel

Chromium Concentrations

- ≥ 3x PEC (333 mg/kg)
- ≥ 2x PEC (222 mg/kg)
- ≥ PEC (111 mg/kg)
- ≥ TEC (43.4 mg/kg)
- < TEC

N

0 250 500 750 1,000
Feet

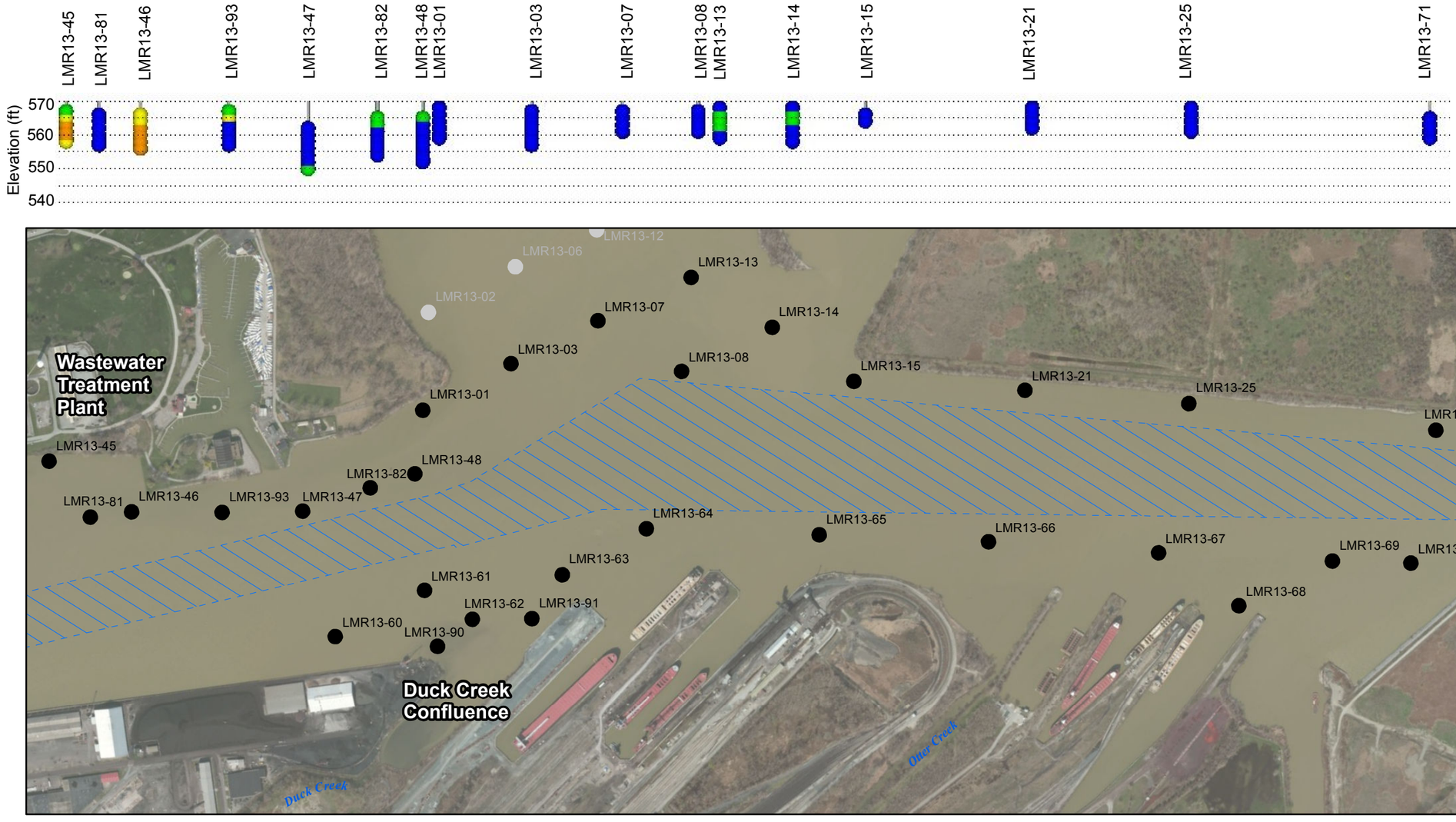
Map Created: 1/27/2014
Basemap: ESRI 2012

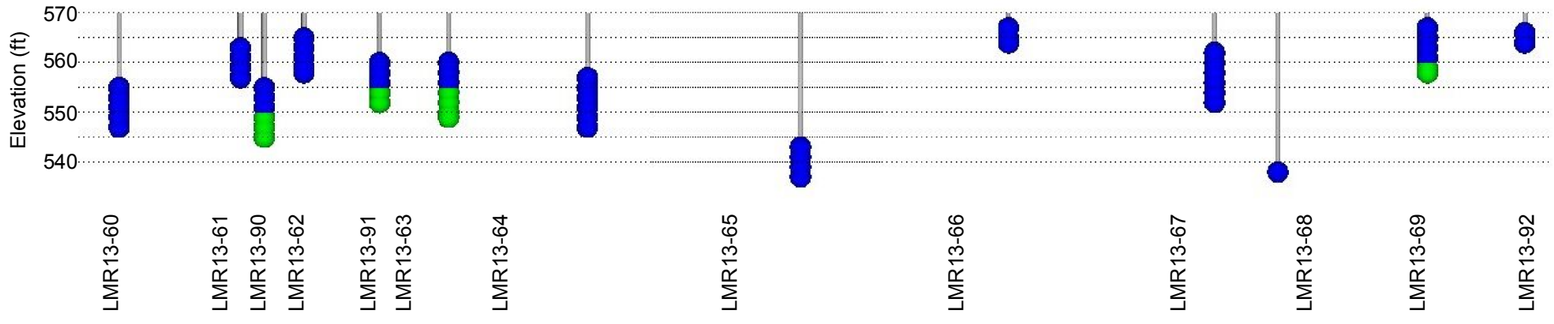
EA Engineering, Science, and Technology, Inc.

FIGURE 4-5A (Cove)

Chromium Concentrations (mg/kg)
Detected in Area A Cove -
Phase 2 Lower Maumee River
Assessment of Contaminated Sediments

Document Path: L:\GISData\Midwest\Ohio\MaumeeRiver\MXDs\Report_Figures\Chromium_AreaA Channel.mxd





VICINITY MAP



Legend

- Sample Locations (Area A- Channel)
- Sample Locations (Area A- Cove)
- Navigation Channel

Chromium Concentrations

- ≥ 3x PEC (333 mg/kg)
- ≥ 2x PEC (222 mg/kg)
- ≥ PEC (111 mg/kg)
- ≥ TEC (43.4 mg/kg)
- < TEC

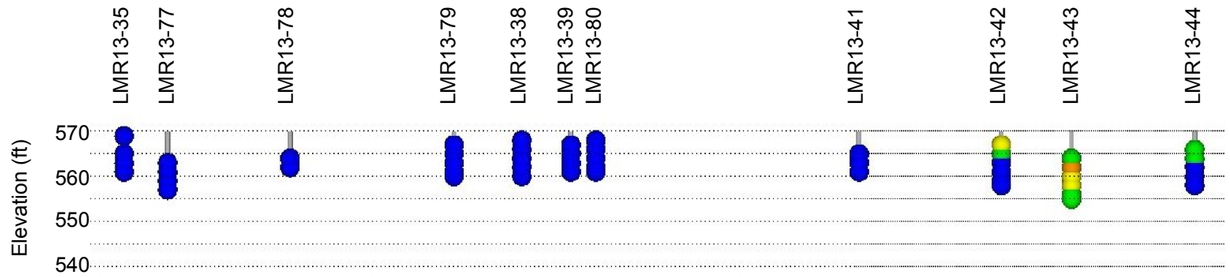
0 250 500 750 1,000
Feet

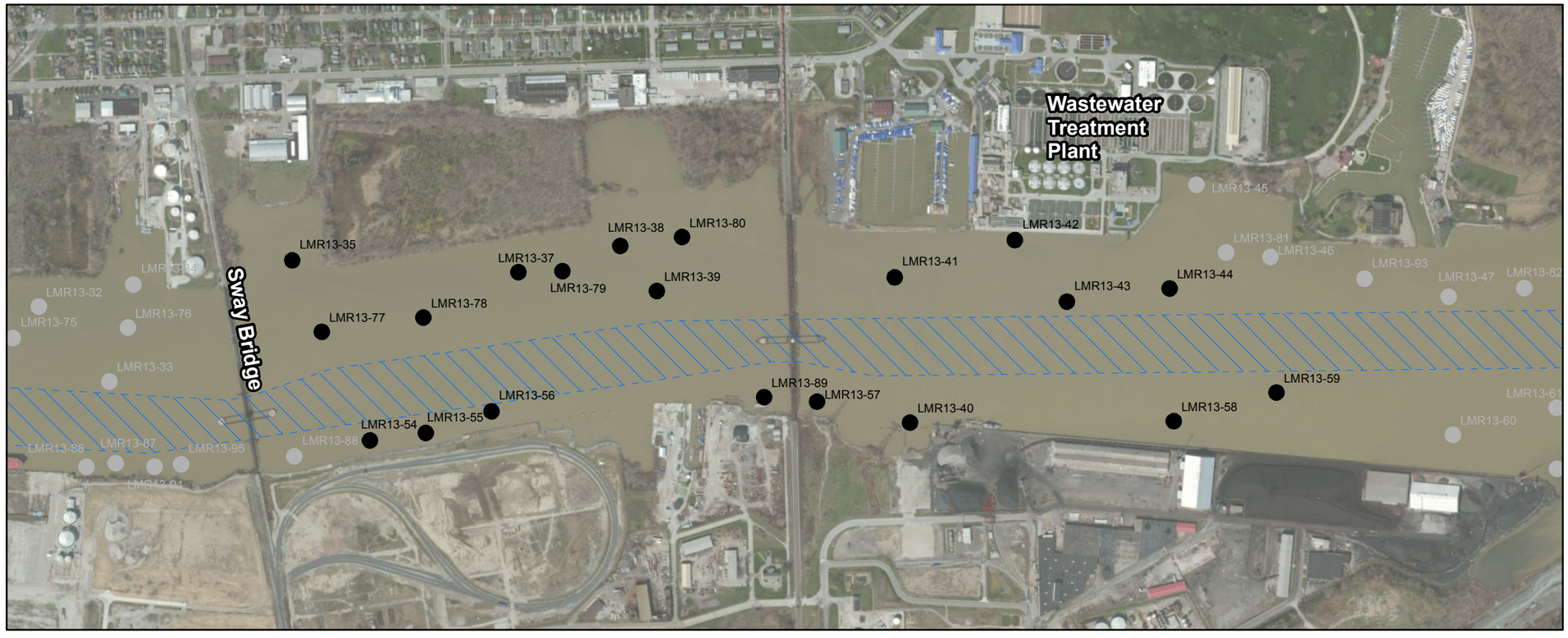
Map Created: 1/27/2014
Basemap: ESRI 2012

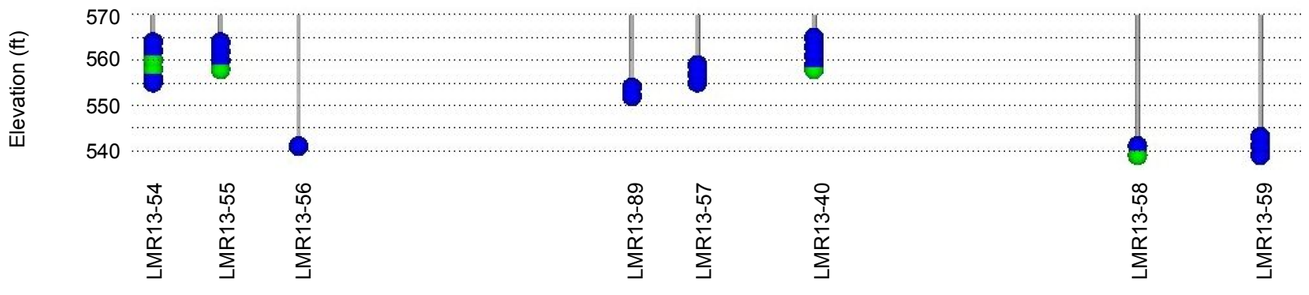
EA Engineering, Science, and Technology, Inc.

FIGURE 4-5A (Channel)
Chromium Concentrations (mg/kg)
Detected in Area A Channel -
Phase 2 Lower Maumee River
Assessment of Contaminated Sediments

Document Path: L:\GISData\Midwest\Ohio\MaumeeRiver\MXDs\Report_Figures\Chromium_AreaB.mxd







VICINITY MAP



Legend

- Sample Locations (Area B)
- Sample Locations (Areas A/C)
- Navigation Channel

Chromium Concentrations

- ≥ 3x PEC (333 mg/kg)
- ≥ 2x PEC (222 mg/kg)
- ≥ PEC (111 mg/kg)
- ≥ TEC (43.4 mg/kg)
- < TEC

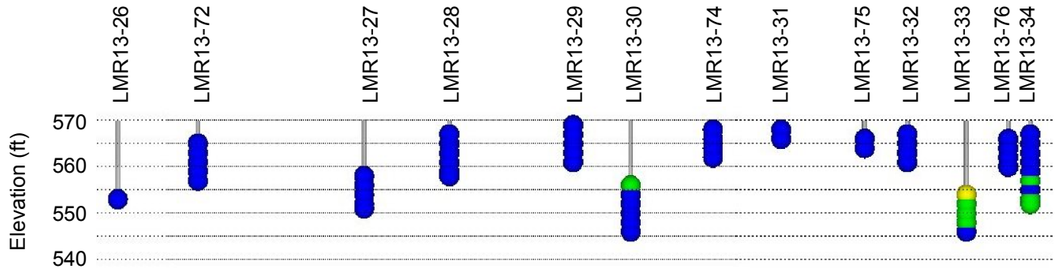
0 250 500 750 1,000
Feet

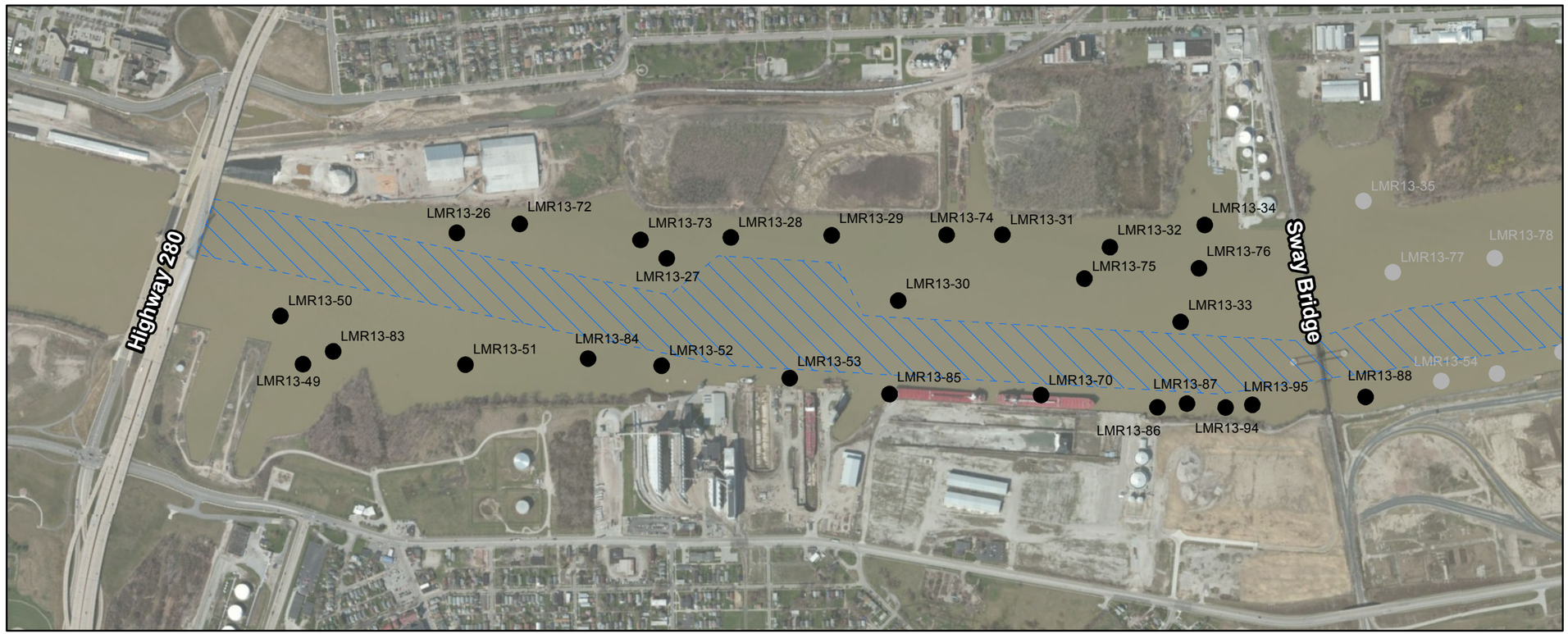
Map Created: 1/27/2014
Basemap: ESRI 2012

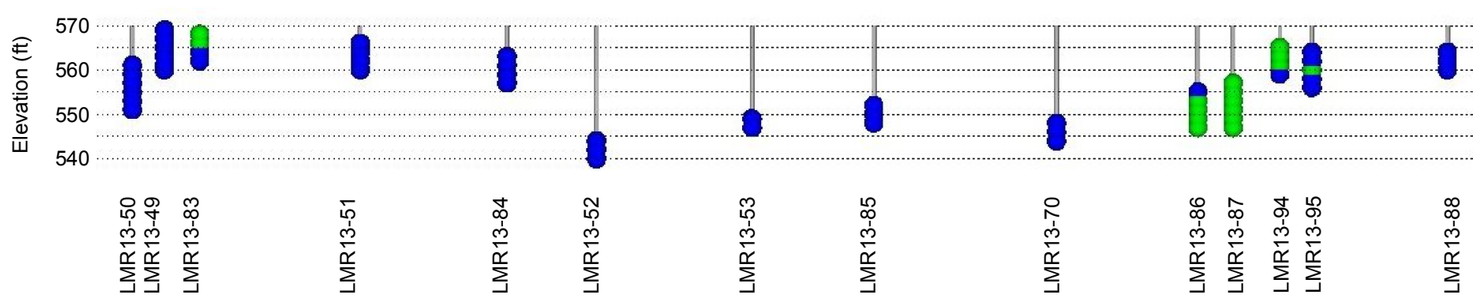
EA Engineering, Science, and Technology, Inc.

FIGURE 4-5B

Chromium Concentrations (mg/kg)
Detected in Area B -
Phase 2 Lower Maumee River
Assessment of Contaminated Sediments







VICINITY MAP



Legend

- Sample Locations (Area C)
- Sample Locations (Area B)
- Navigation Channel

Chromium Concentrations

- ≥ 3x PEC (333 mg/kg)
- ≥ 2x PEC (222 mg/kg)
- ≥ PEC (111 mg/kg)
- ≥ TEC (43.4 mg/kg)
- < TEC

0 250 500 750 1,000
Feet

Map Created: 1/31/2014
Basemap: ESRI 2012

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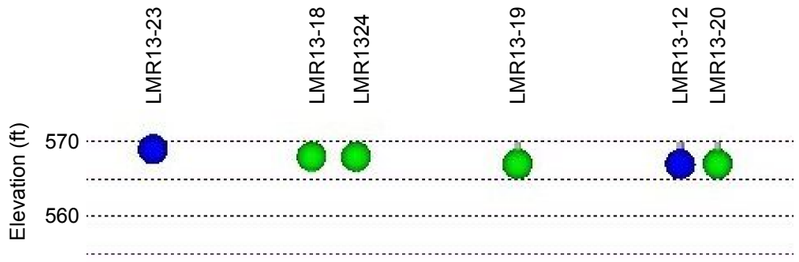
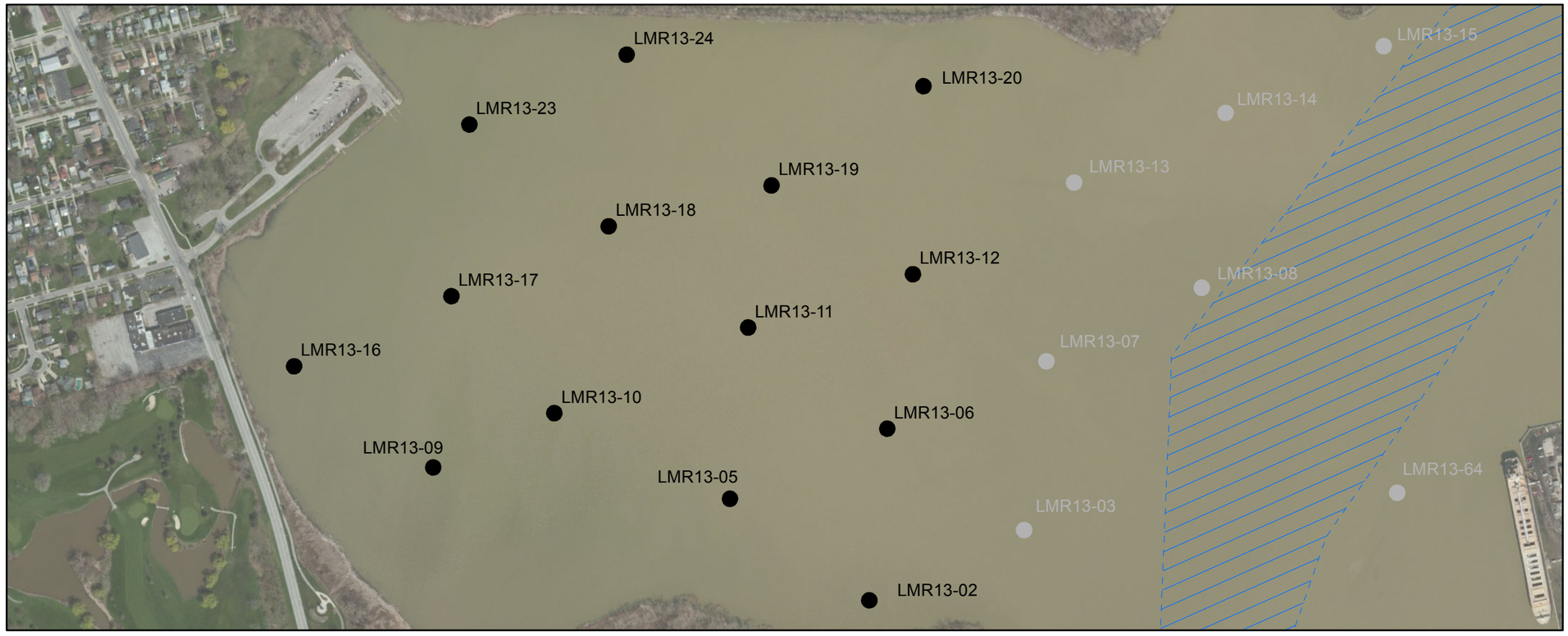
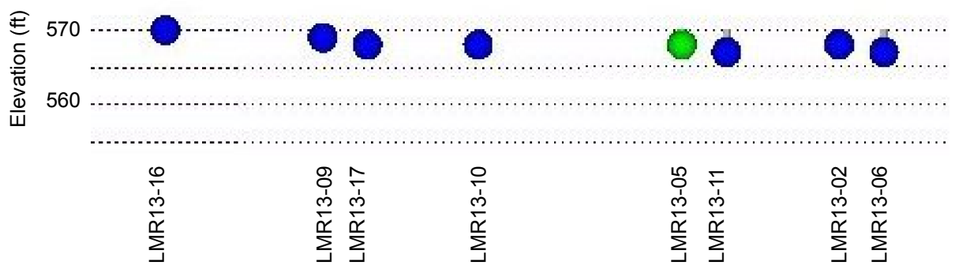
FIGURE 4-5C
Chromium Concentrations (mg/kg)
Detected in Area C -
Phase 2 Lower Maumee River
Assessment of Contaminated Sediments







VICINITY MAP



Legend

- Sample Locations (Area A- Cove)
- Sample Locations (Area A- Channel)
- Navigation Channel

Lead Concentrations

- ≥ 3x PEC (384 mg/kg)
- ≥ 2x PEC (256 mg/kg)
- ≥ PEC (128 mg/kg)
- ≥ TEC (35.8 mg/kg)
- < TEC

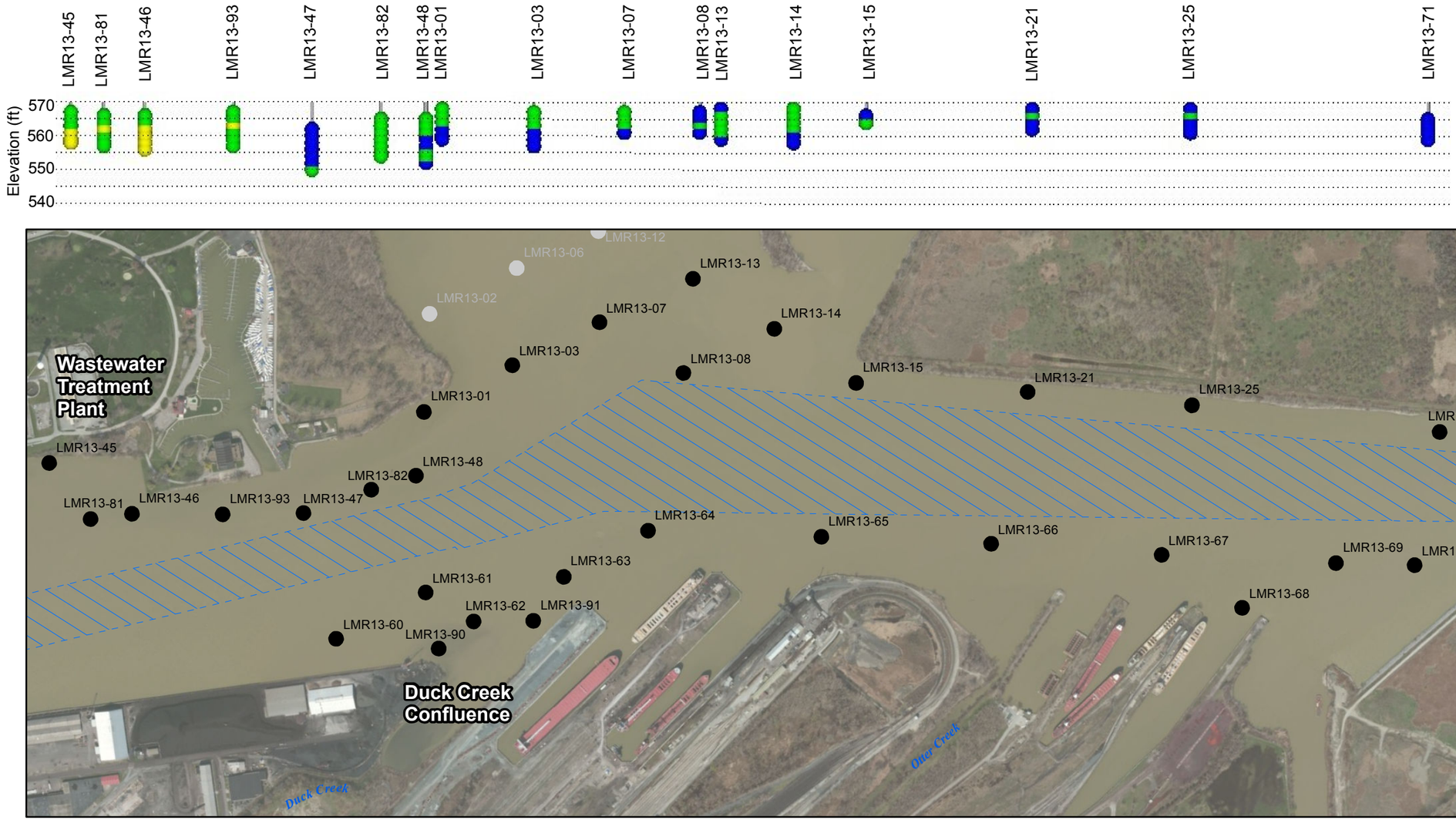
0 250 500 750 1,000
Feet

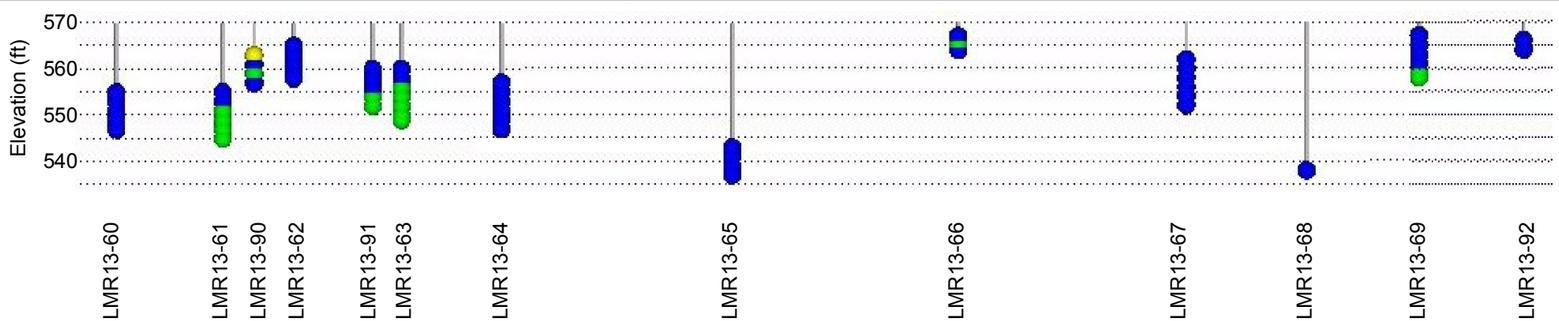
Map Created: 1/24/2014
Basemap: ESRI 2012

EA Engineering, Science, and Technology, Inc.

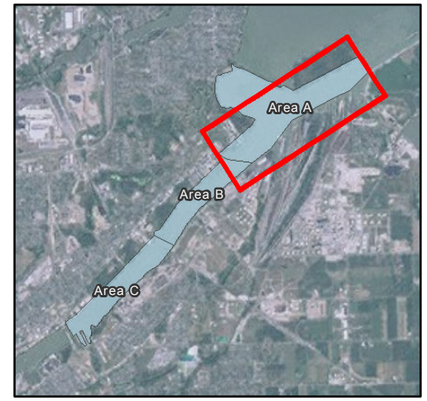
FIGURE 4-6A (Cove)
Lead Concentrations (mg/kg)
Detected in Area A Cove -
Phase 2 Lower Maumee River
Assessment of Contaminated Sediments

Document Path: L:\GISData\Midwest\Ohio\MaumeeRiver\MXDs\Report_Figures\Lead_AreaA Channel.mxd





VICINITY MAP



Legend

- Sample Locations (Area A- Channel)
- Sample Locations (Area A- Cove)
- Navigation Channel

Lead Concentrations

- ≥ 3x PEC (384 mg/kg)
- ≥ 2x PEC (256 mg/kg)
- ≥ PEC (128 mg/kg)
- ≥ TEC (35.8 mg/kg)
- < TEC

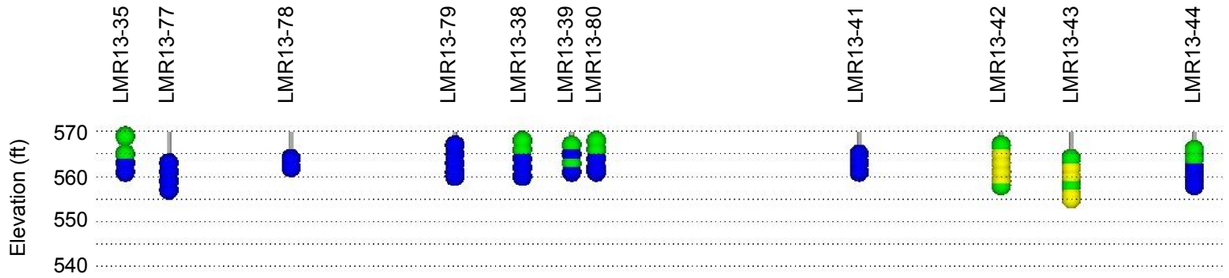
0 250 500 750 1,000
Feet

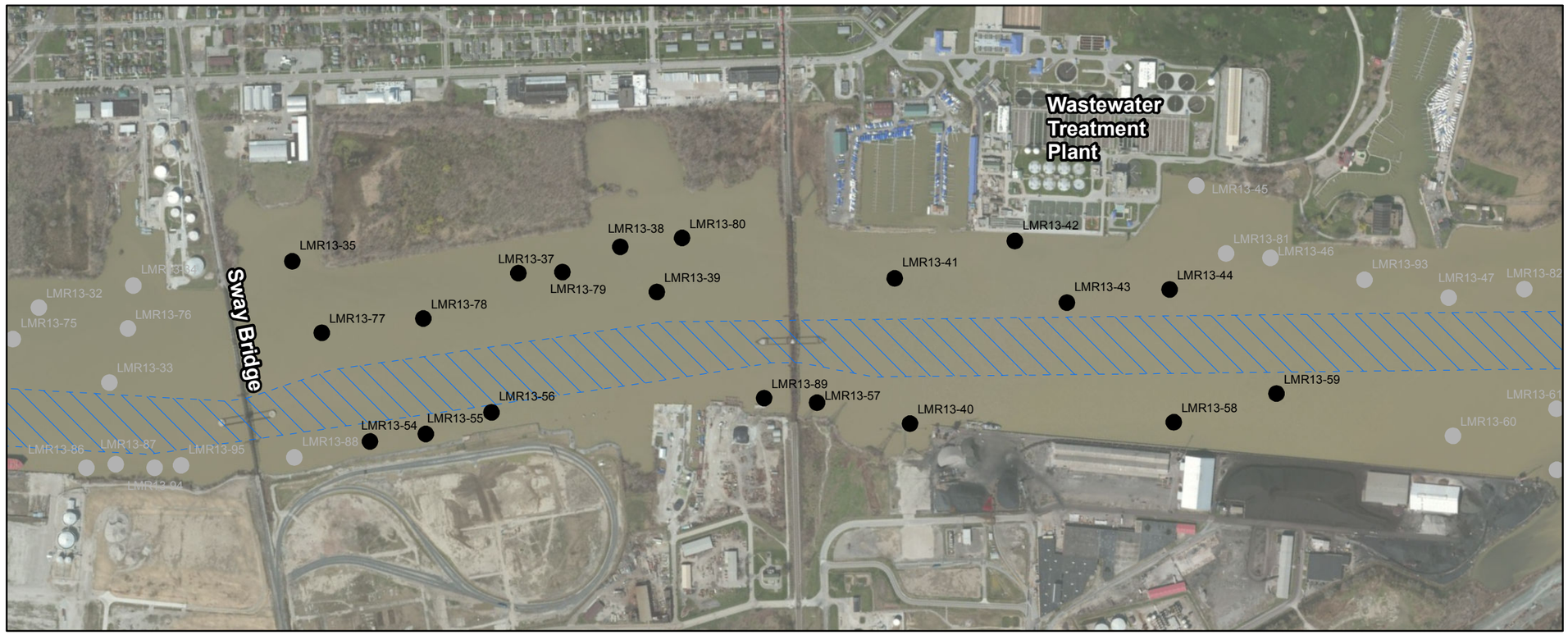
Map Created: 1/24/2014
Basemap: ESRI 2012

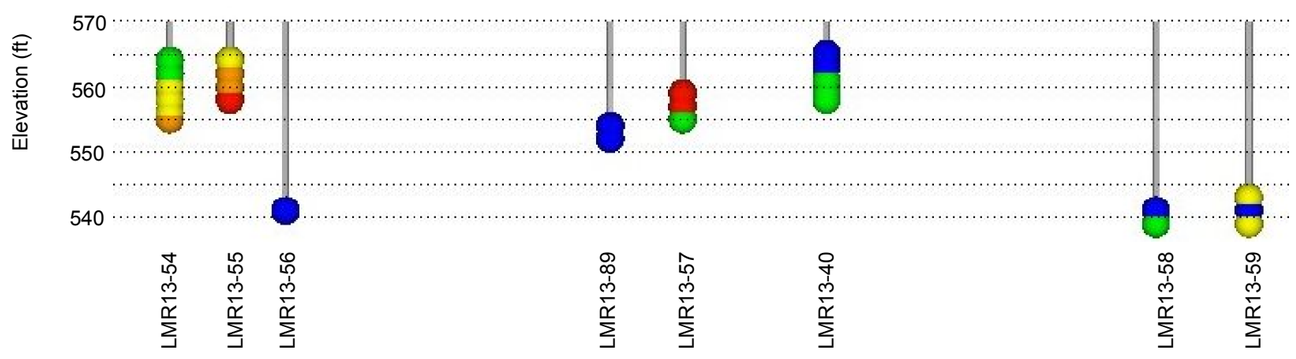
EA Engineering, Science, and Technology, Inc.

FIGURE 4-6A (Channel)
Lead Concentrations (mg/kg)
Detected in Area A Channel -
Phase 2 Lower Maumee River
Assessment of Contaminated Sediments

Document Path: L:\GISData\Midwest\Ohio\MaumeeRiver\MXDs\Report_Figures\Lead_AreaB.mxd







VICINITY MAP



Legend

- Sample Locations (Area B)
- Sample Locations (Areas A/C)
- Navigation Channel

Lead Concentrations

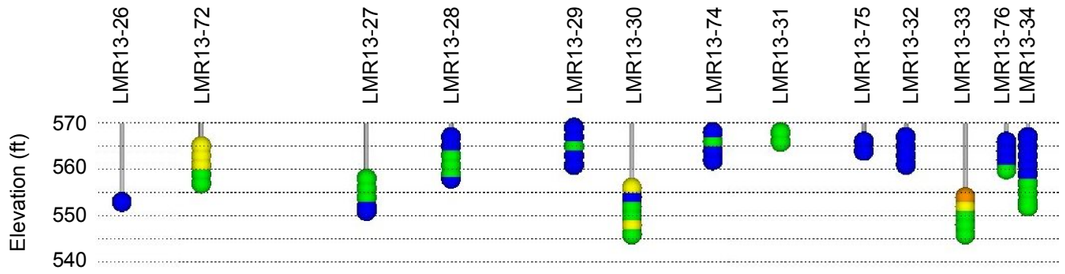
- ≥ 3x PEC (384 mg/kg)
- ≥ 2x PEC (256 mg/kg)
- ≥ PEC (128 mg/kg)
- ≥ TEC (35.8 mg/kg)
- < TEC

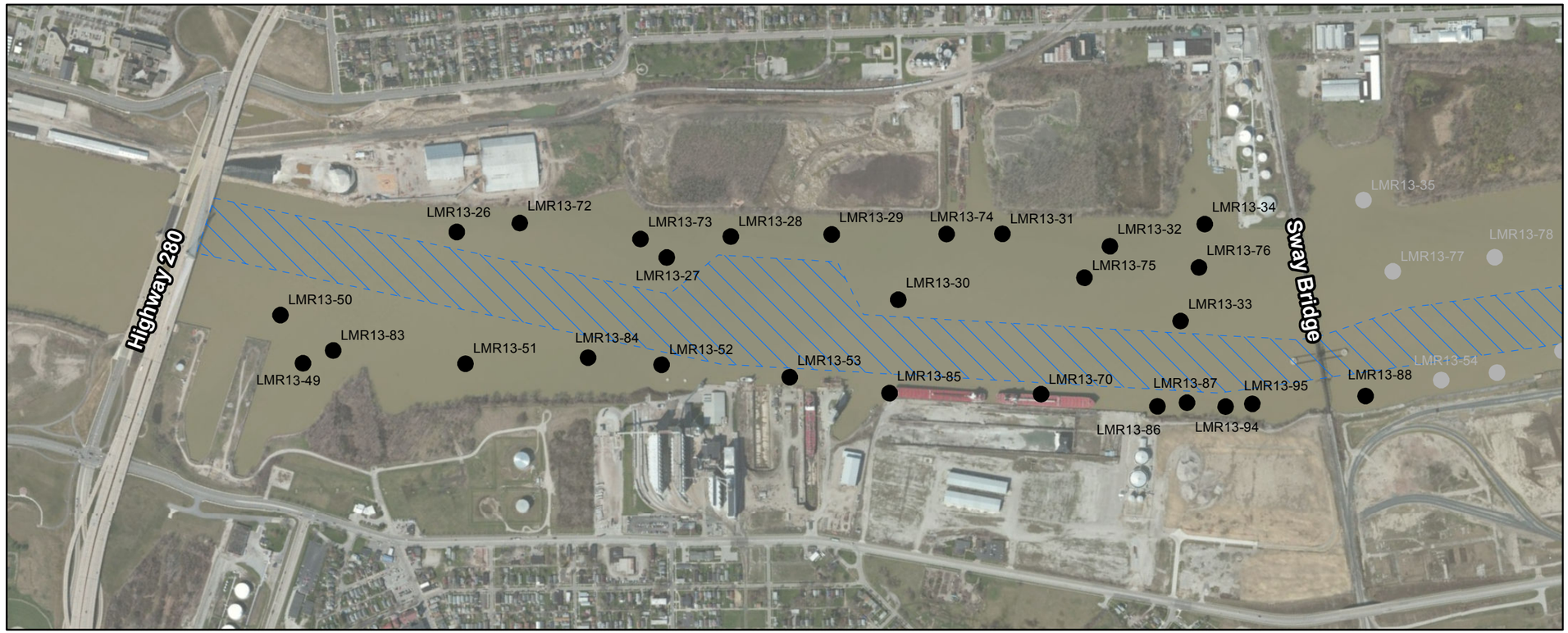
0 250 500 750 1,000
Feet

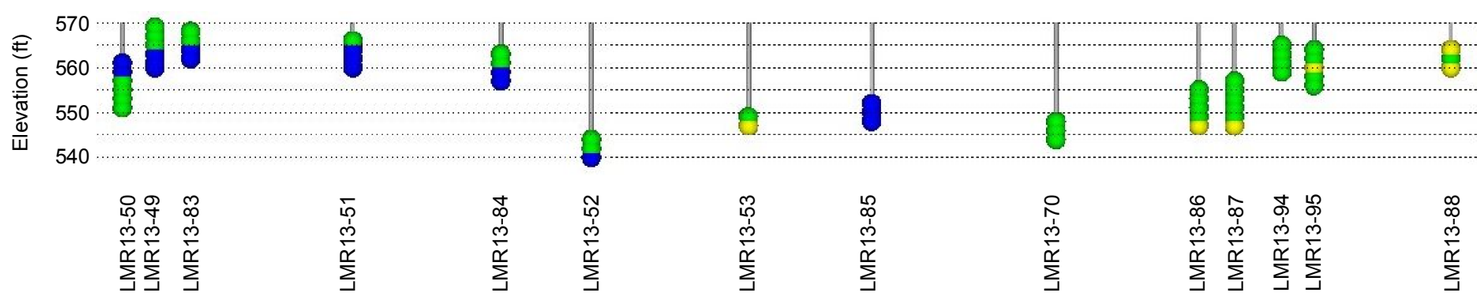
Map Created: 1/27/2014
Basemap: ESRI 2012

EA Engineering, Science, and Technology, Inc.

FIGURE 4-6B
Lead Concentrations (mg/kg)
Detected in Area B -
Phase 2 Lower Maumee River
Assessment of Contaminated Sediments







VICINITY MAP



Legend

- Sample Locations (Area C)
- Sample Locations (Area B)
- Navigation Channel

Lead Concentrations

- ≥ 3x PEC (2.584 mg/kg)
- ≥ 2x PEC (2.408 mg/kg)
- ≥ PEC (2.107 mg/kg)
- ≥ TEC (1.554 mg/kg)
- < TEC

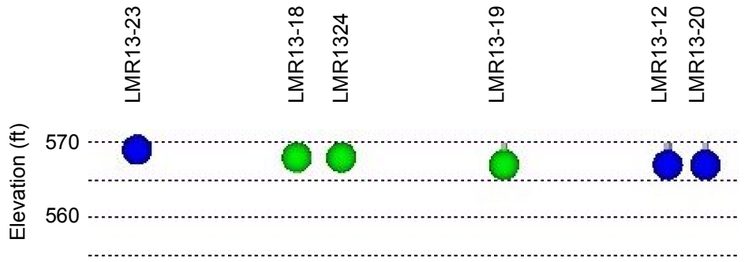
0 250 500 750 1,000
Feet

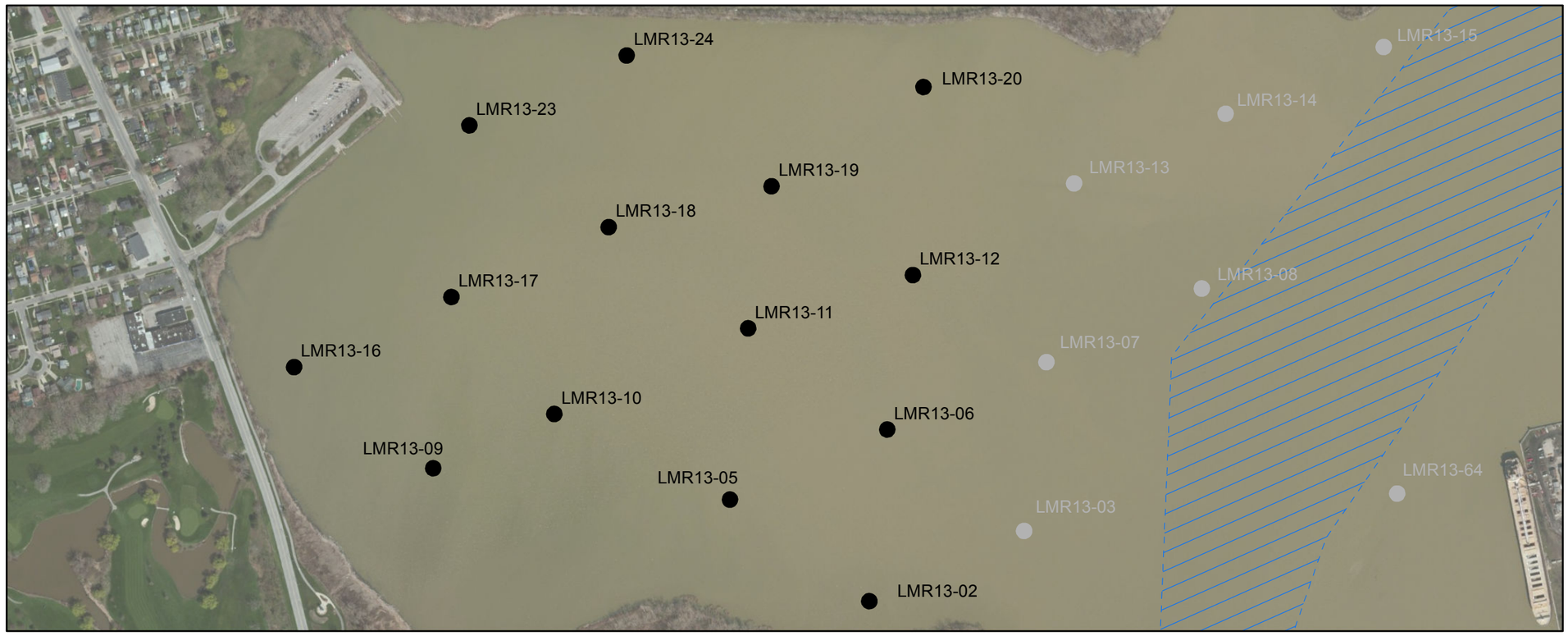
Map Created: 1/31/2014
Basemap: ESRI 2012

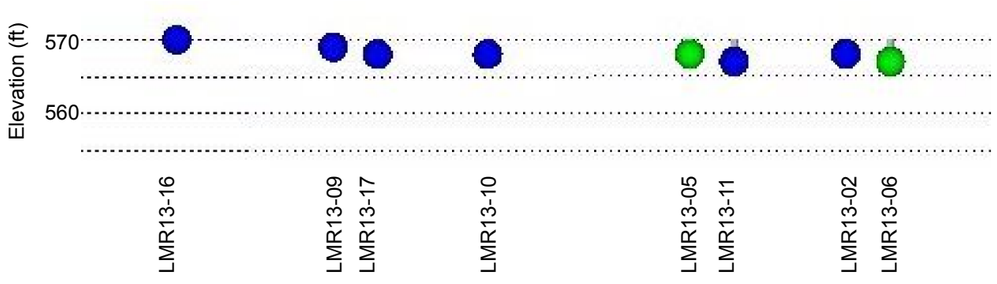
EA Engineering, Science, and Technology, Inc.

FIGURE 4-6C

Lead Concentrations (mg/kg)
Detected in Area C -
Phase 2 Lower Maumee River
Assessment of Contaminated Sediments







VICINITY MAP



Legend

- Sample Locations (Area A- Cove)
- Sample Locations (Area A- Channel)
- Navigation Channel

Nickel Concentrations

- ≥ 3x PEC (145.8 mg/kg)
- ≥ 2x PEC (97.2 mg/kg)
- ≥ PEC (48.6 mg/kg)
- ≥ TEC (22.7 mg/kg)
- < TEC

0 250 500 750 1,000
Feet

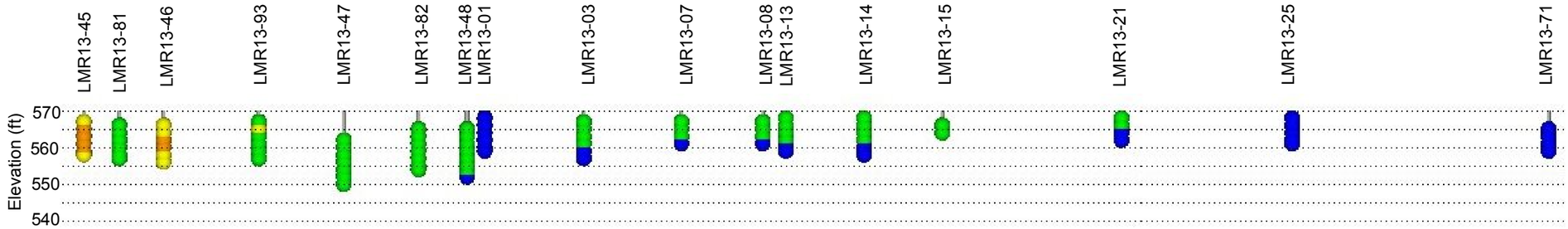
Map Created: 1/27/2014
Basemap: ESRI 2012

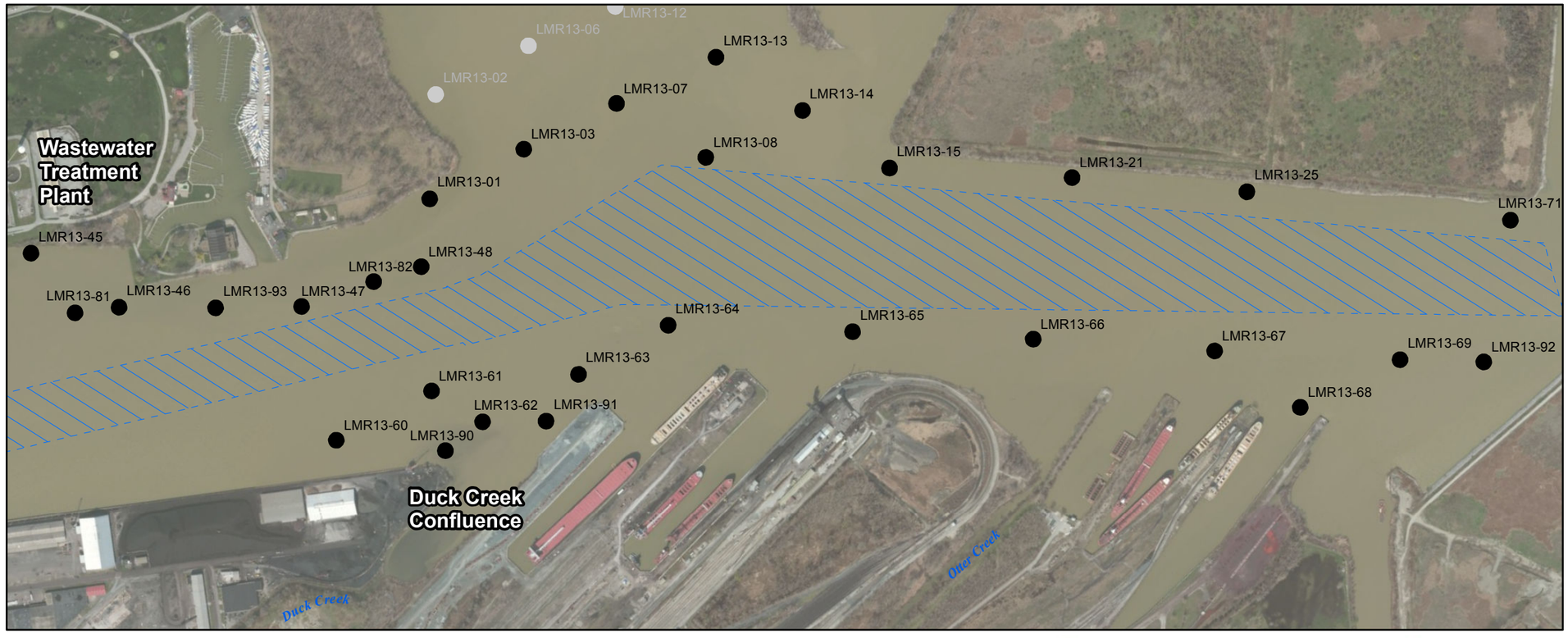
EA Engineering, Science, and Technology, Inc.

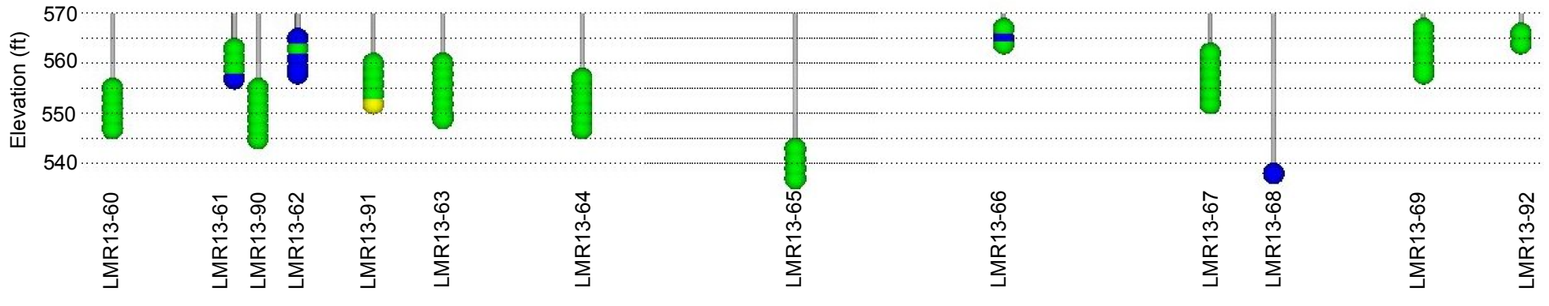
FIGURE 4-7A (Cove)

Nickel Concentrations (mg/kg)
Detected in Area A Cove -
Phase 2 Lower Maumee River
Assessment of Contaminated Sediments

Document Path: L:\GISData\Midwest\Ohio\MaumeeRiver\MXDs\Report_Figures\Nickel_AreaA Channel.mxd







VICINITY MAP



Legend

- Sample Locations (Area A- Channel)
- Sample Locations (Area A- Cove)
- Navigation Channel

Nickel Concentrations

- ≥ 3x PEC (145.8 mg/kg)
- ≥ 2x PEC (97.2 mg/kg)
- ≥ PEC (48.6 mg/kg)
- ≥ TEC (22.7 mg/kg)
- < TEC

0 250 500 750 1,000
Feet

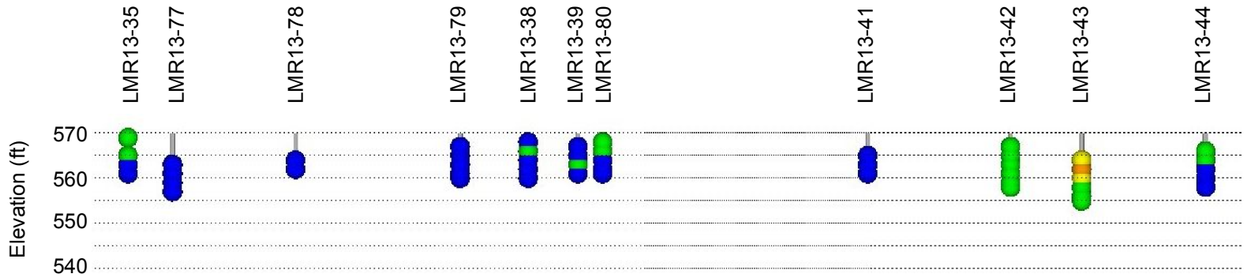
Map Created: 1/27/2014
Basemap: ESRI 2012

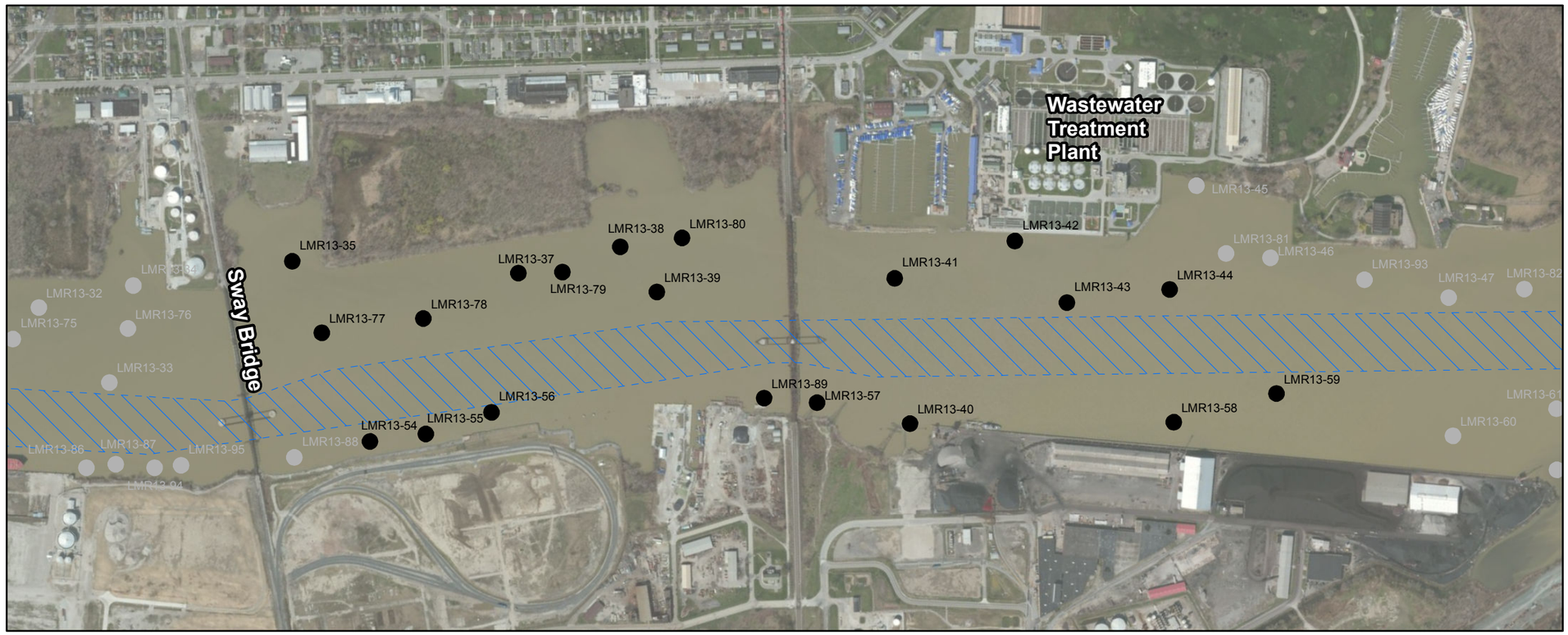
EA Engineering, Science, and Technology, Inc.

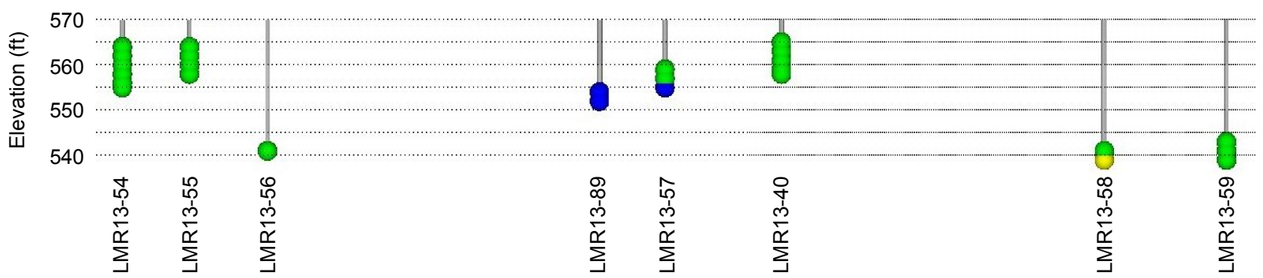
FIGURE 4-7A (Channel)

Nickel Concentrations (mg/kg)
Detected in Area A Channel -
Phase 2 Lower Maumee River
Assessment of Contaminated Sediments

Document Path: L:\GISData\Midwest\Ohio\MaumeeRiver\MXDs\Report_Figures\Nickel_AreaB.mxd







VICINITY MAP



Legend

- Sample Locations (Area B)
- Sample Locations (Areas A/C)
- Navigation Channel

Nickel Concentrations

- ≥ 3x PEC (145.8 mg/kg)
- ≥ 2x PEC (97.2 mg/kg)
- ≥ PEC (48.6 mg/kg)
- ≥ TEC (22.7 mg/kg)
- < TEC

N

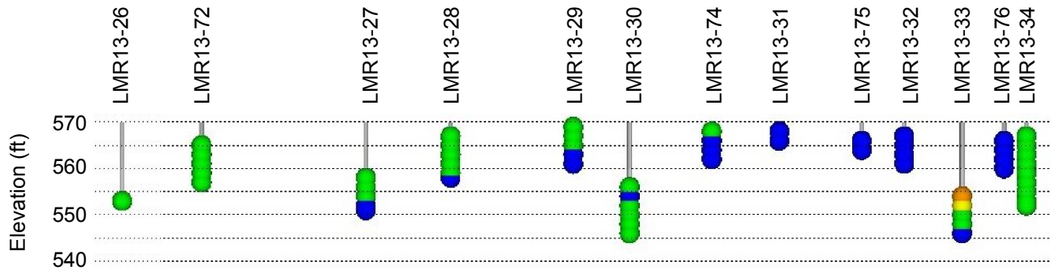
0 250 500 750 1,000
Feet

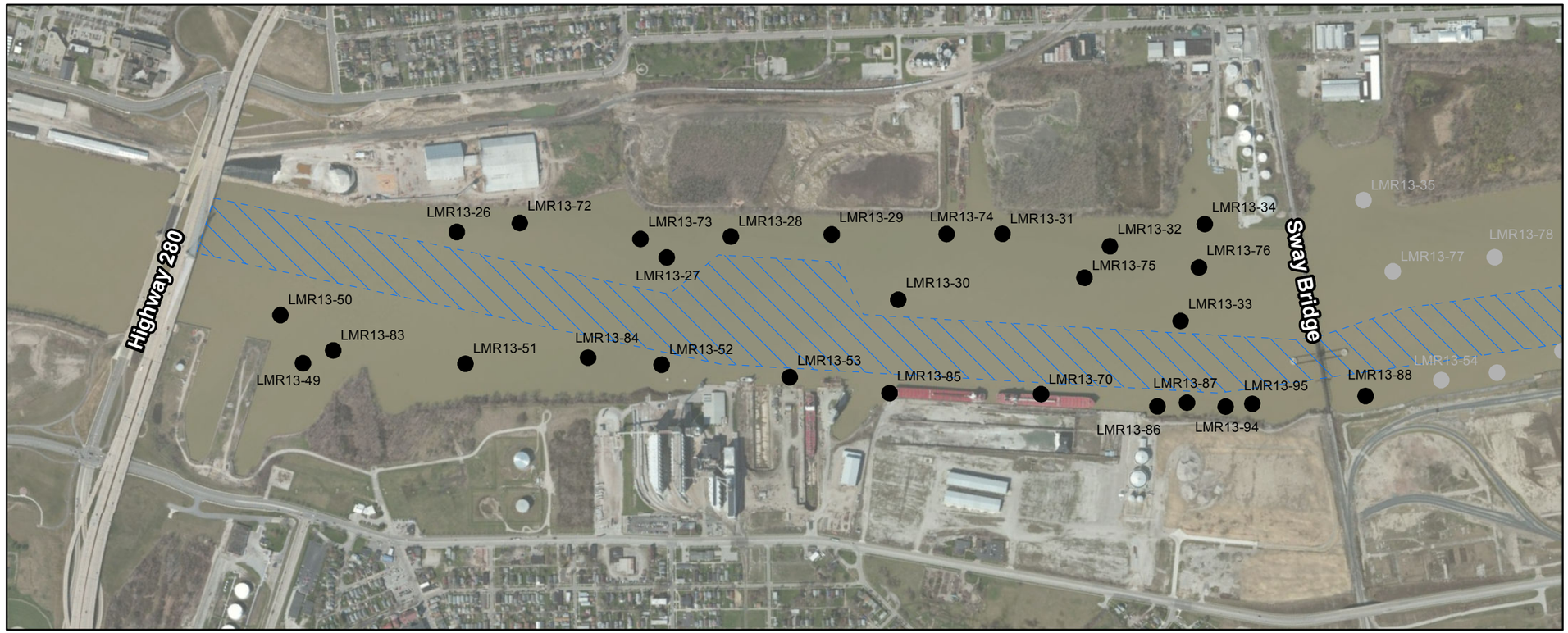
Map Created: 1/27/2014
Basemap: ESRI 2012

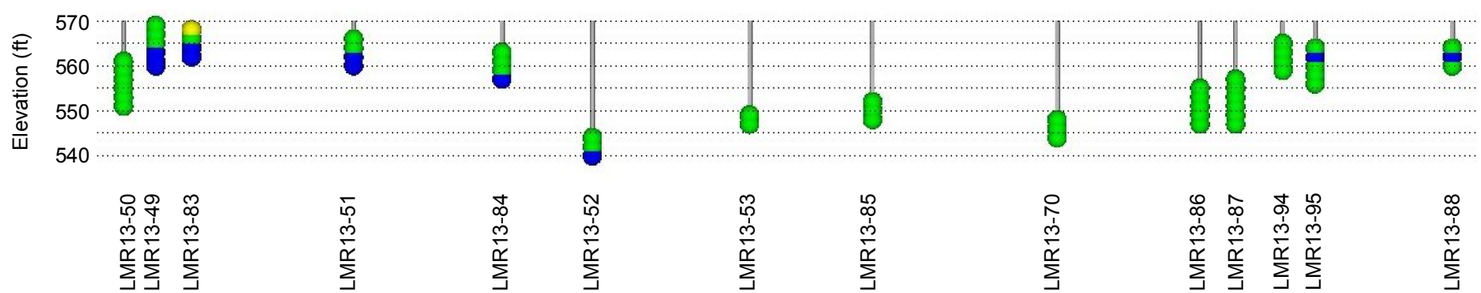
EA Engineering, Science, and Technology, Inc.

FIGURE 4-7B

Nickel Concentrations (mg/kg)
Detected in Area B -
Phase 2 Lower Maumee River
Assessment of Contaminated Sediments







VICINITY MAP



Legend

- Sample Locations (Area C)
- Sample Locations (Area B)
- Navigation Channel

Nickel Concentrations

- ≥ 3x PEC (145.8 mg/kg)
- ≥ 2x PEC (97.2 mg/kg)
- ≥ PEC (48.6 mg/kg)
- ≥ TEC (22.7 mg/kg)
- < TEC

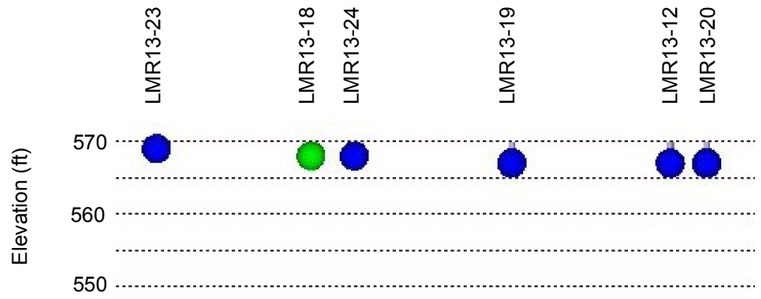
0 250 500 750 1,000
Feet

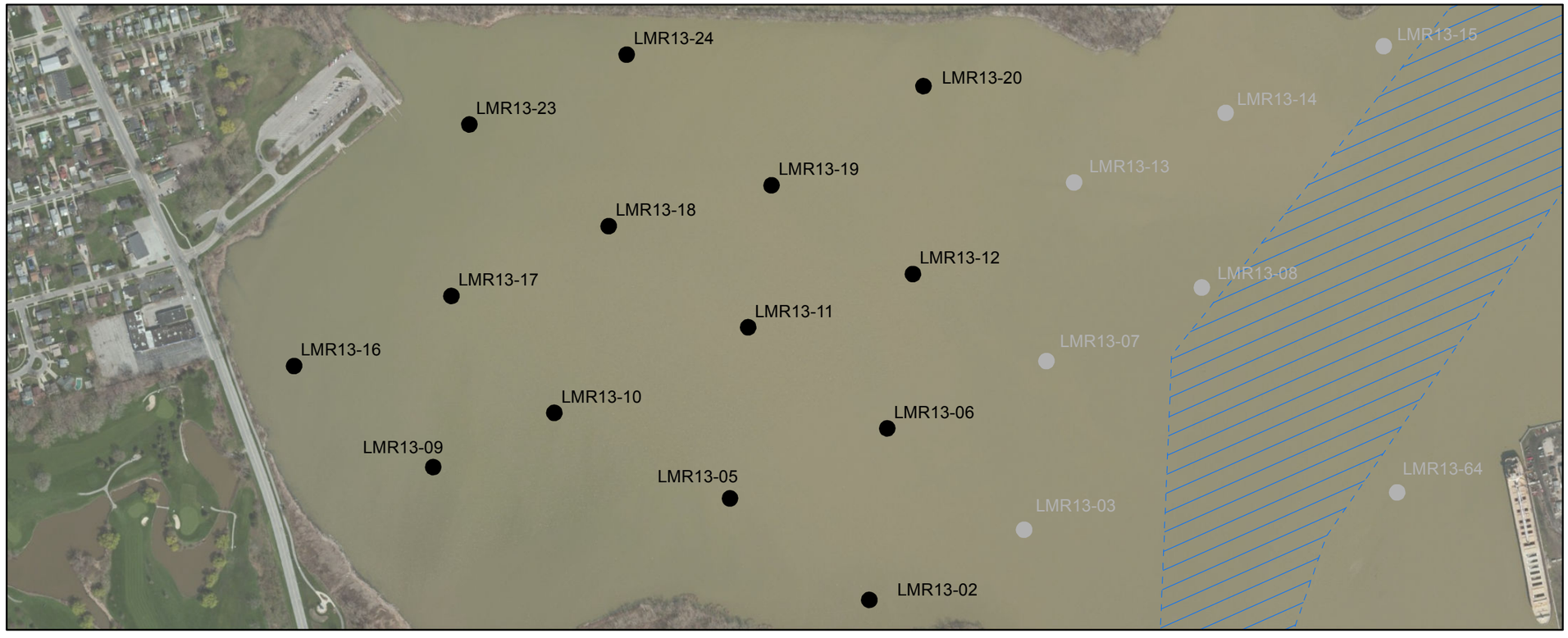
Map Created: 1/31/2014
Basemap: ESRI 2012

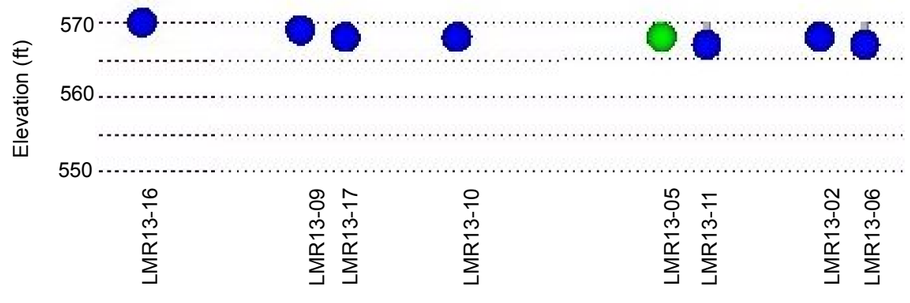
EA Engineering, Science, and Technology, Inc.

FIGURE 4-7C

Nickel Concentrations (mg/kg)
Detected in Area C -
Phase 2 Lower Maumee River
Assessment of Contaminated Sediments







VICINITY MAP



Legend

- Sample Locations (Area A- Cove)
- Sample Locations (Area A- Channel)
- Navigation Channel

Zinc Concentrations

- ≥ 3x PEC (3.139 mg/kg)
- ≥ 2x PEC (2.963 mg/kg)
- ≥ PEC (2.662 mg/kg)
- ≥ TEC (2.083 mg/kg)
- < TEC

N

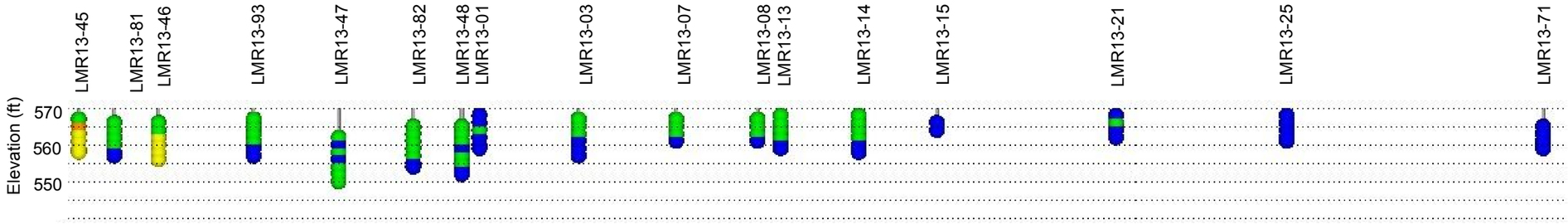
0 250 500 750 1,000
Feet

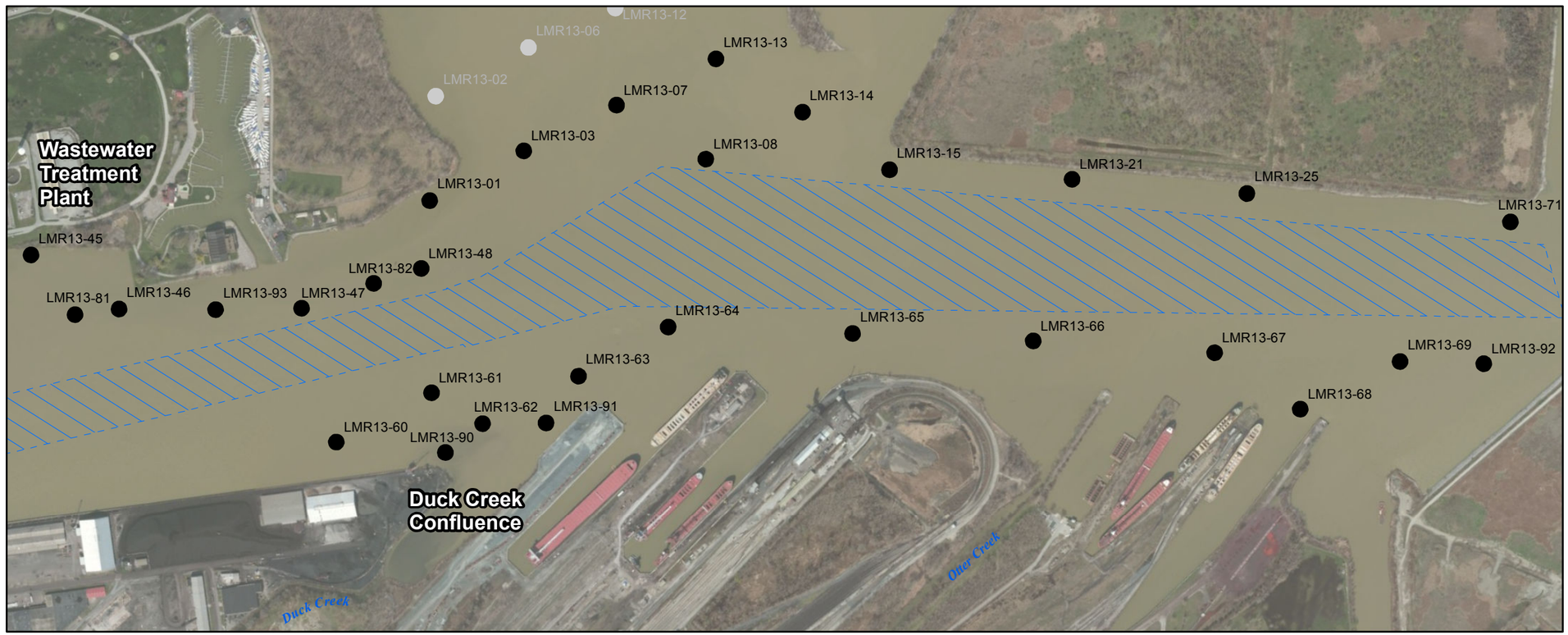
Map Created: 1/27/2014
Basemap: ESRI 2012

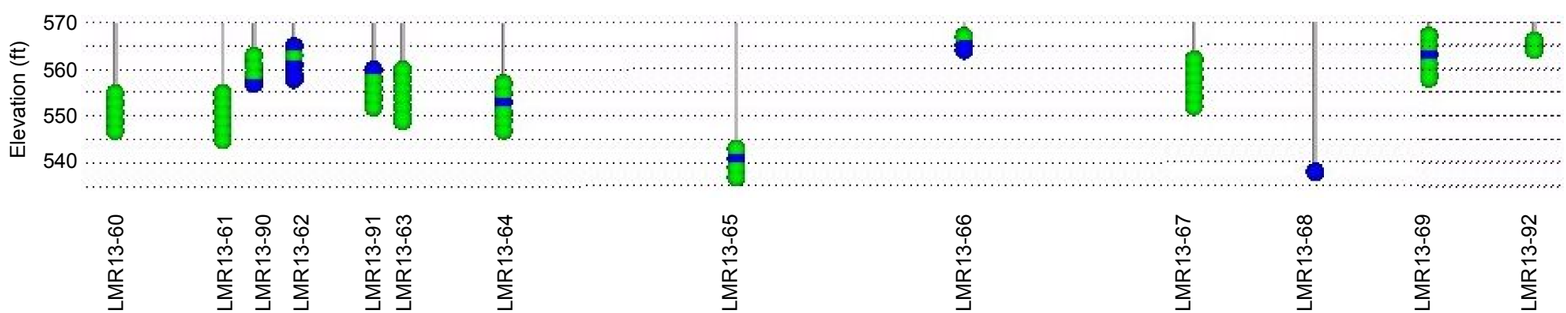
EA Engineering, Science, and Technology, Inc.

FIGURE 4-8A (Cove)

Zinc Concentrations (mg/kg)
Detected in Area A Cove -
Phase 2 Lower Maumee River
Assessment of Contaminated Sediments







VICINITY MAP



Legend

- Sample Locations (Area A- Channel)
- Sample Locations (Area A- Cove)
- Navigation Channel

Zinc Concentrations

- ≥ 3x PEC (3.139 mg/kg)
- ≥ 2x PEC (2.963 mg/kg)
- ≥ PEC (2.662 mg/kg)
- ≥ TEC (2.083 mg/kg)
- < TEC

0 250 500 750 1,000
Feet

Map Created: 1/27/2014
Basemap: ESRI 2012

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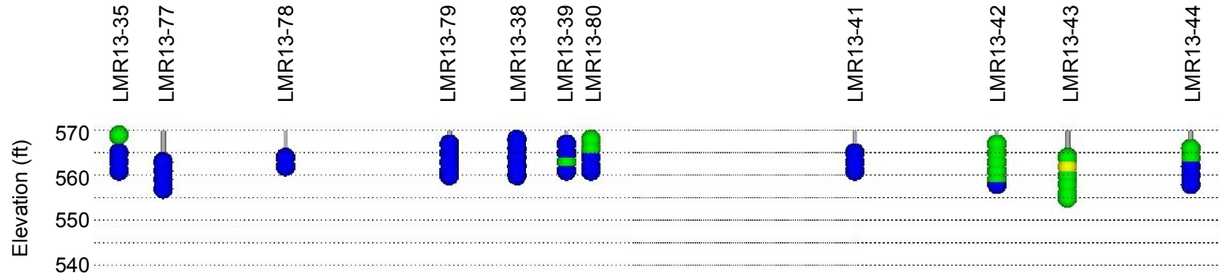
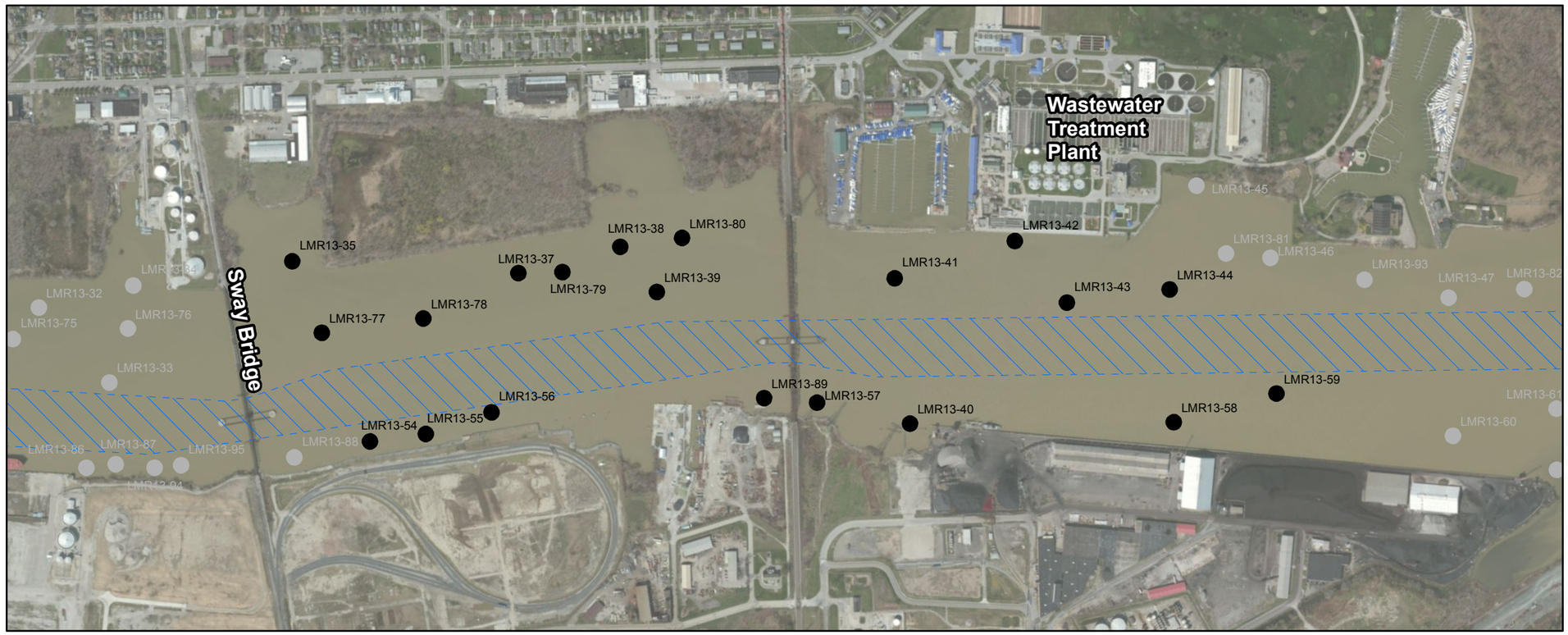
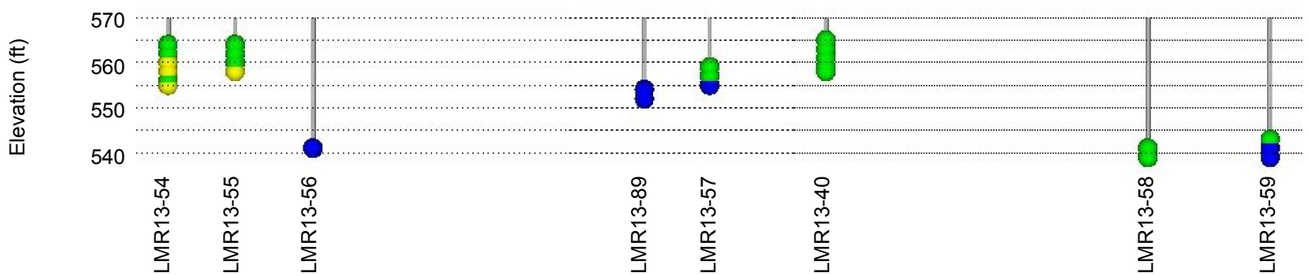
FIGURE 4-8A (Channel)
Zinc Concentrations (mg/kg)
Detected in Area A -
Phase 2 Lower Maumee
River Assessment of Contaminated Sediments

Document Path: \\lovetonfederal\agencies\GISData\Midwest\Ohio\MaumeeRiver\MXDs\Report_Figures\Zinc_AreaB.mxd







VICINITY MAP



Legend

- Sample Locations (Area B)
- Sample Locations (Areas A/C)
- Navigation Channel

Zinc Concentrations

- ≥ 3x PEC (3.139 mg/kg)
- ≥ 2x PEC (2.963 mg/kg)
- ≥ PEC (2.662 mg/kg)
- ≥ TEC (2.083 mg/kg)
- < TEC

N

0 250 500 750 1,000
Feet

Map Created: 1/27/2014
Basemap: ESRI 2012

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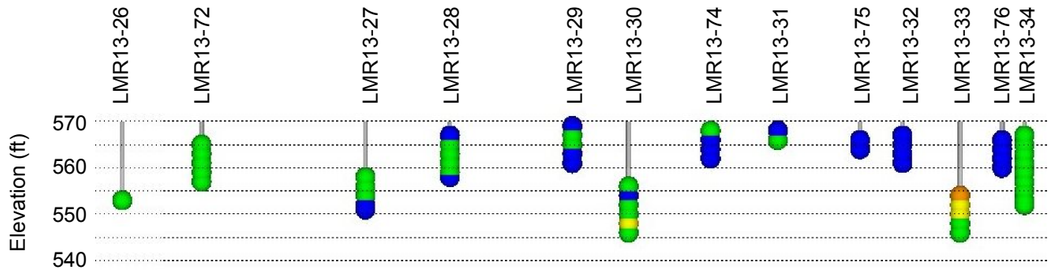
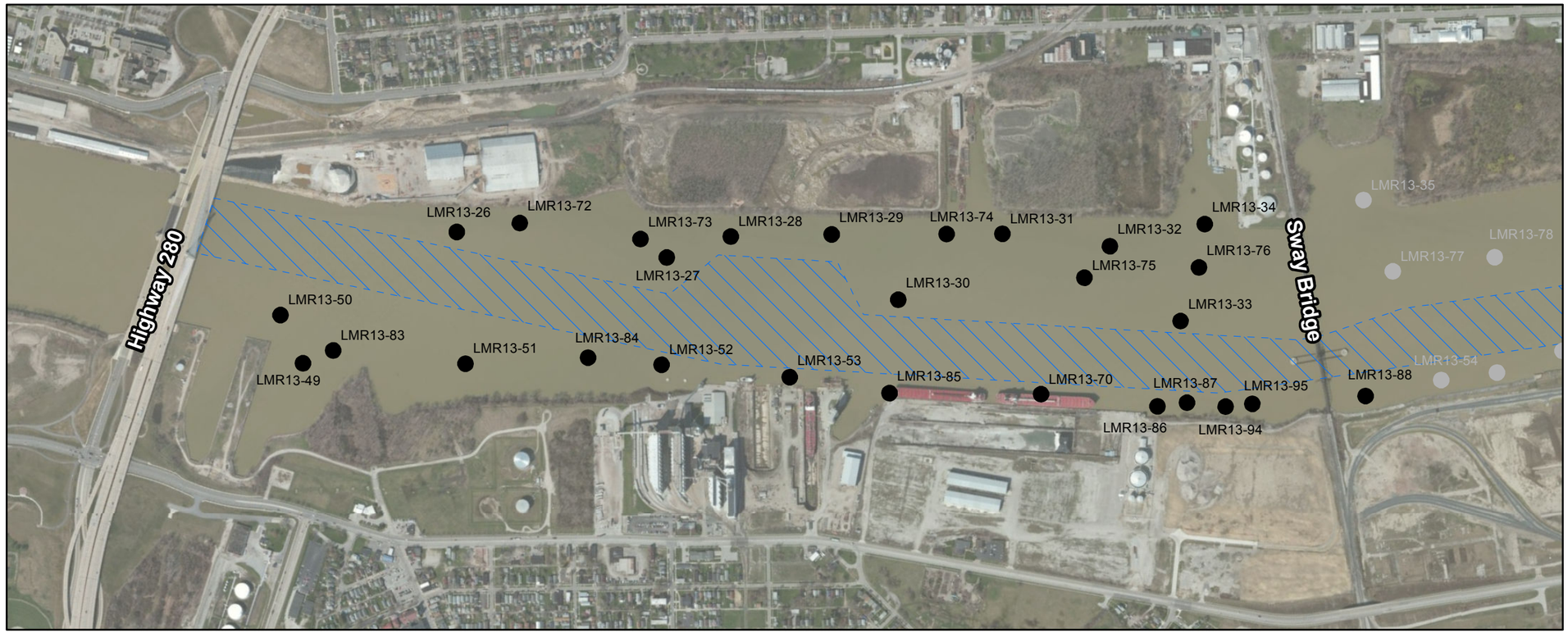
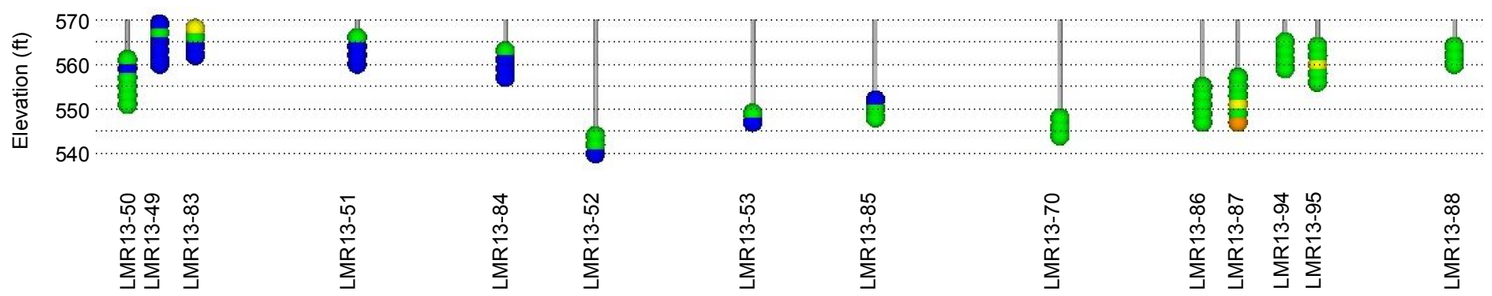
FIGURE 4-8B

Zinc Concentrations (mg/kg)
Detected in Area B -
Phase 2 Lower Maumee River
Assessment of Contaminated Sediments

Document Path: L:\GISData\Midwest\Ohio\MaumeeRiver\MXDs\Report_Figures\Zinc_AreaC.mxd







VICINITY MAP



Legend

- Sample Locations (Area C)
- Sample Locations (Area B)
- Navigation Channel

Zinc Concentrations

- ≥ 3x PEC (3.139 mg/kg)
- ≥ 2x PEC (2.963 mg/kg)
- ≥ PEC (2.662 mg/kg)
- ≥ TEC (2.083 mg/kg)
- < TEC

0 250 500 750 1,000
Feet

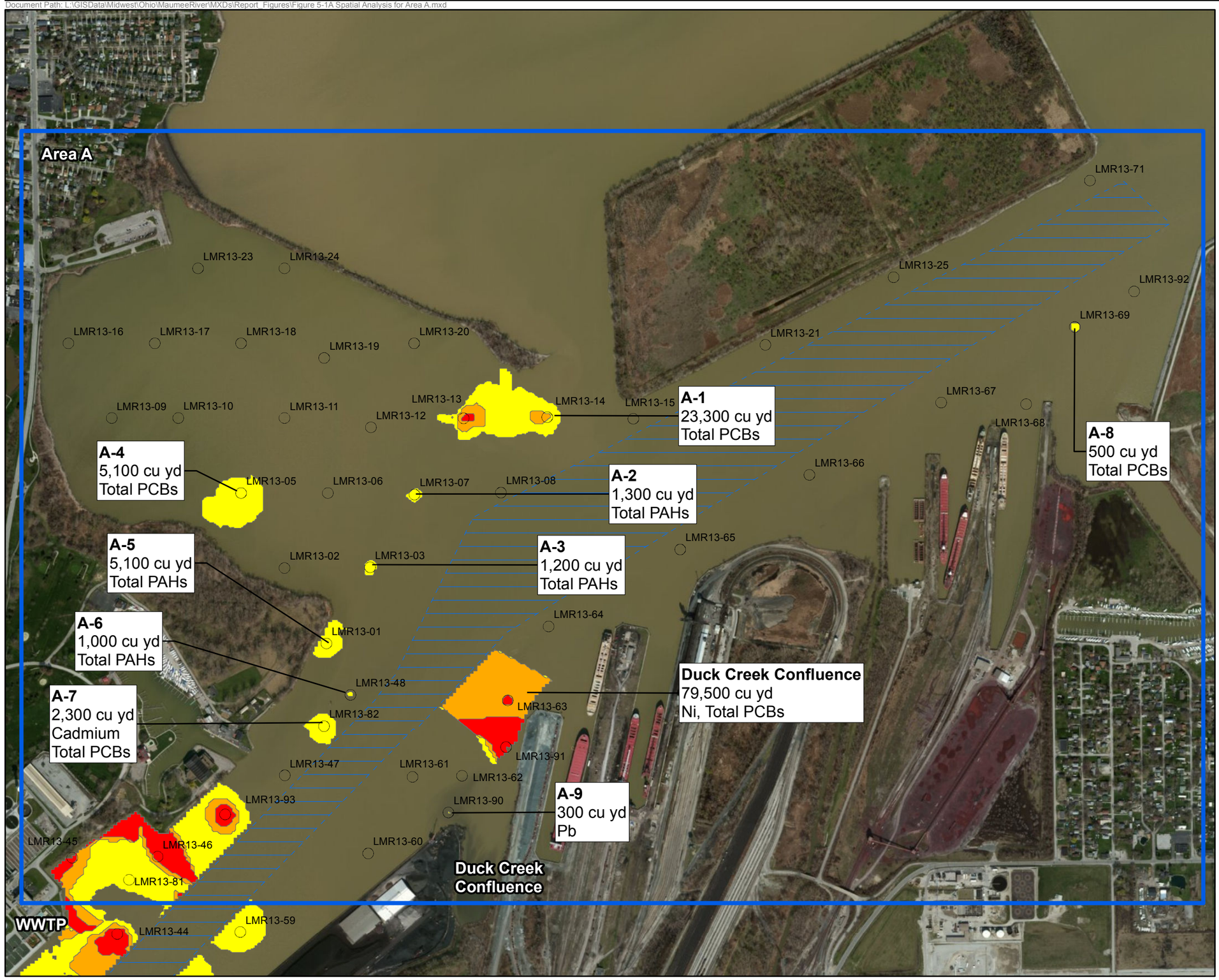
Map Created: 1/31/2014
Basemap: ESRI 2012

EA Engineering, Science, and Technology, Inc.

FIGURE 4-8C

Zinc Concentrations (mg/kg)
Detected in Area C -
Phase 2 Lower Maumee River
Assessment of Contaminated Sediments

Document Path: L:\GISData\Midwest\Ohio\MaumeeRiver\MXDs\Report_Figures\Figure 5-1A Spatial Analysis for Area A.mxd



VICINITY MAP



Legend

- Navigation Channel
- Sample Location
- Area of Spatial Analysis (Area A)
- ≥ 3x PEC
- ≥ 2x PEC
- ≥ PEC

0 300 600 900 1,200
Feet

1 inch = 800 feet

Map Created: 2/7/2014
Basemap: ESRI 2012

EA Engineering, Science, and Technology, Inc.

FIGURE 5-1A

Spatial Analysis for Area A-
Phase 2 Lower Maumee River

Waste Water Treatment Plant

Area B

WWTP
342,500 cu yd
Cd, Cr, Cu, Pb, Hg, Ni, Zn
Total PCBs
Total PAHs

B-1
1,000 cu yd
Total PAHs

B-2
200 cu yd
Total PCBs

B-3
10,000 cu yd
Pb

B-4
11,200 cu yd
Ni, Total PCBs

B-5
6,600 cu yd
Pb, Total PAHs

Sway Bridge

LMR13-82, LMR13-91, LMR13-47, LMR13-61, LMR13-62, LMR13-93, LMR13-90, LMR13-45, LMR13-46, LMR13-60, LMR13-81, LMR13-44, LMR13-59, LMR13-42, LMR13-43, LMR13-58, LMR13-41, LMR13-40, LMR13-80, LMR13-57, LMR13-38, LMR13-39, LMR13-89, LMR13-79, LMR13-37, LMR13-78, LMR13-56, LMR13-35, LMR13-77, LMR13-55, LMR13-54, LMR13-34, LMR13-88, LMR13-76, LMR13-32, LMR13-33, LMR13-95, LMR13-75, LMR13-94, LMR13-31, LMR13-87

VICINITY MAP



Legend

- Navigation Channel
- Sample Location
- Area of Spatial Analysis (Area B)
- ≥ 3x PEC
- ≥ 2x PEC
- ≥ PEC

N

0 300 600 900 1,200
Feet

1 inch = 800 feet

Map Created: 2/7/2014
Basemap: ESRI 2012

EA Engineering, Science, and Technology, Inc.

FIGURE 5-1B
Spatial Analysis for Area B-
Phase 2 Lower Maumee River

Document Path: L:\GISData\Midwest\Ohio\MaumeeRiver\MXDs\Report_Figures\Figure 5-1C Spatial Analysis for Area C.mxd

Area C

C-1
600 cu yd
Total PCBs

C-2
8,200 cu yd
As, Cd, Cr, Pb, Ni, Zn
Total PAHs

C-3
24,100 cu yd
Pb, Zn
Total PAHs

C-4
20,500 cu yd
Cd, Pb,
Total PAHs

C-5
1,800 cu yd
Pb
Total PCBs

C-6
300 cu yd
Ni, Zn

Sway Bridge
124,700 cu yd
As, Cd, Pb, Hg, Zn
Total PCBs
Total PAHs

Sway Bridge

Highway 280

LMR13-35, LMR13-77, LMR13-55, LMR13-54, LMR13-88, LMR13-34, LMR13-76, LMR13-32, LMR13-33, LMR13-95, LMR13-75, LMR13-94, LMR13-31, LMR13-87, LMR13-74, LMR13-86, LMR13-70, LMR13-29, LMR13-30, LMR13-28, LMR13-85, LMR13-73, LMR13-53, LMR13-27, LMR13-72, LMR13-52, LMR13-26, LMR13-84, LMR13-51, LMR13-83, LMR13-50, LMR13-49

VICINITY MAP



Legend

- Navigation Channel
- Sample Location
- Area of Spatial Analysis (Area C)
- ≥ 3x PEC
- ≥ 2x PEC
- ≥ PEC

N

0 300 600 900 1,200
Feet

1 inch = 800 feet

Map Created: 2/7/2014
Basemap: ESRI 2012

EA Engineering, Science, and Technology, Inc.

FIGURE 5-1C

Spatial Analysis for Area C-
Phase 2 Lower Maumee River

Document Path: L:\GISData\Midwest\Ohio\MaumeeRiver\MXDs\Report_Figures\Figure 6-1 Duck Creek Hot Spot.mxd

Sediment Benchmarks for Contaminants				
Analyte	Unit	PEC	PECx 2	PEC x3
Total PCBs ND=0	µg/kg	676	1352	2028
Total PAHs ND=1/2 RL	µg/kg	22800	45600	68400
Cadmium	mg/kg	4.98	9.96	14.9
Chromium	mg/kg	111	222	333
Lead	mg/kg	128	256	384
Nickel	mg/kg	48.6	97.2	146
Zinc	mg/kg	459	918	1377

MR-59
Analyte Exceeding PEC
PCB: 16,800
Ni: 92.3

MR-51
Analyte Exceeding PEC
PCB: 11,400
Ni: 103

DC-19
Analyte Exceeding PEC
PCB: 6000

DC-17
Analyte Exceeding PEC
PCB: 6500
Cd: 5.1

DC-20
Analyte Exceeding PEC
Ni: 77.8
Pb: 158

DC-04
Analyte Exceeding PEC
Ni: 89.5

DC-13
Analyte Exceeding PEC
PCB: 1650
Ni: 54.9

DC-21
Analyte Exceeding PEC
PCB: 1730

DC-07
Analyte Exceeding PEC
PCB: 3940

DC-01
Analyte Exceeding PEC
Ni: 55.4

DC-05
Analyte Exceeding PEC
PCB: 6210
Ni: 52.5
Pb: 21.4

DC-25
Analyte Exceeding PEC
PCB: 920

LMR13-63
Analyte Exceeding PEC
PCB: 2370

LMR13-91
Analyte Exceeding PEC
PCB: 2940
Ni: 49.7

MR-52
Analyte Exceeding PEC
PCB: 7800
Ni: 65.5

DC-14
Analyte Exceeding PEC
Cd: 6.3
Cr: 119
Ni: 51.5

DC-24
Analyte Exceeding PEC
Ni: 66.6

DC-03
Analyte Exceeding PEC
PCB: 2100
Cr: 172
Ni: 113

DC-16
Analyte Exceeding PEC
PCB: 4000
Cd: 5.1

DC-02
Analyte Exceeding PEC
PCB: 1130
Cr: 119
Ni: 86.7

LMR13-48
LMR13-82
LMR13-47
LMR13-61
LMR13-62
LMR13-90
LMR13-60
DC-23
DC-22

VICINITY MAP



Legend

Sampling Locations

- EA 2013
- AScI 1995-1997
- Weston 2010-2011
- Navigation Channel

Interpolated Results

- 3x PEC Exceedance
- 2x PEC Exceedance
- PEC Exceedance

N

0 150 300 450 600
Feet

1 inch = 300 feet

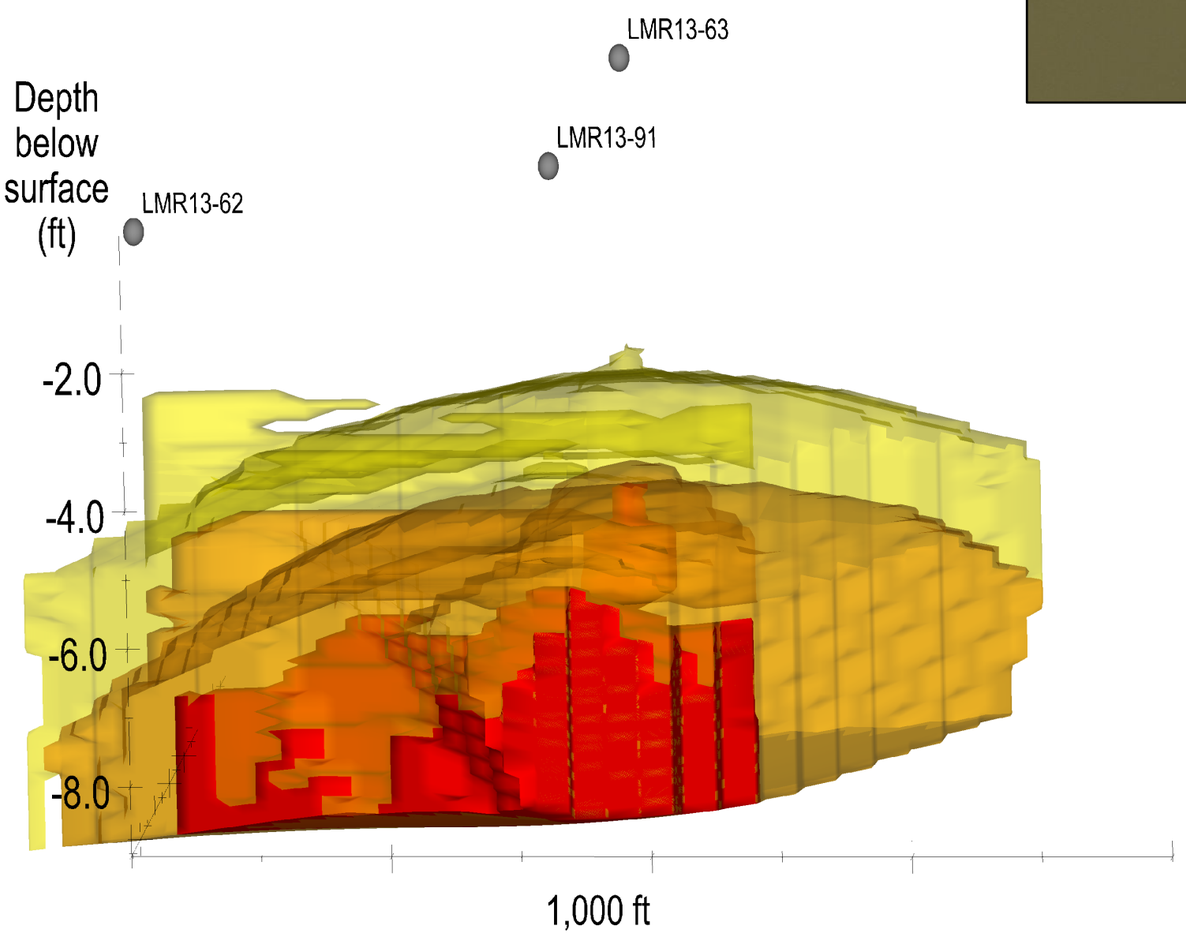
Map Created: 2/7/2014
Basemap: ESRI 2012

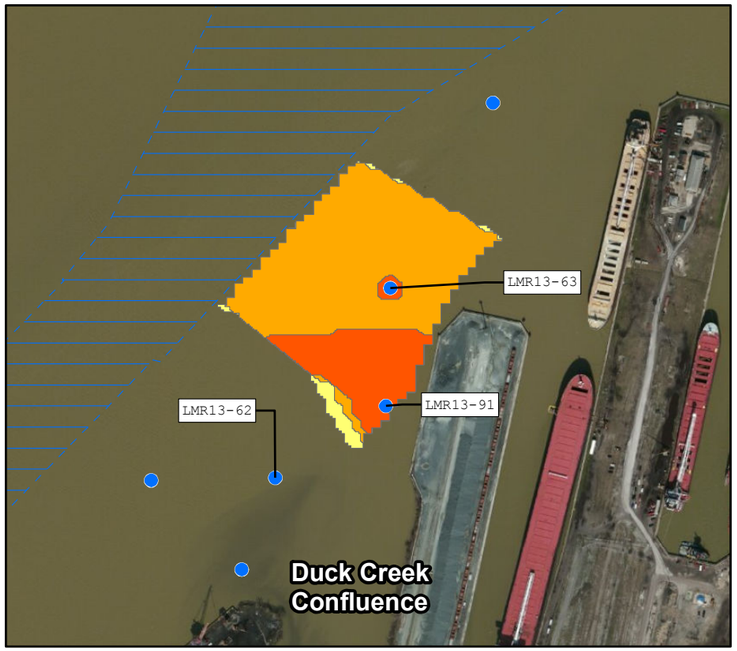
EA Engineering, Science, and Technology, Inc.

FIGURE 6-1

Duck Creek Confluence Hot Spot-
Phase 2 and Historical PEC Exceedances

Sediment Benchmarks for Contaminants				
Analyte	**Unit**	**PEC**	**PECx 2**	**PEC x3**
Total PCBs ND=0	µg/kg	676	1352	2028
Total PAH 17 ND=1/2RL	ug/kg	22800	45600	68400
Arsenic	mg/kg	33.0	66.0	99.0
Cadmium	mg/kg	4.98	9.96	14.9
Chromium	mg/kg	111	222	333
Copper	mg/kg	149	298	447
Lead	mg/kg	128	256	384
Mercury	mg/kg	1.06	2.12	3.18
Nickel	mg/kg	48.6	97.2	146
Zinc	mg/kg	459	918	1377





VICINITY MAP



Legend

Sampling Locations

- EA 2013
- Navigation Channel

Interpolated Results

- 3x PEC Exceedance
- 2x PEC Exceedance
- PEC Exceedance

0 250 500 750 1,000
Feet

1 inch = 500 feet
Scale applies to aerial inset

Map Created: 2/7/2014
Basemap: ESRI 2012

EA Engineering, Science, and Technology, Inc.

FIGURE 6-2

Spatial Analysis With Depth for the Duck Creek Confluence Hot Spot-Phase 2 Lower Maumee River

Sediment Benchmarks for Contaminants				
Analyte	Unit	PEC	PECx 2	PEC x3
Total PCBs ND=0	µg/kg	676	1352	2028
Total PAHs ND=1/2 RL	µg/kg	22800	45600	68400
Cadmium	mg/kg	4.98	9.96	14.9
Chromium	mg/kg	111	222	333
Lead	mg/kg	128	256	384
Nickel	mg/kg	48.6	97.2	146
Zinc	mg/kg	459	918	1377

MR-54

Analyte	Exceeding PEC
PCB:	13,000
Cd:	7.5
Cr:	456
Ni:	227
Pb:	248
Zn:	1120

MR-29

Analyte	Exceeding PEC
PCB:	970
Cd:	11.2
Cr:	622
Ni:	284
Pb:	298
Zn:	1310

LMR13-47

LMR13-45

Analyte	Exceeding PEC
PCB:	6950
Cd:	8.8
Cr:	319
Ni:	141
Pb:	220
Zn:	1210

LMR13-93

Analyte	Exceeding PEC
PCB:	6960
Cd:	6.4
Ni:	53.5
Pb:	135

LMR13-46

Analyte	Exceeding PEC
PCB:	12,860
PAH:	27,860
Cd:	12.2
Cr:	288
Ni:	132
Pb:	199
Zn:	703

LMR13-81

Analyte	Exceeding PEC
PAH:	43,440
Pb:	158

Waste Water Treatment Plant

MR-02

Analyte	Exceeding PEC
PCB:	1100
Cr:	171
Ni:	116
Pb:	183
Zn:	474

LMR13-44

Analyte	Exceeding PEC
PCB:	3380
PAH:	23,600

LMR13-59

MR-41

Analyte	Exceeding PEC
PCB:	13,400
Cd:	9.39
Cr:	252
Ni:	80.8
Pb:	143
Zn:	507

LMR13-43

Analyte	Exceeding PEC
PCB:	5420
PAH:	68,900
Cd:	15.4
Cr:	318
Ni:	108
Pb:	192
Zn:	602

LMR13-58

MR-26

Analyte	Exceeding PEC
PCB:	11,880
Cd:	15.8
Cr:	460
Ni:	141
Pb:	176
Zn:	752

MR-55

Analyte	Exceeding PEC
PCB:	9560

LMR13-42

Analyte	Exceeding PEC
PAH:	36920
Cd:	7.5
Cr:	115
Pb:	222

LMR13-41

VICINITY MAP



Legend

Sampling Locations

- EA 2013
- AScl 1995-1997
- Navigation Channel

Interpolated Results

- 3x PEC Exceedance
- 2x PEC Exceedance
- PEC Exceedance

N

0 200 400 600 800

Feet

1 inch = 300 feet

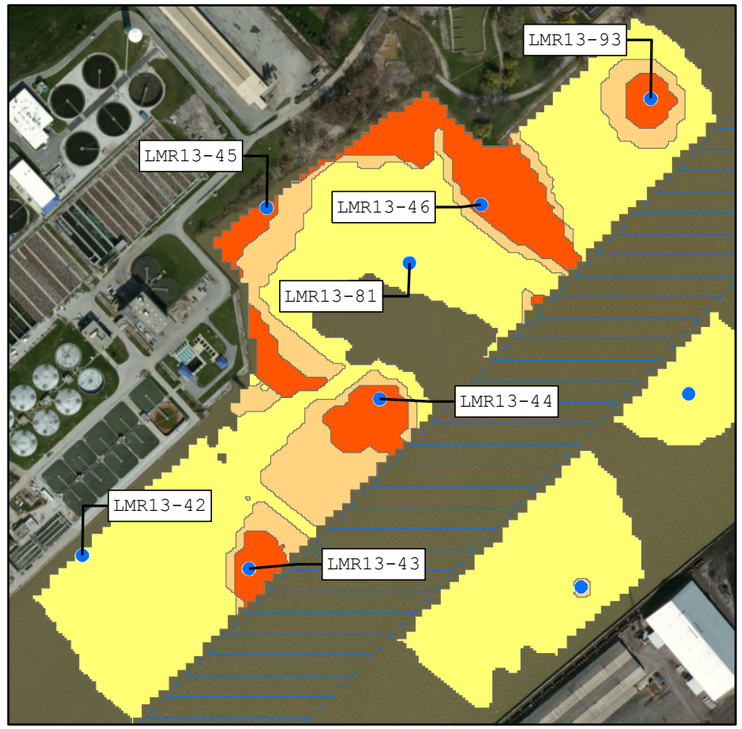
Map Created: 2/7/2014
Basemap: ESRI 2012

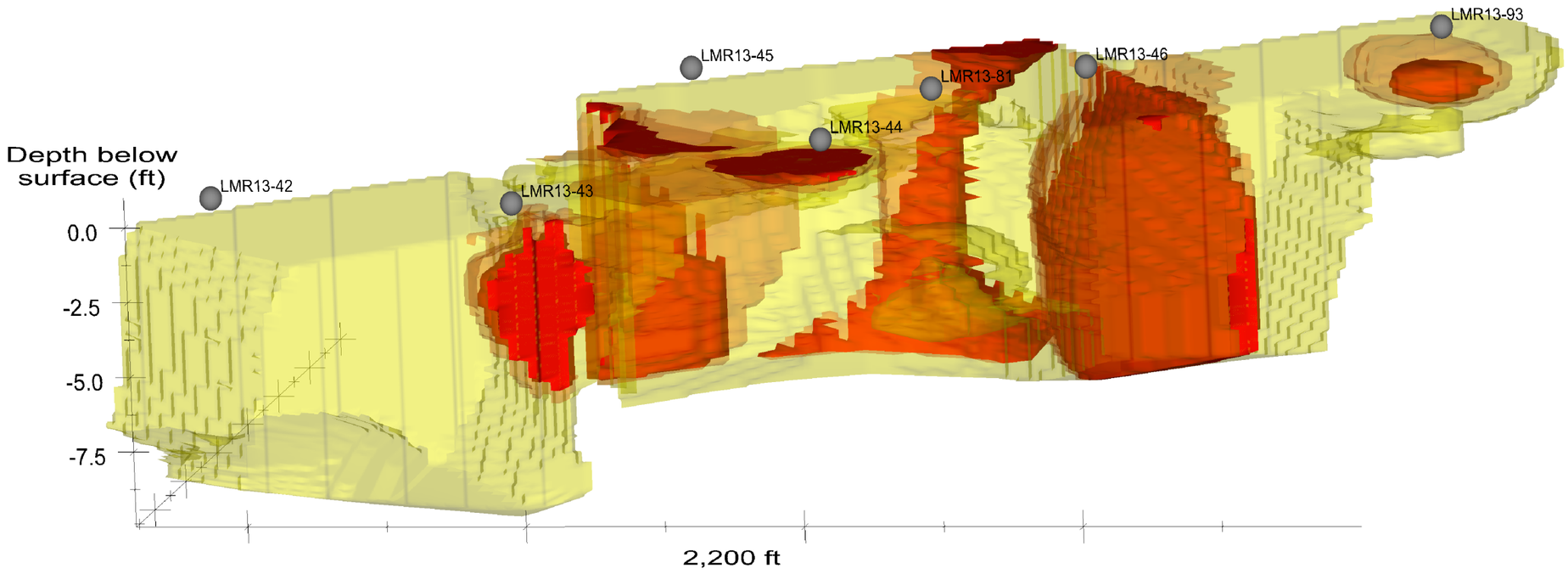
EA Engineering, Science, and Technology, Inc.

FIGURE 6-3

Wastewater Treatment Plant Hot Spot-Phase 2 and Historical PEC Exceedances

Sediment Benchmarks for Contaminants				
Analyte	**Unit**	**PEC**	**PECx 2**	**PEC x3**
Total PCBs ND=0	µg/kg	676	1352	2028
Total PAH 17 ND=1/2RL	ug/kg	22800	45600	68400
Arsenic	mg/kg	33.0	66.0	99.0
Cadmium	mg/kg	4.98	9.96	14.9
Chromium	mg/kg	111	222	333
Copper	mg/kg	149	298	447
Lead	mg/kg	128	256	384
Mercury	mg/kg	1.06	2.12	3.18
Nickel	mg/kg	48.6	97.2	146
Zinc	mg/kg	459	918	1377





VICINITY MAP



Legend

Sampling Locations

- EA 2013
- Navigation Channel

Interpolated Results

- 3x PEC Exceedance
- 2x PEC Exceedance
- PEC Exceedance

0 250 500 750 1,000
Feet

1 inch = 500 feet
Scale applies to aerial inset

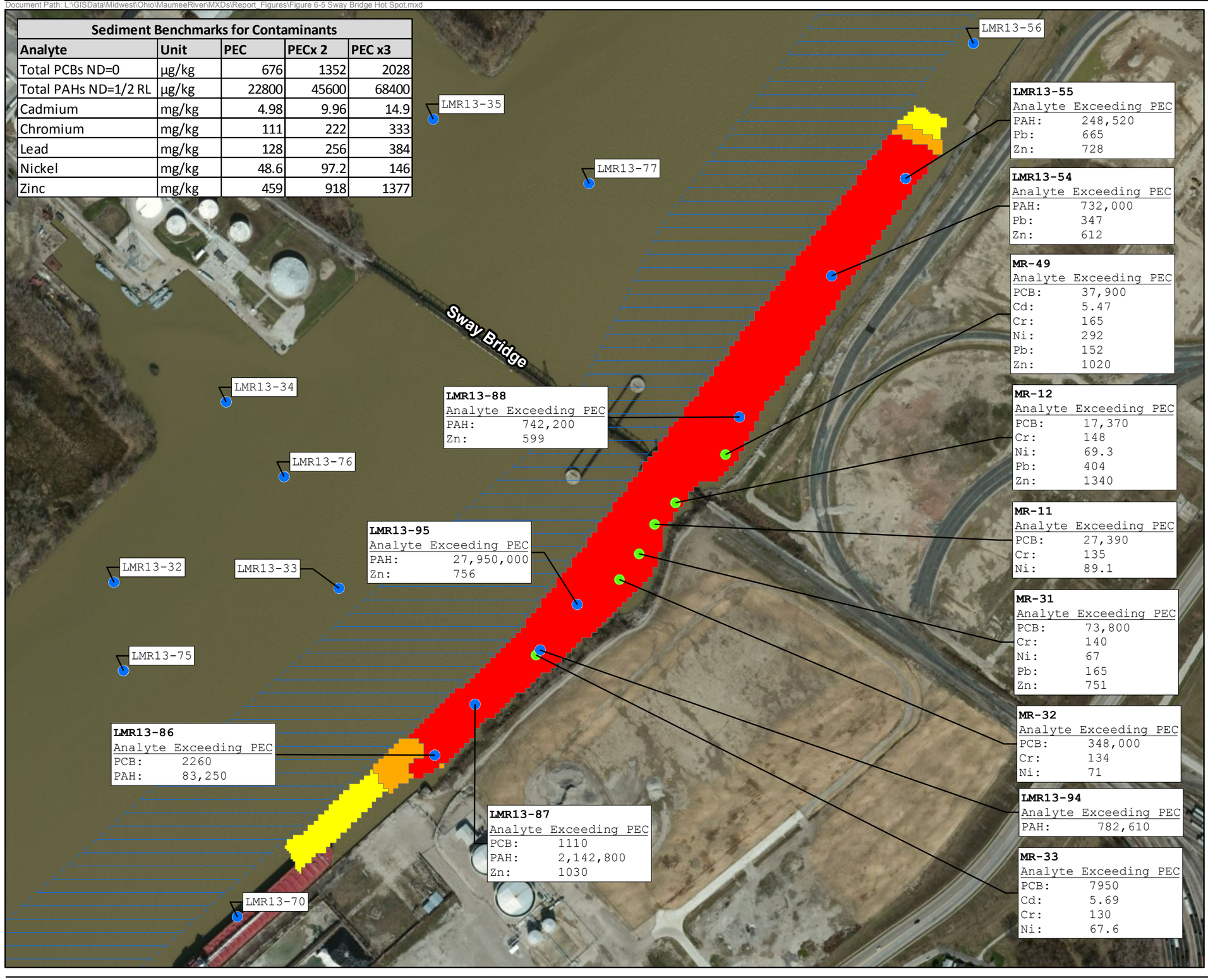
Map Created: 2/7/2014
Basemap: ESRI 2012

EA Engineering, Science, and Technology, Inc.

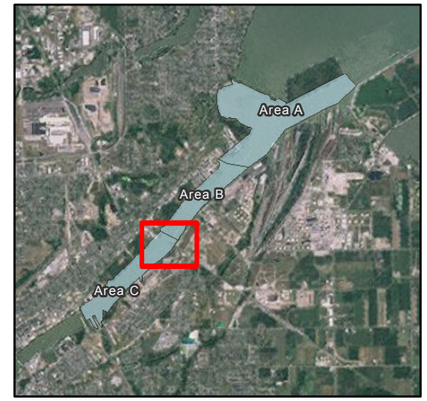
FIGURE 6-4

Spatial Analysis With Depth for the Wastewater Treatment Plant Hot Spot-Phase 2 Lower Maumee River

Sediment Benchmarks for Contaminants				
Analyte	**Unit**	**PEC**	**PECx 2**	**PEC x3**
Total PCBs ND=0	µg/kg	676	1352	2028
Total PAHs ND=1/2 RL	µg/kg	22800	45600	68400
Cadmium	mg/kg	4.98	9.96	14.9
Chromium	mg/kg	111	222	333
Lead	mg/kg	128	256	384
Nickel	mg/kg	48.6	97.2	146
Zinc	mg/kg	459	918	1377



VICINITY MAP



Legend

Sampling Locations

- EA 2013
- AScI 1995-1997
- Navigation Channel

Interpolated Results

- 3x PEC Exceedance
- 2x PEC Exceedance
- PEC Exceedance

0 150 300 450 600
Feet

1 inch = 300 feet

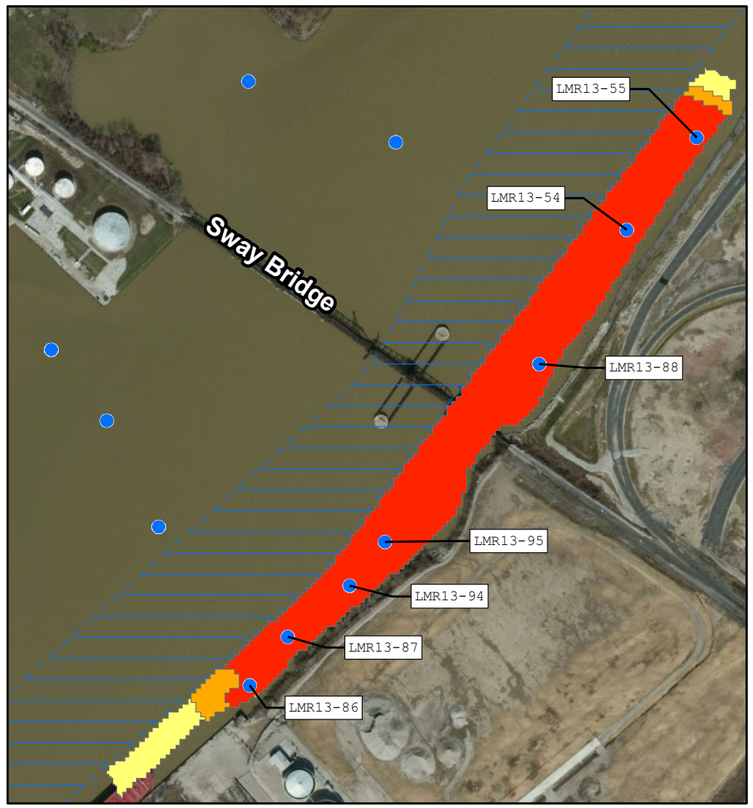
Map Created: 2/7/2014
Basemap: ESRI 2012

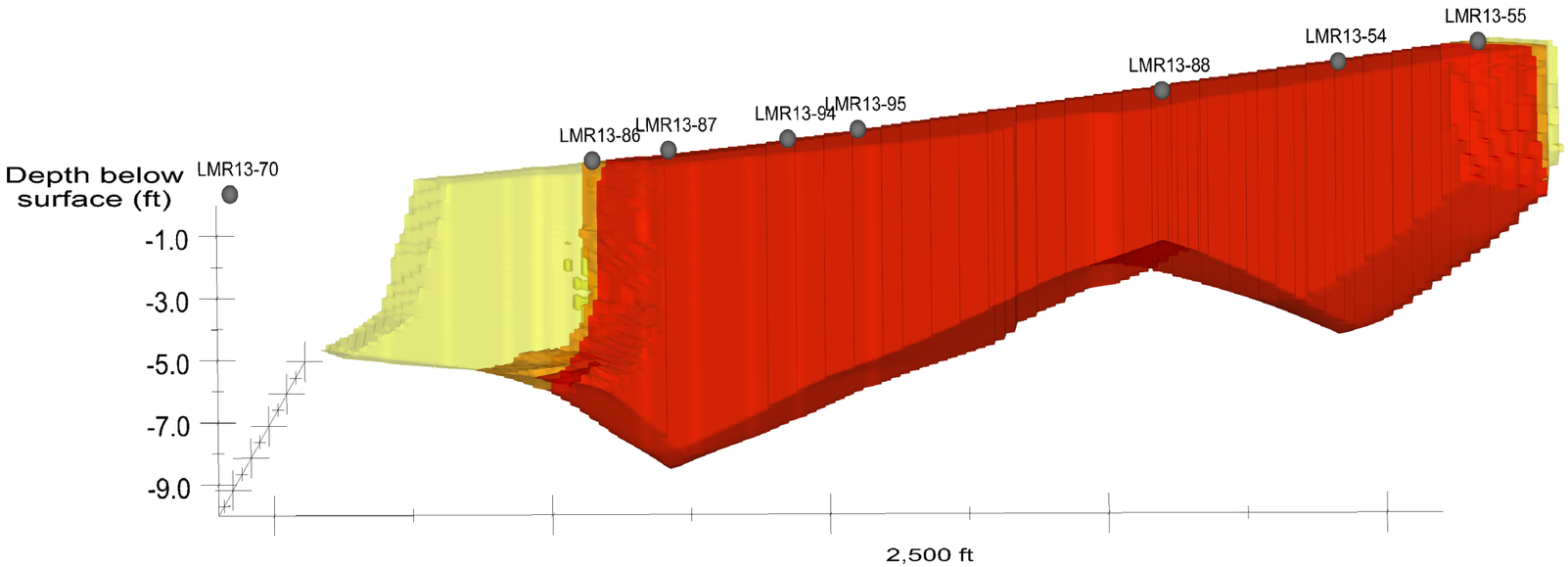
EA Engineering, Science, and Technology, Inc.

FIGURE 6-5

Sway Bridge Hot Spot- Phase 2 and Historical PEC Exceedances

Sediment Benchmarks for Contaminants				
Analyte	**Unit**	**PEC**	**PECx 2**	**PEC x3**
Total PCBs ND=0	µg/kg	676	1352	2028
Total PAH 17 ND=1/2RL	ug/kg	22800	45600	68400
Arsenic	mg/kg	33.0	66.0	99.0
Cadmium	mg/kg	4.98	9.96	14.9
Chromium	mg/kg	111	222	333
Copper	mg/kg	149	298	447
Lead	mg/kg	128	256	384
Mercury	mg/kg	1.06	2.12	3.18
Nickel	mg/kg	48.6	97.2	146
Zinc	mg/kg	459	918	1377





VICINITY MAP



Legend

Sampling Locations

- EA 2013
- Navigation Channel

Interpolated Results

- 3x PEC Exceedance
- 2x PEC Exceedance
- PEC Exceedance

0 250 500 750 1,000
Feet

1 inch = 500 feet
Scale applies to aerial inset

Map Created: 2/7/2014
Basemap: ESRI 2012

EA Engineering, Science, and Technology, Inc.

FIGURE 6-6

Spatial Analysis With Depth for the Sway Bridge Hot Spot-
Phase 2 Lower Maumee River

Table 2-2. Sampling Procedure and Analyses Performed for the 2010-2011 Duck and Otter Creek Sediment Assessment

Media	Parameter	Method	Number of Samples*
Surface Sediment (Ponar- 0 to 6 inches bss)	34PAHs	ASTM D7363	31
	TOC	SW-846 9060	31
	PCB aroclors	SW-846 8270C	31
	GRO/DRO/ORO	SW-846 8015	31
	SVOCs	EPA CLP SOM01.2/SVOC	31
	Metals	EPA CLP SOW ISM01.2/metals	31
	Grain size	ASTM D422	31
	SEM/AVS	EPA 3050/3010/6020/7471/9030	31
Subsurface Sediment (Vibracore- 7 depth intervals up to 14 ft bss)	SVOCs	EPA CLP SOM01.2/SVOC	31
	Metals	EPACLP SOW ISM01.2/metals	31
	GRO/DRO/ORO	SW-846 8015	31
	TOC	SW-846 9060	31
	PCB aroclors	SW-846 8270C	31
Porewater (collected as sediment)	34PAHs	ASTM D7363	31
	Metals	EPA CLP SOW ISM01.2/metals	31
	Hardness	SM2340B	31
	DOC	EPA 415.1	31
	Ammonia	SM4500-NH3	31
	pH	SM4500 H+B	31

*Total does not include field duplicate samples.

NOTES:
AVS = Acid volatile sulfide.
DOC = Dissolved organic carbon.
DRO = Diesel range organics.
GRO = Gasoline range organics.
ORO = Oil range organics.
PAH = Polycyclic aromatic hydrocarbon.
PCB = Polychlorinated biphenyl.
SEM = Simultaneously extracted metals.
TOC = Total organic carbon.
SVOC = Semivolatile organic compound.

Source: Weston 2012a.

Table 2-3. Sampling Procedure and Analyses Performed for the Phase 1 Sediment Assessment of the Lower Maumee River

Media	Parameter	Method	Number of Samples**
Surface and Subsurface Sediment (Vibracore)	SVOCs	Analytical methods not provided in Phase I report	303
	TAL Metals		303
	Grain Size		303
	TOC		303
	PCB Aroclors*		29
	Pesticides*		29

* Parameter measured in ten percent of the total samples.
**Total does not include field duplicate samples.

NOTES:
TAL = Target Analyte List.
PCB = Polychlorinated biphenyl.
TOC = Total organic carbon.
SVOC = Semivolatile organic compound.

Source: Weston 2012b.

Table 2-4. Incorporation of Historic Data for the Maumee River into the Site Characterization Report

Study	Analyses Performed	Level of Incorporation into Site Characterization Report
Screening Analysis Sediment Quality Assessment Study of the Maumee River AOC; 147 sample locations (AScI 1997)	Sediment chemistry	Add results to sediment chemistry database and create figures to display contaminant distribution in areas of elevated concentrations
Duck and Otter Creek Sediment Assessment; 31 sample locations (Weston 2012a)	Surface sediment chemistry: PAHs, TOC, GRO/DRO/ORO, SVOCs, PCBs, metals, grain size, AVS/SEM Subsurface sediment chemistry: SVOCs, PCBs, metals, GRO/DRO/ORO, TOC	Add results to sediment chemistry database and create figures to display contaminant distribution in areas of elevated concentrations
	Toxicity: 10-day growth/survival	Summarize study results and interpret to help describe sediment contamination within the Lower Maumee River
	Pore water: PAHs, metals, hardness, DOC, ammonia, pH	
Phase I Sediment Assessment; 84 sample locations (Weston 2012b)	Sediment chemistry: TAL metals and SVOCs; 10% of samples analyzed for PCB aroclors and pesticides	Summarize study results and interpret to help describe sediment contamination within the Lower Maumee River

NOTES:
AVS = Acid volatile sulfide.
DOC = Dissolved organic carbon.
DRO = Diesel range organics.
GRO = Gasoline range organics.
ORO = Oil range organics.
PAH = Polycyclic aromatic hydrocarbon.
PCB = Polychlorinated biphenyl.
SEM = Simultaneously extracted metals.
TOC = Total organic carbon.
SVOC = Semivolatile organic compound.

TABLE 3-1. PHASE 2 LOWER MAUMEE RIVER SITE CHARACTERIZATION COORDINATE VARIANCE
MAUMEE RIVER, TOLEDO, OHIO (JUNE 2013)

Location ID	TARGET COORDINATES		ACTUAL COORDINATES		LATITUDE DIFFERENCE	LONGITUDE DIFFERENCE	LATITUDE DIFFERENCE	LONGITUDE DIFFERENCE	Field Notes
	Lat D D.M (°N)	Lat D D.M (°W)	Lat D D.M (°N)	Lat D D.M (°W)	(ACTUAL-TARGET) (FT)	(ACTUAL-TARGET) (FT)	(ACTUAL-TARGET) (M)	(ACTUAL-TARGET) (M)	
LMR13-01	41 41.73168	-83 28.18602	41 41.73168	-83 28.1860	0.12	0.09	0.04	0.03	
LMR13-02	41 41.83314	-83 28.26624	41 41.83314	-83 28.26624	0.00	0.00	0.00	0.00	Water depth collected on 6/21/13 at 900
LMR13-03	41 41.83446	-83 28.10892	41 41.8345	-83 28.1089	0.24	0.09	0.07	0.03	
LMR13-04	41 41.93328	-83 28.50372							Not sampled
LMR13-05	41 41.9346	-83 28.3464	41 41.9346	-83 28.3464	0.00	0.00	0.00	0.00	Water depth collected on 6/21/13 at 910
LMR13-06	41 41.93592	-83 28.18908	41 41.93592	-83 28.18908	0.00	0.00	0.00	0.00	Water depth collected on 6/21/13 at 910
LMR13-07	41 41.93724	-83 28.03176	41 41.9352	-83 28.0311	-0.24	0.00	-0.07	0.00	
LMR13-08	41 41.9385	-83 27.87444	41 41.9392	-83 27.874	-0.02	2.00	-0.01	0.61	
LMR13-09	41 42.03474	-83 28.58388	41 42.03474	-83 28.58388	0.00	0.00	0.00	0.00	Water depth collected on 6/21/13 at 950
LMR13-10	41 42.03606	-83 28.42656	41 42.03606	-83 28.42656	0.00	0.00	0.00	0.00	Water depth collected on 6/21/13 at 924
LMR13-11	41 42.03738	-83 28.26924	41 42.03738	-83 28.2692	0.00	0.18	0.00	0.06	Water depth collected on 6/21/13 at 930
LMR13-12	41 42.02612	-83 28.1117	41 42.02612	-83 28.1117	0.00	0.00	0.00	0.00	Water depth collected on 6/21/13 at 920
LMR13-13	41 42.03996	-83 27.9546	41 42.0399	-83 27.9433	-0.93	51.43	-0.28	15.67	
LMR13-14	41 42.04128	-83 27.79728	41 42.0427	-83 27.7910	8.31	28.68	2.53	8.74	
LMR13-15	41 42.0426	-83 27.6399	41 42.0416	-83 27.6342	0.00	0.00	0.00	0.00	
LMR13-16	41 42.1362	-83 28.6641	41 42.1362	-83 28.6641	0.00	0.00	0.00	0.00	Water depth collected on 6/21/13 at 940
LMR13-17	41 42.13752	-83 28.50678	41 42.1375	-83 28.50678	-0.12	0.00	-0.04	0.00	Water depth collected on 6/21/13 at 955
LMR13-18	41 42.13884	-83 28.34946	41 42.13884	-83 28.34946	0.00	0.00	0.00	0.00	Water depth collected on 6/21/13 at 935
LMR13-19	41 42.12901	-83 28.19153	41 42.12901	-83 28.19153	-52.99	-30.25	-16.15	-9.22	Water depth collected on 6/21/13 at 927. Original target location in dredged channel. Location moved approx. 80 feet perpendicular to channel, core collected at New Latitude and New Longitude.
LMR13-20	41 42.14142	-83 28.03476	41 42.14142	-83 28.03476	-0.17	0.01	-0.05	0.00	Water depth collected on 6/21/13 at 933
LMR13-21	41 42.143939322	-83 27.402878016	41 42.14394	-83 27.4029	4.28	31.35	1.30	9.56	
LMR13-22	41 42.23898	-83 28.58694							Not Sampled
LMR13-23	41 42.2403	-83 28.42962	41 42.2403	-83 28.42962	0.00	0.00	0.00	0.00	Water depth collected on 6/21/13 at 943
LMR13-24	41 42.24162	-83 28.2723	41 42.24162	-83 28.2723	0.16	-0.08	0.05	-0.02	Water depth collected on 6/21/13 at 947
LMR13-25	41 42.24651	-83 27.167484	41 42.2386	-83 27.1637	-48.25	16.70	-14.71	5.09	
LMR13-26	41 39.88944	-83 30.4287	41 39.8883	-83 30.4285	-7.05	0.83	-2.15	0.25	Lost top 3" while cutting core. Depth of sediment is from 3"-23"
LMR13-27	41 40.035	-83 30.187	41 40.0378	-83 30.1811	16.69	27.06	5.09	8.25	
LMR13-28	41 40.105	-83 30.140	41 40.1058	-83 30.1366	4.68	15.55	1.43	4.74	
LMR13-29	41 40.19922	-83 30.04026	41 40.1892	-83 30.033	-61.05	32.48	-18.61	9.90	Location moved offshore because proposed location too shallow for Mudpuppy

TABLE 3-1. PHASE 2 LOWER MAUMEE RIVER SITE CHARACTERIZATION COORDINATE VARIANCE
MAUMEE RIVER, TOLEDO, OHIO (JUNE 2013)

Location ID	TARGET COORDINATES		ACTUAL COORDINATES		LATITUDE DIFFERENCE	LONGITUDE DIFFERENCE	LATITUDE DIFFERENCE	LONGITUDE DIFFERENCE	Field Notes
	Lat D D.M (°N)	Lat D D.M (°W)	Lat D D.M (°N)	Lat D D.M (°W)	(ACTUAL-TARGET) (FT)	(ACTUAL-TARGET) (FT)	(ACTUAL-TARGET) (M)	(ACTUAL-TARGET) (M)	
LMR13-30	41 40.20054	-83 29.88306	41 40.1916	-83 29.8927	-53.79	-44.52	-16.39	-13.57	
LMR13-31	41 40.329	-83 29.855	41 40.3276	-83 29.8548	-8.51	0.81	-2.59	0.25	
LMR13-32	41 40.4061	-83 29.72886	41 40.4045	-83 29.7289	-9.71	-0.29	-2.96	-0.09	
LMR13-33	41 40.40748	-83 29.5716	41 40.4027	-83 29.574	-28.90	-11.26	-8.81	-3.43	Very slight odor detected.
LMR13-34	41 40.502	-83 29.649	41 40.4981	-83 29.6532	-23.47	-19.39	-7.15	-5.91	
LMR13-35	41 40.641	-83 29.493	41 40.6457	-83 29.5138	27.14	-89.85	8.27	-27.39	Could not recover core tube at proposed coordinates. Core recovered at New Latitude and New Longitude. Discrepancy between map and GPS coordinates. We went by GPS coordinates. Sampled in the embayment. Location may not be accurate as the water depth was very shallow.
LMR13-36	41 40.71582	-83 29.34036							Not sampled
LMR13-37	41 40.8186	-83 29.26326	41 40.8186	-83 29.2632	0.00	0.00	0.00	0.00	Immediate refusal; no recovery.
LMR13-38	41 40.92138	-83 29.18616	41 40.9218	-83 29.1848	2.48	6.22	0.76	1.90	
LMR13-39	41 40.917	-83 29.090	41 40.9158	-83 29.0981	-6.87	-36.96	-2.09	-11.26	
LMR13-40	41 41.017	-83 29.004	41 41.0166	-83 28.6904	-18.48	1427.60	-5.63	435.13	Tied off of pilings. Soft refusal - stopped for safety (unknown pipe on 1 of 3 different charts: U.E. Joe's plotter - no other maps identified pipeline) Slight sheen on surface.
LMR13-41	41 41.1198	-83 28.86398	41 41.1183	-83 28.8631	-9.15	3.90	-2.79	1.19	
LMR13-42	41 41.2452	-83 28.77928	41 41.2448	-83 28.7773	-2.530253	8.99	-0.77	2.74	
LMR13-43	41 41.2399	-83 28.65339	41 41.2384	-83 28.6564	-8.95593	-13.80	-2.73	-4.21	
LMR13-44	41 41.33514	-83 28.56312	41 41.3315	-83 28.5632	-22.101065	-0.61	-6.74	-0.19	
LMR13-45	41 41.4366	-83 28.64328	41 41.4346	-83 28.6464	-11.98599	-14.34	-3.65	-4.37	
LMR13-46	41 41.43792	-83 28.48602	41 41.4376	-83 28.4913	-1.674721	-24.06	-0.51	-7.33	Sheen observed as core was pulled. Slight hydrocarbon odor detected.
LMR13-47	41 41.5508	-83 28.263285	41 41.5502	-83 28.2624	-3.111624	6.73	-0.95	2.05	No recovery at original location; core collected at New Latitude and New Longitude
LMR13-48	41 41.667580	-83 28.142755	41 41.6611	-83 28.1437	-39.309764	-3.62	-11.98	-1.10	
LMR13-49	41 39.661	-83 30.451	41 39.6609	-83 30.4483	-0.749445	12.29	-0.23	3.75	Tube was started by hand.
LMR13-50	41 39.685	-83 30.511	41 39.6808	-83 30.5234	-24.852633	-56.76	-7.58	-17.30	Did not reach refusal.
LMR13-51	41 39.79314	-83 30.27936	41 39.792	-83 30.2777	-6.940442	7.58	-2.12	2.31	
LMR13-52	41 39.923	-83 30.176	41 39.9495	-83 30.0711	155.439426	479.53	47.38	146.16	Location moved: not accessible as planned due to utilities crossing.
LMR13-53	41 40.046	-83 29.923	41 40.0431	-83 29.9232	-17.600413	-1.11	-5.36	-0.34	
LMR13-54	41 40.570	-83 29.244	41 40.5668	-83 29.2373	-19.778118	30.28	-6.03	9.23	Hydrocarbon odor present.

TABLE 3-1. PHASE 2 LOWER MAUMEE RIVER SITE CHARACTERIZATION COORDINATE VARIANCE
MAUMEE RIVER, TOLEDO, OHIO (JUNE 2013)

Location ID	TARGET COORDINATES		ACTUAL COORDINATES		LATITUDE DIFFERENCE	LONGITUDE DIFFERENCE	LATITUDE DIFFERENCE	LONGITUDE DIFFERENCE	Field Notes
	Lat D D.M (°N)	Lat D D.M (°W)	Lat D D.M (°N)	Lat D D.M (°W)	(ACTUAL-TARGET) (FT)	(ACTUAL-TARGET) (FT)	(ACTUAL-TARGET) (M)	(ACTUAL-TARGET) (M)	
LMR13-55	41 40.633	-83 29.175	41 40.6175	-83 29.1872	-93.499821	-56.61	-28.50	-17.25	Odor present.
LMR13-56	41 40.72224	-83 29.11392	41 40.6872	-83 29.1407	-208.937428	-128.35	-63.68	-39.12	Position location moved due to work on adjacent seawall. Very firm clay. Position adjusted and second core collected at New Latitude and New Longitude for composite.
LMR13-57	41 40.960	-83 28.811	41 40.958	-83 28.8108	-12.155795	0.77	-3.71	0.24	Sheen present when core was pulled. Hydrocarbon odor.
LMR13-58	41 41.23878	-83 28.41378	41 41.2306	-83 28.4157	-49.41	-9.26	-15.06	-2.82	
LMR13-59	41 41.3415	-83 28.33668	41 41.3361	-83 28.339	-32.80	-10.93	-10.00	-3.33	Slight odor present.
LMR13-60	41 41.4456	-83 28.1022	41 41.4452	-83 28.1085	-2.12	-28.63	-0.65	-8.73	
LMR13-61	41 41.54838	-83 28.0251	41 41.5501	-83 28.0290	10.72	-17.64	3.27	-5.38	
LMR13-62	41 41.55318	-83 27.93606	41 41.5524	-83 27.9393	-4.64	-14.80	-1.42	-4.51	
LMR13-63	41 41.65596	-83 27.8589	41 41.656	-83 27.8575	0.19	6.38	0.06	1.94	
LMR13-64	41 41.75874	-83 27.78174	41 41.7575	-83 27.7845	-7.27	-12.65	-2.22	-3.85	
LMR13-65	41 41.86278	-83 27.54726	41 41.8643	-83 27.5465	9.19	3.56	2.80	1.09	
LMR13-66	41 41.96682	-83 27.31278	41 41.968	-83 27.3127	7.08	0.48	2.16	0.15	
LMR13-67	41 42.07086	-83 27.0783	41 42.0683	-83 27.0746	-15.85	16.67	-4.83	5.08	
LMR13-68	41 42.07218	-83 26.92098	41 42.0676	-83 26.9202	-27.85	3.12	-8.49	0.95	
LMR13-69	41 42.17484513	-83 26.854	41 42.1736	-83 26.8332	-8.60	98.63	-2.62	30.06	
LMR13-70	41 40.23018	-83 29.64822	41 40.2325	-83 29.6414	13.83	31.32	4.22	9.55	
LMR13-71	41 42.3717	-83 26.81004	41 42.37333	-83 26.8083	9.81	8.03	2.99	2.45	
LMR13-72	41 39.9423	-83 30.36642	41 39.9464	-83 30.3721	25.20	-25.58	7.68	-7.80	
LMR13-73	41 40.03145	-83 30.22823	41 40.0314	-83 30.2282	-0.30	0.15	-0.09	0.04	Immediate refusal, no recovery.
LMR13-74	41 40.2774	-83 29.9175	41 40.2822	-83 29.9133	28.93	19.46	8.82	5.93	
LMR13-75	41 40.35984	-83 29.7195	41 40.3589	-83 29.7217	-5.59	-10.08	-1.70	-3.07	
LMR13-76	41 40.46226	-83 29.61144	41 40.4599	-83 29.6126	-14.27	-5.44	-4.35	-1.66	
LMR13-77	41 40.6155	-83 29.47842	41 40.613	-83 29.4051	-18.97	333.64	-5.78	101.69	Site moved due to close proximity to location LMR13-35
LMR13-78	41 40.70599	-83 29.314000	40 41.7065	-83 29.3139	3.03	0.49	0.92	0.15	
LMR13-79	41 40.85328	-83 29.21814	41 40.8552	-83 29.2183	11.67	-0.60	3.56	-0.18	
LMR13-80	41 40.96722	-83 29.13138	41 40.9783	-83 29.1294	67.18	9.77	20.48	2.98	
LMR13-81	41 41.40558	-83 28.53996	41 41.4054	-83 28.5425	-0.96	-11.57	-0.29	-3.53	Sheen observed as core was pulled.
LMR13-82	41 41.62962	-83 28.1892	41 41.6182	-83 28.1914	-69.24	-10.79	-21.10	-3.29	
LMR13-83	41 39.70164	-83 30.42528	41 39.6955	-83 30.4302	-37.03	-22.84	-11.29	-6.96	Sheen observed as core was pulled.

TABLE 3-1. PHASE 2 LOWER MAUMEE RIVER SITE CHARACTERIZATION COORDINATE VARIANCE
MAUMEE RIVER, TOLEDO, OHIO (JUNE 2013)

Location ID	TARGET COORDINATES		ACTUAL COORDINATES		LATITUDE DIFFERENCE	LONGITUDE DIFFERENCE	LATITUDE DIFFERENCE	LONGITUDE DIFFERENCE	Field Notes
	Lat D D.M (°N)	Lat D D.M (°W)	Lat D D.M (°N)	Lat D D.M (°W)	(ACTUAL-TARGET) (FT)	(ACTUAL-TARGET) (FT)	(ACTUAL-TARGET) (M)	(ACTUAL-TARGET) (M)	
LMR13-84	41 39.922999	-83 30.1759999	41 39.8954	-83 30.1556	-168.67	90.96	-51.41	27.73	
LMR13-85	41 40.11222	-83 29.80686	41 40.1109	-83 29.8015	-8.29	24.32	-2.53	7.41	
LMR13-86	41 40.3159	-83 29.509000	41 40.3171	-83 29.5068	7.17	10.09	2.19	3.08	
LMR13-87	41 40.3459	-83 29.482999	41 40.3437	-83 29.4794	-13.55	16.23	-4.13	4.95	
LMR13-88	41 40.489000	-83 29.311000	41 40.4934	-83 29.2996	26.13	52.21	7.97	15.91	Strong odor present.
LMR13-89	41 40.92594	-83 28.8684	41 40.9188	-83 28.8712	-43.22	-13.23	-13.17	-4.03	Windy and choppy conditions.
LMR13-90	41 41.50146	-83 27.96618	41 41.5023	-83 27.9629	4.94	14.99	1.50	4.57	
LMR13-91	41 41.59812	-83 27.85458	41 41.5921	-83 27.8596	-36.31	-23.25	-11.07	-7.09	Site moved due to tree stump in sample location.
LMR13-92	41 42.22716	-83 26.72556	41 42.223	-83 26.7259	-25.25	-1.82	-7.70	-0.56	
LMR13-93	41 41.49588	-83 28.3707	41 41.4962	-83 28.369	1.86	7.76	0.57	2.37	Slight sheen observed as core was pulled.
LMR13-94	n/a	n/a	41 40.3719	-83 29.4351	n/a	n/a	n/a	n/a	Added from original sampling design. Odor present. Sheen observed.
LMR13-95	n/a	n/a	41 40.3957	-83 29.4098	n/a	n/a	n/a	n/a	Added from original sampling design. Odor present. Sheen observed.

TABLE 3-2. PHASE 2 LOWER MAUMEE RIVER SITE CHARACTERIZATION SAMPLE COUNT
MAUMEE RIVER, TOLEDO, OHIO (JUNE 2013)

	Maximum Number of Samples Targeted for Collection			Total Number of Samples Submitted		
Constituent of Concern Analysis Identification	**Total Number of Primary Investigatory Samples**	**Field Duplicates**	**MS/MSD**	**Total Number of Primary Investigatory Samples**	**Field Duplicates**	**MS/MSD**
SVOA	378 +42 from SVOA/SVOASIM = 420	37 +5 from SVOA/SVOASIM = 42	18 +3 from SVOA/SVOASIM = 21	317	37	16
SVOA, SVOASIM (34 PAHs)	42	5	3	44	5	3
PCB Aroclors	420	42	21	359	42	18
Metals + Hg, TOC	420	42	21	359	42	18
AVS/SEM	42	5	3	44	5	3
Particle Size, Density	70	0	0	76	0	0
Oil and Grease - HEM	420	42	21	359	42	18
PCB Congeners	--	--	--	36*	0	3**

* Represents 10 percent of samples submitted for PCB aroclor analysis. Samples were selected for analysis based on review of the preliminary data.
** MS/MSD sample volume extracted from three of the primary samples.
AVS - Acid volatile sulfide.
HEM - Hexane extractable material
Hg - Mercury
MS/MSD - Matrix spike/matrix spike duplicate.
PCB - Polychlorinated biphenyl.
SEM - Simultaneous extracted metals.
SIM - Single ion monitoring.
SVOA - Semivolatile organics analysis.
TOC - Total organic carbon.

Table 3-3. Analytical Summary for the Phase 2 Sediment Investigation

Parameter	Method	Total Number of Samples*
SVOASIM (34 PAHs)	EPA CLP SOM01.2/SV SIM	44
SVOAs	EPA CLP SOM01.2/SVOA SIM	317
PCB aroclors	EPA CLP SOM01.2/PCB	359
PCB congeners	EPA 1668B	36**
TOC	Lloyd Khan	359
Oil and Grease (Hexane-Extractable Materials)	SW846 9071B	359
Total Metals with Mercury	EPA CLP ISM01.3/ICP/Mercury	359
SEM/AVS	EPA 3050/3010/6020/7471/9030	44
Grain Size	ASTM International D422	76
Bulk density	ASTM D2937	76

*Total does not include field duplicate samples.
** Number represents 10% of the 359 archived samples submitted to the analytical laboratory.

NOTES:
AVS = Acid volatile sulfide.
PCB = Polychlorinated biphenyl.
SEM = Simultaneously extracted metals.
SIM = Single ion monitoring.
SVOA = Semivolatile organics analysis.
TOC = Total organic carbon.

TABLE 4-1. PHASE 2 LOWER MAUMEE RIVER SITE CHARACTERIZATION CORE DATA
MAUMEE RIVER, TOLEDO, OHIO (JUNE 2013)

Core Location	Date Collected	Time Collected	Core Collected By	Water Depth (ft)	Sediment Surface Elevation* IGLD 1985 (ft)	Penetration Depth (ft)	Sediment Recovery (ft)	Percent Recovery	Drill Technique	MS/MSD (Y/N)	MS/MSD Sample: Analyte	Sample Collected to Refusal (Y/N)
LMR13-01	6/17/2013	929	SV, Mudpuppy	4.3	567.8	9.0	9.0	100.0	Vibracore	N	--	Y
LMR13-02	6/11/2013	1145	OEPA	3.0	568.2	1.0	0.8	83.3	Direct Push Core	N	--	N
LMR13-03	6/17/2013	1005	SV, Mudpuppy	5.3	566.9	10.5	10.3	97.6	Vibracore	N	--	Y
LMR13-05	6/11/2013	1004	OEPA	3.1	568.3	1.0	1.0	100.0	Direct Push Core	N	--	N
LMR13-06	6/11/2013	1130	OEPA	3.9	567.3	1.0	1.0	100.0	Direct Push Core	N	--	N
LMR13-07	6/17/2013	1340	SV, Mudpuppy	4.9	567.2	8.0	6.3	78.1	Vibracore	N		Y
LMR13-08	6/17/2013	1125	SV, Mudpuppy	5.4	566.7	6.0	6.0	100.0	Vibracore	Y	LMR13-08-012: AVS/SEM, PAHs	Y
LMR13-09	6/11/2013	835	OEPA	2.5	568.9	1.0	0.8	75.0	Direct Push Core	N	--	N
LMR13-10	6/11/2013	945	OEPA	3.2	568.3	1.0	1.0	100.0	Direct Push Core	N	--	N
LMR13-11	6/11/2013	1221	OEPA	3.8	567.4	1.0	1.0	100.0	Direct Push Core	N	--	N
LMR13-12	6/11/2013	1055	OEPA	4.2	567.2	1.0	1.0	100.0	Direct Push Core	N	--	N
LMR13-13	6/17/2013	1415	SV, Mudpuppy	4.6	567.5	9.0	8.8	97.2	Vibracore	Y	LMR13-13-096: SVOA, metals, PCB Aroclors, oil+grease, TOC	Y
LMR13-14	6/17/2013	1055	SV, Mudpuppy	4.4	567.7	9.5	9.6	100.9	Vibracore	N	--	Y
LMR13-15	6/17/2013	1445	SV, Mudpuppy	5.6	566.4	2.5	1.9	76.7	Vibracore	Y	LMR13-15-012: PCB Aroclors	Y
LMR13-16	6/11/2013	925	OEPA	1.9	569.6	1.0	1.0	100.0	Direct Push Core	N	--	N
LMR13-17	6/11/2013	851	OEPA	3.0	568.4	1.0	1.0	100.0	Direct Push Core	N	--	N
LMR13-18	6/11/2013	1252	OEPA	3.8	567.5	1.0	1.0	100.0	Direct Push Core	N	--	N

TABLE 4-1. PHASE 2 LOWER MAUMEE RIVER SITE CHARACTERIZATION CORE DATA
MAUMEE RIVER, TOLEDO, OHIO (JUNE 2013)

Core Location	Date Collected	Time Collected	Core Collected By	Water Depth (ft)	Sediment Surface Elevation* IGLD 1985 (ft)	Penetration Depth (ft)	Sediment Recovery (ft)	Percent Recovery	Drill Technique	MS/MSD (Y/N)	MS/MSD Sample: Analyte	Sample Collected to Refusal (Y/N)
LMR13-19	6/11/2013	1303	OEPA	4.0	567.3	1.0	1.0	100.0	Direct Push Core	N	--	N
LMR13-20	6/11/2013	1043	OEPA	4.2	567.2	1.0	1.0	100.0	Direct Push Core	N	--	N
LMR13-21	6/17/2013	1510	SV, Mudpuppy	4.5	567.5	4.5	4.8	105.6	Vibracore	N	--	Y
LMR13-23	6/11/2013	905	OEPA	2.8	568.6	1.0	1.0	100.0	Direct Push Core	N	--	N
LMR13-24	6/11/2013	1301	OEPA	3.2	568.1	1.0	1.0	100.0	Direct Push Core	N	--	N
LMR13-25	6/17/2013	1618	SV, Mudpuppy	4.0	567.8	6.4	6.6	102.6	Vibracore	N	--	Y
LMR13-26	6/13/2013	1353	SV, Mudpuppy	19.1	552.9	3.0	2.0	66.7	Vibracore	N	--	Y
LMR13-27	6/13/2013	1500	SV, Mudpuppy	13.8	558.1	8.0	7.1	88.5	Vibracore	Y	LMR13-048: SVOA	Y
LMR13-28	6/13/2013	1539	SV, Mudpuppy	4.9	566.6	10.0	9.0	90.0	Vibracore	Y	LMR13-28-048: PCB Aroclors, metals, TOC, oil+grease	Y
LMR13-29	6/13/2013	1613	SV, Mudpuppy	2.6	568.7	6.5	7.0	107.7	Vibracore	N	--	Y
LMR13-30	6/18/2013	1040	SV, Mudpuppy	15.8	555.9	10.0	9.8	98.3	Vibracore	Y	LMR13-30-120: PCB Aroclors, metals, TOC, oil+grease	Y
LMR13-31	6/14/2013	848	SV, Mudpuppy	3.7	568	2.5	2.3	90.0	Vibracore	N	--	Y
LMR13-32	6/14/2013	09:38AM	SV, Mudpuppy	5.0	566.9	7.0	6.4	91.7	Vibracore	Y	LMR13-32-024: metals, TOC, PCB Aroclors, oil+grease	Y
LMR13-33	6/18/2013	1115	SV, Mudpuppy	17.9	553.6	8.5	8.0	94.1	Vibracore	N	--	Y
LMR13-34	6/14/2013	1023	SV, Mudpuppy	5.1	566.7	14.5	15.0	103.4	Vibracore	N	--	Y

TABLE 4-1. PHASE 2 LOWER MAUMEE RIVER SITE CHARACTERIZATION CORE DATA
MAUMEE RIVER, TOLEDO, OHIO (JUNE 2013)

Core Location	Date Collected	Time Collected	Core Collected By	Water Depth (ft)	Sediment Surface Elevation* IGLD 1985 (ft)	Penetration Depth (ft)	Sediment Recovery (ft)	Percent Recovery	Drill Technique	MS/MSD (Y/N)	MS/MSD Sample: Analyte	Sample Collected to Refusal (Y/N)
LMR13-35	6/14/2013	1310	SV, Mudpuppy	2.7	569.3	8.0	7.5	93.8	Vibracore	Y	LMR13-35-048: SVOA	Y
LMR13-37	6/20/2013	945	SV, Mudpuppy	6.8	565.1	0.0	0.0	Not Sampled	Vibracore	N	--	Y
LMR13-38	6/14/2013	1608	SV, Mudpuppy	4.2	567.5	7.0	7.8	110.7	Vibracore	Y	LMR13-38-048: metals, TOC, SVOA, oil+grease	Y
LMR13-39	6/18/2013	1625	SV, Mudpuppy	5.9	567.1	6.0	5.8	95.8	Vibracore	N	--	Y
LMR13-40	6/14/2013	1516	SV, Mudpuppy	6.8	565	7.0	7.1	101.2	Vibracore	Y	LMR13-40-048: SVOA, PCB Aroclors LMR13-40-072: oil+grease, metals, TOC	Y
LMR13-41	6/13/2013	1100	SV, Mudpuppy	6.4	565.3	4.5	4.5	100.0	Vibracore	N	--	Y
LMR13-42	6/11/2013	1638	SV, Mudpuppy	4.5	567.0	9.0	8.8	98.1	Vibracore	Y	LMR13-42-012: SVOA, PAHs	Y
LMR13-43	6/12/2013	753	SV, Mudpuppy	7.4	564.2	10.0	9.0	90.0	Vibracore	N	--	Y
LMR13-44	6/12/2013	838	SV, Mudpuppy	6.3	565.5	8.0	7.8	97.9	Vibracore	Y	LMR13-44-012: AVS/SEM	Y
LMR13-45	6/12/2013	950	SV, Mudpuppy	5.0	566.9	9.4	9.0	95.7	Vibracore	Y	LMR13-45-048: SVOA	Y
LMR13-46	6/12/2013	914	SV, Mudpuppy	5.75	566.1	10.0	9.8	97.5	Vibracore	N	--	Y
LMR13-47	6/12/2013	1412	SV, Mudpuppy	10.166	561.6	12.5	11.8	94.7	Vibracore	N	--	Y
LMR13-48	6/17/2013	853	SV, Mudpuppy	6.8	565	12.5	13.3	106.7	Vibracore	N	--	Y
LMR13-49	6/13/2013	804	SV, Mudpuppy	2.333	569.2	9.5	9.2	96.5	Vibracore	N	--	Y
LMR13-50	6/13/2013	840	SV, Mudpuppy	10.75	561	10.0	9.5	95.0	Vibracore	N	--	N
LMR13-51	6/13/2013	948	SV, Mudpuppy	5.8	565.5	5.5	5.1	92.4	Vibracore	Y	LMR13-51-048: metals, TOC, PCB Aroclors	Y
LMR13-52	6/20/2013	755	SV, Mudpuppy	28.2	543.5	6.0	4.5	75.0	Vibracore	N	--	Y
LMR13-53	6/20/2013	825	SV, Mudpuppy	22.8	549	2.5	1.9	76.7	Vibracore	N	--	Y
LMR13-54	6/18/2013	1438	SV, Mudpuppy	7.6	564.5	8.5	8.8	102.9	Vibracore	N	--	Y
LMR13-55	6/18/2013	1410	SV, Mudpuppy	7.8	564.3	6.0	5.5	91.7	Vibracore	N	--	Y
LMR13-56	6/20/2013	1040	SV, Mudpuppy	31.1	540.8	0.9	0.8	83.3	Vibracore	N	--	Y

TABLE 4-1. PHASE 2 LOWER MAUMEE RIVER SITE CHARACTERIZATION CORE DATA
MAUMEE RIVER, TOLEDO, OHIO (JUNE 2013)

Core Location	Date Collected	Time Collected	Core Collected By	Water Depth (ft)	Sediment Surface Elevation* IGLD 1985 (ft)	Penetration Depth (ft)	Sediment Recovery (ft)	Percent Recovery	Drill Technique	MS/MSD (Y/N)	MS/MSD Sample: Analyte	Sample Collected to Refusal (Y/N)
LMR13-57	6/13/2013	1127	SV, Mudpuppy	12.3	559.4	4.5	4.3	96.3	Vibracore	N	--	Y
LMR13-58	6/19/2013	1615	SV, Mudpuppy	30.4	541.2	2.5	1.9	76.7	Vibracore	N	--	Y
LMR13-59	6/19/2013	1545	SV, Mudpuppy	28.5	543.1	5.0	4.4	88.3	Vibracore	N	--	Y
LMR13-60	6/19/2013	1400	SV, Mudpuppy	17.0	554.6	9.0	8.3	92.6	Vibracore	N	--	Y
LMR13-61	6/19/2013	1330	SV, Mudpuppy	16.8	554.7	9.5	9.5	100.0	Vibracore	Y	LMR13-61-024: SVOA LMR13-61-048: PCB Aroclors, metals, TOC, oil+grease	Y
LMR13-62	6/12/2013	1554	SV, Mudpuppy	7	564.7	7.0	6.9	98.8	Vibracore	N	--	Y
LMR13-63	6/12/2013	1443	SV, Mudpuppy	11.8	560.1	11.0	11.2	101.5	Vibracore	N	--	Y
LMR13-64	6/19/2013	1100	SV, Mudpuppy	15.2	557	10.0	9.8	98.3	Vibracore	N	--	Y
LMR13-65	6/19/2013	1030	SV, Mudpuppy	29.3	542.8	6.5	6.0	92.3	Vibracore	N	--	Y
LMR13-66	6/19/2013	945	SV, Mudpuppy	5.0	567.3	3.0	3.0	100.0	Vibracore	N	--	Y
LMR13-67	6/19/2013	920	SV, Mudpuppy	10.8	561.6	10.0	9.6	95.8	Vibracore	N	--	Y
LMR13-68	6/19/2013	850	SV, Mudpuppy	34.2	538.2	1.0	1.0	100.0	Vibracore	N	--	Y
LMR13-69	6/19/2013	825	SV, Mudpuppy	5.8	566.7	9.5	8.7	91.2	Vibracore	N	--	Y
LMR13-70	6/20/2013	900	SV, Mudpuppy	23.3	548.5	4.5	3.5	77.8	Vibracore	Y	LMR13-70-012: AVS/SEM LMR13-70-048: SVOA	Y
LMR13-71	6/17/2013	1548	SV, Mudpuppy	7.3	564.6	6.0	5.6	93.1	Vibracore	N	--	Y
LMR13-72	6/13/2013	1429	SV, Mudpuppy	7	564.7	8.0	8.0	100.0	Vibracore	N	--	Y
LMR13-73	6/20/2013	920	SV, Mudpuppy	7.4	564.4	0.0	0.0	Not Sampled	Vibracore	N	--	Y
LMR13-74	6/14/2013	820	SV, Mudpuppy	4.1	567.6	6.0	6.0	100.0	Vibracore	N	--	Y
LMR13-75	6/14/2013	914	SV, Mudpuppy	5.8	565.9	2.5	1.9	76.7	Vibracore	N	--	Y
LMR13-76	6/14/2013	1000	SV, Mudpuppy	6.2	565.6	6.5	5.5	84.6	Vibracore	N	--	Y
LMR13-77	6/14/2013	1345	SV, Mudpuppy	9.2	562.7	6.4	6.0	93.8	Vibracore	N	--	Y
LMR13-78	6/14/2013	1416	SV, Mudpuppy	7.5	564.4	2.5	2.3	90.0	Vibracore	N	--	Y
LMR13-79	6/14/2013	1544	SV, Mudpuppy	4.7	567.1	6.5	6.8	105.1	Vibracore	N	--	Y
LMR13-80	6/20/2013	1115	SV, Mudpuppy	4.4	567.5	7.0	7.3	103.6	Vibracore	N	--	Y
LMR13-81	6/12/2013	1057	SV, Mudpuppy	5.6	566.1	9.4	9.3	98.4	Vibracore	Y	LMR13-81-048: SVOA LMR13-81-072: PCB Aroclors LMR13-81-096: metals, TOC	Y

TABLE 4-1. PHASE 2 LOWER MAUMEE RIVER SITE CHARACTERIZATION CORE DATA
MAUMEE RIVER, TOLEDO, OHIO (JUNE 2013)

Core Location	Date Collected	Time Collected	Core Collected By	Water Depth (ft)	Sediment Surface Elevation* IGLD 1985 (ft)	Penetration Depth (ft)	Sediment Recovery (ft)	Percent Recovery	Drill Technique	MS/MSD (Y/N)	MS/MSD Sample: Analyte	Sample Collected to Refusal (Y/N)
LMR13-82	6/17/2013	800	SV, Mudpuppy	6.1	565.4	11.0	10.8	98.5	Vibracore	Y	LMR13-82-096: PCB Aroclors LMR13-82-120: SVOA, oil+grease	Y
LMR13-83	6/13/2013	919	SV, Mudpuppy	3.4	568.1	7.0	6.0	85.7	Vibracore	Y	LMR13-83-048: metals, TOC, oil+grease, PCB Aroclors	Y
LMR13-84	6/18/2013	754	SV, Mudpuppy	8.8	562.8	7.0	6.4	91.7	Vibracore	N	--	Y
LMR13-85	6/18/2013	1545	SV, Mudpuppy	20.9	551.8	4.5	3.9	87.0	Vibracore	N	--	Y
LMR13-86	6/18/2013	858	SV, Mudpuppy	16.8	554.7	7.0	7.6	108.3	Vibracore	N	--	Y
LMR13-87	6/18/2013	926	SV, Mudpuppy	14.7	557.1	10.0	9.5	95.0	Vibracore	N	--	Y
LMR13-88	6/18/2013	1505	SV, Mudpuppy	9.0	563.9	4.5	4.3	96.3	Vibracore	Y	LMR13-88-048: PCB Aroclors, metals, TOC, oil+grease	Y
LMR13-89	6/18/2013	1340	SV, Mudpuppy	17.8	554.4	4.0	1.8	43.8	Vibracore	N	--	Y
LMR13-90	6/12/2013	1630	SV, Mudpuppy	8.2	563.4	6.4	6.1	95.1	Vibracore	N	--	Y
LMR13-91	6/12/2013	1520	SV, Mudpuppy	12.1	559.7	9.5	8.5	89.5	Vibracore	Y	LMR13-91-096: metals, TOC, oil+grease, SVOA	Y
LMR13-92	6/19/2013	755	SV, Mudpuppy	6.7	566	2.0	2.1	104.2	Vibracore	N	--	Y
LMR13-93	6/12/2013	1024	SV, Mudpuppy	4.833	567	10.0	9.5	95.0	Vibracore	N	--	Y
LMR13-94	6/20/2013	945	SV, Mudpuppy	6.5	565.4	8.5	6.4	75.5	Vibracore	N	--	Y
LMR13-95	6/20/2013	920	SV, Mudpuppy	7.4	564.4	7.5	7.5	100.0	Vibracore	Y	LMR13-95-012: PAHs	Y

TABLE 4-2 SEDIMENT RESULTS FOR GRAIN SIZE, PARTICLE SIZE, AND DENSITY
PHASE 2 LOWER MAUMEE RIVER SITE CHARACTERIZATION
TOLEDO, OHIO (JUNE 2013)

	Sample Location:	LMR13-01	LMR13-03	LMR13-07	LMR13-08	LMR13-13	LMR13-14	LMR13-15	LMR13-21	LMR13-25	LMR13-26	LMR13-27
	Sample Name:	LMR13-01-012	LMR13-03-012	LMR13-07-012	LMR13-08-012	LMR13-13-012	LMR13-14-012	LMR13-15-012	LMR13-21-012	LMR13-25-012	LMR13-26-012	LMR13-27-012
	Sample Depth (ft):	0-1	0-1	0-1	0-1	0-1	0-1	0-1	0-1	0-1	0-1	0-1
	Date Sampled:	6/17/13	6/17/13	6/18/13	6/17/13	6/18/13	6/17/13	6/18/13	6/18/13	6/18/13	6/14/13	6/14/13
Analyte	**Unit**											
Gravel	%	0.1	0.7	0	0	0	0	0.2	1.5	2	17.6	0
Sand	%	14	25.6	16.3	2.4	2.5	6.7	23.2	15.3	37.9	11.2	5.7
Coarse Sand	%	0	0.9	8.1	0	0.1	0	0.5	0.2	0.8	1.3	0
Medium Sand	%	1.2	1.6	0.5	0.2	0	0.2	3.7	0.7	2.4	3.3	0.3
Fine Sand	%	13	23.1	7.7	2.2	2.4	6.5	19	14.4	34.7	6.6	5.4
Silt	%	51	44.7	37.7	54.1	39.9	44.3	38	52.7	37.1	29	54.2
Clay	%	34	29	46	43.5	57.6	49	38.6	30.5	23	42.2	40.1
Silt + Clay	%	85	73.7	83.7	97.6	97.5	93.3	76.6	83.2	60.1	71.2	94.3
Sieve Size 3 inch - Percent Finer	% passed	100	100	100	100	100	100	100	100	100	100	100
Sieve Size 2 inch - Percent Finer	% passed	100	100	100	100	100	100	100	100	100	100	100
Sieve Size 1.5 inch - Percent Finer	% passed	100	100	100	100	100	100	100	100	100	100	100
Sieve Size 1 inch - Percent Finer	% passed	100	100	100	100	100	100	100	100	100	100	100
Sieve Size 0.75 inch - Percent Finer	% passed	100	100	100	100	100	100	100	100	100	100	100
Sieve Size 0.375 inch - Percent Finer	% passed	100	100	100	100	100	100	100	98.8	99.5	88.1	100
Sieve Size #4 - Percent Finer	% passed	100	99.3	100	100	100	100	99.8	98.5	98	82.4	100
Sieve Size #10 - Percent Finer	% passed	100	98.4	91.9	100	99.9	100	99.3	98.3	97.2	81.1	100
Sieve Size #20 - Percent Finer	% passed	100	97.8	91.7	99.9	99.9	99.9	97.8	98	96.2	79.8	99.9
Sieve Size #40 - Percent Finer	% passed	99	96.8	91.4	99.8	99.9	99.8	95.6	97.6	94.8	77.8	99.7
Sieve Size #60 - Percent Finer	% passed	97	94.4	91.1	99.7	99.9	99.6	94	96.5	92.1	74.5	99
Sieve Size #80 - Percent Finer	% passed	94	90.9	90.7	99.6	99.8	99.5	92.6	94.9	87.9	73.3	98.4
Sieve Size #100 - Percent Finer	% passed	93	87.4	90.1	99.5	99.6	98.8	90	93.1	82.9	72.8	97.7
Sieve Size #200 - Percent Finer	% passed	86	73.7	83.7	97.6	97.5	93.3	76.6	83.2	60.1	71.2	94.3
Hydrometer Reading 1 - Percent Finer	% passed	62	49	70.8	66.1	85	74.1	59	62.1	38.7	59.6	78.7
Hydrometer Reading 2 - Percent Finer	% passed	53	44.1	62.5	61.3	79.5	68.6	54.4	50.1	34.1	55.9	71
Hydrometer Reading 3 - Percent Finer	% passed	45	36.7	56.6	53.2	71.3	60.2	47.6	41.4	29.5	49.7	55.7
Hydrometer Reading 4 - Percent Finer	% passed	39	32.7	50.7	48.4	63	51.8	43.1	36	25.8	47.1	48
Hydrometer Reading 5 - Percent Finer	% passed	34	29	46	43.5	57.6	49	38.6	30.5	23	42.2	40.1
Hydrometer Reading 6 - Percent Finer	% passed	27	23.9	37.7	35.5	49.3	40.6	32.9	22.9	18.4	34.6	33.7
Hydrometer Reading 7 - Percent Finer	% passed	21	17.5	28.3	27.4	38.4	32.2	26.1	17.4	14.8	25.8	27.6
Bulk Density	g/cc	1.2	0.986	0.773	0.671	0.671	0.8	0.795	1.4	1.27	1.02	0.684

Note: Cores collected by OEPA (14 of 90) were not submitted for Grain Size analysis.

TABLE 4-2 SEDIMENT RESULTS FOR GRAIN SIZE, PARTICLE SIZE, AND DENSITY
PHASE 2 LOWER MAUMEE RIVER SITE CHARACTERIZATION
TOLEDO, OHIO (JUNE 2013)

	Sample Location:	LMR13-28	LMR13-29	LMR13-30	LMR13-31	LMR13-32	LMR13-33	LMR13-34	LMR13-35	LMR13-38	LMR13-39	LMR13-40
	Sample Name:	LMR13-28-012	LMR13-29-012	LMR13-30-012	LMR13-31-012	LMR13-32-012	LMR13-33-012	LMR13-34-012	LMR13-35-012	LMR13-38-012	LMR13-39-012	LMR13-40-012
	Sample Depth (ft):	0-1	0-1	0-1	0-1	0-1	0-1	0-1	0-1	0-1	0-1	0-1
	Date Sampled:	6/15/13	6/15/13	6/19/13	6/15/13	6/15/13	6/19/13	6/15/13	6/15/13	6/16/13	6/19/13	6/16/13
Analyte	**Unit**											
Gravel	%	0	0	0	0.1	0	1.7	0	0	1.7	0	0.2
Sand	%	8.9	8.5	4.9	58.7	52.9	7.5	7.2	6.4	58	54.5	5.7
Coarse Sand	%	0.3	0.1	0	0.8	0.2	0	0.4	0.1	0.2	0.2	0.5
Medium Sand	%	0.2	0.1	0.3	7.8	3.6	0.3	0	0.4	3.1	2.4	0.5
Fine Sand	%	8.4	8.3	4.6	50.1	49.1	7.2	6.8	5.9	55	51.9	4.7
Silt	%	55.7	52.2	34.8	31.6	25.4	49	55.9	44.8	20	17.1	42.6
Clay	%	35.4	39.3	60.3	9.6	21.7	42	36.9	48.8	20	28.4	51.5
Silt + Clay	%	91.1	91.5	95.1	41.2	47.1	91	92.8	93.6	40	45.5	94.1
Sieve Size 3 inch - Percent Finer	% passed	100	100	100	100	100	100	100	100	100	100	100
Sieve Size 2 inch - Percent Finer	% passed	100	100	100	100	100	100	100	100	100	100	100
Sieve Size 1.5 inch - Percent Finer	% passed	100	100	100	100	100	100	100	100	100	100	100
Sieve Size 1 inch - Percent Finer	% passed	100	100	100	100	100	100	100	100	100	100	100
Sieve Size 0.75 inch - Percent Finer	% passed	100	100	100	100	100	100	100	100	100	100	100
Sieve Size 0.375 inch - Percent Finer	% passed	100	100	100	100	100	98	100	100	98	100	100
Sieve Size #4 - Percent Finer	% passed	100	100	100	99.9	100	98	100	100	98	100	99.8
Sieve Size #10 - Percent Finer	% passed	99.7	99.9	100	99.1	99.8	98	99.6	99.9	98	99.8	99.3
Sieve Size #20 - Percent Finer	% passed	99.6	99.9	100	97.4	98.8	98	99.6	99.8	97	99.3	99.1
Sieve Size #40 - Percent Finer	% passed	99.5	99.8	99.7	91.3	96.2	98	99.6	99.5	95	97.4	98.8
Sieve Size #60 - Percent Finer	% passed	99.2	99.7	98.6	75.7	82.7	97	99.3	99.1	75	80.3	98.4
Sieve Size #80 - Percent Finer	% passed	98.9	99.6	97.9	66.1	67.3	97	98.6	98.7	59	64.7	98
Sieve Size #100 - Percent Finer	% passed	98.2	99.2	97.3	58.3	61.4	96	97.6	98.2	53	58.5	97.6
Sieve Size #200 - Percent Finer	% passed	91.1	91.5	95.1	41.2	47.1	91	92.8	93.6	41	45.5	94.1
Hydrometer Reading 1 - Percent Finer	% passed	58.1	58.9	86.3	15.6	37.2	69	62.4	76.5	31	39.1	69.6
Hydrometer Reading 2 - Percent Finer	% passed	50.6	55	82.2	14.6	32.5	60	56	73.7	27	37.2	65.4
Hydrometer Reading 3 - Percent Finer	% passed	43.1	48.5	74	12.6	27.7	51	46.5	59.9	24	33.3	61.3
Hydrometer Reading 4 - Percent Finer	% passed	39.1	43.2	67.1	10.6	25.3	48	41.7	54.3	22	31.3	55.7
Hydrometer Reading 5 - Percent Finer	% passed	35.4	39.3	60.3	9.6	21.7	42	36.9	48.8	20	28.4	51.5
Hydrometer Reading 6 - Percent Finer	% passed	30	32.6	48	7.6	16.9	31	30.3	43.2	16	24.5	43.2
Hydrometer Reading 7 - Percent Finer	% passed	22.5	23.5	34.3	5.6	13.1	22	20.7	32.1	13	18.7	32.1
Bulk Density	g/cc	0.666	0.813	0.819	1.44	1.39	0.72	0.552	0.824	1.2	1.28	0.64

Note: Cores collected by OEPA (14 of 90) were not submitted

TABLE 4-2 SEDIMENT RESULTS FOR GRAIN SIZE, PARTICLE SIZE, AND DENSITY
PHASE 2 LOWER MAUMEE RIVER SITE CHARACTERIZATION
TOLEDO, OHIO (JUNE 2013)

	Sample Location:	LMR13-41	LMR13-42	LMR13-43	LMR13-44	LMR13-45	LMR13-46	LMR13-47	LMR13-48	LMR13-49	LMR13-50	LMR13-51
	Sample Name:	LMR13-41-012	LMR13-42-012	LMR13-43-012	LMR13-44-012	LMR13-45-012	LMR13-46-012	LMR13-47-012	LMR13-48-012	LMR13-49-012	LMR13-50-012	LMR13-51-012
	Sample Depth (ft):	0-1	0-1	0-1	0-1	0-1	0-1	0-1	0-1	0-1	0-1	0-1
	Date Sampled:	6/14/13	6/12/13	6/12/13	6/12/13	6/14/13	6/12/13	6/13/13	6/17/13	6/14/13	6/14/13	6/13/13
Analyte	**Unit**											
Gravel	%	0	0	0	0.3	0	0	0	0	0	0.1	0
Sand	%	15	23.2	35.8	10.6	6	20.7	3.2	7.2	14.6	17.3	15.7
Coarse Sand	%	0.2	0.4	0.2	0.2	0	0.1	0	0	0.1	0.3	0.2
Medium Sand	%	0.3	1.1	1	0.5	0.7	0.2	0.1	0.5	0.3	0.7	1.9
Fine Sand	%	14.5	21.7	34.6	9.9	5.3	20.4	3.1	6.7	14.2	16.3	13.6
Silt	%	58.6	40.9	27.9	45.5	52.9	48.7	41.2	38	26.2	46.5	26
Clay	%	26.4	35.9	36.3	43.6	41.1	30.6	55.6	55	59.2	36.1	58.3
Silt + Clay	%	85	76.8	64.2	89.1	94	79.3	96.8	93	85.4	82.6	84.3
Sieve Size 3 inch - Percent Finer	% passed	100	100	100	100	100	100	100	100	100	100	100
Sieve Size 2 inch - Percent Finer	% passed	100	100	100	100	100	100	100	100	100	100	100
Sieve Size 1.5 inch - Percent Finer	% passed	100	100	100	100	100	100	100	100	100	100	100
Sieve Size 1 inch - Percent Finer	% passed	100	100	100	100	100	100	100	100	100	100	100
Sieve Size 0.75 inch - Percent Finer	% passed	100	100	100	100	100	100	100	100	100	100	100
Sieve Size 0.375 inch - Percent Finer	% passed	100	100	100	100	100	100	100	100	100	100	100
Sieve Size #4 - Percent Finer	% passed	100	100	100	99.7	100	100	100	100	100	99.9	100
Sieve Size #10 - Percent Finer	% passed	99.8	99.6	99.8	99.5	100	99.9	100	100	99.9	99.6	99.8
Sieve Size #20 - Percent Finer	% passed	99.7	99.3	99.4	99.4	99.8	99.9	100	100	99.9	99.4	99.5
Sieve Size #40 - Percent Finer	% passed	99.5	98.5	98.8	99	99.3	99.7	99.9	100	99.6	98.9	97.9
Sieve Size #60 - Percent Finer	% passed	99	96.5	97	97.9	98.6	99.2	99.8	99	98.2	97.6	93.1
Sieve Size #80 - Percent Finer	% passed	98.6	93.7	94.6	96.7	98.1	98.8	99.7	99	97	96.4	90.2
Sieve Size #100 - Percent Finer	% passed	97.9	90.9	90.4	95.6	97.7	98.1	99.4	98	96	94.8	88.8
Sieve Size #200 - Percent Finer	% passed	85	76.8	64.2	89.1	94	79.3	96.8	93	85.4	82.6	84.3
Hydrometer Reading 1 - Percent Finer	% passed	57.4	61.1	52.5	72.5	73.4	47.3	88.4	81	84.9	55.7	79.8
Hydrometer Reading 2 - Percent Finer	% passed	47.9	55.7	48.5	64.8	61	42.3	78.9	75	78.2	52.5	76.8
Hydrometer Reading 3 - Percent Finer	% passed	38.4	46.9	42.5	55.9	50.2	37.3	67.6	68	71.3	45.8	69.2
Hydrometer Reading 4 - Percent Finer	% passed	33.7	40.4	39.3	48	46.4	33.3	59.7	62	64.5	40.9	62.9
Hydrometer Reading 5 - Percent Finer	% passed	26.4	35.9	36.3	43.6	41.1	30.6	55.6	55	59.2	36.1	58.3
Hydrometer Reading 6 - Percent Finer	% passed	19.1	28.2	29.2	33.4	33.8	25.3	45.8	45	46.9	30.7	48.7
Hydrometer Reading 7 - Percent Finer	% passed	14.2	20.7	20.2	24.6	24.7	19.1	34.1	34	38.6	22.6	36.4
Bulk Density	g/cc	1.22	0.767	0.829	0.974	0.651	0.841	0.529	0.81	0.695	0.736	0.822

Note: Cores collected by OEPA (14 of 90) were not submitted

TABLE 4-2 SEDIMENT RESULTS FOR GRAIN SIZE, PARTICLE SIZE, AND DENSITY
PHASE 2 LOWER MAUMEE RIVER SITE CHARACTERIZATION
TOLEDO, OHIO (JUNE 2013)

	Sample Location:	LMR13-52	LMR13-53	LMR13-54	LMR13-55	LMR13-56	LMR13-57	LMR13-58	LMR13-59	LMR13-60	LMR13-61	LMR13-62
	Sample Name:	LMR13-52-012	LMR13-53-012	LMR13-54-012	LMR13-55-012	LMR13-56-012	LMR13-57-012	LMR13-58-012	LMR13-59-012	LMR13-60-012	LMR13-61-012	LMR13-62-012
	Sample Depth (ft):	0-1	0-1	0-1	0-1	0-1	0-1	0-1	0-1	0-1	0-1	0-1
	Date Sampled:	6/20/13	6/20/13	6/19/13	6/19/13	6/20/13	6/14/13	6/20/13	6/20/13	6/20/13	6/20/13	6/13/13
Analyte	**Unit**											
Gravel	%	0	1.8	0	13	0.8	0.6	1.7	0	0	0	0.1
Sand	%	9.3	12	16	28	9.1	3.9	11.2	19.3	6	8.3	5.5
Coarse Sand	%	0	2.2	0.2	5.4	1.8	0.6	0.1	0	0	0	0.2
Medium Sand	%	0.6	3.1	0.9	8.3	2.2	0.7	1.4	2	0.2	0.1	0.2
Fine Sand	%	8.7	6.9	15	14	5.1	2.6	9.7	17.3	5.8	8.2	5.1
Silt	%	41	28	32	24	28	37	24	28.4	36	45.8	56.9
Clay	%	50	58	52	35	62	58.5	63.1	52.3	58	45.9	37.5
Silt + Clay	%	91	86	84	59	90	95.5	87.1	80.7	94	91.7	94.4
Sieve Size 3 inch - Percent Finer	% passed	100	100	100	100	100	100	100	100	100	100	100
Sieve Size 2 inch - Percent Finer	% passed	100	100	100	100	100	100	100	100	100	100	100
Sieve Size 1.5 inch - Percent Finer	% passed	100	100	100	100	100	100	100	100	100	100	100
Sieve Size 1 inch - Percent Finer	% passed	100	100	100	100	100	100	100	100	100	100	100
Sieve Size 0.75 inch - Percent Finer	% passed	100	100	100	100	100	100	100	100	100	100	100
Sieve Size 0.375 inch - Percent Finer	% passed	100	100	100	92	100	100	100	100	100	100	100
Sieve Size #4 - Percent Finer	% passed	100	98	100	87	99	99.4	98.3	100	100	100	99.9
Sieve Size #10 - Percent Finer	% passed	100	96	100	81	97	98.8	98.2	100	100	100	99.7
Sieve Size #20 - Percent Finer	% passed	100	95	100	77	96	98.6	97.6	98.9	99.9	100	99.6
Sieve Size #40 - Percent Finer	% passed	99	93	99	73	95	98.1	96.8	98	99.8	99.9	99.5
Sieve Size #60 - Percent Finer	% passed	98	91	97	68	94	97.1	94.8	94.4	99.5	99.6	99.3
Sieve Size #80 - Percent Finer	% passed	97	90	96	65	93	96.7	92.9	88.8	98.9	98.8	98.8
Sieve Size #100 - Percent Finer	% passed	96	88	94	63	92	96.6	91.6	85.2	98.2	97.8	98.2
Sieve Size #200 - Percent Finer	% passed	91	86	84	59	90	95.5	87.1	80.7	94	91.7	94.4
Hydrometer Reading 1 - Percent Finer	% passed	66	80	70	52	89	84.8	82.6	77.6	78.4	66.4	74.1
Hydrometer Reading 2 - Percent Finer	% passed	61	75	67	48	84	80.4	79.3	66.8	73.3	61.2	62.4
Hydrometer Reading 3 - Percent Finer	% passed	56	72	63	42	76	73.2	72.9	63.2	69.9	56.1	51.9
Hydrometer Reading 4 - Percent Finer	% passed	51	65	58	39	70	65.7	66.4	55.9	63.1	51	43.6
Hydrometer Reading 5 - Percent Finer	% passed	50	58	52	35	62	58.5	63.1	52.3	58	45.9	37.5
Hydrometer Reading 6 - Percent Finer	% passed	41	48	46	28	49	46.6	51.8	45.1	49.4	39.1	28
Hydrometer Reading 7 - Percent Finer	% passed	27	37	34	21	35	34.8	40.5	34.3	35.8	28.9	21
Bulk Density	g/cc	0.73	0.95	0.73	1.4	1.7	0.842	0.647	0.622	0.63	0.621	1.15

Note: Cores collected by OEPA (14 of 90) were not submitted

TABLE 4-2 SEDIMENT RESULTS FOR GRAIN SIZE, PARTICLE SIZE, AND DENSITY
PHASE 2 LOWER MAUMEE RIVER SITE CHARACTERIZATION
TOLEDO, OHIO (JUNE 2013)

	Sample Location:	LMR13-63	LMR13-64	LMR13-65	LMR13-66	LMR13-67	LMR13-68	LMR13-69	LMR13-70	LMR13-71	LMR13-72	LMR13-74
	Sample Name:	LMR13-63-012	LMR13-64-012	LMR13-65-012	LMR13-66-012	LMR13-67-012	LMR13-68-012	LMR13-69-012	LMR13-70-012	LMR13-71-012	LMR13-72-012	LMR13-74-012
	Sample Depth (ft):	0-1	0-1	0-1	0-1	0-1	0-1	0-1	0-1	0-1	0-1	0-1
	Date Sampled:	6/13/13	6/19/13	6/20/13	6/20/13	6/19/13	6/20/13	6/20/13	6/20/13	6/18/13	6/14/13	6/15/13
Analyte	**Unit**											
Gravel	%	0	0	0	0	0	5.1	0	0	3.8	1.6	0
Sand	%	4.7	4.8	1.8	11.4	4.7	28.8	4.9	2	42.7	20.2	13.1
Coarse Sand	%	0.4	0	0.2	0	0.1	4.5	0.1	0	3.2	0.6	0
Medium Sand	%	0.1	0.3	0.3	0.5	0.2	7.5	0.2	0.2	6	4.6	1.4
Fine Sand	%	4.2	4.5	1.3	10.9	4.4	16.8	4.6	1.8	33.5	15	11.7
Silt	%	32.1	42	42.4	47.5	34.4	33.6	36.3	32	31.5	39.7	43.5
Clay	%	63.2	53.2	55.8	41.1	60.9	32.5	58.8	66	22	38.5	43.4
Silt + Clay	%	95.3	95.2	98.2	88.6	95.3	66.1	95.1	98	53.5	78.2	86.9
Sieve Size 3 inch - Percent Finer	% passed	100	100	100	100	100	100	100	100	100	100	100
Sieve Size 2 inch - Percent Finer	% passed	100	100	100	100	100	100	100	100	100	100	100
Sieve Size 1.5 inch - Percent Finer	% passed	100	100	100	100	100	100	100	100	100	100	100
Sieve Size 1 inch - Percent Finer	% passed	100	100	100	100	100	100	100	100	100	100	100
Sieve Size 0.75 inch - Percent Finer	% passed	100	100	100	100	100	100	100	100	100	100	100
Sieve Size 0.375 inch - Percent Finer	% passed	100	100	100	100	100	100	100	100	100	100	100
Sieve Size #4 - Percent Finer	% passed	100	100	100	100	100	94.9	100	100	96.2	98.4	100
Sieve Size #10 - Percent Finer	% passed	99.6	100	99.8	100	99.9	90.4	99.9	100	93	97.8	100
Sieve Size #20 - Percent Finer	% passed	99.5	99.8	99.6	99.8	99.7	86.5	99.8	100	90.5	96.6	99.8
Sieve Size #40 - Percent Finer	% passed	99.5	99.7	99.5	99.5	99.7	82.9	99.7	100	87	93.2	98.6
Sieve Size #60 - Percent Finer	% passed	99.2	99.6	99.4	98.7	99.3	78.1	99.6	100	79.8	86.6	95.8
Sieve Size #80 - Percent Finer	% passed	98.9	99.2	99.2	97.4	99.2	75	99.4	99	74	84.3	94.2
Sieve Size #100 - Percent Finer	% passed	98.6	98.3	99.1	95.7	98.8	72.8	98.9	99	69.5	83	93.1
Sieve Size #200 - Percent Finer	% passed	95.3	95.2	98.2	88.6	95.3	66.1	95.1	98	53.5	78.2	86.9
Hydrometer Reading 1 - Percent Finer	% passed	88.1	75.2	73.8	74.7	84.9	52.9	83.8	84	40.5	58.4	64.4
Hydrometer Reading 2 - Percent Finer	% passed	83.2	69.7	72	68.6	76.9	46.9	76.5	81	33.5	55.4	61.8
Hydrometer Reading 3 - Percent Finer	% passed	75	64.2	66.6	56.4	70.5	39.7	70.6	74	28.2	48.5	53.9
Hydrometer Reading 4 - Percent Finer	% passed	68.4	56.8	61.2	47.2	67.3	37.3	64.7	70	24.7	44.6	48.7
Hydrometer Reading 5 - Percent Finer	% passed	63.2	53.2	55.8	41.1	60.9	32.5	58.8	66	22	38.5	43.4
Hydrometer Reading 6 - Percent Finer	% passed	51.2	44	45	33.5	51.4	25.2	48.5	56	17.6	30.5	38.2
Hydrometer Reading 7 - Percent Finer	% passed	39.4	33	34.2	25.9	38.6	19.2	38.2	41	14.1	22.6	27.7
Bulk Density	g/cc	0.657	0.568	0.516	1.13	0.531	1.61	0.707	0.64	1.49	1.16	0.821

Note: Cores collected by OEPA (14 of 90) were not submitted

TABLE 4-2 SEDIMENT RESULTS FOR GRAIN SIZE, PARTICLE SIZE, AND DENSITY
PHASE 2 LOWER MAUMEE RIVER SITE CHARACTERIZATION
TOLEDO, OHIO (JUNE 2013)

	Sample Location:	LMR13-75	LMR13-76	LMR13-77	LMR13-78	LMR13-79	LMR13-80	LMR13-81	LMR13-82	LMR13-83	LMR13-84	LMR13-85
	Sample Name:	LMR13-75-012	LMR13-76-012	LMR13-77-012	LMR13-78-012	LMR13-79-012	LMR13-80-012	LMR13-81-012	LMR13-82-012	LMR13-83-012	LMR13-84-012	LMR13-85-012
	Sample Depth (ft):	0-1	0-1	0-1	0-1	0-1	0-1	0-1	0-1	0-1	0-1	0-1
	Date Sampled:	6/15/13	6/15/13	6/15/13	6/16/13	6/16/13	6/20/13	6/12/13	6/17/13	6/14/13	6/18/13	6/19/13
Analyte	**Unit**											
Gravel	%	0.6	0.6	0.8	0.5	0.6	0.2	0	0	1.3	0	1.6
Sand	%	61.4	54.4	35.4	73.6	57	21	15.9	25	54.9	39	13.2
Coarse Sand	%	0.1	0.6	1.1	0.5	0.4	0.2	0.5	0.3	0.3	0	2.3
Medium Sand	%	1.4	8.7	1.6	1.1	3.1	0.8	2.3	1.4	5.1	1.7	3.7
Fine Sand	%	59.9	45.1	32.7	72	54	20	13.1	23.3	49.5	37.3	7.2
Silt	%	25.9	20.8	44.8	17.9	21	37	44.4	48.2	22.4	31.9	39.6
Clay	%	12.1	24.2	19	8	21	42	39.7	26.8	21.4	29.1	45.6
Silt + Clay	%	38	45	63.8	25.9	42	79	84.1	75	43.8	61	85.2
Sieve Size 3 inch - Percent Finer	% passed	100	100	100	100	100	100	100	100	100	100	100
Sieve Size 2 inch - Percent Finer	% passed	100	100	100	100	100	100	100	100	100	100	100
Sieve Size 1.5 inch - Percent Finer	% passed	100	100	100	100	100	100	100	100	100	100	100
Sieve Size 1 inch - Percent Finer	% passed	100	100	100	100	100	100	100	100	100	100	100
Sieve Size 0.75 inch - Percent Finer	% passed	100	100	100	100	100	100	100	100	100	100	100
Sieve Size 0.375 inch - Percent Finer	% passed	100	100	100	100	99	100	100	100	100	100	100
Sieve Size #4 - Percent Finer	% passed	99.4	99.4	99.2	99.5	99	100	100	100	98.7	100	98.4
Sieve Size #10 - Percent Finer	% passed	99.3	98.8	98.1	99	99	100	99.5	99.7	98.4	100	96.1
Sieve Size #20 - Percent Finer	% passed	99	97.6	97.7	98.6	98	99	98.8	99.4	97.3	99.8	94.5
Sieve Size #40 - Percent Finer	% passed	97.9	90.1	96.5	97.9	96	99	97.2	98.3	93.3	98.3	92.4
Sieve Size #60 - Percent Finer	% passed	85.9	59.8	93.8	87.2	81	95	95.2	96	75.6	83.8	90.1
Sieve Size #80 - Percent Finer	% passed	71	51.6	88	68	66	89	93	94.3	64.2	72.7	89.1
Sieve Size #100 - Percent Finer	% passed	58.8	49.3	82.5	53.6	58	87	91	92	58.3	68.2	88.6
Sieve Size #200 - Percent Finer	% passed	38	45	63.8	25.9	42	79	84.1	75	43.8	61	85.2
Hydrometer Reading 1 - Percent Finer	% passed	24.8	33.8	37.8	15.2	32	62	63.5	44.9	31.8	42.6	64.7
Hydrometer Reading 2 - Percent Finer	% passed	21	31.9	32.3	13.7	30	56	59.7	40.2	29.5	40.5	60.3
Hydrometer Reading 3 - Percent Finer	% passed	17.2	30	25.7	12.3	26	52	52.2	34.2	27.1	36.4	54.4
Hydrometer Reading 4 - Percent Finer	% passed	14.6	26.1	23.4	10.2	22	46	44.6	30.4	24.9	32.2	48.5
Hydrometer Reading 5 - Percent Finer	% passed	12.1	24.2	19	8	21	42	39.7	26.8	21.4	29.1	45.6
Hydrometer Reading 6 - Percent Finer	% passed	9	20.2	12.4	5.9	16	34	30.2	23.1	17.9	23.9	36.8
Hydrometer Reading 7 - Percent Finer	% passed	6.4	15.4	9.1	4.4	13	26	23.6	18.1	13.3	17.7	27.9
Bulk Density	g/cc	1.55	1.13	0.917	1.2	1.2	0.9	1.04	0.873	1.28	1.09	0.633

Note: Cores collected by OEPA (14 of 90) were not submitted

TABLE 4-2 SEDIMENT RESULTS FOR GRAIN SIZE, PARTICLE SIZE, AND DENSITY
PHASE 2 LOWER MAUMEE RIVER SITE CHARACTERIZATION
TOLEDO, OHIO (JUNE 2013)

	Sample Location:	LMR13-86	LMR13-87	LMR13-88	LMR13-89	LMR13-90	LMR13-91	LMR13-92	LMR13-93	LMR13-94	LMR13-95
	Sample Name:	LMR13-86-012	LMR13-87-012	LMR13-88-012	LMR13-89-012	LMR13-90-012	LMR13-91-012	LMR13-92-012	LMR13-93-012	LMR13-94-012	LMR13-95-012
	Sample Depth (ft):	0-1	0-1	0-1	0-1	0-1	0-1	0-1	0-1	0-1	0-1
	Date Sampled:	6/18/13	6/18/13	6/19/13	6/19/13	6/13/13	6/13/13	6/20/13	6/13/13	6/20/13	6/20/13
Analyte	**Unit**										
Gravel	%	0.2	4.3	7.7	33.9	0	0	0	1.3	12.9	12.7
Sand	%	13	18.5	7.6	53.5	1.5	8.1	4.6	20	21	27
Coarse Sand	%	0.6	1	1	5.2	0.1	0.2	0	0.2	6.2	7.5
Medium Sand	%	2.1	3.5	2.1	14.7	0.2	0.5	0.2	0.3	5.5	7.9
Fine Sand	%	10.3	14	4.5	33.6	1.2	7.4	4.4	19.5	9.3	11.6
Silt	%	25.5	24.3	37.1	5.2	30.3	37.7	46.7	48.5	34.8	27.8
Clay	%	61.3	52.9	47.6	7.4	68.2	54.2	48.7	30.2	31.3	32.5
Silt + Clay	%	86.8	77.2	84.7	12.6	98.5	91.9	95.4	78.7	66.1	60.3
Sieve Size 3 inch - Percent Finer	% passed	100	100	100	100	100	100	100	100	100	100
Sieve Size 2 inch - Percent Finer	% passed	100	100	100	100	100	100	100	100	100	100
Sieve Size 1.5 inch - Percent Finer	% passed	100	100	100	100	100	100	100	100	100	100
Sieve Size 1 inch - Percent Finer	% passed	100	100	100	100	100	100	100	100	100	100
Sieve Size 0.75 inch - Percent Finer	% passed	100	100	100	84.5	100	100	100	100	100	100
Sieve Size 0.375 inch - Percent Finer	% passed	100	97.6	92.8	76.9	100	100	100	100	95.6	93.1
Sieve Size #4 - Percent Finer	% passed	99.8	95.7	92.3	66.1	100	100	100	98.7	87.1	87.3
Sieve Size #10 - Percent Finer	% passed	99.2	94.7	91.3	60.9	99.9	99.8	100	98.5	80.9	79.8
Sieve Size #20 - Percent Finer	% passed	98.3	93.3	90.1	56.5	99.8	99.6	99.9	98.4	78.1	75.6
Sieve Size #40 - Percent Finer	% passed	97.1	91.2	89.2	46.2	99.7	99.3	99.8	98.2	75.4	71.9
Sieve Size #60 - Percent Finer	% passed	95.3	87.6	88.4	30.4	99.6	98.7	99.7	97.5	71.6	67.7
Sieve Size #80 - Percent Finer	% passed	94.1	85.2	88	21.9	99.5	98.2	99.7	96.5	70.3	65.7
Sieve Size #100 - Percent Finer	% passed	93	83.4	87.6	17.5	99.5	97.5	99.4	94.7	69.5	64.5
Sieve Size #200 - Percent Finer	% passed	86.8	77.2	84.7	12.6	98.5	91.9	95.4	78.7	66.1	60.3
Hydrometer Reading 1 - Percent Finer	% passed	85	72.9	77	12.6	93.6	80.2	72.3	46.8	40.6	45.7
Hydrometer Reading 2 - Percent Finer	% passed	79.5	68.2	74.8	11.8	87.8	74.7	66.4	41.2	39.4	39.7
Hydrometer Reading 3 - Percent Finer	% passed	72.5	63.5	65.7	10.4	79.5	65.5	57.6	37.6	37.1	39.7
Hydrometer Reading 4 - Percent Finer	% passed	66.9	58.8	55.5	8.9	74	60	53.1	33	35.9	34.9
Hydrometer Reading 5 - Percent Finer	% passed	61.3	52.9	47.6	7.4	68.2	54.2	48.7	30.2	31.3	32.5
Hydrometer Reading 6 - Percent Finer	% passed	51.6	42.3	36.2	5.9	57.1	46.2	39.9	24.7	26.7	27.7
Hydrometer Reading 7 - Percent Finer	% passed	39	31.7	26.1	4.4	44.6	36.8	31	19.2	19.7	19.3
Bulk Density	g/cc	0.646	0.77	0.63	1.67	0.686	0.644	0.699	0.903	0.951	0.985

Note: Cores collected by OEPA (14 of 90) were not submitted

TABLE 4-3A* SEDIMENT RESULTS FOR OIL AND GREASE AND TOC IN AREA A
PHASE 2 LOWER MAUMEE RIVER SITE CHARACTERIZATION
TOLEDO, OHIO (JUNE 2013)

Sample Location:		LMR13-01							LMR13-02				
Sample Name:		LMR13-01-012	LMR13-01-024	LMR13-01-024FD	LMR13-01-048	LMR13-01-072	LMR13-01-096	LMR13-01-120	LMR13-02-012	LMR13-02-012FD	LMR13-03-012	LMR13-03-024	LMR13-03-024FD
Sample Depth (ft):		0-1	1-2	1-2	2-4	4-6	6-8	8-9	0-1	0-1	0-1	1-2	1-2
Date Sampled:		6/17/13	6/17/13	6/17/13	6/17/13	6/17/13	6/17/13	6/17/13	6/11/13	6/11/13	6/17/13	6/17/13	6/17/13
Analyte	**Unit**												
Oil and Grease	mg/kg	379	414	NA	250	55 J	240 U	257 U	289 U	NA	1570	2200	2120 J
Total Organic Carbon	%	2.57 J	2.19 J	2.38 J	2.5 J	2.64 J	2.86 J	2.99 J	1.65	1.42	2.83 J	3.53 J	NA

Sample Location:		LMR13-60					LMR13-61						
Sample Name:		LMR13-60-012	LMR13-60-024	LMR13-60-048	LMR13-60-072	LMR13-60-096	LMR13-61-012	LMR13-61-024	LMR13-61-048	LMR13-61-072	LMR13-61-096	LMR13-61-120	LMR13-62-012
Sample Depth (ft):		0-1	1-2	2-4	4-6	6-8	0-1	1-2	2-4	4-6	6-8	8-10	0-1
Date Sampled:		6/20/13	6/20/13	6/20/13	6/20/13	6/20/13	6/20/13	6/20/13	6/20/13	6/20/13	6/20/13	6/20/13	6/13/13
Analyte	**Unit**												
Oil and Grease	mg/kg	441 UJ	403 UJ	385 UJ	814 J	765 J	677 J	704 J	1140 J	1200 J	1140 J	959 J	288 U
Total Organic Carbon	%	2.82 J	2.72 J	3.55 J	2.66 J	2.86 J	2.91 J	2.19 J	2.57 J	2.63 J	2.64 J	2.73 J	2.08

NOTES:
J = Indicates that the concentration is an estimated value.
U = Indicates the analyte was analyzed for but not detected.
mg/kg = Milligrams per kilogram.
ND = Not detected.
Submitted samples are presented in ascending numerical order.
*Samples presented are displayed in Figure 3-1A

TABLE 4-3A* SEDIMENT RESULTS FOR OIL AND GREASE AND TOC IN AREA A
PHASE 2 LOWER MAUMEE RIVER SITE CHARACTERIZATION
TOLEDO, OHIO (JUNE 2013)

Sample Location:		LMR13-03				LMR13-05		LMR13-06	LMR13-07				
Sample Name:		LMR13-03-048	LMR13-03-072	LMR13-03-096	LMR13-03-120	LMR13-05-012	LMR13-05-012FD	LMR13-06-012	LMR13-07-012	LMR13-07-024	LMR13-07-024FD	LMR13-07-048	LMR13-07-072
Sample Depth (ft):		2-4	4-6	6-8	8-10	0-1	0-1	0-1	0-1	1-2	1-2	2-4	4-6
Date Sampled:		6/17/13	6/17/13	6/17/13	6/17/13	6/11/13	6/11/13	6/11/13	6/18/13	6/18/13	6/18/13	6/18/13	6/18/13
Analyte	**Unit**												
Oil and Grease	mg/kg	939 J	305 UJ	280 UJ	298 UJ	2500	2550	1190	345 J	749 J	NA	858 J	262 J
Total Organic Carbon	%	3.2 J	2.24 J	2.36 J	2.78 J	2.19	NA	1.39	3.05 J	3.08 J	2.92 J	2.99 J	2.29 J

Sample Location:		LMR13-62					LMR13-63						
Sample Name:		LMR13-62-024	LMR13-62-024FD	LMR13-62-048	LMR13-62-072	LMR13-62-096	LMR13-63-012	LMR13-63-024	LMR13-63-024FD	LMR13-63-048	LMR13-63-072	LMR13-63-096	LMR13-63-120
Sample Depth (ft):		1-2	1-2	2-4	4-6	6-7	0-1	1-2	1-2	2-4	4-6	6-8	8-10
Date Sampled:		6/13/13	6/13/13	6/13/13	6/13/13	6/13/13	6/13/13	6/13/13	6/13/13	6/13/13	6/13/13	6/13/13	6/13/13
Analyte	**Unit**												
Oil and Grease	mg/kg	245 J	NA	289 U	261 UJ	242 U	430 U	409 U	866	373 U	1120	2560	2140
Total Organic Carbon	%	2.11	1.99	2.14	1.66	1.75	2.44	2.33	NA	2.61	2.76	3.08	4.82

NOTES:
J = Indicates that the concentration is an estimated value.
U = Indicates the analyte was analyzed for but not detected.
mg/kg = Milligrams per kilogram.
ND = Not detected.
Submitted samples are presented in ascending numerical order.
*Samples presented are displayed in Figure 3-1A

TABLE 4-3A* SEDIMENT RESULTS FOR OIL AND GREASE AND TOC IN AREA A
PHASE 2 LOWER MAUMEE RIVER SITE CHARACTERIZATION
TOLEDO, OHIO (JUNE 2013)

Sample Location:		LMR13-08					LMR13-09	LMR13-10	LMR13-11	LMR13-12	LMR13-13							
Sample Name:		LMR13-08-012	LMR13-08-024	LMR13-08-024FD	LMR13-08-048	LMR13-08-072	LMR13-09-012	LMR13-10-012	LMR13-11-012	LMR13-12-012	LMR13-13-012	LMR13-13-024	LMR13-13-024FD	LMR13-13-048	LMR13-13-048FD	LMR13-13-072	LMR13-13-096	LMR13-13-120
Sample Depth (ft):		0-1	1-2	1-2	2-4	4-6	0-1	0-1	0-1	0-1	0-1	1-2	1-2	2-4	2-4	4-6	6-8	8-9
Date Sampled:		6/17/13	6/17/13	6/18/13	6/17/13	6/17/13	6/11/13	6/11/13	6/11/13	6/11/13	6/18/13	6/18/13	6/18/13	6/18/13	6/18/13	6/18/13	6/18/13	6/18/13
Analyte	**Unit**																	
Oil and Grease	mg/kg	1050 J	353 UJ	326 U	2480 J	1190 J	276 U	696	810	980	771 J	1600 J	NA	621 J	793 J	1170 J	296 U	405 J
Total Organic Carbon	%	2.34 J	2.42 J	NA	2.4 J	1.28 J	1.66	1.94	1.04	1.33	2.52	2.92	2.86	3.89 J	NA	2.52	1.76	1.72

Sample Location:			LMR13-64								LMR13-65				LMR13-66			
Sample Name:		LMR13-63-144	LMR13-64-012	LMR13-64-024	LMR13-64-024FD	LMR13-64-048	LMR13-64-048FD	LMR13-64-072	LMR13-64-096	LMR13-64-120	LMR13-65-012	LMR13-65-024	LMR13-65-048	LMR13-65-072	LMR13-66-012	LMR13-66-024	LMR13-66-024FD	LMR13-66-048
Sample Depth (ft):		10-11	0-1	1-2	1-2	2-4	2-4	4-6	6-8	8-10	0-1	1-2	2-4	4-6	0-1	1-2	1-2	2-3
Date Sampled:		6/13/13	6/19/13	6/19/13	6/19/13	6/19/13	6/19/13	6/19/13	6/19/13	6/19/13	6/20/13	6/20/13	6/20/13	6/20/13	6/20/13	6/20/13	6/20/13	6/20/13
Analyte	**Unit**																	
Oil and Grease	mg/kg	2760	830 J	1080 J	NA	883 J	659 J	679 J	340 J	1020 J	766 J	572 J	794 J	749 J	301 UJ	278 UJ	273 UJ	269 UJ
Total Organic Carbon	%	3.9	2.32 J	2.94 J	2.82 J	2.52 J	NA	2.85 J	2.72 J	2.58 J	2.91 J	2.69 J	3.23 J	2.89 J	2.39 J	1.87 J	NA	1.66 J

NOTES:
J = Indicates that the concentration is an estimated value.
U = Indicates the analyte was analyzed for but not detected.
mg/kg = Milligrams per kilogram.
ND = Not detected.
Submitted samples are presented in ascending numerical order.
*Samples presented are displayed in Figure 3-1A

TABLE 4-3A* SEDIMENT RESULTS FOR OIL AND GREASE AND TOC IN AREA A
PHASE 2 LOWER MAUMEE RIVER SITE CHARACTERIZATION
TOLEDO, OHIO (JUNE 2013)

Sample Location:		LMR13-14							LMR13-15			LMR13-16	LMR13-17	LMR13-18	LMR13-19	LMR13-19
Sample Name:		LMR13-14-012	LMR13-14-024	LMR13-14-024FD	LMR13-14-048	LMR13-14-072	LMR13-14-096	LMR13-14-120	LMR13-15-012	LMR13-15-024	LMR13-15-024FD	LMR13-16-012	LMR13-17-012	LMR13-18-012	LMR13-19-012	LMR13-19-012FD
Sample Depth (ft):		0-1	1-2	1-2	2-4	4-6	6-8	8-10	0-1	1-2	1-2	0-1	0-1	0-1	0-1	0-1
Date Sampled:		6/17/13	6/17/13	6/18/13	6/17/13	6/17/13	6/17/13	6/17/13	6/18/13	6/18/13	6/18/13	6/11/13	6/11/13	6/11/13	6/11/13	6/11/13
Analyte	**Unit**															
Oil and Grease	mg/kg	1470 J	1090 J	1100 J	1860 J	1350 J	279 UJ	259 UJ	317 UJ	304 J	NA	271 U	780	1360	1060	NA
Total Organic Carbon	%	2.3 J	3.63 J	NA	2.99 J	2.25 J	1.62 J	1.68 J	3.15 J	2.23 J	2.22 J	1.37	1.34	1.73	1.22	1.67

Sample Location:		LMR13-67							LMR13-68	LMR13-69						
Sample Name:		LMR13-67-012	LMR13-67-024	LMR13-67-024FD	LMR13-67-048	LMR13-67-072	LMR13-67-096	LMR13-67-120	LMR13-68-012	LMR13-69-012	LMR13-69-024	LMR13-69-024FD	LMR13-69-048	LMR13-69-072	LMR13-69-096	LMR13-69-120
Sample Depth (ft):		0-1	1-2	1-2	2-4	4-6	6-8	8-10	0-1	0-1	1-2	1-2	2-4	4-6	6-8	8-9
Date Sampled:		6/19/13	6/19/13	6/19/13	6/19/13	6/19/13	6/19/13	6/19/13	6/20/13	6/20/13	6/20/13	6/20/13	6/20/13	6/20/13	6/20/13	6/20/13
Analyte	**Unit**															
Oil and Grease	mg/kg	646 J	865 J	NA	549 J	978 J	668 J	586 J	630 J	702 J	640 J	NA	535 J	708 J	1370 J	964 J
Total Organic Carbon	%	3.02 J	3.16 J	3.02 J	2.86 J	3.24 J	3.71 J	2.79 J	2.7 J	3.08 J	2.62 J	2.96 J	2.62 J	2.55 J	2.94 J	2.67 J

NOTES:
J = Indicates that the concentration is an estimated value.
U = Indicates the analyte was analyzed for but not detected.
mg/kg = Milligrams per kilogram.
ND = Not detected.
Submitted samples are presented in ascending numerical order.
*Samples presented are displayed in Figure 3-1A

TABLE 4-3A* SEDIMENT RESULTS FOR OIL AND GREASE AND TOC IN AREA A
PHASE 2 LOWER MAUMEE RIVER SITE CHARACTERIZATION
TOLEDO, OHIO (JUNE 2013)

Sample Location:		LMR13-20		LMR13-21					LMR13-23	LMR13-24	LMR13-25						
Sample Name:		LMR13-20-012	LMR13-20-012FD	LMR13-21-012	LMR13-21-024	LMR13-21-024FD	LMR13-21-048	LMR13-21-072	LMR13-23-012	LMR13-24-012	LMR13-25-012	LMR13-25-024	LMR13-25-024FD	LMR13-25-048	LMR13-25-072	LMR13-25-096
Sample Depth (ft):		0-1	0-1	0-1	1-2	1-2	2-4	4-6	0-1	0-1	0-1	1-2	1-2	2-4	4-6	6-7
Date Sampled:		6/11/13	6/11/13	6/18/13	6/18/13	6/18/13	6/18/13	6/18/13	6/11/13	6/11/13	6/18/13	6/18/13	6/18/13	6/18/13	6/18/13	6/18/13
Analyte	**Unit**															
Oil and Grease	mg/kg	625	298 U	205 J	807 J	859 J	228 UJ	211 UJ	292 U	1380	261 U	1190	NA	265 U	252 U	211 UJ
Total Organic Carbon	%	1.71	NA	2.34 J	2.64 J	NA	1.61 J	1.22 J	1.53	1.77	2.54	2.43	2.13	1.91	1.8	2.88 J

Sample Location:		LMR13-71					LMR13-81									
Sample Name:		LMR13-71-012	LMR13-71-024	LMR13-71-024FD	LMR13-71-048	LMR13-71-072	LMR13-81-012	LMR13-81-024	LMR13-81-024FD	LMR13-81-048	LMR13-81-072	LMR13-81-096	LMR13-81-120	LMR13-82-012	LMR13-82-024	LMR13-82-024FD
Sample Depth (ft):		0-1	1-2	1-2	2-4	4-6	0-1	1-2	1-2	2-4	4-6	6-8	8-9	0-1	1-2	1-2
Date Sampled:		6/18/13	6/18/13	6/18/13	6/18/13	6/18/13	6/12/13	6/12/13	6/12/13	6/12/13	6/12/13	6/12/13	6/12/13	6/17/13	6/17/13	6/17/13
Analyte	**Unit**															
Oil and Grease	mg/kg	217 UJ	218 UJ	239 UJ	215 UJ	207 UJ	2020	2590	2240	323 U	324 U	314 U	424	1400	3930	NA
Total Organic Carbon	%	3.12 J	2.22 J	1.69 J	1.43 J	2.07 J	2.77	2.92	NA	2.94	2.66	2.68	2.54	3.32 J	3.38 J	3.54 J

NOTES:
J = Indicates that the concentration is an estimated value.
U = Indicates the analyte was analyzed for but not detected.
mg/kg = Milligrams per kilogram.
ND = Not detected.
Submitted samples are presented in ascending numerical order.
*Samples presented are displayed in Figure 3-1A

TABLE 4-3A* SEDIMENT RESULTS FOR OIL AND GREASE AND TOC IN AREA A
PHASE 2 LOWER MAUMEE RIVER SITE CHARACTERIZATION
TOLEDO, OHIO (JUNE 2013)

	Sample Location:	LMR13-45							LMR13-46						
	Sample Name:	LMR13-45-012	LMR13-45-024	LMR13-45-024FD	LMR13-45-048	LMR13-45-072	LMR13-45-096	LMR13-45-120	LMR13-46-012	LMR13-46-024	LMR13-46-024FD	LMR13-46-048	LMR13-46-072	LMR13-46-096	LMR13-46-120
	Sample Depth (ft):	0-1	1-2	1-2	2-4	4-6	6-8	8-9	0-1	1-2	1-2	2-4	4-6	6-8	8-10
	Date Sampled:	6/14/13	6/14/13	6/14/13	6/14/13	6/14/13	6/14/13	6/14/13	6/12/13	6/12/13	6/12/13	6/12/13	6/12/13	6/12/13	6/12/13
Analyte	**Unit**														
Oil and Grease	mg/kg	3270	16500	NA	15500	23800	8240	12500	7600	11700	13300	19900	12500	30700	16200
Total Organic Carbon	%	4.46	7.11	7.76	6.52	7.33	5.79	5.02	4.36	5.21	NA	5.29	5.42	7.33	5.05

	Sample Location:	LMR13-82					LMR13-90						LM		
	Sample Name:	LMR13-82-048	LMR13-82-072	LMR13-82-096	LMR13-82-120	LMR13-82-144	LMR13-90-012	LMR13-90-024	LMR13-90-024FD	LMR13-90-048	LMR13-90-048FD	LMR13-90-072	LMR13-91-012	LMR13-91-024	LMR13-91-024FD
	Sample Depth (ft):	2-4	4-6	6-8	8-10	10-11	0-1	1-2	1-2	2-4	2-4	4-6	0-1	1-2	1-2
	Date Sampled:	6/17/13	6/17/13	6/17/13	6/17/13	6/17/13	6/13/13	6/13/13	6/13/13	6/13/13	6/13/13	6/13/13	6/13/13	6/13/13	6/13/13
Analyte	**Unit**														
Oil and Grease	mg/kg	2640	1270	1380	600	686	451	531	NA	784	694 J	109 J	419 UJ	373 UJ	401 UJ
Total Organic Carbon	%	2.17	2.98 J	2.02	2.25	1.9	2.38	2.54	2.23	2.93	NA	2.38	2.75	2.14	NA

NOTES:
J = Indicates that the concentration is an estimated value.
U = Indicates the analyte was analyzed for but not detected.
mg/kg = Milligrams per kilogram.
ND = Not detected.
Submitted samples are presented in ascending numerical order.
*Samples presented are displayed in Figure 3-1A

TABLE 4-3A* SEDIMENT RESULTS FOR OIL AND GREASE AND TOC IN AREA A
PHASE 2 LOWER MAUMEE RIVER SITE CHARACTERIZATION
TOLEDO, OHIO (JUNE 2013)

Sample Location:		LMR13-47									LMR13-48								
Sample Name:		LMR13-47-012	LMR13-47-024	LMR13-47-024FD	LMR13-47-048	LMR13-47-048FD	LMR13-47-072	LMR13-47-096	LMR13-47-120	LMR13-47-144	LMR13-48-012	LMR13-48-024	LMR13-48-024FD	LMR13-48-048	LMR13-48-072	LMR13-48-096	LMR13-48-120	LMR13-48-144	LMR13-48-168
Sample Depth (ft):		0-1	1-2	1-2	2-4	2-4	4-6	6-8	8-10	10-12	0-1	1-2	1-2	2-4	4-6	6-8	8-10	10-12	12-13
Date Sampled:		6/13/13	6/13/13	6/13/13	6/13/13	6/13/13	6/13/13	6/13/13	6/13/13	6/13/13	6/17/13	6/17/13	6/17/13	6/17/13	6/17/13	6/17/13	6/17/13	6/17/13	6/17/13
Analyte	**Unit**																		
Oil and Grease	mg/kg	650 J	505 J	NA	532 J	956	529 J	616 J	380 U	354 U	428	132 J	700	198 J	1900	2610	1030	721	590
Total Organic Carbon	%	3.37	3.07	3.14	2.97	NA	3.15	2.94	3.13	3.49	3.13 J	2.79 J	NA	3.86 J	2.93 J	2.94 J	2.39 J	2.25 J	2.07 J

Sample Location:	R13-91			LMR13-92			LMR13-93						
Sample Name:	LMR13-91-048	LMR13-91-072	LMR13-91-096	LMR13-92-012	LMR13-92-024	LMR13-92-024FD	LMR13-93-012	LMR13-93-024	LMR13-93-024FD	LMR13-93-048	LMR13-93-072	LMR13-93-096	LMR13-93-120
Sample Depth (ft):	2-4	4-6	6-9	0-1	1-2	1-2	0-1	1-2	1-2	2-4	4-6	6-8	8-10
Date Sampled:	6/13/13	6/13/13	6/13/13	6/20/13	6/20/13	6/20/13	6/13/13	6/13/13	6/13/13	6/13/13	6/13/13	6/13/13	6/13/13
Analyte	**Unit**												
Oil and Grease	mg/kg	369 UJ	2940 J	3450 J	341 J	610 J	NA	1950	3600	5500 J	2040	1340	954	599
Total Organic Carbon	%	2.22	2.98	3.38	2.54 J	2.89 J	3.09 J	3.26	4.29	NA	3.03	2.8	2.48	2.35

NOTES:
J = Indicates that the concentration is an estimated value.
U = Indicates the analyte was analyzed for but not detected.
mg/kg = Milligrams per kilogram.
ND = Not detected.
Submitted samples are presented in ascending numerical order.
*Samples presented are displayed in Figure 3-1A

TABLE 4-3B* SEDIMENT RESULTS FOR OIL AND GREASE AND TOC IN AREA B
PHASE 2 LOWER MAUMEE RIVER SITE CHARACTERIZATION
TOLEDO, OHIO (JUNE 2013)

Sample Location:		LMR13-35						LMR13-38					
Sample Name:		LMR13-35-012	LMR13-35-024	LMR13-35-024FD	LMR13-35-048	LMR13-35-072	LMR13-35-096	LMR13-38-012	LMR13-38-024	LMR13-38-024FD	LMR13-38-048	LMR13-38-072	LMR13-38-096
Sample Depth (ft):		0-1	1-2	2-4	4-6	6-8	0-1	1-2	1-2	2-4	4-6	6-8	0-1
Date Sampled:		06/15/2013	06/15/2013	06/15/2013	06/15/2013	06/15/2013	06/15/2013	06/16/2013	06/16/2013	06/16/2013	06/16/2013	06/16/2013	06/16/2013
Analyte	**Unit**												
Oil and Grease	mg/kg	464 J	1570 J	NA	238 J	41.5 J	62.5 J	477 J	54.4 J	120 J	244 UJ	217 UJ	34.5 J
Total Organic Carbon	%	3.22 J	3.69 J	3.86	2.62	1.13	1.55	2.14 J	2	NA	1.76 J	2	1.98 J

NOTES:
J = Indicates that the concentration is an estimated value.
U = Indicates the analyte was analyzed for but not detected.
mg/kg = Milligrams per kilogram.
ND = Not detected.
Submitted samples presented in ascending numerical order.
*Samples presented are displayed in Figure 3-1B.

TABLE 4-3B* SEDIMENT RESULTS FOR OIL AND GREASE AND TOC IN AREA B
PHASE 2 LOWER MAUMEE RIVER SITE CHARACTERIZATION
TOLEDO, OHIO (JUNE 2013)

Sample Location:		LMR13-39					LMR13-40					
Sample Name:		LMR13-39-012	LMR13-39-024	LMR13-39-024FD	LMR13-39-048	LMR13-39-072	LMR13-40-012	LMR13-40-024	LMR13-40-024FD	LMR13-40-048	LMR13-40-072	LMR13-40-096
Sample Depth (ft):		1-2	2-4	4-6	0-1	1-2	1-2	2-4	4-6	6-7	0-1	1-2
Date Sampled:		06/19/2013	06/19/2013	06/19/2013	06/19/2013	06/19/2013	06/16/2013	06/16/2013	06/16/2013	06/16/2013	06/16/2013	06/16/2013
Analyte	**Unit**											
Oil and Grease	mg/kg	284 UJ	275 UJ	NA	307 UJ	264 UJ	26.1 J	170 J	241 J	305 UJ	383 J	296 UJ
Total Organic Carbon	%	1.65 J	1.42 J	2.26 J	2.53 J	2.04 J	2.64	2.33	NA	2.42 J	3.06 J	3.42 J

NOTES:
J = Indicates that the concentration is an estimated value.
U = Indicates the analyte was analyzed for but not detected.
mg/kg = Milligrams per kilogram.
ND = Not detected.
Submitted samples presented in ascending numerical order.
*Samples presented are displayed in Figure 3-1B.

TABLE 4-3B* SEDIMENT RESULTS FOR OIL AND GREASE AND TOC IN AREA B
PHASE 2 LOWER MAUMEE RIVER SITE CHARACTERIZATION
TOLEDO, OHIO (JUNE 2013)

Sample Location:		LMR13-41				LMR13-42						
Sample Name:		LMR13-41-012	LMR13-41-024	LMR13-41-024FD	LMR13-41-048	LMR13-42-012	LMR13-42-024	LMR13-42-024FD	LMR13-42-048	LMR13-42-072	LMR13-42-096	LMR13-42-120
Sample Depth (ft):		2-4	0-1	1-2	1-2	2-4	4-6	6-8	8-9	0-1	1-2	2-4
Date Sampled:		06/14/2013	06/14/2013	06/14/2013	06/14/2013	06/12/2013	06/12/2013	06/12/2013	06/12/2013	06/12/2013	06/12/2013	06/12/2013
Analyte	**Unit**											
Oil and Grease	mg/kg	283 UJ	292 UJ	NA	260 UJ	4840 J	2720 J	2030 J	4540 J	1100 J	970 J	963 J
Total Organic Carbon	%	2.57	2.86	2.79	2.19	2.48	3.7	NA	3.12	2.62	3.02	2.42

NOTES:
J = Indicates that the concentration is an estimated value.
U = Indicates the analyte was analyzed for but not detected.
mg/kg = Milligrams per kilogram.
ND = Not detected.
Submitted samples presented in ascending numerical order.
*Samples presented are displayed in Figure 3-1B.

TABLE 4-3B* SEDIMENT RESULTS FOR OIL AND GREASE AND TOC IN AREA B
PHASE 2 LOWER MAUMEE RIVER SITE CHARACTERIZATION
TOLEDO, OHIO (JUNE 2013)

Sample Location:		LMR13-43							LMR13-44						
Sample Name:		LMR13-43-012	LMR13-43-024	LMR13-43-024FD	LMR13-43-048	LMR13-43-072	LMR13-43-096	LMR13-43-120	LMR13-44-012	LMR13-44-024	LMR13-44-024FD	LMR13-44-048	LMR13-44-048FD	LMR13-44-072	LMR13-44-096
Sample Depth (ft):		4-6	6-8	8-9	0-1	1-2	1-2	2-4	4-6	6-8	0-1	1-2	1-2	2-4	4-6
Date Sampled:		06/12/2013	06/12/2013	06/12/2013	06/12/2013	06/12/2013	06/12/2013	06/12/2013	06/12/2013	06/12/2013	06/12/2013	06/12/2013	06/12/2013	06/12/2013	06/12/2013
Analyte	**Unit**														
Oil and Grease	mg/kg	3800 J	6110 J	NA	6310 J	6340 J	1270 J	2140 J	1620 J	202 J	217 J	280 U	NA	223 J	156 J
Total Organic Carbon	%	2.67	4.59	4.55	4.51	3.17	3.11	3.48	2.6	2	NA	2.36	2.07	3.27	2.86

NOTES:
J = Indicates that the concentration is an estimated value.
U = Indicates the analyte was analyzed for but not detected.
mg/kg = Milligrams per kilogram.
ND = Not detected.
Submitted samples presented in ascending numerical order.
*Samples presented are displayed in Figure 3-1B.

TABLE 4-3B* SEDIMENT RESULTS FOR OIL AND GREASE AND TOC IN AREA B
PHASE 2 LOWER MAUMEE RIVER SITE CHARACTERIZATION
TOLEDO, OHIO (JUNE 2013)

Sample Location:		LMR13-54								LMR13-55				
Sample Name:		LMR13-54-012	LMR13-54-024	LMR13-54-024FD	LMR13-54-048	LMR13-54-048FD	LMR13-54-072	LMR13-54-096	LMR13-54-120	LMR13-55-012	LMR13-55-024	LMR13-55-024FD	LMR13-55-048	LMR13-55-072
Sample Depth (ft):		6-8	8-9	0-1	1-2	2-4	4-6	0-1	0-1	1-2	1-2	2-4	0-1	1-2
Date Sampled:		06/19/2013	06/19/2013	06/19/2013	06/19/2013	06/19/2013	06/19/2013	06/19/2013	06/19/2013	06/19/2013	06/19/2013	06/19/2013	06/19/2013	06/19/2013
Analyte	**Unit**													
Oil and Grease	mg/kg	1550 J	4030 J	2530 J	4100 J	NA	4810 J	5180 J	13400 J	2190 J	3710 J	NA	2040 J	3530 J
Total Organic Carbon	%	4.55 J	4.57 J	NA	3.73 J	4.2 J	4.47 J	4.22 J	5.62 J	4.06 J	3.69 J	3.63 J	3.44 J	4.71 J

NOTES:
J = Indicates that the concentration is an estimated value.
U = Indicates the analyte was analyzed for but not detected.
mg/kg = Milligrams per kilogram.
ND = Not detected.
Submitted samples presented in ascending numerical order.
*Samples presented are displayed in Figure 3-1B.

TABLE 4-3B* SEDIMENT RESULTS FOR OIL AND GREASE AND TOC IN AREA B
PHASE 2 LOWER MAUMEE RIVER SITE CHARACTERIZATION
TOLEDO, OHIO (JUNE 2013)

Sample Location:		LMR13-56	LMR13-57				LMR13-58		LMR13-59		
Sample Name:		LMR13-56-012	LMR13-57-012	LMR13-57-024	LMR13-57-024FD	LMR13-57-048	LMR13-58-012	LMR13-58-024	LMR13-59-012	LMR13-59-024	LMR13-59-048
Sample Depth (ft):		0-1	1-2	2-4	0-1	1-2	1-2	2-4	4-6	0-1	1-2
Date Sampled:		06/20/2013	06/14/2013	06/14/2013	06/14/2013	06/14/2013	06/20/2013	06/20/2013	06/20/2013	06/20/2013	06/20/2013
Analyte	**Unit**										
Oil and Grease	mg/kg	261 J	15400 J	10800 J	16200 J	286 UJ	554 J	1970 J	691 J	618 J	858 J
Total Organic Carbon	%	3.7 J	3.88	3.6	NA	2.17	3.72 J	4.07 J	2.85 J	4.15 J	4.29 J

NOTES:
J = Indicates that the concentration is an estimated value.
U = Indicates the analyte was analyzed for but not detected.
mg/kg = Milligrams per kilogram.
ND = Not detected.
Submitted samples presented in ascending numerical order.
*Samples presented are displayed in Figure 3-1B.

TABLE 4-3B* SEDIMENT RESULTS FOR OIL AND GREASE AND TOC IN AREA B
PHASE 2 LOWER MAUMEE RIVER SITE CHARACTERIZATION
TOLEDO, OHIO (JUNE 2013)

Sample Location:		LMR13-77					LMR13-78			LMR13-79						
Sample Name:		LMR13-77-012	LMR13-77-024	LMR13-77-024FD	LMR13-77-048	LMR13-77-072	LMR13-78-012	LMR13-78-024	LMR13-78-024FD	LMR13-79-012	LMR13-79-024	LMR13-79-024FD	LMR13-79-048	LMR13-79-048FD	LMR13-79-072	LMR13-79-096
Sample Depth (ft):		1-2	0-1	1-2	1-2	2-4	4-6	6-7	0-1	1-2	2-4	4-6	6-7	0-1	1-2	1-2
Date Sampled:		06/15/2013	06/15/2013	06/15/2013	06/15/2013	06/15/2013	06/16/2013	06/16/2013	06/16/2013	06/16/2013	06/16/2013	06/17/2013	06/16/2013	06/16/2013	06/16/2013	06/16/2013
Analyte	**Unit**															
Oil and Grease	mg/kg	115 J	87.5 J	51.9 J	60 J	36.8 J	49.4 J	47.8 J	30.6 J	86 J	45.1 J	32.9 J	127 J	NA	62.2 J	59.8 J
Total Organic Carbon	%	3.85	2.86	NA	2.83	2.07	1.97	2.17	2.24	1.3 J	0.748 J	NA	1.29	1.19	1.53 J	1.41 J

NOTES:
J = Indicates that the concentration is an estimated value.
U = Indicates the analyte was analyzed for but not detected.
mg/kg = Milligrams per kilogram.
ND = Not detected.
Submitted samples presented in ascending numerical order.
*Samples presented are displayed in Figure 3-1B.

TABLE 4-3B* SEDIMENT RESULTS FOR OIL AND GREASE AND TOC IN AREA B
PHASE 2 LOWER MAUMEE RIVER SITE CHARACTERIZATION
TOLEDO, OHIO (JUNE 2013)

Sample Location:		LMR13-80						LMR13-89		
Sample Name:		LMR13-80-012	LMR13-80-024	LMR13-80-024FD	LMR13-80-048	LMR13-80-072	LMR13-80-096	LMR13-89-012	LMR13-89-024	LMR13-89-024FD
Sample Depth (ft):		0-1	41276	41276	41309	41370	41432	0-1	41276	41276
Date Sampled:		06/20/2013	06/20/2013	06/20/2013	06/20/2013	06/20/2013	06/20/2013	06/19/2013	06/19/2013	06/19/2013
Analyte	**Unit**									
Oil and Grease	mg/kg	1600 J	767 J	NA	354 J	112 J	246 UJ	241 UJ	258 UJ	251 UJ
Total Organic Carbon	%	2.72 J	2.98 J	2.76 J	2.23 J	1.56 J	1.5 J	1.8 J	1.91 J	NA

NOTES:
J = Indicates that the concentration is an estimated value.
U = Indicates the analyte was analyzed for but not detected.
mg/kg = Milligrams per kilogram.
ND = Not detected.
Submitted samples presented in ascending numerical order.
*Samples presented are displayed in Figure 3-1B.

TABLE 4-3C* SEDIMENT RESULTS FOR OIL AND GREASE AND TOC IN AREA C
PHASE 2 LOWER MAUMEE RIVER SITE CHARACTERIZATION
TOLEDO, OHIO (JUNE 2013)

	Sample Location:	LMR13-26		LMR13-27						LMR13-28						
	Sample Name:	LMR13-26-012	LMR13-26-012FD	LMR13-27-012	LMR13-27-024	LMR13-27-024FD	LMR13-27-048	LMR13-27-072	LMR13-27-096	LMR13-28-012	LMR13-28-024	LMR13-28-024FD	LMR13-28-048	LMR13-28-072	LMR13-28-096	LMR13-28-120
	Sample Depth (ft):	0-1	0-1	0-1	1-2	1-2	2-4	4-6	6-7	0-1	1-2	1-2	2-4	4-6	6-8	8-9
	Date Sampled:	6/14/13	6/14/13	6/14/13	6/14/13	6/14/13	6/14/13	6/14/13	6/14/13	6/15/13	6/15/13	6/15/13	6/15/13	6/15/13	6/15/13	6/15/13
Analyte	**Unit**															
Oil and Grease	mg/kg	618 J	618 J	1400 J	2500 J	NA	2300 J	725 J	253 UJ	343 J	137 J	247 J	250 J	739 J	533 J	276 J
Total Organic Carbon	%	2.32	2.59	2.4	2.99	3.13	2.82	2.44	2.46	2.84	2.6	NA	2.61	2.47	2.84	3.16

NOTES:
J = Indicates that the concentration is an estimated value.
U = Indicates the analyte was analyzed for but not detected.
mg/kg = Milligrams per kilogram.
ND = Not detected.
Submitted samples are presented in ascending numerical order.
*Samples presented are displayed in Figure 3-1C.

TABLE 4-3C* SEDIMENT RESULTS FOR OIL AND GREASE AND TOC IN AREA C
PHASE 2 LOWER MAUMEE RIVER SITE CHARACTERIZATION
TOLEDO, OHIO (JUNE 2013)

	Sample Location:	LMR13-29						LMR13-30						
	Sample Name:	LMR13-29-012	LMR13-29-024	LMR13-29-024FD	LMR13-29-048	LMR13-29-072	LMR13-29-096	LMR13-30-012	LMR13-30-024	LMR13-30-024FD	LMR13-30-048	LMR13-30-072	LMR13-30-096	LMR13-30-120
	Sample Depth (ft):	0-1	1-2	1-2	2-4	4-6	6-8	0-1	1-2	1-2	2-4	4-6	6-8	8-10
	Date Sampled:	6/15/13	6/15/13	6/15/13	6/15/13	6/15/13	6/15/13	6/19/13	6/19/13	6/19/13	6/19/13	6/19/13	6/19/13	6/19/13
Analyte	**Unit**													
Oil and Grease	mg/kg	237 J	127 J	NA	429 J	249 J	77.3 J	1680	1450 J	1560 J	2190 J	1510 J	2190 J	1570 J
Total Organic Carbon	%	2.5	2.49	2.38	2.78	1.89	0.745	3.53 J	4.12 J	NA	3.6 J	3.21 J	2.84 J	2.06 J

NOTES:
J = Indicates that the concentration is an estimated value.
U = Indicates the analyte was analyzed for but not detected.
mg/kg = Milligrams per kilogram.
ND = Not detected.
Submitted samples are presented in ascending numerical ord
*Samples presented are displayed in Figure 3-1C.

TABLE 4-3C* SEDIMENT RESULTS FOR OIL AND GREASE AND TOC IN AREA C
PHASE 2 LOWER MAUMEE RIVER SITE CHARACTERIZATION
TOLEDO, OHIO (JUNE 2013)

	Sample Location:	LMR13-31			LMR13-32				LMR13-33							
	Sample Name:	LMR13-31-012	LMR13-31-024	LMR13-31-024FD	LMR13-32-012	LMR13-32-024	LMR13-32-048	LMR13-32-072	LMR13-33-012	LMR13-33-024	LMR13-33-024FD	LMR13-33-048	LMR13-33-048FD	LMR13-33-072	LMR13-33-096	LMR13-34-012
	Sample Depth (ft):	0-1	1-2	1-2	0-1	1-2	2-4	4-6	0-1	1-2	1-2	2-4	2-4	4-6	6-8	0-1
	Date Sampled:	6/15/13	6/15/13	6/15/13	6/15/13	6/15/13	6/15/13	6/15/13	6/19/13	6/19/13	6/19/13	6/19/13	6/19/13	6/19/13	6/19/13	6/15/13
Analyte	**Unit**															
Oil and Grease	mg/kg	501 J	375 J	NA	214 J	116 J	103 J	76.8 J	3490 J	5210 J	4300 J	1820 J	992 J	2260 J	2380 J	440 J
Total Organic Carbon	%	2.05	2.03	2.86	1.68	2.17	1.73	2.44	4.47 J	4.31 J	4.48 J	3.27 J	NA	3.55 J	2.29 J	3.31

NOTES:
J = Indicates that the concentration is an estimated value.
U = Indicates the analyte was analyzed for but not detected.
mg/kg = Milligrams per kilogram.
ND = Not detected.
Submitted samples are presented in ascending numerical ord
*Samples presented are displayed in Figure 3-1C.

TABLE 4-3C* SEDIMENT RESULTS FOR OIL AND GREASE AND TOC IN AREA C
PHASE 2 LOWER MAUMEE RIVER SITE CHARACTERIZATION
TOLEDO, OHIO (JUNE 2013)

	Sample Location:	LMR13-34									
	Sample Name:	LMR13-34-024	LMR13-34-024FD	LMR13-34-048	LMR13-34-048FD	LMR13-34-072	LMR13-34-096	LMR13-34-120	LMR13-34-144	LMR13-34-168	LMR13-34-192
	Sample Depth (ft):	1-2	1-2	2-4	2-4	4-6	6-8	8-10	10-12	12-14	14-15
	Date Sampled:	6/15/13	6/15/13	6/15/13	6/15/13	6/15/13	6/15/13	6/15/13	6/15/13	6/15/13	6/15/13
Analyte	**Unit**										
Oil and Grease	mg/kg	273 J	208 J	282 J	NA	400 J	319 J	611 J	398 J	1200 J	588 J
Total Organic Carbon	%	2.97	NA	2.54	3.17	2.99	3.04	3.08	3.15	3.2	3.21

NOTES:
J = Indicates that the concentration is an estimated value.
U = Indicates the analyte was analyzed for but not detected.
mg/kg = Milligrams per kilogram.
ND = Not detected.
Submitted samples are presented in ascending numerical ord
*Samples presented are displayed in Figure 3-1C.

TABLE 4-3C* SEDIMENT RESULTS FOR OIL AND GREASE AND TOC IN AREA C
PHASE 2 LOWER MAUMEE RIVER SITE CHARACTERIZATION
TOLEDO, OHIO (JUNE 2013)

	Sample Location:	LMR13-49							LMR13-50						
	Sample Name:	LMR13-49-012	LMR13-49-024	LMR13-49-024FD	LMR13-49-048	LMR13-49-072	LMR13-49-096	LMR13-49-120	LMR13-50-012	LMR13-50-024	LMR13-50-024FD	LMR13-50-048	LMR13-50-072	LMR13-50-096	LMR13-50-120
	Sample Depth (ft):	0-1	1-2	1-2	2-4	4-6	6-8	8-9	0-1	1-2	1-2	2-4	4-6	6-8	8-10
	Date Sampled:	6/14/13	6/14/13	6/14/13	6/14/13	6/14/13	6/14/13	6/14/13	6/14/13	6/14/13	6/14/13	6/14/13	6/14/13	6/14/13	6/14/13
Analyte	**Unit**														
Oil and Grease	mg/kg	635	529	NA	914	366	259 U	256 U	437 U	424 U	995	853	329 U	324 U	1050
Total Organic Carbon	%	2.55	2.65	2.63	3.18	2.42	1.73	1.9	3.5	3.54	NA	2.6	2.48	3.14	2.11

NOTES:
J = Indicates that the concentration is an estimated value.
U = Indicates the analyte was analyzed for but not detected.
mg/kg = Milligrams per kilogram.
ND = Not detected.
Submitted samples are presented in ascending numerical ord
*Samples presented are displayed in Figure 3-1C.

TABLE 4-3C* SEDIMENT RESULTS FOR OIL AND GREASE AND TOC IN AREA C
PHASE 2 LOWER MAUMEE RIVER SITE CHARACTERIZATION
TOLEDO, OHIO (JUNE 2013)

	Sample Location:	LMR13-51					LMR13-52				LMR13-53			LMR13-70		
	Sample Name:	LMR13-51-012	LMR13-51-024	LMR13-51-024FD	LMR13-51-048	LMR13-51-072	LMR13-52-012	LMR13-52-024	LMR13-52-024FD	LMR13-52-048	LMR13-53-012	LMR13-53-024	LMR13-53-024FD	LMR13-70-012	LMR13-70-024	LMR13-70-048
	Sample Depth (ft):	0-1	1-2	1-2	2-4	4-6	0-1	1-2	1-2	2-5	0-1	1-2	1-2	0-1	1-2	2-4
	Date Sampled:	6/13/13	6/13/13	6/13/13	6/13/13	6/13/13	6/20/13	6/20/13	6/20/13	6/20/13	6/20/13	6/20/13	6/20/13	6/20/13	6/20/13	6/20/13
Analyte	**Unit**															
Oil and Grease	mg/kg	367 U	461	NA	238 J	148 J	763 J	941 J	178 J	203 J	892 J	496 J	NA	963 J	360 UJ	1160 J
Total Organic Carbon	%	1.95	2.16	2.34	1.77	2.8	2.87 J	2.54 J	NA	2.27 J	2.64 J	2.27 J	2.66 J	2.45 J	2.53 J	2.37 J

NOTES:
J = Indicates that the concentration is an estimated value.
U = Indicates the analyte was analyzed for but not detected.
mg/kg = Milligrams per kilogram.
ND = Not detected.
Submitted samples are presented in ascending numerical ord
*Samples presented are displayed in Figure 3-1C.

TABLE 4-3C* SEDIMENT RESULTS FOR OIL AND GREASE AND TOC IN AREA C
PHASE 2 LOWER MAUMEE RIVER SITE CHARACTERIZATION
TOLEDO, OHIO (JUNE 2013)

	Sample Location:	LMR13-72						LMR13-74				
	Sample Name:	LMR13-72-012	LMR13-72-024	LMR13-72-024FD	LMR13-72-048	LMR13-72-072	LMR13-72-096	LMR13-74-012	LMR13-74-024	LMR13-74-024FD	LMR13-74-048	LMR13-74-072
	Sample Depth (ft):	0-1	1-2	1-2	2-4	4-6	6-8	0-1	1-2	1-2	2-4	4-6
	Date Sampled:	6/14/13	6/14/13	6/14/13	6/14/13	6/14/13	6/14/13	6/15/13	6/15/13	6/15/13	6/15/13	6/15/13
Analyte	**Unit**											
Oil and Grease	mg/kg	1760 J	2420 J	3090 J	1930 J	1480 J	2370 J	433 J	193 J	NA	125 J	76.4 J
Total Organic Carbon	%	2.94	3.87	3.73	3.48	3.38	2.81	2.27	2.21	2.66	1.1	2.07

NOTES:
J = Indicates that the concentration is an estimated value.
U = Indicates the analyte was analyzed for but not detected.
mg/kg = Milligrams per kilogram.
ND = Not detected.
Submitted samples are presented in ascending numerical ord
*Samples presented are displayed in Figure 3-1C.

TABLE 4-3C* SEDIMENT RESULTS FOR OIL AND GREASE AND TOC IN AREA C
PHASE 2 LOWER MAUMEE RIVER SITE CHARACTERIZATION
TOLEDO, OHIO (JUNE 2013)

	Sample Location:	LMR13-75			LMR13-76					LMR13-83				
	Sample Name:	LMR13-75-012	LMR13-75-024	LMR13-75-024 FD	LMR13-76-012	LMR13-76-024	LMR13-76-024FD	LMR13-76-048	LMR13-76-072	LMR13-83-012	LMR13-83-024	LMR13-83-024FD	LMR13-83-048	LMR13-83-072
	Sample Depth (ft):	0-1	1-2	1-2	0-1	1-2	1-2	2-4	4-6	0-1	1-2	1-2	2-4	4-6
	Date Sampled:	6/15/13	6/15/13	6/15/13	6/15/13	6/15/13	6/15/13	6/15/13	6/15/13	6/14/13	6/14/13	6/14/13	6/14/13	6/14/13
Analyte	**Unit**													
Oil and Grease	mg/kg	83.5 J	75.3 J	43.6 J	252 J	206 J	NA	445 J	224 J	279 U	700	699	262 UJ	242 UJ
Total Organic Carbon	%	2.06	1.33	NA	1.77	1.37 J	1.06	1.88	1.19	2.01	2.53	NA	1.71	1.32

NOTES:
J = Indicates that the concentration is an estimated value.
U = Indicates the analyte was analyzed for but not detected.
mg/kg = Milligrams per kilogram.
ND = Not detected.
Submitted samples are presented in ascending numerical ord
*Samples presented are displayed in Figure 3-1C.

TABLE 4-3C* SEDIMENT RESULTS FOR OIL AND GREASE AND TOC IN AREA C
PHASE 2 LOWER MAUMEE RIVER SITE CHARACTERIZATION
TOLEDO, OHIO (JUNE 2013)

	Sample Location:	LMR13-84					LMR13-85			
	Sample Name:	LMR13-84-012	LMR13-84-024	LMR13-84-024FD	LMR13-84-048	LMR13-84-072	LMR13-85-012	LMR13-85-024	LMR13-85-024FD	LMR13-85-048
	Sample Depth (ft):	0-1	1-2	1-2	2-4	4-6	0-1	1-2	1-2	2-4
	Date Sampled:	6/18/13	6/18/13	6/18/13	6/18/13	6/18/13	6/19/13	6/19/13	6/19/13	6/19/13
Analyte	**Unit**									
Oil and Grease	mg/kg	332 UJ	979 J	NA	299 UJ	252 UJ	498 J	549 J	645 J	711 J
Total Organic Carbon	%	2.14 J	2.27 J	1.99 J	1.99 J	1.32 J	3.05 J	3.03 J	NA	2.69 J

NOTES:
J = Indicates that the concentration is an estimated value.
U = Indicates the analyte was analyzed for but not detected.
mg/kg = Milligrams per kilogram.
ND = Not detected.
Submitted samples are presented in ascending numerical ord
*Samples presented are displayed in Figure 3-1C.

TABLE 4-3C* SEDIMENT RESULTS FOR OIL AND GREASE AND TOC IN AREA C
PHASE 2 LOWER MAUMEE RIVER SITE CHARACTERIZATION
TOLEDO, OHIO (JUNE 2013)

Sample Location:		LMR13-86						LMR13-87						
Sample Name:		LMR13-86-012	LMR13-86-024	LMR13-86-024FD	LMR13-86-048	LMR13-86-072	LMR13-86-096	LMR13-87-012	LMR13-87-024	LMR13-87-024FD	LMR13-87-048	LMR13-87-072	LMR13-87-096	LMR13-87-120
Sample Depth (ft):		0-1	1-2	1-2	2-4	4-6	6-8	0-1	1-2	1-2	2-4	4-6	6-8	8-10
Date Sampled:		6/18/13	6/18/13	6/18/13	6/18/13	6/18/13	6/18/13	6/18/13	6/18/13	6/18/13	6/18/13	6/18/13	6/18/13	6/18/13
Analyte	**Unit**													
Oil and Grease	mg/kg	1150 J	1520 J	NA	1820 J	1310 J	5200 J	2440 J	7280 J	7040 J	4080 J	1580 J	4740 J	8680 J
Total Organic Carbon	%	3.35 J	3.32 J	3.94 J	2.61 J	3.42 J	4.25 J	4.63 J	6.3 J	NA	5.25 J	5.03 J	5 J	7.5 J

NOTES:
J = Indicates that the concentration is an estimated value.
U = Indicates the analyte was analyzed for but not detected.
mg/kg = Milligrams per kilogram.
ND = Not detected.
Submitted samples are presented in ascending numerical ord
*Samples presented are displayed in Figure 3-1C.

TABLE 4-3C* SEDIMENT RESULTS FOR OIL AND GREASE AND TOC IN AREA C
PHASE 2 LOWER MAUMEE RIVER SITE CHARACTERIZATION
TOLEDO, OHIO (JUNE 2013)

Sample Location:		LMR13-88				LMR13-94				LMR13-95					
Sample Name:		LMR13-88-012	LMR13-88-012FD	LMR13-88-024	LMR13-88-048	LMR13-94-012	LMR13-94-024	LMR13-94-048	LMR13-94-072	LMR13-95-012	LMR13-95-024	LMR13-95-024FD	LMR13-95-048	LMR13-95-072	LMR13-95-096
Sample Depth (ft):		0-1	0-1	1-2	2-4	0-1	1-2	2-4	4-6	0-1	1-2	1-2	2-4	4-6	6-8
Date Sampled:		6/19/13	6/19/13	6/19/13	6/19/13	6/20/13	6/20/13	6/20/13	6/20/13	6/20/13	6/20/13	6/20/13	6/20/13	6/20/13	6/20/13
Analyte	**Unit**														
Oil and Grease	mg/kg	6510 J	NA	6230 J	7160 J	1160 J	1810 J	1750 J	3530 J	10600 J	39500 J	48000 J	10500 J	12800 J	3710 J
Total Organic Carbon	%	6.88 J	6.78 J	5.04 J	5.39 J	5.36 J	5.43 J	3.97 J	6.58 J	4.64 J	14.3 J	NA	6.27 J	4.71 J	3.8 J

NOTES:
J = Indicates that the concentration is an estimated value.
U = Indicates the analyte was analyzed for but not detected.
mg/kg = Milligrams per kilogram.
ND = Not detected.
Submitted samples are presented in ascending numerical ord
*Samples presented are displayed in Figure 3-1C.

TABLE 4-4A* SEDIMENT RESULTS FOR PCB AROCLORS IN AREA A
PHASE 2 LOWER MAUMEE RIVER SITE CHARACTERIZATION
TOLEDO, OHIO (JUNE 2013)

			Sample Location:	LMR13-01							LMR13-02		LMR13-03					
			Sample Name:	LMR13-01-012	LMR13-01-024	LMR13-01-024FD	LMR13-01-048	LMR13-01-072	LMR13-01-096	LMR13-01-120	LMR13-02-012	LMR13-02-012FD	LMR13-03-012	LMR13-03-024	LMR13-03-048	LMR13-03-072	LMR13-03-096	LMR13-03-120
			Sample Depth (ft):	0-1	1-2	1-2	2-4	4-6	6-8	8-9	0-1	0-1	0-1	1-2	2-4	4-6	6-8	8-10
			Date Sampled:	6/17/13	6/17/13	6/17/13	6/17/13	6/17/13	6/17/13	6/17/13	6/11/13	6/11/13	6/17/13	6/17/13	6/17/13	6/17/13	6/17/13	6/17/13
Analyte	**TEC**	**PEC**	**Unit**															
Aroclor-1016	NSL	NSL	µg/kg	46 U	45 U	45 U	46 U	45 UJ	47 U	51 U	49 U	46 U	280 U	270 U	270 U	260 U	230 U	240 U
Aroclor-1221	NSL	NSL	µg/kg	46 U	45 U	45 U	46 U	45 U	47 U	51 U	49 U	46 U	280 U	270 U	270 U	260 U	230 U	240 U
Aroclor-1232	NSL	NSL	µg/kg	46 U	45 U	45 U	46 U	45 U	47 U	51 U	49 U	46 U	280 U	270 U	270 U	260 U	230 U	240 U
Aroclor-1242	NSL	NSL	µg/kg	6.7 J	45 U	45 U	46 U	45 U	47 U	51 U	37 J	32 J	81 J	270 UJ	270 UJ	260 UJ	230 UJ	240 UJ
Aroclor-1248	NSL	NSL	µg/kg	46 U	45 U	45 U	46 U	45 U	47 U	51 U	49 U	46 U	280 UJ	270 UJ	270 UJ	260 UJ	230 UJ	240 UJ
Aroclor-1254	NSL	NSL	µg/kg	46 U	45 U	45 U	46 U	45 U	47 U	51 U	29 J	26 J	66 J	270 U	270 U	260 U	230 U	240 U
Aroclor-1260	NSL	NSL	µg/kg	46 U	45 U	45 U	46 U	45 UJ	47 U	51 U	5.8 J	46 U	16 J	270 U	270 U	260 U	230 U	240 U
Aroclor-1262	NSL	NSL	µg/kg	46 U	45 U	45 U	46 U	45 U	47 U	51 U	49 U	46 U	280 U	270 U	270 U	260 U	230 U	240 U
Aroclor-1268	NSL	NSL	µg/kg	46 U	45 U	45 U	46 U	45 U	47 U	51 U	49 U	46 U	280 U	270 U	270 U	260 U	230 U	240 U
Total PCBs ND=0	59.8	676	µg/kg	6.7	ND	ND	ND	ND	ND	ND	**71.8**	58	**163**	ND	ND	ND	ND	ND

NOTES:

J = Indicates that the concentration is an estimated value.

U = Indicates the analyte was analyzed for but not detected.

µg/kg = Micrograms per kilogram.

TEC = Threshold effect concentration. Development and Evaluation of Consensus-Based Sediment Quality Guidelines for Freshwater Ecosystems (MacDonald et al. 2000).

PEC = Probable effect concentration. Development and Evaluation of Consensus-Based Sediment Quality Guidelines for Freshwater Ecosystems (MacDonald et al. 2000).

Bolded values exceed the TEC.

Gray shaded values exceed the PEC.

NSL = No Screening Level.

Submitted samples are presented in ascending numerical order.

*Samples presented are displayed in Figure 4-2A

TABLE 4-4A* SEDIMENT RESULTS FOR PCB AROCLORS IN AREA A
PHASE 2 LOWER MAUMEE RIVER SITE CHARACTERIZATION
TOLEDO, OHIO (JUNE 2013)

			Sample Location:	LMR13-05	LMR13-06	LMR13-07					LMR13-08				LMR13-09	LMR13-10	LMR13-11	LMR13-12
			Sample Name:	LMR13-05-012	LMR13-06-012	LMR13-07-012	LMR13-07-024	LMR13-07-024FD	LMR13-07-048	LMR13-07-072	LMR13-08-012	LMR13-08-024	LMR13-08-048	LMR13-08-072	LMR13-09-012	LMR13-10-012	LMR13-11-012	LMR13-12-012
			Sample Depth (ft):	0-1	0-1	0-1	1-2	1-2	2-4	4-6	0-1	1-2	2-4	4-6	0-1	0-1	0-1	0-1
			Date Sampled:	6/11/13	6/11/13	6/18/13	6/18/13	6/18/13	6/18/13	6/18/13	6/17/13	6/17/13	6/17/13	6/17/13	6/11/13	6/11/13	6/11/13	6/11/13
Analyte	**TEC**	**PEC**	**Unit**															
Aroclor-1016	NSL	NSL	µg/kg	53 U	58 U	320 U	290 U	300 U	280 U	230 U	360 U	290 U	280 U	230 U	45 U	49 U	54 U	49 U
Aroclor-1221	NSL	NSL	µg/kg	53 U	58 U	320 U	290 U	300 U	280 U	230 U	360 U	290 U	280 U	230 U	45 U	49 U	54 U	49 U
Aroclor-1232	NSL	NSL	µg/kg	53 U	58 U	320 U	290 U	300 U	280 U	230 U	360 U	290 U	280 U	230 U	45 U	49 U	54 U	49 U
Aroclor-1242	NSL	NSL	µg/kg	53 U	31 J	320 U	290 U	300 U	280 U	230 U	41 J	68 J	29 J	230 U	45 U	49 U	35 J	80 J
Aroclor-1248	NSL	NSL	µg/kg	820	58 U	140 J	290 U	300 U	280 U	230 U	360 U	290 U	280 U	230 U	130	48 J	54 U	49 U
Aroclor-1254	NSL	NSL	µg/kg	370	26 J	130 J	24 J	21 J	280 U	230 U	39 J	63 J	20 J	230 U	79	26 J	33 J	57 J
Aroclor-1260	NSL	NSL	µg/kg	59 J	6.2 J	33 J	13 J	15 J	280 U	230 U	11 J	14 J	4.7 J	230 U	16 J	49 U	54 U	12 J
Aroclor-1262	NSL	NSL	µg/kg	53 U	58 U	320 U	290 U	300 U	280 U	230 U	360 U	290 U	280 U	230 U	45 U	49 U	54 U	49 U
Aroclor-1268	NSL	NSL	µg/kg	53 U	58 U	320 U	290 U	300 U	280 U	230 U	360 U	290 U	280 U	230 U	45 U	49 U	54 U	49 U
Total PCBs ND=0	59.8	676	µg/kg	**1249**	**63.2**	**303**	37	36	ND	ND	**91**	**145**	53.7	ND	**225**	**74**	**68**	**149**

NOTES:

J = Indicates that the concentration is an estimated value.

U = Indicates the analyte was analyzed for but not detected.

µg/kg = Micrograms per kilogram.

TEC = Threshold effect concentration. Development and Evaluation of

Guidelines for Freshwater Ecosystems (MacDonald et al. 2000).

PEC = Probable effect concentration. Development and Evaluation of C

Guidelines for Freshwater Ecosystems (MacDonald et al. 2000).

Bolded values exceed the TEC.

Gray shaded values exceed the PEC.

NSL = No Screening Level.

Submitted samples are presented in ascending numerical order.

*Samples presented are displayed in Figure 4-2A

TABLE 4-4A* SEDIMENT RESULTS FOR PCB AROCLORS IN AREA A
PHASE 2 LOWER MAUMEE RIVER SITE CHARACTERIZATION
TOLEDO, OHIO (JUNE 2013)

			Sample Location:	LMR13-13							LMR13-14					
			Sample Name:	LMR13-13-012	LMR13-13-024	LMR13-13-024FD	LMR13-13-048	LMR13-13-072	LMR13-13-096	LMR13-13-120	LMR13-14-012	LMR13-14-024	LMR13-14-048	LMR13-14-072	LMR13-14-096	LMR13-14-120
			Sample Depth (ft):	0-1	1-2	1-2	2-4	4-6	6-8	8-9	0-1	1-2	2-4	4-6	6-8	8-10
			Date Sampled:	6/18/13	6/18/13	6/18/13	6/18/13	6/18/13	6/18/13	6/18/13	6/17/13	6/17/13	6/17/13	6/17/13	6/17/13	6/17/13
Analyte	**TEC**	**PEC**	**Unit**													
Aroclor-1016	NSL	NSL	µg/kg	340 U	300 U	310 U	300 U	280 U	240 U	220 U	340 U	290 U	280 U	250 U	230 U	210 U
Aroclor-1221	NSL	NSL	µg/kg	340 U	300 U	310 U	300 U	280 U	240 U	220 U	340 U	290 U	280 U	250 U	230 U	210 U
Aroclor-1232	NSL	NSL	µg/kg	340 U	300 U	310 U	300 U	280 U	240 U	220 U	340 U	290 U	280 U	250 U	230 U	210 U
Aroclor-1242	NSL	NSL	µg/kg	96 J	1000	850	300 U	280 U	240 U	220 U	73 J	290 U	280 U	250 U	230 U	210 U
Aroclor-1248	NSL	NSL	µg/kg	340 U	300 U	310 U	1300	220 J	240 U	220 U	340 U	580	900	130 J	230 U	210 U
Aroclor-1254	NSL	NSL	µg/kg	87 J	650	560	660	250 J	16 J	220 U	75 J	420	450	170 J	13 J	210 U
Aroclor-1260	NSL	NSL	µg/kg	25 J	130 J	110 J	100 J	71 J	240 U	220 U	18 J	77 J	67 J	48 J	230 U	210 U
Aroclor-1262	NSL	NSL	µg/kg	340 U	300 U	310 U	300 U	280 U	240 U	220 U	340 U	290 U	280 U	250 U	230 U	210 U
Aroclor-1268	NSL	NSL	µg/kg	340 U	300 U	310 U	300 U	280 U	240 U	220 U	340 U	290 U	280 U	250 U	230 U	210 U
Total PCBs ND=0	59.8	676	µg/kg	**208**	**1780**	**1520**	**2060**	**541**	16	ND	**166**	**1077**	**1417**	**348**	13	ND

NOTES:

J = Indicates that the concentration is an estimated value.

U = Indicates the analyte was analyzed for but not detected.

µg/kg = Micrograms per kilogram.

TEC = Threshold effect concentration. Development and Evaluation of

Guidelines for Freshwater Ecosystems (MacDonald et al. 2000).

PEC = Probable effect concentration. Development and Evaluation of C

Guidelines for Freshwater Ecosystems (MacDonald et al. 2000).

Bolded values exceed the TEC.

Gray shaded values exceed the PEC.

NSL = No Screening Level.

Submitted samples are presented in ascending numerical order.

*Samples presented are displayed in Figure 4-2A

TABLE 4-4A* SEDIMENT RESULTS FOR PCB AROCLORS IN AREA A
PHASE 2 LOWER MAUMEE RIVER SITE CHARACTERIZATION
TOLEDO, OHIO (JUNE 2013)

			Sample Location:	LMR13-15			LMR13-16	LMR13-17	LMR13-18		LMR13-19	LMR13-20	LMR13-21			
			Sample Name:	LMR13-15-012	LMR13-15-024	LMR13-15-024FD	LMR13-16-012	LMR13-17-012	LMR13-18-012	LMR13-18-012FD	LMR13-19-012	LMR13-20-012	LMR13-21-012	LMR13-21-024	LMR13-21-048	LMR13-21-072
			Sample Depth (ft):	0-1	1-2	1-2	0-1	0-1	0-1	0-1	0-1	0-1	0-1	1-2	2-4	4-6
			Date Sampled:	6/18/13	6/18/13	6/18/13	6/11/13	6/11/13	6/11/13	6/11/13	6/11/13	6/11/13	6/18/13	6/18/13	6/18/13	6/18/13
Analyte	**TEC**	**PEC**	**Unit**													
Aroclor-1016	NSL	NSL	µg/kg	310 U	240 U	240 U	46 U	50 U	53 U	54 U	55 U	49 U	230 U	250 U	220 U	200 U
Aroclor-1221	NSL	NSL	µg/kg	310 U	240 U	240 U	46 U	50 U	53 U	54 U	55 U	49 U	230 U	250 U	220 U	200 U
Aroclor-1232	NSL	NSL	µg/kg	310 U	240 U	240 U	46 U	50 U	53 U	54 U	55 U	49 U	230 U	250 U	220 U	200 U
Aroclor-1242	NSL	NSL	µg/kg	36 J	240 U	240 U	53 J	50 U	53 U	54 U	82	49 U	230 U	250 U	220 U	200 U
Aroclor-1248	NSL	NSL	µg/kg	310 U	240 U	240 U	46 U	130	91	110	55 U	49 U	40 J	13 J	220 U	200 U
Aroclor-1254	NSL	NSL	µg/kg	41 J	240 U	240 U	64 J	86	69	87	55 J	49 U	74 J	50 J	220 U	200 U
Aroclor-1260	NSL	NSL	µg/kg	38 J	240 U	240 U	12 J	17 J	15 J	19 J	11 J	49 U	14 J	15 J	220 U	200 U
Aroclor-1262	NSL	NSL	µg/kg	310 U	240 U	240 U	46 U	50 U	53 U	54 U	55 U	49 U	230 U	250 U	220 U	200 U
Aroclor-1268	NSL	NSL	µg/kg	310 U	240 U	240 U	46 U	50 U	53 U	54 U	55 U	49 U	230 U	250 U	220 U	200 U
Total PCBs ND=0	59.8	676	µg/kg	**115**	ND	ND	**129**	**233**	**175**	**216**	**148**	ND	**128**	**78**	ND	ND

NOTES:

J = Indicates that the concentration is an estimated value.

U = Indicates the analyte was analyzed for but not detected.

µg/kg = Micrograms per kilogram.

TEC = Threshold effect concentration. Development and Evaluation of

Guidelines for Freshwater Ecosystems (MacDonald et al. 2000).

PEC = Probable effect concentration. Development and Evaluation of

Guidelines for Freshwater Ecosystems (MacDonald et al. 2000).

Bolded values exceed the TEC.

Gray shaded values exceed the PEC.

NSL = No Screening Level.

Submitted samples are presented in ascending numerical order.

*Samples presented are displayed in Figure 4-2A

TABLE 4-4A* SEDIMENT RESULTS FOR PCB AROCLORS IN AREA A
PHASE 2 LOWER MAUMEE RIVER SITE CHARACTERIZATION
TOLEDO, OHIO (JUNE 2013)

			Sample Location:	LMR13-23	LMR13-24	LMR13-25						LMR13-45						
			Sample Name:	LMR13-23-012	LMR13-24-012	LMR13-25-012	LMR13-25-024	LMR13-25-024FD	LMR13-25-048	LMR13-25-072	LMR13-25-096	LMR13-45-012	LMR13-45-024	LMR13-45-024FD	LMR13-45-048	LMR13-45-072	LMR13-45-096	LMR13-45-120
			Sample Depth (ft):	0-1	0-1	0-1	1-2	1-2	2-4	4-6	6-7	0-1	1-2	1-2	2-4	4-6	6-8	8-9
			Date Sampled:	6/11/13	6/11/13	6/18/13	6/18/13	6/18/13	6/18/13	6/18/13	6/18/13	6/14/13	6/14/13	6/14/13	6/14/13	6/14/13	6/14/13	6/14/13
Analyte	**TEC**	**PEC**	**Unit**															
Aroclor-1016	NSL	NSL	µg/kg	47 U	59 U	210 U	230 U	230 U	220 U	210 U	210 U	71 U	260 U	440 U	380 U	370 U	700 U	660 U
Aroclor-1221	NSL	NSL	µg/kg	47 U	59 U	210 U	230 U	230 U	220 U	210 U	210 U	71 U	260 U	440 U	380 U	370 U	700 U	660 U
Aroclor-1232	NSL	NSL	µg/kg	47 U	59 U	210 U	230 U	230 U	220 U	210 U	210 U	71 U	260 U	440 U	380 U	370 U	700 U	660 U
Aroclor-1242	NSL	NSL	µg/kg	47 U	79 J	210 U	230 U	230 U	220 U	210 U	210 U	96 J	140 J	170 J	380 U	370 U	700 U	4300
Aroclor-1248	NSL	NSL	µg/kg	16 J	59 U	210 U	120 J	13 J	220 U	210 U	210 U	71 U	260 U	440 U	390 J	1000 J	2200	660 U
Aroclor-1254	NSL	NSL	µg/kg	15 J	110 J	34 J	120 J	51 J	220 U	210 U	210 U	90 J	120 J	160 J	210 J	560	1900 J	2200
Aroclor-1260	NSL	NSL	µg/kg	47 U	26 J	8.8 J	24 J	12 J	220 U	210 U	210 U	40 J	52 J	65 J	86 J	190 J	360 J	450 J
Aroclor-1262	NSL	NSL	µg/kg	47 U	59 U	210 U	230 U	230 U	220 U	210 U	210 U	71 U	260 U	440 U	380 U	370 U	700 U	660 U
Aroclor-1268	NSL	NSL	µg/kg	47 U	59 U	210 U	230 U	230 U	220 U	210 U	210 U	71 U	260 U	440 U	380 U	370 U	700 U	660 U
Total PCBs ND=0	59.8	676	µg/kg	31	**215**	42.8	**264**	**76**	ND	ND	ND	**226**	**312**	**395**	**686**	**1750**	**4460**	**6950**

NOTES:

J = Indicates that the concentration is an estimated value.

U = Indicates the analyte was analyzed for but not detected.

µg/kg = Micrograms per kilogram.

TEC = Threshold effect concentration. Development and Evaluation of

Guidelines for Freshwater Ecosystems (MacDonald et al. 2000).

PEC = Probable effect concentration. Development and Evaluation of C

Guidelines for Freshwater Ecosystems (MacDonald et al. 2000).

Bolded values exceed the TEC.

Gray shaded values exceed the PEC.

NSL = No Screening Level.

Submitted samples are presented in ascending numerical order.

*Samples presented are displayed in Figure 4-2A

TABLE 4-4A* SEDIMENT RESULTS FOR PCB AROCLORS IN AREA A
PHASE 2 LOWER MAUMEE RIVER SITE CHARACTERIZATION
TOLEDO, OHIO (JUNE 2013)

			Sample Location:	LMR13-46						LMR13-47							
			Sample Name:	LMR13-46-012	LMR13-46-024	LMR13-46-048	LMR13-46-072	LMR13-46-096	LMR13-46-120	LMR13-47-012	LMR13-47-024	LMR13-47-024FD	LMR13-47-048	LMR13-47-072	LMR13-47-096	LMR13-47-120	LMR13-47-144
			Sample Depth (ft):	0-1	1-2	2-4	4-6	6-8	8-10	0-1	1-2	1-2	2-4	4-6	6-8	8-10	10-12
			Date Sampled:	6/12/13	6/12/13	6/12/13	6/12/13	6/12/13	6/12/13	6/13/13	6/13/13	6/13/13	6/13/13	6/13/13	6/13/13	6/13/13	6/13/13
Analyte	**TEC**	**PEC**	**Unit**														
Aroclor-1016	NSL	NSL	µg/kg	60 UJ	61 UJ	67 UJ	68 UJ	72 UJ	56 UJ	83 U	350 U	370 U	330 U	290 U	320 U	310 U	290 U
Aroclor-1221	NSL	NSL	µg/kg	60 UJ	61 UJ	67 UJ	68 UJ	72 UJ	56 UJ	83 U	350 U	370 U	330 U	290 U	320 U	310 U	290 U
Aroclor-1232	NSL	NSL	µg/kg	60 UJ	61 UJ	67 UJ	68 UJ	72 UJ	56 UJ	83 U	350 U	370 U	330 U	290 U	320 U	310 U	290 U
Aroclor-1242	NSL	NSL	µg/kg	160 J	210 J	370 J	930 J	8600	56 UJ	83 U	29 J	30 J	33 J	41 J	29 J	43 J	52 J
Aroclor-1248	NSL	NSL	µg/kg	60 UJ	61 UJ	67 UJ	68 UJ	72 UJ	7200	34 J	350 U	370 U	330 U	290 U	320 U	310 U	290 U
Aroclor-1254	NSL	NSL	µg/kg	93 J	150 J	350 J	700 J	3500	3100 J	22 J	24 J	25 J	26 J	42 J	26 J	41 J	35 J
Aroclor-1260	NSL	NSL	µg/kg	60 UJ	61 UJ	81 J	180 J	760 J	190 J	7.5 J	7.2 J	4.7 J	6.4 J	8.9 J	6 J	8.6 J	9.5 J
Aroclor-1262	NSL	NSL	µg/kg	60 UJ	61 UJ	67 UJ	68 UJ	72 UJ	56 UJ	83 U	350 U	370 U	330 U	290 U	320 U	310 U	290 U
Aroclor-1268	NSL	NSL	µg/kg	60 UJ	61 UJ	67 UJ	68 UJ	72 UJ	56 UJ	83 U	350 U	370 U	330 U	290 U	320 U	310 U	290 U
Total PCBs ND=0	59.8	676	µg/kg	**253**	**360**	**801**	**1810**	**12860**	**10490**	**63.5**	**60.2**	59.7	**65.4**	**91.9**	**61**	**92.6**	**96.5**

NOTES:

J = Indicates that the concentration is an estimated value.

U = Indicates the analyte was analyzed for but not detected.

µg/kg = Micrograms per kilogram.

TEC = Threshold effect concentration. Development and Evaluation of

Guidelines for Freshwater Ecosystems (MacDonald et al. 2000).

PEC = Probable effect concentration. Development and Evaluation of C

Guidelines for Freshwater Ecosystems (MacDonald et al. 2000).

Bolded values exceed the TEC.

Gray shaded values exceed the PEC.

NSL = No Screening Level.

Submitted samples are presented in ascending numerical order.

*Samples presented are displayed in Figure 4-2A

TABLE 4-4A* SEDIMENT RESULTS FOR PCB AROCLORS IN AREA A
PHASE 2 LOWER MAUMEE RIVER SITE CHARACTERIZATION
TOLEDO, OHIO (JUNE 2013)

			Sample Location:	LMR13-48								LMR13-60				
			Sample Name:	LMR13-48-012	LMR13-48-024	LMR13-48-048	LMR13-48-072	LMR13-48-096	LMR13-48-120	LMR13-48-144	LMR13-48-168	LMR13-60-012	LMR13-60-024	LMR13-60-048	LMR13-60-072	LMR13-60-096
			Sample Depth (ft):	0-1	1-2	2-4	4-6	6-8	8-10	10-12	12-13	0-1	1-2	2-4	4-6	6-8
			Date Sampled:	6/17/13	6/17/13	6/17/13	6/17/13	6/17/13	6/17/13	6/17/13	6/17/13	6/20/13	6/20/13	6/20/13	6/20/13	6/20/13
Analyte	**TEC**	**PEC**	**Unit**													
Aroclor-1016	NSL	NSL	µg/kg	59 U	55 U	53 U	260 UJ	260 UJ	270 UJ	250 UJ	220 UJ	360 U	320 U	320 U	290 U	290 U
Aroclor-1221	NSL	NSL	µg/kg	59 U	55 U	53 U	260 U	260 UJ	270 U	250 U	220 U	360 U	320 U	320 U	290 U	290 U
Aroclor-1232	NSL	NSL	µg/kg	59 U	55 U	53 U	260 U	260 UJ	270 U	250 U	220 U	360 U	320 U	320 U	290 U	290 U
Aroclor-1242	NSL	NSL	µg/kg	22 J	7.3 J	53 U	260 U	260 UJ	270 U	250 U	220 U	31 J	26 J	35 J	53 J	50 J
Aroclor-1248	NSL	NSL	µg/kg	59 U	55 U	53 U	260 U	260 UJ	270 U	250 U	220 U	360 U	320 U	320 U	290 U	290 U
Aroclor-1254	NSL	NSL	µg/kg	25 J	13 J	53 U	260 U	260 UJ	270 U	250 U	220 U	30 J	32 J	37 J	50 J	53 J
Aroclor-1260	NSL	NSL	µg/kg	9.1 J	5.4 J	53 U	260 UJ	260 UJ	270 UJ	250 UJ	220 UJ	360 U	9.4 J	11 J	14 J	16 J
Aroclor-1262	NSL	NSL	µg/kg	59 U	55 U	53 U	260 U	260 UJ	270 U	250 U	220 U	360 U	320 U	320 U	290 U	290 U
Aroclor-1268	NSL	NSL	µg/kg	59 U	55 U	53 U	260 U	260 UJ	270 U	250 U	220 U	360 U	320 U	320 U	290 U	290 U
Total PCBs ND=0	59.8	676	µg/kg	56.1	25.7	ND	ND	ND	ND	ND	ND	**61**	**67.4**	**83**	**117**	**119**

NOTES:

J = Indicates that the concentration is an estimated value.

U = Indicates the analyte was analyzed for but not detected.

µg/kg = Micrograms per kilogram.

TEC = Threshold effect concentration. Development and Evaluation of

Guidelines for Freshwater Ecosystems (MacDonald et al. 2000).

PEC = Probable effect concentration. Development and Evaluation of C

Guidelines for Freshwater Ecosystems (MacDonald et al. 2000).

Bolded values exceed the TEC.

Gray shaded values exceed the PEC.

NSL = No Screening Level.

Submitted samples are presented in ascending numerical order.

*Samples presented are displayed in Figure 4-2A

TABLE 4-4A* SEDIMENT RESULTS FOR PCB AROCLORS IN AREA A
PHASE 2 LOWER MAUMEE RIVER SITE CHARACTERIZATION
TOLEDO, OHIO (JUNE 2013)

			Sample Location:	LMR13-61						LMR13-62					
			Sample Name:	LMR13-61-012	LMR13-61-024	LMR13-61-048	LMR13-61-072	LMR13-61-096	LMR13-61-120	LMR13-62-012	LMR13-62-024	LMR13-62-024FD	LMR13-62-048	LMR13-62-072	LMR13-62-096
			Sample Depth (ft):	0-1	1-2	2-4	4-6	6-8	8-10	0-1	1-2	1-2	2-4	4-6	6-7
			Date Sampled:	6/20/13	6/20/13	6/20/13	6/20/13	6/20/13	6/20/13	6/13/13	6/13/13	6/13/13	6/13/13	6/13/13	6/13/13
Analyte	**TEC**	**PEC**	**Unit**												
Aroclor-1016	NSL	NSL	µg/kg	390 U	340 U	320 U	320 U	290 U	280 U	47 U	48 U	48 U	48 U	43 U	39 U
Aroclor-1221	NSL	NSL	µg/kg	390 U	340 U	320 U	320 U	290 U	280 U	47 U	48 U	48 U	48 U	43 U	39 U
Aroclor-1232	NSL	NSL	µg/kg	390 U	340 U	320 U	320 U	290 U	280 U	47 U	48 U	48 U	48 U	43 U	39 U
Aroclor-1242	NSL	NSL	µg/kg	390 U	340 U	320 U	320 U	290 U	280 U	47 U	48 U	48 U	48 U	43 U	39 U
Aroclor-1248	NSL	NSL	µg/kg	50 J	35 J	210 J	87 J	110 J	190 J	47 U	48 U	48 U	48 U	43 U	39 U
Aroclor-1254	NSL	NSL	µg/kg	38 J	25 J	120 J	58 J	69 J	110 J	47 U	48 U	48 U	48 U	43 U	39 U
Aroclor-1260	NSL	NSL	µg/kg	12 J	7.1 J	29 J	15 J	18 J	27 J	47 U	48 U	48 U	48 U	43 U	39 U
Aroclor-1262	NSL	NSL	µg/kg	390 U	340 U	320 U	320 U	290 U	280 U	47 U	48 U	48 U	48 U	43 U	39 U
Aroclor-1268	NSL	NSL	µg/kg	390 U	340 U	320 U	320 U	290 U	280 U	47 U	48 U	48 U	48 U	43 U	39 U
Total PCBs ND=0	59.8	676	µg/kg	**100**	**67.1**	**359**	**160**	**197**	**327**	ND	ND	ND	ND	ND	ND

NOTES:

J = Indicates that the concentration is an estimated value.

U = Indicates the analyte was analyzed for but not detected.

µg/kg = Micrograms per kilogram.

TEC = Threshold effect concentration. Development and Evaluation of

Guidelines for Freshwater Ecosystems (MacDonald et al. 2000).

PEC = Probable effect concentration. Development and Evaluation of G

Guidelines for Freshwater Ecosystems (MacDonald et al. 2000).

Bolded values exceed the TEC.

Gray shaded values exceed the PEC.

NSL = No Screening Level.

Submitted samples are presented in ascending numerical order.

*Samples presented are displayed in Figure 4-2A

TABLE 4-4A* SEDIMENT RESULTS FOR PCB AROCLORS IN AREA A
PHASE 2 LOWER MAUMEE RIVER SITE CHARACTERIZATION
TOLEDO, OHIO (JUNE 2013)

			Sample Location:	LMR13-63							LMR13-64						
			Sample Name:	LMR13-63-012	LMR13-63-024	LMR13-63-048	LMR13-63-072	LMR13-63-096	LMR13-63-120	LMR13-63-144	LMR13-64-012	LMR13-64-024	LMR13-64-024FD	LMR13-64-048	LMR13-64-072	LMR13-64-096	LMR13-64-120
			Sample Depth (ft):	0-1	1-2	2-4	4-6	6-8	8-10	10-11	0-1	1-2	1-2	2-4	4-6	6-8	8-10
			Date Sampled:	6/13/13	6/13/13	6/13/13	6/13/13	6/13/13	6/13/13	6/13/13	6/19/13	6/19/13	6/19/13	6/19/13	6/19/13	6/19/13	6/19/13
Analyte	**TEC**	**PEC**	**Unit**														
Aroclor-1016	NSL	NSL	µg/kg	360 U	340 U	320 U	290 U	300 U	290 U	280 U	430 U	320 U	330 U	330 U	310 U	300 U	290 U
Aroclor-1221	NSL	NSL	µg/kg	360 U	340 U	320 U	290 U	300 U	290 U	280 U	430 U	320 U	330 U	330 U	310 U	300 U	290 U
Aroclor-1232	NSL	NSL	µg/kg	360 U	340 U	320 U	290 U	300 U	290 U	280 U	430 U	320 U	330 U	330 U	310 U	300 U	290 U
Aroclor-1242	NSL	NSL	µg/kg	46 J	72 J	64 J	490	1400	290 U	280 U	27 J	320 U	330 U	26 J	310 U	300 U	290 U
Aroclor-1248	NSL	NSL	µg/kg	360 U	340 U	320 U	290 U	300 U	860	800	430 U	56 J	44 J	330 U	37 J	45 J	65 J
Aroclor-1254	NSL	NSL	µg/kg	38 J	65 J	67 J	320	860	720	700	31 J	41 J	37 J	31 J	29 J	33 J	45 J
Aroclor-1260	NSL	NSL	µg/kg	8.8 J	13 J	15 J	54 J	110 J	110 J	120 J	11 J	12 J	9.9 J	10 J	7.1 J	10 J	13 J
Aroclor-1262	NSL	NSL	µg/kg	360 U	340 U	320 U	290 U	300 U	290 U	280 U	430 U	320 U	330 U	330 U	310 U	300 U	290 U
Aroclor-1268	NSL	NSL	µg/kg	360 U	340 U	320 U	290 U	300 U	290 U	280 U	430 U	320 U	330 U	330 U	310 U	300 U	290 U
Total PCBs ND=0	59.8	676	µg/kg	**92.8**	**150**	**146**	**864**	**2370**	**1690**	**1620**	**69**	**109**	**90.9**	**67**	**73.1**	**88**	**123**

NOTES:

J = Indicates that the concentration is an estimated value.

U = Indicates the analyte was analyzed for but not detected.

µg/kg = Micrograms per kilogram.

TEC = Threshold effect concentration. Development and Evaluation of

Guidelines for Freshwater Ecosystems (MacDonald et al. 2000).

PEC = Probable effect concentration. Development and Evaluation of C

Guidelines for Freshwater Ecosystems (MacDonald et al. 2000).

Bolded values exceed the TEC.

Gray shaded values exceed the PEC.

NSL = No Screening Level.

Submitted samples are presented in ascending numerical order.

*Samples presented are displayed in Figure 4-2A

TABLE 4-4A* SEDIMENT RESULTS FOR PCB AROCLORS IN AREA A
PHASE 2 LOWER MAUMEE RIVER SITE CHARACTERIZATION
TOLEDO, OHIO (JUNE 2013)

			Sample Location:	LMR13-65				LMR13-66			LMR13-67							LMR13-68
			Sample Name:	LMR13-65-012	LMR13-65-024	LMR13-65-048	LMR13-65-072	LMR13-66-012	LMR13-66-024	LMR13-66-048	LMR13-67-012	LMR13-67-024	LMR13-67-024FD	LMR13-67-048	LMR13-67-072	LMR13-67-096	LMR13-67-120	LMR13-68-012
			Sample Depth (ft):	0-1	1-2	2-4	4-6	0-1	1-2	2-3	0-1	1-2	1-2	2-4	4-6	6-8	8-10	0-1
			Date Sampled:	6/20/13	6/20/13	6/20/13	6/20/13	6/20/13	6/20/13	6/20/13	6/19/13	6/19/13	6/19/13	6/19/13	6/19/13	6/19/13	6/19/13	6/20/13
Analyte	**TEC**	**PEC**	**Unit**															
Aroclor-1016	NSL	NSL	µg/kg	430 U	430 U	380 U	260 U	250 U	230 U	220 U	380 U	360 U	360 U	330 U	330 U	310 U	310 U	210 U
Aroclor-1221	NSL	NSL	µg/kg	430 U	430 U	380 U	260 U	250 U	230 U	220 U	380 U	360 U	360 U	330 U	330 U	310 U	310 U	210 U
Aroclor-1232	NSL	NSL	µg/kg	430 U	430 U	380 U	260 U	250 U	230 U	220 U	380 U	360 U	360 U	330 U	330 U	310 U	310 U	210 U
Aroclor-1242	NSL	NSL	µg/kg	430 U	430 U	380 U	260 U	250 U	230 U	220 U	26 J	25 J	22 J	24 J	29 J	37 J	36 J	210 U
Aroclor-1248	NSL	NSL	µg/kg	430 U	430 U	380 U	350	250 U	230 U	220 U	380 U	360 U	360 U	330 U	330 U	310 U	310 U	66 J
Aroclor-1254	NSL	NSL	µg/kg	430 U	430 U	380 U	170 J	250 U	230 U	220 U	49 J	44 J	41 J	38 J	37 J	44 J	48 J	110 J
Aroclor-1260	NSL	NSL	µg/kg	430 U	430 U	380 U	31 J	250 U	230 U	220 U	12 J	11 J	10 J	9.1 J	13 J	14 J	16 J	18 J
Aroclor-1262	NSL	NSL	µg/kg	430 U	430 U	380 U	260 U	250 U	230 U	220 U	380 U	360 U	360 U	330 U	330 U	310 U	310 U	210 U
Aroclor-1268	NSL	NSL	µg/kg	430 U	430 U	380 U	260 U	250 U	230 U	220 U	380 U	360 U	360 U	330 U	330 U	310 U	310 U	210 U
Total PCBs ND=0	59.8	676	µg/kg	ND	ND	ND	**551**	ND	ND	ND	**87**	**80**	**73**	**71.1**	**79**	**95**	**100**	**194**

NOTES:

J = Indicates that the concentration is an estimated value.

U = Indicates the analyte was analyzed for but not detected.

µg/kg = Micrograms per kilogram.

TEC = Threshold effect concentration. Development and Evaluation of

Guidelines for Freshwater Ecosystems (MacDonald et al. 2000).

PEC = Probable effect concentration. Development and Evaluation of C

Guidelines for Freshwater Ecosystems (MacDonald et al. 2000).

Bolded values exceed the TEC.

Gray shaded values exceed the PEC.

NSL = No Screening Level.

Submitted samples are presented in ascending numerical order.

*Samples presented are displayed in Figure 4-2A

TABLE 4-4A* SEDIMENT RESULTS FOR PCB AROCLORS IN AREA A
PHASE 2 LOWER MAUMEE RIVER SITE CHARACTERIZATION
TOLEDO, OHIO (JUNE 2013)

			Sample Location:	LMR13-69							LMR13-71					LMR13-81					
			Sample Name:	LMR13-69-012	LMR13-69-024	LMR13-69-024FD	LMR13-69-048	LMR13-69-072	LMR13-69-096	LMR13-69-120	LMR13-71-012	LMR13-71-024	LMR13-71-024FD	LMR13-71-048	LMR13-71-072	LMR13-81-012	LMR13-81-024	LMR13-81-048	LMR13-81-072	LMR13-81-096	LMR13-81-120
			Sample Depth (ft):	0-1	1-2	1-2	2-4	4-6	6-8	8-9	0-1	1-2	1-2	2-4	4-6	0-1	1-2	2-4	4-6	6-8	8-9
			Date Sampled:	6/20/13	6/20/13	6/20/13	6/20/13	6/20/13	6/20/13	6/20/13	6/18/13	6/18/13	6/18/13	6/18/13	6/18/13	6/12/13	6/12/13	6/12/13	6/12/13	6/12/13	6/12/13
Analyte	**TEC**	**PEC**	**Unit**																		
Aroclor-1016	NSL	NSL	µg/kg	350 U	310 U	300 U	310 U	300 U	280 U	290 U	210 U	210 U	230 U	210 U	200 U	49 UJ	53 UJ	52 UJ	54 U	51 U	53 U
Aroclor-1221	NSL	NSL	µg/kg	350 U	310 U	300 U	310 U	300 U	280 U	290 U	210 U	210 U	230 U	210 U	200 U	49 UJ	53 UJ	52 UJ	54 U	51 U	53 U
Aroclor-1232	NSL	NSL	µg/kg	350 U	310 U	300 U	310 U	300 U	280 U	290 U	210 U	210 U	230 U	210 U	200 U	49 UJ	53 UJ	52 UJ	54 U	51 U	53 U
Aroclor-1242	NSL	NSL	µg/kg	350 U	310 U	300 U	310 U	300 U	280 U	290 U	210 U	210 U	230 U	210 U	200 U	34 J	53 UJ	52 UJ	54 U	51 U	53 U
Aroclor-1248	NSL	NSL	µg/kg	51 J	67 J	64 J	42 J	120 J	510	330	210 U	210 U	230 U	210 U	200 U	49 UJ	53 UJ	52 UJ	54 U	51 U	53 U
Aroclor-1254	NSL	NSL	µg/kg	43 J	74 J	59 J	34 J	84 J	260 J	200 J	210 U	210 U	230 U	210 U	200 U	21 J	53 UJ	52 UJ	54 U	51 U	53 U
Aroclor-1260	NSL	NSL	µg/kg	11 J	14 J	15 J	310 U	21 J	57 J	40 J	210 U	210 U	230 U	210 U	200 U	4.7 J	53 UJ	52 UJ	54 U	51 U	53 U
Aroclor-1262	NSL	NSL	µg/kg	350 U	310 U	300 U	310 U	300 U	280 U	290 U	210 U	210 U	230 U	210 U	200 U	49 UJ	53 UJ	52 UJ	54 U	51 U	53 U
Aroclor-1268	NSL	NSL	µg/kg	350 U	310 U	300 U	310 U	300 U	280 U	290 U	210 U	210 U	230 U	210 U	200 U	49 UJ	53 UJ	52 UJ	54 U	51 U	53 U
Total PCBs ND=0	59.8	676	µg/kg	**105**	**155**	**138**	**76**	**225**	**827**	**570**	ND	ND	ND	ND	ND	59.7	ND	ND	ND	ND	ND

NOTES:

J = Indicates that the concentration is an estimated value.

U = Indicates the analyte was analyzed for but not detected.

µg/kg = Micrograms per kilogram.

TEC = Threshold effect concentration. Development and Evaluation of

Guidelines for Freshwater Ecosystems (MacDonald et al. 2000).

PEC = Probable effect concentration. Development and Evaluation of G

Guidelines for Freshwater Ecosystems (MacDonald et al. 2000).

Bolded values exceed the TEC.

Gray shaded values exceed the PEC.

NSL = No Screening Level.

Submitted samples are presented in ascending numerical order.

*Samples presented are displayed in Figure 4-2A

TABLE 4-4A* SEDIMENT RESULTS FOR PCB AROCLORS IN AREA A
PHASE 2 LOWER MAUMEE RIVER SITE CHARACTERIZATION
TOLEDO, OHIO (JUNE 2013)

			Sample Location:	LMR13-82								LMR13-90				
			Sample Name:	LMR13-82-012	LMR13-82-024	LMR13-82-024FD	LMR13-82-048	LMR13-82-072	LMR13-82-096	LMR13-82-120	LMR13-82-144	LMR13-90-012	LMR13-90-024	LMR13-90-024FD	LMR13-90-048	LMR13-90-072
			Sample Depth (ft):	0-1	1-2	1-2	2-4	4-6	6-8	8-10	10-11	0-1	1-2	1-2	2-4	4-6
			Date Sampled:	6/17/13	6/17/13	6/17/13	6/17/13	6/17/13	6/17/13	6/17/13	6/17/13	6/13/13	6/13/13	6/13/13	6/13/13	6/13/13
Analyte	**TEC**	**PEC**	**Unit**													
Aroclor-1016	NSL	NSL	µg/kg	300 U	290 U	300 U	270 U	240 U	260 U	250 U	260 U	320 U	310 U	60 U	58 U	41 U
Aroclor-1221	NSL	NSL	µg/kg	300 U	290 U	300 U	270 U	240 U	260 U	250 U	260 U	320 U	310 U	60 U	58 U	41 U
Aroclor-1232	NSL	NSL	µg/kg	300 U	290 U	300 U	270 U	240 U	260 U	250 U	260 U	320 U	310 U	60 U	58 U	41 U
Aroclor-1242	NSL	NSL	µg/kg	300 UJ	290 UJ	300 UJ	270 UJ	240 UJ	260 UJ	250 UJ	260 UJ	320 U	310 U	60 U	58 U	41 U
Aroclor-1248	NSL	NSL	µg/kg	520 J	750 J	660 J	270 UJ	240 UJ	260 UJ	250 UJ	260 UJ	47 J	42 J	63	110	67
Aroclor-1254	NSL	NSL	µg/kg	420	510	460	270 U	240 U	260 U	250 U	260 U	31 J	29 J	43 J	69	32 J
Aroclor-1260	NSL	NSL	µg/kg	76 J	92 J	81 J	8.2 J	240 U	260 U	250 U	260 U	9.7 J	7.4 J	10 J	17 J	6.5 J
Aroclor-1262	NSL	NSL	µg/kg	300 U	290 U	300 U	270 U	240 U	260 U	250 U	260 U	320 U	310 U	60 U	58 U	41 U
Aroclor-1268	NSL	NSL	µg/kg	300 U	290 U	300 U	270 U	240 U	260 U	250 U	260 U	320 U	310 U	60 U	58 U	41 U
Total PCBs ND=0	59.8	676	µg/kg	**1016**	**1352**	**1201**	8.2	ND	ND	ND	ND	**87.7**	**78.4**	**116**	**196**	**105.5**

NOTES:

J = Indicates that the concentration is an estimated value.

U = Indicates the analyte was analyzed for but not detected.

µg/kg = Micrograms per kilogram.

TEC = Threshold effect concentration. Development and Evaluation of

Guidelines for Freshwater Ecosystems (MacDonald et al. 2000).

PEC = Probable effect concentration. Development and Evaluation of

Guidelines for Freshwater Ecosystems (MacDonald et al. 2000).

Bolded values exceed the TEC.

Gray shaded values exceed the PEC.

NSL = No Screening Level.

Submitted samples are presented in ascending numerical order.

*Samples presented are displayed in Figure 4-2A

TABLE 4-4A* SEDIMENT RESULTS FOR PCB AROCLORS IN AREA A
PHASE 2 LOWER MAUMEE RIVER SITE CHARACTERIZATION
TOLEDO, OHIO (JUNE 2013)

			Sample Location:	LMR13-91					LMR13-92			LMR13-93					
			Sample Name:	LMR13-91-012	LMR13-91-024	LMR13-91-048	LMR13-91-072	LMR13-91-096	LMR13-92-012	LMR13-92-024	LMR13-92-024FD	LMR13-93-012	LMR13-93-024	LMR13-93-048	LMR13-93-072	LMR13-93-096	LMR13-93-120
			Sample Depth (ft):	0-1	1-2	2-4	4-6	6-9	0-1	1-2	1-2	0-1	1-2	2-4	4-6	6-8	8-10
			Date Sampled:	6/13/13	6/13/13	6/13/13	6/13/13	6/13/13	6/20/13	6/20/13	6/20/13	6/13/13	6/13/13	6/13/13	6/13/13	6/13/13	6/13/13
Analyte	**TEC**	**PEC**	**Unit**														
Aroclor-1016	NSL	NSL	µg/kg	71 U	62 U	59 U	170 U	300 U	350 U	320 U	320 U	56 U	57 UJ	52 U	54 U	50 U	49 U
Aroclor-1221	NSL	NSL	µg/kg	71 U	62 U	59 U	170 U	300 U	350 U	320 U	320 U	56 U	57 UJ	52 U	54 U	50 U	49 U
Aroclor-1232	NSL	NSL	µg/kg	71 U	62 U	59 U	170 U	300 U	350 U	320 U	320 U	56 U	57 UJ	52 U	54 U	50 U	49 U
Aroclor-1242	NSL	NSL	µg/kg	25 J	62 U	59 U	690	1700	350 U	320 U	320 U	56 U	57 UJ	52 U	54 U	50 U	49 U
Aroclor-1248	NSL	NSL	µg/kg	71 U	48 J	48 J	170 U	300 U	29 J	61 J	42 J	970	5100	180	79	21 J	49 U
Aroclor-1254	NSL	NSL	µg/kg	26 J	30 J	32 J	370	1100	25 J	51 J	34 J	520 J	1700	96	29 J	7.4 J	49 U
Aroclor-1260	NSL	NSL	µg/kg	8.9 J	8.7 J	9 J	51 J	140 J	9.6 J	13 J	9 J	81 J	160 J	19 J	54 U	50 U	49 U
Aroclor-1262	NSL	NSL	µg/kg	71 U	62 U	59 U	170 U	300 U	350 U	320 U	320 U	56 U	57 UJ	52 U	54 U	50 U	49 U
Aroclor-1268	NSL	NSL	µg/kg	71 U	62 U	59 U	170 U	300 U	350 U	320 U	320 U	56 U	57 UJ	52 U	54 U	50 U	49 U
Total PCBs ND=0	59.8	676	µg/kg	**59.9**	**86.7**	**89**	**1111**	**2940**	**63.6**	**125**	**85**	**1571**	**6960**	**295**	**108**	28.4	ND

NOTES:

J = Indicates that the concentration is an estimated value.

U = Indicates the analyte was analyzed for but not detected.

µg/kg = Micrograms per kilogram.

TEC = Threshold effect concentration. Development and Evaluation of

Guidelines for Freshwater Ecosystems (MacDonald et al. 2000).

PEC = Probable effect concentration. Development and Evaluation of C

Guidelines for Freshwater Ecosystems (MacDonald et al. 2000).

Bolded values exceed the TEC.

Gray shaded values exceed the PEC.

NSL = No Screening Level.

Submitted samples are presented in ascending numerical order.

*Samples presented are displayed in Figure 4-2A

TABLE 4-4B* SEDIMENT RESULTS FOR PCB AROCLORS IN AREA B
PHASE 2 LOWER MAUMEE RIVER SITE CHARACTERIZATION
TOLEDO, OHIO (JUNE 2013)

Sample Location:				LMR13-35						LMR13-38					LMR13-39				
Sample Name:				LMR13-35-012	LMR13-35-024	LMR13-35-024FD	LMR13-35-048	LMR13-35-072	LMR13-35-096	LMR13-38-012	LMR13-38-024	LMR13-38-048	LMR13-38-072	LMR13-38-096	LMR13-39-012	LMR13-39-024	LMR13-39-024FD	LMR13-39-048	LMR13-39-072
Sample Depth (ft):				0-1	1-2	1-2	2-4	4-6	6-8	0-1	1-2	2-4	4-6	6-8	0-1	1-2	1-2	2-4	4-6
Date Sampled:				6/15/13	6/15/13	6/15/13	6/15/13	6/15/13	6/15/13	6/16/13	6/16/13	6/16/13	6/16/13	6/16/13	6/19/13	6/19/13	6/19/13	6/19/13	6/19/13
Analyte	**TEC**	**PEC**	**Unit**																
Aroclor-1016	NSL	NSL	µg/kg	59 U	54 U	260 U	250 U	200 U	200 U	48 UJ	260 U	48 UJ	210 U	42 UJ	240 U	230 U	220 U	250 U	220 U
Aroclor-1221	NSL	NSL	µg/kg	59 U	54 U	260 U	250 U	200 U	200 U	48 U	260 U	48 U	210 U	42 U	240 U	230 U	220 U	250 U	220 U
Aroclor-1232	NSL	NSL	µg/kg	59 U	54 U	260 U	250 U	200 U	200 U	48 U	260 U	48 U	210 U	42 U	240 U	230 U	220 U	250 U	220 U
Aroclor-1242	NSL	NSL	µg/kg	99	270 J	480	250 U	200 U	200 U	22 J	260 U	48 U	210 U	42 U	25 J	230 U	220 U	250 U	220 U
Aroclor-1248	NSL	NSL	µg/kg	59 U	54 U	260 U	250 U	200 U	200 U	48 U	260 U	48 U	210 U	42 U	240 U	230 U	220 U	250 U	220 U
Aroclor-1254	NSL	NSL	µg/kg	87 J	220 J	340 J	250 U	200 U	200 U	15 J	260 U	48 U	210 U	42 U	27 J	230 U	220 U	250 U	220 U
Aroclor-1260	NSL	NSL	µg/kg	20 J	54 J	66 J	250 U	200 U	200 U	48 UJ	260 U	48 UJ	210 U	42 UJ	240 U	230 U	220 U	250 U	220 U
Aroclor-1262	NSL	NSL	µg/kg	59 U	54 U	260 U	250 U	200 U	200 U	48 U	260 U	48 U	210 U	42 U	240 U	230 U	220 U	250 U	220 U
Aroclor-1268	NSL	NSL	µg/kg	59 U	54 U	260 U	250 U	200 U	200 U	48 U	260 U	48 U	210 U	42 U	240 U	230 U	220 U	250 U	220 U
Total PCBs ND=0	59.8	676	µg/kg	**206**	**544**	**886**	ND	ND	ND	37	ND	ND	ND	ND	52	ND	ND	ND	ND

NOTES:
J = Indicates that the concentration is an estimated value.
U = Indicates the analyte was analyzed for but not detected.
µg/kg = Micrograms per kilogram.
TEC = Threshold effect concentration. Development and Evaluation of Consensus-Based Sediment Quality Guidelines for Freshwater Ecosystems (MacDonald et al. 2000).
PEC = Probable effect concentration. Development and Evaluation of Consensus-Based Sediment Quality Guidelines for Freshwater Ecosystems (MacDonald et al. 2000).
Bolded values exceed the TEC.
Gray shaded values exceed the PEC.
NSL = No Screening Level.
Submitted samples are presented in ascending numerical order.
*Samples presented are displayed in Figure 4-2B.

TABLE 4-4B* SEDIMENT RESULTS FOR PCB AROCLORS IN AREA B
PHASE 2 LOWER MAUMEE RIVER SITE CHARACTERIZATION
TOLEDO, OHIO (JUNE 2013)

Sample Location:				LMR13-40					LMR13-41				LMR13-42						LMR13-43				
Sample Name:				LMR13-40-012	LMR13-40-024	LMR13-40-048	LMR13-40-072	LMR13-40-096	LMR13-41-012	LMR13-41-024	LMR13-41-024FD	LMR13-41-048	LMR13-42-012	LMR13-42-024	LMR13-42-048	LMR13-42-072	LMR13-42-096	LMR13-42-120	LMR13-43-012	LMR13-43-024	LMR13-43-024FD	LMR13-43-048	LMR13-43-072
Sample Depth (ft):				0-1	1-2	2-4	4-6	6-7	0-1	1-2	1-2	2-4	0-1	1-2	2-4	4-6	6-8	8-9	0-1	1-2	1-2	2-4	4-6
Date Sampled:				6/16/13	6/16/13	6/16/13	6/16/13	6/16/13	6/14/13	6/14/13	6/14/13	6/14/13	6/12/13	6/12/13	6/12/13	6/12/13	6/12/13	6/12/13	6/12/13	6/12/13	6/12/13	6/12/13	6/12/13
Analyte	**TEC**	**PEC**	**Unit**																				
Aroclor-1016	NSL	NSL	µg/kg	350 U	330 U	59 UJ	59 UJ	59 UJ	49 U	50 U	48 U	44 U	42 UJ	59 UJ	56 UJ	54 U	57 UJ	55 U	58 UJ	68 UJ	68 UJ	63 UJ	57 UJ
Aroclor-1221	NSL	NSL	µg/kg	350 U	330 U	59 U	59 U	59 U	49 U	50 U	48 U	44 U	42 UJ	59 UJ	56 UJ	54 U	57 UJ	55 U	58 UJ	68 UJ	68 UJ	63 UJ	57 UJ
Aroclor-1232	NSL	NSL	µg/kg	350 U	330 U	59 U	59 U	59 U	49 U	50 U	48 U	44 U	42 UJ	59 UJ	56 UJ	54 U	57 UJ	55 U	58 UJ	68 UJ	68 UJ	63 UJ	57 UJ
Aroclor-1242	NSL	NSL	µg/kg	30 J	20 J	29 J	140 J	150 J	49 U	50 U	48 U	44 U	230 J	20 J	56 UJ	54 U	57 UJ	55 U	400 J	1000 J	940 J	2900	57 UJ
Aroclor-1248	NSL	NSL	µg/kg	350 U	330 U	59 U	59 U	59 U	49 U	50 U	48 U	44 U	42 UJ	59 UJ	56 UJ	54 U	57 UJ	55 U	58 UJ	68 UJ	68 UJ	63 UJ	290 J
Aroclor-1254	NSL	NSL	µg/kg	37 J	26 J	27 J	120	130	49 U	50 U	48 U	44 U	330 J	31 J	56 UJ	54 U	57 UJ	55 U	480 J	1300 J	1800 J	2200	760 J
Aroclor-1260	NSL	NSL	µg/kg	9.8 J	7.5 J	9.3 J	34 J	29 J	49 U	50 U	48 U	44 U	69 J	13 J	56 UJ	54 U	57 UJ	55 U	85 J	170 J	170 J	320 J	140 J
Aroclor-1262	NSL	NSL	µg/kg	350 U	330 U	59 U	59 U	59 U	49 U	50 U	48 U	44 U	42 UJ	59 UJ	56 UJ	54 U	57 UJ	55 U	58 UJ	68 UJ	68 UJ	63 UJ	57 UJ
Aroclor-1268	NSL	NSL	µg/kg	350 U	330 U	59 U	59 U	59 U	49 U	50 U	48 U	44 U	42 UJ	59 UJ	56 UJ	54 U	57 UJ	55 U	58 UJ	68 UJ	68 UJ	63 UJ	57 UJ
Total PCBs ND=0	59.8	676	µg/kg	**76.8**	53.5	**65.3**	**294**	**309**	ND	ND	ND	ND	**629**	**64**	ND	ND	ND	ND	**965**	**2470**	**2910**	**5420**	**1190**

NOTES:

J = Indicates that the concentration is an estimated v

U = Indicates the analyte was analyzed for but not detecte

µg/kg = Micrograms per kilogram.

TEC = Threshold effect concentration. Development and

Guidelines for Freshwater Ecosystems (MacDonald et al. :

PEC = Probable effect concentration. Development and E

Guidelines for Freshwater Ecosystems (MacDonald et al. :

Bolded values exceed the TEC.

Gray shaded values exceed the PEC.

NSL = No Screening Level.

Submitted samples are presented in ascending numerical o

*Samples presented are displayed in Figure 4-2B.

TABLE 4-4B* SEDIMENT RESULTS FOR PCB AROCLORS IN AREA B
PHASE 2 LOWER MAUMEE RIVER SITE CHARACTERIZATION
TOLEDO, OHIO (JUNE 2013)

Sample Location:						LMR13-44									LMR13-54							LMR13-55				
Sample Name:				LMR13-43-096	LMR13-43-120	LMR13-44-012	LMR13-44-024	LMR13-44-048	LMR13-44-048FD	LMR13-44-072	LMR13-44-096	LMR13-54-012	LMR13-54-024	LMR13-54-048	LMR13-54-048FD	LMR13-54-072	LMR13-54-096	LMR13-54-120	LMR13-55-012	LMR13-55-024	LMR13-55-024FD	LMR13-55-048	LMR13-55-072
Sample Depth (ft):				6-8	8-9	0-1	1-2	2-4	2-4	4-6	6-8	0-1	1-2	2-4	2-4	4-6	6-8	8-9	0-1	1-2	1-2	2-4	4-6
Date Sampled:				6/12/13	6/12/13	6/12/13	6/12/13	6/12/13	6/12/13	6/12/13	6/12/13	6/19/13	6/19/13	6/19/13	6/19/13	6/19/13	6/19/13	6/19/13	6/19/13	6/19/13	6/19/13	6/19/13	6/19/13
Analyte	**TEC**	**PEC**	**Unit**																				
Aroclor-1016	NSL	NSL	µg/kg	58 UJ	57 UJ	53 UJ	47 U	47 U	45 U	48 U	48 U	320 U	280 U	300 U	300 U	300 U	280 U	290 U	220 U	250 U	270 U	230 U	300 U
Aroclor-1221	NSL	NSL	µg/kg	58 UJ	57 UJ	53 UJ	47 U	47 U	45 U	48 U	48 U	320 U	280 U	300 U	300 U	300 U	280 U	290 U	220 U	250 U	270 U	230 U	300 U
Aroclor-1232	NSL	NSL	µg/kg	58 UJ	57 UJ	53 UJ	47 U	47 U	45 U	48 U	48 U	320 U	280 U	300 U	300 U	300 U	280 U	290 U	220 U	250 U	270 U	230 U	300 U
Aroclor-1242	NSL	NSL	µg/kg	26 J	17 J	53 UJ	38 J	21 J	18 J	48 U	48 U	89 J	12 J	300 U	300 U	300 U	280 U	290 U	61 J	45 J	51 J	230 U	300 U
Aroclor-1248	NSL	NSL	µg/kg	58 UJ	57 UJ	2600	47 U	47 U	45 U	48 U	48 U	320 U	280 U	300 U	300 U	300 U	280 U	290 U	220 U	250 U	270 U	42 J	300 U
Aroclor-1254	NSL	NSL	µg/kg	120 J	83 J	650 J	28 J	17 J	14 J	48 U	48 U	120 J	32 J	300 U	300 U	300 U	280 U	290 U	49 J	35 J	41 J	33 J	300 U
Aroclor-1260	NSL	NSL	µg/kg	49 J	18 J	130 J	4.3 J	47 U	45 U	48 U	48 U	27 J	12 J	13 J	22 J	13 J	280 U	290 U	13 J	15 J	11 J	18 J	300 U
Aroclor-1262	NSL	NSL	µg/kg	58 UJ	57 UJ	53 UJ	47 U	47 U	45 U	48 U	48 U	320 U	280 U	300 U	300 U	300 U	280 U	290 U	220 U	250 U	270 U	230 U	300 U
Aroclor-1268	NSL	NSL	µg/kg	58 UJ	57 UJ	53 UJ	47 U	47 U	45 U	48 U	48 U	320 U	280 U	300 U	300 U	300 U	280 U	290 U	220 U	250 U	270 U	230 U	300 U
Total PCBs ND=0	59.8	676	µg/kg	**195**	**118**	**3380**	**70.3**	38	32	ND	ND	**236**	56	13	22	13	ND	ND	**123**	**95**	**103**	**93**	ND

NOTES:
J = Indicates that the concentration is an estimated v
U = Indicates the analyte was analyzed for but not detecte
µg/kg = Micrograms per kilogram.
TEC = Threshold effect concentration. Development and
Guidelines for Freshwater Ecosystems (MacDonald et al. :
PEC = Probable effect concentration. Development and E
Guidelines for Freshwater Ecosystems (MacDonald et al. :
Bolded values exceed the TEC.
Gray shaded values exceed the PEC.
NSL = No Screening Level.
Submitted samples are presented in ascending numerical o
*Samples presented are displayed in Figure 4-2B.

TABLE 4-4B* SEDIMENT RESULTS FOR PCB AROCLORS IN AREA B
PHASE 2 LOWER MAUMEE RIVER SITE CHARACTERIZATION
TOLEDO, OHIO (JUNE 2013)

Sample Location:				LMR13-56	LMR13-57			LMR13-58		LMR13-59			LMR13-77				LMR13-78		
Sample Name:				LMR13-56-012	LMR13-57-012	LMR13-57-024	LMR13-57-048	LMR13-58-012	LMR13-58-024	LMR13-59-012	LMR13-59-024	LMR13-59-048	LMR13-77-012	LMR13-77-024	LMR13-77-048	LMR13-77-072	LMR13-78-012	LMR13-78-024	LMR13-78-024FD
Sample Depth (ft):				0-1	0-1	1-2	2-4	0-1	1-2	0-1	1-2	2-4	0-1	1-2	2-4	4-6	0-1	1-2	1-2
Date Sampled:				6/20/13	6/14/13	6/14/13	6/14/13	6/20/13	6/20/13	6/20/13	6/20/13	6/20/13	6/15/13	6/15/13	6/15/13	6/15/13	6/16/13	6/16/13	6/16/13
Analyte	**TEC**	**PEC**	**Unit**																
Aroclor-1016	NSL	NSL	µg/kg	210 U	170 U	170 U	49 U	350 U	260 U	390 U	310 U	260 U	260 U	240 U	230 U	230 U	220 U	210 U	210 U
Aroclor-1221	NSL	NSL	µg/kg	210 U	170 U	170 U	49 U	350 U	260 U	390 U	310 U	260 U	260 U	240 U	230 U	230 U	220 U	210 U	210 U
Aroclor-1232	NSL	NSL	µg/kg	210 U	170 U	170 U	49 U	350 U	260 U	390 U	310 U	260 U	260 U	240 U	230 U	230 U	220 U	210 U	210 U
Aroclor-1242	NSL	NSL	µg/kg	210 U	170 U	170 U	49 U	110 J	840	54 J	41 J	360	260 U	240 U	230 U	230 U	220 U	210 U	210 U
Aroclor-1248	NSL	NSL	µg/kg	210 U	170 U	170 U	49 U	350 U	260 U	390 U	310 U	260 U	260 U	240 U	230 U	230 U	220 U	210 U	210 U
Aroclor-1254	NSL	NSL	µg/kg	210 U	170 U	170 U	49 U	74 J	530	39 J	32 J	250 J	260 U	240 U	230 U	230 U	220 U	210 U	210 U
Aroclor-1260	NSL	NSL	µg/kg	210 U	170 U	170 U	49 U	14 J	110 J	10 J	9.5 J	46 J	260 U	240 U	230 U	230 U	220 U	210 U	210 U
Aroclor-1262	NSL	NSL	µg/kg	210 U	170 U	170 U	49 U	350 U	260 U	390 U	310 U	260 U	260 U	240 U	230 U	230 U	220 U	210 U	210 U
Aroclor-1268	NSL	NSL	µg/kg	210 U	170 U	170 U	49 U	350 U	260 U	390 U	310 U	260 U	260 U	240 U	230 U	230 U	220 U	210 U	210 U
Total PCBs ND=0	59.8	676	µg/kg	ND	ND	ND	ND	**198**	**1480**	**103**	**82.5**	**656**	ND	ND	ND	ND	ND	ND	ND

NOTES:
J = Indicates that the concentration is an estimated v
U = Indicates the analyte was analyzed for but not detecte
µg/kg = Micrograms per kilogram.
TEC = Threshold effect concentration. Development and
Guidelines for Freshwater Ecosystems (MacDonald et al.
PEC = Probable effect concentration. Development and E
Guidelines for Freshwater Ecosystems (MacDonald et al.
Bolded values exceed the TEC.
Gray shaded values exceed the PEC.
NSL = No Screening Level.
Submitted samples are presented in ascending numerical o
*Samples presented are displayed in Figure 4-2B.

TABLE 4-4B* SEDIMENT RESULTS FOR PCB AROCLORS IN AREA B
PHASE 2 LOWER MAUMEE RIVER SITE CHARACTERIZATION
TOLEDO, OHIO (JUNE 2013)

Sample Location:				LMR13-79						LMR13-80						LMR13-89	
Sample Name:				LMR13-79-012	LMR13-79-024	LMR13-79-048	LMR13-79-048FD	LMR13-79-072	LMR13-79-096	LMR13-80-012	LMR13-80-024	LMR13-80-024FD	LMR13-80-048	LMR13-80-072	LMR13-80-096	LMR13-89-012	LMR13-89-024
Sample Depth (ft):				0-1	1-2	2-4	2-4	4-6	6-7	0-1	1-2	1-2	2-4	4-6	6-7	0-1	1-2
Date Sampled:				6/16/13	6/16/13	6/16/13	6/16/13	6/16/13	6/16/13	6/20/13	6/20/13	6/20/13	6/20/13	6/20/13	6/20/13	6/19/13	6/19/13
Analyte	**TEC**	**PEC**	**Unit**														
Aroclor-1016	NSL	NSL	µg/kg	51 UJ	41 UJ	200 U	200 U	42 UJ	39 UJ	300 U	310 U	310 U	250 U	210 U	200 U	200 U	210 U
Aroclor-1221	NSL	NSL	µg/kg	51 U	41 U	200 U	200 U	42 U	39 U	300 U	310 U	310 U	250 U	210 U	200 U	200 U	210 U
Aroclor-1232	NSL	NSL	µg/kg	51 U	41 U	200 U	200 U	42 U	39 U	300 U	310 U	310 U	250 U	210 U	200 U	200 U	210 U
Aroclor-1242	NSL	NSL	µg/kg	24 J	41 U	200 U	200 U	42 U	39 U	56 J	310 U	310 U	250 U	210 U	200 U	200 U	210 U
Aroclor-1248	NSL	NSL	µg/kg	51 U	41 U	200 U	200 U	42 U	39 U	300 U	310 U	310 U	250 U	210 U	200 U	200 U	210 U
Aroclor-1254	NSL	NSL	µg/kg	28 J	41 U	200 U	200 U	42 U	39 U	35 J	310 U	310 U	250 U	210 U	200 U	200 U	210 U
Aroclor-1260	NSL	NSL	µg/kg	51 UJ	41 UJ	200 U	200 U	42 UJ	39 UJ	7.2 J	310 U	310 U	250 U	210 U	200 U	200 U	210 U
Aroclor-1262	NSL	NSL	µg/kg	51 U	41 U	200 U	200 U	42 U	39 U	300 U	310 U	310 U	250 U	210 U	200 U	200 U	210 U
Aroclor-1268	NSL	NSL	µg/kg	51 U	41 U	200 U	200 U	42 U	39 U	300 U	310 U	310 U	250 U	210 U	200 U	200 U	210 U
Total PCBs ND=0	59.8	676	µg/kg	52	ND	ND	ND	ND	ND	**98.2**	ND	ND	ND	ND	ND	ND	ND

NOTES:
J = Indicates that the concentration is an estimated v
U = Indicates the analyte was analyzed for but not detecte
µg/kg = Micrograms per kilogram.
TEC = Threshold effect concentration. Development and
Guidelines for Freshwater Ecosystems (MacDonald et al. :
PEC = Probable effect concentration. Development and E
Guidelines for Freshwater Ecosystems (MacDonald et al. :
Bolded values exceed the TEC.
Gray shaded values exceed the PEC.
NSL = No Screening Level.
Submitted samples are presented in ascending numerical o
*Samples presented are displayed in Figure 4-2B.

TABLE 4-4C* SEDIMENT RESULTS FOR PCB AROCLORS IN AREA C
PHASE 2 LOWER MAUMEE RIVER SITE CHARACTERIZATION
TOLEDO, OHIO (JUNE 2013)

Sample Location:				LMR13-26		LMR13-27						LMR13-28					
Sample Name:				LMR13-26-012	LMR13-26-012FD	LMR13-27-012	LMR13-27-024	LMR13-27-024FD	LMR13-27-048	LMR13-27-072	LMR13-27-096	LMR13-28-012	LMR13-28-024	LMR13-28-048	LMR13-28-072	LMR13-28-096	LMR13-28-120
Sample Depth (ft):				0-1	0-1	0-1	1-2	1-2	2-4	4-6	6-7	0-1	1-2	2-4	4-6	6-8	8-9
Date Sampled:				6/14/13	6/14/13	6/14/13	6/14/13	6/14/13	6/14/13	6/14/13	6/14/13	6/15/13	6/15/13	6/15/13	6/15/13	6/15/13	6/15/13
Analyte	**TEC**	**PEC**	**Unit**														
Aroclor-1016	NSL	NSL	µg/kg	69 U	66 U	67 U	63 U	63 U	60 U	47 U	42 U	72 U	69 U	63 U	52 U	50 U	45 U
Aroclor-1221	NSL	NSL	µg/kg	69 U	66 U	67 U	63 U	63 U	60 U	47 U	42 U	72 U	69 U	63 U	52 U	50 U	45 U
Aroclor-1232	NSL	NSL	µg/kg	69 U	66 U	67 U	63 U	63 U	60 U	47 U	42 U	72 U	69 U	63 U	52 U	50 U	45 U
Aroclor-1242	NSL	NSL	µg/kg	46 J	47 J	60 J	20 J	34 J	60 U	47 U	42 U	72 U	69 U	63 U	52 U	50 U	45 U
Aroclor-1248	NSL	NSL	µg/kg	69 U	66 U	67 U	63 U	63 U	60 U	47 U	42 U	89	67 J	100	99	50 U	45 U
Aroclor-1254	NSL	NSL	µg/kg	35 J	35 J	73	19 J	35 J	60 U	47 U	42 U	42 J	32 J	47 J	64	50 U	45 U
Aroclor-1260	NSL	NSL	µg/kg	69 U	66 U	13 J	3.7 J	5.7 J	60 U	47 U	42 U	11 J	6.9 J	8.8 J	10 J	50 U	45 U
Aroclor-1262	NSL	NSL	µg/kg	69 U	66 U	67 U	63 U	63 U	60 U	47 U	42 U	72 U	69 U	63 U	52 U	50 U	45 U
Aroclor-1268	NSL	NSL	µg/kg	69 U	66 U	67 U	63 U	63 U	60 U	47 U	42 U	72 U	69 U	63 U	52 U	50 U	45 U
Total PCBs ND=0	59.8	676	µg/kg	81	82	146	42.7	74.7	ND	ND	ND	142	105.9	155.8	173	ND	ND

NOTES:

J = Indicates that the concentration is an estimated value.

U = Indicates the analyte was analyzed for but not detected.

µg/kg = Micrograms per kilogram.

TEC = Threshold effect concentration. Development and Evaluation of Consensus-Based Sediment Quality Guidelines for Freshwater Ecosystems (MacDonald et al. 2000).

PEC = Probable effect concentration. Development and Evaluation of Consensus-Based Sediment Quality Guidelines for Freshwater Ecosystems (MacDonald et al. 2000).

Bolded values exceed the TEC.

Gray shaded values exceed the PEC.

NSL = No Screening Level.

Submitted samples are presented in ascending numerical order.

*Samples presented are displayed in Figure 4-2C.

TABLE 4-4C* SEDIMENT RESULTS FOR PCB AROCLORS IN AREA C
PHASE 2 LOWER MAUMEE RIVER SITE CHARACTERIZATION
TOLEDO, OHIO (JUNE 2013)

Sample Location:				LMR13-29						LMR13-30							LMR13-31			LMR13-32			
Sample Name:				LMR13-29-012	LMR13-29-024	LMR13-29-024FD	LMR13-29-048	LMR13-29-072	LMR13-29-096	LMR13-30-012	LMR13-30-024	LMR13-30-048	LMR13-30-072	LMR13-30-096	LMR13-30-120	LMR13-31-012	LMR13-31-024	LMR13-31-024FD	LMR13-32-012	LMR13-32-024	LMR13-32-048	LMR13-32-072
Sample Depth (ft):				0-1	1-2	1-2	2-4	4-6	6-8	0-1	1-2	2-4	4-6	6-8	8-10	0-1	1-2	1-2	0-1	1-2	2-4	4-6
Date Sampled:				6/15/13	6/15/13	6/15/13	6/15/13	6/15/13	6/15/13	6/19/13	6/19/13	6/19/13	6/19/13	6/19/13	6/19/13	6/15/13	6/15/13	6/15/13	6/15/13	6/15/13	6/15/13	6/15/13
Analyte	**TEC**	**PEC**	**Unit**																			
Aroclor-1016	NSL	NSL	µg/kg	62 U	64 U	64 U	55 U	46 U	39 U	320 U	300 U	290 U	300 U	280 U	250 U	44 UJ	45 UJ	44 UJ	44 UJ	46 UJ	41 UJ	44 UJ
Aroclor-1221	NSL	NSL	µg/kg	62 U	64 U	64 U	55 U	46 U	39 U	320 U	300 U	290 U	300 U	280 U	250 U	44 U	45 U	44 U	44 U	46 U	41 U	44 U
Aroclor-1232	NSL	NSL	µg/kg	62 U	64 U	64 U	55 U	46 U	39 U	320 U	300 U	290 U	300 U	280 U	250 U	44 U	45 U	44 U	44 U	46 U	41 U	44 U
Aroclor-1242	NSL	NSL	µg/kg	45 J	64 U	64 U	160 J	46 U	39 U	320 U	300 U	290 U	300 U	280 U	250 U	100	45 U	44 U	44 U	46 U	41 U	44 U
Aroclor-1248	NSL	NSL	µg/kg	62 U	110	100	55 U	15 J	39 U	320 U	300 U	290 U	300 U	280 U	250 U	44 U	8 J	8.5 J	44 U	46 U	41 U	44 U
Aroclor-1254	NSL	NSL	µg/kg	34 J	43 J	43 J	100	46 U	39 U	320 U	300 U	290 U	300 U	280 U	250 U	89 J	17 J	20 J	44 U	46 U	41 U	44 U
Aroclor-1260	NSL	NSL	µg/kg	7.3 J	7.2 J	8.9 J	14 J	46 U	39 U	11 J	300 U	290 U	300 U	280 U	250 U	19 J	4.4 J	7.8 J	44 UJ	46 UJ	41 UJ	44 UJ
Aroclor-1262	NSL	NSL	µg/kg	62 U	64 U	64 U	55 U	46 U	39 U	320 U	300 U	290 U	300 U	280 U	250 U	44 U	45 U	44 U	44 U	46 U	41 U	44 U
Aroclor-1268	NSL	NSL	µg/kg	62 U	64 U	64 U	55 U	46 U	39 U	320 U	300 U	290 U	300 U	280 U	250 U	44 U	45 U	44 U	44 U	46 U	41 U	44 U
Total PCBs ND=0	59.8	676	µg/kg	86.3	160.2	151.9	274	15	ND	11	ND	ND	ND	ND	ND	208	29.4	36.3	ND	ND	ND	ND

NOTES:
J = Indicates that the concentration is an estimated value.
U = Indicates the analyte was analyzed for but not detecte
µg/kg = Micrograms per kilogram.
TEC = Threshold effect concentration. Development and
Guidelines for Freshwater Ecosystems (MacDonald et al.
PEC = Probable effect concentration. Development and
Guidelines for Freshwater Ecosystems (MacDonald et al.
Bolded values exceed the TEC.
Gray shaded values exceed the PEC.
NSL = No Screening Level.
Submitted samples are presented in ascending numerical
*Samples presented are displayed in Figure 4-2C.

TABLE 4-4C* SEDIMENT RESULTS FOR PCB AROCLORS IN AREA C
PHASE 2 LOWER MAUMEE RIVER SITE CHARACTERIZATION
TOLEDO, OHIO (JUNE 2013)

Sample Location:				LMR13-33						LMR13-34									
Sample Name:				LMR13-33-012	LMR13-33-024	LMR13-33-024FD	LMR13-33-048	LMR13-33-072	LMR13-33-096	LMR13-34-012	LMR13-34-024	LMR13-34-048	LMR13-34-048FD	LMR13-34-072	LMR13-34-096	LMR13-34-120	LMR13-34-144	LMR13-34-168	LMR13-34-192
Sample Depth (ft):				0-1	1-2	1-2	2-4	4-6	6-8	0-1	1-2	2-4	2-4	4-6	6-8	8-10	10-12	12-14	14-15
Date Sampled:				6/19/13	6/19/13	6/19/13	6/19/13	6/19/13	6/19/13	6/15/13	6/15/13	6/15/13	6/15/13	6/15/13	6/15/13	6/15/13	6/15/13	6/15/13	6/15/13
Analyte	**TEC**	**PEC**	**Unit**																
Aroclor-1016	NSL	NSL	µg/kg	390 U	340 U	370 U	290 U	290 U	230 U	86 U	68 U	68 U	66 U	62 U	59 U	58 U	56 U	55 U	49 U
Aroclor-1221	NSL	NSL	µg/kg	390 U	340 U	370 U	290 U	290 U	230 U	86 U	68 U	68 U	66 U	62 U	59 U	58 U	56 U	55 U	49 U
Aroclor-1232	NSL	NSL	µg/kg	390 U	340 U	370 U	290 U	290 U	230 U	86 U	68 U	68 U	66 U	62 U	59 U	58 U	56 U	55 U	49 U
Aroclor-1242	NSL	NSL	µg/kg	390 U	340 U	370 U	290 U	290 U	230 U	86 U	68 U	57 J	58 J	48 J	67	58 U	56 U	55 U	49 U
Aroclor-1248	NSL	NSL	µg/kg	390 U	340 U	370 U	290 U	290 U	230 U	130	95	68 U	66 U	62 U	59 U	190	270	460 J	270 J
Aroclor-1254	NSL	NSL	µg/kg	390 U	340 U	370 U	290 U	290 U	230 U	61 J	44 J	51 J	53 J	41 J	48 J	82 J	120 J	430 J	280 J
Aroclor-1260	NSL	NSL	µg/kg	36 J	10 J	12 J	11 J	290 U	230 U	37 J	11 J	12 J	12 J	10 J	11 J	18 J	26 J	96 J	63 J
Aroclor-1262	NSL	NSL	µg/kg	390 U	340 U	370 U	290 U	290 U	230 U	86 U	68 U	68 U	66 U	62 U	59 U	58 U	56 U	55 U	49 U
Aroclor-1268	NSL	NSL	µg/kg	390 U	340 U	370 U	290 U	290 U	230 U	86 U	68 U	68 U	66 U	62 U	59 U	58 U	56 U	55 U	49 U
Total PCBs ND=0	59.8	676	µg/kg	36	10	12	11	ND	ND	228	150	120	123	99	126	290	416	986	613

NOTES:
J = Indicates that the concentration is an estimated value.
U = Indicates the analyte was analyzed for but not detecte
µg/kg = Micrograms per kilogram.
TEC = Threshold effect concentration. Development anc
Guidelines for Freshwater Ecosystems (MacDonald et al.
PEC = Probable effect concentration. Development and
Guidelines for Freshwater Ecosystems (MacDonald et al.
Bolded values exceed the TEC.
Gray shaded values exceed the PEC.
NSL = No Screening Level.
Submitted samples are presented in ascending numerical
*Samples presented are displayed in Figure 4-2C.

TABLE 4-4C* SEDIMENT RESULTS FOR PCB AROCLORS IN AREA C
PHASE 2 LOWER MAUMEE RIVER SITE CHARACTERIZATION
TOLEDO, OHIO (JUNE 2013)

Sample Location:				LMR13-49							LMR13-50						LMR13-51				
Sample Name:				LMR13-49-012	LMR13-49-024	LMR13-49-024FD	LMR13-49-048	LMR13-49-072	LMR13-49-096	LMR13-49-120	LMR13-50-012	LMR13-50-024	LMR13-50-048	LMR13-50-072	LMR13-50-096	LMR13-50-120	LMR13-51-012	LMR13-51-024	LMR13-51-024FD	LMR13-51-048	LMR13-51-072
Sample Depth (ft):				0-1	1-2	1-2	2-4	4-6	6-8	8-9	0-1	1-2	2-4	4-6	6-8	8-10	0-1	1-2	1-2	2-4	4-6
Date Sampled:				6/14/13	6/14/13	6/14/13	6/14/13	6/14/13	6/14/13	6/14/13	6/14/13	6/14/13	6/14/13	6/14/13	6/14/13	6/14/13	6/13/13	6/13/13	6/13/13	6/13/13	6/13/13
Analyte	**TEC**	**PEC**	**Unit**																		
Aroclor-1016	NSL	NSL	µg/kg	62 U	52 U	52 U	51 U	48 U	43 U	42 U	71 U	69 U	62 U	54 U	55 U	55 U	300 U	280 U	55 U	42 U	42 U
Aroclor-1221	NSL	NSL	µg/kg	62 U	52 U	52 U	51 U	48 U	43 U	42 U	71 U	69 U	62 U	54 U	55 U	55 U	300 U	280 U	55 U	42 U	42 U
Aroclor-1232	NSL	NSL	µg/kg	62 U	52 U	52 U	51 U	48 U	43 U	42 U	71 U	69 U	62 U	54 U	55 U	55 U	300 U	280 U	55 U	42 U	42 U
Aroclor-1242	NSL	NSL	µg/kg	62 U	52 U	52 U	51 U	48 U	43 U	42 U	71 U	69 U	62 U	54 U	55 U	55 U	28 J	280 U	55 U	42 U	42 U
Aroclor-1248	NSL	NSL	µg/kg	28 J	61	68	100	8.9 J	43 U	42 U	28 J	18 J	63	61	170	240	300 U	280 U	55 U	42 U	42 U
Aroclor-1254	NSL	NSL	µg/kg	26 J	51 J	77	100	6.8 J	43 U	42 U	22 J	19 J	51 J	50 J	140	170	38 J	280 U	55 U	42 U	42 U
Aroclor-1260	NSL	NSL	µg/kg	7.1 J	12 J	14 J	26 J	48 U	43 U	42 U	7.3 J	7 J	14 J	13 J	37 J	49 J	8.3 J	280 U	55 U	42 U	42 U
Aroclor-1262	NSL	NSL	µg/kg	62 U	52 U	52 U	51 U	48 U	43 U	42 U	71 U	69 U	62 U	54 U	55 U	55 U	300 U	280 U	55 U	42 U	42 U
Aroclor-1268	NSL	NSL	µg/kg	62 U	52 U	52 U	51 U	48 U	43 U	42 U	71 U	69 U	62 U	54 U	55 U	55 U	300 U	280 U	55 U	42 U	42 U
Total PCBs ND=0	59.8	676	µg/kg	61.1	124	159	226	15.7	ND	ND	57.3	44	128	124	347	459	74.3	ND	ND	ND	ND

NOTES:

J = Indicates that the concentration is an estimated value.

U = Indicates the analyte was analyzed for but not detecte

µg/kg = Micrograms per kilogram.

TEC = Threshold effect concentration. Development anc
Guidelines for Freshwater Ecosystems (MacDonald et al.

PEC = Probable effect concentration. Development and
Guidelines for Freshwater Ecosystems (MacDonald et al.

Bolded values exceed the TEC.

Gray shaded values exceed the PEC.

NSL = No Screening Level.

Submitted samples are presented in ascending numerical

*Samples presented are displayed in Figure 4-2C.

TABLE 4-4C* SEDIMENT RESULTS FOR PCB AROCLORS IN AREA C
PHASE 2 LOWER MAUMEE RIVER SITE CHARACTERIZATION
TOLEDO, OHIO (JUNE 2013)

Sample Location:				LMR13-52						LMR13-70			LMR13-72						LMR13-74				
Sample Name:				LMR13-52-012	LMR13-52-024	LMR13-52-048	LMR13-53-012	LMR13-53-024	LMR13-53-024FD	LMR13-70-012	LMR13-70-024	LMR13-70-048	LMR13-72-012	LMR13-72-024	LMR13-72-024FD	LMR13-72-048	LMR13-72-072	LMR13-72-096	LMR13-74-012	LMR13-74-024	LMR13-74-024FD	LMR13-74-048	LMR13-74-072
Sample Depth (ft):				0-1	1-2	2-5	0-1	1-2	1-2	0-1	1-2	2-4	0-1	1-2	1-2	2-4	4-6	6-8	0-1	1-2	1-2	2-4	4-6
Date Sampled:				6/20/13	6/20/13	6/20/13	6/20/13	6/20/13	6/20/13	6/20/13	6/20/13	6/20/13	6/14/13	6/14/13	6/14/13	6/14/13	6/14/13	6/14/13	6/15/13	6/15/13	6/15/13	6/15/13	6/15/13
Analyte	**TEC**	**PEC**	**Unit**																				
Aroclor-1016	NSL	NSL	µg/kg	350 U	290 U	220 U	290 U	260 U	250 U	380 U	300 U	320 U	55 U	56 U	55 U	56 U	55 U	57 U	59 U	46 UJ	46 U	41 U	42 U
Aroclor-1221	NSL	NSL	µg/kg	350 U	290 U	220 U	290 U	260 U	250 U	380 U	300 U	320 U	55 U	56 U	55 U	56 U	55 U	57 U	59 U	46 U	46 U	41 U	42 U
Aroclor-1232	NSL	NSL	µg/kg	350 U	290 U	220 U	290 U	260 U	250 U	380 U	300 U	320 U	55 U	56 U	55 U	56 U	55 U	57 U	59 U	46 U	46 U	41 U	42 U
Aroclor-1242	NSL	NSL	µg/kg	23 J	42 J	220 U	290 U	260 U	250 U	48 J	140 J	240 J	52 J	56 U	55 U	56 U	55 U	57 U	59 U	39 J	46 J	41 U	42 U
Aroclor-1248	NSL	NSL	µg/kg	350 U	290 U	220 U	600	200 J	160 J	380 U	300 U	320 U	55 U	56 U	55 U	56 U	55 U	57 U	58 J	46 U	46 U	41 U	42 U
Aroclor-1254	NSL	NSL	µg/kg	33 J	62 J	220 U	340	260	170 J	54 J	150 J	250 J	66 J	56 U	55 U	56 U	55 U	57 U	39 J	32 J	45 J	41 U	42 U
Aroclor-1260	NSL	NSL	µg/kg	13 J	17 J	220 U	70 J	61 J	52 J	19 J	33 J	52 J	25 J	22 J	26 J	21 J	5.3 J	57 U	7.9 J	5.9 J	7.4 J	41 U	42 U
Aroclor-1262	NSL	NSL	µg/kg	350 U	290 U	220 U	290 U	260 U	250 U	380 U	300 U	320 U	55 U	56 U	55 U	56 U	55 U	57 U	59 U	46 U	46 U	41 U	42 U
Aroclor-1268	NSL	NSL	µg/kg	350 U	290 U	220 U	290 U	260 U	250 U	380 U	300 U	320 U	55 U	56 U	55 U	56 U	55 U	57 U	59 U	46 U	46 U	41 U	42 U
Total PCBs ND=0	59.8	676	µg/kg	69	121	ND	1010	521	382	121	323	542	143	22	26	21	5.3	ND	104.9	76.9	98.4	ND	ND

NOTES:

J = Indicates that the concentration is an estimated value.

U = Indicates the analyte was analyzed for but not detecte

µg/kg = Micrograms per kilogram.

TEC = Threshold effect concentration. Development and

Guidelines for Freshwater Ecosystems (MacDonald et al.

PEC = Probable effect concentration. Development and

Guidelines for Freshwater Ecosystems (MacDonald et al.

Bolded values exceed the TEC.

Gray shaded values exceed the PEC.

NSL = No Screening Level.

Submitted samples are presented in ascending numerical

*Samples presented are displayed in Figure 4-2C.

TABLE 4-4C* SEDIMENT RESULTS FOR PCB AROCLORS IN AREA C
PHASE 2 LOWER MAUMEE RIVER SITE CHARACTERIZATION
TOLEDO, OHIO (JUNE 2013)

Sample Location:				LMR13-75		LMR13-76							LMR13-83				LMR13-84				
Sample Name:				LMR13-75-012	LMR13-75-024	LMR13-76-012	LMR13-76-024	LMR13-76-024FD	LMR13-76-048	LMR13-76-072	LMR13-83-012	LMR13-83-024	LMR13-83-048	LMR13-83-072	LMR13-84-012	LMR13-84-024	LMR13-84-024FD	LMR13-84-048	LMR13-84-072
Sample Depth (ft):				0-1	1-2	0-1	1-2	1-2	2-4	4-6	0-1	1-2	2-4	4-6	0-1	1-2	1-2	2-4	4-6
Date Sampled:				6/15/13	6/15/13	6/15/13	6/15/13	6/15/13	6/15/13	6/15/13	6/14/13	6/14/13	6/14/13	6/14/13	6/18/13	6/18/13	6/18/13	6/18/13	6/18/13
Analyte	**TEC**	**PEC**	**Unit**																
Aroclor-1016	NSL	NSL	µg/kg	40 U	41 UJ	54 U	41 U	210 U	210 U	200 U	230 U	230 U	43 U	40 U	280 U	280 U	270 U	250 U	210 U
Aroclor-1221	NSL	NSL	µg/kg	40 U	41 U	54 U	41 U	210 U	210 U	200 U	230 U	230 U	43 U	40 U	280 U	280 U	270 U	250 U	210 U
Aroclor-1232	NSL	NSL	µg/kg	40 U	41 U	54 U	41 U	210 U	210 U	200 U	230 U	230 U	43 U	40 U	280 U	280 U	270 U	250 U	210 U
Aroclor-1242	NSL	NSL	µg/kg	40 U	41 U	90	98	110 J	190 J	330	230 U	230 U	43 U	40 U	280 U	280 U	270 U	250 U	210 U
Aroclor-1248	NSL	NSL	µg/kg	40 U	41 U	54 U	41 U	210 U	210 U	200 U	89 J	230 U	43 U	40 U	280 U	280 U	270 U	250 U	210 U
Aroclor-1254	NSL	NSL	µg/kg	40 U	41 U	69	57 J	65 J	99 J	140 J	61 J	230 U	43 U	40 U	280 U	280 U	270 U	250 U	210 U
Aroclor-1260	NSL	NSL	µg/kg	40 U	41 UJ	14 J	8.1 J	210 U	210 U	200 U	14 J	230 U	43 U	40 U	280 U	280 U	270 U	250 U	210 U
Aroclor-1262	NSL	NSL	µg/kg	40 U	41 U	54 U	41 U	210 U	210 U	200 U	230 U	230 U	43 U	40 U	280 U	280 U	270 U	250 U	210 U
Aroclor-1268	NSL	NSL	µg/kg	40 U	41 U	54 U	41 U	210 U	210 U	200 U	230 U	230 U	43 U	40 U	280 U	280 U	270 U	250 U	210 U
Total PCBs ND=0	59.8	676	µg/kg	ND	ND	173	163.1	175	289	470	164	ND	ND	ND	ND	ND	ND	ND	ND

NOTES:
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U = Indicates the analyte was analyzed for but not detecte
µg/kg = Micrograms per kilogram.
TEC = Threshold effect concentration. Development anc
Guidelines for Freshwater Ecosystems (MacDonald et al.
PEC = Probable effect concentration. Development and
Guidelines for Freshwater Ecosystems (MacDonald et al.
Bolded values exceed the TEC.
Gray shaded values exceed the PEC.
NSL = No Screening Level.
Submitted samples are presented in ascending numerical
*Samples presented are displayed in Figure 4-2C.

TABLE 4-4C* SEDIMENT RESULTS FOR PCB AROCLORS IN AREA C
PHASE 2 LOWER MAUMEE RIVER SITE CHARACTERIZATION
TOLEDO, OHIO (JUNE 2013)

Sample Location:				LMR13-85			LMR13-86							LMR13-87					
Sample Name:				LMR13-85-012	LMR13-85-024	LMR13-85-048	LMR13-86-012	LMR13-86-024	LMR13-86-024FD	LMR13-86-048	LMR13-86-072	LMR13-86-096	LMR13-87-012	LMR13-87-024	LMR13-87-048	LMR13-87-072	LMR13-87-096	LMR13-87-120
Sample Depth (ft):				0-1	1-2	2-4	0-1	1-2	1-2	2-4	4-6	6-8	0-1	1-2	2-4	4-6	6-8	8-10
Date Sampled:				6/19/13	6/19/13	6/19/13	6/18/13	6/18/13	6/18/13	6/18/13	6/18/13	6/18/13	6/18/13	6/18/13	6/18/13	6/18/13	6/18/13	6/18/13
Analyte	**TEC**	**PEC**	**Unit**															
Aroclor-1016	NSL	NSL	µg/kg	350 U	330 U	310 U	350 U	310 U	330 U	320 U	290 U	290 U	320 U	310 U	270 U	290 U	260 U	270 U
Aroclor-1221	NSL	NSL	µg/kg	350 U	330 U	310 U	350 U	310 U	330 U	320 U	290 U	290 U	320 U	310 U	270 U	290 U	260 U	270 U
Aroclor-1232	NSL	NSL	µg/kg	350 U	330 U	310 U	350 U	310 U	330 U	320 U	290 U	290 U	320 U	310 U	270 U	290 U	260 U	270 U
Aroclor-1242	NSL	NSL	µg/kg	20 J	120 J	120 J	350 U	310 U	330 U	520	330	1300	320 U	310 U	270 U	290 U	260 U	270 U
Aroclor-1248	NSL	NSL	µg/kg	350 U	330 U	310 U	390	470	380	320 U	290 U	290 U	520	100 J	270 U	290 U	260 U	270 U
Aroclor-1254	NSL	NSL	µg/kg	44 J	130 J	150 J	220 J	270 J	220 J	370	280 J	820	420 J	200 J	70 J	72 J	52 J	270 U
Aroclor-1260	NSL	NSL	µg/kg	15 J	28 J	33 J	46 J	61 J	53 J	75 J	55 J	140 J	170 J	60 J	26 J	40 J	30 J	69 J
Aroclor-1262	NSL	NSL	µg/kg	350 U	330 U	310 U	350 U	310 U	330 U	320 U	290 U	290 U	320 U	310 U	270 U	290 U	260 U	270 U
Aroclor-1268	NSL	NSL	µg/kg	350 U	330 U	310 U	350 U	310 U	330 U	320 U	290 U	290 U	320 U	310 U	270 U	290 U	260 U	270 U
Total PCBs ND=0	59.8	676	µg/kg	79	278	303	656	801	653	965	665	2260	1110	360	96	112	82	69

NOTES:

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µg/kg = Micrograms per kilogram.

TEC = Threshold effect concentration. Development and

Guidelines for Freshwater Ecosystems (MacDonald et al.

PEC = Probable effect concentration. Development and

Guidelines for Freshwater Ecosystems (MacDonald et al.

Bolded values exceed the TEC.

Gray shaded values exceed the PEC.

NSL = No Screening Level.

Submitted samples are presented in ascending numerical

*Samples presented are displayed in Figure 4-2C.

TABLE 4-4C* SEDIMENT RESULTS FOR PCB AROCLORS IN AREA C
PHASE 2 LOWER MAUMEE RIVER SITE CHARACTERIZATION
TOLEDO, OHIO (JUNE 2013)

Sample Location:				LMR13-88				LMR13-94				LMR13-95			
Sample Name:				LMR13-88-012	LMR13-88-012FD	LMR13-88-024	LMR13-88-048	LMR13-94-012	LMR13-94-024	LMR13-94-048	LMR13-94-072	LMR13-95-012	LMR13-95-024	LMR13-95-048	LMR13-95-072	LMR13-95-096
Sample Depth (ft):				0-1	0-1	1-2	2-4	0-1	1-2	2-4	4-6	0-1	1-2	2-4	4-6	6-8
Date Sampled:				6/19/13	6/19/13	6/19/13	6/19/13	6/20/13	6/20/13	6/20/13	6/20/13	6/20/13	6/20/13	6/20/13	6/20/13	6/20/13
Analyte	**TEC**	**PEC**	**Unit**													
Aroclor-1016	NSL	NSL	µg/kg	370 U	370 U	280 U	280 U	320 U	260 U	270 U	280 U	290 U	260 U	320 U	310 U	300 U
Aroclor-1221	NSL	NSL	µg/kg	370 U	370 U	280 U	280 U	320 U	260 U	270 U	280 U	290 U	260 U	320 U	310 U	300 U
Aroclor-1232	NSL	NSL	µg/kg	370 U	370 U	280 U	280 U	320 U	260 U	270 U	280 U	290 U	260 U	320 U	310 U	300 U
Aroclor-1242	NSL	NSL	µg/kg	370 U	370 U	280 U	280 U	31 J	64 J	77 J	280 U	290 U	260 U	320 U	310 U	300 U
Aroclor-1248	NSL	NSL	µg/kg	370 U	370 U	280 U	280 U	320 U	260 U	270 U	280 U	290 U	260 U	320 U	310 U	300 U
Aroclor-1254	NSL	NSL	µg/kg	57 J	72 J	280 U	280 U	31 J	62 J	84 J	280 U	29 J	260 U	320 U	310 U	300 U
Aroclor-1260	NSL	NSL	µg/kg	19 J	23 J	5.5 J	280 U	15 J	18 J	15 J	280 U	10 J	260 U	320 U	310 U	300 U
Aroclor-1262	NSL	NSL	µg/kg	370 U	370 U	280 U	280 U	320 U	260 U	270 U	280 U	290 U	260 U	320 U	310 U	300 U
Aroclor-1268	NSL	NSL	µg/kg	370 U	370 U	280 U	280 U	320 U	260 U	270 U	280 U	290 U	260 U	320 U	310 U	300 U
Total PCBs ND=0	59.8	676	µg/kg	76	95	5.5	ND	77	144	176	ND	39	ND	ND	ND	ND

NOTES:
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U = Indicates the analyte was analyzed for but not detecte
µg/kg = Micrograms per kilogram.
TEC = Threshold effect concentration. Development and
Guidelines for Freshwater Ecosystems (MacDonald et al.
PEC = Probable effect concentration. Development and
Guidelines for Freshwater Ecosystems (MacDonald et al.
Bolded values exceed the TEC.
Gray shaded values exceed the PEC.
NSL = No Screening Level.
Submitted samples are presented in ascending numerical
*Samples presented are displayed in Figure 4-2C.

TABLE 4-5 SEDIMENT RESULTS FOR PCB CONGENERS
PHASE 2 LOWER MAUMEE RIVER SITE CHARACTERIZATION
TOLEDO, OHIO (JUNE 2013)

			Sample Location:	LMR13-05-012	LMR13-13-024		LMR13-14-024		LMR13-34-168		LMR13-42-012	LMR13-43-012					LMR13-44-012	LMR13-45-048				LMR13-46-048			
			Sample Name:	LMR13-05-012	LMR13-13-024	LMR13-13-048	LMR13-14-024	LMR13-14-048	LMR13-34-168	LMR13-34-192	LMR13-42-012	LMR13-43-012	LMR13-43-024	LMR13-43-048	LMR13-43-072	LMR13-44-012	LMR13-45-048	LMR13-45-072	LMR13-45-096	LMR13-45-120	LMR13-46-048	LMR13-46-072	LMR13-46-096	LMR13-46-120
			Sample Depth (ft):	0-1	1-2	2-4	1-2	2-4	12-14	14-15	0-1	0-1	1-2	2-4	4-6	0-1	2-4	4-6	6-8	8-9	2-4	4-6	6-8	8-9
			Date Sampled:	6/11/13	6/18/13	6/18/13	6/17/13	6/17/13	6/15/13	6/15/13	6/15/13	6/12/13	6/12/13	6/12/13	6/12/13	6/12/13	6/14/13	6/14/13	6/14/13	6/14/13	6/12/13	6/12/13	6/12/13	6/12/13
chemical_name	TEC	PEC	result_unit																						
PCB 1 (BZ)	NSL	NSL	ppb	210	800	230 J	790	140 J	1400	760	2400	1600	6100	2100	2600	290 Q	220 J	400 Q	590	5200	660	1900	20000	1600 J
PCB 10 (BZ)	NSL	NSL	ppb	140 Q	850	220 Q	190 Q	220 Q	270 Q	110 Q	440 Q	410 Q	970 Q	1500 Q	560	490 Q	180 Q	540	760 Q	6400 Q	620	2500	16000	1900 Q
PCB 100 (BZ)	NSL	NSL	ppb	270 Q	610 Q	750 C	500 Q	420 C	640 Q	270 Q	660 Q	630 Q	2000 C	2000 Q	930 Q	1300 Q	420 C	500 Q	3400 Q	5000 Q	800 Q	1600 Q	10000 C	4600 Q
PCB 101 (BZ)	NSL	NSL	ppb	44000 C	72000 B	69000 B	50000 B	42000 B	78000 B	41000 B	140000 C	120000 C	310000 C	350000 C	200000 C	100000 C	30000 B	70000 B	190000 B	330000 B	68000 C	150000 C	500000 C	390000 C
PCB 102 (BZ)	NSL	NSL	ppb	2200 C	3300 C	3600 C	1700 C	2300 C	2400 C	1400 C	4100 C	3800 C	11000 C	16000 C	4800 C	5500 C	1200 Q	3400 C	8500 C	15000 C	3400 Q	9200 C	28000 C	18000 C
PCB 103 (BZ)	NSL	NSL	ppb	300	510 Q	410 Q	400	250 Q	580	280	890	920	1600 Q	2000 Q	1000	560 Q	300 Q	990	4000 Q	2300	880 Q	2100	5000	2800 Q
PCB 104 (BZ)	NSL	NSL	ppb	49 U	400 U	360 U	240 U	250 U	250 U	230 U	500 U	240 U	370 U	2000 U	240 U	380 U	280 U	440 U	140 J	2000 U	250 U	390 U	2000 U	2000 U
PCB 105 (BZ)	NSL	NSL	ppb	21000 B	26000	30000	19000	20000	27000	15000	52000 B	39000 B	140000 B	140000 B	71000 B	45000 B	7800	21000	39000	140000	19000 B	54000 B	220000 B	190000 B
PCB 106 (BZ)	NSL	NSL	ppb	49 U	400 U	360 U	240 U	250 U	250 U	230 U	500 U	240 U	370 U	2000 U	240 U	94 Q	280 U	440 U	370 U	2000 U	250 U	390 U	2000 U	2000 U
PCB 107 (BZ)/109 (IUPAC)	NSL	NSL	ppb	3400	5000	5100	3700	3200	5500	2700	8600	7800	23000	22000	12000	6800	2000 Q	5200	19000	24000	4700	13000	40000	27000
PCB 108 (BZ)/107 (IUPAC)	NSL	NSL	ppb	0 C	0 C	0 C	0 C	0 C	0 C	0 C	0 C	0 C	0 C	0 C	0 C	0 C	0 C	0 C	0 C	0 C	0 C	0 C	0 C	0 C
PCB 109 (BZ)/108 (IUPAC)	NSL	NSL	ppb	34000 B	52000 B	54000 B	35000 B	33000 B	54000 B	29000 B	95000 B	77000 B	220000 B	250000 B	130000 B	80000 B	19000 B	45000 B	100000 B	250000 B	44000 B	100000 B	390000 B	310000 B
PCB 11 (BZ)	NSL	NSL	ppb	35 Q	220 Q	120 Q	120 Q	92 Q	130 Q	110 Q	490 Q	350 B	770 B	660 Q	280 Q	160 B	420 Q	430 Q	650 B	1000 Q	670 Q	800 B	2100 Q	410 Q
PCB 110 (BZ)	NSL	NSL	ppb	0 B	0 C	0 C	0 C	0 C	0 C	0 C	0 B	0 B	0 B	0 B	0 B	0 B	0 C	0 C	0 C	0 C	0 B	0 B	0 B	0 B
PCB 111 (BZ)	NSL	NSL	ppb	38 Q	89 Q	78 Q	35 Q	71 J	61 Q	230 U	190 Q	130 Q	160 Q	2000 U	120 Q	53 Q	62 Q	84 Q	390 Q	390 Q	71 Q	270 Q	2000 U	860 J
PCB 112 (BZ)	NSL	NSL	ppb	49 U	400 U	360 U	240 U	250 U	250 U	230 U	500 U	240 U	370 U	2000 U	240 U	380 U	280 U	440 U	370 U	2000 U	250 U	390 U	2000 U	2000 U
PCB 113 (BZ)	NSL	NSL	ppb	44000 C	72000 B	69000 B	50000 B	42000 B	78000 B	41000 B	140000 C	120000 C	310000 C	350000 C	200000 C	100000 C	30000 B	70000 B	190000 B	330000 B	68000 C	150000 C	500000 C	390000 C
PCB 114 (BZ)	NSL	NSL	ppb	1300	1700	1900	1200 Q	1400	1700	890	3200	2700	8500	10000	4000	2900	630	1200	2300	8200 Q	1300	3300	16000	11000 Q
PCB 115 (BZ)	NSL	NSL	ppb	49000 B	84000 C	84000 C	59000 C	52000 C	91000 C	50000 C	160000 B	130000 B	330000 B	390000 B	220000 B	120000 B	32000 C	74000 C	210000 C	380000 C	75000 B	160000 B	550000 B	450000 B
PCB 116 (BZ)	NSL	NSL	ppb	10000 C	15000 C	16000 C	9800 C	9700 C	14000 C	7900 C	24000 C	19000 C	57000 C	76000 C	31000 C	24000 C	6200 Q	17000 C	30000 C	74000 C	13000 C	30000 C	130000 C	88000 C
PCB 117 (BZ)	NSL	NSL	ppb	10000 C	15000 C	16000 C	9800 C	9700 C	14000 C	7900 C	24000 C	19000 C	57000 C	76000 C	31000 C	24000 C	6200 Q	17000 C	30000 C	74000 C	13000 C	30000 C	130000 C	88000 C
PCB 118 (BZ)	NSL	NSL	ppb	43000 B	67000 B	65000 B	47000 B	39000 B	71000 B	36000 B	130000 B	100000 B	330000 B	310000 B	180000 B	88000 B	23000 B	61000 B	160000 B	300000 B	57000 B	160000 B	480000 B	400000 B
PCB 119 (BZ)	NSL	NSL	ppb	34000 B	52000 B	54000 B	35000 B	33000 B	54000 B	29000 B	95000 B	77000 B	220000 B	250000 B	130000 B	80000 B	19000 B	45000 B	100000 B	250000 B	44000 B	100000 B	390000 B	310000 B
PCB 12 (BZ)	NSL	NSL	ppb	0 B	0 C	0 C	0 Q	0 Q	0 Q	0 Q	0 Q	0 B	0 B	0 B	0 Q	0 B	0 Q	0 Q	0 C	0 C	0 B	0 B	0 B	0 Q
PCB 120 (BZ)	NSL	NSL	ppb	82	200 Q	130 Q	190 Q	140 Q	210 Q	98 J	340 J	330 Q	420	570 J	300 Q	200 Q	210 Q	360 J	2200	750 J	320 Q	770	1200 Q	760 Q
PCB 121 (BZ)	NSL	NSL	ppb	49 U	400 U	360 U	240 U	250 U	250 U	230 U	500 U	240 U	370 U	2000 U	240 U	380 U	280 U	440 U	250 Q	2000 U	250 U	390 U	2000 U	2000 U
PCB 122 (BZ)	NSL	NSL	ppb	810	910 Q	1300	830	740 Q	1000 Q	590 Q	1700	1500	4500	6000	2300	1800	310 Q	840	1700	4700 Q	900	2300	9600	7900
PCB 123 (BZ)	NSL	NSL	ppb	730 Q	1500 B	1500 B	860 B	1000 B	1300 B	700 B	2100	1900	5500	6400	2700	1900 Q	230 Q	720 B	1400 Q	6000 B	880 Q	2100 Q	12000	7900
PCB 124 (BZ)	NSL	NSL	ppb	1800 C	2500 C	2600 C	1900 C	1600 C	2900 C	1500 C	5200 C	4200 C	14000 C	13000 C	7200 C	3700 C	810 C	1900 C	3700 C	12000 C	1900 C	5500 C	20000 C	16000 C
PCB 125 (BZ)	NSL	NSL	ppb	34000 B	52000 B	54000 B	35000 B	33000 B	54000 B	29000 B	95000 B	77000 B	220000 B	250000 B	130000 B	80000 B	19000 B	45000 B	100000 B	250000 B	44000 B	100000 B	390000 B	310000 B
PCB 126 (BZ)	NSL	NSL	ppb	110 Q	260 J	230 Q	110 Q	200 Q	120 Q	82 Q	370 J	250 Q	600 Q	1100 J	310	200 J	78 Q	300 J	130 Q	700 Q	150 J	300 Q	1600 Q	760 J
PCB 127 (BZ)	NSL	NSL	ppb	57 Q	70 Q	45 Q	79 Q	93 J	160 Q	110 J	220 Q	250	460 Q	330 Q	320 Q	150 Q	280 U	110 J	130 Q	610 J	96 Q	150 J	550 Q	790 Q
PCB 128 (BZ)	NSL	NSL	ppb	0 C	0 B	0 B	0 B	0 B	0 B	0 B	0 C	0 C	0 C	0 C	0 C	0 C	0 B	0 B	0 B	0 B	0 C	0 C	0 C	0 C
PCB 129 (BZ)	NSL	NSL	ppb	0 C	0 B	0 B	0 B	0 B	0 B	0 B	0 C	0 C	0 C	0 C	0 C	0 C	0 B	0 B	0 B	0 B	0 C	0 C	0 C	0 C
PCB 13 (BZ)	NSL	NSL	ppb	440 B	4000 C	780 C	950 Q	470 Q	1400 Q	570 Q	3600 Q	4500 B	7800 B	6100 B	1100 Q	4000 B	1400 Q	1700 Q	2500 C	14000 C	2800 B	5100 B	36000 B	3600 Q
PCB 130 (BZ)	NSL	NSL	ppb	2100	3100	3000	2800	1700	4600	2300	7000	6600	19000	16000	11000	3900	1700	3700	9000	13000	3600	9000	21000	16000
PCB 131 (BZ)	NSL	NSL	ppb	550	720	710	620 Q	460	1100	540 Q	1800	1700	5200	3800 Q	2600	910	330 Q	440 U	1700	3500	690 Q	2100	6100	4600
PCB 132 (BZ)	NSL	NSL	ppb	12000	17000	16000	14000	9200	23000	11000	40000	34000	100000	95000	60000	23000	8600	20000	55000	69000	18000	46000	120000	89000
PCB 133 (BZ)	NSL	NSL	ppb	400	590	570	630	280 Q	770 Q	400	1200 Q	1400	3200 Q	3900	2000	970	460 Q	910	3100	2300	1000	2000 Q	4100 Q	2900 Q
PCB 134 (BZ)	NSL	NSL	ppb	0 C	0 C	0 C	0 C	0 C	0 C	0 C	0 C	0 C	0 C	0 Q	0 C	0 C	0 C	0 Q	0 C	0 C	0 C	0 C	0 C	0 C
PCB 135 (BZ)	NSL	NSL	ppb	0 C	0 C	0 C	0 C	0 C	0 C	0 C	0 C	0 C	0 C	0 C	0 C	0 C	0 C	0 C	0 C	0 C	0 C	0 C	0 C	0 C
PCB 136 (BZ)	NSL	NSL	ppb	3700	5600	5700	4900	3000 Q	7700	3500	14000	11000	31000	36000	19000	8500	3200	7000 Q	20000	27000	7000	16000	37000	28000
PCB 137 (BZ)	NSL	NSL	ppb	1700	2400	2500	2100	1500	3800	1600	6600	5400	16000	11000	8800	3000	1000	2600	5300	11000	2100	5700	16000	14000
PCB 138 (BZ)	NSL	NSL	ppb	34000 C	48000 B	46000 B	41000 B	27000 B	66000 B	32000 B	120000 C	96000 C	300000 C	290000 C	170000 C	67000 C	25000 B	58000 B	130000 B	200000 B	52000 C	130000 C	320000 C	250000 C
PCB 139 (BZ)	NSL	NSL	ppb	0 C	0 C	0 Q	0 C	0 C	0 C	0 C	0 C	0 C	0 C	0 Q	0 C	0 C	0 C	0 C	0 C	0 C	0 C	0 C	0 C	0 C
PCB 14 (BZ)	NSL	NSL	ppb	49 U	400 U	360 U	240 U	250 U	250 U	230 U	500 U	23 Q	370 U	2000 U	18 Q	20 Q	280 U	45 Q	370 U	150 Q	30 Q	55 Q	2000 U	2000 U
PCB 140 (BZ)	NSL	NSL	ppb	600 C	990 C	810 Q	850 C	500 C	1400 C	600 C	2300 C	1900 C	5700 C	4300 Q	3200 C	1000 C	450 C	970 C	3000 C	3500 C	990 C	2800 C	6500 C	4700 C
PCB 141 (BZ)	NSL	NSL	ppb	6100	7700	7600	6300	4600	11000	5200	20000	16000	50000	57000	29000	13000	4200	9500	17000	33000	8500	22000	57000	45000
PCB 142 (BZ)	NSL	NSL	ppb	49 U	400 U	360 U	240 U	250 U	250 U	230 U	500 U	240 U	250 Q	2000 U	240 U	380 U	280 U	860	370 U	2000 U	250 U	390 U	2000 U	2000 U
PCB 143 (BZ)	NSL	NSL	ppb	2000 C	2800 C	2700 C	2400 C	1900 C	4100 C	2200 C	6800 C	6100 C	18000 C	16000 Q	10000 C	4200 C	1400 C	3000 Q	9600 C	12000 C	3200 C	8400 C	19000 C	17000 C

TABLE 4-5 SEDIMENT RESULTS FOR PCB CONGENERS
PHASE 2 LOWER MAUMEE RIVER SITE CHARACTERIZATION
TOLEDO, OHIO (JUNE 2013)

			Sample Location:	LMR13-05-012	LMR13-13-024		LMR13-14-024		LMR13-34-168		LMR13-42-012	LMR13-43-012					LMR13-44-012	LMR13-45-048				LMR13-46-048			
			Sample Name:	LMR13-05-012	LMR13-13-024	LMR13-13-048	LMR13-14-024	LMR13-14-048	LMR13-34-168	LMR13-34-192	LMR13-42-012	LMR13-43-012	LMR13-43-024	LMR13-43-048	LMR13-43-072	LMR13-44-012	LMR13-45-048	LMR13-45-072	LMR13-45-096	LMR13-45-120	LMR13-46-048	LMR13-46-072	LMR13-46-096	LMR13-46-120
			Sample Depth (ft):	0-1	1-2	2-4	1-2	2-4	12-14	14-15	0-1	0-1	1-2	2-4	4-6	0-1	2-4	4-6	6-8	8-9	2-4	4-6	6-8	8-9
			Date Sampled:	6/11/13	6/18/13	6/18/13	6/17/13	6/17/13	6/15/13	6/15/13	6/15/13	6/12/13	6/12/13	6/12/13	6/12/13	6/12/13	6/14/13	6/14/13	6/14/13	6/14/13	6/12/13	6/12/13	6/12/13	6/12/13
PCB 144 (BZ)	NSL	NSL	ppb	2500	1800 Q	2200	1600	1200	2700	1600	5500	4000	11000	14000	6100	3200	1600 Q	4700	7800	8400 Q	4200	12000	13000	8400 Q
PCB 145 (BZ)	NSL	NSL	ppb	49 U	400 U	360 U	240 U	250 U	250 U	230 U	500 U	20 Q	180 Q	2000 U	140 J	380 U	280 U	440 U	370 U	2000 U	250 U	390 U	2000 U	2000 U
PCB 146 (BZ)	NSL	NSL	ppb	4100	5800	5300	4800	3400	8300	3700	13000	12000	33000	36000	19000	8500	3800	8800	23000	22000	8800	19000	44000	29000
PCB 147 (BZ)	NSL	NSL	ppb	0 C	0 B	0 B	0 B	0 B	0 B	0 B	0 C	0 C	0 C	0 C	0 C	0 C	0 B	0 B	0 B	0 B	0 C	0 C	0 C	0 C
PCB 148 (BZ)	NSL	NSL	ppb	49 U	400 U	360 U	240 U	250 U	250 U	230 U	500 U	240 U	370 U	2000 U	120 Q	380 U	280 U	440 U	470 Q	2000 U	250 U	390 U	2000 U	2000 U
PCB 149 (BZ)	NSL	NSL	ppb	23000 C	32000 B	31000 B	28000 B	18000 B	44000 B	21000 B	75000 C	63000 C	190000 C	220000 C	110000 C	51000 C	19000 B	43000 B	110000 B	130000 B	41000 C	99000 C	230000 C	170000 C
PCB 15 (BZ)	NSL	NSL	ppb	5800 B	29000 B	9400 B	7000 B	6900 B	7700 B	3300 B	12000 B	12000 B	26000 B	41000 B	7300 B	17000 B	4600 B	14000 B	23000 B	140000 B	17000 B	52000 B	340000 B	54000 B
PCB 150 (BZ)	NSL	NSL	ppb	24 J	400 U	360 U	240 U	250 U	250 U	230 U	500 U	240 U	370 U	2000 U	150 J	380 U	280 U	440 U	280 J	2000 U	250 U	390 U	2000 U	2000 U
PCB 151 (BZ)	NSL	NSL	ppb	8800 C	14000 C	14000 C	12000 C	8200 C	18000 C	8400 C	35000 C	26000 C	65000 C	91000 C	44000 C	22000 C	8100 C	21000 C	48000 C	60000 C	18000 C	38000 C	93000 C	63000 C
PCB 152 (BZ)	NSL	NSL	ppb	34 Q	400 U	360 U	240 U	250 U	250 U	230 U	500 U	240 U	220 J	2000 U	110 Q	380 U	280 U	440 U	120 Q	2000 U	250 U	390 U	2000 U	2000 U
PCB 153 (BZ)	NSL	NSL	ppb	0 C	0 B	0 B	0 B	0 B	0 B	0 B	0 C	0 C	0 C	0 C	0 C	0 C	0 B	0 B	0 B	0 B	0 C	0 C	0 C	0 C
PCB 154 (BZ)	NSL	NSL	ppb	120 Q	320 J	160 Q	280	65 Q	570	200 Q	1000	700	1000	1200 J	590 Q	390 Q	330 Q	290 Q	2300 Q	1100 J	670	1000 Q	2200	1200 Q
PCB 155 (BZ)	NSL	NSL	ppb	49 U	400 U	360 U	240 U	250 U	250 U	230 U	500 U	240 U	370 U	2000 U	240 U	380 U	280 U	440 U	370 U	2000 U	250 U	390 U	2000 U	2000 U
PCB 156 (BZ)	NSL	NSL	ppb	0 C	0 C	0 C	0 C	0 C	0 C	0 C	0 C	0 C	0 C	0 C	0 C	0 C	0 C	0 C	0 C	0 C	0 C	0 C	0 C	0 C
PCB 157 (BZ)	NSL	NSL	ppb	4300 C	5900 C	6000 C	5100 C	3400 C	8800 C	3900 C	16000 C	13000 C	41000 C	34000 C	23000 C	7500 C	2700 C	6100 C	14000 C	26000 C	5500 C	15000 C	40000 C	33000 C
PCB 158 (BZ)	NSL	NSL	ppb	3300	4700	4400	3900	2600	6300	3000	12000	9900	31000	29000	18000	6600	2400	5200	10000	21000	4800	12000	33000	26000
PCB 159 (BZ)	NSL	NSL	ppb	220	270 J	340 J	200 J	210 J	280 Q	190 Q	640	500 Q	1400	2600 Q	850	540 Q	200 Q	470 Q	930	800 Q	430 Q	1200	2300 Q	1000 Q
PCB 16 (BZ)	NSL	NSL	ppb	16000	34000	23000	9900	18000	10000	5500	25000	21000	56000	120000	11000	61000	5400	15000	26000	220000	18000	47000	410000	140000
PCB 160 (BZ)	NSL	NSL	ppb	34000 C	48000 B	46000 B	41000 B	27000 B	66000 B	32000 B	120000 C	96000 C	300000 C	290000 C	170000 C	67000 C	25000 B	58000 B	130000 B	200000 B	52000 C	130000 C	320000 C	250000 C
PCB 161 (BZ)	NSL	NSL	ppb	49 U	400 U	360 U	240 U	250 U	250 U	230 U	500 U	240 U	370 U	2000 U	240 U	380 U	280 U	440 U	370 U	2000 U	250 U	390 U	2000 U	2000 U
PCB 162 (BZ)	NSL	NSL	ppb	80	150 J	140 Q	150 Q	110 J	210 Q	110 Q	370 Q	410 Q	930 Q	680 J	580	230 J	140 Q	180 Q	480 Q	720 J	230 Q	360 Q	930 Q	680 Q
PCB 163 (BZ)	NSL	NSL	ppb	34000 C	48000 B	46000 B	41000 B	27000 B	66000 B	32000 B	120000 C	96000 C	300000 C	290000 C	170000 C	67000 C	25000 B	58000 B	130000 B	200000 B	52000 C	130000 C	320000 C	250000 C
PCB 164 (BZ)	NSL	NSL	ppb	2200	2800	2900	2500	1800	4200	2100	7000	6300	18000	18000 Q	11000	4200	1600	3800	9100	12000	3400	9800	22000	16000
PCB 165 (BZ)	NSL	NSL	ppb	49 U	400 U	360 U	240 U	250 U	250 U	230 U	500 U	240 U	370 U	2000 U	240 U	380 U	280 U	100 Q	98 Q	2000 U	250 U	390 U	2000 U	2000 U
PCB 166 (BZ)	NSL	NSL	ppb	5500 C	7800 B	7600 B	6700 B	4600 B	11000 B	5200 B	19000 C	16000 C	48000 C	38000 C	28000 C	9400 C	3700 B	8500 B	18000 B	32000 B	7500 C	20000 C	50000 C	41000 C
PCB 167 (BZ)	NSL	NSL	ppb	1300	1700	1900	1500	1000	2400	1300	4600	4000	11000	9800	6400	2400	900	1800 Q	4200	7500	1800	4500	15000	10000
PCB 168 (BZ)	NSL	NSL	ppb	24000 C	32000 B	31000 B	27000 B	18000 B	44000 B	21000 B	76000 C	65000 C	200000 C	220000 C	120000 C	50000 C	20000 B	46000 B	100000 B	140000 B	41000 C	100000 C	240000 C	170000 C
PCB 169 (BZ)	NSL	NSL	ppb	41 J	52 Q	49 Q	240 U	250 U	130 B	230 U	210 Q	94 Q	290 Q	320 Q	160 J	94 Q	73 Q	85 B	200 Q	2000 U	170 J	190 Q	210 Q	340 Q
PCB 17 (BZ)	NSL	NSL	ppb	17000	44000	24000	12000	19000	13000	6300	27000	25000	65000	120000	13000	67000	8800	24000	47000	270000	31000	67000	500000	160000
PCB 170 (BZ)	NSL	NSL	ppb	6100	6800	7500	6100	4500	9700	4700	18000	14000	41000	67000	26000	16000	5900	13000	23000	30000	13000	28000	60000	38000
PCB 171 (BZ)	NSL	NSL	ppb	0 C	0 C	0 C	0 C	0 C	0 C	0 C	0 C	0 C	0 C	0 C	0 C	0 C	0 C	0 C	0 C	0 C	0 C	0 C	0 C	0 C
PCB 172 (BZ)	NSL	NSL	ppb	1000	1100	1200 Q	1000	680 Q	1500	800	3200	2500	6900	12000	4300	2500	1100	2600	3800	4600	2300	5200	11000	5700 Q
PCB 173 (BZ)	NSL	NSL	ppb	1800 C	2300 C	2400 C	1900 C	1300 C	3000 C	1600 C	6100 C	4500 C	14000 C	21000 C	8000 C	4800 C	1700 C	4500 C	7300 C	8600 C	4100 C	8700 C	19000 C	13000 C
PCB 174 (BZ)	NSL	NSL	ppb	5900	6600	7200	5400	4300	8900	4400	18000	14000	39000	73000	25000	15000	6300	14000	23000	29000	13000	30000	61000	37000
PCB 175 (BZ)	NSL	NSL	ppb	220	300 Q	260 Q	170 Q	180 Q	360 Q	180 Q	720	600	1500	2700 Q	970	590	300	560 Q	940	1400 J	630	1100	2500 Q	1600 J
PCB 176 (BZ)	NSL	NSL	ppb	690	800	970	770	450 Q	1200	620	1900 Q	1700	4900	8300	3200	2000	800	1800	3200	3500	1700	4200	8500	4500
PCB 177 (BZ)	NSL	NSL	ppb	3300	3600	4000	3200	2300	5000	2500	9700	7400	22000	37000	14000	8600	3500	7800	14000	15000	7700	16000	36000	21000
PCB 178 (BZ)	NSL	NSL	ppb	1000	1300	1300 Q	1100	920	1700	810	3400	2400	6600	13000	4400	3000	1300	2700	4500	4800	2700	5700	12000	6700 Q
PCB 179 (BZ)	NSL	NSL	ppb	2300	2900	3100	2200	1700	3400	1900	7300	5800	16000	29000	10000	6500	2700	6000	11000	12000	5700	13000	26000	16000
PCB 18 (BZ)	NSL	NSL	ppb	0 B	0 B	0 B	0 B	0 B	0 B	0 B	0 B	0 B	0 B	0 B	0 B	0 B	0 B	0 B	0 B	0 B	0 B	0 B	0 B	0 B
PCB 180 (BZ)	NSL	NSL	ppb	0 C	0 C	0 C	0 C	0 C	0 C	0 C	0 C	0 C	0 C	0 C	0 C	0 C	0 C	0 C	0 C	0 C	0 C	0 C	0 C	0 C
PCB 181 (BZ)	NSL	NSL	ppb	83	93 Q	95 Q	91 J	35 Q	130 J	230 U	230 Q	290	660	760 J	310 Q	130 Q	280 U	140 J	190 Q	330 Q	120 Q	330 Q	690 J	2000 U
PCB 182 (BZ)	NSL	NSL	ppb	21 Q	400 U	64 Q	38 Q	250 U	250 U	230 U	500 U	100 Q	260 Q	110 Q	130 Q	380 U	280 U	60 Q	230 Q	2000 U	87 Q	300 Q	610 Q	2000 U
PCB 183 (BZ)	NSL	NSL	ppb	0 C	0 C	0 C	0 C	0 C	0 C	0 C	0 C	0 C	0 C	0 C	0 C	0 C	0 C	0 C	0 C	0 C	0 C	0 C	0 C	0 C
PCB 184 (BZ)	NSL	NSL	ppb	49 U	400 U	360 U	240 U	250 U	250 U	230 U	500 U	240 U	370 U	2000 U	240 U	380 U	280 U	440 U	370 U	2000 U	250 U	390 U	2000 U	2000 U
PCB 185 (BZ)	NSL	NSL	ppb	4100 C	4400 C	5100 C	3900 C	3100 C	6100 C	3100 C	13000 C	9500 C	28000 C	45000 C	18000 C	11000 C	4400 C	10000 C	16000 C	19000 C	8900 C	20000 C	43000 C	26000 C
PCB 186 (BZ)	NSL	NSL	ppb	49 U	400 U	360 U	240 U	250 U	250 U	230 U	500 U	240 U	370 U	2000 U	240 U	380 U	280 U	440 U	370 U	2000 U	250 U	390 U	2000 U	2000 U
PCB 187 (BZ)	NSL	NSL	ppb	6500	7300	8000	6100	4900	9500	4800	21000	16000	42000	75000	29000	17000	7800	16000	28000	32000	16000	35000	67000	41000
PCB 188 (BZ)	NSL	NSL	ppb	49 U	400 U	360 U	240 U	250 U	250 U	230 U	500 U	240 U	370 U	2000 U	240 U	380 U	280 U	440 U	370 U	2000 U	250 U	390 U	2000 U	2000 U
PCB 189 (BZ)	NSL	NSL	ppb	220	280 Q	260 B	190 Q	200 B	380 B	220 B	810	450 Q	1600	2300 Q	980	490 Q	250 B	380 Q	940 B	1000 B	480	1100 Q	2400	1300 Q
PCB 19 (BZ)	NSL	NSL	ppb	4000	6900 Q	5200	2200	4600	2500	1300	5400	4500	12000	30000	3000	14000	2100 Q	6900	15000	59000	7700	26000	130000	40000
PCB 190 (BZ)	NSL	NSL	ppb	1100	1300	1400 Q	1100	930	1800	880	3800	2800	7800	15000	5000	3000	1400	2600	4400	4900 Q	2400	5400	12000	7900
PCB 191 (BZ)	NSL	NSL	ppb	240	200 Q	310 J	230 Q	210 J	340 Q	140 Q	820	580	1600 Q	2800 Q	1000	600 Q	310	480 Q	940 Q	1200 J	550	1300	2600	1400 J
PCB 192 (BZ)	NSL	NSL	ppb	49 U	400 U	360 U	240 U	250 U	250 U	230 U	500 U	240 U	370 U	2000 U	240 U	380 U	280 U	440 U	370 U	2000 U	250 U	390 U	2000 U	2000 U

TABLE 4-5 SEDIMENT RESULTS FOR PCB CONGENERS
PHASE 2 LOWER MAUMEE RIVER SITE CHARACTERIZATION
TOLEDO, OHIO (JUNE 2013)

			Sample Location:	LMR13-05-012	LMR13-13-024		LMR13-14-024		LMR13-34-168		LMR13-42-012	LMR13-43-012					LMR13-44-012	LMR13-45-048				LMR13-46-048			
			Sample Name:	LMR13-05-012	LMR13-13-024	LMR13-13-048	LMR13-14-024	LMR13-14-048	LMR13-34-168	LMR13-34-192	LMR13-42-012	LMR13-43-012	LMR13-43-024	LMR13-43-048	LMR13-43-072		LMR13-45-048	LMR13-45-072	LMR13-45-096	LMR13-45-120	LMR13-46-048	LMR13-46-072	LMR13-46-096	LMR13-46-120
			Sample Depth (ft):	0-1	1-2	2-4	1-2	2-4	12-14	14-15	0-1	0-1	1-2	2-4	4-6	0-1	2-4	4-6	6-8	8-9	2-4	4-6	6-8	8-9
			Date Sampled:	6/11/13	6/18/13	6/18/13	6/17/13	6/17/13	6/15/13	6/15/13	6/15/13	6/12/13	6/12/13	6/12/13	6/12/13	6/12/13	6/14/13	6/14/13	6/14/13	6/14/13	6/12/13	6/12/13	6/12/13	6/12/13
PCB 193 (BZ)	NSL	NSL	ppb	13000 C	14000 C	16000 C	12000 C	9300 C	19000 C	9300 C	40000 C	30000 C	89000 C	150000 C	56000 C	34000 C	14000 C	30000 C	48000 C	65000 C	29000 C	64000 C	130000 C	79000 C
PCB 194 (BZ)	NSL	NSL	ppb	3000	3200	3900	2800	2400	4400	2000	10000	7000	20000	39000	14000	7600	3600	7300	11000	15000	6700	15000	30000	22000
PCB 195 (BZ)	NSL	NSL	ppb	1100	1100	1400	940	850	1500	750	3100	2400	7000	14000	5000	3300	1400	3000	4300	5300	2500	6000	12000	7000 Q
PCB 196 (BZ)	NSL	NSL	ppb	1500	1700	2000	1400	1200	2300	850 Q	5500	3600	9500	19000	6800	3800	1800	3900	5600	7300 Q	3500	8000	15000	10000
PCB 197 (BZ)	NSL	NSL	ppb	80 Q	400 U	92 Q	110 Q	250 U	170 J	49 Q	470 Q	240	540 Q	1100 Q	490	290 J	140 Q	300 J	440	450 Q	280	520 Q	680 Q	1100 J
PCB 198 (BZ)	NSL	NSL	ppb	0 C	0 C	0 C	0 C	0 C	0 C	0 C	0 C	0 C	0 C	0 C	0 C	0 C	0 C	0 C	0 C	0 C	0 C	0 C	0 C	0 Q
PCB 199 (BZ)/200 (IUPAC)	NSL	NSL	ppb	340	350 J	400 Q	310 Q	300 Q	630	220 Q	1400	940	2400	3700	1600	880	480 Q	1100	1600	1700 Q	840	1800	3600	2900
PCB 2 (BZ)	NSL	NSL	ppb	39 B	120 Q	36 Q	100 Q	250 U	220 J	92 Q	370 B	300 Q	720 B	440 B	330 B	62 Q	74 J	110 Q	120 Q	560 J	180 B	350 Q	2200 B	270 Q
PCB 20 (BZ)	NSL	NSL	ppb	0 B	0 B	0 B	0 B	0 B	0 B	0 B	0 B	0 B	0 B	0 B	0 B	0 B	0 B	0 B	0 B	0 B	0 B	0 B	0 B	0 B
PCB 200 (BZ)/201 (IUPAC)	NSL	NSL	ppb	360	420	420	370	290	500	210 Q	1600	1000	2500	4800 Q	1700	880	490	1000	1500	1700 J	900	1700 Q	2800 Q	2600
PCB 201 (BZ)/199 (IUPAC)	NSL	NSL	ppb	3400 C	3800 C	3900 C	3000 C	2600 C	5000 C	2100 C	13000 C	8800 C	23000 C	35000 C	15000 C	7800 C	4100 C	8900 C	12000 C	18000 C	7300 C	17000 C	31000 C	20000 Q
PCB 202 (BZ)	NSL	NSL	ppb	580	730	700 Q	530 Q	510	1000	390 Q	2500	1700	4100	5800	2600	1300	840	1700	2200	2900	1300	3300	5400	4600
PCB 203 (BZ)	NSL	NSL	ppb	2000	2300	2400	1800	1600	3000	1300	8500	5800	14000	23000	9200	4800	2500	5300	7300	11000	4500	11000	20000	13000
PCB 204 (BZ)	NSL	NSL	ppb	49 U	400 U	360 U	240 U	250 U	250 U	230 U	500 U	240 U	370 U	2000 U	240 U	380 U	280 U	440 U	370 U	2000 U	250 U	390 U	2000 U	2000 U
PCB 205 (BZ)	NSL	NSL	ppb	160 B	190 Q	200 Q	140 J	120 J	140 Q	110 Q	400 B	290 Q	1100 B	1700 Q	660 B	400 Q	260 J	420 J	540	630 Q	420 B	930 B	1400 Q	1200 Q
PCB 206 (BZ)	NSL	NSL	ppb	1400	1400	1600	1100 Q	1100	2000	1000	6000	4600	9700	9700	5500	2300	1400	3000	3700	7000	2500	6000	11000	7500 Q
PCB 207 (BZ)	NSL	NSL	ppb	160	190 J	200 J	160 Q	130 Q	190 Q	120 J	750	640	840 Q	990 Q	600	260 J	240 J	370 Q	390	630 Q	250 Q	560 Q	1100 J	1000 J
PCB 208 (BZ)	NSL	NSL	ppb	450	380 Q	440	340	290 Q	570	250	1700	1100	2400	2200	1400	500	490	790 Q	1000	1600 J	600	1400 Q	2400	1700 Q
PCB 209 (BZ)	NSL	NSL	ppb	1100	590 Q	910	660	1100	950	650 Q	3400 Q	1700	2900	2100 Q	2800	820	780	3200	2800	2500 Q	2900	3000	5500	3600
PCB 21 (BZ)	NSL	NSL	ppb	0 B	0 B	0 B	0 B	0 B	0 B	0 B	0 B	0 B	0 B	0 B	0 B	0 B	0 B	0 B	0 B	0 B	0 B	0 B	0 B	0 B
PCB 22 (BZ)	NSL	NSL	ppb	17000 B	36000 B	23000 B	11000 B	18000 B	13000 B	6000 B	29000 B	27000 B	71000 B	140000 B	13000 B	62000 B	7400 B	21000 B	31000 B	230000 B	25000 B	73000 B	500000 B	160000 B
PCB 23 (BZ)	NSL	NSL	ppb	39 J	120 Q	50 Q	240 U	51 Q	51 Q	230 U	500 U	99 Q	210 Q	380 Q	240 U	130 J	43 Q	110 Q	99 Q	950 J	250 U	240 Q	2200 Q	280 Q
PCB 24 (BZ)	NSL	NSL	ppb	410	1700	680	340 Q	380 Q	270 Q	220 J	810	720	1700 Q	2900	250 Q	1400	280 Q	860	1500 Q	9000	870 Q	2600 Q	21000	3200 Q
PCB 25 (BZ)	NSL	NSL	ppb	3000	12000	4600	2900	3200	4200	1600	12000	15000	27000	31000	2500	20000	6500	8700	34000	53000	16000	21000	120000	28000
PCB 26 (BZ)	NSL	NSL	ppb	0 B	0 B	0 B	0 B	0 B	0 B	0 B	0 B	0 B	0 B	0 B	0 B	0 B	0 B	0 B	0 B	0 B	0 B	0 B	0 B	0 B
PCB 27 (BZ)	NSL	NSL	ppb	2300	6100	3500	1700	3000	1800	1100	3700	3200	9300	17000	1800	8600	1400	4500	8000	37000	5100	14000	79000	22000
PCB 28 (BZ)	NSL	NSL	ppb	60000 B	140000 B	89000 B	44000 B	65000 B	49000 B	24000 B	91000 B	92000 B	230000 B	470000 B	45000 B	210000 B	34000 B	93000 B	180000 B	760000 B	110000 B	290000 B	1700000 B	550000 B
PCB 29 (BZ)	NSL	NSL	ppb	8400 B	22000 B	12000 B	6400 B	9100 B	7900 B	3500 B	15000 B	15000 B	35000 B	66000 B	6000 B	31000 B	6700 B	14000 B	44000 B	120000 B	22000 B	37000 B	250000 B	77000 B
PCB 3 (BZ)	NSL	NSL	ppb	180 B	950 B	220 B	580 B	97 Q	1300 B	580 B	1900 B	1500 B	3900 B	1500 Q	1400 B	260 B	180 B	350 Q	490 B	3100 B	540 B	1400 B	11000 B	1100 B
PCB 30 (BZ)	NSL	NSL	ppb	46000 B	91000 B	65000 B	28000 B	54000 B	28000 B	16000 B	62000 B	53000 B	160000 B	350000 B	33000 B	180000 B	16000 B	46000 B	81000 B	570000 B	60000 B	140000 B	1000000 B	420000 B
PCB 31 (BZ)	NSL	NSL	ppb	59000 B	110000 B	82000 B	37000 B	64000 B	42000 B	22000 B	86000 B	81000 B	220000 B	480000 B	43000 B	210000 B	24000 B	62000 B	100000 B	650000 B	81000 B	200000 B	1300000 B	530000 B
PCB 32 (BZ)	NSL	NSL	ppb	12000	30000 B	20000 B	9300 B	16000 B	9200 B	5600 B	19000	17000	49000	100000	11000	50000	6600 B	20000 B	70000 B	180000 B	24000	62000	360000	130000
PCB 33 (BZ)	NSL	NSL	ppb	25000 B	42000 B	31000 B	14000 B	24000 B	17000 B	8500 B	45000 B	38000 B	100000 B	210000 B	20000 B	84000 B	7200 B	22000 B	34000 B	320000 B	28000 B	87000 B	630000 B	240000 B
PCB 34 (BZ)	NSL	NSL	ppb	300	920	510	330	320	420	180 Q	410 J	670	1100 Q	2100 Q	250	1200	360	900	1400	4200	1100	2600	9800	2200
PCB 35 (BZ)	NSL	NSL	ppb	410 Q	1600 Q	710 Q	520	530	450 Q	310	1200	1100	2100 Q	2800 Q	400 Q	1300	450 Q	1100	1600	9000	1400	3200	22000	3700 Q
PCB 36 (BZ)	NSL	NSL	ppb	49 U	400 U	360 U	240 U	250 U	15 Q	23 Q	500 U	240 U	370 U	2000 U	240 U	40 Q	48 Q	440 U	370 U	150 Q	250 U	390 U	2000 U	2000 U
PCB 37 (BZ)	NSL	NSL	ppb	14000 B	35000	21000	10000	15000	11000	5700	19000 B	17000 B	48000 B	93000 B	9900 B	38000 B	5900	19000	31000	180000	23000 B	69000 B	430000 B	130000 B
PCB 38 (BZ)	NSL	NSL	ppb	70	190 J	69 Q	86 J	100 Q	75 Q	29 Q	100 Q	91 Q	300 Q	640 J	87 Q	200 J	52 Q	150 Q	240 Q	770 Q	150 Q	440 Q	1600 J	1200 J
PCB 39 (BZ)	NSL	NSL	ppb	370	730	480 Q	340	380 Q	330 Q	210 J	530 Q	580	1700	3100	380	1200 Q	260 Q	500 Q	790 Q	4200	750	1900	8800	3400 Q
PCB 4 (BZ)	NSL	NSL	ppb	4100	12000 B	5100 B	3600 B	4600 B	4200 B	1900 Q	9400	8100	19000	36000	4600	14000	3000 B	7300 B	8800 B	99000 B	9600	23000	230000	38000
PCB 40 (BZ)	NSL	NSL	ppb	0 C	0 C	0 C	0 C	0 C	0 C	0 C	0 C	0 C	0 C	0 C	0 C	0 C	0 C	0 C	0 C	0 C	0 C	0 C	0 C	0 C
PCB 41 (BZ)	NSL	NSL	ppb	45000 C	61000 C	61000 C	27000 C	44000 C	30000 C	17000 C	44000 C	42000 C	180000 C	300000 C	32000 C	130000 C	16000 C	44000 C	110000 C	330000 C	55000 C	180000 C	700000 C	380000 C
PCB 42 (BZ)	NSL	NSL	ppb	20000	30000	27000	12000	20000	14000	7900	21000	21000	80000	130000	15000	56000	8900	25000	66000	160000	32000	97000	340000	170000
PCB 43 (BZ)	NSL	NSL	ppb	0 C	0 C	0 C	0 C	0 C	0 C	0 C	0 C	0 Q	0 C	0 C	0 C	0 C	0 C	0 Q	0 C	0 C	0 C	0 C	0 C	0 C
PCB 44 (BZ)	NSL	NSL	ppb	0 B	0 B	0 B	0 B	0 B	0 B	0 B	0 B	0 B	0 B	0 B	0 B	0 B	0 B	0 B	0 B	0 B	0 B	0 B	0 B	0 B
PCB 45 (BZ)	NSL	NSL	ppb	0 C	0 C	0 C	0 C	0 C	0 C	0 C	0 C	0 C	0 C	0 C	0 C	0 C	0 C	0 C	0 C	0 C	0 C	0 C	0 C	0 C
PCB 46 (BZ)	NSL	NSL	ppb	5800	7500	7300	3200	5500	3400	2000	5500	5300	22000	41000	3800	17000	2600	7200	26000	44000	8900	32000	110000	49000
PCB 47 (BZ)	NSL	NSL	ppb	75000 B	100000 B	100000 B	49000 B	76000 B	58000 B	32000 B	87000 B	85000 B	340000 B	530000 B	79000 B	210000 B	32000 B	85000 B	260000 B	560000 B	100000 B	310000 B	1100000 B	650000 B
PCB 48 (BZ)	NSL	NSL	ppb	19000 B	26000	24000	10000	18000	11000	6200	17000 B	17000 B	72000 B	120000 B	12000 B	53000 B	6000	17000	31000	150000	21000 B	68000 B	320000 B	160000 B
PCB 49 (BZ)	NSL	NSL	ppb	0 B	0 C	0 C	0 C	0 C	0 C	0 C	0 B	0 B	0 B	0 B	0 B	0 B	0 C	0 C	0 C	0 C	0 B	0 B	0 B	0 B
PCB 5 (BZ)	NSL	NSL	ppb	36 J	190 B	58 Q	61 Q	250 U	150 Q	71 Q	320 Q	240 Q	560 Q	510 Q	280 Q	110 Q	96 Q	180 Q	170 Q	2500 Q	320 Q	900	9200	480 J
PCB 50 (BZ)	NSL	NSL	ppb	0 C	0 C	0 C	0 C	0 C	0 C	0 C	0 C	0 C	0 C	0 C	0 C	0 C	0 C	0 C	0 C	0 C	0 C	0 C	0 C	0 C
PCB 51 (BZ)	NSL	NSL	ppb	16000 C	23000 C	21000 C	9200 C	16000 C	10000 C	5800 C	15000 C	15000 C	59000 C	110000 C	10000 C	48000 C	7400 C	21000 C	75000 C	140000 C	26000 C	91000 C	320000 C	140000 C
PCB 52 (BZ)	NSL	NSL	ppb	86000 B	110000 B	120000 B	61000 B	87000 B	78000 B	41000 B	130000 B	120000 B	460000 B	610000 B	140000 B	230000 B	36000 B	99000 B	280000 B	610000 B	120000 B	360000 B	1200000 B	750000 B
PCB 53 (BZ)	NSL	NSL	ppb	12000 C	16000 C	15000 C	6600 C	12000 C	7900 C	4200 C	11000 C	11000 C	47000 C	82000 C	8500 C	35000 C	5200 C	15000 C	70000 C	93000 C	19000 C	64000 C	210000 C	100000 C
PCB 54 (BZ)	NSL	NSL	ppb	160	260 J	180 Q	100 J	160 Q	250 U	230 U	500 U	220 J	440 Q	1100 J	240 U	660	130 J	260 J	3400	1300 Q	290 Q	690	2800 Q	1600 Q
PCB 55 (BZ)	NSL	NSL	ppb	1200	1500 Q	2000	840	1300 Q	920	490	2600	2400	7200	8500 Q	760 Q	4600	510	370 Q	1500	10000	1100 Q	2400 Q	21000	14000
PCB 56 (BZ)	NSL	NSL	ppb	33000 B	47000	46000	21000	32000	24000	13000	33000 B	32000 B	130000 B	220000 B	28000 B	88000 B	11000	32000	60000	250000	39000 B	130000 B	520000 B	270000 B
PCB 57 (BZ)	NSL	NSL	ppb	310	560 Q	380	240	350	270	180 J	380 Q	440	1400	1600 Q	290	810 Q	180 Q	630	3300	2800	760	1700	7500	3000
PCB 58 (BZ)	NSL	NSL	ppb	79 Q	240 Q	220 J	130 Q	84 Q	400	68 J	210 Q	420 Q	700	600 Q	230 J	540 Q	370 Q	370 J	1300 Q	590 Q	650	1100 Q	1500 Q	970 Q
PCB 59 (BZ)	NSL	NSL	ppb	0 C	0 C	0 C	0 C	0 C	0 C	0 C	0 C	0 C	0 C	0 C	0 C	0 C	0 C	0 C	0 C	0 C	0 C	0 C	0 C	0 C

TABLE 4-5 SEDIMENT RESULTS FOR PCB CONGENERS
PHASE 2 LOWER MAUMEE RIVER SITE CHARACTERIZATION
TOLEDO, OHIO (JUNE 2013)

			Sample Location:	LMR13-05-012	LMR13-13-024		LMR13-14-024		LMR13-34-168		LMR13-42-012	LMR13-43-012				LMR13-44-012	LMR13-45-048				LMR13-46-048			
			Sample Name:	LMR13-05-012	LMR13-13-024	LMR13-13-048	LMR13-14-024	LMR13-14-048	LMR13-34-168	LMR13-34-192	LMR13-42-012	LMR13-43-012	LMR13-43-024	LMR13-43-048	LMR13-43-072	LMR13-44-012	LMR13-45-048	LMR13-45-072	LMR13-45-096	LMR13-45-120	LMR13-46-048	LMR13-46-072	LMR13-46-096	LMR13-46-120
			Sample Depth (ft):	0-1	1-2	2-4	1-2	2-4	12-14	14-15	0-1	0-1	1-2	2-4	4-6	0-1	2-4	4-6	6-8	8-9	2-4	4-6	6-8	8-9
			Date Sampled:	6/11/13	6/18/13	6/18/13	6/17/13	6/17/13	6/15/13	6/15/13	6/15/13	6/12/13	6/12/13	6/12/13	6/12/13	6/12/13	6/14/13	6/14/13	6/14/13	6/14/13	6/12/13	6/12/13	6/12/13	6/12/13
PCB 6 (BZ)	NSL	NSL	ppb	1200 B	5300 B	1200 Q	1500 Q	1000 Q	2200 Q	890 Q	8500 B	8700 B	14000 B	18000 B	2200 B	9500 B	2200 B	3500 B	4400 B	38000 B	6300 B	10000 B	91000 B	14000 B
PCB 60 (BZ)	NSL	NSL	ppb	17000	18000	22000	8900	16000	9500	6100	17000	12000	63000	110000	11000	44000	2300	6000	8500	110000	7000	25000	200000	150000
PCB 61 (BZ)	NSL	NSL	ppb	0 B	0 B	0 B	0 B	0 B	0 B	0 B	0 B	0 B	0 B	0 B	0 B	0 B	0 B	0 B	0 B	0 B	0 B	0 B	0 B	0 B
PCB 62 (BZ)	NSL	NSL	ppb	6000 C	10000 C	8600 C	3900 C	5900 C	4700 C	2500 C	6300 C	6800 C	25000 C	42000 C	4600 C	17000 C	3300 C	9100 C	23000 C	53000 C	11000 C	38000 C	130000 C	52000 C
PCB 63 (BZ)	NSL	NSL	ppb	2600	4200	3600	1800	2600	2300	1200	3000	3100	11000	17000	2600	7000	1400	3500	10000	21000	4200	12000	47000	23000
PCB 64 (BZ)	NSL	NSL	ppb	32000	47000 B	45000 B	21000 B	33000 B	24000 B	14000 B	36000	33000	130000	230000	30000	91000	14000 B	39000 B	75000 B	250000 B	47000	150000	540000	280000
PCB 65 (BZ)	NSL	NSL	ppb	75000 B	100000 B	100000 B	49000 B	76000 B	58000 B	32000 B	87000 B	85000 B	340000 B	530000 B	79000 B	210000 B	32000 B	85000 B	260000 B	560000 B	100000 B	310000 B	1100000 B	650000 B
PCB 66 (BZ)	NSL	NSL	ppb	61000 B	93000 B	89000 B	42000 B	61000 B	51000 B	28000 B	67000 B	63000 B	250000 B	410000 B	62000 B	160000 B	22000 B	73000 B	160000 B	480000 B	82000 B	250000 B	990000 B	530000 B
PCB 67 (BZ)	NSL	NSL	ppb	1800	3700	2400	1400	1800	1500	820	3300	3700	9800	13000	1600	5400	1600	2600	5600	16000	4300	8500	39000	17000
PCB 68 (BZ)	NSL	NSL	ppb	160	400 Q	270 J	220 Q	280 Q	290	170 J	330 Q	500	1100	1300 Q	300 Q	460	340	600 Q	5100	1600 J	790 Q	2100	5200	1900 Q
PCB 69 (BZ)	NSL	NSL	ppb	44000 B	67000 C	62000 C	30000 C	44000 C	37000 C	19000 C	53000 B	55000 B	200000 B	310000 B	48000 B	120000 B	22000 C	57000 C	220000 C	340000 C	71000 B	210000 B	730000 B	380000 B
PCB 7 (BZ)	NSL	NSL	ppb	120 Q	1000 B	170 Q	420 Q	88 Q	520 Q	240 Q	820 Q	880 Q	2200	1700 Q	560 Q	300 Q	240 Q	620 Q	890 Q	7900 B	880 Q	2600	25000	1700 Q
PCB 70 (BZ)	NSL	NSL	ppb	120000 B	170000 B	160000 B	80000 B	120000 B	99000 B	53000 B	160000 B	140000 B	530000 B	810000 B	150000 B	310000 B	41000 B	110000 B	220000 B	870000 B	130000 B	390000 B	1700000 B	1000000 B
PCB 71 (BZ)	NSL	NSL	ppb	45000 C	61000 C	61000 C	27000 C	44000 C	30000 C	17000 C	44000 C	42000 C	180000 C	300000 C	32000 C	130000 C	16000 C	44000 C	110000 C	330000 C	55000 C	180000 C	700000 C	380000 C
PCB 72 (BZ)	NSL	NSL	ppb	390	950	540 Q	580	490 Q	700	280 Q	700	1000	2000	2600	690	1000	510 Q	1000 Q	6100	3500	1500	3600	6100 Q	3300
PCB 73 (BZ)	NSL	NSL	ppb	2800 C	4400 C	3900 C	2000 C	2900 C	2300 C	1200 C	3200 C	2900 Q	12000 C	20000 C	2400 C	8000 C	1300 C	3300 Q	7600 C	25000 C	4800 C	14000 C	53000 C	27000 C
PCB 74 (BZ)	NSL	NSL	ppb	120000 B	170000 B	160000 B	80000 B	120000 B	99000 B	53000 B	160000 B	140000 B	530000 B	810000 B	150000 B	310000 B	41000 B	110000 B	220000 B	870000 B	130000 B	390000 B	1700000 B	1000000 B
PCB 75 (BZ)	NSL	NSL	ppb	6000 C	10000 C	8600 C	3900 C	5900 C	4700 C	2500 C	6300 C	6800 C	25000 C	42000 C	4600 C	17000 C	3300 C	9100 C	23000 C	53000 C	11000 C	38000 C	130000 C	52000 C
PCB 76 (BZ)	NSL	NSL	ppb	120000 B	170000 B	160000 B	80000 B	120000 B	99000 B	53000 B	160000 B	140000 B	530000 B	810000 B	150000 B	310000 B	41000 B	110000 B	220000 B	870000 B	130000 B	390000 B	1700000 B	1000000 B
PCB 77 (BZ)	NSL	NSL	ppb	4900	8400	6800	3600	4700	4200	2400	5200	5600	19000	31000	4100	12000	2300	6100	11000	41000	7400	23000	96000	39000
PCB 78 (BZ)	NSL	NSL	ppb	49 U	400 U	28 Q	240 U	23 Q	250 U	230 U	75 Q	63 Q	240 Q	230 Q	22 Q	380 U	94 Q	95 Q	32 Q	400 Q	18 Q	76 Q	1300 J	1000 J
PCB 79 (BZ)	NSL	NSL	ppb	420 Q	680	720	470 Q	460 Q	610	420 Q	1100	1000	3000	2600 Q	1500	1000	240 Q	660	1800	2400 Q	760 Q	2400 Q	5800	5000
PCB 8 (BZ)	NSL	NSL	ppb	6600 B	19000 B	6100 B	6100 B	5300 B	8800 B	3400 B	27000 B	23000 B	43000 S	74000 B	9300 B	26000 B	4100 B	11000 B	15000 B	180000 B	17000 B	43000 B	390000 B	74000 B
PCB 80 (BZ)	NSL	NSL	ppb	49 U	400 U	360 U	240 U	250 U	250 U	230 U	500 U	240 U	370 U	2000 U	240 U	380 U	280 U	440 U	370 U	2000 U	250 U	390 U	2000 U	2000 U
PCB 81 (BZ)	NSL	NSL	ppb	180	260 Q	360 J	120 Q	200 J	130 J	100 J	160 Q	190 Q	570 Q	870 Q	140 Q	600	89 J	140 Q	180 Q	1600 J	100 Q	620	2500 Q	2100 Q
PCB 82 (BZ)	NSL	NSL	ppb	8000	13000	13000	7300	8100	11000	6000	18000	15000	43000	60000	22000	20000	4300	10000	20000	57000	10000	22000 Q	97000	75000
PCB 83 (BZ)	NSL	NSL	ppb	0 C	0 C	0 C	0 C	0 C	0 C	0 C	0 C	0 C	0 C	0 C	0 C	0 C	0 C	0 C	0 C	0 C	0 C	0 C	0 C	0 C
PCB 84 (BZ)	NSL	NSL	ppb	16000	23000	24000	15000	16000	22000	12000	38000	33000	100000	110000	53000	38000	9200	22000	58000	110000	24000	55000	180000	140000
PCB 85 (BZ)	NSL	NSL	ppb	0 C	0 C	0 C	0 C	0 C	0 C	0 C	0 C	0 C	0 C	0 C	0 C	0 C	0 Q	0 C	0 C	0 C	0 C	0 C	0 C	0 C
PCB 86 (BZ)	NSL	NSL	ppb	0 B	0 B	0 B	0 B	0 B	0 B	0 B	0 B	0 B	0 B	0 B	0 B	0 B	0 B	0 B	0 B	0 B	0 B	0 B	0 B	0 B
PCB 87 (BZ)	NSL	NSL	ppb	34000 B	52000 B	54000 B	35000 B	33000 B	54000 B	29000 B	95000 B	77000 B	220000 B	250000 B	130000 B	80000 B	19000 B	45000 B	100000 B	250000 B	44000 B	100000 B	390000 B	310000 B
PCB 88 (BZ)	NSL	NSL	ppb	0 C	0 C	0 C	0 C	0 C	0 C	0 C	0 C	0 C	0 C	0 C	0 C	0 C	0 C	0 C	0 C	0 C	0 C	0 C	0 C	0 C
PCB 89 (BZ)	NSL	NSL	ppb	1200	1600	2100	1100	1300 Q	1400	730	2000	1500 Q	5300	9200	2000	3600	620	1800	3600	10000	2100	5100	19000	12000
PCB 9 (BZ)	NSL	NSL	ppb	260	1400 B	310 Q	450 Q	230 Q	670 B	300 Q	1700	1200 Q	2800	3300 Q	760 Q	1100 Q	270 Q	770 Q	1000 Q	13000 B	1200 Q	3700	33000	4300
PCB 90 (BZ)	NSL	NSL	ppb	0 C	0 B	0 B	0 B	0 B	0 B	0 B	0 C	0 C	0 C	0 C	0 C	0 C	0 B	0 B	0 B	0 B	0 C	0 C	0 C	0 C
PCB 91 (BZ)	NSL	NSL	ppb	7900 C	12000 C	13000 C	7700 C	8100 C	11000 C	6100 C	18000 C	17000 C	44000 C	55000 C	23000 C	20000 C	5100 C	12000 C	37000 C	58000 C	12000 C	28000 C	98000 C	70000 C
PCB 92 (BZ)	NSL	NSL	ppb	7600	12000	11000	8800	7200	14000	7200	23000	21000	55000	53000	33000	17000	5800	14000	50000	56000	14000	29000	87000	64000
PCB 93 (BZ)	NSL	NSL	ppb	0 Q	0 Q	0 C	0 Q	0 C	0 Q	0 Q	0 Q	0 Q	0 C	0 Q	0 Q	0 Q	0 C	0 Q	0 Q	0 Q	0 Q	0 Q	0 C	0 Q
PCB 94 (BZ)	NSL	NSL	ppb	360	430	630	300	340 Q	400	190 Q	520 Q	400 Q	1600 Q	2600	690	840 Q	210 Q	680	3700	2700	810	1200 Q	6200	2700 Q
PCB 95 (BZ)	NSL	NSL	ppb	41000 B	59000	60000	41000	37000	64000	33000	120000 B	98000 B	290000 B	310000 B	160000 B	94000 B	25000	61000	160000	270000	60000 B	140000 B	430000 B	350000 B
PCB 96 (BZ)	NSL	NSL	ppb	740	850	960	500	700	550 Q	360 Q	1100	980	3200	4500 Q	1000	1900	370 Q	1000	3200	5200	1200	3100	9800	6400
PCB 97 (BZ)	NSL	NSL	ppb	34000 B	52000 B	54000 B	35000 B	33000 B	54000 B	29000 B	95000 B	77000 B	220000 B	250000 B	130000 B	80000 B	19000 B	45000 B	100000 B	250000 B	44000 B	100000 B	390000 B	310000 B
PCB 98 (BZ)	NSL	NSL	ppb	0 C	0 C	0 C	0 C	0 C	0 C	0 C	0 C	0 C	0 C	0 C	0 C	0 C	0 Q	0 C	0 C	0 C	0 Q	0 C	0 C	0 C
PCB 99 (BZ)	NSL	NSL	ppb	27000 C	44000 C	43000 C	29000 C	26000 C	44000 C	23000 C	74000 C	63000 C	170000 C	200000 C	100000 C	64000 C	18000 C	44000 C	130000 C	200000 C	44000 C	100000 C	340000 C	230000 C
Total PCB congeners ND=0	NSL	NSL	ppb	267205	519770	471300	282760	314260	400210	202890	562540	484350	1440780	2069300	625140	749770	190770	477970	1090930	2729500	445200	1107480	4676600	2159700

NOTES:
J = Indicates that the concentration is an estimated value.
U = Indicates the analyte was analyzed for but not detected.
Q =
B = Method blank contamination
C. =
TEC = Threshold effect concentration.
Development and Evaluation of Consensus-Based Sediment
Guidelines for Freshwater Ecosystems (MacDonald et al. 2000).
PEC = Probable effect concentration.
Development and Evaluation of Consensus-Based Sediment
Quality Guidelines for Freshwater Ecosystems (MacDonald et al. 2000).
NSL= No Screening Level
Submitted samples are presented in ascending numerical order.

TABLE 4-5 SEDIMENT RESULTS FOR PCB CONGENERS
PHASE 2 LOWER MAUMEE RIVER SITE CHARACTERIZATION
TOLEDO, OHIO (JUNE 2013)

			Sample Location:	LMR13-53-012	LMR13-58-024	LMR13-59-048	LMR13-63-072				LMR13-69-096		LMR13-82-012		LMR13-86-012					LMR13-87-012	LMR13-91-072		LMR13-93-012	
			Sample Name:	LMR13-53-012	LMR13-58-024	LMR13-59-048	LMR13-63-072	LMR13-63-096	LMR13-63-120	LMR13-63-144	LMR13-69-096	LMR13-69-120	LMR13-82-012	LMR13-82-024	LMR13-86-012	LMR13-86-024	LMR13-86-048	LMR13-86-072	LMR13-86-096	LMR13-87-012	LMR13-91-072	LMR13-91-096	LMR13-93-012	LMR13-93-024
			Sample Depth (ft):	0-1	1-2	2-4	4-6	6-8	8-9	10-12	6-8	8-9	0-1	1-2	0-1	1-2	2-4	4-6	6-8	0-1	4-6	6-8	0-1	1-2
			Date Sampled:	6/20/13	6/20/13	6/20/13	6/13/13	6/13/13	6/13/13	6/13/13	6/20/13	6/20/13	6/17/13	6/17/13	6/18/13	6/18/13	6/18/13	6/18/13	6/18/13	6/18/13	6/13/13	6/13/13	6/13/13	6/13/13	6/13/13
chemical_name	TEC	PEC	result_unit																					
PCB 1 (BZ)	NSL	NSL	ppb	760	2100	490	670 Q	2800	1800	1800	860	450	1900	1700	590	940	1300	1700	8000	170 Q	2600	3800	790	720 Q
PCB 10 (BZ)	NSL	NSL	ppb	320 J	1000 J	330 J	580	1800	290 Q	230 Q	330 J	190 J	290 Q	220 Q	140 Q	240	400 Q	370 Q	2700	130 Q	1500 Q	1800	330 Q	1100 Q
PCB 100 (BZ)	NSL	NSL	ppb	380 J	770 J	430 J	600 Q	1100 Q	670 Q	360 Q	390 J	180 J	140 Q	310 Q	270 C	360 C	350 Q	270 Q	1600 Q	180 Q	890 Q	700 Q	580 Q	1300 Q
PCB 101 (BZ)	NSL	NSL	ppb	36000 J	93000 J	33000 J	38000 C	120000 C	99000 C	84000 C	32000 J	20000 J	55000 B	53000 B	24000 B	25000 B	36000 B	34000 B	140000 B	49000 B	100000 C	130000 C	85000 C	150000 C
PCB 102 (BZ)	NSL	NSL	ppb	1900 J	4000 J	1700 J	1700 C	5500 C	3100 C	2700 C	1500 J	880 J	1400 Q	2100 C	1200 C	1300 C	1500 Q	1400 C	6100 C	1700 C	4800 C	5900 C	3400 C	9000 Q
PCB 103 (BZ)	NSL	NSL	ppb	390	700 J	260 J	280 Q	1100	530 Q	480	210 J	170 J	380	410 Q	320	290	360	200 Q	930	250 Q	830 Q	1100	690 Q	1300 J
PCB 104 (BZ)	NSL	NSL	ppb	250 U	380 U	240 U	240 U	380 U	370 U	380 U	240 U	50 U	250 U	250 U	290 U	240 U	240 U	250 U	380 U	250 U	240 U	380 U	380 U	1900 U
PCB 105 (BZ)	NSL	NSL	ppb	12000	37000	13000	15000 B	48000 B	35000 B	32000 B	12000	7800	17000	20000	8900	9700	13000	13000	55000	18000	38000 B	52000 B	31000 B	77000 B
PCB 106 (BZ)	NSL	NSL	ppb	250 U	380 U	240 U	240 U	380 U	370 U	380 U	240 U	17 J	250 U	250 U	290 U	240 U	240 U	250 U	380 U	50 J	100 J	380 U	63 Q	470 J
PCB 107 (BZ)/109 (IUPAC)	NSL	NSL	ppb	2800	6800	2500	3200	9100	7100	6200	2700	1600	3600	3600	1800	2000	2500	2400	9700	3100	7600	9900	5500	12000
PCB 108 (BZ)/107 (IUPAC)	NSL	NSL	ppb	0 J	0 J	0 J	0 C	0 C	0 C	0 C	0 J	0 J	0 Q	0 C	0 C	0 Q	0 Q	0 Q	0 C	0 C	0 C	0 C	0 C	0 C
PCB 109 (BZ)/108 (IUPAC)	NSL	NSL	ppb	25000 J	67000 J	24000 J	27000 B	90000 B	69000 B	58000 B	23000 J	14000 J	37000 B	37000 B	17000 B	18000 B	27000 B	24000 B	110000 B	34000 B	77000 B	96000 B	62000 B	130000 B
PCB 11 (BZ)	NSL	NSL	ppb	140 J	270 J	99 J	190 B	350 Q	100 Q	150 Q	170 J	110 J	150 Q	70 Q	220 B	140 Q	130 B	130 Q	550 Q	77 Q	450 Q	430 B	220 Q	270 Q
PCB 110 (BZ)	NSL	NSL	ppb	0 J	0 J	0 J	0 B	0 B	0 B	0 B	0 J	0 J	0 C	0 C	0 C	0 C	0 C	0 C	0 C	0 C	0 B	0 B	0 B	0 B
PCB 111 (BZ)	NSL	NSL	ppb	69 J	120 J	72 J	51 J	120 Q	370 U	33 Q	240 U	21 J	250 U	54 Q	290 U	240 U	40 Q	37 Q	82 Q	47 J	74 J	71 Q	59 Q	1900 U
PCB 112 (BZ)	NSL	NSL	ppb	250 U	380 U	240 U	240 U	380 U	370 U	380 U	240 U	50 U	250 U	250 U	290 U	240 U	240 U	250 U	380 U	250 U	240 U	380 U	380 U	1900 U
PCB 113 (BZ)	NSL	NSL	ppb	36000 J	93000 J	33000 J	38000 C	120000 C	99000 C	84000 C	32000 J	20000 J	55000 B	53000 B	24000 B	25000 B	36000 B	34000 B	140000 B	49000 B	100000 C	130000 C	85000 C	150000 C
PCB 114 (BZ)	NSL	NSL	ppb	770	2700	940	1100	3400	2100	1900	790	530	1000	1300	590	640	910	850	4300	1100 Q	2800	3500	1900 Q	5500
PCB 115 (BZ)	NSL	NSL	ppb	43000 J	110000 J	39000 J	45000 B	140000 B	110000 B	95000 B	38000 J	23000 J	64000 C	63000 C	29000 C	29000 C	42000 C	40000 C	160000 C	55000 C	120000 B	150000 B	99000 B	190000 B
PCB 116 (BZ)	NSL	NSL	ppb	7400 J	19000 J	7500 J	8100 C	26000 C	17000 C	15000 C	6800 J	4100 J	9100 C	10000 C	5100 C	5300 C	8100 C	7000 C	30000 C	9200 C	22000 C	27000 C	17000 C	39000 C
PCB 117 (BZ)	NSL	NSL	ppb	7400 J	19000 J	7500 J	8100 C	26000 C	17000 C	15000 C	6800 J	4100 J	9100 C	10000 C	5100 C	5300 C	8100 C	7000 C	30000 C	9200 C	22000 C	27000 C	17000 C	39000 C
PCB 118 (BZ)	NSL	NSL	ppb	34000	87000	31000	39000 B	110000 B	92000 B	80000 B	32000	19000	45000 B	50000 B	23000 B	24000 B	35000 B	32000 B	120000 B	41000 B	94000 B	130000 B	79000 B	150000 B
PCB 119 (BZ)	NSL	NSL	ppb	25000 J	67000 J	24000 J	27000 B	90000 B	69000 B	58000 B	23000 J	14000 J	37000 B	37000 B	17000 B	18000 B	27000 B	24000 B	110000 B	34000 B	77000 B	96000 B	62000 B	130000 B
PCB 12 (BZ)	NSL	NSL	ppb	0 J	0 J	0 J	0 B	0 B	0 B	0 Q	0 J	0 J	0 C	0 C	0 Q	0 Q	0 C	0 C	0 C	0 Q	0 B	0 B	0 B	0 Q
PCB 120 (BZ)	NSL	NSL	ppb	140 J	160 J	90 J	160 Q	390	260 Q	190 J	72 J	67	180 J	210 J	78 Q	91 Q	130 J	56 Q	330 Q	98 Q	200 Q	280 J	83 Q	1900 U
PCB 121 (BZ)	NSL	NSL	ppb	250 U	380 U	240 U	240 U	380 U	370 U	380 U	240 U	50 U	250 U	250 U	290 U	240 U	240 U	250 U	380 U	250 U	240 U	380 U	380 U	1900 U
PCB 122 (BZ)	NSL	NSL	ppb	600	1600	520 J	750	2100	1300	1300	640	380	660 Q	780	450	460	570 Q	580	2700	700 Q	1700	2000	1300	3600
PCB 123 (BZ)	NSL	NSL	ppb	650 J	1700 J	530	710 Q	2600	1100 Q	1300	510 J	280 J	600 B	760 Q	360 B	500 B	590 Q	590 Q	2900 B	830 B	1500 Q	2100 Q	1500	3600
PCB 124 (BZ)	NSL	NSL	ppb	1200 J	3700 J	1300 J	1600 C	4700 C	3700 C	3000 C	1300 J	740 J	1600 Q	1900 C	760 C	780 Q	1000 Q	1100 Q	5500 C	1900 C	3900 C	5100 C	3100 C	6500 C
PCB 125 (BZ)	NSL	NSL	ppb	25000 J	67000 J	24000 J	27000 B	90000 B	69000 B	58000 B	23000 J	14000 J	37000 B	37000 B	17000 B	18000 B	27000 B	24000 B	110000 B	34000 B	77000 B	96000 B	62000 B	130000 B
PCB 126 (BZ)	NSL	NSL	ppb	72 J	180 J	55 J	110 Q	350 J	130 Q	110 Q	100 J	88 J	60 Q	270 Q	46 Q	120 J	95 Q	140 Q	370 J	140 Q	240	430	230 Q	490 J
PCB 127 (BZ)	NSL	NSL	ppb	56 J	66 J	120 J	79 J	240 J	130 Q	160 J	240 U	32 J	93 Q	78 Q	52 J	78 J	61 Q	62 Q	200 Q	75 Q	200 J	190 J	110 Q	430 Q
PCB 128 (BZ)	NSL	NSL	ppb	0 J	0 J	0 J	0 C	0 C	0 C	0 C	0 J	0 J	0 B	0 B	0 B	0 B	0 B	0 B	0 B	0 B	0 C	0 C	0 C	0 C
PCB 129 (BZ)	NSL	NSL	ppb	0 J	0 J	0 J	0 C	0 C	0 C	0 C	0 J	0 J	0 B	0 B	0 B	0 B	0 B	0 B	0 B	0 B	0 C	0 C	0 C	0 C
PCB 13 (BZ)	NSL	NSL	ppb	1500 J	3300 J	1200 J	2000 B	5800 B	1400 B	980 Q	1400 J	800 J	1700 C	1400 C	830 Q	960 Q	1800 C	1700 C	8500 C	300 Q	5300 B	6000 B	4300 B	5800 Q
PCB 130 (BZ)	NSL	NSL	ppb	1800	4100	1600	1800	6200	5200	4300	1800	1200	2400	2800	1100	1300	1500	1700	6300	2600	4700	6600	3700	5300 Q
PCB 131 (BZ)	NSL	NSL	ppb	490	1000 J	320 J	460 Q	1800	1100 Q	1000	410	300	600	650	210 Q	320 Q	320 Q	400	1800	660	1300	1800	1000 Q	1000 Q
PCB 132 (BZ)	NSL	NSL	ppb	8900	24000	7700	10000	32000	27000	24000	8500	5600	14000	14000	5600	6300	8500	8800	31000	14000	24000	34000	20000	33000
PCB 133 (BZ)	NSL	NSL	ppb	440 J	910	280 J	460	1100	860	780	340 J	250 J	470 Q	620	260 Q	270	320	400	1200	600	910	1300	650	860 Q
PCB 134 (BZ)	NSL	NSL	ppb	0 J	0 J	0 J	0 C	0 C	0 C	0 C	0 J	0 J	0 C	0 C	0 C	0 C	0 Q	0 C	0 C	0 C	0 C	0 C	0 C	0 C
PCB 135 (BZ)	NSL	NSL	ppb	0 J	0 J	0 J	0 C	0 C	0 C	0 C	0 J	0 J	0 C	0 C	0 C	0 C	0 C	0 C	0 C	0 C	0 C	0 C	0 C	0 C
PCB 136 (BZ)	NSL	NSL	ppb	3000	8100	2700	3700	9800	9000	7700	3100	1800	4700	4900	2200	2400	2700	3100	11000	5200	8100	11000	7100	11000
PCB 137 (BZ)	NSL	NSL	ppb	1300	3800	1100	1500	5100	4000	3600	1300	800	1900	1900	930	990	1300	1300	5300	1900	4000	5600	2800	3700 Q
PCB 138 (BZ)	NSL	NSL	ppb	25000 J	67000 J	22000 J	28000 C	87000 C	79000 C	70000 C	24000 J	16000 J	40000 B	40000 B	17000 B	19000 B	24000 B	25000 B	91000 B	41000 B	70000 C	96000 C	54000 C	87000 C
PCB 139 (BZ)	NSL	NSL	ppb	0 J	0 J	0 J	0 C	0 C	0 C	0 C	0 J	0 J	0 Q	0 C	0 C	0 C	0 Q	0 C	0 C	0 Q	0 C	0 C	0 Q	0 C
PCB 14 (BZ)	NSL	NSL	ppb	38 J	36 J	240 U	240 U	35 Q	370 U	380 U	240 U	50 U	250 U	15 Q	290 U	240 U	240 U	18 Q	380 U	250 U	27 Q	29 Q	380 U	1900 U
PCB 140 (BZ)	NSL	NSL	ppb	580 J	1500 J	420 J	600 C	1800 C	1400 C	1200 C	540 J	300 J	720 Q	750 C	330 C	400 C	370 Q	450 C	2000 C	750 Q	1400 C	2100 C	1000 Q	2100 C
PCB 141 (BZ)	NSL	NSL	ppb	3800	11000	3700	4700	14000	12000	11000	4000	2400	6600	6500	2800	3300	4100	4100	16000	7200	11000	15000	9600	16000
PCB 142 (BZ)	NSL	NSL	ppb	250 U	380 U	240 U	240 U	380 U	370 U	380 U	240 U	50 U	250 U	250 U	290 U	240 U	240 U	250 U	380 U	250 U	240 U	380 U	380 U	1900 U
PCB 143 (BZ)	NSL	NSL	ppb	1400 J	4400 J	1400 J	1800 C	5400 C	4700 C	3800 C	1300 J	1000 J	2300 C	2500 C	1100 C	1100 C	1200 Q	1500 C	5400 C	2400 C	4300 C	6000 C	3600 C	5700 C

TABLE 4-5 SEDIMENT RESULTS FOR PCB CONGENERS
PHASE 2 LOWER MAUMEE RIVER SITE CHARACTERIZATION
TOLEDO, OHIO (JUNE 2013)

			Sample Location:	LMR13-53-012	LMR13-58-024	LMR13-59-048	LMR13-63-072				LMR13-69-096		LMR13-82-012		LMR13-86-012					LMR13-87-012	LMR13-91-072		LMR13-93-012	
			Sample Name:	LMR13-53-012	LMR13-58-024	LMR13-59-048	LMR13-63-072	LMR13-63-096	LMR13-63-120	LMR13-63-144	LMR13-69-096	LMR13-69-120	LMR13-82-012	LMR13-82-024	LMR13-86-012	LMR13-86-024	LMR13-86-048	LMR13-86-072	LMR13-86-096	LMR13-87-012	LMR13-91-072	LMR13-91-096	LMR13-93-012	LMR13-93-024
			Sample Depth (ft):	0-1	1-2	2-4	4-6	6-8	8-9	10-12	6-8	8-9	0-1	1-2	0-1	1-2	2-4	4-6	6-8	0-1	4-6	6-8	0-1	1-2
			Date Sampled:	6/20/13	6/20/13	6/20/13	6/13/13	6/13/13	6/13/13	6/13/13	6/20/13	6/20/13	6/17/13	6/17/13	6/18/13	6/18/13	6/18/13	6/18/13	6/18/13	6/18/13	6/13/13	6/13/13	6/13/13	6/13/13	
PCB 144 (BZ)	NSL	NSL	ppb	880 J	3100	920	1300 Q	3400	2800	2300 Q	1100	660	1600	1700	840	810 Q	950	870 Q	4000 Q	1900	3100	3800	2100	4000
PCB 145 (BZ)	NSL	NSL	ppb	250 U	380 U	240 U	240 U	380 U	370 U	380 U	240 U	50 U	250 U	250 U	290 U	240 U	240 U	250 U	380 U	250 U	240 U	110 Q	380 U	1900 U
PCB 146 (BZ)	NSL	NSL	ppb	3700 B	8100 B	3000 B	3700	10000	9400	7900	3200 B	2100 B	5100	5000	2500	2600	3000	3200	11000	5000	8200	11000	6300	10000
PCB 147 (BZ)	NSL	NSL	ppb	0 J	0 J	0 J	0 C	0 C	0 C	0 C	0 J	0 J	0 B	0 B	0 B	0 B	0 B	0 B	0 B	0 B	0 C	0 C	0 C	0 C
PCB 148 (BZ)	NSL	NSL	ppb	250 U	380 U	240 U	240 U	63 Q	370 U	380 U	240 U	50 U	250 U	250 U	290 U	240 U	240 U	250 U	380 U	250 U	240 U	380 U	380 U	1900 U
PCB 149 (BZ)	NSL	NSL	ppb	18000 J	46000 J	15000 J	20000 C	56000 C	51000 C	45000 C	17000 J	11000 J	27000 B	27000 B	12000 B	13000 B	17000 B	17000 B	57000 B	28000 B	45000 C	62000 C	39000 C	60000 C
PCB 15 (BZ)	NSL	NSL	ppb	7700 B	24000 B	9300 B	16000 B	45000 B	10000 B	7500 B	9800 B	5400 B	6300 B	6300 B	4800 B	5800 B	12000 B	11000 B	64000 B	3500 B	38000 B	45000 B	11000 B	32000 B
PCB 150 (BZ)	NSL	NSL	ppb	250 U	380 U	240 U	240 U	85 J	370 U	60 J	240 U	50 U	250 U	250 U	290 U	240 U	240 U	250 U	380 U	250 U	60 Q	79 Q	380 U	1900 U
PCB 151 (BZ)	NSL	NSL	ppb	7700 J	19000 J	6600 J	9000 C	23000 C	20000 C	18000 C	7300 J	4400 J	12000 C	12000 C	5500 C	6700 C	6900 C	7600 C	24000 C	13000 C	19000 C	25000 C	15000 C	27000 C
PCB 152 (BZ)	NSL	NSL	ppb	250 U	380 U	240 U	240 U	76 Q	370 U	380 U	240 U	50 U	52 Q	250 U	290 U	240 U	240 U	250 U	180 J	250 U	42 Q	380 U	380 U	1900 U
PCB 153 (BZ)	NSL	NSL	ppb	0 J	0 J	0 J	0 C	0 C	0 C	0 C	0 J	0 J	0 B	0 B	0 B	0 B	0 B	0 B	0 B	0 B	0 C	0 C	0 C	0 C
PCB 154 (BZ)	NSL	NSL	ppb	250 J	600	210 J	340	510 Q	500	410	130 J	120	340 Q	390 Q	67 Q	210 J	180 Q	140 Q	590 Q	250 Q	490	420 Q	320 Q	650 J
PCB 155 (BZ)	NSL	NSL	ppb	250 U	380 U	240 U	240 U	380 U	370 U	380 U	240 U	50 U	250 U	250 U	290 U	240 U	240 U	250 U	380 U	250 U	240 U	380 U	380 U	1900 U
PCB 156 (BZ)	NSL	NSL	ppb	0 J	0 J	0 J	0 C	0 C	0 C	0 C	0 J	0 J	0 C	0 C	0 C	0 C	0 Q	0 C	0 C	0 C	0 C	0 C	0 C	0 C
PCB 157 (BZ)	NSL	NSL	ppb	3000 J	8700 J	2900 J	3500 C	12000 C	10000 C	8900 C	3200 J	1900 J	4800 C	4900 C	2100 C	2300 C	2600 Q	3000 C	12000 C	4900 C	9300 C	13000 C	7000 C	11000 C
PCB 158 (BZ)	NSL	NSL	ppb	2400	6600	2100	2800	8800	7500	6700	2400	1500	3800	3700	1700	1600	2300	2200	9100	3900	7200	10000	5400	9300
PCB 159 (BZ)	NSL	NSL	ppb	120 J	310 J	100 J	200 Q	500	390	290 Q	140 J	81 J	170 Q	190 J	94 Q	170 J	180 J	120 Q	340 Q	260 Q	370	440 Q	330 J	380 Q
PCB 16 (BZ)	NSL	NSL	ppb	8800	44000	14000	19000	64000	15000	12000	12000	5900	7300	12000	6700	7100	13000	11000	82000	8200	63000	68000	22000	100000
PCB 160 (BZ)	NSL	NSL	ppb	25000 J	67000 J	22000 J	28000 C	87000 C	79000 C	70000 C	24000 J	16000 J	40000 B	40000 B	17000 B	19000 B	24000 B	25000 B	91000 B	41000 B	70000 C	96000 C	54000 C	87000 C
PCB 161 (BZ)	NSL	NSL	ppb	250 U	380 U	240 U	240 U	380 U	370 U	380 U	240 U	50 U	250 U	250 U	290 U	240 U	240 U	250 U	380 U	250 U	240 U	380 U	380 U	1900 U
PCB 162 (BZ)	NSL	NSL	ppb	86 J	220 J	56 J	110 J	350 J	220 Q	210 Q	170 J	47 J	110 J	140 J	88 J	65 Q	82 Q	81 Q	350 J	130 Q	220 Q	410 Q	220 J	1900 U
PCB 163 (BZ)	NSL	NSL	ppb	25000 J	67000 J	22000 J	28000 C	87000 C	79000 C	70000 C	24000 J	16000 J	40000 B	40000 B	17000 B	19000 B	24000 B	25000 B	91000 B	41000 B	70000 C	96000 C	54000 C	87000 C
PCB 164 (BZ)	NSL	NSL	ppb	1700	4500	1400	1900	5500	4800	4300	1600	990	2600	2600	1100	1300	1600	1700	5900	2800	4400	6100	3400	5500
PCB 165 (BZ)	NSL	NSL	ppb	250 U	380 U	240 U	240 U	100 Q	370 U	25 Q	240 U	50 U	250 U	250 U	290 U	240 U	240 U	250 U	380 U	250 U	240 U	380 U	380 U	1900 U
PCB 166 (BZ)	NSL	NSL	ppb	4100 J	11000 J	3600 J	4800 C	14000 C	13000 C	11000 C	3900 J	2600 J	6200 B	6600 B	2800 B	3100 B	3800 B	4100 B	15000 B	6600 B	12000 C	16000 C	8700 C	15000 C
PCB 167 (BZ)	NSL	NSL	ppb	890	2500	680 J	1100	3300	3000	2500	910	620	1500	1500	640	710	850	900	3700	1500	2700	4000	2000	3800
PCB 168 (BZ)	NSL	NSL	ppb	18000 J	45000 J	15000 J	20000 C	57000 C	52000 C	47000 C	17000 J	11000 J	28000 B	26000 B	12000 B	14000 B	18000 B	17000 B	58000 B	29000 B	46000 C	62000 C	37000 C	62000 C
PCB 169 (BZ)	NSL	NSL	ppb	59 J	72 J	240 U	37 Q	82 J	370 U	380 U	24 J	21 J	62 Q	99 B	60 B	36 Q	240 U	17 Q	120 Q	100 B	52 Q	68 Q	59 Q	120 Q
PCB 17 (BZ)	NSL	NSL	ppb	14000	55000	17000	24000	77000	17000	14000	15000	7600	9400	14000	11000	9600	18000	14000	98000	9100	75000	81000	26000	110000
PCB 170 (BZ)	NSL	NSL	ppb	4300	10000	3700	4100	12000	11000	10000	4200	2500	5900	6300	3100	3600	4000	3800	12000	7200	9900	13000	7800	16000
PCB 171 (BZ)	NSL	NSL	ppb	0 J	0 J	0 J	0 C	0 C	0 C	0 C	0 J	0 J	0 C	0 C	0 C	0 C	0 C	0 C	0 C	0 C	0 C	0 C	0 C	0 Q
PCB 172 (BZ)	NSL	NSL	ppb	740	1700	610	690 Q	2000	1500 Q	1500 Q	830	440	910	1100	610	690	610 Q	590	1800 Q	1300	1600	2300	1200 Q	2400
PCB 173 (BZ)	NSL	NSL	ppb	1400 J	3100 J	1300 J	1600 C	3800 C	3700 C	3200 C	1300 J	810 J	2000 C	2100 C	990 C	1100 C	1200 C	1200 C	4200 C	2400 C	3100 C	4200 C	2600 C	4300 Q
PCB 174 (BZ)	NSL	NSL	ppb	4100	9500	3600	3900	10000	9900	9300	3900	2400	5400	6100	2800 Q	3800	3600	3400	11000	7400	9200	12000	7500	14000
PCB 175 (BZ)	NSL	NSL	ppb	150 J	450	180 J	190 Q	490	400	400	200 J	63 J	220 J	240 J	150 Q	170 Q	160 Q	110 Q	560	330	430	470 Q	330 J	480 Q
PCB 176 (BZ)	NSL	NSL	ppb	520	1200	520 J	500	1400	1100	1100	540	320	720	750	340 Q	480	470	430	1500	900	1100	1500	960	1700 Q
PCB 177 (BZ)	NSL	NSL	ppb	2400	5500	2200	2400	6000	5500	5200	2200	1400	3100	3600	1700	2000	2100	1800	6400	3900	5100	6800	4500	7400
PCB 178 (BZ)	NSL	NSL	ppb	830 J	1900	780	820	1800 Q	1700	1600	770	490	1000	1300	620 Q	750	740	570	2100	1400	1700	2000 Q	1500	2200
PCB 179 (BZ)	NSL	NSL	ppb	1700	3900	1500	1700	4500	4000	3600	1700	1000	2400	2700	1300	1600	1700	1500	4800	3000	3700	4800	3200	5600 Q
PCB 18 (BZ)	NSL	NSL	ppb	0 J	0 J	0 J	0 B	0 B	0 B	0 B	0 J	0 J	0 B	0 B	0 B	0 B	0 B	0 B	0 B	0 B	0 B	0 B	0 B	0 B
PCB 180 (BZ)	NSL	NSL	ppb	0 J	0 J	0 J	0 C	0 C	0 C	0 C	0 J	0 J	0 C	0 C	0 C	0 C	0 C	0 C	0 C	0 C	0 C	0 C	0 C	0 C
PCB 181 (BZ)	NSL	NSL	ppb	250 U	150 J	240 U	80 J	200 Q	140 J	160 Q	240 U	22 J	90 Q	95 J	290 U	240 U	240 U	250 U	380 U	58 Q	160 J	230 J	110 Q	1900 U
PCB 182 (BZ)	NSL	NSL	ppb	64 J	94 J	240 U	240 U	110 J	68 Q	98 J	240 U	30 J	32 Q	250 U	290 U	50 Q	240 U	250 U	380 U	250 U	110 Q	110 J	35 Q	1900 U
PCB 183 (BZ)	NSL	NSL	ppb	0 J	0 J	0 J	0 C	0 C	0 C	0 C	0 J	0 J	0 C	0 C	0 C	0 C	0 Q	0 C	0 C	0 C	0 C	0 C	0 C	0 C
PCB 184 (BZ)	NSL	NSL	ppb	250 U	380 U	240 U	240 U	380 U	370 U	380 U	240 U	50 U	250 U	250 U	290 U	240 U	240 U	250 U	380 U	250 U	240 U	380 U	380 U	1900 U
PCB 185 (BZ)	NSL	NSL	ppb	2900 J	6800 J	2500 J	2900 C	7300 C	6900 C	6200 C	2900 J	1600 J	4000 C	4200 C	2200 C	2600 C	2300 Q	2400 C	8200 C	5000 C	6400 C	8300 C	5500 C	9800 C
PCB 186 (BZ)	NSL	NSL	ppb	250 U	380 U	240 U	240 U	380 U	370 U	380 U	240 U	50 U	250 U	250 U	290 U	240 U	240 U	250 U	380 U	250 U	240 U	380 U	380 U	1900 U
PCB 187 (BZ)	NSL	NSL	ppb	4800	10000	4300	4500	12000	11000	10000	4400	2800	6700	7300	3800	4500	4500	4100	12000	8200	10000	13000	8900	16000
PCB 188 (BZ)	NSL	NSL	ppb	250 U	380 U	240 U	240 U	380 U	370 U	380 U	240 U	50 U	250 U	250 U	290 U	240 U	240 U	250 U	380 U	250 U	240 U	380 U	380 U	1900 U
PCB 189 (BZ)	NSL	NSL	ppb	230 J	470	160 J	240 Q	520	430	350 J	180 J	97	200 B	270 B	130 B	99 Q	140 Q	130 B	470 B	290 B	370 Q	590	370 J	720 J
PCB 19 (BZ)	NSL	NSL	ppb	2500	10000	3400	4400	15000	3100	2700	2700	1400	1700	2800	2000	1700	2800 Q	2300	18000	2100	14000	15000	5900	25000
PCB 190 (BZ)	NSL	NSL	ppb	700 J	1900 B	670 B	870	2100	1900	1600 Q	750 B	450 B	1000	1200	610	710 Q	700	650	2500	1500	1800	2500	1600	3400
PCB 191 (BZ)	NSL	NSL	ppb	150 J	370 J	180 J	170 Q	510 Q	420 Q	290 Q	190 J	120	200 J	240 Q	99 Q	110 Q	120 Q	100 Q	480 Q	250 Q	410	530	390	470 Q
PCB 192 (BZ)	NSL	NSL	ppb	250 U	380 U	240 U	240 U	380 U	370 U	380 U	240 U	50 U	250 U	250 U	290 U	240 U	240 U	250 U	380 U	250 U	240 U	380 U	380 U	1900 U

TABLE 4-5 SEDIMENT RESULTS FOR PCB CONGENERS
PHASE 2 LOWER MAUMEE RIVER SITE CHARACTERIZATION
TOLEDO, OHIO (JUNE 2013)

			Sample Location:	LMR13-53-012	LMR13-58-024	LMR13-59-048	LMR13-63-072				LMR13-69-096		LMR13-82-012		LMR13-86-012					LMR13-87-012	LMR13-91-072		LMR13-93-012	
			Sample Name:	LMR13-53-012	LMR13-58-024	LMR13-59-048	LMR13-63-072	LMR13-63-096	LMR13-63-120	LMR13-63-144	LMR13-69-096	LMR13-69-120	LMR13-82-012	LMR13-82-024	LMR13-86-012	LMR13-86-024	LMR13-86-048	LMR13-86-072	LMR13-86-096	LMR13-87-012	LMR13-91-072	LMR13-91-096	LMR13-93-012	LMR13-93-024
			Sample Depth (ft):	0-1	1-2	2-4	4-6	6-8	8-9	10-12	6-8	8-9	0-1	1-2	0-1	1-2	2-4	4-6	6-8	0-1	4-6	6-8	0-1	1-2
			Date Sampled:	6/20/13	6/20/13	6/20/13	6/13/13	6/13/13	6/13/13	6/13/13	6/20/13	6/20/13	6/17/13	6/17/13	6/18/13	6/18/13	6/18/13	6/18/13	6/18/13	6/18/13	6/13/13	6/13/13	6/13/13	6/13/13	6/13/13
PCB 193 (BZ)	NSL	NSL	ppb	8400 J	21000 J	7700 J	8700 C	22000 C	22000 C	20000 C	8300 J	5100 J	12000 C	13000 C	6500 C	7700 C	8400 C	7400 C	24000 C	16000 C	19000 C	26000 C	16000 C	31000 C
PCB 194 (BZ)	NSL	NSL	ppb	2000 J	5100	1900	2200	4900	4700	4400	2000 J	1200	2700 Q	3200	1800	2200	2000	1900	5200	3800	4400	5800	4200	6900 Q
PCB 195 (BZ)	NSL	NSL	ppb	710 J	2100	670	900	1800	1600	1400 Q	790	430 J	940	1200	600 Q	850	680 Q	670	2200	1400	1600	2000	1700	3300
PCB 196 (BZ)	NSL	NSL	ppb	1200	2300	990	1200	2100 Q	2300	2200	910 J	640	1300	1600	840	1000 Q	1000	950	2600	1900 Q	2300	2900	1900 Q	3600
PCB 197 (BZ)	NSL	NSL	ppb	57 J	160 J	66 J	94 Q	170 Q	160 J	160 Q	100 J	33 J	82 Q	130 J	55 Q	44 Q	66 J	42 J	100 Q	97 Q	160 J	180 Q	380 U	140 Q
PCB 198 (BZ)	NSL	NSL	ppb	0 J	0 J	0 J	0 C	0 C	0 C	0 C	0 J	0 J	0 C	0 C	0 Q	0 C	0 C	0 C	0 C	0 C	0 C	0 C	0 C	0 C
PCB 199 (BZ)/200 (IUPAC)	NSL	NSL	ppb	340	570	230 J	330	590	550	450	220 J	150	290	380	230 J	230 Q	230 J	170 J	670	400 Q	510 Q	680	540	810 Q
PCB 2 (BZ)	NSL	NSL	ppb	140 J	320 J	59 J	150 B	490 B	270 B	210 B	160 J	88 J	240 J	240 J	55 Q	170 J	160 J	230 J	1100	60 J	410 B	590 B	120 B	1900 U
PCB 20 (BZ)	NSL	NSL	ppb	0 J	0 J	0 J	0 B	0 B	0 B	0 B	0 J	0 J	0 B	0 B	0 B	0 B	0 B	0 B	0 B	0 B	0 B	0 B	0 B	0 B
PCB 200 (BZ)/201 (IUPAC)	NSL	NSL	ppb	230 J	580	270	300	650	540	470	220 J	160	360	410	180 Q	240 Q	220 J	180 Q	630	420	530 Q	780	540 Q	870 Q
PCB 201 (BZ)/199 (IUPAC)	NSL	NSL	ppb	2900 J	5300 J	2100 J	2500 C	5700 C	5400 C	4500 C	2100 J	1400 J	3300 C	3900 C	1600 Q	2300 C	2400 C	2000 C	6000 C	4100 C	5300 C	6600 C	4300 C	8700 C
PCB 202 (BZ)	NSL	NSL	ppb	420 J	890 J	280 J	440	1100	930	720 Q	430 J	270	580	670	380	450 Q	420	400	970	800	1000	1100 Q	770	1200 Q
PCB 203 (BZ)	NSL	NSL	ppb	1700	3300	1100	1600	3800	3100	2900	1300	840	2000	2300	1200	1600	1000 Q	1200	3600	2600	3200	4300	2800	4200 Q
PCB 204 (BZ)	NSL	NSL	ppb	250 U	380 U	240 U	240 U	380 U	370 U	380 U	240 U	50 U	250 U	250 U	290 U	240 U	240 U	250 U	380 U	250 U	240 U	380 U	380 U	1900 U
PCB 205 (BZ)	NSL	NSL	ppb	70 J	260 J	100 J	170 B	220 Q	190 Q	220 Q	130 J	52 J	110 Q	150 Q	78 Q	120 Q	79 Q	90 Q	360 Q	180 Q	300 B	290 Q	190 B	460 B
PCB 206 (BZ)	NSL	NSL	ppb	1100	2000	800	1000	2500	2100	1700	680 J	570	1200	2100	1200	910	800	740	2400	1500	2200	2700	1800	2500
PCB 207 (BZ)	NSL	NSL	ppb	140 J	230 J	100 J	99 Q	290 Q	230 J	180 Q	79 J	59 J	120 Q	230 Q	170 J	110 J	110 Q	100 J	230 Q	200 J	290	330 J	140 Q	330 Q
PCB 208 (BZ)	NSL	NSL	ppb	310	580	180 J	360	690	600 Q	400	320	160	400	660	480	260	140 Q	180 Q	500 Q	340 Q	610	730	510	650 Q
PCB 209 (BZ)	NSL	NSL	ppb	460 J	1200	410	580	810	810 Q	690 Q	470 J	350	490	2600	3200	360	370 Q	280	710	1400 Q	850	890	710 Q	850 Q
PCB 21 (BZ)	NSL	NSL	ppb	0 J	0 J	0 J	0 B	0 B	0 B	0 B	0 J	0 J	0 B	0 B	0 B	0 B	0 B	0 B	0 B	0 B	0 B	0 B	0 B	0 B
PCB 22 (BZ)	NSL	NSL	ppb	11000	46000	16000	22000 B	70000 B	17000 B	15000 B	14000	7400	10000 B	14000 B	8400 B	8800 B	16000 B	14000 B	85000 B	8200 B	64000 B	69000 B	27000 B	110000 B
PCB 23 (BZ)	NSL	NSL	ppb	250 U	200 J	44 J	240 U	370 J	46 Q	31 Q	82 J	21 J	250 U	34 Q	290 U	240 U	45 J	42 Q	550	250 U	300	240 Q	79 Q	1900 U
PCB 24 (BZ)	NSL	NSL	ppb	180 J	1500 J	610	800	2700	430	290 Q	490 J	280	160 Q	380	280 Q	310 Q	560 Q	400 Q	3900 Q	260	2700	3200	770	2600
PCB 25 (BZ)	NSL	NSL	ppb	5600	11000	4000	6600	18000	3900	3100	4900	2800	3700	4500	3300	2600	4400	3900	22000	1600	16000	18000	19000	31000
PCB 26 (BZ)	NSL	NSL	ppb	0 J	0 J	0 J	0 B	0 B	0 B	0 B	0 J	0 J	0 B	0 B	0 B	0 B	0 B	0 B	0 B	0 B	0 B	0 B	0 B	0 B
PCB 27 (BZ)	NSL	NSL	ppb	2000	6700	2400	3400	10000	2500	2000	2200	1200	1200	1900	1400	1300	2600	1900	13000	1400	9400	11000	3700	13000
PCB 28 (BZ)	NSL	NSL	ppb	49000 J	150000 J	59000 J	84000 B	240000 B	67000 B	57000 B	56000 J	29000 J	37000 B	50000 B	34000 B	34000 B	64000 B	53000 B	290000 B	32000 B	210000 B	240000 B	100000 B	340000 B
PCB 29 (BZ)	NSL	NSL	ppb	10000 J	23000 J	8600 J	14000 B	39000 B	9200 B	7600 B	8900 J	5300 J	5600 B	7000 B	6000 B	5400 B	9200 B	7800 B	47000 B	4400 B	34000 B	38000 B	16000 B	48000 B
PCB 3 (BZ)	NSL	NSL	ppb	640	1400	390	600 Q	2300 B	1500 B	1200 B	740	380	1500 B	1200 B	390 B	750 B	850 Q	1500 B	6200 B	200 B	1800 Q	2900 B	630 B	510 B
PCB 30 (BZ)	NSL	NSL	ppb	26000 J	120000 J	37000 J	49000 B	160000 B	42000 B	36000 B	30000 J	17000 J	22000 B	34000 B	19000 B	19000 B	38000 B	29000 B	200000 B	26000 B	150000 B	170000 B	67000 B	280000 B
PCB 31 (BZ)	NSL	NSL	ppb	41000 B	140000 B	50000 B	69000 B	210000 B	58000 B	52000 B	45000 B	24000 B	34000 B	47000 B	28000 B	29000 B	52000 B	44000 B	250000 B	30000 B	180000 B	200000 B	95000 B	350000 B
PCB 32 (BZ)	NSL	NSL	ppb	9400	35000	12000	16000	48000	13000	11000	10000	5300	6500 B	11000 B	7300 B	6300 B	12000 B	9100 B	63000 B	7700 B	47000	49000	22000	80000
PCB 33 (BZ)	NSL	NSL	ppb	16000 J	66000 J	23000 J	30000 B	100000 B	24000 B	19000 B	20000 J	9800 J	15000 B	19000 B	12000 B	13000 B	24000 B	20000 B	120000 B	11000 B	99000 B	100000 B	32000 B	150000 B
PCB 34 (BZ)	NSL	NSL	ppb	380	1100	450	680	1800	430 Q	380	420	230	260	360	300	230 Q	420	280 Q	1700	140 Q	1400	1700	710	2000 Q
PCB 35 (BZ)	NSL	NSL	ppb	580	1700	660	880 Q	3000	610 Q	550	650	380	330 Q	420	360	300 Q	760	610	3800	310	2500	2800	890	2100 Q
PCB 36 (BZ)	NSL	NSL	ppb	29 J	39 J	240 U	32 Q	380 U	370 U	380 U	240 U	6.6 J	250 U	250 U	15 Q	240 U	240 U	29 Q	380 U	250 U	240 U	380 U	47 Q	1900 U
PCB 37 (BZ)	NSL	NSL	ppb	11000 B	37000 B	13000 B	20000 B	61000 B	16000 B	14000 B	14000 B	7600 B	7800	10000	7700	8100	15000	13000	75000	7300	50000 B	61000 B	18000 B	65000 B
PCB 38 (BZ)	NSL	NSL	ppb	250 U	170 J	46 J	110 Q	240 Q	67 Q	61 Q	64 J	25 J	32 Q	58 Q	41 Q	56 Q	76 Q	48 Q	320 Q	68 Q	200 Q	140 Q	75 Q	480 Q
PCB 39 (BZ)	NSL	NSL	ppb	330	980	420	510	1300	380 Q	380	280 J	180	210 Q	350 Q	270 J	250	410	300 Q	1300 Q	260	1100	1300	640	2200 Q
PCB 4 (BZ)	NSL	NSL	ppb	4600	18000	5400	8400	30000	4800	4300	4900	2500	3700 B	4200 B	3200 B	3000 Q	5500 B	5500 B	43000 B	2100 Q	28000	29000	6300	28000
PCB 40 (BZ)	NSL	NSL	ppb	0 J	0 J	0 J	0 C	0 C	0 C	0 C	0 J	0 J	0 C	0 C	0 C	0 C	0 C	0 C	0 C	0 C	0 C	0 C	0 C	0 C
PCB 41 (BZ)	NSL	NSL	ppb	25000 J	77000 J	31000 J	34000 C	100000 C	42000 C	38000 C	24000 J	15000 J	20000 C	31000 C	18000 C	18000 C	31000 C	24000 C	120000 C	23000 C	85000 C	110000 C	67000 C	210000 C
PCB 42 (BZ)	NSL	NSL	ppb	14000	36000	15000	17000	50000	20000	19000	12000	7800	10000	15000	9500	8800	15000	12000	56000	10000	42000	50000	32000	88000
PCB 43 (BZ)	NSL	NSL	ppb	0 J	0 J	0 J	0 C	0 C	0 C	0 C	0 J	0 J	0 C	0 C	0 C	0 C	0 C	0 C	0 C	0 C	0 C	0 C	0 C	0 C
PCB 44 (BZ)	NSL	NSL	ppb	0 J	0 J	0 J	0 B	0 B	0 B	0 B	0 J	0 J	0 B	0 B	0 B	0 B	0 B	0 B	0 B	0 B	0 B	0 B	0 B	0 B
PCB 45 (BZ)	NSL	NSL	ppb	0 J	0 J	0 J	0 C	0 C	0 C	0 C	0 J	0 J	0 C	0 C	0 C	0 C	0 C	0 C	0 C	0 C	0 C	0 C	0 C	0 C
PCB 46 (BZ)	NSL	NSL	ppb	3300	9900	4200	4300	13000	4700	4700	3000	1900	2200	4100	2400	2300	3700	2800	15000	3000	12000	13000	8700	28000
PCB 47 (BZ)	NSL	NSL	ppb	48000 J	130000 J	53000 J	60000 B	170000 B	80000 B	74000 B	45000 J	27000 J	41000 B	58000 B	35000 B	32000 B	54000 B	43000 B	200000 B	43000 B	140000 B	180000 B	120000 B	350000 B
PCB 48 (BZ)	NSL	NSL	ppb	10000	34000	14000	15000 B	48000 B	17000 B	15000 B	10000	6200	8000	12000	7500	8000	14000	10000	55000	9200	41000 B	48000 B	26000 B	82000 B
PCB 49 (BZ)	NSL	NSL	ppb	0 J	0 J	0 J	0 B	0 B	0 B	0 B	0 J	0 J	0 C	0 C	0 C	0 C	0 C	0 C	0 C	0 C	0 B	0 B	0 B	0 B
PCB 5 (BZ)	NSL	NSL	ppb	130 J	680	240 J	210 Q	1100	220 Q	160 Q	180 J	110	160 Q	140 Q	93 Q	150 Q	200 Q	280 Q	1600 Q	52 Q	1200	1300	180 Q	250 Q
PCB 50 (BZ)	NSL	NSL	ppb	0 J	0 J	0 J	0 C	0 C	0 C	0 C	0 J	0 J	0 C	0 C	0 C	0 C	0 C	0 C	0 C	0 C	0 C	0 C	0 C	0 C
PCB 51 (BZ)	NSL	NSL	ppb	9500 J	29000 J	12000 J	13000 C	40000 C	14000 C	13000 C	9200 J	5100 J	6700 C	11000 C	7100 C	6800 C	11000 C	8600 C	48000 C	8100 C	35000 C	41000 C	25000 C	79000 C
PCB 52 (BZ)	NSL	NSL	ppb	54000	150000	59000	66000 B	190000 B	110000 B	98000 B	48000	30000	53000 B	72000 B	38000 B	37000 B	60000 B	47000 B	220000 B	56000 B	160000 B	200000 B	140000 B	380000 B
PCB 53 (BZ)	NSL	NSL	ppb	7000 J	20000 J	8400 J	9400 C	28000 C	10000 C	10000 C	6600 J	3800 J	5100 C	8200 C	5000 C	4500 C	7600 C	5900 C	31000 C	6400 C	24000 C	28000 C	18000 C	56000 C
PCB 54 (BZ)	NSL	NSL	ppb	250 U	430	240 U	240 U	550	120 Q	130 Q	110 J	71 J	250 U	250 U	290 U	110 J	240 U	250 U	670	91 Q	390 Q	520	290 J	740 Q
PCB 55 (BZ)	NSL	NSL	ppb	870 J	2500	1000 J	1100 Q	3200	1000	1300	780 J	430 J	640 Q	700 Q	460 Q	460	1500 Q	880 Q	4200 Q	610	2800	3200	3100	10000
PCB 56 (BZ)	NSL	NSL	ppb	19000	59000	24000	27000 B	79000 B	36000 B	32000 B	20000	12000	17000	24000	14000	14000	25000	20000	93000	18000	64000 B	80000 B	46000 B	140000 B
PCB 57 (BZ)	NSL	NSL	ppb	330	720	270	430	970	330 J	300 J	210 J	180 J	190 Q	250	220 Q	220 J	250 Q	210 Q	1300	170 Q	840	1000	570 Q	1300 Q
PCB 58 (BZ)	NSL	NSL	ppb	170 J	2800	130 J	310	690	230 J	370 Q	100 J	90 J	130 J	120 Q	110 J	100 Q	200 J	120 Q	950 Q	31 Q	410 Q	660	220 Q	510 Q
PCB 59 (BZ)	NSL	NSL	ppb	0 J	0 J	0 J	0 C	0 C	0 C	0 C	0 J	0 J	0 C	0 C	0 C	0 C	0 C	0 C	0 C	0 C	0 C	0 C	0 C	0 C

TABLE 4-5 SEDIMENT RESULTS FOR PCB CONGENERS
PHASE 2 LOWER MAUMEE RIVER SITE CHARACTERIZATION
TOLEDO, OHIO (JUNE 2013)

			Sample Location:	LMR13-53-012	LMR13-58-024	LMR13-59-048	LMR13-63-072				LMR13-69-096		LMR13-82-012		LMR13-86-012					LMR13-87-012	LMR13-91-072		LMR13-93-012	
			Sample Name:	LMR13-53-012	LMR13-58-024	LMR13-59-048	LMR13-63-072	LMR13-63-096	LMR13-63-120	LMR13-63-144	LMR13-69-096	LMR13-69-120	LMR13-82-012	LMR13-82-024	LMR13-86-012	LMR13-86-024	LMR13-86-048	LMR13-86-072	LMR13-86-096	LMR13-87-012	LMR13-91-072	LMR13-91-096	LMR13-93-012	LMR13-93-024
			Sample Depth (ft):	0-1	1-2	2-4	4-6	6-8	8-9	10-12	6-8	8-9	0-1	1-2	0-1	1-2	2-4	4-6	6-8	0-1	4-6	6-8	0-1	1-2
			Date Sampled:	6/20/13	6/20/13	6/20/13	6/13/13	6/13/13	6/13/13	6/13/13	6/20/13	6/20/13	6/17/13	6/17/13	6/18/13	6/18/13	6/18/13	6/18/13	6/18/13	6/18/13	6/13/13	6/13/13	6/13/13	6/13/13
PCB 6 (BZ)	NSL	NSL	ppb	3300	9000	2800 J	3900 B	13000 B	2300 B	1600 Q	3200	1700	2800 B	2400 B	1800 B	2200 B	2900 Q	3200 B	18000 B	730 B	16000 B	14000 B	6600 B	15000 B
PCB 60 (BZ)	NSL	NSL	ppb	7300	24000	9000	11000	32000	14000	14000	7700	4700	6900	9100	5700	5900	9800	8500	44000	8800	27000	33000	20000	72000
PCB 61 (BZ)	NSL	NSL	ppb	0 J	0 J	0 J	0 B	0 B	0 B	0 B	0 J	0 J	0 B	0 B	0 B	0 B	0 B	0 B	0 B	0 B	0 B	0 B	0 B	0 B
PCB 62 (BZ)	NSL	NSL	ppb	4300 J	12000 J	4900 J	5900 C	17000 C	6300 C	5700 C	4400 J	2600 J	3100 C	4500 C	3200 C	3000 C	5000 C	4000 C	20000 C	3300 C	14000 C	17000 C	9800 C	27000 C
PCB 63 (BZ)	NSL	NSL	ppb	1900	5100	2100	2500	7200	2900	2600	1900	1100	1300 Q	2000	1400	1400	2200	1600	7500	1400	6000	7400	4000	12000
PCB 64 (BZ)	NSL	NSL	ppb	20000	59000	23000	27000	77000	34000	31000	20000	12000	17000 B	24000 B	14000 B	14000 B	24000 B	19000 B	89000 B	18000 B	63000	78000	53000	150000
PCB 65 (BZ)	NSL	NSL	ppb	48000 J	130000 J	53000 J	60000 B	170000 B	80000 B	74000 B	45000 J	27000 J	41000 B	58000 B	35000 B	32000 B	54000 B	43000 B	200000 B	43000 B	140000 B	180000 B	120000 B	350000 B
PCB 66 (BZ)	NSL	NSL	ppb	42000	120000	48000	55000 B	160000 B	72000 B	65000 B	42000	25000	35000 B	46000 B	31000 B	31000 B	52000 B	41000 B	180000 B	35000 B	130000 B	160000 B	80000 B	270000 B
PCB 67 (BZ)	NSL	NSL	ppb	1300	3900	1600	2000	5700	2100	1800	1400	840	1200	1600	900	1000	1600	1300	6800	1000	4800	5900	4400	8900 Q
PCB 68 (BZ)	NSL	NSL	ppb	410	430	260	270 Q	610	360 J	250 Q	220 J	150 J	200 J	230 Q	250 Q	150 Q	310	210 J	720	190 Q	520 Q	760	340 Q	1000 Q
PCB 69 (BZ)	NSL	NSL	ppb	32000 J	82000 J	34000 J	39000 B	110000 B	50000 B	44000 B	29000 J	17000 J	25000 C	36000 C	22000 C	21000 C	35000 C	27000 C	130000 C	25000 C	92000 B	110000 B	75000 B	200000 B
PCB 7 (BZ)	NSL	NSL	ppb	510 J	2100 J	660 J	980 Q	3400	570 Q	520	700 J	330 J	600 Q	500 Q	550 Q	510 Q	750 Q	800 Q	5000 B	110 Q	3800	3700	420 Q	680 Q
PCB 70 (BZ)	NSL	NSL	ppb	74000 J	220000 J	86000 J	98000 B	280000 B	140000 B	130000 B	73000 J	42000 J	70000 B	91000 B	54000 B	54000 B	92000 B	75000 B	330000 B	69000 B	240000 B	290000 B	180000 B	540000 B
PCB 71 (BZ)	NSL	NSL	ppb	25000 J	77000 J	31000 J	34000 C	100000 C	42000 C	38000 C	24000 J	15000 J	20000 C	31000 C	18000 C	18000 C	31000 C	24000 C	120000 C	23000 C	85000 C	110000 C	67000 C	210000 C
PCB 72 (BZ)	NSL	NSL	ppb	640	970 J	470	540	1300	820	590	530	330	350 Q	550	420	310 Q	560	350 Q	1400	340 Q	1100	1600	1100	1900 J
PCB 73 (BZ)	NSL	NSL	ppb	2000 J	5800 J	2400 J	2700 C	7900 C	2900 C	2200 C	1900 J	1000 J	1400 C	2000 C	1400 C	1300 C	2200 C	2000 C	8800 C	1500 C	6700 C	7600 C	4500 C	12000 C
PCB 74 (BZ)	NSL	NSL	ppb	74000 J	220000 J	86000 J	98000 B	280000 B	140000 B	130000 B	73000 J	42000 J	70000 B	91000 B	54000 B	54000 B	92000 B	75000 B	330000 B	69000 B	240000 B	290000 B	180000 B	540000 B
PCB 75 (BZ)	NSL	NSL	ppb	4300 J	12000 J	4900 J	5900 C	17000 C	6300 C	5700 C	4400 J	2600 J	3100 C	4500 C	3200 C	3000 C	5000 C	4000 C	20000 C	3300 C	14000 C	17000 C	9800 C	27000 C
PCB 76 (BZ)	NSL	NSL	ppb	74000 J	220000 J	86000 J	98000 B	280000 B	140000 B	130000 B	73000 J	42000 J	70000 B	91000 B	54000 B	54000 B	92000 B	75000 B	330000 B	69000 B	240000 B	290000 B	180000 B	540000 B
PCB 77 (BZ)	NSL	NSL	ppb	3400	8800	4000	4700	13000	5600	5000	3600	2300	2700	3800	2400	2600	4100	3300	15000	2800	11000	14000	7500	21000
PCB 78 (BZ)	NSL	NSL	ppb	39 J	100 J	29 J	44 Q	81 Q	38 Q	81 J	240 U	11 J	36 J	27 J	290 U	27 Q	23 Q	22 Q	80 Q	34 Q	61 Q	110 Q	82 Q	1900 U
PCB 79 (BZ)	NSL	NSL	ppb	410	1000	430 J	520	1100 Q	720 Q	780	420	220	400	380 Q	280 Q	250 Q	360 Q	340	1200	400 Q	960 Q	1400	840	1900 J
PCB 8 (BZ)	NSL	NSL	ppb	9000 B	41000 B	11000 B	17000 B	54000 B	9700 B	6800 S	12000 B	4600 J	9600 B	8000 B	6300 B	8100 B	14000 B	13000 B	82000 B	3300 B	70000 B	56000 B	12000 B	50000 B
PCB 80 (BZ)	NSL	NSL	ppb	250 U	380 U	240 U	240 U	380 U	370 U	380 U	240 U	50 U	250 U	250 U	290 U	240 U	240 U	250 U	380 U	250 U	240 U	380 U	380 U	1900 U
PCB 81 (BZ)	NSL	NSL	ppb	120 J	530	140 J	130 Q	560	220 Q	180 J	160 J	73 J	66 Q	89 Q	84 Q	110 J	100 Q	110 Q	780	120 Q	440	640	270 J	880 Q
PCB 82 (BZ)	NSL	NSL	ppb	5700	15000	5800	6300	20000	14000	12000	5700	3100	7200	7900	3900	4400	6200	5400	24000	7400	16000	21000	14000	34000
PCB 83 (BZ)	NSL	NSL	ppb	0 J	0 J	0 J	0 C	0 C	0 C	0 C	0 J	0 J	0 C	0 C	0 C	0 C	0 C	0 C	0 C	0 C	0 C	0 C	0 C	0 C
PCB 84 (BZ)	NSL	NSL	ppb	12000	29000	11000	12000	40000	28000	26000	10000	6500	15000	16000	8000	8000	11000	11000	43000	14000	34000	42000	29000	62000
PCB 85 (BZ)	NSL	NSL	ppb	0 J	0 J	0 J	0 C	0 C	0 C	0 C	0 J	0 J	0 C	0 C	0 C	0 C	0 C	0 C	0 C	0 C	0 C	0 C	0 C	0 C
PCB 86 (BZ)	NSL	NSL	ppb	0 J	0 J	0 J	0 B	0 B	0 B	0 B	0 J	0 J	0 B	0 B	0 B	0 B	0 B	0 B	0 B	0 B	0 B	0 B	0 B	0 B
PCB 87 (BZ)	NSL	NSL	ppb	25000 J	67000 J	24000 J	27000 B	90000 B	69000 B	58000 B	23000 J	14000 J	37000 B	37000 B	17000 B	18000 B	27000 B	24000 B	110000 B	34000 B	77000 B	96000 B	62000 B	130000 B
PCB 88 (BZ)	NSL	NSL	ppb	0 J	0 J	0 J	0 C	0 C	0 C	0 C	0 J	0 J	0 C	0 C	0 C	0 C	0 C	0 C	0 C	0 C	0 C	0 C	0 C	0 C
PCB 89 (BZ)	NSL	NSL	ppb	810 J	2500	920 J	1100	3200	1400 Q	1300	780	430 J	630 Q	930 Q	590 Q	590 Q	790 Q	600 Q	3500 Q	870	2500	3200	1900	5400
PCB 9 (BZ)	NSL	NSL	ppb	660 J	3000 B	870 J	1300	4500	750	520 Q	780 B	350 J	700 Q	630 Q	460 Q	600 Q	990 Q	940 Q	6300 B	120 Q	5500	4800	680 Q	1900
PCB 90 (BZ)	NSL	NSL	ppb	0 J	0 J	0 J	0 C	0 C	0 C	0 C	0 J	0 J	0 B	0 B	0 B	0 B	0 B	0 B	0 B	0 B	0 C	0 C	0 C	0 C
PCB 91 (BZ)	NSL	NSL	ppb	6700 J	15000 J	6300 J	7000 C	20000 C	14000 C	12000 C	5700 J	3700 J	7500 C	8500 C	4600 C	4400 C	6400 C	5400 C	23000 C	6900 C	18000 C	22000 C	15000 C	32000 C
PCB 92 (BZ)	NSL	NSL	ppb	7000	16000	5900	6700	22000	17000	14000	5700	3700	9900	9500	4500	4700	6200	5800	24000	7700	19000	24000	13000 Q	27000
PCB 93 (BZ)	NSL	NSL	ppb	0 J	0 J	0 J	0 Q	0 Q	0 Q	0 Q	0 J	0 J	0 Q	0 Q	0 C	0 C	0 Q	0 Q	0 Q	0 Q	0 Q	0 Q	0 Q	0 Q
PCB 94 (BZ)	NSL	NSL	ppb	250 J	710	120 J	280 Q	970	400	420	260 J	120 J	280	310 Q	190 J	170 J	210 Q	250	1000 Q	230 Q	880	990	520 Q	1600 J
PCB 95 (BZ)	NSL	NSL	ppb	30000	78000	29000	31000 B	100000 B	82000 B	71000 B	26000	17000	44000	44000	20000	21000	30000	27000	110000	40000	87000 B	110000 B	75000 B	140000 B
PCB 96 (BZ)	NSL	NSL	ppb	560 J	1300	560	530	1700	830	720	460	270	370 Q	620	290 Q	360	500	290 Q	2100	380 Q	1500	1800	1200	2900
PCB 97 (BZ)	NSL	NSL	ppb	25000 J	67000 J	24000 J	27000 B	90000 B	69000 B	58000 B	23000 J	14000 J	37000 B	37000 B	17000 B	18000 B	27000 B	24000 B	110000 B	34000 B	77000 B	96000 B	62000 B	130000 B
PCB 98 (BZ)	NSL	NSL	ppb	0 J	0 J	0 J	0 C	0 C	0 C	0 C	0 J	0 J	0 Q	0 C	0 C	0 C	0 Q	0 C	0 C	0 C	0 C	0 C	0 C	0 Q
PCB 99 (BZ)	NSL	NSL	ppb	23000 J	55000 J	21000 J	24000 C	75000 C	53000 C	46000 C	20000 J	13000 J	30000 C	30000 C	16000 C	16000 C	23000 C	21000 C	84000 C	26000 C	64000 C	79000 C	51000 C	99000 C
Total PCB congeners ND=0	NSL	NSL	ppb	394630	1169940	426400	247350	766090	367330	327030	384960	234044	259510	315500	165660	172210	251980	225310	1074090	269320	672560	804400	409460	1091900

NOTES:
J = Indicates that the concentration is an estimated value.
U = Indicates the analyte was analyzed for but not detected.
Q =
B = Method blank contamination
C =
TEC = Threshold effect concentration.
Development and Evaluation of Consensus-Based Sediment
Guidelines for Freshwater Ecosystems (MacDonald et al. 2000).
PEC = Probable effect concentration.
Development and Evaluation of Consensus-Based Sediment
Quality Guidelines for Freshwater Ecosystems (MacDonald et al. 2000).
NSL= No Screening Level
Submitted samples are presented in ascending numerical order.

TABLE 4-6A* SEDIMENT RESULTS FOR SEMIVOLATILE ORGANIC ANALYSIS (SVOA) IN AREA A
PHASE 2 LOWER MAUMEE RIVER SITE CHARACTERIZATION
TOLEDO, OHIO (JUNE 2013)

			Sample Location:	LMR13-01						LMR13-02	LMR13-03							LMR13-05	LMR13-06	LMR13-07			
			Sample Name:	LMR13-01-012	LMR13-01-024	LMR13-01-048	LMR13-01-072	LMR13-01-096	LMR13-01-120	LMR13-02-012	LMR13-03-012	LMR13-03-024	LMR13-03-024FD	LMR13-03-048	LMR13-03-072	LMR13-03-096	LMR13-03-120	LMR13-05-012	LMR13-06-012	LMR13-07-012	LMR13-07-024	LMR13-07-048	LMR13-07-072
			Sample Depth (ft):	0-1	1-2	2-4	4-6	6-8	8-9	0-1	0-1	1-2	1-2	2-4	4-6	6-8	8-10	0-1	0-1	0-1	1-2	2-4	4-6
			Date Sampled:	6/17/13	6/17/13	6/17/13	6/17/13	6/17/13	6/17/13	6/11/13	6/17/13	6/17/13	6/17/13	6/17/13	6/17/13	6/17/13	6/17/13	6/11/13	6/11/13	6/18/13	6/18/13	6/18/13	6/18/13
Analyte	**TEC**	**PEC**	**Unit**																				
1,1'-Biphenyl	NSL	NSL	ug/kg	960 U	660 U	590 U	15 J	240 U	260 U	240 U	570 UJ	540 UJ	530 U	270 UJ	270 UJ	250 UJ	250 UJ	280 U	300 U	330 U	600 U	550 U	240 U
1,2,4,5-Tetrachlorobenzene	NSL	NSL	ug/kg	960 U	660 U	590 U	240 U	240 U	260 U	240 U	570 UJ	540 UJ	530 U	270 UJ	270 UJ	250 UJ	250 UJ	280 U	300 U	330 U	600 U	550 U	240 U
2,2'-Oxybis(1-chloropropane)	NSL	NSL	ug/kg	960 U	660 U	590 U	2.1 J	240 U	260 U	240 U	570 UJ	540 UJ	530 U	270 UJ	270 UJ	250 UJ	250 UJ	280 U	300 U	330 U	600 U	550 U	240 U
2,3,4,6-Tetrachlorophenol	NSL	NSL	ug/kg	960 U	660 U	590 U	240 U	240 U	260 U	240 U	570 UJ	540 UJ	530 U	270 UJ	270 UJ	250 UJ	250 UJ	280 U	300 U	330 U	600 U	550 U	240 U
2,4,5-Trichlorophenol	NSL	NSL	ug/kg	960 U	660 U	590 U	3.3 J	240 U	260 U	240 U	570 UJ	540 UJ	530 U	270 UJ	270 UJ	250 UJ	250 UJ	280 U	300 U	330 U	600 U	550 U	240 U
2,4,6-Trichlorophenol	NSL	NSL	ug/kg	960 U	660 U	590 U	3.3 J	240 U	260 U	240 U	570 UJ	540 UJ	530 U	270 UJ	270 UJ	250 UJ	250 UJ	280 U	300 U	330 U	600 U	550 U	240 U
2,4-Dichlorophenol	NSL	NSL	ug/kg	960 U	660 U	590 U	240 U	240 U	260 U	240 U	570 UJ	540 UJ	530 U	270 UJ	270 UJ	250 UJ	250 UJ	280 U	300 U	330 U	600 U	550 U	240 U
2,4-Dimethylphenol	NSL	NSL	ug/kg	960 U	660 U	590 U	240 U	240 U	260 U	240 U	570 UJ	540 UJ	530 U	270 UJ	270 UJ	250 UJ	250 UJ	280 U	300 U	330 U	600 U	550 U	240 U
2,4-Dinitrophenol	NSL	NSL	ug/kg	1900 U	1300 U	1100 U	9.2 J	470 UJ	500 UJ	470 UJ	1100 UJ	1000 UJ	1000 U	530 UJ	520 UJ	480 UJ	480 UJ	550 U	590 U	640 U	1200 U	1100 U	470 U
2,4-Dinitrotoluene	NSL	NSL	ug/kg	960 U	660 U	590 U	340	240 U	260 U	240 U	570 UJ	540 UJ	530 U	270 UJ	270 UJ	250 UJ	250 UJ	280 U	300 U	330 U	600 U	550 U	240 U
2,6-Dinitrotoluene	NSL	NSL	ug/kg	960 U	660 U	590 U	240 U	240 U	260 U	240 U	570 UJ	540 UJ	530 U	270 UJ	270 UJ	250 UJ	250 UJ	280 U	300 U	330 U	600 U	550 U	240 U
2-Chloronaphthalene	NSL	NSL	ug/kg	960 U	660 U	590 U	730	240 U	260 U	240 U	570 UJ	540 UJ	530 U	270 UJ	270 UJ	250 UJ	250 UJ	280 U	300 U	330 U	600 U	550 U	240 U
2-Chlorophenol	NSL	NSL	ug/kg	960 U	660 U	590 U	240 U	240 U	260 U	240 U	570 UJ	540 UJ	530 U	270 UJ	270 UJ	250 UJ	250 UJ	280 U	300 U	330 U	600 U	550 U	240 U
2-Methylnaphthalene**	NSL	NSL	ug/kg	86 J	120 J	98 J	240 U	240 U	260 U	240 U	52 J	46 J	530 U	48 J	270 UJ	250 UJ	250 UJ	280 U	28 J	43 J	38 J	95 J	38 J
2-Methylphenol	NSL	NSL	ug/kg	960 U	660 U	590 U	240 U	240 U	260 U	240 U	570 UJ	540 UJ	530 U	270 UJ	270 UJ	250 UJ	250 UJ	280 U	300 U	330 U	600 U	550 U	240 U
2-Nitroaniline	NSL	NSL	ug/kg	1900 U	1300 U	1100 U	3.1 J	470 U	500 U	470 U	1100 UJ	1000 UJ	1000 U	530 UJ	520 UJ	480 UJ	480 UJ	550 U	590 U	640 U	1200 U	1100 U	470 U
2-Nitrophenol	NSL	NSL	ug/kg	960 U	660 U	590 U	1.9 J	240 U	260 U	240 U	570 UJ	540 UJ	530 U	270 UJ	270 UJ	250 UJ	250 UJ	280 U	300 U	330 U	600 U	550 U	240 U
3,3'-Dichlorobenzidine	NSL	NSL	ug/kg	960 U	660 U	590 U	1.2 J	240 U	260 U	240 U	570 UJ	540 UJ	530 UJ	270 UJ	270 UJ	250 UJ	250 UJ	280 U	300 U	330 U	600 U	550 U	240 U
3-Nitroaniline	NSL	NSL	ug/kg	1900 U	1300 U	1100 U	230 J	470 U	500 U	470 U	1100 UJ	1000 UJ	1000 U	530 UJ	520 UJ	480 UJ	480 UJ	550 U	590 U	640 U	1200 U	1100 U	470 U
4,6-Dinitro-2-methylphenol	NSL	NSL	ug/kg	1900 U	1300 U	1100 U	9.3 J	470 U	500 U	470 U	1100 UJ	1000 UJ	1000 U	530 UJ	520 UJ	480 UJ	480 UJ	550 U	590 U	640 U	1200 U	1100 U	470 U
4-Bromophenyl-phenylether	NSL	NSL	ug/kg	960 U	660 U	590 U	240 U	240 U	260 U	240 U	570 UJ	540 UJ	530 U	270 UJ	270 UJ	250 UJ	250 UJ	280 U	300 U	330 U	600 U	550 U	240 U
4-Chloro-3-methylphenol	NSL	NSL	ug/kg	960 U	660 U	590 U	1.3 J	240 U	260 U	240 U	570 UJ	540 UJ	530 U	270 UJ	270 UJ	250 UJ	250 UJ	280 U	300 U	330 U	600 U	550 U	240 U
4-Chloroaniline	NSL	NSL	ug/kg	960 U	660 U	590 U	11 J	240 U	260 U	240 U	570 UJ	540 UJ	530 UJ	270 UJ	270 UJ	250 UJ	250 UJ	280 U	300 U	330 U	600 U	550 U	240 U
4-Chlorophenyl-phenylether	NSL	NSL	ug/kg	960 U	660 U	590 U	8.5 J	240 U	260 U	240 U	570 UJ	540 UJ	530 U	270 UJ	270 UJ	250 UJ	250 UJ	280 U	300 U	330 U	600 U	550 U	240 U
4-Methylphenol	NSL	NSL	ug/kg	960 U	660 U	590 U	240 U	240 U	260 U	240 U	570 UJ	540 UJ	530 U	270 UJ	270 UJ	250 UJ	250 UJ	16 J	300 U	330 U	600 U	550 U	240 U
4-Nitroaniline	NSL	NSL	ug/kg	1900 U	1300 U	1100 U	4.5 J	470 U	500 U	470 U	1100 UJ	1000 UJ	1000 U	530 UJ	520 UJ	480 UJ	480 UJ	550 U	590 U	640 U	1200 U	1100 U	470 U
4-Nitrophenol	NSL	NSL	ug/kg	1900 U	1300 U	1100 U	8.5 J	470 U	500 U	470 U	1100 UJ	1000 UJ	1000 U	530 UJ	520 UJ	480 UJ	480 UJ	550 U	590 U	640 U	1200 U	1100 U	470 U
Acenaphthene**	NSL	NSL	ug/kg	1000	2100	1400	93 J	6.2 J	260 U	9.9 J	75 J	480 J	700 J	440 J	110 J	130 J	250 UJ	360	440	33 J	61 J	1000	130 J
Acenaphthylene**	NSL	NSL	ug/kg	72 J	96 J	90 J	240 U	240 U	260 U	240 U	68 J	120 J	320 J	80 J	34 J	250 UJ	250 UJ	35 J	66 J	52 J	57 J	220 J	38 J
Acetophenone	NSL	NSL	ug/kg	960 U	660 U	590 U	240 U	240 U	260 U	38 J	570 UJ	540 UJ	530 U	26 J	13 J	250 UJ	9 J	38 J	46 J	330 U	600 U	550 U	240 U
Anthracene**	57.2	845	ug/kg	**1200**	**1800**	**1400**	**89 J**	6.3 J	260 U	19 J	**170 J**	**530 J**	**1000**	**560 J**	**230 J**	**89 J**	9.6 J	**320**	**240 J**	**85 J**	**160 J**	**540 J**	**220 J**
Atrazine	NSL	NSL	ug/kg	960 U	660 U	590 U	240 U	240 U	260 U	240 U	570 UJ	540 UJ	530 U	270 UJ	270 UJ	250 UJ	250 UJ	280 U	300 U	330 U	600 U	550 U	240 U
Benzaldehyde	NSL	NSL	ug/kg	960 U	660 U	590 U	240 U	240 U	260 U	33 J	570 UJ	540 UJ	530 U	36 J	25 J	20 J	13 J	50 J	41 J	57 J	62 J	69 J	39 J
Benzo(a)anthracene**	108	1050	ug/kg	**1500**	**1900**	**1900**	96 J	13 J	260 U	78 J	**910 J**	**2000 J**	**3200**	**1300 J**	**470 J**	71 J	12 J	**820**	**900**	**760**	**910**	**2700**	**560**
Benzo(a)pyrene**	150	1450	ug/kg	**1100**	**1500**	**1700**	91 J	13 J	260 U	79 J	**940 J**	**1400 J**	**2700**	**870 J**	**420 J**	69 J	250 UJ	**680**	**780**	**630**	**550 J**	**1700**	**440**
Benzo(b)fluoranthene**	NSL	NSL	ug/kg	960 J	1500 J	1400 J	120 J	8.8 J	260 UJ	76 J	990 J	1500 J	3000	840 J	310 J	60 J	6.5 J	570	610	690 J	620 J	2000 J	370 J
Benzo(g,h,i)perylene**	NSL	NSL	ug/kg	490 J	690	800	41 J	240 U	260 U	62 J	570 J	920 J	1000	550 J	200 J	28 J	250 UJ	330	380	410	380 J	910	270
Benzo(k)fluoranthene**	NSL	NSL	ug/kg	1100	1300	1400	130 J	9.5 J	260 U	88 J	720 J	1000 J	1800	980 J	350 J	61 J	11 J	620	700	550	510 J	1500	410
Bis(2-chloroethoxy)methane	NSL	NSL	ug/kg	960 U	660 U	590 U	0.88 J	240 U	260 U	240 U	570 U	540 UJ	530 U	270 UJ	270 UJ	250 UJ	250 UJ	280 U	300 U	330 U	600 U	550 U	240 U
Bis(2-chloroethyl)ether	NSL	NSL	ug/kg	960 U	660 U	590 U	1.8 J	240 U	260 U	240 U	570 UJ	540 UJ	530 U	270 UJ	270 UJ	250 UJ	250 UJ	280 U	300 U	330 U	600 U	550 U	240 U
Bis(2-ethylhexyl)phthalate	NSL	NSL	ug/kg	960 U	39 J	590 U	30 J	27 J	29 J	370	570 UJ	540 UJ	530 U	270 UJ	270 UJ	250 UJ	250 UJ	3800	300 U	970	83 J	100 J	79 J
Butylbenzylphthalate	NSL	NSL	ug/kg	960 U	660 U	590 U	240 U	240 U	260 U	240 U	570 UJ	540 UJ	530 U	270 UJ	270 UJ	250 UJ	250 UJ	280 U	300 U	330 U	600 U	550 U	240 U
Caprolactam	NSL	NSL	ug/kg	960 U	660 U	590 U	8.1 J	240 U	260 U	240 U	570 UJ	540 UJ	530 U	270 UJ	270 UJ	250 UJ	250 UJ	280 U	300 U	330 U	600 U	550 U	240 U
Carbazole	NSL	NSL	ug/kg	960 U	660 U	24 J	2.9 J	240 U	260 U	240 U	570 UJ	540 UJ	530 U	12 J	270 UJ	250 UJ	250 UJ	280 U	15 J	330 U	600 U	28 J	240 U
Chrysene**	166	1290	ug/kg	**2000**	**1900**	**1900**	110 J	21 J	260 U	120 J	**1100 J**	**1900 J**	**3700**	**1100 J**	**490 J**	92 J	17 J	**1000**	**930**	**700**	**1000**	**2500**	**680**
Dibenzo(a,h)anthracene**	33	NSL	ug/kg	**150 J**	**230 J**	**240 J**	24 J	240 UJ	260 UJ	22 J	**200 J**	**310 J**	**380 J**	**220 J**	**65 J**	8.9 J	250 UJ	**130 J**	**120 J**	**200 J**	**190 J**	**390 J**	**100 J**
Dibenzofuran	NSL	NSL	ug/kg	77 J	110 J	230 J	11 J	240 U	260 U	240 U	37 J	49 J	92 J	39 J	26 J	37 J	250 UJ	42 J	40 J	33 J	23 J	94 J	37 J
Diethylphthalate	NSL	NSL	ug/kg	960 U	660 U	590 U	3.7 J	5.4 J	5.2 J	240 U	570 UJ	540 UJ	530 U	270 UJ	270 UJ	250 UJ	250 UJ	280 U	300 U	330 U	600 U	550 U	240 U
Dimethylphthalate	NSL	NSL	ug/kg	960 U	660 U	590 U	130 J	240 U	260 U	240 U	570 UJ	540 UJ	530 U	270 UJ	270 UJ	250 UJ	250 UJ	280 U	300 U	330 U	600 U	550 U	240 U
Di-n-butylphthalate	NSL	NSL	ug/kg	960 U	660 U	590 U	240 U	240 U	260 U	240 U	570 U	540 UJ	530 U	270 UJ	270 UJ	250 UJ	250 UJ	22 J	88 J	330 U	600 U	550 U	240 U
Di-n-octylphthalate	NSL	NSL	ug/kg	960 UJ	660 UJ	590 UJ	1.3 J	240 U	260 U	240 U	570 UJ	540 UJ	530 U	270 UJ	270 UJ	250 UJ	250 UJ	280 U	300 U	330 U	600 U	550 U	240 U
Fluoranthene**	423	2230	ug/kg	**4000**	**5600**	**4400**	270	17 J	6.9 J	120 J	**1200 J**	**3000 J**	**3800**	**2300 J**	**850 J**	190 J	23 J	**1100**	**1500**	330 U	**1100**	**4200**	**1200**
Fluorene**	77.4	536	ug/kg	**1100**	**2200**	**1300**	76 J	4.9 J	260 U	15 J	**93 J**	**560 J**	**990**	**530 J**	**110 J**	**91 J**	9.5 J	**350**	**270 J**	75 J	51 J	**920**	**87 J**
Hexachlorobenzene	NSL	NSL	ug/kg	960 U	660 U	590 U	240 U	240 U	260 U	240 U	570 UJ	540 UJ	530 U	270 UJ	270 UJ	250 UJ	250 UJ	280 U	300 U	330 U	600 U	550 U	240 U
Hexachlorobutadiene	NSL	NSL	ug/kg	960 U	660 U	590 U	240 U	240 U	260 U	240 U	570 UJ	540 UJ	530 U	270 UJ	270 UJ	250 UJ	250 UJ	280 U	300 U	330 U	600 U	550 U	240 U
Hexachlorocyclopentadiene	NSL	NSL	ug/kg	960 U	660 U	590 U	240 UJ	240 UJ	260 UJ	240 UJ	570 UJ	540 UJ	530 UJ	270 UJ	270 UJ	250 UJ	250 UJ	280 UJ	300 UJ	330 UJ	600 UJ	550 UJ	240 UJ
Hexachloroethane	NSL	NSL	ug/kg	960 U	660 U	590 U	240 U	240 U	260 U	240 U	570 UJ	540 UJ	530 U	270 UJ	270 UJ	250 UJ	250 UJ	280 U	300 U	330 U	600 U	550 U	240 U
Indeno(1,2,3-cd)pyrene**	NSL	NSL	ug/kg	440 J	610 J	690	34 J	240 U	260 U	49 J	480 J	720 J	950	500 J	190 J	23 J	250 UJ	280 J	320	360	300 J	850	240 J
Isophorone	NSL	NSL	ug/kg	960 U	660 U	590 U	680	240 U	260 U	240 U	570 UJ	540 UJ	530 U	270 UJ	270 UJ	250 UJ	250 UJ	280 U	300 U	330 U	600 U	550 U	240 U
Naphthalene**	176	561	ug/kg	**180 J**	**340 J**	**220 J**	23 J	240 U	260 U	240 U	130 J	78 J	110 J	59 J	17 J	7.7 J	250 UJ	120 J	87 J	**180 J**	88 J	150 J	62 J
Nitrobenzene	NSL	NSL	ug/kg	960 U	660 U	590 U	4.8 J	240 U	260 U	240 U	570 UJ	540 UJ	530 U	270 UJ	270 UJ	250 UJ	250 UJ	280 U	300 U	330 U	600 U	550 U	240 U
N-Nitroso-di-n-propylamine	NSL	NSL	ug/kg	960 U	660 U	590 U	29 J	240 U	260 U	240 U	570 UJ	540 UJ	530 U	270 UJ	270 UJ	250 UJ	250 UJ	280 U	300 U	330 U	600 U	550 U	240 U
N-Nitrosodiphenylamine	NSL	NSL	ug/kg	960 U	660 U	590 U	16 J	240 U	260 U	240 U	570 UJ	540 UJ	530 U	270 UJ	270 UJ	8.2 J	250 UJ	280 U	300 U	330 U	600 U	550 U	240 U
Pentachlorophenol	NSL	NSL	ug/kg	1900 U	1300 U	1100 U	460 U	470 U	500 U	470 U	1100 UJ	1000 UJ	1000 UJ	530 UJ	520 UJ	480 UJ	480 UJ	550 U	590 U	640 U	1200 U	1100 U	470 U
Phenanthrene**	204	1170	ug/kg	**6000**	**7400**	**5000**	**340**	18 J	9.8 J	31 J	**430 J**	**2700 J**	**4300**	**2300 J**	**630 J**	**270 J**	24 J	**1100**	**1400**	330 U	**450 J**	**3600**	**860**
Phenol	NSL	NSL	ug/kg	960 U	660 U	590 U	25 J	16 J	260 U	240 U	570 UJ	540 UJ	530 U	270 UJ	270 UJ	250 UJ	250 UJ	280 U	300 U	330 U	600 U	550 U	240 U
Pyrene**	195	1520	ug/kg	**3000**	**3500**	**3300**	190 J	19 J	9.6 J	**200 J**	**1200 J**	**3100 J**	**5200**	**2600 J**	**1100 J**	180 J	19 J	**1600**	**2000**	**1200**	**1300**	**5000**	**1300**
Total PAHs 17 ND = 1/2RL	1610	22800	ug/kg	**24378**	**32786**	**27238**	**1967**	857	**1846**	1329	**9328**	**20364**	**33415**	**15277**	**5711**	**1621**	1132	**9555**	**10771**	**6298**	**7765**	**28275**	**7005**

NOTES:
** Analytes included in the 17PAH total
J = Indicates that the concentration is an estimated value.
R = Result is rejected
U = Indicates the analyte was analyzed for but not detected.
µg/kg = Micrograms per kilogram.
TEC = Threshold effect concentration.
Development and Evaluation of Consensus-Based Sediment Quality
Guidelines for Freshwater Ecosystems (MacDonald et al. 2000).
PEC = Probable effect concentration.
Development and Evaluation of Consensus-Based Sediment Quality
Guidelines for Freshwater Ecosystems (MacDonald et al. 2000).
Bolded values exceed the TEC.
Gray shaded values exceed the PEC.
NSL = No Screening Level.
Submitted samples are presented in ascending numerical order.
*Samples presented are displayed in Figure 4-3A

TABLE 4-6A* SEDIMENT RESULTS FOR SEMIVOLATILE ORGANIC ANALYSIS (SVOA) IN AREA A
PHASE 2 LOWER MAUMEE RIVER SITE CHARACTERIZATION
TOLEDO, OHIO (JUNE 2013)

			Sample Location:	LMR13-08					LMR13-09	LMR13-10	LMR13-11	LMR13-12	LMR13							LMR13-14						
			Sample Name:	LMR13-08-012	LMR13-08-024	LMR13-08-024FD	LMR13-08-048	LMR13-08-072	LMR13-09-012	LMR13-10-012	LMR13-11-012	LMR13-12-012	LMR13-13-012	LMR13-13-024	LMR13-13-048	LMR13-13-048FD	LMR13-13-072	LMR13-13-096	LMR13-13-120	LMR13-14-012	LMR13-14-024	LMR13-14-024FD	LMR13-14-048	LMR13-14-072	LMR13-14-096	LMR13-14-120
			Sample Depth (ft):	0-1	1-2	1-2	2-4	4-6	0-1	0-1	0-1	0-1	0-1	1-2	2-4	2-4	4-6	6-8	8-9	0-1	1-2	1-2	2-4	4-6	6-8	8-10
			Date Sampled:	6/17/13	6/17/13	6/18/13	6/17/13	6/17/13	6/11/13	6/11/13	6/11/13	6/11/13	6/18/13	6/18/13	6/18/13	6/18/13	6/18/13	6/18/13	6/18/13	6/17/13	6/17/13	6/18/13	6/17/13	6/17/13	6/17/13	6/17/13
Analyte	**TEC**	**PEC**	**Unit**																							
1,1'-Biphenyl	NSL	NSL	ug/kg	360 U	500 U	270 UJ	960 U	780 U	230 U	250 U	280 U	250 U	1200 U	1000 U	1000 UJ	640 U	930 U	430 U	770 U	330 U	310 U	620 U	560 UJ	250 U	230 U	220 U
1,2,4,5-Tetrachlorobenzene	NSL	NSL	ug/kg	360 U	500 U	270 UJ	960 U	780 U	230 U	250 U	280 U	250 U	1200 U	1000 U	1000 UJ	640 U	930 U	430 U	770 U	330 U	310 U	620 U	560 UJ	250 U	230 U	220 U
2,2'-Oxybis(1-chloropropane)	NSL	NSL	ug/kg	360 U	500 U	270 UJ	960 U	780 U	230 U	250 U	280 U	250 U	1200 U	1000 U	1000 UJ	640 U	930 U	430 U	770 U	330 U	310 U	620 U	560 UJ	250 U	230 U	220 U
2,3,4,6-Tetrachlorophenol	NSL	NSL	ug/kg	360 U	500 U	270 UJ	960 U	780 U	230 U	250 U	280 U	250 U	1200 U	1000 U	1000 UJ	640 U	930 U	430 U	770 U	330 U	310 U	620 U	560 UJ	250 U	230 U	220 U
2,4,5-Trichlorophenol	NSL	NSL	ug/kg	360 U	500 U	270 UJ	960 U	780 U	230 U	250 U	280 U	250 U	1200 U	1000 U	1000 UJ	640 U	930 U	430 U	770 U	330 U	310 U	620 U	560 UJ	250 U	230 U	220 U
2,4,6-Trichlorophenol	NSL	NSL	ug/kg	360 U	500 U	270 UJ	960 U	780 U	230 U	250 U	280 U	250 U	1200 U	1000 U	1000 UJ	640 U	930 U	430 U	770 U	330 U	310 U	620 U	560 UJ	250 U	230 U	220 U
2,4-Dichlorophenol	NSL	NSL	ug/kg	360 U	500 U	270 UJ	960 U	780 U	230 U	250 U	280 U	250 U	1200 U	1000 U	1000 UJ	640 U	930 U	430 U	770 U	330 U	310 U	620 U	560 UJ	250 U	230 U	220 U
2,4-Dimethylphenol	NSL	NSL	ug/kg	360 U	500 U	270 UJ	960 U	780 U	230 U	250 U	280 U	250 U	1200 U	1000 U	1000 UJ	640 U	930 U	430 U	770 U	330 U	310 U	620 U	560 UJ	250 U	230 U	220 U
2,4-Dinitrophenol	NSL	NSL	ug/kg	690 U	970 U	530 UJ	1900 U	1500 U	440 U	490 U	540 UJ	490 UJ	2200 U	2000 U	2000 UJ	1200 U	1800 U	830 U	1500 U	650 U	600 U	1200 U	1100 UJ	490 U	450 U	430 U
2,4-Dinitrotoluene	NSL	NSL	ug/kg	360 U	500 U	270 UJ	960 U	780 U	230 U	250 U	280 U	250 U	1200 U	1000 U	1000 UJ	640 U	930 U	430 U	770 U	330 U	310 U	620 U	560 UJ	250 U	230 U	220 U
2,6-Dinitrotoluene	NSL	NSL	ug/kg	360 U	500 U	270 UJ	960 U	780 U	230 U	250 U	280 U	250 U	1200 U	1000 U	1000 UJ	640 U	930 U	430 U	770 U	330 U	310 U	620 U	560 UJ	250 U	230 U	220 U
2-Chloronaphthalene	NSL	NSL	ug/kg	360 U	500 U	270 UJ	960 U	780 U	230 U	250 U	280 U	250 U	1200 U	1000 U	1000 UJ	640 U	930 U	430 U	770 U	330 U	310 U	620 U	560 UJ	250 U	230 U	220 U
2-Chlorophenol	NSL	NSL	ug/kg	360 U	500 U	270 UJ	960 U	780 U	230 U	250 U	280 U	250 U	1200 U	1000 U	1000 UJ	640 U	930 U	430 U	770 U	330 U	310 U	620 U	560 UJ	250 U	230 U	220 U
2-Methylnaphthalene**	NSL	NSL	ug/kg	360 U	17 J	270 UJ	960 U	780 U	230 U	11 J	12 J	250 U	1200 U	1000 U	65 J	61 J	930 U	30 J	45 J	330 U	65 J	66 J	50 J	24 J	230 U	220 U
2-Methylphenol	NSL	NSL	ug/kg	360 U	500 U	270 UJ	960 U	780 U	230 U	250 U	280 U	250 U	1200 U	1000 U	1000 UJ	640 U	930 U	430 U	770 U	330 U	310 U	620 U	560 UJ	250 U	230 U	220 U
2-Nitroaniline	NSL	NSL	ug/kg	690 U	970 U	530 UJ	1900 U	1500 U	440 U	490 U	540 U	490 U	2200 U	2000 U	2000 UJ	1200 U	1800 U	830 U	1500 U	650 U	600 U	1200 U	1100 UJ	490 U	450 U	430 U
2-Nitrophenol	NSL	NSL	ug/kg	360 U	500 U	270 UJ	960 U	780 U	230 U	250 U	280 U	250 U	1200 U	1000 U	1000 UJ	640 U	930 U	430 U	770 U	330 U	310 U	620 U	560 UJ	250 U	230 U	220 U
3,3'-Dichlorobenzidine	NSL	NSL	ug/kg	360 UJ	500 UJ	270 UJ	960 UJ	780 U	230 U	250 U	280 U	250 U	1200 UJ	1000 UJ	1000 UJ	640 U	930 U	430 U	770 UJ	330 UJ	310 U	620 U	560 UJ	250 U	230 UJ	220 UJ
3-Nitroaniline	NSL	NSL	ug/kg	690 U	970 U	530 UJ	1900 U	1500 U	440 U	490 U	540 U	490 U	2200 U	2000 U	2000 UJ	1200 U	1800 U	830 U	1500 U	650 U	600 U	1200 U	1100 UJ	490 U	450 U	430 U
4,6-Dinitro-2-methylphenol	NSL	NSL	ug/kg	690 U	970 U	530 UJ	1900 U	1500 U	440 U	490 U	540 U	490 U	2200 U	2000 U	2000 UJ	1200 U	1800 U	830 U	1500 U	650 U	600 U	1200 U	1100 UJ	490 U	450 U	430 U
4-Bromophenyl-phenylether	NSL	NSL	ug/kg	360 U	500 U	270 UJ	960 U	780 U	230 U	250 U	280 U	250 U	1200 U	1000 U	1000 UJ	640 U	930 U	430 U	770 U	330 U	310 U	620 U	560 UJ	250 U	230 U	220 U
4-Chloro-3-methylphenol	NSL	NSL	ug/kg	360 U	500 U	270 UJ	960 U	780 U	230 U	250 U	280 U	250 U	1200 U	1000 U	1000 UJ	640 U	930 U	430 U	770 U	330 U	310 U	620 U	560 UJ	250 U	230 U	220 U
4-Chloroaniline	NSL	NSL	ug/kg	360 UJ	500 UJ	270 UJ	960 UJ	780 U	230 U	250 U	280 U	250 U	1200 UJ	1000 UJ	1000 UJ	640 U	930 U	430 U	770 UJ	330 UJ	310 U	620 U	560 UJ	250 U	230 UJ	220 UJ
4-Chlorophenyl-phenylether	NSL	NSL	ug/kg	360 U	500 U	270 UJ	960 U	780 U	230 U	250 U	280 U	250 U	1200 U	1000 U	1000 UJ	640 U	930 U	430 U	770 U	330 U	310 U	620 U	560 UJ	250 U	230 U	220 U
4-Methylphenol	NSL	NSL	ug/kg	360 U	500 U	270 UJ	960 U	780 U	230 U	250 U	280 U	250 U	1200 U	1000 U	1000 UJ	640 U	930 U	430 U	770 U	330 U	310 U	620 U	560 UJ	250 U	230 U	220 U
4-Nitroaniline	NSL	NSL	ug/kg	690 U	970 U	530 UJ	1900 U	1500 U	440 U	490 U	540 U	490 U	2200 U	2000 U	2000 UJ	1200 U	1800 U	830 U	1500 U	650 U	600 U	1200 U	1100 UJ	490 U	450 U	430 U
4-Nitrophenol	NSL	NSL	ug/kg	690 U	970 U	530 UJ	1900 U	1500 U	440 U	490 U	540 U	490 U	2200 U	2000 U	2000 UJ	1200 U	1800 U	830 U	1500 U	650 U	600 U	1200 U	1100 UJ	490 U	450 U	430 U
Acenaphthene**	NSL	NSL	ug/kg	19 J	32 J	28 J	190 J	79 J	20 J	80 J	160 J	54 J	1200 U	1000 U	95 J	72 J	240 J	440	1100	33 J	70 J	79 J	110 J	51 J	230 U	220 U
Acenaphthylene**	NSL	NSL	ug/kg	360 U	500 U	270 UJ	960 U	780 U	230 U	33 J	52 J	16 J	1200 U	1000 U	1000 UJ	47 J	930 U	430 U	770 U	330 U	49 J	51 J	560 UJ	250 U	230 U	220 U
Acetophenone	NSL	NSL	ug/kg	360 U	500 U	270 UJ	140 J	780 U	230 U	250 U	43 J	48 J	1200 U	1000 U	1000 UJ	640 U	930 U	430 U	770 U	330 U	500	620 U	560 UJ	250 U	230 U	220 U
Anthracene**	57.2	845	ug/kg	39 J	**62 J**	**66 J**	**280 J**	**93 J**	30 J	**130 J**	**360**	**90 J**	**75 J**	1000 U	**210 J**	**110 J**	**520 J**	**490**	**560 J**	**74 J**	**90 J**	**140 J**	**300 J**	**120 J**	6.4 J	220 U
Atrazine	NSL	NSL	ug/kg	360 U	500 U	270 UJ	960 U	780 U	230 U	250 U	280 U	250 U	1200 U	1000 U	1000 UJ	640 U	930 U	430 U	770 U	330 U	310 U	620 U	560 UJ	250 U	230 U	220 U
Benzaldehyde	NSL	NSL	ug/kg	69 J	500 U	38 J	960 U	780 U	230 U	48 J	45 J	44 J	1200 U	1000 U	1000 UJ	640 U	930 U	49 J	770 U	41 J	250 J	620 U	560 UJ	250 U	39 J	35 J
Benzo(a)anthracene**	108	1050	ug/kg	**160 J**	**240 J**	**220 J**	**1100 J**	**380 J**	77 J	**460**	**1200**	**240 J**	**260 J**	**540 J**	**760 J**	**610 J**	**1000**	**640 J**	**640 J**	**260 J**	**680**	**1100**	**720 J**	**520**	20 J	220 U
Benzo(a)pyrene**	150	1450	ug/kg	**190 J**	**250 J**	**250 J**	**900 J**	**320 J**	79 J	**470**	**1000**	**240 J**	**260 J**	**740 J**	**730 J**	**480 J**	**1000**	**580 J**	**590 J**	**300 J**	**770**	**760**	**770 J**	**480**	19 J	220 U
Benzo(b)fluoranthene**	NSL	NSL	ug/kg	260 J	360 J	310 J	1000	300 J	75 J	360	760	210 J	250 J	820 J	1100 J	560 J	1100	500 J	390 J	330 J	740 J	950 J	590 J	530	230 U	220 U
Benzo(g,h,i)perylene**	NSL	NSL	ug/kg	170 J	200 J	150 J	450 J	180 J	65 J	250 J	510	150 J	160 J	400 J	470 J	330 J	480 J	270 J	370 J	170 J	440	510 J	380 J	240 J	230 UJ	220 UJ
Benzo(k)fluoranthene**	NSL	NSL	ug/kg	270 J	260 J	270 J	960	290 J	60 J	340	790	220 J	300 J	660 J	730 J	420 J	900 J	630 J	430 J	370	650	530 J	800 J	410	230 U	220 U
Bis(2-chloroethoxy)methane	NSL	NSL	ug/kg	360 U	500 U	270 UJ	960 U	780 U	230 U	250 U	280 U	250 U	1200 U	1000 U	1000 UJ	640 U	930 U	430 U	770 U	330 U	310 U	620 U	560 UJ	250 U	230 U	220 U
Bis(2-chloroethyl)ether	NSL	NSL	ug/kg	360 U	500 U	270 UJ	960 U	780 U	230 U	250 U	280 U	250 U	1200 U	1000 U	1000 UJ	640 U	930 U	430 U	770 U	330 U	310 U	620 U	560 UJ	250 U	230 U	220 U
Bis(2-ethylhexyl)phthalate	NSL	NSL	ug/kg	360 U	500 U	270 UJ	960 U	780 U	230 U	250 U	720	790	1200 U	7600 B	9600 J	7200	4700	430 U	770 U	850	3800	3900	3600 J	1500	230 U	220 U
Butylbenzylphthalate	NSL	NSL	ug/kg	360 U	500 U	270 UJ	960 U	780 U	230 U	250 U	280 U	250 U	1200 U	1000 U	1000 UJ	640 U	930 U	430 U	770 U	330 U	310 U	620 U	560 UJ	250 U	230 U	220 U
Caprolactam	NSL	NSL	ug/kg	360 U	500 U	270 UJ	960 U	780 U	230 U	250 U	280 U	250 U	1200 U	1000 U	1000 UJ	640 U	930 U	430 U	770 U	330 U	310 U	620 U	560 UJ	250 U	230 U	220 U
Carbazole	NSL	NSL	ug/kg	360 U	500 U	270 UJ	960 U	780 U	230 U	8.4 J	280 U	250 U	1200 U	1000 U	1000 UJ	640 U	930 U	430 U	770 U	330 U	310 U	620 U	560 UJ	250 U	230 U	220 U
Chrysene**	166	1290	ug/kg	**280 J**	**350 J**	**350 J**	**1500 J**	**510 J**	110 J	**520**	**1100**	**310**	**390 J**	**1200**	**1100 J**	**720**	**1300**	**740 J**	**670 J**	**410**	**1300**	**1200**	**1000 J**	**720**	35 J	220 U
Dibenzo(a,h)anthracene**	33	NSL	ug/kg	**37 J**	**42 J**	**57 J**	**130 J**	**45 J**	230 U	**81 J**	**150 J**	**47 J**	1200 U	**130 J**	**230 J**	**150 J**	**96 J**	**76 J**	**130 J**	**59 J**	**220 J**	**270 J**	**150 J**	**93 J**	230 UJ	220 UJ
Dibenzofuran	NSL	NSL	ug/kg	15 J	25 J	22 J	960 U	780 U	5.1 J	13 J	16 J	15 J	1200 U	1000 U	37 J	30 J	52 J	30 J	33 J	14 J	310 U	29 J	560 UJ	21 J	230 U	220 U
Diethylphthalate	NSL	NSL	ug/kg	16 J	500 U	270 UJ	960 U	780 U	230 U	250 U	280 U	250 U	1200 U	1000 U	1000 UJ	640 U	930 U	430 U	770 U	330 U	310 U	620 U	560 UJ	250 U	230 U	220 U
Dimethylphthalate	NSL	NSL	ug/kg	360 U	500 U	270 UJ	960 U	780 U	230 U	250 U	280 U	250 U	1200 U	1000 U	1000 UJ	640 U	930 U	430 U	770 U	330 U	310 U	620 U	560 UJ	250 U	230 U	220 U
Di-n-butylphthalate	NSL	NSL	ug/kg	360 U	500 U	20 J	960 U	780 U	12 J	14 J	280 U	250 U	1200 U	1000 U	1000 UJ	640 U	930 U	430 U	50 J	330 U	310 U	620 U	560 UJ	250 U	8.6 J	8.7 J
Di-n-octylphthalate	NSL	NSL	ug/kg	360 U	500 U	270 UJ	960 U	780 U	230 U	250 U	280 U	250 U	1200 U	1000 UJ	1000 UJ	640 U	930 U	430 U	770 U	330 U	310 UJ	620 U	560 UJ	250 U	230 U	220 U
Fluoranthene**	423	2230	ug/kg	410	400 J	**590 J**	**2400 J**	**720 J**	120 J	**650**	**1600**	370	410 J	**950 J**	**1200 J**	**690**	**2800**	**1600 J**	**1300**	**640**	**770**	**1200**	**1400 J**	**890**	26 J	220 U
Fluorene**	77.4	536	ug/kg	30 J	50 J	40 J	**300 J**	**94 J**	31 J	47 J	75 J	33 J	48 J	**140 J**	**230 J**	**79 J**	**400 J**	**230 J**	**450 J**	48 J	**110 J**	**120 J**	**240 J**	**82 J**	230 U	220 U
Hexachlorobenzene	NSL	NSL	ug/kg	360 U	500 U	270 UJ	960 U	780 U	230 U	250 U	280 U	250 U	1200 U	1000 U	1000 UJ	640 U	930 U	430 U	770 U	330 U	310 U	620 U	560 UJ	250 U	230 U	220 U
Hexachlorobutadiene	NSL	NSL	ug/kg	360 U	500 U	270 UJ	960 U	780 U	230 U	250 U	280 U	250 U	1200 U	1000 U	1000 UJ	640 U	930 U	430 U	770 U	330 U	310 U	620 U	560 UJ	250 U	230 U	220 U
Hexachlorocyclopentadiene	NSL	NSL	ug/kg	360 UJ	500 UJ	270 UJ	960 UJ	780 U	230 UJ	250 UJ	280 UJ	250 UJ	1200 UJ	1000 UJ	1000 UJ	640 UJ	930 U	430 UJ	770 UJ	330 UJ	310 U	620 UJ	560 UJ	250 UJ	230 UJ	220 UJ
Hexachloroethane	NSL	NSL	ug/kg	360 U	500 U	270 UJ	960 U	780 U	230 U	250 U	280 U	250 U	1200 U	1000 U	1000 UJ	640 U	930 U	430 U	770 U	330 U	310 U	620 U	560 UJ	250 U	230 U	220 U
Indeno(1,2,3-cd)pyrene**	NSL	NSL	ug/kg	120 J	140 J	120 J	410 J	160 J	44 J	210 J	430	120 J	160 J	280 J	350 J	250 J	310 J	210 J	300 J	150 J	310	420 J	300 J	220 J	230 UJ	220 UJ
Isophorone	NSL	NSL	ug/kg	360 U	500 U	270 UJ	960 U	780 U	230 U	250 U	280 U	250 U	1200 U	1000 U	1000 UJ	640 U	930 U	430 U	770 U	330 U	310 U	620 U	560 UJ	250 U	230 U	220 U
Naphthalene**	176	561	ug/kg	26 J	43 J	25 J	61 J	780 U	17 J	22 J	30 J	28 J	1200 U	98 J	170 J	150 J	130 J	55 J	100 J	27 J	140 J	160 J	120 J	70 J	230 U	220 U
Nitrobenzene	NSL	NSL	ug/kg	360 U	500 U	270 UJ	960 U	780 U	230 U	250 U	280 U	250 U	1200 U	1000 U	1000 UJ	640 U	930 U	430 U	770 U	330 U	310 U	620 U	560 UJ	250 U	230 U	220 U
N-Nitroso-di-n-propylamine	NSL	NSL	ug/kg	360 U	500 U	270 UJ	960 U	780 U	230 U	250 U	280 U	250 U	1200 U	1000 U	1000 UJ	640 U	930 U	430 U	770 U	330 U	310 U	620 U	560 UJ	250 U	230 U	220 U
N-Nitrosodiphenylamine	NSL	NSL	ug/kg	360 U	500 U	270 UJ	960 U	780 U	230 U	250 U	280 U	250 U	1200 U	1000 U	1000 UJ	640 U	930 U	430 U	770 U	330 U	310 U	620 U	560 UJ	250 U	230 U	220 U
Pentachlorophenol	NSL	NSL	ug/kg	690 UJ	970 UJ	530 UJ	1900 UJ	1500 UJ	440 U	490 U	540 U	490 U	2200 UJ	2000 UJ	2000 UJ	1200 U	1800 UJ	830 UJ	1500 UJ	650 UJ	600 U	1200 U	1100 UJ	490 UJ	450 UJ	430 UJ
Phenanthrene**	204	1170	ug/kg	160 J	**250 J**	**230 J**	**2100**	**620 J**	85 J	**220 J**	**770**	140 J	170 J	**390 J**	**670 J**	**260 J**	**2100**	**1900**	**2300**	**230 J**	**490**	**600 J**	**870 J**	**390**	25 J	4.9 J
Phenol	NSL	NSL	ug/kg	360 U	500 U	270 UJ	960 U	780 U	230 U	250 U	280 U	250 U	1200 U	1000 U	1000 UJ	640 U	930 U	430 U	770 U	330 U	120 J	620 U	560 UJ	250 U	230 U	220 U
Pyrene**	195	1520	ug/kg	**320 J**	**390 J**	**460 J**	**1600 J**	**750 J**	180 J	**1100**	**2400**	**530**	**390 J**	**800 J**	**840 J**	**970**	**1700 J**	**1300 J**	**1800 J**	**560 J**	**1600**	**1400**	**1400 J**	**810 J**	34 J	220 UJ
Total PAHs 17 ND = 1/2RL	1610	22800	ug/kg	**2851**	**3336**	**3436**	**14341**	**5711**	1338	**4984**	**11399**	**2923**	**5873**	**9148**	**9450**	**5959**	**15006**	**9906**	**11560**	**3991**	**8494**	**9556**	**9480**	**5775**	1315	**1765**

NOTES:
** Analytes included in the 17PAH total
J = Indicates that the concentration is an estimated value.
R = Result is rejected
U = Indicates the analyte was analyzed for but not detected.
µg/kg = Micrograms per kilogram.
TEC = Threshold effect concentration.
Development and Evaluation of Consensus-Based Sediment Quality
Guidelines for Freshwater Ecosystems (MacDonald et al. 2000).
PEC = Probable effect concentration.
Development and Evaluation of Consensus-Based Sediment Quality
Guidelines for Freshwater Ecosystems (MacDonald et al. 2000).
Bolded values exceed the TEC.
Gray shaded values exceed the PEC.
NSL = No Screening Level.
Submitted samples are presented in ascending numerical order.
*Samples presented are displayed in Figure 4-3A

TABLE 4-6A* SEDIMENT RESULTS FOR SEMIVOLATILE ORGANIC ANALYSIS (SVOA) IN AREA A
PHASE 2 LOWER MAUMEE RIVER SITE CHARACTERIZATION
TOLEDO, OHIO (JUNE 2013)

			Sample Location:	LMR13-15		LMR13-16	LMR13-17	LMR13-18	LMR13-19	LMR13-20	LMR13-21							LMR13-23	LMR13-24	LMR13-25				
			Sample Name:	LMR13-15-012	LMR13-15-024	LMR13-16-012	LMR13-17-012	LMR13-18-012	LMR13-19-012	LMR13-20-012	LMR13-21-012	LMR13-21-012FD	LMR13-21-024	LMR13-21-024FD	LMR13-21-048	LMR13-21-072		LMR13-23-012	LMR13-24-012	LMR13-25-012	LMR13-25-024	LMR13-25-048	LMR13-25-072	LMR13-25-096
			Sample Depth (ft):	0-1	1-2	0-1	0-1	0-1	0-1	0-1	0-1	0-1	1-2	1-2	2-4	4-6		0-1	0-1	0-1	1-2	2-4	4-6	6-7
			Date Sampled:	6/18/13	6/18/13	6/11/13	6/11/13	6/11/13	6/11/13	6/11/13	6/18/13	6/18/13	6/18/13	6/18/13	6/18/13	6/18/13		6/11/13	6/11/13	6/18/13	6/18/13	6/18/13	6/18/13	6/18/13
Analyte	**TEC**	**PEC**	**Unit**																					
1,1'-Biphenyl	NSL	NSL	ug/kg	320 U	250 U	240 U	260 U	270 U	5.2 J	250 U	240 U	220 U	260 U	260 U	230 U	210 U		240 U	290 U	710 U	780 U	220 U	210 UJ	210 UJ
1,2,4,5-Tetrachlorobenzene	NSL	NSL	ug/kg	320 U	250 U	240 U	260 U	270 U	280 U	250 U	240 U	220 U	260 U	260 U	230 U	210 U		240 U	290 U	710 U	780 U	220 U	210 UJ	210 UJ
2,2'-Oxybis(1-chloropropane)	NSL	NSL	ug/kg	320 U	250 U	240 U	260 U	270 U	280 U	250 U	240 U	220 U	260 U	260 U	230 U	210 U		240 U	290 U	710 U	780 U	220 U	210 UJ	210 UJ
2,3,4,6-Tetrachlorophenol	NSL	NSL	ug/kg	320 U	250 U	240 U	260 U	270 U	280 U	250 U	240 U	220 U	260 U	260 U	230 U	210 U		240 U	290 U	710 U	780 U	220 U	210 UJ	210 UJ
2,4,5-Trichlorophenol	NSL	NSL	ug/kg	320 U	250 U	240 U	260 U	270 U	280 U	250 U	240 U	220 U	260 U	260 U	230 U	210 U		240 U	290 U	710 U	780 U	220 U	210 UJ	210 UJ
2,4,6-Trichlorophenol	NSL	NSL	ug/kg	320 U	250 U	240 U	260 U	270 U	280 U	250 U	240 U	220 U	260 U	260 U	230 U	210 U		240 U	290 U	710 U	780 U	220 U	210 UJ	210 UJ
2,4-Dichlorophenol	NSL	NSL	ug/kg	320 U	250 U	240 U	260 U	270 U	280 U	250 U	240 U	220 U	260 U	260 U	230 U	210 U		240 U	290 U	710 U	780 U	220 U	210 UJ	210 UJ
2,4-Dimethylphenol	NSL	NSL	ug/kg	320 U	250 U	240 U	260 U	270 U	280 U	250 U	240 U	220 U	260 U	260 U	230 U	210 U		240 U	290 U	710 U	780 U	220 U	210 UJ	210 UJ
2,4-Dinitrophenol	NSL	NSL	ug/kg	620 U	480 U	460 UJ	500 U	520 U	550 U	490 U	460 U	430 U	500 U	510 U	440 U	410 U		470 U	570 U	1400 U	1500 U	430 U	410 UJ	410 UJ
2,4-Dinitrotoluene	NSL	NSL	ug/kg	320 U	250 U	240 U	260 U	270 U	280 U	250 U	240 U	220 U	260 U	260 U	230 U	210 U		240 U	290 U	710 U	780 U	220 U	210 UJ	210 UJ
2,6-Dinitrotoluene	NSL	NSL	ug/kg	320 U	250 U	240 U	260 U	270 U	280 U	250 U	240 U	220 U	260 U	260 U	230 U	210 U		240 U	290 U	710 U	780 U	220 U	210 UJ	210 UJ
2-Chloronaphthalene	NSL	NSL	ug/kg	320 U	250 U	240 U	260 U	270 U	280 U	250 U	240 U	220 U	260 U	260 U	230 U	210 U		240 U	290 U	710 U	780 U	220 U	210 UJ	210 UJ
2-Chlorophenol	NSL	NSL	ug/kg	320 U	250 U	240 U	260 U	270 U	280 U	250 U	240 U	220 U	260 U	260 U	230 U	210 U		240 U	290 U	710 U	780 U	220 U	210 UJ	210 UJ
2-Methylnaphthalene**	NSL	NSL	ug/kg	15 J	250 U	240 U	260 U	34 J	280 U	25 J	17 J	14 J	36 J	24 J	230 U	210 U		240 U	290 U	710 U	37 J	220 U	210 UJ	210 UJ
2-Methylphenol	NSL	NSL	ug/kg	320 U	250 U	240 U	260 U	270 U	280 U	250 U	240 U	220 U	260 U	260 U	230 U	210 U		240 U	290 U	710 U	780 U	220 U	210 UJ	210 UJ
2-Nitroaniline	NSL	NSL	ug/kg	620 U	480 U	460 U	500 U	520 U	550 U	490 U	460 U	430 U	500 U	510 U	440 U	410 U		470 U	570 U	1400 U	1500 U	430 U	410 UJ	410 UJ
2-Nitrophenol	NSL	NSL	ug/kg	320 U	250 U	240 U	260 U	270 U	280 U	250 U	240 U	220 U	260 U	260 U	230 U	210 U		240 U	290 U	710 U	780 U	220 U	210 UJ	210 UJ
3,3'-Dichlorobenzidine	NSL	NSL	ug/kg	320 UJ	250 U	240 U	260 U	270 UJ	280 UJ	250 UJ	240 U	220 U	260 U	260 U	230 U	210 U		240 UJ	290 U	710 U	780 U	220 U	210 UJ	210 UJ
3-Nitroaniline	NSL	NSL	ug/kg	620 U	480 U	460 U	500 U	520 U	550 U	490 U	460 U	430 U	500 U	510 U	440 U	410 U		470 U	570 U	1400 U	1500 U	430 U	410 UJ	410 UJ
4,6-Dinitro-2-methylphenol	NSL	NSL	ug/kg	620 U	480 U	460 U	500 U	520 U	550 U	490 U	460 U	430 U	500 U	510 U	440 U	410 U		470 U	570 U	1400 U	1500 U	430 U	410 UJ	410 UJ
4-Bromophenyl-phenylether	NSL	NSL	ug/kg	320 U	250 U	240 U	260 U	270 U	280 U	250 U	240 U	220 U	260 U	260 U	230 U	210 U		240 U	290 U	710 U	780 U	220 U	210 UJ	210 UJ
4-Chloro-3-methylphenol	NSL	NSL	ug/kg	320 U	250 U	240 U	260 U	270 U	280 U	250 U	240 U	220 U	260 U	260 U	230 U	210 U		240 U	290 U	710 U	780 U	220 U	210 UJ	210 UJ
4-Chloroaniline	NSL	NSL	ug/kg	320 UJ	250 U	240 U	260 U	270 UJ	280 UJ	250 UJ	240 U	220 U	260 U	260 U	230 U	210 U		240 UJ	290 U	710 U	780 U	220 U	210 UJ	210 UJ
4-Chlorophenyl-phenylether	NSL	NSL	ug/kg	320 U	250 U	240 U	260 U	270 U	280 U	250 U	240 U	220 U	260 U	260 U	230 U	210 U		240 U	290 U	710 U	780 U	220 U	210 UJ	210 UJ
4-Methylphenol	NSL	NSL	ug/kg	320 U	250 U	240 U	260 U	270 U	280 U	250 U	240 U	220 U	260 U	260 U	230 U	210 U		240 U	290 U	710 U	780 U	220 U	210 UJ	210 UJ
4-Nitroaniline	NSL	NSL	ug/kg	620 U	480 U	460 U	500 U	520 U	550 U	490 U	460 U	430 U	500 U	510 U	440 U	410 U		470 U	570 U	1400 U	1500 U	430 U	410 UJ	410 UJ
4-Nitrophenol	NSL	NSL	ug/kg	620 U	480 U	460 U	500 U	520 U	550 U	490 U	460 U	430 U	500 U	510 U	440 U	410 U		470 U	570 U	1400 U	1500 U	430 U	410 UJ	410 UJ
Acenaphthene**	NSL	NSL	ug/kg	26 J	150 J	6.5 J	35 J	130 J	180 J	420	18 J	16 J	64 J	43 J	50 J	210 U		29 J	57 J	38 J	100 J	46 J	210 UJ	210 UJ
Acenaphthylene**	NSL	NSL	ug/kg	10 J	48 J	240 U	19 J	77 J	47 J	66 J	9.2 J	5.6 J	40 J	25 J	16 J	210 U		24 J	35 J	710 U	780 U	220 U	210 UJ	210 UJ
Acetophenone	NSL	NSL	ug/kg	320 U	250 U	27 J	35 J	38 J	22 J	24 J	240 U	220 U	260 U	260 U	230 U	210 U		28 J	48 J	710 U	780 U	220 U	32 J	13 J
Anthracene**	57.2	845	ug/kg	47 J	**290**	21 J	**80 J**	**270 J**	**200 J**	**360**	35 J	30 J	**140 J**	**81 J**	**90 J**	210 U		**94 J**	**120 J**	**84 J**	**230 J**	**100 J**	210 UJ	210 UJ
Atrazine	NSL	NSL	ug/kg	320 U	250 U	240 U	260 U	270 U	280 U	250 U	240 U	220 U	260 U	260 U	230 U	210 U		240 U	290 U	710 U	780 U	220 U	210 UJ	210 UJ
Benzaldehyde	NSL	NSL	ug/kg	54 J	53 J	26 J	38 J	61 J	31 J	39 J	28 J	220 U	38 J	29 J	32 J	210 U		47 J	65 J	710 U	780 U	53 J	41 J	29 J
Benzo(a)anthracene**	108	1050	ug/kg	**210 J**	**690**	97 J	**280**	**970**	**510**	**900**	**190 J**	**170 J**	**980**	**540**	**240**	210 U		**430**	**420**	**290 J**	**860**	**180 J**	210 UJ	210 UJ
Benzo(a)pyrene**	150	1450	ug/kg	**210 J**	**420**	100 J	**270**	**1000**	**500**	**890**	150 J	140 J	**630**	**350**	**210 J**	210 U		**400**	**440**	**300 J**	**860**	**180 J**	210 UJ	210 UJ
Benzo(b)fluoranthene**	NSL	NSL	ug/kg	230 J	380 J	110 J	230 J	860	380	890	130 J	140 J	580 J	430 J	150 J	210 UJ		420	420	260 J	710 J	140 J	210 UJ	210 UJ
Benzo(g,h,i)perylene**	NSL	NSL	ug/kg	130 J	260	82 J	180 J	520	270 J	470	96 J	100 J	300	260	130 J	210 U		230 J	280 J	170 J	450 J	89 J	210 UJ	210 UJ
Benzo(k)fluoranthene**	NSL	NSL	ug/kg	210 J	520	110 J	270	810	450	590	110 J	110 J	690	270	200 J	210 U		340	390	260 J	820	150 J	210 UJ	210 UJ
Bis(2-chloroethoxy)methane	NSL	NSL	ug/kg	320 U	250 U	240 U	260 U	270 U	280 U	250 U	240 U	220 U	260 U	260 U	230 U	210 U		240 U	290 U	710 U	780 U	220 U	210 UJ	210 UJ
Bis(2-chloroethyl)ether	NSL	NSL	ug/kg	320 U	250 U	240 U	260 U	270 U	280 U	250 U	240 U	220 U	260 U	260 U	230 U	210 U		240 U	290 U	710 U	780 U	220 U	210 UJ	210 UJ
Bis(2-ethylhexyl)phthalate	NSL	NSL	ug/kg	200 J	55 J	380	260 U	1300	280 U	250 U	520	430	180 J	130 J	64 J	48 J		240 U	2800	710 U	780 U	220 U	210 UJ	210 UJ
Butylbenzylphthalate	NSL	NSL	ug/kg	320 U	250 U	240 U	260 U	270 U	280 U	250 U	240 U	220 U	260 U	260 U	230 U	210 U		240 U	290 U	710 U	780 U	220 U	210 UJ	210 UJ
Caprolactam	NSL	NSL	ug/kg	320 U	250 U	240 U	260 U	270 U	280 U	250 U	240 U	220 U	260 U	260 U	230 U	210 U		240 U	290 U	710 U	780 U	220 U	210 UJ	210 UJ
Carbazole	NSL	NSL	ug/kg	320 U	250 U	240 U	9.1 J	270 U	280 U	14 J	240 U	220 U	260 U	260 U	230 U	210 U		7.9 J	19 J	710 U	780 U	220 U	210 UJ	210 UJ
Chrysene**	166	1290	ug/kg	**330**	**660**	140 J	**360**	**1100**	**620**	**1000**	**270**	**220**	**960**	**560**	**270**	13 J		**470**	**610**	**430 J**	**1100**	**200 J**	210 UJ	210 UJ
Dibenzo(a,h)anthracene**	33	NSL	ug/kg	**50 J**	**140 J**	**39 J**	**72 J**	**160 J**	**87 J**	**120 J**	**49 J**	**50 J**	**190 J**	**130 J**	32 J	210 UJ		**69 J**	**120 J**	**75 J**	**160 J**	24 J	210 UJ	210 UJ
Dibenzofuran	NSL	NSL	ug/kg	17 J	31 J	240 U	12 J	32 J	14 J	29 J	240 U	7.3 J	260 U	14 J	230 U	210 U		12 J	24 J	710 U	780 U	8 J	210 UJ	210 UJ
Diethylphthalate	NSL	NSL	ug/kg	320 U	250 U	240 U	260 U	270 U	280 U	250 U	240 U	220 U	260 U	260 U	230 U	210 U		240 U	290 U	710 U	780 U	220 U	210 UJ	210 UJ
Dimethylphthalate	NSL	NSL	ug/kg	320 U	250 U	240 U	260 U	270 U	280 U	250 U	240 U	220 U	260 U	260 U	230 U	210 U		240 U	290 U	710 U	780 U	220 U	210 UJ	210 UJ
Di-n-butylphthalate	NSL	NSL	ug/kg	320 U	250 U	10 J	16 J	24 J	20 J	250 U	240 U	220 U	260 U	260 U	230 U	210 U		12 J	27 J	710 U	780 U	11 J	7.8 J	6.8 J
Di-n-octylphthalate	NSL	NSL	ug/kg	320 U	250 U	240 U	260 U	270 U	280 U	250 U	240 U	220 U	260 U	260 U	230 U	210 U		240 U	290 U	710 U	780 U	220 U	210 UJ	210 UJ
Fluoranthene**	423	2230	ug/kg	350	**1300**	150 J	380	**1200**	**760**	**1200**	180 J	170 J	**900**	**610**	**460**	7 J		**620**	**590**	380 J	**2100**	360	210 UJ	210 UJ
Fluorene**	77.4	536	ug/kg	26 J	75 J	240 U	49 J	270 U	58 J	**130 J**	240 U	9.9 J	**84 J**	29 J	14 J	210 U		35 J	42 J	54 J	**120 J**	17 J	210 UJ	210 UJ
Hexachlorobenzene	NSL	NSL	ug/kg	320 U	250 U	240 U	260 U	270 U	280 U	250 U	240 U	220 U	260 U	260 U	230 U	210 U		240 U	290 U	710 U	780 U	220 U	210 UJ	210 UJ
Hexachlorobutadiene	NSL	NSL	ug/kg	320 U	250 U	240 U	260 U	270 U	280 U	250 U	240 U	220 U	260 U	260 U	230 U	210 U		240 U	290 U	710 U	780 U	220 U	210 UJ	210 UJ
Hexachlorocyclopentadiene	NSL	NSL	ug/kg	320 UJ	250 UJ	240 UJ	260 UJ	270 UJ	280 UJ	250 UJ	240 UJ	220 UJ	260 UJ	260 UJ	230 UJ	210 UJ		240 UJ	290 UJ	710 U	780 U	220 UJ	210 UJ	210 UJ
Hexachloroethane	NSL	NSL	ug/kg	320 U	250 U	240 U	260 U	270 U	280 U	250 U	240 U	220 U	260 U	260 U	230 U	210 U		240 U	290 U	710 U	780 U	220 U	210 UJ	210 UJ
Indeno(1,2,3-cd)pyrene**	NSL	NSL	ug/kg	110 J	250 J	70 J	130 J	420	210 J	380	73 J	71 J	240 J	190 J	99 J	210 U		190 J	230 J	110 J	300 J	69 J	210 UJ	210 UJ
Isophorone	NSL	NSL	ug/kg	320 U	250 U	240 U	260 U	270 U	280 U	250 U	240 U	220 U	260 U	260 U	230 U	210 U		240 U	290 U	710 U	780 U	220 U	210 UJ	210 UJ
Naphthalene**	176	561	ug/kg	27 J	65 J	9.6 J	27 J	70 J	25 J	40 J	49 J	35 J	120 J	69 J	11 J	210 U		18 J	66 J	72 J	120 J	17 J	210 UJ	210 UJ
Nitrobenzene	NSL	NSL	ug/kg	320 U	250 U	240 U	260 U	270 U	280 U	250 U	240 U	220 U	260 U	260 U	230 U	210 U		240 U	290 U	710 U	780 U	220 U	210 UJ	210 UJ
N-Nitroso-di-n-propylamine	NSL	NSL	ug/kg	320 U	250 U	240 U	260 U	270 U	280 U	250 U	240 U	220 U	260 U	260 U	230 U	210 U		240 U	290 U	710 U	780 U	220 U	210 UJ	210 UJ
N-Nitrosodiphenylamine	NSL	NSL	ug/kg	320 U	250 U	240 U	260 U	270 U	280 U	250 U	240 U	220 U	260 U	260 U	230 U	210 U		240 U	290 U	710 U	780 U	220 U	210 UJ	210 UJ
Pentachlorophenol	NSL	NSL	ug/kg	620 U	480 U	460 U	500 U	520 U	550 U	490 U	460 U	430 U	500 U	510 U	440 U	410 U		470 U	570 U	1400 UJ	1500 UJ	430 UJ	410 UJ	410 UJ
Phenanthrene**	204	1170	ug/kg	150 J	**920**	51 J	200 J	**660**	**310**	**1200**	93 J	92 J	**370**	150 J	**250**	210 U		**290**	**230 J**	**260 J**	**430 J**	**290**	210 UJ	210 UJ
Phenol	NSL	NSL	ug/kg	320 U	250 U	240 U	260 U	12 J	280 U	6.4 J	240 U	220 U	260 U	260 U	230 U	210 U		240 U	290 U	710 U	780 U	220 U	31 J	210 UJ
Pyrene**	195	1520	ug/kg	**410**	**1300**	**220 J**	**630**	**1800**	**1200**	**2000**	**260**	**220 J**	**1400**	**740**	**490**	10 J		**910**	**950**	**380 J**	**1300 J**	**430 J**	210 UJ	210 UJ
Total PAHs 17 ND = 1/2RL	1610	22800	ug/kg	**2541**	**7593**	1566	**3342**	**10216**	**5947**	**10681**	**1849**	1594	**7724**	**4501**	**2827**	1500		**4689**	**5145**	**3873**	**10087**	**2512**	**1785**	**1785**

NOTES:
** Analytes included in the 17PAH total
J = Indicates that the concentration is an estimated value.
R = Result is rejected
U = Indicates the analyte was analyzed for but not detected.
µg/kg = Micrograms per kilogram.
TEC = Threshold effect concentration.
Development and Evaluation of Consensus-Based Sediment Quality
Guidelines for Freshwater Ecosystems (MacDonald et al. 2000).
PEC = Probable effect concentration.
Development and Evaluation of Consensus-Based Sediment Quality
Guidelines for Freshwater Ecosystems (MacDonald et al. 2000).
Bolded values exceed the TEC.
Gray shaded values exceed the PEC.
NSL = No Screening Level.
Submitted samples are presented in ascending numerical order.
*Samples presented are displayed in Figure 4-3A

TABLE 4-6A* SEDIMENT RESULTS FOR SEMIVOLATILE ORGANIC ANALYSIS (SVOA) IN AREA A
PHASE 2 LOWER MAUMEE RIVER SITE CHARACTERIZATION
TOLEDO, OHIO (JUNE 2013)

			Sample Location:	LMR13-45						LMR13-46							LMR13-47						
			Sample Name:	LMR13-45-012	LMR13-45-024	LMR13-45-048	LMR13-45-072	LMR13-45-096	LMR13-45-120	LMR13-46-012	LMR13-46-024	LMR13-46-024FD	LMR13-46-048	LMR13-46-072	LMR13-46-096	LMR13-46-120	LMR13-47-012	LMR13-47-024	LMR13-47-048	LMR13-47-072	LMR13-47-096	LMR13-47-120	LMR13-47-144
			Sample Depth (ft):	0-1	1-2	2-4	4-6	6-8	8-9	0-1	1-2	1-2	2-4	4-6	6-8	8-10	0-1	1-2	2-4	4-6	6-8	8-10	10-12
			Date Sampled:	6/14/13	6/14/13	6/14/13	6/14/13	6/14/13	6/14/13	6/12/13	6/12/13	6/12/13	6/12/13	6/12/13	6/12/13	6/12/13	6/13/13	6/13/13	6/13/13	6/13/13	6/13/13	6/13/13	6/13/13	
Analyte	**TEC**	**PEC**	**Unit**																				
1,1'-Biphenyl	NSL	NSL	ug/kg	720 U	2900 UJ	2000 U	3800 U	2400 U	2200 U	1600 U	1500 U	1600 U	2300 U	2900 U	3700 U	1400 U	410 U	350 U	340 U	310 U	320 U	320 U	310 U
1,2,4,5-Tetrachlorobenzene	NSL	NSL	ug/kg	720 U	2900 UJ	2000 U	3800 U	2400 U	2200 U	1600 U	1500 U	1600 U	2300 U	2900 U	3700 U	1400 U	410 U	350 U	340 U	310 U	320 U	320 U	310 U
2,2'-Oxybis(1-chloropropane)	NSL	NSL	ug/kg	720 U	2900 U	2000 U	3800 U	2400 U	2200 U	1600 U	1500 U	1600 U	2300 U	2900 U	3700 U	1400 U	410 U	350 U	340 U	310 U	320 U	320 U	310 U
2,3,4,6-Tetrachlorophenol	NSL	NSL	ug/kg	720 U	2900 U	2000 U	3800 U	2400 U	2200 U	1600 U	1500 U	1600 U	2300 U	2900 U	3700 U	1400 U	410 U	350 U	340 U	310 U	320 U	320 U	310 U
2,4,5-Trichlorophenol	NSL	NSL	ug/kg	720 U	2900 UJ	2000 U	3800 U	2400 U	2200 U	1600 U	1500 U	1600 U	2300 U	2900 U	3700 U	1400 U	410 U	350 U	340 U	310 U	320 U	320 U	310 U
2,4,6-Trichlorophenol	NSL	NSL	ug/kg	720 U	2900 UJ	2000 U	3800 U	2400 U	2200 U	1600 U	1500 U	1600 U	2300 U	2900 U	3700 U	1400 U	410 U	350 U	340 U	310 U	320 U	320 U	310 U
2,4-Dichlorophenol	NSL	NSL	ug/kg	720 U	2900 U	2000 U	3800 U	2400 U	2200 U	1600 U	1500 U	1600 U	2300 U	2900 U	3700 U	1400 U	410 U	350 U	340 U	310 U	320 U	320 U	310 U
2,4-Dimethylphenol	NSL	NSL	ug/kg	720 U	2900 U	2000 U	3800 U	2400 U	2200 U	1600 U	1500 U	1600 U	2300 U	2900 U	3700 U	1400 U	410 U	350 U	340 U	310 U	320 U	320 U	310 U
2,4-Dinitrophenol	NSL	NSL	ug/kg	1400 U	5700 UJ	3900 U	7400 U	4700 U	4300 U	3100 U	3000 U	3000 U	4400 U	5700 U	7100 U	2800 UJ	800 U	680 U	650 U	600 U	620 U	630 U	600 U
2,4-Dinitrotoluene	NSL	NSL	ug/kg	720 U	2900 UJ	2000 U	3800 U	2400 U	2200 U	1600 U	1500 U	1600 U	2300 U	2900 U	3700 U	1400 U	410 U	350 U	340 U	310 U	320 U	320 U	310 U
2,6-Dinitrotoluene	NSL	NSL	ug/kg	720 U	2900 UJ	2000 U	3800 U	2400 U	2200 U	1600 U	1500 U	1600 U	2300 U	2900 U	3700 U	1400 U	410 U	350 U	340 U	310 U	320 U	320 U	310 U
2-Chloronaphthalene	NSL	NSL	ug/kg	720 U	2900 UJ	2000 U	3800 U	2400 U	2200 U	1600 U	1500 U	1600 U	2300 U	2900 U	3700 U	1400 U	410 U	350 U	340 U	310 U	320 U	320 U	310 U
2-Chlorophenol	NSL	NSL	ug/kg	720 U	2900 U	2000 U	3800 U	2400 U	2200 U	1600 U	1500 U	1600 U	2300 U	2900 U	3700 U	1400 U	410 U	350 U	340 U	310 U	320 U	320 U	310 U
2-Methylnaphthalene**	NSL	NSL	ug/kg	720 U	2900 U	2000 U	170 J	190 J	160 J	48 J	220 J	200 J	250 J	310 J	3700 U	110 J	12 J	350 U	13 J	14 J	320 U	13 J	310 U
2-Methylphenol	NSL	NSL	ug/kg	720 U	2900 U	2000 U	3800 U	2400 U	2200 U	1600 U	1500 U	1600 U	2300 U	2900 U	3700 U	1400 U	410 U	350 U	340 U	310 U	320 U	320 U	310 U
2-Nitroaniline	NSL	NSL	ug/kg	1400 U	5700 UJ	3900 U	7400 U	4700 U	4300 U	3100 U	3000 U	3000 U	4400 U	5700 U	7100 U	2800 U	800 U	680 U	650 U	600 U	620 U	630 U	600 U
2-Nitrophenol	NSL	NSL	ug/kg	720 U	2900 U	2000 U	3800 U	2400 U	2200 U	1600 U	1500 U	1600 U	2300 U	2900 U	3700 U	1400 U	410 U	350 U	340 U	310 U	320 U	320 U	310 U
3,3'-Dichlorobenzidine	NSL	NSL	ug/kg	720 UJ	2900 UJ	2000 UJ	3800 U	2400 U	2200 U	1600 U	1500 U	1600 U	2300 U	2900 U	3700 U	1400 U	410 UJ	350 UJ	340 UJ	310 UJ	320 UJ	320 U	310 U
3-Nitroaniline	NSL	NSL	ug/kg	1400 U	5700 UJ	3900 U	7400 U	4700 U	4300 U	3100 U	3000 U	3000 U	4400 U	5700 U	7100 U	2800 U	800 U	680 U	650 U	600 U	620 U	630 U	600 U
4,6-Dinitro-2-methylphenol	NSL	NSL	ug/kg	1400 U	5700 UJ	3900 UJ	7400 UJ	4700 U	4300 UJ	3100 U	3000 U	3000 U	4400 U	5700 U	7100 U	2800 U	800 U	680 U	650 U	600 U	620 U	630 U	600 U
4-Bromophenyl-phenylether	NSL	NSL	ug/kg	720 U	2900 UJ	2000 U	3800 UJ	2400 U	2200 UJ	1600 U	1500 U	1600 U	2300 U	2900 U	3700 U	1400 U	410 U	350 U	340 U	310 U	320 U	320 U	310 U
4-Chloro-3-methylphenol	NSL	NSL	ug/kg	720 U	2900 U	2000 U	3800 U	2400 U	2200 U	1600 U	1500 U	1600 U	2300 U	2900 U	3700 U	1400 U	410 U	350 U	340 U	310 U	320 U	320 U	310 U
4-Chloroaniline	NSL	NSL	ug/kg	720 UJ	2900 UJ	390 J	3800 U	2400 U	2200 U	640 J	1200 J	1100 J	1300 J	750 J	3700 U	1400 U	410 UJ	350 UJ	340 UJ	310 UJ	320 UJ	320 U	310 U
4-Chlorophenyl-phenylether	NSL	NSL	ug/kg	720 U	2900 UJ	2000 UJ	3800 U	2400 U	2200 U	1600 U	1500 U	1600 U	2300 U	2900 U	3700 U	1400 U	410 UJ	350 U	340 U	310 U	320 U	320 U	310 U
4-Methylphenol	NSL	NSL	ug/kg	720 U	2900 U	2000 U	3800 U	2400 U	2200 U	1600 U	1500 U	1600 U	2300 U	2900 U	3700 U	1400 U	51 J	350 U	340 U	310 U	320 U	320 U	310 U
4-Nitroaniline	NSL	NSL	ug/kg	1400 U	5700 UJ	3900 U	7400 U	4700 U	4300 U	3100 U	3000 U	3000 U	4400 U	5700 U	7100 U	2800 U	800 U	680 U	650 U	600 U	620 U	630 U	600 U
4-Nitrophenol	NSL	NSL	ug/kg	1400 U	5700 UJ	3900 U	7400 U	4700 U	4300 U	3100 U	3000 U	3000 U	4400 U	5700 U	7100 U	2800 U	800 U	680 U	650 U	600 U	620 U	630 U	600 U
Acenaphthene**	NSL	NSL	ug/kg	720 U	2900 UJ	270 J	3800 U	270 J	200 J	390 J	240 J	230 J	290 J	360 J	410 J	200 J	25 J	25 J	26 J	27 J	320 U	21 J	39 J
Acenaphthylene**	NSL	NSL	ug/kg	720 U	2900 UJ	2000 U	3800 U	2400 U	2200 U	180 J	210 J	170 J	280 J	270 J	3700 U	95 J	410 U	350 U	340 U	310 U	320 U	320 U	310 U
Acetophenone	NSL	NSL	ug/kg	720 U	2900 U	2000 U	3800 U	2400 U	2200 U	180 J	240 J	100 J	2300 U	2900 U	3700 U	1400 U	410 U	63 J	69 J	310 U	76 J	76 J	55 J
Anthracene**	57.2	845	ug/kg	**110 J**	2900 UJ	**360 J**	**250 J**	**330 J**	**160 J**	**420 J**	**760 J**	**640 J**	**500 J**	**430 J**	**450 J**	**620 J**	42 J	**94 J**	50 J	55 J	36 J	49 J	**71 J**
Atrazine	NSL	NSL	ug/kg	720 U	2900 UJ	2000 UJ	3800 UJ	2400 U	2200 UJ	1600 U	1500 U	1600 U	2300 U	2900 U	3700 U	1400 U	410 U	350 U	340 U	310 U	320 U	320 U	310 U
Benzaldehyde	NSL	NSL	ug/kg	720 U	2900 U	2000 U	3800 U	2400 U	2200 U	130 J	170 J	140 J	2300 U	2900 U	3700 U	1400 U	60 J	63 J	46 J	50 J	43 J	56 J	45 J
Benzo(a)anthracene**	108	1050	ug/kg	**540 J**	**1100 J**	**920 J**	**820 J**	**1100 J**	**660 J**	**1500 J**	**2100**	**1900**	**1900 J**	**1500 J**	**1500 J**	**1200 J**	**150 J**	**270 J**	**200 J**	**210 J**	**140 J**	**190 J**	**260 J**
Benzo(a)pyrene**	150	1450	ug/kg	**610 J**	**1300 J**	**1200 J**	**1400 J**	**2300 J**	**800 J**	**1700**	**2300**	**2100**	**3000**	**2700 J**	**2000 J**	**860 J**	**200 J**	**270 J**	**210 J**	**200 J**	150 J	**220 J**	**250 J**
Benzo(b)fluoranthene**	NSL	NSL	ug/kg	750	1400 J	1500 J	1500 J	2300 J	780 J	1900	2500	2300	3100	2300 J	2200 J	840 J	260 J	340 J	320 J	300 J	190 J	260 J	260 J
Benzo(g,h,i)perylene**	NSL	NSL	ug/kg	430 J	650 J	640 J	1100 J	1500 J	560 J	1000 J	1200 J	1100 J	2100 J	2300 J	1500 J	420 J	170 J	250 J	260 J	240 J	180 J	220 J	250 J
Benzo(k)fluoranthene**	NSL	NSL	ug/kg	610 J	1600 J	1200 J	1300 J	1500 J	840 J	1200 J	1700	2000	2100 J	1700 J	1200 J	690 J	290 J	250 J	230 J	200 J	170 J	220 J	270 J
Bis(2-chloroethoxy)methane	NSL	NSL	ug/kg	720 U	2900 U	2000 U	3800 U	2400 U	2200 U	1600 U	1500 U	1600 U	2300 U	2900 U	3700 U	1400 U	410 U	350 U	340 U	310 U	320 U	320 U	310 U
Bis(2-chloroethyl)ether	NSL	NSL	ug/kg	720 U	2900 U	2000 U	3800 U	2400 U	2200 U	1600 U	1500 U	1600 U	2300 U	2900 U	3700 U	1400 U	410 U	350 U	340 U	310 U	320 U	320 U	310 U
Bis(2-ethylhexyl)phthalate	NSL	NSL	ug/kg	7300	33000	23000	30000	30000	32000	15000	22000	21000	35000	32000	46000	20000	400 J	350 U	340 U	310 U	320 U	320 U	1800
Butylbenzylphthalate	NSL	NSL	ug/kg	720 U	2900 U	2000 U	3800 U	2400 U	2200 U	1600 U	1500 U	1600 U	2300 U	2900 U	3700 U	1400 U	66 J	350 U	340 U	310 U	320 U	320 U	310 U
Caprolactam	NSL	NSL	ug/kg	720 U	2900 U	2000 U	3800 U	2400 U	2200 U	1600 U	1500 U	1600 U	2300 U	2900 U	3700 U	1400 U	410 U	350 U	340 U	310 U	320 U	320 U	310 U
Carbazole	NSL	NSL	ug/kg	720 U	2900 UJ	2000 UJ	3800 UJ	2400 U	2200 UJ	1600 U	1500 U	1600 U	2300 U	2900 U	3700 U	69 J	21 J	24 J	25 J	25 J	320 U	320 U	310 U
Chrysene**	166	1290	ug/kg	**720**	**1400 J**	**1300 J**	**1300 J**	**1900 J**	**1100 J**	**1900**	**2700**	**2300**	**2500**	**2000 J**	**2300 J**	**1200 J**	**260 J**	**390**	**310 J**	**300 J**	**230 J**	**290 J**	**380**
Dibenzo(a,h)anthracene**	33	NSL	ug/kg	**170 J**	**150 J**	**110 J**	**150 J**	**370 J**	**200 J**	**410 J**	**410 J**	**350 J**	**430 J**	**640 J**	**440 J**	**100 J**	33 J	**80 J**	**82 J**	**67 J**	**49 J**	**67 J**	**87 J**
Dibenzofuran	NSL	NSL	ug/kg	720 U	2900 UJ	210 J	3800 U	110 J	110 J	210 J	190 J	190 J	220 J	180 J	270 J	120 J	410 U	16 J	19 J	20 J	11 J	15 J	26 J
Diethylphthalate	NSL	NSL	ug/kg	720 U	2900 UJ	2000 U	3800 U	2400 U	2200 U	1600 U	1500 U	1600 U	2300 U	2900 U	3700 U	1400 U	410 U	350 U	340 U	310 U	320 U	320 U	310 U
Dimethylphthalate	NSL	NSL	ug/kg	720 U	2900 UJ	2000 U	3800 U	2400 U	2200 U	1600 U	1500 U	1600 U	2300 U	2900 U	3700 U	1400 U	410 U	350 U	340 U	310 U	320 U	320 U	310 U
Di-n-butylphthalate	NSL	NSL	ug/kg	720 U	2900 UJ	2000 UJ	3800 UJ	2400 U	2200 UJ	1600 U	1500 U	1600 U	2300 U	2900 U	3700 U	1400 U	14 J	25 J	22 J	21 J	18 J	22 J	310 U
Di-n-octylphthalate	NSL	NSL	ug/kg	720 U	2900 UJ	2000 UJ	2300 J	2800	2200 U	810 J	1400 J	1300 J	2100 J	1200 J	1100 J	1400 U	410 UJ	350 U	340 U	310 U	320 U	320 U	310 U
Fluoranthene**	423	2230	ug/kg	**900**	**2400 J**	**3100 J**	**1900 J**	**3000 J**	**1700 J**	**2600**	**3200**	**2800**	**2900**	**2800 J**	**2900 J**	**2600**	**510 J**	**470**	**450**	**440**	310 J	360	**500**
Fluorene**	77.4	536	ug/kg	720 U	**120 J**	**260 J**	**150 J**	**270 J**	2200 U	**410 J**	**430 J**	**410 J**	**430 J**	**410 J**	**370 J**	**250 J**	23 J	42 J	40 J	48 J	320 U	320 U	61 J
Hexachlorobenzene	NSL	NSL	ug/kg	720 U	2900 UJ	2000 UJ	3800 UJ	2400 U	2200 UJ	1600 U	1500 U	1600 U	2300 U	2900 U	3700 U	1400 U	410 U	350 U	340 U	310 U	320 U	320 U	310 U
Hexachlorobutadiene	NSL	NSL	ug/kg	720 U	2900 U	2000 U	3800 U	2400 U	2200 U	1600 U	1500 U	1600 U	2300 U	2900 U	3700 U	1400 U	410 U	350 U	340 U	310 U	320 U	320 U	310 U
Hexachlorocyclopentadiene	NSL	NSL	ug/kg	720 UJ	2900 UJ	2000 UJ	3800 UJ	2400 UJ	2200 UJ	1600 U	1500 U	1600 U	2300 U	2900 UJ	3700 UJ	1400 UJ	410 UJ	350 UJ	340 UJ	310 UJ	320 UJ	320 UJ	310 UJ
Hexachloroethane	NSL	NSL	ug/kg	720 U	2900 U	2000 U	3800 U	2400 U	2200 U	1600 U	1500 U	1600 U	2300 U	2900 U	3700 U	1400 U	410 U	350 U	340 U	310 U	320 U	320 U	310 U
Indeno(1,2,3-cd)pyrene**	NSL	NSL	ug/kg	440 J	490 J	590 J	730 J	1100 J	440 J	950 J	1100 J	1000 J	1600 J	1900 J	1300 J	390 J	110 J	210 J	210 J	180 J	140 J	180 J	210 J
Isophorone	NSL	NSL	ug/kg	720 U	2900 U	2000 U	3800 U	2400 U	2200 U	1600 U	1500 U	1600 U	2300 U	2900 U	3700 U	1400 U	410 U	350 U	340 U	310 U	320 U	320 U	310 U
Naphthalene**	176	561	ug/kg	44 J	77 J	**200 J**	**260 J**	**450 J**	150 J	120 J	**180 J**	1600 U	**380 J**	**1400 J**	**1200 J**	100 J	22 J	350 U	18 J	20 J	320 U	18 J	21 J
Nitrobenzene	NSL	NSL	ug/kg	720 U	2900 U	2000 U	3800 U	2400 U	2200 U	1600 U	1500 U	1600 U	2300 U	2900 U	3700 U	1400 U	410 U	350 U	340 U	310 U	320 U	320 U	310 U
N-Nitroso-di-n-propylamine	NSL	NSL	ug/kg	720 U	2900 U	2000 U	3800 U	2400 U	2200 U	1600 U	1500 U	1600 U	2300 U	2900 U	3700 U	1400 U	410 U	350 U	340 U	310 U	320 U	320 U	310 U
N-Nitrosodiphenylamine	NSL	NSL	ug/kg	720 U	2900 UJ	2000 UJ	3800 UJ	2400 U	2200 UJ	1600 U	1500 U	1600 U	2300 U	2900 U	3700 U	1400 U	410 U	350 U	340 U	310 U	320 U	320 U	310 U
Pentachlorophenol	NSL	NSL	ug/kg	1400 UJ	5700 UJ	3900 UJ	7400 UJ	4700 UJ	4300 UJ	3100 U	3000 U	3000 U	4400 U	5700 U	7100 UJ	2800 UJ	800 UJ	680 U	650 U	600 U	620 U	630 U	600 U
Phenanthrene**	204	1170	ug/kg	**350 J**	**500 J**	**990 J**	**750 J**	**1100 J**	**810 J**	**1700**	**1900**	**1700**	**1600 J**	**1400 J**	**1900 J**	**1500**	200 J	**230 J**	**220 J**	**230 J**	150 J	180 J	**270 J**
Phenol	NSL	NSL	ug/kg	720 U	2900 U	2000 U	3800 U	2400 U	2200 U	1600 U	1500 U	1600 U	2300 U	2900 U	3700 U	1400 U	410 U	350 U	340 U	310 U	320 U	320 U	310 U
Pyrene**	195	1520	ug/kg	**1100 J**	**2500 J**	**2500 J**	**2100 J**	**2900 J**	**1300 J**	**3000**	**4400**	**4000**	**4500**	**3600**	**3600 J**	**1700**	**340 J**	**580**	**590**	**570**	**410**	**480**	**550**
Total PAHs 17 ND = 1/2RL	1610	22800	ug/kg	**8214**	**19487**	**17140**	**17680**	**21780**	**12060**	**19428**	**25550**	**24000**	**27860**	**26020**	**26970**	**12875**	**2852**	**4026**	**3399**	**3256**	**2955**	**3088**	**3789**

NOTES:
** Analytes included in the 17PAH total
J = Indicates that the concentration is an estimated value.
R = Result is rejected
U = Indicates the analyte was analyzed for but not detected.
µg/kg = Micrograms per kilogram.
TEC = Threshold effect concentration.
Development and Evaluation of Consensus-Based Sediment Quality
Guidelines for Freshwater Ecosystems (MacDonald et al. 2000).
PEC = Probable effect concentration.
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Guidelines for Freshwater Ecosystems (MacDonald et al. 2000).
Bolded values exceed the TEC.
Gray shaded values exceed the PEC.
NSL = No Screening Level.
Submitted samples are presented in ascending numerical order.
*Samples presented are displayed in Figure 4-3A

TABLE 4-6A* SEDIMENT RESULTS FOR SEMIVOLATILE ORGANIC ANALYSIS (SVOA) IN AREA A
PHASE 2 LOWER MAUMEE RIVER SITE CHARACTERIZATION
TOLEDO, OHIO (JUNE 2013)

			Sample Location:	LMR13-48									LMR13-60					LMR13-61					
			Sample Name:	LMR13-48-012	LMR13-48-024	LMR13-48-024FD	LMR13-48-048	LMR13-48-072	LMR13-48-096	LMR13-48-120	LMR13-48-144	LMR13-48-168	LMR13-60-012	LMR13-60-024	LMR13-60-048	LMR13-60-072	LMR13-60-096	LMR13-61-012	LMR13-61-024	LMR13-61-048	LMR13-61-072	LMR13-61-096	LMR13-61-120
			Sample Depth (ft):	0-1	1-2	1-2	2-4	4-6	6-8	8-10	10-12	12-13	0-1	1-2	2-4	4-6	6-8	0-1	1-2	2-4	4-6	6-8	8-10
			Date Sampled:	6/17/13	6/17/13	6/17/13	6/17/13	6/17/13	6/17/13	6/17/13	6/17/13	6/17/13	6/20/13	6/20/13	6/20/13	6/20/13	6/20/13	6/20/13	6/20/13	6/20/13	6/20/13	6/20/13	6/20/13
Analyte	**TEC**	**PEC**	**Unit**																				
1,1'-Biphenyl	NSL	NSL	ug/kg	300 U	290 U	280 U	12 J	910 UJ	560 UJ	540 UJ	260 UJ	220 UJ	370 UJ	340 U	330 U	310 U	290 U	400 UJ	350 U	330 UJ	330 UJ	310 UJ	290 U
1,2,4,5-Tetrachlorobenzene	NSL	NSL	ug/kg	300 U	290 U	280 U	270 U	910 UJ	560 UJ	540 UJ	260 UJ	220 UJ	370 UJ	340 U	330 U	310 U	290 U	400 UJ	350 U	330 UJ	330 UJ	310 UJ	290 U
2,2'-Oxybis(1-chloropropane)	NSL	NSL	ug/kg	300 U	290 U	280 U	270 U	910 UJ	560 UJ	540 UJ	260 UJ	220 UJ	370 UJ	340 U	330 U	310 U	290 U	400 UJ	350 U	330 UJ	330 UJ	310 UJ	290 U
2,3,4,6-Tetrachlorophenol	NSL	NSL	ug/kg	300 U	290 U	280 U	270 U	910 UJ	560 UJ	540 UJ	260 UJ	220 UJ	370 UJ	340 U	330 U	310 U	290 U	400 UJ	350 U	330 UJ	330 UJ	310 UJ	290 U
2,4,5-Trichlorophenol	NSL	NSL	ug/kg	300 U	290 U	280 U	270 U	910 UJ	560 UJ	540 UJ	260 UJ	220 UJ	370 UJ	340 U	330 U	310 U	290 U	400 UJ	350 U	330 UJ	330 UJ	310 UJ	290 U
2,4,6-Trichlorophenol	NSL	NSL	ug/kg	300 U	290 U	280 U	270 U	910 UJ	560 UJ	540 UJ	260 UJ	220 UJ	370 UJ	340 U	330 U	310 U	290 U	400 UJ	350 U	330 UJ	330 UJ	310 UJ	290 U
2,4-Dichlorophenol	NSL	NSL	ug/kg	300 U	290 U	280 U	270 U	910 UJ	560 UJ	540 UJ	260 UJ	220 UJ	370 UJ	340 U	330 U	310 U	290 U	400 UJ	350 U	330 UJ	330 UJ	310 UJ	290 U
2,4-Dimethylphenol	NSL	NSL	ug/kg	300 U	290 U	280 U	270 U	910 UJ	560 UJ	540 UJ	260 UJ	220 UJ	370 UJ	340 U	330 U	310 U	290 U	400 UJ	350 U	330 UJ	330 UJ	310 UJ	290 U
2,4-Dinitrophenol	NSL	NSL	ug/kg	580 U	570 U	540 U	530 U	1800 UJ	1100 UJ	1000 UJ	500 UJ	440 UJ	720 UJ	650 U	650 U	600 U	560 U	770 UJ	690 U	640 UJ	640 UJ	590 UJ	570 U
2,4-Dinitrotoluene	NSL	NSL	ug/kg	300 U	290 U	280 U	270 U	910 UJ	560 UJ	540 UJ	260 UJ	220 UJ	370 UJ	340 U	330 U	310 U	290 U	400 UJ	350 U	330 UJ	330 UJ	310 UJ	290 U
2,6-Dinitrotoluene	NSL	NSL	ug/kg	300 U	290 U	280 U	270 U	910 UJ	560 UJ	540 UJ	260 UJ	220 UJ	370 UJ	340 U	330 U	310 U	290 U	400 UJ	350 U	330 UJ	330 UJ	310 UJ	290 U
2-Chloronaphthalene	NSL	NSL	ug/kg	300 U	290 U	280 U	270 U	910 UJ	560 UJ	540 UJ	260 UJ	220 UJ	370 UJ	340 U	330 U	310 U	290 U	400 UJ	350 U	330 UJ	330 UJ	310 UJ	290 U
2-Chlorophenol	NSL	NSL	ug/kg	300 U	290 U	280 U	270 U	910 UJ	560 UJ	540 UJ	260 UJ	220 UJ	370 UJ	340 U	330 U	310 U	290 U	400 UJ	350 U	330 UJ	330 UJ	310 UJ	290 U
2-Methylnaphthalene**	NSL	NSL	ug/kg	34 J	71 J	59 J	53 J	910 UJ	90 J	540 UJ	260 UJ	14 J	370 UJ	340 U	330 U	310 U	15 J	26 J	350 U	14 J	18 J	22 J	37 J
2-Methylphenol	NSL	NSL	ug/kg	300 U	290 U	280 U	270 U	910 UJ	560 UJ	540 UJ	260 UJ	220 UJ	370 UJ	340 U	330 U	310 U	290 U	400 UJ	350 U	330 UJ	330 UJ	310 UJ	290 U
2-Nitroaniline	NSL	NSL	ug/kg	580 U	570 U	540 U	530 U	1800 UJ	1100 UJ	1000 UJ	500 UJ	440 UJ	720 UJ	650 U	650 U	600 U	560 U	770 UJ	690 U	640 UJ	640 UJ	590 UJ	570 U
2-Nitrophenol	NSL	NSL	ug/kg	300 U	290 U	280 U	270 U	910 UJ	560 UJ	540 UJ	260 UJ	220 UJ	370 UJ	340 U	330 U	310 U	290 U	400 UJ	350 U	330 UJ	330 UJ	310 UJ	290 U
3,3'-Dichlorobenzidine	NSL	NSL	ug/kg	300 U	290 U	280 U	270 U	910 UJ	560 UJ	540 UJ	260 UJ	220 UJ	370 UJ	340 U	330 U	310 U	290 U	400 UJ	350 UJ	330 UJ	330 UJ	310 UJ	290 U
3-Nitroaniline	NSL	NSL	ug/kg	580 U	570 U	540 U	530 U	1800 UJ	1100 UJ	1000 UJ	500 UJ	440 UJ	720 UJ	650 U	650 U	600 U	560 U	770 UJ	690 U	640 UJ	640 UJ	590 UJ	570 U
4,6-Dinitro-2-methylphenol	NSL	NSL	ug/kg	580 U	570 U	540 U	530 U	1800 UJ	1100 UJ	1000 UJ	500 UJ	440 UJ	720 UJ	650 U	650 U	600 U	560 U	770 UJ	690 U	16 J	640 UJ	590 UJ	570 U
4-Bromophenyl-phenylether	NSL	NSL	ug/kg	300 U	290 U	280 U	270 U	910 UJ	560 UJ	540 UJ	260 UJ	220 UJ	370 UJ	340 U	330 U	310 U	290 U	400 UJ	350 U	330 UJ	330 UJ	310 UJ	290 U
4-Chloro-3-methylphenol	NSL	NSL	ug/kg	300 U	290 U	280 U	270 U	910 UJ	560 UJ	540 UJ	260 UJ	220 UJ	370 UJ	340 U	330 U	310 U	290 U	400 UJ	350 U	330 UJ	330 UJ	310 UJ	290 U
4-Chloroaniline	NSL	NSL	ug/kg	300 U	290 U	280 U	270 U	910 UJ	560 UJ	540 UJ	260 UJ	220 UJ	370 UJ	340 U	330 U	310 U	290 U	400 UJ	350 U	330 UJ	330 UJ	310 UJ	290 U
4-Chlorophenyl-phenylether	NSL	NSL	ug/kg	300 U	290 U	280 U	270 U	910 UJ	560 UJ	540 UJ	260 UJ	220 UJ	370 UJ	340 U	330 U	310 U	290 U	400 UJ	350 U	330 UJ	330 UJ	310 UJ	290 U
4-Methylphenol	NSL	NSL	ug/kg	300 U	24 J	280 U	24 J	910 UJ	560 UJ	540 UJ	260 UJ	10 J	370 UJ	340 U	330 U	310 U	290 U	400 UJ	350 U	330 UJ	330 UJ	22 J	36 J
4-Nitroaniline	NSL	NSL	ug/kg	580 U	570 U	540 U	530 U	1800 UJ	1100 UJ	1000 UJ	500 UJ	440 UJ	720 UJ	650 U	650 U	600 U	560 U	770 UJ	690 U	640 UJ	640 UJ	590 UJ	570 U
4-Nitrophenol	NSL	NSL	ug/kg	580 U	570 U	540 U	530 U	1800 UJ	1100 UJ	1000 UJ	500 UJ	440 UJ	720 UJ	650 U	650 U	600 U	560 U	770 UJ	690 U	640 UJ	640 UJ	590 UJ	570 U
Acenaphthene**	NSL	NSL	ug/kg	76 J	130 J	120 J	160 J	130 J	400 J	240 J	62 J	23 J	26 J	340 U	41 J	46 J	67 J	49 J	22 J	130 J	55 J	49 J	56 J
Acenaphthylene**	NSL	NSL	ug/kg	44 J	79 J	73 J	76 J	46 J	120 J	51 J	20 J	220 UJ	370 UJ	340 U	330 U	310 U	290 U	400 UJ	350 U	330 UJ	330 UJ	310 UJ	12 J
Acetophenone	NSL	NSL	ug/kg	300 U	290 U	280 U	270 U	910 UJ	65 J	39 J	25 J	17 J	370 UJ	340 U	330 U	310 U	290 U	400 UJ	350 U	330 UJ	330 UJ	310 UJ	290 U
Anthracene**	57.2	845	ug/kg	**92 J**	**230 J**	**300**	**180 J**	**260 J**	**640 J**	**380 J**	**110 J**	32 J	51 J	49 J	**120 J**	**65 J**	**69 J**	48 J	36 J	**97 J**	**83 J**	**86 J**	**64 J**
Atrazine	NSL	NSL	ug/kg	300 U	290 U	280 U	270 U	910 UJ	560 UJ	540 UJ	260 UJ	220 UJ	370 UJ	340 U	330 U	310 U	290 U	400 UJ	350 U	330 UJ	330 UJ	310 UJ	290 U
Benzaldehyde	NSL	NSL	ug/kg	300 U	290 U	280 U	270 U	910 UJ	560 UJ	540 UJ	24 J	19 J	43 J	58 J	330 U	310 U	290 U	58 J	53 J	35 J	330 UJ	49 J	290 U
Benzo(a)anthracene**	108	1050	ug/kg	**980**	**1400**	**1500**	**1000**	**920 J**	**2200 J**	**770 J**	**340 J**	**110 J**	**140 J**	**140 J**	**310 J**	**190 J**	**160 J**	**150 J**	**200 J**	**200 J**	**310 J**	**300 J**	**280 J**
Benzo(a)pyrene**	150	1450	ug/kg	**690**	**1000**	**950**	**710**	**620 J**	**1300 J**	**810 J**	**300 J**	110 J	**170 J**	140 J	**290 J**	**180 J**	**170 J**	**180 J**	**180 J**	**220 J**	**320 J**	**340 J**	**260 J**
Benzo(b)fluoranthene**	NSL	NSL	ug/kg	720 J	1100 J	1300 J	810 J	560 J	1200 J	780 J	270 J	85 J	230 J	160 J	320 J	150 J	150 J	220 J	250 J	220 J	390 J	440 J	340
Benzo(g,h,i)perylene**	NSL	NSL	ug/kg	440	620	510	420	280 J	910 J	440 J	180 J	50 J	130 J	150 J	260 J	160 J	150 J	150 J	180 J	130 J	180 J	160 J	170 J
Benzo(k)fluoranthene**	NSL	NSL	ug/kg	560	800	700	560	670 J	1300 J	620 J	260 J	94 J	200 J	160 J	210 J	200 J	170 J	180 J	160 J	280 J	340 J	350 J	170 J
Bis(2-chloroethoxy)methane	NSL	NSL	ug/kg	300 U	290 U	280 U	270 U	910 UJ	560 UJ	540 UJ	260 UJ	220 UJ	370 UJ	340 U	330 U	310 U	290 U	400 UJ	350 U	330 UJ	330 UJ	310 UJ	290 U
Bis(2-chloroethyl)ether	NSL	NSL	ug/kg	300 U	290 U	280 U	270 U	910 UJ	560 UJ	540 UJ	260 UJ	220 UJ	370 UJ	340 U	330 U	310 U	290 U	400 UJ	350 U	330 UJ	330 UJ	310 UJ	290 U
Bis(2-ethylhexyl)phthalate	NSL	NSL	ug/kg	180 J	290 U	110 J	74 J	910 UJ	560 UJ	540 UJ	260 UJ	220 UJ	370 UJ	310 J	350	770	510	400 UJ	390 J	330 UJ	330 UJ	310 UJ	1300
Butylbenzylphthalate	NSL	NSL	ug/kg	300 U	290 U	280 U	270 U	910 UJ	560 UJ	540 UJ	260 UJ	220 UJ	33 J	47 J	54 J	310 U	47 J	36 J	350 UJ	72 J	330 UJ	310 UJ	290 U
Caprolactam	NSL	NSL	ug/kg	300 U	290 U	280 U	270 U	910 UJ	560 UJ	540 UJ	260 UJ	220 UJ	370 UJ	340 U	330 U	310 U	290 U	400 UJ	350 U	330 UJ	330 UJ	310 UJ	290 U
Carbazole	NSL	NSL	ug/kg	300 U	290 U	280 U	270 U	910 UJ	560 UJ	540 UJ	260 UJ	220 UJ	370 UJ	340 U	23 J	310 U	290 U	400 UJ	350 U	330 UJ	330 UJ	310 UJ	290 U
Chrysene**	166	1290	ug/kg	**930**	**1500**	**1400**	**1000**	**1100 J**	**2000 J**	**870 J**	**380 J**	140 J	**240 J**	**240 J**	**350 J**	**280 J**	**240 J**	**220 J**	**260 J**	**300 J**	**440 J**	**390 J**	**400**
Dibenzo(a,h)anthracene**	33	NSL	ug/kg	**190 J**	**260 J**	**240 J**	**210 J**	**150 J**	**310 J**	**140 J**	**55 J**	16 J	**46 J**	**63 J**	**90 J**	**70 J**	**53 J**	**39 J**	350 UJ	**46 J**	**63 J**	**55 J**	**59 J**
Dibenzofuran	NSL	NSL	ug/kg	26 J	62 J	61 J	37 J	83 J	250 J	55 J	260 UJ	11 J	21 J	340 U	34 J	33 J	39 J	28 J	18 J	64 J	46 J	37 J	38 J
Diethylphthalate	NSL	NSL	ug/kg	300 U	290 U	280 U	270 U	910 UJ	560 UJ	540 UJ	260 UJ	220 UJ	370 UJ	340 U	330 U	310 U	290 U	400 UJ	350 U	330 UJ	330 UJ	310 UJ	290 U
Dimethylphthalate	NSL	NSL	ug/kg	300 U	290 U	280 U	270 U	910 UJ	560 UJ	540 UJ	260 UJ	220 UJ	370 UJ	340 U	330 U	310 U	290 U	400 UJ	350 U	330 UJ	330 UJ	310 UJ	290 U
Di-n-butylphthalate	NSL	NSL	ug/kg	300 U	290 U	280 U	270 U	910 UJ	560 UJ	540 UJ	260 UJ	220 UJ	18 J	27 J	24 J	17 J	40 J	23 J	17 J	330 UJ	330 UJ	310 UJ	28 J
Di-n-octylphthalate	NSL	NSL	ug/kg	300 UJ	290 UJ	280 UJ	270 UJ	910 UJ	560 UJ	540 UJ	260 UJ	220 UJ	370 UJ	340 U	330 U	310 U	290 U	400 UJ	350 UJ	330 UJ	330 UJ	310 UJ	290 U
Fluoranthene**	423	2230	ug/kg	**830**	**1700**	**1800**	**1100**	**1500 J**	**3700 J**	**1500 J**	**540 J**	170 J	360 J	330 J	**630 J**	290 J	320	390 J	230 J	**540 J**	**880 J**	**630 J**	320
Fluorene**	77.4	536	ug/kg	**81 J**	**190 J**	**240 J**	**240 J**	**200 J**	**570 J**	**280 J**	71 J	23 J	30 J	38 J	**84 J**	63 J	77 J	48 J	43 J	**140 J**	75 J	56 J	57 J
Hexachlorobenzene	NSL	NSL	ug/kg	300 U	290 U	280 U	270 U	910 UJ	560 UJ	540 UJ	260 UJ	220 UJ	370 UJ	340 U	330 U	310 U	290 U	400 UJ	350 U	330 UJ	330 UJ	310 UJ	290 U
Hexachlorobutadiene	NSL	NSL	ug/kg	300 U	290 U	280 U	270 U	910 UJ	560 UJ	540 UJ	260 UJ	220 UJ	370 UJ	340 U	330 U	310 U	290 U	400 UJ	350 U	330 UJ	330 UJ	310 UJ	290 U
Hexachlorocyclopentadiene	NSL	NSL	ug/kg	300 U	290 U	280 U	270 U	910 UJ	560 UJ	540 UJ	260 UJ	220 UJ	370 UJ	340 UJ	330 UJ	310 UJ	290 UJ	400 UJ	350 UJ	330 UJ	330 UJ	310 UJ	290 UJ
Hexachloroethane	NSL	NSL	ug/kg	300 U	290 U	280 U	270 U	910 UJ	560 UJ	540 UJ	260 UJ	220 UJ	370 UJ	340 U	330 U	310 U	290 U	400 UJ	350 U	330 UJ	330 UJ	310 UJ	290 U
Indeno(1,2,3-cd)pyrene**	NSL	NSL	ug/kg	390	550	400	420	220 J	690 J	360 J	150 J	45 J	110 J	140 J	230 J	140 J	140 J	110 J	170 J	110 J	160 J	180 J	150 J
Isophorone	NSL	NSL	ug/kg	300 U	290 U	280 U	270 U	910 UJ	560 UJ	540 UJ	260 UJ	220 UJ	370 UJ	340 U	330 U	310 U	290 U	400 UJ	350 U	330 UJ	330 UJ	310 UJ	290 U
Naphthalene**	176	561	ug/kg	120 J	150 J	130 J	100 J	40 J	90 J	44 J	17 J	12 J	47 J	30 J	59 J	59 J	53 J	58 J	27 J	46 J	56 J	77 J	140 J
Nitrobenzene	NSL	NSL	ug/kg	300 U	290 U	280 U	270 U	910 UJ	560 UJ	540 UJ	260 UJ	220 UJ	370 UJ	340 U	330 U	310 U	290 U	400 UJ	350 U	330 UJ	330 UJ	310 UJ	290 U
N-Nitroso-di-n-propylamine	NSL	NSL	ug/kg	300 U	290 U	280 U	270 U	910 UJ	560 UJ	540 UJ	260 UJ	220 UJ	370 UJ	340 U	330 U	310 U	290 U	400 UJ	350 U	330 UJ	330 UJ	310 UJ	290 U
N-Nitrosodiphenylamine	NSL	NSL	ug/kg	300 U	290 U	280 U	270 U	910 UJ	560 UJ	540 UJ	260 UJ	220 UJ	370 UJ	340 U	330 U	310 U	290 U	400 UJ	350 U	330 UJ	330 UJ	310 UJ	290 U
Pentachlorophenol	NSL	NSL	ug/kg	580 U	570 U	540 U	530 U	1800 UJ	1100 UJ	1000 UJ	500 UJ	440 UJ	720 UJ	650 U	650 U	600 U	560 U	770 UJ	690 UJ	640 UJ	640 UJ	590 UJ	570 UJ
Phenanthrene**	204	1170	ug/kg	**310**	**780**	**830**	**670**	910 UJ	**4300 J**	**1400 J**	**450 J**	120 J	200 J	180 J	**440**	**240 J**	**290**	150 J	140 J	**520 J**	**350 J**	**310 J**	**240 J**
Phenol	NSL	NSL	ug/kg	300 U	290 U	280 U	270 U	910 UJ	560 UJ	540 UJ	260 UJ	220 UJ	370 UJ	340 U	330 U	310 U	290 U	400 UJ	350 U	330 UJ	330 UJ	310 UJ	290 U
Pyrene**	195	1520	ug/kg	**1400**	**2200**	**2200**	**1700**	**1300 J**	**3800 J**	**1400 J**	**590 J**	**240 J**	**280 J**	**430 J**	**810 J**	**480**	**440**	**290 J**	**470**	**440 J**	**670 J**	**490 J**	**690**
Total PAHs 17 ND = 1/2RL	1610	22800	ug/kg	**7887**	**12760**	**12752**	**9409**	**8906**	**23620**	**10355**	**3925**	1394	**2630**	**2760**	**4574**	**2923**	**2709**	**2508**	**2893**	**3598**	**4555**	**4090**	**3445**

NOTES:
** Analytes included in the 17PAH total
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R = Result is rejected
U = Indicates the analyte was analyzed for but not detected.
µg/kg = Micrograms per kilogram.
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Guidelines for Freshwater Ecosystems (MacDonald et al. 2000).
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Guidelines for Freshwater Ecosystems (MacDonald et al. 2000).
Bolded values exceed the TEC.
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NSL = No Screening Level.
Submitted samples are presented in ascending numerical order.
*Samples presented are displayed in Figure 4-3A

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PHASE 2 LOWER MAUMEE RIVER SITE CHARACTERIZATION
TOLEDO, OHIO (JUNE 2013)

			Sample Location:	LMR13-62					LMR13-63								LMR13-64						
			Sample Name:	LMR13-62-012	LMR13-62-024	LMR13-62-048	LMR13-62-072	LMR13-62-096	LMR13-63-012	LMR13-63-024	LMR13-63-024FD	LMR13-63-048	LMR13-63-072	LMR13-63-096	LMR13-63-120	LMR13-63-144	LMR13-64-012	LMR13-64-024	LMR13-64-048	LMR13-64-048FD	LMR13-64-072	LMR13-64-096	LMR13-64-120
			Sample Depth (ft):	0-1	1-2	2-4	4-6	6-7	0-1	1-2	1-2	2-4	4-6	6-8	8-10	10-11	0-1	1-2	2-4	2-4	4-6	6-8	8-10
			Date Sampled:	6/13/13	6/13/13	6/13/13	6/13/13	6/13/13	6/13/13	6/13/13	6/13/13	6/13/13	6/13/13	6/13/13	6/13/13	6/13/13	6/19/13	6/19/13	6/19/13	6/19/13	6/19/13	6/19/13	6/19/13
Analyte	**TEC**	**PEC**	**Unit**																				
1,1'-Biphenyl	NSL	NSL	ug/kg	250 U	250 U	250 U	220 U	210 U	370 U	350 U	350 U	310 U	300 U	1200 U	730 U	1400 U	430 UJ	340 U	320 UJ	320 UJ	330 U	320 U	300 UJ
1,2,4,5-Tetrachlorobenzene	NSL	NSL	ug/kg	250 U	250 U	250 U	220 U	210 U	370 U	350 U	350 U	310 U	300 U	1200 U	730 U	1400 U	430 UJ	340 U	320 UJ	320 UJ	330 U	320 U	300 UJ
2,2'-Oxybis(1-chloropropane)	NSL	NSL	ug/kg	250 U	250 U	250 U	220 U	210 U	370 U	350 U	350 U	310 U	300 U	1200 U	730 U	1400 U	430 UJ	340 U	320 UJ	320 UJ	330 U	320 U	300 UJ
2,3,4,6-Tetrachlorophenol	NSL	NSL	ug/kg	250 U	250 U	250 U	220 U	210 U	370 U	350 U	350 U	310 U	300 U	1200 U	730 U	1400 U	430 UJ	340 U	320 UJ	320 UJ	330 U	320 U	300 UJ
2,4,5-Trichlorophenol	NSL	NSL	ug/kg	250 U	250 U	250 U	220 U	210 U	370 U	350 U	350 U	310 U	300 U	1200 U	730 U	1400 U	430 UJ	340 U	320 UJ	320 UJ	330 U	320 U	300 UJ
2,4,6-Trichlorophenol	NSL	NSL	ug/kg	250 U	250 U	250 U	220 U	210 U	370 U	350 U	350 U	310 U	300 U	1200 U	730 U	1400 U	430 UJ	340 U	320 UJ	320 UJ	330 U	320 U	300 UJ
2,4-Dichlorophenol	NSL	NSL	ug/kg	250 U	250 U	250 U	220 U	210 U	370 U	350 U	350 U	310 U	300 U	1200 U	730 U	1400 U	430 UJ	340 U	320 UJ	320 UJ	330 U	320 U	300 UJ
2,4-Dimethylphenol	NSL	NSL	ug/kg	250 U	250 U	250 U	220 U	210 U	370 U	350 U	350 U	310 U	300 U	1200 U	730 U	1400 U	430 UJ	340 U	320 UJ	320 UJ	330 U	320 U	300 UJ
2,4-Dinitrophenol	NSL	NSL	ug/kg	480 U	480 U	490 U	440 U	400 U	720 U	690 U	670 UJ	600 U	580 UJ	2300 U	1400 UJ	2700 UJ	840 UJ	650 U	630 UJ	630 UJ	640 U	620 U	580 UJ
2,4-Dinitrotoluene	NSL	NSL	ug/kg	250 U	250 U	250 U	220 U	210 U	370 U	350 U	350 U	310 U	300 U	1200 U	730 U	1400 U	430 UJ	340 U	320 UJ	320 UJ	330 U	320 U	300 UJ
2,6-Dinitrotoluene	NSL	NSL	ug/kg	250 U	250 U	250 U	220 U	210 U	370 U	350 U	350 U	310 U	300 U	1200 U	730 U	1400 U	430 UJ	340 U	320 UJ	320 UJ	330 U	320 U	300 UJ
2-Chloronaphthalene	NSL	NSL	ug/kg	250 U	250 U	250 U	220 U	210 U	370 U	350 U	350 U	310 U	300 U	1200 U	730 U	1400 U	430 UJ	340 U	320 UJ	320 UJ	330 U	320 U	300 UJ
2-Chlorophenol	NSL	NSL	ug/kg	250 U	250 U	250 U	220 U	210 U	370 U	350 U	350 U	310 U	300 U	1200 U	730 U	1400 U	430 UJ	340 U	320 UJ	320 UJ	330 U	320 U	300 UJ
2-Methylnaphthalene**	NSL	NSL	ug/kg	250 U	250 U	250 U	220 U	210 U	12 J	350 U	350 U	21 J	300 U	1200 U	53 J	1400 U	31 J	340 U	320 UJ	320 UJ	330 U	320 U	300 UJ
2-Methylphenol	NSL	NSL	ug/kg	250 U	250 U	250 U	220 U	210 U	370 U	350 U	350 U	310 U	300 U	1200 U	730 U	1400 U	430 UJ	340 U	320 UJ	320 UJ	330 U	320 U	300 UJ
2-Nitroaniline	NSL	NSL	ug/kg	480 U	480 U	490 U	440 U	400 U	720 U	690 U	670 U	600 U	580 U	2300 U	1400 U	2700 U	840 UJ	650 U	630 UJ	630 UJ	640 U	620 U	580 UJ
2-Nitrophenol	NSL	NSL	ug/kg	250 U	250 U	250 U	220 U	210 U	370 U	350 U	350 U	310 U	300 U	1200 U	730 U	1400 U	430 UJ	340 U	320 UJ	320 UJ	330 U	320 U	300 UJ
3,3'-Dichlorobenzidine	NSL	NSL	ug/kg	250 U	250 UJ	250 UJ	220 U	210 UJ	370 UJ	350 UJ	350 UJ	310 UJ	300 UJ	1200 UJ	730 U	1400 U	430 UJ	340 UJ	320 UJ	320 UJ	330 UJ	320 UJ	300 UJ
3-Nitroaniline	NSL	NSL	ug/kg	480 U	480 U	490 U	440 U	400 U	720 U	690 U	670 U	600 U	580 U	2300 U	1400 U	2700 U	840 UJ	650 U	630 UJ	630 UJ	640 U	620 U	580 UJ
4,6-Dinitro-2-methylphenol	NSL	NSL	ug/kg	480 U	480 U	490 U	440 U	400 U	720 U	690 U	670 U	600 U	580 U	2300 U	1400 U	2700 U	840 UJ	650 U	630 UJ	630 UJ	640 U	620 U	580 UJ
4-Bromophenyl-phenylether	NSL	NSL	ug/kg	250 U	250 U	250 U	220 U	210 U	370 U	350 U	350 U	310 U	300 U	1200 U	730 U	1400 U	430 UJ	340 U	320 UJ	320 UJ	330 U	320 U	300 UJ
4-Chloro-3-methylphenol	NSL	NSL	ug/kg	250 U	250 U	250 U	220 U	210 U	370 U	350 U	350 U	310 U	300 U	1200 U	730 U	1400 U	430 UJ	340 U	320 UJ	320 UJ	330 U	320 U	300 UJ
4-Chloroaniline	NSL	NSL	ug/kg	250 U	250 UJ	250 UJ	220 U	210 UJ	370 UJ	350 UJ	350 UJ	310 UJ	300 UJ	1200 UJ	730 U	1400 U	430 UJ	340 UJ	320 UJ	320 UJ	330 UJ	320 UJ	300 UJ
4-Chlorophenyl-phenylether	NSL	NSL	ug/kg	250 UJ	250 UJ	250 UJ	220 UJ	210 UJ	370 U	350 U	350 U	310 U	300 U	1200 U	730 U	1400 U	430 UJ	340 U	320 UJ	320 UJ	330 U	320 U	300 UJ
4-Methylphenol	NSL	NSL	ug/kg	250 U	250 U	250 U	220 U	210 U	370 U	350 U	350 U	310 U	23 J	1200 U	730 U	1400 U	430 UJ	340 U	320 UJ	320 UJ	330 U	6 J	300 UJ
4-Nitroaniline	NSL	NSL	ug/kg	480 U	480 U	490 U	440 U	400 U	720 U	690 U	670 U	600 U	580 U	2300 U	1400 U	2700 U	840 UJ	650 U	630 UJ	630 UJ	640 U	620 U	580 UJ
4-Nitrophenol	NSL	NSL	ug/kg	480 UJ	480 UJ	490 U	440 U	400 U	720 U	690 U	670 U	600 U	580 U	2300 U	1400 U	2700 U	840 UJ	650 U	630 UJ	630 UJ	640 U	620 U	580 UJ
Acenaphthene**	NSL	NSL	ug/kg	250 U	3.6 J	250 U	220 U	210 U	16 J	25 J	24 J	33 J	52 J	140 J	86 J	210 J	26 J	14 J	25 J	20 J	13 J	21 J	36 J
Acenaphthylene**	NSL	NSL	ug/kg	250 U	250 U	250 U	220 U	210 U	370 U	350 U	350 U	310 U	28 J	1200 U	730 U	1400 U	430 UJ	340 U	320 UJ	320 UJ	330 U	320 U	300 UJ
Acetophenone	NSL	NSL	ug/kg	250 U	250 U	250 U	220 U	210 U	30 J	36 J	21 J	23 J	45 J	1200 U	730 U	1400 U	430 UJ	89 J	20 J	18 J	79 J	56 J	300 UJ
Anthracene**	57.2	845	ug/kg	18 J	12 J	250 U	220 U	210 U	37 J	35 J	40 J	**61 J**	**92 J**	**170 J**	**130 J**	**280 J**	36 J	19 J	35 J	27 J	19 J	38 J	50 J
Atrazine	NSL	NSL	ug/kg	250 U	250 U	250 U	220 U	210 U	370 U	350 U	350 U	310 U	300 U	1200 U	730 U	1400 U	430 UJ	340 U	320 UJ	320 UJ	330 U	320 U	300 UJ
Benzaldehyde	NSL	NSL	ug/kg	33 J	33 J	34 J	18 J	210 U	56 J	70 J	58 J	310 U	59 J	1200 U	730 U	1400 U	71 J	43 J	54 J	61 J	45 J	38 J	300 UJ
Benzo(a)anthracene**	108	1050	ug/kg	35 J	26 J	250 U	220 U	210 U	**130 J**	**180 J**	**180 J**	**210 J**	**370**	**910 J**	**520 J**	**1100 J**	**210 J**	100 J	**170 J**	**190 J**	**110 J**	**130 J**	**140 J**
Benzo(a)pyrene**	150	1450	ug/kg	29 J	20 J	250 U	220 U	210 U	130 J	150 J	**200 J**	**190 J**	**360**	**790 J**	**440 J**	**990 J**	**220 J**	120 J	**160 J**	**180 J**	120 J	110 J	**160 J**
Benzo(b)fluoranthene**	NSL	NSL	ug/kg	29 J	22 J	250 U	220 U	210 U	200 J	190 J	220 J	190 J	330	770 J	430 J	1000 J	290 J	140 J	190 J	250 J	130 J	180 J	200 J
Benzo(g,h,i)perylene**	NSL	NSL	ug/kg	16 J	12 J	250 U	220 U	210 U	160 J	190 J	200 J	210 J	280 J	710 J	440 J	990 J	190 J	86 J	150 J	170 J	87 J	100 J	93 J
Benzo(k)fluoranthene**	NSL	NSL	ug/kg	31 J	18 J	250 U	220 U	210 U	120 J	180 J	170 J	220 J	350	550 J	300 J	520 J	190 J	130 J	210 J	230 J	140 J	110 J	150 J
Bis(2-chloroethoxy)methane	NSL	NSL	ug/kg	250 U	250 U	250 U	220 U	210 U	370 U	350 U	350 U	310 U	300 U	1200 U	730 U	1400 U	430 UJ	340 U	320 UJ	320 UJ	330 U	320 U	300 UJ
Bis(2-chloroethyl)ether	NSL	NSL	ug/kg	250 U	250 U	250 U	220 U	210 U	370 U	350 U	350 U	310 U	300 U	1200 U	730 U	1400 U	430 UJ	340 U	320 UJ	320 UJ	330 U	320 U	300 UJ
Bis(2-ethylhexyl)phthalate	NSL	NSL	ug/kg	50 J	33 J	57 J	52 J	48 J	370 U	350 U	350 U	310 U	2700	11000	4400	7500	430 UJ	340 U	320 UJ	320 UJ	330 U	320 U	300 UJ
Butylbenzylphthalate	NSL	NSL	ug/kg	17 J	17 J	30 J	220 U	21 J	370 U	350 U	350 U	310 U	300 U	1200 U	730 U	1400 U	430 UJ	340 U	320 UJ	320 UJ	330 U	320 U	300 UJ
Caprolactam	NSL	NSL	ug/kg	250 U	250 U	250 U	220 U	210 U	370 U	350 U	350 U	310 U	300 U	1200 U	730 U	1400 U	430 UJ	340 U	320 UJ	320 UJ	330 U	320 U	300 UJ
Carbazole	NSL	NSL	ug/kg	250 U	250 U	250 U	220 U	210 U	370 U	350 U	350 U	310 U	24 J	1200 U	730 U	1400 U	20 J	340 U	7.6 J	320 UJ	330 U	7.1 J	300 UJ
Chrysene**	166	1290	ug/kg	40 J	28 J	11 J	220 U	16 J	**220 J**	**290 J**	**300 J**	**310**	**620**	**2000**	**930**	**1900**	**270 J**	150 J	**200 J**	**290 J**	160 J	**180 J**	**240 J**
Dibenzo(a,h)anthracene**	33	NSL	ug/kg	5.4 J	250 U	250 U	220 U	210 U	**54 J**	**60 J**	**69 J**	**78 J**	**110 J**	**290 J**	**270 J**	**580 J**	**79 J**	28 J	**44 J**	**42 J**	25 J	31 J	**48 J**
Dibenzofuran	NSL	NSL	ug/kg	250 U	3.4 J	250 U	220 U	210 U	370 U	20 J	20 J	24 J	40 J	87 J	49 J	110 J	20 J	340 U	18 J	18 J	11 J	16 J	28 J
Diethylphthalate	NSL	NSL	ug/kg	250 U	250 U	250 U	220 U	210 U	370 U	350 U	350 U	310 U	300 U	27 J	730 U	1400 U	430 UJ	340 U	320 UJ	320 UJ	330 U	320 U	300 UJ
Dimethylphthalate	NSL	NSL	ug/kg	250 U	250 U	250 U	220 U	210 U	370 U	350 U	350 U	310 U	300 U	1200 U	730 U	1400 U	430 UJ	340 U	320 UJ	320 UJ	330 U	320 U	300 UJ
Di-n-butylphthalate	NSL	NSL	ug/kg	11 J	250 U	5.1 J	5.8 J	8 J	20 J	22 J	18 J	310 U	19 J	1200 U	730 U	110 J	24 J	12 J	20 J	20 J	11 J	18 J	300 UJ
Di-n-octylphthalate	NSL	NSL	ug/kg	250 U	250 U	250 U	220 U	210 U	370 U	350 U	350 U	310 U	300 U	1200 U	730 U	1400 U	15 J	340 U	320 UJ	320 UJ	330 U	320 U	300 UJ
Fluoranthene**	423	2230	ug/kg	76 J	47 J	250 UJ	220 UJ	210 UJ	280 J	290 J	240 J	330	**510**	**870 J**	**520 J**	**950 J**	320 J	180 J	350 J	320 J	160 J	280 J	260 J
Fluorene**	77.4	536	ug/kg	250 U	7.1 J	250 U	220 U	210 U	370 U	48 J	350 U	68 J	**78 J**	**120 J**	**110 J**	**230 J**	32 J	18 J	28 J	29 J	16 J	24 J	46 J
Hexachlorobenzene	NSL	NSL	ug/kg	250 U	250 U	250 U	220 U	210 U	370 U	350 U	350 U	310 U	300 U	1200 U	730 U	1400 U	430 UJ	340 U	320 UJ	320 UJ	330 U	320 U	300 UJ
Hexachlorobutadiene	NSL	NSL	ug/kg	250 U	250 U	250 U	220 U	210 U	370 U	350 U	350 U	310 U	300 U	1200 UJ	730 U	1400 U	430 UJ	340 U	320 UJ	320 UJ	330 U	320 U	300 UJ
Hexachlorocyclopentadiene	NSL	NSL	ug/kg	250 UJ	250 UJ	250 UJ	220 U	210 UJ	370 UJ	350 UJ	350 UJ	310 UJ	300 UJ	1200 UJ	730 UJ	1400 UJ	430 UJ	340 UJ	320 UJ	320 UJ	330 UJ	320 UJ	300 UJ
Hexachloroethane	NSL	NSL	ug/kg	250 U	250 U	250 U	220 U	210 U	370 U	350 U	350 U	310 U	300 U	1200 U	730 U	1400 U	430 UJ	340 U	320 UJ	320 UJ	330 U	320 U	300 UJ
Indeno(1,2,3-cd)pyrene**	NSL	NSL	ug/kg	15 J	8.9 J	250 U	220 U	210 U	120 J	130 J	150 J	160 J	190 J	450 J	270 J	500 J	120 J	62 J	110 J	130 J	66 J	70 J	83 J
Isophorone	NSL	NSL	ug/kg	250 U	250 U	250 U	220 U	210 U	370 U	350 U	350 U	310 U	300 U	1200 U	730 U	1400 U	430 UJ	340 U	320 UJ	320 UJ	330 U	320 U	300 UJ
Naphthalene**	176	561	ug/kg	250 U	250 U	250 U	220 U	210 U	19 J	27 J	30 J	44 J	120 J	**240 J**	**290 J**	**210 J**	67 J	18 J	44 J	40 J	18 J	25 J	59 J
Nitrobenzene	NSL	NSL	ug/kg	250 U	250 U	250 U	220 U	210 U	370 U	350 U	350 U	310 U	300 U	1200 U	730 U	1400 U	430 UJ	340 U	320 UJ	320 UJ	330 U	320 U	300 UJ
N-Nitroso-di-n-propylamine	NSL	NSL	ug/kg	250 U	250 U	250 U	220 U	210 U	370 U	350 U	350 U	310 U	300 U	1200 U	730 U	1400 U	430 UJ	340 U	320 UJ	320 UJ	330 U	320 U	300 UJ
N-Nitrosodiphenylamine	NSL	NSL	ug/kg	250 U	250 U	250 U	220 U	210 U	370 U	350 U	350 U	310 U	300 U	1200 U	730 U	1400 U	430 UJ	340 U	320 UJ	320 UJ	330 U	320 U	300 UJ
Pentachlorophenol	NSL	NSL	ug/kg	480 U	480 U	490 UJ	440 UJ	400 UJ	720 U	690 U	670 UJ	600 U	580 UJ	2300 UJ	1400 UJ	2700 UJ	840 UJ	650 U	630 UJ	630 UJ	640 U	620 U	580 UJ
Phenanthrene**	204	1170	ug/kg	39 J	20 J	9.8 J	220 U	17 J	130 J	180 J	160 J	**230 J**	**380**	**910 J**	**510 J**	**1300 J**	150 J	87 J	160 J	130 J	73 J	150 J	170 J
Phenol	NSL	NSL	ug/kg	250 U	250 U	250 U	220 U	210 U	370 U	350 U	350 U	310 U	300 U	1200 U	730 U	1400 U	430 UJ	340 U	320 UJ	320 UJ	330 U	320 U	300 UJ
Pyrene**	195	1520	ug/kg	76 J	44 J	250 U	220 U	210 U	**400**	**460**	**410**	**490**	**690**	**1800**	**910**	**1900**	**340 J**	180 J	**250 J**	**300 J**	180 J	**200 J**	**280 J**
Total PAHs 17 ND = 1/2RL	1610	22800	ug/kg	1034	769	**1896**	**1870**	1608	**2398**	**2785**	**2918**	**3000**	**4710**	**11920**	**6574**	**14060**	**2786**	**1672**	**2446**	**2668**	**1647**	**1969**	**2315**

NOTES:
** Analytes included in the 17PAH total
J = Indicates that the concentration is an estimated value.
R = Result is rejected
U = Indicates the analyte was analyzed for but not detected.
µg/kg = Micrograms per kilogram.
TEC = Threshold effect concentration.
Development and Evaluation of Consensus-Based Sediment Quality
Guidelines for Freshwater Ecosystems (MacDonald et al. 2000).
PEC = Probable effect concentration.
Development and Evaluation of Consensus-Based Sediment Quality
Guidelines for Freshwater Ecosystems (MacDonald et al. 2000).
Bolded values exceed the TEC.
Gray shaded values exceed the PEC.
NSL = No Screening Level.
Submitted samples are presented in ascending numerical order.
*Samples presented are displayed in Figure 4-3A

TABLE 4-6A* SEDIMENT RESULTS FOR SEMIVOLATILE ORGANIC ANALYSIS (SVOA) IN AREA A
PHASE 2 LOWER MAUMEE RIVER SITE CHARACTERIZATION
TOLEDO, OHIO (JUNE 2013)

			Sample Location:	LMR13-65				LMR13-66				LMR13-67						LMR13-68	LMR13-69					
			Sample Name:	LMR13-65-012	LMR13-65-024	LMR13-65-048	LMR13-65-072	LMR13-66-012	LMR13-66-024	LMR13-66-024FD	LMR13-66-048	LMR13-67-012	LMR13-67-024	LMR13-67-048	LMR13-67-072	LMR13-67-096	LMR13-67-120	LMR13-68-012	LMR13-69-012	LMR13-69-024	LMR13-69-048	LMR13-69-072	LMR13-69-096	LMR13-69-120
			Sample Depth (ft):	0-1	1-2	2-4	4-6	0-1	1-2	1-2	2-3	0-1	1-2	2-4	4-6	6-8	8-10	0-1	0-1	1-2	2-4	4-6	6-8	8-9
			Date Sampled:	6/20/13	6/20/13	6/20/13	6/20/13	6/20/13	6/20/13	6/20/13	6/20/13	6/19/13	6/19/13	6/19/13	6/19/13	6/19/13	6/19/13	6/20/13	6/20/13	6/20/13	6/20/13	6/20/13	6/20/13	6/20/13
Analyte	**TEC**	**PEC**	**Unit**																					
1,1'-Biphenyl	NSL	NSL	ug/kg	450 UJ	450 U	380 UJ	270 UJ	260 UJ	230 UJ	230 U	220 U	390 U	360 U	340 U	340 UJ	320 UJ	320 UJ	220 U	360 UJ	330 U	310 UJ	300 UJ	300 UJ	290 UJ
1,2,4,5-Tetrachlorobenzene	NSL	NSL	ug/kg	450 UJ	450 U	380 UJ	270 UJ	260 UJ	230 UJ	230 U	220 U	390 U	360 U	340 U	340 UJ	320 UJ	320 UJ	220 U	360 UJ	330 U	310 UJ	300 UJ	300 UJ	290 UJ
2,2'-Oxybis(1-chloropropane)	NSL	NSL	ug/kg	450 UJ	450 U	380 UJ	270 UJ	260 UJ	230 UJ	230 U	220 U	390 U	360 U	340 U	340 UJ	320 UJ	320 UJ	220 U	360 UJ	330 U	310 UJ	300 UJ	300 UJ	290 UJ
2,3,4,6-Tetrachlorophenol	NSL	NSL	ug/kg	450 UJ	450 U	380 UJ	270 UJ	260 UJ	230 UJ	230 U	220 U	390 U	360 U	340 U	340 UJ	320 UJ	320 UJ	220 U	360 UJ	330 U	310 UJ	300 UJ	300 UJ	290 UJ
2,4,5-Trichlorophenol	NSL	NSL	ug/kg	450 UJ	450 U	380 UJ	270 UJ	260 UJ	230 UJ	230 U	220 U	390 U	360 U	340 U	340 UJ	320 UJ	320 UJ	220 U	360 UJ	330 U	310 UJ	300 UJ	300 UJ	290 UJ
2,4,6-Trichlorophenol	NSL	NSL	ug/kg	450 UJ	450 U	380 UJ	270 UJ	260 UJ	230 UJ	230 U	220 U	390 U	360 U	340 U	340 UJ	320 UJ	320 UJ	220 U	360 UJ	330 U	310 UJ	300 UJ	300 UJ	290 UJ
2,4-Dichlorophenol	NSL	NSL	ug/kg	450 UJ	450 U	380 UJ	270 UJ	260 UJ	230 UJ	230 U	220 U	390 U	360 U	340 U	340 UJ	320 UJ	320 UJ	220 U	360 UJ	330 U	310 UJ	300 UJ	300 UJ	290 UJ
2,4-Dimethylphenol	NSL	NSL	ug/kg	450 UJ	450 U	380 UJ	270 UJ	260 UJ	230 UJ	230 U	220 U	390 U	360 U	340 U	340 UJ	320 UJ	320 UJ	220 U	360 UJ	330 U	310 UJ	300 UJ	300 UJ	290 UJ
2,4-Dinitrophenol	NSL	NSL	ug/kg	870 UJ	860 U	740 UJ	520 UJ	510 UJ	450 UJ	440 U	440 U	770 UJ	700 UJ	660 UJ	650 UJ	620 UJ	620 UJ	430 U	690 UJ	630 U	600 UJ	590 UJ	580 UJ	560 UJ
2,4-Dinitrotoluene	NSL	NSL	ug/kg	450 UJ	450 U	380 UJ	270 UJ	260 UJ	230 UJ	230 U	220 U	390 U	360 U	340 U	340 UJ	320 UJ	320 UJ	220 U	360 UJ	330 U	310 UJ	300 UJ	300 UJ	290 UJ
2,6-Dinitrotoluene	NSL	NSL	ug/kg	450 UJ	450 U	380 UJ	270 UJ	260 UJ	230 UJ	230 U	220 U	390 U	360 U	340 U	340 UJ	320 UJ	320 UJ	220 U	360 UJ	330 U	310 UJ	300 UJ	300 UJ	290 UJ
2-Chloronaphthalene	NSL	NSL	ug/kg	450 UJ	450 U	380 UJ	270 UJ	260 UJ	230 UJ	230 U	220 U	390 U	360 U	340 U	340 UJ	320 UJ	320 UJ	220 U	360 UJ	330 U	310 UJ	300 UJ	300 UJ	290 UJ
2-Chlorophenol	NSL	NSL	ug/kg	450 UJ	450 U	380 UJ	270 UJ	260 UJ	230 UJ	230 U	220 U	390 U	360 U	340 U	340 UJ	320 UJ	320 UJ	220 U	360 UJ	330 U	310 UJ	300 UJ	300 UJ	290 UJ
2-Methylnaphthalene**	NSL	NSL	ug/kg	450 UJ	450 U	12 J	31 J	23 J	14 J	11 J	220 U	41 J	31 J	35 J	42 J	35 J	38 J	82 J	33 J	55 J	24 J	39 J	30 J	23 J
2-Methylphenol	NSL	NSL	ug/kg	450 UJ	450 U	380 UJ	270 UJ	260 UJ	230 UJ	230 U	220 U	390 U	360 U	340 U	340 UJ	320 UJ	320 UJ	220 U	360 UJ	330 U	310 UJ	300 UJ	300 UJ	290 UJ
2-Nitroaniline	NSL	NSL	ug/kg	870 UJ	860 U	740 UJ	520 UJ	510 UJ	450 UJ	440 U	440 U	770 U	700 U	660 U	650 UJ	620 UJ	620 UJ	430 U	690 UJ	630 U	600 UJ	590 UJ	580 UJ	560 UJ
2-Nitrophenol	NSL	NSL	ug/kg	450 UJ	450 U	380 UJ	270 UJ	260 UJ	230 UJ	230 U	220 U	390 U	360 U	340 U	340 UJ	320 UJ	320 UJ	220 U	360 UJ	330 U	310 UJ	300 UJ	300 UJ	290 UJ
3,3'-Dichlorobenzidine	NSL	NSL	ug/kg	450 UJ	450 UJ		270 UJ	260 UJ	230 UJ	230 U	220 U	390 UJ	360 UJ	340 UJ	340 UJ	320 UJ	320 UJ	220 U	360 UJ	330 U	310 UJ	300 UJ	300 UJ	290 UJ
3-Nitroaniline	NSL	NSL	ug/kg	870 UJ	860 U	740 UJ	520 UJ	510 UJ	450 UJ	440 U	440 U	770 U	700 U	660 U	650 UJ	620 UJ	620 UJ	430 U	690 UJ	630 U	600 UJ	590 UJ	580 UJ	560 UJ
4,6-Dinitro-2-methylphenol	NSL	NSL	ug/kg	870 UJ	860 U	740 UJ	520 UJ	510 UJ	450 UJ	440 U	440 U	770 U	700 U	660 U	650 UJ	620 UJ	620 UJ	430 U	690 UJ	630 U	600 UJ	590 UJ	580 UJ	560 UJ
4-Bromophenyl-phenylether	NSL	NSL	ug/kg	450 UJ	450 U	380 UJ	270 UJ	260 UJ	230 UJ	230 U	220 U	390 U	360 U	340 U	340 UJ	320 UJ	320 UJ	220 U	360 UJ	330 U	310 UJ	300 UJ	300 UJ	290 UJ
4-Chloro-3-methylphenol	NSL	NSL	ug/kg	450 UJ	450 U	380 UJ	270 UJ	260 UJ	230 UJ	230 U	220 U	390 U	360 U	340 U	340 UJ	320 UJ	320 UJ	220 U	360 UJ	330 U	310 UJ	300 UJ	300 UJ	290 UJ
4-Chloroaniline	NSL	NSL	ug/kg	450 UJ	450 UJ		270 UJ	260 UJ	230 UJ	230 U	220 U	390 UJ	360 UJ	340 UJ	340 UJ	320 UJ	320 UJ	220 U	360 UJ	330 U	310 UJ	300 UJ	300 UJ	290 UJ
4-Chlorophenyl-phenylether	NSL	NSL	ug/kg	450 UJ	450 U	380 UJ	270 UJ	260 UJ	230 UJ	230 U	220 U	390 U	360 U	340 U	340 UJ	320 UJ	320 UJ	220 U	360 UJ	330 U	310 UJ	300 UJ	300 UJ	290 UJ
4-Methylphenol	NSL	NSL	ug/kg	450 UJ	200 J	380 UJ	31 J	260 UJ	230 UJ	230 U	220 U	390 U	360 U	340 U	340 UJ	320 UJ	320 UJ	220 U	360 UJ	19 J	310 UJ	300 UJ	300 UJ	26 J
4-Nitroaniline	NSL	NSL	ug/kg	870 UJ	860 U	740 UJ	520 UJ	510 UJ	450 UJ	440 U	440 U	770 U	700 U	660 U	650 UJ	620 UJ	620 UJ	430 U	690 UJ	630 U	600 UJ	590 UJ	580 UJ	560 UJ
4-Nitrophenol	NSL	NSL	ug/kg	870 UJ	860 U	740 UJ	520 UJ	510 UJ	450 UJ	440 U	440 U	770 U	700 U	660 U	650 UJ	620 UJ	620 UJ	430 U	690 UJ	630 U	600 UJ	590 UJ	580 UJ	560 UJ
Acenaphthene**	NSL	NSL	ug/kg	450 UJ	14 J	16 J	130 J	130 J	180 J	210 J	220 U	28 J	23 J	20 J	21 J	15 J	15 J	220 U	26 J	28 J	21 J	38 J	300 UJ	24 J
Acenaphthylene**	NSL	NSL	ug/kg	450 UJ	450 U	380 UJ	270 UJ	260 UJ	15 J	39 J	220 U	390 U	360 U	340 U	340 UJ	320 UJ	320 UJ	220 U	360 UJ	330 U	310 UJ	300 UJ	300 UJ	290 UJ
Acetophenone	NSL	NSL	ug/kg	450 UJ	20 J	380 UJ	270 UJ	260 UJ	230 UJ	230 U	220 U	50 J	360 U	340 U	340 UJ	17 J	320 UJ	220 U	360 UJ	330 U	310 UJ	300 UJ	300 UJ	290 UJ
Anthracene**	57.2	845	ug/kg	43 J	32 J	23 J	**150 J**	**190 J**	**310 J**	**310**	220 U	53 J	46 J	37 J	34 J	20 J	31 J	48 J	**62 J**	38 J	33 J	53 J	36 J	44 J
Atrazine	NSL	NSL	ug/kg	450 UJ	450 U	380 UJ	270 UJ	260 UJ	230 UJ	230 U	220 U	390 U	360 U	340 U	340 UJ	320 UJ	320 UJ	220 U	360 UJ	330 U	310 UJ	300 UJ	300 UJ	290 UJ
Benzaldehyde	NSL	NSL	ug/kg	83 J	58 J	380 UJ	270 UJ	260 UJ	29 J	33 J	220 U	59 J	41 J	45 J	61 J	50 J	63 J	220 U	360 UJ	330 U	310 UJ	300 UJ	300 UJ	290 UJ
Benzo(a)anthracene**	108	1050	ug/kg	**110 J**	**120 J**	**110 J**	**350 J**	**490 J**	**760 J**	**660**	19 J	**200 J**	**170 J**	**180 J**	**240 J**	**270 J**	**380 J**	**400**	**200 J**	**540**	**110 J**	**210 J**	**400 J**	**360 J**
Benzo(a)pyrene**	150	1450	ug/kg	150 J	140 J	**170 J**	**320 J**	**450 J**	**730 J**	**560**	19 J	**210 J**	**170 J**	150 J	**190 J**	**210 J**	**270 J**	**280 J**	**200 J**	**270 J**	120 J	**240 J**	**420 J**	**360 J**
Benzo(b)fluoranthene**	NSL	NSL	ug/kg	180 J	140 J	180 J	360 J	360 J	770 J	440	17 J	210 J	230 J	220 J	310 J	310 J	320 J	240 J	260 J	310 J	140 J	290 J	500 J	370 J
Benzo(g,h,i)perylene**	NSL	NSL	ug/kg	95 J	110 J	140 J	190 J	240 J	320 J	360	220 U	200 J	190 J	190 J	200 J	190 J	240 J	220 J	130 J	230 J	89 J	160 J	270 J	230 J
Benzo(k)fluoranthene**	NSL	NSL	ug/kg	190 J	190 J	180 J	330 J	460 J	630 J	440	14 J	230 J	160 J	170 J	160 J	140 J	290 J	95 J	200 J	190 J	110 J	210 J	270 J	290 J
Bis(2-chloroethoxy)methane	NSL	NSL	ug/kg	450 UJ	450 U	380 UJ	270 UJ	260 UJ	230 UJ	230 U	220 U	390 U	360 U	340 U	340 UJ	320 UJ	320 UJ	220 U	360 UJ	330 U	310 UJ	300 UJ	300 UJ	290 UJ
Bis(2-chloroethyl)ether	NSL	NSL	ug/kg	450 UJ	450 U	380 UJ	270 UJ	260 UJ	230 UJ	230 U	220 U	390 U	360 U	340 U	340 UJ	320 UJ	320 UJ	220 U	360 UJ	330 U	310 UJ	300 UJ	300 UJ	290 UJ
Bis(2-ethylhexyl)phthalate	NSL	NSL	ug/kg	450 UJ	450 U	380 UJ	270 UJ	260 UJ	230 UJ	48 J	57 J	390 U	360 U	340 U	340 UJ	320 UJ	320 UJ	220 U	360 UJ	330 U	310 UJ	300 UJ	300 UJ	290 UJ
Butylbenzylphthalate	NSL	NSL	ug/kg	450 UJ	450 U	33 J	270 UJ	43 J	230 UJ	230 U	29 J	390 U	360 U	340 U	340 UJ	320 UJ	320 UJ	220 U	360 UJ	330 U	310 UJ	300 UJ	300 UJ	290 UJ
Caprolactam	NSL	NSL	ug/kg	450 UJ	450 U	380 UJ	270 UJ	260 UJ	230 UJ	230 U	220 U	390 U	360 U	340 U	340 UJ	320 UJ	320 UJ	220 U	360 UJ	330 U	310 UJ	300 UJ	300 UJ	290 UJ
Carbazole	NSL	NSL	ug/kg	450 UJ	20 J	380 UJ	270 UJ	260 UJ	230 UJ	16 J	220 U	14 J	360 U	340 U	340 UJ	320 UJ	320 UJ	220 U	360 UJ	330 U	310 UJ	300 UJ	300 UJ	290 UJ
Chrysene**	166	1290	ug/kg	**210 J**	**180 J**	**180 J**	**670 J**	**700 J**	**820 J**	**700**	26 J	**400**	**380**	**340**	**350 J**	**380 J**	**660 J**	**490**	**410 J**	**730**	**190 J**	**530 J**	**1000 J**	**750 J**
Dibenzo(a,h)anthracene**	33	NSL	ug/kg	450 UJ	28 J	**39 J**	**84 J**	**91 J**	**120 J**	**130 J**	220 U	**95 J**	**82 J**	**98 J**	**58 J**	**73 J**	**120 J**	**140 J**	**67 J**	**93 J**	**34 J**	**74 J**	**110 J**	**120 J**
Dibenzofuran	NSL	NSL	ug/kg	15 J	12 J	380 UJ	78 J	23 J	24 J	25 J	220 U	24 J	360 U	16 J	16 J	14 J	14 J	40 J	360 UJ	15 J	15 J	300 UJ	300 UJ	19 J
Diethylphthalate	NSL	NSL	ug/kg	450 UJ	450 U	380 UJ	270 UJ	260 UJ	230 UJ	230 U	220 U	390 U	360 U	340 U	340 UJ	320 UJ	320 UJ	220 U	360 UJ	9.4 J	310 UJ	300 UJ	300 UJ	290 UJ
Dimethylphthalate	NSL	NSL	ug/kg	450 UJ	450 U	380 UJ	270 UJ	260 UJ	230 UJ	230 U	220 U	390 U	360 U	340 U	340 UJ	320 UJ	320 UJ	220 U	360 UJ	330 U	310 UJ	300 UJ	300 UJ	290 UJ
Di-n-butylphthalate	NSL	NSL	ug/kg	33 J	36 J	16 J	270 UJ	19 J	230 UJ	9.8 J	15 J	390 U	360 U	340 U	19 J	10 J	17 J	16 J	360 UJ	20 J	310 UJ	300 UJ	300 UJ	18 J
Di-n-octylphthalate	NSL	NSL	ug/kg	450 UJ	450 U	380 UJ	270 UJ	260 UJ	230 UJ	230 U	220 U	390 U	360 U	340 U	340 UJ	320 UJ	320 UJ	220 U	360 UJ	330 U	310 UJ	300 UJ	300 UJ	290 UJ
Fluoranthene**	423	2230	ug/kg	280 J	310 J	290 J	**870 J**	**980 J**	**2100**	**1400**	35 J	270 J	330 J	240 J	320 J	200 J	270 J	170 J	370 J	410	200 J	380 J	**570 J**	410 J
Fluorene**	77.4	536	ug/kg	450 UJ	19 J	380 UJ	**130 J**	**130 J**	**160 J**	**140 J**	220 U	38 J	38 J	30 J	32 J	19 J	29 J	**110 J**	73 J	33 J	34 J	51 J	300 UJ	27 J
Hexachlorobenzene	NSL	NSL	ug/kg	450 UJ	450 U	380 UJ	270 UJ	260 UJ	230 UJ	230 U	220 U	390 U	360 U	340 U	340 UJ	320 UJ	320 UJ	220 U	360 UJ	330 U	310 UJ	300 UJ	300 UJ	290 UJ
Hexachlorobutadiene	NSL	NSL	ug/kg	450 UJ	450 U	380 UJ	270 UJ	260 UJ	230 UJ	230 U	220 U	390 U	360 U	340 U	340 UJ	320 UJ	320 UJ	220 U	360 UJ	330 U	310 UJ	300 UJ	300 UJ	290 UJ
Hexachlorocyclopentadiene	NSL	NSL	ug/kg	450 UJ	450 UJ		270 UJ	260 UJ	230 UJ	230 UJ	220 UJ	390 UJ	360 UJ	340 UJ	340 UJ	320 UJ	320 UJ	220 UJ	360 UJ	330 UJ	310 UJ	300 UJ	300 UJ	290 UJ
Hexachloroethane	NSL	NSL	ug/kg	450 UJ	450 U	380 UJ	270 UJ	260 UJ	230 UJ	230 U	220 U	390 U	360 U	340 U	340 UJ	320 UJ	320 UJ	220 U	360 UJ	330 U	310 UJ	300 UJ	300 UJ	290 UJ
Indeno(1,2,3-cd)pyrene**	NSL	NSL	ug/kg	95 J	89 J	95 J	130 J	180 J	320 J	350	220 U	160 J	170 J	150 J	110 J	140 J	170 J	110 J	110 J	130 J	67 J	97 J	160 J	150 J
Isophorone	NSL	NSL	ug/kg	450 UJ	450 U	380 UJ	270 UJ	260 UJ	230 UJ	230 U	220 U	390 U	360 U	340 U	340 UJ	320 UJ	320 UJ	220 U	360 UJ	330 U	310 UJ	300 UJ	300 UJ	290 UJ
Naphthalene**	176	561	ug/kg	58 J	45 J	29 J	140 J	46 J	54 J	52 J	220 U	58 J	41 J	39 J	34 J	21 J	22 J	63 J	110 J	140 J	95 J	83 J	54 J	46 J
Nitrobenzene	NSL	NSL	ug/kg	450 UJ	450 U	380 UJ	270 UJ	260 UJ	230 UJ	230 U	220 U	390 U	360 U	340 U	340 UJ	320 UJ	320 UJ	220 U	360 UJ	330 U	310 UJ	300 UJ	300 UJ	290 UJ
N-Nitroso-di-n-propylamine	NSL	NSL	ug/kg	450 UJ	450 U	380 UJ	270 UJ	260 UJ	230 UJ	230 U	220 U	390 U	360 U	340 U	340 UJ	320 UJ	320 UJ	220 U	360 UJ	330 U	310 UJ	300 UJ	300 UJ	290 UJ
N-Nitrosodiphenylamine	NSL	NSL	ug/kg	450 UJ	450 U	380 UJ	270 UJ	260 UJ	230 UJ	230 U	220 U	390 U	360 U	340 U	340 UJ	320 UJ	320 UJ	220 U	360 UJ	330 U	310 UJ	300 UJ	300 UJ	290 UJ
Pentachlorophenol	NSL	NSL	ug/kg	870 UJ	860 U	740 UJ	520 UJ	510 UJ	450 UJ	440 U	440 U	440 U	770 UJ	700 UJ	660 UJ	650 UJ	620 UJ	620 UJ	690 UJ	630 U	600 UJ	590 UJ	580 UJ	560 UJ
Phenanthrene**	204	1170	ug/kg	140 J	140 J	120 J	**720 J**	**870 J**	**1600 J**	**1400**	28 J	**230 J**	**230 J**	170 J	170 J	140 J	200 J	**380**	**330 J**	**320 J**	150 J	**290 J**	**370 J**	**280 J**
Phenol	NSL	NSL	ug/kg	450 UJ	450 U	380 UJ	270 UJ	260 UJ	230 UJ	230 U	220 U	390 U	360 U	340 U	340 UJ	16 J	320 UJ	220 U	360 UJ	330 U	310 UJ	300 UJ	300 UJ	290 UJ
Pyrene**	195	1520	ug/kg	**240 J**	**250 J**	**210 J**	**690 J**	**900 J**	**1400 J**	**1500**	40 J	**520**	**480**	**440**	**270 J**	**300 J**	**420 J**	**470**	**390 J**	**620**	**230 J**	**400 J**	**650 J**	**490 J**
Total PAHs 17 ND = 1/2RL	1610	22800	ug/kg	**2916**	**2257**	**2174**	**5430**	**6370**	**10303**	**8702**	1188	**3138**	**2951**	**2679**	**2711**	**2623**	**3635**	**3518**	**3151**	**4302**	**1802**	**3295**	**5290**	**4119**

NOTES:
** Analytes included in the 17PAH total
J = Indicates that the concentration is an estimated value.
R = Result is rejected
U = Indicates the analyte was analyzed for but not detected.
µg/kg = Micrograms per kilogram.
TEC = Threshold effect concentration.
Development and Evaluation of Consensus-Based Sediment Quality Guidelines for Freshwater Ecosystems (MacDonald et al. 2000).
PEC = Probable effect concentration.
Development and Evaluation of Consensus-Based Sediment Quality Guidelines for Freshwater Ecosystems (MacDonald et al. 2000).
Bolded values exceed the TEC.
Gray shaded values exceed the PEC.
NSL = No Screening Level.
Submitted samples are presented in ascending numerical order.
*Samples presented are displayed in Figure 4-3A

TABLE 4-6A* SEDIMENT RESULTS FOR SEMIVOLATILE ORGANIC ANALYSIS (SVOA) IN AREA A
PHASE 2 LOWER MAUMEE RIVER SITE CHARACTERIZATION
TOLEDO, OHIO (JUNE 2013)

			Sample Location:	LMR13-71					LMR13-81								LMR13-82						
			Sample Name:	LMR13-71-012	LMR13-71-024	LMR13-71-024FD	LMR13-71-048	LMR13-71-072	LMR13-81-012	LMR13-81-012FD	LMR13-81-024	LMR13-81-024FD	LMR13-81-048	LMR13-81-072	LMR13-81-096	LMR13-81-120	LMR13-82-012	LMR13-82-024	LMR13-82-048	LMR13-82-072	LMR13-82-096	LMR13-82-120	LMR13-82-144
			Sample Depth (ft):	0-1	1-2	1-2	2-4	4-6	0-1	0-1	1-2	1-2	2-4	4-6	6-8	8-9	0-1	1-2	2-4	4-6	6-8	8-10	10-11
			Date Sampled:	6/18/13	6/18/13	6/18/13	6/18/13	6/18/13	6/12/13	6/12/13	6/12/13	6/12/13	6/12/13	6/12/13	6/12/13	6/12/13	6/17/13	6/17/13	6/17/13	6/17/13	6/17/13	6/17/13	6/17/13
Analyte	**TEC**	**PEC**	**Unit**																				
1,1'-Biphenyl	NSL	NSL	ug/kg	220 U	220 U	240 U	220 U	210 U	520 U	480 U	550 U	560 U	900 U	270 U	41 J	24 J	640 UJ	1500 UJ	270 U	510 UJ	260 U	270 U	260 U
1,2,4,5-Tetrachlorobenzene	NSL	NSL	ug/kg	220 U	220 U	240 U	220 U	210 U	520 U	480 U	550 U	560 U	900 U	270 U	520 U	260 U	640 UJ	1500 UJ	270 U	510 UJ	260 U	270 U	260 U
2,2'-Oxybis(1-chloropropane)	NSL	NSL	ug/kg	220 U	220 U	240 U	220 U	210 U	520 U	480 U	550 U	560 U	900 U	270 U	520 U	260 U	640 UJ	1500 UJ	270 U	510 UJ	260 U	270 U	260 U
2,3,4,6-Tetrachlorophenol	NSL	NSL	ug/kg	220 U	220 U	240 U	220 U	210 U	520 U	480 U	550 U	560 U	900 U	270 U	520 U	260 U	640 UJ	1500 UJ	270 U	510 UJ	260 U	270 U	260 U
2,4,5-Trichlorophenol	NSL	NSL	ug/kg	220 U	220 U	240 U	220 U	210 U	520 U	480 U	550 U	560 U	900 U	270 U	520 U	260 U	640 UJ	1500 UJ	270 U	510 UJ	260 U	270 U	260 U
2,4,6-Trichlorophenol	NSL	NSL	ug/kg	220 U	220 U	240 U	220 U	210 U	520 U	480 U	550 U	560 U	900 U	270 U	520 U	260 U	640 UJ	1500 UJ	270 U	510 UJ	260 U	270 U	260 U
2,4-Dichlorophenol	NSL	NSL	ug/kg	220 U	220 U	240 U	220 U	210 U	520 U	480 U	550 U	560 U	900 U	270 U	520 U	260 U	640 UJ	1500 UJ	270 U	510 UJ	260 U	270 U	260 U
2,4-Dimethylphenol	NSL	NSL	ug/kg	220 U	220 U	240 U	220 U	210 U	520 U	480 U	550 U	560 U	900 U	270 U	520 U	260 U	640 UJ	1500 UJ	270 U	510 UJ	260 U	270 U	260 U
2,4-Dinitrophenol	NSL	NSL	ug/kg	420 U	430 U	470 U	420 U	410 U	1000 U	930 U	1100 U	1100 U	1700 U	530 U	1000 U	510 U	1200 UJ	2900 UJ	520 U	990 UJ	510 U	520 U	510 U
2,4-Dinitrotoluene	NSL	NSL	ug/kg	220 U	220 U	240 U	220 U	210 U	520 U	480 U	550 U	560 U	900 U	270 U	520 U	260 U	640 UJ	1500 UJ	270 U	510 UJ	260 U	270 U	260 U
2,6-Dinitrotoluene	NSL	NSL	ug/kg	220 U	220 U	240 U	220 U	210 U	520 U	480 U	550 U	560 U	900 U	270 U	520 U	260 U	640 UJ	1500 UJ	270 U	510 UJ	260 U	270 U	260 U
2-Chloronaphthalene	NSL	NSL	ug/kg	220 U	220 U	240 U	220 U	210 U	520 U	480 U	550 U	560 U	900 U	270 U	520 U	260 U	640 UJ	1500 UJ	270 U	510 UJ	260 U	270 U	260 U
2-Chlorophenol	NSL	NSL	ug/kg	220 U	220 U	240 U	220 U	210 U	520 U	480 U	550 U	560 U	900 U	270 U	520 U	260 U	640 UJ	1500 UJ	270 U	510 UJ	260 U	270 U	260 U
2-Methylnaphthalene**	NSL	NSL	ug/kg	220 U	220 U	240 U	220 U	210 U	520 U	46 J	51 J	57 J	150 J	42 J	110 J	55 J	45 J	1500 UJ	33 J	69 J	260 U	270 U	260 U
2-Methylphenol	NSL	NSL	ug/kg	220 U	220 U	240 U	220 U	210 U	520 U	480 U	550 U	560 U	900 U	270 U	520 U	260 U	640 UJ	1500 UJ	270 U	510 UJ	260 U	270 U	260 U
2-Nitroaniline	NSL	NSL	ug/kg	420 U	430 U	470 U	420 U	410 U	1000 U	930 U	1100 U	1100 U	1700 U	530 U	1000 U	510 U	1200 UJ	2900 UJ	520 U	990 UJ	510 U	520 U	510 U
2-Nitrophenol	NSL	NSL	ug/kg	220 U	220 U	240 U	220 U	210 U	520 U	480 U	550 U	560 U	900 U	270 U	520 U	260 U	640 UJ	1500 UJ	270 U	510 UJ	260 U	270 U	260 U
3,3'-Dichlorobenzidine	NSL	NSL	ug/kg	220 U	220 UJ	240 UJ	220 U	210 U	520 U	480 U	550 U	560 U	900 U	270 U	520 U	260 U	640 UJ	1500 UJ	270 U	510 UJ	260 UJ	270 UJ	260 UJ
3-Nitroaniline	NSL	NSL	ug/kg	420 U	430 U	470 U	420 U	410 U	1000 U	930 U	1100 U	1100 U	1700 U	530 U	1000 U	510 U	1200 UJ	2900 UJ	520 U	990 UJ	510 U	520 U	510 U
4,6-Dinitro-2-methylphenol	NSL	NSL	ug/kg	420 U	430 U	470 U	420 U	410 U	1000 U	930 U	1100 U	1100 U	1700 U	530 U	1000 U	510 U	1200 UJ	2900 UJ	520 U	990 UJ	510 U	520 U	510 U
4-Bromophenyl-phenylether	NSL	NSL	ug/kg	220 U	220 U	240 U	220 U	210 U	520 U	480 U	550 U	560 U	900 U	270 U	520 U	260 U	640 UJ	1500 UJ	270 U	510 UJ	260 U	270 U	260 U
4-Chloro-3-methylphenol	NSL	NSL	ug/kg	220 U	220 U	240 U	220 U	210 U	520 U	480 U	550 U	560 U	900 U	270 U	520 U	260 U	640 UJ	1500 UJ	270 U	510 UJ	260 U	270 U	260 U
4-Chloroaniline	NSL	NSL	ug/kg	220 U	220 UJ	240 UJ	220 U	210 U	520 U	480 U	550 U	560 U	900 U	270 U	520 U	260 U	640 UJ	1500 UJ	270 U	510 UJ	260 UJ	270 UJ	260 UJ
4-Chlorophenyl-phenylether	NSL	NSL	ug/kg	220 U	220 U	240 U	220 U	210 U	520 U	480 U	550 U	560 U	900 U	270 U	520 U	260 U	640 UJ	1500 UJ	270 U	510 UJ	260 U	270 U	260 U
4-Methylphenol	NSL	NSL	ug/kg	220 U	220 U	240 U	220 U	210 U	520 U	480 U	550 U	560 U	900 U	11 J	520 U	7.6 J	640 UJ	1500 UJ	270 U	510 UJ	260 U	270 UJ	260 UJ
4-Nitroaniline	NSL	NSL	ug/kg	420 U	430 U	470 U	420 U	410 U	1000 U	930 U	1100 U	1100 U	1700 U	530 U	1000 U	510 U	1200 UJ	2900 UJ	520 U	990 UJ	510 U	520 U	510 U
4-Nitrophenol	NSL	NSL	ug/kg	420 U	430 U	470 U	420 U	410 U	1000 U	930 U	1100 U	1100 U	1700 U	530 U	1000 U	510 U	1200 UJ	2900 UJ	520 U	990 UJ	510 U	520 U	510 U
Acenaphthene**	NSL	NSL	ug/kg	21 J	220 U	240 U	220 U	210 U	270 J	310 J	340 J	370 J	2100	380	2200	1000	150 J	150 J	160 J	430 J	150 J	130 J	51 J
Acenaphthylene**	NSL	NSL	ug/kg	8.2 J	220 U	240 U	220 U	210 U	140 J	120 J	130 J	140 J	260 J	98 J	130 J	58 J	45 J	56 J	73 J	98 J	59 J	30 J	20 J
Acetophenone	NSL	NSL	ug/kg	220 U	220 U	240 U	220 U	210 U	520 U	480 U	550 U	560 U	900 U	31 J	520 U	260 U	42 J	1500 UJ	54 J	510 UJ	25 J	270 U	21 J
Anthracene**	57.2	845	ug/kg	56 J	13 J	240 U	220 U	210 U	**630**	**510**	**730**	**790**	**2300**	**670**	**1400**	**850**	**180 J**	**220 J**	**330**	**630 J**	**340**	**230 J**	**91 J**
Atrazine	NSL	NSL	ug/kg	220 U	220 U	240 U	220 U	210 U	520 U	480 U	550 U	560 U	900 U	270 U	520 U	260 U	640 UJ	1500 UJ	270 U	510 UJ	260 U	270 U	260 U
Benzaldehyde	NSL	NSL	ug/kg	33 J	120 J	68 J	20 J	91 J	520 U	480 U	550 U	560 U	900 U	50 J	520 U	39 J	640 UJ	1500 UJ	33 J	510 UJ	49 J	59 J	57 J
Benzo(a)anthracene**	108	1050	ug/kg	**130 J**	25 J	35 J	6.4 J	210 U	**2000**	**1500**	**1800**	**2100**	**2700**	**1300**	**1500**	**1200**	**830 J**	**1100 J**	**1000**	**1300 J**	**660 J**	**460**	**260**
Benzo(a)pyrene**	150	1450	ug/kg	130 J	20 J	34 J	220 U	210 U	**1500**	**1100**	**1200**	**1300**	**2000**	**1000**	**1500**	**1200**	**720 J**	**1100 J**	**770**	**1000 J**	**550 J**	**420**	**240 J**
Benzo(b)fluoranthene**	NSL	NSL	ug/kg	100 J	15 J	24 J	220 UJ	210 UJ	1600	1100	1200	1500	1900	1200	930	710	680 J	1200 J	740	970 J	550 J	420	230 J
Benzo(g,h,i)perylene**	NSL	NSL	ug/kg	61 J	12 J	13 J	220 U	210 U	800	600	600	660	1100	550	900	710	550 J	580 J	300	590 J	260 J	300	200 J
Benzo(k)fluoranthene**	NSL	NSL	ug/kg	94 J	23 J	22 J	220 U	210 U	990	960	910	880	1600	680	980	860	720 J	860 J	760	940 J	520 J	310	180 J
Bis(2-chloroethoxy)methane	NSL	NSL	ug/kg	220 U	220 U	240 U	220 U	210 U	520 U	480 U	550 U	560 U	900 U	270 U	520 U	260 U	640 UJ	1500 UJ	270 U	510 UJ	260 U	270 U	260 U
Bis(2-chloroethyl)ether	NSL	NSL	ug/kg	220 U	220 U	240 U	220 U	210 U	520 U	480 U	550 U	560 U	900 U	270 U	520 U	260 U	640 UJ	1500 UJ	270 U	510 UJ	260 U	270 U	260 U
Bis(2-ethylhexyl)phthalate	NSL	NSL	ug/kg	45 J	72 J	46 J	43 J	40 J	520 U	480 U	550 U	560 U	900 U	270 U	520 U	260 U	4700 J	8000 J	270 U	510 UJ	260 U	270 U	260 U
Butylbenzylphthalate	NSL	NSL	ug/kg	220 U	220 U	240 U	220 U	210 U	520 U	480 U	550 U	560 U	900 U	270 U	520 U	260 U	640 UJ	1500 UJ	270 U	510 UJ	260 U	270 U	260 U
Caprolactam	NSL	NSL	ug/kg	220 U	220 U	240 U	220 U	210 U	520 U	480 U	550 U	560 U	900 U	270 U	520 U	260 U	640 UJ	1500 UJ	270 U	510 UJ	260 U	270 U	260 U
Carbazole	NSL	NSL	ug/kg	220 U	220 U	240 U	220 U	210 U	520 U	480 U	550 U	560 U	900 U	270 U	26 J	14 J	24 J	1500 UJ	270 U	510 UJ	260 U	270 U	260 U
Chrysene**	166	1290	ug/kg	160 J	31 J	41 J	11 J	210 U	**2500**	**2000**	**2400**	**2700**	**3100**	**1400**	**1600**	**1200**	**950 J**	**1400 J**	**1300**	**1200 J**	**780 J**	**600**	**320**
Dibenzo(a,h)anthracene**	33	NSL	ug/kg	18 J	220 UJ	240 UJ	220 UJ	210 UJ	**290 J**	**180 J**	**190 J**	**220 J**	**400 J**	**180 J**	**260 J**	**190 J**	**170 J**	**280 J**	**130 J**	**180 J**	**79 J**	**82 J**	**59 J**
Dibenzofuran	NSL	NSL	ug/kg	9.2 J	220 U	240 U	220 U	210 U	47 J	93 J	78 J	83 J	590 J	74 J	210 J	85 J	65 J	41 J	41 J	100 J	71 J	46 J	260 U
Diethylphthalate	NSL	NSL	ug/kg	220 U	220 U	240 U	220 U	210 U	520 U	480 U	550 U	560 U	900 U	270 U	520 U	260 U	640 UJ	1500 UJ	270 U	510 UJ	260 U	270 U	260 U
Dimethylphthalate	NSL	NSL	ug/kg	220 U	220 U	240 U	220 U	210 U	520 U	480 U	550 U	560 U	900 U	270 U	520 U	260 U	640 UJ	1500 UJ	270 U	510 UJ	260 U	270 U	260 U
Di-n-butylphthalate	NSL	NSL	ug/kg	220 U	220 U	240 U	220 U	210 U	520 U	480 U	550 U	560 U	900 U	270 U	21 J	10 J	640 UJ	1500 UJ	270 U	510 UJ	14 J	270 U	14 J
Di-n-octylphthalate	NSL	NSL	ug/kg	220 UJ	220 UJ	240 U	220 UJ	210 U	520 U	480 U	550 U	560 U	900 U	270 U	520 U	260 U	150 J	1500 UJ	270 U	510 UJ	260 U	270 UJ	260 UJ
Fluoranthene**	423	2230	ug/kg	310	54 J	50 J	9.6 J	210 U	**2700**	**2400**	**2800**	**3200**	**6200**	**2600**	**3100**	**1800**	**1700 J**	**2100 J**	**1200**	**2800 J**	**1200 J**	**850**	410
Fluorene**	77.4	536	ug/kg	13 J	220 U	240 U	220 U	210 U	**480 J**	**450 J**	**600**	**610**	**2500**	**460**	**1100**	**490**	**190 J**	**230 J**	**290**	**420 J**	**210 J**	**150 J**	59 J
Hexachlorobenzene	NSL	NSL	ug/kg	220 U	220 U	240 U	220 U	210 U	520 U	480 U	550 U	560 U	900 U	270 U	520 U	260 U	640 UJ	1500 UJ	270 U	510 UJ	260 U	270 U	260 U
Hexachlorobutadiene	NSL	NSL	ug/kg	220 U	220 U	240 U	220 U	210 U	520 U	480 U	550 U	560 U	900 U	270 U	520 U	260 U	640 UJ	1500 UJ	270 U	510 UJ	260 U	270 U	260 U
Hexachlorocyclopentadiene	NSL	NSL	ug/kg	220 U	220 UJ	240 UJ	220 U	210 UJ	520 UJ	480 UJ	550 UJ	560 UJ	900 UJ	270 UJ	520 UJ	260 UJ	640 UJ	1500 UJ	270 UJ	510 UJ	260 UJ	270 UJ	260 UJ
Hexachloroethane	NSL	NSL	ug/kg	220 U	220 U	240 U	220 U	210 U	520 U	480 U	550 U	560 U	900 U	270 U	520 U	260 U	640 UJ	1500 UJ	270 U	510 UJ	260 U	270 U	260 U
Indeno(1,2,3-cd)pyrene**	NSL	NSL	ug/kg	46 J	9.5 J	8.3 J	220 U	210 U	660	500	530 J	590	1000	470	690	510	370 J	550 J	260 J	420 J	220 J	230 J	160 J
Isophorone	NSL	NSL	ug/kg	220 U	220 U	240 U	220 U	210 U	520 U	480 U	550 U	560 U	900 U	270 U	520 U	260 U	640 UJ	1500 UJ	270 U	510 UJ	260 U	270 U	260 U
Naphthalene**	176	561	ug/kg	7.7 J	220 U	240 U	220 U	210 U	60 J	61 J	71 J	70 J	130 J	54 J	140 J	76 J	110 J	**200 J**	49 J	79 J	33 J	19 J	9.9 J
Nitrobenzene	NSL	NSL	ug/kg	220 U	220 U	240 U	220 U	210 U	520 U	480 U	550 U	560 U	900 U	270 U	520 U	260 U	640 UJ	1500 UJ	270 U	510 UJ	260 U	270 U	260 U
N-Nitroso-di-n-propylamine	NSL	NSL	ug/kg	220 U	220 U	240 U	220 U	210 U	520 U	480 U	550 U	560 U	900 U	270 U	520 U	260 U	640 UJ	1500 UJ	270 U	510 UJ	260 U	270 UJ	260 UJ
N-Nitrosodiphenylamine	NSL	NSL	ug/kg	220 U	220 U	240 U	220 U	210 U	520 U	480 U	550 U	560 U	900 U	270 U	520 U	260 U	640 UJ	1500 UJ	270 U	510 UJ	260 U	270 U	260 U
Pentachlorophenol	NSL	NSL	ug/kg	420 U	430 U	470 U	420 U	410 U	1000 U	930 U	1100 U	1100 U	1700 U	530 U	1000 U	510 UJ	1200 UJ	2900 UJ	520 UJ	990 UJ	510 UJ	520 UJ	510 UJ
Phenanthrene**	204	1170	ug/kg	100 J	21 J	240 U	220 U	210 U	**2900**	**3200**	**3700**	**3900**	**10000**	**2400**	**5500**	**2900**	**870 J**	**880 J**	**1500**	**2500 J**	**1000**	**800**	**270**
Phenol	NSL	NSL	ug/kg	220 U	220 U	240 U	11 J	53 J	520 U	480 U	550 U	560 U	900 U	270 U	520 U	260 U	640 UJ	1500 UJ	270 U	510 UJ	260 U	270 U	260 U
Pyrene**	195	1520	ug/kg	**300**	42 J	53 J	12 J	210 U	**3400**	**3100**	**3800**	**4100**	**6000 J**	**2900**	**4300**	**3500**	**1500 J**	**1700 J**	**1800**	**2600 J**	**1600 J**	**1300**	**760**
Total PAHs 17 ND = 1/2RL	1610	22800	ug/kg	**1665**	926	1240	1469	**1785**	**21180**	**18137**	**21052**	**23187**	**43440**	**16384**	**26340**	**17309**	**9780**	**13356**	**10695**	**16226**	**8341**	**6466**	**3450**

NOTES:
** Analytes included in the 17PAH total
J = Indicates that the concentration is an estimated value.
R = Result is rejected
U = Indicates the analyte was analyzed for but not detected.
µg/kg = Micrograms per kilogram.
TEC = Threshold effect concentration.
Development and Evaluation of Consensus-Based Sediment Quality
Guidelines for Freshwater Ecosystems (MacDonald et al. 2000).
PEC = Probable effect concentration.
Development and Evaluation of Consensus-Based Sediment Quality
Guidelines for Freshwater Ecosystems (MacDonald et al. 2000).
Bolded values exceed the TEC.
Gray shaded values exceed the PEC.
NSL = No Screening Level.
Submitted samples are presented in ascending numerical order.
*Samples presented are displayed in Figure 4-3A

TABLE 4-6A* SEDIMENT RESULTS FOR SEMIVOLATILE ORGANIC ANALYSIS (SVOA) IN AREA A
PHASE 2 LOWER MAUMEE RIVER SITE CHARACTERIZATION
TOLEDO, OHIO (JUNE 2013)

			Sample Location:	LMR13-90						LMR13-91					LMR13-92		LMR13-93						
			Sample Name:	LMR13-90-012	LMR13-90-012FD	LMR13-90-024	LMR13-90-048	LMR13-90-048FD	LMR13-90-072	LMR13-91-012	LMR13-91-024	LMR13-91-048	LMR13-91-072	LMR13-91-096	LMR13-92-012	LMR13-92-024	LMR13-93-012	LMR13-93-024	LMR13-93-024FD	LMR13-93-048	LMR13-93-072	LMR13-93-096	LMR13-93-120
			Sample Depth (ft):	0-1	0-1	1-2	2-4	2-4	4-6	0-1	1-2	2-4	4-6	6-9	0-1	1-2	0-1	1-2	1-2	2-4	4-6	6-8	8-10
			Date Sampled:	6/13/13	6/13/13	6/13/13	6/13/13	6/13/13	6/13/13	6/13/13	6/13/13	6/13/13	6/13/13	6/13/13	6/20/13	6/20/13	6/13/13	6/13/13	6/13/13	6/13/13	6/13/13	6/13/13	6/13/13	6/13/13
Analyte	**TEC**	**PEC**	**Unit**																				
1,1'-Biphenyl	NSL	NSL	ug/kg	330 U	330 U	310 U	300 U	300 U	210 U	360 U	320 U	310 U	500 U	1500 U	360 UJ	340 U	940 U	2000 U	3000 U	540 U	270 U	250 U	250 U
1,2,4,5-Tetrachlorobenzene	NSL	NSL	ug/kg	330 U	330 U	310 U	300 U	300 U	210 U	360 U	320 U	310 U	500 U	1500 U	360 UJ	340 U	940 U	2000 U	3000 U	540 U	270 U	250 U	250 U
2,2'-Oxybis(1-chloropropane)	NSL	NSL	ug/kg	330 U	330 U	310 U	300 U	300 U	210 U	360 U	320 U	310 U	500 U	1500 U	360 UJ	340 U	940 U	2000 U	3000 U	540 U	270 U	250 U	250 U
2,3,4,6-Tetrachlorophenol	NSL	NSL	ug/kg	330 U	330 U	310 U	300 U	300 U	210 U	360 U	320 U	310 U	500 U	1500 U	360 UJ	340 U	940 U	2000 U	3000 U	540 U	270 U	250 U	250 U
2,4,5-Trichlorophenol	NSL	NSL	ug/kg	330 U	330 U	310 U	300 U	300 U	210 U	360 U	320 U	310 U	500 U	1500 U	360 UJ	340 U	940 U	2000 U	3000 U	540 U	270 U	250 U	250 U
2,4,6-Trichlorophenol	NSL	NSL	ug/kg	330 U	330 U	310 U	300 U	300 U	210 U	360 U	320 U	310 U	500 U	1500 U	360 UJ	340 U	940 U	2000 U	3000 U	540 U	270 U	250 U	250 U
2,4-Dichlorophenol	NSL	NSL	ug/kg	330 U	330 U	310 U	300 U	300 U	210 U	360 U	320 U	310 U	500 U	1500 U	360 UJ	340 U	940 U	2000 U	3000 U	540 U	270 U	250 U	250 U
2,4-Dimethylphenol	NSL	NSL	ug/kg	330 U	330 U	310 U	300 U	300 U	210 U	360 U	320 U	310 U	500 U	1500 U	360 UJ	340 U	940 U	2000 U	3000 U	540 U	270 U	250 U	250 U
2,4-Dinitrophenol	NSL	NSL	ug/kg	640 U	640 U	600 U	580 U	590 U	400 U	690 U	620 U	600 U	970 UJ	2900 UJ	700 UJ	660 U	1800 U	3900 U	5900 U	1000 U	520 U	490 U	490 U
2,4-Dinitrotoluene	NSL	NSL	ug/kg	330 U	330 U	310 U	300 U	300 U	210 U	360 U	320 U	310 U	500 U	1500 U	360 UJ	340 U	940 U	2000 U	3000 U	540 U	270 U	250 U	250 U
2,6-Dinitrotoluene	NSL	NSL	ug/kg	330 U	330 U	310 U	300 U	300 U	210 U	360 U	320 U	310 U	500 U	1500 U	360 UJ	340 U	940 U	2000 U	3000 U	540 U	270 U	250 U	250 U
2-Chloronaphthalene	NSL	NSL	ug/kg	330 U	330 U	310 U	300 U	300 U	210 U	360 U	320 U	310 U	500 U	1500 U	360 UJ	340 U	940 U	2000 U	3000 U	540 U	270 U	250 U	250 U
2-Chlorophenol	NSL	NSL	ug/kg	330 U	330 U	310 U	300 U	300 U	210 U	360 U	320 U	310 U	500 U	1500 U	360 UJ	340 U	940 U	2000 U	3000 U	540 U	270 U	250 U	250 U
2-Methylnaphthalene**	NSL	NSL	ug/kg	330 U	330 U	18 J	22 J	20 J	210 U	30 J	19 J	310 U	30 J	1500 U	24 J	35 J	940 U	2000 U	3000 U	57 J	19 J	250 U	250 U
2-Methylphenol	NSL	NSL	ug/kg	330 U	330 U	310 U	300 U	300 U	210 U	360 U	320 U	310 U	500 U	1500 U	360 UJ	340 U	940 U	2000 U	3000 U	540 U	270 U	250 U	250 U
2-Nitroaniline	NSL	NSL	ug/kg	640 U	640 U	600 U	580 U	590 U	400 U	690 U	620 U	600 U	970 U	2900 U	700 UJ	660 U	1800 U	3900 U	5900 U	1000 U	520 U	490 U	490 U
2-Nitrophenol	NSL	NSL	ug/kg	330 U	330 U	310 U	300 U	300 U	210 U	360 U	320 U	310 U	500 U	1500 U	360 UJ	340 U	940 U	2000 U	3000 U	540 U	270 U	250 U	250 U
3,3'-Dichlorobenzidine	NSL	NSL	ug/kg	330 UJ	330 UJ	310 U	300 UJ	300 U	210 U	360 UJ	320 U	310 UJ	500 UJ	1500 UJ	360 UJ	340 UJ	940 U	2000 U	3000 U	540 U	270 U	250 UJ	250 U
3-Nitroaniline	NSL	NSL	ug/kg	640 U	640 U	600 U	580 U	590 U	400 U	690 U	620 U	600 U	970 U	2900 U	700 UJ	660 U	1800 U	3900 U	5900 U	1000 U	520 U	490 U	490 U
4,6-Dinitro-2-methylphenol	NSL	NSL	ug/kg	640 U	640 U	600 U	580 U	590 U	400 U	690 U	620 U	600 U	970 U	2900 U	700 UJ	660 U	1800 U	3900 U	5900 U	1000 U	520 U	490 U	490 U
4-Bromophenyl-phenylether	NSL	NSL	ug/kg	330 U	330 U	310 U	300 U	300 U	210 U	360 U	320 U	310 U	500 U	1500 U	360 UJ	340 U	940 UJ	2000 UJ	3000 UJ	540 UJ	270 U	250 U	250 U
4-Chloro-3-methylphenol	NSL	NSL	ug/kg	330 U	330 U	310 U	300 U	300 U	210 U	360 U	320 U	310 U	500 U	1500 U	360 UJ	340 U	940 U	2000 U	3000 U	540 U	270 U	250 U	250 U
4-Chloroaniline	NSL	NSL	ug/kg	330 UJ	330 UJ	310 U	300 UJ	300 U	210 U	360 UJ	320 U	310 UJ	500 UJ	1500 UJ	360 UJ	340 UJ	940 U	2000 U	3000 U	540 U	270 U	250 UJ	250 U
4-Chlorophenyl-phenylether	NSL	NSL	ug/kg	330 UJ	330 UJ	310 UJ	300 UJ	300 UJ	210 UJ	360 UJ	320 UJ	310 UJ	500 U	1500 U	360 UJ	340 U	940 UJ	2000 UJ	3000 UJ	540 UJ	270 UJ	250 UJ	250 UJ
4-Methylphenol	NSL	NSL	ug/kg	330 U	330 U	310 U	25 J	24 J	210 U	360 U	320 U	310 U	500 U	1500 U	360 UJ	21 J	940 U	2000 U	3000 U	540 U	270 U	250 U	10 J
4-Nitroaniline	NSL	NSL	ug/kg	640 U	640 U	600 U	580 U	590 U	400 U	690 U	620 U	600 U	970 U	2900 U	700 UJ	660 U	1800 U	3900 U	5900 U	1000 U	520 U	490 U	490 U
4-Nitrophenol	NSL	NSL	ug/kg	640 UJ	640 U	600 UJ	580 UJ	590 U	400 UJ	690 U	620 U	600 U	970 U	2900 U	700 UJ	660 U	1800 U	3900 U	5900 U	1000 U	520 U	490 U	490 UJ
Acenaphthene**	NSL	NSL	ug/kg	330 U	330 U	26 J	33 J	35 J	12 J	22 J	320 U	13 J	88 J	190 J	360 UJ	20 J	97 J	190 J	200 J	300 J	110 J	80 J	44 J
Acenaphthylene**	NSL	NSL	ug/kg	330 U	330 U	310 U	300 U	300 U	210 U	360 U	320 U	310 U	500 U	1500 U	360 UJ	340 U	940 U	2000 U	3000 U	31 J	20 J	250 U	250 U
Acetophenone	NSL	NSL	ug/kg	330 U	330 U	310 U	300 U	300 U	210 U	360 U	320 U	310 U	32 J	1500 U	360 UJ	26 J	940 U	2000 U	3000 U	540 U	270 U	250 U	250 U
Anthracene**	57.2	845	ug/kg	14 J	21 J	43 J	54 J	50 J	16 J	37 J	20 J	17 J	**89 J**	**260 J**	360 UJ	40 J	**140 J**	**300 J**	**310 J**	**530 J**	**230 J**	**150 J**	**69 J**
Atrazine	NSL	NSL	ug/kg	330 U	330 U	310 U	300 U	300 U	210 U	360 U	320 U	310 U	500 U	1500 U	360 UJ	340 U	940 U	2000 U	3000 U	540 U	270 U	250 U	250 U
Benzaldehyde	NSL	NSL	ug/kg	45 J	330 U	50 J	45 J	46 J	210 U	43 J	320 U	35 J	28 J	1500 U	360 UJ	55 J	940 U	2000 U	3000 U	540 U	26 J	31 J	27 J
Benzo(a)anthracene**	108	1050	ug/kg	64 J	82 J	92 J	**150 J**	**190 J**	45 J	**130 J**	68 J	65 J	**280 J**	**760 J**	**130 J**	**220 J**	**610 J**	**1500 J**	**1300 J**	**1700**	**670**	**440**	**190 J**
Benzo(a)pyrene**	150	1450	ug/kg	76 J	76 J	110 J	**160 J**	**220 J**	41 J	**190 J**	90 J	75 J	**240 J**	**720 J**	150 J	**170 J**	**700 J**	**1400 J**	**1200 J**	**1600**	**620**	**420**	**240 J**
Benzo(b)fluoranthene**	NSL	NSL	ug/kg	110 J	140 J	160 J	200 J	280 J	45 J	210 J	120 J	96 J	300 J	750 J	190 J	190 J	810 J	1400 J	1200 J	1600	740	490	150 J
Benzo(g,h,i)perylene**	NSL	NSL	ug/kg	61 J	75 J	68 J	91 J	110 J	28 J	160 J	65 J	58 J	220 J	680 J	110 J	140 J	340 J	560 J	530 J	620	240 J	190 J	110 J
Benzo(k)fluoranthene**	NSL	NSL	ug/kg	110 J	92 J	110 J	220 J	250 J	46 J	210 J	100 J	100 J	180 J	500 J	190 J	160 J	730 J	1400 J	1200 J	1600	580	340	210 J
Bis(2-chloroethoxy)methane	NSL	NSL	ug/kg	330 U	330 U	310 U	300 U	300 U	210 U	360 U	320 U	310 U	500 U	1500 U	360 UJ	340 U	940 U	2000 U	3000 U	540 U	270 U	250 U	250 U
Bis(2-chloroethyl)ether	NSL	NSL	ug/kg	330 U	330 U	310 U	300 U	300 U	210 U	360 U	320 U	310 U	500 U	1500 U	360 UJ	340 U	940 U	2000 U	3000 U	540 U	270 U	250 U	250 U
Bis(2-ethylhexyl)phthalate	NSL	NSL	ug/kg	120 J	330 U	200 J	580	540	210	190 J	170 J	180 J	4700	12000 J	360 UJ	340 U	12000	27000	32000	2900	340	120 J	42 J
Butylbenzylphthalate	NSL	NSL	ug/kg	29 J	330 U	35 J	48 J	38 J	22 J	360 U	31 J	31 J	500 U	1500 UJ	360 UJ	340 U	940 U	2000 U	3000 U	540 U	270 U	250 U	21 J
Caprolactam	NSL	NSL	ug/kg	330 U	330 U	310 U	300 U	300 U	210 U	360 U	320 U	310 U	500 U	1500 U	360 UJ	340 U	940 U	2000 U	3000 U	540 U	270 U	250 U	250 U
Carbazole	NSL	NSL	ug/kg	330 U	330 U	310 U	300 U	300 U	210 U	360 U	320 U	310 U	28 J	1500 U	360 UJ	340 U	940 U	2000 U	3000 U	540 U	270 U	250 U	250 U
Chrysene**	166	1290	ug/kg	120 J	140 J	160 J	**250 J**	**300 J**	71 J	**250 J**	120 J	110 J	**480 J**	**1600 J**	**230 J**	**290 J**	**960**	**1700 J**	**1700 J**	**2200**	**810**	**600**	**250**
Dibenzo(a,h)anthracene**	33	NSL	ug/kg	18 J	330 U	26 J	24 J	20 J	7.2 J	**35 J**	20 J	21 J	**93 J**	**360 J**	**45 J**	**49 J**	**99 J**	**190 J**	**210 J**	**200 J**	**78 J**	**49 J**	26 J
Dibenzofuran	NSL	NSL	ug/kg	9 J	330 U	16 J	24 J	27 J	11 J	17 J	10 J	9.1 J	54 J	92 J	360 UJ	19 J	940 U	66 J	3000 U	42 J	40 J	35 J	9.9 J
Diethylphthalate	NSL	NSL	ug/kg	330 U	330 U	310 U	300 U	180 J	210 U	5.6 J	320 U	310 U	500 U	1500 U	360 UJ	340 U	940 U	2000 U	3000 U	540 U	270 U	250 U	250 U
Dimethylphthalate	NSL	NSL	ug/kg	330 U	330 U	310 U	300 U	300 U	210 U	360 U	320 U	310 U	500 U	1500 U	360 UJ	340 U	940 U	2000 U	3000 U	540 U	270 U	250 U	250 U
Di-n-butylphthalate	NSL	NSL	ug/kg	330 U	9.7 J	310 U	300 U	300 U	210 U	360 U	320 U	310 U	27 J	1500 U	21 J	26 J	940 U	2000 U	3000 U	540 U	270 U	250 U	250 U
Di-n-octylphthalate	NSL	NSL	ug/kg	330 U	330 U	310 U	300 U	300 UJ	210 U	360 U	320 U	310 U	500 U	1500 UJ	360 UJ	340 U	940 U	2000 U	3000 U	540 U	270 U	250 U	250 U
Fluoranthene**	423	2230	ug/kg	170 J	220 J	280 J	**510 J**	**430 J**	79 J	330 J	190 J	140 J	**460 J**	**900 J**	250 J	270 J	**1400 J**	**2400 J**	**1900 J**	**4100 J**	**1900 J**	**1300 J**	**480 J**
Fluorene**	77.4	536	ug/kg	17 J	330 U	35 J	46 J	46 J	10 J	29 J	16 J	15 J	**110 J**	**260 J**	25 J	26 J	940 U	**260 J**	**260 J**	**350 J**	**150 J**	**89 J**	26 J
Hexachlorobenzene	NSL	NSL	ug/kg	330 U	330 U	310 U	300 U	300 U	210 U	360 U	320 U	310 U	500 U	1500 U	360 UJ	340 U	940 U	2000 U	3000 U	540 U	270 U	250 U	250 U
Hexachlorobutadiene	NSL	NSL	ug/kg	330 U	330 U	310 U	300 U	300 U	210 U	360 U	320 U	310 U	500 UJ	1500 U	360 UJ	340 U	940 U	2000 U	3000 U	540 U	270 U	250 U	250 U
Hexachlorocyclopentadiene	NSL	NSL	ug/kg	330 UJ	330 UJ	310 UJ	300 UJ	300 U	210 UJ	360 UJ	320 UJ	310 UJ	500 UJ	1500 UJ	360 UJ	340 UJ	940 UJ	2000 UJ	3000 UJ	540 UJ	270 UJ	250 UJ	250 UJ
Hexachloroethane	NSL	NSL	ug/kg	330 U	330 U	310 U	300 U	300 U	210 U	360 U	320 U	310 U	500 U	1500 U	360 UJ	340 U	940 U	2000 U	3000 U	540 U	270 U	250 U	250 U
Indeno(1,2,3-cd)pyrene**	NSL	NSL	ug/kg	48 J	57 J	59 J	75 J	96 J	20 J	97 J	54 J	46 J	160 J	410 J	72 J	110 J	280 J	420 J	430 J	530 J	220 J	150 J	86 J
Isophorone	NSL	NSL	ug/kg	330 U	330 U	310 U	300 U	300 U	210 U	360 U	320 U	310 U	500 U	1500 U	360 UJ	340 U	940 U	2000 U	3000 U	540 U	270 U	250 U	250 U
Naphthalene**	176	561	ug/kg	11 J	330 U	33 J	80 J	74 J	27 J	45 J	23 J	11 J	120 J	**350 J**	36 J	59 J	91 J	**260 J**	150 J	91 J	45 J	19 J	14 J
Nitrobenzene	NSL	NSL	ug/kg	330 U	330 U	310 U	300 U	300 U	210 U	360 U	320 U	310 U	500 U	1500 U	360 UJ	340 U	940 U	2000 U	3000 U	540 U	270 U	250 U	250 U
N-Nitroso-di-n-propylamine	NSL	NSL	ug/kg	330 U	330 U	310 U	300 U	300 U	210 U	360 U	320 U	310 U	500 U	1500 U	360 UJ	340 U	940 UJ	2000 UJ	3000 UJ	540 UJ	270 U	250 U	250 U
N-Nitrosodiphenylamine	NSL	NSL	ug/kg	330 U	330 U	310 U	300 U	300 U	210 U	360 U	320 U	310 U	500 U	1500 U	360 UJ	340 U	940 U	2000 U	3000 U	540 U	270 U	250 U	250 U
Pentachlorophenol	NSL	NSL	ug/kg	640 U	640 U	600 U	580 U	590 UJ	400 U	690 UJ	620 U	600 UJ	970 UJ	2900 UJ	700 UJ	660 U	1800 U	3900 U	5900 U	1000 U	520 U	490 U	490 U
Phenanthrene**	204	1170	ug/kg	76 J	94 J	140 J	**220 J**	**230 J**	74 J	140 J	82 J	78 J	**420 J**	**1000 J**	130 J	160 J	**620 J**	**1100 J**	**1100 J**	**2500**	**830**	**580**	**260**
Phenol	NSL	NSL	ug/kg	330 U	330 U	310 U	300 U	300 U	210 U	360 U	320 U	310 U	500 U	1500 U	360 UJ	340 U	940 U	2000 U	3000 U	540 U	270 U	250 U	250 U
Pyrene**	195	1520	ug/kg	130 J	**200 J**	190 J	**340**	**340**	74 J	**280 J**	170 J	150 J	**610 J**	**1600 J**	**260 J**	**330 J**	**1200**	**2300**	**2300 J**	**3200**	**1400**	**1100**	**450**
Total PAHs 17 ND = 1/2RL	1610	22800	ug/kg	1520	**2187**	**1705**	**2625**	**2841**	805	**2375**	1477	1305	**4130**	**11840**	**2382**	**2439**	**9487**	**17380**	**16990**	**21209**	**8662**	**6247**	**2855**

NOTES:
** Analytes included in the 17PAH total
J = Indicates that the concentration is an estimated value.
R = Result is rejected
U = Indicates the analyte was analyzed for but not detected.
µg/kg = Micrograms per kilogram.
TEC = Threshold effect concentration.
Development and Evaluation of Consensus-Based Sediment Quality Guidelines for Freshwater Ecosystems (MacDonald et al. 2000).
PEC = Probable effect concentration.
Development and Evaluation of Consensus-Based Sediment Quality Guidelines for Freshwater Ecosystems (MacDonald et al. 2000).
Bolded values exceed the TEC.
Gray shaded values exceed the PEC.
NSL = No Screening Level.
Submitted samples are presented in ascending numerical order.
*Samples presented are displayed in Figure 4-3A

TABLE 4-6B* SEDIMENT RESULTS FOR SEMIVOLATILE ORGANIC ANALYSIS (SVOA) IN AREA B
PHASE 2 LOWER MAUMEE RIVER SITE CHARACTERIZATION
TOLEDO, OHIO (JUNE 2013)

			Sample Location:	LMR13-35					LMR13-38						LMR13-39			
			Sample Name:	LMR13-35-012	LMR13-35-024	LMR13-35-048	LMR13-35-072	LMR13-35-096	LMR13-38-012	LMR13-38-024	LMR13-38-024FD	LMR13-38-048	LMR13-38-072	LMR13-38-096	LMR13-39-012	LMR13-39-024	LMR13-39-048	LMR13-39-072
			Sample Depth (ft):	0-1	1-2	2-4	4-6	6-8	0-1	1-2	1-2	2-4	4-6	6-8	0-1	1-2	2-4	4-6
			Date Sampled:	6/15/13	6/15/13	6/15/13	6/15/13	6/15/13	6/16/13	6/16/13	6/16/13	6/16/13	6/16/13	6/16/13	6/19/13	6/19/13	6/19/13	6/19/13
Analyte	TEC	PEC	Unit															
1,1'-Biphenyl	NSL	NSL	ug/kg	310 U	280 U	260 U	210 U	220 U	250 U	280 U	250 U	240 U	220 U	220 U	240 U	6.6 J	260 UJ	220 U
1,2,4,5-Tetrachlorobenzene	NSL	NSL	ug/kg	310 U	280 U	260 U	210 U	220 U	250 U	280 U	250 U	240 U	220 U	220 U	240 U	230 U	260 UJ	220 U
2,2'-Oxybis(1-chloropropane)	NSL	NSL	ug/kg	310 U	280 U	260 U	210 U	220 U	250 U	280 U	250 U	240 U	220 U	220 U	240 U	230 U	260 UJ	220 U
2,3,4,6-Tetrachlorophenol	NSL	NSL	ug/kg	310 U	280 U	260 U	210 U	220 U	250 U	280 U	250 U	240 U	220 U	220 U	240 U	230 U	260 UJ	220 U
2,4,5-Trichlorophenol	NSL	NSL	ug/kg	310 U	280 U	260 U	210 U	220 U	250 U	280 U	250 U	240 U	220 U	220 U	240 U	230 U	260 UJ	220 U
2,4,6-Trichlorophenol	NSL	NSL	ug/kg	310 U	280 U	260 U	210 U	220 U	250 U	280 U	250 U	240 U	220 U	220 U	240 U	230 U	260 UJ	220 U
2,4-Dichlorophenol	NSL	NSL	ug/kg	310 U	280 U	260 U	210 U	220 U	250 U	280 U	250 U	240 U	220 U	220 U	240 U	230 U	260 UJ	220 U
2,4-Dimethylphenol	NSL	NSL	ug/kg	310 U	280 U	260 U	210 U	220 U	250 U	280 U	250 U	240 U	220 U	220 U	240 U	230 U	260 UJ	220 U
2,4-Dinitrophenol	NSL	NSL	ug/kg	610 U	550 U	510 U	400 U	420 U	490 U	540 U	490 U	480 UJ	430 U	430 UJ	470 UJ	450 UJ	500 UJ	420 UJ
2,4-Dinitrotoluene	NSL	NSL	ug/kg	310 U	280 U	260 U	210 U	220 U	250 U	280 U	250 U	240 U	220 U	220 U	240 U	230 U	260 UJ	220 U
2,6-Dinitrotoluene	NSL	NSL	ug/kg	310 U	280 U	260 U	210 U	220 U	250 U	280 U	250 U	240 U	220 U	220 U	240 U	230 U	260 UJ	220 U
2-Chloronaphthalene	NSL	NSL	ug/kg	310 U	280 U	260 U	210 U	220 U	250 U	280 U	250 U	240 U	220 U	220 U	240 U	230 U	260 UJ	220 U
2-Chlorophenol	NSL	NSL	ug/kg	310 U	280 U	260 U	210 U	220 U	250 U	280 U	250 U	240 U	220 U	220 U	240 U	230 U	260 UJ	220 U
2-Methylnaphthalene**	NSL	NSL	ug/kg	14 J	35 J	15 J	210 U	220 U	14 J	280 U	250 U	240 U	220 U	220 U	24 J	12 J	260 UJ	220 U
2-Methylphenol	NSL	NSL	ug/kg	310 U	280 U	260 U	210 U	220 U	250 U	280 U	250 U	240 U	220 U	220 U	240 U	230 U	260 UJ	220 U
2-Nitroaniline	NSL	NSL	ug/kg	610 U	550 U	510 U	400 U	420 U	490 U	540 U	490 U	480 U	430 U	430 U	470 U	450 U	500 UJ	420 U
2-Nitrophenol	NSL	NSL	ug/kg	310 U	280 U	260 U	210 U	220 U	250 U	280 U	250 U	240 U	220 U	220 U	240 U	230 U	260 UJ	220 U
3,3'-Dichlorobenzidine	NSL	NSL	ug/kg	310 UJ	280 UJ	260 UJ	210 U	220 U	250 UJ	280 UJ	250 UJ	240 U	220 U	220 U	240 U	230 U	260 UJ	220 U
3-Nitroaniline	NSL	NSL	ug/kg	610 U	550 U	510 U	400 U	420 U	490 U	540 U	490 U	480 U	430 U	430 U	470 U	450 U	500 UJ	420 U
4,6-Dinitro-2-methylphenol	NSL	NSL	ug/kg	610 U	550 U	510 U	400 U	420 U	490 U	540 U	490 U	480 U	430 U	430 U	470 U	450 U	500 UJ	420 U
4-Bromophenyl-phenylether	NSL	NSL	ug/kg	310 U	280 U	260 U	210 U	220 U	250 U	280 U	250 U	240 U	220 U	220 U	240 U	230 U	260 UJ	220 U
4-Chloro-3-methylphenol	NSL	NSL	ug/kg	310 U	280 U	260 U	210 U	220 U	250 U	280 U	250 U	240 U	220 U	220 U	240 U	230 U	260 UJ	220 U
4-Chloroaniline	NSL	NSL	ug/kg	310 UJ	280 U	260 UJ	210 U	220 U	250 UJ	280 UJ	250 UJ	240 U	220 U	220 U	240 U	230 U	16 J	220 U
4-Chlorophenyl-phenylether	NSL	NSL	ug/kg	310 U	280 U	260 U	210 U	220 U	250 U	280 U	250 U	240 U	220 U	220 U	240 U	230 U	260 UJ	220 U
4-Methylphenol	NSL	NSL	ug/kg	310 U	280 U	260 U	210 U	220 U	250 U	280 U	250 U	240 U	220 U	220 U	240 U	230 U	260 UJ	220 U
4-Nitroaniline	NSL	NSL	ug/kg	610 U	550 U	510 U	400 U	420 U	490 U	540 U	490 U	480 U	430 U	430 U	470 U	450 U	500 UJ	420 U
4-Nitrophenol	NSL	NSL	ug/kg	610 U	550 U	510 U	400 U	420 U	490 U	540 U	490 U	480 U	430 U	430 U	470 U	450 U	500 UJ	420 U
Acenaphthene**	NSL	NSL	ug/kg	42 J	200 J	160 J	9.6 J	220 U	93 J	130 J	150 J	39 J	220 U	220 U	160 J	130 J	110 J	220 U
Acenaphthylene**	NSL	NSL	ug/kg	24 J	73 J	37 J	210 U	220 U	37 J	45 J	29 J	18 J	220 U	220 U	27 J	28 J	25 J	220 U
Acetophenone	NSL	NSL	ug/kg	310 U	280 U	52 J	21 J	23 J	250 U	21 J	250 U	240 U	15 J	220 U	240 U	28 J	35 J	19 J
Anthracene**	57.2	845	ug/kg	**74 J**	**170 J**	**170 J**	14 J	2.8 J	**160 J**	**190 J**	**98 J**	**210 J**	3.5 J	220 U	**200 J**	**230 J**	**240 J**	8.7 J
Atrazine	NSL	NSL	ug/kg	310 U	280 U	260 U	210 U	220 U	250 U	280 U	250 U	240 U	220 U	220 U	240 U	230 U	260 UJ	220 U
Benzaldehyde	NSL	NSL	ug/kg	56 J	46 J	60 J	10 J	14 J	250 U	31 J	44 J	240 U	12 J	220 U	18 J	24 J	42 J	19 J
Benzo(a)anthracene**	108	1050	ug/kg	**370**	**1000**	**480**	15 J	220 U	**750**	**650**	**540**	**420**	8.5 J	220 U	**780**	**540**	**500 J**	220 U
Benzo(a)pyrene**	150	1450	ug/kg	**320**	**810**	**410**	14 J	220 U	**560**	**540**	**520**	**330**	220 U	220 U	**600**	**500**	**470 J**	220 U
Benzo(b)fluoranthene**	NSL	NSL	ug/kg	440 J	940 J	410 J	6.9 J	220 UJ	590 J	400 J	500 J	310 J	220 UJ	220 UJ	510	420	280 J	220 U
Benzo(g,h,i)perylene**	NSL	NSL	ug/kg	330 J	660 J	280	9.4 J	220 U	370	270 J	310	160 J	220 U	220 U	360	310	280 J	220 U
Benzo(k)fluoranthene**	NSL	NSL	ug/kg	380	610	320	13 J	220 U	430	410	410	270	220 U	220 U	470	270	370 J	220 U
Bis(2-chloroethoxy)methane	NSL	NSL	ug/kg	310 U	280 U	260 U	210 U	220 U	250 U	280 U	250 U	240 U	220 U	220 U	240 U	230 U	260 UJ	220 U
Bis(2-chloroethyl)ether	NSL	NSL	ug/kg	310 U	280 U	260 U	210 U	220 U	250 U	280 U	250 U	240 U	220 U	220 U	240 U	230 U	260 UJ	220 U
Bis(2-ethylhexyl)phthalate	NSL	NSL	ug/kg	310 U	2500	260 U	210 U	220 U	320	280 U	250 U	120 J	220 U	35 J	240 U	230 U	260 UJ	220 U
Butylbenzylphthalate	NSL	NSL	ug/kg	310 U	280 U	260 U	210 U	220 U	250 U	280 U	250 U	240 U	220 U	220 U	240 U	230 U	260 UJ	220 U
Caprolactam	NSL	NSL	ug/kg	310 U	280 U	260 U	210 U	220 U	250 U	280 U	250 U	240 U	220 U	220 U	240 U	230 U	260 UJ	220 U
Carbazole	NSL	NSL	ug/kg	310 U	280 U	8.3 J	210 U	220 U	250 U	280 U	250 U	240 U	220 U	220 U	16 J	230 U	260 UJ	220 U
Chrysene**	166	1290	ug/kg	**490**	**1100**	**500**	22 J	12 J	**830**	**540**	**580**	**360**	15 J	14 J	**920**	**650**	**560 J**	220 U
Dibenzo(a,h)anthracene**	33	NSL	ug/kg	**94 J**	**220 J**	**71 J**	210 UJ	220 UJ	**99 J**	**70 J**	**84 J**	**41 J**	220 UJ	220 UJ	**130 J**	**91 J**	**87 J**	220 U
Dibenzofuran	NSL	NSL	ug/kg	25 J	42 J	11 J	4 J	220 U	250 U	280 U	12 J	23 J	220 U	220 U	39 J	19 J	28 J	220 U
Diethylphthalate	NSL	NSL	ug/kg	310 U	280 U	260 U	4.4 J	220 U	250 U	280 U	250 U	240 U	8.1 J	5.3 J	240 U	230 U	260 UJ	220 U
Dimethylphthalate	NSL	NSL	ug/kg	310 U	280 U	260 U	210 U	220 U	250 U	280 U	250 U	240 U	220 U	220 U	240 U	230 U	260 UJ	220 U
Di-n-butylphthalate	NSL	NSL	ug/kg	310 U	280 U	260 U	210 U	220 U	250 U	280 U	250 U	240 U	220 U	220 U	240 U	230 U	260 UJ	220 U
Di-n-octylphthalate	NSL	NSL	ug/kg	310 UJ	280 UJ	260 U	210 U	220 U	250 U	280 U	250 U	240 U	220 U	220 U	240 U	230 U	260 UJ	220 U
Fluoranthene**	423	2230	ug/kg	**740**	**1700**	**900**	41 J	9.1 J	**1100**	**1000**	**490**	**910**	17 J	6.9 J	**1100**	**800**	**760 J**	19 J
Fluorene**	77.4	536	ug/kg	48 J	**110 J**	35 J	4.3 J	220 U	42 J	70 J	54 J	47 J	220 U	220 U	**110 J**	**84 J**	**110 J**	220 U
Hexachlorobenzene	NSL	NSL	ug/kg	310 U	280 U	260 U	210 U	220 U	250 U	280 U	250 U	240 U	220 U	220 U	240 U	230 U	260 UJ	220 U
Hexachlorobutadiene	NSL	NSL	ug/kg	310 U	280 U	260 U	210 U	220 U	250 U	280 U	250 U	240 U	220 U	220 U	240 U	230 U	260 UJ	220 U
Hexachlorocyclopentadiene	NSL	NSL	ug/kg	310 UJ	280 UJ	260 UJ	210 UJ	220 UJ	250 UJ	280 UJ	250 UJ	240 UJ	220 UJ	220 UJ	240 UJ	230 UJ	260 UJ	220 UJ
Hexachloroethane	NSL	NSL	ug/kg	310 U	280 U	260 U	210 U	220 U	250 U	280 U	250 U	240 U	220 U	220 U	240 U	230 U	260 UJ	220 U
Indeno(1,2,3-cd)pyrene**	NSL	NSL	ug/kg	250 J	530 J	230 J	7 J	220 U	260	200 J	260	130 J	220 U	220 U	350	250	260 J	220 U
Isophorone	NSL	NSL	ug/kg	310 U	280 U	260 U	210 U	220 U	250 U	280 U	250 U	240 U	220 U	220 U	240 U	230 U	260 UJ	220 U
Naphthalene**	176	561	ug/kg	31 J	120 J	24 J	210 U	220 U	31 J	23 J	26 J	11 J	220 U	220 U	60 J	28 J	19 J	220 U
Nitrobenzene	NSL	NSL	ug/kg	310 U	280 U	260 U	210 U	220 U	250 U	280 U	250 U	240 U	220 U	220 U	240 U	230 U	260 UJ	220 U
N-Nitroso-di-n-propylamine	NSL	NSL	ug/kg	310 U	280 U	260 U	210 U	220 U	250 U	280 U	250 U	240 U	220 U	220 U	240 U	230 U	260 UJ	220 U
N-Nitrosodiphenylamine	NSL	NSL	ug/kg	310 U	280 U	260 U	210 U	220 U	250 U	280 U	250 U	240 U	220 U	220 U	240 U	230 U	260 UJ	220 U
Pentachlorophenol	NSL	NSL	ug/kg	610 UJ	550 UJ	510 U	400 U	420 U	490 U	540 U	490 U	480 U	430 U	430 U	470 UJ	450 UJ	500 UJ	420 UJ
Phenanthrene**	204	1170	ug/kg	**260 J**	**850**	**510**	30 J	4.2 J	**460**	**650**	**330**	**470**	12 J	5.4 J	**1100**	**670**	**680 J**	21 J
Phenol	NSL	NSL	ug/kg	310 U	280 U	260 U	210 U	220 U	250 U	280 U	250 U	240 U	220 U	220 U	240 U	7 J	260 UJ	220 U
Pyrene**	195	1520	ug/kg	**600**	**2000**	**1000**	33 J	9.1 J	**1300**	**1000**	**1000**	**690**	18 J	9.7 J	**2100**	**1700**	**1600 J**	32 J
Total PAHs 17 ND = 1/2RL	1610	22800	ug/kg	**4507**	**11128**	**5552**	639	1357	**7126**	**6328**	**5506**	**4536**	1284	1466	**9001**	**6713**	**6481**	1511

NOTES:
** Analytes included in the 17PAH total
J = Indicates that the concentration is an estimated value.
R = Result is rejected
U = Indicates the analyte was analyzed for but not detected.
µg/kg = Micrograms per kilogram.
TEC = Threshold effect concentration.
Development and Evaluation of Consensus-Based Sediment Quality
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Development and Evaluation of Consensus-Based Sediment Quality
Guidelines for Freshwater Ecosystems (MacDonald et al. 2000).
Bolded values exceed the TEC.
Gray shaded values exceed the PEC.
NSL = No Screening Level.
Submitted samples are presented in ascending numerical order.
*Samples presented are displayed in Figure 4-3B

TABLE 4-6B* SEDIMENT RESULTS FOR SEMIVOLATILE ORGANIC ANALYSIS (SVOA) IN AREA B
PHASE 2 LOWER MAUMEE RIVER SITE CHARACTERIZATION
TOLEDO, OHIO (JUNE 2013)

			Sample Location:	LMR13-40						LMR13-41			LMR13-42						
			Sample Name:	LMR13-40-012	LMR13-40-024	LMR13-40-024FD	LMR13-40-048	LMR13-40-072	LMR13-40-096	LMR13-41-012	LMR13-41-024	LMR13-41-048	LMR13-42-012	LMR13-42-024	LMR13-42-024FD	LMR13-42-048	LMR13-42-072	LMR13-42-096	LMR13-42-120
			Sample Depth (ft):	0-1	1-2	1-2	2-4	4-6	6-7	0-1	1-2	2-4	0-1	1-2	1-2	2-4	4-6	6-8	8-9
			Date Sampled:	6/16/13	6/16/13	6/16/13	6/16/13	6/16/13	6/16/13	6/14/13	6/14/13	6/14/13	6/12/13	6/12/13	6/12/13	6/12/13	6/12/13	6/12/13	6/12/13
Analyte	TEC	PEC	Unit																
1,1'-Biphenyl	NSL	NSL	ug/kg	350 U	340 U	350 U	310 U	11 J	300 U	250 U	250 U	230 U	3100 U	610 U	580 U	830 U	390 U	730 U	410 U
1,2,4,5-Tetrachlorobenzene	NSL	NSL	ug/kg	350 U	340 U	350 U	310 U	300 U	300 U	250 U	250 U	230 U	3100 U	610 U	580 U	830 U	390 U	730 U	410 U
2,2'-Oxybis(1-chloropropane)	NSL	NSL	ug/kg	350 U	340 U	350 U	310 U	300 U	300 U	250 U	250 U	230 U	3100 U	610 U	580 U	830 U	390 U	730 U	410 U
2,3,4,6-Tetrachlorophenol	NSL	NSL	ug/kg	350 U	340 U	350 U	310 U	300 U	300 U	250 U	250 U	230 U	3100 U	610 U	580 U	830 U	390 U	730 U	410 U
2,4,5-Trichlorophenol	NSL	NSL	ug/kg	350 U	340 U	350 U	310 U	300 U	300 U	250 U	250 U	230 U	3100 U	610 U	580 U	830 U	390 U	730 U	410 U
2,4,6-Trichlorophenol	NSL	NSL	ug/kg	350 U	340 U	350 U	310 U	300 U	300 U	250 U	250 U	230 U	3100 U	610 U	580 U	830 U	390 U	730 U	410 U
2,4-Dichlorophenol	NSL	NSL	ug/kg	350 U	340 U	350 U	310 U	300 U	300 U	250 U	250 U	230 U	3100 U	610 U	580 U	830 U	390 U	730 U	410 U
2,4-Dimethylphenol	NSL	NSL	ug/kg	350 U	340 U	350 U	310 U	300 U	300 U	250 U	250 U	230 U	3100 U	610 U	580 U	830 U	390 U	730 U	410 U
2,4-Dinitrophenol	NSL	NSL	ug/kg	690 U	660 U	680 U	600 UJ	570 U	570 U	480 UJ	490 U	440 U	6100 U	1200 U	1100 U	1600 U	760 U	1400 U	810 U
2,4-Dinitrotoluene	NSL	NSL	ug/kg	350 U	340 U	350 U	310 U	300 U	300 U	250 U	250 U	230 U	3100 U	610 U	580 U	830 U	390 U	730 U	410 U
2,6-Dinitrotoluene	NSL	NSL	ug/kg	350 U	340 U	350 U	310 U	300 U	300 U	250 U	250 U	230 U	3100 U	610 U	580 U	830 U	390 U	730 U	410 U
2-Chloronaphthalene	NSL	NSL	ug/kg	350 U	340 U	350 U	310 U	300 U	300 U	250 U	250 U	230 U	3100 U	610 U	580 U	830 U	390 U	730 U	410 U
2-Chlorophenol	NSL	NSL	ug/kg	350 U	340 U	350 U	310 U	300 U	300 U	250 U	250 U	230 U	3100 U	610 U	580 U	830 U	390 U	730 U	410 U
2-Methylnaphthalene**	NSL	NSL	ug/kg	350 U	340 U	350 U	310 U	49 J	26 J	250 U	250 U	230 U	3100 U	610 U	72 J	110 J	94 J	130 J	410 U
2-Methylphenol	NSL	NSL	ug/kg	350 U	340 U	350 U	310 U	300 U	300 U	250 U	250 U	230 U	3100 U	610 U	580 U	830 U	390 U	730 U	410 U
2-Nitroaniline	NSL	NSL	ug/kg	690 U	660 U	680 U	600 U	570 U	570 U	480 U	490 U	440 U	6100 U	1200 U	1100 U	1600 U	760 U	1400 U	810 U
2-Nitrophenol	NSL	NSL	ug/kg	350 U	340 U	350 U	310 U	300 U	300 U	250 U	250 U	230 U	3100 U	610 U	580 U	830 U	390 U	730 U	410 U
3,3'-Dichlorobenzidine	NSL	NSL	ug/kg	350 UJ	340 U	350 UJ	310 UJ	300 U	300 U	250 UJ	250 U	230 UJ	3100 U	610 U	580 U	830 U	390 U	730 U	410 U
3-Nitroaniline	NSL	NSL	ug/kg	690 U	660 U	680 U	600 U	570 U	570 U	480 U	490 U	440 U	6100 U	1200 U	1100 U	1600 U	760 U	1400 U	810 U
4,6-Dinitro-2-methylphenol	NSL	NSL	ug/kg	690 U	660 U	680 U	600 U	570 U	570 U	480 U	490 U	440 U	6100 U	1200 U	1100 U	1600 U	760 U	1400 U	810 U
4-Bromophenyl-phenylether	NSL	NSL	ug/kg	350 U	340 U	350 U	310 U	300 U	300 U	250 U	250 U	230 U	3100 U	610 U	580 U	830 U	390 U	730 U	410 U
4-Chloro-3-methylphenol	NSL	NSL	ug/kg	350 U	340 U	350 U	310 U	300 U	300 U	250 U	250 U	230 U	3100 U	610 U	580 U	830 U	390 U	730 U	410 U
4-Chloroaniline	NSL	NSL	ug/kg	350 UJ	340 U	350 UJ	310 UJ	300 U	300 U	250 UJ	250 U	230 UJ	3100 U	610 U	580 U	830 U	390 U	730 U	410 U
4-Chlorophenyl-phenylether	NSL	NSL	ug/kg	350 U	340 U	350 U	310 U	300 U	300 U	250 U	250 U	230 U	3100 U	610 U	580 U	830 U	390 U	730 U	410 U
4-Methylphenol	NSL	NSL	ug/kg	350 U	340 U	350 U	9.5 J	30 J	22 J	250 U	250 UJ	230 UJ	3100 U	610 U	580 U	830 U	390 U	730 U	410 U
4-Nitroaniline	NSL	NSL	ug/kg	690 U	660 U	680 U	600 U	570 U	570 U	480 U	490 U	440 U	6100 U	1200 U	1100 U	1600 U	760 U	1400 U	810 U
4-Nitrophenol	NSL	NSL	ug/kg	690 U	660 U	680 U	600 U	570 U	570 U	480 U	490 U	440 U	6100 U	1200 U	1100 U	1600 U	760 U	1400 U	810 U
Acenaphthene**	NSL	NSL	ug/kg	31 J	30 J	21 J	45 J	120 J	52 J	73 J	11 J	230 U	460 J	190 J	190 J	400 J	700	560 J	160 J
Acenaphthylene**	NSL	NSL	ug/kg	9.9 J	8.7 J	350 U	15 J	62 J	29 J	24 J	250 U	230 U	3100 U	150 J	190 J	260 J	390 U	190 J	62 J
Acetophenone	NSL	NSL	ug/kg	28 J	19 J	20 J	310 U	300 U	300 U	250 U	250 U	230 U	3100 U	59 J	580 U	830 U	40 J	76 J	410 U
Anthracene**	57.2	845	ug/kg	39 J	48 J	28 J	**58 J**	**200 J**	**85 J**	**450**	27 J	230 U	**800 J**	**350 J**	**480 J**	**1100**	**620**	**880 J**	**290 J**
Atrazine	NSL	NSL	ug/kg	350 U	340 U	350 U	310 U	300 U	300 U	250 U	250 U	230 U	3100 U	610 U	580 U	830 U	390 U	730 U	410 U
Benzaldehyde	NSL	NSL	ug/kg	51 J	41 J	36 J	310 U	300 U	300 U	89 J	250 U	230 U	3100 U	610 U	580 U	830 U	74 J	91 J	71 J
Benzo(a)anthracene**	108	1050	ug/kg	**190 J**	**140 J**	89 J	**240 J**	**700**	**380**	**780**	44 J	230 U	**1500 J**	**1500**	**1700**	**3300**	**870**	**2100**	**660**
Benzo(a)pyrene**	150	1450	ug/kg	**200 J**	150 J	110 J	**200 J**	**610**	**330**	**490**	33 J	230 U	**1300 J**	**1200**	**1400**	**2500**	**680**	**1700**	**680**
Benzo(b)fluoranthene**	NSL	NSL	ug/kg	180 J	140 J	110 J	240 J	720 J	360 J	460	25 J	230 U	1300 J	1100	1200	2600	740	1300	450
Benzo(g,h,i)perylene**	NSL	NSL	ug/kg	140 J	110 J	73 J	150 J	540	270 J	210 J	250 U	230 U	800 J	820	980	1500	400	1000	440
Benzo(k)fluoranthene**	NSL	NSL	ug/kg	200 J	160 J	110 J	170 J	580	300	390	31 J	230 U	990 J	890	1300	2000	540	1700	530
Bis(2-chloroethoxy)methane	NSL	NSL	ug/kg	350 U	340 U	350 U	310 U	300 U	300 U	250 U	250 U	230 U	3100 U	610 U	580 U	830 U	390 U	730 U	410 U
Bis(2-chloroethyl)ether	NSL	NSL	ug/kg	350 U	340 U	350 U	310 U	300 U	300 U	250 U	250 U	230 U	3100 U	610 U	580 U	830 U	390 U	730 U	410 U
Bis(2-ethylhexyl)phthalate	NSL	NSL	ug/kg	350 U	340 U	350 U	320	1700	1400	250 U	250 U	230 U	25000	610 U	580 U	830 U	390 U	730 U	410 U
Butylbenzylphthalate	NSL	NSL	ug/kg	350 U	340 U	350 U	310 U	300 U	300 U	250 U	250 U	230 U	3100 U	610 U	580 U	830 U	390 U	730 U	410 U
Caprolactam	NSL	NSL	ug/kg	350 U	340 U	350 U	310 U	300 U	300 U	250 U	250 U	230 U	3100 U	610 U	580 U	830 U	390 U	730 U	410 U
Carbazole	NSL	NSL	ug/kg	10 J	340 U	350 U	6.1 J	19 J	300 U	250 U	250 U	230 U	3100 U	610 UJ	580 U	830 U	390 U	60 J	410 U
Chrysene**	166	1290	ug/kg	**290 J**	**220 J**	160 J	**270 J**	**790**	**480**	**680**	51 J	21 J	**1900 J**	**2000**	**2300**	**4000**	**980**	**2400**	**790**
Dibenzo(a,h)anthracene**	33	NSL	ug/kg	**51 J**	27 J	24 J	**41 J**	**160 J**	**84 J**	**93 J**	250 U	230 U	3100 U	**310 J**	**400 J**	**470 J**	**140 J**	**340 J**	**120 J**
Dibenzofuran	NSL	NSL	ug/kg	20 J	26 J	24 J	28 J	54 J	300 U	55 J	250 U	230 U	210 J	63 J	77 J	140 J	110 J	270 J	39 J
Diethylphthalate	NSL	NSL	ug/kg	350 U	340 U	350 U	310 U	300 U	300 U	250 U	250 U	230 U	3100 U	610 U	580 U	830 U	390 U	730 U	410 U
Dimethylphthalate	NSL	NSL	ug/kg	350 U	340 U	350 U	310 U	300 U	300 U	250 U	250 U	230 U	3100 U	610 U	580 U	830 U	390 U	730 U	410 U
Di-n-butylphthalate	NSL	NSL	ug/kg	350 U	340 U	350 U	310 U	300 U	300 U	250 U	250 U	230 U	340 J	610 U	580 U	830 U	36 J	730 U	66 J
Di-n-octylphthalate	NSL	NSL	ug/kg	350 U	340 U	350 U	310 U	300 U	300 U	250 U	250 UJ	230 UJ	3100 U	610 U	580 U	830 U	390 U	730 U	410 U
Fluoranthene**	423	2230	ug/kg	330 J	340 J	220 J	380	**1200**	**780**	**1200**	81 J	17 J	**3200**	**2000**	**2300**	**5000**	**1900**	**4200**	**1000**
Fluorene**	77.4	536	ug/kg	39 J	33 J	34 J	39 J	**200 J**	**81 J**	**190 J**	250 U	230 U	**700 J**	**340 J**	**410 J**	**830 J**	**590**	**690 J**	**140 J**
Hexachlorobenzene	NSL	NSL	ug/kg	350 U	340 U	350 U	310 U	300 U	300 U	250 U	250 U	230 U	3100 U	610 U	580 U	830 U	390 U	730 U	410 U
Hexachlorobutadiene	NSL	NSL	ug/kg	350 U	340 U	350 U	310 U	300 U	300 U	250 U	250 U	230 U	3100 U	610 U	580 U	830 U	390 U	730 U	410 U
Hexachlorocyclopentadiene	NSL	NSL	ug/kg	350 UJ	340 UJ	350 UJ	310 UJ	300 U	300 U	250 UJ	250 UJ	230 UJ	3100 U	610 U	580 U	830 U	390 U	730 UJ	410 U
Hexachloroethane	NSL	NSL	ug/kg	350 U	340 U	350 U	310 U	300 U	300 U	250 U	250 U	230 U	3100 U	610 U	580 U	830 U	390 U	730 U	410 U
Indeno(1,2,3-cd)pyrene**	NSL	NSL	ug/kg	110 J	89 J	67 J	120 J	440	210 J	220 J	250 U	230 U	690 J	650	730	1200	350 J	850	350 J
Isophorone	NSL	NSL	ug/kg	350 U	340 U	350 U	310 U	300 U	300 U	250 U	250 U	230 U	3100 U	610 U	580 U	830 U	390 U	730 U	410 U
Naphthalene**	176	561	ug/kg	33 J	15 J	12 J	140 J	**250 J**	170 J	17 J	250 U	230 U	3100 U	110 J	150 J	150 J	170 J	**280 J**	44 J
Nitrobenzene	NSL	NSL	ug/kg	350 U	340 U	350 U	310 U	300 U	300 U	250 U	250 U	230 U	3100 U	610 U	580 U	830 U	390 U	730 U	410 U
N-Nitroso-di-n-propylamine	NSL	NSL	ug/kg	350 U	340 U	350 U	310 U	300 U	300 U	250 U	250 UJ	230 UJ	3100 U	610 U	580 U	830 U	390 U	730 U	410 U
N-Nitrosodiphenylamine	NSL	NSL	ug/kg	350 U	340 U	350 U	310 U	300 U	440	250 U	250 U	230 U	3100 U	610 U	580 U	830 U	390 U	730 U	410 U
Pentachlorophenol	NSL	NSL	ug/kg	690 U	660 U	680 U	600 U	570 U	570 U	480 UJ	490 UJ	440 UJ	6100 UJ	1200 UJ	1100 UJ	1600 UJ	760 UJ	1400 U	810 UJ
Phenanthrene**	204	1170	ug/kg	160 J	180 J	140 J	**210 J**	**710**	**400**	**1000**	76 J	30 J	**3300**	**1100**	**1300**	**5300**	**2300**	**2900 J**	**910**
Phenol	NSL	NSL	ug/kg	350 U	340 U	350 U	310 U	300 U	300 U	250 U	250 U	230 U	3100 U	610 U	580 U	830 U	390 U	730 U	410 U
Pyrene**	195	1520	ug/kg	**320 J**	**260 J**	190 J	**390**	**1200**	**790**	**1200**	85 J	23 J	**2900 J**	**2400**	**2800**	**6200**	**2200**	**4500**	**1700**
Total PAHs 17 ND = 1/2RL	1610	22800	ug/kg	**2498**	**2121**	**1738**	**2863**	**8531**	**4827**	**7602**	1339	1586	**26040**	**15415**	**17902**	**36920**	**13469**	**25720**	**8531**

NOTES:
** Analytes included in the 17PAH total
J = Indicates that the concentration is an estimated value.
R = Result is rejected
U = Indicates the analyte was analyzed for but not detected.
µg/kg = Micrograms per kilogram.
TEC = Threshold effect concentration.
Development and Evaluation of Consensus-Based Sediment Quality
Guidelines for Freshwater Ecosystems (MacDonald et al. 2000).
PEC = Probable effect concentration.
Development and Evaluation of Consensus-Based Sediment Quality
Guidelines for Freshwater Ecosystems (MacDonald et al. 2000).
Bolded values exceed the TEC.
Gray shaded values exceed the PEC.
NSL = No Screening Level.
Submitted samples are presented in ascending numerical order.
*Samples presented are displayed in Figure 4-3B

TABLE 4-6B* SEDIMENT RESULTS FOR SEMIVOLATILE ORGANIC ANALYSIS (SVOA) IN AREA B
PHASE 2 LOWER MAUMEE RIVER SITE CHARACTERIZATION
TOLEDO, OHIO (JUNE 2013)

			Sample Location:	LMR13-43						LMR13-44						LMR13-54						
			Sample Name:	LMR13-43-012	LMR13-43-024	LMR13-43-048	LMR13-43-072	LMR13-43-096	LMR13-43-120	LMR13-44-012	LMR13-44-024	LMR13-44-024FD	LMR13-44-048	LMR13-44-072	LMR13-44-096	LMR13-54-012	LMR13-54-024	LMR13-54-024FD	LMR13-54-048	LMR13-54-072	LMR13-54-096	LMR13-54-120
			Sample Depth (ft):	0-1	1-2	2-4	4-6	6-8	8-9	0-1	1-2	1-2	2-4	4-6	6-8	0-1	1-2	1-2	2-4	4-6	6-8	8-9
			Date Sampled:	6/12/13	6/12/13	6/12/13	6/12/13	6/12/13	6/12/13	6/12/13	6/12/13	6/12/13	6/12/13	6/12/13	6/12/13	6/19/13	6/19/13	6/19/13	6/19/13	6/19/13	6/19/13	6/19/13
Analyte	TEC	PEC	Unit																			
1,1'-Biphenyl	NSL	NSL	ug/kg	3000 U	12000 U	6400 U	9900 U	970 U	730 U	2300 U	240 U	240 U	240 U	240 U	240 U	1300 U	2800 U	2800 U	3100 U	6300 U	4100 U	2500 J
1,2,4,5-Tetrachlorobenzene	NSL	NSL	ug/kg	3000 U	12000 U	6400 U	9900 U	970 U	730 U	2300 U	240 U	240 U	240 U	240 U	240 U	1300 U	2800 U	2800 U	3100 U	6300 U	4100 U	12000 UJ
2,2'-Oxybis(1-chloropropane)	NSL	NSL	ug/kg	3000 U	12000 U	6400 U	9900 U	970 U	730 U	2300 U	240 U	240 U	240 U	240 U	240 U	1300 U	2800 U	2800 U	3100 U	6300 U	4100 U	12000 UJ
2,3,4,6-Tetrachlorophenol	NSL	NSL	ug/kg	3000 U	12000 U	6400 U	9900 U	970 U	730 U	2300 U	240 U	240 U	240 U	240 U	240 U	1300 U	2800 U	2800 U	3100 U	6300 U	4100 U	12000 UJ
2,4,5-Trichlorophenol	NSL	NSL	ug/kg	3000 U	12000 U	6400 U	9900 U	970 U	730 U	2300 U	240 U	240 U	240 U	240 U	240 U	1300 U	2800 U	2800 U	3100 U	6300 U	4100 U	12000 UJ
2,4,6-Trichlorophenol	NSL	NSL	ug/kg	3000 U	12000 U	6400 U	9900 U	970 U	730 U	2300 U	240 U	240 U	240 U	240 U	240 U	1300 U	2800 U	2800 U	3100 U	6300 U	4100 U	12000 UJ
2,4-Dichlorophenol	NSL	NSL	ug/kg	3000 U	12000 U	6400 U	9900 U	970 U	730 U	2300 U	240 U	240 U	240 U	240 U	240 U	1300 U	2800 U	2800 U	3100 U	6300 U	4100 U	12000 UJ
2,4-Dimethylphenol	NSL	NSL	ug/kg	3000 U	12000 U	6400 U	9900 U	970 U	730 U	2300 U	240 U	240 U	240 U	240 U	240 U	1300 U	2800 U	2800 U	3100 U	6300 U	4100 U	12000 UJ
2,4-Dinitrophenol	NSL	NSL	ug/kg	5800 U	23000 U	12000 U	19000 U	1900 U	1400 U	4400 U	460 U	470 U	460 U	470 U	460 U	2600 U	5400 U	5300 U	6100 U	12000 U	8000 U	22000 UJ
2,4-Dinitrotoluene	NSL	NSL	ug/kg	3000 U	12000 U	6400 U	9900 U	970 U	730 U	2300 U	240 U	240 U	240 U	240 U	240 U	1300 U	2800 U	2800 U	3100 U	6300 U	4100 U	12000 UJ
2,6-Dinitrotoluene	NSL	NSL	ug/kg	3000 U	12000 U	6400 U	9900 U	970 U	730 U	2300 U	240 U	240 U	240 U	240 U	240 U	1300 U	2800 U	2800 U	3100 U	6300 U	4100 U	12000 UJ
2-Chloronaphthalene	NSL	NSL	ug/kg	3000 U	12000 U	6400 U	9900 U	970 U	730 U	2300 U	240 U	240 U	240 U	240 U	240 U	1300 U	2800 U	2800 U	3100 U	6300 U	4100 U	12000 UJ
2-Chlorophenol	NSL	NSL	ug/kg	3000 U	12000 U	6400 U	9900 U	970 U	730 U	2300 U	240 U	240 U	240 U	240 U	240 U	1300 U	2800 U	2800 U	3100 U	6300 U	4100 U	12000 UJ
2-Methylnaphthalene**	NSL	NSL	ug/kg	3000 U	12000 U	530 J	9900 U	97 J	140 J	2300 U	240 U	240 U	240 U	240 U	240 U	270 J	1300 J	1400 J	6200	15000	4000 J	34000 J
2-Methylphenol	NSL	NSL	ug/kg	3000 U	12000 U	6400 U	9900 U	970 U	730 U	2300 U	240 U	240 U	240 U	240 U	240 U	1300 U	2800 U	2800 U	3100 U	6300 U	4100 U	12000 UJ
2-Nitroaniline	NSL	NSL	ug/kg	5800 U	23000 U	12000 U	19000 U	1900 U	1400 U	4400 U	460 U	470 U	460 U	470 U	460 U	2600 U	5400 U	5300 U	6100 U	12000 U	8000 U	22000 UJ
2-Nitrophenol	NSL	NSL	ug/kg	3000 U	12000 U	6400 U	9900 U	970 U	730 U	2300 U	240 U	240 U	240 U	240 U	240 U	1300 U	2800 U	2800 U	3100 U	6300 U	4100 U	12000 UJ
3,3'-Dichlorobenzidine	NSL	NSL	ug/kg	3000 U	12000 U	6400 U	9900 U	970 U	730 U	2300 U	240 UJ	240 U	240 UJ	240 UJ	240 UJ	1300 U	2800 U	2800 U	3100 U	6300 U	4100 U	12000 UJ
3-Nitroaniline	NSL	NSL	ug/kg	5800 U	23000 U	12000 U	19000 U	1900 U	1400 U	4400 U	460 U	470 U	460 U	470 U	460 U	2600 U	5400 U	5300 U	6100 U	12000 U	8000 U	22000 UJ
4,6-Dinitro-2-methylphenol	NSL	NSL	ug/kg	5800 U	23000 U	12000 U	19000 U	1900 U	1400 U	4400 U	460 U	470 U	460 U	470 U	460 U	2600 U	5400 U	5300 U	6100 U	12000 U	8000 U	22000 UJ
4-Bromophenyl-phenylether	NSL	NSL	ug/kg	3000 U	12000 U	6400 U	9900 U	970 U	730 U	2300 U	240 U	240 U	240 U	240 U	240 U	1300 U	2800 U	2800 U	3100 U	6300 U	4100 U	12000 UJ
4-Chloro-3-methylphenol	NSL	NSL	ug/kg	3000 U	12000 U	6400 U	9900 U	970 U	730 U	2300 U	240 U	240 U	240 U	240 U	240 U	1300 U	2800 U	2800 U	3100 U	6300 U	4100 U	12000 UJ
4-Chloroaniline	NSL	NSL	ug/kg	3000 U	12000 U	6400 U	9900 U	970 U	730 U	2300 U	240 UJ	240 U	240 UJ	240 UJ	240 UJ	1300 U	2800 U	2800 U	3100 U	6300 U	4100 U	12000 UJ
4-Chlorophenyl-phenylether	NSL	NSL	ug/kg	3000 U	12000 U	6400 U	9900 U	970 U	730 U	2300 U	240 U	240 U	240 U	240 U	240 U	1300 U	2800 U	2800 U	3100 U	6300 U	4100 U	12000 UJ
4-Methylphenol	NSL	NSL	ug/kg	3000 U	12000 U	6400 U	9900 U	970 U	730 U	2300 U	240 U	240 U	240 U	240 U	240 U	1300 U	2800 U	2800 U	3100 U	6300 U	4100 U	12000 UJ
4-Nitroaniline	NSL	NSL	ug/kg	5800 U	23000 U	12000 U	19000 U	1900 U	1400 U	4400 U	460 U	470 U	460 U	470 U	460 U	2600 U	5400 U	5300 U	6100 U	12000 U	8000 U	22000 UJ
4-Nitrophenol	NSL	NSL	ug/kg	5800 U	23000 U	12000 U	19000 U	1900 U	1400 U	4400 U	460 U	470 U	460 U	470 U	460 U	2600 U	5400 U	5300 U	6100 U	12000 U	8000 U	22000 UJ
Acenaphthene**	NSL	NSL	ug/kg	450 J	1400 J	800 J	9900 U	130 J	250 J	460 J	46 J	44 J	22 J	240 U	240 U	1500	6400	8200 J	6800	13000	10000	35000 J
Acenaphthylene**	NSL	NSL	ug/kg	3000 U	12000 U	6400 U	9900 U	970 U	150 J	170 J	22 J	24 J	240 U	240 U	240 U	190 J	720 J	850 J	540 J	1000 J	870 J	12000 UJ
Acetophenone	NSL	NSL	ug/kg	3000 U	12000 U	6400 U	9900 U	970 U	730 U	2300 U	240 U	11 J	13 J	230 J	29 J	1300 U	2800 U	2800 U	3100 U	6300 U	4100 U	400 J
Anthracene**	57.2	845	ug/kg	**750 J**	**1400 J**	**990 J**	**570 J**	**400 J**	**620 J**	**630 J**	**120 J**	**150 J**	**74 J**	10 J	240 U	**1700**	**9400**	**9900**	**10000**	**23000**	**13000**	**43000 J**
Atrazine	NSL	NSL	ug/kg	3000 U	12000 U	6400 U	9900 U	970 U	730 U	2300 U	240 U	240 U	240 U	240 U	240 U	1300 U	2800 U	2800 U	3100 U	6300 U	4100 U	12000 UJ
Benzaldehyde	NSL	NSL	ug/kg	3000 U	12000 U	6400 U	9900 U	970 U	120 J	2300 U	51 J	46 J	40 J	230 J	61 J	1300 U	2800 U	2800 U	3100 U	6300 U	4100 U	12000 UJ
Benzo(a)anthracene**	108	1050	ug/kg	**1900 J**	**3600 J**	**2400 J**	**1600 J**	**1200**	**2100**	**2000 J**	**310**	**350**	**150 J**	18 J	240 U	**5500**	**13000**	**16000**	**10000**	**23000**	**16000**	**40000 J**
Benzo(a)pyrene**	150	1450	ug/kg	**1700 J**	**2900 J**	**1800 J**	**1300 J**	**980**	**1900**	**1800 J**	**290**	**320**	100 J	240 U	240 U	**5800**	**12000**	**13000**	**9100**	**19000**	**12000**	**25000 J**
Benzo(b)fluoranthene**	NSL	NSL	ug/kg	1800 J	2900 J	1600 J	1200 J	950 J	1600	1100 J	230 J	260	81 J	240 U	240 U	5600	13000 J	12000 J	9800 J	15000 J	12000 J	27000 J
Benzo(g,h,i)perylene**	NSL	NSL	ug/kg	1400 J	1700 J	1200 J	880 J	670 J	1100	1100 J	180 J	180 J	57 J	240 U	240 U	3500 J	5900	7600	4000	6800	5200	17000 J
Benzo(k)fluoranthene**	NSL	NSL	ug/kg	1300 J	2000 J	1800 J	1100 J	840 J	1700	1400 J	210 J	230 J	100 J	240 U	240 U	4600	8800	13000	7300	19000	11000	18000 J
Bis(2-chloroethoxy)methane	NSL	NSL	ug/kg	3000 U	12000 U	6400 U	9900 U	970 U	730 U	2300 U	240 U	240 U	240 U	240 U	240 U	1300 U	2800 U	2800 U	3100 U	6300 U	4100 U	12000 UJ
Bis(2-chloroethyl)ether	NSL	NSL	ug/kg	3000 U	12000 U	6400 U	9900 U	970 U	730 U	2300 U	240 U	240 U	240 U	240 U	240 U	1300 U	2800 U	2800 U	3100 U	6300 U	4100 U	12000 UJ
Bis(2-ethylhexyl)phthalate	NSL	NSL	ug/kg	41000	120000	83000	110000	970 U	730 U	18000	240 U	240 U	240 U	240 U	240 U	1300 U	2800 U	2800 U	3100 U	6300 U	4100 U	12000 UJ
Butylbenzylphthalate	NSL	NSL	ug/kg	3000 U	12000 U	6400 U	9900 U	970 U	730 U	2300 U	240 U	240 U	240 U	240 U	240 U	1300 U	2800 U	2800 U	3100 U	6300 U	4100 U	12000 UJ
Caprolactam	NSL	NSL	ug/kg	3000 U	12000 U	6400 U	9900 U	970 U	730 U	2300 U	240 U	240 U	240 U	240 U	240 U	1300 U	2800 U	2800 U	3100 U	6300 U	4100 U	12000 UJ
Carbazole	NSL	NSL	ug/kg	3000 U	12000 U	6400 U	9900 U	970 U	730 U	2300 U	240 U	240 U	240 U	240 U	240 U	130 J	250 J	210 J	700 J	1900 J	410 J	4800 J
Chrysene**	166	1290	ug/kg	**2300 J**	**4700 J**	**3000 J**	**2200 J**	**1600**	**3000**	**2400**	**350**	**370**	150 J	29 J	240 U	**5600**	**13000**	**15000**	**10000**	**22000**	**15000**	**42000 J**
Dibenzo(a,h)anthracene**	33	NSL	ug/kg	**590 J**	12000 U	**510 J**	9900 U	**220 J**	**560 J**	**400 J**	**61 J**	**71 J**	25 J	240 U	240 U	**970 J**	**1700 J**	**2400 J**	**1500 J**	**2900 J**	**1800 J**	**10000 J**
Dibenzofuran	NSL	NSL	ug/kg	300 J	710 J	470 J	9900 U	120 J	160 J	2300 U	18 J	18 J	17 J	240 U	240 U	400 J	3900	3400	4700	12000	4200	25000 J
Diethylphthalate	NSL	NSL	ug/kg	3000 U	12000 U	6400 U	9900 U	970 U	730 U	2300 U	240 U	240 U	240 U	240 U	240 U	1300 U	2800 U	2800 U	3100 U	6300 U	4100 U	12000 UJ
Dimethylphthalate	NSL	NSL	ug/kg	3000 U	12000 U	6400 U	9900 U	970 U	730 U	2300 U	240 U	240 U	240 U	240 U	240 U	1300 U	2800 U	2800 U	3100 U	6300 U	4100 U	12000 UJ
Di-n-butylphthalate	NSL	NSL	ug/kg	3000 U	390 J	6400 U	9900 U	970 U	730 U	2300 U	12 J	10 J	14 J	240 U	16 J	47 J	2800 U	2800 U	3100 U	6300 U	4100 U	350 J
Di-n-octylphthalate	NSL	NSL	ug/kg	3000 U	12000 U	6400 U	9900 U	970 U	730 U	2300 U	240 U	240 U	240 U	240 U	240 U	1300 U	2800 U	2800 U	3100 U	6300 U	4100 U	12000 UJ
Fluoranthene**	423	2230	ug/kg	**3600**	**6800 J**	**4600 J**	**1700 J**	**1700**	**3200**	**2800**	**540**	**610**	270	34 J	240 U	**12000**	**35000**	**34000**	**28000**	**61000**	**37000**	**85000 J**
Fluorene**	77.4	536	ug/kg	**500 J**	**3800 J**	**880 J**	9900 U	**240 J**	**580 J**	**710 J**	45 J	47 J	28 J	240 U	240 U	**2000**	**7300**	**8600**	**7400**	**16000**	**12000**	**36000 J**
Hexachlorobenzene	NSL	NSL	ug/kg	3000 U	12000 U	6400 U	9900 U	970 U	730 U	2300 U	240 U	240 U	240 U	240 U	240 U	1300 U	2800 U	2800 U	3100 U	6300 U	4100 U	12000 UJ
Hexachlorobutadiene	NSL	NSL	ug/kg	3000 U	12000 U	6400 U	9900 U	970 U	730 U	2300 U	240 U	240 U	240 U	240 U	240 U	1300 U	2800 U	2800 U	3100 U	6300 U	4100 U	12000 UJ
Hexachlorocyclopentadiene	NSL	NSL	ug/kg	3000 U	12000 UJ	6400 UJ	9900 UJ	970 U	730 UJ	2300 UJ	240 UJ	240 UJ	240 UJ	240 UJ	240 UJ	1300 U	2800 UJ	2800 UJ	3100 UJ	6300 UJ	4100 UJ	12000 UJ
Hexachloroethane	NSL	NSL	ug/kg	3000 U	12000 U	6400 U	9900 U	970 U	730 U	2300 U	240 U	240 U	240 U	240 U	240 U	1300 U	2800 U	2800 U	3100 U	6300 U	4100 U	12000 UJ
Indeno(1,2,3-cd)pyrene**	NSL	NSL	ug/kg	1100 J	1600 J	1000 J	660 J	540 J	970	940 J	140 J	150 J	53 J	240 U	240 U	3200 J	5400 J	7400 J	4000 J	7400 J	4700 J	14000 J
Isophorone	NSL	NSL	ug/kg	3000 U	12000 U	6400 U	9900 U	970 U	730 U	2300 U	240 U	240 U	240 U	240 U	240 U	1300 U	2800 U	2800 U	3100 U	6300 U	4100 U	12000 UJ
Naphthalene**	176	561	ug/kg	**320 J**	12000 U	**320 J**	9900 U	**250 J**	**360 J**	140 J	9.7 J	11 J	240 U	240 U	240 U	**3800**	**7800**	**7100 J**	**7100**	**14000**	**3700 J**	**30000 J**
Nitrobenzene	NSL	NSL	ug/kg	3000 U	12000 U	6400 U	9900 U	970 U	730 U	2300 U	240 U	240 U	240 U	240 U	240 U	1300 U	2800 U	2800 U	3100 U	6300 U	4100 U	12000 UJ
N-Nitroso-di-n-propylamine	NSL	NSL	ug/kg	3000 U	12000 U	6400 U	9900 U	970 U	730 U	2300 U	240 U	240 U	240 U	240 U	240 U	1300 U	2800 U	2800 U	3100 U	6300 U	4100 U	12000 UJ
N-Nitrosodiphenylamine	NSL	NSL	ug/kg	3000 U	12000 U	6400 U	9900 U	970 U	730 U	2300 U	240 U	240 U	240 U	240 U	240 U	1300 U	2800 U	2800 U	3100 U	6300 U	4100 U	12000 UJ
Pentachlorophenol	NSL	NSL	ug/kg	5800 UJ	23000 U	12000 U	19000 U	1900 UJ	1400 U	4400 U	460 U	470 U	460 U	470 U	460 U	2600 UJ	5400 U	5300 U	6100 U	12000 U	8000 U	22000 UJ
Phenanthrene**	204	1170	ug/kg	**2400 J**	**4700 J**	**3100 J**	**1500 J**	**1200**	**2300**	**2400**	**270**	**290**	160 J	36 J	240 U	**7800**	**32000**	**33000**	**35000**	**61000**	**43000**	**170000 J**
Phenol	NSL	NSL	ug/kg	3000 U	12000 U	6400 U	9900 U	970 U	730 U	2300 U	240 U	240 U	240 U	240 U	150 J	1300 U	2800 U	2800 U	3100 U	6300 U	4100 U	12000 UJ
Pyrene**	195	1520	ug/kg	**3700**	**7400 J**	**5000 J**	**3000 J**	**2200**	**3700**	**4000**	**840**	**880**	**290**	42 J	240 U	**9000 J**	**19000**	**27000**	**15000**	**36000**	**26000**	**100000 J**
Total PAHs 17 ND = 1/2RL	1610	22800	ug/kg	**26810**	**68900**	**32730**	**45410**	**13702**	**24230**	**23600**	**3784**	**4107**	**1920**	1489	**2040**	**73030**	**191720**	**216450**	**171740**	**355100**	**227270**	**732000**

NOTES:
** Analytes included in the 17PAH total
J = Indicates that the concentration is an estimated value.
R = Result is rejected
U = Indicates the analyte was analyzed for but not detected.
µg/kg = Micrograms per kilogram.
TEC = Threshold effect concentration.
Development and Evaluation of Consensus-Based Sediment Quality Guidelines for Freshwater Ecosystems (MacDonald et al. 2000).
PEC = Probable effect concentration.
Development and Evaluation of Consensus-Based Sediment Quality Guidelines for Freshwater Ecosystems (MacDonald et al. 2000).
Bolded values exceed the TEC.
Gray shaded values exceed the PEC.
NSL = No Screening Level.
Submitted samples are presented in ascending numerical order.
*Samples presented are displayed in Figure 4-3B

TABLE 4-6B* SEDIMENT RESULTS FOR SEMIVOLATILE ORGANIC ANALYSIS (SVOA) IN AREA B
PHASE 2 LOWER MAUMEE RIVER SITE CHARACTERIZATION
TOLEDO, OHIO (JUNE 2013)

			Sample Location:	LMR13-55				LMR13-56	LMR13-57				LMR13-58		LMR13-59			LMR13-77				
			Sample Name:	LMR13-55-012	LMR13-55-024	LMR13-55-048	LMR13-55-072	LMR13-56-012	LMR13-57-012	LMR13-57-024	LMR13-57-024FD	LMR13-57-048	LMR13-58-012	LMR13-58-024	LMR13-59-012	LMR13-59-024	LMR13-59-048	LMR13-77-012	LMR13-77-024	LMR13-77-024FD	LMR13-77-048	LMR13-77-072
			Sample Depth (ft):	0-1	1-2	2-4	4-6	0-1	0-1	1-2	1-2	2-4	0-1	1-2	0-1	1-2	2-4	0-1	1-2	1-2	2-4	4-6
			Date Sampled:	6/19/13	6/19/13	6/19/13	6/19/13	6/20/13	6/14/13	6/14/13	6/14/13	6/14/13	6/20/13	6/20/13	6/20/13	6/20/13	6/20/13	6/15/13	6/15/13	6/15/13	6/15/13	6/15/13
Analyte	TEC	PEC	Unit																			
1,1'-Biphenyl	NSL	NSL	ug/kg	4700 U	4100 U	2400 U	3900 U	210 UJ	2900 U	3000 U	1500 U	250 U	9.1 J	890 UJ	400 UJ	12 J	16 J	270 U	250 U	250 U	230 U	230 U
1,2,4,5-Tetrachlorobenzene	NSL	NSL	ug/kg	4700 U	4100 U	2400 U	3900 U	210 UJ	2900 U	3000 U	1500 U	250 U	370 UJ	890 UJ	400 UJ	320 U	270 UJ	270 U	250 U	250 U	230 U	230 U
2,2'-Oxybis(1-chloropropane)	NSL	NSL	ug/kg	4700 U	4100 U	2400 U	3900 U	210 UJ	2900 U	3000 U	1500 U	250 U	370 UJ	890 UJ	400 UJ	320 U	270 UJ	270 U	250 U	250 U	230 U	230 U
2,3,4,6-Tetrachlorophenol	NSL	NSL	ug/kg	4700 U	4100 U	2400 U	3900 U	210 UJ	2900 U	3000 U	1500 U	250 U	370 UJ	890 UJ	400 UJ	320 U	270 UJ	270 U	250 U	250 U	230 U	230 U
2,4,5-Trichlorophenol	NSL	NSL	ug/kg	4700 U	4100 U	2400 U	3900 U	210 UJ	2900 U	3000 U	1500 U	250 U	370 UJ	890 UJ	400 UJ	320 U	270 UJ	270 U	250 U	250 U	230 U	230 U
2,4,6-Trichlorophenol	NSL	NSL	ug/kg	4700 U	4100 U	2400 U	3900 U	210 UJ	2900 U	3000 U	1500 U	250 U	370 UJ	890 UJ	400 UJ	320 U	270 UJ	270 U	250 U	250 U	230 U	230 U
2,4-Dichlorophenol	NSL	NSL	ug/kg	4700 U	4100 U	2400 U	3900 U	210 UJ	2900 U	3000 U	1500 U	250 U	370 UJ	890 UJ	400 UJ	320 U	270 UJ	270 U	250 U	250 U	230 U	230 U
2,4-Dimethylphenol	NSL	NSL	ug/kg	4700 U	4100 U	2400 U	3900 U	210 UJ	2900 U	3000 U	1500 U	250 U	370 UJ	890 UJ	400 UJ	320 U	270 UJ	270 U	250 U	250 U	230 U	230 U
2,4-Dinitrophenol	NSL	NSL	ug/kg	9000 U	8000 U	4700 U	7600 U	410 UJ	5700 U	5700 U	2900 U	490 UJ	710 UJ	1700 UJ	770 UJ	620 U	510 UJ	520 U	490 U	480 U	450 U	450 U
2,4-Dinitrotoluene	NSL	NSL	ug/kg	4700 U	4100 U	2400 U	3900 U	210 UJ	2900 U	3000 U	1500 U	250 U	370 UJ	890 UJ	400 UJ	320 U	270 UJ	270 U	250 U	250 U	230 U	230 U
2,6-Dinitrotoluene	NSL	NSL	ug/kg	4700 U	4100 U	2400 U	3900 U	210 UJ	2900 U	3000 U	1500 U	250 U	370 UJ	890 UJ	400 UJ	320 U	270 UJ	270 U	250 U	250 U	230 U	230 U
2-Chloronaphthalene	NSL	NSL	ug/kg	4700 U	4100 U	2400 U	3900 U	210 UJ	2900 U	3000 U	1500 U	250 U	370 UJ	890 UJ	400 UJ	320 U	270 UJ	270 U	250 U	250 U	230 U	230 U
2-Chlorophenol	NSL	NSL	ug/kg	4700 U	4100 U	2400 U	3900 U	210 UJ	2900 U	3000 U	1500 U	250 U	370 UJ	890 UJ	400 UJ	320 U	270 UJ	270 U	250 U	250 U	230 U	230 U
2-Methylnaphthalene**	NSL	NSL	ug/kg	910 J	1100 J	450 J	1300 J	23 J	350 J	3000 U	1500 U	250 U	28 J	890 UJ	22 J	39 J	33 J	270 U	250 U	250 U	230 U	230 U
2-Methylphenol	NSL	NSL	ug/kg	4700 U	4100 U	2400 U	3900 U	210 UJ	2900 U	3000 U	1500 U	250 U	370 UJ	890 UJ	400 UJ	320 U	270 UJ	270 U	250 U	250 U	230 U	230 U
2-Nitroaniline	NSL	NSL	ug/kg	9000 U	8000 U	4700 U	7600 U	410 UJ	5700 U	5700 U	2900 U	490 U	710 UJ	1700 UJ	770 UJ	620 U	510 UJ	520 U	490 U	480 U	450 U	450 U
2-Nitrophenol	NSL	NSL	ug/kg	4700 U	4100 U	2400 U	3900 U	210 UJ	2900 U	3000 U	1500 U	250 U	370 UJ	890 UJ	400 UJ	320 U	270 UJ	270 U	250 U	250 U	230 U	230 U
3,3'-Dichlorobenzidine	NSL	NSL	ug/kg	4700 U	4100 U	2400 U	3900 U	210 UJ	2900 U	3000 U	1500 U	250 U	370 UJ	890 UJ	400 UJ	320 U	270 UJ	270 UJ	250 U	250 UJ	230 U	230 U
3-Nitroaniline	NSL	NSL	ug/kg	9000 U	8000 U	4700 U	7600 U	410 UJ	5700 U	5700 U	2900 U	490 U	710 UJ	1700 UJ	770 UJ	620 U	510 UJ	520 U	490 U	480 U	450 U	450 U
4,6-Dinitro-2-methylphenol	NSL	NSL	ug/kg	9000 U	8000 U	4700 U	7600 U	410 UJ	5700 U	5700 U	2900 U	490 U	710 UJ	1700 UJ	770 UJ	620 U	510 UJ	520 U	490 U	480 U	450 U	450 U
4-Bromophenyl-phenylether	NSL	NSL	ug/kg	4700 U	4100 U	2400 U	3900 U	210 UJ	2900 U	3000 U	1500 U	250 U	370 UJ	890 UJ	400 UJ	320 U	270 UJ	270 U	250 U	250 U	230 U	230 U
4-Chloro-3-methylphenol	NSL	NSL	ug/kg	4700 U	4100 U	2400 U	3900 U	210 UJ	2900 U	3000 U	1500 U	250 U	370 UJ	890 UJ	400 UJ	320 U	270 UJ	270 U	250 U	250 U	230 U	230 U
4-Chloroaniline	NSL	NSL	ug/kg	4700 U	4100 U	2400 U	3900 U	210 UJ	2900 U	3000 U	1500 U	250 U	370 UJ	890 UJ	400 UJ	320 U	270 UJ	270 UJ	250 U	250 UJ	230 U	230 U
4-Chlorophenyl-phenylether	NSL	NSL	ug/kg	4700 U	4100 U	2400 U	3900 U	210 UJ	2900 U	3000 U	1500 U	250 U	370 UJ	890 UJ	400 UJ	320 U	270 UJ	270 U	250 U	250 U	230 U	230 U
4-Methylphenol	NSL	NSL	ug/kg	4700 U	4100 U	2400 U	3900 U	210 UJ	2900 U	3000 U	1500 U	250 U	370 UJ	890 UJ	400 UJ	320 U	270 UJ	270 U	250 U	250 U	230 U	230 U
4-Nitroaniline	NSL	NSL	ug/kg	9000 U	8000 U	4700 U	7600 U	410 UJ	54 J	5700 U	2900 U	490 U	710 UJ	1700 UJ	770 UJ	620 U	510 UJ	520 U	490 U	480 U	450 U	450 U
4-Nitrophenol	NSL	NSL	ug/kg	9000 U	8000 U	4700 U	7600 U	410 UJ	5700 U	5700 U	2900 U	490 U	710 UJ	1700 UJ	770 UJ	620 U	510 UJ	520 U	490 U	480 U	450 U	450 U
Acenaphthene**	NSL	NSL	ug/kg	8900	9700	5200	7800	210 UJ	4000	620 J	650 J	25 J	89 J	330 J	51 J	81 J	100 J	270 U	250 U	250 U	230 U	230 U
Acenaphthylene**	NSL	NSL	ug/kg	4700 U	700 J	360 J	720 J	210 UJ	300 J	3000 U	1500 U	250 U	370 UJ	890 UJ	400 UJ	9.7 J	29 J	270 U	250 U	250 U	230 U	230 U
Acetophenone	NSL	NSL	ug/kg	4700 U	4100 U	2400 U	3900 U	210 UJ	2900 U	3000 U	1500 U	250 U	370 UJ	890 UJ	28 J	320 U	270 UJ	270 U	250 U	19 J	21 J	24 J
Anthracene**	57.2	845	ug/kg	**12000**	**11000 J**	**7100**	**15000**	7 J	**4600**	**370 J**	**370 J**	36 J	**110 J**	**530 J**	**83 J**	**110 J**	**170 J**	270 U	250 U	250 U	230 U	230 U
Atrazine	NSL	NSL	ug/kg	4700 U	4100 U	2400 U	3900 U	210 UJ	2900 U	3000 U	1500 U	250 U	370 UJ	890 UJ	400 UJ	320 U	270 UJ	270 U	250 U	250 U	230 U	230 U
Benzaldehyde	NSL	NSL	ug/kg	4700 U	4100 U	2400 U	3900 U	210 UJ	2900 U	3000 U	1500 U	250 U	45 J	890 UJ	47 J	37 J	270 UJ	33 J	21 J	30 J	25 J	24 J
Benzo(a)anthracene**	108	1050	ug/kg	**12000**	**12000**	**8400**	**17000**	24 J	**6000**	**1500 J**	**1000 J**	66 J	370 UJ	**880 J**	400 UJ	320 U	**580 J**	10 J	250 U	250 U	230 U	230 U
Benzo(a)pyrene**	150	1450	ug/kg	**8900**	**9500**	**6500**	**12000**	24 J	**3000**	**680 J**	**540 J**	49 J	**250 J**	**880 J**	**220 J**	**170 J**	**580 J**	270 U	250 U	250 U	230 U	230 U
Benzo(b)fluoranthene**	NSL	NSL	ug/kg	8300	11000 J	6200	9000	18 J	2900 J	750 J	560 J	45 J	300 J	700 J	180 J	170 J	450 J	270 UJ	250 UJ	250 UJ	230 UJ	230 UJ
Benzo(g,h,i)perylene**	NSL	NSL	ug/kg	3500 J	4200	4600	8300	21 J	2300 J	600 J	390 J	43 J	200 J	450 J	180 J	160 J	290 J	270 U	250 U	250 U	230 U	230 U
Benzo(k)fluoranthene**	NSL	NSL	ug/kg	9200	8700	4100	9600	16 J	2600 J	360 J	370 J	41 J	200 J	1100 J	260 J	220 J	560 J	270 U	250 U	250 U	230 U	230 U
Bis(2-chloroethoxy)methane	NSL	NSL	ug/kg	4700 U	4100 U	2400 U	3900 U	210 UJ	2900 U	3000 U	1500 U	250 U	370 UJ	890 UJ	400 UJ	320 U	270 UJ	270 U	250 U	250 U	230 U	230 U
Bis(2-chloroethyl)ether	NSL	NSL	ug/kg	4700 U	4100 U	2400 U	3900 U	210 UJ	2900 U	3000 U	1500 U	250 U	370 UJ	890 UJ	400 UJ	320 U	270 UJ	270 U	250 U	250 U	230 U	230 U
Bis(2-ethylhexyl)phthalate	NSL	NSL	ug/kg	4700 U	4100 U	2400 U	3900 U	210 UJ	2900 U	3000 U	1500 U	250 U	370 UJ	890 UJ	400 UJ	320 U	2700 J	270 U	250 U	250 U	230 U	230 U
Butylbenzylphthalate	NSL	NSL	ug/kg	4700 U	4100 U	2400 U	3900 U	210 UJ	2900 U	3000 U	1500 U	250 U	370 UJ	890 UJ	49 J	35 J	270 UJ	270 U	250 U	250 U	230 U	230 U
Caprolactam	NSL	NSL	ug/kg	4700 U	4100 U	2400 U	3900 U	210 UJ	2900 U	3000 U	1500 U	250 U	370 UJ	890 UJ	400 UJ	320 U	270 UJ	270 U	250 U	250 U	230 U	230 U
Carbazole	NSL	NSL	ug/kg	640 J	680 J	2400 U	3900 U	210 UJ	2900 U	3000 U	1500 U	250 U	16 J	890 UJ	400 UJ	320 U	270 UJ	270 U	250 U	250 U	230 U	230 U
Chrysene**	166	1290	ug/kg	**13000**	**14000**	**8800**	**18000**	49 J	**5100**	**1800 J**	**1700**	110 J	370 UJ	**1300 J**	400 UJ	320 U	**630 J**	16 J	7.6 J	12 J	9.8 J	8.9 J
Dibenzo(a,h)anthracene**	33	NSL	ug/kg	**2000 J**	**1600 J**	**1600 J**	**3400 J**	210 UJ	**790 J**	**250 J**	**130 J**	19 J	**92 J**	**180 J**	**51 J**	**59 J**	**160 J**	270 UJ	250 UJ	250 UJ	230 UJ	230 UJ
Dibenzofuran	NSL	NSL	ug/kg	4900	5300	1900 J	6700	16 J	3200	3000 U	190 J	250 U	65 J	890 UJ	400 UJ	67 J	67 J	270 U	250 U	250 U	230 U	230 U
Diethylphthalate	NSL	NSL	ug/kg	4700 U	4100 U	2400 U	3900 U	210 UJ	2900 U	3000 U	1500 U	250 U	370 UJ	890 UJ	400 UJ	320 U	270 UJ	270 U	250 U	250 U	230 U	230 U
Dimethylphthalate	NSL	NSL	ug/kg	4700 U	4100 U	2400 U	3900 U	210 UJ	2900 U	3000 U	1500 U	250 U	370 UJ	890 UJ	400 UJ	320 U	270 UJ	270 U	250 U	250 U	230 U	230 U
Di-n-butylphthalate	NSL	NSL	ug/kg	4700 U	4100 U	2400 U	3900 U	210 UJ	2900 U	3000 U	1500 U	250 U	370 UJ	890 UJ	400 UJ	320 U	270 UJ	270 U	250 U	250 U	230 U	230 U
Di-n-octylphthalate	NSL	NSL	ug/kg	4700 U	4100 U	2400 U	3900 U	210 UJ	2900 UJ	3000 UJ	1500 U	250 U	370 UJ	890 UJ	400 UJ	320 U	270 UJ	270 U	250 U	250 U	230 U	230 U
Fluoranthene**	423	2230	ug/kg	**32000**	**34000**	**16000**	**33000**	30 J	**14000**	**1900 J**	**1400 J**	110 J	**460 J**	**2700 J**	400 J	**480**	**860 J**	15 J	250 U	5.6 J	230 U	230 U
Fluorene**	77.4	536	ug/kg	**11000**	**11000**	**7000**	**12000**	210 UJ	**5300**	**610 J**	**610 J**	26 J	**110 J**	**960 J**	70 J	**130 J**	**120 J**	270 U	250 U	250 U	230 U	230 U
Hexachlorobenzene	NSL	NSL	ug/kg	4700 U	4100 U	2400 U	3900 U	210 UJ	2900 U	3000 U	1500 U	250 U	370 UJ	890 UJ	400 UJ	320 U	270 UJ	270 U	250 U	250 U	230 U	230 U
Hexachlorobutadiene	NSL	NSL	ug/kg	4700 U	4100 U	2400 U	3900 U	210 UJ	2900 U	3000 U	1500 U	250 U	370 UJ	890 UJ	400 UJ	320 U	270 UJ	270 U	250 U	250 U	230 U	230 U
Hexachlorocyclopentadiene	NSL	NSL	ug/kg	4700 U	4100 UJ	2400 U	3900 U	210 UJ	2900 U	3000 U	1500 UJ	250 UJ	370 UJ	890 UJ	400 UJ	320 UJ	270 UJ	270 UJ	250 UJ	250 UJ	230 UJ	230 UJ
Hexachloroethane	NSL	NSL	ug/kg	4700 U	4100 U	2400 U	3900 U	210 UJ	2900 U	3000 U	1500 U	250 U	370 UJ	890 UJ	400 UJ	320 U	270 UJ	270 U	250 U	250 U	230 U	230 U
Indeno(1,2,3-cd)pyrene**	NSL	NSL	ug/kg	3800 J	4300 J	4200	7000	11 J	1800 J	440 J	310 J	29 J	180 J	320 J	160 J	150 J	270 J	270 U	250 U	250 U	230 U	230 U
Isophorone	NSL	NSL	ug/kg	4700 U	4100 U	2400 U	3900 U	210 UJ	2900 U	3000 U	1500 U	250 U	370 UJ	890 UJ	400 UJ	320 U	270 UJ	270 U	250 U	250 U	230 U	230 U
Naphthalene**	176	561	ug/kg	**2100 J**	**4100 J**	**2700**	**2400 J**	22 J	**730 J**	**230 J**	**180 J**	250 U	370 UJ	**300 J**	400 UJ	320 U	270 UJ	270 U	250 U	250 U	230 U	230 U
Nitrobenzene	NSL	NSL	ug/kg	4700 U	4100 U	2400 U	3900 U	210 UJ	2900 U	3000 U	1500 U	250 U	370 UJ	890 UJ	400 UJ	320 U	270 UJ	270 U	250 U	250 U	230 U	230 U
N-Nitroso-di-n-propylamine	NSL	NSL	ug/kg	4700 U	4100 U	2400 U	3900 U	210 UJ	2900 U	3000 U	1500 U	250 U	370 UJ	890 UJ	400 UJ	320 U	270 UJ	270 U	250 U	250 U	230 U	230 U
N-Nitrosodiphenylamine	NSL	NSL	ug/kg	4700 U	4100 U	2400 U	3900 U	210 UJ	2900 U	3000 U	1500 U	250 U	370 UJ	890 UJ	400 UJ	320 U	270 UJ	270 U	250 U	250 U	230 U	230 U
Pentachlorophenol	NSL	NSL	ug/kg	9000 UJ	8000 U	4700 U	7600 U	410 UJ	5700 UJ	5700 UJ	2900 U	490 UJ	710 UJ	1700 UJ	770 UJ	620 U	510 UJ	520 U	490 U	480 U	450 U	450 U
Phenanthrene**	204	1170	ug/kg	**51000**	**48000 J**	**29000**	**53000**	72 J	**17000**	**1700 J**	**1500**	130 J	**450 J**	**2000 J**	**300 J**	**400**	**630 J**	270 U	250 U	5.4 J	230 U	230 U
Phenol	NSL	NSL	ug/kg	4700 U	4100 U	2400 U	3900 U	210 UJ	2900 U	3000 U	1500 U	250 U	370 UJ	890 UJ	400 UJ	320 U	270 UJ	270 U	250 U	250 U	230 U	230 U
Pyrene**	195	1520	ug/kg	**21000 J**	**21000**	**17000**	**39000**	33 J	**10000**	**2000 J**	**1600**	140 J	**720 J**	**1900 J**	**600 J**	**600**	**1300 J**	20 J	250 U	8.1 J	230 U	230 U
Total PAHs 17 ND = 1/2RL	1610	22800	ug/kg	**201960**	**205900**	**129210**	**248520**	770	**80770**	**16810**	**12810**	1244	**3929**	**15420**	**3377**	**3259**	**6897**	**1816**	**2008**	**1656**	**1850**	**1849**

NOTES:
** Analytes included in the 17PAH total
J = Indicates that the concentration is an estimated value.
R = Result is rejected
U = Indicates the analyte was analyzed for but not detected.
µg/kg = Micrograms per kilogram.
TEC = Threshold effect concentration.
Development and Evaluation of Consensus-Based Sediment Quality Guidelines for Freshwater Ecosystems (MacDonald et al. 2000).
PEC = Probable effect concentration.
Development and Evaluation of Consensus-Based Sediment Quality Guidelines for Freshwater Ecosystems (MacDonald et al. 2000).
Bolded values exceed the TEC.
Gray shaded values exceed the PEC.
NSL = No Screening Level.
Submitted samples are presented in ascending numerical order.
*Samples presented are displayed in Figure 4-3B

TABLE 4-6B* SEDIMENT RESULTS FOR SEMIVOLATILE ORGANIC ANALYSIS (SVOA) IN AREA B
PHASE 2 LOWER MAUMEE RIVER SITE CHARACTERIZATION
TOLEDO, OHIO (JUNE 2013)

			Sample Location:	LMR13-78			LMR13-79						LMR13-80					LMR13-89		
			Sample Name:	LMR13-78-012	LMR13-78-024	LMR13-78-024FD	LMR13-79-012	LMR13-79-024	LMR13-79-024FD	LMR13-79-048	LMR13-79-072	LMR13-79-096	LMR13-80-012	LMR13-80-024	LMR13-80-048	LMR13-80-072	LMR13-80-096	LMR13-89-012	LMR13-89-024	LMR13-89-024FD
			Sample Depth (ft):	0-1	1-2	1-2	0-1	1-2	1-2	2-4	4-6	6-7	0-1	1-2	2-4	4-6	6-7	0-1	1-2	1-2
			Date Sampled:	6/16/13	6/16/13	6/16/13	6/16/13	6/16/13	6/17/13	6/16/13	6/16/13	6/16/13	6/20/13	6/20/13	6/20/13	6/20/13	6/20/13	6/19/13	6/19/13	6/19/13
Analyte	TEC	PEC	Unit																	
1,1'-Biphenyl	NSL	NSL	ug/kg	230 U	220 U	220 U	250 U	210 U	210 UJ	210 UJ	210 U	210 U	290 UJ	1000 UJ	250 UJ	210 UJ	200 UJ	200 U	210 U	220 U
1,2,4,5-Tetrachlorobenzene	NSL	NSL	ug/kg	230 U	220 U	220 U	250 U	210 U	210 UJ	210 UJ	210 U	210 U	290 UJ	1000 UJ	250 UJ	210 UJ	200 UJ	200 U	210 U	220 U
2,2'-Oxybis(1-chloropropane)	NSL	NSL	ug/kg	230 U	220 U	220 U	250 U	210 U	210 UJ	210 UJ	210 U	210 U	290 UJ	1000 UJ	250 UJ	210 UJ	200 UJ	200 U	210 U	220 U
2,3,4,6-Tetrachlorophenol	NSL	NSL	ug/kg	230 U	220 U	220 U	250 U	210 U	210 UJ	210 UJ	210 U	210 U	290 UJ	1000 UJ	250 UJ	210 UJ	200 UJ	200 U	210 U	220 U
2,4,5-Trichlorophenol	NSL	NSL	ug/kg	230 U	220 U	220 U	250 U	210 U	210 UJ	210 UJ	210 U	210 U	290 UJ	1000 UJ	250 UJ	210 UJ	200 UJ	200 U	210 U	220 U
2,4,6-Trichlorophenol	NSL	NSL	ug/kg	230 U	220 U	220 U	250 U	210 U	210 UJ	210 UJ	210 U	210 U	290 UJ	1000 UJ	250 UJ	210 UJ	200 UJ	200 U	210 U	220 U
2,4-Dichlorophenol	NSL	NSL	ug/kg	230 U	220 U	220 U	250 U	210 U	210 UJ	210 UJ	210 U	210 U	290 UJ	1000 UJ	250 UJ	210 UJ	200 UJ	200 U	210 U	220 U
2,4-Dimethylphenol	NSL	NSL	ug/kg	230 U	220 U	220 U	250 U	210 U	210 UJ	210 UJ	210 U	210 U	290 UJ	1000 UJ	250 UJ	210 UJ	200 UJ	200 U	210 U	220 U
2,4-Dinitrophenol	NSL	NSL	ug/kg	460 U	430 U	430 U	490 U	410 U	400 UJ	400 UJ	410 U	400 U	570 UJ	1900 UJ	480 UJ	400 UJ	400 UJ	390 U	420 U	420 U
2,4-Dinitrotoluene	NSL	NSL	ug/kg	230 U	220 U	220 U	250 U	210 U	210 UJ	210 UJ	210 U	210 U	290 UJ	1000 UJ	250 UJ	210 UJ	200 UJ	200 U	210 U	220 U
2,6-Dinitrotoluene	NSL	NSL	ug/kg	230 U	220 U	220 U	250 U	210 U	210 UJ	210 UJ	210 U	210 U	290 UJ	1000 UJ	250 UJ	210 UJ	200 UJ	200 U	210 U	220 U
2-Chloronaphthalene	NSL	NSL	ug/kg	230 U	220 U	220 U	250 U	210 U	210 UJ	210 UJ	210 U	210 U	290 UJ	1000 UJ	250 UJ	210 UJ	200 UJ	200 U	210 U	220 U
2-Chlorophenol	NSL	NSL	ug/kg	230 U	220 U	220 U	250 U	210 U	210 UJ	210 UJ	210 U	210 U	290 UJ	1000 UJ	250 UJ	210 UJ	200 UJ	200 U	210 U	220 U
2-Methylnaphthalene**	NSL	NSL	ug/kg	230 U	220 U	220 U	250 U	210 U	210 UJ	210 UJ	210 U	210 U	30 J	1000 UJ	13 J	210 UJ	200 UJ	200 U	210 U	220 U
2-Methylphenol	NSL	NSL	ug/kg	230 U	220 U	220 U	250 U	210 U	210 UJ	210 UJ	210 U	210 U	290 UJ	1000 UJ	250 UJ	210 UJ	200 UJ	200 U	210 U	220 U
2-Nitroaniline	NSL	NSL	ug/kg	460 U	430 U	430 U	490 U	410 U	400 UJ	400 UJ	410 U	400 U	570 UJ	1900 UJ	480 UJ	400 UJ	400 UJ	390 U	420 U	420 U
2-Nitrophenol	NSL	NSL	ug/kg	230 U	220 U	220 U	250 U	210 U	210 UJ	210 UJ	210 U	210 U	290 UJ	1000 UJ	250 UJ	210 UJ	200 UJ	200 U	210 U	220 U
3,3'-Dichlorobenzidine	NSL	NSL	ug/kg	230 U	220 U	220 U	250 U	210 U	210 UJ	210 UJ	210 U	210 U	290 UJ	1000 UJ	250 UJ	210 UJ	200 UJ	200 U	210 U	220 UJ
3-Nitroaniline	NSL	NSL	ug/kg	460 U	430 U	430 U	490 U	410 U	400 UJ	400 UJ	410 U	400 U	570 UJ	1900 UJ	480 UJ	400 UJ	400 UJ	390 U	420 U	420 U
4,6-Dinitro-2-methylphenol	NSL	NSL	ug/kg	460 U	430 U	430 U	490 U	410 U	400 UJ	400 UJ	410 U	400 U	570 UJ	1900 UJ	480 UJ	400 U	400 UJ	390 U	420 U	420 U
4-Bromophenyl-phenylether	NSL	NSL	ug/kg	230 U	220 U	220 U	250 U	210 U	210 UJ	210 UJ	210 U	210 U	290 UJ	1000 UJ	250 UJ	210 UJ	200 UJ	200 U	210 U	220 U
4-Chloro-3-methylphenol	NSL	NSL	ug/kg	230 U	220 U	220 U	250 U	210 U	210 UJ	210 UJ	210 U	210 U	290 UJ	1000 UJ	250 UJ	210 UJ	200 UJ	200 U	210 U	220 U
4-Chloroaniline	NSL	NSL	ug/kg	230 U	220 U	220 U	250 U	210 U	210 UJ	210 UJ	210 U	210 U	290 UJ	1000 UJ	250 UJ	210 UJ	200 UJ	200 U	210 U	220 UJ
4-Chlorophenyl-phenylether	NSL	NSL	ug/kg	230 U	220 U	220 U	250 U	210 U	210 UJ	210 UJ	210 U	210 U	290 UJ	1000 UJ	250 UJ	210 UJ	200 UJ	200 U	210 U	220 U
4-Methylphenol	NSL	NSL	ug/kg	230 U	220 U	220 U	250 U	210 U	210 UJ	210 UJ	210 U	210 U	290 UJ	1000 UJ	250 UJ	210 UJ	200 UJ	200 U	210 U	220 U
4-Nitroaniline	NSL	NSL	ug/kg	460 U	430 U	430 U	490 U	410 U	400 UJ	400 UJ	410 U	400 U	570 UJ	1900 UJ	480 UJ	400 UJ	400 UJ	390 U	420 U	420 U
4-Nitrophenol	NSL	NSL	ug/kg	460 U	430 U	430 U	490 U	410 U	400 UJ	400 UJ	410 U	400 U	570 UJ	1900 UJ	480 UJ	400 UJ	400 UJ	390 U	420 U	420 U
Acenaphthene**	NSL	NSL	ug/kg	230 U	220 U	220 U	77 J	210 U	210 UJ	210 UJ	210 U	210 U	110 J	240 J	98 J	6.7 J	200 UJ	200 U	210 U	220 U
Acenaphthylene**	NSL	NSL	ug/kg	230 U	220 U	220 U	26 J	210 U	210 UJ	210 UJ	210 U	210 U	65 J	110 J	39 J	210 UJ	200 UJ	200 U	210 U	220 U
Acetophenone	NSL	NSL	ug/kg	18 J	14 J	16 J	250 U	210 U	210 UJ	10 J	210 U	210 U	19 J	1000 UJ	250 UJ	210 UJ	200 UJ	200 U	210 U	19 J
Anthracene**	57.2	845	ug/kg	230 U	220 U	220 U	**200 J**	4.4 J	210 UJ	210 UJ	210 U	210 U	**80 J**	**470 J**	**110 J**	20 J	200 UJ	200 U	210 U	220 U
Atrazine	NSL	NSL	ug/kg	230 U	220 U	220 U	250 U	210 U	210 UJ	210 UJ	210 U	210 U	290 UJ	1000 UJ	250 UJ	210 UJ	200 UJ	200 U	210 U	220 U
Benzaldehyde	NSL	NSL	ug/kg	16 J	19 J	22 J	250 U	210 U	210 UJ	11 J	210 U	210 U	47 J	1000 UJ	47 J	27 J	15 J	200 U	210 U	17 J
Benzo(a)anthracene**	108	1050	ug/kg	230 U	220 U	220 U	**630**	210 U	210 UJ	210 UJ	210 U	210 U	**1000 J**	**2600 J**	**430 J**	42 J	18 J	200 U	210 U	220 U
Benzo(a)pyrene**	150	1450	ug/kg	230 U	220 U	220 U	**620**	210 U	210 UJ	210 UJ	210 U	210 U	**690 J**	**2100 J**	**440 J**	37 J	13 J	200 U	210 U	220 U
Benzo(b)fluoranthene**	NSL	NSL	ug/kg	230 UJ	220 UJ	220 UJ	450 J	210 UJ	210 UJ	210 UJ	210 UJ	210 UJ	870 J	2200 J	260 J	26 J	11 J	200 U	210 U	220 U
Benzo(g,h,i)perylene**	NSL	NSL	ug/kg	230 U	220 U	220 U	270	210 U	210 UJ	210 UJ	210 U	210 U	360 J	1300 J	250 J	210 UJ	10 J	200 U	210 U	220 U
Benzo(k)fluoranthene**	NSL	NSL	ug/kg	230 U	220 U	220 U	640	210 U	210 UJ	210 UJ	210 U	210 U	510 J	1500 J	410 J	33 J	22 J	200 U	210 U	220 U
Bis(2-chloroethoxy)methane	NSL	NSL	ug/kg	230 U	220 U	220 U	250 U	210 U	210 UJ	210 UJ	210 U	210 U	290 UJ	1000 UJ	250 UJ	210 UJ	200 UJ	200 U	210 U	220 U
Bis(2-chloroethyl)ether	NSL	NSL	ug/kg	230 U	220 U	220 U	250 U	210 U	210 UJ	210 UJ	210 U	210 U	290 UJ	1000 UJ	250 UJ	210 UJ	200 UJ	200 U	210 U	220 U
Bis(2-ethylhexyl)phthalate	NSL	NSL	ug/kg	230 U	220 U	220 U	130 J	32 J	210 UJ	210 UJ	42 J	28 J	290 UJ	1000 UJ	250 UJ	210 UJ	200 UJ	200 U	210 U	220 U
Butylbenzylphthalate	NSL	NSL	ug/kg	230 U	220 U	220 U	250 U	210 U	210 UJ	210 UJ	210 U	210 U	290 UJ	1000 UJ	250 UJ	29 J	200 UJ	200 U	210 U	220 U
Caprolactam	NSL	NSL	ug/kg	230 U	220 U	220 U	250 U	210 U	210 UJ	210 UJ	210 U	210 U	290 UJ	1000 UJ	250 UJ	210 UJ	200 UJ	200 U	210 U	220 U
Carbazole	NSL	NSL	ug/kg	230 U	220 U	220 U	8.1 J	210 U	210 UJ	210 UJ	210 U	210 U	290 UJ	1000 UJ	250 UJ	210 UJ	6 J	200 U	210 U	220 U
Chrysene**	166	1290	ug/kg	9.9 J	13 J	12 J	**630**	12 J	210 UJ	7.9 J	210 U	210 U	**960 J**	**2700 J**	**490 J**	53 J	35 J	200 U	18 J	220 U
Dibenzo(a,h)anthracene**	33	NSL	ug/kg	230 UJ	220 UJ	220 UJ	**86 J**	210 UJ	210 UJ	210 UJ	210 UJ	210 UJ	**160 J**	**500 J**	**54 J**	210 UJ	200 UJ	200 U	210 U	220 U
Dibenzofuran	NSL	NSL	ug/kg	230 U	220 U	220 U	19 J	210 U	210 UJ	210 UJ	210 U	210 U	29 J	55 J	21 J	4.4 J	200 UJ	200 U	210 U	220 U
Diethylphthalate	NSL	NSL	ug/kg	7.7 J	220 U	8 J	250 U	210 U	210 UJ	210 UJ	210 U	210 U	290 UJ	1000 UJ	250 UJ	210 UJ	200 UJ	200 U	210 U	220 U
Dimethylphthalate	NSL	NSL	ug/kg	230 U	220 U	220 U	250 U	210 U	210 UJ	210 UJ	210 U	210 U	290 UJ	1000 UJ	250 UJ	210 UJ	200 UJ	200 U	210 U	220 U
Di-n-butylphthalate	NSL	NSL	ug/kg	230 U	220 U	220 U	250 U	210 U	210 UJ	210 UJ	210 U	210 U	290 UJ	1000 UJ	250 UJ	17 J	200 UJ	200 U	210 U	220 U
Di-n-octylphthalate	NSL	NSL	ug/kg	230 U	220 U	220 U	250 U	210 U	210 UJ	210 UJ	210 U	210 U	290 UJ	1000 UJ	250 UJ	210 UJ	200 UJ	200 U	210 U	220 U
Fluoranthene**	423	2230	ug/kg	7.3 J	220 U	5.5 J	**1200**	13 J	15 J	210 UJ	210 U	210 U	**1300 J**	**3900 J**	**780 J**	62 J	48 J	20 J	210 U	220 U
Fluorene**	77.4	536	ug/kg	230 U	220 U	220 U	36 J	210 U	210 UJ	210 UJ	210 U	210 U	**110 J**	**210 J**	37 J	210 UJ	200 UJ	200 U	210 U	220 U
Hexachlorobenzene	NSL	NSL	ug/kg	230 U	220 U	220 U	250 U	210 U	210 UJ	210 UJ	210 U	210 U	290 UJ	1000 UJ	250 UJ	210 UJ	200 UJ	200 U	210 U	220 U
Hexachlorobutadiene	NSL	NSL	ug/kg	230 U	220 U	220 U	250 U	210 U	210 UJ	210 UJ	210 U	210 U	290 UJ	1000 UJ	250 UJ	210 UJ	200 UJ	200 U	210 U	220 U
Hexachlorocyclopentadiene	NSL	NSL	ug/kg	230 UJ	220 UJ	220 UJ	250 U	210 U	210 UJ	210 UJ	210 U	210 U	290 UJ	1000 UJ	250 UJ	210 UJ	200 UJ	200 U	210 U	220 UJ
Hexachloroethane	NSL	NSL	ug/kg	230 U	220 U	220 U	250 U	210 U	210 UJ	210 UJ	210 U	210 U	290 UJ	1000 UJ	250 UJ	210 UJ	200 UJ	200 U	210 U	220 U
Indeno(1,2,3-cd)pyrene**	NSL	NSL	ug/kg	230 U	220 U	220 U	230 J	210 U	210 UJ	210 UJ	210 U	210 U	430 J	1300 J	190 J	17 J	8.9 J	200 U	210 U	220 U
Isophorone	NSL	NSL	ug/kg	230 U	220 U	220 U	250 U	210 U	210 UJ	210 UJ	210 U	210 U	290 UJ	1000 UJ	250 UJ	210 UJ	200 UJ	200 U	210 U	220 U
Naphthalene**	176	561	ug/kg	230 U	220 U	220 U	22 J	210 U	210 UJ	210 UJ	210 U	210 U	77 J	65 J	20 J	210 UJ	200 UJ	200 U	210 U	220 U
Nitrobenzene	NSL	NSL	ug/kg	230 U	220 U	220 U	250 U	210 U	210 UJ	210 UJ	210 U	210 U	290 UJ	1000 UJ	250 UJ	210 UJ	200 UJ	200 U	210 U	220 U
N-Nitroso-di-n-propylamine	NSL	NSL	ug/kg	230 U	220 U	220 U	250 U	210 U	210 UJ	210 UJ	210 U	210 U	290 UJ	1000 UJ	250 UJ	210 UJ	200 UJ	200 U	210 U	220 U
N-Nitrosodiphenylamine	NSL	NSL	ug/kg	230 U	220 U	220 U	250 U	210 U	210 UJ	210 UJ	210 U	210 U	290 UJ	1000 UJ	250 UJ	210 UJ	200 UJ	200 U	210 U	220 U
Pentachlorophenol	NSL	NSL	ug/kg	460 U	430 U	430 U	490 U	410 U	400 UJ	400 UJ	410 U	400 U	570 UJ	1900 UJ	480 UJ	400 UJ	400 UJ	390 U	420 U	420 U
Phenanthrene**	204	1170	ug/kg	4.9 J	4.1 J	3.5 J	**260**	5.3 J	5.3 J	210 UJ	210 U	210 U	**440 J**	**1400 J**	**430 J**	42 J	19 J	24 J	210 U	220 U
Phenol	NSL	NSL	ug/kg	230 U	220 U	220 U	250 U	210 U	210 UJ	210 UJ	210 U	210 U	290 UJ	1000 UJ	250 UJ	210 UJ	200 UJ	200 U	210 U	220 U
Pyrene**	195	1520	ug/kg	8.9 J	220 U	6.7 J	**950**	15 J	13 J	6.7 J	210 U	210 U	**2100 J**	**5200 J**	**1000 J**	100 J	38 J	33 J	210 U	220 U
Total PAHs 17 ND = 1/2RL	1610	22800	ug/kg	1526	**1667**	1458	**6452**	1310	1503	1590	**1785**	**1785**	**9292**	**26295**	**5051**	1069	923	1477	**1698**	**1870**

NOTES:
** Analytes included in the 17PAH total
J = Indicates that the concentration is an estimated value.
R = Result is rejected
U = Indicates the analyte was analyzed for but not detected.
µg/kg = Micrograms per kilogram.
TEC = Threshold effect concentration.
Development and Evaluation of Consensus-Based Sediment Quality
Guidelines for Freshwater Ecosystems (MacDonald et al. 2000).
PEC = Probable effect concentration.
Development and Evaluation of Consensus-Based Sediment Quality
Guidelines for Freshwater Ecosystems (MacDonald et al. 2000).
Bolded values exceed the TEC.
Gray shaded values exceed the PEC.
NSL = No Screening Level.
Submitted samples are presented in ascending numerical order.
*Samples presented are displayed in Figure 4-3B

TABLE 4-6C* SEDIMENT RESULTS FOR SEMIVOLATILE ORGANIC ANALYSIS (SVOA) IN AREA C
PHASE 2 LOWER MAUMEE RIVER SITE CHARACTERIZATION
TOLEDO, OHIO (JUNE 2013)

			Sample Location:	LMR13-26		LMR13-27					LMR13-28							LMR13-29				
			Sample Name:	LMR13-26-012	LMR13-26-012FD	LMR13-27-012	LMR13-27-024	LMR13-27-048	LMR13-27-072	LMR13-27-096	LMR13-28-012	LMR13-28-024	LMR13-28-024FD	LMR13-28-048	LMR13-28-072	LMR13-28-096	LMR13-28-120	LMR13-29-012	LMR13-29-024	LMR13-29-048	LMR13-29-072	LMR13-29-096
			Sample Depth (ft):	0-1	0-1	0-1	1-2	2-4	4-6	6-7	0-1	1-2	1-2	2-4	4-6	6-8	8-9	0-1	1-2	2-4	4-6	6-8
			Date Sampled:	6/14/13	6/14/13	6/14/13	6/14/13	6/14/13	6/14/13	6/14/13	6/15/13	6/15/13	6/15/13	6/15/13	6/15/13	6/15/13	6/15/13	6/15/13	6/15/13	6/15/13	6/15/13	6/15/13	6/15/13
Analyte	**TEC**	**PEC**	**Unit**																			
1,1'-Biphenyl	NSL	NSL	ug/kg	350 U	330 U	350 U	640 U	310 U	240 U	220 U	360 U	350 U	340 U	330 U	260 U	260 U	230 U	320 U	330 U	270 U	230 U	210 U
1,2,4,5-Tetrachlorobenzene	NSL	NSL	ug/kg	350 U	330 U	350 U	640 U	310 U	240 U	220 U	360 U	350 U	340 U	330 U	260 U	260 U	230 U	320 U	330 U	270 U	230 U	210 U
2,2'-Oxybis(1-chloropropane)	NSL	NSL	ug/kg	350 U	330 U	350 U	640 U	310 U	240 U	220 U	360 U	350 U	340 U	330 U	260 U	260 U	230 U	320 U	330 U	270 U	230 U	210 U
2,3,4,6-Tetrachlorophenol	NSL	NSL	ug/kg	350 U	330 U	350 U	640 U	310 U	240 U	220 U	360 U	350 U	340 U	330 U	260 U	260 U	230 U	320 U	330 U	270 U	230 U	210 U
2,4,5-Trichlorophenol	NSL	NSL	ug/kg	350 U	330 U	350 U	640 U	310 U	240 U	220 U	360 U	350 U	340 U	330 U	260 U	260 U	230 U	320 U	330 U	270 U	230 U	210 U
2,4,6-Trichlorophenol	NSL	NSL	ug/kg	350 U	330 U	350 U	640 U	310 U	240 U	220 U	360 U	350 U	340 U	330 U	260 U	260 U	230 U	320 U	330 U	270 U	230 U	210 U
2,4-Dichlorophenol	NSL	NSL	ug/kg	350 U	330 U	350 U	640 U	310 U	240 U	220 U	360 U	350 U	340 U	330 U	260 U	260 U	230 U	320 U	330 U	270 U	230 U	210 U
2,4-Dimethylphenol	NSL	NSL	ug/kg	350 U	330 U	350 U	640 U	310 U	240 U	220 UJ	360 U	350 U	340 U	330 U	260 U	260 U	230 U	320 U	330 U	270 U	230 U	210 U
2,4-Dinitrophenol	NSL	NSL	ug/kg	690 U	650 UJ	680 UJ	1200 U	600 UJ	460 UJ	430 U	700 U	680 U	660 U	630 U	500 U	510 U	450 U	620 U	630 U	520 U	450 U	400 U
2,4-Dinitrotoluene	NSL	NSL	ug/kg	350 U	330 U	350 U	640 U	310 U	240 U	220 U	360 U	350 U	340 U	330 U	260 U	260 U	230 U	320 U	330 U	270 U	230 U	210 U
2,6-Dinitrotoluene	NSL	NSL	ug/kg	350 U	330 U	350 U	640 U	310 U	240 U	220 U	360 U	350 U	340 U	330 U	260 U	260 U	230 U	320 U	330 U	270 U	230 U	210 U
2-Chloronaphthalene	NSL	NSL	ug/kg	350 U	330 U	350 U	640 U	310 U	240 U	220 U	360 U	350 U	340 U	330 U	260 U	260 U	230 U	320 U	330 U	270 U	230 U	210 U
2-Chlorophenol	NSL	NSL	ug/kg	350 U	330 U	350 U	640 U	310 U	240 U	220 U	360 U	350 U	340 U	330 U	260 U	260 U	230 U	320 U	330 U	270 U	230 U	210 U
2-Methylnaphthalene**	NSL	NSL	ug/kg	18 J	18 J	350 U	85 J	62 J	21 J	220 U	11 J	350 U	340 U	330 U	46 J	53 J	230 U	320 U	330 U	31 J	230 U	210 U
2-Methylphenol	NSL	NSL	ug/kg	350 U	330 U	350 U	640 U	310 U	240 U	220 UJ	360 U	350 U	340 U	330 U	260 U	260 U	230 U	320 U	330 U	270 U	230 U	210 U
2-Nitroaniline	NSL	NSL	ug/kg	690 U	650 U	680 U	1200 U	600 U	460 U	430 U	700 U	680 U	660 U	630 U	500 U	510 U	450 U	620 U	630 U	520 U	450 U	400 U
2-Nitrophenol	NSL	NSL	ug/kg	350 U	330 U	350 U	640 U	310 U	240 U	220 U	360 U	350 U	340 U	330 U	260 U	260 U	230 U	320 U	330 U	270 U	230 U	210 U
3,3'-Dichlorobenzidine	NSL	NSL	ug/kg	350 UJ	330 UJ	350 UJ	640 U	310 UJ	240 UJ	220 UJ	360 UJ	350 UJ	340 UJ	330 UJ	260 U	260 U	230 UJ	320 UJ	330 UJ	270 U	230 U	210 U
3-Nitroaniline	NSL	NSL	ug/kg	690 U	650 U	680 U	1200 U	600 U	460 U	430 U	700 U	680 U	660 U	630 U	500 U	510 U	450 U	620 U	630 U	520 U	450 U	400 U
4,6-Dinitro-2-methylphenol	NSL	NSL	ug/kg	690 U	650 U	680 U	1200 U	600 U	460 U	430 U	700 U	680 U	660 U	630 U	500 U	510 U	450 U	620 U	630 U	520 U	450 U	400 U
4-Bromophenyl-phenylether	NSL	NSL	ug/kg	350 U	330 U	350 U	640 U	310 U	240 U	220 U	360 U	350 U	340 U	330 U	260 U	260 U	230 U	320 U	330 U	270 U	230 U	210 U
4-Chloro-3-methylphenol	NSL	NSL	ug/kg	350 U	330 U	350 U	640 U	310 U	240 U	220 U	360 U	350 U	340 U	330 U	260 U	260 U	230 U	320 U	330 U	270 U	230 U	210 U
4-Chloroaniline	NSL	NSL	ug/kg	350 UJ	330 UJ	350 U	640 U	310 UJ	240 UJ	220 UJ	360 UJ	350 UJ	340 UJ	330 UJ	260 U	260 U	230 UJ	320 UJ	330 UJ	270 U	230 U	210 U
4-Chlorophenyl-phenylether	NSL	NSL	ug/kg	350 U	330 U	350 U	640 U	310 U	240 U	220 U	360 U	350 U	340 U	330 U	260 U	260 U	230 U	320 U	330 U	270 U	230 U	210 U
4-Methylphenol	NSL	NSL	ug/kg	350 UJ	330 U	350 U	640 U	310 U	240 U	220 UJ	360 U	350 U	340 U	330 U	260 U	260 U	230 U	320 U	330 U	270 U	230 U	210 U
4-Nitroaniline	NSL	NSL	ug/kg	690 U	650 U	680 U	1200 U	600 U	460 U	430 U	700 U	680 U	660 U	630 U	500 U	510 U	450 U	620 U	630 U	520 U	450 U	400 U
4-Nitrophenol	NSL	NSL	ug/kg	690 U	650 U	680 U	1200 U	600 U	460 U	430 U	700 U	680 U	660 U	630 U	500 U	510 U	450 U	620 U	630 U	520 U	450 U	400 U
Acenaphthene**	NSL	NSL	ug/kg	51 J	83 J	34 J	72 J	120 J	50 J	220 U	41 J	23 J	22 J	35 J	340	470	190 J	18 J	30 J	180 J	120 J	210 U
Acenaphthylene**	NSL	NSL	ug/kg	350 U	330 U	350 U	130 J	120 J	41 J	220 U	360 U	350 U	340 U	330 U	67 J	81 J	47 J	320 U	330 U	55 J	31 J	210 U
Acetophenone	NSL	NSL	ug/kg	350 U	330 U	350 U	29 J	310 U	240 U	220 U	28 J	26 J	340 U	330 U	25 J	45 J	36 J	30 J	330 U	33 J	22 J	210 U
Anthracene**	57.2	845	ug/kg	**86 J**	**82 J**	**190 J**	**250 J**	**400**	**120 J**	220 U	**82 J**	44 J	42 J	**75 J**	**590**	**610**	**400**	49 J	**60 J**	**240 J**	**150 J**	210 U
Atrazine	NSL	NSL	ug/kg	350 U	330 U	350 U	640 U	310 U	240 U	220 U	360 U	350 U	340 U	330 U	260 U	260 U	230 U	320 U	330 U	270 U	230 U	210 U
Benzaldehyde	NSL	NSL	ug/kg	59 J	55 J	57 J	640 U	310 U	27 J	22 J	40 J	72 J	61 J	61 J	40 J	260 U	230 U	54 J	47 J	42 J	230 U	210 U
Benzo(a)anthracene**	108	1050	ug/kg	**220 J**	**230 J**	**640**	**2700**	**1900**	**560**	220 U	**300 J**	**190 J**	**170 J**	**230 J**	**1200**	**1100**	**700**	**180 J**	**180 J**	**890**	**420**	210 U
Benzo(a)pyrene**	150	1450	ug/kg	**200 J**	**190 J**	**530**	**1200**	**1600**	**440**	220 U	**300 J**	**210 J**	**190 J**	**220 J**	**960**	**860**	**540**	**190 J**	**170 J**	**850**	**320**	210 U
Benzo(b)fluoranthene**	NSL	NSL	ug/kg	260 J	330 J	570	1700 J	1900	410	220 U	380	250 J	270 J	320 J	1200	1100	480	250 J	260 J	790	270	210 U
Benzo(g,h,i)perylene**	NSL	NSL	ug/kg	180 J	250 J	420	1100	940	350	220 UJ	330 J	190 J	180 J	190 J	410	430	310	160 J	140 J	400	200 J	210 U
Benzo(k)fluoranthene**	NSL	NSL	ug/kg	260 J	270 J	600	900	1300	500	220 U	340 J	280 J	280 J	250 J	740	660	470	200 J	180 J	960	370	210 U
Bis(2-chloroethoxy)methane	NSL	NSL	ug/kg	350 U	330 U	350 U	640 U	310 U	240 U	220 U	360 U	350 U	340 U	330 U	260 U	260 U	230 U	320 U	330 U	270 U	230 U	210 U
Bis(2-chloroethyl)ether	NSL	NSL	ug/kg	350 U	330 U	350 U	640 U	310 U	240 U	220 U	360 U	350 U	340 U	330 U	260 U	260 U	230 U	320 U	330 U	270 U	230 U	210 U
Bis(2-ethylhexyl)phthalate	NSL	NSL	ug/kg	350 U	330 U	350 U	640 U	310 U	240 U	220 U	360 U	350 U	340 U	330 U	260 U	260 U	230 U	320 U	330 U	1000	230 U	210 U
Butylbenzylphthalate	NSL	NSL	ug/kg	350 U	330 U	350 U	640 U	310 U	240 U	220 U	360 U	350 U	340 U	330 U	260 U	260 U	230 U	320 U	330 U	270 U	230 U	210 U
Caprolactam	NSL	NSL	ug/kg	350 U	330 U	350 U	640 U	310 U	240 U	220 U	360 U	350 U	340 U	330 U	260 U	260 U	230 U	320 U	330 U	270 U	230 U	210 U
Carbazole	NSL	NSL	ug/kg	350 U	18 J	23 J	640 U	310 U	240 U	220 U	28 J	17 J	19 J	330 U	260 U	260 U	230 U	16 J	330 U	37 J	230 U	210 U
Chrysene**	166	1290	ug/kg	**360**	**350**	**830**	**2300**	**2100**	**620**	220 U	**460**	**350 J**	**300 J**	**400**	**1600**	**1300**	**820**	**270 J**	**320 J**	**1200**	**510**	210 U
Dibenzo(a,h)anthracene**	33	NSL	ug/kg	**61 J**	**82 J**	**110 J**	**370 J**	**300 J**	**99 J**	220 UJ	**120 J**	**65 J**	**63 J**	**72 J**	**140 J**	**130 J**	**100 J**	**49 J**	**55 J**	**140 J**	**57 J**	210 U
Dibenzofuran	NSL	NSL	ug/kg	29 J	330 U	350 U	66 J	73 J	26 J	220 U	360 U	17 J	15 J	20 J	51 J	46 J	44 J	320 U	19 J	51 J	22 J	210 U
Diethylphthalate	NSL	NSL	ug/kg	350 U	330 U	350 U	640 U	310 U	240 U	220 U	32 J	350 U	340 U	330 U	260 U	260 U	230 U	320 U	330 U	270 U	230 U	210 U
Dimethylphthalate	NSL	NSL	ug/kg	350 U	330 U	350 U	640 U	310 U	240 U	220 U	360 U	350 U	340 U	330 U	260 U	260 U	230 U	320 U	330 U	270 U	230 U	210 U
Di-n-butylphthalate	NSL	NSL	ug/kg	350 U	330 U	350 U	640 U	310 U	240 U	46 J	35 J	30 J	28 J	27 J	24 J	29 J	110 J	27 J	22 J	25 J	22 J	36 J
Di-n-octylphthalate	NSL	NSL	ug/kg	350 UJ	330 U	350 U	640 UJ	310 U	240 U	220 U	360 U	350 U	340 U	330 U	260 U	260 U	230 U	320 U	330 U	54 J	230 U	210 U
Fluoranthene**	423	2230	ug/kg	**570**	**620**	**850**	**2000**	**3200**	**920**	220 U	**710**	**490**	390	**490**	**1800**	**1900**	**1300**	**440**	**430**	**1300**	**780**	29 J
Fluorene**	77.4	536	ug/kg	70 J	**110 J**	68 J	**100 J**	**250 J**	61 J	220 U	60 J	38 J	36 J	61 J	**510**	**510**	**220 J**	31 J	42 J	**130 J**	64 J	210 U
Hexachlorobenzene	NSL	NSL	ug/kg	350 U	330 U	350 U	640 U	310 U	240 U	220 U	360 U	350 U	340 U	330 U	260 U	260 U	230 U	320 U	330 U	270 U	230 U	210 U
Hexachlorobutadiene	NSL	NSL	ug/kg	350 U	330 U	350 U	640 U	310 U	240 U	220 U	360 U	350 U	340 U	330 U	260 U	260 U	230 U	320 U	330 U	270 U	230 U	210 U
Hexachlorocyclopentadiene	NSL	NSL	ug/kg	350 UJ	330 UJ	350 UJ	640 U	310 UJ	240 UJ	220 UJ	360 UJ	350 UJ	340 UJ	330 UJ	260 UJ	260 UJ	230 UJ	320 UJ	330 UJ	270 UJ	230 UJ	210 UJ
Hexachloroethane	NSL	NSL	ug/kg	350 U	330 U	350 U	640 U	310 U	240 U	220 U	360 U	350 U	340 U	330 U	260 U	260 U	230 U	320 U	330 U	270 U	230 U	210 U
Indeno(1,2,3-cd)pyrene**	NSL	NSL	ug/kg	150 J	210 J	360	980	800	260	220 UJ	260 J	180 J	160 J	160 J	360	370	270	130 J	130 J	390	160 J	210 U
Isophorone	NSL	NSL	ug/kg	350 U	330 U	350 U	640 U	310 U	240 U	220 U	360 U	350 U	340 U	330 U	260 U	260 U	230 U	320 U	330 U	270 U	230 U	210 U
Naphthalene**	176	561	ug/kg	23 J	20 J	27 J	150 J	130 J	45 J	220 U	18 J	350 U	340 U	330 U	100 J	68 J	27 J	320 U	330 U	68 J	39 J	210 U
Nitrobenzene	NSL	NSL	ug/kg	350 U	330 U	350 U	640 U	310 U	240 U	220 U	360 U	350 U	340 U	330 U	260 U	260 U	230 U	320 U	330 U	270 U	230 U	210 U
N-Nitroso-dl-n-propylamine	NSL	NSL	ug/kg	350 UJ	330 U	350 U	640 U	310 U	240 U	220 U	360 U	350 U	340 U	330 U	260 U	260 U	230 U	320 U	330 U	270 U	230 U	210 U
N-Nitrosodiphenylamine	NSL	NSL	ug/kg	350 U	330 U	350 U	640 U	310 U	240 U	220 U	360 U	350 U	340 U	330 U	260 U	260 U	230 U	320 U	330 U	270 U	230 U	210 U
Pentachlorophenol	NSL	NSL	ug/kg	690 UJ	650 UJ	680 UJ	1200 UJ	600 UJ	460 UJ	430 U	700 U	680 U	660 UJ	630 U	500 U	510 U	450 U	620 U	630 U	520 U	450 U	400 U
Phenanthrene**	204	1170	ug/kg	**320 J**	**430**	**320 J**	**790**	**1100**	**300**	220 U	**280 J**	200 J	190 J	**250 J**	**2900**	**2700**	**1400**	140 J	190 J	**660**	**400**	21 J
Phenol	NSL	NSL	ug/kg	350 U	330 U	350 U	640 U	310 U	240 U	220 U	360 U	350 U	340 U	330 U	260 U	260 U	230 U	320 U	330 U	270 U	230 U	210 U
Pyrene**	195	1520	ug/kg	**690**	**660**	**1300**	**4000**	**3800**	**1200**	220 U	**870**	**620**	**510**	**670**	**2800**	**2600**	**1900**	**530**	**560**	**1800**	**1200**	43 J
Total PAHs 17 ND = 1/2RL	1610	22800	ug/kg	**3694**	**4100**	**7199**	**18827**	**20022**	**5997**	**1870**	**4742**	**3655**	**3313**	**3918**	**15763**	**14942**	**9289**	**3117**	**3242**	**10084**	**5206**	1563

NOTES:
** Analytes included in the 17PAH total
J = Indicates that the concentration is an estimated value.
R = Result is rejected
U = Indicates the analyte was analyzed for but not detected.
µg/kg = Micrograms per kilogram.
TEC = Threshold effect concentration.
Development and Evaluation of Consensus-Based Sediment Quality Guidelines for Freshwater Ecosystems (MacDonald et al. 2000).
PEC = Probable effect concentration.
Development and Evaluation of Consensus-Based Sediment Quality Guidelines for Freshwater Ecosystems (MacDonald et al. 2000).
Bolded values exceed the TEC.
Bolded and Gray shaded values exceed the PEC.
NSL = No Screening Level.
Submitted samples are presented in ascending numerical order.
*Samples presented are displayed in Figure 4-3C

TABLE 4-6C* SEDIMENT RESULTS FOR SEMIVOLATILE ORGANIC ANALYSIS (SVOA) IN AREA C
PHASE 2 LOWER MAUMEE RIVER SITE CHARACTERIZATION
TOLEDO, OHIO (JUNE 2013)

Sample Location:				LMR13-30								LMR13-31		LMR13-32				LMR13-33						LMR13-34				
Sample Name:				LMR13-30-012	LMR13-30-012FD	LMR13-30-024	LMR13-30-024FD	LMR13-30-048	LMR13-30-072	LMR13-30-096	LMR13-30-120	LMR13-31-012	LMR13-31-024	LMR13-32-012	LMR13-32-024	LMR13-32-048	LMR13-32-072	LMR13-33-012	LMR13-33-024	LMR13-33-048	LMR13-33-048FD	LMR13-33-072	LMR13-33-096	LMR13-34-012	LMR13-34-024	LMR13-34-024FD	LMR13-34-048	LMR13-34-072
Sample Depth (ft):				0-1	0-1	1-2	1-2	2-4	4-6	6-8	8-10	0-1	1-2	0-1	1-2	2-4	4-6	0-1	1-2	2-4	2-4	4-6	6-8	0-1	1-2	1-2	2-4	4-6
Date Sampled:				6/19/13	6/19/13	6/19/13	6/19/13	6/19/13	6/19/13	6/19/13	6/19/13	6/15/13	6/15/13	6/15/13	6/15/13	6/15/13	6/15/13	6/19/13	6/19/13	6/19/13	6/19/13	6/19/13	6/19/13	6/15/13	6/15/13	6/15/13	6/15/13	6/15/13
Analyte	**TEC**	**PEC**	**Unit**																									
1,1'-Biphenyl	NSL	NSL	ug/kg	640 UJ	640 UJ	510 U	600 U	610 U	1500 UJ	40 J	15 J	460 U	7.8 J	230 U	240 U	220 U	230 U	120 J	110 J	35 J	20 J	32 J	450 U	430 U	350 U	360 U	350 U	320 U
1,2,4,5-Tetrachlorobenzene	NSL	NSL	ug/kg	640 UJ	640 UJ	510 U	600 U	610 U	1500 UJ	1500 UJ	440 U	460 U	240 U	230 U	240 U	220 U	230 U	1300 UJ	710 U	590 UJ	300 UJ	600 UJ	450 U	430 U	350 U	360 U	350 U	320 U
2,2'-Oxybis(1-chloropropane)	NSL	NSL	ug/kg	640 UJ	640 UJ	510 U	600 U	610 U	1500 UJ	1500 UJ	440 U	460 U	240 U	230 U	240 U	220 U	230 U	1300 UJ	710 U	590 UJ	300 U	600 UJ	450 U	430 U	350 U	360 U	350 U	320 U
2,3,4,6-Tetrachlorophenol	NSL	NSL	ug/kg	640 UJ	640 UJ	510 U	600 U	610 U	1500 UJ	1500 UJ	440 U	460 U	240 U	230 U	240 U	220 U	230 U	1300 UJ	710 U	590 UJ	300 UJ	600 UJ	450 U	430 U	350 U	360 U	350 U	320 U
2,4,5-Trichlorophenol	NSL	NSL	ug/kg	640 UJ	640 UJ	510 U	600 U	610 U	1500 UJ	1500 UJ	440 U	460 U	240 U	230 U	240 U	220 U	230 U	1300 UJ	710 U	590 UJ	300 UJ	600 UJ	450 U	430 U	350 U	360 U	350 U	320 U
2,4,6-Trichlorophenol	NSL	NSL	ug/kg	640 UJ	640 UJ	510 U	600 U	610 U	1500 UJ	1500 UJ	440 U	460 U	240 U	230 U	240 U	220 U	230 U	1300 UJ	710 U	590 UJ	300 UJ	600 UJ	450 U	430 U	350 U	360 U	350 U	320 U
2,4-Dichlorophenol	NSL	NSL	ug/kg	640 UJ	640 UJ	510 U	600 U	610 U	1500 UJ	1500 UJ	440 U	460 U	240 U	230 U	240 U	220 U	230 U	1300 UJ	710 U	590 UJ	300 UJ	600 UJ	450 U	430 U	350 U	360 U	350 U	320 U
2,4-Dimethylphenol	NSL	NSL	ug/kg	640 UJ	640 UJ	510 U	600 U	610 U	1500 UJ	1500 UJ	440 U	460 U	240 U	230 U	240 U	220 U	230 U	1300 UJ	710 U	590 UJ	300 U	600 UJ	450 U	430 U	350 U	360 U	350 U	320 U
2,4-Dinitrophenol	NSL	NSL	ug/kg	1200 UJ	1300 UJ	990 U	1200 U	1200 U	2800 UJ	2800 UJ	860 U	890 U	460 U	450 U	460 U	430 U	440 U	2600 UJ	1400 U	1100 UJ	580 U	1200 UJ	880 U	840 U	670 U	700 U	670 U	620 U
2,4-Dinitrotoluene	NSL	NSL	ug/kg	640 UJ	640 UJ	510 U	600 U	610 U	1500 UJ	1500 UJ	440 U	460 U	240 U	230 U	240 U	220 U	230 U	1300 UJ	710 U	590 UJ	300 U	600 UJ	450 U	430 U	350 U	360 U	350 U	320 U
2,6-Dinitrotoluene	NSL	NSL	ug/kg	640 UJ	640 UJ	510 U	600 U	610 U	1500 UJ	1500 UJ	440 U	460 U	240 U	230 U	240 U	220 U	230 U	1300 UJ	710 U	590 UJ	300 U	600 UJ	450 U	430 U	350 U	360 U	350 U	320 U
2-Chloronaphthalene	NSL	NSL	ug/kg	640 UJ	640 UJ	510 U	600 U	610 U	1500 UJ	1500 UJ	440 U	460 U	240 U	230 U	240 U	220 U	230 U	1300 UJ	710 U	590 UJ	300 U	600 UJ	450 U	430 U	350 U	360 U	350 U	320 U
2-Chlorophenol	NSL	NSL	ug/kg	640 UJ	640 UJ	510 U	600 U	610 U	1500 UJ	1500 UJ	440 U	460 U	240 U	230 U	240 U	220 U	230 U	1300 UJ	710 U	590 UJ	300 U	600 UJ	450 U	430 U	350 U	360 U	350 U	320 U
2-Methylnaphthalene**	NSL	NSL	ug/kg	63 J	85 J	78 J	84 J	72 J	95 J	120 J	84 J	29 J	22 J	230 U	240 U	220 U	230 U	490 J	610 J	160 J	120 J	120 J	25 J	430 U	350 U	360 U	350 U	320 U
2-Methylphenol	NSL	NSL	ug/kg	640 UJ	640 UJ	510 U	600 U	610 U	1500 UJ	1500 UJ	440 U	460 U	240 U	230 U	240 U	220 U	230 U	1300 UJ	710 U	590 UJ	300 U	600 UJ	450 U	430 U	350 U	360 U	350 U	320 U
2-Nitroaniline	NSL	NSL	ug/kg	1200 UJ	1300 UJ	990 U	1200 U	1200 U	2800 UJ	2800 UJ	860 U	890 U	460 U	450 U	460 U	430 U	440 U	2600 UJ	1400 U	1100 UJ	580 U	1200 UJ	880 U	840 U	670 U	700 U	670 U	620 U
2-Nitrophenol	NSL	NSL	ug/kg	640 UJ	640 UJ	510 U	600 U	610 U	1500 UJ	1500 UJ	440 U	460 U	240 U	230 U	240 U	220 U	230 U	1300 UJ	710 U	590 UJ	300 U	600 UJ	450 U	430 U	350 U	360 U	350 U	320 U
3,3'-Dichlorobenzidine	NSL	NSL	ug/kg	640 UJ	640 UJ	510 U	600 U	610 U	1500 UJ	1500 UJ	440 U	460 U	240 UJ	230 U	240 U	220 U	230 U	1300 UJ	710 U	590 UJ	300 U	600 UJ	450 U	430 UJ	350 UJ	360 UJ	350 UJ	320 UJ
3-Nitroaniline	NSL	NSL	ug/kg	1200 UJ	1300 UJ	990 U	1200 U	1200 U	2800 UJ	2800 UJ	860 U	890 U	460 U	450 U	460 U	430 U	440 U	2600 UJ	1400 U	1100 UJ	580 U	1200 UJ	880 U	840 U	670 U	700 U	670 U	620 U
4,6-Dinitro-2-methylphenol	NSL	NSL	ug/kg	1200 UJ	1300 UJ	990 U	1200 U	1200 U	2800 UJ	2800 UJ	860 U	890 U	460 U	450 U	460 U	430 U	440 U	2600 UJ	1400 U	1100 UJ	580 U	1200 UJ	880 U	840 U	670 U	700 U	670 U	620 U
4-Bromophenyl-phenylether	NSL	NSL	ug/kg	640 UJ	640 UJ	510 U	600 U	610 U	1500 UJ	1500 UJ	440 U	460 U	240 U	230 U	240 U	220 U	230 U	1300 UJ	710 U	590 UJ	300 U	600 UJ	450 U	430 U	350 U	360 U	350 U	320 U
4-Chloro-3-methylphenol	NSL	NSL	ug/kg	640 UJ	640 UJ	510 U	600 U	610 U	1500 UJ	1500 UJ	440 U	460 U	240 U	230 U	240 U	220 U	230 U	1300 UJ	710 U	590 UJ	300 UJ	600 UJ	450 U	430 U	350 U	360 U	350 U	320 U
4-Chloroaniline	NSL	NSL	ug/kg	640 UJ	640 UJ	510 U	600 U	610 U	1500 UJ	1500 UJ	440 U	460 U	240 UJ	230 U	240 U	220 U	230 U	1300 UJ	710 U	590 UJ	300 U	600 UJ	450 U	430 UJ	350 UJ	360 UJ	350 UJ	320 UJ
4-Chlorophenyl-phenylether	NSL	NSL	ug/kg	640 UJ	640 UJ	510 U	600 U	610 U	1500 UJ	1500 UJ	440 U	460 U	240 U	230 U	240 U	220 U	230 U	1300 UJ	710 U	590 UJ	300 U	600 UJ	450 U	430 U	350 U	360 U	350 U	320 U
4-Methylphenol	NSL	NSL	ug/kg	640 UJ	640 UJ	510 U	600 U	610 U	1500 UJ	1500 UJ	440 U	460 U	240 U	230 U	240 U	220 U	230 U	110 J	110 J	590 UJ	300 U	600 UJ	450 U	430 U	350 U	360 U	350 U	320 U
4-Nitroaniline	NSL	NSL	ug/kg	1200 UJ	1300 UJ	990 U	1200 U	1200 U	2800 UJ	2800 UJ	860 U	890 U	460 U	450 U	460 U	430 U	440 U	2600 UJ	1400 U	1100 UJ	580 U	1200 UJ	880 U	840 U	670 U	700 U	670 U	620 U
4-Nitrophenol	NSL	NSL	ug/kg	1200 UJ	1300 UJ	990 U	1200 U	1200 U	2800 UJ	2800 UJ	860 U	890 U	460 U	450 U	460 U	430 U	440 U	2600 UJ	1400 U	1100 UJ	580 U	1200 UJ	880 U	840 U	670 U	700 U	670 U	620 U
Acenaphthene**	NSL	NSL	ug/kg	190 J	210 J	260 J	260 J	180 J	450 J	390 J	360 J	180 J	230 J	110 J	19 J	6.4 J	230 U	250 J	420 J	290 J	210 J	350 J	140 J	65 J	44 J	33 J	40 J	39 J
Acenaphthylene**	NSL	NSL	ug/kg	36 J	47 J	52 J	41 J	47 J	140 J	84 J	58 J	43 J	78 J	23 J	15 J	6.1 J	230 U	100 J	130 J	63 J	90 J	110 J	31 J	430 U	18 J	360 U	21 J	320 U
Acetophenone	NSL	NSL	ug/kg	27 J	640 UJ	510 U	600 U	610 U	1500 UJ	1500 UJ	440 U	460 U	240 U	230 U	240 U	220 U	230 U	1300 UJ	710 U	590 UJ	300 U	42 J	450 U	430 U	350 U	360 U	350 U	320 U
Anthracene**	57.2	845	ug/kg	**310 J**	**400 J**	**470 J**	**510 J**	**660**	**1300 J**	**1000 J**	**510**	**120 J**	**140 J**	**110 J**	**120 J**	44 J	230 U	**850 J**	**1300**	**800 J**	**350**	**760 J**	**470**	**120 J**	**83 J**	57 J	**78 J**	**68 J**
Atrazine	NSL	NSL	ug/kg	640 UJ	640 UJ	510 U	600 U	610 U	1500 UJ	1500 UJ	440 U	460 U	240 U	230 U	240 U	220 U	230 U	1300 UJ	710 U	590 UJ	300 U	600 UJ	450 U	430 U	350 U	360 U	350 U	320 U
Benzaldehyde	NSL	NSL	ug/kg	640 UJ	63 J	54 J	600 U	610 U	1500 UJ	1500 UJ	440 U	37 J	38 J	37 J	49 J	30 J	37 J	1300 UJ	710 U	590 UJ	300 U	600 UJ	450 U	430 U	350 U	65 J	350 U	61 J
Benzo(a)anthracene**	108	1050	ug/kg	**2000 J**	**2100 J**	**2300**	**2200**	**2400 J**	1500 UJ	**2300 J**	**1300**	**590**	**800**	**350**	**260**	**140 J**	230 U	**1900 J**	**4500**	**1600 J**	**1800**	**1900 J**	**1300 J**	**310 J**	**270 J**	**210 J**	**250 J**	**230 J**
Benzo(a)pyrene**	150	1450	ug/kg	**1000 J**	**1300 J**	**1800**	**2000**	**2100**	**1800 J**	**1500 J**	**840**	**520**	**650**	**320**	**170 J**	87 J	230 U	**1300 J**	**2600**	**1200 J**	**1200**	**1500 J**	**1000**	**370 J**	**280 J**	**230 J**	**300 J**	**240 J**
Benzo(b)fluoranthene**	NSL	NSL	ug/kg	1200 J	1500 J	1900	2000	2600	2100 J	1600 J	960 J	660 J	970 J	300 J	150 J	88 J	230 U	1100 J	2800 J	1100 J	1500 J	1400 J	1100	550	330 J	410	370	250 J
Benzo(g,h,i)perylene**	NSL	NSL	ug/kg	770 J	930 J	880	840	860	1600 J	1300 J	440 J	380 J	520	180 J	78 J	40 J	230 U	850 J	1400	720 J	580	860 J	480 J	290 J	330 J	200 J	280 J	240 J
Benzo(k)fluoranthene**	NSL	NSL	ug/kg	700 J	830 J	2000	2200	2000	1700 J	1100 J	680	560	560	220 J	180 J	79 J	230 U	1400 J	1500	970 J	860	1000 J	900	350 J	400	240 J	300 J	290 J
Bis(2-chloroethoxy)methane	NSL	NSL	ug/kg	640 UJ	640 UJ	510 U	600 U	610 U	1500 UJ	1500 UJ	440 U	460 U	240 U	230 U	240 U	220 U	230 U	1300 UJ	710 U	590 UJ	300 U	600 UJ	450 U	430 U	350 U	360 U	350 U	320 U
Bis(2-chloroethyl)ether	NSL	NSL	ug/kg	640 UJ	640 UJ	510 U	600 U	610 U	1500 UJ	1500 UJ	440 U	460 U	240 U	230 U	240 U	220 U	230 U	1300 UJ	710 U	590 UJ	300 U	600 UJ	450 U	430 U	350 U	360 U	350 U	320 U
Bis(2-ethylhexyl)phthalate	NSL	NSL	ug/kg	640 UJ	640 UJ	510 U	600 U	610 U	1500 UJ	1500 UJ	440 U	460 U	240 U	230 U	240 U	220 U	230 U	1300 UJ	710 U	590 UJ	300 U	600 UJ	450 U	430 U	350 U	360 U	780	320 U
Butylbenzylphthalate	NSL	NSL	ug/kg	640 UJ	640 UJ	510 U	600 U	610 U	1500 UJ	1500 UJ	440 U	460 U	240 U	230 U	240 U	220 U	230 U	1300 UJ	710 U	590 UJ	300 U	600 UJ	450 U	430 U	350 U	360 U	350 U	320 U
Caprolactam	NSL	NSL	ug/kg	640 UJ	640 UJ	510 U	600 U	610 U	1500 UJ	1500 UJ	440 U	460 U	240 U	230 U	240 U	220 U	230 U	1300 UJ	710 U	590 UJ	300 U	600 UJ	450 U	430 U	350 U	360 U	350 U	320 U
Carbazole	NSL	NSL	ug/kg	640 UJ	640 UJ	510 U	600 U	610 U	1500 UJ	1500 UJ	18 J	460 U	240 U	4.3 J	240 U	220 U	230 U	76 J	710 U	590 UJ	300 U	600 UJ	450 U	22 J	21 J	360 U	350 U	320 U
Chrysene**	166	1290	ug/kg	**1800 J**	**1800 J**	**2500**	**2600**	**3200 J**	**3200 J**	**2400 J**	**1000**	**780**	**890**	**390**	**240**	120 J	230 U	**2400 J**	**3800**	**1800 J**	**1200**	**2100 J**	**1500 J**	**490**	**450**	**350 J**	**410**	**370**
Dibenzo(a,h)anthracene**	33	NSL	ug/kg	**420 J**	**340 J**	**330 J**	**330 J**	**290 J**	**700 J**	**390 J**	**150 J**	**110 J**	**190 J**	**46 J**	30 J	16 J	230 UJ	**500 J**	**510 J**	**290 J**	**280 J**	**350 J**	**140 J**	**95 J**	**85 J**	**61 J**	**85 J**	**68 J**
Dibenzofuran	NSL	NSL	ug/kg	68 J	84 J	82 J	89 J	62 J	280 J	200 J	150 J	24 J	26 J	11 J	13 J	220 U	230 U	330 J	510 J	120 J	100 J	170 J	47 J	41 J	28 J	23 J	27 J	27 J
Diethylphthalate	NSL	NSL	ug/kg	640 UJ	640 UJ	510 U	600 U	610 U	1500 UJ	1500 UJ	440 U	460 U	240 U	230 U	240 U	220 U	230 U	1300 UJ	710 U	590 UJ	300 U	600 UJ	450 U	430 U	350 U	360 U	350 U	320 U
Dimethylphthalate	NSL	NSL	ug/kg	640 UJ	640 UJ	510 U	600 U	610 U	1500 UJ	1500 UJ	440 U	460 U	240 U	230 U	240 U	220 U	230 U	1300 UJ	710 U	590 UJ	300 U	600 UJ	450 U	430 U	350 U	360 U	350 U	320 U
Di-n-butylphthalate	NSL	NSL	ug/kg	640 UJ	640 UJ	510 U	600 U	610 U	1500 UJ	1500 UJ	440 U	460 U	240 U	230 U	240 U	220 U	230 U	1300 UJ	710 U	46 J	300 U	600 UJ	450 U	59 J	40 J	29 J	38 J	33 J
Di-n-octylphthalate	NSL	NSL	ug/kg	640 UJ	640 UJ	510 U	600 U	610 U	1500 UJ	1500 UJ	440 U	460 UJ	240 UJ	230 UJ	240 UJ	220 UJ	230 UJ	1300 UJ	710 U	590 UJ	300 U	600 UJ	450 U	430 U	350 U	360 U	350 U	320 U
Fluoranthene**	423	2230	ug/kg	**1600 J**	**2100 J**	**6700**	**5600**	**5000 J**	**5200 J**	**3300 J**	**2800**	**1000**	**1300**	**650**	**520**	210 J	230 U	**2400 J**	**5400**	**2400 J**	**2200**	**2500 J**	**2700 J**	**740**	**610**	**430**	**540**	**450**
Fluorene**	77.4	536	ug/kg	**330 J**	**390 J**	**430 J**	**450 J**	**580 J**	**960 J**	**580 J**	**450**	460 U	**150 J**	43 J	25 J	220 U	230 U	**630 J**	**1100**	**550 J**	**350**	**560 J**	**300 J**	**95 J**	70 J	57 J	**78 J**	65 J
Hexachlorobenzene	NSL	NSL	ug/kg	640 UJ	640 UJ	510 U	600 U	610 U	1500 UJ	1500 UJ	440 U	460 U	240 U	230 U	240 U	220 U	230 U	1300 UJ	710 U	590 UJ	300 U	600 UJ	450 U	430 U	350 U	360 U	350 U	320 U
Hexachlorobutadiene	NSL	NSL	ug/kg	640 UJ	640 UJ	510 U	600 U	610 U	1500 UJ	1500 UJ	440 U	460 U	240 U	230 U	240 U	220 U	230 U	1300 UJ	710 U	590 UJ	300 UJ	600 UJ	450 U	430 U	350 U	360 U	350 U	320 U
Hexachlorocyclopentadiene	NSL	NSL	ug/kg	640 UJ	640 UJ	510 UJ	600 UJ	610 UJ	1500 UJ	1500 UJ	440 UJ	460 U	240 UJ	230 U	240 U	220 U	230 U	1300 UJ	710 UJ	590 UJ	300 UJ	600 UJ	450 U	430 UJ	350 UJ	360 UJ	350 UJ	320 UJ
Hexachloroethane	NSL	NSL	ug/kg	640 UJ	640 UJ	510 U	600 U	610 U	1500 UJ	1500 UJ	440 U	460 U	240 U	230 U	240 U	220 U	230 U	1300 UJ	710 U	590 UJ	300 U	600 UJ	450 U	430 U	350 U	360 U	350 U	320 U
Indeno(1,2,3-cd)pyrene**	NSL	NSL	ug/kg	630 J	700 J	750	800	860	1200 J	1000 J	410 J	300 J	450	140 J	74 J	38 J	230 U	790 J	1200 J	720 J	590 J	780 J	400 J	240 J	280 J	170 J	250 J	210 J
Isophorone	NSL	NSL	ug/kg	640 UJ	640 UJ	510 U	600 U	610 U	1500 UJ	1500 UJ	440 U	460 U	240 U	230 U	240 U	220 U	230 U	1300 UJ	710 U	590 UJ	300 U	600 UJ	450 U	430 U	350 U	360 U	350 U	320 U
Naphthalene**	176	561	ug/kg	160 J	**220 J**	**180 J**	**190 J**	150 J	160 J	170 J	**220 J**	93 J	72 J	15 J	11 J	5.1 J	230 U	**2300 J**	**1900**	**440 J**	**280 J**	**250 J**	67 J	40 J	23 J	22 J	34 J	24 J
Nitrobenzene	NSL	NSL	ug/kg	640 UJ	640 UJ	510 U	600 U	610 U	1500 UJ	1500 UJ	440 U	460 UJ	240 UJ	230 UJ	240 UJ	220 UJ	230 UJ	1300 UJ	710 U	590 UJ	300 U	600 UJ	450 U	430 U	350 U	360 U	350 U	320 U
N-Nitroso-di-n-propylamine	NSL	NSL	ug/kg	640 UJ	640 UJ	510 U	600 U	610 U	1500 UJ	1500 UJ	440 U	460 U	240 U	230 U	240 U	220 U	230 U	1300 UJ	710 U	590 UJ	300 U	600 UJ	450 U	430 U	350 U	360 U	350 U	320 U
N-Nitrosodiphenylamine	NSL	NSL	ug/kg	640 UJ	640 UJ	510 U	600 U	610 U	1500 UJ	1500 UJ	440 U	460 U	240 U	230 U	240 U	220 U	230 U	1300 UJ	710 U	590 UJ	300 U	600 UJ	450 U	430 U	350 U	360 U	350 U	320 U
Pentachlorophenol	NSL	NSL	ug/kg	1200 UJ	1300 UJ	990 UJ	1200 UJ	1200 UJ	2800 UJ	2800 UJ	860 U	890 UJ	460 UJ	450 UJ	460 UJ	430 UJ	440 UJ	2600 UJ	1400 U	1100 UJ	580 UJ	1200 UJ	880 UJ	840 U	670 UJ	700 UJ	670 UJ	620 UJ
Phenanthrene**	204	1170	ug/kg	**1200 J**	**1600 J**	**3300**	**3200**	**4200**	**6000 J**	**3300 J**	**1900**	**360 J**	**800**	**260**	**260**	73 J	230 U	**2900 J**	**4200**	**2800 J**	**1300**	**2600 J**	**1900**	**290 J**	**270 J**	**210 J**	**250 J**	**230 J**
Phenol	NSL	NSL	ug/kg	640 UJ	640 UJ	510 U	600 U	610 U	1500 UJ	1500 UJ	440 U	460 U	240 U	230 U	240 U	220 U	230 U	1300 UJ	710 U	590 UJ	300 U	600 UJ	450 U	430 U	350 U	360 U	350 U	320 U
Pyrene**	195	1520	ug/kg	**3500 J**	**3600 J**	**4200 J**	**2900 J**	**3200 J**	**6100 J**	**4800 J**	**2200**	**1100**	**1200**	**850**	**450**	180 J	230 U	**3600 J**	**5900**	590 U	**2800**	**3300 J**	**1800 J**	**1000**	**770**	**610**	**680**	**610**
Total PAHs 17 ND = 1/2RL	1610	22800	ug/kg	**15909**	**18152**	**28130**	**26205**	**28399**	**33455**	**25334**	**14362**	**7055**	**9022**	**4122**	**2722**	1353	**1955**	**23760**	**39270**	**16198**	**15710**	**20440**	**14253**	**5475**	**4488**	**3650**	**4141**	**3704**

NOTES:
** Analytes included in the 17PAH total
J = Indicates that the concentration is an estimated value.
R = Result is rejected
U = Indicates the analyte was analyzed for but not detected.
µg/kg = Micrograms per kilogram.
TEC = Threshold effect concentration.
Development and Evaluation of Consensus-Based Sediment Quality Guidelines for Freshwater Ecosystems (MacDonald et al. 2000).
PEC = Probable effect concentration.
Development and Evaluation of Consensus-Based Sediment Quality Guidelines for Freshwater Ecosystems (MacDonald et al. 2000).
Bolded values exceed the TEC.
Bolded and Gray shaded values exceed the PEC.
NSL = No Screening Level.
Submitted samples are presented in ascending numerical order.
*Samples presented are displayed in Figure 4-3C

TABLE 4-6C* SEDIMENT RESULTS FOR SEMIVOLATILE ORGANIC ANALYSIS (SVOA) IN AREA C
PHASE 2 LOWER MAUMEE RIVER SITE CHARACTERIZATION
TOLEDO, OHIO (JUNE 2013)

			Sample Location:	I-34					LMR13-49						LMR13-50							LMR13-51					LM	
			Sample Name:	LMR13-34-096	LMR13-34-120	LMR13-34-144	LMR13-34-168	LMR13-34-192	LMR13-49-012	LMR13-49-024	LMR13-49-048	LMR13-49-072	LMR13-49-096	LMR13-49-120	LMR13-50-012	LMR13-50-024	LMR13-50-024FD	LMR13-50-048	LMR13-50-072	LMR13-50-096	LMR13-50-120	LMR13-51-012	LMR13-51-012FD	LMR13-51-024	LMR13-51-048	LMR13-51-072	LMR13-52-012	LMR13-52-024
			Sample Depth (ft):	6-8	8-10	10-12	12-14	14-15	0-1	1-2	2-4	4-6	6-8	8-9	0-1	1-2	1-2	2-4	4-6	6-8	8-10	0-1	0-1	1-2	2-4	4-6	0-1	1-2
			Date Sampled:	6/15/13	6/15/13	6/15/13	6/15/13	6/15/13	6/14/13	6/14/13	6/14/13	6/14/13	6/14/13	6/14/13	6/14/13	6/14/13	6/14/13	6/14/13	6/14/13	6/14/13	6/14/13	6/13/13	6/13/13	6/13/13	6/13/13	6/13/13	6/20/13	6/20/13
Analyte	**TEC**	**PEC**	**Unit**																									
1,1'-Biphenyl	NSL	NSL	ug/kg	310 U	300 U	290 U	1400 U	1300 U	320 U	260 U	260 U	250 U	220 U	220 U	1800 U	360 U	350 U	320 U	270 U	280 U	270 U	320 U	310 U	290 U	210 U	220 U	360 UJ	14 J
1,2,4,5-Tetrachlorobenzene	NSL	NSL	ug/kg	310 U	300 U	290 U	1400 U	1300 U	320 U	260 U	260 U	250 U	220 U	220 U	1800 U	360 U	350 U	320 U	270 U	280 U	270 U	320 U	310 U	290 U	210 U	220 U	360 UJ	300 UJ
2,2'-Oxybis(1-chloropropane)	NSL	NSL	ug/kg	310 U	300 U	290 U	1400 U	1300 U	320 U	260 U	260 U	250 U	220 U	220 U	1800 U	360 U	350 U	320 U	270 U	280 U	270 U	320 U	310 U	290 U	210 U	220 U	360 UJ	300 UJ
2,3,4,6-Tetrachlorophenol	NSL	NSL	ug/kg	310 U	300 U	290 U	1400 U	1300 U	320 U	260 U	260 U	250 U	220 U	220 U	1800 U	360 U	350 U	320 U	270 U	280 U	270 U	320 U	310 U	290 U	210 U	220 U	360 UJ	300 UJ
2,4,5-Trichlorophenol	NSL	NSL	ug/kg	310 U	300 U	290 U	1400 U	1300 U	320 U	260 U	260 U	250 U	220 U	220 U	1800 U	360 U	350 U	320 U	270 U	280 U	270 U	320 U	310 U	290 U	210 U	220 U	360 UJ	300 UJ
2,4,6-Trichlorophenol	NSL	NSL	ug/kg	310 U	300 U	290 U	1400 U	1300 U	320 U	260 U	260 U	250 U	220 U	220 U	1800 U	360 U	350 U	320 U	270 U	280 U	270 U	320 U	310 U	290 U	210 U	220 U	360 UJ	300 UJ
2,4-Dichlorophenol	NSL	NSL	ug/kg	310 U	300 U	290 U	1400 U	1300 U	320 U	260 U	260 U	250 U	220 U	220 U	1800 U	360 U	350 U	320 U	270 U	280 U	270 U	320 U	310 U	290 U	210 U	220 U	360 UJ	300 UJ
2,4-Dimethylphenol	NSL	NSL	ug/kg	310 U	300 U	290 U	1400 U	1300 U	320 U	260 U	260 U	250 U	220 U	220 U	1800 U	360 U	350 U	320 U	270 U	280 U	270 U	320 U	310 U	290 U	210 U	220 U	360 UJ	300 UJ
2,4-Dinitrophenol	NSL	NSL	ug/kg	590 U	580 U	570 U	2800 U	2500 U	620 U	510 U	500 U	480 U	420 U	420 U	3600 U	700 U	690 U	620 U	530 U	540 U	530 U	620 UJ	610 UJ	560 UJ	410 UJ	420 UJ	700 UJ	580 UJ
2,4-Dinitrotoluene	NSL	NSL	ug/kg	310 U	300 U	290 U	1400 U	1300 U	320 U	260 U	260 U	250 U	220 U	220 U	1800 U	360 U	350 U	320 U	270 U	280 U	270 U	320 U	310 U	290 U	210 U	220 U	360 UJ	300 UJ
2,6-Dinitrotoluene	NSL	NSL	ug/kg	310 U	300 U	290 U	1400 U	1300 U	320 U	260 U	260 U	250 U	220 U	220 U	1800 U	360 U	350 U	320 U	270 U	280 U	270 U	320 U	310 U	290 U	210 U	220 U	360 UJ	300 UJ
2-Chloronaphthalene	NSL	NSL	ug/kg	310 U	300 U	290 U	1400 U	1300 U	320 U	260 U	260 U	250 U	220 U	220 U	1800 U	360 U	350 U	320 U	270 U	280 U	270 U	320 U	310 U	290 U	210 U	220 U	360 UJ	300 UJ
2-Chlorophenol	NSL	NSL	ug/kg	310 U	300 U	290 U	1400 U	1300 U	320 U	260 U	260 U	250 U	220 U	220 U	1800 U	360 U	350 U	320 U	270 U	280 U	270 U	320 U	310 U	290 U	210 U	220 U	360 UJ	300 UJ
2-Methylnaphthalene**	NSL	NSL	ug/kg	310 U	22 J	35 J	1400 U	43 J	320 U	260 U	30 J	250 U	220 U	220 U	1800 U	360 U	350 U	320 U	270 U	280 U	31 J	320 U	310 U	290 U	210 U	220 U	29 J	68 J
2-Methylphenol	NSL	NSL	ug/kg	310 U	300 U	290 U	1400 U	1300 U	320 U	260 U	260 U	250 U	220 U	220 U	1800 U	360 U	350 U	320 U	270 U	280 U	270 U	320 U	310 U	290 U	210 U	220 U	360 UJ	300 UJ
2-Nitroaniline	NSL	NSL	ug/kg	590 U	580 U	570 U	2800 U	2500 U	620 U	510 U	500 U	480 U	420 U	420 U	3600 U	700 U	690 U	620 U	530 U	540 U	530 U	620 U	610 U	560 U	410 U	420 U	700 UJ	580 UJ
2-Nitrophenol	NSL	NSL	ug/kg	310 U	300 U	290 U	1400 U	1300 U	320 U	260 U	260 U	250 U	220 U	220 U	1800 U	360 U	350 U	320 U	270 U	280 U	270 U	320 U	310 U	290 U	210 U	220 U	360 UJ	300 UJ
3,3'-Dichlorobenzidine	NSL	NSL	ug/kg	310 UJ	300 UJ	290 UJ	1400 UJ	1300 UJ	320 UJ	260 UJ	260 UJ	250 UJ	220 UJ	220 UJ	1800 UJ	360 UJ	350 UJ	320 UJ	270 UJ	280 UJ	270 UJ	320 UJ	310 UJ	290 UJ	210 UJ	220 UJ	360 UJ	300 UJ
3-Nitroaniline	NSL	NSL	ug/kg	590 U	580 U	570 U	2800 U	2500 U	620 U	510 U	500 U	480 U	420 U	420 U	3600 U	700 U	690 U	620 U	530 U	540 U	530 U	620 U	610 U	560 U	410 U	420 U	700 UJ	580 UJ
4,6-Dinitro-2-methylphenol	NSL	NSL	ug/kg	590 U	580 U	570 U	2800 U	2500 U	620 U	510 U	500 U	480 U	420 U	420 U	3600 U	700 U	690 U	620 U	530 U	540 U	530 U	620 U	610 U	560 U	410 U	420 U	700 UJ	580 UJ
4-Bromophenyl-phenylether	NSL	NSL	ug/kg	310 U	300 U	290 U	1400 U	1300 U	320 U	260 U	260 U	250 U	220 U	220 U	1800 U	360 U	350 U	320 U	270 U	280 U	270 U	320 U	310 U	290 U	210 U	220 U	360 UJ	300 UJ
4-Chloro-3-methylphenol	NSL	NSL	ug/kg	310 U	300 U	290 U	1400 U	1300 U	320 U	260 U	260 U	250 U	220 U	220 U	1800 U	360 U	350 U	320 U	270 U	280 U	270 U	320 U	310 U	290 U	210 U	220 U	360 UJ	300 UJ
4-Chloroaniline	NSL	NSL	ug/kg	310 UJ	300 U	290 U	1400 U	1300 U	320 U	260 U	260 UJ	250 U	220 U	220 U	1800 U	360 U	350 UJ	320 U	270 U	280 U	270 U	320 UJ	310 UJ	290 UJ	210 UJ	220 U	360 UJ	300 UJ
4-Chlorophenyl-phenylether	NSL	NSL	ug/kg	310 U	300 U	290 U	1400 U	1300 U	320 U	260 U	260 U	250 U	220 U	220 U	1800 U	360 U	350 U	320 U	270 U	280 U	270 U	320 U	310 U	290 U	210 U	220 U	360 UJ	300 UJ
4-Methylphenol	NSL	NSL	ug/kg	310 U	300 U	32 J	1400 U	1300 U	320 U	260 U	260 U	250 U	220 U	220 U	1800 U	360 U	350 UJ	320 U	270 U	16 J	21 J	320 U	310 U	290 U	210 U	220 U	360 UJ	300 UJ
4-Nitroaniline	NSL	NSL	ug/kg	590 U	580 U	570 U	2800 U	2500 U	620 U	510 U	500 U	480 U	420 U	420 U	3600 U	700 U	690 U	620 U	530 U	540 U	530 U	620 U	610 U	560 U	410 U	420 U	700 UJ	580 UJ
4-Nitrophenol	NSL	NSL	ug/kg	590 U	580 U	570 U	2800 U	2500 U	620 U	510 U	500 U	480 U	420 U	420 U	3600 U	700 U	690 U	620 U	530 U	540 U	530 U	620 U	610 U	560 U	410 U	420 U	130 J	580 UJ
Acenaphthene**	NSL	NSL	ug/kg	74 J	130 J	120 J	140 J	130 J	17 J	19 J	34 J	24 J	220 U	220 U	1800 U	360 U	16 J	17 J	23 J	32 J	33 J	26 J	32 J	36 J	7.1 J	220 U	44 J	100 J
Acenaphthylene**	NSL	NSL	ug/kg	20 J	31 J	39 J	37 J	1300 U	320 U	260 U	19 J	10 J	220 U	220 U	1800 U	360 U	350 U	320 U	270 U	13 J	14 J	320 U	310 U	16 J	210 U	220 U	24 J	44 J
Acetophenone	NSL	NSL	ug/kg	310 U	300 U	290 U	1400 U	1300 U	320 U	260 U	260 U	250 U	220 U	220 U	1800 U	360 U	350 U	320 U	270 U	35 J	270 U	19 J	15 J	22 J	13 J	15 J	18 J	26 J
Anthracene**	57.2	845	ug/kg	**130 J**	**230 J**	**170 J**	**160 J**	**100 J**	45 J	35 J	56 J	**62 J**	17 J	220 U	1800 U	29 J	33 J	35 J	40 J	40 J	**59 J**	40 J	54 J	**91 J**	35 J	220 U	**71 J**	**160 J**
Atrazine	NSL	NSL	ug/kg	310 U	300 U	290 U	1400 U	1300 U	320 U	260 U	260 U	250 U	220 U	220 U	1800 U	360 U	350 U	320 U	270 U	280 U	270 U	320 U	310 U	290 U	210 U	220 U	360 UJ	300 UJ
Benzaldehyde	NSL	NSL	ug/kg	60 J	300 U	55 J	1400 U	1300 U	53 J	33 J	46 J	48 J	26 J	23 J	1800 U	52 J	70 J	44 J	39 J	38 J	43 J	51 J	51 J	57 J	27 J	18 J	55 J	50 J
Benzo(a)anthracene**	108	1050	ug/kg	**280 J**	**840**	**450**	**610 J**	**380 J**	**160 J**	100 J	**270**	**180 J**	52 J	220 U	**200 J**	**120 J**	**110 J**	**130 J**	**140 J**	**160 J**	**230 J**	**160 J**	**180 J**	**290**	73 J	220 U	**360 J**	**800 J**
Benzo(a)pyrene**	150	1450	ug/kg	**250 J**	**660**	**450**	**490 J**	**360 J**	150 J	87 J	**210 J**	**170 J**	35 J	220 U	**230 J**	130 J	120 J	100 J	98 J	140 J	**200 J**	140 J	**160 J**	**260 J**	40 J	220 U	**310 J**	**610 J**
Benzo(b)fluoranthene**	NSL	NSL	ug/kg	330	860	550	490 J	330 J	220 J	110 J	270	160 J	31 J	220 U	240 J	160 J	140 J	130 J	120 J	150 J	290	200 J	180 J	200 J	38 J	220 U	340 J	630 J
Benzo(g,h,i)perylene**	NSL	NSL	ug/kg	200 J	290 J	210 J	320 J	250 J	150 J	75 J	170 J	130 J	220 U	220 U	150 J	130 J	97 J	99 J	94 J	100 J	150 J	160 J	170 J	240 J	30 J	220 U	210 J	360 J
Benzo(k)fluoranthene**	NSL	NSL	ug/kg	290 J	600	410	480 J	280 J	130 J	96 J	250 J	160 J	39 J	220 U	280 J	140 J	160 J	120 J	97 J	140 J	230 J	120 J	180 J	220 J	50 J	220 U	390 J	560 J
Bis(2-chloroethoxy)methane	NSL	NSL	ug/kg	310 U	300 U	290 U	1400 U	1300 U	320 U	260 U	260 U	250 U	220 U	220 U	1800 U	360 U	350 U	320 U	270 U	280 U	270 U	320 U	310 U	290 U	210 U	220 U	360 UJ	300 UJ
Bis(2-chloroethyl)ether	NSL	NSL	ug/kg	310 U	300 U	290 U	1400 U	1300 U	320 U	260 U	260 U	250 U	220 U	220 U	1800 U	360 U	350 U	320 U	270 U	280 U	270 U	320 U	310 U	290 U	210 U	220 U	360 UJ	300 UJ
Bis(2-ethylhexyl)phthalate	NSL	NSL	ug/kg	890	1400	1600	1400 U	1300 U	320 U	260 U	260 U	250 U	220 U	220 U	1800 U	360 U	350 U	320 U	270 U	280 U	270 U	320 U	310 U	290 U	210 U	220 U	360 UJ	300 UJ
Butylbenzylphthalate	NSL	NSL	ug/kg	310 U	300 U	290 U	1400 U	1300 U	320 U	260 U	260 U	250 U	220 U	220 U	1800 U	360 U	350 U	320 U	270 U	280 U	270 U	320 U	310 U	290 U	210 U	220 U	360 UJ	300 UJ
Caprolactam	NSL	NSL	ug/kg	310 U	300 U	290 U	1400 U	1300 U	320 U	63 J	260 U	250 U	220 U	220 U	1800 U	360 U	350 U	320 U	270 U	280 U	270 U	320 U	310 U	290 U	210 U	220 U	360 UJ	300 UJ
Carbazole	NSL	NSL	ug/kg	15 J	300 U	290 U	1400 U	1300 U	17 J	12 J	16 J	250 U	220 U	220 U	1800 U	15 J	350 U	15 J	14 J	12 J	15 J	320 U	310 U	290 U	210 U	220 U	12 J	31 J
Chrysene**	166	1290	ug/kg	**410**	**1000**	**620**	**710 J**	**520 J**	**220 J**	150 J	**350**	**220 J**	56 J	17 J	**310 J**	**190 J**	**200 J**	**180 J**	**180 J**	**230 J**	**340**	**260 J**	**270 J**	**320**	78 J	12 J	**460 J**	**790 J**
Dibenzo(a,h)anthracene**	33	NSL	ug/kg	**85 J**	**86 J**	**69 J**	**99 J**	**96 J**	**37 J**	260 UJ	**49 J**	33 J	220 U	220 U	1800 U	**46 J**	350 U	**37 J**	**38 J**	32 J	**54 J**	**45 J**	**49 J**	**96 J**	210 U	220 U	**64 J**	**130 J**
Dibenzofuran	NSL	NSL	ug/kg	54 J	93 J	81 J	75 J	65 J	320 U	12 J	26 J	20 J	220 U	220 U	1800 U	360 U	350 U	13 J	15 J	18 J	34 J	13 J	14 J	16 J	8.2 J	220 U	31 J	65 J
Diethylphthalate	NSL	NSL	ug/kg	310 U	300 U	290 U	1400 U	1300 U	320 U	260 U	260 U	250 U	220 U	220 U	1800 U	360 U	350 U	320 U	270 U	280 U	270 U	320 U	310 U	290 U	210 U	220 U	360 UJ	300 UJ
Dimethylphthalate	NSL	NSL	ug/kg	310 U	300 U	290 U	1400 U	1300 U	320 U	260 U	260 U	250 U	220 U	220 U	1800 U	360 U	350 U	320 U	270 U	280 U	270 U	320 U	310 U	290 U	210 U	220 U	360 UJ	300 UJ
Di-n-butylphthalate	NSL	NSL	ug/kg	30 J	300 U	40 J	1400 U	1300 U	28 J	22 J	24 J	18 J	23 J	25 J	1800 U	24 J	20 J	23 J	25 J	25 J	32 J	16 J	18 J	290 U	10 J	220 U	360 UJ	300 UJ
Di-n-octylphthalate	NSL	NSL	ug/kg	310 U	300 U	290 U	1400 UJ	1300 UJ	17 J	260 U	260 U	250 U	220 U	220 U	1800 U	360 U	350 UJ	320 U	270 U	280 U	270 U	320 U	310 U	290 U	210 U	220 U	360 UJ	300 UJ
Fluoranthene**	423	2230	ug/kg	**610**	**1100**	**790**	**1200 J**	**530 J**	390	240 J	**570**	340	76 J	220 U	**480 J**	300 J	290 J	290 J	260 J	300 J	**450**	290 J	360	**470**	120 J	220 U	**510 J**	**1100 J**
Fluorene**	77.4	536	ug/kg	**98 J**	**180 J**	**170 J**	**93 J**	75 J	30 J	27 J	42 J	25 J	9.6 J	220 U	1800 U	360 U	27 J	34 J	40 J	40 J	47 J	33 J	40 J	37 J	210 U	220 U	62 J	**140 J**
Hexachlorobenzene	NSL	NSL	ug/kg	310 U	300 U	290 U	1400 U	1300 U	320 U	260 U	260 U	250 U	220 U	220 U	1800 U	360 U	350 U	320 U	270 U	280 U	270 U	320 U	310 U	290 U	210 U	220 U	360 UJ	300 UJ
Hexachlorobutadiene	NSL	NSL	ug/kg	310 U	300 U	290 U	1400 U	1300 U	320 U	260 U	260 U	250 U	220 U	220 U	1800 U	360 U	350 U	320 U	270 U	280 U	270 U	320 U	310 U	290 U	210 U	220 U	360 UJ	300 UJ
Hexachlorocyclopentadiene	NSL	NSL	ug/kg	310 UJ	300 UJ	290 UJ	1400 U	1300 U	320 UJ	260 UJ	260 UJ	250 UJ	220 UJ	220 UJ	1800 UJ	360 UJ	350 UJ	320 UJ	270 UJ	280 UJ	270 UJ	320 UJ	310 UJ	290 UJ	210 UJ	220 UJ	360 UJ	300 UJ
Hexachloroethane	NSL	NSL	ug/kg	310 U	300 U	290 U	1400 U	1300 U	320 U	260 U	260 U	250 U	220 U	220 U	1800 U	360 U	350 U	320 U	270 U	280 U	270 U	320 U	310 U	290 U	210 U	220 U	360 UJ	300 UJ
Indeno(1,2,3-cd)pyrene**	NSL	NSL	ug/kg	190 J	240 J	200 J	240 J	190 J	110 J	63 J	140 J	110 J	220 U	220 U	150 J	83 J	79 J	85 J	76 J	100 J	130 J	110 J	130 J	180 J	23 J	220 U	230 J	370 J
Isophorone	NSL	NSL	ug/kg	310 U	300 U	290 U	1400 U	1300 U	320 U	260 U	260 U	250 U	220 U	220 U	1800 U	360 U	350 U	320 U	270 U	280 U	270 U	320 U	310 U	290 U	210 U	220 U	360 UJ	300 UJ
Naphthalene**	176	561	ug/kg	17 J	74 J	110 J	170 J	97 J	7.8 J	11 J	44 J	6.8 J	220 U	220 U	1800 U	360 U	350 U	320 U	10 J	36 J	44 J	11 J	310 U	290 U	210 U	220 U	41 J	88 J
Nitrobenzene	NSL	NSL	ug/kg	310 U	300 U	290 U	1400 U	1300 U	320 U	260 U	260 U	250 U	220 U	220 U	1800 U	360 U	350 U	320 U	270 U	280 U	270 U	320 U	310 U	290 U	210 U	220 U	360 UJ	300 UJ
N-Nitroso-di-n-propylamine	NSL	NSL	ug/kg	310 U	300 U	290 U	1400 U	1300 U	320 U	260 U	260 U	250 U	220 U	220 U	1800 U	360 U	350 UJ	320 U	270 U	280 U	270 U	320 U	310 U	290 U	210 U	220 U	360 UJ	300 UJ
N-Nitrosodiphenylamine	NSL	NSL	ug/kg	310 U	300 U	290 U	1400 U	1300 U	320 U	260 U	260 U	250 U	220 U	220 U	1800 U	360 U	350 U	320 U	270 U	280 U	270 U	320 U	310 U	290 U	210 U	220 U	360 UJ	300 UJ
Pentachlorophenol	NSL	NSL	ug/kg	590 UJ	580 UJ	570 UJ	2800 UJ	2500 UJ	620 UJ	510 UJ	500 UJ	480 UJ	420 UJ	420 UJ	3600 UJ	700 UJ	690 U	620 UJ	530 UJ	540 UJ	530 UJ	620 UJ	610 UJ	560 UJ	410 UJ	420 UJ	700 UJ	580 UJ
Phenanthrene**	204	1170	ug/kg	**440**	**810**	**620**	**680 J**	**430 J**	170 J	150 J	**280**	170 J	36 J	220 U	200 J	130 J	160 J	170 J	170 J	190 J	**270 J**	130 J	180 J	200 J	59 J	220 U	**290 J**	**610 J**
Phenol	NSL	NSL	ug/kg	310 U	300 U	290 U	1400 U	1300 U	320 U	260 U	260 U	250 U	220 U	220 U	1800 U	360 U	350 U	320 U	270 U	280 U	270 U	320 U	310 U	290 U	210 U	220 U	360 UJ	300 UJ
Pyrene**	195	1520	ug/kg	**780**	**1400**	**1000**	**1000 J**	**560 J**	**400 J**	**320**	**590**	**520**	95 J	220 U	**430 J**	**310 J**	**320 J**	**350 J**	**330 J**	**360 J**	**580**	**490**	**540**	**870**	140 J	220 U	**680**	**1300 J**
Total PAHs 17 ND = 1/2RL	1610	22800	ug/kg	**4359**	**8553**	**6013**	**7619**	**5021**	**2557**	**1873**	**3374**	**2446**	1217	**1777**	**8970**	**2668**	**2452**	**2257**	**1986**	**2203**	**3152**	**2535**	**2990**	**3816**	1218	**1772**	**4115**	**7860**

NOTES:
** Analytes included in the 17PAH total
J = Indicates that the concentration is an estimated value.
R = Result is rejected
U = Indicates the analyte was analyzed for but not detected.
µg/kg = Micrograms per kilogram.
TEC = Threshold effect concentration.
Development and Evaluation of Consensus-Based Sediment Quality Guidelines for Freshwater Ecosystems (MacDonald et al. 2000).
PEC = Probable effect concentration.
Development and Evaluation of Consensus-Based Sediment Quality Guidelines for Freshwater Ecosystems (MacDonald et al. 2000).
Bolded values exceed the TEC.
Bolded and Gray shaded values exceed the PEC.
NSL = No Screening Level.
Submitted samples are presented in ascending numerical order.
*Samples presented are displayed in Figure 4-3C

TABLE 4-6C* SEDIMENT RESULTS FOR SEMIVOLATILE ORGANIC ANALYSIS (SVOA) IN AREA C
PHASE 2 LOWER MAUMEE RIVER SITE CHARACTERIZATION
TOLEDO, OHIO (JUNE 2013)

			Sample Location:	R13-52		LMR13-53		LMR13-70			LMR13-72						LMR13-74				LMR13-75			
			Sample Name:	LMR13-52-024FD	LMR13-52-048	LMR13-53-012	LMR13-53-024	LMR13-70-012	LMR13-70-024	LMR13-70-048	LMR13-72-012	LMR13-72-024	LMR13-72-024FD	LMR13-72-048	LMR13-72-072	LMR13-72-096	LMR13-74-012	LMR13-74-024	LMR13-74-048	LMR13-74-072	LMR13-75-012	LMR13-75-024	LMR13-75-024 FD	LMR13-76-012
			Sample Depth (ft):	1-2	2-5	0-1	1-2	0-1	1-2	2-4	0-1	1-2	1-2	2-4	4-6	6-8	0-1	1-2	2-4	4-6	0-1	1-2	1-2	0-1
			Date Sampled:	6/20/13	6/20/13	6/20/13	6/20/13	6/20/13	6/20/13	6/20/13	6/14/13	6/14/13	6/14/13	6/14/13	6/14/13	6/14/13	6/15/13	6/15/13	6/15/13	6/15/13	6/15/13	6/15/13	6/15/13	6/15/13
Analyte	**TEC**	**PEC**	**Unit**																					
1,1'-Biphenyl	NSL	NSL	ug/kg	230 UJ	230 UJ	300 UJ	260 UJ	390 UJ	320 U	10 J	280 U	26 J	280 U	580 U	560 U	1200 U	310 U	8.1 J	220 U	220 U	220 U	220 U	210 U	290 U
1,2,4,5-Tetrachlorobenzene	NSL	NSL	ug/kg	230 UJ	230 UJ	300 UJ	260 UJ	390 UJ	320 U	320 UJ	280 U	290 U	280 U	580 U	560 U	1200 U	310 U	240 U	220 U	220 U	220 U	220 U	210 U	290 U
2,2'-Oxybis(1-chloropropane)	NSL	NSL	ug/kg	230 UJ	230 UJ	300 UJ	260 UJ	390 UJ	320 U	320 UJ	280 U	290 U	280 U	580 U	560 U	1200 U	310 U	240 U	220 U	220 U	220 U	220 U	210 U	290 U
2,3,4,6-Tetrachlorophenol	NSL	NSL	ug/kg	230 UJ	230 UJ	300 UJ	260 UJ	390 UJ	320 U	320 UJ	280 U	290 U	280 U	580 U	560 U	1200 U	310 U	240 U	220 U	220 U	220 U	220 U	210 U	290 U
2,4,5-Trichlorophenol	NSL	NSL	ug/kg	230 UJ	230 UJ	300 UJ	260 UJ	390 UJ	320 U	320 UJ	280 U	290 U	280 U	580 U	560 U	1200 U	310 U	240 U	220 U	220 U	220 U	220 U	210 U	290 U
2,4,6-Trichlorophenol	NSL	NSL	ug/kg	230 UJ	230 UJ	300 UJ	260 UJ	390 UJ	320 U	320 UJ	280 U	290 U	280 U	580 U	560 U	1200 U	310 U	240 U	220 U	220 U	220 U	220 U	210 U	290 U
2,4-Dichlorophenol	NSL	NSL	ug/kg	230 UJ	230 UJ	300 UJ	260 UJ	390 UJ	320 U	320 UJ	280 U	290 U	280 U	580 U	560 U	1200 U	310 U	240 U	220 U	220 U	220 U	220 U	210 U	290 U
2,4-Dimethylphenol	NSL	NSL	ug/kg	230 UJ	230 UJ	300 UJ	260 UJ	390 UJ	320 U	320 UJ	280 U	290 U	280 U	580 U	560 U	1200 U	310 U	240 U	220 U	220 U	220 U	220 U	210 U	290 U
2,4-Dinitrophenol	NSL	NSL	ug/kg	450 UJ	440 UJ	590 UJ	510 UJ	750 UJ	610 U	630 UJ	540 UJ	560 U	550 U	1100 U	1100 U	2300 U	610 U	480 U	420 U	430 U	420 U	420 U	400 U	560 U
2,4-Dinitrotoluene	NSL	NSL	ug/kg	230 UJ	230 UJ	300 UJ	260 UJ	390 UJ	320 U	320 UJ	280 U	290 U	280 U	580 U	560 U	1200 U	310 U	240 U	220 U	220 U	220 U	220 U	210 U	290 U
2,6-Dinitrotoluene	NSL	NSL	ug/kg	230 UJ	230 UJ	300 UJ	260 UJ	390 UJ	320 U	320 UJ	280 U	290 U	280 U	580 U	560 U	1200 U	310 U	240 U	220 U	220 U	220 U	220 U	210 U	290 U
2-Chloronaphthalene	NSL	NSL	ug/kg	230 UJ	230 UJ	300 UJ	260 UJ	390 UJ	320 U	320 UJ	280 U	290 U	280 U	580 U	560 U	1200 U	310 U	240 U	220 U	220 U	220 U	220 U	210 U	290 U
2-Chlorophenol	NSL	NSL	ug/kg	230 UJ	230 UJ	300 UJ	260 UJ	390 UJ	320 U	320 UJ	280 U	290 U	280 U	580 U	560 U	1200 U	310 U	240 U	220 U	220 U	220 U	220 U	210 U	290 U
2-Methylnaphthalene**	NSL	NSL	ug/kg	31 J	26 J	30 J	23 J	24 J	320 U	44 J	38 J	77 J	69 J	120 J	560 U	150 J	310 U	25 J	220 U	220 U	220 U	220 U	210 U	290 U
2-Methylphenol	NSL	NSL	ug/kg	230 UJ	230 UJ	300 UJ	260 UJ	390 UJ	320 U	320 UJ	280 U	290 U	280 U	580 U	560 U	1200 U	310 U	240 U	220 U	220 U	220 U	220 U	210 U	290 U
2-Nitroaniline	NSL	NSL	ug/kg	450 UJ	440 UJ	590 UJ	510 UJ	750 UJ	610 U	630 UJ	540 UJ	560 U	550 U	1100 U	1100 U	2300 U	610 U	480 U	420 U	430 U	420 U	420 U	400 U	560 U
2-Nitrophenol	NSL	NSL	ug/kg	230 UJ	230 UJ	300 UJ	260 UJ	390 UJ	320 U	320 UJ	280 U	290 U	280 U	580 U	560 U	1200 U	310 U	240 U	220 U	220 U	220 U	220 U	210 U	290 U
3,3-Dichlorobenzidine	NSL	NSL	ug/kg	230 UJ	230 UJ	300 UJ	260 UJ	390 UJ	320 UJ	320 UJ	280 UJ	290 U	280 U	580 U	560 UJ	1200 U	310 UJ	240 UJ	220 U	220 UJ	220 U	220 U	210 UJ	290 UJ
3-Nitroaniline	NSL	NSL	ug/kg	450 UJ	440 UJ	590 UJ	510 UJ	750 UJ	610 U	630 UJ	540 U	560 U	550 U	1100 U	1100 U	2300 U	610 U	480 U	420 U	430 U	420 U	420 U	400 U	560 U
4,6-Dinitro-2-methylphenol	NSL	NSL	ug/kg	450 UJ	440 UJ	590 UJ	510 UJ	750 UJ	610 U	630 UJ	540 U	560 U	550 U	1100 U	1100 U	2300 U	610 U	480 U	420 U	430 U	420 U	420 U	400 U	560 U
4-Bromophenyl-phenylether	NSL	NSL	ug/kg	230 UJ	230 UJ	300 UJ	260 UJ	390 UJ	320 U	320 UJ	280 U	290 U	280 U	580 U	560 U	1200 U	310 U	240 U	220 U	220 U	220 U	220 U	210 U	290 U
4-Chloro-3-methylphenol	NSL	NSL	ug/kg	230 UJ	230 UJ	300 UJ	260 UJ	390 UJ	320 U	320 UJ	280 U	290 U	280 U	580 U	560 U	1200 U	310 U	240 U	220 U	220 U	220 U	220 U	210 U	290 U
4-Chloroaniline	NSL	NSL	ug/kg	230 UJ	230 UJ	300 UJ	260 UJ	390 UJ	320 UJ	320 UJ	280 UJ	290 U	280 U	580 U	560 UJ	1200 U	310 UJ	240 UJ	220 U	220 UJ	220 U	220 U	210 UJ	290 UJ
4-Chlorophenyl-phenylether	NSL	NSL	ug/kg	230 UJ	230 UJ	300 UJ	260 UJ	390 UJ	320 U	320 UJ	280 U	290 U	280 U	580 U	560 U	1200 U	310 U	240 U	220 U	220 U	220 U	220 U	210 U	290 U
4-Methylphenol	NSL	NSL	ug/kg	230 UJ	230 UJ	300 UJ	260 UJ	21 J	320 U	14 J	280 U	290 U	280 U	580 U	560 U	1200 U	310 U	240 U	220 U	220 U	220 U	220 U	210 U	290 U
4-Nitroaniline	NSL	NSL	ug/kg	450 UJ	440 UJ	590 UJ	510 UJ	750 UJ	610 U	630 UJ	540 U	560 U	550 U	1100 U	1100 U	2300 U	610 U	480 U	420 U	430 U	420 U	420 U	400 U	560 U
4-Nitrophenol	NSL	NSL	ug/kg	450 UJ	440 UJ	590 UJ	510 UJ	750 UJ	610 U	630 UJ	540 U	560 U	550 U	1100 U	1100 U	2300 U	610 U	480 U	420 U	430 U	420 U	420 U	400 U	560 U
Acenaphthene**	NSL	NSL	ug/kg	73 J	79 J	100 J	76 J	70 J	140 J	230 J	110 J	150 J	170 J	290 J	220 J	1200	23 J	150 J	27 J	220 U	9.2 J	220 U	210 U	49 J
Acenaphthylene**	NSL	NSL	ug/kg	24 J	28 J	26 J	260 UJ	16 J	320 U	120 J	81 J	88 J	90 J	140 J	87 J	220 J	9.8 J	35 J	220 U	220 U	220 U	220 U	210 U	290 U
Acetophenone	NSL	NSL	ug/kg	230 UJ	230 UJ	300 UJ	260 UJ	23 J	320 U	320 UJ	280 U	22 J	21 J	580 U	560 U	1200 U	310 U	240 U	220 U	220 U	220 U	220 U	210 U	290 U
Anthracene**	57.2	845	ug/kg	**150 J**	**120 J**	**85 J**	**110 J**	**83 J**	**150 J**	**250 J**	**240 J**	**150 J**	**140 J**	**520 J**	**400 J**	**2300**	27 J	**160 J**	29 J	220 U	18 J	220 U	210 U	46 J
Atrazine	NSL	NSL	ug/kg	230 UJ	230 UJ	300 UJ	260 UJ	390 UJ	320 U	320 UJ	280 U	290 U	280 U	580 U	560 U	1200 U	310 U	240 U	220 U	220 U	220 U	220 U	210 U	290 U
Benzaldehyde	NSL	NSL	ug/kg	26 J	29 J	42 J	34 J	57 J	46 J	43 J	65 J	40 J	42 J	57 J	560 U	1200 U	32 J	43 J	19 J	27 J	220 U	16 J	19 J	41 J
Benzo(a)anthracene**	108	1050	ug/kg	**560 J**	**410 J**	**460 J**	**340 J**	**410 J**	**310 J**	**1100 J**	**1100**	**1900**	**2000**	**2800**	**1100**	**3700**	**150 J**	**600**	40 J	220 U	27 J	220 U	210 U	**210 J**
Benzo(a)pyrene**	150	1450	ug/kg	**480 J**	**360 J**	**330 J**	**250 J**	**300 J**	**280 J**	**800 J**	**1200**	**1000**	**930**	**1400**	**790**	**2400**	140 J	**490**	36 J	220 U	17 J	220 U	210 U	140 J
Benzo(b)fluoranthene**	NSL	NSL	ug/kg	510 J	360 J	390 J	350 J	380 J	390	820 J	1200	1600 J	1500 J	1900 J	860	2400 J	240 J	540 J	26 J	220 UJ	15 J	220 UJ	210 UJ	220 J
Benzo(g,h,i)perylene**	NSL	NSL	ug/kg	280 J	210 J	170 J	180 J	200 J	160 J	480 J	790	980	920	1400	630 J	1700	140 J	430	26 J	220 U	12 J	220 U	210 UJ	140 J
Benzo(k)fluoranthene**	NSL	NSL	ug/kg	390 J	400 J	400 J	250 J	340 J	330	740 J	1200	820	920	1100	820	2200	150 J	480	33 J	220 U	19 J	220 U	210 U	190 J
Bis(2-chloroethoxy)methane	NSL	NSL	ug/kg	230 UJ	230 UJ	300 UJ	260 UJ	390 UJ	320 U	320 UJ	280 U	290 U	280 U	580 U	560 U	1200 U	310 U	240 U	220 U	220 U	220 U	220 U	210 U	290 U
Bis(2-chloroethyl)ether	NSL	NSL	ug/kg	230 UJ	230 UJ	300 UJ	260 UJ	390 UJ	320 U	320 UJ	280 U	290 U	280 U	580 U	560 U	1200 U	310 U	240 U	220 U	220 U	220 U	220 U	210 U	290 U
Bis(2-ethylhexyl)phthalate	NSL	NSL	ug/kg	230 UJ	230 UJ	1500 J	260 UJ	390 UJ	320 U	1600 J	280 U	290 U	280 U	580 U	560 U	1200 U	310 U	240 U	220 U	220 U	220 U	220 U	210 U	290 U
Butylbenzylphthalate	NSL	NSL	ug/kg	230 UJ	230 UJ	300 UJ	260 UJ	390 UJ	320 U	320 UJ	280 U	290 U	280 U	580 U	560 U	1200 U	310 U	240 U	220 U	220 U	220 U	220 U	210 U	290 U
Caprolactam	NSL	NSL	ug/kg	230 UJ	230 UJ	300 UJ	260 UJ	390 UJ	320 U	320 UJ	280 U	290 U	280 U	580 U	560 U	1200 U	310 U	240 U	220 U	220 U	220 U	220 U	210 U	290 U
Carbazole	NSL	NSL	ug/kg	38 J	11 J	300 UJ	25 J	11 J	320 U	27 J	280 U	23 J	20 J	580 U	27 J	50 J	6.1 J	27 J	220 U	220 U	220 U	220 U	210 U	6.1 J
Chrysene**	166	1290	ug/kg	**630 J**	**450 J**	**470 J**	**400 J**	**420 J**	**430**	**990 J**	**1500**	**1400**	**1600**	**2400**	**1200**	**4000**	**230 J**	**660**	48 J	220 U	32 J	220 U	10 J	**280 J**
Dibenzo(a,h)anthracene**	33	NSL	ug/kg	**84 J**	**72 J**	**62 J**	**66 J**	**68 J**	**63 J**	**160 J**	**260 J**	**410 J**	**370 J**	**580 J**	**220 J**	**550 J**	**36 J**	**120 J**	7.1 J	220 UJ	220 UJ	220 UJ	210 UJ	**36 J**
Dibenzofuran	NSL	NSL	ug/kg	38 J	34 J	39 J	25 J	27 J	38 J	50 J	52 J	78 J	47 J	120 J	62 J	100 J	310 U	36 J	220 U	220 U	220 U	220 U	210 U	20 J
Diethylphthalate	NSL	NSL	ug/kg	230 UJ	230 UJ	300 UJ	260 UJ	390 UJ	320 U	320 UJ	280 U	290 U	280 U	580 U	560 U	1200 U	310 U	240 U	220 U	220 U	220 U	220 U	210 U	290 U
Dimethylphthalate	NSL	NSL	ug/kg	130 J	230 UJ	300 UJ	260 UJ	390 UJ	320 U	320 UJ	280 U	290 U	280 U	580 U	560 U	1200 U	310 U	240 U	220 U	220 U	220 U	220 U	210 U	290 U
Di-n-butylphthalate	NSL	NSL	ug/kg	230 UJ	230 UJ	300 UJ	260 UJ	390 UJ	320 U	320 UJ	280 U	290 U	150 J	580 U	26 J	1200 U	310 U	240 U	220 U	220 U	220 U	220 U	210 U	290 U
Di-n-octylphthalate	NSL	NSL	ug/kg	230 UJ	230 UJ	300 UJ	260 UJ	390 UJ	320 U	320 UJ	280 U	290 UJ	280 UJ	580 UJ	560 U	1200 UJ	310 UJ	240 UJ	220 UJ	220 UJ	220 UJ	220 UJ	210 UJ	290 UJ
Fluoranthene**	423	2230	ug/kg	**1000 J**	**800 J**	**660 J**	**740 J**	**530 J**	**840**	**1200 J**	**2300**	**1700**	**1800**	**3900**	**2000**	**8900**	270 J	**1100**	100 J	220 U	72 J	220 U	5.3 J	**460**
Fluorene**	77.4	536	ug/kg	**91 J**	**110 J**	**84 J**	62 J	**83 J**	**150 J**	**280 J**	**170 J**	**270 J**	**260 J**	**490 J**	**250 J**	**1600**	23 J	**93 J**	7.2 J	220 U	220 U	220 U	210 U	49 J
Hexachlorobenzene	NSL	NSL	ug/kg	230 UJ	230 UJ	300 UJ	260 UJ	390 UJ	320 U	320 UJ	280 U	290 U	280 U	580 U	560 U	1200 U	310 U	240 U	220 U	220 U	220 U	220 U	210 U	290 U
Hexachlorobutadiene	NSL	NSL	ug/kg	230 UJ	230 UJ	300 UJ	260 UJ	390 UJ	320 U	320 UJ	280 U	290 U	280 U	580 U	560 U	1200 U	310 U	240 U	220 U	220 U	220 U	220 U	210 U	290 U
Hexachlorocyclopentadiene	NSL	NSL	ug/kg	230 UJ	230 UJ	300 UJ	260 UJ	390 UJ	320 UJ	320 UJ	280 UJ	290 U	280 U	580 U	560 UJ	1200 U	310 UJ	240 UJ	220 U	220 UJ	220 U	220 U	210 UJ	290 UJ
Hexachloroethane	NSL	NSL	ug/kg	230 UJ	230 UJ	300 UJ	260 UJ	390 UJ	320 U	320 UJ	280 U	290 U	280 U	580 U	560 U	1200 U	310 U	240 U	220 U	220 U	220 U	220 U	210 U	290 U
Indeno(1,2,3-cd)pyrene**	NSL	NSL	ug/kg	250 J	220 J	180 J	170 J	170 J	140 J	450 J	690	860	760	1100	520 J	1400	110 J	310	19 J	220 U	9 J	220 U	210 UJ	110 J
Isophorone	NSL	NSL	ug/kg	230 UJ	230 UJ	300 UJ	260 UJ	390 UJ	320 U	320 UJ	280 U	290 U	280 U	580 U	560 U	1200 U	310 U	240 U	220 U	220 U	220 U	220 U	210 U	290 U
Naphthalene**	176	561	ug/kg	48 J	53 J	85 J	50 J	110 J	320 U	140 J	100 J	140 J	120 J	**200 J**	95 J	150 J	14 J	43 J	2 J	220 U	220 U	220 U	210 U	9.8 J
Nitrobenzene	NSL	NSL	ug/kg	230 UJ	230 UJ	300 UJ	260 UJ	390 UJ	320 U	320 UJ	280 U	290 U	280 U	580 U	560 U	1200 U	310 UJ	240 UJ	220 UJ	220 UJ	220 UJ	220 UJ	210 U	290 UJ
N-Nitroso-di-n-propylamine	NSL	NSL	ug/kg	230 UJ	230 UJ	300 UJ	260 UJ	390 UJ	320 U	320 UJ	280 U	290 U	280 U	580 U	560 U	1200 U	310 U	240 U	220 U	220 U	220 U	220 U	210 U	290 U
N-Nitrosodiphenylamine	NSL	NSL	ug/kg	230 UJ	230 UJ	300 UJ	260 UJ	390 UJ	320 U	320 UJ	280 U	290 U	280 U	580 U	560 U	1200 U	310 U	240 U	220 U	220 U	220 U	220 U	210 U	290 U
Pentachlorophenol	NSL	NSL	ug/kg	450 UJ	440 UJ	590 UJ	510 UJ	750 UJ	610 UJ	630 UJ	540 UJ	560 UJ	550 UJ	1100 UJ	1100 U	2300 UJ	610 UJ	480 UJ	420 UJ	430 UJ	420 UJ	420 UJ	400 UJ	560 UJ
Phenanthrene**	204	1170	ug/kg	**620 J**	**400 J**	**360 J**	**490 J**	**330 J**	**820**	**1000 J**	**1000**	**900**	**990**	**2300**	**2000**	**9300**	85 J	**690**	67 J	220 U	27 J	220 U	210 U	120 J
Phenol	NSL	NSL	ug/kg	230 UJ	230 UJ	300 UJ	260 UJ	390 UJ	320 U	320 UJ	280 U	290 U	280 U	580 U	560 U	1200 U	310 U	240 U	220 U	220 U	220 U	220 U	210 U	290 U
Pyrene**	195	1520	ug/kg	**990 J**	**800 J**	**910 J**	**660 J**	**700 J**	**660 J**	**1600 J**	**2400**	**2800**	**3200**	**3400**	**2000**	**7600**	**310**	**1100**	130 J	220 U	61 J	220 U	7.2 J	**560**
Total PAHs 17 ND = 1/2RL	1610	22800	ug/kg	**6211**	**4898**	**4802**	**4347**	**4234**	**5343**	**10404**	**14379**	**15245**	**15839**	**24040**	**13472**	**49770**	**2113**	**7026**	817	**1870**	868	**1870**	1493	**2910**

NOTES:
** Analytes included in the 17PAH total
J = Indicates that the concentration is an estimated value.
R = Result is rejected
U = Indicates the analyte was analyzed for but not detected.
µg/kg = Micrograms per kilogram.
TEC = Threshold effect concentration.
Development and Evaluation of Consensus-Based Sediment Quality
Guidelines for Freshwater Ecosystems (MacDonald et al. 2000).
PEC = Probable effect concentration.
Development and Evaluation of Consensus-Based Sediment Quality
Guidelines for Freshwater Ecosystems (MacDonald et al. 2000).
Bolded values exceed the TEC.
Bolded and Gray shaded values exceed the PEC.
NSL = No Screening Level.
Submitted samples are presented in ascending numerical order.
*Samples presented are displayed in Figure 4-3C

TABLE 4-6C* SEDIMENT RESULTS FOR SEMIVOLATILE ORGANIC ANALYSIS (SVOA) IN AREA C
PHASE 2 LOWER MAUMEE RIVER SITE CHARACTERIZATION
TOLEDO, OHIO (JUNE 2013)

Sample Location:			LMR13-76			LMR13-83					LMR13-84				LMR13-85				LMR13-86				
Sample Name:			LMR13-76-024	LMR13-76-048	LMR13-76-072	LMR13-83-012	LMR13-83-024	LMR13-83-024FD	LMR13-83-048	LMR13-83-072	LMR13-84-012	LMR13-84-024	LMR13-84-048	LMR13-84-072	LMR13-85-012	LMR13-85-024	LMR13-85-024FD	LMR13-85-048	LMR13-86-012	LMR13-86-024	LMR13-86-048	LMR13-86-072	LMR13-86-096
Sample Depth (ft):			1-2	2-4	4-6	0-1	1-2	1-2	2-4	4-6	0-1	1-2	2-4	4-6	0-1	1-2	1-2	2-4	0-1	1-2	2-4	4-6	6-8
Date Sampled:			6/15/13	6/15/13	6/15/13	6/14/13	6/14/13	6/14/13	6/14/13	6/14/13	6/18/13	6/18/13	6/18/13	6/18/13	6/19/13	6/19/13	6/19/13	6/19/13	6/18/13	6/18/13	6/18/13	6/18/13	6/18/13
Analyte	**TEC**	**PEC**	**Unit**																				
1,1'-Biphenyl	NSL	NSL	ug/kg	220 U	210 U	420 U	230 U	240 U	230 U	220 U	210 U	280 U	290 U	260 U	230 U	360 U	330 U	340 U	310 U	18 J	320 U	330 U	310 U	1500 U
1,2,4,5-Tetrachlorobenzene	NSL	NSL	ug/kg	220 U	210 U	420 U	230 U	240 U	230 U	220 U	210 U	280 U	290 U	260 U	230 U	360 U	330 U	340 U	310 U	360 U	320 U	330 U	310 U	1500 U
2,2'-Oxybis(1-chloropropane)	NSL	NSL	ug/kg	220 U	210 U	420 U	230 U	240 U	230 U	220 U	210 U	280 U	290 U	260 U	230 U	360 U	330 U	340 U	310 U	360 U	320 U	330 U	310 U	1500 U
2,3,4,6-Tetrachlorophenol	NSL	NSL	ug/kg	220 U	210 U	420 U	230 U	240 U	230 U	220 U	210 U	280 U	290 U	260 U	230 U	360 U	330 U	340 U	310 U	360 U	320 U	330 U	310 U	1500 U
2,4,5-Trichlorophenol	NSL	NSL	ug/kg	220 U	210 U	420 U	230 U	240 U	230 U	220 U	210 U	280 U	290 U	260 U	230 U	360 U	330 U	340 U	310 U	360 U	320 U	330 U	310 U	1500 U
2,4,6-Trichlorophenol	NSL	NSL	ug/kg	220 U	210 U	420 U	230 U	240 U	230 U	220 U	210 U	280 U	290 U	260 U	230 U	360 U	330 U	340 U	310 U	360 U	320 U	330 U	310 U	1500 U
2,4-Dichlorophenol	NSL	NSL	ug/kg	220 U	210 U	420 U	230 U	240 U	230 U	220 U	210 U	280 U	290 U	260 U	230 U	360 U	330 U	340 U	310 U	360 U	320 U	330 U	310 U	1500 U
2,4-Dimethylphenol	NSL	NSL	ug/kg	220 U	210 U	420 U	230 U	240 U	230 U	220 UJ	210 U	280 U	290 U	260 U	230 U	360 U	330 U	340 U	310 U	360 U	320 U	330 U	310 U	1500 U
2,4-Dinitrophenol	NSL	NSL	ug/kg	430 U	410 U	820 U	460 U	470 U	450 U	430 U	400 U	550 U	560 U	500 U	440 U	700 U	650 UJ	660 U	600 UJ	690 U	620 U	640 U	600 U	2900 U
2,4-Dinitrotoluene	NSL	NSL	ug/kg	220 U	210 U	420 U	230 U	240 U	230 U	220 U	210 U	280 U	290 U	260 U	230 U	360 U	330 U	340 U	310 U	360 U	320 U	330 U	310 U	1500 U
2,6-Dinitrotoluene	NSL	NSL	ug/kg	220 U	210 U	420 U	230 U	240 U	230 U	220 U	210 U	280 U	290 U	260 U	230 U	360 U	330 U	340 U	310 U	360 U	320 U	330 U	310 U	1500 U
2-Chloronaphthalene	NSL	NSL	ug/kg	220 U	210 U	420 U	230 U	240 U	230 U	220 U	210 U	280 U	290 U	260 U	230 U	360 U	330 U	340 U	310 U	360 U	320 U	330 U	310 U	1500 U
2-Chlorophenol	NSL	NSL	ug/kg	220 U	210 U	420 U	230 U	240 U	230 U	220 U	210 U	280 U	290 U	260 U	230 U	360 U	330 U	340 U	310 U	360 U	320 U	330 U	310 U	1500 U
2-Methylnaphthalene**	NSL	NSL	ug/kg	220 U	15 J	30 J	230 U	11 J	230 U	220 U	210 U	280 U	290 U	260 U	19 J	360 U	27 J	340 U	25 J	60 J	52 J	95 J	430	2300
2-Methylphenol	NSL	NSL	ug/kg	220 U	210 U	420 U	230 U	240 U	230 U	220 UJ	210 U	280 U	290 U	260 U	230 U	360 U	330 U	340 U	310 U	360 U	320 U	330 U	310 U	1500 U
2-Nitroaniline	NSL	NSL	ug/kg	430 U	410 U	820 U	460 U	470 U	450 U	430 U	400 U	550 U	560 U	500 U	440 U	700 U	650 U	660 U	600 U	690 U	620 U	640 U	600 U	2900 U
2-Nitrophenol	NSL	NSL	ug/kg	220 U	210 U	420 U	230 U	240 U	230 U	220 U	210 U	280 U	290 U	260 U	230 U	360 U	330 U	340 U	310 U	360 U	320 U	330 U	310 U	1500 U
3,3'-Dichlorobenzidine	NSL	NSL	ug/kg	220 UJ	210 UJ	420 UJ	230 UJ	240 UJ	230 UJ	220 UJ	210 UJ	280 UJ	290 UJ	260 UJ	230 UJ	360 UJ	330 UJ	340 UJ	310 UJ	360 UJ	320 UJ	330 UJ	310 UJ	1500 UJ
3-Nitroaniline	NSL	NSL	ug/kg	430 U	410 U	820 U	460 U	470 U	450 U	430 U	400 U	550 U	560 U	500 U	440 U	700 U	650 U	660 U	600 U	690 U	620 U	640 U	600 U	2900 U
4,6-Dinitro-2-methylphenol	NSL	NSL	ug/kg	430 U	410 U	820 U	460 U	470 U	450 U	430 U	400 U	550 U	560 U	500 U	440 U	700 U	650 U	660 U	600 U	690 U	620 U	640 U	600 U	2900 U
4-Bromophenyl-phenylether	NSL	NSL	ug/kg	220 U	210 U	420 U	230 U	240 U	230 U	220 U	210 U	280 U	290 U	260 U	230 U	360 U	330 U	340 U	310 U	360 U	320 U	330 U	310 U	1500 U
4-Chloro-3-methylphenol	NSL	NSL	ug/kg	220 U	210 U	420 U	230 U	240 U	230 U	220 U	210 U	280 U	290 U	260 U	230 U	360 U	330 U	340 U	310 U	360 U	320 U	330 U	310 U	1500 U
4-Chloroaniline	NSL	NSL	ug/kg	220 U	210 U	420 U	230 U	240 UJ	230 UJ	220 UJ	210 U	280 UJ	290 UJ	260 UJ	230 UJ	360 UJ	330 UJ	340 UJ	310 U	360 U	320 U	330 U	310 U	1500 U
4-Chlorophenyl-phenylether	NSL	NSL	ug/kg	220 U	210 U	420 U	230 U	240 U	230 U	220 U	210 U	280 U	290 U	260 U	230 U	360 U	330 U	340 U	310 U	360 U	320 U	330 U	310 U	1500 U
4-Methylphenol	NSL	NSL	ug/kg	220 U	210 U	420 U	230 U	240 U	230 UJ	220 UJ	210 UJ	280 U	290 U	260 U	230 U	360 U	330 U	340 U	310 U	47 J	320 U	330 U	310 U	1500 U
4-Nitroaniline	NSL	NSL	ug/kg	430 U	410 U	820 U	460 U	470 U	450 U	430 U	400 U	550 U	560 U	500 U	440 U	700 U	650 U	660 U	600 U	690 U	620 U	640 U	600 U	2900 U
4-Nitrophenol	NSL	NSL	ug/kg	430 U	410 U	820 U	460 U	470 U	450 U	430 U	400 U	550 U	560 U	500 U	440 U	700 U	650 U	660 U	600 U	690 U	620 U	640 U	600 U	2900 U
Acenaphthene**	NSL	NSL	ug/kg	68 J	160 J	710	18 J	39 J	43 J	66 J	210 U	27 J	28 J	26 J	14 J	360 U	62 J	54 J	73 J	420	380	330	570	1500
Acenaphthylene**	NSL	NSL	ug/kg	220 U	15 J	38 J	230 U	21 J	21 J	220 U	210 U	280 U	290 U	260 U	230 U	360 U	330 U	340 U	18 J	140 J	81 J	330 U	48 J	120 J
Acetophenone	NSL	NSL	ug/kg	220 U	21 J	27 J	19 J	240 U	230 U	220 U	210 U	280 U	290 U	260 U	230 U	50 J	35 J	340 U	310 U	360 U	320 U	330 U	310 U	1500 U
Anthracene**	57.2	845	ug/kg	**63 J**	**98 J**	**430**	37 J	**76 J**	**100 J**	**110 J**	210 U	**88 J**	**65 J**	57 J	55 J	26 J	**94 J**	**71 J**	**91 J**	**510**	**300 J**	**460**	**280 J**	**4000**
Atrazine	NSL	NSL	ug/kg	220 U	210 U	420 U	230 U	240 U	230 U	220 U	210 U	280 U	290 U	260 U	230 U	360 U	330 U	340 U	310 U	360 U	320 U	330 U	310 U	1500 U
Benzaldehyde	NSL	NSL	ug/kg	24 J	210 U	420 U	28 J	43 J	40 J	43 J	210 U	38 J	46 J	260 U	20 J	43 J	43 J	47 J	39 J	42 J	320 U	330 U	310 U	1500 U
Benzo(a)anthracene**	108	1050	ug/kg	**180 J**	**470**	**930**	**110 J**	**320**	**310**	**250**	210 U	**350**	**210 J**	**130 J**	76 J	99 J	**240 J**	**320 J**	**280 J**	**1700**	**1400**	**930**	**730**	**5200 J**
Benzo(a)pyrene**	150	1450	ug/kg	110 J	**310**	**840**	92 J	**230 J**	**250**	150 J	210 U	**320**	**230 J**	140 J	68 J	110 J	**220 J**	**220 J**	**230 J**	**1400**	**970**	**1100**	**400**	**4700**
Benzo(b)fluoranthene**	NSL	NSL	ug/kg	130 J	400 J	820 J	140 J	330	250	130 J	210 U	360	190 J	120 J	66 J	110 J	220 J	350	260 J	1500 J	1200 J	890	590 J	5100
Benzo(g,h,i)perylene**	NSL	NSL	ug/kg	74 J	190 J	350 J	66 J	190 J	200 J	89 J	210 U	180 J	120 J	60 J	32 J	85 J	190 J	260 J	200 J	1200 J	910 J	520	360	1800
Benzo(k)fluoranthene**	NSL	NSL	ug/kg	160 J	290	690	73 J	220 J	280	180 J	210 U	340	230 J	130 J	71 J	140 J	230 J	240 J	220 J	960	870	1200	360	4500
Bis(2-chloroethoxy)methane	NSL	NSL	ug/kg	220 U	210 U	420 U	230 U	240 U	230 U	220 U	210 U	280 U	290 U	260 U	230 U	360 U	330 U	340 U	310 U	360 U	320 U	330 U	310 U	1500 U
Bis(2-chloroethyl)ether	NSL	NSL	ug/kg	220 U	210 U	420 U	230 U	240 U	230 U	220 U	210 U	280 U	290 U	260 U	230 U	360 U	330 U	340 U	310 U	360 U	320 U	330 U	310 U	1500 U
Bis(2-ethylhexyl)phthalate	NSL	NSL	ug/kg	220 U	210 U	420 U	230 U	240 U	230 U	220 U	210 U	280 U	290 U	260 U	230 U	360 U	330 U	340 U	310 U	360 U	2600	1700	310 U	8600
Butylbenzylphthalate	NSL	NSL	ug/kg	220 U	210 U	420 U	230 U	240 U	230 U	220 U	210 U	280 U	290 U	260 U	230 U	360 U	330 U	340 U	310 U	360 U	320 U	330 U	310 U	1500 U
Caprolactam	NSL	NSL	ug/kg	220 U	210 U	420 U	230 U	240 U	230 U	220 U	210 U	280 U	290 U	260 U	230 U	360 U	330 U	340 U	310 U	360 U	320 U	330 U	310 U	1500 U
Carbazole	NSL	NSL	ug/kg	220 U	10 J	72 J	11 J	240 U	230 U	220 U	210 U	280 U	290 U	260 U	230 U	360 U	330 U	16 J	12 J	72 J	30 J	58 J	100 J	860 J
Chrysene**	166	1290	ug/kg	**250**	**500**	**1100**	150 J	**390**	**380**	**220 J**	210 U	**470**	**250 J**	150 J	93 J	**170 J**	**370**	**410**	**350**	**1800**	**1200**	**1100**	**530**	**5800 J**
Dibenzo(a,h)anthracene**	33	NSL	ug/kg	29 J	**65 J**	**130 J**	17 J	**50 J**	**52 J**	**41 J**	210 U	**60 J**	30 J	20 J	12 J	360 U	**81 J**	**120 J**	**90 J**	**300 J**	**290 J**	**140 J**	**98 J**	**630 J**
Dibenzofuran	NSL	NSL	ug/kg	11 J	18 J	55 J	230 U	17 J	17 J	20 J	210 U	280 U	6.4 J	15 J	13 J	360 U	38 J	29 J	40 J	120 J	90 J	240 J	300 J	1100 J
Diethylphthalate	NSL	NSL	ug/kg	220 U	210 U	420 U	230 U	240 U	230 U	220 U	210 U	280 U	290 U	260 U	230 U	360 U	7.4 J	340 U	11 J	360 U	320 U	330 U	310 U	1500 U
Dimethylphthalate	NSL	NSL	ug/kg	220 U	210 U	420 U	230 U	240 U	230 U	220 U	210 U	280 U	290 U	260 U	230 U	360 U	330 U	340 U	310 U	360 U	320 U	330 U	310 U	1500 U
Di-n-butylphthalate	NSL	NSL	ug/kg	220 U	210 U	420 U	22 J	20 J	31 J	220 U	210 U	280 U	290 U	260 U	230 U	360 U	330 U	340 U	310 U	360 U	320 U	330 U	310 U	1500 U
Di-n-octylphthalate	NSL	NSL	ug/kg	10 J	23 J	48 J	230 U	240 U	230 UJ	220 UJ	210 UJ	280 U	290 U	260 U	230 U	360 U	330 U	340 U	310 U	360 UJ	320 UJ	330 U	310 U	1500 U
Fluoranthene**	423	2230	ug/kg	400	**910**	**2700**	280	**650**	**630**	**460**	210 U	**810**	370	270	150 J	210 J	410	**520**	330	**4200**	**2300**	**3300**	**1500**	**17000 J**
Fluorene**	77.4	536	ug/kg	38 J	**180 J**	**590**	17 J	23 J	39 J	38 J	210 U	26 J	15 J	25 J	27 J	360 U	72 J	59 J	**80 J**	**670**	**410**	**520**	**470**	**2900**
Hexachlorobenzene	NSL	NSL	ug/kg	220 U	210 U	420 U	230 U	240 U	230 U	220 U	210 U	280 U	290 U	260 U	230 U	360 U	330 U	340 U	310 U	360 U	320 U	330 U	310 U	1500 U
Hexachlorobutadiene	NSL	NSL	ug/kg	220 U	210 U	420 U	230 U	240 U	230 U	220 U	210 U	280 U	290 U	260 U	230 U	360 U	330 U	340 U	310 U	360 U	320 U	330 U	310 U	1500 U
Hexachlorocyclopentadiene	NSL	NSL	ug/kg	220 UJ	210 UJ	420 UJ	230 UJ	240 UJ	230 UJ	220 UJ	210 UJ	280 UJ	290 UJ	260 UJ	230 UJ	360 UJ	330 UJ	340 UJ	310 UJ	360 UJ	320 UJ	330 UJ	310 UJ	1500 UJ
Hexachloroethane	NSL	NSL	ug/kg	220 U	210 U	420 U	230 U	240 U	230 U	220 U	210 U	280 U	290 U	260 U	230 U	360 U	330 U	340 U	310 U	360 U	320 U	330 U	310 U	1500 U
Indeno(1,2,3-cd)pyrene**	NSL	NSL	ug/kg	62 J	160 J	330 J	67 J	150 J	170 J	89 J	210 U	170 J	89 J	65 J	29 J	78 J	180 J	200 J	180 J	970 J	740 J	460	290 J	1800
Isophorone	NSL	NSL	ug/kg	220 U	210 U	420 U	230 U	240 U	230 U	220 U	210 U	280 U	290 U	260 U	230 U	360 U	330 U	340 U	310 U	360 U	320 U	330 U	310 U	1500 U
Naphthalene**	176	561	ug/kg	7.5 J	29 J	50 J	8.9 J	14 J	230 U	220 U	210 U	280 U	11 J	8.6 J	38 J	15 J	120 J	67 J	93 J	360 U	320 U	**320 J**	**260 J**	**2400**
Nitrobenzene	NSL	NSL	ug/kg	220 U	210 U	420 U	230 U	240 U	230 U	220 U	210 U	280 U	290 U	260 U	230 U	360 U	330 U	340 U	310 U	360 U	320 U	330 U	310 U	1500 U
N-Nitroso-di-n-propylamine	NSL	NSL	ug/kg	220 U	210 U	420 U	230 U	240 U	230 UJ	220 UJ	210 UJ	280 U	290 U	260 U	230 U	360 U	330 U	340 U	310 U	360 U	320 U	330 U	310 U	1500 U
N-Nitrosodiphenylamine	NSL	NSL	ug/kg	220 U	210 U	420 U	230 U	240 U	230 U	220 U	210 U	280 U	290 U	260 U	230 U	360 U	330 U	340 U	310 U	360 U	320 U	330 U	310 U	1500 U
Pentachlorophenol	NSL	NSL	ug/kg	430 UJ	410 U	820 U	460 UJ	470 UJ	450 U	430 UJ	400 UJ	550 UJ	560 UJ	500 UJ	440 UJ	700 U	650 UJ	660 U	600 UJ	690 UJ	620 UJ	640 UJ	600 U	2900 UJ
Phenanthrene**	204	1170	ug/kg	**220**	**510**	**2400**	140 J	200 J	**230 J**	**280**	210 U	**280**	160 J	150 J	170 J	100 J	**360**	**360**	**350**	**3300**	**2000**	**2300**	**1500**	**15000**
Phenol	NSL	NSL	ug/kg	220 U	210 U	420 U	230 U	240 U	230 U	220 U	210 U	280 U	290 U	260 U	230 U	16 J	330 U	340 U	310 U	360 U	320 U	330 U	310 U	1500 U
Pyrene**	195	1520	ug/kg	**420**	**850**	**1800**	**340**	**790**	**870**	**470**	210 U	**650 J**	**510 J**	**290 J**	150 J	**310 J**	**640**	**700**	**640**	**3300**	**3100**	**1800 J**	**1400**	**8500 J**
Total PAHs 17 ND = 1/2RL	1610	22800	ug/kg	**2432**	**5152**	**13938**	**1786**	**3704**	**4055**	**2903**	**1785**	**4551**	**2798**	**1902**	1185	**2353**	**3681**	**4291**	**3510**	**22610**	**16363**	**15630**	**9816**	**83250**

NOTES:
** Analytes included in the 17PAH total
J = Indicates that the concentration is an estimated value.
R = Result is rejected
U = Indicates the analyte was analyzed for but not detected.
µg/kg = Micrograms per kilogram.
TEC = Threshold effect concentration.
Development and Evaluation of Consensus-Based Sediment Quality Guidelines for Freshwater Ecosystems (MacDonald et al. 2000).
PEC = Probable effect concentration.
Development and Evaluation of Consensus-Based Sediment Quality Guidelines for Freshwater Ecosystems (MacDonald et al. 2000).
Bolded values exceed the TEC.
Bolded and Gray shaded values exceed the PEC.
NSL = No Screening Level.
Submitted samples are presented in ascending numerical order.
*Samples presented are displayed in Figure 4-3C

TABLE 4-6C* SEDIMENT RESULTS FOR SEMIVOLATILE ORGANIC ANALYSIS (SVOA) IN AREA C
PHASE 2 LOWER MAUMEE RIVER SITE CHARACTERIZATION
TOLEDO, OHIO (JUNE 2013)

			Sample Location:	LMR13-87							LMR13-88			LMR13-94				LMR13-95					
			Sample Name:	LMR13-87-012	LMR13-87-024	LMR13-87-024FD	LMR13-87-048	LMR13-87-072	LMR13-87-096	LMR13-87-120	LMR13-88-012	LMR13-88-024	LMR13-88-048	LMR13-94-012	LMR13-94-024	LMR13-94-048	LMR13-94-072	LMR13-95-012	LMR13-95-024	LMR13-95-024FD	LMR13-95-048	LMR13-95-072	LMR13-95-096
			Sample Depth (ft):	0-1	1-2	1-2	2-4	4-6	6-8	8-10	0-1	1-2	2-4	0-1	1-2	2-4	4-6	0-1	1-2	1-2	2-4	4-6	6-8
			Date Sampled:	6/18/13	6/18/13	6/18/13	6/18/13	6/18/13	6/18/13	6/18/13	6/19/13	6/19/13	6/19/13	6/20/13	6/20/13	6/20/13	6/20/13	6/20/13	6/20/13	6/20/13	6/20/13	6/20/13	6/20/13	6/20/13
Analyte	**TEC**	**PEC**	**Unit**																				
1,1'-Biphenyl	NSL	NSL	ug/kg	1600 U	2000 J	3800 J	980 J	680 J	7800 J	19000 J	24000 U	14000 U	14000 UJ	1300 U	230 J	2800 UJ	11000 J	18000 J	240000 J	150000 J	43000 J	46000 J	14000 J
1,2,4,5-Tetrachlorobenzene	NSL	NSL	ug/kg	1600 U	6200 U	15000 U	2900 U	15000 U	26000 U	110000 U	24000 U	14000 U	14000 UJ	1300 U	2800 U	2800 UJ	14000 UJ	150000 U	1500000 UJ	700000 UJ	220000 UJ	380000 UJ	30000 UJ
2,2'-Oxybis(1-chloropropane)	NSL	NSL	ug/kg	1600 U	6200 U	15000 U	2900 U	15000 U	26000 U	110000 U	24000 U	14000 U	14000 UJ	1300 U	2800 U	2800 UJ	14000 UJ	150000 U	1500000 UJ	700000 UJ	220000 UJ	380000 UJ	30000 UJ
2,3,4,6-Tetrachlorophenol	NSL	NSL	ug/kg	1600 U	6200 U	15000 U	2900 U	15000 U	26000 U	110000 U	24000 U	14000 U	14000 UJ	1300 U	2800 U	2800 UJ	14000 UJ	150000 U	1500000 UJ	700000 UJ	220000 UJ	380000 UJ	30000 UJ
2,4,5-Trichlorophenol	NSL	NSL	ug/kg	1600 U	6200 U	15000 U	2900 U	15000 U	26000 U	110000 U	24000 U	14000 U	14000 UJ	1300 U	2800 U	2800 UJ	14000 UJ	150000 U	1500000 UJ	700000 UJ	220000 UJ	380000 UJ	30000 UJ
2,4,6-Trichlorophenol	NSL	NSL	ug/kg	1600 U	6200 U	15000 U	2900 U	15000 U	26000 U	110000 U	24000 U	14000 U	14000 UJ	1300 U	2800 U	2800 UJ	14000 UJ	150000 U	1500000 UJ	700000 UJ	220000 UJ	380000 UJ	30000 UJ
2,4-Dichlorophenol	NSL	NSL	ug/kg	1600 U	6200 U	15000 U	2900 U	15000 U	26000 U	110000 U	24000 U	14000 U	14000 UJ	1300 U	2800 U	2800 UJ	14000 UJ	150000 U	1500000 UJ	700000 UJ	220000 U	380000 UJ	30000 UJ
2,4-Dimethylphenol	NSL	NSL	ug/kg	1600 U	6200 U	15000 U	2900 U	15000 U	26000 U	110000 U	24000 U	14000 U	14000 UJ	1300 U	2800 U	2800 UJ	14000 UJ	150000 U	1500000 UJ	700000 UJ	220000 UJ	380000 UJ	30000 UJ
2,4-Dinitrophenol	NSL	NSL	ug/kg	3100 U	12000 U	30000 U	5600 U	28000 U	51000 U	210000 U	47000 UJ	27000 U	28000 UJ	2600 U	5500 U	5500 UJ	27000 UJ	290000 U	2900000 UJ	1400000 UJ	430000 UJ	750000 UJ	58000 UJ
2,4-Dinitrotoluene	NSL	NSL	ug/kg	1600 U	6200 U	15000 U	2900 U	15000 U	26000 U	110000 U	24000 U	14000 U	14000 UJ	1300 U	2800 U	2800 UJ	14000 UJ	150000 U	1500000 UJ	700000 UJ	220000 UJ	380000 UJ	30000 UJ
2,6-Dinitrotoluene	NSL	NSL	ug/kg	1600 U	6200 U	15000 U	2900 U	15000 U	26000 U	110000 U	24000 U	14000 U	14000 UJ	1300 U	2800 U	2800 UJ	14000 UJ	150000 U	1500000 UJ	700000 UJ	220000 UJ	380000 UJ	30000 UJ
2-Chloronaphthalene	NSL	NSL	ug/kg	1600 U	6200 U	15000 U	2900 U	15000 U	26000 U	110000 U	24000 U	14000 U	14000 UJ	1300 U	2800 U	2800 UJ	14000 UJ	150000 U	1500000 UJ	700000 UJ	220000 UJ	380000 UJ	30000 UJ
2-Chlorophenol	NSL	NSL	ug/kg	1600 U	6200 U	15000 U	2900 U	15000 U	26000 U	110000 U	24000 U	14000 U	14000 UJ	1300 U	2800 U	2800 UJ	14000 UJ	150000 U	1500000 UJ	700000 UJ	220000 UJ	380000 UJ	30000 UJ
2-Methylnaphthalene**	NSL	NSL	ug/kg	610 J	16000	34000	11000	4000 J	36000	91000 J	19000 J	8900 J	37000 J	490 J	4100	9000 J	79000 J	120000 J	1200000 J	780000 J	210000 J	290000 J	60000 J
2-Methylphenol	NSL	NSL	ug/kg	1600 U	6200 U	15000 U	2900 U	15000 U	26000 U	110000 U	24000 U	14000 U	14000 UJ	1300 U	2800 U	2800 UJ	14000 UJ	150000 U	1500000 UJ	700000 UJ	220000 UJ	380000 UJ	30000 UJ
2-Nitroaniline	NSL	NSL	ug/kg	3100 U	12000 U	30000 U	5600 U	28000 U	51000 U	210000 U	47000 U	27000 U	28000 UJ	2600 U	5500 U	5500 UJ	27000 UJ	290000 U	2900000 UJ	1400000 UJ	430000 UJ	750000 UJ	58000 UJ
2-Nitrophenol	NSL	NSL	ug/kg	1600 U	6200 U	15000 U	2900 U	15000 U	26000 U	110000 U	24000 U	14000 U	14000 UJ	1300 U	2800 U	2800 UJ	14000 UJ	150000 U	1500000 UJ	700000 UJ	220000 UJ	380000 UJ	30000 UJ
3,3'-Dichlorobenzidine	NSL	NSL	ug/kg	1600 U	6200 U	15000 U	2900 U	15000 U	26000 U	110000 U	24000 U	14000 U	14000 UJ	1300 U	2800 U	2800 UJ	14000 UJ	150000 U	1500000 UJ	700000 UJ	220000 UJ	380000 UJ	30000 UJ
3-Nitroaniline	NSL	NSL	ug/kg	3100 U	12000 U	30000 U	5600 U	28000 U	51000 U	210000 U	47000 U	27000 U	28000 UJ	2600 U	5500 U	5500 UJ	27000 UJ	290000 U	2900000 UJ	1400000 UJ	430000 UJ	750000 UJ	58000 UJ
4,6-Dinitro-2-methylphenol	NSL	NSL	ug/kg	3100 U	12000 U	30000 U	5600 U	28000 U	51000 U	210000 U	47000 U	27000 U	28000 UJ	2600 U	5500 U	5500 UJ	27000 UJ	290000 U	2900000 UJ	1400000 UJ	430000 UJ	750000 UJ	58000 UJ
4-Bromophenyl-phenylether	NSL	NSL	ug/kg	1600 U	6200 U	15000 U	2900 U	15000 U	26000 U	110000 U	24000 U	14000 U	14000 UJ	1300 U	2800 U	2800 UJ	14000 UJ	150000 U	1500000 UJ	700000 UJ	220000 UJ	380000 UJ	30000 UJ
4-Chloro-3-methylphenol	NSL	NSL	ug/kg	1600 U	6200 U	15000 U	2900 U	15000 U	26000 U	110000 U	24000 U	14000 U	14000 UJ	1300 U	2800 U	2800 UJ	14000 UJ	150000 U	1500000 UJ	700000 UJ	220000 UJ	380000 UJ	30000 UJ
4-Chloroaniline	NSL	NSL	ug/kg	1600 U	6200 U	15000 U	2900 U	15000 U	26000 U	110000 U	24000 U	14000 U	14000 UJ	1300 U	2800 U	2800 UJ	14000 UJ	150000 U	1500000 UJ	700000 UJ	220000 UJ	380000 UJ	30000 UJ
4-Chlorophenyl-phenylether	NSL	NSL	ug/kg	1600 U	6200 U	15000 U	2900 U	15000 U	26000 U	110000 U	24000 U	14000 U	14000 UJ	1300 U	2800 U	2800 UJ	14000 UJ	150000 U	1500000 UJ	700000 UJ	220000 UJ	380000 UJ	30000 UJ
4-Methylphenol	NSL	NSL	ug/kg	1600 U	6200 U	15000 U	2900 U	15000 U	26000 U	2900 J	24000 U	14000 U	14000 UJ	1300 U	2800 U	2800 UJ	14000 UJ	150000 U	1500000 UJ	700000 UJ	220000 UJ	380000 UJ	30000 UJ
4-Nitroaniline	NSL	NSL	ug/kg	3100 U	12000 U	30000 U	5600 U	28000 U	51000 U	210000 U	47000 U	27000 U	28000 UJ	2600 U	5500 U	5500 UJ	27000 UJ	290000 U	2900000 UJ	1400000 UJ	430000 UJ	750000 UJ	58000 UJ
4-Nitrophenol	NSL	NSL	ug/kg	3100 U	12000 U	30000 U	5600 U	28000 U	51000 U	210000 U	47000 U	27000 U	28000 UJ	2600 U	5500 U	5500 UJ	27000 UJ	290000 U	2900000 UJ	1400000 UJ	430000 UJ	750000 UJ	58000 UJ
Acenaphthene**	NSL	NSL	ug/kg	3500	12000	20000	10000	2100 J	5500 J	14000 J	20000 J	38000	36000 J	2300	5100	5800 J	51000 J	53000 J	130000 J	98000 J	200000 J	170000 J	62000 J
Acenaphthylene**	NSL	NSL	ug/kg	450 J	5000 J	11000 J	2600 J	15000 U	5900 J	20000 J	24000 U	1500 J	1100 J	160 J	960 J	260 J	910 J	53000 J	840000 J	600000 J	220000 UJ	380000 UJ	30000 UJ
Acetophenone	NSL	NSL	ug/kg	1600 U	6200 U	15000 U	2900 U	15000 U	26000 U	110000 U	24000 U	14000 U	14000 UJ	1300 U	2800 U	2800 UJ	14000 UJ	150000 U	1500000 UJ	700000 UJ	220000 UJ	380000 UJ	30000 UJ
Anthracene**	57.2	845	ug/kg	**5200**	**20000**	**40000**	**12000**	**4300 J**	**22000 J**	**75000 J**	**21000 J**	**46000**	**43000 J**	**4100**	**9600**	**5900 J**	**50000 J**	**130000 J**	**1100000 J**	**760000 J**	**190000 J**	**120000 J**	**44000 J**
Atrazine	NSL	NSL	ug/kg	1600 U	6200 U	15000 U	2900 U	15000 U	26000 U	110000 U	24000 U	14000 U	14000 UJ	1300 U	2800 U	2800 UJ	14000 UJ	150000 U	1500000 UJ	700000 UJ	220000 UJ	380000 UJ	30000 UJ
Benzaldehyde	NSL	NSL	ug/kg	190 J	6200 U	15000 U	2900 U	15000 U	26000 U	110000 U	24000 U	14000 U	14000 UJ	1300 U	2800 U	2800 UJ	14000 UJ	150000 U	1500000 UJ	700000 UJ	220000 UJ	380000 UJ	30000 UJ
Benzo(a)anthracene**	108	1050	ug/kg	**7900**	**20000**	**38000**	**14000**	**4900 J**	**22000 J**	**66000 J**	**24000 J**	**34000**	**33000 J**	**7200**	**16000**	**6200 J**	**33000 J**	**110000 J**	1500000 UJ	700000 UJ	220000 UJ	380000 UJ	30000 UJ
Benzo(a)pyrene**	150	1450	ug/kg	**5700**	**15000**	**30000**	**11000**	**4300 J**	**19000 J**	**53000 J**	**20000 J**	**28000**	**25000 J**	**6500**	**13000**	**5000 J**	**24000 J**	**87000 J**	**590000 J**	**400000 J**	**85000 J**	**38000 J**	**19000 J**
Benzo(b)fluoranthene**	NSL	NSL	ug/kg	5800 J	17000 J	20000 J	9700 J	2900 J	12000 J	33000 J	13000 J	20000	21000 J	5300	11000	3400 J	24000 J	75000 J	510000 J	270000 J	66000 J	22000 J	13000 J
Benzo(g,h,i)perylene**	NSL	NSL	ug/kg	3600 J	5900 J	18000 J	7700 J	2800 J	7900 J	25000 J	15000 J	13000 J	12000 J	3200 J	8600	3200 J	13000 J	39000 J	250000 J	200000 J	36000 J	380000 UJ	9700 J
Benzo(k)fluoranthene**	NSL	NSL	ug/kg	5600	14000	34000	11000	5500 J	22000 J	61000 J	22000 J	23000	18000 J	7900	12000	4900 J	17000 J	77000 J	510000 J	370000 J	71000 J	42000 J	19000 J
Bis(2-chloroethoxy)methane	NSL	NSL	ug/kg	1600 U	6200 U	15000 U	2900 U	15000 U	26000 U	110000 U	24000 U	14000 U	14000 UJ	1300 U	2800 U	2800 UJ	14000 UJ	150000 U	1500000 UJ	700000 UJ	220000 UJ	380000 UJ	30000 UJ
Bis(2-chloroethyl)ether	NSL	NSL	ug/kg	1600 U	6200 U	15000 U	2900 U	15000 U	26000 U	110000 U	24000 U	14000 U	14000 UJ	1300 U	2800 U	2800 UJ	14000 UJ	150000 U	1500000 UJ	700000 UJ	220000 UJ	380000 UJ	30000 UJ
Bis(2-ethylhexyl)phthalate	NSL	NSL	ug/kg	1600 U	6200 U	15000 U	2900 U	15000 U	26000 U	110000 U	24000 U	14000 U	14000 UJ	1300 U	2800 U	2800 UJ	14000 UJ	150000 U	1500000 UJ	700000 UJ	220000 UJ	380000 UJ	30000 UJ
Butylbenzylphthalate	NSL	NSL	ug/kg	1600 U	6200 U	15000 U	2900 U	15000 U	26000 U	110000 U	24000 U	14000 U	14000 UJ	1300 U	2800 U	2800 UJ	14000 UJ	150000 U	1500000 UJ	700000 UJ	220000 UJ	380000 UJ	30000 UJ
Caprolactam	NSL	NSL	ug/kg	1600 U	6200 U	15000 U	2900 U	15000 U	26000 U	110000 U	24000 U	14000 U	14000 UJ	1300 U	2800 U	2800 UJ	14000 UJ	150000 U	1500000 UJ	700000 UJ	220000 UJ	380000 UJ	30000 UJ
Carbazole	NSL	NSL	ug/kg	200 J	1800 J	3300 J	1800 J	1400 J	12000 J	34000 J	2900 J	2100 J	2600 J	390 J	1500 J	1800 J	7600 J	29000 J	320000 J	220000 J	43000 J	380000 UJ	12000 J
Chrysene**	166	1290	ug/kg	**7200**	**17000**	**40000**	**14000**	**5700 J**	**22000 J**	**76000 J**	**26000**	**37000**	**33000 J**	**7200**	**16000**	**5700 J**	**30000 J**	**110000 J**	1500000 UJ	700000 UJ	220000 UJ	380000 UJ	30000 UJ
Dibenzo(a,h)anthracene**	33	NSL	ug/kg	**1300 J**	**2000 J**	**4700 J**	**2500 J**	**930 J**	**2100 J**	**6800 J**	**5200 J**	**5200 J**	**6200 J**	**960 J**	**3300**	**1500 J**	**4700 J**	**20000 J**	1500000 UJ	**89000 J**	**14000 J**	380000 UJ	**3900 J**
Dibenzofuran	NSL	NSL	ug/kg	940 J	10000	22000	6800	2600 J	26000	72000 J	10000 J	25000	25000 J	790 J	2800	4100 J	40000 J	93000 J	800000 J	520000 J	140000 J	130000 J	42000 J
Diethylphthalate	NSL	NSL	ug/kg	1600 U	6200 U	15000 U	2900 U	15000 U	26000 U	110000 U	24000 U	14000 U	14000 UJ	1300 U	2800 U	2800 UJ	14000 UJ	150000 U	1500000 UJ	700000 UJ	220000 UJ	380000 UJ	30000 UJ
Dimethylphthalate	NSL	NSL	ug/kg	1600 U	6200 U	15000 U	2900 U	15000 U	26000 U	110000 U	24000 U	14000 U	14000 UJ	1300 U	2800 U	2800 UJ	14000 UJ	150000 U	1500000 UJ	700000 UJ	220000 UJ	380000 UJ	30000 UJ
Di-n-butylphthalate	NSL	NSL	ug/kg	1600 U	6200 U	15000 U	2900 U	15000 U	26000 U	110000 U	24000 U	14000 U	14000 UJ	1300 U	2800 U	2800 UJ	14000 UJ	150000 U	1500000 UJ	700000 UJ	220000 UJ	380000 UJ	30000 UJ
Di-n-octylphthalate	NSL	NSL	ug/kg	1600 UJ	6200 UJ	15000 UJ	2900 UJ	15000 UJ	26000 UJ	110000 UJ	24000 U	14000 U	14000 UJ	1300 U	2800 U	2800 UJ	14000 UJ	150000 U	1500000 UJ	700000 UJ	220000 UJ	380000 UJ	30000 UJ
Fluoranthene**	423	2230	ug/kg	**20000**	**55000**	**110000**	**36000**	**15000**	**79000**	**220000**	**54000**	**83000**	**76000 J**	**18000**	**34000**	**14000 J**	**82000 J**	**270000**	**2200000 J**	**1500000 J**	**360000 J**	**190000 J**	**88000 J**
Fluorene**	77.4	536	ug/kg	**5500**	**27000**	**42000**	**16000**	**4300 J**	**39000**	**110000**	**16000 J**	**43000**	**43000 J**	**3200**	**8200**	**7700 J**	**56000 J**	**150000 J**	**1100000 J**	**740000 J**	**200000 J**	**150000 J**	**59000 J**
Hexachlorobenzene	NSL	NSL	ug/kg	1600 U	6200 U	15000 U	2900 U	15000 U	26000 U	110000 U	24000 U	14000 U	14000 UJ	1300 U	2800 U	2800 UJ	14000 UJ	150000 U	1500000 UJ	700000 UJ	220000 UJ	380000 UJ	30000 UJ
Hexachlorobutadiene	NSL	NSL	ug/kg	1600 U	6200 U	15000 U	2900 U	15000 U	26000 U	110000 U	24000 U	14000 U	14000 UJ	1300 U	2800 U	2800 UJ	14000 UJ	150000 U	1500000 UJ	700000 UJ	220000 UJ	380000 UJ	30000 UJ
Hexachlorocyclopentadiene	NSL	NSL	ug/kg	1600 UJ	6200 UJ	15000 UJ	2900 UJ	15000 U	26000 UJ	110000 UJ	24000 UJ	14000 U	14000 UJ	1300 UJ	2800 UJ	2800 UJ	14000 UJ	150000 UJ	1500000 UJ	700000 UJ	220000 UJ	380000 UJ	30000 UJ
Hexachloroethane	NSL	NSL	ug/kg	1600 U	6200 U	15000 U	2900 U	15000 U	26000 U	110000 U	24000 U	14000 U	14000 UJ	1300 U	2800 U	2800 UJ	14000 UJ	150000 U	1500000 UJ	700000 UJ	220000 UJ	380000 UJ	30000 UJ
Indeno(1,2,3-cd)pyrene**	NSL	NSL	ug/kg	3400 J	5600 J	15000 J	7000 J	2200 J	7500 J	22000 J	10000 J	13000 J	14000 J	3200 J	9600	3500 J	12000 J	35000 J	270000 J	210000 J	37000 J	380000 UJ	8700 J
Isophorone	NSL	NSL	ug/kg	1600 U	6200 U	15000 U	2900 U	15000 U	26000 U	110000 U	24000 U	14000 U	14000 UJ	1300 U	2800 U	2800 UJ	14000 UJ	150000 U	1500000 UJ	700000 UJ	220000 UJ	380000 UJ	30000 UJ
Naphthalene**	176	561	ug/kg	1600 U	**11000**	15000 U	**19000**	**110000**	**340000**	**780000**	**350000**	**39000**	**13000 J**	**2300**	**11000**	**12000 J**	**60000 J**	**1500000**	**12000000 J**	**8400000 J**	**3200000 J**	**4500000 J**	**330000 J**
Nitrobenzene	NSL	NSL	ug/kg	1600 U	6200 U	15000 U	2900 U	15000 U	26000 U	110000 U	24000 U	14000 U	14000 UJ	1300 U	2800 U	2800 UJ	14000 UJ	150000 U	1500000 UJ	700000 UJ	220000 UJ	380000 UJ	30000 UJ
N-Nitroso-di-n-propylamine	NSL	NSL	ug/kg	1600 U	6200 U	15000 U	2900 U	15000 U	26000 U	110000 U	24000 U	14000 U	14000 UJ	1300 U	2800 U	2800 UJ	14000 UJ	150000 U	1500000 UJ	700000 UJ	220000 UJ	380000 UJ	30000 UJ
N-Nitrosodiphenylamine	NSL	NSL	ug/kg	1600 U	6200 U	15000 U	2900 U	15000 U	26000 U	110000 U	24000 U	14000 U	14000 UJ	1300 U	2800 U	2800 UJ	14000 UJ	150000 U	1500000 UJ	700000 UJ	220000 UJ	380000 UJ	30000 UJ
Pentachlorophenol	NSL	NSL	ug/kg	3100 UJ	12000 U	30000 UJ	5600 UJ	28000 U	51000 U	210000 U	47000 UJ	27000 U	28000 UJ	2600 UJ	5500 U	5500 UJ	27000 UJ	290000 UJ	2900000 UJ	1400000 UJ	430000 UJ	750000 UJ	58000 UJ
Phenanthrene**	204	1170	ug/kg	**19000**	**71000**	**120000**	**38000**	**16000**	**130000**	**330000**	**66000**	**140000**	**140000 J**	**18000**	**32000**	**24000 J**	**170000 J**	**510000**	**3400000 J**	**2300000 J**	**600000 J**	**410000 J**	**180000 J**
Phenol	NSL	NSL	ug/kg	110 J	6200 U	15000 U	2900 U	15000 U	26000 U	1500 J	24000 U	14000 U	14000 UJ	1300 U	2800 U	2800 UJ	14000 UJ	150000 U	1500000 UJ	700000 UJ	220000 UJ	380000 UJ	30000 UJ
Pyrene**	195	1520	ug/kg	**12000**	**33000**	**67000**	**25000**	**11000 J**	**59000**	**160000**	**49000**	**78000**	**73000 J**	**14000 J**	**37000**	**17000 J**	**76000 J**	**520000 J**	**1600000 J**	**1100000 J**	**260000 J**	**150000 J**	**73000 J**
Total PAHs 17 ND = 1/2RL	1610	22800	ug/kg	**107560**	**346500**	**651200**	**246500**	**203430**	**830900**	**2142800**	**742200**	**650600**	**624300**	**104010**	**231460**	**129060**	**782610**	**3859000**	**27950000**	**18517000**	**5859000**	**7222000**	**1014300**

NOTES:
** Analytes included in the 17PAH total
J = Indicates that the concentration is an estimated value.
R = Result is rejected
U = Indicates the analyte was analyzed for but not detected.
µg/kg = Micrograms per kilogram.
TEC = Threshold effect concentration.
Development and Evaluation of Consensus-Based Sediment Quality Guidelines for Freshwater Ecosystems (MacDonald et al. 2000).
PEC = Probable effect concentration.
Development and Evaluation of Consensus-Based Sediment Quality Guidelines for Freshwater Ecosystems (MacDonald et al. 2000).
Bolded values exceed the TEC.
Bolded and Gray shaded values exceed the PEC.
NSL = No Screening Level.
Submitted samples are presented in ascending numerical order.
*Samples presented are displayed in Figure 4-3C

TABLE 4-7 SEDIMENT RESULTS FOR POLYCYCLIC AROMATIC HYDROCARBONS (PAHs)
PHASE 2 LOWER MAUMEE RIVER SITE CHARACTERIZATION
TOLEDO, OHIO (JUNE 2013)

			Sample Location:	LMR13-01	LMR13-03	LMR13-08	LMR13-13	LMR13-14	LMR13-15	LMR13-21		LMR13-25	LMR13-28	LMR13-30		LMR13-33	LMR13-35	LMR13-39	LMR13-42	LMR13-44	LMR13-45	LMR13-47
			Sample Name:	LMR13-01-012	LMR13-03-012	LMR13-08-012	LMR13-13-012	LMR13-14-012	LMR13-15-012	LMR13-21-012	LMR13-21-012FD	LMR13-25-012	LMR13-28-012	LMR13-30-012	LMR13-30-012FD	LMR13-33-012	LMR13-35-012	LMR13-39-012	LMR13-42-012	LMR13-44-012	LMR13-45-012	LMR13-47-012
			Sample Depth (ft):	0-1	0-1	0-1	0-1	0-1	0-1	0-1	0-1	0-1	0-1	0-1	0-1	0-1	0-1	0-1	0-1	0-1	0-1	0-1
			Date Sampled:	6/17/13	6/17/13	6/17/13	6/18/13	6/17/13	6/18/13	6/18/13	6/18/13	6/18/13	6/15/13	6/19/13	6/19/13	6/19/13	6/15/13	6/19/13	6/12/13	6/12/13	6/14/13	6/13/13
Analyte	**TEC**	**PEC**	**Unit**																			
1-Methylnaphthalene**	NSL	NSL	ug/kg	62 J	18 J	6.1 J	11 J	7.1 J	8.5 J	7.7 J	6.1 J	19 J	8.2 J	42 J	46 J	340 J	61 U	15 J	57	50 J	15 J	7.3 J
2-Methylnaphthalene**	NSL	NSL	ug/kg	92	38 J	9.8	19 J	12 J	14 J	17 J	13 J	39 J	13 J	86 J	96 J	610 J	61 U	24	97	83 J	70 U	11 J
Acenaphthene*	NSL	NSL	ug/kg	900 J	56 J	17	28 J	24 J	26 J	18 J	18 J	44 J	33 J	200	210	140	38 J	130	740	540	57 J	16 J
Acenaphthylene*	NSL	NSL	ug/kg	68 J	65 J	6.6 J	15 J	17 J	8.6 J	6.6 J	6.5 J	18 J	8 J	120	140	110 J	17 J	31	160	130 J	40 J	5.4 J
Anthracene*	57.2	845	ug/kg	**1100 J**	**140 J**	33	**71 J**	**64**	57 J	38	35	**110 J**	**64 J**	**400**	**420**	**1300 J**	**72**	**290 J**	**1300**	**700**	**120**	33 J
Benzo(a)anthracene*	108	1050	ug/kg	**1400 J**	**600 J**	**130 J**	**280 J**	**180**	**210 J**	**160**	**150**	**370 J**	**260**	**1900 J**	**2100 J**	**2200 J**	**300**	**720 J**	**2500 J**	**2600 J**	**500**	**150**
Benzo(a)pyrene*	150	1450	ug/kg	**980 J**	**510 J**	120 J	**270 J**	**170**	**220 J**	150	**160**	**320J**	**280**	**1300 J**	**1400 J**	**1500 J**	**270**	**580 J**	**2100**	**2300 J**	**570**	**190**
Benzo(b)fluoranthene*	NSL	NSL	ug/kg	710 J	610 J	200 J	320 J	220	210 J	110	120	290 J	340	1500 J	1400 J	1600 J	300	490 J	1800	1800 J	740 J	250
Benzo(e)pyrene	NSL	NSL	ug/kg	620 J	480 J	120 J	250 J	140	200 J	130	140 J	330 J	230	1100 J	1100 J	1300 J	220	370 J	1300	1400	420	170
Benzo(g,h,i)perylene*	NSL	NSL	ug/kg	470 J	360 J	130 J	170 UJ	170	150 J	80	100	210 UJ	220	1000 J	1100 J	560 J	190	220	900	950	270	110
Benzo(k)fluoranthene*	NSL	NSL	ug/kg	780 J	350 J	110 J	300 J	130	200 J	80	90	230 J	300	950 J	1200 J	1500 J	300	480 J	1600	1600	600	240
C1 Chrysenes	NSL	NSL	ug/kg	1500 J	880 J	110 J	310 J	170 J	270 J	380 J	360 J	790 J	190 J	1900 J	2000 J	2800 J	250 J	720 J	2300 J	3200 J	450 J	110 J
C1 Fluorenes	NSL	NSL	ug/kg	350 J	47 J	7.4 J	19 J	18 J	310 U	27 J	26 J	76 J	11 J	160 J	160 J	350 J	14 J	110 J	460 J	330 J	31 J	6.2 J
C1-Fluoranthenes/Pyrenes	NSL	NSL	ug/kg	2500 J	810 J	140 J	440 J	230 J	300 J	300 J	310 J	780 J	280 J	2700 J	2800 J	4300 J	330 J	1000 J	3300 J	4300 J	590 J	180 J
C1-Naphthalenes	NSL	NSL	ug/kg	100 J	39 J	11 J	19 J	13 J	310 U	16 J	12 J	39 J	14 J	87 J	96 J	610 J	15 J	25 J	110 J	87 J	29 J	12 J
C1-Phenanthrenes/Anthracenes	NSL	NSL	ug/kg	4900 J	590 J	110 J	200 J	210 J	190 J	250 J	250 J	770 J	180 J	2200 J	2300 J	5500 J	180 J	1400 J	4300 J	3100 J	320 J	110 J
C2 Chrysenes	NSL	NSL	ug/kg	1100 J	630 J	73 J	280 J	120 J	240 J	370 J	390 J	850 J	130 J	1100 J	1200 J	2700 J	170 J	500 J	1200 J	2500 J	420 J	110 J
C2 Fluorenes	NSL	NSL	ug/kg	460 J	90 J	9.2 J	41 J	26 J	310 U	57 J	56 J	160 J	16 J	230 J	240 J	870 J	25 J	150 J	940 J	500 J	47 J	13 J
C2-Fluoranthenes/Pyrenes**	NSL	NSL	ug/kg	1300 J	690 J	100 J	360 J	170 J	240 J	310 J	290 J	750 J	200 J	1700 J	1800 J	3300 J	220 J	580 J	2300 J	2900 J	500 J	120 J
C2-Naphthalenes	NSL	NSL	ug/kg	460 J	130 J	44 J	100 J	72 J	69 J	120 J	100 J	280 J	55 J	340 J	360 J	1200 J	72 J	110 J	3300 J	610 J	150 J	38 J
C2-Phenanthrenes/Anthracenes	NSL	NSL	ug/kg	2100 J	660 J	92 J	210 J	200 J	160 J	260 J	250 J	840 J	120 J	1700 J	1700 J	7000 J	150 J	870 J	4600 J	2700 J	380 J	78 J
C3 Chrysenes	NSL	NSL	ug/kg	510 J	290 J	50 J	110 J	83 J	87 J	160 J	160 J	430 J	66 J	610 J	670 J	1200 J	65 J	210 J	590 J	1200 J	150 J	60 J
C3 Fluorenes	NSL	NSL	ug/kg	580 J	270 J	6.9 U	81 J	76 J	52 J	99 J	91 J	290 J	21 J	490 J	530 J	2400 J	31 J	220 J	2100 J	960 J	200 J	14 J
C3-Fluoranthenes/Pyrenes**	NSL	NSL	ug/kg	680 J	460 J	58 J	230 J	100 J	140 J	230 J	220 J	570 J	89 J	970 J	960 J	2300 J	120 J	350 J	1600 J	2000 J	320 J	58 J
C3-Naphthalenes	NSL	NSL	ug/kg	2300 J	300 J	60 J	150 J	150 J	140 J	370 J	350 J	1100 J	88 J	890 J	930 J	1700 J	120 J	350 J	7000 J	2000 J	210 J	65 J
C3-Phenanthrenes/Anthracenes	NSL	NSL	ug/kg	1500 J	520 J	75 J	290 J	150 J	180 J	400 J	390 J	910 J	120 J	1400 J	1600 J	6300 J	170 J	550 J	5400 J	3700 J	430 J	96 J
C4 Chrysenes	NSL	NSL	ug/kg	200 J	130 J	19 J	41 J	36 J	44 J	71 J	70 J	140 J	21 J	250 J	250 J	440 J	24 J	71 J	280 J	470 J	70 U	20 J
C4-Naphthalenes	NSL	NSL	ug/kg	1200 J	360 J	77 J	120 J	180 J	120 J	380 J	330 J	870 J	74 J	830 J	800 J	2800 J	99 J	470 J	4600 J	2000 J	210 J	52 J
C4-Phenanthrenes/Anthracenes	NSL	NSL	ug/kg	720 J	460 J	52 J	230 J	120 J	110 J	230 J	220 J	530 J	69 J	1100 J	1100 J	4000 J	110 J	320 J	3600 J	2800 J	380 J	52 J
Chrysene*	166	1290	ug/kg	**1600 J**	**690 J**	**180 J**	**400 J**	**230**	**280 J**	**210**	**200**	**520 J**	**350**	**1900 J**	**2000 J**	**2600 J**	**410**	**770 J**	**2700 J**	**2700 J**	**640**	**230**
Dibenzo(a,h)anthracene*	33	NSL	ug/kg	**190 J**	**160 J**	**40**	**52 J**	**53**	**58 J**	**44**	**55**	**79 J**	**68 J**	**420**	**430**	**250 J**	**69**	**94**	**350 J**	**370 J**	**91**	30 J
Fluoranthene*	423	2230	ug/kg	**2600 J**	**930 J**	340 J	**520 J**	**450 J**	380	130	130	**490 J**	**600**	**2900 J**	**3100 J**	**5800 J**	**530**	**1700 J**	**5500 J**	**3200 J**	**1100 J**	380 J
Fluorene*	77.4	536	ug/kg	**1200 J**	64 J	21	55 J	35	36 J	31	31	70 J	53 J	**470**	**480**	**1000 J**	61 U	**160**	**2300 J**	**900**	60 J	28 J
Indeno(1,2,3-cd)pyrene*	NSL	NSL	ug/kg	480 J	350 J	120 J	170 UJ	150	140 J	64	84	210 UJ	210	930 J	950	580 J	200	230	970	1000	270	110
Naphthalene*	176	561	ug/kg	170 J	92 J	19	170 UJ	32 U	**310 U**	42	29	**210 UJ**	70 U	**190**	**220**	**2500 J**	61 U	58	**180**	160 J	70 U	33 U
Perylene	NSL	NSL	ug/kg	380 J	290 J	380 J	740 J	510 J	370	150	160	230 J	450	670	750	370 J	510	330 J	660	900	280	150
Phenanthrene*	204	1170	ug/kg	**5000 J**	**400 J**	160 J	200 J	**210**	180 J	95	89	**320 J**	**220**	**1700 J**	**1900 J**	**4000 J**	**220**	**1200 J**	**5400 J**	**2400 J**	**330**	150
Pyrene*	195	1520	ug/kg	**2700 J**	**750 J**	**250 J**	**520 J**	**350 J**	**360 J**	**210 J**	**210 J**	**580 J**	**470**	**2700 J**	**2900 J**	**3200 J**	**450**	**1200 J**	**4900 J**	**4100 J**	**820 J**	**320**
Total PAH 17 ND=1/2RL	1610	22800	ug/kg	**20440**	**6165**	**1886**	**3305**	**2481**	**2685**	1486	1521	**3795**	**3524**	**18666**	**20046**	**29450**	**3458**	**8377**	**33497**	**25533**	**6278**	**2270**
Total PAH 34 ND=1/2RL	NSL	NSL	ug/kg	43128	13793	3410	7277	5143	5888	5549	5463	13906	5841	38037	40336	77980	6201	16709	81740	61107	11465	3715

NOTES:
* Included in calculation of total 17PAH
** Excluded from calculation of total 34PAH
J = Indicates that the concentration is an estimated value.
U = Indicates the analyte was analyzed for but not detected.
µg/kg = Micrograms per kilogram.
TEC = Threshold effect concentration.
Development and Evaluation of Consensus-Based Sediment
Guidelines for Freshwater Ecosystems (MacDonald et al. 2000).
PEC = Probable effect concentration.
Development and Evaluation of Consensus-Based Sediment
Quality Guidelines for Freshwater Ecosystems (MacDonald et al. 2000).
Bolded values exceed the TEC.
Gray shaded values exceed the PEC.
NSL = No Screening Level.
Submitted samples are presented in ascending numerical order.

TABLE 4-7 SEDIMENT RESULTS FOR POLYCYCLIC AROMATIC HYDROCARBONS (PAHs)
PHASE 2 LOWER MAUMEE RIVER SITE CHARACTERIZATION
TOLEDO, OHIO (JUNE 2013)

Sample Location:				LMR13-49	LMR13-50	LMR13-51		LMR13-54	LMR13-55	LMR13-57	LMR13-58	LMR13-65	LMR13-66	LMR13-67	LMR13-69	LMR13-70	LMR13-72	LMR13-74
Sample Name:				LMR13-49-012	LMR13-50-012	LMR13-51-012	LMR13-51-012FD	LMR13-54-012	LMR13-55-012	LMR13-57-012	LMR13-58-012	LMR13-65-012	LMR13-66-012	LMR13-67-012	LMR13-69-012	LMR13-70-012	LMR13-72-012	LMR13-74-012
Sample Depth (ft):				0-1	0-1	0-1	0-1	0-1	0-1	0-1	0-1	0-1	0-1	0-1	0-1	0-1	0-1	0-1
Date Sampled:				6/14/13	6/14/13	6/13/13	6/13/13	6/19/13	6/19/13	6/14/13	6/20/13	6/20/13	6/20/13	6/19/13	6/20/13	6/20/13	6/14/13	6/15/13
Analyte	**TEC**	**PEC**	**Unit**															
1-Methylnaphthalene**	NSL	NSL	ug/kg	5.9 J	9.9 J	5.6 J	5.9 J	210 J	2700 J	220 J	48 U	8.3 J	11 J	23 J	14 J	9.7 J	18 J	61 U
2-Methylnaphthalene**	NSL	NSL	ug/kg	7.7	72 U	7.4 J	8.2 J	440 J	1400 J	430	48 U	35 U	18 J	41	35 U	17 J	30 J	61 U
Acenaphthene*	NSL	NSL	ug/kg	12	22 J	21 J	29 J	1700 J	9000 J	4800 J	68	14 J	110	21 J	20 J	53	85 J	22 J
Acenaphthylene*	NSL	NSL	ug/kg	3 J	6 J	5.7 J	6.2 J	390 J	540 J	280 J	48 U	6.8 J	34 U	7.5 J	7.8 J	17 J	50 J	6.3 J
Anthracene*	57.2	845	ug/kg	49	52 J	43 J	55 J	**2200 J**	**13000 J**	**5100 J**	**70**	29 J	**120**	35	33 J	**96**	**160**	**61 U**
Benzo(a)anthracene*	108	1050	ug/kg	**150**	**220**	**140**	**170**	**7000 J**	**13000 J**	**5300 J**	**200**	**110**	**340**	**200 J**	**160**	**250**	**870**	**140**
Benzo(a)pyrene*	150	1450	ug/kg	130	**250**	120 J	140	**5900 J**	**8600 J**	**3900 J**	**170**	130	**260**	**240**	**170**	**210**	**810**	140
Benzo(b)fluoranthene*	NSL	NSL	ug/kg	160	260	120 J	140	5500 J	8600 J	2800	240	190	250	280	200	270 J	670	150
Benzo(e)pyrene	NSL	NSL	ug/kg	100	190	94 J	110 J	3600 J	5900 J	2500	160	130	260	240	200	180	550	110
Benzo(g,h,i)perylene*	NSL	NSL	ug/kg	68 J	150	65 J	92 J	2600 J	3400 J	1500	170	160	200	170	170	210	590	100
Benzo(k)fluoranthene*	NSL	NSL	ug/kg	130	260	130	150	5000 J	7700 J	3200	150	110	200	200	120	180	720	160
C1 Chrysenes	NSL	NSL	ug/kg	110 J	170	140 J	190 J	3100 J	9000 J	6800 J	170 J	88 J	490 J	380 J	300 J	200 J	730 J	120 J
C1 Fluorenes	NSL	NSL	ug/kg	8.8 J	9.6 J	12 J	14 J	310 J	1700 J	960 J	16 J	6.4 J	48 J	19 J	26 J	17 J	50 J	7.6 J
C1-Fluoranthenes/Pyrenes	NSL	NSL	ug/kg	160 J	210	210 J	270 J	6500 J	20000 J	8700 J	240 J	110 J	560 J	330 J	240 J	270 J	920 J	180 J
C1-Naphthalenes	NSL	NSL	ug/kg	9 J	16 J	8.7 J	9.9 J	420 J	2700 J	440 J	48 U	16 J	20 J	42 J	26 J	19 J	31 J	7.7 J
C1-Phenanthrenes/Anthracenes	NSL	NSL	ug/kg	130 J	170	130 J	170 J	3100 J	23000 J	12000 J	180 J	98 J	570 J	230 J	380 J	240 J	620 J	92 J
C2 Chrysenes	NSL	NSL	ug/kg	86 J	110	110 J	150 J	1200 J	5300 J	8200 J	110 J	68 J	430 J	440 J	250 J	130 J	480 J	80 J
C2 Fluorenes	NSL	NSL	ug/kg	13 J	11 J	18 J	23 J	220 J	1900 J	1300 J	21 J	8.6 J	78 J	38 J	45 J	20 J	110 J	13 J
C2-Fluoranthenes/Pyrenes**	NSL	NSL	ug/kg	100 J	170	140 J	170 J	1900 J	8400 J	6000 J	160 J	83 J	440 J	350 J	230 J	180 J	650 J	110 J
C2-Naphthalenes	NSL	NSL	ug/kg	36 J	66 J	50 J	60 J	560 J	10000 J	3900 J	100 J	43 J	170 J	190 J	270 J	87 J	160 J	37 J
C2-Phenanthrenes/Anthracenes	NSL	NSL	ug/kg	90 J	110	120 J	150 J	1400 J	10000 J	9400 J	150 J	72 J	430 J	240 J	270 J	180 J	670 J	79 J
C3 Chrysenes	NSL	NSL	ug/kg	50 J	43 J	50 J	72 J	600 J	2600 J	3900 J	71 J	49 J	250 J	200 J	140 J	87 J	190 J	33 J
C3 Fluorenes	NSL	NSL	ug/kg	16 J	72 U	34 J	39 J	300 J	2600 J	2700 J	53 J	12 J	150 J	72 J	88 J	36 J	270 J	25 J
C3-Fluoranthenes/Pyrenes**	NSL	NSL	ug/kg	48 J	72	87 J	120 J	710 J	4300 J	4600 J	96 J	47 J	290 J	240 J	150 J	110 J	430 J	63 J
C3-Naphthalenes	NSL	NSL	ug/kg	57 J	91	74 J	90 J	750 J	13000 J	12000 J	170 J	58 J	490 J	270 J	370 J	120 J	460 J	63 J
C3-Phenanthrenes/Anthracenes	NSL	NSL	ug/kg	79 J	110	150 J	190 J	1100 J	7000 J	13000 J	160 J	46 J	450 J	290 J	190 J	150 J	820 J	94 J
C4 Chrysenes	NSL	NSL	ug/kg	13 J	16 J	16 J	23 J	160 J	1000 J	1700 J	32 J	19 J	100 J	73 J	62 J	39 J	120 J	12 J
C4-Naphthalenes	NSL	NSL	ug/kg	76 J	91	84 J	110 J	480 J	5700 J	7000 J	120 J	62 J	380 J	170 J	230 J	110 J	440 J	54 J
C4-Phenanthrenes/Anthracenes	NSL	NSL	ug/kg	40 J	55 J	96 J	130 J	530 J	3800 J	8300 J	120 J	34 J	320 J	180 J	130 J	110 J	670 J	53 J
Chrysene*	166	1290	ug/kg	**190**	**300**	**190**	**250**	**6600 J**	**13000 J**	**5600 J**	**240**	160	**390 J**	**350 J**	**280**	**300 J**	**960**	**200**
Dibenzo(a,h)anthracene*	33	NSL	ug/kg	25 J	**43 J**	19 J	27 J	**940 J**	**1600 J**	**680**	**48 U**	**41**	**69**	**67 J**	**58**	**65**	**190**	32 J
Fluoranthene*	423	2230	ug/kg	340	**480**	280	350	**12000 J**	**28000 J**	**12000 J**	400	300	**470 J**	290	280	**630 J**	**1600 J**	320
Fluorene*	77.4	536	ug/kg	25	35 J	25 J	36 J	**3500 J**	**13000 J**	**5200 J**	**85**	20 J	**120**	43	35	70	**140**	61 U
Indeno(1,2,3-cd)pyrene*	NSL	NSL	ug/kg	70 J	150	62 J	89 J	2900 J	3800 J	1600	140	130	160	140	120	180	590	100
Naphthalene*	176	561	ug/kg	6.2 U	72 U	120 U	120 U	**4800 J**	**2400 J**	**840**	48 U	55	34 U	56	80	86	110 U	61 U
Perylene	NSL	NSL	ug/kg	510	370	780	940	1800 J	2300 J	810	310	150	260	270	340	830 J	630	350
Phenanthrene*	204	1170	ug/kg	150	**210**	130	170	**8500 J**	**34000 J**	**18000 J**	**300**	140	**500 J**	180	**250**	**410 J**	**680**	96
Pyrene*	195	1520	ug/kg	**270**	**380**	**310**	**400**	**9600 J**	**21000 J**	**10000 J**	**410**	**210**	**600 J**	**330 J**	**280**	**460 J**	**1300 J**	**290**
Total PAH 17 ND=1/2RL	1610	22800	ug/kg	**1783**	**2890**	**1728**	**2172**	**79570**	**182040**	**81230**	**2739**	**1823**	**3841**	**2651**	**2281**	**3504**	**9500**	**1878**
Total PAH 34 ND=1/2RL	NSL	NSL	ug/kg	3459	4899	4037	5075	107160	316540	190410	5082	2959	9719	6634	6051	6492	18041	3367

NOTES:
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** Excluded from calculation of total 34PAH
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U = Indicates the analyte was analyzed for but not detected.
µg/kg = Micrograms per kilogram.
TEC = Threshold effect concentration.
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Guidelines for Freshwater Ecosystems (MacDonald et al. 2000).
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Development and Evaluation of Consensus-Based Sediment
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Bolded values exceed the TEC.
Gray shaded values exceed the PEC.
NSL = No Screening Level.
Submitted samples are presented in ascending numerical order.

TABLE 4-7 SEDIMENT RESULTS FOR POLYCYCLIC AROMATIC HYDROCARBONS (PAHs)
PHASE 2 LOWER MAUMEE RIVER SITE CHARACTERIZATION
TOLEDO, OHIO (JUNE 2013)

			Sample Location:	LMR13-75	LMR13-76	LMR13-78	LMR13-81		LMR13-82	LMR13-85	LMR13-86	LMR13-88	LMR13-89	LMR13-90		LMR13-91	LMR13-94	LMR13-95
			Sample Name:	LMR13-75-012	LMR13-76-012	LMR13-78-012	LMR13-81-012	LMR13-81-012FD	LMR13-82-012	LMR13-85-012	LMR13-86-012	LMR13-88-012	LMR13-89-012	LMR13-90-012	LMR13-90-012FD	LMR13-91-012	LMR13-94-012	LMR13-95-012
			Sample Depth (ft):	0-1	0-1	0-1	0-1	0-1	0-1	0-1	0-1	0-1	0-1	0-1	0-1	0-1	0-1	0-1
			Date Sampled:	6/15/13	6/15/13	6/16/13	6/12/13	6/12/13	6/17/13	6/19/13	6/18/13	6/19/13	6/19/13	6/13/13	6/13/13	6/13/13	6/20/13	6/20/13
Analyte	**TEC**	**PEC**	**Unit**															
1-Methylnaphthalene**	NSL	NSL	ug/kg	4.2 U	46 U	0.45 J	37	59	16 J	5.7 J	46 U	7100	1.7 J	4.9 J	3.8 J	16 J	350	66000 J
2-Methylnaphthalene**	NSL	NSL	ug/kg	4.2 U	46U	0.44 J	67	63	34 J	8.6 J	65	18000	2.6 J	130 U	5.5 J	46 U	500	150000 J
Acenaphthene*	NSL	NSL	ug/kg	7.1	44 J	0.51 J	280	280 J	130 J	14 J	410	16000	1.6 J	10 J	9.6 J	18 J	2100	65000 J
Acenaphthylene*	NSL	NSL	ug/kg	1.3 J	6.8 J	4.6 UJ	110	99	43 J	3.6 J	87	790 J	0.77 J	4.1 J	3.4 J	5.7 J	650	82000 J
Anthracene*	57.2	845	ug/kg	17	**58**	0.53 J	**730 J**	**430 J**	**160 J**	35 U	**470 J**	**17000**	3.9 U	23 J	18 J	44 J	**3300 J**	**150000 J**
Benzo(a)anthracene*	108	1050	ug/kg	29	**190**	1.8 J	**2600 J**	**1400 J**	**560 J**	88	**1500 J**	**21000**	3.9 U	84 J	86 J	**160**	**6300 J**	**140000 J**
Benzo(a)pyrene*	150	1450	ug/kg	22	130	4.6 UJ	**2000 J**	**950 J**	**470 J**	81	**1500 J**	**20000**	3.7 J	87 J	69 J	**170**	**4700 J**	**97000 J**
Benzo(b)fluoranthene*	NSL	NSL	ug/kg	18	160	3.6 J	1500 J	760 J	570 J	100	1100 J	13000	4.5	100 J	95 J	170	5700 J	93000 J
Benzo(e)pyrene	NSL	NSL	ug/kg	12	110	3.6 J	1500 J	650 J	400 J	75	840 J	9700 J	4.8	83 J	71 J	130	3000 J	53000 J
Benzo(g,h,i)perylene*	NSL	NSL	ug/kg	9.1	82	4.9 J	770 J	380 J	390 J	67	680 J	9600	3.3 J	48 J	58 J	100	2700 J	48000 J
Benzo(k)fluoranthene*	NSL	NSL	ug/kg	17	160	1.7 J	1600 J	830 J	370 J	94	1300 J	16000	3.9 U	110 J	86 J	140	3800 J	78000 J
C1 Chrysenes	NSL	NSL	ug/kg	30 J	150 J	9.5 J	3700 J	1900 J	530 J	78 J	780 J	8900 J	16 J	100 J	85 J	220 J	2300 J	47000 J
C1 Fluorenes	NSL	NSL	ug/kg	6.6 J	15 J	1.5 J	250	260 J	58 J	6.1 J	79 J	1400 J	3.4 J	6.6 J	64 UJ	10 J	250 J	9500 J
C1-Fluoranthenes/Pyrenes	NSL	NSL	ug/kg	59 J	260 J	8.5 J	4700 J	2800 J	660 J	110 J	1200 J	20000 J	17 J	110 J	110 J	210 J	4600 J	130000 J
C1-Naphthalenes	NSL	NSL	ug/kg	1.2 J	7.7 J	4.6 UJ	65	80	35 J	9.1 J	64 J	16000 J	3.3 J	8.2 J	64 UJ	32 J	570 J	150000 J
C1-Phenanthrenes/Anthracenes	NSL	NSL	ug/kg	72 J	180 J	18 J	4700 J	3400 J	750 J	73 J	970 J	16000 J	52 J	72 J	81 J	130 J	3400 J	120000 J
C2 Chrysenes	NSL	NSL	ug/kg	31 J	100 J	17 J	2700 J	1300 J	370 J	47 J	520 J	3900 J	35 J	64 J	62 J	160 J	750 J	14000 J
C2 Fluorenes	NSL	NSL	ug/kg	6.8 J	23 J	3.2 J	560 J	410 J	100 J	10 J	100 J	1300 J	6.7 J	11 J	10 J	18 J	93 J	2800 J
C2-Fluoranthenes/Pyrenes**	NSL	NSL	ug/kg	31 J	150 J	12 J	3100 J	1700 J	470 J	80 J	630 J	6300 J	22 J	80 J	82 J	160 J	1300 J	27000 J
C2-Naphthalenes	NSL	NSL	ug/kg	5.6 J	46 J	3.2 J	460 J	840 J	150 J	41 J	190 J	8500 J	22 J	48 J	38 J	95 J	1100 J	81000 J
C2-Phenanthrenes/Anthracenes	NSL	NSL	ug/kg	40 J	130 J	22 J	340 J	2100 J	740 J	62 J	590 J	8400 J	54 J	72 J	69 J	110 J	1000 J	27000 J
C3 Chrysenes	NSL	NSL	ug/kg	15 J	35 J	11 J	1300 J	580 J	220 J	22 J	200 J	1300 J	17 J	32 J	27 J	78 J	410 J	7500 J
C3 Fluorenes	NSL	NSL	ug/kg	6.2 J	36 J	7.3 J	920 J	680 J	280 J	13 J	170 J	2700 J	16 J	22 J	21 J	28 J	100 J	2400 J
C3-Fluoranthenes/Pyrenes**	NSL	NSL	ug/kg	17 J	75 J	11 J	200 J	1100 J	320 J	39 J	370 J	2700 J	21 J	53 J	49 J	110 J	420 J	5800 J
C3-Naphthalenes	NSL	NSL	ug/kg	20 J	100 J	16 J	2200 J	1600 J	470 J	66 J	620 J	6900 J	53 J	62 J	57 J	93 J	560 J	21000 J
C3-Phenanthrenes/Anthracenes	NSL	NSL	ug/kg	35 J	130 J	21 J	3700 J	2400 J	580 J	67 J	660 J	8800 J	75 J	86 J	69 J	120 J	520 J	11000 J
C4 Chrysenes	NSL	NSL	ug/kg	5 J	14 J	7.9 J	300	240	89 J	10 J	79 J	3600 U	6.7 J	130 U	8.4 J	24 J	110 J	2200 J
C4-Naphthalenes	NSL	NSL	ug/kg	34 J	88 J	37 J	1400 J	1000 J	550 J	66 J	450 J	5100 J	110 J	57 J	49 J	75 J	200 J	4400 J
C4-Phenanthrenes/Anthracenes	NSL	NSL	ug/kg	23 J	69 J	33 J	1900 J	1500 J	480 J	36 J	330 J	4200 J	41 J	46 J	39 J	77 J	240 J	2700 J
Chrysene*	166	1290	ug/kg	27	**230**	6.6 J	**2800 J**	**1700 J**	**660 J**	140	**1500 J**	**20000**	11	160	130 J	**240**	**5300 J**	**110000 J**
Dibenzo(a,h)anthracene*	33	NSL	ug/kg	3.8 J	28 J	0.56 J	**250**	**180**	**140 J**	22 J	**230**	**3100 J**	0.5 J	17 J	17 J	**36 J**	**840**	**19000 UJ**
Fluoranthene*	423	2230	ug/kg	60	**470 J**	5.1 J	**2800 J**	**1800 J**	**1500 J**	210	**2900 J**	**44000 J**	8.2	180	210 J	280	**14000 J**	**350000 J**
Fluorene*	77.4	536	ug/kg	4.2 U	59	0.46 J	**550 J**	**440 J**	**170 J**	35 U	**680 J**	**20000**	3.9 U	22 J	21 J	41 J	**3200 J**	**170000 J**
Indeno(1,2,3-cd)pyrene*	NSL	NSL	ug/kg	9.7	82	1.7 J	810 J	420 J	360 J	65	750 J	10000	1.4 J	49 J	53 J	89	2800 J	51000 J
Naphthalene*	176	561	ug/kg	4.2 U	46 U	4.6 UJ	73	68	84 J	35 U	**310**	**330000 J**	4.3	130 U	64 UJ	52	**260 U**	**1400000 J**
Perylene	NSL	NSL	ug/kg	140	340	200 J	540 J	270 J	280 J	180	710 J	5600	260 J	680	460 J	330	1500	25000 J
Phenanthrene*	204	1170	ug/kg	23	140	4.6 UJ	**3200 J**	**2700 J**	**880 J**	99	**2900 J**	**55000 J**	14	130 U	89 J	150	**12000 J**	**530000 J**
Pyrene*	195	1520	ug/kg	46	**390**	4.8 J	**3700 J**	**2700 J**	**920 J**	180	**2500 J**	**39000 J**	10	160	150 J	**280**	**11000 J**	**260000 J**
Total PAH 17 ND=1/2RL	1610	22800	ug/kg	296	**2276**	41.9	**23840**	**15200**	**7441**	1225	**18882**	**652490**	73.7	1249	1133	**1999**	**79020**	**3783500**
Total PAH 34 ND=1/2RL	NSL	NSL	ug/kg	868	4237	475	61168	38847	14619	2269	27999	771290	886	2889	2529	4076	100523	4371000

NOTES:
* Included in calculation of total 17PAH
** Excluded from calculation of total 34PAH
J = Indicates that the concentration is an estimated value.
U = Indicates the analyte was analyzed for but not detected.
µg/kg = Micrograms per kilogram.
TEC = Threshold effect concentration.
Development and Evaluation of Consensus-Based Sediment
Guidelines for Freshwater Ecosystems (MacDonald et al. 2000).
PEC = Probable effect concentration.
Development and Evaluation of Consensus-Based Sediment
Quality Guidelines for Freshwater Ecosystems (MacDonald et al. 2000).
Bolded values exceed the TEC.
Gray shaded values exceed the PEC.
NSL = No Screening Level.
Submitted samples are presented in ascending numerical order.

TABLE 4-8A* SEDIMENT RESULTS FOR METALS IN AREA A
PHASE 2 LOWER MAUMEE RIVER SITE CHARACTERIZATION
TOLEDO, OHIO (JUNE 2013)

				Sample Location:	LMR13-01							LMR13-02		LMR13-03					
				Sample Name:	LMR13-01-012	LMR13-01-024	LMR13-01-024FD	LMR13-01-048	LMR13-01-072	LMR13-01-096	LMR13-01-120	LMR13-02-012	LMR13-02-012FD	LMR13-03-012	LMR13-03-024	LMR13-03-048	LMR13-03-072	LMR13-03-096	LMR13-03-120
				Sample Depth (ft):	0-1	1-2	1-2	2-4	4-6	6-8	8-9	0-1	0-1	0-1	1-2	2-4	4-6	6-8	8-10
				Date Sampled:	6/17/13	6/17/13	6/17/13	6/17/13	6/17/13	6/17/13	6/17/13	6/11/13	6/11/13	6/17/13	6/17/13	6/17/13	6/17/13	6/17/13	6/17/13
Analyte	**TEC**	**PEC**	**SRV**	**Unit**															
Arsenic	9.79	33	11	mg/kg	8.5	9.2	9.1	9.4	3.3	3	3.2	4.2	4.2	8.6	***11***	**9.8**	6.1	5.4	4.2
Cadmium	0.99	4.98	0.96	mg/kg	0.43 J	0.4 J	0.39 J	0.51 J	0.32 J	0.34 J	0.32 J	0.43 J	0.45 J	***1.6***	***1.2***	0.53 U	0.53 U	0.5 U	0.52 U
Chromium	43.4	111	51	mg/kg	15.2 J	14.6 J	14.1 J	17.3 J	8.1 J	10.3 J	9.4 J	11.6	11.8	28.8 J	23.2 J	19.9 J	19.9 J	13 J	12.9 J
Copper	31.6	149	42	mg/kg	19.2 J	17.7 J	17.2 J	22.5 J	9 J	11.5 J	11.2 J	11.7	11.2	**34 J**	**32.5 J**	25.4 J	19.8 J	13 J	14.3 J
Lead	35.8	128	47	mg/kg	***65***	***76.3***	***70.9***	***76.4***	9.9	7.9	7	10.6	11.2	***64.4***	***81.4***	***57.3***	27.7	12.4	12.3
Mercury	0.18	1.06	0.12	mg/kg	***0.12 J***	***0.12 J***	***0.14 J***	***0.27 J***	0.059 J	0.051 J	0.15 U	0.14 U	0.061 J	***0.3 J***	***0.46 J***	***0.46 J***	***0.16 J***	***0.2 J***	0.13 U
Nickel	22.7	48.6	36	mg/kg	21.1 J	20.3 J	20.1 J	22.5 J	12.3 J	15.1 J	13.8 J	14.7 J	14.9 J	**30.2 J**	**27.3 J**	**26.3 J**	**26 J**	18.8 J	19.1 J
Zinc	121	459	190	mg/kg	85.2 J	87.6 J	84 J	**126 J**	34.2 J	38.3 J	35.4 J	45.5 J	47.3 J	**144 J**	**168 J**	**125 J**	80.5 J	49.6 J	58.6 J

NOTES:
J = Indicates that the concentration is an estimated value.
U = Indicates the analyte was analyzed
for but not detected.
mg/kg = Milligrams per kilogram.
TEC = Threshold effect concentration.
Development and Evaluation of
Consensus-Based Sediment Quality Guidelines for
Freshwater Ecosystems (MacDonald et al. 2000).
PEC = Probable effect concentration.
Development and Evaluation of Consensus-Based
Sediment Quality Guidelines for
Freshwater Ecosystems (MacDonald et al. 2000).
SRV= Sediment reference value
Ohio EPA Ecological Risk Assessment Guidance Document (2008)
Bolded values exceed the TEC.
Gray shaded values exceed the PEC.
Italic values exceed the SRV.
Submitted samples are presented in ascending numerical order.
*Samples presented are displayed in Figure 4-4A, 4-5A, 4-6A, 4-7A, and 4-8A

TABLE 4-8A* SEDIMENT RESULTS FOR METALS IN AREA A
PHASE 2 LOWER MAUMEE RIVER SITE CHARACTERIZATION
TOLEDO, OHIO (JUNE 2013)

				Sample Location:	LMR13-05	LMR13-06	LMR13-07					LMR13-08				LMR13-09	LMR13-10	LMR13-11	LMR13-12
				Sample Name:	LMR13-05-012	LMR13-06-012	LMR13-07-012	LMR13-07-024	LMR13-07-024FD	LMR13-07-048	LMR13-07-072	LMR13-08-012	LMR13-08-024	LMR13-08-048	LMR13-08-072	LMR13-09-012	LMR13-10-012	LMR13-11-012	LMR13-12-012
				Sample Depth (ft):	0-1	0-1	0-1	1-2	1-2	2-4	4-6	0-1	1-2	2-4	4-6	0-1	0-1	0-1	0-1
				Date Sampled:	6/11/13	6/11/13	6/18/13	6/18/13	6/18/13	6/18/13	6/18/13	6/17/13	6/17/13	6/17/13	6/17/13	6/11/13	6/11/13	6/11/13	6/11/13
Analyte	**TEC**	**PEC**	**SRV**	**Unit**															
Arsenic	9.79	33	11	mg/kg	***11.3***	5.9	8.6	**10.7**	9.2	***14.9***	**10.1**	7.3	7.6	***13.9***	7.7	5.5	5.2	7.2	4.4
Cadmium	0.99	4.98	0.96	mg/kg	***3.4***	0.74	***2.1***	***3.8***	***3.8***	***1.4***	0.56	***0.97***	***1.3***	***1.5***	0.48	0.85	0.47 J	0.75	0.75
Chromium	43.4	111	51	mg/kg	***59.6***	22.2	38.6 J	40.8	**44**	25.2	17.6	28.2 J	30.4 J	30.5 J	12.9 J	21.8	14.4	20.6	18.7
Copper	31.6	149	42	mg/kg	***48.6***	22.3	***48.3 J***	***51.2***	***49.6***	**39.2**	19.7	**31.6 J**	**36.8 J**	**40.1 J**	13.6 J	20.5	16.9	17.9	17.2
Lead	35.8	128	47	mg/kg	***76***	25.4	***51.7***	***106***	***89.4***	***101***	34.8	26	32.5	***87.2***	33.4	21.2	25.3	24.3	21.3
Mercury	0.18	1.06	0.12	mg/kg	***0.48 J***	***0.17 J***	***0.2***	***0.3***	0.11 J	***0.65***	***0.17***	0.21 U	0.086 J	***0.37***	***0.14***	0.041 J	***0.18 J***	0.073 J	0.061 J
Nickel	22.7	48.6	36	mg/kg	**34.5 J**	**23.6 J**	**35 J**	**33 J**	**34.5 J**	**32.5 J**	21.5 J	**32.3 J**	**32.8 J**	**34.4 J**	17.3 J	22.6 J	18.5 J	21.9 J	19.9 J
Zinc	121	459	190	mg/kg	***191 J***	96.3 J	**176**	***227 J***	***226***	***216***	102	**131 J**	**168 J**	***220 J***	76.9 J	67.3 J	63.4 J	90.8 J	67.8 J

NOTES:
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U = Indicates the analyte was analyzed
for but not detected.
mg/kg = Milligrams per kilogram.
TEC = Threshold effect concentration.
Development and Evaluation of
Consensus-Based Sediment Quality Guidelines for
Freshwater Ecosystems (MacDonald et al. 2000).
PEC = Probable effect concentration.
Development and Evaluation of Consensus-Based
Sediment Quality Guidelines for
Freshwater Ecosystems (MacDonald et al. 2000).
SRV= Sediment reference value
Ohio EPA Ecological Risk Assessment Guidance Document (2008)
Bolded values exceed the TEC.
Gray shaded values exceed the PEC.
Italic values exceed the SRV.
Submitted samples are presented in ascending numerical order.
*Samples presented are displayed in Figure 4-4A, 4-5A, 4-6A, 4-7A,

TABLE 4-8A* SEDIMENT RESULTS FOR METALS IN AREA A
PHASE 2 LOWER MAUMEE RIVER SITE CHARACTERIZATION
TOLEDO, OHIO (JUNE 2013)

Sample Location:					LMR13-13							LMR13-14						LMR13-15		
Sample Name:					LMR13-13-012	LMR13-13-024	LMR13-13-024FD	LMR13-13-048	LMR13-13-072	LMR13-13-096	LMR13-13-120	LMR13-14-012	LMR13-14-024	LMR13-14-048	LMR13-14-072	LMR13-14-096	LMR13-14-120	LMR13-15-012	LMR13-15-024	LMR13-15-024FD
Sample Depth (ft):					0-1	1-2	1-2	2-4	4-6	6-8	8-9	0-1	1-2	2-4	4-6	6-8	8-10	0-1	1-2	1-2
Date Sampled:					6/18/13	6/18/13	6/18/13	6/18/13	6/18/13	6/18/13	6/18/13	6/17/13	6/17/13	6/17/13	6/17/13	6/17/13	6/17/13	6/18/13	6/18/13	6/18/13
Analyte	**TEC**	**PEC**	**SRV**	**Unit**																
Arsenic	9.79	33	11	mg/kg	7.2	9	9.4	**10.8**	***12.1***	9.7	5.7	7.9	**9.8**	**10.5**	8.9	3.5	3.5	6.7	8	8.5
Cadmium	0.99	4.98	0.96	mg/kg	***1.4***	***3.4***	***3.7***	***4.2***	***2.7***	0.53	0.37 J	***1.3***	***3.3***	***2.4***	***2.2***	0.39 J	0.31 J	0.92	0.82	0.9
Chromium	43.4	111	51	mg/kg	36.9 J	***65.4 J***	***69.4 J***	***82***	**47.8 J**	18.4 J	13.1 J	33.6 J	***63.9***	**48.1 J**	34.5 J	12.1 J	9.6 J	22.7	23.4	24.9
Copper	31.6	149	42	mg/kg	**33.7 J**	***50.9 J***	***53.1 J***	***57.6***	***44.3 J***	20.2 J	15.4 J	**34.4 J**	***48.9***	***45 J***	***42.6 J***	12.4 J	8.8 J	26.9	23	24
Lead	35.8	128	47	mg/kg	32.9	***57.8***	***61***	***68.7***	***71.5***	**40.8**	29.1	**36.3**	***58.8***	***63.8***	***62.6***	11.6	7.2	26	**36.5**	**41.8**
Mercury	0.18	1.06	0.12	mg/kg	***0.16 J***	***0.24***	***0.29***	***0.43***	***0.31***	***0.18***	***0.2***	***0.23***	***0.3***	***0.24***	***0.17***	0.14 U	0.12 U	0.11 J	***0.14***	***0.15***
Nickel	22.7	48.6	36	mg/kg	**34.5 J**	***45.7 J***	***46.3 J***	***44.9 J***	**31.9 J**	22.1 J	16.7 J	**35.2 J**	***44.9 J***	**34.1 J**	**24.9 J**	17 J	13.4 J	**26.8 J**	**23 J**	**22.7 J**
Zinc	121	459	190	mg/kg	**163 J**	***193 J***	***201 J***	***203***	**179 J**	99.5 J	60.2 J	***223 J***	**177**	**159 J**	**146 J**	41.7 J	32.8 J	109	101	105

NOTES:
J = Indicates that the concentration is an estimated value.
U = Indicates the analyte was analyzed
for but not detected.
mg/kg = Milligrams per kilogram.
TEC = Threshold effect concentration.
Development and Evaluation of
Consensus-Based Sediment Quality Guidelines for
Freshwater Ecosystems (MacDonald et al. 2000).
PEC = Probable effect concentration.
Development and Evaluation of Consensus-Based
Sediment Quality Guidelines for
Freshwater Ecosystems (MacDonald et al. 2000).
SRV= Sediment reference value
Ohio EPA Ecological Risk Assessment Guidance Document (2008)
Bolded values exceed the TEC.
Gray shaded values exceed the PEC.
Italic values exceed the SRV.
Submitted samples are presented in ascending numerical order.
*Samples presented are displayed in Figure 4-4A, 4-5A, 4-6A, 4-7A,

TABLE 4-8A* SEDIMENT RESULTS FOR METALS IN AREA A
PHASE 2 LOWER MAUMEE RIVER SITE CHARACTERIZATION
TOLEDO, OHIO (JUNE 2013)

				Sample Location:	LMR13-16	LMR13-17	LMR13-18	LMR13-19		LMR13-20	LMR13-21				LMR13-23	LMR13-24	LMR13-25					
				Sample Name:	LMR13-16-012	LMR13-17-012	LMR13-18-012	LMR13-19-012	LMR13-19-012FD	LMR13-20-012	LMR13-21-012	LMR13-21-024	LMR13-21-048	LMR13-21-072	LMR13-23-012	LMR13-24-012	LMR13-25-012	LMR13-25-024	LMR13-25-024FD	LMR13-25-048	LMR13-25-072	LMR13-25-096
				Sample Depth (ft):	0-1	0-1	0-1	0-1	0-1	0-1	0-1	1-2	2-4	4-6	0-1	0-1	0-1	1-2	1-2	2-4	4-6	6-7
				Date Sampled:	6/11/13	6/11/13	6/11/13	6/11/13	6/11/13	6/11/13	6/18/13	6/18/13	6/18/13	6/18/13	6/11/13	6/11/13	6/18/13	6/18/13	6/18/13	6/18/13	6/18/13	6/18/13
Analyte	**TEC**	**PEC**	**SRV**	**Unit**																		
Arsenic	9.79	33	11	mg/kg	4	5.3	9.3	6.7	6.5	7.3	7.9	8.7	3.9	6.6	7.6	8	6.9	6.9	7.5	5	3.7	5.1
Cadmium	0.99	4.98	0.96	mg/kg	0.75	***1***	***1.6***	***1.2***	0.89	0.46 J	0.81	***1.7***	0.35 J	0.29 J	0.66	***1.3***	0.79	***1.3***	***1.5***	0.38 J	0.29 J	0.3 J
Chromium	43.4	111	51	mg/kg	16.6	21.2	33.6	25.2	20.2	14.3	19.7	25.7	13	8	13.9	27.6	18.2 J	20.2 J	23.8 J	11.6 J	8.1 J	8.4
Copper	31.6	149	42	mg/kg	14.8	18.4	**33.4**	23.6	23.6	17.5	25.7	**31.7**	12.4	6.8	13.9	27.6	21 J	22.3 J	31.5 J	13.4 J	7.8 J	9.9
Lead	35.8	128	47	mg/kg	21.2	25.9	***57.2***	**38.8**	32.2	***65.8***	20.1	***60.6***	13.2	5.6	22	**40.5**	21.8	**39.5**	**42.9**	14.1	6.7	7
Mercury	0.18	1.06	0.12	mg/kg	0.031 J	***0.13 J***	***0.46 J***	***0.18 J***	***0.14 J***	***0.18 J***	0.031 J	***0.15***	0.058 J	0.04 J	0.088 J	***0.23 J***	0.054 J	0.11 J	0.1 J	0.042 J	0.12 U	0.032 J
Nickel	22.7	48.6	36	mg/kg	20.2 J	20.3 J	**30.7 J**	**23.8 J**	19.4 J	17.9 J	**22.9 J**	**23.5 J**	16.9 J	11.1 J	17.2 J	**28.1 J**	19 J	18.4 J	20.4 J	15.7 J	11.9 J	13.1 J
Zinc	121	459	190	mg/kg	53.1 J	74.1 J	**148 J**	113 J	95.8 J	68.5 J	75.8	**140**	43.5	28.8	53.4 J	107 J	73.7 J	109 J	**121 J**	51.7 J	30.4 J	31.7

NOTES:
J = Indicates that the concentration is an estimated value.
U = Indicates the analyte was analyzed
for but not detected.
mg/kg = Milligrams per kilogram.
TEC = Threshold effect concentration.
Development and Evaluation of
Consensus-Based Sediment Quality Guidelines for
Freshwater Ecosystems (MacDonald et al. 2000).
PEC = Probable effect concentration.
Development and Evaluation of Consensus-Based
Sediment Quality Guidelines for
Freshwater Ecosystems (MacDonald et al. 2000).
SRV= Sediment reference value
Ohio EPA Ecological Risk Assessment Guidance Document (2008)
Bolded values exceed the TEC.
Gray shaded values exceed the PEC.
Italic values exceed the SRV.
Submitted samples are presented in ascending numerical order.
*Samples presented are displayed in Figure 4-4A, 4-5A, 4-6A, 4-7A,

TABLE 4-8A* SEDIMENT RESULTS FOR METALS IN AREA A
PHASE 2 LOWER MAUMEE RIVER SITE CHARACTERIZATION
TOLEDO, OHIO (JUNE 2013)

				Sample Location:	LMR13-45							LMR13-46						LMR13-47							
				Sample Name:	LMR13-45-012	LMR13-45-024	LMR13-45-024FD	LMR13-45-048	LMR13-45-072	LMR13-45-096	LMR13-45-120	LMR13-46-012	LMR13-46-024	LMR13-46-048	LMR13-46-072	LMR13-46-096	LMR13-46-120	LMR13-47-012	LMR13-47-024	LMR13-47-024FD	LMR13-47-048	LMR13-47-072	LMR13-47-096	LMR13-47-120	LMR13-47-144
				Sample Depth (ft):	0-1	1-2	1-2	2-4	4-6	6-8	8-9	0-1	1-2	2-4	4-6	6-8	8-10	0-1	1-2	1-2	2-4	4-6	6-8	8-10	10-12
				Date Sampled:	6/14/13	6/14/13	6/14/13	6/14/13	6/14/13	6/14/13	6/14/13	6/12/13	6/12/13	6/12/13	6/12/13	6/12/13	6/12/13	6/13/13	6/13/13	6/13/13	6/13/13	6/13/13	6/13/13	6/13/13	6/13/13
Analyte	**TEC**	**PEC**	**SRV**	**Unit**																					
Arsenic	9.79	33	11	mg/kg	**10.2**	***18.1***	***19.2***	***14.3***	***15.9***	***13.7***	***12.9***	***11.7***	***11.3***	***15.4***	***13.4***	***13.5***	***15.1***	8.3	7.3	7.8	7.9	7.5	7.8	7.4	8.7
Cadmium	0.99	4.98	0.96	mg/kg	***1.8***	***4.4***	***4.7***	***4.6***	***6.7***	***7.8***	***8.8***	***2.9***	***3.5***	***6.2***	***8.4***	***11.1***	***12.2***	0.9	0.82 J	0.83 J	0.85 J	0.88 J	0.88 J	0.94 J	***1.3 J***
Chromium	43.4	111	51	mg/kg	***60.7 J***	***220 J***	***235 J***	***259 J***	***319 J***	***247 J***	***220 J***	***147 J***	***150 J***	***278 J***	***246 J***	***262 J***	***288 J***	29.1 J	27.4 J	28.4 J	27.5 J	25.8 J	28.8 J	29.3 J	***52.1 J***
Copper	31.6	149	42	mg/kg	***57.8***	***118***	***131***	***106***	***172***	***143***	***123***	***77.3***	***86.4***	***145***	***142***	***145***	***159***	**31.9**	28.4	30.6	**34.4**	30.8	31.3	**31.7**	**39.7**
Lead	35.8	128	47	mg/kg	***53.7***	***95.8***	***101***	***121***	***220***	***181***	***144***	***78.2***	***113***	***199***	***163***	***172***	***152***	25.1	23.5	25.8	26.6	27.1	26.2	26.4	**39**
Mercury	0.18	1.06	0.12	mg/kg	***0.39***	***0.13 J***	***0.55 J***	***0.42***	***0.68***	***0.75***	***1.1***	***0.56***	***0.74***	***0.63***	***0.85***	***2.1***	***0.99***	0.045 J	0.2 U	0.094 J	0.19 U	***0.16***	0.18 U	0.1 J	***0.18***
Nickel	22.7	48.6	36	mg/kg	***50.4***	***135***	***140***	***126***	***141***	***128***	***82.2***	***76.9 J***	***89.3 J***	***116 J***	***132 J***	***94.7 J***	***85.1 J***	**33.1 J**	**30 J**	**32.9 J**	**30.8 J**	**28.9 J**	**31.9 J**	**31.8 J**	***41.3 J***
Zinc	121	459	190	mg/kg	***305 J***	***1160 J***	***1210 J***	***535 J***	***797 J***	***591 J***	***520 J***	***342 J***	***393 J***	***703 J***	***627 J***	***638 J***	***566 J***	**131 J**	118 J	**128 J**	**124 J**	119 J	**125 J**	**129 J**	***232 J***

NOTES:
J = Indicates that the concentration is an estimated value.
U = Indicates the analyte was analyzed
for but not detected.
mg/kg = Milligrams per kilogram.
TEC = Threshold effect concentration.
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Development and Evaluation of Consensus-Based
Sediment Quality Guidelines for
Freshwater Ecosystems (MacDonald et al. 2000).
SRV= Sediment reference value
Ohio EPA Ecological Risk Assessment Guidance Document (2008)
Bolded values exceed the TEC.
Gray shaded values exceed the PEC.
Italic values exceed the SRV.
Submitted samples are presented in ascending numerical order.
*Samples presented are displayed in Figure 4-4A, 4-5A, 4-6A, 4-7A,

TABLE 4-8A* SEDIMENT RESULTS FOR METALS IN AREA A
PHASE 2 LOWER MAUMEE RIVER SITE CHARACTERIZATION
TOLEDO, OHIO (JUNE 2013)

				Sample Location:	LMR13-48								LMR13-60					LMR13-61					
				Sample Name:	LMR13-48-012	LMR13-48-024	LMR13-48-048	LMR13-48-072	LMR13-48-096	LMR13-48-120	LMR13-48-144	LMR13-48-168	LMR13-60-012	LMR13-60-024	LMR13-60-048	LMR13-60-072	LMR13-60-096	LMR13-61-012	LMR13-61-024	LMR13-61-048	LMR13-61-072	LMR13-61-096	LMR13-61-120
				Sample Depth (ft):	0-1	1-2	2-4	4-6	6-8	8-10	10-12	12-13	0-1	1-2	2-4	4-6	6-8	0-1	1-2	2-4	4-6	6-8	8-10
				Date Sampled:	6/17/13	6/17/13	6/17/13	6/17/13	6/17/13	6/17/13	6/17/13	6/17/13	6/20/13	6/20/13	6/20/13	6/20/13	6/20/13	6/20/13	6/20/13	6/20/13	6/20/13	6/20/13	6/20/13
Analyte	**TEC**	**PEC**	**SRV**	**Unit**																			
Arsenic	9.79	33	11	mg/kg	***11***	***11.5***	***13.4***	6	6.7	***13***	8.2	6	7.2	8.2	7.9	9.2	8.7	6.9	8.3	**10**	**10.5**	9.7	**10.1**
Cadmium	0.99	4.98	0.96	mg/kg	***4.9 J***	***2.5 J***	***1.6 J***	0.77	***1.2***	0.64	***0.5 U***	***0.52 U***	0.83 J	0.9 J	***0.99 J***	***1.2 J***	***1.3 J***	0.85 J	***1 J***	***1.6 J***	***1.9 J***	***1.9 J***	***2.6 J***
Chromium	43.4	111	51	mg/kg	***53.2 J***	39 J	28.8 J	23.2 J	28.9 J	21.4 J	19.7 J	14 J	26.3 J	29.7 J	28.5 J	34.3 J	33.3 J	27.4 J	31 J	38.9 J	**47.2 J**	**45.1 J**	**45 J**
Copper	31.6	149	42	mg/kg	***51.4 J***	***42.9 J***	**31.9 J**	24 J	28.5 J	28.4 J	20.7 J	14.4 J	28.6	31.5	31.4	**34.1**	**31.6**	30.1	**33.3**	**37.3**	**41.3**	**36.7**	**40.9**
Lead	35.8	128	47	mg/kg	***115***	***113***	***69.9***	20	31.7	***72.2***	***48.4***	29.4	23.1	24.7	25.8	35.3	34.6	23.5	28.2	**36.7**	**41.8**	**40**	***48.1***
Mercury	0.18	1.06	0.12	mg/kg	***0.41 J***	***0.38 J***	***0.31 J***	***0.55 J***	***0.76 J***	***0.43 J***	***0.25 J***	***0.16 J***	0.047 J	0.097 J	0.11 J	***0.17***	0.086 J	0.075 J	0.11 J	0.095 J	***0.19***	***0.15 J***	***0.17***
Nickel	22.7	48.6	36	mg/kg	**30.7 J**	**31.5 J**	**26.9 J**	**25.9 J**	**29.1 J**	**26.8 J**	**24.4 J**	18.7 J	**31.3 J**	**35.4 J**	**34.5 J**	***38.2 J***	***36.6 J***	**32 J**	**35.7 J**	***40.1 J***	***43.7 J***	***41.5 J***	***42.8 J***
Zinc	121	459	190	mg/kg	***280 J***	***202 J***	**143 J**	100 J	**189 J**	**137 J**	89.1 J	53.8 J	**123 J**	**135 J**	**135 J**	***219 J***	***277 J***	**124 J**	**143 J**	**189 J**	***221 J***	**161 J**	**176 J**

NOTES:
J = Indicates that the concentration is an estimated value.
U = Indicates the analyte was analyzed
for but not detected.
mg/kg = Milligrams per kilogram.
TEC = Threshold effect concentration.
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SRV= Sediment reference value
Ohio EPA Ecological Risk Assessment Guidance Document (2008)
Bolded values exceed the TEC.
Gray shaded values exceed the PEC.
Italic values exceed the SRV.
Submitted samples are presented in ascending numerical order.
*Samples presented are displayed in Figure 4-4A, 4-5A, 4-6A, 4-7A,

TABLE 4-8A* SEDIMENT RESULTS FOR METALS IN AREA A
PHASE 2 LOWER MAUMEE RIVER SITE CHARACTERIZATION
TOLEDO, OHIO (JUNE 2013)

Sample Location:					LMR13-62						LMR13-63							LMR13-64						
Sample Name:					LMR13-62-012	LMR13-62-024	LMR13-62-024FD	LMR13-62-048	LMR13-62-072	LMR13-62-096	LMR13-63-012	LMR13-63-024	LMR13-63-048	LMR13-63-072	LMR13-63-096	LMR13-63-120	LMR13-63-144	LMR13-64-012	LMR13-64-024	LMR13-64-024FD	LMR13-64-048	LMR13-64-072	LMR13-64-096	LMR13-64-120
Sample Depth (ft):					0-1	1-2	1-2	2-4	4-6	6-7	0-1	1-2	2-4	4-6	6-8	8-10	10-11	0-1	1-2	1-2	2-4	4-6	6-8	8-10
Date Sampled:					6/13/13	6/13/13	6/13/13	6/13/13	6/13/13	6/13/13	6/13/13	6/13/13	6/13/13	6/13/13	6/13/13	6/13/13	6/13/13	6/19/13	6/19/13	6/19/13	6/19/13	6/19/13	6/19/13	6/19/13
Analyte	**TEC**	**PEC**	**SRV**	**Unit**																				
Arsenic	9.79	33	11	mg/kg	5.2	6.3	5	4.2	4.9	***18.9***	7.4	8.5	9	9.3	**10.4**	**10.5**	**10.9**	7.8	8	8.5	7	8.2	9.2	8.9
Cadmium	0.99	4.98	0.96	mg/kg	0.37 J	0.81	0.37 J	0.34 J	0.31 J	0.19 J	0.89 J	***1.1 J***	***1.5 J***	***2.5 J***	***4.3 J***	***4.2 J***	***3.8 J***	0.95 J	***1 J***	***1 J***	0.87 J	***0.96 J***	***1.3 J***	***1.5 J***
Chromium	43.4	111	51	mg/kg	15.4 J	24.5 J	15 J	13 J	8.1 J	8.4 J	29.5 J	34.5 J	38.6 J	**47.3 J**	***88.3 J***	***79.1 J***	***77.9 J***	32.7 J	30.3 J	31.5 J	26.5 J	30.2 J	35.6 J	38.1 J
Copper	31.6	149	42	mg/kg	15.1	23.4	14.1	12.5	7.2	8.2	30.3	**33.7**	**34.8**	**40.5**	***58.9***	***56.3***	***56.8***	**33.9 J**	**32.7 J**	**33.6 J**	28.9 J	**33.1 J**	**36.1 J**	**36.6 J**
Lead	35.8	128	47	mg/kg	13.9	25.6	12.8	11.2	6	6.9	25.9	31.7	**38.8**	***49.8***	***77.9***	***73.2***	***71.4***	26.2	27.6	27.4	23	26.7	32.5	35.4
Mercury	0.18	1.06	0.12	mg/kg	0.039 J	0.042 J	0.054 J	0.056 J	0.046 J	0.037 J	***0.16 J***	***0.13 J***	***0.15 J***	***0.2***	***0.32***	***0.44***	***0.39***	***0.12 J***	0.078 J	0.086 J	0.068 J	0.09 J	0.11 J	0.079 J
Nickel	22.7	48.6	36	mg/kg	21.5 J	**27.1 J**	20.9 J	18.8 J	12.4 J	14.3 J	**34.1 J**	***36.9 J***	***39.5 J***	***41.2 J***	***48.6 J***	***47.3 J***	***45.1 J***	***36.6 J***	**34.5 J**	**35.4 J**	**30.5 J**	**35.1 J**	***38.5 J***	***38.5 J***
Zinc	121	459	190	mg/kg	54.3 J	**165 J**	51.2 J	44.2 J	34.9 J	32 J	**128 J**	**154 J**	***198 J***	**172 J**	***224 J***	***210 J***	***201 J***	**141 J**	**147 J**	**146 J**	119 J	**141 J**	**185 J**	***195 J***

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Ohio EPA Ecological Risk Assessment Guidance Document (2008)
Bolded values exceed the TEC.
Gray shaded values exceed the PEC.
Italic values exceed the SRV.
Submitted samples are presented in ascending numerical order.
*Samples presented are displayed in Figure 4-4A, 4-5A, 4-6A, 4-7A,

TABLE 4-8A* SEDIMENT RESULTS FOR METALS IN AREA A
PHASE 2 LOWER MAUMEE RIVER SITE CHARACTERIZATION
TOLEDO, OHIO (JUNE 2013)

Sample Location:					LMR13-65				LMR13-66			LMR13-67							LMR13-68	LMR13-69						
Sample Name:					LMR13-65-012	LMR13-65-024	LMR13-65-048	LMR13-65-072	LMR13-66-012	LMR13-66-024	LMR13-66-048	LMR13-67-012	LMR13-67-024	LMR13-67-024FD	LMR13-67-048	LMR13-67-072	LMR13-67-096	LMR13-67-120	LMR13-68-012	LMR13-69-012	LMR13-69-024	LMR13-69-024FD	LMR13-69-048	LMR13-69-072	LMR13-69-096	LMR13-69-120
Sample Depth (ft):					0-1	1-2	2-4	4-6	0-1	1-2	2-3	0-1	1-2	1-2	2-4	4-6	6-8	8-10	0-1	0-1	1-2	1-2	2-4	4-6	6-8	8-9
Date Sampled:					6/20/13	6/20/13	6/20/13	6/20/13	6/20/13	6/20/13	6/20/13	6/19/13	6/19/13	6/19/13	6/19/13	6/19/13	6/19/13	6/19/13	6/20/13	6/20/13	6/20/13	6/20/13	6/20/13	6/20/13	6/20/13	6/20/13
Analyte	**TEC**	**PEC**	**SRV**	**Unit**																						
Arsenic	9.79	33	11	mg/kg	8.9	7.7	8	8	6.7	6.6	8	7.8 J	7.6 J	7.7 J	7.5 J	8.4	8.5	8.9	7.4	7.7	7.7	7.3	6.9	8	9.1	9.4
Cadmium	0.99	4.98	0.96	mg/kg	0.88 J	0.87 J	0.94 J	***2 J***	0.67 J	0.36 J	0.26 J	0.89 J	0.88 J	0.93 J	0.88 J	***1 J***	***1 J***	***1.1 J***	0.7 J	***1.1 J***	***1.1 J***	***1 J***	0.92 J	***1.2 J***	***3.2 J***	***3.6 J***
Chromium	43.4	111	51	mg/kg	30.7 J	26.5 J	28.5 J	35.9 J	19 J	11.7 J	18.5 J	30 J	29.6 J	30.3 J	28.7 J	31.9 J	32.7 J	34.1 J	20.2 J	29.2 J	28.8 J	28.1 J	27 J	34.5 J	***54.7 J***	***53.7 J***
Copper	31.6	149	42	mg/kg	**33.1 J**	30.9 J	**31.9**	**33.2**	21.3	14.4	19.1	31.3 J	**32.8 J**	**32.4 J**	31.2 J	**34.7 J**	**35.2 J**	**36.2 J**	22.2 J	31.1 J	**32.5 J**	30.8	29.2 J	**33.7 J**	***42.1***	***42***
Lead	35.8	128	47	mg/kg	23.5	21.8	25.4	35.4	30	**37.9**	11.4	25.2 J	24.4 J	26.1	25.7 J	27.8	29	29.7	20.8	25.8	27.6	25.1	23.8	30.3	***48.4***	**46.8**
Mercury	0.18	1.06	0.12	mg/kg	0.076 J	0.044 J	0.068 J	0.096 J	***0.12 J***	0.048 J	0.03 J	***0.14 J***	***0.13 J***	***0.14 J***	0.11 J	***0.12 J***	0.075 J	***0.12 J***	0.081 J	0.065 J	***0.13 J***	0.068 J	0.077 J	0.099 J	***0.2***	***0.16***
Nickel	22.7	48.6	36	mg/kg	**35.3 J**	**31.2 J**	**33.7 J**	**34.9 J**	**23 J**	18.1 J	**27.5 J**	**31.8 J**	**31.6 J**	**33.3 J**	**31.8 J**	***36.3 J***	***37.3 J***	***37.4 J***	22 J	**32.3 J**	**32.1 J**	**32.4 J**	**30.5 J**	**35.6 J**	***43 J***	***43.7 J***
Zinc	121	459	190	mg/kg	**133 J**	120 J	**134 J**	**135 J**	**128 J**	54.2 J	56.4 J	**122 J**	**122 J**	**127 J**	**122 J**	**141 J**	**143 J**	**147 J**	61.8 J	**128 J**	**133 J**	**129 J**	119 J	**161 J**	**172 J**	**169 J**

NOTES:
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for but not detected.
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Freshwater Ecosystems (MacDonald et al. 2000).
SRV= Sediment reference value
Ohio EPA Ecological Risk Assessment Guidance Document (2008)
Bolded values exceed the TEC.
Gray shaded values exceed the PEC.
Italic values exceed the SRV.
Submitted samples are presented in ascending numerical order.
*Samples presented are displayed in Figure 4-4A, 4-5A, 4-6A, 4-7A,

TABLE 4-8A* SEDIMENT RESULTS FOR METALS IN AREA A
PHASE 2 LOWER MAUMEE RIVER SITE CHARACTERIZATION
TOLEDO, OHIO (JUNE 2013)

				Sample Location:	LMR13-71					LMR13-81						LMR13-82							
				Sample Name:	LMR13-71-012	LMR13-71-024	LMR13-71-024FD	LMR13-71-048	LMR13-71-072	LMR13-81-012	LMR13-81-024	LMR13-81-048	LMR13-81-072	LMR13-81-096	LMR13-81-120	LMR13-82-012	LMR13-82-024	LMR13-82-024FD	LMR13-82-048	LMR13-82-072	LMR13-82-096	LMR13-82-120	LMR13-82-144
				Sample Depth (ft):	0-1	1-2	1-2	2-4	4-6	0-1	1-2	2-4	4-6	6-8	8-9	0-1	1-2	1-2	2-4	4-6	6-8	8-10	10-11
				Date Sampled:	6/18/13	6/18/13	6/18/13	6/18/13	6/18/13	6/12/13	6/12/13	6/12/13	6/12/13	6/12/13	6/12/13	6/17/13	6/17/13	6/17/13	6/17/13	6/17/13	6/17/13	6/17/13	6/17/13
Analyte	**TEC**	**PEC**	**SRV**	**Unit**																			
Arsenic	9.79	33	11	mg/kg	4.6	3.2	3.6	4.7	6	***14.9***	***14.2***	***16.4***	***14.8***	9.4	8.1	9.7	**10.4**	***11.5***	***14.4***	***16.9***	***16.4***	**10.5**	8
Cadmium	0.99	4.98	0.96	mg/kg	0.33 J	0.33 J	0.32 J	0.3 J	0.33 J	***1.6***	***1.5***	***0.96***	0.64 J	0.46 J	0.49 J	***3.4***	***5***	***5.2***	***2.5***	0.71	0.81	0.57	***0.56 U***
Chromium	43.4	111	51	mg/kg	11.5	11.1	11.2	8.4	8.9	27.5 J	29.4 J	24.6 J	22.7 J	17.5 J	21.3 J	***60.3 J***	***64.5 J***	***74.5 J***	38.2 J	21 J	25.1 J	21.6 J	26.4 J
Copper	31.6	149	42	mg/kg	12.2	9.6	11.6	8.8	10.4	**39.8**	***47.2***	***42.1***	29.6	20.9	25.9	***48.3 J***	***50.8 J***	***57.9 J***	***44.4 J***	**31.9 J**	29.5 J	23 J	23.6 J
Lead	35.8	128	47	mg/kg	14.4	8.4	9	5.9	7.3	***116***	***120***	***158***	***79.9***	***53.7***	**46.2**	***64.9***	***96.1***	***105***	***99.1***	***110***	***74.7***	***51.4***	***65.5***
Mercury	0.18	1.06	0.12	mg/kg	0.044 J	0.12 U	0.12 U	0.12 U	0.12 U	***0.51***	***0.6***	***0.71***	***0.37***	***0.26***	***0.35***	***0.25 J***	***0.52 J***	***0.48 J***	***0.5 J***	***0.68 J***	***0.33 J***	***0.28 J***	***0.14 J***
Nickel	22.7	48.6	36	mg/kg	15.3 J	14.5 J	15.6 J	12 J	13.8 J	**28.7 J**	**34.5 J**	**33 J**	**28.7 J**	**24.2 J**	**26.5 J**	**35.7 J**	**34 J**	***38.2 J***	**32.3 J**	**27.3 J**	**28.4 J**	**25.4 J**	**29.4 J**
Zinc	121	459	190	mg/kg	43.8	37.3	39.5	29.3	34.3	***208 J***	***245 J***	***269 J***	**160 J**	92.8 J	95.4 J	**170 J**	***239 J***	***271 J***	***224 J***	***201 J***	**162 J**	96.3 J	92.5 J

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SRV= Sediment reference value
Ohio EPA Ecological Risk Assessment Guidance Document (2008)
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Gray shaded values exceed the PEC.
Italic values exceed the SRV.
Submitted samples are presented in ascending numerical order.
*Samples presented are displayed in Figure 4-4A, 4-5A, 4-6A, 4-7A,

TABLE 4-8A* SEDIMENT RESULTS FOR METALS IN AREA A
PHASE 2 LOWER MAUMEE RIVER SITE CHARACTERIZATION
TOLEDO, OHIO (JUNE 2013)

				Sample Location:	LMR13-90					LMR13-91					LMR13-92			LMR13-93					
				Sample Name:	LMR13-90-012	LMR13-90-024	LMR13-90-024FD	LMR13-90-048	LMR13-90-072	LMR13-91-012	LMR13-91-024	LMR13-91-048	LMR13-91-072	LMR13-91-096	LMR13-92-012	LMR13-92-024	LMR13-92-024FD	LMR13-93-012	LMR13-93-024	LMR13-93-048	LMR13-93-072	LMR13-93-096	LMR13-93-120
				Sample Depth (ft):	0-1	1-2	1-2	2-4	4-6	0-1	1-2	2-4	4-6	6-9	0-1	1-2	1-2	0-1	1-2	2-4	4-6	6-8	8-10
				Date Sampled:	6/13/13	6/13/13	6/13/13	6/13/13	6/13/13	6/13/13	6/13/13	6/13/13	6/13/13	6/13/13	6/20/13	6/20/13	6/20/13	6/13/13	6/13/13	6/13/13	6/13/13	6/13/13	6/13/13
Analyte	**TEC**	**PEC**	**SRV**	**Unit**																			
Arsenic	9.79	33	11	mg/kg	***19.6***	7.9	7.9	8.3	6.9	6.8	7.7	8	**10.7**	**10.4**	6.8	7.5	8.1	7.5	***11.8***	***14.7***	***14.9***	***12.3***	8.4
Cadmium	0.99	4.98	0.96	mg/kg	0.84	***1.1***	***1***	***1.9***	0.5	0.72	0.72	0.85	***3.6 J***	***4.7 J***	0.91 J	***1.3 J***	***1.3 J***	***2.5***	***6.4***	***1.7***	0.67	0.5 J	0.45 J
Chromium	43.4	111	51	mg/kg	27.6 J	31.9 J	30.8 J	34.8 J	14 J	24.3 J	32.3 J	32.6 J	***76.7 J***	***87.1 J***	29.3 J	33.7 J	33.9 J	***56.4 J***	***154 J***	32 J	22 J	18 J	17.4 J
Copper	31.6	149	42	mg/kg	**35.4**	29.7	30.2	**33.7**	17.1	27.2	29.3	30.5	***53.9***	***60.6***	30.4 J	**32.5 J**	**32.8 J**	***46***	***90.8***	**41.6**	26.6	21.3	20
Lead	35.8	128	47	mg/kg	***130***	31.6	34.5	**39.7**	11.8	22.2	27.4	30.2	***73.3***	***76.8***	24.8	32.4	33.2	***56.8***	***102***	***135***	***97.8***	***59.6***	**46.3**
Mercury	0.18	1.06	0.12	mg/kg	0.11 J	0.11 J	***0.12 J***	***0.16***	0.039 J	0.044 J	0.092 J	0.065 J	***0.27***	***0.44***	***0.21 U***	***0.12 J***	0.1 J	***0.35***	***0.6***	***0.58***	***0.3***	***0.2***	***0.18***
Nickel	22.7	48.6	36	mg/kg	**33.3 J**	**34 J**	**34.3 J**	**35.9 J**	22.2 J	**29.9 J**	***37.8 J***	***37 J***	***45.8 J***	***49.7 J***	**32.7 J**	**34.7 J**	**35.2 J**	**33.7 J**	***53.5 J***	**29.3 J**	**25.7 J**	**23.8 J**	**23.2 J**
Zinc	121	459	190	mg/kg	***205 J***	***209 J***	***230 J***	**139 J**	67.6 J	111 J	**136 J**	**172 J**	***315 J***	***230 J***	**131 J**	***202 J***	***241 J***	**157 J**	***305 J***	***233 J***	**155 J**	112 J	83.2 J

NOTES:
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Ohio EPA Ecological Risk Assessment Guidance Document (2008)
Bolded values exceed the TEC.
Gray shaded values exceed the PEC.
Italic values exceed the SRV.
Submitted samples are presented in ascending numerical order.
*Samples presented are displayed in Figure 4-4A, 4-5A, 4-6A, 4-7A,

TABLE 4-8B* SEDIMENT RESULTS FOR METALS IN AREA B
PHASE 2 LOWER MAUMEE RIVER SITE CHARACTERIZATION
TOLEDO, OHIO (JUNE 2013)

				Sample Location:	LMR13-35						LMR13-38					LMR13-39				
				Sample Name:	LMR13-35-012	LMR13-35-024	LMR13-35-024FD	LMR13-35-048	LMR13-35-072	LMR13-35-096	LMR13-38-012	LMR13-38-024	LMR13-38-048	LMR13-38-072	LMR13-38-096	LMR13-39-012	LMR13-39-024	LMR13-39-024FD	LMR13-39-048	LMR13-39-072
				Sample Depth (ft):	0-1	1-2	1-2	2-4	4-6	6-8	0-1	1-2	2-4	4-6	6-8	0-1	1-2	1-2	2-4	4-6
				Date Sampled:	6/15/13	6/15/13	6/15/13	6/15/13	6/15/13	6/15/13	6/16/13	6/16/13	6/16/13	6/16/13	6/16/13	6/19/13	6/19/13	6/19/13	6/19/13	6/19/13
Analyte	**TEC**	**PEC**	**SRV**	**Unit**																
Arsenic	9.79	33	11	mg/kg	8.1	**9.9**	**9.9**	6.8	4.1	2.4	7.4	6.8	4.8	3.8	3.2	7.8 J	5.6 J	4.7 J	***13.6 J***	3.1 J
Cadmium	0.99	4.98	0.96	mg/kg	***1.3***	***3.3***	***3.5***	0.53 J	0.19 J	0.22 J	***1.1 J***	0.49 J	0.39 J	0.25 J	0.3 J	0.68 J	0.37 J	0.38 J	***3.4 J***	0.32 J
Chromium	43.4	111	51	mg/kg	33.2 J	37.6 J	41.1 J	19.6 J	6 J	5.8 J	19.1 J	23.3 J	16.4 J	7.7 J	8.3 J	16.3 J	12 J	13.5 J	37.3 J	7 J
Copper	31.6	149	42	mg/kg	**34.9**	***46 J***	***55.4***	23.9	4.1	4.5	24.8 J	25.6	16.8 J	6.2	7.5 J	20.2 J	14 J	14.3 J	**35.2 J**	7 J
Lead	35.8	128	47	mg/kg	**38 J**	***81.8 J***	***88.4***	***49.9***	3.9	4	***58.7***	***54.5***	24.7	5	5.6	**39.6 J**	24.9 J	21.9 J	***82.5 J***	5.6 J
Mercury	0.18	1.06	0.12	mg/kg	0.054 J	***0.24***	***0.25***	***0.21***	0.12 U	0.12 U	***0.16 J***	***0.26***	0.08 J	0.12 U	0.12 U	***0.13 J***	***0.15***	0.11 J	***0.13 J***	0.049 J
Nickel	22.7	48.6	36	mg/kg	**31.3**	**27.7**	**30.7**	**23.4**	8.1	8	19.5 J	**28.4**	20.7 J	10.6	12.2 J	18.4 J	16.2 J	17.8 J	**22.7 J**	10.9 J
Zinc	121	459	190	mg/kg	**152 J**	***205 J***	***209***	95.9	22.5	24.5	118 J	99.1	64.6 J	26.3	34.4 J	102 J	60.8 J	63 J	***365 J***	29.9 J

NOTES:
J = Indicates that the concentration is an estimated value.
U = Indicates the analyte was analyzed
for but not detected.
mg/kg = Milligrams per kilogram.
TEC = Threshold effect concentration.
Development and Evaluation of
Consensus-Based Sediment Quality Guidelines for
Freshwater Ecosystems (MacDonald et al. 2000).
PEC = Probable effect concentration.
Development and Evaluation of Consensus-Based
Sediment Quality Guidelines for
Freshwater Ecosystems (MacDonald et al. 2000).
SRV= Sediment reference value
Ohio EPA Ecological Risk Assessment Guidance Document (2008)
Bolded values exceed the TEC.
Gray shaded values exceed the PEC.
Italic values exceed the SRV.
Submitted samples are presented in ascending numerical order.
*Samples presented are displayed in Figure 4-4B, 4-5B, 4-6B, 4-7B, and 4-8B

TABLE 4-8B* SEDIMENT RESULTS FOR METALS IN AREA B
PHASE 2 LOWER MAUMEE RIVER SITE CHARACTERIZATION
TOLEDO, OHIO (JUNE 2013)

				Sample Location:	LMR13-40					LMR13-41				LMR13-42					
				Sample Name:	LMR13-40-012	LMR13-40-024	LMR13-40-048	LMR13-40-072	LMR13-40-096	LMR13-41-012	LMR13-41-024	LMR13-41-024FD	LMR13-41-048	LMR13-42-012	LMR13-42-024	LMR13-42-048	LMR13-42-072	LMR13-42-096	LMR13-42-120
				Sample Depth (ft):	0-1	1-2	2-4	4-6	6-7	0-1	1-2	1-2	2-4	0-1	1-2	2-4	4-6	6-8	8-9
				Date Sampled:	6/16/13	6/16/13	6/16/13	6/16/13	6/16/13	6/14/13	6/14/13	6/14/13	6/14/13	6/12/13	6/12/13	6/12/13	6/12/13	6/12/13	6/12/13
Analyte	**TEC**	**PEC**	**SRV**	**Unit**															
Arsenic	9.79	33	11	mg/kg	7.9	8.1	8.3	9.1	8.9	4.1	4.3	4.3	3.1	7.6	***15***	***20.6***	***11.6***	***17***	**10.5**
Cadmium	0.99	4.98	0.96	mg/kg	0.89	***0.96***	***1.9 J***	***2.5 J***	***3.7 J***	0.69 U	0.67 U	0.61 U	0.49 U	***7.5***	***4.7***	***1.6***	0.68 J	0.73 J	0.6 J
Chromium	43.4	111	51	mg/kg	31.6 J	35 J	36.4 J	41.3 J	***52.2 J***	14.1	14	14.3	11.1	***115***	***61.7***	28	19.3	25.8	23.2 J
Copper	31.6	149	42	mg/kg	30.4	**33.3**	**34.9 J**	**39.4 J**	**41.1 J**	15.1	15.5	16	10.4	***82.7***	***65.3***	***52.9***	25.1	**33.1**	26.7
Lead	35.8	128	47	mg/kg	27.5	27.6	**41.4**	***55***	***54.4***	14 J	21 J	23.7 J	11.6 J	***104***	***158***	***222***	***170***	***133***	***81.9***
Mercury	0.18	1.06	0.12	mg/kg	0.21 U	0.19 U	***0.13 J***	***0.17 J***	***0.15 J***	0.13 U	0.13 U	0.13 U	0.13 U	***0.54***	***0.5***	***0.73***	***0.23***	***0.4***	***0.33***
Nickel	22.7	48.6	36	mg/kg	**33.5**	***36.8***	**34.9 J**	***38.1 J***	***44.3 J***	19.7 J	20.1 J	20.4 J	15.3 J	***43.3 J***	***37 J***	**35.9 J**	**25.8 J**	**32 J**	**29 J**
Zinc	121	459	190	mg/kg	**125**	**139**	**146 J**	**166 J**	**180 J**	52.4	52.5	54.8	40.6	***297***	***311***	***327***	**130**	***200***	120 J

NOTES:
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Sediment Quality Guidelines for
Freshwater Ecosystems (MacDonald et al. 2000).
SRV= Sediment reference value
Ohio EPA Ecological Risk Assessment Guidance Document (2008)
Bolded values exceed the TEC.
Gray shaded values exceed the PEC.
Italic values exceed the SRV.
Submitted samples are presented in ascending numerical order.
*Samples presented are displayed in Figure 4-4B, 4-5B, 4-6B, 4-7B, a

TABLE 4-8B* SEDIMENT RESULTS FOR METALS IN AREA B
PHASE 2 LOWER MAUMEE RIVER SITE CHARACTERIZATION
TOLEDO, OHIO (JUNE 2013)

				Sample Location:	LMR13-43							LMR13-44					
				Sample Name:	LMR13-43-012	LMR13-43-024	LMR13-43-024FD	LMR13-43-048	LMR13-43-072	LMR13-43-096	LMR13-43-120	LMR13-44-012	LMR13-44-024	LMR13-44-048	LMR13-44-048FD	LMR13-44-072	LMR13-44-096
				Sample Depth (ft):	0-1	1-2	1-2	2-4	4-6	6-8	8-9	0-1	1-2	2-4	2-4	4-6	6-8
				Date Sampled:	6/12/13	6/12/13	6/12/13	6/12/13	6/12/13	6/12/13	6/12/13	6/12/13	6/12/13	6/12/13	6/12/13	6/12/13	6/12/13
Analyte	**TEC**	**PEC**	**SRV**	**Unit**													
Arsenic	9.79	33	11	mg/kg	9	***15.5***	***14.8***	***13.3***	***13***	***12.1***	***12.7***	***11.1***	***11.6***	4.6	4.4	4	3.3
Cadmium	0.99	4.98	0.96	mg/kg	***4.5***	***15.4***	***13.7***	***8.7***	***8.6 J***	***7.3***	***9.7 J***	***2.8***	***3.3 J***	0.39 J	0.34 J	0.39 J	0.41 J
Chromium	43.4	111	51	mg/kg	***99.1***	***318***	***291***	***160***	***124 J***	***86.1***	***81.5 J***	***51.4***	***58.5 J***	13.1 J	12.4 J	12.8 J	11.1 J
Copper	31.6	149	42	mg/kg	***71.6***	***169***	***158***	***105***	***103***	***90.1***	***80.3***	***47.6***	***49.3***	13.9	12.3	13.5	10.9
Lead	35.8	128	47	mg/kg	***71***	***171***	***157***	***132***	***127***	***133***	***192***	***91.8***	***91.7***	13.6	13.5	12.4	8
Mercury	0.18	1.06	0.12	mg/kg	***0.48***	***1.4***	***1.4***	***0.94***	***0.69***	***0.5***	***0.58***	***0.49***	0.096 J	0.065 J	***0.15***	0.13 U	0.13 U
Nickel	22.7	48.6	36	mg/kg	***50.1 J***	***108 J***	***102 J***	***55.6 J***	***45.9 J***	***39.3 J***	***36.8 J***	**32.2 J**	**30.4 J**	18.9 J	17.2 J	18.8 J	16.3 J
Zinc	121	459	190	mg/kg	***256***	***602***	***552***	***365***	***335 J***	***321***	***444 J***	***211***	***215 J***	48.8 J	45.9 J	48.2 J	41.3 J

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Development and Evaluation of Consensus-Based
Sediment Quality Guidelines for
Freshwater Ecosystems (MacDonald et al. 2000).
SRV= Sediment reference value
Ohio EPA Ecological Risk Assessment Guidance Document (2008)
Bolded values exceed the TEC.
Gray shaded values exceed the PEC.
Italic values exceed the SRV.
Submitted samples are presented in ascending numerical order.
*Samples presented are displayed in Figure 4-4B, 4-5B, 4-6B, 4-7B, a

TABLE 4-8B* SEDIMENT RESULTS FOR METALS IN AREA B
PHASE 2 LOWER MAUMEE RIVER SITE CHARACTERIZATION
TOLEDO, OHIO (JUNE 2013)

				Sample Location:	LMR13-54							LMR13-55					LMR13-56	LMR13-57		
				Sample Name:	LMR13-54-012	LMR13-54-024	LMR13-54-048	LMR13-54-048FD	LMR13-54-072	LMR13-54-096	LMR13-54-120	LMR13-55-012	LMR13-55-024	LMR13-55-024FD	LMR13-55-048	LMR13-55-072	LMR13-56-012	LMR13-57-012	LMR13-57-024	LMR13-57-048
				Sample Depth (ft):	0-1	1-2	2-4	2-4	4-6	6-8	8-9	0-1	1-2	1-2	2-4	4-6	0-1	0-1	1-2	2-4
				Date Sampled:	6/19/13	6/19/13	6/19/13	6/19/13	6/19/13	6/19/13	6/19/13	6/19/13	6/19/13	6/19/13	6/19/13	6/19/13	6/20/13	6/14/13	6/14/13	6/14/13
Analyte	**TEC**	**PEC**	**SRV**	**Unit**																
Arsenic	9.79	33	11	mg/kg	9.6 J	***14 J***	***16.5 J***	***16.5 J***	***20.3 J***	***21.8 J***	***24.4 J***	9.2 J	***11.9 J***	***11.8 J***	***12.3 J***	***36.6 J***	5.8	***22.1***	***15.5***	4.7
Cadmium	0.99	4.98	0.96	mg/kg	***1.1***	***3.1***	***3.4***	***3.2***	***2.7***	***1.9***	***2.2***	***0.97***	***1.5***	***1.4***	***1.8 J***	***3.8 J***	0.32 J	***0.96***	0.84	0.53 U
Chromium	43.4	111	51	mg/kg	29.7	39.3	**48.4**	**44.9 J**	***56.7***	36.5 J	39.8 J	19.2	28.2	25.8	31.4 J	**46.9 J**	17.2 J	25.7	23.3	15
Copper	31.6	149	42	mg/kg	**32**	**40.5**	***44.5***	***44.1***	***44.8***	**40.5**	***55.9***	23	29.8	29.2	30.3 J	***67.8 J***	16.7	29.9	28.5	15.4
Lead	35.8	128	47	mg/kg	**42.6**	***110***	***151***	***164***	***156***	***168***	***347***	***155***	***322***	***162***	***262 J***	***665 J***	10.3	***616 J***	***522 J***	***56.9 J***
Mercury	0.18	1.06	0.12	mg/kg	***0.21***	***0.3***	***0.39***	***0.36***	***0.49***	***0.59***	***0.74***	***0.22***	***0.41***	***0.3***	***0.45***	***1.2***	0.12 U	***0.46 J***	***0.38 J***	0.062 J
Nickel	22.7	48.6	36	mg/kg	**32.2 J**	**33.2 J**	***37.2 J***	**34.8 J**	***36.4 J***	**31 J**	**35.6 J**	22.5 J	**24.5 J**	**24.7 J**	**26.5 J**	***39.9 J***	**26.9 J**	**30 J**	**28.1 J**	20.7 J
Zinc	121	459	190	mg/kg	**157 J**	***337 J***	***510 J***	***500 J***	***560 J***	***389 J***	***612 J***	***311 J***	***250 J***	***264 J***	***279 J***	***728 J***	57.6 J	***287***	**148**	57.3

NOTES:
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Freshwater Ecosystems (MacDonald et al. 2000).
PEC = Probable effect concentration.
Development and Evaluation of Consensus-Based
Sediment Quality Guidelines for
Freshwater Ecosystems (MacDonald et al. 2000).
SRV= Sediment reference value
Ohio EPA Ecological Risk Assessment Guidance Document (2008)
Bolded values exceed the TEC.
Gray shaded values exceed the PEC.
Italic values exceed the SRV.
Submitted samples are presented in ascending numerical order.
*Samples presented are displayed in Figure 4-4B, 4-5B, 4-6B, 4-7B, a

TABLE 4-8B* SEDIMENT RESULTS FOR METALS IN AREA B
PHASE 2 LOWER MAUMEE RIVER SITE CHARACTERIZATION
TOLEDO, OHIO (JUNE 2013)

				Sample Location:	LMR13-58		LMR13-59			LMR13-77				LMR13-78		
				Sample Name:	LMR13-58-012	LMR13-58-024	LMR13-59-012	LMR13-59-024	LMR13-59-048	LMR13-77-012	LMR13-77-024	LMR13-77-048	LMR13-77-072	LMR13-78-012	LMR13-78-024	LMR13-78-024FD
				Sample Depth (ft):	0-1	1-2	0-1	1-2	2-4	0-1	1-2	2-4	4-6	0-1	1-2	1-2
				Date Sampled:	6/20/13	6/20/13	6/20/13	6/20/13	6/20/13	6/15/13	6/15/13	6/15/13	6/15/13	6/16/13	6/16/13	6/16/13
Analyte	**TEC**	**PEC**	**SRV**	**Unit**												
Arsenic	9.79	33	11	mg/kg	7.9 J	***12***	8.3 J	8.2 J	7.4 J	3.7	2.8	3.1	2.9	2.3	2.6	2.9
Cadmium	0.99	4.98	0.96	mg/kg	***0.97***	***4.7 J***	0.81	0.78 J	***1.5***	0.42 J	0.38 J	0.34 J	0.27 J	0.25 J	0.29 J	0.3 J
Chromium	43.4	111	51	mg/kg	31.2 J	***93.4 J***	39 J	25 J	33.7 J	9.7 J	8.7 J	9.3 J	7.7 J	6.7 J	7.2 J	7.7 J
Copper	31.6	149	42	mg/kg	**35.2 J**	***67.2***	31.5 J	25.7 J	29.2 J	12.3	9.6	10.6	7.6	6.4	6.3	7.7
Lead	35.8	128	47	mg/kg	26.3	***77.5***	***227***	20	***174***	8.2	6.4	7.1	5.5	4.6	5.3	5.7
Mercury	0.18	1.06	0.12	mg/kg	0.21 UJ	***0.24***	0.22 UJ	0.19 UJ	0.14 UJ	0.14 U	0.14 U	0.12 U	0.13 U	0.12 U	0.12 U	0.13 U
Nickel	22.7	48.6	36	mg/kg	**35.8 J**	***50.8 J***	**31.6 J**	**28.5 J**	**27.5 J**	14.6	12.6	13.6	10.8	9	9.9	10.5
Zinc	121	459	190	mg/kg	**135 J**	***247 J***	**124 J**	107 J	117 J	40.4	35.8	37	30	27.2	27.3	28.9

NOTES:
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Freshwater Ecosystems (MacDonald et al. 2000).
SRV= Sediment reference value
Ohio EPA Ecological Risk Assessment Guidance Document (2008)
Bolded values exceed the TEC.
Gray shaded values exceed the PEC.
Italic values exceed the SRV.
Submitted samples are presented in ascending numerical order.
*Samples presented are displayed in Figure 4-4B, 4-5B, 4-6B, 4-7B, a

TABLE 4-8B* SEDIMENT RESULTS FOR METALS IN AREA B
PHASE 2 LOWER MAUMEE RIVER SITE CHARACTERIZATION
TOLEDO, OHIO (JUNE 2013)

				Sample Location:	LMR13-79						LMR13-80						LMR13-89	
				Sample Name:	LMR13-79-012	LMR13-79-024	LMR13-79-048	LMR13-79-048FD	LMR13-79-072	LMR13-79-096	LMR13-80-012	LMR13-80-024	LMR13-80-024FD	LMR13-80-048	LMR13-80-072	LMR13-80-096	LMR13-89-012	LMR13-89-024
				Sample Depth (ft):	0-1	1-2	2-4	2-4	4-6	6-7	0-1	1-2	1-2	2-4	4-6	6-7	0-1	1-2
				Date Sampled:	6/16/13	6/16/13	6/16/13	6/16/13	6/16/13	6/16/13	6/20/13	6/20/13	6/20/13	6/20/13	6/20/13	6/20/13	6/19/13	6/19/13
Analyte	**TEC**	**PEC**	**SRV**	**Unit**														
Arsenic	9.79	33	11	mg/kg	3.8	3.8	2.8	2.7	3	3	***11.7***	***16.4***	***14.9***	5.9	3.2	4.4	3.5 J	3 J
Cadmium	0.99	4.98	0.96	mg/kg	0.39 J	0.22 J	0.22 J	0.24 J	0.24 J	0.19 J	***1.4***	0.89	0.82 J	0.37 J	0.26 J	0.2 J	0.23 J	0.31 J
Chromium	43.4	111	51	mg/kg	14.3 J	5.4 J	6.8 J	6.1 J	6.5 J	5.5 J	28.3 J	28.6 J	26.3 J	14.2 J	9.2 J	7.2 J	7.8 J	8.9 J
Copper	31.6	149	42	mg/kg	14.1 J	3.4 J	5.6	5.5	6.5 J	5.1 J	**32.9**	**35.2**	**32.7**	15.1	8.7	6.1	6.2 J	8 J
Lead	35.8	128	47	mg/kg	14.1	3.2	4.5	4.1	4.8	3.4	***87.4***	***111***	***95.9***	28.4	8.9	5.7	7.4 J	6.4 J
Mercury	0.18	1.06	0.12	mg/kg	0.094 J	0.11 U	0.11 U	0.12 U	0.11 U	0.11 U	***0.24***	***0.51***	***0.4***	***0.12 J***	0.03 J	0.11 U	0.12 U	0.04 J
Nickel	22.7	48.6	36	mg/kg	17 J	7.2 J	9.1	8.5	9.6 J	7.8 J	**29.3 J**	**32.9 J**	**31.1 J**	18.9 J	13.3 J	11.8 J	10.6 J	13.4 J
Zinc	121	459	190	mg/kg	55.6 J	20.5 J	22.6	28	24.6 J	21.8 J	**179 J**	***246 J***	***217 J***	66.1 J	35.7 J	27.3 J	32.6 J	35.2 J

NOTES:
J = Indicates that the concentration is an estimated value.
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Bolded values exceed the TEC.
Gray shaded values exceed the PEC.
Italic values exceed the SRV.
Submitted samples are presented in ascending numerical order.
*Samples presented are displayed in Figure 4-4B, 4-5B, 4-6B, 4-7B, a

TABLE 4-8C* SEDIMENT RESULTS FOR METALS IN AREA C
PHASE 2 LOWER MAUMEE RIVER SITE CHARACTERIZATION
TOLEDO, OHIO (JUNE 2013)

				Sample Location:	LMR13-26		LMR13-27						LMR13-28					
				Sample Name:	LMR13-26-012	LMR13-26-012FD	LMR13-27-012	LMR13-27-024	LMR13-27-024FD	LMR13-27-048	LMR13-27-072	LMR13-27-096	LMR13-28-012	LMR13-28-024	LMR13-28-048	LMR13-28-072	LMR13-28-096	LMR13-28-120
				Sample Depth (ft):	0-1	0-1	0-1	1-2	1-2	2-4	4-6	6-7	0-1	1-2	2-4	4-6	6-8	8-9
				Date Sampled:	6/14/13	6/14/13	6/14/13	6/14/13	6/14/13	6/14/13	6/14/13	6/14/13	6/15/13	6/15/13	6/15/13	6/15/13	6/15/13	6/15/13
Analyte	**TEC**	**PEC**	**SRV**	**Unit**														
Arsenic	9.79	33	11	mg/kg	7.1	7.1	9.1	***22.3***	***24.7***	***21***	**10.5**	4	7.4	7.5	7.7	***12.3***	***15.8***	8.2
Cadmium	0.99	4.98	0.96	mg/kg	0.9	0.97 U	***1.3***	***2***	***2.1***	***1***	0.63 U	0.44 U	0.9	0.91	***1***	***1.2***	0.71	0.34 J
Chromium	43.4	111	51	mg/kg	27.9	27.3	33.5	40.1	43	30.9	14.5	7.1	25.2 J	29.1 J	29.1 J	25.4 J	20.7 J	9.9 J
Copper	31.6	149	42	mg/kg	***60.7***	28.9	**36**	***50.4***	***50.8***	**39.6**	16.7	7.7	29.8 J	30.8 J	**32.3 J**	31.5 J	**33.9 J**	14.1 J
Lead	35.8	128	47	mg/kg	31.6 J	32.5 J	**40.6 J**	***107 J***	***116 J***	***97.8 J***	35.6 J	5 J	28.1	26.3	**37.3**	***70.3***	***78.2***	30.5
Mercury	0.18	1.06	0.12	mg/kg	0.18 U	0.04 J	***0.15 J***	***0.57 J***	***0.44 J***	***0.45 J***	***0.19 J***	0.12 U	0.19 U	0.2 U	0.16 U	***0.29***	***0.55***	***0.18***
Nickel	22.7	48.6	36	mg/kg	**31.3 J**	**31.5 J**	**35.1 J**	***37 J***	***36.9 J***	**34.5 J**	17.3 J	9.8 J	**28.1 J**	**33.2 J**	**31.9 J**	**27.7 J**	**26 J**	14.8 J
Zinc	121	459	190	mg/kg	**123**	**121**	**159**	***342***	***363***	***310***	106	26	119 J	**128 J**	**141 J**	***210 J***	***211 J***	84.7 J

NOTES:
J = Indicates that the concentration is an estimated value.
U = Indicates the analyte was analyzed
for but not detected.
mg/kg = Milligrams per kilogram.
TEC = Threshold effect concentration.
Development and Evaluation of
Consensus-Based Sediment Quality Guidelines for
Freshwater Ecosystems (MacDonald et al. 2000).
PEC = Probable effect concentration.
Development and Evaluation of Consensus-Based
Sediment Quality Guidelines for
Freshwater Ecosystems (MacDonald et al. 2000).
SRV= Sediment reference value
Ohio EPA Ecological Risk Assessment Guidance Document (2008)
Bolded values exceed the TEC.
Gray shaded values exceed the PEC.
Italic values exceed the SRV.
Submitted samples are presented in ascending numerical order.
*Samples presented are displayed in Figure 4-4C, 4-5C, 4-6C, 4-7C, and 4-8C

TABLE 4-8C* SEDIMENT RESULTS FOR METALS IN AREA C
PHASE 2 LOWER MAUMEE RIVER SITE CHARACTERIZATION
TOLEDO, OHIO (JUNE 2013)

				Sample Location:	LMR13-29						LMR13-30					
				Sample Name:	LMR13-29-012	LMR13-29-024	LMR13-29-024FD	LMR13-29-048	LMR13-29-072	LMR13-29-096	LMR13-30-012	LMR13-30-024	LMR13-30-048	LMR13-30-072	LMR13-30-096	LMR13-30-120
				Sample Depth (ft):	0-1	1-2	1-2	2-4	4-6	6-8	0-1	1-2	2-4	4-6	6-8	8-10
				Date Sampled:	6/15/13	6/15/13	6/15/13	6/15/13	6/15/13	6/15/13	6/19/13	6/19/13	6/19/13	6/19/13	6/19/13	6/19/13
Analyte	**TEC**	**PEC**	**SRV**	**Unit**												
Arsenic	9.79	33	11	mg/kg	6.4	7.1	7.3	8.6	7.6	2.5	***24.6 J***	4.3 J	7.9 J	***18.3 J***	***26.3 J***	***16.2 J***
Cadmium	0.99	4.98	0.96	mg/kg	0.86	0.94	***0.96***	***1.5***	0.36 J	0.44 U	***2.9 J***	0.38 J	***2 J***	***1.2***	***1.2***	0.64 J
Chromium	43.4	111	51	mg/kg	22.3 J	27.3 J	26.6 J	24.4 J	12.4 J	5.5 J	***54.7 J***	13.4 J	36.3 J	32.8	27.7	18.5
Copper	31.6	149	42	mg/kg	27.5 J	**31.9 J**	30.8 J	**40.1 J**	14.5 J	5.1 J	***51.7***	13.2	***43.9 J***	**40.3**	***45.1***	26.3
Lead	35.8	128	47	mg/kg	24.5	29.2	30.5	***52.4***	33	4.1	***111 J***	11.3 J	**45.8 J**	***122***	***225***	***76.7***
Mercury	0.18	1.06	0.12	mg/kg	0.095 J	0.071 J	0.17 U	***0.17***	***0.13***	0.12 U	0.19 U	0.16 U	0.17 U	***0.46***	***0.65***	***0.32***
Nickel	22.7	48.6	36	mg/kg	**26.7 J**	**32.1 J**	**30.7 J**	**26.6 J**	15.5 J	8.6 J	**34.4 J**	19.2 J	**32.1 J**	**35.5 J**	**34 J**	**23.7 J**
Zinc	121	459	190	mg/kg	106 J	**129 J**	**130 J**	**156 J**	88.8 J	22.5 J	***446 J***	49.3 J	**160 J**	***456 J***	***509 J***	**176 J**

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Freshwater Ecosystems (MacDonald et al. 2000).
SRV= Sediment reference value
Ohio EPA Ecological Risk Assessment Guidance Document (2008)
Bolded values exceed the TEC.
Gray shaded values exceed the PEC.
Italic values exceed the SRV.
Submitted samples are presented in ascending numerical order.
*Samples presented are displayed in Figure 4-4C, 4-5C, 4-6C, 4-7C, and 4-8C

TABLE 4-8C* SEDIMENT RESULTS FOR METALS IN AREA C
PHASE 2 LOWER MAUMEE RIVER SITE CHARACTERIZATION
TOLEDO, OHIO (JUNE 2013)

				Sample Location:	LMR13-31			LMR13-32				LMR13-33					
				Sample Name:	LMR13-31-012	LMR13-31-024	LMR13-31-024FD	LMR13-32-012	LMR13-32-024	LMR13-32-048	LMR13-32-072	LMR13-33-012	LMR13-33-024	LMR13-33-024FD	LMR13-33-048	LMR13-33-072	LMR13-33-096
				Sample Depth (ft):	0-1	1-2	1-2	0-1	1-2	2-4	4-6	0-1	1-2	1-2	2-4	4-6	6-8
				Date Sampled:	6/15/13	6/15/13	6/15/13	6/15/13	6/15/13	6/15/13	6/15/13	6/19/13	6/19/13	6/19/13	6/19/13	6/19/13	6/19/13
Analyte	**TEC**	**PEC**	**SRV**	**Unit**													
Arsenic	9.79	33	11	mg/kg	6.1	7.7	6.3	5.2	3.4	2.7	2.6	***38.4 J***	***32.6 J***	***30.4 J***	***21.9 J***	***28.8 J***	**9.9 J**
Cadmium	0.99	4.98	0.96	mg/kg	***1***	***1.2***	0.95	0.42 J	0.28 J	0.23 J	0.36 J	***8***	***6***	***5.5***	***2.6***	***3.5***	***0.96***
Chromium	43.4	111	51	mg/kg	16.4 J	20.2 J	18.3 J	14 J	10.3 J	6.3 J	11.1 J	***135***	***76.1***	***70.8***	**46.3**	***51.8***	15.7
Copper	31.6	149	42	mg/kg	20.2	28	22.2	14.1	7.9	5	11.2	***131***	***82.9***	***83.4***	***48***	***54.8***	20.1
Lead	35.8	128	47	mg/kg	**36.8 J**	***50 J***	**42.1 J**	23.4 J	8.1 J	5.1 J	7.5 J	***340***	***254***	***233***	***113***	***122***	***48.7***
Mercury	0.18	1.06	0.12	mg/kg	0.08 J	***0.23***	***0.13***	***0.15***	0.069 J	0.034 J	0.11 U	***0.31***	***0.36***	***0.34***	***0.42***	***0.54***	***0.31***
Nickel	22.7	48.6	36	mg/kg	13.5	16.2	14.6	14.9	12.4	8.5	15.1	***98.1 J***	***50.9 J***	***50.4 J***	**35.6 J**	***36.7 J***	17 J
Zinc	121	459	190	mg/kg	73.4 J	**129 J**	101 J	64.2 J	34.3 J	26 J	41.4 J	***950 J***	***737 J***	***686 J***	***510 J***	***419 J***	**158 J**

NOTES:
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for but not detected.
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Development and Evaluation of Consensus-Based
Sediment Quality Guidelines for
Freshwater Ecosystems (MacDonald et al. 2000).
SRV= Sediment reference value
Ohio EPA Ecological Risk Assessment Guidance Document (2008)
Bolded values exceed the TEC.
Gray shaded values exceed the PEC.
Italic values exceed the SRV.
Submitted samples are presented in ascending numerical order.
*Samples presented are displayed in Figure 4-4C, 4-5C, 4-6C, 4-7C, and 4-8C

TABLE 4-8C* SEDIMENT RESULTS FOR METALS IN AREA C
PHASE 2 LOWER MAUMEE RIVER SITE CHARACTERIZATION
TOLEDO, OHIO (JUNE 2013)

				Sample Location:	LMR13-34										LMR13-49						
				Sample Name:	LMR13-34-012	LMR13-34-024	LMR13-34-048	LMR13-34-048FD	LMR13-34-072	LMR13-34-096	LMR13-34-120	LMR13-34-144	LMR13-34-168	LMR13-34-192	LMR13-49-012	LMR13-49-024	LMR13-49-024FD	LMR13-49-048	LMR13-49-072	LMR13-49-096	LMR13-49-120
				Sample Depth (ft):	0-1	1-2	2-4	2-4	4-6	6-8	8-10	10-12	12-14	14-15	0-1	1-2	1-2	2-4	4-6	6-8	8-9
				Date Sampled:	6/15/13	6/15/13	6/15/13	6/15/13	6/15/13	6/15/13	6/15/13	6/15/13	6/15/13	6/15/13	6/14/13	6/14/13	6/14/13	6/14/13	6/14/13	6/14/13	6/14/13
Analyte	**TEC**	**PEC**	**SRV**	**Unit**																	
Arsenic	9.79	33	11	mg/kg	7.6	7.9	8	8.4	8.3	8.1	9.5	**9.9**	***12.4***	9.1	6.2	6.6	6.6	8.3	6.2	3.3	3
Cadmium	0.99	4.98	0.96	mg/kg	***0.97***	***1***	***1.1***	***1.2***	***1.1***	***1.1***	***2.2***	***2.4***	***4.5***	***2.7***	0.8	***1.3***	***1.2***	***2.1***	0.48 J	0.33 J	0.29 J
Chromium	43.4	111	51	mg/kg	26.7 J	29.2 J	31.9 J	30.8 J	31.4 J	32.3 J	**44.3 J**	40.1 J	***78.4 J***	**47.2 J**	23.3 J	20.4 J	20.5 J	23 J	16.7 J	9.5 J	6.5 J
Copper	31.6	149	42	mg/kg	**32.4 J**	**34 J**	**33.6 J**	**34.4 J**	**34.3 J**	**35 J**	***50.4 J***	**41.5 J**	***63.1***	**40.3**	26.5	23.4	23.8	28.2	18.6	9.5	6.3
Lead	35.8	128	47	mg/kg	28.7	29.7	31.8	33.4	32	35.5	***49.3***	***55.7***	***80.1 J***	***51.3 J***	23.3	**37.2**	31.6	**38.2**	23.6	8.5	4.8
Mercury	0.18	1.06	0.12	mg/kg	0.25 U	***0.14 J***	***0.12 J***	0.085 J	0.17 U	0.098 J	***0.15 J***	***0.16 J***	***0.32***	***0.24***	0.075 J	***0.12 J***	***0.12 J***	***0.16***	0.084 J	***0.32***	0.11 U
Nickel	22.7	48.6	36	mg/kg	**30.4 J**	**32.7 J**	**34.6 J**	**34.6 J**	**34.4 J**	**34.4 J**	***41 J***	***37.6 J***	***46.7***	**34.7**	**28.1**	**24.2**	**24.2**	**25**	22.4	14	10.2
Zinc	121	459	190	mg/kg	**129 J**	**140 J**	**147 J**	**150 J**	**144 J**	**157 J**	**166 J**	**169 J**	***231 J***	**142 J**	107 J	**128 J**	**133 J**	113 J	84 J	39.6 J	27.9 J

NOTES:
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for but not detected.
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Development and Evaluation of
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Freshwater Ecosystems (MacDonald et al. 2000).
PEC = Probable effect concentration.
Development and Evaluation of Consensus-Based
Sediment Quality Guidelines for
Freshwater Ecosystems (MacDonald et al. 2000).
SRV= Sediment reference value
Ohio EPA Ecological Risk Assessment Guidance Document (2008)
Bolded values exceed the TEC.
Gray shaded values exceed the PEC.
Italic values exceed the SRV.
Submitted samples are presented in ascending numerical order.
*Samples presented are displayed in Figure 4-4C, 4-5C, 4-6C, 4-7C, and 4-8C

TABLE 4-8C* SEDIMENT RESULTS FOR METALS IN AREA C
PHASE 2 LOWER MAUMEE RIVER SITE CHARACTERIZATION
TOLEDO, OHIO (JUNE 2013)

				Sample Location:	LMR13-50						LMR13-51					LMR13-52		
				Sample Name:	LMR13-50-012	LMR13-50-024	LMR13-50-048	LMR13-50-072	LMR13-50-096	LMR13-50-120	LMR13-51-012	LMR13-51-024	LMR13-51-024FD	LMR13-51-048	LMR13-51-072	LMR13-52-012	LMR13-52-024	LMR13-52-048
				Sample Depth (ft):	0-1	1-2	2-4	4-6	6-8	8-10	0-1	1-2	1-2	2-4	4-6	0-1	1-2	2-5
				Date Sampled:	6/14/13	6/14/13	6/14/13	6/14/13	6/14/13	6/14/13	6/13/13	6/13/13	6/13/13	6/13/13	6/13/13	6/20/13	6/20/13	6/20/13
Analyte	**TEC**	**PEC**	**SRV**	**Unit**														
Arsenic	9.79	33	11	mg/kg	7.2	8	7.7	7.4	8.7	**9.8**	7.1	6.1	6.5	3.6	2.9	**10.2**	8.5	6.8
Cadmium	0.99	4.98	0.96	mg/kg	0.76 J	0.86 J	***1***	***1.2***	***2.5***	***2.8***	0.84 J	0.57 UJ	0.59 UJ	0.43 UJ	0.44 UJ	***1.1***	***0.99***	0.46 J
Chromium	43.4	111	51	mg/kg	22.1 J	26.5 J	25.7 J	25.1 J	32 J	34.3 J	22.3 J	22.5 J	25.7 J	7.7 J	6.9 J	29.7 J	24.2 J	12.6 J
Copper	31.6	149	42	mg/kg	26.5	29.9	28.7	27.3	**38**	**36**	26.3	22	23.7	7.5	6.1	**31.8**	26.9	14.5
Lead	35.8	128	47	mg/kg	21.3	22.6	***60.6***	***66.1***	***51.4***	***53.1***	**39.3**	29.3	22.5	6.7	4.9	**42.9**	**41**	30.1
Mercury	0.18	1.06	0.12	mg/kg	0.066 J	0.071 J	0.093 J	***0.14 J***	***0.12 J***	***0.16***	***0.16 J***	***0.19***	***0.2***	0.12 U	0.11 U	0.079 J	***0.18***	0.11 J
Nickel	22.7	48.6	36	mg/kg	**26.7**	**32**	**29.1**	**28.6**	**32.6**	**34.8**	**28.5 J**	**28.4 J**	**30.2 J**	11.7	10.5	**33 J**	**26.2 J**	16.1 J
Zinc	121	459	190	mg/kg	101 J	120 J	**127 J**	**176 J**	**135 J**	**145 J**	**137 J**	91 J	110 J	35.4 J	27.4 J	**155 J**	**136 J**	84 J

NOTES:
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SRV= Sediment reference value
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Bolded values exceed the TEC.
Gray shaded values exceed the PEC.
Italic values exceed the SRV.
Submitted samples are presented in ascending numerical order.
*Samples presented are displayed in Figure 4-4C, 4-5C, 4-6C, 4-7C, and 4-8C

TABLE 4-8C* SEDIMENT RESULTS FOR METALS IN AREA C
PHASE 2 LOWER MAUMEE RIVER SITE CHARACTERIZATION
TOLEDO, OHIO (JUNE 2013)

				Sample Location:	LMR13-53			LMR13-70			LMR13-72						LMR13-74				
				Sample Name:	LMR13-53-012	LMR13-53-024	LMR13-53-024FD	LMR13-70-012	LMR13-70-024	LMR13-70-048	LMR13-72-012	LMR13-72-024	LMR13-72-024FD	LMR13-72-048	LMR13-72-072	LMR13-72-096	LMR13-74-012	LMR13-74-024	LMR13-74-024FD	LMR13-74-048	LMR13-74-072
				Sample Depth (ft):	0-1	1-2	1-2	0-1	1-2	2-4	0-1	1-2	1-2	2-4	4-6	6-8	0-1	1-2	1-2	2-4	4-6
				Date Sampled:	6/20/13	6/20/13	6/20/13	6/20/13	6/20/13	6/20/13	6/14/13	6/14/13	6/14/13	6/14/13	6/14/13	6/14/13	6/15/13	6/15/13	6/15/13	6/15/13	6/15/13
Analyte	**TEC**	**PEC**	**SRV**	**Unit**																	
Arsenic	9.79	33	11	mg/kg	**10.8**	9.3	7.8	**10.6**	**10 J**	**10.6**	***13.9***	***15.6***	***13.2***	***14.2***	***18.7***	***23***	6.7	7.5	7.6	5.4	2.6
Cadmium	0.99	4.98	0.96	mg/kg	***2.6***	***1.3***	***1.3***	***1.2***	***1.9***	***2.3***	***5.5***	***5.1***	***5.4***	***2.7***	***1.8***	***1.2***	0.91	0.77	0.85	0.23 J	0.24 J
Chromium	43.4	111	51	mg/kg	41.6 J	35.7 J	36 J	39.2 J	38.2 J	43.2 J	40.2	43.1	41.9	32.6	40.6	30.5	27 J	21.1 J	21.7 J	9.7 J	8.5 J
Copper	31.6	149	42	mg/kg	**40**	**41.1**	**33.1**	**37.7**	**36.1 J**	**40.8**	***58.2***	***91.5***	***85.5***	***55.5***	***46.6***	***42.1***	28.9	23.7	23.4	9.8	6.9
Lead	35.8	128	47	mg/kg	***66.3***	***199***	***80***	***47.9***	**44.8**	***54.3***	***133 J***	***245 J***	***246 J***	***157 J***	***97.9 J***	***113 J***	31.9 J	**36.8 J**	**37.6 J**	16.2 J	5.4 J
Mercury	0.18	1.06	0.12	mg/kg	***0.17***	***0.12 J***	***0.12 J***	0.11 J	0.17 UJ	***0.17***	***0.28 J***	***0.54 J***	***0.44 J***	***0.5 J***	***0.45 J***	***0.6 J***	0.057 J	***0.21***	***0.18***	0.06 J	0.12 U
Nickel	22.7	48.6	36	mg/kg	***41.1 J***	**33.9 J**	**31.5 J**	***40.7 J***	***37.9 J***	***43.8 J***	**33.2 J**	**30.3 J**	**30.3 J**	**30.9 J**	**29.6 J**	**33.5 J**	**26.8**	18.6	19.1	13.4	10.8
Zinc	121	459	190	mg/kg	**173 J**	**121 J**	117 J	***190 J***	**160 J**	**177 J**	***314***	***424***	***353***	***256***	***209***	***280***	**130 J**	114 J	114 J	34 J	27.3 J

NOTES:
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Bolded values exceed the TEC.
Gray shaded values exceed the PEC.
Italic values exceed the SRV.
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TABLE 4-8C* SEDIMENT RESULTS FOR METALS IN AREA C
PHASE 2 LOWER MAUMEE RIVER SITE CHARACTERIZATION
TOLEDO, OHIO (JUNE 2013)

				Sample Location:	LMR13-75		LMR13-76					LMR13-83				LMR13-84				
				Sample Name:	LMR13-75-012	LMR13-75-024	LMR13-76-012	LMR13-76-024	LMR13-76-024FD	LMR13-76-048	LMR13-76-072	LMR13-83-012	LMR13-83-024	LMR13-83-048	LMR13-83-072	LMR13-84-012	LMR13-84-024	LMR13-84-024FD	LMR13-84-048	LMR13-84-072
				Sample Depth (ft):	0-1	1-2	0-1	1-2	1-2	2-4	4-6	0-1	1-2	2-4	4-6	0-1	1-2	1-2	2-4	4-6
				Date Sampled:	6/15/13	6/15/13	6/15/13	6/15/13	6/15/13	6/15/13	6/15/13	6/14/13	6/14/13	6/14/13	6/14/13	6/18/13	6/18/13	6/18/13	6/18/13	6/18/13
Analyte	**TEC**	**PEC**	**SRV**	**Unit**																
Arsenic	9.79	33	11	mg/kg	3.6	2.2	4.6	3.4	3.5	4.4	3.5	8.5	8	3.6	3.1	***12 J***	6.3 J	6.9 J	5.2 J	2.9 J
Cadmium	0.99	4.98	0.96	mg/kg	0.25 J	0.19 J	0.58 J	0.62	0.41 J	0.65	0.45	***2.1***	***1.4***	0.57 U	0.51 U	0.66 J	0.51 J	0.49 J	0.43 J	0.35 J
Chromium	43.4	111	51	mg/kg	9.2 J	6.3 J	20.1 J	10.4 J	10.7 J	14.5 J	10.1 J	***98.8 J***	**48.7 J**	10.4	6.6	20.5 J	21.4 J	21.4 J	18 J	10.5 J
Copper	31.6	149	42	mg/kg	7.1	4.2	21.3	10.4	15.6	15	27.1	***53.8***	***45.5***	9.8	4.8	25.6	24.8	24.4	18.4	10
Lead	35.8	128	47	mg/kg	7.3 J	3.4 J	17.1 J	11.8 J	20.8	34.3	**42.7**	**43.9**	**42.6**	12.5 J	4.5 J	**42.6 J**	**40 J**	**39.5 J**	19.9 J	8.6 J
Mercury	0.18	1.06	0.12	mg/kg	0.12 U	0.11 U	0.15 U	0.043 J	0.12 U	0.11 U	0.11 U	0.069 J	***0.13 J***	0.12 U	0.11 U	0.16 U	0.16 U	0.17 U	0.15 U	0.13 U
Nickel	22.7	48.6	36	mg/kg	11	7.9	20.2	11.8	12.5	15.7	9.8	***61.5***	***38.8***	13.8 J	9.4 J	**24.7 J**	**28 J**	**27.4 J**	**24.2 J**	15.6 J
Zinc	121	459	190	mg/kg	29.6 J	20.6 J	78.5 J	48.7 J	56.4	73.3	46.4	***511 J***	***236 J***	38.6	24.9	**132 J**	101 J	97.5 J	77.1 J	42.5 J

NOTES:
J = Indicates that the concentration is an estimated value.
U = Indicates the analyte was analyzed
for but not detected.
mg/kg = Milligrams per kilogram.
TEC = Threshold effect concentration.
Development and Evaluation of
Consensus-Based Sediment Quality Guidelines for
Freshwater Ecosystems (MacDonald et al. 2000).
PEC = Probable effect concentration.
Development and Evaluation of Consensus-Based
Sediment Quality Guidelines for
Freshwater Ecosystems (MacDonald et al. 2000).
SRV= Sediment reference value
Ohio EPA Ecological Risk Assessment Guidance Document (2008)
Bolded values exceed the TEC.
Gray shaded values exceed the PEC.
Italic values exceed the SRV.
Submitted samples are presented in ascending numerical order.
*Samples presented are displayed in Figure 4-4C, 4-5C, 4-6C, 4-7C, and 4-8C

TABLE 4-8C* SEDIMENT RESULTS FOR METALS IN AREA C
PHASE 2 LOWER MAUMEE RIVER SITE CHARACTERIZATION
TOLEDO, OHIO (JUNE 2013)

Sample Location:					LMR13-85			LMR13-86							LMR13-87						
Sample Name:					LMR13-85-012	LMR13-85-024	LMR13-85-048	LMR13-86-012	LMR13-86-024	LMR13-86-024FD	LMR13-86-048	LMR13-86-072	LMR13-86-096	LMR13-87-012	LMR13-87-024	LMR13-87-048	LMR13-87-072	LMR13-87-096	LMR13-87-120
Sample Depth (ft):					0-1	1-2	2-4	0-1	1-2	1-2	2-4	4-6	6-8	0-1	1-2	2-4	4-6	6-8	8-10
Date Sampled:					6/19/13	6/19/13	6/19/13	6/18/13	6/18/13	6/18/13	6/18/13	6/18/13	6/18/13	6/18/13	6/18/13	6/18/13	6/18/13	6/18/13	6/18/13
Analyte	**TEC**	**PEC**	**SRV**	**Unit**															
Arsenic	9.79	33	11	mg/kg	7.6 J	7.5 J	7.4 J	**10.6 J**	**10.8 J**	**10 J**	8.5 J	9.5 J	***11.1 J***	***18.3 J***	***16.9 J***	***17.8 J***	***19.5 J***	***19.1 J***	***25.6 J***
Cadmium	0.99	4.98	0.96	mg/kg	0.81 J	***1.2 J***	***1.2 J***	***2 J***	***3.2 J***	***3 J***	***2.9 J***	***3.5***	***3.3 J***	***3.2 J***	***3.9 J***	***2.6 J***	***2.6 J***	***2.2 J***	***4.2 J***
Chromium	43.4	111	51	mg/kg	23.7 J	29.5 J	27.7 J	37 J	**46.4 J**	43.3 J	**44.4 J**	**49.9**	***55 J***	***70.7 J***	***62.1 J***	**45 J**	**43.7 J**	***54.5 J***	***80 J***
Copper	31.6	149	42	mg/kg	28.5 J	**31.9 J**	30.4 J	**36.8**	***42.2***	**40.6**	**39.8**	***42***	***46.4***	***57.2***	***57.8***	***55.5***	***52.1***	***53.2***	***70.6***
Lead	35.8	128	47	mg/kg	23.1 J	31.7 J	32.9 J	***50.5 J***	***62.6 J***	***67.9 J***	***53.6 J***	***65.1***	***211 J***	***73.9 J***	***85.2 J***	***74.8 J***	***85.8 J***	***53.7 J***	***138 J***
Mercury	0.18	1.06	0.12	mg/kg	***0.12 J***	0.091 J	***0.14 J***	0.19 U	0.18 U	0.19 U	0.18 U	***0.19***	0.17 U	0.17 U	0.18 U	0.15 U	0.17 U	0.14 U	0.15 U
Nickel	22.7	48.6	36	mg/kg	**29.2 J**	**30.4 J**	**29.8 J**	***36.7 J***	***42 J***	***40.2 J***	***40 J***	***42.2 J***	***38 J***	***38.8 J***	**35.8 J**	**32.2 J**	**29.7 J**	**26.1 J**	***44.7 J***
Zinc	121	459	190	mg/kg	109 J	**133 J**	**125 J**	**156 J**	**180 J**	**183 J**	**169 J**	**182 J**	***288 J***	***301 J***	***378 J***	***376 J***	***551 J***	***388 J***	***1030 J***

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Sediment Quality Guidelines for
Freshwater Ecosystems (MacDonald et al. 2000).
SRV= Sediment reference value
Ohio EPA Ecological Risk Assessment Guidance Document (2008)
Bolded values exceed the TEC.
Gray shaded values exceed the PEC.
Italic values exceed the SRV.
Submitted samples are presented in ascending numerical order.
*Samples presented are displayed in Figure 4-4C, 4-5C, 4-6C, 4-7C, and 4-8C

TABLE 4-8C* SEDIMENT RESULTS FOR METALS IN AREA C
PHASE 2 LOWER MAUMEE RIVER SITE CHARACTERIZATION
TOLEDO, OHIO (JUNE 2013)

				Sample Location:	LMR13-88				LMR13-94				LMR13-95				
				Sample Name:	LMR13-88-012	LMR13-88-012FD	LMR13-88-024	LMR13-88-048	LMR13-94-012	LMR13-94-024	LMR13-94-048	LMR13-94-072	LMR13-95-012	LMR13-95-024	LMR13-95-048	LMR13-95-072	LMR13-95-096
				Sample Depth (ft):	0-1	0-1	1-2	2-4	0-1	1-2	2-4	4-6	0-1	1-2	2-4	4-6	6-8
				Date Sampled:	6/19/13	6/19/13	6/19/13	6/19/13	6/20/13	6/20/13	6/20/13	6/20/13	6/20/13	6/20/13	6/20/13	6/20/13	6/20/13
Analyte	**TEC**	**PEC**	**SRV**	**Unit**													
Arsenic	9.79	33	11	mg/kg	***19.1 J***	***20.7 J***	***17.3 J***	***23 J***	***11 J***	***13.1 J***	***14 J***	***15.2 J***	**10.9 J**	***14.8 J***	***26 J***	***22.3 J***	***21 J***
Cadmium	0.99	4.98	0.96	mg/kg	***2.4 J***	***5.3 J***	***1.6 J***	***2 J***	***0.98***	***1.7***	***2***	***1.3***	***1***	***1.6***	***2.7***	0.9	0.81
Chromium	43.4	111	51	mg/kg	36.4 J	***56.3 J***	26.2 J	33.7 J	**47.7 J**	**49.5 J**	**50.2 J**	36.3 J	30.9 J	36.4 J	***71.2 J***	29.8 J	25.5 J
Copper	31.6	149	42	mg/kg	**37.5 J**	***53.6 J***	**32.7 J**	***42.3 J***	**39.7 J**	**41.5 J**	***51.9 J***	**33.3 J**	**39.3 J**	***44.9 J***	***53.1 J***	30.7 J	28 J
Lead	35.8	128	47	mg/kg	***131 J***	***132 J***	***106 J***	***166 J***	**43.1**	***57.9***	***68.3***	***70.2***	**45.8**	***91***	***144***	***92.2***	***80.4***
Mercury	0.18	1.06	0.12	mg/kg	***0.51***	***0.53***	***0.28***	***0.66***	0.19 UJ	***0.27 J***	***0.15 J***	***0.63 J***	***0.17 J***	***0.4 J***	***0.46 J***	***1.2 J***	***0.21 J***
Nickel	22.7	48.6	36	mg/kg	**28.5 J**	**34 J**	22.4 J	**26.2 J**	**33.5 J**	**34.4 J**	***37.8 J***	**31.6 J**	**27.5 J**	21.7 J	***38 J***	**31.8 J**	**27.3 J**
Zinc	121	459	190	mg/kg	***454 J***	***599 J***	***281 J***	***405 J***	**178 J**	***325 J***	***387 J***	***309 J***	**185 J**	***317 J***	***756 J***	***398 J***	***336 J***

NOTES:
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U = Indicates the analyte was analyzed
for but not detected.
mg/kg = Milligrams per kilogram.
TEC = Threshold effect concentration.
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Ohio EPA Ecological Risk Assessment Guidance Document (2008)
Bolded values exceed the TEC.
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Italic values exceed the SRV.
Submitted samples are presented in ascending numerical order.
*Samples presented are displayed in Figure 4-4C, 4-5C, 4-6C, 4-7C, and 4-8C

TABLE 4-9 SEDIMENT RESULTS FOR SEM/AVS
PHASE 2 LOWER MAUMEE RIVER SITE CHARACTERISTICS
TOLEDO, OHIO (JUNE 2013)

	Sample Location:	LMR13-01	LMR13-03	LMR13-08	LMR13-13	LMR13-14	LMR13-15	LMR13-21	LMR13-25		LMR13-28
	Sample Name:	LMR13-01-012	LMR13-03-012	LMR13-08-012	LMR13-13-012	LMR13-14-012	LMR13-15-012	LMR13-21-012	LMR13-25-012	LMR13-25-012FD	LMR13-28-012
	Sample Depth (ft):	0-1	0-1	0-1	0-1	0-1	0-1	0-1	0-1	0-1	0-1
	Date Sampled:	6/17/13	6/17/13	6/17/13	6/18/13	6/17/13	6/18/13	6/18/13	6/18/13	6/18/13	6/15/13
Analyte	**Unit**										
Cadmium SEM	umole/g	0.015 U	0.0086 J	0.0057 J	0.0092 J	0.0094 J	0.0048 J	0.012 J	0.0033 J	0.0044 J	0.019 J
Copper SEM	umole/g	0.08 J	0.11 J	0.13 J	0.14 J	0.13 J	0.12 J	0.14	0.056 J	0.072 J	0.19 J
Lead SEM	umole/g	0.1	0.15	0.063	0.11	0.094	0.07	0.066	0.041	0.049	0.086
Mercury SEM	umole/g	0.000034 U	0.000042 U	0.000053 U	0.000051 U	0.000049 U	0.000046 U	0.000035 U	0.000031 U	0.000033 U	0.000054 U
Nickel SEM	umole/g	0.068 J	0.1 J	0.11 J	0.2 J	0.14 J	0.13 J	0.15 J	0.049 J	0.055 J	0.11 J
Zinc SEM	umole/g	0.44	0.9	0.6	1.4	1.6	0.66	0.58	0.28	0.33	0.72
Acid Volatile Sulfides (AVS)	umole/g	10.7	12.7	10.5	16.4	9.8	0.91 U	0.69 U	20.3	1.1	10.2
SEM/AVS Ratio	none	0.0643	0.101	0.0865	0.113	0.202	1.082	1.374	0.0211	0.464	0.1103

NOTES:

J = Indicates that the concentration is an estimated value.

Method Detection Limit and the concentration is an approximate value.

U = Indicates the analyte was analyzed for but not detected.

umole/g = Micro mole per gram.

49 submitted samples are presented in ascending numerical order.

TABLE 4-9 SEDIMENT RESULTS FOR SEM/AVS
PHASE 2 LOWER MAUMEE RIVER SITE CHARACTERISTICS
TOLEDO, OHIO (JUNE 2013)

	Sample Location:	LMR13-30	LMR13-33	LMR13-35	LMR13-39	LMR13-42	LMR13-42	LMR13-44	LMR13-45	LMR13-47	LMR13-49	LMR13-50	LMR13-51
	Sample Name:	LMR13-30-012	LMR13-33-012	LMR13-35-012	LMR13-39-012	LMR13-42-012	LMR13-42-012FD	LMR13-44-012	LMR13-45-012	LMR13-47-012	LMR13-49-012	LMR13-50-012	LMR13-51-012
	Sample Depth (ft):	0-1	0-1	0-1	0-1	0-1	0-1	0-1	0-1	0-1	0-1	0-1	0-1
	Date Sampled:	6/19/13	6/19/13	6/15/13	6/19/13	6/12/13	6/12/13	6/12/13	6/14/13	6/13/13	6/14/13	6/14/13	6/13/13
Analyte	**Unit**												
Cadmium SEM	umole/g	0.0067 J	0.0075 J	0.0054 J	0.0037 J	0.022	0.026	0.0098 J	0.01 J	0.026 U	0.014 J	0.01 J	0.0034 J
Copper SEM	umole/g	0.12 J	0.13 J	0.1 J	0.1 J	0.022 J	0.019 J	0.044 J	0.037 J	0.062 J	0.062 J	0.034 J	0.06 J
Lead SEM	umole/g	0.83	0.13	0.072	0.1	0.14	0.18	0.11	0.15	0.033	0.18	0.13	0.071
Mercury SEM	umole/g	0.000045 U	0.000057 U	0.000045 U	0.000034 U	0.00002 J	0.000043 U	0.00004 U	0.000053 U	0.000061 U	0.000047 U	0.00004 J	0.000046 U
Nickel SEM	umole/g	0.13 J	0.18 J	0.09 J	0.093 J	0.14 J	0.21 J	0.082 J	0.35 J	0.045 J	0.057 J	0.33 J	0.073 J
Zinc SEM	umole/g	3.7	1.1	0.7	0.73	1.3	1.9	0.8	2.8	0.29	1	2.5	0.55
Acid Volatile Sulfides (AVS)	umole/g	1.1	1.1 U	9	0.68 U	10.5	18.6	5.4	11.4	1.5	2.6	4.1	4.6
SEM/AVS Ratio	none	4.352	1.407	0.107	1.511	0.155	0.125	0.193	0.295	0.287	0.505	0.733	0.165

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Method Detection Limit and the concentration is an approximate value.

U = Indicates the analyte was analyzed for but not detected.

umole/g = Micro mole per gram.

49 submitted samples are presented in ascending numerical order.

TABLE 4-9 SEDIMENT RESULTS FOR SEM/AVS
PHASE 2 LOWER MAUMEE RIVER SITE CHARACTERISTICS
TOLEDO, OHIO (JUNE 2013)

	Sample Location:	LMR13-54	LMR13-55	LMR13-57	LMR13-58	LMR13-65	LMR13-66		LMR13-67	LMR13-69	LMR13-70	LMR13-72	LMR13-74	LMR13-75	LMR13-76	LMR13-78
	Sample Name:	LMR13-54-012	LMR13-55-012	LMR13-57-012	LMR13-58-012	LMR13-65-012	LMR13-66-012	LMR13-66-012FD	LMR13-67-012	LMR13-69-012	LMR13-70-012	LMR13-72-012	LMR13-74-012	LMR13-75-012	LMR13-76-012	LMR13-78-012
	Sample Depth (ft):	0-1	0-1	0-1	0-1	0-1	0-1	0-1	0-1	0-1	0-1	0-1	0-1	0-1	0-1	0-1
	Date Sampled:	6/19/13	6/19/13	6/14/13	6/20/13	6/20/13	6/20/13	6/20/13	6/19/13	6/20/13	6/20/13	6/14/13	6/15/13	6/15/13	6/15/13	6/16/13
Analyte	**Unit**															
Cadmium SEM	umole/g	0.021 U	0.027	0.0042 J	0.023 U	0.027 U	0.016 U	0.015 U	0.024 U	0.01 J	0.005 J	0.014 J	0.0044 J	0.013 U	0.017 U	0.014 U
Copper SEM	umole/g	0.1 J	0.59	0.056 J	0.081 J	0.083 J	0.024 J	0.03 J	0.13 J	0.085 J	0.12 J	0.083 J	0.12 J	0.043 J	0.041 J	0.056 J
Lead SEM	umole/g	0.078	0.71	0.82	0.031	0.046	0.016 J	0.032	0.054	0.036	0.093	0.22	0.066	0.019	0.032	0.014 J
Mercury SEM	umole/g	0.000049 U	< 0.000034 U	0.000032 J	0.000053 U	0.000063 U	0.000037 U	0.000036 U	0.000055 U	0.000049 U	0.000056 U	0.000042 U	0.000045 U	0.000031 U	0.000041 U	0.000034 U
Nickel SEM	umole/g	0.1 J	0.49	0.071 J	0.038 J	0.053 J	0.25 U	0.25 U	0.11 J	0.055 J	0.17 J	0.059 J	0.08 J	0.047 J	0.043 J	0.043 J
Zinc SEM	umole/g	0.51	5	1.7	0.26	0.35	0.12	0.19	0.59	0.25	1	1.1	0.68	0.14	0.29	0.14
Acid Volatile Sulfides (AVS)	umole/g	1.2	0.68 U	10.5	4	5	1.1	1.8	1.1 U	1.5	1.1 U	4.4	9.5	0.63 U	8.3	0.67 U
SEM/AVS Ratio	none	0.657	10.025	0.253	0.103	0.1064	0.145	0.14	0.804	0.292	1.262	0.336	0.1	0.395	0.0491	0.378

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umole/g = Micro mole per gram.

49 submitted samples are presented in ascending numerical order.

TABLE 4-9 SEDIMENT RESULTS FOR SEM/AVS
PHASE 2 LOWER MAUMEE RIVER SITE CHARACTERISTICS
TOLEDO, OHIO (JUNE 2013)

	Sample Location:	LMR13-81		LMR13-82	LMR13-85	LMR13-86		LMR13-88	LMR13-89	LMR13-90	LMR13-91	LMR13-94	LMR13-95
	Sample Name:	LMR13-81-012	LMR13-81-012FD	LMR13-82-012	LMR13-85-012	LMR13-86-012	LMR13-86-012FD	LMR13-88-012	LMR13-89-012	LMR13-90-012	LMR13-91-012	LMR13-94-012	LMR13-95-012
	Sample Depth (ft):	0-1	0-1	0-1	0-1	0-1	0-1	0-1	0-1	0-1	0-1	0-1	0-1
	Date Sampled:	6/12/13	6/12/13	6/17/13	6/19/13	6/18/13	6/18/13	6/19/13	6/19/13	6/13/13	6/13/13	6/20/13	6/20/13
Analyte	**Unit**												
Cadmium SEM	umole/g	0.014 J	0.0065 J	0.012 J	0.022 U	0.007 J	0.0082 J	0.026	0.013 U	0.0044 J	0.023 U	0.02 U	0.0029 J
Copper SEM	umole/g	0.053 J	0.079 J	0.17 J	0.12 J	0.14 J	0.15 J	0.25	0.041 J	0.059 J	0.061 J	0.055 J	0.063 J
Lead SEM	umole/g	0.16	0.17	0.13	0.06	0.076	0.11	0.42	0.017	0.043	0.04	0.031	0.069
Mercury SEM	umole/g	0.000049	0.00004 U	0.000044 U	0.000051 U	< 0.000051 U	0.00005 U	0.000053 U	0.00003 U	0.000029 J	0.000053 U	0.000048 U	< 0.000042 U
Nickel SEM	umole/g	0.1 J	0.079 J	0.12 J	0.11 J	0.12 J	0.16 J	0.17 J	0.062 J	0.064 J	0.061 J	0.026 J	0.048 J
Zinc SEM	umole/g	1	1	0.89	0.55	0.68	0.86	4.7	0.21	0.38	0.36	0.3	0.69
Acid Volatile Sulfides (AVS)	umole/g	9.5	8.5	8.2	1 U	1 U	1.5	1.1 U	0.74	3.1	4	4.8	10.8
SEM/AVS Ratio	none	0.14	0.16	0.161	0.84	1.023	0.862	5.06	0.44	0.179	0.13	0.087	0.0808

NOTES:

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U = Indicates the analyte was analyzed for but not detected.

umole/g = Micro mole per gram.

49 submitted samples are presented in ascending numerical order.

Appendix A

Field Logbook

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Location MAUMEE RIVER Date

Project / Client

Location Date 6/11/13

Project / Client

6-11-13 Tuesday 75° Sunny
on Board MudPuppy

EPA - Bryant
EA - Voss
MudPuppy Staff Joe & Stacey

16:30 Leave dock w/ New
Vibracore

16:38 Arrive LMR 13-42
~~[illegible]~~
~~[illegible]~~
water Depth 4 ft 6 in
LAT = 41°41.2448 Long 83°28.7773
Recovery
9 Feet of Penetration
~~108~~ inches of Recovery
105 ↑
10 foot Core Tube

Location Maumee River Phase II Date 6/12/13

Project / Client

Weather - partly cloudy; 81°F

6/12/13

on board - Mike Bryant (EPA)
Sam Voss (EA)
Joe + Stacey (Mudpuppy crew)

0745 - Mudpuppy leaves dock

0753 - on site at LMR13-43
- water depth = 7'5"
41° 41. 238358 N 83° 28. 656353 W
- 10 ft core tube
Penetration = 10 ft
Recovery = 110 inches

0838 - on site at LMR13-44
water depth = 6'3"
41° 41. 3315 N 83° 28. 5832
10 ft core tube
Penetration = 8 ft
Recovery = 95 inches

Location 5'9" Date 6/12/13

Project / Client

0914 - on site at LMR13-46
water depth = 5'9"
41° 41. 4376 N 83° 28. 4913 W
10 ft core tube
Penetration = 10 ft
Recovery = 117 inches
* sheen observed as core was pulled. Slight hydrocarbon odor detected.

0950 - on site at LMR13-45
water depth = 5'
41° 41. 4346 N 83° 28. 6464 W
10 ft core tube
Penetration = 9.5 ft
Recovery = 109 inches

1024 - on site at LMR13-93
water depth = 4'10"
41° 41. 4962 N 83° 28. 3690 W
10 ft core tube
Penetration = 10 ft
Recovery = 114 inches
* slight sheen observed as core was pulled.

Location _____ Date 6/12/13

Project / Client _____

1057 - on site at LMR13-81
water depth = 5'7"
41°41.4054 N 83°28.5425 W
10 ft core tube
Penetration = 9.5 ft
Recovery = 108 inches
* Sheen observed as core was pulled.

1120 - head into dock for lunch

1313 Board Mudpuppy

1339 on site At LMR13-47
upon Approval from U.S. Coast Guard
Water Depth 10'2"
41°41.5502 83°28.2624
10 ft Plastic core Tube
Penetration = 10
Recovery = ____
Discarded
1412 41°41.5503 83.28.2218
15 Foot core
Penetration 12'6"
Recovery 146"

Location _____ Date 6/12/13

Project / Client _____

1443 - on Site at LMR13-63
Water Depth 11'10"
41°41.6560 83°27.8575
15 FT Core tube
Penetration - 11'0"
1450 - Recovery - 136"

1520 On Site at LMR13-91
* Site moved due to stump in Sample Location
Water depth 12'1"
41°41.5921 N 83°27.8596 W
15 FT Core Tube
Penetration - 9'6"
Recovery - 103

1554 On Site at LMR13-62
Water depth 7'0"
41°41.5524 N 83°27.9393 W
15 ft Core tube
Penetration - 7'0"
Recovery 83"

Location _____ Date 6/12/13

Project / Client _____

16:30 On Site at LMR13-90
Water depth - 8'2"
41° 41.5023 83° 27.9609
10 FT Core Tube
Penetration - 6'5"
Recovery - 75"

15:00 → Dock

Location _____ Date 6/13/13

Project / Client _____

65° Overcast + Windy 20 Knots

7:47 → Leave Marina
on Board: Bryant (EPA)
Voss (EA)
Joe (Mud Pupp)
Stacy (Mud Pupp)

8:04 Arrive on Site LMR13-49
Water Depth 2'4"
41°39.6609 N 83°30.4483 W
15 FT Core Tube
Penetration → 9'6"
Recovery → 110"
*Tube was Started By Hand

8:40 Arrive on Site LMR13-50
*Location originally on utility line
Moved the Location to more
Suitable Location
Water depth 10'9"
41°39.6308 N 83°30.5234 W
Penetration 10'0" No Refusal
Recovery 113"

Location _____ Date 6/13/13

Project / Client _____

9:19 On Site at LMR13-83
Water Depth 3'5"
41°39.6955N 83°30.4302W
10 FT Core
Penetration → 7'0"
Recovery → 79"
*Sheen observed as core was Pulled

9:48 On Site at LMR13-51
Water Depth 5'10"
41°39.7920N 83°30.2777W
10 FT Core
Penetration → 5'6"
Recovery 66"

10:11 Pull Anchor & Head back to Processing Center

10:52 Depart Dock w/ Same Staff

Location _____ Date 6-13-13

Project / Client _____

11:00 on Site at LMR13-41
Water depth 6'5"
41°41.1183N 83°28.8631W
10 FT Core
Penetration → 4'6"
Recovery → 56"

11:27 On Site at LMR13-57
Water depth 12'9"
41°40.9580 83°28.8108
10 FT Core
Penetration → 4'6"
Recovery → 55"
*Hydro carbon Odor
*Sheen present when core was pulled

12:00 → Lunch

Location _____ Date ~~6-12-13~~ 6-13-13

Project / Client _____

1:30 Leave Dock

13:53 On Site at LMR13-26
Water Depth 19'1"
10' Core
41°39.8883N 83°30.4285W
Penetration 3'
Recovery 23"
*Lost top 3" while cutting
depth of sediment is from 3"-23"

14:29 on Site at LMR13-72
Water Depth 7'0"
41°39.9464N 83°30.3721W
10 foot Core
Penetration → ~~7'6"~~ 8'0"
Recovery → 90"

Location _____ Date 6-13-13

Project / Client _____

15:00 on Site at LMR13-27
Water Depth 13'9"
41°40.0378N 38°30.1811W
15' Core
Penetration ~~6'00"~~ 8'00
Recovery ~~8'5"~~ 85"

* Location 73 was abandoned due to close Proximity to Site 27
73 is Now a Judgemental Sample!

15:39 On Site at LMR13-28
Water depth 4'11"
41°40.1058 38°30.1366
10' Core
Penetration 10'0"
Recovery 103"

Location _____ Date 6-13-13

Project / Client _____

16:13 on Site at LMR13-29
Water Depth 2'7"
41°40.1892 N 83°30.0330 W
10' Core
Penetration → 6'6"
Recovery → 72"
* Location Moved offshore Because Proposed Location To Shallow for MudPuppy

16:39 on Site at LMR13-30
Water depth ~~14'~~ 15'4"
41°40 83.29
Penetration →
Recovery →
* Current too fast to Set Vertical Core. Sample on ~~Another~~ Another Day.

17:00 → Docks

Location _____ Date 6-14-13

Project / Client _____ 65° + Sunny
Wind 5 Knots

7:55 Leave Dock
Bryant (EPA)
Voss (EPA)
Joe + Stacey (Mudpuppy)

8:20 on Site at LMR13-7H
Water depth 4'1"
10 FT Core (steel)
41°40.2822 N 83°29.9133 W
Penetration - 6'0"
Recovery - 73"

8:48 on Site at LMR13-31
Water depth 3'8"
10 FT Core
41°40.3276 N 83°29.8548 W
Penetration → ~~3'6"~~ 2'6"
Recovery → 24"

Location _____ Date 6-14-13

Project / Client _____

9:14 on Site at LMR13-75
Water depth - 5'10"
41°40.3589 N 83°29.7217 W
10 FT Core
Penetration - 2'6"
Recovery - 23"

9:38 on Site at LMR-32
Water depth - 5'0"
41° 40. 4045 N 83°29.7289 W
10 FT Core (steel)
Penetration - 7'0"
Recovery - 7½"

Location _____ Date 6-14-13

Project / Client _____

10:00 on Site at LMR-76
Water depth ~~5'7~~ 6'3"
41°40.4599 N 83°29.6126 W
10 FT Core
Penetration 6'6"
Recovery 62"

10:23 on Site at LMR-34
Water depth 5'1"
41°40.4981 N 83°29.6532 W
15' Core (started by Hand)
Penetration 14'6"
Recovery 172"

11:00 Dock By EA
Lunch

12:52 Leave Dock

Location _____ Date 6-14-13

Project / Client _____

_____

_____ on Site at LMR-40
* Location Moved to North ~~West~~ East Side of Bridge due to close Proximity of Buried GAS Line
Water depth

* Could Not core at New Proposed Location due to Utility Line

13:10 on Site at LMR-35
* discrepancy Between Map & GPS coordinates. We went By GPS Coordinates & Sampled in the enbayment.
* Location May Not be Precise as the water depth is very shallow
Water depth 2'8"
10' core (steel)
41°40.645 7N 83°29.5138
Penetration → 9'6"
Recovery →
* Could Not Recover tube
Re-Sample

Location _____ Date 6-14-13

Project / Client _____

_____

41°40.6453N 83°29.5128W
Penetration - 8'0"
Recovery - 91"
10' core Tube (steel)
Water depth 2'8"

13:45 on Site at LMR-77
Site moved due to close Proximity to Location LMR13-35
Water Depth - 9'2"
41°40.6130N 83°29.4051W
10' Core (steel)
Penetration - 6'5"
Recovery - 71"

14:16 on Site at LMR13-78
Water depth 7'6"
40°41.7065 83°29.3139
10' Core
Penetration - 2'6"
Recovery - 28"

Location _____ Date 6-14-13

Project / Client _____

~~on Site at LMR13-79~~
~~Water depth~~

14:37 Pull anchor & drop off 3 cores

15:16 Arrive at New LMR13-40
*Tie off of Pilings
Water depth → 6'10"
41°41.0166 83°28.6904
10' Core
Penetration → 7'00
Recovery → 81"

Soft refusal - Stopped for Safety (unknown Pipe on 1 of 3 different charts. i.e. Joe's Plotter - No other maps identified Pipeline)
* Slight sheen on surface

Location _____ Date _____

Project / Client _____

15:44 arrive at LMR13-79
Water depth 4'8"
41°40.8552N 83°29.2183W
10' Core (Steel)
Penetration → 6'6"
Recovery 80"

16:08 Arrive at LMR13-38
Water depth 4'2"
41°40.9218N 83°29.1848
10' Core
Penetration → 7'0"
Recovery 88"

Location Maumee River Date 6/17/13

Project / Client

6/17/13 on board: 80°F; clear; wind - 5 kts
Bill Murry EPA
Sam Voss EA
Joe + Stacy

0752 - leave dock

0844 on site at LMR13-82
41°41.6182N / 83°28.1914W
water depth - 6'1"
15 ft core tube
Penetration = 11FT
Recovery = 125"

0853 ANCHORED AT LMR 13-48
41°41.6611N / 83°28.1437W
WATER DEPTH 6'10"
15FT CORE TUBE
PENETRATION 12'6"
RECOVERY 154"

Location Date 17 JUNE 2013

Project / Client

0929 ANCHORED AT LMR 13-01
41°41.7306N / 83°28.1882W
WATER DEPTH 4'4"
FT CORE TUBE 10FT
PENETRATION 9FT
RECOVERY 103"
STEEL NOSE CONE IN CORE TUBE

0955 LMR 13-82/48/01 TRANSFERED TO EA RUNNER BOAT FOR PROCESSING

1005 ANCHORED AT LMR 13-03
41°41.8353N / 83°28.1108W
WATER DEPTH 5'3"
PENETRATION 10'6"
RECOVERY 122"
15 FT CORE TUBE

Location _____ Date 17 JUNE 2013

Project / Client _____

1455 ANCHORED AT LMR 13-14
41°42.0427N/83°27.7910W
WATER DEPTH 4'5"
10 FT CORE TUBE
PENETRATION 9'6"
RECOVERY 111"

1125 ANCHORED AT LMR 13-08
41°41.9392N/83°27.8740W
WATER DEPTH 5'5"
15 FT CORE TUBE
PENETRATION 6 FT
RECOVERY 68"
LMR 13-3/14/8 HANDED OFF AT SHORE

1340 ANCHORED AT LMR 13-07
WATER DEPTH 4'11"
10 FT CORE TUBE W/
STEEL NOSE CONE
41°41.93~~46~~52N/83°28.0311W
RECOVERY 71"
PENETRATION 8 FT

PETE CARTER W/ EA

Location _____ Date 17 JUNE 2013

Project / Client _____

ON BOARD

1415 ANCHORED AT LMR 13-13
41°42.0399N/83°27.9433W
WATER DEPTH 4'7"
10 FT CORE TUBE
PENETRATION 9 FT
RECOVERY 101"

1445 ANCHORED AT LMR 13-15
41°42.0416N/83°27.6342W
WATER DEPTH 5'7"
10 FT CORE TUBE
PENETRATION 2'6"
RECOVERY 20"

1510 ANCHORED AT LMR 13-21
41°42.1447N/83°27.3960W
WATER DEPTH 4'6"
10 FT CORE TUBE
PENETRATION 4'6"
RECOVERY 56"

Location _____ Date 17 JUNE 2013

Project / Client _____

1548 ANCHORED AT LMR 13-71
41°42.3733N/83°26.8083
WATER DEPTH 7'4"
10 FT CORE TUBE
RECOVERY 67"
PENETRATION 6FT
~~RECOVERY~~

1618 ANCHORED AT LMR 13-25
41°42.2386N/83°27.1637
WATER DEPTH 4FT
10FT CORE TUBE
PENETRATION 6.5FT
RECOVERY 73"

1715 LMR 13-7/13/15/21/71/25
WANDED OFF FOR PROCESSING
TIED UP A DOCK FOR DAYS END

Location TUES Date JUNE 18 2013

Project / Client _____

0740 CAST OFF FROM DOCK
EA! SAM
EPA! BILL
JOE
STACY
OVERCAST 10-15 KTS BREEZY

0754 ANCHORED AT LMR 13-84
41°39.8954N/83°34.1556W
WATER DEPTH ~~9'6"~~ 8'9"
10FT CORE TUBE
PENETRATION 7FT
RECOVERY 76"

LMR 13-52 ~~RELOCATED~~ NOT ACCESSABLE
AS PLANNED DUE TO UTILITIES CROSSING RIV.

0835 ANCHORED AT LMR 13-85
10FT CORE TUBE
WATER DEPTH 17'8"
FT CORE T-BE
PENETRATION
RECOVERY
NOT ATTEMPTED

Location _____ Date 18 JUNE

Project / Client _____

LMR 13-53 CURRENTLY IN-
ACCESSABLE DUE TO
DRY DOCK PUMP OUT

LMR 13-85 NOT SAMPLED
AS DESIGNED DUE TO
CURRENT (TO STRONG)

0858 ANCHORED AT LMR13-86
41°4ϕ.3171N/83°29.5ϕ68W
WATER DEPTH 16'9"
1ϕFT CORE TUBE
PENETRATION 7FT
RECOVERY 86"

ϕ926 ANCHORED AT LMR13-87
41°4ϕ.3437/83°29.4794W
WATER DEPTH 14'8"
1ϕFT CORE TUBE W/STEEL NOSE CONE
PENETRATION 1ϕFT
RECOVERY 1ϕ9"
LMR 13-84/86/87 UNDED OFF
AT DOCK FOR PROCESSING

Location _____ Date 18 JUNE

Project / Client _____

1ϕ4ϕ ANCHORED AT LMR13-3ϕ
41°4ϕ.1916N/83°29.8927W
WATER DEPTH 15'1ϕ"
1ϕFT CORE TUBE W/STEEL NOSE CONE
PENETRATION 1ϕFT
RECOVERY 113"

1115 ANCHORED AT LMR13-33
41°4ϕ.4ϕ27N/83°29.574ϕW
WATER DEPTH 17'11"
1ϕFT CORE TUBE
PENETRATION 8'6"
RECOVERY 96"
VERY SLIGHT ODOR DETECTED

133ϕ SHERE BLAIR W/OHIO EPA
(TRAP COORDINATOR)

134ϕ TIED TO MOORED BARGE
AT LMR-13-89
WINDY + CHOPPY CONDITIONS
1ϕFT CORE TUBE
WATER DEPTH 17'1ϕ"
41°4ϕ.9188/83°28.8712W

Location _____ Date 18 JUNE

Project / Client _____

PENETRATION 4FT (ESTIMATED APPROX.)
RECOVERY ~~23"~~ 24"

1410 ANCHORED AT LMR13-55
41°40.6175N/83°29.1872
WATER DEPTH 7'9"
10 FT CORE TUBE
PENETRATION 6FT
RECOVERY 66"
ODOR OBSERVED

1438 ANCHORED AT LMR13-54
41°40.5668N/83°29.2373W
WATER DEATH 7'7"
10 FT CORE TUBE
PENETRATION 8'6"
RECOVERY 97"
HYDROCARBON ODOR

1545 ANCHORED AT LMR13-88
41°40.4934N/83°29.2496W
WATER DEPTH 9FT
10 FT CORE TUBE
PENETRATION 4'6"
RECOVERY ~~117"~~ ~~116~~ ~~116~~ ~~116

Location _____ Date 19 JUNE 2013

Project / Client _____ WED.

0740 CAST OFF FROM DOCK
JOE
STACY
EA SAM
EPA B. MURRAY
CLEAR H60'S VERY LIGHT BREEZE

0755 ANCHORED AT LMR13-92
41° 42.2230N/83°26.7259W
10FT CORE TUBE
WATER DEPTH 6'8"
PENETRATION ~~1'6"~~ 2FT
RECOVERY 21"

0825 ANCHORED AT LMR13-69
41°42.1736N/83°26.8332W
10FT CORE TUBE
WATER DEPTH 5'10"
PENETRATION 9'6"
RECOVERY 105"

0850 ANCHORED AT LM13-68
41°42.0676N/83°26.9202W
10FT CORE TUBE
WATER DEPTH 34'2"
PENETRATION ~1FT

Location _____ Date 19 JUNE 2013

Project / Client _____

RECOVERY 10"

0920 ANCHORED AT LMR13-67
41°42.0683N/83°27.0746W
10FT CORE TUBE
WATER DEPTH 10'9"
PENETRATION 10FT
RECOVERY 112"

0945 ANCHORED AT LMR13-66
41°41.9680/83°27.3127W
10FT CORE TUBE
WATER DEPTH 5FT
PENETRATION 3FT
RECOVERY 34"

1030 ANCHORED AT LMR13-65
41°41.8643N/83°27.5465W
10FT CORE TUBE
PENETRATION ~~7FT~~ 6'6"
RECOVERY 67"
WATER DEPTH 29'4"

Location _____ Date 19 JUNE 2013 WED.

Project / Client _____

1140 ANCHORED AT LMR13-64
41°41.7575N/83°27.7845
WATER DEPTH 15'2"
10FT CORE TUBE
PENETRATION 10FT
RECOVERY 114"

1140 CORES LMR13-62/69/68/67/66/65/64 HANDED OFF AT DOCK FOR PROCESSING

1330 ANCHORED AT LMR13-61
41°41.5501N/83°28.0290W
WATER DEPTH 16'10"
10FT CORE TUBE
PENETRATION 9'6"
RECOVERY 108"

1400 ANCHORED AT LMR13-60
41°41.4452N/83°28.1085W
WATER DEPTH 17 FT
10 FT CORE TUBE
PENETRATION 9 FT
RECOVERY 98"

Location _____ Date 19 JUNE 2013 WED

Project / Client _____

1545 ANCHORED AT LMR13-59
41°41.3361N/83°28.3390W
WATER DEPTH 28'6"
10FT CORE TUBE
PENETRATION 5FT
RECOVERY 50"
SULFUR ODOR OBSERVED

1615 ANCHORED AT LMR13-58
41°41.2300N/83°28.4157
WATER DEPTH 30'5"
10FT CORE TUBE
PENETRATION 2'6"
RECOVERY 24"

1655 LMR13-61/60/59/58
HANDED OFF FOR PROCESSING
TIED-UP AT DOCK
FOR DAY

Location _____ Date 24 JUNE 2413

Project / Client _____ THURS

0734	AT DOCK REVIEWING PLAN FOR DAY JOE STACY EDA SAM EDA BILL
0745	PUSH OFF · CLEAR/STILL/46Φ's · 17Φ's
0755	ANCHORED AT LMR13-52 41°39.9495N/83°3Φ.Φ711W WATER DEPTH 28'2" 1Φ FT CORE TUBE PENETRATION 6FT RECOVERY 51" LOCATED AS DESIGNED
0825	ANCHORED AT LMR13-53 41°4Φ.Φ431N/83°29.9232 WATER DEPTH 22'9" PENETRATION ~~3FT~~ utym 2'6" RECOVERY 22" 1Φ FT CORE TUBE LOCATED AS DESIGNED

Location _____ Date 24 JUNE 2413

Project / Client _____

0900	MOORED ALONGSIDE FREIGHTER AT LMR13-7Φ WATER DEPTH 23'4" 1Φ FT CORE TUBE PENETRATION 4'6" RECOVERY 38" 41°4Φ.2325N/83°29.6414W
0920	ANCHORED AT LMR13-73 RELOCATED DS OF LMR13-82 US OF UTILITY CROSSING, US OF SWING BRIDGE NOT LOCATED AS DESIGNED WATER DEPTH 7'5 1Φ FT CORE TUBE 41°4Φ.3957N/83°29.4Φ98W PENETRATION 7'6" RECOVERY 87" SHEEN OBSERVED ODOR OBSERVED
0945 *	ANCHORED AT LMR13-37 RELOCATED FROM ORIGINAL DESIGN. US OF -73/DS OF -87

Location _____ Date 24 JUNE

Project / Client _____ 2013

WATER DEPTH 6'9"
10 FT CORE TUBE
41°40.3712N/83°29.438W
NO ~~RECOV~~ PENETRATION AT THIS LOCATION (REFUSAL)
NO RECOVERY
SLIGHT ADJUSTMENT MADE TO POSITION
*NEW LOCATION/POSITION
41°40.3719N/83°29.4351W
WATER DEPTH 6'6"
10 FT CORE TUBE
PENETRATION 8'6"
RECOVERY 74"
ODOR OBSERVED
SHEEN AT BOTTOM OF CORE

1440 ANCHORED AT LMR13-56
41°40.6872N/83°29.1407W
10 FT CORE TUBE
WATER DEPTH 31'1"
POSITION/LOCATION MOVED US SLIGHTLY DUE TO WORK ON SEAWALL ADJACENT TO LOCATION

Location _____ Date 24 JUNE

Project / Client _____ 2013

PENETRATION <1FT (BOTH)
RECOVERY ~~40~~ 7" + 8"
VERY FIRM CLAY
POSITION ADJUSTED AND ADDITIONAL CORE COLLECTED
41°40.6876N/83°29.1416
2 CORES COLLECTED FOR COMPOSITE

1115 ANCHORED AT LMR13-84
41°40.9783N/83°29.1294
WATER DEPTH 4'5"
10 FT CORE TUBE
PENETRATION 7FT
RECOVERY 82"

1145 SAMPLES HANDED OFF AT DOCK

Location _____ Date _____

Project / Client _____

Water depths at proposed/sampled locations:

LMR13-02
water depth = 3.0 ft

LMR13-06
water depth = 3'11"

LMR13-12
water depth = 4'2"

LMR13-20
water depth = 4'2"

LMR13-19
water depth = 4.0'

LMR13-11
water depth = 3'10"

LMR13-05
water depth = 3'1"

LMR13-10
water depth = 3'2"

Location _____ Date _____

Project / Client _____

LMR13-18
water depth = 3'9"

LMR13-24
water depth = 3'2"

LMR13-23
water depth = 2'10"

LMR13-16
water depth = 1'11"

LMR13-17
water depth = 3.0'

LMR13-09
water depth = 2'6"

Appendix B

Core Log and
Recreation Narrative

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Maumee River Core Log Re-creation

This is a narrative of the steps taken to re-create the 35 sediment core logs that were stolen on 6/14/13 in Toledo, Ohio.

While in the field, high-resolution photographs were taken (at a minimum) for each analytical sample interval for each core (0-12", 12-24", 24-48", 48-72", etc.). Additional high-resolution photographs were taken of unique features, such as a dense organic layer that had an intense diesel odor. These photographs were used by the field geologist who logged all of the cores to re-create the sediment logs immediately upon returning from the field (24-27 June 2013) and are presented in Attachment D. The lack of lithologic and stratigraphic variation between coring locations made this method of re-creation possible. Field maps were used to identify cores taken in close proximity to each other and correlate layers between them.

Excess sediment from the oil and grease analytical samples was archived and shipped to the field geologist in Hunt Valley, MD, in an effort to validate the sediment description derived from the photographs. These 140 sediment samples were used to spot-check the re-created core logs by randomly choosing analytical samples within each core to see if the description generally matched the sediment in the analytical sample. This was done with 30 (25 percent) of the sediment samples, presented in Table C-1. The sediment samples remain archived at EA's Ecotoxicology laboratory for future reference, if needed.

The re-created core logs were reviewed by EA's Chief Geologist and Director of Quality Control for accuracy and correctness.

Table C-1. Archived Analytical Sample* Descriptions

Sample ID	Description from Archived Sediment Sample
LMR13-81-096	Gray clay with some silt, some (20%) organic debris (grass) and small wood pieces 1-3 mm in size
LMR13-83-048	Gray sandy (fine, ~20%) clay with some (20%) small shells ~3mm and wood pieces ~2x2 cm in size.
LMR13-57-012	Gray silty clay with some (20%) organic (wood) debris 1-3 mm in size. Strong grease/oil odor.
LMR13-62-024	Gray silty clay with trace (5%) organic fragments ~ 1mm in size.
LMR13-63-024	Gray silty clay, moisture still high.
LMR13-50-012	Gray/brown silty clay with trace (10%) organic material (grass) up to 3 cm long.
LMR13-50-096	Gray silty clay with some (20%) organic (wood pieces) debris 0.5-1.5 cm in size.
LMR13-51-048	Gray sandy (30%) clay with trace (5-10%) shell fragments and organic debris 1-3 mm in size.
LMR13-72-024	Gray/brown silty clay with trace (15%) organic (wood) debris 1-5 mm. Faint grease odor.
LMR13-81-012	Dark gray silty clay with trace (5%) shell fragments ~1mm. Faint grease odor.
LMR13-90-048	Gray silty clay.
LMR13-91-072	Gray clay with trace (15%) organic (wood) pieces 1-5mm in size.
LMR13-93-024FD	Dark gray silty clay with trace (15%) small black shells 1-3 mm in size. Faint grease odor.
LMR13-93-120	Gray silty clay
LMR13-41-024	Gray silty clay with trace (10%) organic (grass) fragments 1-2 cm long.
LMR13-45-120	Dark gray silty clay with trace (10%) organic (wood pieces) debris 1-5 mm in size. Grease odor.
LMR13-46-072	Dark gray silty clay with some (20%) organic (wood, grass/roots) debris 1-5 cm long. Grease odor.
LMR13-47-012	Gray clayey silt with trace (10%) organic (grass, wood) debris 2-10 mm in size.
LMR13-47-096	Gray silty clay with trace (10%) organic (grass) fragments 1-5 mm long.
LMR13-49-072	Gray sandy (fine, ~20%) clay with some (25%) small shells ~1-3mm in size.
LMR13-42-024	Dark gray clayey silt
LMR13-43-048	Dark gray silty clay. Grease odor.
LMR13-44-048	Gray sandy (fine, ~20%) clay with trace to some (15-20%) shell fragments 1-3 mm in size.
LMR13-44-096	Gray clay with trace (10%) shell fragments 1-3 mm in size.
LMR13-45-024	Dark gray clayey silt with trace (10%) organic (wood) debris 1-3 mm in size. Grease odor.
LMR13-02-012	Gray sandy silty clay with some (25%) shell fragments 1-3 mm in size.
LMR13-11-012	Gray clayey silt with some (25%) shell fragments 1-3 mm in size and some (20%) wood debris 5-10 mm in size.
LMR13-20-012	Gray silty clay with some (25-30%) shell fragments 1-5 mm in size.
LMR13-27-048	Dark gray clayey silt with some (20%) shell fragments 1-3 mm in size.
LMR13-26-012	Gray silty clay with some (20%) shell fragments 1-3 mm in size; trace (10%) gravel; and trace (5%) organic (wood) debris 1-10 mm in size.

***** These 30 samples represent ~25% of the 140 archived sediment samples.

Sediment Core Logs Recreated After Sampling

EA Engineering, Science, and Technology, Inc.

SEDIMENT BORING LMR13-02

PROJECT NUMBER 62561.10
PROJECT NAME Maumee River
LOCATION Toledo, OH
DATE/TIME COLLECTED 6/11/2013 11:45:00 AM
LATITUDE 41° 41.83314
DATE/TIME LOGGED 6/11/2013 2:00:00 PM
LONGITUDE -83° 28.26624
DRILLING CONTRACTOR OEPA
ELEVATION (Sediment Surface) 568.2 ft IGLD85
DRILLING METHOD Direct Push
LOGGED BY M. Gelinas **WATER DEPTH (ft)** 3 **CORE RECOVERY (ft)** 0.83

DEPTH (ft)	SAMPLE INTERVAL (inches)	SAMPLE TYPE	SAMPLE SUBMITTED FOR ANALYSIS (Sample ID at sample depth)	GRAPHIC LOG	USCS CLASS	MATERIAL DESCRIPTION	Depth (ft)
0	10	CT	LMR13-02-012		ML-CL	SILTY CLAY: gray, moisture ~20%. With some (25%) shell fragments, blue/white in color, 5 mm - 3 cm.	0.8
1						End of Boring at 0.83 ft.	
2							
3							
4							
5							
6							
7							
8							
9							
10							
11							
12							
13							
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15							

NOTES:

CT=Core Tube
GB=Grab Sample

EA Engineering, Science, and Technology, Inc.

SEDIMENT BORING LMR13-05

PROJECT NUMBER 62561.10

PROJECT NAME Maumee River
LOCATION Toledo, OH
DATE/TIME COLLECTED 6/11/2013 10:04:00 AM
LATITUDE 41° 41.9346
DATE/TIME LOGGED 6/11/2013 11:15:00 AM
LONGITUDE -83° 28.3464
DRILLING CONTRACTOR OEPA
ELEVATION (Sediment Surface) 568.3 ft IGLD85
DRILLING METHOD Direct Push
LOGGED BY M. Gelinas **WATER DEPTH (ft)** 3.1 **CORE RECOVERY (ft)** 1

DEPTH (ft)	SAMPLE INTERVAL (inches)	SAMPLE TYPE	SAMPLE SUBMITTED FOR ANALYSIS (Sample ID at sample depth)	GRAPHIC LOG	USCS CLASS	MATERIAL DESCRIPTION	Depth (ft)
0	12	CT	LMR13-05-012		ML-CL	SILTY CLAY: dark gray, moisture ~40%.	1.0
1						End of Boring at 1 ft.	
2							
3							
4							
5							
6							
7							
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9							
10							
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14							
15							

NOTES:

CT=Core Tube
GB=Grab Sample

SEDIMENT LOG MAUMEE CORE LOGS.GPJ 9/13/13

EA Engineering, Science, and Technology, Inc.

SEDIMENT BORING LMR13-06

PROJECT NUMBER 62561.10

PROJECT NAME Maumee River
LOCATION Toledo, OH
DATE/TIME COLLECTED 6/11/2013 11:30:00 AM
LATITUDE 41° 41.93592
DATE/TIME LOGGED 6/11/2013 2:50:00 PM
LONGITUDE -83° 28.18908
DRILLING CONTRACTOR OEPA
ELEVATION (Sediment Surface) 567.3 ft IGLD85
DRILLING METHOD Direct Push
LOGGED BY M. Gelinas **WATER DEPTH (ft)** 3.9 **CORE RECOVERY (ft)** 1

DEPTH (ft)	SAMPLE INTERVAL (inches)	SAMPLE TYPE	SAMPLE SUBMITTED FOR ANALYSIS (Sample ID at sample depth)	GRAPHIC LOG	USCS CLASS	MATERIAL DESCRIPTION	Depth (ft)
0	12	CT	LMR13-06-012		ML	SILT: brown/gray, moisture ~40%.	0.3
1					ML-CL	SILTY CLAY: gray, moisture ~35-40%.	1.0
2						End of Boring at 1 ft.	
3							
4							
5							
6							
7							
8							
9							
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13							
14							
15							

NOTES:

CT=Core Tube
GB=Grab Sample

SEDIMENT BORING LMR13-09

EA Engineering, Science, and Technology, Inc.

PROJECT NUMBER 62561.10
PROJECT NAME Maumee River
LOCATION Toledo, OH
DATE/TIME COLLECTED 6/11/2013 8:35:00 AM
LATITUDE 41° 42.03474
DATE/TIME LOGGED 6/11/2013 10:15:00 AM
LONGITUDE -83° 28.58388
DRILLING CONTRACTOR OEPA
ELEVATION (Sediment Surface) 568.9 ft IGLD85
DRILLING METHOD Direct Push
LOGGED BY M. Gelinas **WATER DEPTH (ft)** 2.5 **CORE RECOVERY (ft)** 0.75

DEPTH (ft)	SAMPLE INTERVAL (inches)	SAMPLE TYPE	SAMPLE SUBMITTED FOR ANALYSIS (Sample ID at sample depth)	GRAPHIC LOG	USCS CLASS	MATERIAL DESCRIPTION	Depth (ft)
0	9	CT	LMR13-09-012		OL	SILTY CLAY: with some (20%) organic debris 1-3 cm, moisture 35-40%	0.8
1						End of Boring at 0.75 ft.	
2							
3							
4							
5							
6							
7							
8							
9							
10							
11							
12							
13							
14							
15							

NOTES:

CT=Core Tube
GB=Grab Sample

EA Engineering, Science, and Technology, Inc.

SEDIMENT BORING LMR13-10

PROJECT NUMBER 62561.10
PROJECT NAME Maumee River
LOCATION Toledo, OH
DATE/TIME COLLECTED 6/11/2013 9:45:00 AM
LATITUDE 41° 42.03606
DATE/TIME LOGGED 6/11/2013 10:45:00 AM
LONGITUDE -83° 28.42656
DRILLING CONTRACTOR OEPA
ELEVATION (Sediment Surface) 568.3 ft IGLD85
DRILLING METHOD Direct Push
LOGGED BY M. Gelinas **WATER DEPTH (ft)** 3.2 **CORE RECOVERY (ft)** 1

DEPTH (ft)	SAMPLE INTERVAL (inches)	SAMPLE TYPE	SAMPLE SUBMITTED FOR ANALYSIS (Sample ID at sample depth)	GRAPHIC LOG	USCS CLASS	MATERIAL DESCRIPTION	Depth (ft)
0	12	CT	LMR13-10-012		ML-CL	SILTY CLAY: moisture content 25-30%	1.0
1						End of Boring at 1 ft.	
2							
3							
4							
5							
6							
7							
8							
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11							
12							
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14							
15							

NOTES:

CT=Core Tube
GB=Grab Sample

SEDIMENT LOG MAUMEE CORE LOGS.GPJ 9/13/13

EA Engineering, Science, and Technology, Inc.

SEDIMENT BORING LMR13-11

PROJECT NUMBER 62561.10
PROJECT NAME Maumee River
LOCATION Toledo, OH
DATE/TIME COLLECTED 6/11/2013 12:21:00 PM
LATITUDE 41° 42.03738
DATE/TIME LOGGED 6/11/2013 2:45:00 PM
LONGITUDE -83° 28.2692
DRILLING CONTRACTOR OEPA
ELEVATION (Sediment Surface) 567.4 ft IGLD85
DRILLING METHOD Direct Push
LOGGED BY M. Gelinas **WATER DEPTH (ft)** 3.8 **CORE RECOVERY (ft)** 1

DEPTH (ft)	SAMPLE INTERVAL (inches)	SAMPLE TYPE	SAMPLE SUBMITTED FOR ANALYSIS (Sample ID at sample depth)	GRAPHIC LOG	USCS CLASS	MATERIAL DESCRIPTION	Depth (ft)
0	12	CT	LMR13-11-012		ML-CL	SILTY CLAY: gray, moisture ~60%. @10-12" trace (15%) gravel	1.0
1						End of Boring at 1 ft.	
2							
3							
4							
5							
6							
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15							

NOTES:

CT=Core Tube
GB=Grab Sample

EA Engineering, Science, and Technology, Inc.

SEDIMENT BORING LMR13-12

PROJECT NUMBER 62561.10
PROJECT NAME Maumee River
LOCATION Toledo, OH
DATE/TIME COLLECTED 6/11/2013 10:55:00 AM
LATITUDE 41° 42.02612
DATE/TIME LOGGED 6/11/2013 1:30:00 PM
LONGITUDE -83° 28.1117
DRILLING CONTRACTOR OEPA
ELEVATION (Sediment Surface) 567.2 ft IGLD85
DRILLING METHOD Direct Push
LOGGED BY M. Gelinas **WATER DEPTH (ft)** 4.2 **CORE RECOVERY (ft)** 1

DEPTH (ft)	SAMPLE INTERVAL (inches)	SAMPLE TYPE	SAMPLE SUBMITTED FOR ANALYSIS (Sample ID at sample depth)	GRAPHIC LOG	USCS CLASS	MATERIAL DESCRIPTION	Depth (ft)
0	12	CT	LMR13-12-012		CH	CLAY: gray, moisture ~20%	1.0
1						End of Boring at 1 ft.	
2							
3							
4							
5							
6							
7							
8							
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12							
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14							
15							

NOTES:

CT=Core Tube
GB=Grab Sample

EA Engineering, Science, and Technology, Inc.

SEDIMENT BORING LMR13-16

PROJECT NUMBER 62561.10

PROJECT NAME Maumee River
LOCATION Toledo, OH
DATE/TIME COLLECTED 6/11/2013 9:25:00 AM
LATITUDE 41° 42.1362
DATE/TIME LOGGED 6/11/2013 11:30:00 AM
LONGITUDE -83° 28.6641
DRILLING CONTRACTOR OEPA
ELEVATION (Sediment Surface) 569.6 ft IGLD85
DRILLING METHOD Direct Push
LOGGED BY M. Gelinas **WATER DEPTH (ft)** 1.9 **CORE RECOVERY (ft)** 1

DEPTH (ft)	SAMPLE INTERVAL (inches)	SAMPLE TYPE	SAMPLE SUBMITTED FOR ANALYSIS (Sample ID at sample depth)	GRAPHIC LOG	USCS CLASS	MATERIAL DESCRIPTION	Depth (ft)
0	12	CT	LMR13-16-012		ML-CL	SILTY CLAY: dark gray, moisture ~20%. @ 4-8" some (20%) shell fragments 1-2 mm.	0.7
1					CH	CLAY: dark gray clay with some (20%) shell fragments 1-3 mm.	1.0
2						End of Boring at 1 ft.	
3							
4							
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15							

NOTES:

CT=Core Tube
GB=Grab Sample

SEDIMENT LOG MAUMEE CORE LOGS.GPJ 9/13/13

EA Engineering, Science, and Technology, Inc.

SEDIMENT BORING LMR13-17

PROJECT NUMBER 62561.10

PROJECT NAME Maumee River
LOCATION Toledo, OH
DATE/TIME COLLECTED 6/11/2013 8:51:00 AM
LATITUDE 41° 42.1375
DATE/TIME LOGGED 6/11/2013 10:00:00 AM
LONGITUDE -83° 28.50678
DRILLING CONTRACTOR OEPA
ELEVATION (Sediment Surface) 568.4 ft IGLD85
DRILLING METHOD Direct Push
LOGGED BY M. Gelinas **WATER DEPTH (ft)** 3 **CORE RECOVERY (ft)** 1

DEPTH (ft)	SAMPLE INTERVAL (inches)	SAMPLE TYPE	SAMPLE SUBMITTED FOR ANALYSIS (Sample ID at sample depth)	GRAPHIC LOG	USCS CLASS	MATERIAL DESCRIPTION	Depth (ft)
0	12	CT	LMR13-17-012		ML-CL	SILTY CLAY: dark gray, moisture ~40%.	1.0
1						End of Boring at 1 ft.	
2							
3							
4							
5							
6							
7							
8							
9							
10							
11							
12							
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15							

NOTES:

CT=Core Tube
GB=Grab Sample

SEDIMENT LOG MAUMEE CORE LOGS.GPJ 9/13/13

EA Engineering, Science, and Technology, Inc.

SEDIMENT BORING LMR13-18

PROJECT NUMBER 62561.10
PROJECT NAME Maumee River
LOCATION Toledo, OH
DATE/TIME COLLECTED 6/11/2013 12:52:00 PM
LATITUDE 41° 42.13884
DATE/TIME LOGGED 6/11/2013 2:40:00 PM
LONGITUDE -83° 28.34946
DRILLING CONTRACTOR OEPA
ELEVATION (Sediment Surface) 567.5 ft IGLD85
DRILLING METHOD Direct Push
LOGGED BY M. Gelinas **WATER DEPTH (ft)** 3.8 **CORE RECOVERY (ft)** 1

DEPTH (ft)	SAMPLE INTERVAL (inches)	SAMPLE TYPE	SAMPLE SUBMITTED FOR ANALYSIS (Sample ID at sample depth)	GRAPHIC LOG	USCS CLASS	MATERIAL DESCRIPTION	Depth (ft)
0	12	CT	LMR13-18-012		ML-CL	SILTY CLAY: dark gray with some (20%) shell fragments 2-10 mm.	1.0
1						End of Boring at 1 ft.	
2							
3							
4							
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NOTES:

CT=Core Tube
GB=Grab Sample

EA Engineering, Science, and Technology, Inc.

SEDIMENT BORING LMR13-19

PROJECT NUMBER 62561.10
PROJECT NAME Maumee River
LOCATION Toledo, OH
DATE/TIME COLLECTED 6/11/2013 1:03:00 PM
LATITUDE 41° 42.1202
DATE/TIME LOGGED 6/11/2013 3:00:00 PM
LONGITUDE -83° 28.1981
DRILLING CONTRACTOR OEPA
ELEVATION (Sediment Surface) 567.3 ft IGLD85
DRILLING METHOD Direct Push
LOGGED BY M. Gelinas **WATER DEPTH (ft)** 4 **CORE RECOVERY (ft)** 1

DEPTH (ft)	SAMPLE INTERVAL (inches)	SAMPLE TYPE	SAMPLE SUBMITTED FOR ANALYSIS (Sample ID at sample depth)	GRAPHIC LOG	USCS CLASS	MATERIAL DESCRIPTION	Depth (ft)
0	12	CT	LMR13-19-012		ML-CL	SILTY CLAY: gray/brown, moisture 50-60%.	1.0
1						End of Boring at 1 ft.	
2							
3							
4							
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15							

NOTES:

CT=Core Tube
GB=Grab Sample

SEDIMENT LOG MAUMEE CORE LOGS.GPJ 9/13/13

EA Engineering, Science, and Technology, Inc.

SEDIMENT BORING LMR13-20

PROJECT NUMBER 62561.10
PROJECT NAME Maumee River
LOCATION Toledo, OH
DATE/TIME COLLECTED 6/11/2013 10:43:00 AM
LATITUDE 41° 42.14142
DATE/TIME LOGGED 6/11/2013 2:40:00 PM
LONGITUDE -83° 28.03476
DRILLING CONTRACTOR OEPA
ELEVATION (Sediment Surface) 567.2 ft IGLD85
DRILLING METHOD Direct Push
LOGGED BY M. Gelinas **WATER DEPTH (ft)** 4.2 **CORE RECOVERY (ft)** 1

DEPTH (ft)	SAMPLE INTERVAL (inches)	SAMPLE TYPE	SAMPLE SUBMITTED FOR ANALYSIS (Sample ID at sample depth)	GRAPHIC LOG	USCS CLASS	MATERIAL DESCRIPTION	Depth (ft)
0	12	CT	LMR13-20-012		ML-CL	SILTY CLAY: dark gray, moisture 30-40% with some (20%) shell fragments 2-20 mm.	1.0
1						End of Boring at 1 ft.	
2							
3							
4							
5							
6							
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9							
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15							

NOTES:

CT=Core Tube
GB=Grab Sample

EA Engineering, Science, and Technology, Inc.

SEDIMENT BORING LMR13-23

PROJECT NUMBER 62561.10
PROJECT NAME Maumee River
LOCATION Toledo, OH
DATE/TIME COLLECTED 6/11/2013 9:05:00 AM
LATITUDE 41° 42.2403
DATE/TIME LOGGED 6/11/2013 9:40:00 AM
LONGITUDE -83° 28.42962
DRILLING CONTRACTOR OEPA
ELEVATION (Sediment Surface) 568.6 ft IGLD85
DRILLING METHOD Direct Push
LOGGED BY M. Gelinas **WATER DEPTH (ft)** 2.8 **CORE RECOVERY (ft)** 1

DEPTH (ft)	SAMPLE INTERVAL (inches)	SAMPLE TYPE	SAMPLE SUBMITTED FOR ANALYSIS (Sample ID at sample depth)	GRAPHIC LOG	USCS CLASS	MATERIAL DESCRIPTION	Depth (ft)
0	12	CT	LMR13-23-012		ML-CL	SILTY CLAY: dark gray, moisture ~30%	1.0
1						End of Boring at 1 ft.	
2							
3							
4							
5							
6							
7							
8							
9							
10							
11							
12							
13							
14							
15							

NOTES:

CT=Core Tube
GB=Grab Sample

SEDIMENT LOG MAUMEE CORE LOGS.GPJ 9/13/13

EA Engineering, Science, and Technology, Inc.

SEDIMENT BORING LMR13-24

PROJECT NUMBER 62561.10
PROJECT NAME Maumee River
LOCATION Toledo, OH
DATE/TIME COLLECTED 6/11/2013 1:01:00 PM
LATITUDE 41° 42.24162
DATE/TIME LOGGED 6/11/2013 2:15:00 PM
LONGITUDE -83° 28.2723
DRILLING CONTRACTOR OEPA
ELEVATION (Sediment Surface) 568.1 ft IGLD85
DRILLING METHOD Direct Push
LOGGED BY M. Gelinas **WATER DEPTH (ft)** 3.2 **CORE RECOVERY (ft)** 1

DEPTH (ft)	SAMPLE INTERVAL (inches)	SAMPLE TYPE	SAMPLE SUBMITTED FOR ANALYSIS (Sample ID at sample depth)	GRAPHIC LOG	USCS CLASS	MATERIAL DESCRIPTION	Depth (ft)
0	12	CT	LMR13-24-012		OL	SILTY CLAY: gray, moisture 60-65%. Organic debris (roots) ~6x6 cm across.	1.0
1						End of Boring at 1 ft.	
2							
3							
4							
5							
6							
7							
8							
9							
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11							
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14							
15							

NOTES:

CT=Core Tube
GB=Grab Sample

SEDIMENT LOG MAUMEE CORE LOGS.GPJ 9/13/13

SEDIMENT BORING LMR13-26

EA Engineering, Science, and Technology, Inc.

PROJECT NUMBER 62561.10

PROJECT NAME Maumee River
LOCATION Toledo, OH
DATE/TIME COLLECTED 6/13/2013 1:53:00 PM
LATITUDE 41° 39.8883
DATE/TIME LOGGED 6/14/2013 2:30:00 PM
LONGITUDE -83° 30.4285
DRILLING CONTRACTOR Mudpuppy
ELEVATION (Sediment Surface) 552.9 ft IGLD85
DRILLING METHOD Vibracore
LOGGED BY M. Gelinas **WATER DEPTH (ft)** 19.1 **CORE RECOVERY (ft)** 2

DEPTH (ft)	SAMPLE INTERVAL (inches)	SAMPLE TYPE	SAMPLE SUBMITTED FOR ANALYSIS (Sample ID at sample depth)	GRAPHIC LOG	USCS CLASS	MATERIAL DESCRIPTION	Depth (ft)
0						Top 3 inches of sample lost when collecting core	0.3
1	12	CT	LMR13-26-012		ML-CL	SILTY CLAY: gray with trace (10-15%) gravel, moisture ~40%. *Log begins at 0.25 ft because top 3" were lost during core collection.	
2					GP	POORLY SORTED GRAVEL: pebbly, cobbley gravel, moisture 75% with shell fragments 1-4 cm long. Did not submit for analysis, not enough fine-grained material.	2.0 2.3
3							
4						End of Boring at 2 ft.	
5							
6							
7							
8							
9							
10							
11							
12							
13							
14							
15							

NOTES:

CT=Core Tube
GB=Grab Sample

SEDIMENT BORING LMR13-27

EA Engineering, Science, and Technology, Inc.

PROJECT NUMBER 62561.10
PROJECT NAME Maumee River
LOCATION Toledo, OH
DATE/TIME COLLECTED 6/13/2013 3:00:00 PM
LATITUDE 41° 40.0378
DATE/TIME LOGGED 6/14/2013 4:15:00 PM
LONGITUDE -83° 30.1811
DRILLING CONTRACTOR Mudpuppy
ELEVATION (Sediment Surface) 558.1 ft IGLD85
DRILLING METHOD Vibracore
LOGGED BY M. Gelinas
WATER DEPTH (ft) 13.8
CORE RECOVERY (ft) 7.1

DEPTH (ft)	SAMPLE INTERVAL (inches)	SAMPLE TYPE	SAMPLE SUBMITTED FOR ANALYSIS (Sample ID at sample depth)	GRAPHIC LOG	USCS CLASS	MATERIAL DESCRIPTION	Depth (ft)
0	12	CT	LMR13-27-012		ML-CL	SILTY CLAY: gray,moisture ocntent 65-70%.	
1	12	CT	LMR13-27-024				
2							
3	24	CT	LMR13-27-048		ML-CL	SILTY CLAY: gray/brown silty clay, moisture 30-40%.	2.7
4							
5	24	CT	LMR13-27-072		GP-GM	SILTY GRAVEL: poorly sorted with some (20%) cobbles and 40% shells and shell fragments 2-5 cm.	4.8
					SP	SHELLY SAND: medium to coarse, poorly sorted with 50% shell fragments 1-40mm and trace (10%) gravel.	5.2
6					SC		6.0
	13	CT	LMR13-27-096		CH		6.3
					SP	SANDY CLAY: medium to fine sand with trace (10-15%) shell fragments 1-2 mm.	6.3
7					SC		6.5
						CLAY: gray	7.1
8						SAND: medium to coarse sand, poorly sorted with trace (10-15%) shell fragments 1-3 mm.	
9						SANDY CLAY: 25% fine to medium sand; @ 82-85" sand denser (50%) with trace (15%) shell fragments 1-2 mm.	
10						End of Boring at 7.1 ft.	
11							
12							
13							
14							
15							

NOTES:

CT=Core Tube
GB=Grab Sample

SEDIMENT BORING LMR13-41

EA Engineering, Science, and Technology, Inc.

PROJECT NUMBER 62561.10
PROJECT NAME Maumee River
LOCATION Toledo, OH
DATE/TIME COLLECTED 6/13/2013 11:00:00 AM
LATITUDE 41° 41.1183
DATE/TIME LOGGED 6/14/2013 1:00:00 PM
LONGITUDE -83° 28.8631
DRILLING CONTRACTOR Mudpuppy
ELEVATION (Sediment Surface) 565.3 ft IGLD85
DRILLING METHOD Vibracore
LOGGED BY M. Gelinas **WATER DEPTH (ft)** 6.5 **CORE RECOVERY (ft)** 4.5

DEPTH (ft)	SAMPLE INTERVAL (inches)	SAMPLE TYPE	SAMPLE SUBMITTED FOR ANALYSIS (Sample ID at sample depth)	GRAPHIC LOG	USCS CLASS	MATERIAL DESCRIPTION	Depth (ft)
0	12	CT	LMR13-41-012		CL	CLAY: gray in color with trace (10-15%) fine sand and trace (10%) shells and shell fragments 5-20 mm.	
1	12	CT	LMR13-41-024				
2							
3	24	CT	LMR13-41-048				3.3
					SC	SANDY CLAY: medium to coarse sand with trace to some (10-20%) shell fragments 1-20 mm. @40-44 sand more concentrated, ~50% layer.	4.1
4					CL	CLAY: gray in color.	4.5
5						End of Boring at 4.5 ft.	
6							
7							
8							
9							
10							
11							
12							
13							
14							
15							

NOTES:

CT=Core Tube
GB=Grab Sample

SEDIMENT LOG MAUMEE CORE LOGS.GPJ 9/13/13

SEDIMENT BORING LMR13-42

EA Engineering, Science, and Technology, Inc.

PROJECT NUMBER 62561.10
PROJECT NAME Maumee River
LOCATION Toledo, OH
DATE/TIME COLLECTED 6/11/2013 4:38:00 PM
LATITUDE 41° 41.2448
DATE/TIME LOGGED 6/12/2013 8:30:00 AM
LONGITUDE -83° 28.7773
DRILLING CONTRACTOR Mudpuppy
ELEVATION (Sediment Surface) 567 ft IGLD85
DRILLING METHOD Vibracore
LOGGED BY M. Gelinas **WATER DEPTH (ft)** 4.5 **CORE RECOVERY (ft)** 8.8

DEPTH (ft)	SAMPLE INTERVAL (inches)	SAMPLE TYPE	SAMPLE SUBMITTED FOR ANALYSIS (Sample ID at sample depth)	GRAPHIC LOG	USCS CLASS	MATERIAL DESCRIPTION	Depth (ft)
0	12	CT	LMR13-42-012		CL-ML	CLAYEY SILT: dark gray/black, moisture ~45%.	1.3
1	12	CT	LMR13-42-024				
2	24	CT	LMR13-42-048				
3							
4	24	CT	LMR13-42-072		CL-ML	SILTY CLAY: dark gray/brown, moisture ~35% with trace (10-15%) organic debris 1-3 cm and shell fragments 1-3 mm.	
5							
6	24	CT	LMR13-42-096				
7							
8	10	CT	LMR13-42-120				8.8
9						End of Boring at 8.8 ft.	
10							
11							
12							
13							
14							
15							

NOTES:

CT=Core Tube
GB=Grab Sample

SEDIMENT LOG MAUMEE CORE LOGS.GPJ 9/13/13

SEDIMENT BORING LMR13-43

EA Engineering, Science, and Technology, Inc.

PROJECT NAME Maumee River
DATE/TIME COLLECTED 6/12/2013 7:53:00 AM
DATE/TIME LOGGED 6/12/2013 10:15:00 AM
DRILLING CONTRACTOR Mudpuppy
DRILLING METHOD Vibracore
LOGGED BY M. Gelinas **WATER DEPTH (ft)** 7.4

PROJECT NUMBER 62561.10
LOCATION Toledo, OH
LATITUDE 41° 41.2384
LONGITUDE -83° 28.6564
ELEVATION (Sediment Surface) 564.2 ft IGLD85
CORE RECOVERY (ft) 9

DEPTH (ft)	SAMPLE INTERVAL (inches)	SAMPLE TYPE	SAMPLE SUBMITTED FOR ANALYSIS (Sample ID at sample depth)	GRAPHIC LOG	USCS CLASS	MATERIAL DESCRIPTION	Depth (ft)
0	12	CT	LMR13-43-012		ML	SILT: gray/brown, water visible in core moisture ~65% with trace (15%) coarse sand/gravel @ surface.	0.5
1	12	CT	LMR13-43-024				
2							
3	24	CT	LMR13-43-048				
4							
5	24	CT	LMR13-43-072		CL-ML	SILTY CLAY: dark gray with some (15-20%) organic debris 1-3 cm.	
6							
7	24	CT	LMR13-43-096				
8							
9	12	CT	LMR13-43-120				9.0
10						End of Boring at 9 ft.	
11							
12							
13							
14							
15							

NOTES:

CT=Core Tube
GB=Grab Sample

SEDIMENT BORING LMR13-44

EA Engineering, Science, and Technology, Inc.

PROJECT NUMBER 62561.10
PROJECT NAME Maumee River
LOCATION Toledo, OH
DATE/TIME COLLECTED 6/12/2013 8:38:00 AM
LATITUDE 41° 41.3315
DATE/TIME LOGGED 6/12/2013 11:30:00 AM
LONGITUDE -83° 28.5632
DRILLING CONTRACTOR Mudpuppy
ELEVATION (Sediment Surface) 565.5 ft IGLD85
DRILLING METHOD Vibracore
LOGGED BY M. Gelinas
WATER DEPTH (ft) 6.3
CORE RECOVERY (ft) 7.8

DEPTH (ft)	SAMPLE INTERVAL (inches)	SAMPLE TYPE	SAMPLE SUBMITTED FOR ANALYSIS (Sample ID at sample depth)	GRAPHIC LOG	USCS CLASS	MATERIAL DESCRIPTION	Depth (ft)
0–1	12	CT	LMR13-44-012		CL-ML	CLAYEY SILT: dark gray, moisture ~50%.	1.0
1–2	12	CT	LMR13-44-024		ML-CL	SILTY CLAY: light gray/brown, moisture ~30% with trace (15%) fine sand.	2.4
2–3	24	CT	LMR13-44-048		SC	SANDY CLAY: 40% fine to medium sand with trace (15%) shell fragments 1-6 mm.	2.8
3–4					CL	CLAY: light gray, moisture ~20% with trace (15%) shell fragments 1-3 mm.	
4–5	24	CT	LMR13-44-072				6.0
5–6					SC	SANDY CLAY: 40% fine to medium sand with trace (15%) shell fragments 1 mm up to 3 cm, white in color. (Similar to 2.4-2.75 ft layer)	6.7
6–7	22	CT	LMR13-44-096		CL	CLAY: dark gray clay with trace (15%) shell fragments 1-3 mm.	7.8
7–8						End of Boring at 7.8 ft.	
8–9							
9–10							
10–11							
11–12							
12–13							
13–14							
14–15							

NOTES:

CT=Core Tube
GB=Grab Sample

SEDIMENT BORING LMR13-45

EA Engineering, Science, and Technology, Inc.

PROJECT NAME Maumee River
DATE/TIME COLLECTED 6/12/2013 9:50:00 AM
DATE/TIME LOGGED 6/14/2013 8:15:00 AM
DRILLING CONTRACTOR Mudpuppy
DRILLING METHOD Vibracore
LOGGED BY M. Gelinas **WATER DEPTH (ft)** 5 **CORE RECOVERY (ft)** 9

PROJECT NUMBER 62561.10
LOCATION Toledo, OH
LATITUDE 41° 41.4346
LONGITUDE -83° 28.6464
ELEVATION (Sediment Surface) 566.9 ft IGLD85

DEPTH (ft)	SAMPLE INTERVAL (inches)	SAMPLE TYPE	SAMPLE SUBMITTED FOR ANALYSIS (Sample ID at sample depth)	GRAPHIC LOG	USCS CLASS	MATERIAL DESCRIPTION	Depth (ft)
0					ML	SILT: gray/brown, soupy, moisture ~60%.	0.3
1	12	CT	LMR13-45-012				
2	12	CT	LMR13-45-024				
3	24	CT	LMR13-45-048				
4							
5	24	CT	LMR13-45-072		CL-ML	SILTY CLAY: gray, moisture 30% with some (20%) organic/woody debris 1-3 mm.	
6							
7	22	CT	LMR13-45-096				
8							
9	12	CT	LMR13-45-120				9.0
10						End of Boring at 9 ft.	
11							
12							
13							
14							
15							

NOTES:

CT=Core Tube
GB=Grab Sample

SEDIMENT BORING LMR13-46

EA Engineering, Science, and Technology, Inc.

PROJECT NAME Maumee River
DATE/TIME COLLECTED 6/12/2013 9:14:00 AM
DATE/TIME LOGGED 6/12/2013 1:15:00 PM
DRILLING CONTRACTOR Mudpuppy
DRILLING METHOD Vibracore
LOGGED BY M. Gelinas **WATER DEPTH (ft)** 5.75

PROJECT NUMBER 62561.10
LOCATION Toledo, OH
LATITUDE 41° 41.4376
LONGITUDE -83° 28.4913
ELEVATION (Sediment Surface) 566.1 ft IGLD85
CORE RECOVERY (ft) 9.8

DEPTH (ft)	SAMPLE INTERVAL (inches)	SAMPLE TYPE	SAMPLE SUBMITTED FOR ANALYSIS (Sample ID at sample depth)	GRAPHIC LOG	USCS CLASS	MATERIAL DESCRIPTION	Depth (ft)
0							
1	12	CT	LMR13-46-012		CL-ML	CLAYEY SILT: gray/brown with moisture ~50%.	
	12	CT	LMR13-46-024		SM	SANDY SILT: 30% coarse sand with some (20%) organic/woody debris 1-3 mm.	1.4 1.7
2							
3	24	CT	LMR13-46-048		ML-CL	SILTY CLAY: gray with moisture 40% and some (20%) organic debris 1-3 mm.	
4							4.2
5	24	CT	LMR13-46-072		CL	CLAY: brown with inclusions of brown/light gray dry clay clumps, ~1-2 cm diameter, moisture ~25%; some (20-25%) organic matter 1-5 cm long (roots, woody debris)	
6							
7	22	CT	LMR13-46-096				
8							
9	21	CT	LMR13-46-120				
							9.8
10						End of Boring at 9.8 ft.	
11							
12							
13							
14							
15							

NOTES:

CT=Core Tube
GB=Grab Sample

SEDIMENT LOG MAUMEE CORE LOGS.GPJ 9/13/13

SEDIMENT BORING LMR13-47

EA Engineering, Science, and Technology, Inc.

PROJECT NUMBER 62561.10

PROJECT NAME Maumee River
LOCATION Toledo, OH
DATE/TIME COLLECTED 6/12/2013 2:12:00 PM
LATITUDE 41° 41.5503
DATE/TIME LOGGED 6/13/2013 2:00:00 AM
LONGITUDE -83° 28.2618
DRILLING CONTRACTOR Mudpuppy
ELEVATION (Sediment Surface) 561.6 ft IGLD85
DRILLING METHOD Vibracore
LOGGED BY M. Gelinas **WATER DEPTH (ft)** 10.166 **CORE RECOVERY (ft)** 11.8

DEPTH (ft)	SAMPLE INTERVAL (inches)	SAMPLE TYPE	SAMPLE SUBMITTED FOR ANALYSIS (Sample ID at sample depth)	GRAPHIC LOG	USCS CLASS	MATERIAL DESCRIPTION	Depth (ft)
0	12	CT	LMR13-47-012		ML	CLAYEY SILT: gray/brown with moisture ~55%.	1.0
1	12	CT	LMR13-47-024		CL-ML	SILTY CLAY: brown/gray, moisture ~40% with some (20%) organic debris 1-2mm. @96-103" trace (10%) shell fragments 2-20mm, white in color.	
2	24	CT	LMR13-47-048				
3							
4	24	CT	LMR13-47-072				
5							
6	24	CT	LMR13-47-096				
7							
8	24	CT	LMR13-47-120				
9							
10	22	CT	LMR13-47-144				11.8
11							
12						End of Boring at 11.8 ft.	
13							
14							
15							

NOTES:

CT=Core Tube
GB=Grab Sample

SEDIMENT LOG MAUMEE CORE LOGS.GPJ 9/13/13

SEDIMENT BORING LMR13-49

EA Engineering, Science, and Technology, Inc.

PROJECT NAME Maumee River
DATE/TIME COLLECTED 6/13/2013 8:04:00 AM
DATE/TIME LOGGED 6/14/2013 10:15:00 AM
DRILLING CONTRACTOR Mudpuppy
DRILLING METHOD Vibracore
LOGGED BY M. Gelinas

PROJECT NUMBER 62561.10
LOCATION Toledo, OH
LATITUDE 41° 39.6609
LONGITUDE -83° 30.4483
ELEVATION (Sediment Surface) 569.2 ft IGLD85
WATER DEPTH (ft) 2.333
CORE RECOVERY (ft) 9.2

DEPTH (ft)	SAMPLE INTERVAL (inches)	SAMPLE TYPE	SAMPLE SUBMITTED FOR ANALYSIS (Sample ID at sample depth)	GRAPHIC LOG	USCS CLASS	MATERIAL DESCRIPTION	Depth (ft)
0	12	CT	LMR13-49-012				
1	12	CT	LMR13-49-024		CL-ML	SILTY CLAY: gray, moisture ~45% with some (20%) organic debris 1-4 cm.	
2							
3	24	CT	LMR13-49-048				3.0
					SC	CLAYEY SAND: fine to medium sand with trace (10%) shell fragments 1-3 mm.	3.2
4					CL	CLAY: gray in color, moisture ~30%. @47" 1/2"-thick layer of fine sand.	
5	24	CT	LMR13-49-072				4.9
					CL	GRAVELLY CLAY: 50% gravel with some (20%) pebbles and trace (10%) shell fragments 1-5 mm.	5.2
6							
7	24	CT	LMR13-49-096		CL	CLAY: gray clay with trace (15%) fine sand and trace (15%) woody/organic debris 1-3 mm.	
8							7.8
	14	CT	LMR13-49-120		SC	CLAYEY SAND: 60% fine sand with some (20%) organic debris 1-3 cm and trace (10%) shell fragments 1-3 mm.	
9							9.2
10						End of Boring at 9.2 ft.	
11							
12							
13							
14							
15							

NOTES:

CT=Core Tube
GB=Grab Sample

SEDIMENT BORING LMR13-50

EA Engineering, Science, and Technology, Inc.

PROJECT NUMBER 62561.10

PROJECT NAME Maumee River
LOCATION Toledo, OH
DATE/TIME COLLECTED 6/13/2013 8:40:00 AM
LATITUDE 41° 39.6808
DATE/TIME LOGGED 6/13/2013 9:15:00 AM
LONGITUDE -83° 30.5234
DRILLING CONTRACTOR Mudpuppy
ELEVATION (Sediment Surface) 561 ft IGLD85
DRILLING METHOD Vibracore
LOGGED BY M. Gelinas **WATER DEPTH (ft)** 10.75 **CORE RECOVERY (ft)** 9.5

DEPTH (ft)	SAMPLE INTERVAL (inches)	SAMPLE TYPE	SAMPLE SUBMITTED FOR ANALYSIS (Sample ID at sample depth)	GRAPHIC LOG	USCS CLASS	MATERIAL DESCRIPTION	Depth (ft)
0	12	CT	LMR13-50-012		ML	SILT: brown/gray, soft, water visible in core moisture 60% with trace (10%) organic material 5-10 mm.	1.0
1	12	CT	LMR13-50-024		CL-ML	SILTY CLAY: gray, moisture ~30% with trace to some (15-20%) organic debris 5-20 mm.	
2	24	CT	LMR13-50-048				
3							
4	24	CT	LMR13-50-072				
5							
6	24	CT	LMR13-50-096				
7							
8	18	CT	LMR13-50-120				9.5
9						End of Boring at 9.5 ft.	
10							
11							
12							
13							
14							
15							

NOTES:

CT=Core Tube
GB=Grab Sample

SEDIMENT LOG MAUMEE CORE LOGS.GPJ 9/13/13

SEDIMENT BORING LMR13-51

EA Engineering, Science, and Technology, Inc.

PROJECT NUMBER 62561.10
PROJECT NAME Maumee River
LOCATION Toledo, OH
DATE/TIME COLLECTED 6/13/2013 9:48:00 AM
LATITUDE 41° 39.792
DATE/TIME LOGGED 6/13/2013 4:15:00 PM
LONGITUDE -83° 30.2777
DRILLING CONTRACTOR Mudpuppy
ELEVATION (Sediment Surface) 565.5 ft IGLD85
DRILLING METHOD Vibracore
LOGGED BY M. Gelinas **WATER DEPTH (ft)** 5.8 **CORE RECOVERY (ft)** 5.1

DEPTH (ft)	SAMPLE INTERVAL (inches)	SAMPLE TYPE	SAMPLE SUBMITTED FOR ANALYSIS (Sample ID at sample depth)	GRAPHIC LOG	USCS CLASS	MATERIAL DESCRIPTION	Depth (ft)
0	12	CT	LMR13-51-012		CL-ML	CLAYEY SILT: dark gray, moisture ~45%.	0.3
1	12	CT	LMR13-51-024		ML-CL	SILTY CLAY: gray with some (15-20%) organic debris 1-2 cm and trace (5%) cobbles.	
2							
3	24	CT	LMR13-51-048				3.0
					SC	CLAYEY SAND WITH SHELLS: black in color with 50% shells and shell fragments 1 -30 mm.	3.2
4					SC	CLAYEY SAND: 80% fine to medium sand, water visible, moisture ~45% with trace 910-15%) small shells and shell fragments 1-10mm	4.5
	13	CT	LMR13-51-072		CL	CLAY: gray with some (20%) fine sand and trace (10%) shell fragments 1-2 mm.	5.1
5						End of Boring at 5.1 ft.	
6							
7							
8							
9							
10							
11							
12							
13							
14							
15							

NOTES:

CT=Core Tube
GB=Grab Sample

SEDIMENT LOG MAUMEE CORE LOGS.GPJ 9/13/13

SEDIMENT BORING LMR13-57

EA Engineering, Science, and Technology, Inc.

PROJECT NAME Maumee River
DATE/TIME COLLECTED 6/13/2013 11:27:00 AM
DATE/TIME LOGGED 6/14/2013 1:50:00 PM
DRILLING CONTRACTOR Mudpuppy
DRILLING METHOD Vibracore
LOGGED BY M. Gelinas **WATER DEPTH (ft)** 12.3

PROJECT NUMBER 62561.10
LOCATION Toledo, OH
LATITUDE 41° 40.958
LONGITUDE -83° 28.8108
ELEVATION (Sediment Surface) 559.4 ft IGLD85
CORE RECOVERY (ft) 4.3

DEPTH (ft)	SAMPLE INTERVAL (inches)	SAMPLE TYPE	SAMPLE SUBMITTED FOR ANALYSIS (Sample ID at sample depth)	GRAPHIC LOG	USCS CLASS	MATERIAL DESCRIPTION	Depth (ft)
0	12	CT	LMR13-57-012		CL-ML	CLAYEY SILT: dark gray, soupy, moisture ~60%.	0.3
1					ML-CL	SILTY CLAY: gray in color, moisture ~45%.	1.3
	12	CT	LMR13-57-024		PT	ORGANICS: dense organic material, 1-2 cm pieces with STRONG diesel odor.	1.4
2					ML-CL	gray with a layer of coarse sand @26".	2.4
					SP	SAND: coarse to fine gravel, poorly sorted with trace (15%) shell fragments 1-5 mm.	2.6
3	28	CT	LMR13-57-048		ML-CL	SILTY CLAY: gray with trace (15%) shell fragments 1-2 cm in size. @35-36" concentrated whole shells (mussels) up to 3 cm long.	
4					SC	SANDY CLAY: 40-50% fine to medium sand with some (20%) shell fragments 1-2 cm and trace (10%) gravel/pebbles at end of core.	4.1 4.3
5						End of Boring at 4.3 ft.	
6							
7							
8							
9							
10							
11							
12							
13							
14							
15							

NOTES:

CT=Core Tube
GB=Grab Sample

SEDIMENT LOG MAUMEE CORE LOGS.GPJ 9/13/13

SEDIMENT BORING LMR13-62

EA Engineering, Science, and Technology, Inc.

PROJECT NUMBER 62561.10
PROJECT NAME Maumee River
LOCATION Toledo, OH
DATE/TIME COLLECTED 6/12/2013 3:54:00 PM
LATITUDE 41° 41.5524
DATE/TIME LOGGED 6/13/2013 10:20:00 AM
LONGITUDE -83° 27.9393
DRILLING CONTRACTOR Mudpuppy
ELEVATION (Sediment Surface) 564.7 ft IGLD85
DRILLING METHOD Vibracore
LOGGED BY M. Gelinas
WATER DEPTH (ft) 7
CORE RECOVERY (ft) 6.9

DEPTH (ft)	SAMPLE INTERVAL (inches)	SAMPLE TYPE	SAMPLE SUBMITTED FOR ANALYSIS (Sample ID at sample depth)	GRAPHIC LOG	USCS CLASS	MATERIAL DESCRIPTION	Depth (ft)
0	12	CT	LMR13-62-012		ML-CL	SILTY CLAY: gray, moisture 35%.	
1	12	CT	LMR13-62-024				
2							
3	24	CT	LMR13-62-048				
4							4.7
5	24	CT	LMR13-62-072		ML-CL	SILTY CLAY: gray, moisture 35% with some (25%) shell fragments 0.5-2 cm in size and trace (15%) coarse gravel/pebbles.	
6							6.0
	11	CT	LMR13-62-096		GC	GRAVELLY CLAY: gray with some (20%) shell fragments 1-20 mm in size and trace (10%) cobbles and pebbles.	6.9
7						End of Boring at 6.9 ft.	
8							
9							
10							
11							
12							
13							
14							
15							

NOTES:

CT=Core Tube
GB=Grab Sample

SEDIMENT LOG MAUMEE CORE LOGS.GPJ 9/13/13

SEDIMENT BORING LMR13-63

EA Engineering, Science, and Technology, Inc.

PROJECT NUMBER 62561.10
PROJECT NAME Maumee River
LOCATION Toledo, OH
DATE/TIME COLLECTED 6/12/2013 2:43:00 PM
LATITUDE 41° 41.656
DATE/TIME LOGGED 6/13/2013 2:50:00 PM
LONGITUDE -83° 27.8575
DRILLING CONTRACTOR Mudpuppy
ELEVATION (Sediment Surface) 560.1 ft IGLD85
DRILLING METHOD Vibracore
LOGGED BY M. Gelinas
WATER DEPTH (ft) 11.8
CORE RECOVERY (ft) 11.2

DEPTH (ft)	SAMPLE INTERVAL (inches)	SAMPLE TYPE	SAMPLE SUBMITTED FOR ANALYSIS (Sample ID at sample depth)	GRAPHIC LOG	USCS CLASS	MATERIAL DESCRIPTION	Depth (ft)
0	12	CT	LMR13-63-012		CL-ML	CLAYEY SILT: gray/brown in color, moisture 50%, soupy.	
1	12	CT	LMR13-63-024				
2							1.8
3	24	CT	LMR13-63-048		ML-CL	SILTY CLAY: gray, moisture ~40% with some (25%) organic/woody debris 1-5 mm in size.	
4							
5	24	CT	LMR13-63-072				
6							
7	24	CT	LMR13-63-096				
8							
9	24	CT	LMR13-63-120				9.2
					SP	SAND: coarse sand and fine gravel, poorly sorted.	9.3
10	14	CT	LMR13-63-144		ML-CL	SILTY CLAY: gray, moisture ~40% with some (25%) organic/woody debris 1-5 mm in size.	
11							11.2
12						End of Boring at 11.2 ft.	
13							
14							
15							

NOTES:

CT=Core Tube
GB=Grab Sample

SEDIMENT LOG MAUMEE CORE LOGS.GPJ 9/13/13

SEDIMENT BORING LMR13-72

EA Engineering, Science, and Technology, Inc.

PROJECT NAME Maumee River
DATE/TIME COLLECTED 6/13/2013 2:29:00 PM
DATE/TIME LOGGED 6/14/2013 3:00:00 PM
DRILLING CONTRACTOR Mudpuppy
DRILLING METHOD Vibracore
LOGGED BY M. Gelinas **WATER DEPTH (ft)** 7 **CORE RECOVERY (ft)** 8

PROJECT NUMBER 62561.10
LOCATION Toledo, OH
LATITUDE 41° 39.9464
LONGITUDE -83° 30.3721
ELEVATION (Sediment Surface) 564.7 ft IGLD85

DEPTH (ft)	SAMPLE INTERVAL (inches)	SAMPLE TYPE	SAMPLE SUBMITTED FOR ANALYSIS (Sample ID at sample depth)	GRAPHIC LOG	USCS CLASS	MATERIAL DESCRIPTION	Depth (ft)
0	12	CT	LMR13-72-012		GM	COBBLEY, PEBBLEY, GRAVELLY SILT: moisture ~40%, water visible in core with some (25%) shell fragments 1-3 cm in size.	0.3
1	12	CT	LMR13-72-024		ML-CL	SILTY CLAY: gray in color, moisture ~35% with some (15-20%) organic debris 1-3 cm in size.	
2							2.4
3	24	CT	LMR13-72-048		OL	ORGANIC: 85% dense organic material debris, black in color 1-3 cm in size.	2.6
4							
5	24	CT	LMR13-72-072		ML-CL	SILTY CLAY: gray in color, moisture ~35% with some (15-20%) organic debris 1-3 cm in size.	
6							
7	24	CT	LMR13-72-096				
8							8.0
9						End of Boring at 8 ft.	
10							
11							
12							
13							
14							
15							

NOTES:

CT=Core Tube
GB=Grab Sample

SEDIMENT BORING LMR13-83

EA Engineering, Science, and Technology, Inc.

PROJECT NUMBER 62561.10
PROJECT NAME Maumee River
LOCATION Toledo, OH
DATE/TIME COLLECTED 6/13/2013 9:19:00 AM
LATITUDE 41° 39.6955
DATE/TIME LOGGED 6/14/2013 11:15:00 AM
LONGITUDE -83° 30.4302
DRILLING CONTRACTOR Mudpuppy
ELEVATION (Sediment Surface) 568.1 ft IGLD85
DRILLING METHOD Vibracore
LOGGED BY M. Gelinas **WATER DEPTH (ft)** 3.4 **CORE RECOVERY (ft)** 6

DEPTH (ft)	SAMPLE INTERVAL (inches)	SAMPLE TYPE	SAMPLE SUBMITTED FOR ANALYSIS (Sample ID at sample depth)	GRAPHIC LOG	USCS CLASS	MATERIAL DESCRIPTION	Depth (ft)
0	12	CT	LMR13-83-012		CL-ML	CLAYEY SILT: gray/brown in color, moisture ~45%.	0.3
					SC	SANDY CLAY: 25% fine grained sand, moisture ~40%.	0.9
1	12	CT	LMR13-83-024		ML-CL	SILTY CLAY: gray to dark gray with some (20%) organic debris 0.5-1 cm	1.8
2					SP	SAND: fine to medium grained sand, poorly sorted with trace (15%) shell fragments 1-5 mm in size.	2.6
3	24	CT	LMR13-83-048		CL	CLAY: dark gray with some (20%) shell fragments 0.5-2 cm in size and some (20%) organic material up to 4 cm long. @41": fine-grained sand lens.	4.3
4							
5	24	CT	LMR13-83-072		SC	SANDY CLAY: 25% fine grained sand within gray clay with grace (15%) shell fragments 1-4 cm and trace (15%) organic debris 1-3 cm in size.	6.0
6						End of Boring at 6 ft.	
7							
8							
9							
10							
11							
12							
13							
14							
15							

NOTES:

CT=Core Tube
GB=Grab Sample

SEDIMENT LOG MAUMEE CORE LOGS.GPJ 9/13/13

SEDIMENT BORING LMR13-81

EA Engineering, Science, and Technology, Inc.

PROJECT NUMBER 62561.10
PROJECT NAME Maumee River
LOCATION Toledo, OH
DATE/TIME COLLECTED 6/12/2013 10:57:00 AM
LATITUDE 41° 41.4054
DATE/TIME LOGGED 6/12/2013 2:15:00 PM
LONGITUDE -83° 28.5425
DRILLING CONTRACTOR Mudpuppy
ELEVATION (Sediment Surface) 566.1 ft IGLD85
DRILLING METHOD Vibracore
LOGGED BY M. Gelinas
WATER DEPTH (ft) 5.6
CORE RECOVERY (ft) 9.3

DEPTH (ft)	SAMPLE INTERVAL (inches)	SAMPLE TYPE	SAMPLE SUBMITTED FOR ANALYSIS (Sample ID at sample depth)	GRAPHIC LOG	USCS CLASS	MATERIAL DESCRIPTION	Depth (ft)
0	12	CT	LMR13-81-012		OL	SILTY CLAY: dark gray, moisture ~40% with some (20%) organic/woody debris 1-5 mm in size.	
1	12	CT	LMR13-81-024				
2	24	CT	LMR13-81-048				
3							
4	24	CT	LMR13-81-072				
5							
6	24	CT	LMR13-81-096				
7					SC	SANDY CLAY: 35-40% fine sand, water visible in core, moisture ~50%.	7.5
8	15	CT	LMR13-81-120		CL	CLAY: gray in color. @108-111": trace (15%) shell fragments 1-3 cm in size.	7.9
9							9.3
10						End of Boring at 9.3 ft.	
11							
12							
13							
14							
15							

NOTES:

CT=Core Tube
GB=Grab Sample

SEDIMENT LOG MAUMEE CORE LOGS.GPJ 9/13/13

SEDIMENT BORING LMR13-90

EA Engineering, Science, and Technology, Inc.

PROJECT NAME Maumee River
DATE/TIME COLLECTED 6/12/2013 4:30:00 PM
DATE/TIME LOGGED 6/13/2013 9:30:00 AM
DRILLING CONTRACTOR Mudpuppy
DRILLING METHOD Vibracore
LOGGED BY M. Gelinas **WATER DEPTH (ft)** 8.2

PROJECT NUMBER 62561.10
LOCATION Toledo, OH
LATITUDE 41° 41.5023
LONGITUDE -83° 27.9629
ELEVATION (Sediment Surface) 563.4 ft IGLD85
CORE RECOVERY (ft) 6.1

DEPTH (ft)	SAMPLE INTERVAL (inches)	SAMPLE TYPE	SAMPLE SUBMITTED FOR ANALYSIS (Sample ID at sample depth)	GRAPHIC LOG	USCS CLASS	MATERIAL DESCRIPTION	Depth (ft)
0	12	CT	LMR13-90-012		CL-ML	CLAYEY SILT: brown/gray in color, water visible in core, moisture ~60%.	0.8
1	12	CT	LMR13-90-024		ML-CL	SILTY CLAY: dark gray in color, moisutre ~40% with some (20%) organic/woody debris 1-3 mm in size.	
2	24	CT	LMR13-90-048				
3							
4	25	CT	LMR13-90-072				6.1
5						End of Boring at 6.1 ft.	
6							
7							
8							
9							
10							
11							
12							
13							
14							
15							

NOTES:

CT=Core Tube
GB=Grab Sample

SEDIMENT LOG MAUMEE CORE LOGS.GPJ 9/13/13

SEDIMENT BORING LMR13-91

EA Engineering, Science, and Technology, Inc.

PROJECT NUMBER 62561.10

PROJECT NAME Maumee River
LOCATION Toledo, OH
DATE/TIME COLLECTED 6/12/2013 3:20:00 PM
LATITUDE 41° 41.5921
DATE/TIME LOGGED 6/13/2013 11:30:00 AM
LONGITUDE -83° 27.8596
DRILLING CONTRACTOR Mudpuppy
ELEVATION (Sediment Surface) 559.7 ft IGLD85
DRILLING METHOD Vibracore
LOGGED BY M. Gelinas **WATER DEPTH (ft)** 12.1 **CORE RECOVERY (ft)** 8.5

DEPTH (ft)	SAMPLE INTERVAL (inches)	SAMPLE TYPE	SAMPLE SUBMITTED FOR ANALYSIS (Sample ID at sample depth)	GRAPHIC LOG	USCS CLASS	MATERIAL DESCRIPTION	Depth (ft)
0					ML	SILT: brown/gray in color, water visible in core, moisture ~60%.	0.2
1	12	CT	LMR13-91-012		CL-ML	CLAYEY SILT: gray in color, moisture ~45%. @13-14": dense (80%) whole mussel shells 2-4 cm long.	1.2
2	12	CT	LMR13-91-024				
3	24	CT	LMR13-91-048				
4							
5	24	CT	LMR13-91-072		ML-CL	SILTY CLAY: gray/brown in color, moisture ~30%.	
6							
7	30	CT	LMR13-91-096				
8							8.5
9						End of Boring at 8.5 ft.	
10							
11							
12							
13							
14							
15							

NOTES:

CT=Core Tube
GB=Grab Sample

SEDIMENT LOG MAUMEE CORE LOGS.GPJ 9/13/13

EA Engineering, Science, and Technology, Inc.

SEDIMENT BORING LMR13-93

PROJECT NUMBER 62561.10
PROJECT NAME Maumee River
LOCATION Toledo, OH
DATE/TIME COLLECTED 6/12/2013 10:24:00 AM
LATITUDE 41° 41.4962
DATE/TIME LOGGED 6/13/2013 8:15:00 AM
LONGITUDE -83° 28.369
DRILLING CONTRACTOR Mudpuppy
ELEVATION (Sediment Surface) 567 ft IGLD85
DRILLING METHOD Vibracore
LOGGED BY M. Gelinas **WATER DEPTH (ft)** 4.8 **CORE RECOVERY (ft)** 9.5

DEPTH (ft)	SAMPLE INTERVAL (inches)	SAMPLE TYPE	SAMPLE SUBMITTED FOR ANALYSIS (Sample ID at sample depth)	GRAPHIC LOG	USCS CLASS	MATERIAL DESCRIPTION	Depth (ft)
0	12	CT	LMR13-93-012		ML-CL	SILTY CLAY: light gray/brown, moisture ~45%. Color changes to black @5-11".	0.9
1	12	CT	LMR13-93-024				
2	24	CT	LMR13-93-048				
3							
4	24	CT	LMR13-93-072		ML-CL	SILTY CLAY: gray, moisture ~35% with some (15-20%) organic debris 1-3 mm.	
5							
6	24	CT	LMR13-93-096				
7							
8	18	CT	LMR13-93-120				9.5
9							
10						End of Boring at 9.5 ft.	
11							
12							
13							
14							
15							

NOTES:

CT=Core Tube
GB=Grab Sample

Sediment Core Logs Created in the Field

EA Engineering, Science, and Technology, Inc.

SEDIMENT BORING LMR13-01

PROJECT NUMBER 62561.10
PROJECT NAME Maumee River
LOCATION Toledo, OH
DATE/TIME COLLECTED 6/17/2013 9:29:00 AM
LATITUDE 41° 41.73168
DATE/TIME LOGGED 6/17/2013 10:20:00 AM
LONGITUDE -83° 28.1860
DRILLING CONTRACTOR Mudpuppy
ELEVATION (Sediment Surface) 567.8 ft IGLD85
DRILLING METHOD Vibracore
LOGGED BY M. Gelinas **WATER DEPTH (ft)** 4.3 **CORE RECOVERY (ft)** 9

DEPTH (ft)	SAMPLE INTERVAL (inches)	SAMPLE TYPE	SAMPLE SUBMITTED FOR ANALYSIS (Sample ID at sample depth)	GRAPHIC LOG	USCS CLASS	MATERIAL DESCRIPTION	Depth (ft)
0					ML	SILT: brown/gray, one large (6cmx4cmx2cm) wedge-shaped stone	0.2
	12	CT	LMR13-01-012		ML-CL	SILTY CLAY: gray with sand. Organic debris at 2". Strong diesel odor at 12"	0.4
1							
	12	CT	LMR13-01-024		ML-CL	SILTY CLAY: gray, moisture 15%	
2							
3	24	CT	LMR13-01-048		SC	SANDY CLAY: gray, fine-grained sand, decreased moisture from previous layer. @ 39-40": black layer of silty coarse sand and gravel with diesel odor, moisture ~20%. @ 40-45" sandy (30%) silty clay, sand fine-grained, shell fragments 1-3 mm ~10%	3.0
4							3.8
5	24	CT	LMR13-01-072		CH	CLAY: gray, stiff, low moisture. @ 61" thin black layer of organic debris with strong diesel odor. @77-79" shell debris up to 3 cm long. @103" small shells and shell debris, 1-5 mm	
6							
7	24	CT	LMR13-01-096				
8							
	12	CT	LMR13-01-120				
9							9.0
10						End of Boring at 9 ft.	
11							
12							
13							
14							
15							

NOTES:

CT=Core Tube
GB=Grab Sample

SEDIMENT LOG MAUMEE CORE LOGS.GPJ 9/13/13

SEDIMENT BORING LMR13-03

EA Engineering, Science, and Technology, Inc.

PROJECT NUMBER 62561.10
PROJECT NAME Maumee River
LOCATION Toledo, OH
DATE/TIME COLLECTED 6/17/2013 10:05:00 AM
LATITUDE 41° 41.8345
DATE/TIME LOGGED 6/17/2013 4:10:00 PM
LONGITUDE -83° 28.1089
DRILLING CONTRACTOR Mudpuppy
ELEVATION (Sediment Surface) 566.9 ft IGLD85
DRILLING METHOD Vibracore
LOGGED BY M. Gelinas **WATER DEPTH (ft)** 5.3 **CORE RECOVERY (ft)** 10.25

DEPTH (ft)	SAMPLE INTERVAL (inches)	SAMPLE TYPE	SAMPLE SUBMITTED FOR ANALYSIS (Sample ID at sample depth)	GRAPHIC LOG	USCS CLASS	MATERIAL DESCRIPTION	Depth (ft)
0					ML	SILT: brown/gray silt; moisture ~80%, soupy with some (20%) shell fragments 1-5 mm.	0.3
1	12	CT	LMR13-03-012		ML-CL	SILTY CLAY: gray with trace (15%) shell fragments 1-3 mm. Diesel odor.	1.3
2	12	CT	LMR13-03-024		ML-CL	SILTY CLAY WITH SAND: fine-grained sand with trace (15%) shell fragments 1-3 mm. @ 47": dense woody debris/wood chips	
3	24	CT	LMR13-03-048				
4					SM	SILTY SAND WITH GRAVEL: coarse sand to gravel, pebbles (3x3 cm) 30%. Sand has trace (10-15%) shell fragments 1-3 mm.	4.0 4.3
5	24	CT	LMR13-03-072		ML-CL	SILTY CLAY WITH SAND: fine-grained sand. @59-60" full mollusk shell ~3 cm long. @ 74" find-medium sand layer with trace (10-15%) shell fragments 1-3 mm.	6.2
6					SP	SAND: fine to medium sand with trace (10-15%) shell fragments 1-3 mm.	6.3
7	24	CT	LMR13-03-096		ML-CL	SILTY CLAY WITH SAND: fine sand with trace (15%) shell fragments 1-3 mm.	6.5
8					ML-CL	SILTY CLAY WITH SAND: fine-grained sand, with trace (15%) shell fragments 1-3 mm. @115-118": whole mollusk shells and fragments up to 4 cm long.	
9	27	CT	LMR13-03-120				
10							10.3
11						End of Boring at 10.25 ft.	
12							
13							
14							
15							

NOTES:

CT=Core Tube
GB=Grab Sample

SEDIMENT LOG MAUMEE CORE LOGS.GPJ 9/13/13

SEDIMENT BORING LMR13-07

EA Engineering, Science, and Technology, Inc.

PROJECT NUMBER 62561.10
PROJECT NAME Maumee River
LOCATION Toledo, OH
DATE/TIME COLLECTED 6/17/2013 1:40:00 PM
LATITUDE 41° 41.9372
DATE/TIME LOGGED 6/18/2013 11:00:00 AM
LONGITUDE -83° 28.03176
DRILLING CONTRACTOR Mudpuppy
ELEVATION (Sediment Surface) 567.2 ft IGLD85
DRILLING METHOD Vibracore
LOGGED BY M. Gelinas **WATER DEPTH (ft)** 4.9 **CORE RECOVERY (ft)** 6.25

DEPTH (ft)	SAMPLE INTERVAL (inches)	SAMPLE TYPE	SAMPLE SUBMITTED FOR ANALYSIS (Sample ID at sample depth)	GRAPHIC LOG	USCS CLASS	MATERIAL DESCRIPTION	Depth (ft)
0					ML	SILT: gray/brown, soft, ~65% moisture.	0.3
1	12	CT	LMR13-07-012				
2	12	CT	LMR13-07-024				
3	24	CT	LMR13-07-048		ML-CL	SILTY CLAY: dark gray, moisture 40% with some (20%) shell fragments 1-5mm, trace (10%) wood debris 1mm - 3 cm. @ 48" diesel odor.	
4							
5	27	CT	LMR13-07-072				
6					GP-GM	SANDY GRAVEL: with some (30%) pebbles 1-2cm, some (25%) cobbles 4-5 cm, trace (15%)shell fragments 1-5 mm, and whole shell pieces up to 3 cm long.	5.7 6.3
7						End of Boring at 6.25 ft.	
8							
9							
10							
11							
12							
13							
14							
15							

NOTES:

CT=Core Tube
GB=Grab Sample

SEDIMENT LOG MAUMEE CORE LOGS.GPJ 9/13/13

EA Engineering, Science, and Technology, Inc.

SEDIMENT BORING LMR13-08

PROJECT NUMBER 62561.10
PROJECT NAME Maumee River
LOCATION Toledo, OH
DATE/TIME COLLECTED 6/17/2013 11:25:00 AM
LATITUDE 41° 41.9392
DATE/TIME LOGGED 6/17/2013 5:10:00 PM
LONGITUDE -83° 27.874
DRILLING CONTRACTOR Mudpuppy
ELEVATION (Sediment Surface) 566.7 ft IGLD85
DRILLING METHOD Vibracore
LOGGED BY M. Gelinas **WATER DEPTH (ft)** 5.4 **CORE RECOVERY (ft)** 6

DEPTH (ft)	SAMPLE INTERVAL (inches)	SAMPLE TYPE	SAMPLE SUBMITTED FOR ANALYSIS (Sample ID at sample depth)	GRAPHIC LOG	USCS CLASS	MATERIAL DESCRIPTION	Depth (ft)
0	12	CT	LMR13-08-012		ML	SILT: brown/gray, soupy moisture ~40%.	0.6
1	12	CT	LMR13-08-024		ML-CL	SILTY CLAY: gray with trace (15%) shell fragments 1-3 mm , moisture ~20%.	
2							
3	24	CT	LMR13-08-048				
4							
5	24	CT	LMR13-08-072		SC	CLAYEY SAND: gray. @66-72": some (20%) shell fragments and whole shells up to 3 cm long	5.2
6							6.0
7						End of Boring at 6 ft.	
8							
9							
10							
11							
12							
13							
14							
15							

NOTES:

CT=Core Tube
GB=Grab Sample

SEDIMENT LOG MAUMEE CORE LOGS.GPJ 9/13/13

SEDIMENT BORING LMR13-13

EA Engineering, Science, and Technology, Inc.

PROJECT NUMBER 62561.10
PROJECT NAME Maumee River
LOCATION Toledo, OH
DATE/TIME COLLECTED 6/17/2013 2:15:00 PM
LATITUDE 41° 42.0399
DATE/TIME LOGGED 6/18/2013 7:35:00 AM
LONGITUDE -83° 27.9433
DRILLING CONTRACTOR Mudpuppy
ELEVATION (Sediment Surface) 567.5 ft IGLD85
DRILLING METHOD Vibracore
LOGGED BY M. Gelinas **WATER DEPTH (ft)** 4.6 **CORE RECOVERY (ft)** 8.8

DEPTH (ft)	SAMPLE INTERVAL (inches)	SAMPLE TYPE	SAMPLE SUBMITTED FOR ANALYSIS (Sample ID at sample depth)	GRAPHIC LOG	USCS CLASS	MATERIAL DESCRIPTION	Depth (ft)
0	12	CT	LMR13-13-012		ML	SILT: brown/gray, soupy; some (20%) gravel; water visible in core, moisture ~70%.	0.3
1	12	CT	LMR13-13-024				
2	24	CT	LMR13-13-048		ML-OL	CLAYEY SILT: gray, moisture ~30%; some (20%) shell fragments 1-3 mm and organic debris 1 mm - 2 cm	
3							
4	24	CT	LMR13-13-072				5.8
5					ML-CL	SILTY CLAY: gray, moisture ~20% with trace (10%) gravel; trace (10%) shell fragments and organic debris 1-10 mm	
6	24	CT	LMR13-13-096				7.3
7					SC	SANDY CLAY: fine sand ~30% in gray clay	7.7
8	9	CT	LMR13-13-120		SP	SAND: fine to coarse sand, poorly sorted; trace (10%) gravel and trace (10%) shell fragments 1-3 mm.	8.1
					CH	CLAY: gray, moisture ~10%	8.4
					SC	SANDY CLAY: fine sand ~25%.	8.8
9							
10						End of Boring at 8.8 ft.	
11							
12							
13							
14							
15							

NOTES:

CT=Core Tube
GB=Grab Sample

SEDIMENT LOG MAUMEE CORE LOGS.GPJ 9/13/13

SEDIMENT BORING LMR13-14

EA Engineering, Science, and Technology, Inc.

PROJECT NUMBER 62561.10

PROJECT NAME Maumee River
LOCATION Toledo, OH
DATE/TIME COLLECTED 6/17/2013 10:55:00 AM
LATITUDE 41° 42.0427
DATE/TIME LOGGED 6/17/2013 6:20:00 PM
LONGITUDE -83° 27.79728
DRILLING CONTRACTOR Mudpuppy
ELEVATION (Sediment Surface) 567.7 ft IGLD85
DRILLING METHOD Vibracore
LOGGED BY M. Gelinas **WATER DEPTH (ft)** 4.4 **CORE RECOVERY (ft)** 9.6

DEPTH (ft)	SAMPLE INTERVAL (inches)	SAMPLE TYPE	SAMPLE SUBMITTED FOR ANALYSIS (Sample ID at sample depth)	GRAPHIC LOG	USCS CLASS	MATERIAL DESCRIPTION	Depth (ft)
0					ML	SILT: brown/gray, soupy	0.2
1	12	CT	LMR13-14-012				
	12	CT	LMR13-14-024				
2							
3	24	CT	LMR13-14-048				
4					ML-CL	SILTY CLAY: moisture ~45% with trace (10-15%) shell fragments 1-3 mm and organic/woody debris 1-5 mm. @60-66" shell fragments and organic debris much denser ~40%	
5	24	CT	LMR13-14-072				
6							
7	24	CT	LMR13-14-096				
8							
	19	CT	LMR13-14-120				8.8
9					SP	SAND: fine to medium san with trace (10-15%) shell fragments 1-3 mm.	9.0
					CH	CLAY: gray, with shell fragments up to 4 cm across.	9.6
10						End of Boring at 9.6 ft.	
11							
12							
13							
14							
15							

NOTES:

CT=Core Tube
GB=Grab Sample

SEDIMENT LOG MAUMEE CORE LOGS.GPJ 9/13/13

SEDIMENT BORING LMR13-15

EA Engineering, Science, and Technology, Inc.

PROJECT NUMBER 62561.10

PROJECT NAME Maumee River
LOCATION Toledo, OH
DATE/TIME COLLECTED 6/17/2013 2:45:00 PM
LATITUDE 41° 42.041 6
DATE/TIME LOGGED 6/18/2013 1:35:00 PM
LONGITUDE -83° 27.6342
DRILLING CONTRACTOR Mudpuppy
ELEVATION (Sediment Surface) 566.4 ft IGLD85
DRILLING METHOD Vibracore
LOGGED BY M. Gelinas **WATER DEPTH (ft)** 5.6 **CORE RECOVERY (ft)** 1.9

DEPTH (ft)	SAMPLE INTERVAL (inches)	SAMPLE TYPE	SAMPLE SUBMITTED FOR ANALYSIS (Sample ID at sample depth)	GRAPHIC LOG	USCS CLASS	MATERIAL DESCRIPTION	Depth (ft)
0	12	CT	LMR13-15-012		ML	SILT WITH SAND: brown/gray, soupy silt with trace (15%) medium to coarse sand; water visible in core; moisture ~40%.	0.3
1	11	CT	LMR13-15-024		ML-CL	CLAYEY SILT WITH SAND: gray clayey silt with some (15-20%) medium to fine sand. @20-23" shell fragments 1-10 mm ~40%, white in color.	1.9
2						End of Boring at 1.9 ft.	
3							
4							
5							
6							
7							
8							
9							
10							
11							
12							
13							
14							
15							

NOTES:

CT=Core Tube
GB=Grab Sample

SEDIMENT BORING LMR13-21

EA Engineering, Science, and Technology, Inc.

PROJECT NUMBER 62561.10

PROJECT NAME Maumee River
LOCATION Toledo, OH
DATE/TIME COLLECTED 6/17/2013 3:10:00 PM
LATITUDE 41° 42.1447
DATE/TIME LOGGED 6/18/2013 12:50:00 PM
LONGITUDE -83° 27.396
DRILLING CONTRACTOR Mudpuppy
ELEVATION (Sediment Surface) 567.5 ft IGLD85
DRILLING METHOD Vibracore
LOGGED BY M. Gelinas **WATER DEPTH (ft)** 4.5 **CORE RECOVERY (ft)** 4.8

DEPTH (ft)	SAMPLE INTERVAL (inches)	SAMPLE TYPE	SAMPLE SUBMITTED FOR ANALYSIS (Sample ID at sample depth)	GRAPHIC LOG	USCS CLASS	MATERIAL DESCRIPTION	Depth (ft)
0	12	CT	LMR13-21-012		ML-CL	SILTY CLAY: gray, moisture ~30% with trace (10%) shell debris/fine sand. @4-5" dry (~10% moisture) clay lens.	1.1
1	12	CT	LMR13-21-024		ML-CL	SILTY CLAY: dark gray to black	2.1
2	24	CT	LMR13-21-048		SP	SAND: fine to medium with trace (10%) shell hash 1-2mm and trace (10%) dark gray/black silt.	2.2
					ML-CL		2.3
					ML-CL		2.4
3					ML-CL	SILTY CLAY: dark gray, wood debris 5-10 mm.	2.8
					SC	SILTY CLAY WITH SAND: fine grained sand ~30%, silt ~30%.	2.8
					CH	SILTY CLAY: dark gray, wood debris 5-10 mm (similar to 2.2 - 2.3 ft layer)	
4	24	CT	LMR13-21-072		SC	SANDY CLAY: fine sand 30-40%, with trace (10%) silt; Shell fragments ~1 mm	4.1
5						CLAY: gray clay with trace (15%) shell and wood fragments 1-10 mm.	4.8
6						SANDY CLAY WITH PEBBLES: fine sand 30-40%, with some (20%) pebbles 1-2 cm.	
7						End of Boring at 4.8 ft.	
8							
9							
10							
11							
12							
13							
14							
15							

NOTES:

CT=Core Tube
GB=Grab Sample

SEDIMENT BORING LMR13-25

EA Engineering, Science, and Technology, Inc.

PROJECT NAME Maumee River
DATE/TIME COLLECTED 6/17/2013 4:18:00 PM
DATE/TIME LOGGED 6/18/2013 9:00:00 AM
DRILLING CONTRACTOR Mudpuppy
DRILLING METHOD Vibracore
LOGGED BY M. Gelinas **WATER DEPTH (ft)** 4

PROJECT NUMBER 62561.10
LOCATION Toledo, OH
LATITUDE 41° 42.2386
LONGITUDE -83° 27.1637
ELEVATION (Sediment Surface) 567.8 ft IGLD85
CORE RECOVERY (ft) 6.6

DEPTH (ft)	SAMPLE INTERVAL (inches)	SAMPLE TYPE	SAMPLE SUBMITTED FOR ANALYSIS (Sample ID at sample depth)	GRAPHIC LOG	USCS CLASS	MATERIAL DESCRIPTION	Depth (ft)
0					ML	SILT: brown/gray, moisture ~40%.	0.1
	12	CT	LMR13-25-012		ML	SILT WITH SHELLS: black silt, dense (80%) shells 1-3 cm.	0.3
1							
	12	CT	LMR13-25-024		SC	SANDY CLAY: fine sand 30% with trace (15%) shell fragments 1-3 mm; moisture ~15%. @ 19": fine to medium sand layer with shell debris 1-3mm	
2							
3	24	CT	LMR13-25-048				2.9
					CH	CLAY: gray/brown clay with trace (10%) gravel	
4							4.5
5	24	CT	LMR13-25-072		SC	SANDY CLAY: fine sand 30% with shells and shell fragments up to 3 cm in length	
6							6.0
	7	CT	LMR13-25-096		SP	SAND WITH GRAVEL: medium to coarse sand with some (20%) silt and trace (10%) shell fragments 1-3 mm.	6.1
7					CH	CLAY: gray/brown with trace (10%) shell and woody debris 5-10 mm.	6.6
8						End of Boring at 6.6 ft.	
9							
10							
11							
12							
13							
14							
15							

NOTES:

CT=Core Tube
GB=Grab Sample

SEDIMENT LOG MAUMEE CORE LOGS.GPJ 9/13/13

SEDIMENT BORING LMR13-28

EA Engineering, Science, and Technology, Inc.

PROJECT NUMBER 62561.10
PROJECT NAME Maumee River
LOCATION Toledo, OH
DATE/TIME COLLECTED 6/13/2013 3:39:00 PM
LATITUDE 41° 40.1058
DATE/TIME LOGGED 6/15/2013 9:20:00 AM
LONGITUDE -83° 30.1366
DRILLING CONTRACTOR Mudpuppy
ELEVATION (Sediment Surface) 566.6 ft IGLD85
DRILLING METHOD Vibracore
LOGGED BY M. Gelinas
WATER DEPTH (ft) 4.9
CORE RECOVERY (ft) 9

DEPTH (ft)	SAMPLE INTERVAL (inches)	SAMPLE TYPE	SAMPLE SUBMITTED FOR ANALYSIS (Sample ID at sample depth)	GRAPHIC LOG	USCS CLASS	MATERIAL DESCRIPTION	Depth (ft)
0							
1	12	CT	LMR13-28-012		CL-ML	CLAYEY SILT: gray in color	1.0
2	12	CT	LMR13-28-024		ML-CL	SILTY CLAY: gray in color	
3	24	CT	LMR13-28-048				
4							4.3
5	24	CT	LMR13-28-072		CH	CLAY: gray, stiff	4.8
6					ML-CL	SILTY CLAY: gray, with some (20%) fine sand and shell hash 1-2 mm. Large pebble/cobble 5 cm x 3 cm x 5 cm. Diesel odor.	6.3
7	24	CT	LMR13-28-096		CH	CLAY: gray with some (20%) silt.	7.3
8	9	CT	LMR13-28-120		SM CH GM-GP SC CH	SILTY SAND: fine to medium sand with some (30%) shell hash. CLAY: gray with some (20%) silt. (similar to 6.25 to 7.25 ft interval) SILTY GRAVEL: gray, with some (30%) pebbles 2-3 cm and shell fragments 1-30 mm. SANDY CLAY: clay layers (1-3 cm wide) interbedded with fine to medium sand and shell hash. CLAY: gray in color.	7.4 7.6 8.1 8.8 9.0
9						End of Boring at 9 ft.	
10							
11							
12							
13							
14							
15							

NOTES:

CT=Core Tube
GB=Grab Sample

SEDIMENT LOG MAUMEE CORE LOGS.GPJ 9/13/13

SEDIMENT BORING LMR13-29

EA Engineering, Science, and Technology, Inc.

PROJECT NAME Maumee River
DATE/TIME COLLECTED 6/13/2013 4:13:00 PM
DATE/TIME LOGGED 6/15/2013 11:00:00 AM
DRILLING CONTRACTOR Mudpuppy
DRILLING METHOD Vibracore
LOGGED BY M. Gelinas **WATER DEPTH (ft)** 2.6

PROJECT NUMBER 62561.10
LOCATION Toledo, OH
LATITUDE 41° 40.1892
LONGITUDE -83° 30.033
ELEVATION (Sediment Surface) 568.7 ft IGLD85
CORE RECOVERY (ft) 7

DEPTH (ft)	SAMPLE INTERVAL (inches)	SAMPLE TYPE	SAMPLE SUBMITTED FOR ANALYSIS (Sample ID at sample depth)	GRAPHIC LOG	USCS CLASS	MATERIAL DESCRIPTION	Depth (ft)
0							
1	12	CT	LMR13-29-012		ML	SILT: gray with denser silty clay clumps 2-5 mm diameter.	0.8
2	12	CT	LMR13-29-024		ML-CL	SILTY CLAY: gray in color	
3	24	CT	LMR13-29-048				3.0
4					ML-CL	SILTY CLAY: gray in color with some (20%) medium grained sand and shell fragments 1-3 mm.	4.8
5	24	CT	LMR13-29-072		SM	SILTY SAND: fine to medium sand with 40% shell fragments and trace (5-10%) gravel.	5.4
6					SC	SANDY CLAY: sand 30% with trace (10-15%) shell fragments 1-5 mm.	
7	24	CT	LMR13-29-096				7.0
8						End of Boring at 7 ft.	
9							
10							
11							
12							
13							
14							
15							

NOTES:

CT=Core Tube
GB=Grab Sample

SEDIMENT LOG MAUMEE CORE LOGS.GPJ 9/13/13

SEDIMENT BORING LMR13-30

EA Engineering, Science, and Technology, Inc.

PROJECT NUMBER 62561.10

PROJECT NAME Maumee River
LOCATION Toledo, OH
DATE/TIME COLLECTED 6/18/2013 10:40:00 AM
LATITUDE 41° 40.1916
DATE/TIME LOGGED 6/19/2013 8:00:00 AM
LONGITUDE -83° 29.8927
DRILLING CONTRACTOR Mudpuppy
ELEVATION (Sediment Surface) 555.9 ft IGLD85
DRILLING METHOD Vibracore
LOGGED BY M. Gelinas **WATER DEPTH (ft)** 15.8 **CORE RECOVERY (ft)** 9.8

DEPTH (ft)	SAMPLE INTERVAL (inches)	SAMPLE TYPE	SAMPLE SUBMITTED FOR ANALYSIS (Sample ID at sample depth)	GRAPHIC LOG	USCS CLASS	MATERIAL DESCRIPTION	Depth (ft)
0	12	CT	LMR13-30-012		CL-ML	CLAYEY SILT: brown/gray with 40% moisture	0.1
1	12	CT	LMR13-30-024				
2							
3	24	CT	LMR13-30-048		ML-CL	SILTY CLAY: gray, moisture ~25%. @17-20": 50% rounded pebbles and woody debris 1-3 cm. @20" color changes to dark gray, some sheen visible and strong creosote odor.	
4							
5	24	CT	LMR13-30-072				
6							6.6
7	24	CT	LMR13-30-096		SP	SAND: fine to medium sand with trace (10%) shell fragments 1-3 mm black in color. Creosote odor.	6.7
					CH	CLAY: gray clay with trace (10%) fine sand. Creosote odor	
8							7.9
					SP	SAND: fine to medium-grained sand with trace (10-15%) shell fragments 1-3 mm. Creosote odor.	8.3
					CH		8.6
					SP	CLAY: gray in color. Creosote odor.	8.8
9	22	CT	LMR13-30-120		CH	SAND: fine to medium-grained sand with trace (10-15%) shell fragments 1-3 mm. Creosote odor. (Similar to 7.9 to 8.3 ft layer)	9.2
					SC		9.3
					CH		9.8
10						CLAY: gray with some (25%) shell fragments 1-3 cm. Latex substance, circular diameter ~3cm. Creosote odor.	
11						CLAYEY SAND: gray, fine sand. Creosote odor.	
						CLAY: gray, remainder of latex substance in layer. Creosote odor.	
12						End of Boring at 9.8 ft.	
13							
14							
15							

NOTES:

CT=Core Tube
GB=Grab Sample

SEDIMENT LOG MAUMEE CORE LOGS.GPJ 9/13/13

SEDIMENT BORING LMR13-31

EA Engineering, Science, and Technology, Inc.

PROJECT NAME Maumee River
DATE/TIME COLLECTED 6/14/2013 8:48:00 AM
DATE/TIME LOGGED 6/15/2013 2:40:00 PM
DRILLING CONTRACTOR Mudpuppy
DRILLING METHOD Vibracore
LOGGED BY M. Gelinas **WATER DEPTH (ft)** 3.7

PROJECT NUMBER 62561.10
LOCATION Toledo, OH
LATITUDE 41° 40.3276
LONGITUDE -83° 29.8548
ELEVATION (Sediment Surface) 568 ft IGLD85
CORE RECOVERY (ft) 2.3

DEPTH (ft)	SAMPLE INTERVAL (inches)	SAMPLE TYPE	SAMPLE SUBMITTED FOR ANALYSIS (Sample ID at sample depth)	GRAPHIC LOG	USCS CLASS	MATERIAL DESCRIPTION	Depth (ft)
0	12	CT	LMR13-31-012		SM	SANDY SILT: gray, moisture ~20%.	0.4
					SM	SANDY SILT WITH CLAY: gray, with trace (10-15%) shell fragments	1.0
1	12	CT	LMR13-31-024		ML-CL	SILTY CLAY: gray in color.	1.8
					SM	SILTY SAND: 85% fine to medium sand with 50% shell fragments 1-10 mm.	2.1
2					CH	CLAY: stiff with whole mollusks 3-4 cm across.	2.3
3						End of Boring at 2.3 ft.	
4							
5							
6							
7							
8							
9							
10							
11							
12							
13							
14							
15							

NOTES:

CT=Core Tube
GB=Grab Sample

SEDIMENT LOG MAUMEE CORE LOGS.GPJ 9/13/13

SEDIMENT BORING LMR13-32

EA Engineering, Science, and Technology, Inc.

PROJECT NUMBER 62561.10
PROJECT NAME Maumee River
LOCATION Toledo, OH
DATE/TIME COLLECTED 6/14/2013 9:38:00 AM
LATITUDE 41° 40.4045
DATE/TIME LOGGED 6/15/2013 1:50:00 PM
LONGITUDE -83° 29.7289
DRILLING CONTRACTOR Mudpuppy
ELEVATION (Sediment Surface) 566.9 ft IGLD85
DRILLING METHOD Vibracore
LOGGED BY M. Gelinas **WATER DEPTH (ft)** 5 **CORE RECOVERY (ft)** 6.4

DEPTH (ft)	SAMPLE INTERVAL (inches)	SAMPLE TYPE	SAMPLE SUBMITTED FOR ANALYSIS (Sample ID at sample depth)	GRAPHIC LOG	USCS CLASS	MATERIAL DESCRIPTION	Depth (ft)
0	12	CT	LMR13-32-012		SC	SANDY CLAY: 40% sand.	0.8
1					OL / CH	ORGANICS: 85% woody debris 0.5-1 cm pieces in fine silt matrix.	0.8
	12	CT	LMR13-32-024		SC	CLAY: gray with some (20%) sand and trace (10%) shell fragments. @16-17": large shells, some whole 2-5 cm.	1.4
2					ML	SANDY CLAY: gray, interspersed with clay layers and trace (10~) shell fragments and woody debris 5-10 mm.	2.3
	24	CT	LMR13-32-048		CL-SC	SHELLY SILT: gray, shell fragments and wood debris up to 2 cm in size.	2.6
3						SANDY CLAY: gray with trace (10%) shell fragments 1-3 mm.	
4							4.8
5	29	CT	LMR13-32-072		ML-CL	SILTY CLAY: gray with dense (50%) brown wood pieces up to 2 cm and shell fragments 1-3 mm.	5.8
6					SC	SANDY CLAY: gray with 30% sand and trace (15%) shell fragments 1-3 mm.	6.4
7						End of Boring at 6.4 ft.	
8							
9							
10							
11							
12							
13							
14							
15							

NOTES:

CT=Core Tube
GB=Grab Sample

EA Engineering, Science, and Technology, Inc.

SEDIMENT BORING LMR13-33

PROJECT NUMBER 62561.10
PROJECT NAME Maumee River
LOCATION Toledo, OH
DATE/TIME COLLECTED 6/18/2013 11:15:00 AM
LATITUDE 41° 40.4027
DATE/TIME LOGGED 6/19/2013 9:00:00 AM
LONGITUDE -83° 29.574
DRILLING CONTRACTOR Mudpuppy
ELEVATION (Sediment Surface) 553.6 ft IGLD85
DRILLING METHOD Vibracore
LOGGED BY M. Gelinas **WATER DEPTH (ft)** 17.9 **CORE RECOVERY (ft)** 8

DEPTH (ft)	SAMPLE INTERVAL (inches)	SAMPLE TYPE	SAMPLE SUBMITTED FOR ANALYSIS (Sample ID at sample depth)	GRAPHIC LOG	USCS CLASS	MATERIAL DESCRIPTION	Depth (ft)
0	12	CT	LMR13-33-012		ML-CL	SILTY CLAY: dark gray with visible sheen on sediment, moisture ~40%. Diesel odor. @32-34": dense (40%) cresote pieces 1-2 cm	
1	12	CT	LMR13-33-024				
2	24	CT	LMR13-33-048				
3							
4	24	CT	LMR13-33-072				
5							
6	24	CT	LMR13-33-096				6.6
7					SC	CLAYEY SAND: 50-60% fine to medium sand with trace to some (15-20%) shell fragments 1-3 mm.	8.0
8						End of Boring at 8 ft.	
9							
10							
11							
12							
13							
14							
15							

NOTES:

CT=Core Tube
GB=Grab Sample

SEDIMENT LOG MAUMEE CORE LOGS.GPJ 9/13/13

SEDIMENT BORING LMR13-34

EA Engineering, Science, and Technology, Inc.

PROJECT NAME Maumee River
DATE/TIME COLLECTED 6/14/2013 10:23:00 AM
DATE/TIME LOGGED 6/15/2013 11:30:00 AM
DRILLING CONTRACTOR Mudpuppy
DRILLING METHOD Vibracore
LOGGED BY M. Gelinas **WATER DEPTH (ft)** 5.1

PROJECT NUMBER 62561.10
LOCATION Toledo, OH
LATITUDE 41° 40.4981
LONGITUDE -83° 29.6532
ELEVATION (Sediment Surface) 566.7 ft IGLD85
CORE RECOVERY (ft) 15

DEPTH (ft)	SAMPLE INTERVAL (inches)	SAMPLE TYPE	SAMPLE SUBMITTED FOR ANALYSIS (Sample ID at sample depth)	GRAPHIC LOG	USCS CLASS	MATERIAL DESCRIPTION	Depth (ft)
0					ML	SILT: gray in color, moisture ~35%.	0.4
1	12	CT	LMR13-34-012		OL-ML	CLAYEY SILT: gray in color with trace (10%) organic material up to 7 cm long	0.8
2	12	CT	LMR13-34-024				
3	24	CT	LMR13-34-048				
4							
5	24	CT	LMR13-34-072				
6							
7	24	CT	LMR13-34-096				
8					ML-CL	SILTY CLAY: gray, moisture content decreases with depth, trace (5-10%) organic debris.	
9	24	CT	LMR13-34-120				
10							
11	24	CT	LMR13-34-144				
12							
13	24	CT	LMR13-34-168				
14							
15	12	CT	LMR13-34-192				15.0

End of Boring at 15 ft.

NOTES:

CT=Core Tube
GB=Grab Sample

SEDIMENT LOG MAUMEE CORE LOGS.GPJ 9/13/13

SEDIMENT BORING LMR13-35

EA Engineering, Science, and Technology, Inc.

PROJECT NAME Maumee River
DATE/TIME COLLECTED 6/14/2013 1:10:00 PM
DATE/TIME LOGGED 6/15/2013 4:30:00 PM
DRILLING CONTRACTOR Mudpuppy
DRILLING METHOD Vibracore
LOGGED BY M. Gelinas **WATER DEPTH (ft)** 2.7

PROJECT NUMBER 62561.10
LOCATION Toledo, OH
LATITUDE 41° 40.6453
LONGITUDE -83° 29.5128
ELEVATION (Sediment Surface) 569.3 ft IGLD85
CORE RECOVERY (ft) 7.5

DEPTH (ft)	SAMPLE INTERVAL (inches)	SAMPLE TYPE	SAMPLE SUBMITTED FOR ANALYSIS (Sample ID at sample depth)	GRAPHIC LOG	USCS CLASS	MATERIAL DESCRIPTION	Depth (ft)
0	12	CT	LMR13-35-012		ML-CL	SILTY CLAY: gray, 15-20% moisture with some (20%) fine sand.	
1	12	CT	LMR13-35-024				
2					SM	SILTY SAND: fine sand with trace (10%) silt.	1.9 2.1
3	24	CT	LMR13-35-048		ML-CL	SILTY CLAY: gray with some (20%) fine sand.	
4					CL	CLAY: gray with thin layer of shell fragments <1mm @ 42-43".	3.2 4.2
5	24	CT	LMR13-35-072		SC	CLAYEY SAND: fine grained sand with 35% clay and trace (10-15%) shell fragments 0.5-3 cm. @59-60": dark black woody debris.	4.9
6	18	CT	LMR13-35-096		SC	SANDY CLAY: 50/50% fine sand/clay with trace (15%) shell fragments. @85" single pebble. @81-82" dense woody debris 2 cm long.	7.5
7							
8						End of Boring at 7.5 ft.	
9							
10							
11							
12							
13							
14							
15							

NOTES:

CT=Core Tube
GB=Grab Sample

SEDIMENT BORING LMR13-38

EA Engineering, Science, and Technology, Inc.

PROJECT NAME Maumee River
DATE/TIME COLLECTED 6/14/2013 4:08:00 PM
DATE/TIME LOGGED 6/16/2013 11:00:00 AM
DRILLING CONTRACTOR Mudpuppy
DRILLING METHOD Vibracore
LOGGED BY M. Gelinas **WATER DEPTH (ft)** 4.2

PROJECT NUMBER 62561.10
LOCATION Toledo, OH
LATITUDE 41° 40.9218
LONGITUDE -83° 29.1848
ELEVATION (Sediment Surface) 567.5 ft IGLD85
CORE RECOVERY (ft) 7.8

DEPTH (ft)	SAMPLE INTERVAL (inches)	SAMPLE TYPE	SAMPLE SUBMITTED FOR ANALYSIS (Sample ID at sample depth)	GRAPHIC LOG	USCS CLASS	MATERIAL DESCRIPTION	Depth (ft)
0	12	CT	LMR13-38-012		ML	SILT: brown/gray silt, water visible in core.	0.5
1					SM	SILTY SAND: 50/50 sand and silt/clay with trace (15-20%) organic debris up to 2 cm long; water visible in core.	1.0
2	12	CT	LMR13-38-024		ML-CL	SILTY CLAY: gray in color, 30% sand. @68-70" and @ 83-85" some (20%) shell fragments up to 3 cm long.	
3	24	CT	LMR13-38-048				
4							3.9
5	24	CT	LMR13-38-072		SC	SANDY CLAY: fine, some large shell fragments, up to 3 cm long, at 68 - 70 in. and 83-85 in.	
6							
7	21	CT	LMR13-38-096				
8							7.8
9						End of Boring at 7.8 ft.	
10							
11							
12							
13							
14							
15							

NOTES:

CT=Core Tube
GB=Grab Sample

SEDIMENT LOG MAUMEE CORE LOGS.GPJ 9/13/13

SEDIMENT BORING LMR13-39

EA Engineering, Science, and Technology, Inc.

PROJECT NAME Maumee River
DATE/TIME COLLECTED 6/18/2013 4:25:00 PM
DATE/TIME LOGGED 6/19/2013 2:00:00 PM
DRILLING CONTRACTOR Mudpuppy
DRILLING METHOD Vibracore
LOGGED BY M. Gelinas **WATER DEPTH (ft)** 5.9

PROJECT NUMBER 62561.10
LOCATION Toledo, OH
LATITUDE 41° 40.9158
LONGITUDE -83° 29.0981
ELEVATION (Sediment Surface) 567.1 ft IGLD85
CORE RECOVERY (ft) 5.8

DEPTH (ft)	SAMPLE INTERVAL (inches)	SAMPLE TYPE	SAMPLE SUBMITTED FOR ANALYSIS (Sample ID at sample depth)	GRAPHIC LOG	USCS CLASS	MATERIAL DESCRIPTION	Depth (ft)
0					ML	CLAYEY SILT: brown/gray with 40% moisture.	0.3
	12	CT	LMR13-39-012		SC	CLAYEY SAND: 50% fine sand with trace (10%) shell fragments 1-2 mm.	0.8
1					CL		0.9
					SC	CLAY: gray in color.	1.3
	12	CT	LMR13-39-024			CLAYEY SAND: 50% fine sand with trace (10%) shell fragments 1-2 mm. (similar to 0.75-0.9 ft layer)	
2					CH	CLAY: gray in color with some (20%) organic debris 1-2 cm. @40" dense organic debris, soft debris 1 cm max size. @44-45" wooden piece 5 cm diameter.	
3	24	CT	LMR13-39-048				3.8
4					SC	SANDY CLAY: 40% fine sand with trace (10-15%) shell and wood debris 1-2 cm.	
5	21	CT	LMR13-39-072				5.8
6						End of Boring at 5.8 ft.	
7							
8							
9							
10							
11							
12							
13							
14							
15							

NOTES:

CT=Core Tube
GB=Grab Sample

SEDIMENT LOG MAUMEE CORE LOGS.GPJ 9/13/13

SEDIMENT BORING LMR13-40

EA Engineering, Science, and Technology, Inc.

PROJECT NAME Maumee River
DATE/TIME COLLECTED 6/14/2013 3:16:00 PM
DATE/TIME LOGGED 6/16/2013 12:25:00 PM
DRILLING CONTRACTOR Mudpuppy
DRILLING METHOD Vibracore
LOGGED BY M. Gelinas **WATER DEPTH (ft)** 6.8

PROJECT NUMBER 62561.10
LOCATION Toledo, OH
LATITUDE 41° 41.0166
LONGITUDE -83° 28.6904
ELEVATION (Sediment Surface) 565 ft IGLD85
CORE RECOVERY (ft) 7.1

DEPTH (ft)	SAMPLE INTERVAL (inches)	SAMPLE TYPE	SAMPLE SUBMITTED FOR ANALYSIS (Sample ID at sample depth)	GRAPHIC LOG	USCS CLASS	MATERIAL DESCRIPTION	Depth (ft)
0	12	CT	LMR13-40-012		ML	SILT: brown/gray, soupy, water visible in core.	0.4
					CL-ML	CLAYEY SILT: gray in color with ~60% moisture and some (20%) shell fragments 2-5 mm.	0.8
1	12	CT	LMR13-40-024				
2							
3	24	CT	LMR13-40-048				
4					CL-ML	SILTY CLAY: gray in color with ~40% moisture and trace (10-15%) shell fragments and organic debris 1-7 mm. @70-80" diesel odor	
5	24	CT	LMR13-40-072				
6							
7	13	CT	LMR13-40-096				7.1
8						End of Boring at 7.1 ft.	
9							
10							
11							
12							
13							
14							
15							

NOTES:

CT=Core Tube
GB=Grab Sample

SEDIMENT BORING LMR13-48

EA Engineering, Science, and Technology, Inc.

PROJECT NAME Maumee River
DATE/TIME COLLECTED 6/17/2013 8:53:00 AM
DATE/TIME LOGGED 6/17/2013 11:10:00 AM
DRILLING CONTRACTOR Mudpuppy
DRILLING METHOD Vibracore
LOGGED BY M. Gelinas **WATER DEPTH (ft)** 6.8

PROJECT NUMBER 62561.10
LOCATION Toledo, OH
LATITUDE 41° 41.6611
LONGITUDE -83° 28.1437
ELEVATION (Sediment Surface) 565 ft IGLD85
CORE RECOVERY (ft) 13.3

DEPTH (ft)	SAMPLE INTERVAL (inches)	SAMPLE TYPE	SAMPLE SUBMITTED FOR ANALYSIS (Sample ID at sample depth)	GRAPHIC LOG	USCS CLASS	MATERIAL DESCRIPTION	Depth (ft)
0	12	CT	LMR13-48-012		ML	SILT: brown/gray, soupy, water visible in core. Faint diesel odor.	0.3
1	12	CT	LMR13-48-024				
2	24	CT	LMR13-48-048		ML-CL	SILTY CLAY: gray with trace (15%) shell framents 2-10 mm. @ 32-33" stiff clay lens. @48" shell fragments much denser, ~75% of layer.	
3							
4							
5	24	CT	LMR13-48-072				
6							
7	24	CT	LMR13-48-096		SM	SILTY SAND: fine to medium sand, black in color with oil/diesel odor.	7.0 7.1
8							
9	24	CT	LMR13-48-120		ML-CL	SILTY CLAY: gray with trace (15%) shell framents 2-10 mm. @ 32-33" stiff clay lens. @48" shell fragments much denser, ~75% of layer.	10.0
10							
11	24	CT	LMR13-48-144		CL	CLAY: gray with trace (10-15%) fine to medium sand and trace (15%) shell fragments 1-4 mm.	
12	16	CT	LMR13-48-168				13.3
13							
14						End of Boring at 13.3 ft.	
15							

NOTES:

CT=Core Tube
GB=Grab Sample

SEDIMENT LOG MAUMEE CORE LOGS.GPJ 9/13/13

SEDIMENT BORING LMR13-52

EA Engineering, Science, and Technology, Inc.

PROJECT NAME Maumee River
DATE/TIME COLLECTED 6/20/2013 7:55:00 AM
DATE/TIME LOGGED 6/20/2013 5:20:00 PM
DRILLING CONTRACTOR Mudpuppy
DRILLING METHOD Vibracore
LOGGED BY M. Gelinas **WATER DEPTH (ft)** 28.2

PROJECT NUMBER 62561.10
LOCATION Toledo, OH
LATITUDE 41° 39.9495
LONGITUDE -83° 30.0711
ELEVATION (Sediment Surface) 543.5 ft IGLD85
CORE RECOVERY (ft) 4.5

DEPTH (ft)	SAMPLE INTERVAL (inches)	SAMPLE TYPE	SAMPLE SUBMITTED FOR ANALYSIS (Sample ID at sample depth)	GRAPHIC LOG	USCS CLASS	MATERIAL DESCRIPTION	Depth (ft)
0	12	CT	LMR13-52-012		ML	SILT: brown/gray, soupy, water visible, moisture ~40%.	0.2
1	12	CT	LMR13-52-024		ML-CL	SILTY CLAY: gray in color, moisture ~35% with some (20%) fine sand. Slight diesel odor.	
2	30	CT	LMR13-52-048		ML-CL	SILTY CLAY: gray, moisture ~30% with some (20%) sand.	2.0
3					SC	CLAYEY SAND: 50% fine sand with trace (10-15%) shell fragments 1-2 cm.	2.4
					CL	CLAY: gray with trace (10%) fine sand.	3.0
4					SC	CLAYEY SAND: fine to medium shelly sand with 35% shell fragments 1-40 mm; water visible in core, moisture ~50%.	3.8
					CL	CLAY: gray with some (20%) fine sand and trace (10-15%) shell fragments 1-2 cm.	4.3
5							4.5
6						End of Boring at 4.5 ft.	
7							
8							
9							
10							
11							
12							
13							
14							
15							

NOTES:

CT=Core Tube
GB=Grab Sample

SEDIMENT BORING LMR13-53

EA Engineering, Science, and Technology, Inc.

PROJECT NUMBER 62561.10
PROJECT NAME Maumee River
LOCATION Toledo, OH
DATE/TIME COLLECTED 6/20/2013 8:25:00 AM
LATITUDE 41° 40.0431
DATE/TIME LOGGED 6/20/2013 5:50:00 PM
LONGITUDE -83° 29.9232
DRILLING CONTRACTOR Mudpuppy
ELEVATION (Sediment Surface) 549 ft IGLD85
DRILLING METHOD Vibracore
LOGGED BY M. Gelinas **WATER DEPTH (ft)** 22.8 **CORE RECOVERY (ft)** 1.9

DEPTH (ft)	SAMPLE INTERVAL (inches)	SAMPLE TYPE	SAMPLE SUBMITTED FOR ANALYSIS (Sample ID at sample depth)	GRAPHIC LOG	USCS CLASS	MATERIAL DESCRIPTION	Depth (ft)
0	12	CT	LMR13-53-012		CL-ML	SILTY CLAY: gray with trace (10%) organid debris 1-2 cm.	0.8
1	11	CT	LMR13-53-024		SC	SANDY SILTY CLAY: silty clay with 40% medium sand and 25% gravel and organic debris.	1.9
2						End of Boring at 1.9 ft.	
3							
4							
5							
6							
7							
8							
9							
10							
11							
12							
13							
14							
15							

NOTES:

CT=Core Tube
GB=Grab Sample

SEDIMENT BORING LMR13-54

EA Engineering, Science, and Technology, Inc.

PROJECT NUMBER 62561.10
PROJECT NAME Maumee River
LOCATION Toledo, OH
DATE/TIME COLLECTED 6/18/2013 2:38:00 PM
LATITUDE 41° 40.5668
DATE/TIME LOGGED 6/19/2013 10:00:00 AM
LONGITUDE -83° 29.2373
DRILLING CONTRACTOR Mudpuppy
ELEVATION (Sediment Surface) 564.5 ft IGLD85
DRILLING METHOD Vibracore
LOGGED BY M. Gelinas
WATER DEPTH (ft) 7.6
CORE RECOVERY (ft) 8.8

DEPTH (ft)	SAMPLE INTERVAL (inches)	SAMPLE TYPE	SAMPLE SUBMITTED FOR ANALYSIS (Sample ID at sample depth)	GRAPHIC LOG	USCS CLASS	MATERIAL DESCRIPTION	Depth (ft)
0					ML	SILT: brown/gray, water visible in core, moisture ~40%.	0.2
1	12	CT	LMR13-54-012		ML-CL	SILTY CLAY: gray in color. @12-13" creosote-soaked wood pieces 1-2 cm in size.	1.3
2	12	CT	LMR13-54-024		ML-CL	SILTY CLAY: gray with black and brown sheen, fuel/diesel odor throughout.	
3	24	CT	LMR13-54-048				
4					SM	SANDY SILT: 30% sand, diesel odor.	3.4 3.5
5	24	CT	LMR13-54-072		ML-CL	SILTY CLAY: gray with black and brown sheen, fuel/diesel odor throughout.	5.8
6					SC	SANDY CLAY: 30% fine sand, sticky with hydrocarbon residue/NAPL. Strong diesel odor.	6.1
7	24	CT	LMR13-54-096		ML-CL	SILTY CLAY: gray with black, light gray/brown dry mudballs within layer ~1-4 cm diameter and trace (10-15%) woody debris 1-3 cm across.	
8	9	CT	LMR13-54-120				8.8
9						End of Boring at 8.8 ft.	
10							
11							
12							
13							
14							
15							

NOTES:

CT=Core Tube
GB=Grab Sample

SEDIMENT LOG MAUMEE CORE LOGS.GPJ 9/13/13

SEDIMENT BORING LMR13-55

EA Engineering, Science, and Technology, Inc.

PROJECT NUMBER 62561.10
PROJECT NAME Maumee River
LOCATION Toledo, OH
DATE/TIME COLLECTED 6/28/2013 2:10:00 PM
LATITUDE 41° 40.6175
DATE/TIME LOGGED 6/19/2013 11:00:00 AM
LONGITUDE -83° 29.1872
DRILLING CONTRACTOR Mudpuppy
ELEVATION (Sediment Surface) 564.3 ft IGLD85
DRILLING METHOD Vibracore
LOGGED BY M. Gelinas **WATER DEPTH (ft)** 7.8 **CORE RECOVERY (ft)** 5.5

DEPTH (ft)	SAMPLE INTERVAL (inches)	SAMPLE TYPE	SAMPLE SUBMITTED FOR ANALYSIS (Sample ID at sample depth)	GRAPHIC LOG	USCS CLASS	MATERIAL DESCRIPTION	Depth (ft)
0	12	CT	LMR13-55-012		CL-ML	CLAYEY SILT: brown/light gray moisture ~35% with some (20%) gravel.	0.3
1	12	CT	LMR13-55-024		CL-ML	SILTY CLAY: gray/dark gray, moisture 25%, with some (25%) gravel, some (25%) organic debris up to 3 cm long, and trace (10%) subrounded cobbles 4x3 cm in size	
2							2.8
3	24	CT	LMR13-55-048		CL-ML	GRAVELLY SILTY CLAY: gray/dark gray, moisture 25% with concentrated (50%) gravel and organic debris up to 3 cm long.	3.4
					SC		3.6
4					SC	CLAYEY SAND: 45% medium sand with trace (10-15%) shell fragments 1-3 mm.	3.8
						SANDY CLAY: ~30% fine sand.	
5	18	CT	LMR13-55-072		CL-ML	SILTY CLAY: gray and black with strong creosote odor with trace (15%) woody creosote-soaked pieces 1-2 cm in size. Sediment sticky with hydrocarbon/NAPL residue.	5.5
6						End of Boring at 5.5 ft.	
7							
8							
9							
10							
11							
12							
13							
14							
15							

NOTES:

CT=Core Tube
GB=Grab Sample

SEDIMENT LOG MAUMEE CORE LOGS.GPJ 9/13/13

EA Engineering, Science, and Technology, Inc.

SEDIMENT BORING LMR13-56

PROJECT NUMBER 62561.10
PROJECT NAME Maumee River
LOCATION Toledo, OH
DATE/TIME COLLECTED 6/20/2013 10:40:00 AM
LATITUDE 41° 40.6876
DATE/TIME LOGGED 6/20/2013 5:45:00 PM
LONGITUDE -83° 29.1416
DRILLING CONTRACTOR Mudpuppy
ELEVATION (Sediment Surface) 540.8 ft IGLD85
DRILLING METHOD Vibracore
LOGGED BY M. Gelinas **WATER DEPTH (ft)** 31.1 **CORE RECOVERY (ft)** 0.8

DEPTH (ft)	SAMPLE INTERVAL (inches)	SAMPLE TYPE	SAMPLE SUBMITTED FOR ANALYSIS (Sample ID at sample depth)	GRAPHIC LOG	USCS CLASS	MATERIAL DESCRIPTION	Depth (ft)
0	9	CT	LMR13-56-012		CH	CLAY: gray, stiff with 30% pebbles and gravel.	0.8
1						End of Boring at 0.8 ft.	
2							
3							
4							
5							
6							
7							
8							
9							
10							
11							
12							
13							
14							
15							

NOTES:

CT=Core Tube
GB=Grab Sample

SEDIMENT BORING LMR13-58

EA Engineering, Science, and Technology, Inc.

PROJECT NUMBER 62561.10
PROJECT NAME Maumee River
LOCATION Toledo, OH
DATE/TIME COLLECTED 6/19/2013 4:15:00 PM
LATITUDE 41° 41.2306
DATE/TIME LOGGED 6/20/2013 11:30:00 AM
LONGITUDE -83° 28.4157
DRILLING CONTRACTOR Mudpuppy
ELEVATION (Sediment Surface) 541.2 ft IGLD85
DRILLING METHOD Vibracore
LOGGED BY M. Gelinas **WATER DEPTH (ft)** 30.4 **CORE RECOVERY (ft)** 1.9

DEPTH (ft)	SAMPLE INTERVAL (inches)	SAMPLE TYPE	SAMPLE SUBMITTED FOR ANALYSIS (Sample ID at sample depth)	GRAPHIC LOG	USCS CLASS	MATERIAL DESCRIPTION	Depth (ft)
0	12	CT	LMR13-58-012		ML	SILT: brown/gray, water visible in core, moisture ~50% with some (25%) gravel.	0.3
1					ML-CL	SILTY CLAY: gray with 30% organic debris 1-3 cm in size.	1.1
	11	CT	LMR13-58-024		CL	CLAY: gray with 30% organic debris 1-3 cm in size. Slight grease odor.	1.9
2						End of Boring at 1.9 ft.	
3							
4							
5							
6							
7							
8							
9							
10							
11							
12							
13							
14							
15							

NOTES:

CT=Core Tube
GB=Grab Sample

SEDIMENT BORING LMR13-59

EA Engineering, Science, and Technology, Inc.

PROJECT NUMBER 62561.10
PROJECT NAME Maumee River
LOCATION Toledo, OH
DATE/TIME COLLECTED 6/19/2013 3:45:00 PM
LATITUDE 41° 41.3361
DATE/TIME LOGGED 6/20/2013 2:10:00 PM
LONGITUDE -83° 28.339
DRILLING CONTRACTOR Mudpuppy
ELEVATION (Sediment Surface) 543.1 ft IGLD85
DRILLING METHOD Vibracore
LOGGED BY M. Gelinas
WATER DEPTH (ft) 28.5
CORE RECOVERY (ft) 4.4

DEPTH (ft)	SAMPLE INTERVAL (inches)	SAMPLE TYPE	SAMPLE SUBMITTED FOR ANALYSIS (Sample ID at sample depth)	GRAPHIC LOG	USCS CLASS	MATERIAL DESCRIPTION	Depth (ft)
0	12	CT	LMR13-59-012		ML	SILT: gray/brown, water visible in core moisture ~50%.	0.3
1					CL-ML	CLAYEY SILT: brown/gray with trace (15%) organic debris 5-10 mm.	1.3
2	12	CT	LMR13-59-024		ML-CL	SILTY CLAY: gray in color, moisture 30%, with fine to medium grained sand and trace (10%) shell fragments 1 mm in size.	3.5
3	29	CT	LMR13-59-048		ML-CL	SILTY CLAY: gravelly, silty clay with pebbles up to 2 cm x 2 cm, coarse sand, shell and wood debris.	4.4
4							
5						End of Boring at 4.4 ft.	
6							
7							
8							
9							
10							
11							
12							
13							
14							
15							

NOTES:

CT=Core Tube
GB=Grab Sample

SEDIMENT LOG MAUMEE CORE LOGS.GPJ 9/13/13

SEDIMENT BORING LMR13-60

EA Engineering, Science, and Technology, Inc.

PROJECT NUMBER 62561.10
PROJECT NAME Maumee River
LOCATION Toledo, OH
DATE/TIME COLLECTED 6/19/2013 2:00:00 PM
LATITUDE 41° 41.4452
DATE/TIME LOGGED 6/20/2013 1:30:00 PM
LONGITUDE -83° 28.1085
DRILLING CONTRACTOR Mudpuppy
ELEVATION (Sediment Surface) 554.6 ft IGLD85
DRILLING METHOD Vibracore
LOGGED BY M. Gelinas **WATER DEPTH (ft)** 17 **CORE RECOVERY (ft)** 8.3

DEPTH (ft)	SAMPLE INTERVAL (inches)	SAMPLE TYPE	SAMPLE SUBMITTED FOR ANALYSIS (Sample ID at sample depth)	GRAPHIC LOG	USCS CLASS	MATERIAL DESCRIPTION	Depth (ft)
0	12	CT	LMR13-60-012		ML-CL	SILTY CLAY: brown/gray silt, moisture 50% with some (20%) organic debris (leaves) up to 3 cm in size. Moisture decreases with depth of core.	
1	12	CT	LMR13-60-024				
2	24	CT	LMR13-60-048				
3							
4	24	CT	LMR13-60-072				
5							
6	28	CT	LMR13-60-096				8.3
7						End of Boring at 8.3 ft.	
8							
9							
10							
11							
12							
13							
14							
15							

NOTES:

CT=Core Tube
GB=Grab Sample

EA Engineering, Science, and Technology, Inc.

SEDIMENT BORING LMR13-61

PROJECT NUMBER 62561.10

PROJECT NAME Maumee River
LOCATION Toledo, OH
DATE/TIME COLLECTED 6/19/2013 1:30:00 PM
LATITUDE 41° 41.5501
DATE/TIME LOGGED 6/20/2013 10:20:00 AM
LONGITUDE -83° 28.0290
DRILLING CONTRACTOR Mudpuppy
ELEVATION (Sediment Surface) 554.7 ft IGLD85
DRILLING METHOD Vibracore
LOGGED BY M. Gelinas **WATER DEPTH (ft)** 16.8 **CORE RECOVERY (ft)** 9.5

DEPTH (ft)	SAMPLE INTERVAL (inches)	SAMPLE TYPE	SAMPLE SUBMITTED FOR ANALYSIS (Sample ID at sample depth)	GRAPHIC LOG	USCS CLASS	MATERIAL DESCRIPTION	Depth (ft)
0	12	CT	LMR13-61-012		ML	SILT: brown/gray, water visible in core, moisture ~60%.	0.3
1	12	CT	LMR13-61-024				
2	24	CT	LMR13-61-048		ML-CL	SILTY CLAY: gray, with 35% organic debris 1-5 mm and trace (15%) gravel.	
4	24	CT	LMR13-61-072				6.0
6	24	CT	LMR13-61-096		ML	SILTY CLAY: gray with trace (15%) gravel -- similar to 0.3-6 ft layer but no organic debris. Moisture ~30%. @94": fine grained sand les with trace (10%) fine shell debris <1 mm.	
8	18	CT	LMR13-61-120				9.5
10						End of Boring at 9.5 ft.	
15							

NOTES:

CT=Core Tube
GB=Grab Sample

SEDIMENT LOG MAUMEE CORE LOGS.GPJ 9/13/13

SEDIMENT BORING LMR13-64

EA Engineering, Science, and Technology, Inc.

PROJECT NAME Maumee River
DATE/TIME COLLECTED 6/19/2013 11:00:00 AM
DATE/TIME LOGGED 6/19/2013 5:00:00 PM
DRILLING CONTRACTOR Mudpuppy
DRILLING METHOD Vibracore
LOGGED BY M. Gelinas **WATER DEPTH (ft)** 15.2

PROJECT NUMBER 62561.10
LOCATION Toledo, OH
LATITUDE 41° 41.7575
LONGITUDE -83° 27.7845
ELEVATION (Sediment Surface) 557 ft IGLD85
CORE RECOVERY (ft) 9.8

DEPTH (ft)	SAMPLE INTERVAL (inches)	SAMPLE TYPE	SAMPLE SUBMITTED FOR ANALYSIS (Sample ID at sample depth)	GRAPHIC LOG	USCS CLASS	MATERIAL DESCRIPTION	Depth (ft)
0					ML	SILT: gray/brown, 50% moisture, water visible in core.	0.3
1	12	CT	LMR13-64-012				
2	12	CT	LMR13-64-024				
3	24	CT	LMR13-64-048				
4							
5	24	CT	LMR13-64-072		ML-CL	SILTY CLAY: gray with some (15-20%) organic debris 1-20 mm in size.	
6							
7	24	CT	LMR13-64-096				
8							
9	22	CT	LMR13-64-120				9.8
10						End of Boring at 9.8 ft.	
11							
12							
13							
14							
15							

NOTES:

CT=Core Tube
GB=Grab Sample

EA Engineering, Science, and Technology, Inc.

SEDIMENT BORING LMR13-65

PROJECT NUMBER 62561.10

PROJECT NAME Maumee River
LOCATION Toledo, OH
DATE/TIME COLLECTED 6/19/2013 10:30:00 AM
LATITUDE 41° 41.8643
DATE/TIME LOGGED 6/20/2013 9:20:00 AM
LONGITUDE -83° 27.5465
DRILLING CONTRACTOR Mudpuppy
ELEVATION (Sediment Surface) 542.8 ft IGLD85
DRILLING METHOD Vibracore
LOGGED BY M. Gelinas **WATER DEPTH (ft)** 29.3 **CORE RECOVERY (ft)** 6

DEPTH (ft)	SAMPLE INTERVAL (inches)	SAMPLE TYPE	SAMPLE SUBMITTED FOR ANALYSIS (Sample ID at sample depth)	GRAPHIC LOG	USCS CLASS	MATERIAL DESCRIPTION	Depth (ft)
0	12	CT	LMR13-65-012		ML-CL	SILTY CLAY: gray in color, moisture ~30-40% with some (20-30%) organic debris 1-3 cm in size.	
1	12	CT	LMR13-65-024				
2	24	CT	LMR13-65-048				
3							
4	24	CT	LMR13-65-072				
5							
6							6.0
6						End of Boring at 6 ft.	
7							
8							
9							
10							
11							
12							
13							
14							
15							

NOTES:

CT=Core Tube
GB=Grab Sample

SEDIMENT LOG MAUMEE CORE LOGS.GPJ 9/13/13

SEDIMENT BORING LMR13-66

EA Engineering, Science, and Technology, Inc.

PROJECT NUMBER 62561.10

PROJECT NAME Maumee River
LOCATION Toledo, OH
DATE/TIME COLLECTED 6/19/2013 9:45:00 AM
LATITUDE 41° 41.968
DATE/TIME LOGGED 6/20/2013 11:15:00 AM
LONGITUDE -83° 27.3127
DRILLING CONTRACTOR Mudpuppy
ELEVATION (Sediment Surface) 567.3 ft IGLD85
DRILLING METHOD Vibracore
LOGGED BY M. Gelinas **WATER DEPTH (ft)** 5 **CORE RECOVERY (ft)** 3

DEPTH (ft)	SAMPLE INTERVAL (inches)	SAMPLE TYPE	SAMPLE SUBMITTED FOR ANALYSIS (Sample ID at sample depth)	GRAPHIC LOG	USCS CLASS	MATERIAL DESCRIPTION	Depth (ft)
0	12	CT	LMR13-66-012		ML	SHELLY SILT: gray/brown, moisture ~50% with 65% shell debris 1-2 cm in size.	0.3
					ML-CL		0.5
					SP	SILTY CLAY: gray with moisture ~50%.	0.6
1					CL	SAND: fine sand dark gray in color.	1.0
	12	CT	LMR13-66-024		CL	CLAY: gray and black interbedded, moisture 40%.	1.5
					CL	CLAY: gray in color with some (25%) fine sand	1.9
2					SC	CLAY: gray in color.	2.0
	12	CT	LMR13-66-048		CH	SANDY CLAY: sand dark gray/black in color, moisture 30-40%.	
3						CLAY: farved, layered clay with red, gray, green/gray layers and rip-ups visible.	3.0
4						End of Boring at 3 ft.	
5							
6							
7							
8							
9							
10							
11							
12							
13							
14							
15							

NOTES:

CT=Core Tube
GB=Grab Sample

SEDIMENT LOG MAUMEE CORE LOGS.GPJ 9/13/13

SEDIMENT BORING LMR13-67

EA Engineering, Science, and Technology, Inc.

PROJECT NAME Maumee River
DATE/TIME COLLECTED 6/19/2013 9:20:00 AM
DATE/TIME LOGGED 6/19/2013 3:20:00 PM
DRILLING CONTRACTOR Mudpuppy
DRILLING METHOD Vibracore
LOGGED BY M. Gelinas **WATER DEPTH (ft)** 10.8

PROJECT NUMBER 62561.10
LOCATION Toledo, OH
LATITUDE 41° 42.0683
LONGITUDE -83° 27.0746
ELEVATION (Sediment Surface) 561.6 ft IGLD85
CORE RECOVERY (ft) 9.6

DEPTH (ft)	SAMPLE INTERVAL (inches)	SAMPLE TYPE	SAMPLE SUBMITTED FOR ANALYSIS (Sample ID at sample depth)	GRAPHIC LOG	USCS CLASS	MATERIAL DESCRIPTION	Depth (ft)
0	12	CT	LMR13-67-012		ML	SILT: brown/gray in color, water visible in core, moisture ~50%.	0.5
1	12	CT	LMR13-67-024				
2							
3	24	CT	LMR13-67-048				
4							
5	24	CT	LMR13-67-072		ML-CL	SILTY CLAY: gray/brown in color, moisture ~35% with some (20%) organic debris 1-15 mm in size.	
6							
7	24	CT	LMR13-67-096				
8							
9	19	CT	LMR13-67-120				9.6
10						End of Boring at 9.6 ft.	
11							
12							
13							
14							
15							

NOTES:

CT=Core Tube
GB=Grab Sample

EA Engineering, Science, and Technology, Inc.

SEDIMENT BORING LMR13-68

PROJECT NUMBER 62561.10

PROJECT NAME Maumee River
LOCATION Toledo, OH
DATE/TIME COLLECTED 6/19/2013 8:50:00 AM
LATITUDE 41° 42.0676
DATE/TIME LOGGED 6/20/2013 8:40:00 AM
LONGITUDE -83° 26.9202
DRILLING CONTRACTOR Mudpuppy
ELEVATION (Sediment Surface) 538.2 ft IGLD85
DRILLING METHOD Vibracore
LOGGED BY M. Gelinas **WATER DEPTH (ft)** 34.2 **CORE RECOVERY (ft)** 1

DEPTH (ft)	SAMPLE INTERVAL (inches)	SAMPLE TYPE	SAMPLE SUBMITTED FOR ANALYSIS (Sample ID at sample depth)	GRAPHIC LOG	USCS CLASS	MATERIAL DESCRIPTION	Depth (ft)
0	12	CT	LMR13-68-012		PT	ORGANIC: 65% organic material 1-2 cm in size with brown/gray silt, moisture ~50%.	0.1
					ML-CL	SILTY CLAY: gray in color with 35% shell pieces 1-3 cm in size. Faint diesel odor.	1.0
1						End of Boring at 1 ft.	
2							
3							
4							
5							
6							
7							
8							
9							
10							
11							
12							
13							
14							
15							

NOTES:

CT=Core Tube
GB=Grab Sample

SEDIMENT BORING LMR13-69

EA Engineering, Science, and Technology, Inc.

PROJECT NUMBER 62561.10
PROJECT NAME Maumee River
LOCATION Toledo, OH
DATE/TIME COLLECTED 6/19/2013 8:25:00 AM
LATITUDE 41° 42.1736
DATE/TIME LOGGED 6/20/2013 7:40:00 AM
LONGITUDE -83° 26.8332
DRILLING CONTRACTOR Mudpuppy
ELEVATION (Sediment Surface) 566.7 ft IGLD85
DRILLING METHOD Vibracore
LOGGED BY M. Gelinas **WATER DEPTH (ft)** 5.8 **CORE RECOVERY (ft)** 8.7

DEPTH (ft)	SAMPLE INTERVAL (inches)	SAMPLE TYPE	SAMPLE SUBMITTED FOR ANALYSIS (Sample ID at sample depth)	GRAPHIC LOG	USCS CLASS	MATERIAL DESCRIPTION	Depth (ft)
0					ML-CL	SILT: brown/gray, water visible in core, moisture 50-60%, soupy with trace (10%) organic material 1-2 cm in size.	0.2
1	12	CT	LMR13-69-012				
2	12	CT	LMR13-69-024				
3	24	CT	LMR13-69-048				
4							
5	24	CT	LMR13-69-072		ML-CL	SILTY CLAY: gray in color, 20-25% moisture with some (15-20%) organic debris 1-3 cm in size. Faint diesel odor.	
6							
7	24	CT	LMR13-69-096				
8	8	CT	LMR13-69-120				8.7
9						End of Boring at 8.7 ft.	
10							
11							
12							
13							
14							
15							

NOTES:

CT=Core Tube
GB=Grab Sample

SEDIMENT LOG MAUMEE CORE LOGS.GPJ 9/13/13

SEDIMENT BORING LMR13-70

EA Engineering, Science, and Technology, Inc.

PROJECT NAME Maumee River
DATE/TIME COLLECTED 6/20/2013 9:00:00 AM
DATE/TIME LOGGED 6/20/2013 4:15:00 PM
DRILLING CONTRACTOR Mudpuppy
DRILLING METHOD Vibracore
LOGGED BY M. Gelinas **WATER DEPTH (ft)** 23.3 **CORE RECOVERY (ft)** 3.5

PROJECT NUMBER 62561.10
LOCATION Toledo, OH
LATITUDE 41° 40.2325
LONGITUDE -83° 29.6414
ELEVATION (Sediment Surface) 548.5 ft IGLD85

DEPTH (ft)	SAMPLE INTERVAL (inches)	SAMPLE TYPE	SAMPLE SUBMITTED FOR ANALYSIS (Sample ID at sample depth)	GRAPHIC LOG	USCS CLASS	MATERIAL DESCRIPTION	Depth (ft)
0	12	CT	LMR13-70-012		ML	SILT: brown/gray in color, water visible in core, moisture ~60%.	0.2
1	12	CT	LMR13-70-024		ML-CL	CLAYEY SILT: gray in color with some (20%) organic debris 1-2 cm in size.	
2	18	CT	LMR13-70-048				
3					GC	GRAVELLY CLAY: stiff gray clay with some (20%) shell fragments 1-2 cm in size and cobbles.	3.4 3.5
4						End of Boring at 3.5 ft.	
5							
6							
7							
8							
9							
10							
11							
12							
13							
14							
15							

NOTES:

CT=Core Tube
GB=Grab Sample

SEDIMENT LOG MAUMEE CORE LOGS.GPJ 9/13/13

SEDIMENT BORING LMR13-71

EA Engineering, Science, and Technology, Inc.

PROJECT NUMBER 62561.10
PROJECT NAME Maumee River
LOCATION Toledo, OH
DATE/TIME COLLECTED 6/17/2013 3:48:00 PM
LATITUDE 41° 42.37333
DATE/TIME LOGGED 6/18/2013 10:00:00 AM
LONGITUDE -83° 26.8083
DRILLING CONTRACTOR Mudpuppy
ELEVATION (Sediment Surface) 564.6 ft IGLD85
DRILLING METHOD Vibracore
LOGGED BY M. Gelinas
WATER DEPTH (ft) 7.3
CORE RECOVERY (ft) 5.6

DEPTH (ft)	SAMPLE INTERVAL (inches)	SAMPLE TYPE	SAMPLE SUBMITTED FOR ANALYSIS (Sample ID at sample depth)	GRAPHIC LOG	USCS CLASS	MATERIAL DESCRIPTION	Depth (ft)
0	12	CT	LMR13-71-012		GC	GRAVELLY SILT: gray in color, 75% moisture with ~30% coarse sand/gravel.	0.1
1					CL	CLAY: gray in color with some (25%) fine grained sand and trace (10%) shells and shell fragments 0.5-1 cm in size.	1.1
	12	CT	LMR13-71-024		CL	CLAY: gray in color	1.7
2					SC	SANDY CLAY: 40-45% fine grained sand with trace (10%) shell fragments 1-20 mm in size.	2.5
3	24	CT	LMR13-71-048		CL	CLAY: gray in color with some (25%) sand. @33-34": higher moisture content	4.0
4					SC	SANDY CLAY: 40-45% fine grained sand with trace (10%) shell fragments 1-20 mm in size. Similar to 1.7-2.5 ft layer. Preserved innards of mollusk shell -- white abalone.	4.4
	19	CT	LMR13-71-072		GP	SANDY GRAVEL: poorly sorted with trace (10%) silt and one cobble ~5 cm long.	4.8
5					CL	CLAY: gray in color with trace (15%) medium grained sand and trace (10%) gravel towards bottom of core. Low moisture content.	5.6
6						End of Boring at 5.6 ft.	
7							
8							
9							
10							
11							
12							
13							
14							
15							

NOTES:

CT=Core Tube
GB=Grab Sample

SEDIMENT LOG MAUMEE CORE LOGS.GPJ 9/13/13

SEDIMENT BORING LMR13-74

EA Engineering, Science, and Technology, Inc.

PROJECT NAME Maumee River
DATE/TIME COLLECTED 6/14/2013 8:20:00 AM
DATE/TIME LOGGED 6/15/2013 3:35:00 PM
DRILLING CONTRACTOR Mudpuppy
DRILLING METHOD Vibracore
LOGGED BY M. Gelinas **WATER DEPTH (ft)** 4.1

PROJECT NUMBER 62561.10
LOCATION Toledo, OH
LATITUDE 41° 40.2822
LONGITUDE -83° 29.9133
ELEVATION (Sediment Surface) 567.6 ft IGLD85
CORE RECOVERY (ft) 6

DEPTH (ft)	SAMPLE INTERVAL (inches)	SAMPLE TYPE	SAMPLE SUBMITTED FOR ANALYSIS (Sample ID at sample depth)	GRAPHIC LOG	USCS CLASS	MATERIAL DESCRIPTION	Depth (ft)
0					ML	SILT: brown/gray in color ~40% moisture, soupy.	0.2
1	12	CT	LMR13-74-012		ML-CL	SILTY CLAY: brown/gray in color with trace (5%) shell fragments 1-2 mm in size.	
	12	CT	LMR13-74-024		SC	SAND: medium to fine-grained with some (20%) shell fragments 1-3 mm in size.	1.5
2					ML-CL		1.6
					SP		1.8
					CL	SILTY CLAY: brown/gray in color with trace (5%) shell fragments 1-2 mm in size. Similar to 0.2-1.5 ft interval but darker gray/black in color.	2.1
3	24	CT	LMR13-74-048		SC		2.6
					CL	SAND: fine to medium grained, poorly sorted with some (20%) shell fragments 1-3 mm in size, little to no silt.	2.8
4					SC	CLAY: gray in color.	3.8
						SANDY CLAY: fine grained sand with trace (10%) shell fragments 1-2 mm in size.	
5	24	CT	LMR13-74-072			CLAY: gray in color with some (20%) fine sand and large shell fragments up to 3 cm in size, white in color.	
6						SANDY CLAY: 50% medium to coarse sand with trace (10-15%) shell fragments 1mm up to 5 cm in size and woody debris up to 3 cm in size.	6.0
7						End of Boring at 6 ft.	
8							
9							
10							
11							
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13							
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NOTES:

CT=Core Tube
GB=Grab Sample

SEDIMENT LOG MAUMEE CORE LOGS.GPJ 9/13/13

SEDIMENT BORING LMR13-75

EA Engineering, Science, and Technology, Inc.

PROJECT NAME Maumee River
DATE/TIME COLLECTED 6/14/2013 9:14:00 AM
DATE/TIME LOGGED 6/15/2013 2:20:00 PM
DRILLING CONTRACTOR Mudpuppy
DRILLING METHOD Vibracore
LOGGED BY M. Gelinas **WATER DEPTH (ft)** 5.8

PROJECT NUMBER 62561.10
LOCATION Toledo, OH
LATITUDE 41° 40.3589
LONGITUDE -83° 29.7217
ELEVATION (Sediment Surface) 565.9 ft IGLD85
CORE RECOVERY (ft) 1.9

DEPTH (ft)	SAMPLE INTERVAL (inches)	SAMPLE TYPE	SAMPLE SUBMITTED FOR ANALYSIS (Sample ID at sample depth)	GRAPHIC LOG	USCS CLASS	MATERIAL DESCRIPTION	Depth (ft)
0					ML	SILT: gray in color, high moisture content/soupy.	0.2
	12	CT	LMR13-75-012		CL	CLAY: gray in color with some (20%) dark gray clumps 1-2 mm in diameter.	0.5
1							
	11	CT	LMR13-75-024		SC	SANDY CLAY: 35-40% medium to fine grained sand with some (20%) shell fragments 1-2 mm, white in color. Shell fragments get larger, up to 2 cm, in 19-23".	2.1
2							
3						End of Boring at 1.9 ft.	
4							
5							
6							
7							
8							
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14							
15							

NOTES:

CT=Core Tube
GB=Grab Sample

SEDIMENT BORING LMR13-76

EA Engineering, Science, and Technology, Inc.

PROJECT NUMBER 62561.10
PROJECT NAME Maumee River
LOCATION Toledo, OH
DATE/TIME COLLECTED 6/14/2013 10:00:00 AM
LATITUDE 41° 40.4599
DATE/TIME LOGGED 6/15/2013 4:10:00 PM
LONGITUDE -83° 29.6126
DRILLING CONTRACTOR Mudpuppy
ELEVATION (Sediment Surface) 565.6 ft IGLD85
DRILLING METHOD Vibracore
LOGGED BY M. Gelinas **WATER DEPTH (ft)** 6.2 **CORE RECOVERY (ft)** 5.5

DEPTH (ft)	SAMPLE INTERVAL (inches)	SAMPLE TYPE	SAMPLE SUBMITTED FOR ANALYSIS (Sample ID at sample depth)	GRAPHIC LOG	USCS CLASS	MATERIAL DESCRIPTION	Depth (ft)
0	12	CT	LMR13-76-012		ML	SILT: brown/gray, ~40% moisture, water visible in core, soupy.	0.3
1					CL-ML	CLAYEY SILT: with some (25%) fine grained sand.	1.1
	12	CT	LMR13-76-024		SP	SAND: fine to medium grained, water visible in core with trace (10-15%) shell fragments and whole shells 1-2 mm.	1.5
2					ML-CL	SILTY CLAY: with fine sand lenses @23" and @27-29".	2.5
3	24	CT	LMR13-76-048		SC	CLAYEY SAND: within sand, trace (10%) shell fragments 1-2 mm in size.	3.4
4					CL	CLAY: gray in color with some (25%) fine sand with trace (15%) shell fragments.	4.2
5	18	CT	LMR13-76-072		SP	SAND: fine to medium grained with trace (10%) shell hash 1-2 mm and trace (10%) silt. High moisture content.	5.5
6						End of Boring at 5.5 ft.	
7							
8							
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10							
11							
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13							
14							
15							

NOTES:

CT=Core Tube
GB=Grab Sample

SEDIMENT LOG MAUMEE CORE LOGS.GPJ 9/13/13

SEDIMENT BORING LMR13-77

EA Engineering, Science, and Technology, Inc.

PROJECT NAME Maumee River
DATE/TIME COLLECTED 6/14/2013 1:45:00 PM
DATE/TIME LOGGED 6/15/2013 5:10:00 PM
DRILLING CONTRACTOR Mudpuppy
DRILLING METHOD Vibracore
LOGGED BY M. Gelinas **WATER DEPTH (ft)** 9.2

PROJECT NUMBER 62561.10
LOCATION Toledo, OH
LATITUDE 41° 40.613
LONGITUDE -83° 29.4051
ELEVATION (Sediment Surface) 562.7 ft IGLD85
CORE RECOVERY (ft) 6

DEPTH (ft)	SAMPLE INTERVAL (inches)	SAMPLE TYPE	SAMPLE SUBMITTED FOR ANALYSIS (Sample ID at sample depth)	USCS CLASS	MATERIAL DESCRIPTION	Depth (ft)
0	12	CT	LMR13-77-012	ML	SILT: brown/gray with water visible in core, high moisture content.	0.2
				PT		0.3
				CL		
				SP	ORGANIC: dense organic layer, black in color.	0.8
1	12	CT	LMR13-77-024	CL	CLAY: gray in color with trace (1-5%) shell fragments 1-3 cm in size.	1.1
				SC	SAND: fine to medium grained sand, high moisture content with trace (15%) shell fragments 1-3 mm in size.	1.7
2	24	CT	LMR13-77-048	SP		2.0
				OL		2.3
				SP	CLAY: gray in color.	2.6
				CL	SANDY CLAY: 40% fine-grained sand.	2.8
3					SAND: fine to medium-grained sand with water visible in core, moisture ~50%.	
4					SILTY CLAY: gray in color with some (20%) sand and trace (10%) organic debris 5-10 mm in size.	4.2
	24	CT	LMR13-77-072	SC	SAND: fine to medium-grained sand with water visible in core, moisture ~50% with some (20%) shell fragments white in color 3 mm - 2 cm in size.	4.3
				CL		4.6
				SC		4.7
5				CL		4.8
				SC		5.2
				CL	CLAY: gray in color with fine sand lenses @43".	
					SANDY CLAY: fine sand with clay	
6					CLAY: gray in color.	6.0
7					SANDY CLAY: fine sand with clay	
					CLAY: gray in color.	
8					SANDY CLAY: fine-grained sand with large shell fragments 1 mm -3 cm in size. @60-62": concentrated shell fragments, make up ~70% of layer.	
9					CLAY: stiff with fine-grained sand lenses @64-66" and @70-72"	
10					End of Boring at 6 ft.	
11						
12						
13						
14						
15						

NOTES:

CT=Core Tube
GB=Grab Sample

SEDIMENT LOG MAUMEE CORE LOGS.GPJ 9/13/13

SEDIMENT BORING LMR13-78

EA Engineering, Science, and Technology, Inc.

PROJECT NUMBER 62561.10
PROJECT NAME Maumee River
LOCATION Toledo, OH
DATE/TIME COLLECTED 6/14/2013 2:16:00 PM
LATITUDE 40° 41.7065
DATE/TIME LOGGED 6/16/2013 10:30:00 AM
LONGITUDE -83° 29.3139
DRILLING CONTRACTOR Mudpuppy
ELEVATION (Sediment Surface) 564.4 ft IGLD85
DRILLING METHOD Vibracore
LOGGED BY M. Gelinas **WATER DEPTH (ft)** 7.5 **CORE RECOVERY (ft)** 2.3

DEPTH (ft)	SAMPLE INTERVAL (inches)	SAMPLE TYPE	SAMPLE SUBMITTED FOR ANALYSIS (Sample ID at sample depth)	GRAPHIC LOG	USCS CLASS	MATERIAL DESCRIPTION	Depth (ft)
0	12	CT	LMR13-78-012		SM	SANDY SILT: gray in color with ~40% moisture and trace (10-15%) shell fragments 5-10 mm in size.	0.2
					SC	SANDY CLAY: 40% fine grained sand	0.5
					PT	ORGANICS: organic layer with trace (15%) silt and shell fragments 1-5 mm in size.	0.6
					ML-CL	SILTY CLAY: gray in color	0.8
1	15	CT	LMR13-78-024		SC	SANDY CLAY: gray in color. @14": organic debris. @17-21": 30% brown/black shell fragments ~3 cm long, organic debris 1-10 mm in size. @25-27": 40% shell debris 1-20 mm in size.	2.3
2						End of Boring at 2.3 ft.	
3							
4							
5							
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15							

NOTES:

CT=Core Tube
GB=Grab Sample

SEDIMENT BORING LMR13-79

EA Engineering, Science, and Technology, Inc.

PROJECT NAME Maumee River
DATE/TIME COLLECTED 6/14/2013 3:44:00 PM
DATE/TIME LOGGED 6/16/2013 11:40:00 AM
DRILLING CONTRACTOR Mudpuppy
DRILLING METHOD Vibracore
LOGGED BY M. Gelinas **WATER DEPTH (ft)** 4.7

PROJECT NUMBER 62561.10
LOCATION Toledo, OH
LATITUDE 41° 40.8552
LONGITUDE -83° 29.2183
ELEVATION (Sediment Surface) 567.1 ft IGLD85
CORE RECOVERY (ft) 6.8

DEPTH (ft)	SAMPLE INTERVAL (inches)	SAMPLE TYPE	SAMPLE SUBMITTED FOR ANALYSIS (Sample ID at sample depth)	GRAPHIC LOG	USCS CLASS	MATERIAL DESCRIPTION	Depth (ft)
0	12	CT	LMR13-79-012		ML	SILT: moisture ~40%, soupy.	0.4
					ML-CL	SILTY CLAY: gray in color.	0.8
1	12	CT	LMR13-79-024		SC	CLAYEY SAND: high moisture content, water visible, with trace (10%) shell fragments 1-20 mm in size.	
2							
3	24	CT	LMR13-79-048		ML-CL	SANDY CLAY: lower moisture content than overlying layer ~20% with trace (10%) shell fragments 1-30 mm in size and trace (1-5%) organic debris up to 1 cm in size.	2.8
4							
5	24	CT	LMR13-79-072				
6	10	CT	LMR13-79-096		SM	SAND: fine to medium-grained, moisture ~10%, with some (20%) silt.	5.8
					SC	SANDY CLAY: fine grained sand. @77": organic/woody debris ~1.5 cm in size.	6.1
7					SM	SAND: fine to medium-grained, moisture ~10%, with some (20%) silt. Similar to 5.8-6.1 ft layer.	6.8
8						End of Boring at 6.8 ft.	
9							
10							
11							
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13							
14							
15							

NOTES:

CT=Core Tube
GB=Grab Sample

SEDIMENT LOG MAUMEE CORE LOGS.GPJ 9/13/13

SEDIMENT BORING LMR13-80

EA Engineering, Science, and Technology, Inc.

PROJECT NAME Maumee River
DATE/TIME COLLECTED 6/20/2013 11:15:00 AM
DATE/TIME LOGGED 6/20/2013 4:40:00 PM
DRILLING CONTRACTOR Mudpuppy
DRILLING METHOD Vibracore
LOGGED BY M. Gelinas **WATER DEPTH (ft)** 4.4

PROJECT NUMBER 62561.10
LOCATION Toledo, OH
LATITUDE 41° 40.9783
LONGITUDE -83° 29.1294
ELEVATION (Sediment Surface) 567.5 ft IGLD85
CORE RECOVERY (ft) 7.3

DEPTH (ft)	SAMPLE INTERVAL (inches)	SAMPLE TYPE	SAMPLE SUBMITTED FOR ANALYSIS (Sample ID at sample depth)	GRAPHIC LOG	USCS CLASS	MATERIAL DESCRIPTION	Depth (ft)
0	12	CT	LMR13-80-012		OL	CLAYEY SILT: gray in color with ~40% moisture and some (20%) shell and organic debris 5-20 mm in size.	0.5
1	12	CT	LMR13-80-024		ML-CL	SILTY CLAY: gray/black in color with some (30%) gravel and creosote pieces/creosote-soaked wood pieces. Diesel odor.	2.2
2	24	CT	LMR13-80-048		CL	CLAY: gray with 30% organic debris 1-3 cm in size.	4.5
3	24	CT	LMR13-80-072		SC	SANDY CLAY: 40% fine to medium sand with some (25%) shell fragments 1-2 cm in size and trace (10%) organic debris 1-2 cm in size. @69-70": large shell remains white in color, 3-4 cm in size.	6.4
4	15	CT	LMR13-80-096		SC	SANDY CLAY: 25% sand	6.8
5					SC	SANDY CLAY: 40% sand with trace (10-15%) shell fragments ~0.5 cm in size.	7.3
6						End of Boring at 7.3 ft.	
7							
8							
9							
10							
11							
12							
13							
14							
15							

NOTES:

CT=Core Tube
GB=Grab Sample

SEDIMENT LOG MAUMEE CORE LOGS.GPJ 9/13/13

SEDIMENT BORING LMR13-82

EA Engineering, Science, and Technology, Inc.

PROJECT NAME Maumee River
DATE/TIME COLLECTED 6/17/2013 8:00:00 AM
DATE/TIME LOGGED 6/17/2013 2:50:00 PM
DRILLING CONTRACTOR Mudpuppy
DRILLING METHOD Vibracore
LOGGED BY M. Gelinas **WATER DEPTH (ft)** 6.1

PROJECT NUMBER 62561.10
LOCATION Toledo, OH
LATITUDE 41° 41.6182
LONGITUDE -83° 28.1914
ELEVATION (Sediment Surface) 565.4 ft IGLD85
CORE RECOVERY (ft) 10.8

DEPTH (ft)	SAMPLE INTERVAL (inches)	SAMPLE TYPE	SAMPLE SUBMITTED FOR ANALYSIS (Sample ID at sample depth)	GRAPHIC LOG	USCS CLASS	MATERIAL DESCRIPTION	Depth (ft)
0	12	CT	LMR13-82-012		ML	SILT: brown/gray, water visible in core, soupy.	0.5
					ML-CL	CLAYEY SILT: gray with trace (10%) gravel.	0.8
1	12	CT	LMR13-82-024		CL	CLAY: gray in color, 15% moisture with some (20%) shell fragments up to 2 cm in size and trace (15%) organic debris up to 5 cm long. @45": thin medium-grained sand layer. Diesel odor throughout layer.	
2							
3	24	CT	LMR13-82-048				
4							
5	24	CT	LMR13-82-072				
6							
7							
8					PT	ORGANICS: black organic detritis ~70% of layer.	7.8
					CL	CLAY: gray in color, 15% moisture with some (20%) shell fragments up to 2 cm in size and trace (15%) organic debris up to 5 cm long.	7.9
9					SC	SANDY CLAY: 30% fine to medium grained sand with SOME (20%) large organic/woody detritis up to 2 cm in size.	9.0
					CL	CLAY: gray in color, 15% moisture with some (20%) shell fragments up to 2 cm in size and trace (15%) organic debris up to 5 cm long. @112-113": whole mollusk shell 5-6cm across.	9.2
10							9.4
11							
12						End of Boring at 10.8 ft.	
13							
14							
15							

NOTES:

CT=Core Tube
GB=Grab Sample

SEDIMENT LOG MAUMEE CORE LOGS.GPJ 9/13/13

SEDIMENT BORING LMR13-84

EA Engineering, Science, and Technology, Inc.

PROJECT NAME Maumee River
DATE/TIME COLLECTED 6/18/2013 7:54:00 AM
DATE/TIME LOGGED 6/18/2013 10:49:00 AM
DRILLING CONTRACTOR Mudpuppy
DRILLING METHOD Vibracore
LOGGED BY M. Gelinas **WATER DEPTH (ft)** 8.8

PROJECT NUMBER 62561.10
LOCATION Toledo, OH
LATITUDE 41° 39.8954
LONGITUDE -83° 30.1556
ELEVATION (Sediment Surface) 562.8 ft IGLD85
CORE RECOVERY (ft) 6.4

DEPTH (ft)	SAMPLE INTERVAL (inches)	SAMPLE TYPE	SAMPLE SUBMITTED FOR ANALYSIS (Sample ID at sample depth)	GRAPHIC LOG	USCS CLASS	MATERIAL DESCRIPTION	Depth (ft)
0	12	CT	LMR13-84-012		ML-CL	SILTY CLAY: gray in color, moisture ~60%.	
					SM	SAND: fine to medium-grained, poorly sorted with trace (15%) shell fragments 1-3 mm in size and trace (10%) silt.	0.7 0.8
1	12	CT	LMR13-84-024				
2							
3	24	CT	LMR13-84-048		ML-CL	SILTY CLAY: grya in color with trace (15%) organic debris 1-2 cm in size. @44-45": shell fragments, white in color, 2-4 cm in size. @52-54": whole mollusk shells up to 5 cm long.	
4							
5	29	CT	LMR13-84-072				4.8
6					SC	CLAYEY SAND: fine-grained sand, gray in color. @73-77": large white shell fragments 1mm - 3 cm in size.	6.4
7						End of Boring at 6.4 ft.	
8							
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13							
14							
15							

NOTES:

CT=Core Tube
GB=Grab Sample

SEDIMENT LOG MAUMEE CORE LOGS.GPJ 9/13/13

SEDIMENT BORING LMR13-85

EA Engineering, Science, and Technology, Inc.

PROJECT NUMBER 62561.10

PROJECT NAME Maumee River
LOCATION Toledo, OH
DATE/TIME COLLECTED 6/18/2013 3:45:00 PM
LATITUDE 41° 40.1109
DATE/TIME LOGGED 6/19/2013 2:50:00 PM
LONGITUDE -83° 29.8015
DRILLING CONTRACTOR Mudpuppy
ELEVATION (Sediment Surface) 551.8 ft IGLD85
DRILLING METHOD Vibracore
LOGGED BY M. Gelinas **WATER DEPTH (ft)** 20.9 **CORE RECOVERY (ft)** 3.9

DEPTH (ft)	SAMPLE INTERVAL (inches)	SAMPLE TYPE	SAMPLE SUBMITTED FOR ANALYSIS (Sample ID at sample depth)	GRAPHIC LOG	USCS CLASS	MATERIAL DESCRIPTION	Depth (ft)
0	12	CT	LMR13-85-012		ML	SILT: brown/gray in color, 45% moisture.	0.4
1					SM	SANDY SILT: 30-40% coarse sand/fine gravel. @13-15": pebbles and cobbles up to 3 cm diameter	1.3
2	12	CT	LMR13-85-024		ML-CL	SILTY CLAY: gray in color with some (20%) organic material 1-10 mm in size.	
3	23	CT	LMR13-85-048				3.9
4						End of Boring at 3.9 ft.	
5							
6							
7							
8							
9							
10							
11							
12							
13							
14							
15							

NOTES:

CT=Core Tube
GB=Grab Sample

SEDIMENT BORING LMR13-86

EA Engineering, Science, and Technology, Inc.

PROJECT NUMBER 62561.10
PROJECT NAME Maumee River
LOCATION Toledo, OH
DATE/TIME COLLECTED 6/18/2013 8:58:00 AM
LATITUDE 41° 40.3171
DATE/TIME LOGGED 6/18/2013 4:15:00 PM
LONGITUDE -83° 29.5068
DRILLING CONTRACTOR Mudpuppy
ELEVATION (Sediment Surface) 554.7 ft IGLD85
DRILLING METHOD Vibracore
LOGGED BY M. Gelinas **WATER DEPTH (ft)** 16.8 **CORE RECOVERY (ft)** 7.6

DEPTH (ft)	SAMPLE INTERVAL (inches)	SAMPLE TYPE	SAMPLE SUBMITTED FOR ANALYSIS (Sample ID at sample depth)	GRAPHIC LOG	USCS CLASS	MATERIAL DESCRIPTION	Depth (ft)
0					ML	SILT: brown/gray in color, water visible in core, moisture ~40%, soupy with trace (15%) organic/woody debris 1-2 cm in size. @5": single cobble, 3 cm in size.	0.4
1	12	CT	LMR13-86-012				
	12	CT	LMR13-86-024		ML-CL	SILTY CLAY: gray in color, 25% moisture.	
2							
3	24	CT	LMR13-86-048				3.5
4					ML-CL	SILTY CLAY: gray in color, moisture ~25% with some (25%) creosote/creosote-soaked wood chunks 1-2 cm in diameter. Diesel odor throughout. @68-73" and @89-91": creosote pieces concentrated (75%) 1-2 cm in diameter	
5	24	CT	LMR13-86-072				
6							
7	19	CT	LMR13-86-096				7.6
8						End of Boring at 7.6 ft.	
9							
10							
11							
12							
13							
14							
15							

NOTES:

CT=Core Tube
GB=Grab Sample

SEDIMENT BORING LMR13-87

EA Engineering, Science, and Technology, Inc.

PROJECT NUMBER 62561.10

PROJECT NAME Maumee River
LOCATION Toledo, OH
DATE/TIME COLLECTED 6/18/2013 9:26:00 AM
LATITUDE 41° 40.3437
DATE/TIME LOGGED 6/18/2013 3:00:00 PM
LONGITUDE -83° 29.4794
DRILLING CONTRACTOR Mudpuppy
ELEVATION (Sediment Surface) 557.1 ft IGLD85
DRILLING METHOD Vibracore
LOGGED BY M. Gelinas **WATER DEPTH (ft)** 14.7 **CORE RECOVERY (ft)** 9.5

DEPTH (ft)	SAMPLE INTERVAL (inches)	SAMPLE TYPE	SAMPLE SUBMITTED FOR ANALYSIS (Sample ID at sample depth)	GRAPHIC LOG	USCS CLASS	MATERIAL DESCRIPTION	Depth (ft)
0					ML-CL	SILT: brown/gray in color, water visible in core, moisture ~40%, soupy with some (25%) shelly and woody debris 1-4 cm in size.	0.2
1	12	CT	LMR13-87-012		ML-CL	SILTY CLAY: dark gray in color, STRONG smell of creosote, 20% moisture, with some (20%) creosote pieces 1-2 cm in size and some (20%) shell/woody fragments 0.5-2 cm in size.	
2	12	CT	LMR13-87-024				2.5
3	24	CT	LMR13-87-048		ML-CL	SILTY CLAY: dark gray in color with visible brown/irridescent sheen, moisture ~35% and some (25%) creosote pieces 2-10 mm throughout. Creosote odor throughout. @45-47": concentrated (65-70%) creosote pieces within silty clay, moisture ~45%. @79-80": fine sand layer.	
4							
5	24	CT	LMR13-87-072				
6							
7	24	CT	LMR13-87-096				7.3
8					GW	GRAVELLY SAND: black in color, poorly sorted with 50% creosote pieces up to 3x3 cm and trace (15%) shell fragments 1-3 mm in size. Creosote odor throughout.	8.0
					PT	ORGANIC: solid piece of creosote ~6x6x4 cm. Creosote odor throughout.	8.3
9	18	CT	LMR13-87-120		ML-CL	SILTY CLAY: black in color with 30% creosote and some (20%) shell and wood fragments 1-10 mm in size. Creosote odor throughout.	9.5
10						End of Boring at 9.5 ft.	
11							
12							
13							
14							
15							

NOTES:

CT=Core Tube
GB=Grab Sample

SEDIMENT BORING LMR13-88

EA Engineering, Science, and Technology, Inc.

PROJECT NUMBER 62561.10
PROJECT NAME Maumee River
LOCATION Toledo, OH
DATE/TIME COLLECTED 6/18/2013 3:05:00 PM
LATITUDE 41° 40.4934
DATE/TIME LOGGED 6/19/2013 1:20:00 PM
LONGITUDE -83° 29.2996
DRILLING CONTRACTOR Mudpuppy
ELEVATION (Sediment Surface) 563.9 ft IGLD85
DRILLING METHOD Vibracore
LOGGED BY M. Gelinas
WATER DEPTH (ft) 9
CORE RECOVERY (ft) 4.3

DEPTH (ft)	SAMPLE INTERVAL (inches)	SAMPLE TYPE	SAMPLE SUBMITTED FOR ANALYSIS (Sample ID at sample depth)	GRAPHIC LOG	USCS CLASS	MATERIAL DESCRIPTION	Depth (ft)
0	12	CT	LMR13-88-012		CL-ML	CLAYEY SILT: dark gray/black, moisture ~40%, 40% creosote pieces 1x2 cm in size, sheen and strong odor.	
1	12	CT	LMR13-88-024		SM	SILTY SAND: ~70% fine to medium grained black sand, large creosote chunks 1-4 cm in size, water visible in core with sheen and strong odor.	1.3
					ML		1.5
2					SC		2.0
						SILT: black with brown sheen, high moisture content, water visible. Strong odor.	2.3
3	28	CT	LMR13-88-048		ML-CL	SANDY CLAY: 30% fine-grained sand, black in color.	
4						SILTY CLAY: black in color, high moisture ~39%, with trace (15%) creosote pieces, strong creosote odor and sticky hydrocarbon residue/NAPL throughout.	4.3
5						End of Boring at 4.3 ft.	
6							
7							
8							
9							
10							
11							
12							
13							
14							
15							

NOTES:

CT=Core Tube
GB=Grab Sample

SEDIMENT LOG MAUMEE CORE LOGS.GPJ 9/13/13

SEDIMENT BORING LMR13-89

EA Engineering, Science, and Technology, Inc.

PROJECT NUMBER 62561.10
PROJECT NAME Maumee River
LOCATION Toledo, OH
DATE/TIME COLLECTED 6/18/2013 1:40:00 PM
LATITUDE 41° 40.9188
DATE/TIME LOGGED 6/19/2013 1:00:00 PM
LONGITUDE -83° 28.8712
DRILLING CONTRACTOR Mudpuppy
ELEVATION (Sediment Surface) 554.4 ft IGLD85
DRILLING METHOD Vibracore
LOGGED BY M. Gelinas **WATER DEPTH (ft)** 17.8 **CORE RECOVERY (ft)** 1.8

DEPTH (ft)	SAMPLE INTERVAL (inches)	SAMPLE TYPE	SAMPLE SUBMITTED FOR ANALYSIS (Sample ID at sample depth)	GRAPHIC LOG	USCS CLASS	MATERIAL DESCRIPTION	Depth (ft)
0	12	CT	LMR13-89-012		GM SM SC	GRAVELLY SILT: gray in color with pebbles/cobbles up to 3x2 cm and shell pieces 1-5 cm long.	0.3 0.7 1.0
1	9	CT	LMR13-89-024		SC GC	SILTY SAND: 60% medium to coarse-grained sand with some (25%) shell fragments 1-30 mm in size.	1.1 1.8
2						SANDY CLAY: 30% fine-grained sand.	
3						CLAYEY SAND: 65% fine to medium-grained sand with trace (10-15%) shell fragments 1-2 mm in size.	
4						CLAYEY GRAVEL: dark gray in color with shell pieces 1mm to 3 cm in size. @13-14": 40% layer consists of black wood debris 2-3cm in size	
5						End of Boring at 1.8 ft.	
6							
7							
8							
9							
10							
11							
12							
13							
14							
15							

NOTES:

CT=Core Tube
GB=Grab Sample

EA Engineering, Science, and Technology, Inc.

SEDIMENT BORING LMR13-92

PROJECT NUMBER 62561.10

PROJECT NAME Maumee River
LOCATION Toledo, OH
DATE/TIME COLLECTED 6/19/2013 7:55:00 AM
LATITUDE 41° 42.223
DATE/TIME LOGGED 6/20/2013 8:45:00 AM
LONGITUDE -83° 26.7259
DRILLING CONTRACTOR Mudpuppy
ELEVATION (Sediment Surface) 566 ft IGLD85
DRILLING METHOD Vibracore
LOGGED BY M. Gelinas **WATER DEPTH (ft)** 6.7 **CORE RECOVERY (ft)** 2.1

DEPTH (ft)	SAMPLE INTERVAL (inches)	SAMPLE TYPE	SAMPLE SUBMITTED FOR ANALYSIS (Sample ID at sample depth)	GRAPHIC LOG	USCS CLASS	MATERIAL DESCRIPTION	Depth (ft)
0	12	CT	LMR13-92-012		ML	SILT: brown/gray in color, water visible in core, moisture ~45%, soupy.	0.4
1	13	CT	LMR13-92-024		ML-CL	SILTY CLAY: gray in color with trace (10-15%) organic debris 5-10 mm in size.	2.1
2						End of Boring at 2.1 ft.	
3							
4							
5							
6							
7							
8							
9							
10							
11							
12							
13							
14							
15							

NOTES:

CT=Core Tube
GB=Grab Sample

SEDIMENT BORING LMR13-94

EA Engineering, Science, and Technology, Inc.

PROJECT NUMBER 62561.10
PROJECT NAME Maumee River
LOCATION Toledo, OH
DATE/TIME COLLECTED 6/20/2013 9:45:00 AM
LATITUDE 41° 40.3719
DATE/TIME LOGGED 6/20/2013 2:40:00 PM
LONGITUDE -83° 29.4351
DRILLING CONTRACTOR Mudpuppy
ELEVATION (Sediment Surface) 565.4 ft IGLD85
DRILLING METHOD Vibracore
LOGGED BY M. Gelinas **WATER DEPTH (ft)** 6.5 **CORE RECOVERY (ft)** 6.4

DEPTH (ft)	SAMPLE INTERVAL (inches)	SAMPLE TYPE	SAMPLE SUBMITTED FOR ANALYSIS (Sample ID at sample depth)	GRAPHIC LOG	USCS CLASS	MATERIAL DESCRIPTION	Depth (ft)
0	12	CT	LMR13-94-012		ML	SILT: gray/brown, moisture ~60%, water visible in core, soupy with some (20%) gravel/pebbles.	0.2
1					ML-CL	SILTY CLAY: gray in color, moisture ~50% with some (20%) coarse sand and some (20%) wood debris 1-2 cm in size.	0.8
	12	CT	LMR13-94-024		ML	SILT WITH CREOSOTE: 80% creosote pieces 1-2 cm in size with some (20%) shell fragments 5-10 mm in size.	1.3
2							
3	24	CT	LMR13-94-048				
4					ML-CL	SILTY CLAY: gray in color with ~40% creosote pieces 1-2 cm in size and trace (10%) fine sand. @70-72": large shell fragments 2-4 cm in size.	
5	29	CT	LMR13-94-072				
6							6.4
7						End of Boring at 6.4 ft.	
8							
9							
10							
11							
12							
13							
14							
15							

NOTES:

CT=Core Tube
GB=Grab Sample

SEDIMENT LOG MAUMEE CORE LOGS.GPJ 9/13/13

SEDIMENT BORING LMR13-95

EA Engineering, Science, and Technology, Inc.

PROJECT NAME Maumee River
DATE/TIME COLLECTED 6/20/2013 9:20:00 AM
DATE/TIME LOGGED 6/20/2013 3:25:00 PM
DRILLING CONTRACTOR Mudpuppy
DRILLING METHOD Vibracore
LOGGED BY M. Gelinas **WATER DEPTH (ft)** 7.4

PROJECT NUMBER 62561.10
LOCATION Toledo, OH
LATITUDE 41° 40.3957
LONGITUDE -83° 29.4098
ELEVATION (Sediment Surface) 564.4 ft IGLD85
CORE RECOVERY (ft) 7.5

DEPTH (ft)	SAMPLE INTERVAL (inches)	SAMPLE TYPE	SAMPLE SUBMITTED FOR ANALYSIS (Sample ID at sample depth)	GRAPHIC LOG	USCS CLASS	MATERIAL DESCRIPTION	Depth (ft)
0					ML		
	12	CT	LMR13-95-012		ML-CL	SILT: brown/gray in color, water visible in core, moisture ~60%, soupy with 30% creosote pieces 1-2 cm in size. Sheen visible, diesel odor.	0.2
1							0.8
	12	CT	LMR13-95-024		CL	SILTY CLAY: gray in color, moisture ~40% with 50% creosote pieces 1-2 cm in size. @7-9": higher moisture content ~65%, soupy. Sheen visible, diesel odor.	
2							1.8
3	24	CT	LMR13-95-048			CLAY: concentrated creosote pieces in gray/black clay, some orange in color, sticky with hydrocarbon residue/NAPL, organic material up to 4 cm long (grass). Sheen visible, diesel odor.	
4							
5	24	CT	LMR13-95-072		CL-ML	CLAYEY SILT: gray/black in color with 60% creosote pieces 0.5-1 cm and 30% organic debris. Sheen visible, diesel odor. @45-46": small shells 0.5 cm in size ~80% of layer.	
6							
7	18	CT	LMR13-95-096				7.5
8						End of Boring at 7.5 ft.	
9							
10							
11							
12							
13							
14							
15							

NOTES:

CT=Core Tube
GB=Grab Sample

ATTACHMENT C

CORE RE-CREATION NARRATIVE

Maumee River Core Log Re-creation

This is a narrative of the steps taken to re-create the 35 sediment core logs that were stolen on 6/14/13 in Toledo, Ohio.

While in the field, high-resolution photographs were taken (at a minimum) for each analytical sample interval for each core (0-12", 12-24", 24-48", 48-72", etc.). Additional high-resolution photographs were taken of unique features, such as a dense organic layer that had an intense diesel odor. These photographs were used by the field geologist who logged all of the cores to re-create the sediment logs immediately upon returning from the field (24-27 June 2013) and are presented in Attachment D. The lack of lithologic and stratigraphic variation between coring locations made this method of re-creation possible. Field maps were used to identify cores taken in close proximity to each other and correlate layers between them.

Excess sediment from the oil and grease analytical samples was archived and shipped to the field geologist in Hunt Valley, MD, in an effort to validate the sediment description derived from the photographs. These 140 sediment samples were used to spot-check the re-created core logs by randomly choosing analytical samples within each core to see if the description generally matched the sediment in the analytical sample. This was done with 30 (25 percent) of the sediment samples, presented in Table C-1. The sediment samples remain archived at EA's Ecotoxicology laboratory for future reference, if needed.

The re-created core logs were reviewed by EA's Chief Geologist and Director of Quality Control for accuracy and correctness.

Table C-1. Archived Analytical Sample* Descriptions

Sample ID	Description from Archived Sediment Sample
LMR13-81-096	Gray clay with some silt, some (20%) organic debris (grass) and small wood pieces 1-3 mm in size
LMR13-83-048	Gray sandy (fine, ~20%) clay with some (20%) small shells ~3mm and wood pieces ~2x2 cm in size.
LMR13-57-012	Gray silty clay with some (20%) organic (wood) debris 1-3 mm in size. Strong grease/oil odor.
LMR13-62-024	Gray silty clay with trace (5%) organic fragments ~ 1mm in size.
LMR13-63-024	Gray silty clay, moisture still high.
LMR13-50-012	Gray/brown silty clay with trace (10%) organic material (grass) up to 3 cm long.
LMR13-50-096	Gray silty clay with some (20%) organic (wood pieces) debris 0.5-1.5 cm in size.
LMR13-51-048	Gray sandy (30%) clay with trace (5-10%) shell fragments and organic debris 1-3 mm in size.
LMR13-72-024	Gray/brown silty clay with trace (15%) organic (wood) debris 1-5 mm. Faint grease odor.
LMR13-81-012	Dark gray silty clay with trace (5%) shell fragments ~1mm. Faint grease odor.
LMR13-90-048	Gray silty clay.
LMR13-91-072	Gray clay with trace (15%) organic (wood) pieces 1-5mm in size.
LMR13-93-024FD	Dark gray silty clay with trace (15%) small black shells 1-3 mm in size. Faint grease odor.
LMR13-93-120	Gray silty clay
LMR13-41-024	Gray silty clay with trace (10%) organic (grass) fragments 1-2 cm long.
LMR13-45-120	Dark gray silty clay with trace (10%) organic (wood pieces) debris 1-5 mm in size. Grease odor.
LMR13-46-072	Dark gray silty clay with some (20%) organic (wood, grass/roots) debris 1-5 cm long. Grease odor.
LMR13-47-012	Gray clayey silt with trace (10%) organic (grass, wood) debris 2-10 mm in size.
LMR13-47-096	Gray silty clay with trace (10%) organic (grass) fragments 1-5 mm long.
LMR13-49-072	Gray sandy (fine, ~20%) clay with some (25%) small shells ~1-3mm in size.
LMR13-42-024	Dark gray clayey silt
LMR13-43-048	Dark gray silty clay. Grease odor.
LMR13-44-048	Gray sandy (fine, ~20%) clay with trace to some (15-20%) shell fragments 1-3 mm in size.
LMR13-44-096	Gray clay with trace (10%) shell fragments 1-3 mm in size.
LMR13-45-024	Dark gray clayey silt with trace (10%) organic (wood) debris 1-3 mm in size. Grease odor.
LMR13-02-012	Gray sandy silty clay with some (25%) shell fragments 1-3 mm in size.
LMR13-11-012	Gray clayey silt with some (25%) shell fragments 1-3 mm in size and some (20%) wood debris 5-10 mm in size.
LMR13-20-012	Gray silty clay with some (25-30%) shell fragments 1-5 mm in size.
LMR13-27-048	Dark gray clayey silt with some (20%) shell fragments 1-3 mm in size.
LMR13-26-012	Gray silty clay with some (20%) shell fragments 1-3 mm in size; trace (10%) gravel; and trace (5%) organic (wood) debris 1-10 mm in size.

***** These 30 samples represent ~25% of the 140 archived sediment samples.

Appendix C

Core Photographs

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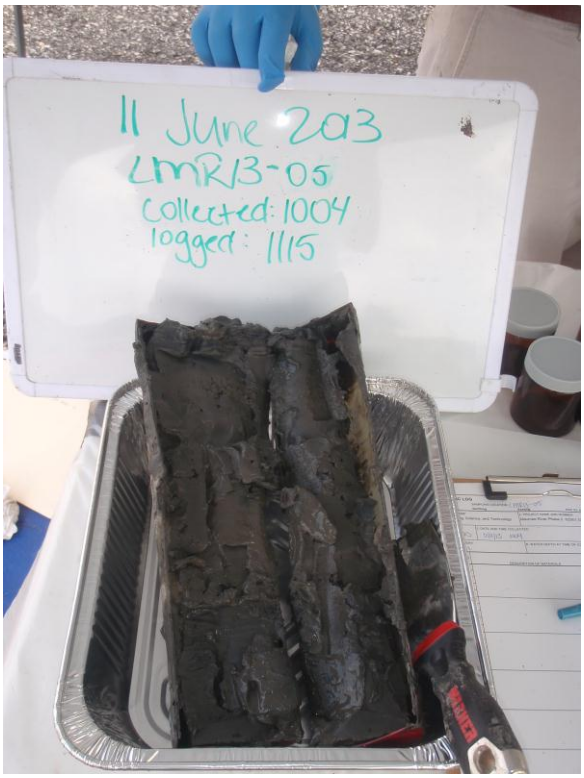
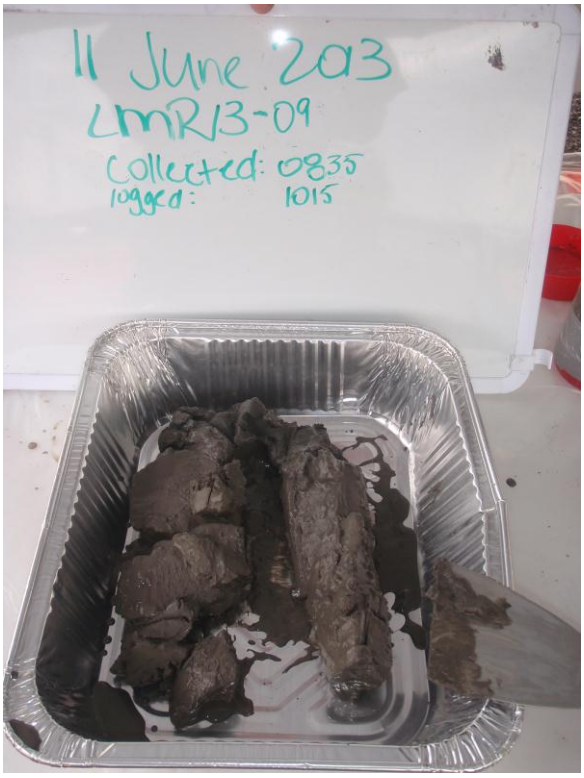
I. **Photos used for Recreated Core Logs**







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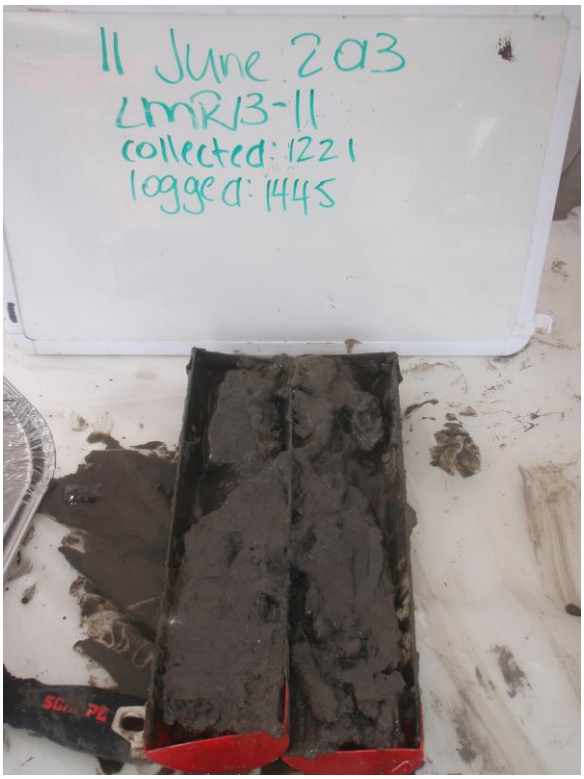
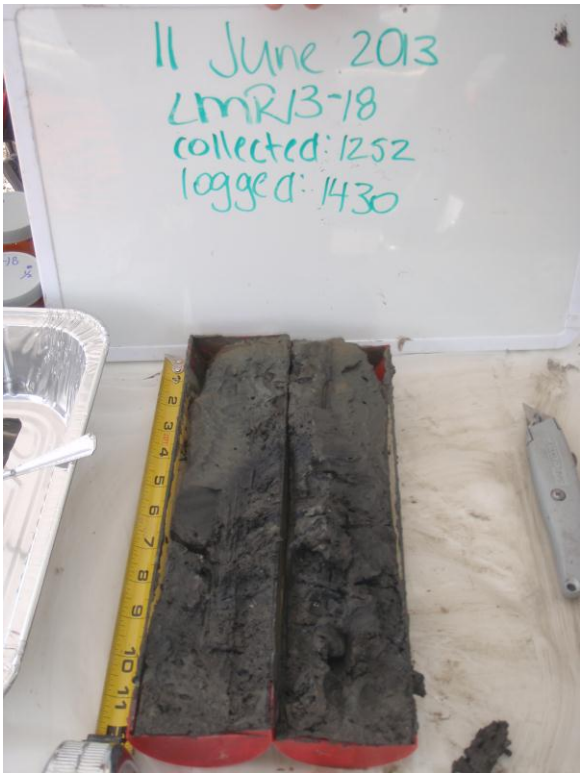
collected: 0945
logged: 1045


11 June 2023
LMR13-11
collected: 1221
logged: 1445


11 June 2023
LMR13-12
collected: 1055
logged: 1330


11 June 2023
LMR13-16
collected: 0925
logged: 1130


11 June 203
LmR13-17
Collected 0851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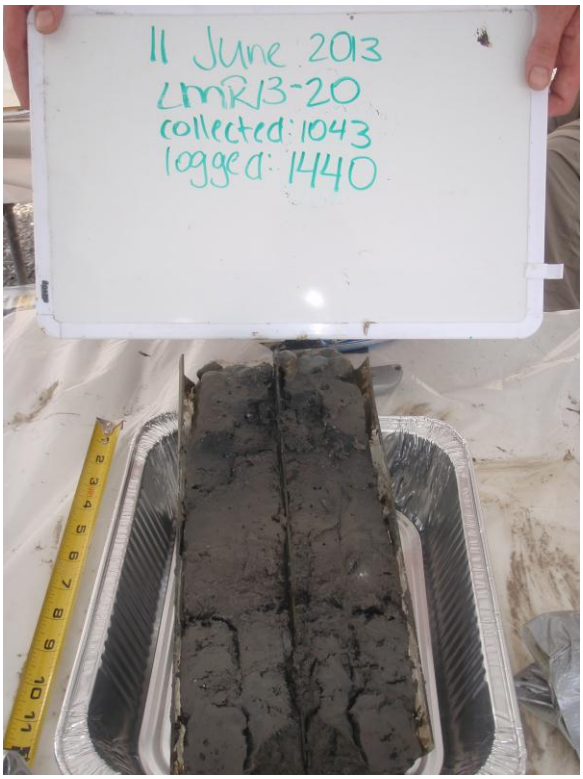
LmR13-18
collected: 1252
logged: 1430


11 June 2013
LmR13-19
collected: 1303
logged: 1500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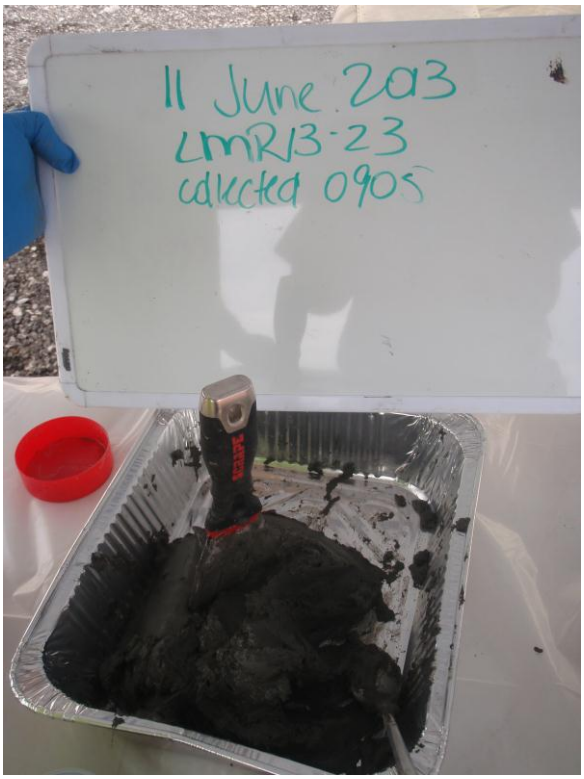
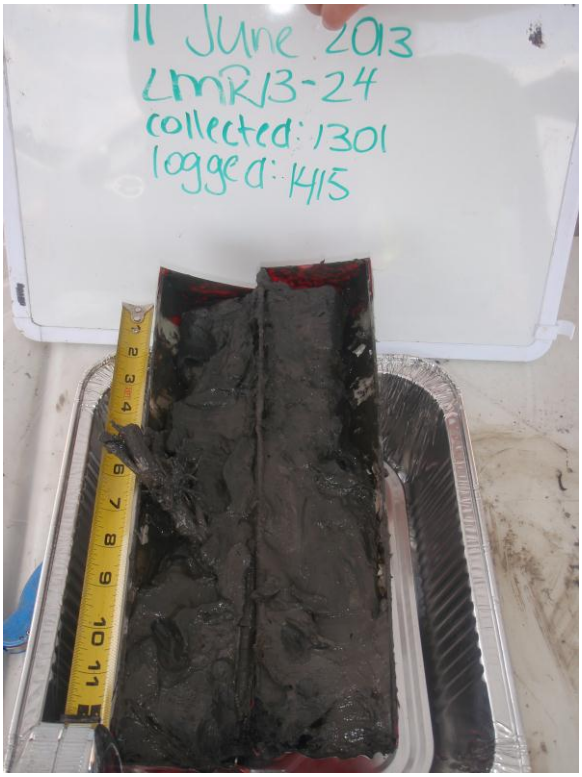
logged: 1440


11 June 2013
LmR13-23
collected 0905


11 June 2013
LmR13-24
collected: 1301
logged: 1415

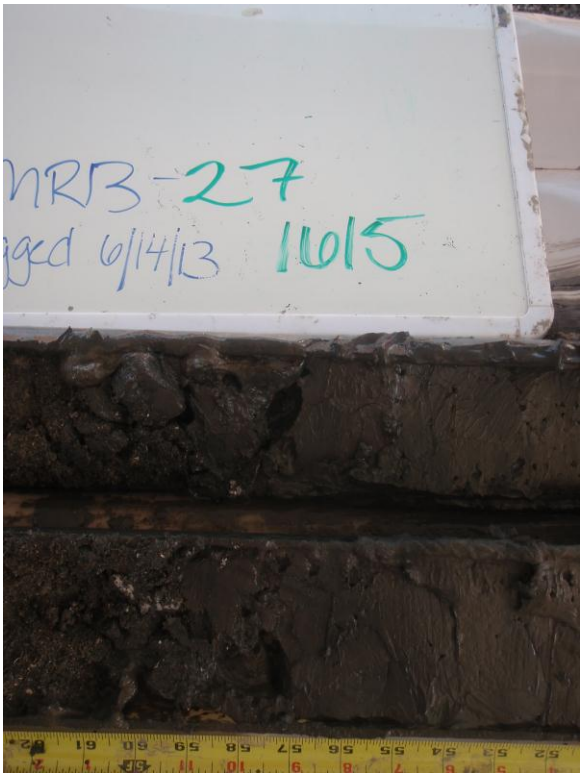

LMRB-26
Logged 6/14/13 1430


LMRB-27
Logged 6/14/13 1615


LMRB-27
Logged 6/14/13 1615


LMRB-27
Logged 6/14/13 1615


LMRB-27
Logged 6/14/13 1615


nRB-27
gged 6/14/13 1615

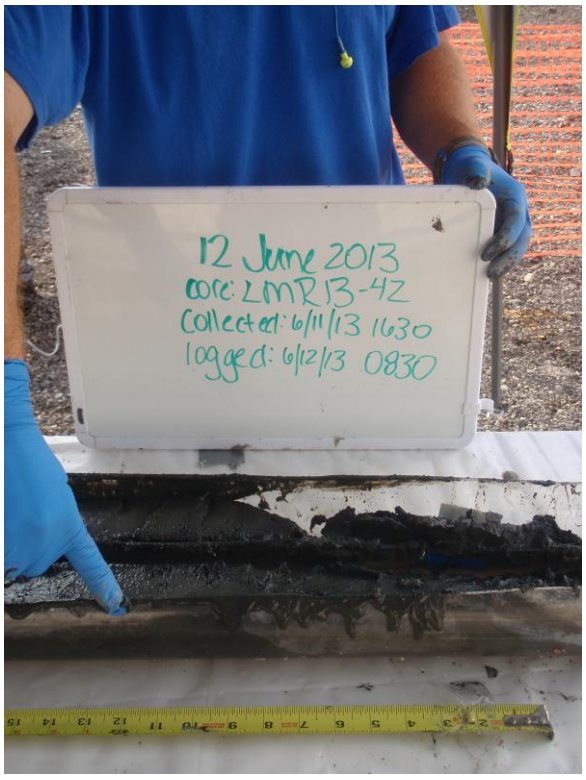

LMRB-27
Logged 6/14/13 1615


LMRB-41
Logged 6/14/13 1300


LMRB-41
Logged 6/14/13 1300


LMRB-41
Logged 6/14/13 1300


LMRB-41
Logged 6/14/13 1300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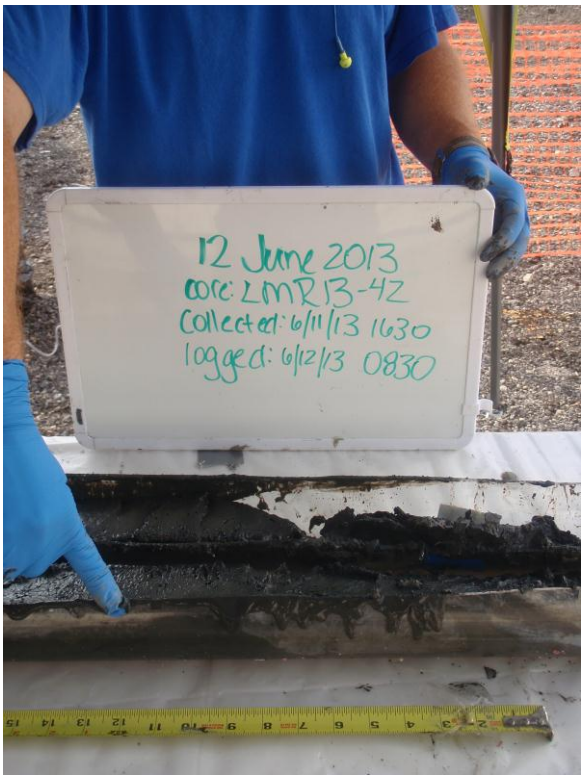
Collected: 6/11/13 1630
logged: 6/12/13 0830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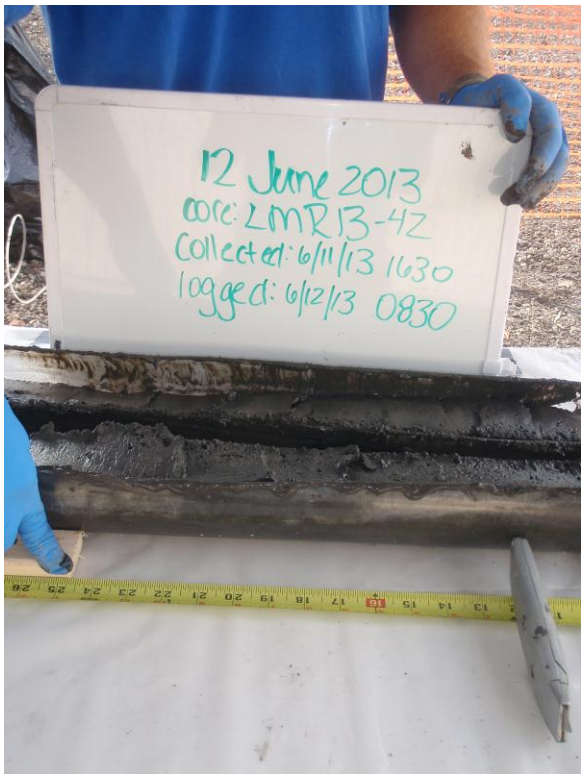
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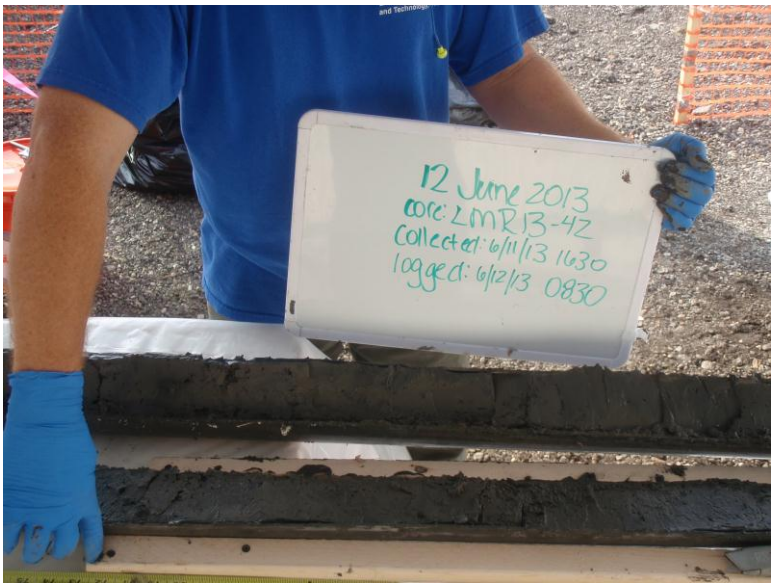
logged: 6/12/13 0830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Collected: 6/11/13 1630
logged: 6/12/13 0830


12 June 2013
core: LMR13-42
Collected: 6/11/13 1630
logged: 6/12/13 0830

3


12 June 2013
core: LMR13-43
Collected: 6/12/13 0753
logged: 6/12/13 1015


12 June 2013
core: LMR13-43
Collected: 6/12/13 0753
logged: 6/12/13 1015


12 June 2013
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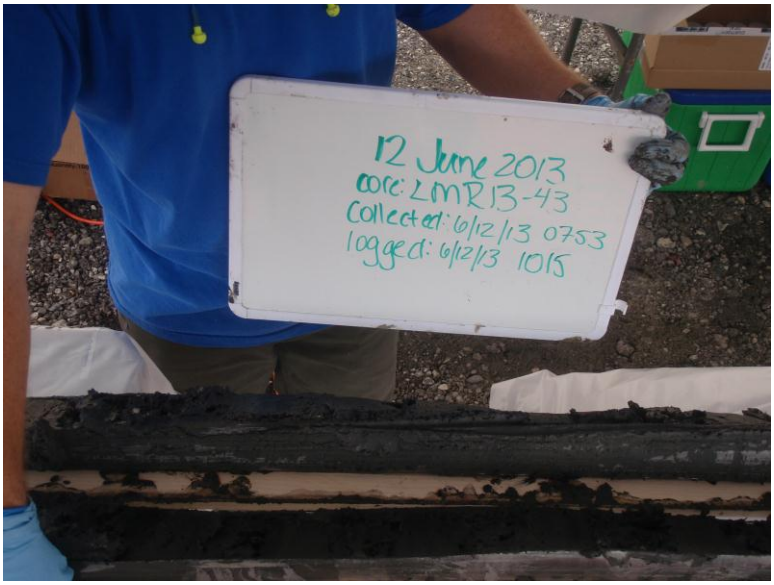
logged: 6/12/13 1015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Collected: 6/12/13 0753
logged: 6/12/13 1015


12 June 2013
core: LMR13-43
Collected: 6/12/13 0753
logged: 6/12/13 1015


12 June 2013
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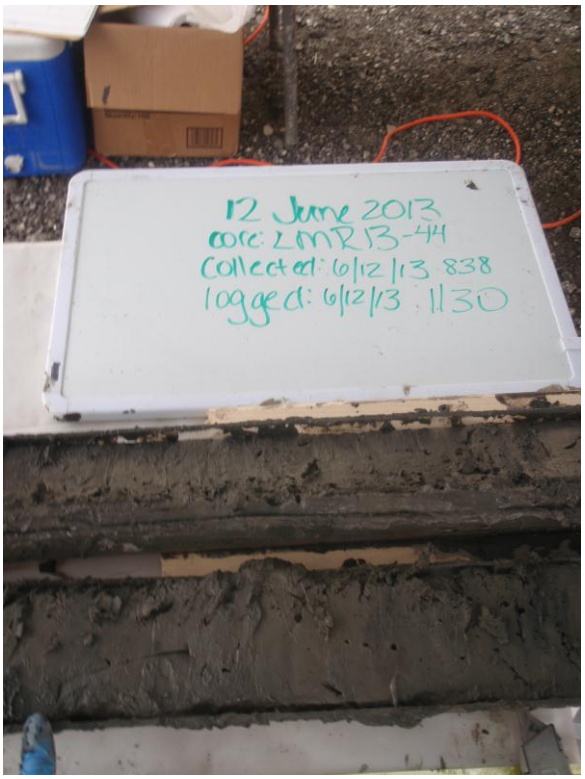
Collected: 6/12/13 838
logged: 6/12/13 1130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logged: 6/12/13 1130


12 June 2013
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Collected: 6/12/13 838
logged: 6/12/13 1130


12 June 2013
core: LMR13-44
Collected: 6/12/13 838
logged: 6/12/13 1130


LMR13-45
Logged: 6/14/13 0815

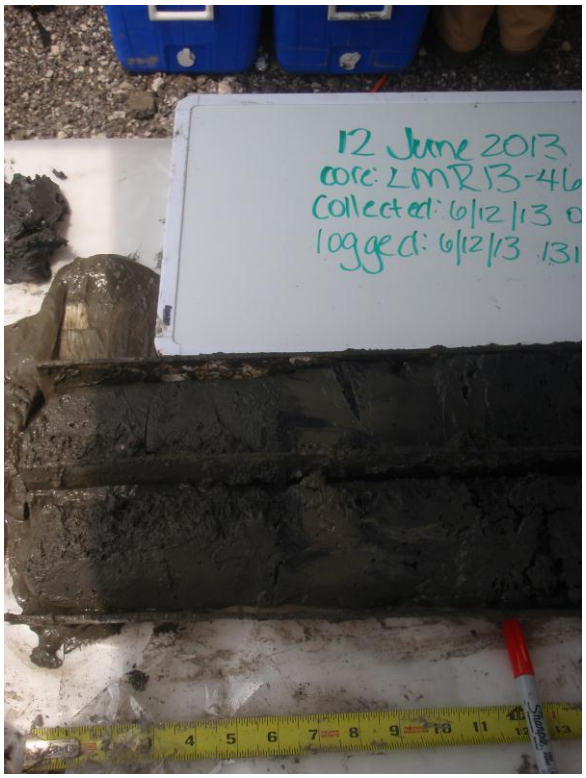

LMR13-45
Logged: 6/14/13 0815


LMR13-45
Logged: 6/14/13 0815


LMR13-45
Logged: 6/14/13 0815


LMR13-45
Logged: 6/14/13 0815


LMR13-45
Logged: 6/14/13 0815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logged: 6/12/13


12 June 2013
core: LMR13-46
Collected: 6/12/13 0914
logged: 6/12/13 1315


12 June 2013
core: LMR13-46
Collected: 6/12/13 0914
logged: 6/12/13 1315


12 June 2013
core: LMR13-46
Collected: 6/12/13 0914
logged: 6/12/13 1315


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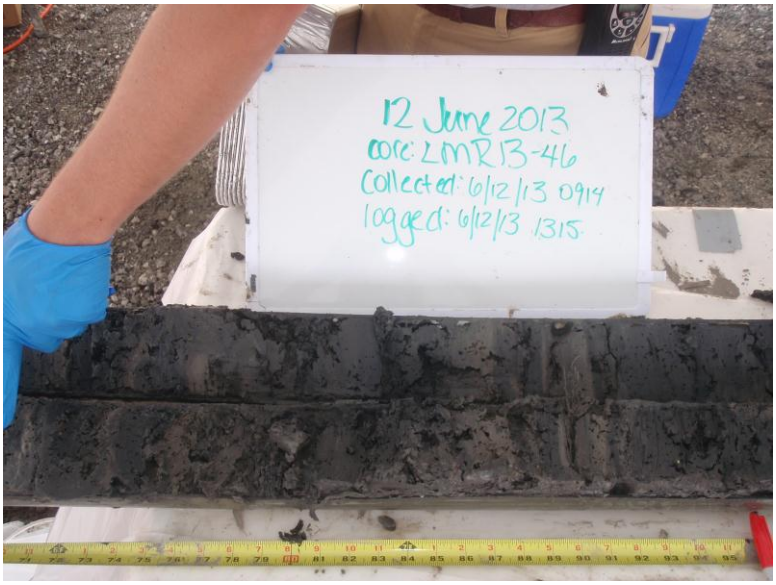
logged: 6/12/13 1315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logged: 6/12/13 1315


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Logged: 6/12/13 1315


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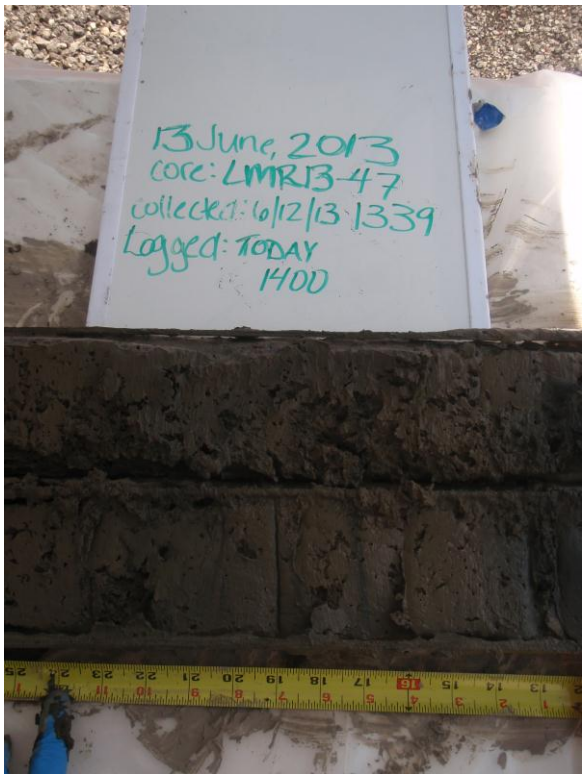
collected: 6/12/13 1339
Logged: TODAY
1400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collected: 6/12/13 1339
Logged: TODAY
1400


13 June, 2013
core: LMRI3-47
collected: 6/12/13 1339
Logged: TODAY
1400


13 June, 2013
core: LMRI3-47
collected: 6/12/13 1339
Logged: TODAY
1400


13 June, 2013
core: LMRI3-47
collected: 6/12/13 1339
Logged: TODAY
1400


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collected: 6/12/13 1339
Logged: TODAY
1400


13 June, 2013
core: LMR13-47
collected: 6/12/13 1339
Logged: TODAY
1400

II. **Photos of all Logs Created on 6/15/13 and later**





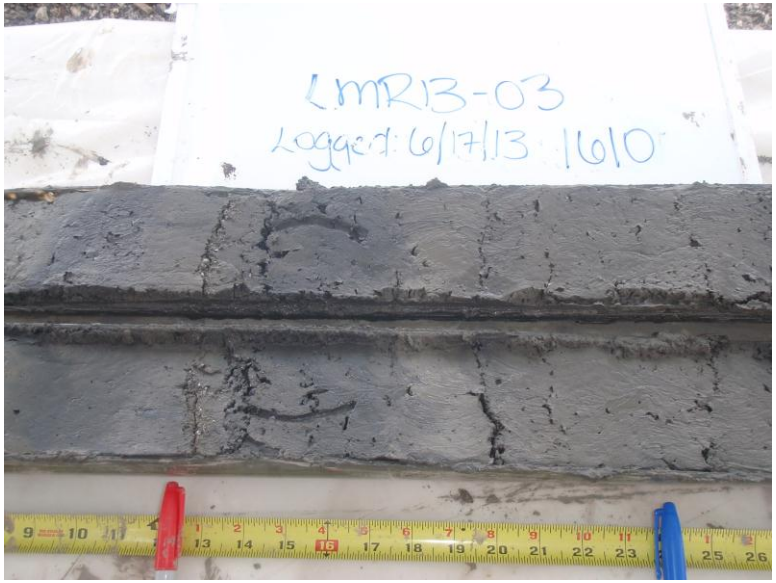





LmR13-01
Logged: 6/17/13 1020


LmR13-01
Logged: 6/17/13 1020


LmR13-03
Logged: 6/17/13 1610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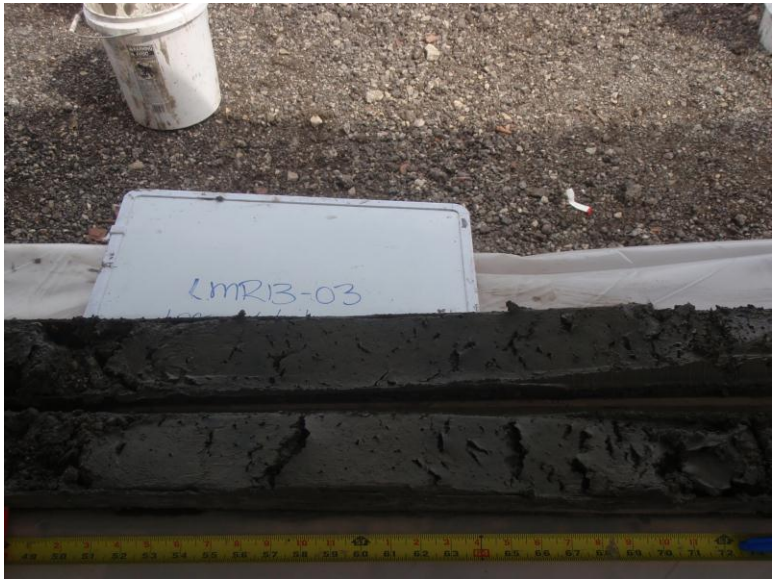
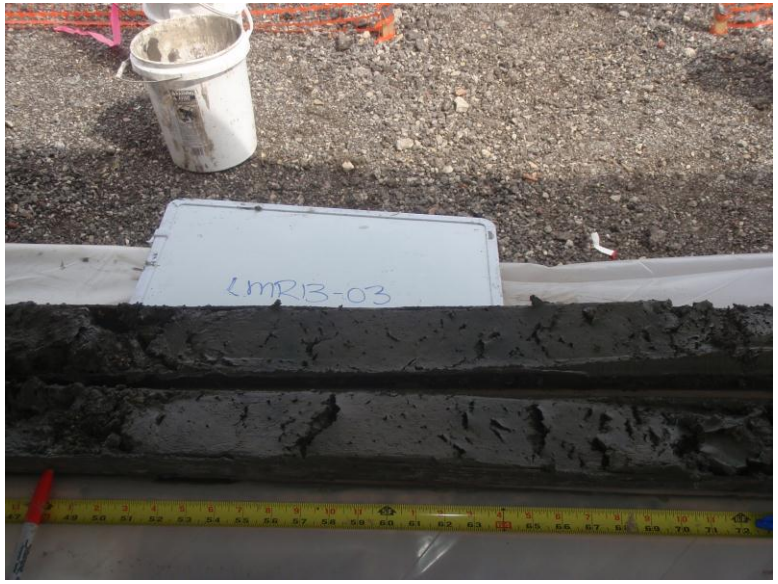
Logged: 6/17/13 1610


LMR13-03
Logged: 6/17/13 1610


LMR13-03


LMR13-03


LMR13-03

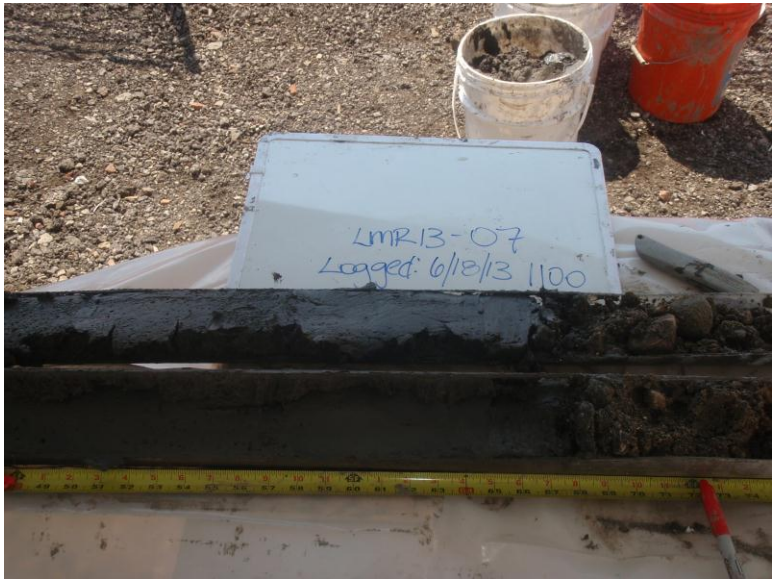

LmR13-03
Logged: 6/17/13 1610


LmR13-03
Logged: 6/17/13 1610


LmR13-07
Logged: 6/18/13 1100


LmR13-07
Logged: 6/18/13 1100


LMR13-07

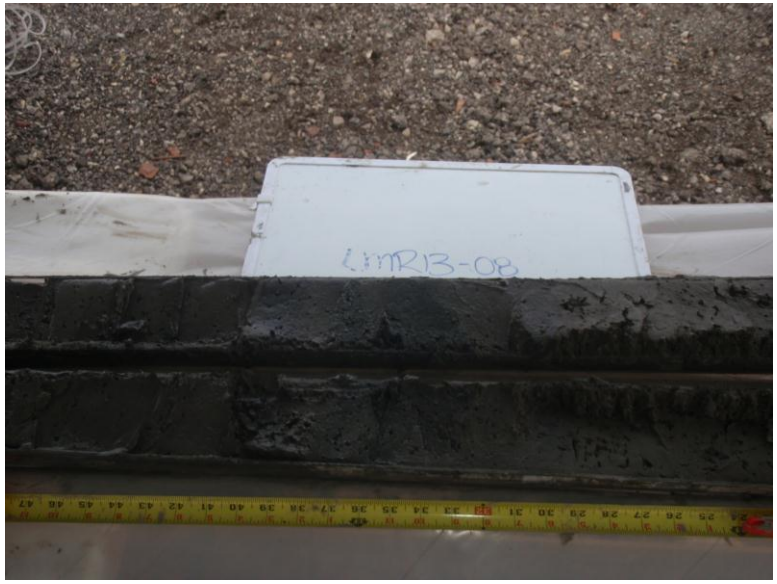

LMR13-07
Logged: 6/18/13 1100


13-07
6/18/13 1100


LMR13-08
Logged: 6/17/13 1710


LMR13-08
Logged: 6/17/13 JTD



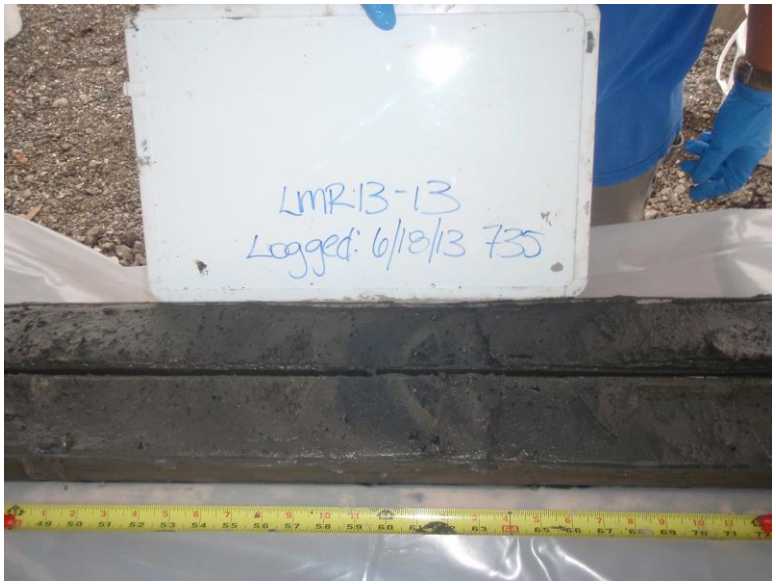

LMR13-08


LMR13-08
Logged: 6/17/13 JTD


LMR:13-13
Logged: 6/18/13 735


LMR:13-13
Logged: 6/18/13 735


LMR:13-13
Logged: 6/18/13 735

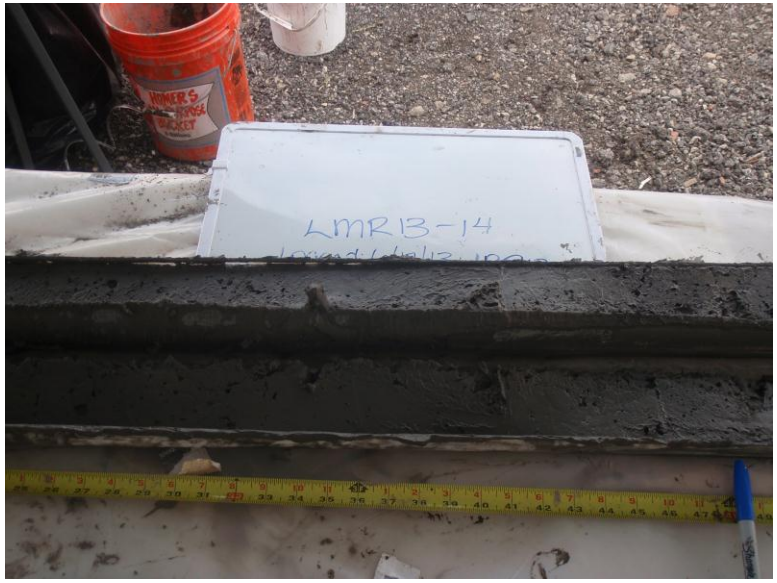

LMR:13-13
Logged: 6/18/13 735


LMR13-13
Logged: 6/18/13 735


LMR13-13
Logged: 6/18/13 735


LMR13-14


LMR13-14
Logged: 6/17/13 1820


LMR13-14


LMR13-14


LMR13-14


LMR13-14
Logged: 6/17/13 1820


LMR13-15
Logged: 6/18/13 1335


LMR13-21
Logged: 6/18/13 1250

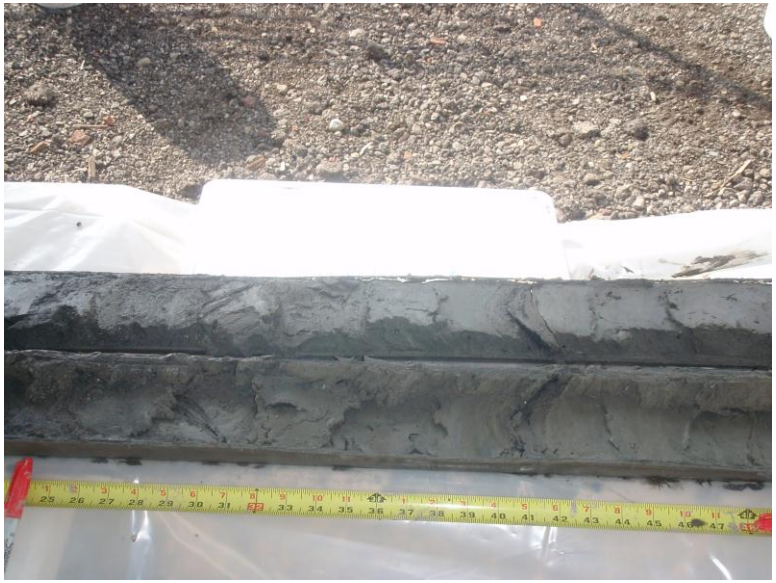

LMR13-21

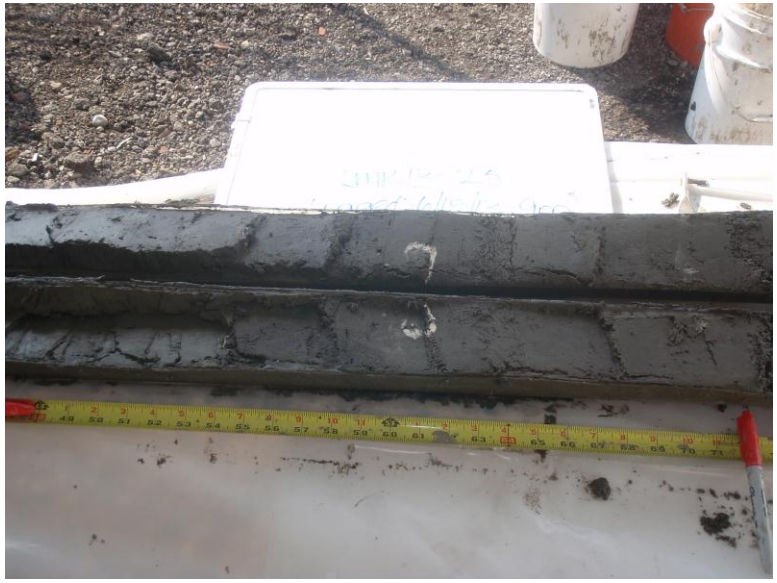


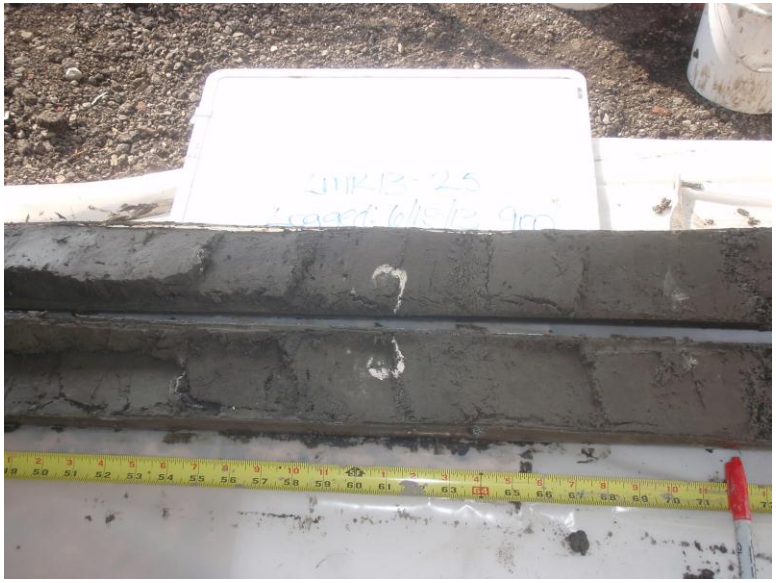

LMR13-21
Logged: 6/18/13 1250


LMR13-25
Logged: 6/18/13 900


LMR13-25
Logged: 6/18/13 900








LMR13-25
Logged: 6/18/13 900


LMR13-28
Logged: 6/15/13 945


LMR13-28
Logged: 6/15/13 945

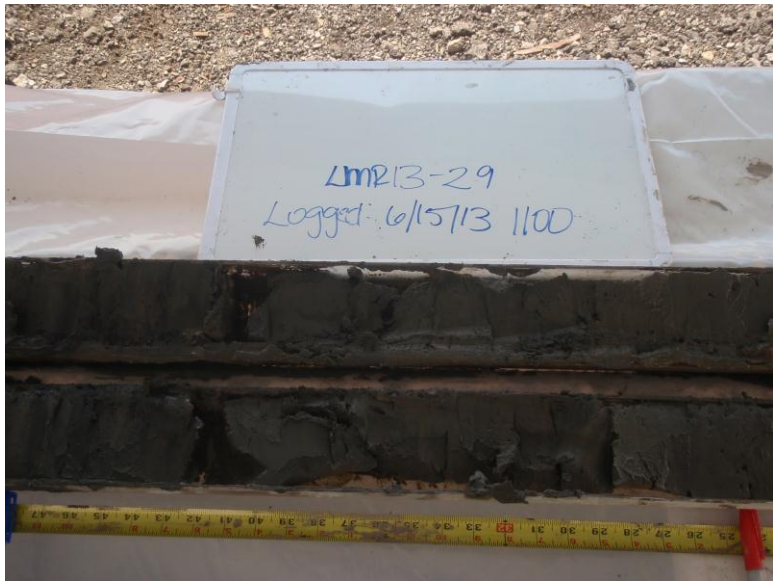

LMR13-28
Logged: 6/15/13 945


LMR13-28
Logged: 6/15/13 945


LMR13-28
Logged: 6/15/13 945


LMR13-29
Logged: 6/15/13 1100


LMR13-29
Logged: 6/15/13 1100


LMR13-29
Logged: 6/15/13 1100


LMR13-29
Logged: 6/15/13 1100


LMRB-29
Logged: 6/15/13 1100


LMRB-30
Logged: 6/19/13 0700


LMRB-30
Logged: 6/19/13 0700


LMRB-30
Logged: 6/19/13 0700




LMRB-30
Logged: 6/19/13 CCC


LMRB-30
Logged: 6/19/13 CCC


LMR13-31
Logged: 6/15/13 1440


LMR13-31
Logged: 6/15/13 1440


LMR13-32
Logged: 6/15/13 1350


LMR13-32
Logged: 6/15/13 1350


LMR13-32
Logged: 6/15/13 1350

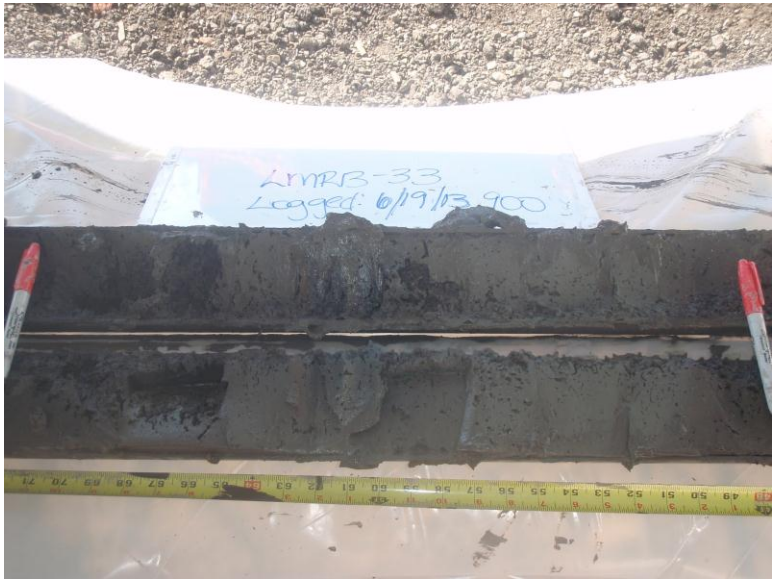

LMR13-32


LMR13-32


LMRB-33
Logged: 6/19/13 900


LMRB-33
Logged: 6/19/13 900


LrnRB-33
Logged: 6/19/13 900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Logged: 6/19/13 900


LrnRB-33
Logged: 6/19/13 900


LrnRB-33
Logged: 6/19/13 9


LMR13-34
Logged: 6/15/13 1130


LMR13-34
Logged: 6/15/13 1130


LMR13-34
Logged: 6/15/13 1130


LMR13-34
Logged: 6/15/13 1130


LMR13-34
Logged: 6/15/13 1130


LMR13-34
Logged: 6/15/13 1130


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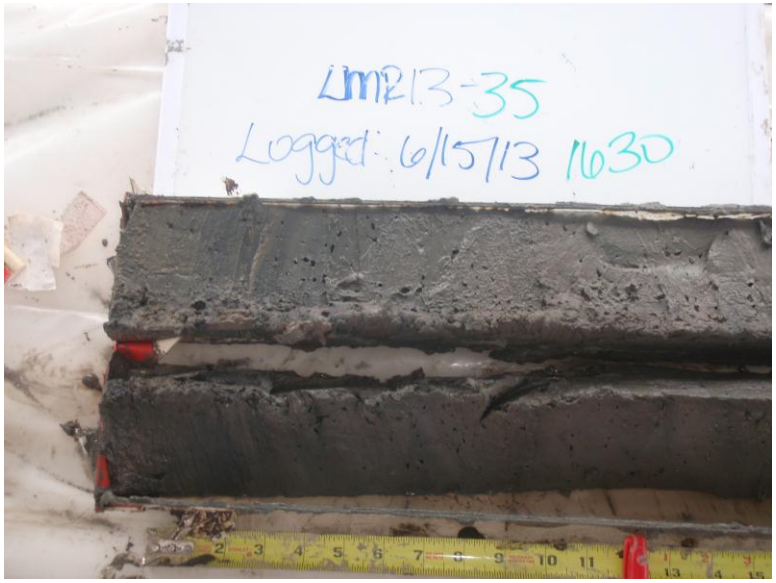
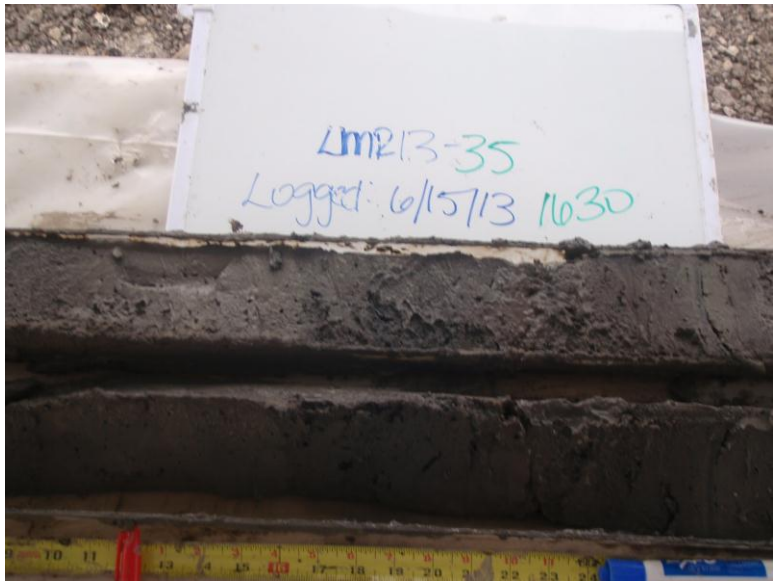
Logged: 6/15/13 1130


LMR13-34
Logged: 6/15/13 1130

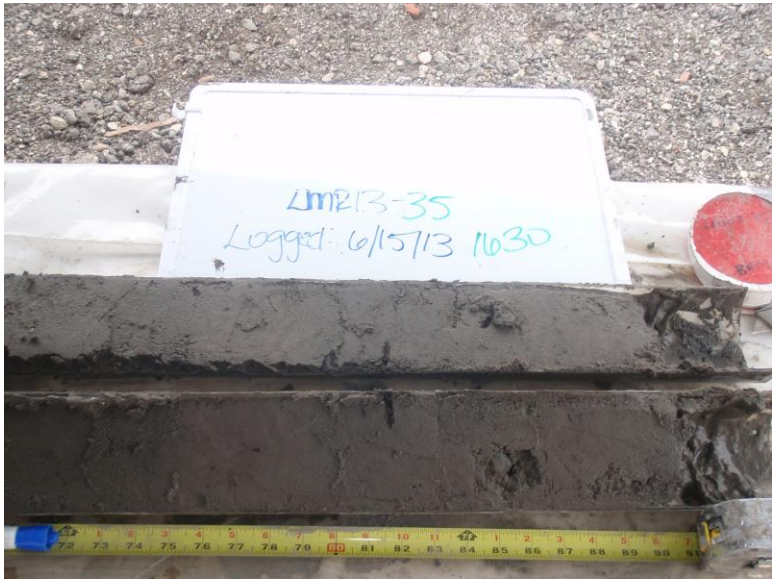

LM213-34
Logged: 6/15/13 1130


LM213-35
Logged: 6/15/13 1630

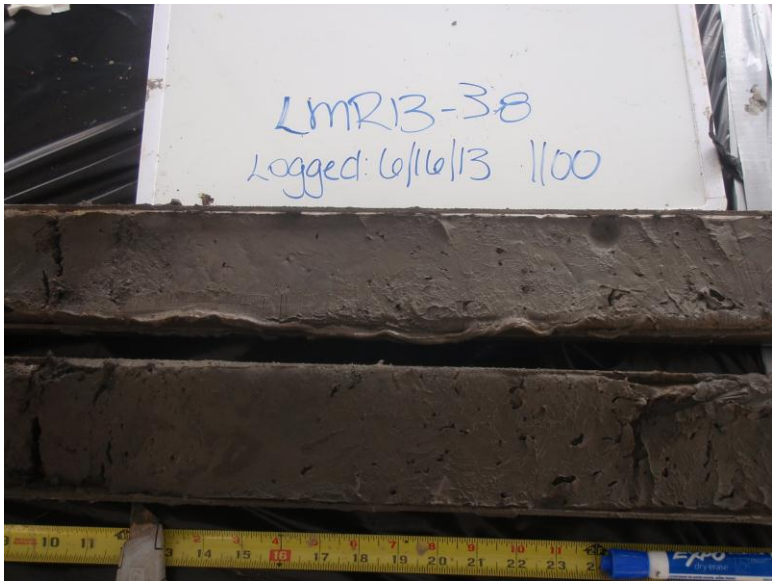

LM213-35
Logged: 6/15/13 1630


LM213-35

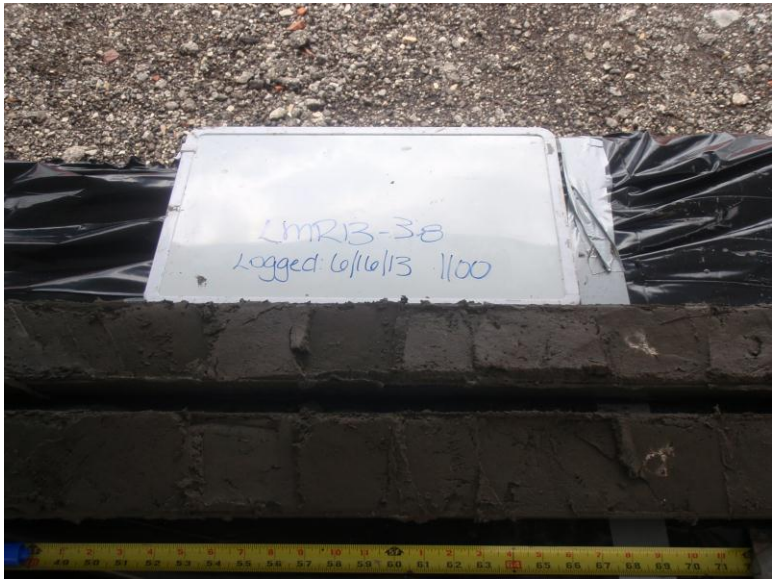

LMR13-35
Logged: 6/15/13 1630


LMR13-35
Logged: 6/15/13 1630


LMR13-38
Logged: 6/16/13 1100


LMR13-38
Logged: 6/16/13 1100


LMRB-38
Logged: 6/16/13 1100

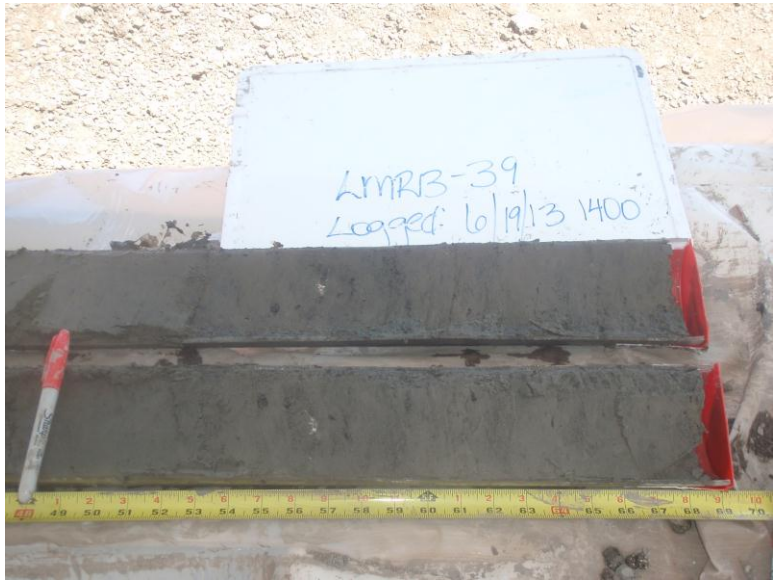

LMRB-38
Logged: 6/16/13 1100


LMRB-38
Logged: 6/16/13 1100


LMRB-39
Logged: 6/19/13 1400


LmRB-39
Logged: 6/19/13 1400


LmRB-39


LmRB-39
Logged: 6/19/13 1400


LmRB-40
Logged: 6/16/13 1225

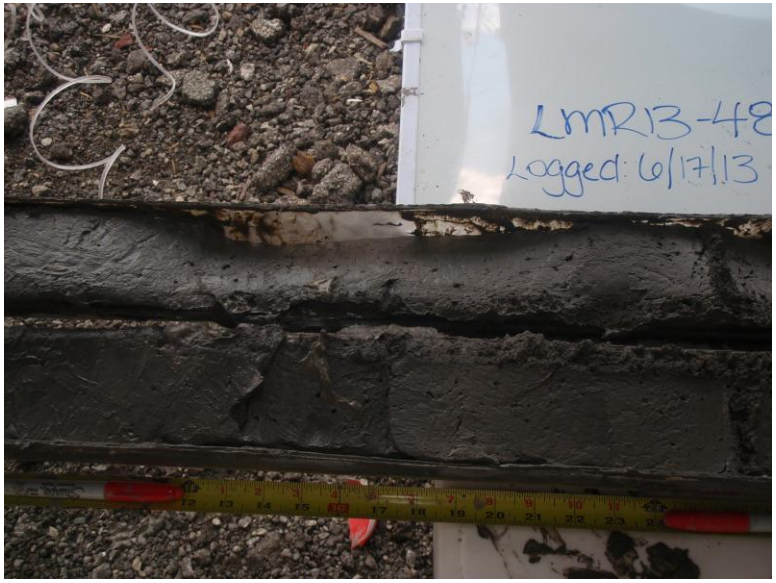

LMR13-40
Logged: 6/16/13 1225

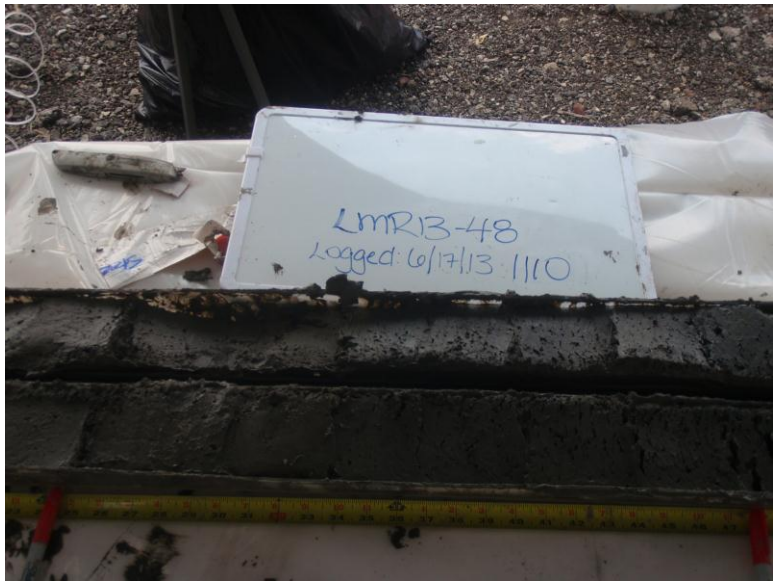

LMR13-40
Logged: 6/16/13 1225


LMR13-40
Logged: 6/16/13 1225


LMR13-40
Logged: 6/16/13: 1225


LmR13-48
Logged: 6/17/13 1110


LmR13-48
Logged: 6/17/13


LmR13-48
Logged: 6/17/13 1110




LMR13-48
Logged: 6/17/13 1110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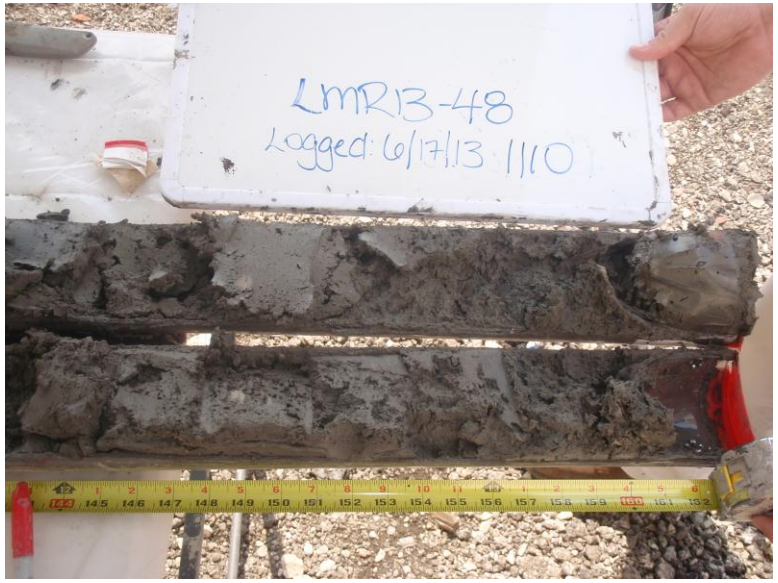
Logged: 6/17/13 1110


LMR13-48
Logged: 6/17/13 1110


LMR13-48
Logged: 6/17/13 1110


LMR13-48
Logged: 6/17/13 1110


LMR13-52
Logged 6/20/13, 1420


LMR13-52
Logged 6/20/13, 1420


MR13-52


LMRB-52


LMRB-53
Logged 6/20/13, 1750


LMRB-54
Logged: 6/19/13 1000


LMRB-54
Logged: 6/19/13 1000


LrmRB-54
Logged: 6/19/13 1000


LrmRB-54
Logged: 6/19/13 1000


LrmRB-54
Logged: 6/19/13 1000


LrmRB-54
Logged: 6/19/13 1000


LrmRB-55
Logged: 6/19/13 1100


LrmRB-55




LrmRB-55
Logged: 6/19/13 1100

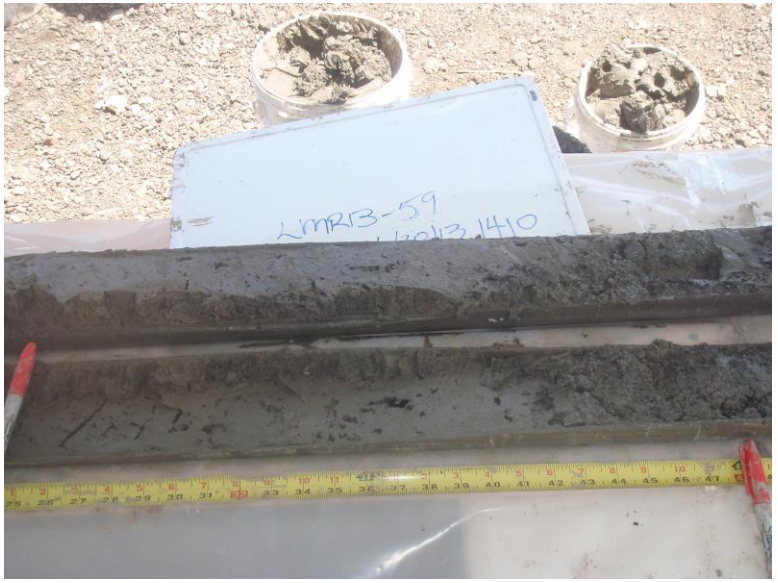

LMR13-56
Logged 6/20/13, 1745


LMR13-58


LMR13-58
Logged: 6/20/13 1130


LMR13-59
Logged: 6/20/13 1410


LMR13-59


LMR13-59

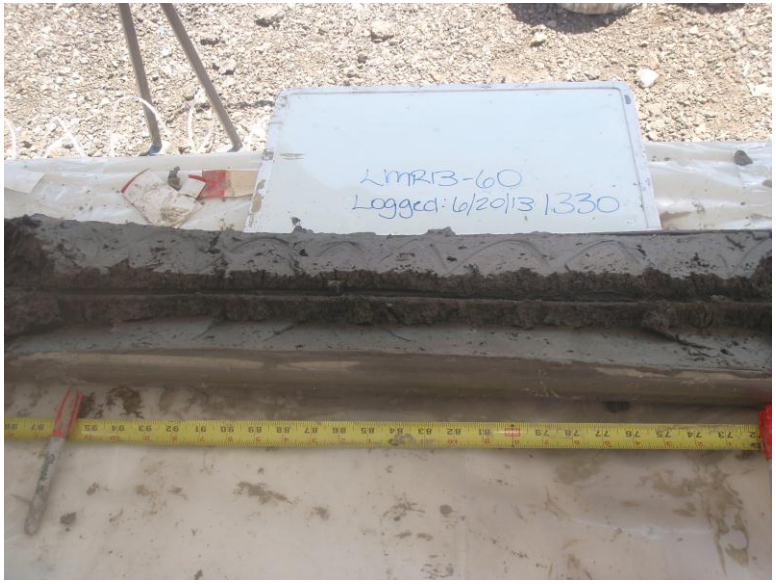

LMR13-59
Logged: 6/20/13 1410


LMR13-60
Logged: 6/20/13 1330


LMRB-60
Logged: 6/20/13 1330


LMRB-60


LMRB-60
Logged: 6/20/13 1330


LMRB-60
Logged: 6/20/13 1330


LMR13-60
Logged: 6/20/13 133


LMR13-67
Logged: 6/20/13 1020


LMR13-67
Logged: 6/20/13 1020


LMR13-67
Logged: 6/20/13 1020



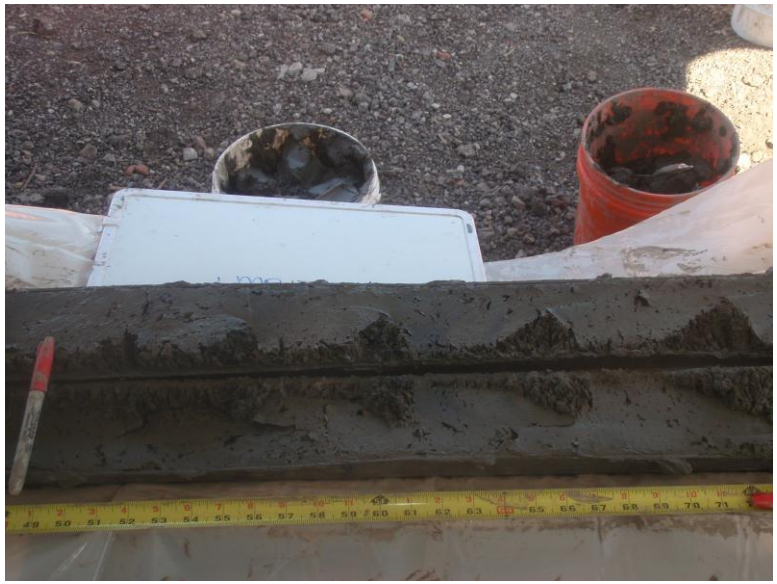

LMR13-67
Logged: 6/20/13 1020


LMR13-67
Logged: 6/20/13 1020


LMR13-64
Logged: 6/19/13 1700


LMR13-UH
Logged: 6/19/13 1700


LMR13-UH

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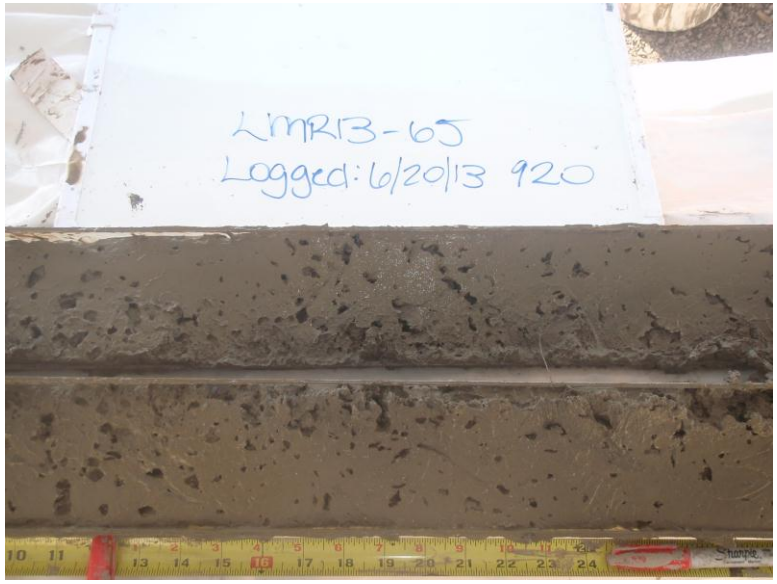
LMR13-64
Logged: 6/19/13 1700


LMR13-65
Logged: 6/20/13 920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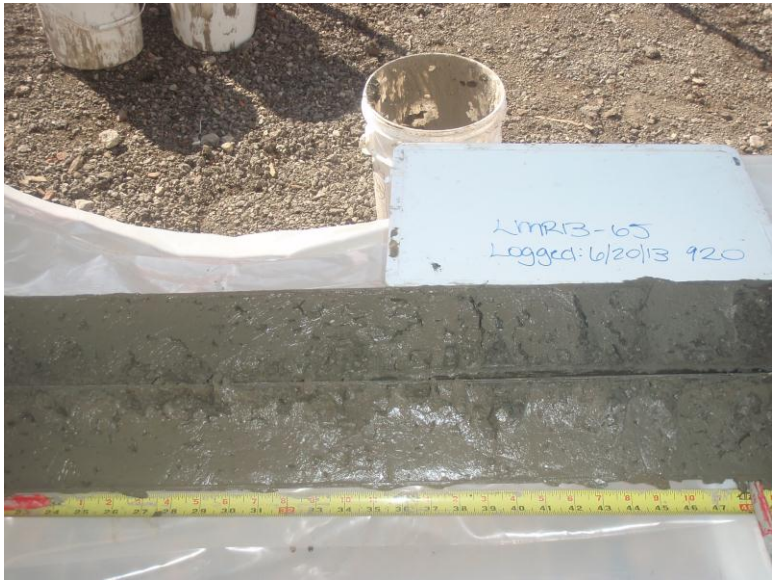
Logged: 6/20/13 920


LMR13-65
Logged: 6/20/13 920

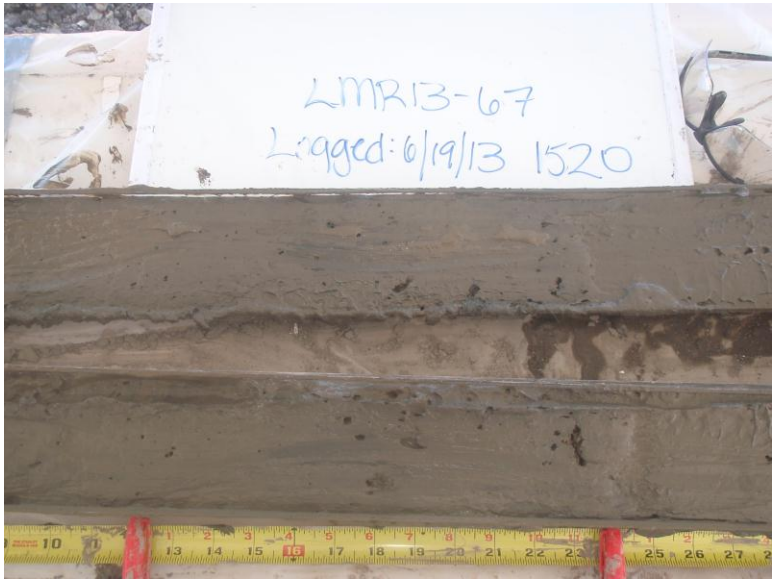

LMR13-65
Logged: 6/20/13 920


LMR13-66
Logged: 6/20/13 1115


LMR13-66
Logged: 6/20/13 1115


LMR13-66
Logged: 6/20/13 1115


LMR13-67
Logged: 6/19/13 1520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Logged: 6/19/13 1520


LMR13-67
Logged: 6/19/13 1520


LMR13-67
Logged: 6/19/13 1520

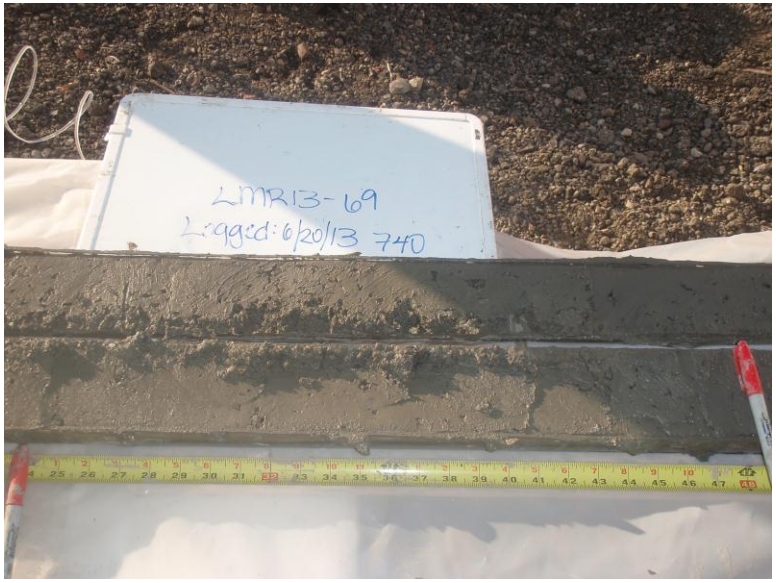

LMR13-67


LMR13-67
Logged: 6/19/13 1520


LMR13-68
Logged: 6/20/13 840


LMR13-69
Logged: 6/20/13 740


LMR13-69
Logged: 6/20/13 740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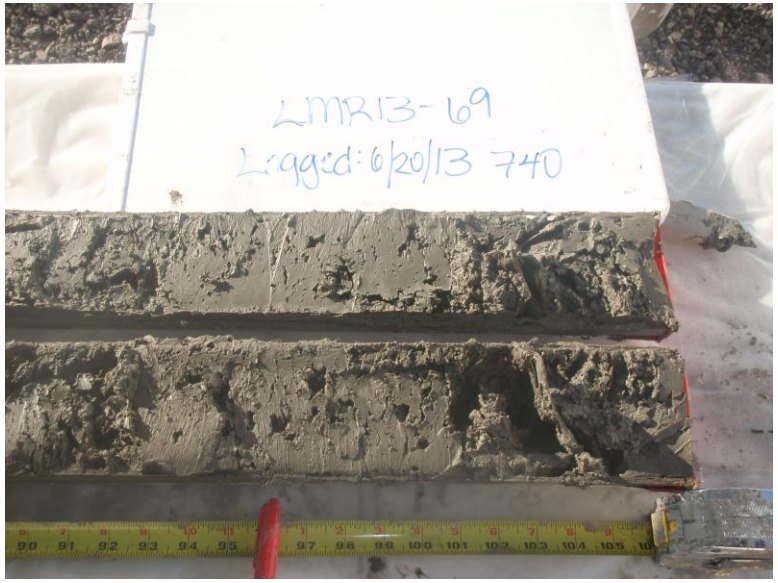
Logged: 6/20/13 740


LMR13-69


LMR13-69
Logged: 6/20/13 740


LMR13-69
Logged: 6/20/13 740


LMR13-70
Logged 6/20/13, 1105


LMR13-70


LMR13-70
Logged 6/20/13, 1105

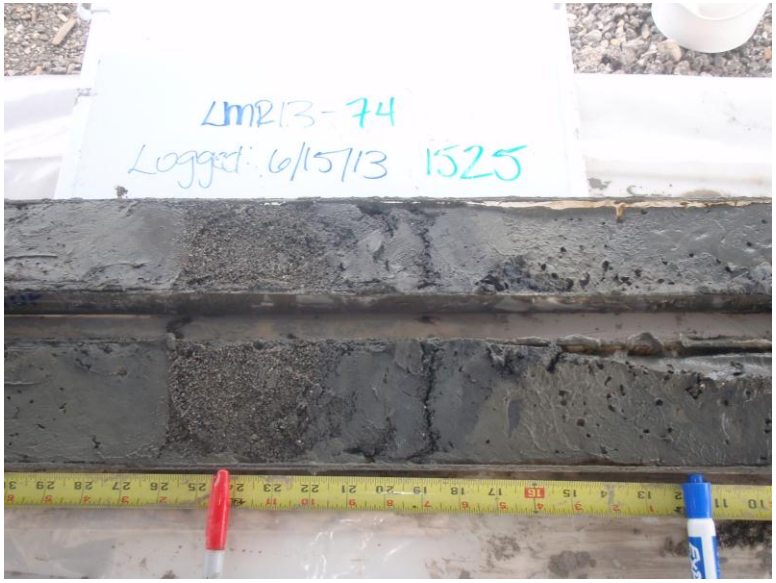

LMR13-77
Logged: 6/18/13 1000


LMR13-77


LMR13-77


LMR13-77
Logged: 6/18/13 1000


LMR13-74
Logged: 6/15/13 1525


LMR13-74
Logged: 6/15/13 1525


LMR13-74


LMR13-74
Logged: 6/15/13 1525


LMR13-74
Logged: 6/15/13 1525


LMR13-75
Logged: 6/15/13 1420

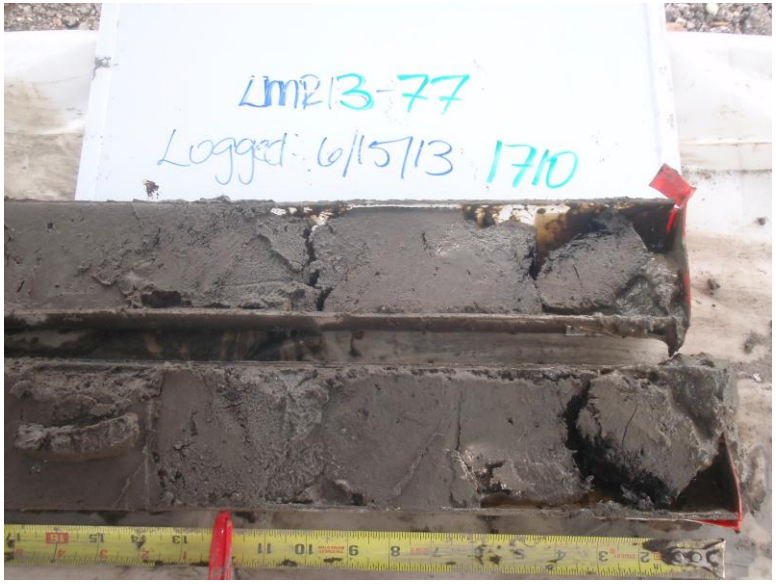

LMR13-75
Logged: 6/15/13 1420


LMR13-76
Logged: 6/15/13 1610


LMR13-76
Logged: 6/15/13 1610


LMR13-76
Logged: 6/15/13 1610


LMR13-76
Logged: 6/15/13 1610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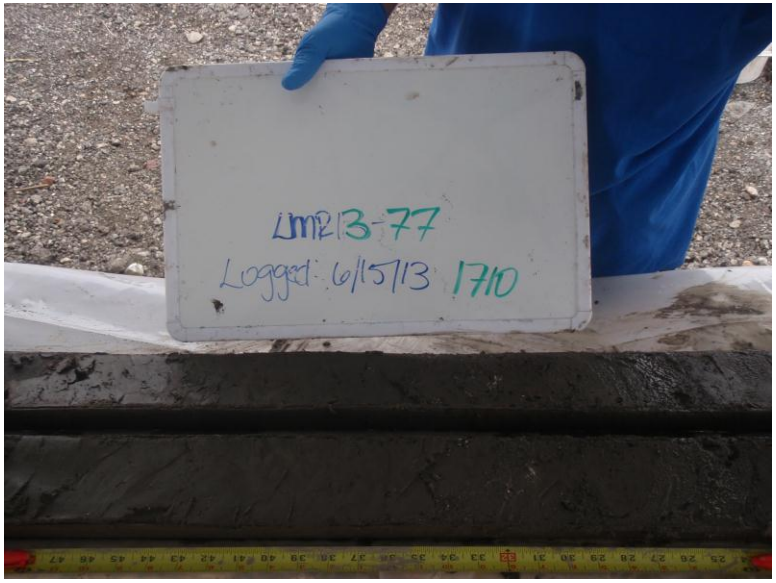
Logged: 6/15/13 1710


LMR13-77
Logged: 6/15/13 1710


LMR13-77
Logged: 6/15/13 1710


LMR13-77
Logged: 6/15/13 1710


LMR13-78
Logged: 6/16/13 1030

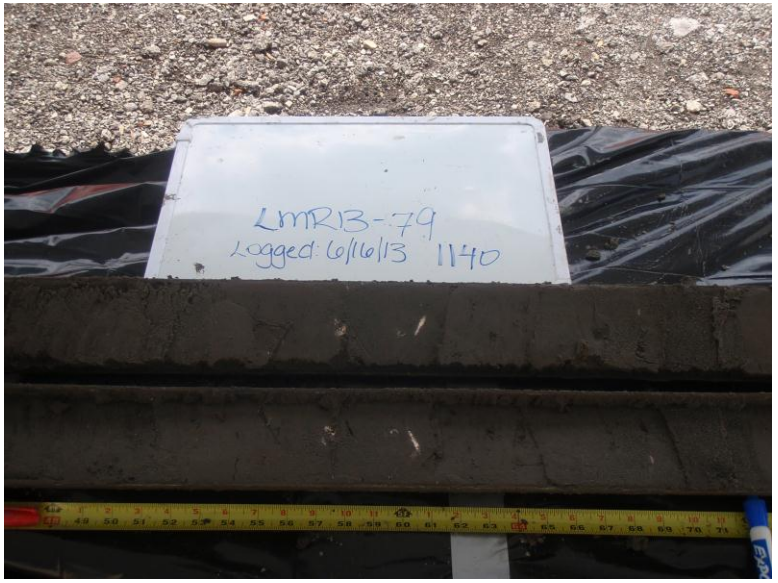



LmR13-79
Logged: 6/16/13 1140


LmR13-79
Logged: 6/16/13 1140


LmR13-79
Logged: 6/16/13 1140


LmR13-79
Logged: 6/16/13 1140


LmR13-79
Logged: 6/16/13 1140


LmR13-79
Logged: 6/16/13 1140


LmR13-80
Logged 6/20/13, 1640


LYMK13-80
Logged 6/20/13, 1640


LYMK13-80


LYMK13-80
Logged 6/20/13, 1640


LYMK13-80
Logged 6/20/13, 1640

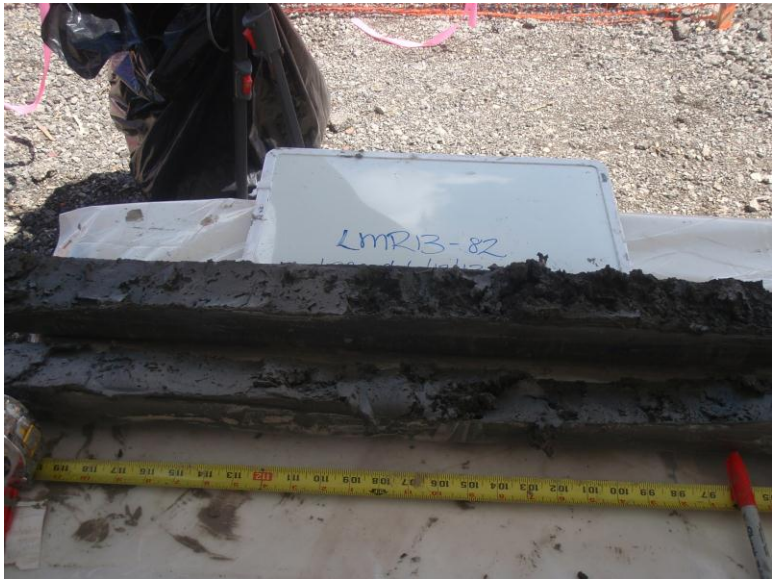

LMR13-82
Logged: 6/17/13 1450


LMR13-82
Logged: 6/17/13 1450


LMR13-82
Logged: 6/17/13 1450


LMR13-82


LMR13-82
Logged: 6/17/13 1450


LMR13-82


LMR13-82
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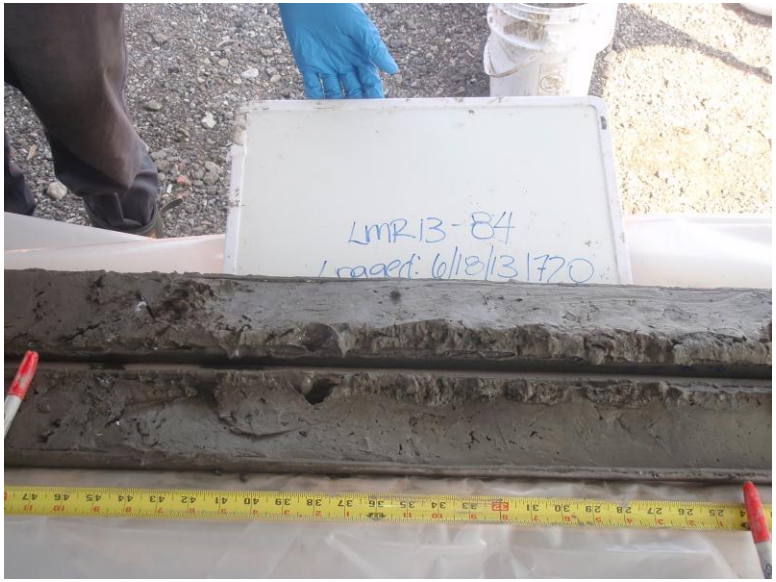
LMR13-84
Logged: 6/18/13 1720


LMR13-84
Logged: 6/18/13 1720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LMR13-84
Logged: 6/18/13 1720


LMR13-84
Logged: 6/18/13 1720


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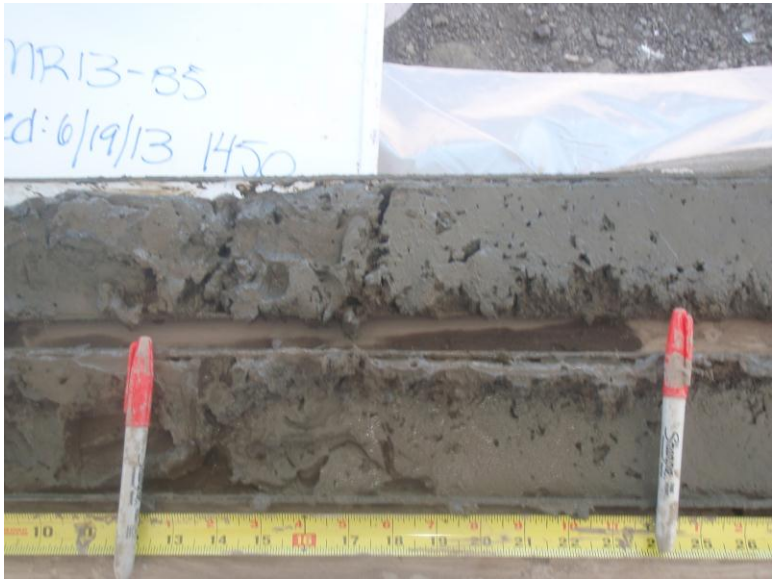
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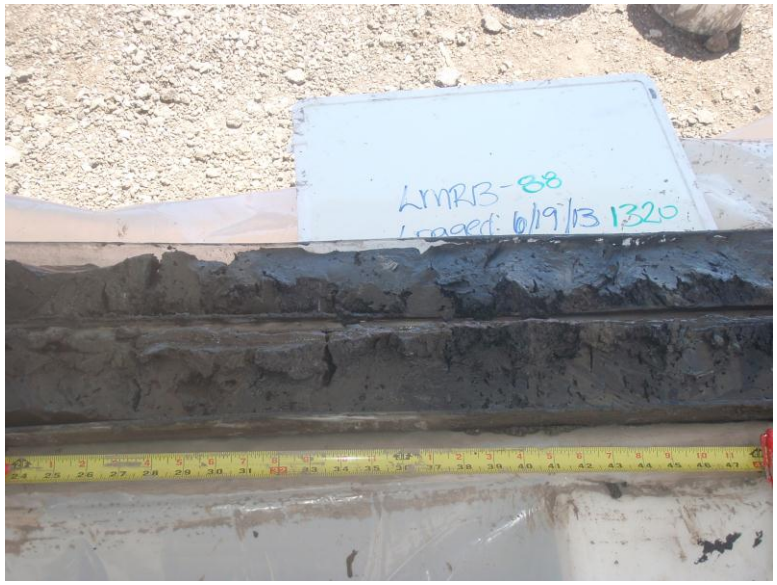
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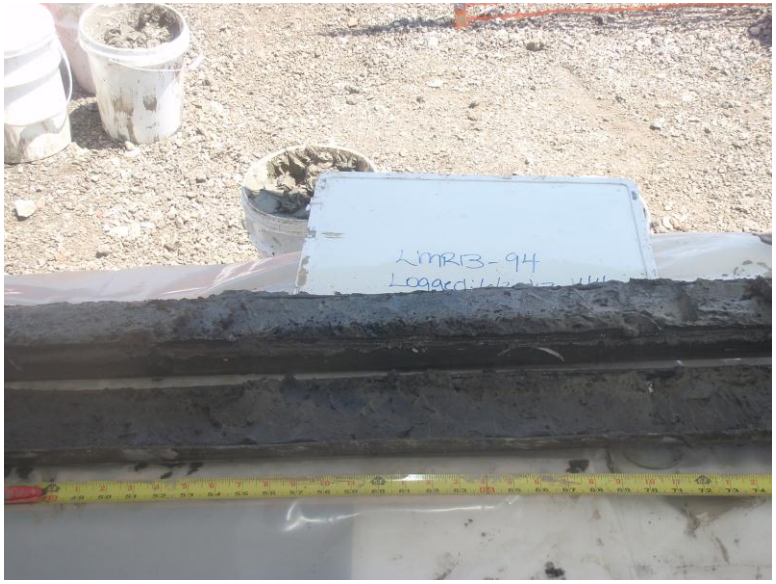
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LIMRI3-95
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Appendix D

Data Usability Assessment Report

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Data Usability Assessment Report
Phase 2 of the Lower Maumee River Site Characterization
Maumee Area of Concern, Toledo, Ohio

Great Lakes Architect-Engineer Services
Contract: EP-R5-11-10

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LIST OF ACRONYMS AND ABBREVIATIONS

%D	Percent difference
%R	Percent recovery
%RSD	Percent relative standard deviation
AOC	Area of Concern
AVS	Acid volatile sulfide
BUI	Beneficial use impairment
CB&I	Chicago Bridge & Iron Company
CLP	Contract Laboratory Program
COC	Chain-of-custody
CRDL	Contract-required detection limit
CRQL	Contract-required quantitation limit
DMC	Deuterated monitoring compound
DUAR	Data Usability Assessment Report
DQO	Data Quality Objective
DUP	Duplicate
DVR	Data validation report
EA	EA Engineering, Science, and Technology, Inc.
EDD	Electronic data deliverable
EDS	Environmental Data Services, Inc.
EPA	U.S. Environmental Protection Agency
FSP	Field Sampling Plan
GC/MS	Gas Chromatography/Mass Spectroscopy
GLAES	Great Lakes Architect-Engineer Services
GLNPO	Great Lakes National Program Office
HEM	Hexane Extractable Material
ICP	Inductively Coupled Plasma
IS	Internal Standard
LCS	Laboratory control sample
LCSD	Laboratory control spike duplicate

MDL	Method detection limit
MS/MSD	Matrix spike/matrix spike duplicate
NELAC	National Environmental Laboratory Accreditation Conference
OEPA	Ohio Environmental Protection Agency
PAH	Polycyclic aromatic hydrocarbons
PARCCS	Precision, accuracy, completeness, comparability, representativeness, and sensitivity
PCB	Polychlorinated biphenyl
QA/QC	Quality assurance/quality control
QAPP	Quality Assurance Project Plan
QATS	Quality Assurance Technical Support Program
RAP	Remedial Action Plan
RPD	Relative percent difference
RRF	Relative response factor
RT	Retention time
SDG	Sample delivery group
SEM	Simultaneously extracted metals
SOP	Standard operating procedure
SVOC	Semivolatile organic compound
TestAmerica	TestAmerica Laboratories, Inc.
TOC	Total organic carbon

1. INTRODUCTION

EA Engineering, Science, and Technology, Inc. (EA), on behalf of U.S. Environmental Protection Agency (EPA) Great Lakes National Program Office (GLNPO), has prepared this Data Usability Assessment Report (DUAR) to summarize the data review and data validation performed on the data sets collected from the field investigation at the Lower Maumee River Site from 22 to 26 October 2012, and determine whether the sample results meet the Data Quality Objectives (DQOs) outlined in the Quality Assurance Project Plan (QAPP) and Field Sampling Plan (FSP) for Phase 2 of the Lower Maumee River Site Characterization, Maumee Area of Concern (AOC), Toledo, Ohio (EA 2013), finalized May 2013.

The principal goals of the study derived from the DQO process are as follows:

1. Define the nature and extent of chemical contamination in the areas of soft sediment deposition, including depth of contamination; provide information about depositional areas; and identify high priority areas for remediation or for further investigation.

2. Develop preliminary estimates for the volume of contaminated soft sediment in these areas.

3. Identify hotspots.

4. Identify potential sources of contamination.

In order to address the goals of the study, sediment samples were collected and analyzed as outlined in the QAPP/FSP (EA 2013). Sediment samples were analyzed for semivolatile organic compounds (SVOCs), polycyclic aromatic hydrocarbons (PAHs), polychlorinated biphenyls (PCB) Aroclors, metals, oil and grease, total organic carbon (TOC), acid volatile sulfide (AVS) and simultaneously extracted metals (SEM), percent moisture, and grain size.

2. SITE INFORMATION

The Maumee River has its headwaters in Fort Wayne, Indiana, and flows over 130 river miles to its mouth at Lake Erie in Toledo, Ohio. The Maumee has the largest drainage area of any Great Lakes river with 8,316 square miles. The Maumee AOC does not include the river in its entirety; rather, it includes the lower reach and tributaries, as well as some of the neighboring watersheds. This project will take place in the lowermost reaches of the Maumee River and at its confluence with Maumee Bay.

While the Maumee River has a long history of industrial use, there is little historical data, especially at depth, which identifies the nature and extent of contamination. It is believed that contaminated sediments in the study area contribute to beneficial use impairments (BUIs) in the AOC, but there is not enough historical data for the Maumee River to assess the impact of the contamination. Impairment of beneficial use means a change in the chemical, physical, or biological integrity of the Great Lakes ecosystem. The Maumee Remedial Action Plan (RAP) identifies the following BUIs for the Maumee River AOC:

- Restrictions on fish and wildlife consumption
- Eutrophication or undesirable algae
- Restrictions on drinking water consumption, or taste and odor
- Degradation of fish and wildlife populations
- Beach closings
- Fish tumors or other deformities
- Degradation of aesthetics
- Degradation of benthos
- Restriction on dredging activities
- Loss of fish and wildlife habitat.

The Lower Maumee River is an industrialized port with both current and historical contamination. Current land use along the Maumee River is primarily industrial and commercial. It has received historical and current contamination sources from various industries, chemical plants, petroleum production, and wastewater outfalls. Sampling by the Ohio Environmental Protection Agency (OEPA) and City of Toledo shows elevated concentrations of PCBs, PAHs, and heavy metals in surface sediments of the project area. These sediments adversely impact the survival and viability of benthic organisms and fish communities, while placing restrictions on dredging. The sediment contamination may also impact human health due to consumption of fish tainted with elevated levels of PCBs, and heavy metals. The International Joint Commission indicates in the Maumee River RAP that “heavy metals and organic chemical sediment contamination are what led to the lower Maumee River being classified as an Area of Concern” (RAPAC 1991). In 2011 and 2012, GLNPO performed a sediment assessment of the Phase 1 area of the Lower Maumee River. Results of that sampling event are presented in a *Sediment Assessment Report, Lower Maumee River, Maumee River Area*

of Concern, Toledo, Lucas County, Ohio, 2012. Sampling results indicated that PAHs and metals are of concern in the Phase 1 area.

In 2010, GLNPO performed a sediment investigation of the Duck Creek and Otter Creek confluence areas. The results showed that Duck Creek confluence area, which is adjacent to the Phase 2 Maumee project area, has high concentrations of PCBs below the sediment surface. The project area for this Phase 2 investigation encompasses the Lower Maumee River from the I-280 Bridge downstream to the Cullen Park peninsula, approximately 4.6 miles. The project area does not include any part of the U.S. Army Corp of Engineers Federal Navigation Channel, or any of the privately maintained slips near Presque Isle. The site area is also contiguous with GLNPO's Great Lakes Legacy Act Duck and Otter Creek confluence project area.

3. DATA VALIDATION

This section presents a summary of the data collected, verified, and validated during the site characterization field investigation at Lower Maumee River. Sediment was the only medium collected at the Site. Twenty-one sample delivery groups (SDGs) were reported by TestAmerica Laboratories, Inc. (TestAmerica) and submitted for data validation. All analytical laboratory data packages are located in Appendix A.

All data were verified by EA, to ensure completeness and accuracy of field chain-of-custody, laboratory electronic data deliverables (EDDs), and laboratory analytical data packages. The project goal was for data to undergo two levels of review and validation. Environmental Data Services, Inc. (EDS), located in Williamsburg, Virginia, was subcontracted by EA to perform a 100 percent Tier I and 20 percent Tier II data validation. Chicago Bridge & Iron Company's (CB&I's) Quality Assurance Technical Support Program (QATS) was subcontracted by EPA to conduct a 100 percent Tier II data validation verification check for this project. The Tier I and Tier II reviews were performed according to the *National Functional Guidelines for Superfund Organics Method Data Review* (EPA 2008) and *National Functional Guidelines for Superfund Inorganics Method Data Review* (EPA 2010).

The EDS data validation reports (DVRs) were prepared for all validations and are presented in Appendix B. Each DVR contains a comprehensive listing of samples reviewed (field sample identifications and laboratory sample numbers), validation review elements, a summary of the individual method's performance, and the sample data sheets showing data validation qualifiers (and reasons for qualification) that were applied to the sample results. Edits were not made to the laboratory's sample data sheets if the performance and quality control (QC) sample results were within laboratory or project criteria. When QC results indicated inadequate performance, validation data qualifiers were applied to the results to inform the data user of the possible performance issues identified in the DVR. These qualifiers are in addition to, or a revision of, the qualifiers provided by the laboratory. On the basis of the validations, data were: (1) accepted without qualification, (2) qualified as indicated in Table 3-1; or (3) rejected "R". The complete list of validation qualifiers applied to the results and their definitions are presented in Table 3-1. Data qualifiers were added to the results in the EDDs. The EDDs contained the original laboratory qualifiers, validation qualifiers, and data revisions.

Specifically, the items/criteria reviewed during the validation process were:

- Holding times and sample preservation
- Gas chromatography/mass spectroscopy (GC/MS) tuning
- Initial and continuing calibration and verifications
- Method blank contamination
- Surrogate spike recoveries
- Matrix spike/matrix spike duplicate (MS/MSD) recoveries
- Laboratory control sample (LCS) recoveries

- Internal standard area and retention time summary forms
- Target compound identification
- Compound quantitation
- Tentatively identified compounds
- Field duplicate sample precision
- Duplicate sample analysis
- Inductively coupled plasma (ICP) interference check sample
- ICP serial dilution
- ICP/MS tuning

CB&I's QATS was contracted by GLNPO to perform Tier 2 data validation verification on all of the data sets validated by EDS. Data validation verification was performed on 2,603 analyses, totaling 49,433 analytical results, from 409 sediment samples. Of the 49,433 analytical results, 47,914 (96.9 percent) of the original data validation results were verified to be correct. Revisions were required to the results for 1,519 of the 49,433 results (3.1 percent). The revisions included changing, adding, or removing select qualifiers from the validated data or changing the Yes to No (or vice versa) in the reportable result column. CB&I provided results of the validation verification including revised EDDs and a summary of the QATS-revised data qualifiers (Appendix C).

All revisions to the results and qualifiers superseded EDS's validation qualifiers and are considered the final validation decisions. The summary of the QATS-revised data qualifiers and justifications are provided in Table 3-2.

QATs data validation review revealed a discrepancy in the project holding time requirements for oil and grease samples. The holding time required by the QAPP/FSP (EA 2013) is 14 days from collection to extraction and 40 days to analysis. The North Canton, Ohio TestAmercia Laboratory Standard Operating Procedure (SOP) number NC-WC-091 for HEM/SGT-HEM for Methods 1664A, 9070A, and 9071B defines the holding time as 28 days from collection to analysis. Method 9071B, n-Hexane Extractable Material (HEM) for Sludge, Sediment, and Solid Samples recommends that the samples be analyzed as soon as possible. QATS validated the oil and grease samples using the 14-day QAPP/FSP (EA 2013) holding time, resulting in the qualification of 167 oil and grease sample results.

EDS validators qualified metal sample results when the associated serial dilution percent differences (%D) exceeded 10 percent. QATS validated the serial dilution samples using the expanded %D criteria of 15 percent allowed in the National Functional Guidelines. This resulted in the removal of 323 J qualifiers from affected metals results for associated serial dilution %Ds that were greater than 10 percent but less than 15 percent.

EDS validators qualified all PAH sample results associated with the deuterated monitoring compound (DMC) 4-chloroaniline-d4 as rejected R when the recovery of 4-chloroaniline-d4 was listed as zero (0) on the FORM II DMC report form. The three compounds affected were 4-chloroaniline, hexachlorocyclopentadiene, and 3,3'-dichlorobenzidine. The QATS validators

changed the qualifiers for these compounds in 148 samples from (R) rejected to (UJ) estimated because the lower acceptable limit for this DMC is so low.

4. QUALITY ASSURANCE/QUALITY CONTROL

The major components of the quality assurance/quality control (QA/QC) program included the collection and analysis of QC samples, the use of SOPs for field and laboratory activities, and data validation and verification of analytical results. The field investigation activities included collection of additional QC samples (e.g., duplicates, MS/MSD, etc.) sufficient to meet the requirements of the DQOs as defined in the QAPP/FSP (EA 2013). In order to provide adequate sample volume for sample analysis, the core intervals were adjusted. During the field investigation, seven locations were relocated, one location was removed, and two locations were added after consultation with EPA. None of the deviations identified affected the QA of this field investigation. Field and laboratory SOPs for this investigation are found in the QAPP/FSP (EA 2013). Field SOPs were followed for sample collection, handling and decontamination, and the sediment sampling conducted. Laboratory SOPs were followed for analytical testing.

This section describes the QA/QC findings for the analytical data provided by TestAmerica. EDS performed 100 percent Tier I and 20 percent Tier II validation in accordance with the protocols and QC requirements of the analytical methods, and the most recent EPA National Functional data validation guidelines identified in Section 3. EA reviewed the electronic deliverables from EDS and determined they contained suitable data validation qualifiers and accompanying case narratives and submitted to CB&I to conduct a 100 percent Tier II data validation verification. In preparing this DUAR, the available data validation reports and case narratives were reviewed from EDS and CB&I. The validation verification findings identified by CB&I were considered the final qualification of the data sets. The QC findings are summarized in the following sections and only address those issues that resulted in the qualification of data.

4.1 LABORATORY DATA

The sediment analyses were performed by TestAmerica. TestAmerica submitted analytical data reports and EDDs for validation. The analytical data reports and case narratives for the sediment samples collected at the Lower Maumee River site are contained in Appendix A. Data verification and validation procedures not outlined in National Functional Guidelines were accomplished by comparing the contents of the analytical data packages and QA/QC results to the requirements presented in the QAPP, the analytical methods and reporting requirements defined in the QAPP, and the laboratory SOPs.

The deliverables included appropriate data qualifiers and accompanying data summaries. Appendix B of this DUAR contains the DVRs from EDS, and Appendix C of this DUAR contains the verification reports from QATS. The data validation findings are summarized in the following sections. The following analyses were included in the validated data for sediment samples:

- SVOC, EPA Contract Laboratory Program (CLP) SOM01.2

- PAH 34, EPA CLP SOM01.2
- PCBS, EPA CLP SOM01.2
- Michigan Metals, EPA CLP ISM01.3
- Oil and Grease, EPA SW-846 Method 9071B
- TOC, Lloyd Kahn
- AVS/SEM.

4.1.1 Semivolatile Organic Compounds (SVOC)

4.1.1.1 Holding Times

The samples were extracted and analyzed within the required holding time except the following:

- Several samples were extracted outside holding time; the affected sample results were qualified "UJ" for non-detects and "J" for detects.

4.1.1.2 Gas Chromatography/Mass Spectroscopy (GC/MS) Tuning

All criteria were met.

4.1.1.3 Initial Calibration

All percent relative standard deviation (%RSD) and mean relative response factor (RRF) criteria were met except the following:

- **SDG 16999—**Low criteria for 2,4-dinitrophenol; the affected sample results were qualified "UJ" for non-detects and "J" for detects.

- **SDG 17010—**Low criteria for fluoranthene; the affected sample results were qualified "UJ" for non-detects and "J" for detects.

- **SDG 17024, 17071, 17127—**Low criteria for pentachlorophenol and pyrene; the affected sample results were qualified "UJ" for non-detects and "J" for detects.

- **SDG 17028—**Low criteria for pentachlorophenol, benzo(b)fluoranthene, and dibenzo(a,h)anthracene; the affected sample results were qualified "UJ" for non-detects and "J" for detects.

- **SDG 17054, 17055—**Low criteria for pentachlorophenol, di-n-octylphthalate, benzo(b) fluoranthene and dibenzo(a,h)anthracene; the affected sample results were qualified "UJ" for non-detects and "J" for detects.

- **SDG 17056, 17122—**Low criteria for benzo(b)fluoranthene and dibenzo(a,h)anthracene; the affected sample results were qualified "UJ" for non-detects and "J" for detects.

- **SDG 17078, 17083, 17099—**Low criteria for pentachlorophenol, pyrene, benzo(b)fluoranthene, and dibenzo(a,h)anthracene; the affected sample results were qualified "UJ" for non-detects and "J" for detects.

4.1.1.4 Continuing Calibration

All %D and RRF criteria were met except the following:

- **SDG 16948—**Low criteria for hexachlorocyclopentadiene and 2,4-dinitrophenol; the affected sample results were qualified "UJ" for non-detects and "J" for detects.

- **SDG 16995, 17052, 17125—**Low criteria for pentachlorophenol and hexachlorocyclopentadiene; the affected samples results were qualified "UJ" for non-detects and "J" for detects.

- **SDG 16999—**Low criteria for pentachlorophenol, hexachlorocyclopentadiene, indeno(1,2,3-cd)pyrene, dibenzo(a,h)anthracene, and benzo(g,h,i)perylene; the affected samples results were qualified "UJ" for non-detects and "J" for detects.

- **SDG 17010—**Low criteria for benzo(g,h,i)perylene, hexachlorocyclopentadiene, 4-nitrophenol, pentachlorophenol, n-nitroso-di-n-propylamine and 4-bromophenyl-phenylether , the affected sample results were qualified "JUJ".

- **SDG 17014, 17096—**Low criteria for hexachlorocyclopentadiene, 2,4-dinitrophenol, and pentachlorophenol; the affected sample results were qualified "UJ" for non-detects and "J" for detects.

- **SDG 17024—** Low criteria for hexachlorocyclopentadiene, 2,4-dinitrophenol, and pentachlorophenol; the affected sample results were qualified "UJ" for non-detects and "J" for detects.

- **SDG 17028—**Low criteria for hexachlorocyclopentadiene, 2,4-dinitrophenol, and pentachlorophenol; the affected sample results were qualified "UJ" for non-detects and "J" for detects.

- **SDG 17054, 17071—**Low criteria for pentachlorophenol, hexachlorocyclopentadiene, indeno(1,2,3-cd)pyrene, dibenzo(a,h)anthracene, 2, 4-dinitrophenol, and benzo(g,h,i)perylene; the affected samples results were qualified "UJ" for non-detects and "J" for detects.

- **SDG 10755—**Low criteria for pentachlorophenol, hexachlorocyclopentadiene, 4-methylphenol, benzo(k)fluoranthene, and di-n-octylphthalate; the affected samples results were qualified "UJ" for non-detects and "J" for detects.

- **SDG 17056—**Low criteria for hexachlorocyclopentadiene, and indeno(1,2,3-cd)pyrene; the affected samples results were qualified "UJ" for non-detects and "J" for detects.

- **SDG 17061—**Low criteria for hexachlorocyclopentadiene, 2,4-dinitrophenol, benzo(k)fluoranthene, and di-n-octylphthalate; the affected samples results were qualified "UJ" for non-detects and "J" for detects.

- **SDG 17078—**Low criteria for hexachlorocyclopentadiene, pyrene, fluoranthene, benzo(g,h,i)perylene and di-n-octylphthalate; the affected samples results were qualified "UJ" for non-detects and "J" for detects.

- **SDG 17083—**Low criteria for hexachlorocyclopentadiene, pyrene, fluoranthene, benzo(g,h,i)perylene, and di-n-octylphthalate; the affected samples results were qualified "UJ" for non-detects and "J" for detects.

- **SDG 17099—**Low criteria for hexachlorocyclopentadiene, pyrene, fluoranthene, benzo(g,h,i)perylene, and di-n-octylphthalate; the affected samples results were qualified "UJ" for non-detects and "J" for detects.

- **SDG 17122—** Low criteria for hexachlorocyclopentadiene, caprolactam, and di-n-octylphthalate; the affected samples results were qualified "UJ" for non-detects and "J" for detects.

- **SDG 17127—**Low criteria for pyrene, hexachlorocyclopentadiene, indeno(1,2,3-cd)pyrene, dibenzo(a,h)anthracene, and benzo(g,h,i)perylene; the affected samples results were qualified "UJ" for non-detects and "J" for detects.

4.1.1.5 Method Blank Contamination

The method blanks were free of contamination with the exception of the following:

- **SDG 16948—**SBLKZ1 (butylbenzylphthalate and bis (2-ethylhexyl)phthalate) and SBLKL4 (butylbenzylphthalate, bis (2-ethylhexyl)phthalate, and di-n-octylphthalate) associated with several samples. The associated results for these samples were considered non-detected and qualified "U" or not qualified.

- **SDG 16995—**SBLKL4 (butylbenzylphthalate, bis (2-ethylhexyl) phthalate, and di-n-octylphthalate) and SBLKL8 (butylbenzylphthalate and bis (2-ethylhexyl)phthalate) associated with several samples. The associated results for these samples were considered non-detected and qualified "U".

- **SDG 16999—**SBLKL5 (butylbenzylphthalate and bis (2-ethylhexyl)phthalate). The associated results for these samples were considered non-detected and qualified "U".

- **SDG 17010—**SBLKL7 and SBLK10 bis (2-ethylhexyl)phthalate. The associated results for these samples were considered non-detected and qualified "U".

- **SDG 17014—**SBLKL7 and SBLKL8 (butylbenzylphthalate and bis (2-ethylhexyl)phthalate). The associated results for these samples were considered non-detected and qualified "U".

- **SDG 17024—**SBLK9L and SBLKL9 (butylbenzylphthalate and bis (2-ethylhexyl)phthalate). The associated results for these samples were considered non-detected and qualified "U".

- **SDG 17028—**SBLKM1, SBLK1M, and SBLKM1 (di-n-butylphthalate, butylbenzylphthalate and bis (2-ethylhexyl)phthalate). The associated results for these samples were considered non-detected and qualified "U".

- **SDG 17052, 17122—**SBLKM2, SBLKN8, and SBLK8N (butylbenzylphthalate and bis (2-ethylhexyl) phthalate). The associated results for these samples were considered non-detected and qualified "U".

- **SDG 17054—**SBLKM7 (phenol, acetophenone, di-n-butylphthalate , butylbenzylphthalate and bis (2-ethylhexyl)phthalate). The associated results for these samples were considered non-detected and qualified "U".

- **SDG 17055, 17056, 17096—**SBLKL8, SBLKL9, SBLKN6 and SBLKN1 (butylbenzylphthalate, di-n-butylphthalate , and bis (2-ethylhexyl) phthalate). The associated results for these samples were considered non-detected and qualified "U".

- **SDG 17061—**SBLKM5 and SBLKM9 (di-n-butylphthalate, butylbenzylphthalate and bis(2-ethylhexyl)phthalate). The associated results for these samples were considered non-detected and qualified "U".

- **SDG 17071—**SBLKN2 and SBLKN7 (butylbenzylphthalate, di-n-butylphthalate , and bis(2-ethylhexyl)phthalate). The associated results for these samples were considered non-detected and qualified "U".

- **SDG 17078—**SBLKN2 and SBLKN3 (butylbenzylphthalate, di-n-butylphthalate , acetophenone and bis (2-ethylhexyl)phthalate). The associated results for these samples were considered non-detected and qualified "U".

- **SDG 17083—**SBLKN4, SBLK7N and SBLKN7 (butylbenzylphthalate, di-n-butylphthalate , acetophenone and bis (2-ethylhexyl) phthalate, naphthalene). The associated results for these samples were considered non-detected and qualified "U".

- **SDG 17099—**SBLKN5, SBLK5N and SBLKNN (butylbenzylphthalate, di-n-butylphthalate , acetophenone and bis (2-ethylhexyl)phthalate, naphthalene). The associated results for these samples were considered non-detected and qualified "U".

- **SDG 17127—**SBLKN9 and SBLK9N (butylbenzylphthalate, di-n-butylphthalate , acetophenone and bis (2-ethylhexyl)phthalate, naphthalene). The associated results for these samples were considered non-detected and qualified "U".

- **SDG 17149—**SBLKN9 and SBLK9N (butylbenzylphthalate, di-n-butylphthalate , acetophenone and bis (2-ethylhexyl)phthalate, naphthalene). The associated results for these samples were considered non-detected and qualified "U".

4.1.1.6 Surrogate Spike Recoveries

All samples exhibited acceptable surrogate percent recovery (%R) values with the exception of the following:

- Several samples were rejected due to low surrogate recoveries of 4-chloroaniline-d4 by EDS. During the QATs Tier 2 validation review, the qualifiers were replaced with a "U" or "UJ" for non-detects or "J" for detects due to the low the acceptance criteria, or the surrogate was diluted out.

- **SDG 16948, SDG 16995—**High phenol-d5 recovery in several samples. The associated results for this compound were considered estimated and qualified "J".

- **SDG 16999, 17056, 17061, 17078—**High phenol-d5 and 4-methylphenol-d8 recovery in several samples. The associated results for this compound were considered estimated and qualified "J".

- **SDG 17010, 17014, 17028, 17052, 17055, 17071, 17083, 17099, 17122, 17125, 17127—** Several surrogates exhibited high recovery in several samples. The associated results for this compound were considered estimated and qualified "J".

4.1.1.7 Matrix Spikes/Matrix Spike Duplicate (MS/MSD) Recoveries

All MS/MSD samples analyzed exhibited acceptable %R and relative percent difference (RPD) values except the following:

- **SDG 16999—**High pyrene recovery; the associated sample results for this compound were considered estimated and qualified "J".

4.1.1.8 Laboratory Control Sample (LCS) Recoveries

All LCS samples exhibited acceptable %R values.

4.1.1.9 Internal Standard (IS) Area Performance

All internal standards met response and retention time (RT) criteria except the following:

- **SDG 17010, 17071, 17122—**Low perylene-d12 RT; the associated sample results for this compound were considered estimated and qualified "UJ" for non-detects and "J" for detects.

- **SDG 17014—**Low chrysene-d12 and perylene-d12 RT; the associated sample results for this compound were considered estimated and qualified "UJ" for non-detects and "J" for detects.

- **SDG 17024—**Low phenanthrene-d10, acenaphthalene-d10, and perylene-d12 RT; the associated sample results for this compound were considered estimated and qualified "UJ" for non-detects and "J" for detects.

- **SDG 17078—**Low phenanthrene-d10; the associated sample results for this compound were considered estimated and qualified "UJ" for non-detects and "J" for detects.

- **SDG 17099—**Low chrysene-d12 and perylene-d12 RT, and high 1,4-dichlorobenzene-d4, Naphthalene-d8, Acenaphthalene-d10; the associated sample results for this compound were considered estimated and qualified "UJ" for non-detects and "J" for detects.

4.1.1.10 Target Compound Identification

All mass spectra and quantitation criteria were met.

4.1.1.11 Compound Quantitation

All criteria were met except the following:

- Several samples were analyzed at various dilutions due to high concentrations of target compounds.

4.1.1.12 Field Duplicate Sample Precision

Field duplicate results exhibited acceptable RPD.

4.1.2 Polycyclic Aromatic Hydrocarbons (34 PAHs)

4.1.2.1 Holding Times

The samples were extracted and analyzed within the required holding time except the following:

- **SDG 17071, 17127—**Several samples were extracted outside holding time, the affected sample results were qualified "UJ" for non-detects and "J" for detects.

4.1.2.2 Gas Chromatography/Mass Spectroscopy (GC/MS) Tuning

All criteria were met.

4.1.2.3 Initial Calibration

All %RSD and mean RRF criteria were met.

4.1.2.4 Continuing Calibration

All %D and RRF criteria were met except the following:

- **SDG 16995, 16999, 17010, 17014, 17096—**Low criteria for dibenzo(a,h)anthracene; the affected sample results were qualified "UJ" for non-detects and "J" for detects.

- **SDG 17056—**Low criteria for benzo(g,h,i)perylene; the affected samples results were qualified "UJ" for non-detects and "J" for detects.

4.1.2.5 Method Blank Contamination

The method blanks were free of contamination with the exception of the following:

- **SDG 16999—**SBLKZ5 (naphthalene, 1-methylnaphthalene, and 2-methylnaphthalene) associated with several samples. The associated results for these samples were considered non-detected and qualified "U".

- **SDG 17010 —**SBLKM3 (naphthalene, 2-methylnaphthalene, and phenanthrene) associated with several samples. The associated results for these samples were considered non-detected and qualified "U".

- **SDG 17014, 17028, 17052, 17078—**SBLKL7, SBLKL8, SBLKM, SBLKM2, and SBLKN3 (naphthalene) associated with several samples. The associated results for these samples were considered non-detected and qualified "U".

- **SDG 17024, 17056—**SBLKL9 and SBLKN1 (naphthalene and 2-methylnaphthalene) associated with several samples. The associated results for these samples were considered non-detected and qualified "U".

- **SDG 17054, 17096—**SBLKM7 and SBLKN6 (several compounds) associated with several samples. The associated results for these samples were considered non-detected and qualified "U".

- **SDG 17071—**SBLKN2 and SBLKN2 (naphthalene, indeno(1,2,3-cd)pyrene and benzo(g,h,i)perylene) associated with several samples. The associated results for these samples were considered non-detected and qualified "U".

- **SDG 17083—**SBLKN4 (1-methylnaphthalene) associated with several samples. The associated results for these samples were considered non-detected and qualified "U".

- **SDG 17122—**SBLKN8 (2-methylnaphthalene) associated with several samples. The associated results for these samples were considered non-detected and qualified "U".

- **SDG 17125—**SBLK01 (2-methylnaphthalene) associated with several samples. The associated results for these samples were considered non-detected and qualified "U".

- **SDG 17127—**SBLKZ5 (naphthalene, 1-methylnaphthalene, and 2-methylnaphthalene) associated with several samples. The associated results for these samples were considered non-detected and qualified "U".

4.1.2.6 Surrogate Spike Recoveries

- **SDG 16995—**All samples exhibited acceptable surrogate %R values except several samples where the surrogate was diluted out. No additional qualifiers were applied.

4.1.2.7 Matrix Spikes/Matrix Spike Duplicate (MS/MSD) Recoveries

All MS/MSD samples analyzed exhibited acceptable %R and RPD values.

4.1.2.8 Laboratory Control Sample (LCS) Recoveries

All LCS samples exhibited acceptable %R values.

4.1.2.9 Internal Standard (IS) Area Performance

All internal standards met response and RT criteria except the following:

- **SDG 17096—**High chrysene-d12. The associated results for these samples were considered estimated and qualified "J".

4.1.2.10 Target Compound Identification

All mass spectra and quantitation criteria were met.

4.1.2.11 Compound Quantitation

All criteria were met except the following:

- Several samples were analyzed at various dilutions due to high concentrations of several target compounds and were flagged "E" by the laboratory which were qualified estimated "J" by the validator.

4.1.2.12 Field Duplicate Sample Precision

Field duplicate results exhibited acceptable RPD values.

4.1.3 Polychlorinated Biphenyls (PCBs)

4.1.3.1 Holding Times

The samples were extracted and analyzed within the required holding time.

4.1.3.2 Initial Calibration

All %RSD were met.

4.1.3.3 Continuing Calibration

All %D criteria were met.

4.1.3.4 Method Blank

The method blanks were free of contamination.

4.1.3.5 Surrogate Spike Recoveries

All samples exhibited acceptable surrogate %R values with the exception of the following:

- **SDG 16995, 16999, 17010, 17024, 17028—**Low decachlorobiphenyl and tetrachloro-m-xylene recovery in several samples. The associated results for this compound were considered estimated; with positive results qualified "J" and non-detected results qualified "UJ".

4.1.3.6 Matrix Spikes/Matrix Spike Duplicate (MS/MSD) Recoveries

All MS/MSD samples analyzed exhibited acceptable %R and RPD values.

4.1.3.7 Laboratory Control Sample (LCS) Recoveries

All LCS samples exhibited acceptable %R values.

4.1.3.8 Compound Quantitation

- **SDG 16995, 16999, 17010, 17014, 17024—**Several samples exhibited high concentrations of PCBs and were flagged (E) by the laboratory. The samples were diluted and reanalyzed within holding time. The diluted results were reported.

4.1.3.9 Field Duplicate Sample Precision

Field duplicate results exhibited acceptable RPD values.

4.1.3.10 Gas Chromatography (GC) Column Difference Results

- Several samples exhibited high %D values > 25 percent between column. The associated results were qualified as estimated "J".

4.1.4 Metals and Mercury

4.1.4.1 Holding Times

The samples were prepared and analyzed within the required holding time.

4.1.4.2 Inductively Coupled Plasma (ICP)/Mass Spectroscopy (MS) Tuning

All criteria were met.

4.1.4.3 Initial Calibration Verification

All initial calibration criteria were met.

4.1.4.4 Continuing Calibration Verification

All continuing calibration criteria were met.

4.1.4.5 Method Blank Contamination

The method blanks were free of contamination with the exception of the following:

- **SDG 17028, 17055, 17056, 17083**—MB (cadmium and mercury), and PBS (mercury) associated with several samples. The associated results for these samples were considered non-detected and qualified "U".

- **SDG 17014, 17052**—Trace levels of cadmium were detected in the initial calibration blank and continuing calibration blanks between the method detection limit (MDL) and contract-required quantitation limit (CRQL). The results of the affected samples were

adjusted to the CRQL and qualified "U". The J qualifier was added for the serial dilution exceeding criteria.

4.1.4.6 Inductively Coupled Plasma (ICP) Interference Check Sample

The ICP interference check sample exhibited acceptable %R values.

4.1.4.7 Laboratory Control Sample (LCS) Recoveries

All LCS samples exhibited acceptable recoveries.

4.1.4.8 Matrix Spikes/Duplicate (MS/DUP) Recoveries

All MS/DUP samples analyzed exhibited acceptable %R and RPD values except the following:

- **SDG 16948, 17055, 17061, 17127—**There was high mercury recovery. The associated results for these samples were considered estimated and qualified "J".

- **SDG 17028—**There were high lead and mercury recoveries. The associated results for these samples were considered estimated and qualified "J".

- **SDG 17054—**There was high lead recovery. The associated results for these samples were considered estimated and qualified "J".

- **SDG 17083—**There were high arsenic and cadmium recoveries. The associated results for these samples were considered estimated; with positive results qualified "J" and non-detected results qualified "UJ".

- **SDG 17099—**There was high arsenic recovery. The associated results for these samples were considered estimated and qualified "J".

4.1.4.9 Inductively Coupled Plasma (ICP) Serial Dilution

ICP serial dilution %D were within acceptable limits except the following:

- **SDG 16948, 17099**—There were low nickel and zinc recoveries. The associated results for these samples were considered estimated and qualified "J".

- **SDG 16995, 17028, 17078**—There was low nickel recovery. The associated results for these samples were considered estimated and qualified "J".

- **SDG 16999, 17010, 1714**9—There were low chromium, nickel, and zinc recoveries. The associated results for these samples were considered estimated and qualified "J".

- **SDG 17014, 17125**—There were low cadmium, chromium, nickel, and zinc recoveries. The associated results for these samples were considered estimated and qualified "J".

- **SDG 17024, 17054**—There were low chromium and zinc recoveries. The associated results for these samples were considered estimated and qualified "J".

- **SDG 17052, 17055, 17071**—There were low chromium, copper, nickel, and zinc recoveries. The associated results for these samples were considered estimated and qualified "J".

- **SDG 17056**—There was low chromium recovery. The associated results for these samples were considered estimated and qualified "J".

- **SDG 17061, 17122**—There were low cadmium, chromium, copper, nickel, and zinc recoveries. The associated results for these samples were considered estimated and qualified "J".

- **SDG 17083**—There were low chromium, lead, nickel, and zinc recoveries. The associated results for these samples were considered estimated and qualified "J".

- **SDG 17096**—There were low arsenic, cadmium, chromium, copper, lead, nickel, and zinc recoveries. The associated results for these samples were considered estimated and qualified "J".

- **SDG 17127—**There were low arsenic, chromium, copper, nickel, and zinc recoveries. The associated results for these samples were considered estimated and qualified "J".

4.1.4.10 Compound Quantitation

All criteria were met.

4.1.4.11 Field Duplicate Sample Precision

Field duplicate results exhibited acceptable RPD values.

4.1.5 Oil and Grease, Total Organic Carbon (TOC), and Acid Volatile Sulfide (AVS)/Simultaneously Extracted Metals (SEM)

4.1.5.1 Holding Times

The samples were analyzed within the required holding time for each analysis except the following:

- **SDG 17054, 17055, 17061, 17071, 17078, 17083, 17096, 17099, 17122, 17125, 17127, 17149**—TOC holding times for several samples. The associated results for these samples were considered estimated and qualified "J".

- **SDG 17010, 17014, 17055, 17061, 17071, 17083, 17096, 17099, 17122, 17125, 17127, 17149**—Oil and grease holding times for several samples. The associated results for these samples were considered estimated and qualified "J" for detects and "UJ" for non-detects.

4.1.5.2 Initial and Continuing Calibration

All %R criteria were met.

4.1.5.3 Method Blank Contamination

The method blanks were free of contamination with the exception of the following:

- **SDG 16948, 16995, 16999, 17010, 17014, 17024, 17028, 17055, 17071, 17083, 17096, 17125, 17127**—MB 240-89836/1-A, MB 240-91121/1-A, MB 240-90545/1-A, MB 240-91726/1-A, MB 240-90718/1-A, MB 240-92349, MB 240-92537/1-A, MB 240-92706/1-A, MB 240-93562/1-A, and MB 240-91908/1- (Oil and Grease) associated with several samples. The associated results for these samples were considered non-detected and qualified "U".

- **SDG 17061, 17078**—MB 180-76255/1-A (Oil and Grease) associated with several samples. The associated results for these samples were considered non-detected and qualified "U".

4.1.5.4 Laboratory Control Sample (LCS) Recoveries

All LCS samples exhibited acceptable %R values.

4.1.5.5 Matrix Spikes/Duplicate (MS/DUP) Recoveries

- **SDG 16995, 17054, 17096, 17125—**All MS/DUP samples analyzed exhibited acceptable %R and RPD values except high oil and grease recovery. The associated results for this compound were considered estimated, with positive results qualified "J" and non-detected results qualified "UJ".

- **SDG 17028, 17052, 17056, 17078, 17099, 17122, 17125—**All MS/DUP samples analyzed exhibited acceptable %R and RPD values except low oil and grease recovery. The associated results for this compound were considered estimated, with positive results qualified "J" and non-detected results qualified "UJ".

- **SDG 17071—**All MS/DUP samples analyzed exhibited acceptable %R and RPD values except the high mercury SEM %R. The associated results for this compound were considered estimated and qualified "J".

4.1.5.6 Compound Quantitation

All criteria were met.

4.1.5.7 Field Duplicate Sample Precision

Field duplicate results exhibited acceptable RPD values.

5. DATA USABILITY ASSESSMENT

Data usability assessment is the process of evaluating validated and verified data to determine whether they can be used for the purpose of the project (e.g., to answer the environmental questions or to make the environmental decision that must be made).

The data were evaluated for acceptable quality and quantity based on the critical indicator parameters, represented by precision, accuracy, representativeness, completeness, comparability, and sensitivity (PARCCS). To the extent possible, EA followed EPA's data quality assessment process (EPA 2006). This evaluation helps determine whether limitations should be placed on the data and to verify that the type, quality, and quantity of data that are collected are appropriate for their intended use. The PARCCS parameters were reviewed for the laboratory analytical data results and are discussed in the following sections.

A well-defined QA/QC process is integral to the generation of analytical data of known and documented quality. The QC process includes those activities required during data collection to produce data of sufficient quality to support the decisions that will be made based on the data (e.g., decisions to be made prior to, during, and after site remedial actions). After environmental data are collected, QA activities focus on evaluating the quality of the data in order to determine the data usability with respect to support for remedial or enforcement decisions.

All analytical data, data validation qualifiers, and QC results were evaluated to determine the confidence with which the sediment data could be used in the site characterization assessment of the Site. The criteria used in the data usability assessment are presented in the following sections.

5.1 DATA QUALITY OBJECTIVES

The overall DQO for the project was to provide data of known and documented quality to characterize current site conditions at the Site.

The primary objectives of this task order for the Lower Maumee River site characterization assessment are: (1) define the nature and extent of chemical contamination in the areas of soft sediment deposition, including depth of contamination, provide information about depositional areas, and identify high priority areas for remediation or for further investigation; (2) develop preliminary estimates for the volume of soft sediment in these areas; (3) identify hotspots; and (4) identify potential sources of contamination.

5.2 LABORATORY ACCREDITATION

The samples were analyzed by TestAmerica, a National Environmental Laboratory Accreditation Conference (NELAC) certified lab. TestAmerica was procured by EA using the procurement procedures outlined in the EA Quality Management Plan for the Great Lakes Architect-Engineer

Services (GLAES) program to perform the required analytical services work in accordance with the overall GLAES contract and Task Order-specific quality.

5.3 ANALYTICAL METHODS

The sediment samples were analyzed by TestAmerica's laboratories located in Burlington, Vermont; North Canton, Ohio; and Pittsburgh, Pennsylvania for this investigation. The analytical methods used are presented in Section 4.1 of this DUAR. No deviations were identified in the laboratory analysis reports or in the DVRs for the approved methods; therefore, the DQO for analytical methods was met.

5.4 SAMPLING HANDLING AND CHAIN-OF-CUSTODY

Sample handling chain-of-custody (COC) procedures followed the procedures outlined in the QAPP/FSP (EA 2013). Sediment samples were submitted for analysis to the TestAmerica Burlington laboratory and the TestAmerica North Canton laboratory. Samples were placed in the appropriate sample containers (obtained from TestAmerica), preserved, and labeled in accordance with the QAPP/FSP (EA 2013). In preparation for shipment to the laboratories, all samples were packaged in accordance with the general procedures outlined in the QAPP/FSP (EA 2013). A COC form was completed and accompanied each cooler. Copies of the completed COCs are provided in the analytical laboratory reports. All samples were received by the laboratory intact, properly preserved, and under a proper COC.

5.5 DATA VALIDATION

Data validation consists of evaluating the completeness, correctness, and conformance of a data set against the method, SOP, or contract requirements documented in the approved QAPP/FSP (EA 2013). The levels of data review and validation were consistent with the requirements of the QAPP/FSP (EA 2013). The DVRs and data validation verification reports are presented in Appendix B and Appendix C, respectively.

The data review and validation achieved the project goals. The overall data review and validation program attained the project objectives with no adverse effects on data quality or usability.

5.6 DATA QUALITY INDICATORS

The type of data generated depends on the qualitative and quantitative DQOs developed for a project. Data analyzed must be of adequate quality for the decision-making process for which they were collected. For this project, both field-based and analytical data may be used to support decisions made for this project. EPA CLP analytical methods were used to generate analyte-specific, definitive data for this project. The definitive quality of the data is assured by: (1) using SOPs and QC processes during data collection; (2) documented control and traceability of reference standards, calibrations, and instrument performance; and (3) acceptable performance

of field and laboratory QC procedures within the defined limits established for these procedures. Both quantitative and qualitative quality indicators defined in terms of precision, accuracy, representativeness, completeness, and comparability are used to assess the quality of a data set. Three of these parameters can be quantified: precision, accuracy, and completeness. Representativeness and comparability are qualitative descriptors of data integrity. Sensitivity is evaluated by direct comparison of project quantitation limits to screening criteria.

5.6.1 Precision

Precision describes the reproducibility of measurements of the same parameter for a sample under the same or similar conditions. Specifically, it is a quantitative measure of the degree of variability of a group of measurements compared to the average value. Precision is evaluated most directly by recording and comparing multiple measurements of the same parameter made on the same sample under similar conditions. Standard deviation, coefficient of variation, range, and relative range are terms often used to express precision. Precision is determined in the laboratory by assessing the RPD for sample duplicate and MS/MSD pairs:

$$RPD = \frac{\text{Sample result} - \text{Duplicate result}}{(\text{Sample result} + \text{Duplicate result})/2} \times 100$$

Given uncertainties associated with field work and laboratory activity, a precision of ±30 percent RPD is the DQO to meet the project objectives.

The acceptance criteria for each analytical methodology are presented in the QAPP (EA 2013). Duplicate results were evaluated for compliance with acceptance criteria for precision for each analytical method. RPD evaluations are documented in the individual data validation report for each SDG which was validated for MS/MSD and laboratory replicate pairs.

Field duplicate pairs were collected, analyzed, and evaluated for each matrix. The frequency of field duplicates submitted to the laboratory for analysis was sampled in accordance with the QAPP/FSP (EA 2013) achieving the defined precision.

5.6.2 Accuracy

Accuracy is the comparison between experimental and known or calculated values, expressed as a %R, and measures the bias of a measurement system. Percent recoveries are derived from analysis of standards spiked into deionized water (standard recovery) or into actual samples (matrix spike or surrogate spike recovery). Recovery is calculated as follows:

$$\text{Accuracy} = \frac{\text{Measured Value}}{\text{True value}} \times 100 = \%R$$

Variations in accuracy result from a combination of the random error (precision) and systematic error (bias), which are due to sampling and analytical operations. Sources of error include the sampling process, field contamination, preservation, handling, sample matrix, sample preparation, and analytical techniques. However, blank contamination can directly impact the accuracy of measurements. Consequently, if contaminants of potential concern are detected in the field blanks (but not in the laboratory blanks) at concentrations at or near the project action levels, then selective re-sampling should be considered.

Acceptance of the calibration is usually within 10 percent of the true value, but this varies with the value being measured and the instrument being calibrated. Refer to the SOPs presented in Appendix B of the FSP.

Laboratory accuracy was assessed through the analysis of MS/MSDs, LCSs, and surrogate spikes as appropriate to each method. Percent recovery in these samples is evaluated by analyzing a spiked and an un-spiked portion of the same investigative sample. The spike recovery is calculated using the following equation:

$$\%R = \frac{\text{Observed spike sample conc. - Unspiked sample conc.}}{\text{True concentration of spike}} \times 100$$

One field sample in every 20 was marked as an MS/MSD sample. The level of recovery of an analyte in MS/MSD samples is dependent on the sample matrix, the method of analysis, and the contaminant. The concentration of the analyte relative to the detection limit of the method is also a factor. MS/MSD samples and samples spiked with surrogates, compounds similar to environmental contaminants but not likely to be present in the samples, are used to evaluate the effect of the sample matrix on the accuracy of the analytical data.

LCS and laboratory control spike duplicate (LCSD) samples were prepared and analyzed along with the investigative samples. LCS/LCSD samples consist of a clean matrix that is spiked with known constituents and are indicative of the accuracy of the laboratory techniques without possible sample matrix interferences. Recovery for MS/MSD and LCS/LCSD samples will meet the compound-specific laboratory accuracy limits.

MS and MSD samples were prepared and analyzed at a frequency of 5 percent. LCSs or blank spikes are also analyzed at a frequency of 5 percent. Surrogate standards, where applicable, are added to every sample analyzed for organic constituents. The results of the spiked samples are used to calculate the percent recovery for evaluating accuracy. The evaluations of percent recovery are documented in Appendix B and Appendix C.

$$\text{Percent Recovery} = \frac{S - C}{T} \times 100\%$$

where: S = measured spike sample concentration
C = sample concentration
T = true or actual concentration of the spike

The objective for accuracy of field measurements is to achieve and maintain factory specifications for the field equipment. To this end, appropriate SOPs for instrument calibration were followed and calibration results were properly documented.

Representativeness

Representativeness describes the degree to which sample data accurately and precisely represent a characteristic of the material being measured. Representativeness is a qualitative term that is evaluated to determine whether *in situ* and other field measurements are made and physical samples are collected in such a manner that the resulting data appropriately reflect the media and phenomenon measured or studied.

Sample results were evaluated for representativeness by examining items related to sample collection, including COC documentation, sample labeling, collection dates, and condition of the samples upon receipt at the laboratory. Laboratory procedures (including anomalies reported by the laboratory) were also examined, either upon receipt of the samples at the laboratory or during analytical processes. Procedures that were examined included adherence to recommended holding times of samples prior to analysis; calibration of laboratory instruments; adherence to analytical methods; and completeness of data package documentation. Any item that may have adversely affected the representativeness of the sample result is documented in the data validation narratives.

Some of the samples were extracted and analyzed outside the holding times for SVOCs, PAHs TOC and oil and grease. The affected sample results were qualified as estimated “J” or “UJ”; however, no results were rejected based on holding time issues. Calibration blanks, and preparation blank results were evaluated during the data validation or review process to determine whether laboratory conditions (preparation or calibration blanks) affected sample results. As necessary appropriate qualifiers were applied by the data validator or verifier.

The field investigation program, outlined in the QAPP/FSP (EA 2013), was designed to answer the principal goals of the study from the DQO process. Therefore, it is important that the data collected during the field investigation is suitable and sufficient to accomplish the DQOs. To satisfy these sampling goals, sediment samples were collected from the defined project area for chemical and physical analyses to evaluate the current conditions of the Lower Maumee River. Based on the information collected during the site reconnaissance, targeted station locations were adjusted to ensure that samples were collected outside of dredged areas and in locations not within or adjacent to utility crossings. To define the extent of contamination and evaluate

sediment thickness, sampling locations were spatially distributed based on site conditions. The representativeness goal for this project has been achieved.

5.6.3 Completeness

Completeness is defined as the percentage of measurements judged to be valid. The validity of sample results is determined through the data validation process. The rejected (R) sample results are considered to be incomplete. The data that are qualified as estimated (J) or estimated non-detected (UJ) are considered to be valid and usable. The completeness is calculated and reported for each method and analyte combination. The number of valid results divided by the number of possible individual analyte results, expressed as a percentage, determines the completeness of the data set. Completeness is expressed as a percentage, as follows:

Percent Completeness = (Number of valid data/Expected number of data) x 100

A total of three target analyte results were rejected out of 49,433 results, resulting in 99.9 percent completeness for the overall project, which exceeded the completeness goal of 90 percent. Rejected data were not used in the decision-making process for this project. A total of 409 sediment samples were collected and analyzed, meeting the goal to not to exceed 420 samples as stated in the QAPP/FSP (EA 2013). The sampling deviations that occurred did not impact DOQs for this field investigation. The data reported are suitable for their intended use. The percent completeness was acceptable to support the decision-making process and reporting activities of this investigation.

5.6.4 Comparability

Comparability of the data is a qualitative parameter that expresses the confidence with which one data set may be compared to another. Comparability of the data is achieved by using standard methods for sampling and analysis, reporting data in standard units, normalizing results to standard conditions, and using standardized reporting formats and data validation procedures.

To ensure that data derived from this field effort are comparable, all like media samples were submitted for analysis by the same analytical method (with like analytical parameters and similar detection/reporting limits); units of measure (e.g., microgram per liter, microgram per kilogram) are the same for all reporting; and like media were sampled, handled, and prepared in the same manner according to EA's field collection SOPs included in Appendix B of the QAPP/FSP (EA 2013).

5.6.5 Sensitivity

Sensitivity is a measure of method performance in terms of the ability to detect chemicals of concern at low enough concentrations to eliminate potential false negatives and to ensure the project goals in terms of actionable concentrations are met. Target detection limits are based on

available standard methods applicable to media and are below most applicable regulatory screening criteria.

Ideally the lowest of the detection limits outlined by the laboratories would be below the applicable screening level; analytically achievable quantitation limits are not always low enough to meet this goal. Specific analytes with detection limits above the screening levels were discussed in the QAPP (EA 2013). The method reporting limits were sufficient to meet the project objectives.

5.7 DETECTION AND QUANTITATION LIMITS

The analytical parameters and their quantitation limits for use on this project are determined under the EPA CLP Statement(s) of Work. The contract-required detection limit (CRDL) is the minimum concentration of an analyte that can be reliably distinguished from background noise for a specific analytical method. The quantitation limit represents the lowest concentration of an analyte that can be accurately and reproducibly quantified in a sample matrix. CRQLs are contractually specified maximum quantitation limits for specific analytical methods and sample matrices, such as soil or water, and are typically several times the MDL to allow for matrix effects.

For this project, analytical methods were selected so that the CRQL for each target analyte was below the applicable screening level and/or specific project requirements, wherever practical. For this project, sample results were reported as estimated values if concentrations were less than CRQLs but greater than MDL. The CRDL for each analyte was listed as the detection limit in the laboratory's EDD.

6. DATA QUALITY OBJECTIVES AND CONCLUSIONS

Based on the data validation findings summarized in Section 4, data were either determined to be usable or qualified as estimated. Three SVOC target analyte results were rejected in sample LMR13-65-048.

The overall DQO for the project is to provide data of known and documented quality to characterize current site conditions. The following items were evaluated to conduct an overall review of the results presented within this DUAR.

6.1 CONTAMINANTS OF CONCERN TARGETED

The DQOs identified in the QAPP/FSP (EA 2013) for the Site were based on operational history and existing site data. These data were all considered in development of the field investigation and site characterization. The target chemicals of concern were appropriately targeted and analyzed in the field investigation.

6.2 MEDIA VARIABILITY

The media of concern at the Site were sediments.

Field QC samples including field duplicates and MS/MSD samples were collected and analyzed to assess the quality and representativeness of the field sampling activities and the precision and accuracy of the analytical results.

6.3 LABORATORY PERFORMANCE PROBLEMS

In general, the laboratory performance met QC limits. Refer to Section 4 for a more detailed discussion of any laboratory performance issues.

6.4 CONCLUSIONS

For this data usability assessment, 21 SDGs were reviewed. Samples were collected and analyzed in accordance with the QAPP/FSP (EA 2013). The data were obtained using approved methods and procedures and the data met the DQOs developed for this investigation. The analytical results for this sampling event met overall project objectives for the quantity and quality of data required to support the decision-making process and reporting activities of this investigation.

Data without qualifiers and data qualified as estimated are usable for purposes in supporting project objectives with the exception of three SVOC analytes that were rejected for one sediment sample. Validated data were also found to be representative and comparable for all samples. Precision and accuracy were acceptable.

7. REFERENCES

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U.S. Environmental Protection Agency (EPA). 2006. *Guidance on Systematic Planning Using the Data Quality Objectives Process*. EPA QA/G-4. February.

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Tables

Table 3-1. Data Validation Qualifiers

Qualifier	Definition
Data Qualifier Definitions	
U	The analyte was analyzed for, but was not detected at a level greater than or equal to the level of the adjusted method detection limit for sample and method.
J	the approximate concentration of the analyte in the sample (due to either the quality of the data generated because certain quality control criteria were not met, or the concentration of the analyte was below the reporting limit).
UJ	The reporting limit is approximate and may be inaccurate or imprecise.
J-	Low biased. Actual concentration may be higher than the concentration reported.
J+	High biased. Actual concentration may be lower than the concentration reported.
R	The sample results are unusable due to the quality of the data generated because certain criteria were not met. The analyte may or may not be present in the sample
NJ	The analysis indicates the presence of an analyte that has been “tentatively identified” and the associated numerical value represents its approximate concentration.

Table 3-2 QATS Revised Data Qualifiers

SDG/Fraction	Analyte/ Compound	Original Qualifier	Revised Qualifier	EPA Sample IDs	QATS Justification for EDD Revision
16948 METALS	Chromium	J	None	LMR13-05-012 LMR13-09-012 LMR13-10-012 LMR13-17-012 LMR13-23-012 LMR13-06-012 LMR13-18-012 LMR13-19-012 LMR13-19-012FD LMR13-20-012 LMR13-02-012 LMR13-02-012FD LMR13-11-012 LMR13-12-012 LMR13-16-012 LMR13-24-012	J qualifiers that were originally applied to samples for which the serial dilution %D exceeded 10% were removed if less than the expanded NFG criterion of ±15%D. The %D for the analytes listed is <15%; therefore, the J qualifiers were removed (unless the result was between the MDL and CRQL).
16948 PAH	4-Chloroaniline Hexachlorocyclopentadiene 3,3'-Dichlorobenzidine	R	UJ	LMR13-12-012 LMR13-18-012 LMR13-19-012 LMR13-20-012	The R qualifiers originally assigned to the listed compounds in samples with a 0% R for the DMC 4-Chloroaniline-d4 were replaced with a UJ due to the low (1%R) acceptance criteria for this DMC.
16948 PAH	Bis(2-ethylhexyl)phthalate	None	U	LMR13-09-012 LMR13-17-012 LMR13-06-012 LMR13-19-012	In accordance with the Organic NFG, results less than 5x the CRQL were qualified with a U when bis(2-ethylhexyl) phthalate was detected in the method blank.
16948 OIL AND GREASE	HEM	J UJ	None U	LMR13-20-012 LMR13-20-012FD	The original validators did not use the actual field duplicate (FD) value of 402 mg/kg for this sample to calculate the HEM %RPD for LMR13- 20-012 field duplicate analysis; instead they compared a non-detected value assigned due to blank contamination which resulted in an RPD of 200%. Since the 402 mg/kg value is over the CRQL of 200 mg/kg, QATS used this value to calculate an RPD of 43.4%. The J qualifier for LMR13-20-012 and the J added to the U qualifier for LMR13-20- 012FD were removed.
16995 METALS	Cadmium Chromium Zinc	J	None	LMR13-42-012 LMR13-42-024 LMR13-42-048 LMR13-42-072 LMR13-42-096 LMR13-43-012 LMR13-43-024 LMR13-43-024FD LMR13-43-048 LMR13-43-096 LMR13-44-012	J qualifiers that were originally applied to samples for which the serial dilution %D exceeded 10% were removed if less than the expanded NFG criterion of ±15%D. The %D for the analytes listed is <15%; therefore, the J qualifiers were removed (unless the result was between the MDL and CRQL).
16995 METALS	Copper	J	None	LMR13-42-120 LMR13-43-072 LMR13-43-120 LMR13-44-024 LMR13-44-048 LMR13-44-048FD	J qualifiers that were originally applied to samples for which the serial dilution %D exceeded 10% were removed if less than the expanded NFG criterion of ±15%D. The %D for the analytes listed is <15%; therefore, the J qualifiers were removed (unless the result was between the MDL and CRQL).

Table 3-2 QATS Revised Data Qualifiers

SDG/Fraction	Analyte/ Compound	Original Qualifier	Revised Qualifier	EPA Sample IDs	QATS Justification for EDD Revision
16995 AROCLOR	Aroclor-1254	None	J	LMR13-43-024FD	The original validators did not qualify the Aroclor-1254 result for the DCB failure due to the 5x dilution. The result was J-qualified by QATS due to the low dilution factor and DCB %R failure in the original analysis.
16995 PAH	Bis(2-ethylhexyl)phthalate	None	U	LMR13-42-024 LMR13-42-024FD LMR13-43-096 LMR13-43-120	In accordance with the Organic NFG, results less than 5x the CRQL were qualified with a U when bis(2-ethylhexyl) phthalate was detected in the method blank.
16995 PAH	Hexachlorocyclopentadiene	U	UJ	LMR13-42-096 LMR13-43-024 LMR13-43-048 LMR13-43-120 LMR13-44-024FD	The original validators did not qualify all of the associated samples for the hexachlorocyclopentadiene closing CCV %D failure.
16995 PAH	Anthracene Phenanthrene	None	J	LMR13-42-096	Four DMC percent recoveries for sample LMR13-42-096 exceeded the upper control limits. The sample was analyzed at a 2.5x dilution. Detected results were qualified J due to the high percent recoveries.
16995 PAH	4-Chloroaniline Hexachlorocyclopentadiene 3,3'-Dichlorobenzidine	R	UJ	LMR13-44-024 LMR13-44-048	The R qualifiers originally assigned to the listed compounds in samples with a 0% R for the DMC 4-Chloroaniline-d4 were replaced with a UJ due to the low (1%R) acceptance criteria for this DMC.
16995 OIL AND GREASE	HEM	U	J	LMR13-44-024 LMR13-44-024FD	Trace levels of HEM were detected in two of the three method blanks. The original validators incorrectly qualified two samples in the batch that was associated with the clean blank. The U qualifiers were removed from the two samples and the results returned to the original value with the original J qualifier.
16999 METALS	Copper	J	None	LMR13-44-072 LMR13-44-096 LMR13-46-012 LMR13-46-024 LMR13-46-048 LMR13-46-072 LMR13-46-096 LMR13-46-120 LMR13-81-012 LMR13-81-024 LMR13-81-048 LMR13-81-072 LMR13-81-096 LMR13-81-120	J qualifiers that were originally applied to samples for which the serial dilution %D exceeded 10% were removed if less than the expanded NFG criterion of ±15%D. The %D for the analytes listed is <15%; therefore, the J qualifiers were removed (unless the result was between the MDL and CRQL).
16999 MERCURY	Mercury	J	U	LMR13-44-072 LMR13-44-096	Trace level of mercury between the MDL and CRQL was detected in the CCB. The original validation did not report or qualify for the calibration blank contamination. The results for two samples have been adjusted to the CRQL and qualified "U".
16999 PAH	4-Chloroaniline Hexachlorocyclopentadiene 3,3'-Dichlorobenzidine	R	UJ	LMR13-44-072 LMR13-44-096	The R qualifiers originally assigned to the listed compounds in samples with a 0% R for the DMC 4-Chloroaniline-d4 were replaced with a UJ due to the low (1%R) acceptance criteria for this DMC.
16999 PAH	Pentachlorophenol	U	UJ	LMR13-46-120	The original validators did not report or qualify the associated sample for the pentachlorophenol closing CCV %D failure.
16999 PAH	Bis(2-ethylhexyl)phthalate	None	U	LMR13-81-012FD	In accordance with the Organic NFG, results less than 5x the CRQL were qualified with a U when bis(2-ethylhexyl) phthalate was detected in the method blank.

Table 3-2 QATS Revised Data Qualifiers

SDG/Fraction	Analyte/ Compound	Original Qualifier	Revised Qualifier	EPA Sample IDs	QATS Justification for EDD Revision
16999 PAH SIM	Fluorene Anthracene Benzo(b)fluoranthene Benzo(k)fluoranthene Benzo(e)pyrene Perylene Indeno (1,2,3-cd)pyrene Benzo(g,h,i)perylene	None	J	LMR13-81-012	The dilution for LMR13-81-012 was analyzed 41 days after extraction, which exceeds the analysis holding time by 1 day. Compounds reported from the diluted sample were qualified J.
16999 PAH SIM	Fluorene Acenaphthene Anthracene Benzo(b)fluoranthene Benzo(k)fluoranthene Benzo(e)pyrene Benzo(a)pyrene Perylene Indeno (1,2,3-cd)pyrene Benzo(g,h,i)perylene	None	J	LMR13-81-012FD	The dilution for LMR13-81-012FD was analyzed 41 days after extraction, which exceeds the analysis holding time by 1 day. Compounds reported from the diluted sample were qualified J.
17010 METALS	Copper	J	None	LMR13-93-012 LMR13-93-024 LMR13-93-048 LMR13-93-072 LMR13-93-096 LMR13-93-120 LMR13-62-024FD LMR13-90-024FD LMR13-62-024 LMR13-90-012 LMR13-90-024 LMR13-90-048 LMR13-90-072 LMR13-62-012 LMR13-62-048 LMR13-62-072 LMR13-62-096 LMR13-91-024 LMR13-91-048 LMR13-47-012 LMR13-91-012	J qualifiers that were originally applied to samples for which the serial dilution %D exceeded 10% were removed if less than the expanded NFG criterion of ±15%D. The %D for the analytes listed is <15%; therefore, the J qualifiers were removed (unless the result was between the MDL and CRQL).

Table 3-2 QATS Revised Data Qualifiers

SDG/Fraction	Analyte/ Compound	Original Qualifier	Revised Qualifier	EPA Sample IDs	QATS Justification for EDD Revision
17010 PAH	4-Chlorophenyl-phenlyether	U	UJ	LMR13-93-012 LMR13-93-024 LMR13-93-048 LMR13-93-072 LMR13-93-096 LMR13-93-120 LMR13-62-024 LMR13-90-012 LMR13-90-024 LMR13-90-048 LMR13-90-072 LMR13-62-012 LMR13-62-048 LMR13-62-072 LMR13-62-096 LMR13-91-024 LMR13-91-048 LMR13-47-012 LMR13-91-012 LMR13-90-048FD LMR13-90-012FD LMR13-93-024FD	The original validators did not report or qualify the associated samples for the initial calibration %RSD failures.
17010 PAH	4-Chloroaniline Hexachlorocyclopentadiene 3,3'-Dichlorobenzidine	R	UJ	LMR13-93-096 LMR13-62-024 LMR13-90-012 LMR13-90-048 LMR13-62-048 LMR13-62-096 LMR13-91-048 LMR13-47-012 LMR13-91-012 LMR13-90-012FD	The R qualifiers originally assigned to the listed compounds in samples with a 0% R for the DMC 4-Chloroaniline-d4 were replaced with a UJ due to the low (1%R) acceptance criteria for this DMC.
17010 PAH SIM	Phenanthrene Fluoranthene Pyrene Benzo(a)anthracene Chrysene Benzo(b)fluoranthene Benzo(k)fluoranthene Benzo(e)pyrene Benzo(a)pyrene Perylene	None	J	LMR13-90-012FD	The sample was analyzed 41 days after extraction, which exceeds the analysis holding time by 1 day. Detected compounds reported from this sample were qualified J.
17010 PAH SIM	Naphthalene C1 Naphthalenes C1 Fluorenes	U	UJ	LMR13-90-012FD	The sample was analyzed 41 days after extraction, which exceeds the analysis holding time by 1 day. Non-detected compounds reported from this sample were qualified UJ.
17010 OIL AND GREASE	HEM	U	UJ	LMR13-62-072 LMR13-91-024 LMR13-91-048 LMR13-91-012 LMR13-91-024FD	These samples were extracted outside of the QAPP-required 14-day holding time for oil and grease. The non-detect samples were qualified UJ.

Table 3-2 QATS Revised Data Qualifiers

SDG/Fraction	Analyte/ Compound	Original Qualifier	Revised Qualifier	EPA Sample IDs	QATS Justification for EDD Revision
17010 OIL AND GREASE	HEM	None	J	LMR13-47-012 LMR13-90-048FD LMR13-93-024FD	These samples were extracted outside of the QAPP-required 14-day holding time for oil and grease. The detect samples were qualified J.
17014 METALS	Cadmium	J	UJ	LMR13-51-024FD LMR13-51-024 LMR13-51-048 LMR13-51-072	Trace levels of cadmium between the MDL and CRQL were detected in the ICB and CCBs. The original validation did not report or qualify for this calibration blank contamination. The results for four samples have been adjusted to the CRQL and qualified U. The J is added for the serial dilution exceeding criteria.
17014 MERCURY	Mercury	J	U	LMR13-47-024 LMR13-47-048 LMR13-47-096 LMR13-51-048	Trace levels of mercury between the MDL and CRQL were detected in the ICB and CCBs. The original validation did not report or qualify for this calibration blank contamination. The results for four samples have been adjusted to the CRQL and qualified U.
17014 PAH	4-Chloroaniline Hexachlorocyclopentadiene 3,3'-Dichlorobenzidine	R	UJ	LMR13-91-072 LMR13-91-096 LMR13-47-024 LMR13-47-048 LMR13-47-072 LMR13-47-096 LMR13-63-012 LMR13-63-024 LMR13-63-048 LMR13-63-072 LMR13-63-096 LMR13-51-012 LMR13-51-024 LMR13-51-048 LMR13-63-024FD LMR13-51-012FD	The R qualifiers originally assigned to the listed compounds in samples with a 0% R for the DMC 4-Chloroaniline-d4 were replaced with a UJ due to the low (1%R) acceptance criteria for this DMC.
17014 PAH	Bis(2-ethylhexyl)phthalate	None	U	LMR13-47-120 LMR13-63-024 LMR13-63-048	In accordance with the Organic NFG, results less than 5x the CRQL were qualified with a U when bis(2-ethylhexyl) phthalate was detected in the method blank.
17014 PAH	Hexachlorobutadiene	U	UJ	LMR13-91-072 LMR13-63-096	The original validators did not report or qualify the associated samples for the hexachlorobutadiene closing CCV %D failure.
17014 PAH	Pyrene	None	J	LMR13-91-072	The original validators did not report or qualify the associated sample results for the Pyrene-d10 low DMC percent recovery.
17014 OIL AND GREASE	HEM	None	J	LMR13-91-072 LMR13-91-096 LMR13-47-024 LMR13-47-048 LMR13-47-072 LMR13-47-096	These samples were extracted outside of the QAPP-required 14-day holding time for oil and grease. The samples were qualified J.
17024 MERCURY	Mercury	None	J	LMR13-45-024FD	The original validator did not qualify mercury for a field duplicate RPD > 100%. A J qualifier was assigned.
17024 AROCLOR	Aroclor-1248	None	J	LMR13-45-048 LMR13-45-072	The original validator did not qualify for four CCV failures. Several results are already qualified J for other reasons. The QATS validator added a J qualifier to two samples.

Table 3-2 QATS Revised Data Qualifiers

SDG/Fraction	Analyte/ Compound	Original Qualifier	Revised Qualifier	EPA Sample IDs	QATS Justification for EDD Revision
17024 PAH	4-Chloroaniline Hexachlorocyclopentadiene 3,3'-Dichlorobenzidine	R	UJ	LMR13-45-012 LMR13-45-024RE LMR13-45-048 LMR13-49-048 LMR13-83-024 LMR13-50-024FD LMR13-83-024FD	The R qualifiers originally assigned to the listed compounds in samples with a 0% R for the DMC 4-Chloroaniline-d4 were replaced with a UJ due to the low (1%R) acceptance criteria for this DMC.
17024 PAH	Bis(2-ethylhexyl)phthalate	None	U	LMR13-50-096 LMR13-50-120	In accordance with the Organic NFG, results less than 5x the CRQL were qualified with a U when bis(2-ethylhexyl) phthalate was detected in the method blank.
17024 PAH	1,2,4,5-Tetrachlorobenzene	UJ	U	LMR13-45-048 LMR13-45-072RE LMR13-45-120	Internal standard Phenanthrene-d10 exceeded criteria and associated compounds were qualified. 1,2,4,5-tetrachlorobenzene was incorrectly included in the qualified compounds. The J was removed from the UJ qualifier by the QATS validator.
17024 PAH	2,4-Dinitrophenol	UJ	U	LMR13-49-024 LMR13-49-048 LMR13-49-072 LMR13-50-120 LMR13-49-096 LMR13-49-120 LMR13-83-012 LMR13-83-024	The original validators qualified 2,4-Dinitrophenol UJ due to a closing CCV failure. The laboratory analyzed two closing CCVs. 2,4- dinitrophenol was within criteria in the first CCV and out in the second CCV (50.2 %D). The J was removed from the UJ qualifier by the QATS validators due to the passing %D in the first CCV.
17028 METALS	Chromium Zinc	J	None	LMR13-83-048 LMR13-83-072 LMR13-41-012 LMR13-41-024 LMR13-41-024FD LMR13-41-048 LMR13-57-012 LMR13-26-012 LMR13-26-012FD LMR13-57-024 LMR13-57-048 LMR13-72-048 LMR13-27-012 LMR13-27-024 LMR13-27-024FD LMR13-27-048 LMR13-27-072 LMR13-72-012 LMR13-72-024 LMR13-72-024FD LMR13-72-096 LMR13-27-096 LMR13-72-072	J qualifiers that were originally applied to samples for which the serial dilution %D exceeded 10% were removed if less than the expanded NFG criterion of ±15%D. The %D for the analytes listed is <15%; therefore, the J qualifiers were removed (unless the result was between the MDL and CRQL).

Table 3-2 QATS Revised Data Qualifiers

SDG/Fraction	Analyte/ Compound	Original Qualifier	Revised Qualifier	EPA Sample IDs	QATS Justification for EDD Revision
17028 MERCURY	Mercury	U	J	LMR13-26-012FD LMR13-57-048 LMR13-27-012 LMR13-27-072 LMR13-72-012	Trace levels of mercury were detected in one method blank. The original validators incorrectly qualified five samples that were in the batch associated with the clean blank. The U qualifiers were removed from the five samples and the results returned to the original value with the original J qualifier. Note that the original results for LMR13- 27-072 and LMR13-72-012 were detects. A J qualifier was applied to those samples for failed matrix spike percent recovery.
17028 PAH	4-Chloroaniline Hexachlorocyclopentadiene 3,3'-Dichlorobenzidine	R	UJ	LMR13-83-048 LMR13-41-012 LMR13-41-048 LMR13-26-012 LMR13-26-012FD LMR13-27-048 LMR13-27-072 LMR13-72-012 LMR13-27-096 LMR13-72-072	The R qualifiers originally assigned to the listed compounds in samples with a 0% R for the DMC 4-Chloroaniline-d4 were replaced with a UJ due to the low (1%R) acceptance criteria for this DMC.
17028 PAH	2-Methylphenol 4-Methlyphenol 2,4-Dimethylphenol	R	UJ	LMR13-83-048 LMR13-27-096	The R qualifier that was applied for the DMC recovery of 2% for 4- Methlyphenol-d8 was replaced with a UJ because the lower acceptance criterion is 8%. Note for LMR13-27-096 the original validators qualified the compounds R on the report forms; however, the qualifiers were not applied in the EDD file. The UJ qualifier was added by the QATS validator.
17028 PAH	Bis(2-ethylhexyl)phthalate	None	U	LMR13-26-012 LMR13-27-012 LMR13-72-012	In accordance with the Organic NFG, results less than 5x the CRQL were qualified with a U when bis(2-ethylhexyl) phthalate was detected in the method blank.
17028 PAH	Bis(2-ethylhexyl)phthalate	J	U	LMR13-41-012 LMR13-26-012FD LMR13-57-048 LMR13-27-048 LMR13-27-072	Bis(2-ethylhexyl) phthalate was detected in all three method blanks; however, five samples were not qualified U. For these samples the value was changed to the CRQL and qualified U. Note the laboratory did not apply the B to the Lab qualifiers.
17028 PAH	Di-n-butylphthalate Butylbenzylphthalate	J	U	LMR13-26-012FD LMR13-57-048 LMR13-27-012 LMR13-27-048 LMR13-27-072	Di-n-butylphthalate and butylbenzylphthalate were detected in the associated blank; however, five samples were not qualified U. For these samples the value was changed to the CRQL and qualified U. Note the laboratory did not apply the B to in the lab qualifier column for these samples.
17052 METALS	Cadmium	J	U	LMR13-29-096	Trace levels of cadmium between the MDL and CRQL were detected in the CCBs. The original validation did not report or qualify for this calibration blank contamination. The result for one sample was adjusted to the CRQL and qualified U.
17052 MERCURY	Mercury	J	U	LMR13-28-048	Trace level of mercury between the MDL and CRQL was detected in the CCB. The original validation did not report or qualify for this calibration blank contamination. The result for one sample was changed to the CRQL and qualified U.
17052 AROCLOR	Aroclor-1242	None	J	LMR13-29-048	The original validator did not qualify for a CCV %D failure. One result was already qualified J for another reason. The QATS validator added a J qualifier to one other sample.

Table 3-2 QATS Revised Data Qualifiers

SDG/Fraction	Analyte/ Compound	Original Qualifier	Revised Qualifier	EPA Sample IDs	QATS Justification for EDD Revision
17052 PAH	4-Chloroaniline Hexachlorocyclopentadiene 3,3'-Dichlorobenzidine	R	UJ	LMR13-28-012 LMR13-28-024 LMR13-28-048 LMR13-28-120 LMR13-29-012 LMR13-29-024 LMR13-34-012 LMR13-34-024 LMR13-34-048 LMR13-34-072 LMR13-34-096 LMR13-28-024FD LMR13-34-024FD	The R qualifiers originally assigned to the listed compounds in samples with a 0% R for the DMC 4-Chloroaniline-d4 were replaced with a UJ due to the low (1%R) acceptance criteria for this DMC.
17052 PAH	Pentachlorophenol	UJ	U	LMR13-28-012 LMR13-28-048 LMR13-28-024 LMR13-28-072 LMR13-28-096 LMR13-28-120 LMR13-29-012 LMR13-29-024 LMR13-29-048 LMR13-29-072 LMR13-29-096 LMR13-34-012	The original validators qualified pentachlorophenol UJ due to a closing CCV %D failure. The laboratory analyzed two closing CCVs. Pentachlorophenol was within criteria in the first CCV and out in the second CCV (50.2 %D). The J was removed from the UJ qualifier by the QATS validators due to the passing %D in the first CCV.
17054 AROCLOR	Aroclor-1016 Aroclor-1260	U	UJ	LMR13-32-012 LMR13-32-024 LMR13-32-048 LMR13-32-072 LMR13-75-024	The original validator did not report or qualify for CCV %D failures. The QATS validator added a J qualifier to the existing U for two compounds in five associated samples.
17054 AROCLOR	Aroclor-1016	U	UJ	LMR13-31-012 LMR13-31-024 LMR13-31-024FD LMR13-74-024	The original validator did not report or qualify for CCV %D failures. The QATS validator added a J qualifier to the existing U for one compound in four associated samples.
17054 PAH	4-Chloroaniline Hexachlorocyclopentadiene 3,3'-Dichlorobenzidine	R	UJ	LMR13-31-024 LMR13-74-024 LMR13-74-012 LMR13-74-072 LMR13-76-012 LMR13-35-012 LMR13-75-024FD	The R qualifiers originally assigned to the listed compounds in samples with a 0% R for the DMC 4-Chloroaniline-d4 were replaced with a UJ due to the low (1%R) acceptance criteria for this DMC.
17054 PAH	Bis(2-ethylhexyl)phthalate	None	U	LMR13-34-168 LMR13-31-012 LMR13-74-024 LMR13-76-012 LMR13-76-024 LMR13-35-012	In accordance with the Organic NFG, results less than 5x the CRQL were qualified with a U when bis(2-ethylhexyl) phthalate was detected in the method blank.

Table 3-2 QATS Revised Data Qualifiers

SDG/Fraction	Analyte/ Compound	Original Qualifier	Revised Qualifier	EPA Sample IDs	QATS Justification for EDD Revision
17054 PAH	Nitrobenzene	U	UJ	LMR13-32-012 LMR13-32-024 LMR13-32-048 LMR13-32-072 LMR13-75-024 LMR13-31-012 LMR13-31-024 LMR13-74-024 LMR13-75-012 LMR13-74-012 LMR13-74-048 LMR13-74-072 LMR13-76-012	The original validator did not qualify nitrobenzene for opening CCV %D failure. The QATS validator added a J qualifier to the existing U in the associated samples.
17054 PAH	2,4-Dinitrophenol	UJ	U	LMR13-32-012 LMR13-32-024 LMR13-32-048 LMR13-32-072 LMR13-75-024 LMR13-31-012 LMR13-31-024 LMR13-74-024 LMR13-75-012 LMR13-74-012 LMR13-74-048 LMR13-74-072 LMR13-76-012	The original validators qualified 2,4-Dinitrophenol UJ due to a closing CCV failure. The laboratory analyzed two closing CCVs. 2,4- dinitrophenol was within criteria in the second CCV and out in the first CCV. The J was removed from the UJ qualifier by the QATS validators due to the passing %D in the second CCV.
17054 PAH	3,3'-Dichlorobenzidine	U	UJ	LMR13-76-024 LMR13-35-024	The original validator did not report or qualify 3,3'-Dichlorobenzidine for opening CCV %D failure. The QATS validator added a J qualifier to the existing U in the associated samples.
17055 METALS	Lead	J	None	LMR13-48-072 LMR13-48-096 LMR13-48-120 LMR13-48-144 LMR13-48-168 LMR13-82-012 LMR13-82-024 LMR13-82-024FD LMR13-82-072 LMR13-03-012 LMR13-03-024 LMR13-03-048 LMR13-03-072 LMR13-03-096 LMR13-03-120 LMR13-82-048 LMR13-82-096 LMR13-82-120 LMR13-82-144	J qualifiers that were originally applied to samples for which the serial dilution %D exceeded 10% were removed if less than the expanded NFG criterion of ±15%D. The %D for the analytes listed is <15%; therefore, the J qualifiers were removed (unless the result was between the MDL and CRQL).

Table 3-2 QATS Revised Data Qualifiers

SDG/Fraction	Analyte/ Compound	Original Qualifier	Revised Qualifier	EPA Sample IDs	QATS Justification for EDD Revision
17055 MERCURY	Mercury	J	U	LMR13-03-120	Trace levels of mercury between the MDL and CRQL were detected in the ICB and CCBs. The original validation did not report or qualify for this calibration blank contamination. The result for one sample has been adjusted to the CRQL and qualified U.
17055 AROCLOR	Aroclor-1016 Aroclor-1260	U	UJ	LMR13-48-072 LMR13-48-096 LMR13-48-120 LMR13-48-144 LMR13-48-168	The original validator did not report or qualify for CCV %D failures. The QATS validator added a J qualifier to the existing U for two compounds in five associated samples.
17055 AROCLOR	Aroclor-1242	U	UJ	LMR13-82-012 LMR13-82-024 LMR13-82-024FD LMR13-82-072 LMR13-03-024 LMR13-03-048 LMR13-03-072 LMR13-03-096 LMR13-03-120 LMR13-82-048 LMR13-82-096 LMR13-82-120 LMR13-82-144	The original validator did not report or qualify for CCV %D failures. The QATS validator added a J qualifier to the existing U.
17055 AROCLOR	Aroclor-1248	None	J	LMR13-82-012 LMR13-82-024 LMR13-82-024FD	The original validator did not report or qualify for CCV %D failures. The QATS validator added a J qualifier.
17055 AROCLOR	Aroclor-1248	U	UJ	LMR13-82-072 LMR13-03-012 LMR13-03-024 LMR13-03-048 LMR13-03-072 LMR13-03-096 LMR13-03-120 LMR13-82-048 LMR13-82-096 LMR13-82-120 LMR13-82-144	The original validator did not report or qualify for CCV %D failures. The QATS validator added a J qualifier to the existing U.
17055 PAH	4-Chloroaniline Hexachlorocyclopentadiene 3,3'-Dichlorobenzidine	R	UJ	LMR13-48-072 LMR13-48-120 LMR13-48-144 LMR13-82-012 LMR13-82-024 LMR13-03-024FD LMR13-82-096 LMR13-82-120 LMR13-82-144	The R qualifiers originally assigned to the listed compounds in samples with a 0% R for the DMC 4-Chloroaniline-d4 were replaced with a UJ due to the low (1%R) acceptance criteria for this DMC.
17055 PAH	Bis(2-ethylhexyl)phthalate	None	U	LMR13-03-012	In accordance with the Organic NFG, results less than 5x the CRQL were qualified with a U when bis(2-ethylhexyl) phthalate was detected in the method blank.

Table 3-2 QATS Revised Data Qualifiers

SDG/Fraction	Analyte/ Compound	Original Qualifier	Revised Qualifier	EPA Sample IDs	QATS Justification for EDD Revision
17055 PAH SIM	Naphthalene 1-Methylnaphthalene 2-Methylnaphthalene Acenaphthylene Acenaphthene Fluorene Anthracene Perylene Dibenzo(a,h)anthracene	None	J	LMR13-82-012 LMR13-03-012	The sample was analyzed 43 days after extraction, which exceeds the analysis holding time by 3 days. Detected compounds (not already qualified J) reported from this sample were qualified J.
17055 OIL AND GREASE	HEM	None	J	LMR13-03-048	These samples were extracted outside of the QAPP-required 14-day holding time for oil and grease. The samples were qualified J.
17055 OIL AND GREASE	HEM	U	UJ	LMR13-03-072 LMR13-03-096 LMR13-03-120	These samples were extracted outside of the QAPP-required 14-day holding time for oil and grease. The samples were qualified UJ.
17056 METALS	Zinc	J	None	LMR13-35-024FD LMR13-35-048 LMR13-76-024FD LMR13-76-048 LMR13-76-072 LMR13-35-072 LMR13-35-096 LMR13-77-012 LMR13-77-024 LMR13-77-048 LMR13-77-072 LMR13-38-024 LMR13-38-072 LMR13-78-012 LMR13-78-024 LMR13-78-024FD LMR13-40-012 LMR13-40-024 LMR13-79-048 LMR13-79-048FD	J qualifiers that were originally applied to samples for which the serial dilution %D exceeded 10% were removed if less than the expanded NFG criterion of ±15%D. The %D for the analytes listed is <15%; therefore, the J qualifiers were removed (unless the result was between the MDL and CRQL).
17056 MERCURY	Mercury	U	None	LMR13-35-024FD LMR13-35-048 LMR13-38-024	Trace level of mercury between the MDL and CRQL was detected in the MB. The original validation qualified results greater than the CRQL and greater than 5x the blank level as U. The U qualifier was removed.
17056 AROCLOR	Aroclor-1254	None	J	LMR13-35-024FD	The original validator did not qualify for CCV %D failures. A J qualifier was added.
17056 PAH SIM	Fluoranthene Pyrene Chrysene Benzo(g,h,i)perylene	None	J	LMR13-78-012	The sample was analyzed 48 days after extraction, which exceeds the analysis holding time by 8 days. Detected compounds (not already qualified J) reported from this sample were qualified J.

Table 3-2 QATS Revised Data Qualifiers

SDG/Fraction	Analyte/ Compound	Original Qualifier	Revised Qualifier	EPA Sample IDs	QATS Justification for EDD Revision
17056 PAH SIM	Naphthalene Acenaphthylene Phenanthrene Benzo(a)pyrene C1-Naphthalenes	U	UJ	LMR13-78-012	The sample was analyzed 48 days after extraction, which exceeds the analysis holding time by 8 days. Non-detected compounds were qualified UJ.
17056 PAH	4-Chloroaniline Hexachlorocyclopentadiene 3,3'-Dichlorobenzidine	R	UJ	LMR13-35-048 LMR13-77-012 LMR13-38-024 LMR13-38-024FD LMR13-77-024FD LMR13-40-012 LMR13-40-024FD	The R qualifiers originally assigned to the listed compounds in samples with a 0% R for the DMC 4-Chloroaniline-d4 were replaced with a UJ due to the low (1%R) acceptance criteria for this DMC.
17056 PAH	Bis(2-ethylhexyl)phthalate	None	U	LMR13-76-048 LMR13-76-072	In accordance with the Organic NFG, results less than 5x the CRQL were qualified with a U when bis(2-ethylhexyl) phthalate was detected in the method blank.
17061 AROCLOR	Aroclor-1016 Aroclor-1260	U	UJ	LMR13-79-072 LMR13-79-096 LMR13-38-012 LMR13-40-072 LMR13-40-096 LMR13-79-012 LMR13-79-024 LMR13-01-072 LMR13-38-048 LMR13-38-096 LMR13-40-048	The original validators did not report or qualify the associated samples for the Aroclor-1016 and Aroclor-1260 CCV %D failure.
17061 PAH SIM	Naphthalene 2-Methylnaphthalene Acenaphthylene Benzo(e)pyrene Perylene Indeno(1,2,3-cd)pyrene Dibenzo(a,h)anthracene Benzo(g,h,i)perylene	None	J	LMR13-01-012	The sample was analyzed 42 days after extraction, which exceeds the 40-day analytical holding time. The original validators did not qualify for the holding time exceedance. Compounds not already qualified J were qualified J.
17061 PAH	Benzo(b)fluoranthene Dibenzo(a,h)anthracene	U	UJ	LMR13-79-072 LMR13-79-096 LMR13-79-024 LMR13-38-096 LMR13-01-120	The original validators did not qualify the associated samples for the initial calibration %RSD failure.
17061 PAH	Dibenzo(a,h)anthracene	U	UJ	LMR13-01-096	The original validators did not qualify the associated samples for the initial calibration %RSD failure.

Table 3-2 QATS Revised Data Qualifiers

SDG/Fraction	Analyte/ Compound	Original Qualifier	Revised Qualifier	EPA Sample IDs	QATS Justification for EDD Revision
17061 PAH	Benzo(b)fluoranthene	None	J	LMR13-38-012 LMR13-40-072 LMR13-40-096 LMR13-79-012 LMR13-38-048 LMR13-01-012 LMR13-01-024 LMR13-01-048 LMR13-48-024 LMR13-48-012 LMR13-48-048 LMR13-48-024FD	The original validators did not qualify the associated samples for the initial calibration %RSD failure.
17061 PAH	4-Chloroaniline Hexachlorocyclopentadiene 3,3'-Dichlorobenzidine	R	UJ	LMR13-38-012 LMR13-01-072 LMR13-40-048	The R qualifiers originally assigned to the listed compounds in samples with a 0% R for the DMC 4-Chloroaniline-d4 were replaced with a UJ due to the low (1%R) acceptance criteria for this DMC. (Unless the compound was a detected result qualified J).
17061 PAH	Di-n-octylphthalate	UJ	U	LMR13-38-048 LMR13-38-096 LMR13-40-048 LMR13-01-096 LMR13-01-120	The original validators qualified di-n-octylphthalate UJ due to a closing CCV %D failure. The laboratory analyzed two closing CCVs. Di-n- octylphthalate was within criteria in the second CCV and out in the first CCV (50.2 %D). The J was removed from the UJ qualifier by the QATS validators due to the passing %D in the second CCV.
17061 OIL AND GREASE	HEM	None or U	J or UJ	LMR13-79-072 LMR13-79-096 LMR13-38-012 LMR13-40-072 LMR13-40-096 LMR13-79-012 LMR13-79-024 LMR13-38-048 LMR13-38-096 LMR13-40-048	These samples were extracted outside of the QAPP-required 14-day holding time for oil and grease. The samples were qualified J or UJ. Note that some of these samples were incorrectly qualified for MS/MSD recoveries in the EDD file. The qualifiers were highlighted blue to indicate the different reason for the qualification.
17061 OIL AND GREASE	HEM	J or UJ	None or U	LMR13-01-012 LMR13-01-024 LMR13-01-048 LMR13-01-096 LMR13-48-048 LMR13-48-024FD LMR13-79-024FD	The samples were incorrectly qualified for MS/MSD recoveries. The MS/MSD recoveries were within criteria for the QC sample associated with these samples.

Table 3-2 QATS Revised Data Qualifiers

SDG/Fraction	Analyte/ Compound	Original Qualifier	Revised Qualifier	EPA Sample IDs	QATS Justification for EDD Revision
17071 PAH	All Compounds	U, J, or None	ZZZ	LMR13-13-024	The sample was reanalyzed due to low internal standard recoveries. The re-analysis produced better results; however, the reanalysis was not included in the EDD file. Upon request, the reanalysis EDD was sent to the QATS validators and incorporated into the Region 5 EDD. The original analysis was set to NO in the reportable result column and ZZZ were entered into the validator qualifier column. The reanalysis was set to YES in the reportable result column and validation qualifiers were added as needed.
17071 PAH	4-Chloroaniline Hexachlorocyclopentadiene 3,3'-Dichlorobenzidine	R	UJ	LMR13-08-048 LMR13-13-012 LMR13-13-024RE LMR13-14-120 LMR13-13-120 LMR13-14-096 LMR13-08-024 LMR13-25-072 LMR13-08-024FD LMR13-08-012 LMR13-14-012	The R qualifiers originally assigned to the listed compounds in samples with a 0% R for the DMC 4-Chloroaniline-d4 were replaced with a UJ due to the low (1%R) acceptance criteria for this DMC.
17071 PAH	Bis(2-ethylhexyl)phthalate	None	U	LMR13-13-012 LMR13-08-024	In accordance with the Organic NFG, results less than 5x the CRQL were qualified with a U when bis(2-ethylhexyl) phthalate was detected in the method blank.
17071 SEM MERCURY	SEM Mercury	J	U	LMR13-25-012FD LMR13-82-024 LMR13-82-024FD	Trace levels of mercury between the MDL and CRQL were detected in the ICB and CCB. The original validators did not qualify results for the calibration blank contamination. The result was changed to the CRQL and a U qualifier was applied. The QATS validator added a J qualifier.
17055 AROCLOR	Aroclor-1248	U	UJ	LMR13-82-072 LMR13-03-012 LMR13-03-024 LMR13-03-048 LMR13-03-072 LMR13-03-096 LMR13-03-120 LMR13-82-048 LMR13-82-096 LMR13-82-120 LMR13-82-144	The original validator did not report or qualify for CCV %D failures. The QATS validator added a J qualifier to the existing U.
17055 PAH	4-Chloroaniline Hexachlorocyclopentadiene 3,3'-Dichlorobenzidine	R	UJ	LMR13-48-072 LMR13-48-120 LMR13-48-144 LMR13-82-012 LMR13-82-024 LMR13-03-024FD LMR13-82-096 LMR13-82-120 LMR13-82-144	The R qualifiers originally assigned to the listed compounds in samples with a 0% R for the DMC 4-Chloroaniline-d4 were replaced with a UJ due to the low (1%R) acceptance criteria for this DMC.
17055 PAH	Bis(2-ethylhexyl)phthalate	None	U	LMR13-03-012	In accordance with the Organic NFG, results less than 5x the CRQL were qualified with a U when bis(2-ethylhexyl) phthalate was detected in the method blank.

Table 3-2 QATS Revised Data Qualifiers

SDG/Fraction	Analyte/ Compound	Original Qualifier	Revised Qualifier	EPA Sample IDs	QATS Justification for EDD Revision
17055 PAH SIM	Naphthalene 1-Methylnaphthalene 2-Methylnaphthalene Acenaphthylene Acenaphthene Fluorene Anthracene Perylene Dibenzo(a,h)anthracene	None	J	LMR13-82-012 LMR13-03-012	The sample was analyzed 43 days after extraction, which exceeds the analysis holding time by 3 days. Detected compounds (not already qualified J) reported from this sample were qualified J.
17055 OIL AND GREASE	HEM	None	J	LMR13-03-048	These samples were extracted outside of the QAPP-required 14-day holding time for oil and grease. The samples were qualified J.
17055 OIL AND GREASE	HEM	U	UJ	LMR13-03-072 LMR13-03-096 LMR13-03-120	These samples were extracted outside of the QAPP-required 14-day holding time for oil and grease. The samples were qualified UJ.
17056 METALS	Zinc	J	None	LMR13-35-024FD LMR13-35-048 LMR13-76-024FD LMR13-76-048 LMR13-76-072 LMR13-35-072 LMR13-35-096 LMR13-77-012 LMR13-77-024 LMR13-77-048 LMR13-77-072 LMR13-38-024 LMR13-38-072 LMR13-78-012 LMR13-78-024 LMR13-78-024FD LMR13-40-012 LMR13-40-024 LMR13-79-048 LMR13-79-048FD	J qualifiers that were originally applied to samples for which the serial dilution %D exceeded 10% were removed if less than the expanded NFG criterion of ±15%D. The %D for the analytes listed is <15%; therefore, the J qualifiers were removed (unless the result was between the MDL and CRQL).
17056 MERCURY	Mercury	U	None	LMR13-35-024FD LMR13-35-048 LMR13-38-024	Trace level of mercury between the MDL and CRQL was detected in the MB. The original validation qualified results greater than the CRQL and greater than 5x the blank level as U. The U qualifier was removed.
17056 AROCLOR	Aroclor-1254	None	J	LMR13-35-024FD	The original validator did not qualify for CCV %D failures. A J qualifier was added.
17056 PAH SIM	Fluoranthene Pyrene Chrysene Benzo(g,h,i)perylene	None	J	LMR13-78-012	The sample was analyzed 48 days after extraction, which exceeds the analysis holding time by 8 days. Detected compounds (not already qualified J) reported from this sample were qualified J.
17056 PAH SIM	Naphthalene Acenaphthylene Phenanthrene Benzo(a)pyrene C1-Naphthalenes	U	UJ	LMR13-78-012	The sample was analyzed 48 days after extraction, which exceeds the analysis holding time by 8 days. Non-detected compounds were qualified UJ.

Table 3-2 QATS Revised Data Qualifiers

SDG/Fraction	Analyte/ Compound	Original Qualifier	Revised Qualifier	EPA Sample IDs	QATS Justification for EDD Revision
17056 PAH	4-Chloroaniline Hexachlorocyclopentadiene 3,3'-Dichlorobenzidine	R	UJ	LMR13-35-048 LMR13-77-012 LMR13-38-024 LMR13-38-024FD LMR13-77-024FD LMR13-40-012 LMR13-40-024FD	The R qualifiers originally assigned to the listed compounds in samples with a 0% R for the DMC 4-Chloroaniline-d4 were replaced with a UJ due to the low (1%R) acceptance criteria for this DMC.
17056 PAH	Bis(2-ethylhexyl)phthalate	None	U	LMR13-76-048 LMR13-76-072	In accordance with the Organic NFG, results less than 5x the CRQL were qualified with a U when bis(2-ethylhexyl) phthalate was detected in the method blank.
17061 AROCLOR	Aroclor-1016 Aroclor-1260	U	UJ	LMR13-79-072 LMR13-79-096 LMR13-38-012 LMR13-40-072 LMR13-40-096 LMR13-79-012 LMR13-79-024 LMR13-01-072 LMR13-38-048 LMR13-38-096 LMR13-40-048	The original validators did not report or qualify the associated samples for the Aroclor-1016 and Aroclor-1260 CCV %D failure.
17061 PAH SIM	Naphthalene 2-Methylnaphthalene Acenaphthylene Benzo(e)pyrene Perylene Indeno(1,2,3-cd)pyrene Dibenzo(a,h)anthracene Benzo(g,h,i)perylene	None	J	LMR13-01-012	The sample was analyzed 42 days after extraction, which exceeds the 40-day analytical holding time. The original validators did not qualify for the holding time exceedance. Compounds not already qualified J were qualified J.
17061 PAH	Benzo(b)fluoranthene Dibenzo(a,h)anthracene	U	UJ	LMR13-79-072 LMR13-79-096 LMR13-79-024 LMR13-38-096 LMR13-01-120	The original validators did not qualify the associated samples for the initial calibration %RSD failure.
17061 PAH	Dibenzo(a,h)anthracene	U	UJ	LMR13-01-096	The original validators did not qualify the associated samples for the initial calibration %RSD failure.
17061 PAH	Benzo(b)fluoranthene	None	J	LMR13-38-012 LMR13-40-072 LMR13-40-096 LMR13-79-012 LMR13-38-048 LMR13-01-012 LMR13-01-024 LMR13-01-048 LMR13-48-024 LMR13-48-012 LMR13-48-048 LMR13-48-024FD	The original validators did not qualify the associated samples for the initial calibration %RSD failure.

Table 3-2 QATS Revised Data Qualifiers

SDG/Fraction	Analyte/ Compound	Original Qualifier	Revised Qualifier	EPA Sample IDs	QATS Justification for EDD Revision
17061 PAH	4-Chloroaniline Hexachlorocyclopentadiene 3,3'-Dichlorobenzidine	R	UJ	LMR13-38-012 LMR13-01-072 LMR13-40-048	The R qualifiers originally assigned to the listed compounds in samples with a 0% R for the DMC 4-Chloroaniline-d4 were replaced with a UJ due to the low (1%R) acceptance criteria for this DMC. (Unless the compound was a detected result qualified J).
17061 PAH	Di-n-octylphthalate	UJ	U	LMR13-38-048 LMR13-38-096 LMR13-40-048 LMR13-01-096 LMR13-01-120	The original validators qualified di-n-octylphthalate UJ due to a closing CCV %D failure. The laboratory analyzed two closing CCVs. Di-n- octylphthalate was within criteria in the second CCV and out in the first CCV (50.2 %D). The J was removed from the UJ qualifier by the QATS validators due to the passing %D in the second CCV.
17061 OIL AND GREASE	HEM	None or U	J or UJ	LMR13-79-072 LMR13-79-096 LMR13-38-012 LMR13-40-072 LMR13-40-096 LMR13-79-012 LMR13-79-024 LMR13-38-048 LMR13-38-096 LMR13-40-048	These samples were extracted outside of the QAPP-required 14-day holding time for oil and grease. The samples were qualified J or UJ. Note that some of these samples were incorrectly qualified for MS/MSD recoveries in the EDD file. The qualifiers were highlighted blue to indicate the different reason for the qualification.
17061 OIL AND GREASE	HEM	J or UJ	None or U	LMR13-01-048 LMR13-01-024 LMR13-01-012 LMR13-01-096 LMR13-01-120 LMR13-48-012 LMR13-48-024 LMR13-48-048 LMR13-48-024FD LMR13-79-024FD	The samples were incorrectly qualified for MS/MSD recoveries. The MS/MSD recoveries were within criteria for the QC sample associated with these samples.
17071 PAH	All Compounds	U, J, or None	ZZZ	LMR13-13-024	The sample was reanalyzed due to low internal standard recoveries. The re-analysis produced better results; however, the reanalysis was not included in the EDD file. Upon request, the reanalysis EDD was sent to the QATS validators and incorporated into the Region 5 EDD. The original analysis was set to NO in the reportable result column and ZZZ were entered into the validator qualifier column. The reanalysis was set to YES in the reportable result column and validation qualifiers were added as needed.

Table 3-2 QATS Revised Data Qualifiers

SDG/Fraction	Analyte/ Compound	Original Qualifier	Revised Qualifier	EPA Sample IDs	QATS Justification for EDD Revision
17071 PAH	4-Chloroaniline Hexachlorocyclopentadiene 3,3'-Dichlorobenzidine	R	UJ	LMR13-08-048 LMR13-13-012 LMR13-13-024RE LMR13-14-120 LMR13-13-120 LMR13-14-096 LMR13-08-024 LMR13-25-072 LMR13-08-024FD LMR13-08-012 LMR13-14-012	The R qualifiers originally assigned to the listed compounds in samples with a 0% R for the DMC 4-Chloroaniline-d4 were replaced with a UJ due to the low (1%R) acceptance criteria for this DMC.
17071 PAH	Bis(2-ethylhexyl)phthalate	None	U	LMR13-13-012 LMR13-08-024	In accordance with the Organic NFG, results less than 5x the CRQL were qualified with a U when bis(2-ethylhexyl) phthalate was detected in the method blank.
17071 SEM MERCURY	SEM Mercury	J	U	LMR13-25-012FD	Trace levels of mercury between the MDL and CRQL were detected in the ICB and CCB. The original validators did not qualify results for the calibration blank contamination. The result was changed to the CRQL and a U qualifier was applied.
17071 OIL AND GREASE	HEM	None or U	J or UJ	LMR13-08-012 LMR13-14-012 LMR13-14-048 LMR13-14-072 LMR13-08-048 LMR13-08-072 LMR13-13-012 LMR13-13-024 LMR13-14-120 LMR13-13-072 LMR13-13-120 LMR13-14-096 LMR13-08-024 LMR13-03-024FD	These samples were extracted outside of the QAPP-required 14-day holding time for oil and grease. The samples were qualified J or UJ.

Table 3-2 QATS Revised Data Qualifiers

SDG/Fraction	Analyte/ Compound	Original Qualifier	Revised Qualifier	EPA Sample IDs	QATS Justification for EDD Revision
17078 METALS	Chromium Copper Zinc	J	None	LMR13-25-096 LMR13-13-048 LMR13-14-024 LMR13-71-012 LMR13-71-024 LMR13-71-048 LMR13-71-072 LMR13-07-024FD LMR13-71-024FD LMR13-07-012 LMR13-07-024 LMR13-07-048 LMR13-07-072 LMR13-21-048 LMR13-15-024FD LMR13-15-024 LMR13-21-012 LMR13-21-024 LMR13-21-072 LMR13-15-012	J qualifiers that were originally applied to samples for which the serial dilution %D exceeded 10% were removed if less than the expanded NFG criterion of ±15%D. The %D for the analytes listed is <15%; therefore, the J qualifiers were removed (unless the result was between the MDL and CRQL).
17078 AROCLOR	Aroclor-1016 Aroclor-1221 Aroclor-1232 Aroclor-1242 Aroclor-1262 Aroclor-1268	UJ	U	LMR13-13-048	Sample LMR13-13-048 was qualified UJ and J in the EDD file. The original validated Form I did not reflect qualifiers other than the U and J for the concentration qualifiers. The data validation report did not explain why qualifiers were entered for this sample. The QATS validators removed the J and left the original U.
17078 AROCLOR	Aroclor-1248 Aroclor-1254	J	None	LMR13-13-048	Sample LMR13-13-048 was qualified UJ and J in the EDD file. The original validated Form I did not reflect qualifiers other than the U and J for the concentration qualifiers. The data validation report did not explain why qualifiers were entered for this sample. The QATS validators removed the J qualifier.
17078 PAH SIM	Benzo(e)pyrene Pyrene	None	J	LMR13-21-012 LMR13-15-012 LMR13-21-012FD	The original validator did not qualify benzo(e)pyrene or pyrene for opening CCV %D failure. J qualifiers were added to the associated samples.
17078 PAH	4-Chloroaniline Hexachlorocyclopentadiene 3,3'-Dichlorobenzidine	R	UJ	LMR13-71-024 LMR13-71-024FD LMR13-15-012	The R qualifiers originally assigned to the listed compounds in samples with a 0% R for the DMC 4-Chloroaniline-d4 were replaced with a UJ due to the low (1%R) acceptance criteria for this DMC. (Unless the compound was a detected result qualified J).
17078 SEM MERCURY	SEM Mercury	J	U	LMR13-15-012	Trace levels of mercury between the MDL and CRQL were detected in the ICB and CCB. The original validators did not qualify results for the calibration blank contamination. The result was changed to the CRQL and a U qualifier was applied.

Table 3-2 QATS Revised Data Qualifiers

SDG/Fraction	Analyte/ Compound	Original Qualifier	Revised Qualifier	EPA Sample IDs	QATS Justification for EDD Revision
17083 METALS	Copper	J	None	LMR13-87-012 LMR13-87-024 LMR13-87-072 LMR13-87-096 LMR13-86-024FD LMR13-86-012 LMR13-86-024 LMR13-87-048 LMR13-87-120 LMR13-84-024FD LMR13-84-012 LMR13-84-024 LMR13-84-048 LMR13-84-072 LMR13-86-048 LMR13-86-096 LMR13-30-012 LMR13-30-024 LMR13-30-048	J qualifiers that were originally applied to samples for which the serial dilution %D exceeded 10% were removed if less than the expanded NFG criterion of ±15%D. The %D for the analytes listed is <15%; therefore, the J qualifiers were removed (unless the result was between the MDL and CRQL).
17083 PAH	4-Chloroaniline 3,3'-Dichlorobenzidine	R	U	LMR13-87-012 LMR13-87-048	The R qualifier that was applied for the DMC recovery of 0% for 4- Chloroaniline-d4 was removed because the sample was run at a dilution and the DMC was diluted out. The QATS validator removed the R qualifier and changed it back to the original U.
17083 PAH	Hexachlorocyclopentadiene	R	UJ	LMR13-87-012 LMR13-87-048	The R qualifier that was applied for the DMC recovery of 0% for 4- Chloroaniline-d4 was removed because the sample was run at a dilution and the DMC was diluted out. The R qualifier was removed and replaced with a UJ because the %D for hexachlorocyclopentadiene failed criteria in the closing CCVs.
17083 PAH	4-Chloroaniline Hexachlorocyclopentadiene 3,3'-Dichlorobenzidine	R	U	LMR13-87-072	The R qualifier that was applied for the DMC recovery of 0% for 4- Chloroaniline-d4 was removed because the sample was run at a dilution and the DMC was diluted out. The QATS validator removed the R qualifier and changed it back to the original U.
17083 PAH	4-Chloroaniline Hexachlorocyclopentadiene 3,3'-Dichlorobenzidine	R	UJ	LMR13-84-012 LMR13-84-024 LMR13-84-048 LMR13-84-072	The R qualifiers originally assigned to the listed compounds in samples with a 0% R for the DMC 4-Chloroaniline-d4 were replaced with a UJ due to the low (1%R) acceptance criteria for this DMC.
17083 PAH	Phenanthrene Anthracene	J	None	LMR13-87-048	The J qualifier that was applied for the DMC recovery for anthracene- d10 was removed because the sample was run at a dilution.
17083 PAH	Bis(2-ethylhexyl)phthalate	None	U	LMR13-87-012 LMR13-86-012	In accordance with the Organic NFG, results less than 5x the CRQL were qualified with a U when bis(2-ethylhexyl) phthalate was detected in the method blank.
17083 PAH	4-Nitroaniline	UJ	U	LMR13-84-012 LMR13-84-024 LMR13-84-048 LMR13-84-072 LMR13-86-048 LMR13-86-096 LMR13-30-024 LMR13-30-048 LMR13-30-024FD	The original validators qualified 4-Nitroaniline UJ due to a closing CCV %D failure. The laboratory analyzed two closing CCVs. 4-nitroaniline was within criteria in the first CCV and out in the second CCV (53.2 %D). The J was removed from the UJ qualifier due to the passing %D in the first CCV.

Table 3-2 QATS Revised Data Qualifiers

SDG/Fraction	Analyte/ Compound	Original Qualifier	Revised Qualifier	EPA Sample IDs	QATS Justification for EDD Revision
17083 PAH	Indeno(1,2,3-cd)pyrene Benzo(g,h,i)perylene	J	None	LMR13-86-048 LMR13-86-096 LMR13-30-024 LMR13-30-048 LMR13-30-024FD	The original validators qualified these compounds J based on a calibration that was not analyzed within the 12-hour window. The alternate continuing calibration standard was analyzed within the 12- hour window and was within criteria for these compounds. The QATS validators removed the J qualifiers.
17083 PAH	2,4-Dinitrophenol	UJ	U	LMR13-87-024 LMR13-87-096 LMR13-87-120	The original validators qualified 2,4-Dinitrophenol UJ due to a closing CCV %D failure. The laboratory analyzed two closing CCVs. 2,4- dinitrophenol was within criteria in the first CCV and out in the second CCV (50.5 %D). The J was removed from the UJ qualifier due to the passing %D in the first CCV.
17083 PAH	Fluoranthene Benzo(a)anthracene Chrysene	J	None	LMR13-86-096	The J qualifier that was applied for the DMC recovery for pyrene-d10 was removed because the sample was run at a dilution. Note that the pyrene result is qualified J due to an ICAL %RSD failure.
17083 SEM MERCURY	SEM Mercury	J	U	LMR13-86-012	Trace levels of mercury between the MDL and CRQL were detected in the ICB and CCB. The original validators did not qualify results for the calibration blank contamination. The result was changed to the CRQL and a U qualifier was applied.
17083 OIL AND GREASE	HEM	None or U	J or UJ	LMR13-84-012 LMR13-87-024FD LMR13-87-120 LMR13-87-048 LMR13-86-012 LMR13-87-096 LMR13-87-072 LMR13-87-024 LMR13-87-012 LMR13-84-024 LMR13-84-048 LMR13-84-072 LMR13-86-048 LMR13-86-096 LMR13-30-024 LMR13-30-048 LMR13-30-024FD	These samples were extracted outside of the QAPP-required 14-day holding time for oil and grease. The samples were qualified J or UJ.
17096 PAH	4-Chloroaniline Hexachlorocyclopentadiene 3,3'-Dichlorobenzidine	R	UJ	LMR13-39-048 LMR13-85-024 LMR13-67-012 LMR13-67-024 LMR13-67-048 LMR13-85-012 LMR13-89-024FD LMR13-85-024FD	The R qualifiers originally assigned to the listed compounds in samples with a 0% R for the DMC 4-Chloroaniline-d4 were replaced with a UJ due to the low (1%R) acceptance criteria for this DMC. (Unless the compound was a detected result qualified J).
17096 PAH	Bis(2-ethylhexyl)phthalate	None	U	LMR13-85-024 LMR13-85-048 LMR13-85-024FD	In accordance with the Organic NFG, results less than 5x the CRQL were qualified with a U when bis(2-ethylhexyl) phthalate was detected in the method blank.

Table 3-2 QATS Revised Data Qualifiers

SDG/Fraction	Analyte/ Compound	Original Qualifier	Revised Qualifier	EPA Sample IDs	QATS Justification for EDD Revision
17096 PAH SIM	Benzo(e)pyrene	None	J	LMR13-88-012	The original validator did not report or qualify Benzo(e)pyrene for opening CCV %D failure. A J qualifier was assigned to the associated sample.
17096 SEM MERCURY	SEM Mercury	J	U	LMR13-39-012	Trace levels of mercury between the MDL and CRQL were detected in the ICB and CCB. The original validators did not qualify results for the calibration blank contamination. The result was changed to the CRQL and a U qualifier was applied.
17096 OIL AND GREASE	HEM	None or U	J or UJ	LMR13-55-048 LMR13-55-072 LMR13-89-012 LMR13-89-024 LMR13-39-048 LMR13-88-012 LMR13-88-024 LMR13-88-048 LMR13-39-012 LMR13-39-024 LMR13-39-072 LMR13-85-024 LMR13-85-048 LMR13-67-012 LMR13-67-024 LMR13-67-048 LMR13-85-012 LMR13-89-024FD LMR13-85-024FD	These samples were extracted outside of the QAPP-required 14-day holding time for oil and grease. The samples were qualified J or UJ.
17099 METALS	Chromium	J	None	LMR13-86-072 LMR13-33-072 LMR13-33-096 LMR13-54-012 LMR13-54-024 LMR13-54-048 LMR13-33-024FD LMR13-33-024 LMR13-33-048 LMR13-54-072 LMR13-54-096 LMR13-54-120 LMR13-30-096 LMR13-30-120 LMR13-33-012 LMR13-55-012 LMR13-54-048FD LMR13-55-024FD LMR13-55-024 LMR13-30-072	J qualifiers that were originally applied to samples for which the serial dilution %D exceeded 10% were removed if less than the expanded NFG criterion of ±15%D. The %D for the analytes listed is <15%; therefore, the J qualifiers were removed (unless the result was between the MDL and CRQL).

Table 3-2 QATS Revised Data Qualifiers

SDG/Fraction	Analyte/ Compound	Original Qualifier	Revised Qualifier	EPA Sample IDs	QATS Justification for EDD Revision
17099 PAH	Phenanthrene Anthracene	J	None	LMR13-33-096	Phenanthrene and Anthracene were incorrectly qualified J by the original validators. These compounds are not associated with internal standards or DMC %R that failed criteria. There is no explanation for the qualifiers in the DVR, therefore the QATS validator removed the J qualifiers.
17099 PAH	Bis(2-ethylhexyl)phthalate	None	U	LMR13-86-072	In accordance with the Organic NFG, results less than 5x the CRQL were qualified with a U when bis(2-ethylhexyl) phthalate was detected in the method blank.
17099 PAH	4-Chloroaniline Hexachlorocyclopentadiene 3,3'-Dichlorobenzidine	R	UJ	LMR13-54-120	The R qualifiers originally assigned to the listed compounds in samples with a 0% R for the DMC 4-Chloroaniline-d4 were replaced with a UJ due to the low (1%R) acceptance criteria for this DMC. (Unless the compound was a detected result qualified J).
17099 PAH SIM	Naphthalene 1-Methlynaphthalene 2-Methylnaphthalene Acenaphthene Fluorene Anthracene Benzo(e)pyrene Perylene Indeno(1,2,3-cd)pyrene Dibenzo(a,h)anthracene Benzo(g,h,i)perylene	None	J	LMR13-54-012 LMR13-33-012 LMR13-55-012	These samples were analyzed 47 or 48 days after extraction, which exceeds the analysis holding time by 7 or 8 days. Detected compounds (not already qualified J) reported from these samples were qualified J.
17099 SEM MERCURY	SEM Mercury	J	U	LMR13-55-012	Trace levels of mercury between the MDL and CRQL were detected in the ICB and CCB. The original validators did not qualify results for the calibration blank contamination. The result was changed to the CRQL and a U qualifier was applied.
17099 OIL AND GREASE	HEM	J	J	LMR13-86-072 LMR13-33-072 LMR13-33-096 LMR13-54-012 LMR13-54-024 LMR13-54-048 LMR13-33-024FD LMR13-33-024 LMR13-33-048 LMR13-54-072 LMR13-54-096 LMR13-54-120 LMR13-30-096 LMR13-30-120 LMR13-33-012 LMR13-55-012 LMR13-33-048FD LMR13-54-024FD LMR13-55-024 LMR13-30-072	These samples were extracted outside of the QAPP-required 14-day holding time for oil and grease. The samples were already qualified J for failed MSD % recovery and %RPD in the EDD file. The qualifiers were highlighted blue to indicate another reason for the qualification.

Table 3-2 QATS Revised Data Qualifiers

SDG/Fraction	Analyte/ Compound	Original Qualifier	Revised Qualifier	EPA Sample IDs	QATS Justification for EDD Revision
17122 PAH	4-Chloroaniline Hexachlorocyclopentadiene 3,3'-Dichlorobenzidine	R	UJ	LMR13-64-012 LMR13-64-048 LMR13-64-048FD LMR13-67-072 LMR13-67-096 LMR13-64-024 LMR13-64-072 LMR13-64-096 LMR13-69-012 LMR13-69-048 LMR13-92-012 LMR13-92-024 LMR13-65-012 LMR13-65-024	The R qualifiers originally assigned to the listed compounds in samples with a 0% R for the DMC 4-Chloroaniline-d4 were replaced with a UJ due to the low (1%R) acceptance criteria for this DMC. (Unless the compound was a detected result qualified J).
17122 PAH	Hexachlorocyclopentadiene	U	UJ	LMR13-92-024	Hexachlorocyclopendadiene was not qualified UJ by the original validators. The UJ was added due to %D failures in both closing CCVs.
17122 PAH	Bis(2-ethylhexyl)phthalate	None	U	LMR13-64-096 LMR13-68-012 LMR13-69-024	In accordance with the Organic NFG, results less than 5x the CRQL were qualified with a U when bis(2-ethylhexyl) phthalate was detected in the method blank.
17122 PAH	Bis(2-ethylhexyl)phthalate	None	UJ	LMR13-64-048FD LMR13-67-096 LMR13-67-120 LMR13-64-120 LMR13-69-072	In accordance with the Organic NFG, results less than 5x the CRQL were qualified with a U when bis(2-ethylhexyl) phthalate was detected in the method blank. The J qualifier was added to the U because of exceeded holding time.
17122 PAH	Di-n-octylphthalate	UJ	U	LMR13-64-024 LMR13-64-072 LMR13-64-096 LMR13-92-024 LMR13-65-024 LMR13-69-024	The original validators qualified di-n-octylphthalate UJ due to a closing CCV %D failure. The laboratory analyzed two closing CCVs. Di-n- octylphthalate was within criteria in the first CCV and out in the second CCV. The J was removed from the UJ qualifier by the QATS validators due to the passing %D in the first CCV.
17122 PAH	Caprolactam	UJ	U	LMR13-68-012	The original validators qualified caprolactam UJ due to a CCV %D failure. The %D was not out of criteria for caprolactam in the associated CCV, but was out of criteria for a different analysis date. The J was removed from the UJ qualifier due to the passing %D in the associated CCV.
17122 SEM MERCURY	SEM Mercury	J	U	LMR13-65-012	Trace levels of mercury between the MDL and CRQL were detected in the ICB and CCB. The original validators did not qualify results for the calibration blank contamination. The result was changed to the CRQL and a U qualifier was applied.

Table 3-2 QATS Revised Data Qualifiers

SDG/Fraction	Analyte/ Compound	Original Qualifier	Revised Qualifier	EPA Sample IDs	QATS Justification for EDD Revision
17122 OIL AND GREASE	HEM	J	J	LMR13-64-024 LMR13-64-072 LMR13-64-096 LMR13-64-120 LMR13-69-012 LMR13-68-012 LMR13-69-048 LMR13-69-072 LMR13-92-012 LMR13-92-024 LMR13-65-012 LMR13-65-024 LMR13-69-024 LMR13-64-012 LMR13-64-048 LMR13-64-048FD LMR13-67-072 LMR13-67-096 LMR13-67-120	These samples were extracted outside of the QAPP-required 14-day holding time for oil and grease. The samples were already qualified J for failed MS/MSD recoveries in the EDD file. The qualifiers were highlighted blue to indicate another reason for the qualification.
17125 METALS	Copper	J	None	LMR13-69-024FD LMR13-69-096 LMR13-69-120 LMR13-61-012 LMR13-61-048 LMR13-61-096 LMR13-65-048 LMR13-65-072 LMR13-61-024 LMR13-61-072 LMR13-61-120 LMR13-66-012 LMR13-66-024 LMR13-60-012 LMR13-60-024 LMR13-60-048 LMR13-60-072 LMR13-60-096 LMR13-66-048 LMR13-58-024	J qualifiers that were originally applied to samples for which the serial dilution %D exceeded 10% were removed if less than the expanded NFG criterion of ±15%D. The %D for the analytes listed is <15%; therefore, the J qualifiers were removed (unless the result was between the MDL and CRQL).
17125 PAH	Bis(2-ethylhexyl)phthalate	None	UJ	LMR13-69-096 LMR13-69-120 LMR13-61-048 LMR13-61-096 LMR13-65-072 LMR13-61-072 LMR13-58-024	In accordance with the Organic NFG, results less than 5x the CRQL were qualified with a U when bis(2-ethylhexyl) phthalate was detected in the method blank. The J qualifier was added to the U because of exceeded holding time.
17125 PAH	Pyrene Bis(2-ethylhexyl)phthalate	None	J	LMR13-61-024	Internal standard area recoveries for Chrysene-d12 and Perylene-d12 were out of criteria. Associated detected results (not already qualified J) are qualified J.

Table 3-2 QATS Revised Data Qualifiers

SDG/Fraction	Analyte/ Compound	Original Qualifier	Revised Qualifier	EPA Sample IDs	QATS Justification for EDD Revision
17125 PAH	Butylbenzylphthalate 3,3'-Dichlobenzidine Di-n-octlyphthalate Dibenzo(a,h)anthracene	U	UJ	LMR13-61-024	Internal standard area recoveries for Chrysene-d12 and Perylene-d12 were out of criteria. Associated non-detected results are qualified UJ.
17125 PAH SIM	C1-Fluoranthenes/Pyrenes C1-Chrysenes	U	J	LMR13-66-012	The original validators incorrectly qualified the sample for blank contamination. The results were qualified JB by the laboratory, B for the blank contamination and J because modification 1734.2 requires a J qualifier be added to the PAH Alkyl Homologues since no separate calibration is required for PAH alkyl homologues. The original validators incorrectly qualified these compounds U based on the J qualifier, when the actual concentration was above 10 X the CRQL. The QATS validators removed the U and replaced the qualifier with the original J.
17125 SEM MERCURY	SEM Mercury	J	U	LMR13-66-012	Trace levels of mercury between the MDL and CRQL were detected in the ICB and CCB. The original validators did not qualify results for the calibration blank contamination. The result was changed to the CRQL and a U qualifier was applied.
17125 OIL AND GREASE	HEM	J or UJ	J or UJ	LMR13-69-096 LMR13-69-120 LMR13-61-012 LMR13-61-048 LMR13-61-096 LMR13-65-048 LMR13-65-072 LMR13-61-024 LMR13-61-072 LMR13-61-120 LMR13-66-012 LMR13-66-024 LMR13-60-012 LMR13-60-024 LMR13-60-048 LMR13-60-072 LMR13-60-096 LMR13-66-048 LMR13-58-024 LMR13-66-024FD	These samples were extracted outside of the QAPP-required 14-day holding time for oil and grease. The samples were already qualified J for MSD recovery in the EDD file. The qualifiers were highlighted blue to indicate another reason for the qualification.

Table 3-2 QATS Revised Data Qualifiers

SDG/Fraction	Analyte/ Compound	Original Qualifier	Revised Qualifier	EPA Sample IDs	QATS Justification for EDD Revision
17127 METALS	Lead	J	None	LMR13-59-012 LMR13-59-024 LMR13-59-048 LMR13-94-024 LMR13-94-072 LMR13-58-012 LMR13-94-012 LMR13-94-048 LMR13-95-012 LMR13-70-024 LMR13-95-024 LMR13-95-048 LMR13-95-072 LMR13-95-096	J qualifiers that were originally applied to samples for which the serial dilution %D exceeded 10% were removed if less than the expanded NFG criterion of ±15%D. The %D for the analytes listed is <15%; therefore, the J qualifiers were removed (unless the result was between the MDL and CRQL).
17127 MERCURY	Mercury	J	U	LMR13-59-024 LMR13-59-048 LMR13-58-012 LMR13-70-024	Trace level of mercury between the MDL and CRQL was detected in the ICB. The original validators did not qualify results for the calibration blank contamination. The result was changed to the CRQL and a U qualifier was applied to the four affected samples.
17127 PAH	4-Chloroaniline Hexachlorocyclopentadiene 3,3'-Dichlorobenzidine	R	UJ	LMR13-59-012 LMR13-58-012 LMR13-70-024	The R qualifiers originally assigned to the listed compounds in samples with a 0% R for the DMC 4-Chloroaniline-d4 were replaced with a UJ due to the low (1%R) acceptance criteria for this DMC.
17127 PAH	Bis(2-ethylhexyl)phthalate	None	UJ	LMR13-58-012	In accordance with the Organic NFG, results less than 5x the CRQL were qualified with a U when bis(2-ethylhexyl) phthalate was detected in the method blank. The J qualifier was added to the U because of exceeded holding time.
17127 PAH	Phenanthrene Anthracene Fluoranthene	J	None	LMR13-94-024	These compounds were qualified J by the original validators. There is no explanation for the qualifiers in the DVR, therefore the QATS validator removed the J qualifiers.
	Pyrene Benzo(a)anthracene Chrysene				
17127 PAH	Naphthalene 2-Methylnaphthalene Fluorene Phenanthrene Anthracene Fluoranthene Pyrene	None	J	LMR13-95-024FD	This sample was analyzed 46 days after extraction, which exceeds the analysis holding time by 6 days. Detected compounds (not already qualified J) reported from these samples were qualified J.
17127 PAH	46 Compounds	U	UJ	LMR13-95-024FD	This sample was analyzed 46 days after extraction, which exceeds the analysis holding time by 6 days. Non-detected compounds reported from these samples were qualified UJ.
17127 PAH	Bis(2-ethylhexyl)phthalate	None	U	LMR13-70-024	In accordance with the Organic NFG, results less than 5x the CRQL were qualified with a U when bis(2-ethylhexyl) phthalate was detected in the method blank.

Table 3-2 QATS Revised Data Qualifiers

SDG/Fraction	Analyte/ Compound	Original Qualifier	Revised Qualifier	EPA Sample IDs	QATS Justification for EDD Revision
17127 PAH SIM	C1-Naphthalenes C2-Naphthalenes C1-Phenanthrenes/Anthracenes C2-Phenanthrenes/Anthracenes C1-Fluoranthenes/Pyrenes C1-Chrysenes	U	J	LMR13-94-012 LMR13-95-012	The original validators incorrectly qualified these samples for blank contamination. The results were qualified JB by the laboratory, B for the blank contamination and J because modification 1734.2 requires a J qualifier be added to the PAH Alkyl Homologues since no separate calibration is required for PAH alkyl homologues. The original validators qualified these compounds U based on the J qualifier, when the actual concentration was above 10 X the CRQL. The QATS validators removed the U and replaced the qualifier with the original J.
17127 PAH SIM	C2-Naphthalenes C1-Phenanthrenes/Anthracenes C2-Phenanthrenes/Anthracenes C1-Fluoranthenes/Pyrenes C1-Chrysenes	U	J	LMR13-58-012	The original validators incorrectly qualified the sample for blank contamination. The results were qualified JB by the laboratory, B for the blank contamination and J because modification 1734.2 requires a J qualifier be added to the PAH Alkyl Homologues since no separate calibration is required for PAH alkyl homologues. The original validators qualified these compounds U based on the J qualifier, when the actual concentration was above 10 X the CRQL. The concentration was incorrectly changed to the lower CRQL. The QATS validators removed the U and replaced the qualifier with the original J and re-entered the original concentration in the result column.
17127 SEM MERCURY	SEM Mercury	J	U	LMR13-95-012	Trace level of mercury between the MDL and CRQL was detected in the ICB. The original validators did not qualify results for the calibration blank contamination. The result was changed to the CRQL and a U qualifier was applied.
17127 OIL AND GREASE	HEM	J or UJ	J or UJ	LMR13-59-012 LMR13-59-024 LMR13-59-048 LMR13-94-024 LMR13-94-072 LMR13-58-012 LMR13-94-012 LMR13-94-048 LMR13-95-012 LMR13-70-024 LMR13-95-024 LMR13-95-048 LMR13-95-072 LMR13-95-096 LMR13-95-024FD	These samples were extracted outside of the QAPP-required 14-day holding time for oil and grease. The sample results were qualified J or UJ.

Table 3-2 QATS Revised Data Qualifiers

SDG/Fraction	Analyte/ Compound	Original Qualifier	Revised Qualifier	EPA Sample IDs	QATS Justification for EDD Revision
17149 METALS	Copper	J	None	LMR13-52-012 LMR13-52-024 LMR13-52-048 LMR13-53-012 LMR13-53-024 LMR13-53-024FD LMR13-56-012 LMR13-70-012 LMR13-70-048 LMR13-80-012 LMR13-80-024 LMR13-80-024FD LMR13-80-048 LMR13-80-072 LMR13-80-096	J qualifiers that were originally applied to samples for which the serial dilution %D exceeded 10% were removed if less than the expanded NFG criterion of ±15%D. The %D for the analytes listed is <15%; therefore, the J qualifiers were removed (unless the result was between the MDL and CRQL).
17149 PAH	4-Chloroaniline Hexachlorocyclopentadiene 3,3'-Dichlorobenzidine	R	UJ	LMR13-70-012 LMR13-70-048 LMR13-80-024 LMR13-52-012 LMR13-52-024FD LMR13-80-072 LMR13-53-024 LMR13-52-048 LMR13-53-012 LMR13-80-048 LMR13-80-096	The R qualifiers originally assigned to the listed compounds in samples with a 0% R for the DMC 4-Chloroaniline-d4 were replaced with a UJ due to the low (1%R) acceptance criteria for this DMC.
17149 PAH	Bis(2-ethylhexyl)phthalate	None	UJ	LMR13-70-012 LMR13-52-024 LMR13-53-024 LMR13-80-012	In accordance with the Organic NFG, results less than 5x the CRQL were qualified with a U when bis(2-ethylhexyl) phthalate was detected in the method blank. The J qualifier was added to the U because of exceeded holding time.
17149 OIL AND GREASE	HEM	J or UJ	J or UJ	LMR13-70-012 LMR13-70-048 LMR13-80-024 LMR13-52-012 LMR13-52-024 LMR13-52-024FD LMR13-80-072 LMR13-53-024 LMR13-80-012 LMR13-52-048 LMR13-53-012 LMR13-56-012 LMR13-80-048 LMR13-80-096	These samples were extracted outside of the QAPP-required 14-day holding time for oil and grease. The sample results were qualified J or already qualified J due to field duplicate RPD > 100%)

Appendix A

Analytical Reports and Case Narratives

Appendix B

EDS Data Validation Reports

ENVIRONMENTAL
Data Services, Inc.

DATA VALIDATION SUMMARY REPORT
LOWER MAUMEE RIVER, TOLEDO, OHIO

Client: EA Engineering, Science & Technology, Inc., Hunt Valley, Maryland
SDG: 200-16948, 200-16992
Laboratory: Test America Laboratories, Burlington, Vermont
Test America Laboratories, North Canton, Ohio
Site: Lower Maumee River, Maumee Area of Concern, Toledo, Ohio
Date: August 6, 2013

SVOC/PCBs			
EDS ID	Client Sample ID	Laboratory Sample ID	Matrix
1	LMR13-05-012	200-16948-1	Sediment
1DL*	LMR13-05-012DL	200-16948-1DL	Sediment
2	LMR13-09-012	200-16948-2	Sediment
3	LMR13-10-012	200-16948-3	Sediment
4	LMR13-17-012	200-16948-4	Sediment
5	LMR13-23-012	200-16948-5	Sediment
12	LMR13-06-012	200-16948-12	Sediment
13	LMR13-18-012	200-16948-13	Sediment
14*	LMR13-18-012FD	200-16948-14	Sediment
15	LMR13-19-012	200-16948-15	Sediment
17	LMR13-20-012	200-16948-17	Sediment
20	LMR13-02-012	200-16992-1	Sediment
21*	LMR13-02-012FD	200-16992-2	Sediment
22	LMR13-11-012	200-16992-3	Sediment
23	LMR13-12-012	200-16992-4	Sediment
24	LMR13-16-012	200-16992-5	Sediment
24MS†	LMR13-16-012MS	200-16992-5MS	Sediment
24MSD†	LMR13-16-012MSD	200-16992-5MSD	Sediment
25	LMR13-24-012	200-16992-6	Sediment

* - Analyzed for PCB only † - Analyzed for SVOC only

Metals/Mercury/TOC			
EDS ID	Client Sample ID	Laboratory Sample ID	Matrix
1	LMR13-05-012	200-16948-1	Sediment
2	LMR13-09-012	200-16948-2	Sediment
3	LMR13-10-012	200-16948-3	Sediment
4	LMR13-17-012	200-16948-4	Sediment
4MS	LMR13-17-012MS	200-16948-4MS	Sediment
4DUP	LMR13-17-012DUP	200-16948-4DUP	Sediment
5	LMR13-23-012	200-16948-5	Sediment
12	LMR13-06-012	200-16948-12	Sediment
13	LMR13-18-012	200-16948-13	Sediment
15	LMR13-19-012	200-16948-15	Sediment
16	LMR13-19-012FD	200-16948-16	Sediment

Metals/Mercury/TOC			
EDS ID	Client Sample ID	Laboratory Sample ID	Matrix
17	LMR13-20-012	200-16948-17	Sediment
20	LMR13-02-012	200-16992-1	Sediment
20MS*	LMR13-02-012MS	200-16992-1MS	Sediment
20DUP*	LMR13-02-012DUP	200-16992-1DUP	Sediment
21	LMR13-02-012FD	200-16992-2	Sediment
22	LMR13-11-012	200-16992-3	Sediment
23	LMR13-12-012	200-16992-4	Sediment
24	LMR13-16-012	200-16992-5	Sediment
25	LMR13-24-012	200-16992-6	Sediment

HEM			
EDS ID	Client Sample ID	Laboratory Sample ID	Matrix
1	LMR13-05-012	200-16948-1	Sediment
2	LMR13-09-012	200-16948-2	Sediment
3	LMR13-10-012	200-16948-3	Sediment
3MS	LMR13-10-012MS	200-16948-3MS	Sediment
3MSD	LMR13-10-012MSD	200-16948-3MSD	Sediment
4	LMR13-17-012	200-16948-4	Sediment
5	LMR13-23-012	200-16948-5	Sediment
6	LMR13-02-012	200-16948-6	Sediment
8	LMR13-11-012	200-16948-8	Sediment
9	LMR13-12-012	200-16948-9	Sediment
10	LMR13-16-012	200-16948-10	Sediment
11	LMR13-24-012	200-16948-11	Sediment
12	LMR13-06-012	200-16948-12	Sediment
13	LMR13-18-012	200-16948-13	Sediment
15	LMR13-19-012	200-16948-15	Sediment
17	LMR13-20-012	200-16948-17	Sediment
18	LMR13-05-012FD	200-16948-18	Sediment
19	LMR13-20-012FD	200-16948-19	Sediment

A full data validation was performed on the analytical data for twenty-four sediment samples collected on June 11, 2013 by EA Engineering at the Lower Maumee River site in Toledo, Ohio. The samples were analyzed under the Environmental Protection Agency (USEPA) Contract Laboratory Program (CLP) Multi-Media Multi-Concentration Organics Analysis SOM01.2 and Inorganic Analysis ILM05.4 and the Test Methods for the Evaluation of Solid Waste, USEPA SW-846, Third Edition, September 1986, with revisions.

Specific method references are as follows:

Analysis	*Method References*
SVOCs	USEPA CLP SOM01.2
PCBs	USEPA CLP SOM01.2
Michigan Metals & Mercury	USEPA CLP ISM01.3
TOC	Lloyd Kahn
Oil & Grease (HEM)	USEPA SW-846 Method 9071B

The data have been validated according to the protocols and quality control (QC) requirements of the analytical methods, the Great Lakes Legacy Act, March 2010, the Quality Assurance Project Plan

for Phase 2 of the Lower Maumee River Site Characterization, May 2013, and the USEPA National Functional Guidelines for Organic Data Review as follows:

- The USEPA "Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review," June 2008;
- The USEPA "Contract Laboratory Program National Functional Guidelines for Inorganic Superfund Data Review," January 2010;
- and the reviewer's professional judgment.

The following items/criteria were reviewed for this report:

Organics

- Holding times and sample preservation
- Gas Chromatography/Mass Spectroscopy (GC/MS) Tuning
- Initial and continuing calibration summaries
- Method blank and field blank contamination
- Surrogate Spike recoveries
- Matrix Spike/Matrix Spike Duplicate (MS/MSD) recoveries
- Laboratory Control Sample (LCS) recoveries
- Internal standard area and retention time summary forms
- Target Compound Identification
- Compound Quantitation
- Tentatively Identified Compounds (TICs)
- Field Duplicate sample precision

Inorganics

- Holding times and sample preservation
- ICP/MS Tuning
- Initial and continuing calibration verifications
- Method blank and field blank contamination
- ICP Interference Check Sample
- Laboratory Control Sample (LCS) recoveries
- Matrix Spike Analysis
- Duplicate Sample Analysis
- ICP Serial Dilution
- Compound Quantitation
- Field Duplicate sample precision

Overall Usability Issues:

There were minor rejections of data. This data cannot be used in the decision-making process for this project.

- Three SVOC compounds were rejected in four samples due to severely low surrogate recoveries.

Overall the remaining data is acceptable for the intended purposes as qualified for the deficiencies detailed in this report.

Please note that any results qualified (U) due to blank contamination may be then qualified (J) due to another action. Therefore, the results may be qualified (UJ) due to the culmination of the blank contaminations and actions from other exceedences of QC criteria.

Semivolatile Organic Compounds (SVOCs)

Holding Times

- All samples were extracted within 14 days for soil samples and analyzed within 40 days for all samples.

GC/MS Tuning

- All criteria were met.

Initial Calibration

- All %RSD and mean RRF criteria were met.

Continuing Calibration

- All %D and RRF criteria were met except the following.

CCAL Date	Compound	%D/RRF	Qualifier	Affected Samples
07/08/13 (1941)	Hexachlorocyclopentadiene	53.1%	J/UJ	1-4, 12
07/09/13 (1841)	Hexachlorocyclopentadiene	54.8%	J/UJ	20, 22, 23, 24
	2,4-Dinitrophenol	51.9%	J/UJ	
07/13/13 (0014)	Hexachlorocyclopentadiene	61.5%	J/UJ	25

Method Blank

- The method blanks exhibited the following contamination.

Blank ID	Compound	Conc. ug/kg	Qualifier	Affected Samples
SBLKL1	Butylbenzylphthalate	25	U	2-5, 12, 13, 15, 17
	bis(2-Ethylhexyl)phthalate	39	U	3, 5, 17
SBLKL4	Butylbenzylphthalate	11	U	20, 22-25
	bis(2-Ethylhexyl)phthalate	22	None	All >10X
	di-n-Octylphthalate	1.7	None	All ND

Field Blank

- Field QC samples were not analyzed.

Surrogate Spike Recoveries

- All samples exhibited acceptable surrogate %R values except the following.

Sample ID	Surrogate	%R	Qualifier
5	4-Methylphenol-d8	101%	None - All Associated ND
	4-Chloroaniline-d4	0%	R - Associated Compounds
12	Phenol-d5	105%	J- Associated Compounds
	4-Methylphenol-d8	105%	None - All ND
13	Phenol-d5	113%	J - Associated Compounds
	4-Methylphenol-d8	117%	None - All ND
	4-Chloroaniline-d4	0%	R - Associated Compounds
15	4-Chloroaniline-d4	0%	
17	4-Chloroaniline-d4	0%	
22	4-Methylphenol-d8	108%	None - All ND
24	Phenol-d5	115%	J - Associated Compounds
	4-Methylphenol-d8	117%	None - All ND
25	Phenol-d5	121%	J
	4-Methylphenol-d8	118%	None - ND

Matrix Spike/Matrix Spike Duplicate (MS/MSD) Recoveries

- The MS/MSD sample exhibited acceptable %R and RPD values.

Laboratory Control Samples

- A LCS sample was not analyzed.

Internal Standard (IS) Area Performance

- All internal standards met response and retention time (RT) criteria.

Target Compound Identification

- All mass spectra and quantitation criteria were met.

Compound Quantitation

- All criteria were met.

Field Duplicate Sample Precision

- Field duplicate samples were not analyzed.

Polychlorinated Biphenyls (PCBs)

Holding Times

- All samples were extracted within 14 days for soil samples and analyzed within 40 days.

Initial Calibration

- All %RSD and/or correlation coefficient criteria were met.

Continuing Calibration

- All %D criteria were met.

Method Blank

- The method blanks were free of contamination.

Field Blank

- Field QC samples were not analyzed.

Surrogate Spike Recoveries

- All samples exhibited acceptable surrogate recoveries.

Matrix Spike/Matrix Spike Duplicate (MS/MSD) Recoveries

- The MS/MSD sample exhibited acceptable %R and RPD values.

Laboratory Control Samples

- The LCS sample exhibited acceptable %R values.

Compound Quantitation

- EDS Sample ID #1 exhibited aroclor-1248 that exceeded the calibration range. The sample was reanalyzed at a 3X dilution. The reviewer replaced the original results with the dilution results. Use original results for reporting purposes.

Field Duplicate Sample Precision

- Field duplicate results are summarized below.

PCBs				
Compound	LMR13-18-012 ug/kg	LMR13-18-012FD ug/kg	RPD	Qualifier
Aroclor-1248	91	110	19%	None
Aroclor-1254	69	87	23%	
Aroclor-1260	15	19	24%	

PCBs				
Compound	LMR13-02-012 ug/kg	LMR13-02-012FD ug/kg	RPD	Qualifier
Aroclor-1242	37	32	14%	None
Aroclor-1254	29	26	11%	
Aroclor-1260	5.8	46U	None	

GC Column Difference Results

- Several samples exhibited high %D values > 25% between columns and have been qualified as estimated (J) by the reviewer.

Metals & Mercury

Holding Times

- All samples were prepared and analyzed within 28 days for mercury and 180 days for all other metals.

ICP/MS Tuning

- Not applicable.

Initial Calibration Verification

- All initial calibration criteria were met.

Continuing Calibration Verification

- All continuing calibration criteria were met.

Method Blank

- The method blanks were free of contamination.

Field Blank

- Field QC samples were not analyzed.

ICP Interference Check Sample

- The ICP interference check sample exhibited acceptable %R values.

Laboratory Control Samples

- The LCS sample exhibited acceptable recoveries.

Matrix Spike/Duplicate (MS/DUP) Analysis

- The MS/DUP samples exhibited acceptable %R and RPD values except the following.

DUP Sample ID	Compound	DUP %R/RPD	Qualifier	Affected samples
4	Mercury	154%	J	All Samples Except 20

ICP Serial Dilution

- ICP serial dilution percent differences (%D) were within acceptance limits except the following.

ICP Sample ID	Compound	%D	Qualifier	Affected Samples
4	Chromium	14%	J	All Samples
	Nickel	16%	J	
	Zinc	15%	J	

Compound Quantitation

- All criteria were met.

Field Duplicate Sample Precision

- Field duplicate results are summarized below.

Metals				
Compound	LMR13-19-012 mg/kg	LMR13-19-012FD mg/kg	RPD	Qualifier
Arsenic	6.7	6.5	3%	None
Cadmium	1.2	0.89	30%	
Chromium	25.2	20.2	22%	
Copper	23.6	23.6	0%	
Lead	38.8	32.2	19%	
Mercury	0.18	0.14	25%	
Nickel	23.8	19.4	20%	
Zinc	113	95.8	16%	

Metals				
Compound	LMR13-02-012 mg/kg	LMR13-02-012FD mg/kg	RPD	Qualifier
Arsenic	4.2	4.2	0%	None
Cadmium	0.43	0.45	5%	
Chromium	11.6	11.8	2%	
Copper	11.7	11.2	4%	
Lead	10.6	11.2	6%	
Mercury	0.14	0.061	79%	
Nickel	14.7	14.9	1%	
Zinc	45.5	47.3	4%	

Oil & Grease, Total Organic Carbon

Holding Times

- All samples were analyzed within the recommended holding time for each analysis.

Initial and Continuing Calibration

- All %R criteria were met.

Method Blank

- The method blanks exhibited the following contamination.

Blank ID	Compound	Conc. mg/kg	Qualifier	Affected Samples
240-89836/1-A	HEM	120.1	U	2, 5, 6, 10, 19

Field Blank

- Field QC samples were not included in this data package.

Laboratory Control Samples

- The LCS samples exhibited acceptable %R values.

Matrix Spike/Duplicate (MS/DUP) Recoveries

- The MS/DUP samples exhibited acceptable %R and RPD values.

Compound Quantitation

- All criteria were met.

Field Duplicate Sample Precision

- Field duplicate results are summarized below.

Wet Chemistry/AVS/SEM				
Compound	LMR13-05-012 mg/kg	LMR13-05-012FD mg/kg	RPD	Qualifier
HEM	2500	2550	2%	None

Wet Chemistry/AVS/SEM				
Compound	LMR13-20-012 mg/kg	LMR13-20-012FD mg/kg	RPD	Qualifier
HEM	625	402U	200%	J/UJ

Please contact the undersigned at (757) 564-0090 if you have any questions or need further information.

Signed: Nancy Weaver Dated: 8/12/13

Nancy Weaver
Senior Chemist

Data Qualifiers

U = The analyte was analyzed for, but was not detected at a level greater than or equal to the level of the adjusted Contract Required Quantitation Limit (CRQL) for sample and method.

UJ = The analyte was not detected at a level greater than or equal to the adjusted CRQL. However, the reported adjusted CRQL is approximate and may be inaccurate or imprecise.

J = The analyte was positively identified and the associated numerical value is the approximate concentration of the analyte in the sample (due either to the quality of the data generated because certain quality control criteria were not met, or the concentration of the analyte was below the CRQL).

J+ = The result is an estimated quantity, but the result may be biased high.

J- = The result is an estimated quantity, but the result may be biased low.

R = The sample results are unusable due to the quality of the data generated because certain criteria were not met. The analyte may or may not be present in the sample.

NJ = The analysis indicates the presence of an analyte that has been "tentatively identified" and the associated numerical value represents its approximate concentration.

1D - FORM I SV-1

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-05-012

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 16948

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-16948-1

Sample wt/vol: 30.0 (g/mL) g Lab File ID: PJUVY06.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 40 Decanted: (Y/N) Date Received: 06/12/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/14/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/08/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
100-52-7	Benzaldehyde	50	J
108-95-2	Phenol	280	U
111-44-4	Bis(2-chloroethyl)ether	280	U
95-57-8	2-Chlorophenol	280	U
95-48-7	2-Methylphenol	280	U
108-60-1	2,2'-Oxybis(1-chloropropane)	280	U
98-86-2	Acetophenone	38	J
106-44-5	4-Methylphenol	16	J
621-64-7	N-Nitroso-di-n-propylamine	280	U
67-72-1	Hexachloroethane	280	U
98-95-3	Nitrobenzene	280	U
78-59-1	Isophorone	280	U
88-75-5	2-Nitrophenol	280	U
105-67-9	2,4-Dimethylphenol	280	U
111-91-1	Bis(2-chloroethoxy)methane	280	U
120-83-2	2,4-Dichlorophenol	280	U
91-20-3	Naphthalene	120	J
106-47-8	4-Chloroaniline	280	U
87-68-3	Hexachlorobutadiene	280	U
105-60-2	Caprolactam	280	U
59-50-7	4-Chloro-3-methylphenol	280	U
91-57-6	2-Methylnaphthalene	280	U
77-47-4	Hexachlorocyclopentadiene	280	UJ
88-06-2	2,4,6-Trichlorophenol	280	U
95-95-4	2,4,5-Trichlorophenol	280	U
92-52-4	1,1'-Biphenyl	280	U
91-58-7	2-Chloronaphthalene	280	U
88-74-4	2-Nitroaniline	550	U
131-11-3	Dimethylphthalate	280	U
606-20-2	2,6-Dinitrotoluene	280	U
208-96-8	Acenaphthylene	35	J
99-09-2	3-Nitroaniline	550	U
83-32-9	Acenaphthene	360	

NW 8/8/13

1E - FORM I SV-2

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-05-012

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 16948

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-16948-1

Sample wt/vol: 30.0 (g/mL) g Lab File ID: PJUVY06.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 40 Decanted: (Y/N) Date Received: 06/12/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/14/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/08/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
51-28-5	2,4-Dinitrophenol	550	U
100-02-7	4-Nitrophenol	550	U
132-64-9	Dibenzofuran	42	J
121-14-2	2,4-Dinitrotoluene	280	U
84-66-2	Diethylphthalate	280	U
86-73-7	Fluorene	350	
7005-72-3	4-Chlorophenyl-phenylether	280	U
100-01-6	4-Nitroaniline	550	U
534-52-1	4,6-Dinitro-2-methylphenol	550	U
86-30-6	N-Nitrosodiphenylamin [1]	280	U
95-94-3	1,2,4,5-Tetrachlorobenzene	280	U
101-55-3	4-Bromophenyl-phenylether	280	U
118-74-1	Hexachlorobenzene	280	U
1912-24-9	Atrazine	280	U
87-86-5	Pentachlorophenol	550	U
85-01-8	Phenanthrene	1100	
120-12-7	Anthracene	320	
86-74-8	Carbazole	280	U
84-74-2	Di-n-butylphthalate	22	J
206-44-0	Fluoranthene	1100	
129-00-0	Pyrene	1600	
85-68-7	Butylbenzylphthalate	280	U
91-94-1	3,3'-Dichlorobenzidine	280	U
56-55-3	Benzo(a)anthracene	820	
218-01-9	Chrysene	1000	
117-81-7	Bis(2-ethylhexyl)phthalate	3800	B
117-84-0	Di-n-octylphthalate	280	U
205-99-2	Benzo(b)fluoranthene	570	
207-08-9	Benzo(k)fluoranthene	620	
50-32-8	Benzo(a)pyrene	680	
193-39-5	Indeno(1,2,3-cd)pyrene	280	J
53-70-3	Dibenzo(a,h)anthracene	130	J
191-24-2	Benzo(g,h,i)perylene	330	
58-90-2	2,3,4,6-Tetrachlorophenol	280	U

[1] Cannot be separated from Diphenylamine

NW 8/8/13

1D - FORM I SV-1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-09-012

2

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 16948

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-16948-2

Sample wt/vol: 30.8 (g/mL) g Lab File ID: PJUVY07.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 27 Decanted: (Y/N) Date Received: 06/12/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/14/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/08/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
100-52-7	Benzaldehyde	230	U
108-95-2	Phenol	230	U
111-44-4	Bis(2-chloroethyl)ether	230	U
95-57-8	2-Chlorophenol	230	U
95-48-7	2-Methylphenol	230	U
108-60-1	2,2'-Oxybis(1-chloropropane)	230	U
98-86-2	Acetophenone	230	U
106-44-5	4-Methylphenol	230	U
621-64-7	N-Nitroso-di-n-propylamine	230	U
67-72-1	Hexachloroethane	230	U
98-95-3	Nitrobenzene	230	U
78-59-1	Isophorone	230	U
88-75-5	2-Nitrophenol	230	U
105-67-9	2,4-Dimethylphenol	230	U
111-91-1	Bis(2-chloroethoxy)methane	230	U
120-83-2	2,4-Dichlorophenol	230	U
91-20-3	Naphthalene	17	J
106-47-8	4-Chloroaniline	230	U
87-68-3	Hexachlorobutadiene	230	U
105-60-2	Caprolactam	230	U
59-50-7	4-Chloro-3-methylphenol	230	U
91-57-6	2-Methylnaphthalene	230	U
77-47-4	Hexachlorocyclopentadiene	230	U UJ
88-06-2	2,4,6-Trichlorophenol	230	U
95-95-4	2,4,5-Trichlorophenol	230	U
92-52-4	1,1'-Biphenyl	230	U
91-58-7	2-Chloronaphthalene	230	U
88-74-4	2-Nitroaniline	440	U
131-11-3	Dimethylphthalate	230	U
606-20-2	2,6-Dinitrotoluene	230	U
208-96-8	Acenaphthylene	230	U
99-09-2	3-Nitroaniline	440	U
83-32-9	Acenaphthene	20	J

NW 8/8/13

1E - FORM I SV-2
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-09-012

2

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 16948

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-16948-2

Sample wt/vol: 30.8 (g/mL) g Lab File ID: PJUVY07.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 27 Decanted: (Y/N) Date Received: 06/12/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/14/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/08/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
51-28-5	2,4-Dinitrophenol	440	U
100-02-7	4-Nitrophenol	440	U
132-64-9	Dibenzofuran	5.1	J
121-14-2	2,4-Dinitrotoluene	230	U
84-66-2	Diethylphthalate	230	U
86-73-7	Fluorene	31	J
7005-72-3	4-Chlorophenyl-phenylether	230	U
100-01-6	4-Nitroaniline	440	U
534-52-1	4,6-Dinitro-2-methylphenol	440	U
86-30-6	N-Nitrosodiphenylamin [1]	230	U
95-94-3	1,2,4,5-Tetrachlorobenzene	230	U
101-55-3	4-Bromophenyl-phenylether	230	U
118-74-1	Hexachlorobenzene	230	U
1912-24-9	Atrazine	230	U
87-86-5	Pentachlorophenol	440	U
85-01-8	Phenanthrene	85	J
120-12-7	Anthracene	30	J
86-74-8	Carbazole	230	U
84-74-2	Di-n-butylphthalate	12	J
206-44-0	Fluoranthene	120	J
129-00-0	Pyrene	180	J
85-68-7	Butylbenzylphthalate	230 ~~46~~ ~~J~~ ~~B~~ U	
91-94-1	3,3'-Dichlorobenzidine	230	U
56-55-3	Benzo(a)anthracene	77	J
218-01-9	Chrysene	110	J
117-81-7	Bis(2-ethylhexyl)phthalate	430	~~B~~
117-84-0	Di-n-octylphthalate	230	U
205-99-2	Benzo(b)fluoranthene	75	J
207-08-9	Benzo(k)fluoranthene	60	J
50-32-8	Benzo(a)pyrene	79	J
193-39-5	Indeno(1,2,3-cd)pyrene	44	J
53-70-3	Dibenzo(a,h)anthracene	230	U
191-24-2	Benzo(g,h,i)perylene	65	J
58-90-2	2,3,4,6-Tetrachlorophenol	230	U

[1] Cannot be separated from Diphenylamine

NW 8/8/13

1D - FORM I SV-1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-10-012

3

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 16948

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-16948-3

Sample wt/vol: 30.2 (g/mL) g Lab File ID: PJUVY08.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 34 Decanted: (Y/N) Date Received: 06/12/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/14/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/08/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
100-52-7	Benzaldehyde	48	J
108-95-2	Phenol	250	U
111-44-4	Bis(2-chloroethyl)ether	250	U
95-57-8	2-Chlorophenol	250	U
95-48-7	2-Methylphenol	250	U
108-60-1	2,2'-Oxybis(1-chloropropane)	250	U
98-86-2	Acetophenone	250	U
106-44-5	4-Methylphenol	250	U
621-64-7	N-Nitroso-di-n-propylamine	250	U
67-72-1	Hexachloroethane	250	U
98-95-3	Nitrobenzene	250	U
78-59-1	Isophorone	250	U
88-75-5	2-Nitrophenol	250	U
105-67-9	2,4-Dimethylphenol	250	U
111-91-1	Bis(2-chloroethoxy)methane	250	U
120-83-2	2,4-Dichlorophenol	250	U
91-20-3	Naphthalene	22	J
106-47-8	4-Chloroaniline	250	U
87-68-3	Hexachlorobutadiene	250	U
105-60-2	Caprolactam	250	U
59-50-7	4-Chloro-3-methylphenol	250	U
91-57-6	2-Methylnaphthalene	11	J
77-47-4	Hexachlorocyclopentadiene	250	U UJ
88-06-2	2,4,6-Trichlorophenol	250	U
95-95-4	2,4,5-Trichlorophenol	250	U
92-52-4	1,1'-Biphenyl	250	U
91-58-7	2-Chloronaphthalene	250	U
88-74-4	2-Nitroaniline	490	U
131-11-3	Dimethylphthalate	250	U
606-20-2	2,6-Dinitrotoluene	250	U
208-96-8	Acenaphthylene	33	J
99-09-2	3-Nitroaniline	490	U
83-32-9	Acenaphthene	80	J

NW 8/8/13

1E - FORM I SV-2
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-10-012

3

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 16948

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-16948-3

Sample wt/vol: 30.2 (g/mL) g Lab File ID: PJUVY08.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 34 Decanted: (Y/N) Date Received: 06/12/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/14/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/08/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
51-28-5	2,4-Dinitrophenol	490	U
100-02-7	4-Nitrophenol	490	U
132-64-9	Dibenzofuran	13	J
121-14-2	2,4-Dinitrotoluene	250	U
84-66-2	Diethylphthalate	250	U
86-73-7	Fluorene	47	J
7005-72-3	4-Chlorophenyl-phenylether	250	U
100-01-6	4-Nitroaniline	490	U
534-52-1	4,6-Dinitro-2-methylphenol	490	U
86-30-6	N-Nitrosodiphenylamin [1]	250	U
95-94-3	1,2,4,5-Tetrachlorobenzene	250	U
101-55-3	4-Bromophenyl-phenylether	250	U
118-74-1	Hexachlorobenzene	250	U
1912-24-9	Atrazine	250	U
87-86-5	Pentachlorophenol	490	U
85-01-8	Phenanthrene	220	J
120-12-7	Anthracene	130	J
86-74-8	Carbazole	8.4	J
84-74-2	Di-n-butylphthalate	14	J
206-44-0	Fluoranthene	650	
129-00-0	Pyrene	1100	
85-68-7	Butylbenzylphthalate	250 ~~33~~ ~~J B~~	U
91-94-1	3,3'-Dichlorobenzidine	250	U
56-55-3	Benzo(a)anthracene	460	
218-01-9	Chrysene	520	
117-81-7	Bis(2-ethylhexyl)phthalate	320 ~~B~~	U
117-84-0	Di-n-octylphthalate	250	U
205-99-2	Benzo(b)fluoranthene	360	
207-08-9	Benzo(k)fluoranthene	340	
50-32-8	Benzo(a)pyrene	470	
193-39-5	Indeno(1,2,3-cd)pyrene	210	J
53-70-3	Dibenzo(a,h)anthracene	81	J
191-24-2	Benzo(g,h,i)perylene	250	J
58-90-2	2,3,4,6-Tetrachlorophenol	250	U

[1] Cannot be separated from Diphenylamine

NW 8/8/13

1D - FORM I SV-1

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-17-012

4

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 16948

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-16948-4

Sample wt/vol: 31.0 (g/mL) g Lab File ID: PJUVY09.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 36 Decanted: (Y/N) Date Received: 06/12/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/14/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/08/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
100-52-7	Benzaldehyde	38	J
108-95-2	Phenol	260	U
111-44-4	Bis(2-chloroethyl)ether	260	U
95-57-8	2-Chlorophenol	260	U
95-48-7	2-Methylphenol	260	U
108-60-1	2,2'-Oxybis(1-chloropropane)	260	U
98-86-2	Acetophenone	35	J
106-44-5	4-Methylphenol	260	U
621-64-7	N-Nitroso-di-n-propylamine	260	U
67-72-1	Hexachloroethane	260	U
98-95-3	Nitrobenzene	260	U
78-59-1	Isophorone	260	U
88-75-5	2-Nitrophenol	260	U
105-67-9	2,4-Dimethylphenol	260	U
111-91-1	Bis(2-chloroethoxy)methane	260	U
120-83-2	2,4-Dichlorophenol	260	U
91-20-3	Naphthalene	27	J
106-47-8	4-Chloroaniline	260	U
87-68-3	Hexachlorobutadiene	260	U
105-60-2	Caprolactam	260	U
59-50-7	4-Chloro-3-methylphenol	260	U
91-57-6	2-Methylnaphthalene	260	U
77-47-4	Hexachlorocyclopentadiene	260	U UJ
88-06-2	2,4,6-Trichlorophenol	260	U
95-95-4	2,4,5-Trichlorophenol	260	U
92-52-4	1,1'-Biphenyl	260	U
91-58-7	2-Chloronaphthalene	260	U
88-74-4	2-Nitroaniline	500	U
131-11-3	Dimethylphthalate	260	U
606-20-2	2,6-Dinitrotoluene	260	U
208-96-8	Acenaphthylene	19	J
99-09-2	3-Nitroaniline	500	U
83-32-9	Acenaphthene	35	J

NW 8/8/13

1E - FORM I SV-2

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-17-012

4

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 16948

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-16948-4

Sample wt/vol: 31.0 (g/mL) g Lab File ID: PJUVY09.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 36 Decanted: (Y/N) Date Received: 06/12/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/14/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/08/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
51-28-5	2,4-Dinitrophenol	500	U
100-02-7	4-Nitrophenol	500	U
132-64-9	Dibenzofuran	12	J
121-14-2	2,4-Dinitrotoluene	260	U
84-66-2	Diethylphthalate	260	U
86-73-7	Fluorene	49	J
7005-72-3	4-Chlorophenyl-phenylether	260	U
100-01-6	4-Nitroaniline	500	U
534-52-1	4,6-Dinitro-2-methylphenol	500	U
86-30-6	N-Nitrosodiphenylamin [1]	260	U
95-94-3	1,2,4,5-Tetrachlorobenzene	260	U
101-55-3	4-Bromophenyl-phenylether	260	U
118-74-1	Hexachlorobenzene	260	U
1912-24-9	Atrazine	260	U
87-86-5	Pentachlorophenol	500	U
85-01-8	Phenanthrene	200	J
120-12-7	Anthracene	80	J
86-74-8	Carbazole	9.1	J
84-74-2	Di-n-butylphthalate	16	J
206-44-0	Fluoranthene	380	
129-00-0	Pyrene	630	
85-68-7	Butylbenzylphthalate	260 ~~45~~ ~~J B~~	U
91-94-1	3,3'-Dichlorobenzidine	260	U
56-55-3	Benzo(a)anthracene	280	
218-01-9	Chrysene	360	
117-81-7	Bis(2-ethylhexyl)phthalate	800	~~B~~ ✓
117-84-0	Di-n-octylphthalate	260	U
205-99-2	Benzo(b)fluoranthene	230	J
207-08-9	Benzo(k)fluoranthene	270	
50-32-8	Benzo(a)pyrene	270	
193-39-5	Indeno(1,2,3-cd)pyrene	130	J
53-70-3	Dibenzo(a,h)anthracene	72	J
191-24-2	Benzo(g,h,i)perylene	180	J
58-90-2	2,3,4,6-Tetrachlorophenol	260	U

[1] Cannot be separated from Diphenylamine

NW 8/8/13

1D - FORM I SV-1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-23-012

5

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 16948

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-16948-5

Sample wt/vol: 30.9 (g/mL) g Lab File ID: PJUVY10.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 31 Decanted: (Y/N) Date Received: 06/12/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/14/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/08/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
100-52-7	Benzaldehyde	47	J	
108-95-2	Phenol	240	U	
111-44-4	Bis(2-chloroethyl)ether	240	U	
95-57-8	2-Chlorophenol	240	U	
95-48-7	2-Methylphenol	240	U	
108-60-1	2,2'-Oxybis(1-chloropropane)	240	U	
98-86-2	Acetophenone	28	J	
106-44-5	4-Methylphenol	240	U	
621-64-7	N-Nitroso-di-n-propylamine	240	U	
67-72-1	Hexachloroethane	240	U	
98-95-3	Nitrobenzene	240	U	
78-59-1	Isophorone	240	U	
88-75-5	2-Nitrophenol	240	U	
105-67-9	2,4-Dimethylphenol	240	U	
111-91-1	Bis(2-chloroethoxy)methane	240	U	
120-83-2	2,4-Dichlorophenol	240	U	
91-20-3	Naphthalene	18	J	
106-47-8	4-Chloroaniline	240	~~U~~	R
87-68-3	Hexachlorobutadiene	240	U	
105-60-2	Caprolactam	240	U	
59-50-7	4-Chloro-3-methylphenol	240	U	
91-57-6	2-Methylnaphthalene	240	U	
77-47-4	Hexachlorocyclopentadiene	240	~~U~~	R
88-06-2	2,4,6-Trichlorophenol	240	U	
95-95-4	2,4,5-Trichlorophenol	240	U	
92-52-4	1,1'-Biphenyl	240	U	
91-58-7	2-Chloronaphthalene	240	U	
88-74-4	2-Nitroaniline	470	U	
131-11-3	Dimethylphthalate	240	U	
606-20-2	2,6-Dinitrotoluene	240	U	
208-96-8	Acenaphthylene	24	J	
99-09-2	3-Nitroaniline	470	U	
83-32-9	Acenaphthene	29	J	

NW 8/8/13

1E - FORM I SV-2

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-23-012

5

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 16948

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-16948-5

Sample wt/vol: 30.9 (g/mL) g Lab File ID: PJUVY10.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 31 Decanted: (Y/N) Date Received: 06/12/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/14/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/08/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
51-28-5	2,4-Dinitrophenol	470	U	
100-02-7	4-Nitrophenol	470	U	
132-64-9	Dibenzofuran	12	J	
121-14-2	2,4-Dinitrotoluene	240	U	
84-66-2	Diethylphthalate	240	U	
86-73-7	Fluorene	35	J	
7005-72-3	4-Chlorophenyl-phenylether	240	U	
100-01-6	4-Nitroaniline	470	U	
534-52-1	4,6-Dinitro-2-methylphenol	470	U	
86-30-6	N-Nitrosodiphenylamin [1]	240	U	
95-94-3	1,2,4,5-Tetrachlorobenzene	240	U	
101-55-3	4-Bromophenyl-phenylether	240	U	
118-74-1	Hexachlorobenzene	240	U	
1912-24-9	Atrazine	240	U	
87-86-5	Pentachlorophenol	470	U	
85-01-8	Phenanthrene	290		
120-12-7	Anthracene	94	J	
86-74-8	Carbazole	7.9	J	
84-74-2	Di-n-butylphthalate	12	J	
206-44-0	Fluoranthene	620		
129-00-0	Pyrene	910		
85-68-7	Butylbenzylphthalate	240 ~~52~~ ~~J B~~	U	
91-94-1	3,3'-Dichlorobenzidine	240 ~~U~~	R	
56-55-3	Benzo(a)anthracene	430		
218-01-9	Chrysene	470		
117-81-7	Bis(2-ethylhexyl)phthalate	240 ~~160~~ ~~J B~~	U	
117-84-0	Di-n-octylphthalate	240	U	
205-99-2	Benzo(b)fluoranthene	420		
207-08-9	Benzo(k)fluoranthene	340		
50-32-8	Benzo(a)pyrene	400		
193-39-5	Indeno(1,2,3-cd)pyrene	190	J	
53-70-3	Dibenzo(a,h)anthracene	69	J	
191-24-2	Benzo(g,h,i)perylene	230	J	
58-90-2	2,3,4,6-Tetrachlorophenol	240	U	

[1] Cannot be separated from Diphenylamine

NW 8/8/13

1D - FORM I SV-1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-06-012

12

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 16948

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-16948-12

Sample wt/vol: 30.1 (g/mL) g Lab File ID: PJUVY11.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 44 Decanted: (Y/N) Date Received: 06/12/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/14/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/08/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
100-52-7	Benzaldehyde	41	~~J~~ J
108-95-2	Phenol	300	U
111-44-4	Bis(2-chloroethyl)ether	300	U
95-57-8	2-Chlorophenol	300	U
95-48-7	2-Methylphenol	300	U
108-60-1	2,2'-Oxybis(1-chloropropane)	300	U
98-86-2	Acetophenone	46	J
106-44-5	4-Methylphenol	300	U
621-64-7	N-Nitroso-di-n-propylamine	300	U
67-72-1	Hexachloroethane	300	U
98-95-3	Nitrobenzene	300	U
78-59-1	Isophorone	300	U
88-75-5	2-Nitrophenol	300	U
105-67-9	2,4-Dimethylphenol	300	U
111-91-1	Bis(2-chloroethoxy)methane	300	U
120-83-2	2,4-Dichlorophenol	300	U
91-20-3	Naphthalene	87	J
106-47-8	4-Chloroaniline	300	U
87-68-3	Hexachlorobutadiene	300	U
105-60-2	Caprolactam	300	U
59-50-7	4-Chloro-3-methylphenol	300	U
91-57-6	2-Methylnaphthalene	28	J
77-47-4	Hexachlorocyclopentadiene	300	~~U~~ UJ
88-06-2	2,4,6-Trichlorophenol	300	U
95-95-4	2,4,5-Trichlorophenol	300	U
92-52-4	1,1'-Biphenyl	300	U
91-58-7	2-Chloronaphthalene	300	U
88-74-4	2-Nitroaniline	590	U
131-11-3	Dimethylphthalate	300	U
606-20-2	2,6-Dinitrotoluene	300	U
208-96-8	Acenaphthylene	66	J
99-09-2	3-Nitroaniline	590	U
83-32-9	Acenaphthene	440	

NW 8/8/13

1E - FORM I SV-2
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-06-012

12

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 16948

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-16948-12

Sample wt/vol: 30.1 (g/mL) g Lab File ID: PJUVY11.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 44 Decanted: (Y/N) Date Received: 06/12/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/14/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/08/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
51-28-5	2,4-Dinitrophenol	590	U
100-02-7	4-Nitrophenol	590	U
132-64-9	Dibenzofuran	40	J
121-14-2	2,4-Dinitrotoluene	300	U
84-66-2	Diethylphthalate	300	U
86-73-7	Fluorene	270	J
7005-72-3	4-Chlorophenyl-phenylether	300	U
100-01-6	4-Nitroaniline	590	U
534-52-1	4,6-Dinitro-2-methylphenol	590	U
86-30-6	N-Nitrosodiphenylamin [1]	300	U
95-94-3	1,2,4,5-Tetrachlorobenzene	300	U
101-55-3	4-Bromophenyl-phenylether	300	U
118-74-1	Hexachlorobenzene	300	U
1912-24-9	Atrazine	300	U
87-86-5	Pentachlorophenol	590	U
85-01-8	Phenanthrene	1400	
120-12-7	Anthracene	240	J
86-74-8	Carbazole	15	J
84-74-2	Di-n-butylphthalate	88	J
206-44-0	Fluoranthene	1500	
129-00-0	Pyrene	2000	
85-68-7	Butylbenzylphthalate	300 ~~71~~	J ~~B~~ U
91-94-1	3,3'-Dichlorobenzidine	300	U
56-55-3	Benzo(a)anthracene	900	
218-01-9	Chrysene	930	
117-81-7	Bis(2-ethylhexyl)phthalate	490	~~B~~ ✓
117-84-0	Di-n-octylphthalate	300	U
205-99-2	Benzo(b)fluoranthene	610	
207-08-9	Benzo(k)fluoranthene	700	
50-32-8	Benzo(a)pyrene	780	
193-39-5	Indeno(1,2,3-cd)pyrene	320	
53-70-3	Dibenzo(a,h)anthracene	120	J
191-24-2	Benzo(g,h,i)perylene	380	
58-90-2	2,3,4,6-Tetrachlorophenol	300	U

[1] Cannot be separated from Diphenylamine

NW 8/8/13

1D - FORM I SV-1

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-18-012

13

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 16948

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-16948-13

Sample wt/vol: 30.9 (g/mL) g Lab File ID: PJUVY12.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 39 Decanted: (Y/N) Date Received: 06/12/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/14/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/08/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
100-52-7	Benzaldehyde	61	~~J~~	J
108-95-2	Phenol	12	~~J~~	J
111-44-4	Bis(2-chloroethyl)ether	270	U	
95-57-8	2-Chlorophenol	270	U	
95-48-7	2-Methylphenol	270	U	
108-60-1	2,2'-Oxybis(1-chloropropane)	270	U	
98-86-2	Acetophenone	38	J	
106-44-5	4-Methylphenol	270	U	
621-64-7	N-Nitroso-di-n-propylamine	270	U	
67-72-1	Hexachloroethane	270	U	
98-95-3	Nitrobenzene	270	U	
78-59-1	Isophorone	270	U	
88-75-5	2-Nitrophenol	270	U	
105-67-9	2,4-Dimethylphenol	270	U	
111-91-1	Bis(2-chloroethoxy)methane	270	U	
120-83-2	2,4-Dichlorophenol	270	U	
91-20-3	Naphthalene	70	J	
106-47-8	4-Chloroaniline	270	~~U~~	R
87-68-3	Hexachlorobutadiene	270	U	
105-60-2	Caprolactam	270	U	
59-50-7	4-Chloro-3-methylphenol	270	U	
91-57-6	2-Methylnaphthalene	34	J	
77-47-4	Hexachlorocyclopentadiene	270	~~U~~	R
88-06-2	2,4,6-Trichlorophenol	270	U	
95-95-4	2,4,5-Trichlorophenol	270	U	
92-52-4	1,1'-Biphenyl	270	U	
91-58-7	2-Chloronaphthalene	270	U	
88-74-4	2-Nitroaniline	520	U	
131-11-3	Dimethylphthalate	270	U	
606-20-2	2,6-Dinitrotoluene	270	U	
208-96-8	Acenaphthylene	77	J	
99-09-2	3-Nitroaniline	520	U	
83-32-9	Acenaphthene	130	J	

NW 8/8/13

1E - FORM I SV-2

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-18-012

13

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 16948

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-16948-13

Sample wt/vol: 30.9 (g/mL) g Lab File ID: PJUVY12.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 39 Decanted: (Y/N) Date Received: 06/12/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/14/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/08/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
51-28-5	2,4-Dinitrophenol	520	U
100-02-7	4-Nitrophenol	520	U
132-64-9	Dibenzofuran	32	J
121-14-2	2,4-Dinitrotoluene	270	U
84-66-2	Diethylphthalate	270	U
86-73-7	Fluorene	270	U
7005-72-3	4-Chlorophenyl-phenylether	270	U
100-01-6	4-Nitroaniline	520	U
534-52-1	4,6-Dinitro-2-methylphenol	520	U
86-30-6	N-Nitrosodiphenylamin [1]	270	U
95-94-3	1,2,4,5-Tetrachlorobenzene	270	U
101-55-3	4-Bromophenyl-phenylether	270	U
118-74-1	Hexachlorobenzene	270	U
1912-24-9	Atrazine	270	U
87-86-5	Pentachlorophenol	520	U
85-01-8	Phenanthrene	660	
120-12-7	Anthracene	270	J
86-74-8	Carbazole	270	U
84-74-2	Di-n-butylphthalate	24	J
206-44-0	Fluoranthene	1200	
129-00-0	Pyrene	1800	
85-68-7	Butylbenzylphthalate	~~46~~ 270 ~~J~~ ~~D~~	U R
91-94-1	3,3'-Dichlorobenzidine	270 ~~U~~	
56-55-3	Benzo(a)anthracene	970	
218-01-9	Chrysene	1100	
117-81-7	Bis(2-ethylhexyl)phthalate	1300 ~~B~~	
117-84-0	Di-n-octylphthalate	270	U
205-99-2	Benzo(b)fluoranthene	860	
207-08-9	Benzo(k)fluoranthene	810	
50-32-8	Benzo(a)pyrene	1000	
193-39-5	Indeno(1,2,3-cd)pyrene	420	
53-70-3	Dibenzo(a,h)anthracene	160	J
191-24-2	Benzo(g,h,i)perylene	520	
58-90-2	2,3,4,6-Tetrachlorophenol	270	U

[1] Cannot be separated from Diphenylamine

NW 8/8/13

1D - FORM I SV-1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-19-012

15

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 16948

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-16948-15

Sample wt/vol: 30.5 (g/mL) g Lab File ID: PJUVY13.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 41 Decanted: (Y/N) Date Received: 06/12/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/14/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/08/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
100-52-7	Benzaldehyde	31	~~J~~	J
108-95-2	Phenol	280	U	
111-44-4	Bis(2-chloroethyl)ether	280	U	
95-57-8	2-Chlorophenol	280	U	
95-48-7	2-Methylphenol	280	U	
108-60-1	2,2'-Oxybis(1-chloropropane)	280	U	
98-86-2	Acetophenone	22	J	
106-44-5	4-Methylphenol	280	U	
621-64-7	N-Nitroso-di-n-propylamine	280	U	
67-72-1	Hexachloroethane	280	U	
98-95-3	Nitrobenzene	280	U	
78-59-1	Isophorone	280	U	
88-75-5	2-Nitrophenol	280	U	
105-67-9	2,4-Dimethylphenol	280	U	
111-91-1	Bis(2-chloroethoxy)methane	280	U	
120-83-2	2,4-Dichlorophenol	280	U	
91-20-3	Naphthalene	25	J	
106-47-8	4-Chloroaniline	280	~~U~~	R
87-68-3	Hexachlorobutadiene	280	U	
105-60-2	Caprolactam	280	U	
59-50-7	4-Chloro-3-methylphenol	280	U	
91-57-6	2-Methylnaphthalene	280	U	
77-47-4	Hexachlorocyclopentadiene	280	~~U~~	R
88-06-2	2,4,6-Trichlorophenol	280	U	
95-95-4	2,4,5-Trichlorophenol	280	U	
92-52-4	1,1'-Biphenyl	5.2	J	
91-58-7	2-Chloronaphthalene	280	U	
88-74-4	2-Nitroaniline	550	U	
131-11-3	Dimethylphthalate	280	U	
606-20-2	2,6-Dinitrotoluene	280	U	
208-96-8	Acenaphthylene	47	J	
99-09-2	3-Nitroaniline	550	U	
83-32-9	Acenaphthene	180	J	

NW 8/8/13

1E - FORM I SV-2
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-19-012

15

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 16948

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-16948-15

Sample wt/vol: 30.5 (g/mL) g Lab File ID: PJUVY13.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 41 Decanted: (Y/N) Date Received: 06/12/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/14/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/08/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
51-28-5	2,4-Dinitrophenol	550	U
100-02-7	4-Nitrophenol	550	U
132-64-9	Dibenzofuran	14	J
121-14-2	2,4-Dinitrotoluene	280	U
84-66-2	Diethylphthalate	280	U
86-73-7	Fluorene	58	J
7005-72-3	4-Chlorophenyl-phenylether	280	U
100-01-6	4-Nitroaniline	550	U
534-52-1	4,6-Dinitro-2-methylphenol	550	U
86-30-6	N-Nitrosodiphenylamin [1]	280	U
95-94-3	1,2,4,5-Tetrachlorobenzene	280	U
101-55-3	4-Bromophenyl-phenylether	280	U
118-74-1	Hexachlorobenzene	280	U
1912-24-9	Atrazine	280	U
87-86-5	Pentachlorophenol	550	U
85-01-8	Phenanthrene	310	
120-12-7	Anthracene	200	J
86-74-8	Carbazole	280	U
84-74-2	Di-n-butylphthalate	20	J
206-44-0	Fluoranthene	760	
129-00-0	Pyrene	1200	
85-68-7	Butylbenzylphthalate	280 ~~54~~	~~J B~~ U R
91-94-1	3,3'-Dichlorobenzidine	280	~~U~~
56-55-3	Benzo(a)anthracene	510	
218-01-9	Chrysene	620	
117-81-7	Bis(2-ethylhexyl)phthalate	530	~~B~~
117-84-0	Di-n-octylphthalate	280	U
205-99-2	Benzo(b)fluoranthene	380	
207-08-9	Benzo(k)fluoranthene	450	
50-32-8	Benzo(a)pyrene	500	
193-39-5	Indeno(1,2,3-cd)pyrene	210	J
53-70-3	Dibenzo(a,h)anthracene	87	J
191-24-2	Benzo(g,h,i)perylene	270	J
58-90-2	2,3,4,6-Tetrachlorophenol	280	U

[1] Cannot be separated from Diphenylamine

NW 8/8/13

1D - FORM I SV-1

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-20-012

17

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 16948

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-16948-17

Sample wt/vol: 30.1 (g/mL) g Lab File ID: PJUVY14.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 33 Decanted: (Y/N) Date Received: 06/12/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/14/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/08/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
100-52-7	Benzaldehyde	39	J	
108-95-2	Phenol	6.4	J	
111-44-4	Bis(2-chloroethyl)ether	250	U	
95-57-8	2-Chlorophenol	250	U	
95-48-7	2-Methylphenol	250	U	
108-60-1	2,2'-Oxybis(1-chloropropane)	250	U	
98-86-2	Acetophenone	24	J	
106-44-5	4-Methylphenol	250	U	
621-64-7	N-Nitroso-di-n-propylamine	250	U	
67-72-1	Hexachloroethane	250	U	
98-95-3	Nitrobenzene	250	U	
78-59-1	Isophorone	250	U	
88-75-5	2-Nitrophenol	250	U	
105-67-9	2,4-Dimethylphenol	250	U	
111-91-1	Bis(2-chloroethoxy)methane	250	U	
120-83-2	2,4-Dichlorophenol	250	U	
91-20-3	Naphthalene	40	J	
106-47-8	4-Chloroaniline	250	~~U~~	R
87-68-3	Hexachlorobutadiene	250	U	
105-60-2	Caprolactam	250	U	
59-50-7	4-Chloro-3-methylphenol	250	U	
91-57-6	2-Methylnaphthalene	25	J	
77-47-4	Hexachlorocyclopentadiene	250	~~U~~	R
88-06-2	2,4,6-Trichlorophenol	250	U	
95-95-4	2,4,5-Trichlorophenol	250	U	
92-52-4	1,1'-Biphenyl	250	U	
91-58-7	2-Chloronaphthalene	250	U	
88-74-4	2-Nitroaniline	490	U	
131-11-3	Dimethylphthalate	250	U	
606-20-2	2,6-Dinitrotoluene	250	U	
208-96-8	Acenaphthylene	66	J	
99-09-2	3-Nitroaniline	490	U	
83-32-9	Acenaphthene	420		

MW 8/8/13

1E - FORM I SV-2
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-20-012

17

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 16948

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-16948-17

Sample wt/vol: 30.1 (g/mL) g Lab File ID: PJUVY14.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 33 Decanted: (Y/N) Date Received: 06/12/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/14/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/08/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
51-28-5	2,4-Dinitrophenol	490	U
100-02-7	4-Nitrophenol	490	U
132-64-9	Dibenzofuran	29	J
121-14-2	2,4-Dinitrotoluene	250	U
84-66-2	Diethylphthalate	250	U
86-73-7	Fluorene	130	J
7005-72-3	4-Chlorophenyl-phenylether	250	U
100-01-6	4-Nitroaniline	490	U
534-52-1	4,6-Dinitro-2-methylphenol	490	U
86-30-6	N-Nitrosodiphenylamin [1]	250	U
95-94-3	1,2,4,5-Tetrachlorobenzene	250	U
101-55-3	4-Bromophenyl-phenylether	250	U
118-74-1	Hexachlorobenzene	250	U
1912-24-9	Atrazine	250	U
87-86-5	Pentachlorophenol	490	U
85-01-8	Phenanthrene	1200	
120-12-7	Anthracene	360	
86-74-8	Carbazole	14	J
84-74-2	Di-n-butylphthalate	250	U
206-44-0	Fluoranthene	1200	
129-00-0	Pyrene	2000	
85-68-7	Butylbenzylphthalate	250 ~~49~~ ~~J B~~	U
91-94-1	3,3'-Dichlorobenzidine	250 ~~J~~	R
56-55-3	Benzo(a)anthracene	900	
218-01-9	Chrysene	1000	
117-81-7	Bis(2-ethylhexyl)phthalate	250 ~~140~~ ~~J B~~	U
117-84-0	Di-n-octylphthalate	250	U
205-99-2	Benzo(b)fluoranthene	890	
207-08-9	Benzo(k)fluoranthene	590	
50-32-8	Benzo(a)pyrene	890	
193-39-5	Indeno(1,2,3-cd)pyrene	380	
53-70-3	Dibenzo(a,h)anthracene	120	J
191-24-2	Benzo(g,h,i)perylene	470	
58-90-2	2,3,4,6-Tetrachlorophenol	250	U

[1] Cannot be separated from Diphenylamine

NW 8/8/13

1D - FORM I SV-1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-02-012

20

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 16948

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-16992-1

Sample wt/vol: 30.4 (g/mL) g Lab File ID: PJUVZ07.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 31 Decanted: (Y/N) Date Received: 06/13/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/17/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/09/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
100-52-7	Benzaldehyde	33	J
108-95-2	Phenol	240	U
111-44-4	Bis(2-chloroethyl)ether	240	U
95-57-8	2-Chlorophenol	240	U
95-48-7	2-Methylphenol	240	U
108-60-1	2,2'-Oxybis(1-chloropropane)	240	U
98-86-2	Acetophenone	38	J
106-44-5	4-Methylphenol	240	U
621-64-7	N-Nitroso-di-n-propylamine	240	U
67-72-1	Hexachloroethane	240	U
98-95-3	Nitrobenzene	240	U
78-59-1	Isophorone	240	U
88-75-5	2-Nitrophenol	240	U
105-67-9	2,4-Dimethylphenol	240	U
111-91-1	Bis(2-chloroethoxy)methane	240	U
120-83-2	2,4-Dichlorophenol	240	U
91-20-3	Naphthalene	240	U
106-47-8	4-Chloroaniline	240	U
87-68-3	Hexachlorobutadiene	240	U
105-60-2	Caprolactam	240	U
59-50-7	4-Chloro-3-methylphenol	240	U
91-57-6	2-Methylnaphthalene	240	U
77-47-4	Hexachlorocyclopentadiene	240	U UJ
88-06-2	2,4,6-Trichlorophenol	240	U
95-95-4	2,4,5-Trichlorophenol	240	U
92-52-4	1,1'-Biphenyl	240	U
91-58-7	2-Chloronaphthalene	240	U
88-74-4	2-Nitroaniline	470	U
131-11-3	Dimethylphthalate	240	U
606-20-2	2,6-Dinitrotoluene	240	U
208-96-8	Acenaphthylene	240	U
99-09-2	3-Nitroaniline	470	U
83-32-9	Acenaphthene	9.9	J

NW 8/8/13

1E - FORM I SV-2
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-02-012

20

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 16948

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-16992-1

Sample wt/vol: 30.4 (g/mL) g Lab File ID: PJUVZ07.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 31 Decanted: (Y/N) Date Received: 06/13/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/17/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/09/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
51-28-5	2,4-Dinitrophenol	470	U / UJ
100-02-7	4-Nitrophenol	470	U
132-64-9	Dibenzofuran	240	U
121-14-2	2,4-Dinitrotoluene	240	U
84-66-2	Diethylphthalate	240	U
86-73-7	Fluorene	15	J
7005-72-3	4-Chlorophenyl-phenylether	240	U
100-01-6	4-Nitroaniline	470	U
534-52-1	4,6-Dinitro-2-methylphenol	470	U
86-30-6	N-Nitrosodiphenylamin [1]	240	U
95-94-3	1,2,4,5-Tetrachlorobenzene	240	U
101-55-3	4-Bromophenyl-phenylether	240	U
118-74-1	Hexachlorobenzene	240	U
1912-24-9	Atrazine	240	U
87-86-5	Pentachlorophenol	470	U
85-01-8	Phenanthrene	31	J
120-12-7	Anthracene	19	J
86-74-8	Carbazole	240	U
84-74-2	Di-n-butylphthalate	240	U
206-44-0	Fluoranthene	120	J
129-00-0	Pyrene	200	J
85-68-7	Butylbenzylphthalate	240 ~~30~~ ~~J~~ U	
91-94-1	3,3'-Dichlorobenzidine	240	U
56-55-3	Benzo(a)anthracene	78	J
218-01-9	Chrysene	120	J
117-81-7	Bis(2-ethylhexyl)phthalate	370	
117-84-0	Di-n-octylphthalate	240	U
205-99-2	Benzo(b)fluoranthene	76	J
207-08-9	Benzo(k)fluoranthene	88	J
50-32-8	Benzo(a)pyrene	79	J
193-39-5	Indeno(1,2,3-cd)pyrene	49	J
53-70-3	Dibenzo(a,h)anthracene	22	J
191-24-2	Benzo(g,h,i)perylene	62	J
58-90-2	2,3,4,6-Tetrachlorophenol	240	U

[1] Cannot be separated from Diphenylamine

NW 8/8/13

1D - FORM I SV-1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-11-012

22

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 16948

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-16992-3

Sample wt/vol: 30.0 (g/mL) g Lab File ID: PJUVZ08.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 39 Decanted: (Y/N) Date Received: 06/13/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/17/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/09/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
100-52-7	Benzaldehyde	45	J
108-95-2	Phenol	280	U
111-44-4	Bis(2-chloroethyl)ether	280	U
95-57-8	2-Chlorophenol	280	U
95-48-7	2-Methylphenol	280	U
108-60-1	2,2'-Oxybis(1-chloropropane)	280	U
98-86-2	Acetophenone	43	J
106-44-5	4-Methylphenol	280	U
621-64-7	N-Nitroso-di-n-propylamine	280	U
67-72-1	Hexachloroethane	280	U
98-95-3	Nitrobenzene	280	U
78-59-1	Isophorone	280	U
88-75-5	2-Nitrophenol	280	U
105-67-9	2,4-Dimethylphenol	280	U
111-91-1	Bis(2-chloroethoxy)methane	280	U
120-83-2	2,4-Dichlorophenol	280	U
91-20-3	Naphthalene	30	J
106-47-8	4-Chloroaniline	280	U
87-68-3	Hexachlorobutadiene	280	U
105-60-2	Caprolactam	280	U
59-50-7	4-Chloro-3-methylphenol	280	U
91-57-6	2-Methylnaphthalene	12	J
77-47-4	Hexachlorocyclopentadiene	280	U UJ
88-06-2	2,4,6-Trichlorophenol	280	U
95-95-4	2,4,5-Trichlorophenol	280	U
92-52-4	1,1'-Biphenyl	280	U
91-58-7	2-Chloronaphthalene	280	U
88-74-4	2-Nitroaniline	540	U
131-11-3	Dimethylphthalate	280	U
606-20-2	2,6-Dinitrotoluene	280	U
208-96-8	Acenaphthylene	52	J
99-09-2	3-Nitroaniline	540	U
83-32-9	Acenaphthene	160	J

NW 8/8/13

1E - FORM I SV-2
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-11-012

22

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 16948

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-16992-3

Sample wt/vol: 30.0 (g/mL) g Lab File ID: PJUVZ08.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 39 Decanted: (Y/N) Date Received: 06/13/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/17/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/09/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
51-28-5	2,4-Dinitrophenol	540	U UJ
100-02-7	4-Nitrophenol	540	U
132-64-9	Dibenzofuran	16	J
121-14-2	2,4-Dinitrotoluene	280	U
84-66-2	Diethylphthalate	280	U
86-73-7	Fluorene	75	J
7005-72-3	4-Chlorophenyl-phenylether	280	U
100-01-6	4-Nitroaniline	540	U
534-52-1	4,6-Dinitro-2-methylphenol	540	U
86-30-6	N-Nitrosodiphenylamin [1]	280	U
95-94-3	1,2,4,5-Tetrachlorobenzene	280	U
101-55-3	4-Bromophenyl-phenylether	280	U
118-74-1	Hexachlorobenzene	280	U
1912-24-9	Atrazine	280	U
87-86-5	Pentachlorophenol	540	U
85-01-8	Phenanthrene	770	
120-12-7	Anthracene	360	
86-74-8	Carbazole	280	U
84-74-2	Di-n-butylphthalate	280	U
206-44-0	Fluoranthene	1600	
129-00-0	Pyrene	2400	
85-68-7	Butylbenzylphthalate	280 ~~57~~ ~~J~~ U	
91-94-1	3,3'-Dichlorobenzidine	280	U
56-55-3	Benzo(a)anthracene	1200	
218-01-9	Chrysene	1100	
117-81-7	Bis(2-ethylhexyl)phthalate	720	
117-84-0	Di-n-octylphthalate	280	U
205-99-2	Benzo(b)fluoranthene	760	
207-08-9	Benzo(k)fluoranthene	790	
50-32-8	Benzo(a)pyrene	1000	
193-39-5	Indeno(1,2,3-cd)pyrene	430	
53-70-3	Dibenzo(a,h)anthracene	150	J
191-24-2	Benzo(g,h,i)perylene	510	
58-90-2	2,3,4,6-Tetrachlorophenol	280	U

[1] Cannot be separated from Diphenylamine

NW 8/8/13

1D - FORM I SV-1

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-12-012

23

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 16948

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-16992-4

Sample wt/vol: 30.3 (g/mL) g Lab File ID: PJUVZ09.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 33 Decanted: (Y/N) Date Received: 06/13/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/17/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/09/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
100-52-7	Benzaldehyde	44	J
108-95-2	Phenol	250	U
111-44-4	Bis(2-chloroethyl)ether	250	U
95-57-8	2-Chlorophenol	250	U
95-48-7	2-Methylphenol	250	U
108-60-1	2,2'-Oxybis(1-chloropropane)	250	U
98-86-2	Acetophenone	48	J
106-44-5	4-Methylphenol	250	U
621-64-7	N-Nitroso-di-n-propylamine	250	U
67-72-1	Hexachloroethane	250	U
98-95-3	Nitrobenzene	250	U
78-59-1	Isophorone	250	U
88-75-5	2-Nitrophenol	250	U
105-67-9	2,4-Dimethylphenol	250	U
111-91-1	Bis(2-chloroethoxy)methane	250	U
120-83-2	2,4-Dichlorophenol	250	U
91-20-3	Naphthalene	28	J
106-47-8	4-Chloroaniline	250	U
87-68-3	Hexachlorobutadiene	250	U
105-60-2	Caprolactam	250	U
59-50-7	4-Chloro-3-methylphenol	250	U
91-57-6	2-Methylnaphthalene	250	U
77-47-4	Hexachlorocyclopentadiene	250	U UJ
88-06-2	2,4,6-Trichlorophenol	250	U
95-95-4	2,4,5-Trichlorophenol	250	U
92-52-4	1,1'-Biphenyl	250	U
91-58-7	2-Chloronaphthalene	250	U
88-74-4	2-Nitroaniline	490	U
131-11-3	Dimethylphthalate	250	U
606-20-2	2,6-Dinitrotoluene	250	U
208-96-8	Acenaphthylene	16	J
99-09-2	3-Nitroaniline	490	U
83-32-9	Acenaphthene	54	J

NW 8/8/13

1E - FORM I SV-2
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-12-012

23

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 16948

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-16992-4

Sample wt/vol: 30.3 (g/mL) g Lab File ID: PJUVZ09.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 33 Decanted: (Y/N) Date Received: 06/13/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/17/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/09/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
51-28-5	2,4-Dinitrophenol	490	~~U~~ UJ
100-02-7	4-Nitrophenol	490	U
132-64-9	Dibenzofuran	15	J
121-14-2	2,4-Dinitrotoluene	250	U
84-66-2	Diethylphthalate	250	U
86-73-7	Fluorene	33	J
7005-72-3	4-Chlorophenyl-phenylether	250	U
100-01-6	4-Nitroaniline	490	U
534-52-1	4,6-Dinitro-2-methylphenol	490	U
86-30-6	N-Nitrosodiphenylamin [1]	250	U
95-94-3	1,2,4,5-Tetrachlorobenzene	250	U
101-55-3	4-Bromophenyl-phenylether	250	U
118-74-1	Hexachlorobenzene	250	U
1912-24-9	Atrazine	250	U
87-86-5	Pentachlorophenol	490	U
85-01-8	Phenanthrene	140	J
120-12-7	Anthracene	90	J
86-74-8	Carbazole	250	U
84-74-2	Di-n-butylphthalate	250	U
206-44-0	Fluoranthene	370	
129-00-0	Pyrene	530	
85-68-7	Butylbenzylphthalate	250 ~~23~~ ~~J~~	U
91-94-1	3,3'-Dichlorobenzidine	250	U
56-55-3	Benzo(a)anthracene	240	J
218-01-9	Chrysene	310	
117-81-7	Bis(2-ethylhexyl)phthalate	790	
117-84-0	Di-n-octylphthalate	250	U
205-99-2	Benzo(b)fluoranthene	210	J
207-08-9	Benzo(k)fluoranthene	220	J
50-32-8	Benzo(a)pyrene	240	J
193-39-5	Indeno(1,2,3-cd)pyrene	120	J
53-70-3	Dibenzo(a,h)anthracene	47	J
191-24-2	Benzo(g,h,i)perylene	150	J
58-90-2	2,3,4,6-Tetrachlorophenol	250	U

[1] Cannot be separated from Diphenylamine

NW 8/8/13

1D - FORM I SV-1

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-16-012

24

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 16948

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-16992-5

Sample wt/vol: 30.1 (g/mL) g Lab File ID: PJUVZ10.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 29 Decanted: (Y/N) Date Received: 06/13/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/17/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/09/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
100-52-7	Benzaldehyde	26	~~J~~ J
108-95-2	Phenol	240	U
111-44-4	Bis(2-chloroethyl)ether	240	U
95-57-8	2-Chlorophenol	240	U
95-48-7	2-Methylphenol	240	U
108-60-1	2,2'-Oxybis(1-chloropropane)	240	U
98-86-2	Acetophenone	27	J
106-44-5	4-Methylphenol	240	U
621-64-7	N-Nitroso-di-n-propylamine	240	U
67-72-1	Hexachloroethane	240	U
98-95-3	Nitrobenzene	240	U
78-59-1	Isophorone	240	U
88-75-5	2-Nitrophenol	240	U
105-67-9	2,4-Dimethylphenol	240	U
111-91-1	Bis(2-chloroethoxy)methane	240	U
120-83-2	2,4-Dichlorophenol	240	U
91-20-3	Naphthalene	9.6	J
106-47-8	4-Chloroaniline	240	U
87-68-3	Hexachlorobutadiene	240	U
105-60-2	Caprolactam	240	U
59-50-7	4-Chloro-3-methylphenol	240	U
91-57-6	2-Methylnaphthalene	240	U
77-47-4	Hexachlorocyclopentadiene	240	~~U~~ UJ
88-06-2	2,4,6-Trichlorophenol	240	U
95-95-4	2,4,5-Trichlorophenol	240	U
92-52-4	1,1'-Biphenyl	240	U
91-58-7	2-Chloronaphthalene	240	U
88-74-4	2-Nitroaniline	460	U
131-11-3	Dimethylphthalate	240	U
606-20-2	2,6-Dinitrotoluene	240	U
208-96-8	Acenaphthylene	240	U
99-09-2	3-Nitroaniline	460	U
83-32-9	Acenaphthene	6.5	J

1E - FORM I SV-2
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-16-012

24

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 16948

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-16992-5

Sample wt/vol: 30.1 (g/mL) g Lab File ID: PJUVZ10.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 29 Decanted: (Y/N) Date Received: 06/13/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/17/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/09/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
51-28-5	2,4-Dinitrophenol	460	~~U~~ UJ
100-02-7	4-Nitrophenol	460	U
132-64-9	Dibenzofuran	240	U
121-14-2	2,4-Dinitrotoluene	240	U
84-66-2	Diethylphthalate	240	U
86-73-7	Fluorene	240	U
7005-72-3	4-Chlorophenyl-phenylether	240	U
100-01-6	4-Nitroaniline	460	U
534-52-1	4,6-Dinitro-2-methylphenol	460	U
86-30-6	N-Nitrosodiphenylamin [1]	240	U
95-94-3	1,2,4,5-Tetrachlorobenzene	240	U
101-55-3	4-Bromophenyl-phenylether	240	U
118-74-1	Hexachlorobenzene	240	U
1912-24-9	Atrazine	240	U
87-86-5	Pentachlorophenol	460	U
85-01-8	Phenanthrene	51	J
120-12-7	Anthracene	21	J
86-74-8	Carbazole	240	U
84-74-2	Di-n-butylphthalate	10	J
206-44-0	Fluoranthene	150	J
129-00-0	Pyrene	220	J
85-68-7	Butylbenzylphthalate	240 ~~39~~	~~J~~ U
91-94-1	3,3'-Dichlorobenzidine	240	U
56-55-3	Benzo(a)anthracene	97	J
218-01-9	Chrysene	140	J
117-81-7	Bis(2-ethylhexyl)phthalate	380	
117-84-0	Di-n-octylphthalate	240	U
205-99-2	Benzo(b)fluoranthene	110	J
207-08-9	Benzo(k)fluoranthene	110	J
50-32-8	Benzo(a)pyrene	100	J
193-39-5	Indeno(1,2,3-cd)pyrene	70	J
53-70-3	Dibenzo(a,h)anthracene	39	J
191-24-2	Benzo(g,h,i)perylene	82	J
58-90-2	2,3,4,6-Tetrachlorophenol	240	U

[1] Cannot be separated from Diphenylamine

NW 8/8/13

1D - FORM I SV-1

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-24-012

25

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 16948

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-16992-6

Sample wt/vol: 30.9 (g/mL) g Lab File ID: PJUWD15.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 43 Decanted: (Y/N) Date Received: 06/13/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/17/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/12/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
100-52-7	Benzaldehyde	65	~~J~~ J
108-95-2	Phenol	290	U
111-44-4	Bis(2-chloroethyl)ether	290	U
95-57-8	2-Chlorophenol	290	U
95-48-7	2-Methylphenol	290	U
108-60-1	2,2'-Oxybis(1-chloropropane)	290	U
98-86-2	Acetophenone	48	J
106-44-5	4-Methylphenol	290	U
621-64-7	N-Nitroso-di-n-propylamine	290	U
67-72-1	Hexachloroethane	290	U
98-95-3	Nitrobenzene	290	U
78-59-1	Isophorone	290	U
88-75-5	2-Nitrophenol	290	U
105-67-9	2,4-Dimethylphenol	290	U
111-91-1	Bis(2-chloroethoxy)methane	290	U
120-83-2	2,4-Dichlorophenol	290	U
91-20-3	Naphthalene	66	J
106-47-8	4-Chloroaniline	290	U
87-68-3	Hexachlorobutadiene	290	U
105-60-2	Caprolactam	290	U
59-50-7	4-Chloro-3-methylphenol	290	U
91-57-6	2-Methylnaphthalene	290	U
77-47-4	Hexachlorocyclopentadiene	290	~~U~~ UJ
88-06-2	2,4,6-Trichlorophenol	290	U
95-95-4	2,4,5-Trichlorophenol	290	U
92-52-4	1,1'-Biphenyl	290	U
91-58-7	2-Chloronaphthalene	290	U
88-74-4	2-Nitroaniline	570	U
131-11-3	Dimethylphthalate	290	U
606-20-2	2,6-Dinitrotoluene	290	U
208-96-8	Acenaphthylene	35	J
99-09-2	3-Nitroaniline	570	U
83-32-9	Acenaphthene	57	J

MW 8/8/13

1E - FORM I SV-2

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-24-012

25

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 16948

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-16992-6

Sample wt/vol: 30.9 (g/mL) g Lab File ID: PJUWD15.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 43 Decanted: (Y/N) Date Received: 06/13/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/17/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/12/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
51-28-5	2,4-Dinitrophenol	570	U
100-02-7	4-Nitrophenol	570	U
132-64-9	Dibenzofuran	24	J
121-14-2	2,4-Dinitrotoluene	290	U
84-66-2	Diethylphthalate	290	U
86-73-7	Fluorene	42	J
7005-72-3	4-Chlorophenyl-phenylether	290	U
100-01-6	4-Nitroaniline	570	U
534-52-1	4,6-Dinitro-2-methylphenol	570	U
86-30-6	N-Nitrosodiphenylamin [1]	290	U
95-94-3	1,2,4,5-Tetrachlorobenzene	290	U
101-55-3	4-Bromophenyl-phenylether	290	U
118-74-1	Hexachlorobenzene	290	U
1912-24-9	Atrazine	290	U
87-86-5	Pentachlorophenol	570	U
85-01-8	Phenanthrene	230	J
120-12-7	Anthracene	120	J
86-74-8	Carbazole	19	J
84-74-2	Di-n-butylphthalate	27	J
206-44-0	Fluoranthene	590	
129-00-0	Pyrene	950	
85-68-7	Butylbenzylphthalate	290 ~~52~~ ~~J~~ U	
91-94-1	3,3'-Dichlorobenzidine	290	U
56-55-3	Benzo(a)anthracene	420	
218-01-9	Chrysene	610	
117-81-7	Bis(2-ethylhexyl)phthalate	2800 ~~B~~	
117-84-0	Di-n-octylphthalate	290	U
205-99-2	Benzo(b)fluoranthene	420	
207-08-9	Benzo(k)fluoranthene	390	
50-32-8	Benzo(a)pyrene	440	
193-39-5	Indeno(1,2,3-cd)pyrene	230	J
53-70-3	Dibenzo(a,h)anthracene	120	J
191-24-2	Benzo(g,h,i)perylene	280	J
58-90-2	2,3,4,6-Tetrachlorophenol	290	U

[1] Cannot be separated from Diphenylamine

MW 8/8/13

1H - FORM I ARO
AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO. 1
LMR13-05-012

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 16948

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-16948-1

Sample wt/vol: 31.0 (g/mL) g Lab File ID: 0825ACASOM04.D

% Moisture: 40 Decanted: (Y/N) Date Received: 06/12/2013

Extraction: (Type) SONC Date Extracted: 06/14/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 07/11/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	53	U
11104-28-2	Aroclor-1221	53	U
11141-16-5	Aroclor-1232	53	U
53469-21-9	Aroclor-1242	53	U
12672-29-6	Aroclor-1248	820 ~~750~~	
11097-69-1	Aroclor-1254	370	
11096-82-5	Aroclor-1260	59	~~P~~ J
37324-23-5	Aroclor-1262	53	U
11100-14-4	Aroclor-1268	53	U

NW 8/8/13

1H - FORM I ARO
AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO. 1DL
LMR13-05-012DL

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678
Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 16948
Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-16948-1
Sample wt/vol: 31.0 (g/mL) g Lab File ID: 0825ACASOM03.D
% Moisture: 40 Decanted: (Y/N) Date Received: 06/12/2013
Extraction: (Type) SONC Date Extracted: 06/14/2013
Concentrated Extract Volume: 10000 (uL) Date Analyzed: 07/11/2013
Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 3.0
GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y
Acid Cleanup: (Y/N) Y

use original results

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	160	U
11104-28-2	Aroclor-1221	160	U
11141-16-5	Aroclor-1232	160	U
53469-21-9	Aroclor-1242	160	U
12672-29-6	Aroclor-1248	820	~~D~~
11097-69-1	Aroclor-1254	420	~~D~~
11096-82-5	Aroclor-1260	68	J ~~D~~
37324-23-5	Aroclor-1262	160	U
11100-14-4	Aroclor-1268	160	U

NW 8/8/13

1H - FORM I ARO
AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO. 2

LMR13-09-012

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 16948

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-16948-2

Sample wt/vol: 30.2 (g/mL) g Lab File ID: 0825ACASOM05.D

% Moisture: 27 Decanted: (Y/N) Date Received: 06/12/2013

Extraction: (Type) SONC Date Extracted: 06/14/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 07/11/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	45	U
11104-28-2	Aroclor-1221	45	U
11141-16-5	Aroclor-1232	45	U
53469-21-9	Aroclor-1242	45	U
12672-29-6	Aroclor-1248	130	
11097-69-1	Aroclor-1254	79	
11096-82-5	Aroclor-1260	16	J
37324-23-5	Aroclor-1262	45	U
11100-14-4	Aroclor-1268	45	U

NW 8/8/13

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO. 3

LMR13-10-012

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 16948

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-16948-3

Sample wt/vol: 30.6 (g/mL) g Lab File ID: 0825ACASOM06.D

% Moisture: 34 Decanted: (Y/N) Date Received: 06/12/2013

Extraction: (Type) SONC Date Extracted: 06/14/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 07/11/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	49	U
11104-28-2	Aroclor-1221	49	U
11141-16-5	Aroclor-1232	49	U
53469-21-9	Aroclor-1242	49	U
12672-29-6	Aroclor-1248	48	~~J~~ J
11097-69-1	Aroclor-1254	26	J
11096-82-5	Aroclor-1260	49	U
37324-23-5	Aroclor-1262	49	U
11100-14-4	Aroclor-1268	49	U

NW 8/8/13

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO. 4

LMR13-17-012

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 16948

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-16948-4

Sample wt/vol: 30.9 (g/mL) g Lab File ID: 0825ACASOM07.D

% Moisture: 36 Decanted: (Y/N) Date Received: 06/12/2013

Extraction: (Type) SONC Date Extracted: 06/14/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 07/11/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	50	U
11104-28-2	Aroclor-1221	50	U
11141-16-5	Aroclor-1232	50	U
53469-21-9	Aroclor-1242	50	U
12672-29-6	Aroclor-1248	130	
11097-69-1	Aroclor-1254	86	
11096-82-5	Aroclor-1260	17	~~J~~ J
37324-23-5	Aroclor-1262	50	U
11100-14-4	Aroclor-1268	50	U

NW 8/8/13

1H - FORM I ARO
AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO. 5
LMR13-23-012

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 16948

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-16948-5

Sample wt/vol: 30.6 (g/mL) g Lab File ID: 0825ACASOM08.D

% Moisture: 31 Decanted: (Y/N) Date Received: 06/12/2013

Extraction: (Type) SONC Date Extracted: 06/14/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 07/11/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	47	U
11104-28-2	Aroclor-1221	47	U
11141-16-5	Aroclor-1232	47	U
53469-21-9	Aroclor-1242	47	U
12672-29-6	Aroclor-1248	16	~~J~~ J
11097-69-1	Aroclor-1254	15	J
11096-82-5	Aroclor-1260	47	U
37324-23-5	Aroclor-1262	47	U
11100-14-4	Aroclor-1268	47	U

NW 8/8/13

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO. 12

LMR13-06-012

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 16948

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-16948-12

Sample wt/vol: 30.4 (g/mL) g Lab File ID: 0825ACASOM11.D

% Moisture: 44 Decanted: (Y/N) Date Received: 06/12/2013

Extraction: (Type) SONC Date Extracted: 06/14/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 07/11/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	58	U
11104-28-2	Aroclor-1221	58	U
11141-16-5	Aroclor-1232	58	U
53469-21-9	Aroclor-1242	31	~~J~~ J
12672-29-6	Aroclor-1248	58	U
11097-69-1	Aroclor-1254	26	J
11096-82-5	Aroclor-1260	6.2	~~J~~ J
37324-23-5	Aroclor-1262	58	U
11100-14-4	Aroclor-1268	58	U

NW 8/8/13

1H - FORM I ARO
AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO. 13
LMR13-18-012

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 16948

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-16948-13

Sample wt/vol: 30.2 (g/mL) g Lab File ID: 0825ACASOM12.D

% Moisture: 39 Decanted: (Y/N) Date Received: 06/12/2013

Extraction: (Type) SONC Date Extracted: 06/14/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 07/11/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	53	U
11104-28-2	Aroclor-1221	53	U
11141-16-5	Aroclor-1232	53	U
53469-21-9	Aroclor-1242	53	U
12672-29-6	Aroclor-1248	91	
11097-69-1	Aroclor-1254	69	
11096-82-5	Aroclor-1260	15	~~J~~ J
37324-23-5	Aroclor-1262	53	U
11100-14-4	Aroclor-1268	53	U

NW 8/8/13

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO. 14

LMR13-18-012FD

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 16948

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-16948-14

Sample wt/vol: 30.5 (g/mL) g Lab File ID: 0825ACASOM13.D

% Moisture: 40 Decanted: (Y/N) Date Received: 06/12/2013

Extraction: (Type) SONC Date Extracted: 06/14/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 07/11/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	54	U
11104-28-2	Aroclor-1221	54	U
11141-16-5	Aroclor-1232	54	U
53469-21-9	Aroclor-1242	54	U
12672-29-6	Aroclor-1248	110	
11097-69-1	Aroclor-1254	87	
11096-82-5	Aroclor-1260	19	~~J~~ J
37324-23-5	Aroclor-1262	54	U
11100-14-4	Aroclor-1268	54	U

NW 8/8/13

1H - FORM I ARO
AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO. 15
LMR13-19-012

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678
Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 16948
Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-16948-15
Sample wt/vol: 30.3 (g/mL) g Lab File ID: 0825ACASOM14.D
% Moisture: 41 Decanted: (Y/N) Date Received: 06/12/2013
Extraction: (Type) SONC Date Extracted: 06/14/2013
Concentrated Extract Volume: 10000 (uL) Date Analyzed: 07/11/2013
Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 1.0
GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y
Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	55	U
11104-28-2	Aroclor-1221	55	U
11141-16-5	Aroclor-1232	55	U
53469-21-9	Aroclor-1242	82	
12672-29-6	Aroclor-1248	55	U
11097-69-1	Aroclor-1254	55	J
11096-82-5	Aroclor-1260	11	~~J~~ J
37324-23-5	Aroclor-1262	55	U
11100-14-4	Aroclor-1268	55	U

RW 8/8/13

1H - FORM I ARO
AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO. 17
LMR13-20-012

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678
Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 16948
Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-16948-17
Sample wt/vol: 30.3 (g/mL) g Lab File ID: 0825ACASOM15.D
% Moisture: 33 Decanted: (Y/N) Date Received: 06/12/2013
Extraction: (Type) SONC Date Extracted: 06/14/2013
Concentrated Extract Volume: 10000 (uL) Date Analyzed: 07/11/2013
Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 1.0
GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y
Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	49	U
11104-28-2	Aroclor-1221	49	U
11141-16-5	Aroclor-1232	49	U
53469-21-9	Aroclor-1242	49	U
12672-29-6	Aroclor-1248	49	U
11097-69-1	Aroclor-1254	49	U
11096-82-5	Aroclor-1260	49	U
37324-23-5	Aroclor-1262	49	U
11100-14-4	Aroclor-1268	49	U

MW 8/8/13

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO. 20

LMR13-02-012

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 16948

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-16992-1

Sample wt/vol: 29.3 (g/mL) g Lab File ID: 5253AWASOM08.D

% Moisture: 31 Decanted: (Y/N) Date Received: 06/13/2013

Extraction: (Type) SONC Date Extracted: 06/18/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 07/08/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	49	U
11104-28-2	Aroclor-1221	49	U
11141-16-5	Aroclor-1232	49	U
53469-21-9	Aroclor-1242	37	~~J P~~ J
12672-29-6	Aroclor-1248	49	U
11097-69-1	Aroclor-1254	29	~~J P~~ J
11096-82-5	Aroclor-1260	5.8	J
37324-23-5	Aroclor-1262	49	U
11100-14-4	Aroclor-1268	49	U

NW 8/8/13

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-02-012FD 21

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 16948

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-16992-2

Sample wt/vol: 30.9 (g/mL) g Lab File ID: 5253AWASOM09.D

% Moisture: 31 Decanted: (Y/N) Date Received: 06/13/2013

Extraction: (Type) SONC Date Extracted: 06/18/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 07/08/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	46	U
11104-28-2	Aroclor-1221	46	U
11141-16-5	Aroclor-1232	46	U
53469-21-9	Aroclor-1242	32	~~J P~~ J
12672-29-6	Aroclor-1248	46	U
11097-69-1	Aroclor-1254	26	~~J P~~ J
11096-82-5	Aroclor-1260	46	U
37324-23-5	Aroclor-1262	46	U
11100-14-4	Aroclor-1268	46	U

NW 8/8/13

1H - FORM I ARO
AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO. 22
LMR13-11-012

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 16948

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-16992-3

Sample wt/vol: 30.0 (g/mL) g Lab File ID: 5253AWASOM10.D

% Moisture: 39 Decanted: (Y/N) Date Received: 06/13/2013

Extraction: (Type) SONC Date Extracted: 06/18/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 07/08/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
12674-11-2	Aroclor-1016	54	U	
11104-28-2	Aroclor-1221	54	U	
11141-16-5	Aroclor-1232	54	U	
53469-21-9	Aroclor-1242	35	~~J P~~	J
12672-29-6	Aroclor-1248	54	U	
11097-69-1	Aroclor-1254	33	~~J P~~	J
11096-82-5	Aroclor-1260	54	U	
37324-23-5	Aroclor-1262	54	U	
11100-14-4	Aroclor-1268	54	U	

NW 8/8/13

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO. 23

LMR13-12-012

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 16948

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-16992-4

Sample wt/vol: 30.1 (g/mL) g Lab File ID: 5253AWASOM11.D

% Moisture: 33 Decanted: (Y/N) Date Received: 06/13/2013

Extraction: (Type) SONC Date Extracted: 06/18/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 07/08/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	49	U
11104-28-2	Aroclor-1221	49	U
11141-16-5	Aroclor-1232	49	U
53469-21-9	Aroclor-1242	80	~~P~~ J
12672-29-6	Aroclor-1248	49	U
11097-69-1	Aroclor-1254	57	~~P~~ J
11096-82-5	Aroclor-1260	12	~~J P~~ J
37324-23-5	Aroclor-1262	49	U
11100-14-4	Aroclor-1268	49	U

MW 8/8/13

1H - FORM I ARO
AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO. 24
LMR13-16-012

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 16948

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-16992-5

Sample wt/vol: 30.1 (g/mL) g Lab File ID: 5253AWASOM12.D

% Moisture: 29 Decanted: (Y/N) Date Received: 06/13/2013

Extraction: (Type) SONC Date Extracted: 06/18/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 07/08/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	46	U
11104-28-2	Aroclor-1221	46	U
11141-16-5	Aroclor-1232	46	U
53469-21-9	Aroclor-1242	53	~~P~~ J
12672-29-6	Aroclor-1248	46	U
11097-69-1	Aroclor-1254	64	~~P~~ J
11096-82-5	Aroclor-1260	12	~~J P~~ J
37324-23-5	Aroclor-1262	46	U
11100-14-4	Aroclor-1268	46	U

MW 8/8/13

1H - FORM I ARO
AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO. 25
LMR13-24-012

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 16948

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-16992-6

Sample wt/vol: 29.7 (g/mL) g Lab File ID: 5253AWASOM13.D

% Moisture: 43 Decanted: (Y/N) Date Received: 06/13/2013

Extraction: (Type) SONC Date Extracted: 06/18/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 07/08/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	59	U
11104-28-2	Aroclor-1221	59	U
11141-16-5	Aroclor-1232	59	U
53469-21-9	Aroclor-1242	79	~~P~~ J
12672-29-6	Aroclor-1248	59	U
11097-69-1	Aroclor-1254	110	~~P~~ J
11096-82-5	Aroclor-1260	26	~~J P~~ J
37324-23-5	Aroclor-1262	59	U
11100-14-4	Aroclor-1268	59	U

NW 8/8/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-05-012

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678
Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 16948
Matrix: SED | Lab Sample Id: 200-16948-1
% Solids: 60.3 | Date Received: 06/12/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	11.3			P
7440-43-9	Cadmium	3.4			P
7440-47-3	Chromium	59.6	J	E	P
7440-50-8	Copper	48.6		E	P
7439-92-1	Lead	76.0			P
7440-02-0	Nickel	34.5	J	E	P
7440-66-6	Zinc	191	J	E	P

Color Before: BROWN | Clarity Before: | Texture:
Color After: LIGHT YELLOW | Clarity After: CLOUDY | Artifacts: FINE
Comments:

NW 8/8/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-05-012

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678
Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 16948
Matrix: SED Lab Sample Id: 200-16948-1
% Solids: 60.3 Date Received: 06/12/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.48	J	N	CV

Color Before: GRAY Clarity Before: CLOUDY Texture:
Color After: COLORLESS Clarity After: CLEAR Artifacts:
Comments:

NW 8/8/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-09-012

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678
Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 16948
Matrix: SED | Lab Sample Id: 200-16948-2
% Solids: 72.9 | Date Received: 06/12/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	5.5			P
7440-43-9	Cadmium	0.85			P
7440-47-3	Chromium	21.8	J	~~F~~	P
7440-50-8	Copper	20.5			P
7439-92-1	Lead	21.2			P
7440-02-0	Nickel	22.6	J	~~F~~	P
7440-66-6	Zinc	67.3	J	~~F~~	P

Color Before: BROWN | Clarity Before: | Texture:
Color After: LIGHT YELLOW | Clarity After: CLOUDY | Artifacts: FINE
Comments:

NW 8/8/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-09-012

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678
Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 16948
Matrix: SED | Lab Sample Id: 200-16948-2
% Solids: 72.9 | Date Received: 06/12/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.041		J N	CV

Color Before: GRAY | Clarity Before: CLOUDY | Texture:
Color After: COLORLESS | Clarity After: CLEAR | Artifacts:
Comments:

NW 8/8/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-10-012

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 16948

Matrix: SED Lab Sample Id: 200-16948-3

% Solids: 66.4 Date Received: 06/12/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	5.2			P
7440-43-9	Cadmium	0.47	J		P
7440-47-3	Chromium	14.4	J	~~E~~	P
7440-50-8	Copper	16.9			P
7439-92-1	Lead	25.3			P
7440-02-0	Nickel	18.5	J	~~E~~	P
7440-66-6	Zinc	63.4	J	~~E~~	P

Color Before: BROWN Clarity Before: Texture:

Color After: LIGHT YELLOW Clarity After: CLOUDY Artifacts: FINE

Comments:

NW 8/8/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-10-012

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 16948

Matrix: SED Lab Sample Id: 200-16948-3

% Solids: 66.4 Date Received: 06/12/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.18	J	~~N~~	CV

Color Before: GRAY Clarity Before: CLOUDY Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

NW 8/8/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-17-012

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678
Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 16948
Matrix: SED | Lab Sample Id: 200-16948-4
% Solids: 63.9 | Date Received: 06/12/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	5.3			P
7440-43-9	Cadmium	1.0			P
7440-47-3	Chromium	21.2	J	~~E~~	P
7440-50-8	Copper	18.4			P
7439-92-1	Lead	25.9			P
7440-02-0	Nickel	20.3	J	~~E~~	P
7440-66-6	Zinc	74.1	J	~~E~~	P

Color Before: BROWN | Clarity Before: | Texture:
Color After: LIGHT YELLOW | Clarity After: CLOUDY | Artifacts: FINE
Comments:

JW 8/8/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-17-012

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678
Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 16948
Matrix: SED Lab Sample Id: 200-16948-4
% Solids: 63.9 Date Received: 06/12/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.13		J	CV

Color Before: GRAY Clarity Before: CLOUDY Texture:
Color After: COLORLESS Clarity After: CLEAR Artifacts:
Comments:

MW 8/8/13

5

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-23-012

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678
Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 16948
Matrix: SED | Lab Sample Id: 200-16948-5
% Solids: 68.8 | Date Received: 06/12/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	7.6			P
7440-43-9	Cadmium	0.66			P
7440-47-3	Chromium	13.9	J	~~P~~	P
7440-50-8	Copper	13.9			P
7439-92-1	Lead	22.0			P
7440-02-0	Nickel	17.2	J	~~P~~	P
7440-66-6	Zinc	53.4	J	~~P~~	P

Color Before: BROWN | Clarity Before: | Texture:
Color After: LIGHT YELLOW | Clarity After: CLOUDY | Artifacts: FINE

Comments:

NW 8/8/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-23-012

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678
Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 16948
Matrix: SED Lab Sample Id: 200-16948-5
% Solids: 68.8 Date Received: 06/12/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.088	~~J~~ J	~~N~~	CV

Color Before: GRAY Clarity Before: CLOUDY Texture:
Color After: COLORLESS Clarity After: CLEAR Artifacts:
Comments:

NW 8/8/13

12

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-06-012

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678
Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 16948
Matrix: SED | Lab Sample Id: 200-16948-12
% Solids: 55.9 | Date Received: 06/12/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	5.9			P
7440-43-9	Cadmium	0.74			P
7440-47-3	Chromium	22.2	J	~~E~~	P
7440-50-8	Copper	22.3			P
7439-92-1	Lead	25.4			P
7440-02-0	Nickel	23.6	J	~~E~~	P
7440-66-6	Zinc	96.3	J	~~E~~	P

Color Before: BROWN | Clarity Before: | Texture:
Color After: LIGHT YELLOW | Clarity After: CLOUDY | Artifacts: FINE
Comments:

NW 8/8/13

12

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-06-012

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678
Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 16948
Matrix: SED Lab Sample Id: 200-16948-12
% Solids: 55.9 Date Received: 06/12/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.17	J	~~N~~	CV

Color Before: GRAY Clarity Before: CLOUDY Texture:
Color After: COLORLESS Clarity After: CLEAR Artifacts:
Comments:

NW 8/8/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-18-012

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678
Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 16948
Matrix: SED | Lab Sample Id: 200-16948-13
% Solids: 61.4 | Date Received: 06/12/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	9.3			P
7440-43-9	Cadmium	1.6			P
7440-47-3	Chromium	33.6	J	E	P
7440-50-8	Copper	33.4			P
7439-92-1	Lead	57.2			P
7440-02-0	Nickel	30.7	J	E	P
7440-66-6	Zinc	148	J	E	P

Color Before: BROWN | Clarity Before: | Texture:
Color After: LIGHT YELLOW | Clarity After: CLOUDY | Artifacts: FINE
Comments:

MW 8/8/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-18-012

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678
Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 16948
Matrix: SED Lab Sample Id: 200-16948-13
% Solids: 61.4 Date Received: 06/12/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.46	J	N	CV

Color Before: GRAY Clarity Before: CLOUDY Texture:
Color After: COLORLESS Clarity After: CLEAR Artifacts:
Comments:

NW 8/8/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-19-012

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678
Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 16948
Matrix: SED | Lab Sample Id: 200-16948-15
% Solids: 59.4 | Date Received: 06/12/2013

Concentration Units (**ug/L, ug,** or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	6.7			P
7440-43-9	Cadmium	1.2			P
7440-47-3	Chromium	25.2	J	~~E~~	P
7440-50-8	Copper	23.6			P
7439-92-1	Lead	38.8			P
7440-02-0	Nickel	23.8	J	~~E~~	P
7440-66-6	Zinc	113	J	~~E~~	P

Color Before: BROWN | Clarity Before: | Texture:
Color After: LIGHT YELLOW | Clarity After: CLOUDY | Artifacts: FINE
Comments:

NW 8/8/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-19-012

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678
Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 16948
Matrix: SED Lab Sample Id: 200-16948-15
% Solids: 59.4 Date Received: 06/12/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.18	J	N	CV

Color Before: GRAY Clarity Before: CLOUDY Texture:
Color After: COLORLESS Clarity After: CLEAR Artifacts:
Comments:

NW 8/8/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-19-012FD

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678
Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 16948
Matrix: SED | Lab Sample Id: 200-16948-16
% Solids: 59.5 | Date Received: 06/12/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	6.5			P
7440-43-9	Cadmium	0.89			P
7440-47-3	Chromium	20.2	J	~~F~~	P
7440-50-8	Copper	23.6			P
7439-92-1	Lead	32.2			P
7440-02-0	Nickel	19.4	J	~~F~~	P
7440-66-6	Zinc	95.8	J	~~F~~	P

Color Before: BROWN | Clarity Before: | Texture:
Color After: LIGHT YELLOW | Clarity After: CLOUDY | Artifacts: FINE
Comments:

NW 8/8/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-19-012FD

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678
Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 16948
Matrix: SED | Lab Sample Id: 200-16948-16
% Solids: 59.5 | Date Received: 06/12/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.14	J	J	CV

Color Before: GRAY | Clarity Before: CLOUDY | Texture:
Color After: COLORLESS | Clarity After: CLEAR | Artifacts:
Comments:

NW 8/8/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-20-012

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678
Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 16948
Matrix: SED | Lab Sample Id: 200-16948-17
% Solids: 67.2 | Date Received: 06/12/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	7.3			P
7440-43-9	Cadmium	0.46	J		P
7440-47-3	Chromium	14.3		J E	P
7440-50-8	Copper	17.5			P
7439-92-1	Lead	65.8			P
7440-02-0	Nickel	17.9		J E	P
7440-66-6	Zinc	68.5		J E	P

Color Before: BROWN | Clarity Before: | Texture:
Color After: LIGHT YELLOW | Clarity After: CLOUDY | Artifacts: FINE
Comments:

MW 8/8/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-20-012

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678
Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 16948
Matrix: SED | Lab Sample Id: 200-16948-17
% Solids: 67.2 | Date Received: 06/12/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.18		J	CV

Color Before: GRAY | Clarity Before: CLOUDY | Texture:
Color After: COLORLESS | Clarity After: CLEAR | Artifacts:
Comments:

NW 8/8/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-02-012

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678
Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 16948
Matrix: SED | Lab Sample Id: 200-16992-1
% Solids: 69.3 | Date Received: 06/13/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	4.2			P
7440-43-9	Cadmium	0.43	J		P
7440-47-3	Chromium	11.6	J	~~F~~	P
7440-50-8	Copper	11.7			P
7439-92-1	Lead	10.6			P
7440-02-0	Nickel	14.7	J	~~F~~	P
7440-66-6	Zinc	45.5	J	~~F~~	P

Color Before: BROWN | Clarity Before: | Texture:
Color After: LIGHT YELLOW | Clarity After: CLOUDY | Artifacts: FINE
Comments:

MW 8/8/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-02-012

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678
Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 16948
Matrix: SED | Lab Sample Id: 200-16992-1
% Solids: 69.3 | Date Received: 06/13/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.14	U	N	CV

Color Before: GRAY | Clarity Before: CLOUDY | Texture:
Color After: COLORLESS | Clarity After: CLEAR | Artifacts: NONE
Comments:

NW 8/8/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-02-012FD

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678
Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 16948
Matrix: SED Lab Sample Id: 200-16992-2
% Solids: 69.0 Date Received: 06/13/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	4.2			P
7440-43-9	Cadmium	0.45	J		P
7440-47-3	Chromium	11.8	J	E	P
7440-50-8	Copper	11.2			P
7439-92-1	Lead	11.2			P
7440-02-0	Nickel	14.9	J	E	P
7440-66-6	Zinc	47.3	J	E	P

Color Before: BROWN Clarity Before: Texture:
Color After: LIGHT YELLOW Clarity After: CLOUDY Artifacts: FINE
Comments:

NW 8/8/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-02-012FD

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678
Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 16948
Matrix: SED | Lab Sample Id: 200-16992-2
% Solids: 69.0 | Date Received: 06/13/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.061	~~J~~	J ~~M~~	CV

Color Before: GRAY | Clarity Before: CLOUDY | Texture:
Color After: COLORLESS | Clarity After: CLEAR | Artifacts: NONE
Comments:

MW 8/8/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-11-012

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678
Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 16948
Matrix: SED | Lab Sample Id: 200-16992-3
% Solids: 60.9 | Date Received: 06/13/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	7.2			P
7440-43-9	Cadmium	0.75			P
7440-47-3	Chromium	20.6	J	~~E~~	P
7440-50-8	Copper	17.9			P
7439-92-1	Lead	24.3			P
7440-02-0	Nickel	21.9	J	~~E~~	P
7440-66-6	Zinc	90.8	J	~~E~~	P

Color Before: BROWN | Clarity Before: | Texture:
Color After: LIGHT YELLOW | Clarity After: CLOUDY | Artifacts: FINE
Comments:

NW 8/8/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-11-012

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678
Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 16948
Matrix: SED | Lab Sample Id: 200-16992-3
% Solids: 60.9 | Date Received: 06/13/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.073		J	CV

Color Before: GRAY | Clarity Before: CLOUDY | Texture:
Color After: COLORLESS | Clarity After: CLEAR | Artifacts: NONE
Comments:

NW 8/8/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-12-012

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678
Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 16948
Matrix: SED | Lab Sample Id: 200-16992-4
% Solids: 67.2 | Date Received: 06/13/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	4.4			P
7440-43-9	Cadmium	0.75			P
7440-47-3	Chromium	18.7	J	~~E~~	P
7440-50-8	Copper	17.2			P
7439-92-1	Lead	21.3			P
7440-02-0	Nickel	19.9	J	~~E~~	P
7440-66-6	Zinc	67.8	J	~~E~~	P

Color Before: BROWN | Clarity Before: | Texture:
Color After: LIGHT YELLOW | Clarity After: CLOUDY | Artifacts: FINE
Comments:

NW 8/8/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-12-012

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678
Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 16948
Matrix: SED | Lab Sample Id: 200-16992-4
% Solids: 67.2 | Date Received: 06/13/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.061	J	J N	CV

Color Before: GRAY | Clarity Before: CLOUDY | Texture:
Color After: COLORLESS | Clarity After: CLEAR | Artifacts: NONE
Comments:

NW 8/8/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-16-012

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 16948

Matrix: SED Lab Sample Id: 200-16992-5

% Solids: 71.1 Date Received: 06/13/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	4.0			P
7440-43-9	Cadmium	0.75			P
7440-47-3	Chromium	16.6	J	~~B~~	P
7440-50-8	Copper	14.8			P
7439-92-1	Lead	21.2			P
7440-02-0	Nickel	20.2	J	~~B~~	P
7440-66-6	Zinc	53.1	J	~~B~~	P

Color Before: BROWN Clarity Before: Texture:

Color After: LIGHT YELLOW Clarity After: CLOUDY Artifacts: FINE

Comments:

NW 8/8/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-16-012

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678
Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 16948
Matrix: SED | Lab Sample Id: 200-16992-5
% Solids: 71.1 | Date Received: 06/13/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.031	~~J~~	~~J~~ ~~N~~	CV

Color Before: GRAY | Clarity Before: CLOUDY | Texture:
Color After: COLORLESS | Clarity After: CLEAR | Artifacts: NONE
Comments:

NW 8/8/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-24-012

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678
Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 16948
Matrix: SED | Lab Sample Id: 200-16992-6
% Solids: 56.6 | Date Received: 06/13/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	8.0			P
7440-43-9	Cadmium	1.3			P
7440-47-3	Chromium	27.6		J F	P
7440-50-8	Copper	27.6			P
7439-92-1	Lead	40.5			P
7440-02-0	Nickel	28.1		J F	P
7440-66-6	Zinc	107		J F	P

Color Before: BROWN | Clarity Before: | Texture:
Color After: LIGHT YELLOW | Clarity After: CLOUDY | Artifacts: FINE
Comments:

MW 8/8/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-24-012

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678
Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 16948
Matrix: SED | Lab Sample Id: 200-16992-6
% Solids: 56.6 | Date Received: 06/13/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.23		J	CV

Color Before: GRAY | Clarity Before: CLOUDY | Texture:
Color After: COLORLESS | Clarity After: CLEAR | Artifacts: NONE
Comments:

MW 8/8/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

1

Client Sample ID: LMR13-05-012
Lab Sample ID: 200-16948-1
Lab Name: TestAmerica Burlington
Job No.: 200-16948-1
SDG ID.: 16948
Matrix: Sediment
Date Sampled: 06/11/2013 11:15
Reporting Basis: WET
Date Received: 06/12/2013 10:30
% Solids: 60.3

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	21900	1000		mg/Kg			1	Lloyd Kahn

NW 8/8/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

2

Client Sample ID: LMR13-09-012
Lab Sample ID: 200-16948-2
Lab Name: TestAmerica Burlington
Job No.: 200-16948-1
SDG ID.: 16948
Matrix: Sediment
Date Sampled: 06/11/2013 10:15
Reporting Basis: WET
Date Received: 06/12/2013 10:30
% Solids: 72.9

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	16600	1000		mg/Kg			1	Lloyd Kahn

NW 8/8/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

3

Client Sample ID: LMR13-10-012
Lab Sample ID: 200-16948-3
Lab Name: TestAmerica Burlington
Job No.: 200-16948-1
SDG ID.: 16948
Matrix: Sediment
Date Sampled: 06/11/2013 10:45
Reporting Basis: WET
Date Received: 06/12/2013 10:30
% Solids: 66.4

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	19400	1000		mg/Kg			1	Lloyd Kahn

MW 8/8/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

4

Client Sample ID: LMR13-17-012 | Lab Sample ID: 200-16948-4

Lab Name: TestAmerica Burlington | Job No.: 200-16948-1

SDG ID.: 16948

Matrix: Sediment | Date Sampled: 06/11/2013 10:05

Reporting Basis: WET | Date Received: 06/12/2013 10:30

% Solids: 63.9

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	13400	1000		mg/Kg			1	Lloyd Kahn

NW 8/8/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

5

Client Sample ID: LMR13-23-012
Lab Sample ID: 200-16948-5
Lab Name: TestAmerica Burlington
Job No.: 200-16948-1
SDG ID.: 16948
Matrix: Sediment
Date Sampled: 06/11/2013 09:45
Reporting Basis: WET
Date Received: 06/12/2013 10:30
% Solids: 68.8

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	15300	1000		mg/Kg			1	Lloyd Kahn

NW 8/8/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

12

Client Sample ID: LMR13-06-012 Lab Sample ID: 200-16948-12

Lab Name: TestAmerica Burlington Job No.: 200-16948-1

SDG ID.: 16948

Matrix: Sediment Date Sampled: 06/11/2013 14:50

Reporting Basis: WET Date Received: 06/12/2013 10:30

% Solids: 55.9

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	13900	1000		mg/Kg			1	Lloyd Kahn

NW 8/8/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

13

Client Sample ID: LMR13-18-012
Lab Sample ID: 200-16948-13
Lab Name: TestAmerica Burlington
Job No.: 200-16948-1
SDG ID.: 16948
Matrix: Sediment
Date Sampled: 06/11/2013 14:30
Reporting Basis: WET
Date Received: 06/12/2013 10:30
% Solids: 61.4

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	17300	1000		mg/Kg			1	Lloyd Kahn

NW 8/8/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

15

Client Sample ID: LMR13-19-012
Lab Sample ID: 200-16948-15
Lab Name: TestAmerica Burlington
Job No.: 200-16948-1
SDG ID.: 16948
Matrix: Sediment
Date Sampled: 06/11/2013 15:00
Reporting Basis: WET
Date Received: 06/12/2013 10:30
% Solids: 59.4

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	12200	1000		mg/Kg			1	Lloyd Kahn

MW 8/8/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

16

Client Sample ID: LMR13-19-012FD
Lab Sample ID: 200-16948-16
Lab Name: TestAmerica Burlington
Job No.: 200-16948-1
SDG ID.: 16948
Matrix: Sediment
Date Sampled: 06/11/2013 15:00
Reporting Basis: WET
Date Received: 06/12/2013 10:30
% Solids: 59.5

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	16700	1000		mg/Kg			1	Lloyd Kahn

NW 8/8/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

17

Client Sample ID: LMR13-20-012 Lab Sample ID: 200-16948-17

Lab Name: TestAmerica Burlington Job No.: 200-16948-1

SDG ID.: 16948

Matrix: Sediment Date Sampled: 06/11/2013 14:40

Reporting Basis: WET Date Received: 06/12/2013 10:30

% Solids: 67.2

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	17100	1000		mg/Kg			1	Lloyd Kahn

MW 8/8/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

20

Client Sample ID: LMR13-02-012 | Lab Sample ID: 200-16992-1

Lab Name: TestAmerica Burlington | Job No.: 200-16948-1

SDG ID.: 16948

Matrix: Sediment | Date Sampled: 06/11/2013 14:00

Reporting Basis: WET | Date Received: 06/13/2013 10:50

% Solids: 69.3

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	16500	1000		mg/Kg			1	Lloyd Kahn

NW 8/8/13

INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: LMR13-02-012FD
Lab Sample ID: 200-16992-2
Lab Name: TestAmerica Burlington
Job No.: 200-16948-1
SDG ID.: 16948
Matrix: Sediment
Date Sampled: 06/11/2013 14:00
Reporting Basis: WET
Date Received: 06/13/2013 10:50
% Solids: 69.0

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	14200	1000		mg/Kg			1	Lloyd Kahn

NW 8/8/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

22

Client Sample ID: LMR13-11-012 | Lab Sample ID: 200-16992-3

Lab Name: TestAmerica Burlington | Job No.: 200-16948-1

SDG ID.: 16948

Matrix: Sediment | Date Sampled: 06/11/2013 14:45

Reporting Basis: WET | Date Received: 06/13/2013 10:50

% Solids: 60.9

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	10400	1000		mg/Kg			1	Lloyd Kahn

MW 8/8/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

23

Client Sample ID: LMR13-12-012 | Lab Sample ID: 200-16992-4

Lab Name: TestAmerica Burlington | Job No.: 200-16948-1

SDG ID.: 16948

Matrix: Sediment | Date Sampled: 06/11/2013 13:30

Reporting Basis: WET | Date Received: 06/13/2013 10:50

% Solids: 67.2

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	13300	1000		mg/Kg			1	Lloyd Kahn

NW 8/8/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

24

Client Sample ID: LMR13-16-012 | Lab Sample ID: 200-16992-5

Lab Name: TestAmerica Burlington | Job No.: 200-16948-1

SDG ID.: 16948

Matrix: Sediment | Date Sampled: 06/11/2013 11:30

Reporting Basis: WET | Date Received: 06/13/2013 10:50

% Solids: 71.1

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	13700	1000		mg/Kg			1	Lloyd Kahn

NW 8/8/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

25

Client Sample ID: LMR13-24-012 | Lab Sample ID: 200-16992-6

Lab Name: TestAmerica Burlington | Job No.: 200-16948-1

SDG ID.: 16948

Matrix: Sediment | Date Sampled: 06/11/2013 14:15

Reporting Basis: WET | Date Received: 06/13/2013 10:50

% Solids: 56.6

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	17700	1000		mg/Kg			1	Lloyd Kahn

NW 8/8/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

1

Client Sample ID: LMR13-05-012
Lab Sample ID: 200-16948-1
Lab Name: TestAmerica Canton
Job No.: 200-16948-1
SDG ID.: 16948
Matrix: Sediment
Date Sampled: 06/11/2013 11:15
Reporting Basis: DRY
Date Received: 06/12/2013 10:30
% Solids: 60.3

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	2500	331	146	mg/Kg			1	9071B

MW 8/8/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

2

Client Sample ID: LMR13-09-012
Lab Sample ID: 200-16948-2
Lab Name: TestAmerica Canton
Job No.: 200-16948-1
SDG ID.: 16948
Matrix: Sediment
Date Sampled: 06/11/2013 10:15
Reporting Basis: DRY
Date Received: 06/12/2013 10:30
% Solids: 72.9

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	372	u 276	122	mg/Kg		F	1	9071B

NW 8/8/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

3

Client Sample ID: LMR13-10-012
Lab Sample ID: 200-16948-3
Lab Name: TestAmerica Canton
Job No.: 200-16948-1
SDG ID.: 16948
Matrix: Sediment
Date Sampled: 06/11/2013 10:45
Reporting Basis: DRY
Date Received: 06/12/2013 10:30
% Solids: 66.4

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	696	302	134	mg/Kg		F	1	9071B

NW 8/8/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

4

Client Sample ID: LMR13-17-012
Lab Sample ID: 200-16948-4
Lab Name: TestAmerica Canton
Job No.: 200-16948-1
SDG ID.: 16948
Matrix: Sediment
Date Sampled: 06/11/2013 10:05
Reporting Basis: DRY
Date Received: 06/12/2013 10:30
% Solids: 63.9

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	780	312	138	mg/Kg		P	1	9071B

NW 8/8/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: LMR13-23-012
Lab Sample ID: 200-16948-5
Lab Name: TestAmerica Canton
Job No.: 200-16948-1
SDG ID.: 16948
Matrix: Sediment
Date Sampled: 06/11/2013 09:45
Reporting Basis: DRY
Date Received: 06/12/2013 10:30
% Solids: 68.8

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	482	U 292	129	mg/Kg			1	9071B

NW 8/8/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

6

Client Sample ID: LMR13-02-012
Lab Sample ID: 200-16948-6
Lab Name: TestAmerica Canton
Job No.: 200-16948-1
SDG ID.: 16948
Matrix: Sediment
Date Sampled: 06/11/2013 14:00
Reporting Basis: DRY
Date Received: 06/12/2013 10:30
% Solids: 69.6

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	332	U 289	127	mg/Kg		P	1	9071B

NW 8/8/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

8

Client Sample ID: LMR13-11-012
Lab Sample ID: 200-16948-8
Lab Name: TestAmerica Canton
Job No.: 200-16948-1
SDG ID.: 16948
Matrix: Sediment
Date Sampled: 06/11/2013 14:45
Reporting Basis: DRY
Date Received: 06/12/2013 10:30
% Solids: 64.0

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	810	312	138	mg/Kg		U	1	9071B

NW 8/8/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

9

Client Sample ID: LMR13-12-012
Lab Sample ID: 200-16948-9
Lab Name: TestAmerica Canton
Job No.: 200-16948-1
SDG ID.: 16948
Matrix: Sediment
Date Sampled: 06/11/2013 13:30
Reporting Basis: DRY
Date Received: 06/12/2013 10:30
% Solids: 67.2

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	980	297	131	mg/Kg		U	1	9071B

NW 8/8/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

10

Client Sample ID: LMR13-16-012
Lab Sample ID: 200-16948-10
Lab Name: TestAmerica Canton
Job No.: 200-16948-1
SDG ID.: 16948
Matrix: Sediment
Date Sampled: 06/11/2013 11:30
Reporting Basis: DRY
Date Received: 06/12/2013 10:30
% Solids: 74.0

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	501	U 271	120	mg/Kg			1	9071B

NW 8/8/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

11

Client Sample ID: LMR13-24-012
Lab Sample ID: 200-16948-11
Lab Name: TestAmerica Canton
Job No.: 200-16948-1
SDG ID.: 16948
Matrix: Sediment
Date Sampled: 06/11/2013 14:15
Reporting Basis: DRY
Date Received: 06/12/2013 10:30
% Solids: 56.0

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	1380	358	158	mg/Kg		B	1	9071B

NW 8/8/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

12

Client Sample ID: LMR13-06-012
Lab Sample ID: 200-16948-12
Lab Name: TestAmerica Canton
Job No.: 200-16948-1
SDG ID.: 16948
Matrix: Sediment
Date Sampled: 06/11/2013 14:50
Reporting Basis: DRY
Date Received: 06/12/2013 10:30
% Solids: 55.9

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	1190	356	157	mg/Kg		B	1	9071B

NW 8/8/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

13

Client Sample ID: LMR13-18-012
Lab Sample ID: 200-16948-13
Lab Name: TestAmerica Canton
Job No.: 200-16948-1
SDG ID.: 16948
Matrix: Sediment
Date Sampled: 06/11/2013 14:30
Reporting Basis: DRY
Date Received: 06/12/2013 10:30
% Solids: 61.4

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	1360	325	143	mg/Kg			1	9071B

MW 8/8/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

15

Client Sample ID: LMR13-19-012
Lab Sample ID: 200-16948-15
Lab Name: TestAmerica Canton
Job No.: 200-16948-1
SDG ID.: 16948
Matrix: Sediment
Date Sampled: 06/11/2013 15:00
Reporting Basis: DRY
Date Received: 06/12/2013 10:30
% Solids: 59.4

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	1060	337	149	mg/Kg		B	1	9071B

NW 8/8/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

17

Client Sample ID: LMR13-20-012
Lab Sample ID: 200-16948-17
Lab Name: TestAmerica Canton
Job No.: 200-16948-1
SDG ID.: 16948
Matrix: Sediment
Date Sampled: 06/11/2013 14:40
Reporting Basis: DRY
Date Received: 06/12/2013 10:30
% Solids: 67.2

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	625	J 298	132	mg/Kg		P	1	9071B

NW 8/8/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

18

Client Sample ID: LMR13-05-012FD
Lab Sample ID: 200-16948-18
Lab Name: TestAmerica Canton
Job No.: 200-16948-1
SDG ID.: 16948
Matrix: Sediment
Date Sampled: 06/11/2013 11:15
Reporting Basis: DRY
Date Received: 06/12/2013 10:30
% Solids: 60.5

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	2550	329	145	mg/Kg		B	1	9071B

MW 8/8/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

19

Client Sample ID: LMR13-20-012FD
Lab Sample ID: 200-16948-19
Lab Name: TestAmerica Canton
Job No.: 200-16948-1
SDG ID.: 16948
Matrix: Sediment
Date Sampled: 06/11/2013 14:40
Reporting Basis: DRY
Date Received: 06/12/2013 10:30
% Solids: 67.5

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	402	ULJ 298	132	mg/Kg		~~B~~ ✓	1	9071B

NW 8/8/13

ENVIRONMENTAL
Data Services, Inc.

DATA VALIDATION SUMMARY REPORT
LOWER MAUMEE RIVER, TOLEDO, OHIO

Client: EA Engineering, Science & Technology, Inc., Hunt Valley, Maryland
SDG: 200-16995, 200-17017
Laboratory: Test America Laboratories, Burlington, Vermont
Test America Laboratories, Canton, Ohio
Site: Lower Maumee River, Maumee Area of Concern, Toledo, Ohio
Date: August 12, 2013

SVOC			
EDS ID	Client Sample ID	Laboratory Sample ID	Matrix
1	LMR13-42-012	200-16995-1	Sediment
1MS	LMR13-42-012MS	200-16995-1MS	Sediment
1MSD	LMR13-42-012MSD	200-16995-1MSD	Sediment
2	LMR13-42-024	200-16995-2	Sediment
3	LMR13-42-024FD	200-16995-3	Sediment
4	LMR13-42-048	200-16995-4	Sediment
5	LMR13-42-072	200-16995-5	Sediment
6	LMR13-42-096	200-16995-6	Sediment
7	LMR13-42-120	200-16995-7	Sediment
8	LMR13-43-012	200-16995-8	Sediment
9	LMR13-43-024	200-16995-9	Sediment
11	LMR13-43-048	200-16995-11	Sediment
12	LMR13-43-096	200-16995-12	Sediment
20	LMR13-43-072	200-17017-2	Sediment
21	LMR13-43-120	200-17017-3	Sediment
22	LMR13-44-012	200-17017-4	Sediment
23	LMR13-44-024	200-17017-5	Sediment
24	LMR13-44-024FD	200-17017-6	Sediment
25	LMR13-44-048	200-17017-7	Sediment

PAH 34			
EDS ID	Client Sample ID	Laboratory Sample ID	Matrix
1	LMR13-42-012	200-16995-1	Sediment
1MS	LMR13-42-012MS	200-16995-1MS	Sediment
1MSD	LMR13-42-012MSD	200-16995-1MSD	Sediment
1DL	LMR13-42-012DL	200-16995-1DL	Sediment
22	LMR13-44-012	200-17017-4	Sediment

PCBs			
EDS ID	Client Sample ID	Laboratory Sample ID	Matrix
1	LMR13-42-012	200-16995-1	Sediment
2	LMR13-42-024	200-16995-2	Sediment
4	LMR13-42-048	200-16995-4	Sediment
5	LMR13-42-072	200-16995-5	Sediment
6	LMR13-42-096	200-16995-6	Sediment

PCBs			
EDS ID	Client Sample ID	Laboratory Sample ID	Matrix
7	LMR13-42-120	200-16995-7	Sediment
8	LMR13-43-012	200-16995-8	Sediment
9	LMR13-43-024	200-16995-9	Sediment
9DL	LMR13-43-024DL	200-16995-9DL	Sediment
10	LMR13-43-024FD	200-16995-10	Sediment
10DL	LMR13-43-024FDDL	200-16995-10DL	Sediment
11	LMR13-43-048	200-16995-11	Sediment
11MS	LMR13-43-048MS	200-16995-11MS	Sediment
11MSD	LMR13-43-048MSD	200-16995-11MSD	Sediment
11DL	LMR13-43-048DL	200-16995-11DL	Sediment
11 DLMS	LMR13-43-048DLMS	200-16995-11DLMS	Sediment
11 DLMSD	LMR13-43-048 DLMSD	200-16995-11DLMSD	Sediment
12	LMR13-43-096	200-16995-12	Sediment
13	LMR13-43-120	200-16995-13	Sediment
20	LMR13-43-072	200-17017-2	Sediment
20DL	LMR13-43-072DL	200-17017-2DL	Sediment
22	LMR13-44-012	200-17017-4	Sediment
22DL	LMR13-44-012DL	200-17017-4DL	Sediment
23	LMR13-44-024	200-17017-5	Sediment
25	LMR13-44-048	200-17017-7	Sediment
26	LMR13-44-048FD	200-17017-8	Sediment

Metals/Mercury/TOC			
EDS ID	Client Sample ID	Laboratory Sample ID	Matrix
1	LMR13-42-012	200-16995-1	Sediment
1MS*	LMR13-42-012MS	200-16995-1MS	Sediment
1DUP*	LMR13-42-012DUP	200-16995-1DUP	Sediment
2	LMR13-42-024	200-16995-2	Sediment
4	LMR13-42-048	200-16995-4	Sediment
5	LMR13-42-072	200-16995-5	Sediment
6	LMR13-42-096	200-16995-6	Sediment
8	LMR13-43-012	200-16995-8	Sediment
9	LMR13-43-024	200-16995-9	Sediment
10	LMR13-43-024FD	200-16995-10	Sediment
11	LMR13-43-048	200-16995-11	Sediment
12	LMR13-43-096	200-16995-12	Sediment
15	LMR13-44-012	200-16995-15	Sediment
19	LMR13-42-120	200-17017-1	Sediment
20	LMR13-43-072	200-17017-2	Sediment
20MSβ	LMR13-43-072MS	200-17017-2MS	Sediment
20DUPβ	LMR13-43-072DUP	200-17017-2DUP	Sediment
21	LMR13-43-120	200-17017-3	Sediment
23	LMR13-44-024	200-17017-5	Sediment
25	LMR13-44-048	200-17017-7	Sediment
26	LMR13-44-048FD	200-17017-8	Sediment

* - Metals & Mercury only β - TOC

AVS/SEM			
EDS ID	Client Sample ID	Laboratory Sample ID	Matrix
1	LMR13-42-012	200-16995-1	Sediment
15	LMR13-44-012	200-16995-15	Sediment
15MS	LMR13-44-012MS	200-16995-15MS	Sediment
15DUP	LMR13-44-012DUP	200-16995-15DUP	Sediment

HEM			
EDS ID	Client Sample ID	Laboratory Sample ID	Matrix
1	LMR13-42-012	200-16995-1	Sediment
2	LMR13-42-024	200-16995-2	Sediment
3	LMR13-42-024FD	200-16995-3	Sediment
4	LMR13-42-048	200-16995-4	Sediment
5	LMR13-42-072	200-16995-5	Sediment
6	LMR13-42-096	200-16995-6	Sediment
7	LMR13-42-120	200-16995-7	Sediment
8	LMR13-43-012	200-16995-8	Sediment
9	LMR13-43-024	200-16995-9	Sediment
11	LMR13-43-048	200-16995-11	Sediment
12	LMR13-43-096	200-16995-12	Sediment
12MS	LMR13-43-096MS	200-16995-12MS	Sediment
12DUP	LMR13-43-096DUP	200-16995-12DUP	Sediment
13	LMR13-43-120	200-16995-13	Sediment
14	LMR13-43-072	200-16995-14	Sediment
15	LMR13-44-012	200-16995-15	Sediment
16	LMR13-44-024	200-16995-16	Sediment
16MS	LMR13-44-024MS	200-16995-16MS	Sediment
16DUP	LMR13-44-024DUP	200-16995-16DUP	Sediment
17	LMR13-44-024FD	200-16995-17	Sediment
18	LMR13-44-048	200-16995-18	Sediment

A full data validation was performed on the analytical data for twenty-six sediment samples collected on June 12, 2013 by EA Engineering at the Lower Maumee River site in Toledo, Ohio. The samples were analyzed under the Environmental Protection Agency (USEPA) Contract Laboratory Program (CLP) Multi-Media Multi-Concentration Organics Analysis SOM01.2 and Inorganic Analysis ILM05.4 and the Test Methods for the Evaluation of Solid Waste, USEPA SW-846, Third Edition, September 1986, with revisions.

Specific method references are as follows:

Analysis	*Method References*
SVOC	USEPA CLP SOM01.2
PAH 34	USEPA CLP SOM01.2
PCBs	USEPA CLP SOM01.2
Michigan Metals & Mercury	USEPA CLP ISM01.3
AVS/SEM	USEPA SW-846 Methods 6010C/7470A
TOC	Lloyd Kahn
Oil & Grease (HEM)	USEPA SW-846 Method 9071B

The data have been validated according to the protocols and quality control (QC) requirements of the analytical methods, the Great Lakes Legacy Act, March 2010, the Quality Assurance Project Plan for Phase 2 of the Lower Maumee River Site Characterization, May 2013, and the USEPA National Functional Guidelines for Organic Data Review as follows:

- The USEPA "Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review," June 2008;
- The USEPA "Contract Laboratory Program National Functional Guidelines for Inorganic Superfund Data Review," January 2010;
- and the reviewer's professional judgment.

The following items/criteria were reviewed for this report:

Organics

- Holding times and sample preservation
- Gas Chromatography/Mass Spectroscopy (GC/MS) Tuning
- Initial and continuing calibration summaries
- Method blank and field blank contamination
- Surrogate Spike recoveries
- Matrix Spike/Matrix Spike Duplicate (MS/MSD) recoveries
- Laboratory Control Sample (LCS) recoveries
- Internal standard area and retention time summary forms
- Target Compound Identification
- Compound Quantitation
- Tentatively Identified Compounds (TICs)
- Field Duplicate sample precision

Inorganics

- Holding times and sample preservation
- ICP/MS Tuning
- Initial and continuing calibration verifications
- Method blank and field blank contamination
- ICP Interference Check Sample
- Laboratory Control Sample (LCS) recoveries
- Matrix Spike Analysis
- Duplicate Sample Analysis
- ICP Serial Dilution
- Compound Quantitation
- Field Duplicate sample precision

Overall Usability Issues:

There were minor rejections of data. This data cannot be used in the decision-making process for this project.

- Three SVOC compounds were rejected in two samples due to severely low surrogate recoveries.

Overall the remaining data is acceptable for the intended purposes as qualified for the deficiencies detailed in this report.

Please note that any results qualified (U) due to blank contamination may be then qualified (J) due to another action. Therefore, the results may be qualified (UJ) due to the culmination of the blank contaminations and actions from other exceedences of QC criteria.

Semivolatile Organic Compounds (SVOC)

Holding Times

- All samples were extracted within 14 days for sediment samples and analyzed within 40 days for all samples.

GC/MS Tuning

- All criteria were met.

Initial Calibration

- All %RSD and mean RRF criteria were met.

Continuing Calibration

- All %D and RRF criteria were met except the following.

CCAL Date	Compound	%D/RRF	Qualifier	Affected Samples
07/11/13	Pentachlorophenol	37.9%	J/UJ	1-5, 7, 8, 12
07/14/13	Hexachlorocyclopentadiene	61.5%	J/UJ	20, 22

Method Blank

- The method blanks exhibited the following contamination.

Blank ID	Compound	Conc. ug/kg	Qualifier	Affected Samples
SBLKL4	Butylbenzylphthalate	11	U	5, 6, 7
	bis(2-Ethylhexyl)phthalate	22	U	4, 5, 6, 7
	di-n-Octylphthalate	1.7	U	1, 8, 9
SBLKL8	Butylbenzylphthalate	29	U	23, 24, 25

Blank ID	Compound	Conc. ug/kg	Qualifier	Affected Samples
SBLKL8	bis(2-Ethylhexyl)phthalate	83	U	23, 24, 25

Field Blank

- Field QC samples were not analyzed.

Surrogate Spike Recoveries

- All samples exhibited acceptable surrogate %R values except the following.

Sample ID	Surrogate	%R	Qualifier
23	4-Chloroaniline-d4	0%	R - Associated Compounds
25	Phenol-d5	106%	J - Positive Results
	4-Methylphenol-d8	105%	None - ND
	4-Chloroaniline-d4	0%	R - Associated Compounds
Several	Several	"0D"	Dilution - Results Not Valid

Matrix Spike/Matrix Spike Duplicate (MS/MSD) Recoveries

- The MS/MSD sample exhibited acceptable %R and RPD values except the following.

MS/MSD Sample ID	Compound	MS %R/MSD %R/ RPD	Qualifier
1	4-Nitrophenol	0%/0%/--	None - Sample Analyzed at 14.3X Dilution
	Pentachlorophenol	0%/0%/--	
	Pyrene	31%/OK/OK	

Laboratory Control Samples

- A LCS sample was not analyzed.

Internal Standard (IS) Area Performance

- All internal standards met response and retention time (RT) criteria.

Target Compound Identification

- All mass spectra and quantitation criteria were met.

Compound Quantitation

- Several samples were analyzed at various dilutions due to high concentrations of target compounds. No action was required.

Field Duplicate Sample Precision

- Field duplicate results are summarized below.

SVOC				
Compound	LMR13-42-024 ug/kg	LMR13-42-024FD ug/kg	RPD	Qualifier
Acetophenone	59	580U	NC	None
Naphthalene	110	150	31%	
2-Methylnaphthalene	610U	72	NC	
Acenaphthylene	150	190	24%	
Acenaphthene	190	190	0%	
Dibenzofuran	63	77	20%	
Fluorene	340	410	19%	
Phenanthrene	1100	1300	17%	
Anthracene	350	480	31%	
Fluoranthene	2000	2300	14%	
Pyrene	2400	2800	15%	
Benzo(a)anthracene	1500	1700	13%	
Chrysene	2000	2300	14%	
bis(2-Ethylhexyl)phthalate	960	950	1%	
Benzo(b)fluoranthene	1100	1200	9%	
Benzo(k)fluoranthene	890	1300	37%	
Benzo(a)pyrene	1200	1400	15%	
Indeno(1,2,3-cd)pyrene	650	730	12%	
Dibenzo(a,h)anthracene	310	400	25%	
Benzo(g,h,i)perylene	820	980	18%	

SVOC				
Compound	LMR13-44-024 ug/kg	LMR13-44-024FD ug/kg	RPD	Qualifier
Benzaldehyde	51	46	10%	None
Acetophenone	240U	11	NC	
Naphthalene	9.7	11	13%	
Acenaphthylene	22	24	9%	
Acenaphthene	46	44	4%	
Dibenzofuran	18	18	0%	
Fluorene	45	47	4%	
Phenanthrene	270	290	7%	
Anthracene	120	150	22%	
di-n-Butylphthalate	12	10	18%	
Fluoranthene	540	610	12%	
Pyrene	840	880	5%	
Benzo(a)anthracene	310	350	12%	
Chrysene	350	370	6%	
Benzo(b)fluoranthene	230	260	12%	
Benzo(k)fluoranthene	210	230	9%	

SVOC				
Compound	LMR13-44-024 ug/kg	LMR13-44-024FD ug/kg	RPD	Qualifier
Benzo(a)pyrene	290	320	10%	None
Indeno(1,2,3-cd)pyrene	140	150	7%	
Dibenzo(a,h)anthracene	61	71	15%	
Benzo(g,h,i)perylene	180	180	0%	

Polynuclear Aromatic Hydrocarbons (PAH 34)

Holding Times

- All samples were extracted within 14 days for sediment samples and analyzed within 40 days for all samples.

GC/MS Tuning

- All criteria were met.

Initial Calibration

- All %RSD and mean RRF criteria were met.

Continuing Calibration

- All %D and RRF criteria were met except the following.

CCAL Date	Compound	%D/RRF	Qualifier	Affected Samples
07/30/13	Dibenzo(a,h)anthracene	31.2%	J/UJ	1DL, 22

Method Blank

- The method blanks exhibited the following contamination.

Blank ID	Compound	Conc. ug/kg	Qualifier	Affected Samples
SBLK4L	Naphthalene	0.24	None	All >5X
	Fluoranthene	0.21	None	
	Pyrene	0.15	None	
	Benzo(a)anthracene	0.091	None	
	Chrysene	0.14	None	
	Benzo(b)fluoranthene	0.16	None	
	Benzo(k)fluoranthene	0.13	None	
	Total 16 PPAH	1.1	None	
	Total PAH	1.1	None	
SBLKL4	Naphthalene	0.24	None	
	Total 16 PPAH	0.24	None	
	Total PAH	0.24	None	
SBLKL8	Naphthalene	0.18	None	
	Phenanthrene	0.17	None	
	Total 16 PPAH	0.35	None	
	Total PAH	0.35	None	

Field Blank

- Field QC samples were not analyzed.

Surrogate Spike Recoveries

- All samples exhibited acceptable surrogate %R values except the following.

Sample ID	Surrogate	%R	Qualifier
1DL	Fluroranthene-d10	158%	None for 1 Out per Fraction

Matrix Spike/Matrix Spike Duplicate (MS/MSD) Recoveries

- The MS/MSD sample exhibited acceptable %R and RPD values except the following.

MS/MSD Sample ID	Compound	MS %R/MSD %R/ RPD	Qualifier
1	Several Out	Results Not Valid	None - Sample Analyzed at 6.7X Dilution

Laboratory Control Samples

- A LCS sample was not analyzed.

Internal Standard (IS) Area Performance

- All internal standards met response and retention time (RT) criteria.

Target Compound Identification

- All mass spectra and quantitation criteria were met.

Compound Quantitation

- EDS Sample ID #1 exhibited high concentrations of several target compounds and were flagged (E) by the laboratory. The sample was reanalyzed at a 50X dilution and the dilution results should be used for these compounds. Several of the compounds remained flagged (E) in the dilution analysis and these results were qualified estimated (J).
- EDS Sample ID #22 exhibited high concentrations of several target compounds and were flagged (E) by the laboratory. However, a dilution analysis was not performed and these compounds were qualified estimated (J).
- Total 16 PPAH and Total PAH were estimated (J) in all samples due to blank contamination.

Field Duplicate Sample Precision

- Field duplicate samples were not analyzed.

Polychlorinated Biphenyls (PCBs)

Holding Times

- All samples were extracted within 14 days for sediment samples and analyzed within 40 days.

Initial Calibration

- All %RSD and/or correlation coefficient criteria were met.

Continuing Calibration

- All %D criteria were met.

Method Blank

- The method blanks were free of contamination.

Field Blank

- Field QC samples were not analyzed.

Surrogate Spike Recoveries

- All samples exhibited acceptable surrogate recoveries except the following.

Sample ID	Surrogate	%R	Qualifier
1	DCB1/DCB2	17%/18%	J/UJ
2	DCB1/DCB2	20%/28%	
4	DCB1/DCB2	23%/29%	
6	DCB1/DCB2	23%/29%	
8	DCB1/DCB2	20%/22%	
9	TCX1/DCB1/DCB2	28%/12%/14%	
9DL	TCX1/DCB1/DCB2	29%/17%/26%	None - Dilution Results
10	TCX1/DCB1/DCB2	28%/12%/15%	J/UJ
10DL	DCB1/DCB2	21%/27%	None - Dilution Results
11	DCB1/DCB2	10%/12%	J/UJ
11DL	DCB1/DCB2	22%/28%	None - Dilution Results
12	DCB1/DCB2	15%/18%	J/UJ
13	DCB1/DCB2	12%/16%	
20	TCX1/DCB1/DCB2	29%/20%/26%	
22	DCB1	27%	

Matrix Spike/Matrix Spike Duplicate (MS/MSD) Recoveries

- The MS/MSD sample exhibited acceptable %R and RPD values except the following.

MS/MSD Sample ID	Compound	MS %R/MSD %R/ RPD	Qualifier
11	Aroclor-1016	897%/982%/OK	None - See Surrogates
	Aroclor-1260	6%/17%/93	
11RE	Aroclor-1016	582%/644%/OK	
	Aroclor-1260	8%/20%/86	

Laboratory Control Samples

- The LCS sample exhibited acceptable %R values.

Compound Quantitation

- Several samples exhibited high concentrations of PCBs which were flagged (E) by the laboratory indicating calibration range exceedences. The laboratory diluted and reanalyzed these samples and the dilution results for these PCBs should be used for reporting purposes.

Field Duplicate Sample Precision

- Field duplicate results are summarized below.

PCBs				
Compound	LMR13-43-024 ug/kg	LMR13-43-024FD ug/kg	RPD	Qualifier
Aroclor-1242	1000	940	6%	None
Aroclor-1254	1300	1800	32%	
Aroclor-1260	170	170	0%	

GC Column Difference Results

- Several samples exhibited high %D values > 25% between columns and have been qualified as estimated (J) by the reviewer.

Metals & Mercury

Holding Times

- All samples were prepared and analyzed within 28 days for mercury and 180 days for all other metals.

ICP/MS Tuning

- Not applicable.

Initial Calibration Verification

- All initial calibration criteria were met.

Continuing Calibration Verification

- All continuing calibration criteria were met.

Method Blank

- The method blanks were free of contamination.

Field Blank

- Field QC samples were not analyzed.

ICP Interference Check Sample

- The ICP interference check sample exhibited acceptable %R values.

Laboratory Control Samples

- The LCS sample exhibited acceptable recoveries.

Matrix Spike Analysis

- The matrix spike sample exhibited acceptable %R values.

Duplicate Sample Analysis

- The duplicate sample exhibited acceptable RPD values.

ICP Serial Dilution

- ICP serial dilution percent differences (%D) were within acceptance limits except the following.

ICP Sample ID	Compound	%D	Qualifier	Affected Samples
1	Cadmium	11%	J	1, 2, 4-6, 8-12, 15
	Chromium	12%	J	
	Nickel	15%	J	
	Zinc	12%	J	
20	Cadmium	16%	J	19, 20, 21, 23, 25, 26
	Chromium	17%	J	
	Copper	11%	J	
	Nickel	21%	J	
	Zinc	17%	J	

Compound Quantitation

- All criteria were met.

Field Duplicate Sample Precision

- Field duplicate results are summarized below.

Metals				
Compound	LMR13-43-024 mg/kg	LMR13-43-024FD mg/kg	RPD	Qualifier
Arsenic	15.5	14.8	5%	None
Cadmium	15.4	13.7	12%	
Chromium	318	291	9%	
Copper	169	158	7%	
Lead	171	157	9%	
Nickel	108	102	6%	
Zinc	602	552	9%	
Mercury	1.4	1.4	0%	

Metals				
Compound	LMR13-44-048 mg/kg	LMR13-44-048FD mg/kg	RPD	Qualifier
Arsenic	4.6	4.4	4%	None
Cadmium	0.39	0.34	14%	
Chromium	13.1	12.4	5%	
Copper	13.9	12.3	12%	
Lead	13.6	13.5	1%	

Metals				
Compound	LMR13-44-048 mg/kg	LMR13-44-048FD mg/kg	RPD	Qualifier
Nickel	18.9	17.2	9%	None
Zinc	48.8	45.9	6%	
Mercury	0.065	0.15	79%	

Oil & Grease, Total Organic Carbon, AVS/SEM (Metals & Hg)

Holding Times

- All samples were analyzed within the recommended holding time for each analysis.

Initial and Continuing Calibration

- All %R criteria were met.

Method Blank

- The method blanks exhibited the following contamination.

Blank ID	Compound	Conc. mg/kg	Qualifier	Affected Samples
240-90545/1-A	HEM	191.0	None	All >5X
240-91121/1-A	HEM	116.8	U	16, 17

Field Blank

- Field QC samples were not included in this data package.

Laboratory Control Samples

- The LCS samples exhibited acceptable %R values.

Matrix Spike/Duplicate (MS/DUP) Recoveries

- The MS/MSD samples exhibited acceptable %R and RPD values except the following.

MS/DUP Sample ID	Compound	MS %R/RPD	Qualifier	Affected Samples
12 (Batch 90545)	HEM	216%/64	J	1-9, 11-15
16 (Batch 91530)	HEM	OK/29	None	Sample ND

Compound Quantitation

- All criteria were met.

Field Duplicate Sample Precision

- Field duplicate results are summarized below.

HEM				
Compound	LMR13-42-024 mg/kg	LMR13-42-024FD mg/kg	RPD	Qualifier
HEM	2720	2030	29%	None

TOC				
Compound	LMR13-43-024 mg/kg	LMR13-43-024FD mg/kg	RPD	Qualifier
TOC	45900	45500	1%	None

HEM				
Compound	LMR13-44-024 mg/kg	LMR13-44-024FD mg/kg	RPD	Qualifier
HEM	288U	289U	0%	None

TOC				
Compound	LMR13-44-048 mg/kg	LMR13-44-048FD mg/kg	RPD	Qualifier
TOC	23600	20700	13%	None

Please contact the undersigned at (757) 564-0090 if you have any questions or need further information.

Signed: Nancy Weaver Dated: 8/16/13

Nancy Weaver
Senior Chemist

Data Qualifiers

U = The analyte was analyzed for, but was not detected at a level greater than or equal to the level of the adjusted Contract Required Quantitation Limit (CRQL) for sample and method.

UJ = The analyte was not detected at a level greater than or equal to the adjusted CRQL. However, the reported adjusted CRQL is approximate and may be inaccurate or imprecise.

J = The analyte was positively identified and the associated numerical value is the approximate concentration of the analyte in the sample (due either to the quality of the data generated because certain quality control criteria were not met, or the concentration of the analyte was below the CRQL).

J+ = The result is an estimated quantity, but the result may be biased high.

J- = The result is an estimated quantity, but the result may be biased low.

R = The sample results are unusable due to the quality of the data generated because certain criteria were not met. The analyte may or may not be present in the sample.

NJ = The analysis indicates the presence of an analyte that has been "tentatively identified" and the associated numerical value represents its approximate concentration.

1D - FORM I SV-1

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-42-012

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 16995

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-16995-1

Sample wt/vol: 30.1 (g/mL) g Lab File ID: PJUWC07.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 23 Decanted: (Y/N) Date Received: 06/13/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/17/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/11/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 14.3

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
100-52-7	Benzaldehyde	3100	U
108-95-2	Phenol	3100	U
111-44-4	Bis(2-chloroethyl)ether	3100	U
95-57-8	2-Chlorophenol	3100	U
95-48-7	2-Methylphenol	3100	U
108-60-1	2,2'-Oxybis(1-chloropropane)	3100	U
98-86-2	Acetophenone	3100	U
106-44-5	4-Methylphenol	3100	U
621-64-7	N-Nitroso-di-n-propylamine	3100	U
67-72-1	Hexachloroethane	3100	U
98-95-3	Nitrobenzene	3100	U
78-59-1	Isophorone	3100	U
88-75-5	2-Nitrophenol	3100	U
105-67-9	2,4-Dimethylphenol	3100	U
111-91-1	Bis(2-chloroethoxy)methane	3100	U
120-83-2	2,4-Dichlorophenol	3100	U
91-20-3	Naphthalene	3100	U
106-47-8	4-Chloroaniline	3100	U
87-68-3	Hexachlorobutadiene	3100	U
105-60-2	Caprolactam	3100	U
59-50-7	4-Chloro-3-methylphenol	3100	U
91-57-6	2-Methylnaphthalene	3100	U
77-47-4	Hexachlorocyclopentadiene	3100	U
88-06-2	2,4,6-Trichlorophenol	3100	U
95-95-4	2,4,5-Trichlorophenol	3100	U
92-52-4	1,1'-Biphenyl	3100	U
91-58-7	2-Chloronaphthalene	3100	U
88-74-4	2-Nitroaniline	6100	U
131-11-3	Dimethylphthalate	3100	U
606-20-2	2,6-Dinitrotoluene	3100	U
208-96-8	Acenaphthylene	3100	U
99-09-2	3-Nitroaniline	6100	U
83-32-9	Acenaphthene	460	J

NW 08/12/13

EPA SAMPLE NO.
LMR13-42-012

1

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 16995

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-16995-1

Sample wt/vol: 30.1 (g/mL) g Lab File ID: PJUWC07.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 23 Decanted: (Y/N) Date Received: 06/13/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/17/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/11/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 14.3

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
51-28-5	2,4-Dinitrophenol	6100	U
100-02-7	4-Nitrophenol	6100	U
132-64-9	Dibenzofuran	210	J
121-14-2	2,4-Dinitrotoluene	3100	U
84-66-2	Diethylphthalate	3100	U
86-73-7	Fluorene	700	J
7005-72-3	4-Chlorophenyl-phenylether	3100	U
100-01-6	4-Nitroaniline	6100	U
534-52-1	4,6-Dinitro-2-methylphenol	6100	U
86-30-6	N-Nitrosodiphenylamin [1]	3100	U
95-94-3	1,2,4,5-Tetrachlorobenzene	3100	U
101-55-3	4-Bromophenyl-phenylether	3100	U
118-74-1	Hexachlorobenzene	3100	U
1912-24-9	Atrazine	3100	U
87-86-5	Pentachlorophenol	6100	U UJ
85-01-8	Phenanthrene	3300	
120-12-7	Anthracene	800	J
86-74-8	Carbazole	3100	U
84-74-2	Di-n-butylphthalate	340	J
206-44-0	Fluoranthene	3200	
129-00-0	Pyrene	2900	J
85-68-7	Butylbenzylphthalate	3100	U
91-94-1	3,3'-Dichlorobenzidine	3100	U
56-55-3	Benzo(a)anthracene	1500	J
218-01-9	Chrysene	1900	J
117-81-7	Bis(2-ethylhexyl)phthalate	25000	B
117-84-0	Di-n-octylphthalate	3100 ~~950~~	~~J~~ B U
205-99-2	Benzo(b)fluoranthene	1300	J
207-08-9	Benzo(k)fluoranthene	990	J
50-32-8	Benzo(a)pyrene	1300	J
193-39-5	Indeno(1,2,3-cd)pyrene	690	J
53-70-3	Dibenzo(a,h)anthracene	3100	U
191-24-2	Benzo(g,h,i)perylene	800	J
58-90-2	2,3,4,6-Tetrachlorophenol	3100	U

[1] Cannot be separated from Diphenylamine

NW 08/12/13

1D - FORM I SV-1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-42-024

2

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 16995

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-16995-2

Sample wt/vol: 30.1 (g/mL) g Lab File ID: PJUWC10.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 44 Decanted: (Y/N) Date Received: 06/13/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/17/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/11/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 2.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
100-52-7	Benzaldehyde	610	U
108-95-2	Phenol	610	U
111-44-4	Bis(2-chloroethyl)ether	610	U
95-57-8	2-Chlorophenol	610	U
95-48-7	2-Methylphenol	610	U
108-60-1	2,2'-Oxybis(1-chloropropane)	610	U
98-86-2	Acetophenone	59	J
106-44-5	4-Methylphenol	610	U
621-64-7	N-Nitroso-di-n-propylamine	610	U
67-72-1	Hexachloroethane	610	U
98-95-3	Nitrobenzene	610	U
78-59-1	Isophorone	610	U
88-75-5	2-Nitrophenol	610	U
105-67-9	2,4-Dimethylphenol	610	U
111-91-1	Bis(2-chloroethoxy)methane	610	U
120-83-2	2,4-Dichlorophenol	610	U
91-20-3	Naphthalene	110	J
106-47-8	4-Chloroaniline	610	U
87-68-3	Hexachlorobutadiene	610	U
105-60-2	Caprolactam	610	U
59-50-7	4-Chloro-3-methylphenol	610	U
91-57-6	2-Methylnaphthalene	610	U
77-47-4	Hexachlorocyclopentadiene	610	U
88-06-2	2,4,6-Trichlorophenol	610	U
95-95-4	2,4,5-Trichlorophenol	610	U
92-52-4	1,1'-Biphenyl	610	U
91-58-7	2-Chloronaphthalene	610	U
88-74-4	2-Nitroaniline	1200	U
131-11-3	Dimethylphthalate	610	U
606-20-2	2,6-Dinitrotoluene	610	U
208-96-8	Acenaphthylene	150	J
99-09-2	3-Nitroaniline	1200	U
83-32-9	Acenaphthene	190	J

NW 8/12/13

1E - FORM I SV-2
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-42-024

2

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 16995

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-16995-2

Sample wt/vol: 30.1 (g/mL) g Lab File ID: PJUWC10.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 44 Decanted: (Y/N) Date Received: 06/13/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/17/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/11/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 2.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
51-28-5	2,4-Dinitrophenol	1200	U
100-02-7	4-Nitrophenol	1200	U
132-64-9	Dibenzofuran	63	J
121-14-2	2,4-Dinitrotoluene	610	U
84-66-2	Diethylphthalate	610	U
86-73-7	Fluorene	340	J
7005-72-3	4-Chlorophenyl-phenylether	610	U
100-01-6	4-Nitroaniline	1200	U
534-52-1	4,6-Dinitro-2-methylphenol	1200	U
86-30-6	N-Nitrosodiphenylamin [1]	610	U
95-94-3	1,2,4,5-Tetrachlorobenzene	610	U
101-55-3	4-Bromophenyl-phenylether	610	U
118-74-1	Hexachlorobenzene	610	U
1912-24-9	Atrazine	610	U
87-86-5	Pentachlorophenol	1200	~~U~~ UJ
85-01-8	Phenanthrene	1100	
120-12-7	Anthracene	350	J
86-74-8	Carbazole	610	U
84-74-2	Di-n-butylphthalate	610	U
206-44-0	Fluoranthene	2000	
129-00-0	Pyrene	2400	
85-68-7	Butylbenzylphthalate	610	U
91-94-1	3,3'-Dichlorobenzidine	610	U
56-55-3	Benzo(a)anthracene	1500	
218-01-9	Chrysene	2000	
117-81-7	Bis(2-ethylhexyl)phthalate	960	~~B~~
117-84-0	Di-n-octylphthalate	610	U
205-99-2	Benzo(b)fluoranthene	1100	
207-08-9	Benzo(k)fluoranthene	890	
50-32-8	Benzo(a)pyrene	1200	
193-39-5	Indeno(1,2,3-cd)pyrene	650	
53-70-3	Dibenzo(a,h)anthracene	310	J
191-24-2	Benzo(g,h,i)perylene	820	
58-90-2	2,3,4,6-Tetrachlorophenol	610	U

[1] Cannot be separated from Diphenylamine

NW 08/12/13

EPA SAMPLE NO.
LMR13-42-024FD
3

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678
Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 16995
Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-16995-3
Sample wt/vol: 30.9 (g/mL) g Lab File ID: PJUWC11.D
Level: (LOW/MED) LOW Extraction: (Type) SONC
% Moisture: 43 Decanted: (Y/N) Date Received: 06/13/2013
Concentrated Extract Volume: 500 (uL) Date Extracted: 06/17/2013
Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/11/2013
GPC Cleanup: (Y/N) Y pH: Dilution Factor: 2.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
100-52-7	Benzaldehyde	580	U
108-95-2	Phenol	580	U
111-44-4	Bis(2-chloroethyl)ether	580	U
95-57-8	2-Chlorophenol	580	U
95-48-7	2-Methylphenol	580	U
108-60-1	2,2'-Oxybis(1-chloropropane)	580	U
98-86-2	Acetophenone	580	U
106-44-5	4-Methylphenol	580	U
621-64-7	N-Nitroso-di-n-propylamine	580	U
67-72-1	Hexachloroethane	580	U
98-95-3	Nitrobenzene	580	U
78-59-1	Isophorone	580	U
88-75-5	2-Nitrophenol	580	U
105-67-9	2,4-Dimethylphenol	580	U
111-91-1	Bis(2-chloroethoxy)methane	580	U
120-83-2	2,4-Dichlorophenol	580	U
91-20-3	Naphthalene	150	J
106-47-8	4-Chloroaniline	580	U
87-68-3	Hexachlorobutadiene	580	U
105-60-2	Caprolactam	580	U
59-50-7	4-Chloro-3-methylphenol	580	U
91-57-6	2-Methylnaphthalene	72	J
77-47-4	Hexachlorocyclopentadiene	580	U
88-06-2	2,4,6-Trichlorophenol	580	U
95-95-4	2,4,5-Trichlorophenol	580	U
92-52-4	1,1'-Biphenyl	580	U
91-58-7	2-Chloronaphthalene	580	U
88-74-4	2-Nitroaniline	1100	U
131-11-3	Dimethylphthalate	580	U
606-20-2	2,6-Dinitrotoluene	580	U
208-96-8	Acenaphthylene	190	J
99-09-2	3-Nitroaniline	1100	U
83-32-9	Acenaphthene	190	J

1E - FORM I SV-2

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-42-024FD

3

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 16995

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-16995-3

Sample wt/vol: 30.9 (g/mL) g Lab File ID: PJUWC11.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 43 Decanted: (Y/N) Date Received: 06/13/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/17/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/11/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 2.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
51-28-5	2,4-Dinitrophenol	1100	U
100-02-7	4-Nitrophenol	1100	U
132-64-9	Dibenzofuran	77	J
121-14-2	2,4-Dinitrotoluene	580	U
84-66-2	Diethylphthalate	580	U
86-73-7	Fluorene	410	J
7005-72-3	4-Chlorophenyl-phenylether	580	U
100-01-6	4-Nitroaniline	1100	U
534-52-1	4,6-Dinitro-2-methylphenol	1100	U
86-30-6	N-Nitrosodiphenylamin [1]	580	U
95-94-3	1,2,4,5-Tetrachlorobenzene	580	U
101-55-3	4-Bromophenyl-phenylether	580	U
118-74-1	Hexachlorobenzene	580	U
1912-24-9	Atrazine	580	U
87-86-5	Pentachlorophenol	1100	~~U~~ UJ
85-01-8	Phenanthrene	1300	
120-12-7	Anthracene	480	J
86-74-8	Carbazole	580	U
84-74-2	Di-n-butylphthalate	580	U
206-44-0	Fluoranthene	2300	
129-00-0	Pyrene	2800	
85-68-7	Butylbenzylphthalate	580	U
91-94-1	3,3'-Dichlorobenzidine	580	U
56-55-3	Benzo(a)anthracene	1700	
218-01-9	Chrysene	2300	
117-81-7	Bis(2-ethylhexyl)phthalate	950	~~B~~
117-84-0	Di-n-octylphthalate	580	U
205-99-2	Benzo(b)fluoranthene	1200	
207-08-9	Benzo(k)fluoranthene	1300	
50-32-8	Benzo(a)pyrene	1400	
193-39-5	Indeno(1,2,3-cd)pyrene	730	
53-70-3	Dibenzo(a,h)anthracene	400	J
191-24-2	Benzo(g,h,i)perylene	980	
58-90-2	2,3,4,6-Tetrachlorophenol	580	U

[1] Cannot be separated from Diphenylamine

MW 08/12/13

EPA SAMPLE NO.
LMR13-42-048

4

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 16995

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-16995-4

Sample wt/vol: 30.3 (g/mL) g Lab File ID: PJUWC12.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 41 Decanted: (Y/N) Date Received: 06/13/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/17/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/11/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 2.9

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
100-52-7	Benzaldehyde	830	U
108-95-2	Phenol	830	U
111-44-4	Bis(2-chloroethyl)ether	830	U
95-57-8	2-Chlorophenol	830	U
95-48-7	2-Methylphenol	830	U
108-60-1	2,2'-Oxybis(1-chloropropane)	830	U
98-86-2	Acetophenone	830	U
106-44-5	4-Methylphenol	830	U
621-64-7	N-Nitroso-di-n-propylamine	830	U
67-72-1	Hexachloroethane	830	U
98-95-3	Nitrobenzene	830	U
78-59-1	Isophorone	830	U
88-75-5	2-Nitrophenol	830	U
105-67-9	2,4-Dimethylphenol	830	U
111-91-1	Bis(2-chloroethoxy)methane	830	U
120-83-2	2,4-Dichlorophenol	830	U
91-20-3	Naphthalene	150	J
106-47-8	4-Chloroaniline	830	U
87-68-3	Hexachlorobutadiene	830	U
105-60-2	Caprolactam	830	U
59-50-7	4-Chloro-3-methylphenol	830	U
91-57-6	2-Methylnaphthalene	110	J
77-47-4	Hexachlorocyclopentadiene	830	U
88-06-2	2,4,6-Trichlorophenol	830	U
95-95-4	2,4,5-Trichlorophenol	830	U
92-52-4	1,1'-Biphenyl	830	U
91-58-7	2-Chloronaphthalene	830	U
88-74-4	2-Nitroaniline	1600	U
131-11-3	Dimethylphthalate	830	U
606-20-2	2,6-Dinitrotoluene	830	U
208-96-8	Acenaphthylene	260	J
99-09-2	3-Nitroaniline	1600	U
83-32-9	Acenaphthene	400	J

NW 08/12/13

1E - FORM I SV-2

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-42-048

4

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 16995

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-16995-4

Sample wt/vol: 30.3 (g/mL) g Lab File ID: PJUWC12.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 41 Decanted: (Y/N) Date Received: 06/13/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/17/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/11/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 2.9

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
51-28-5	2,4-Dinitrophenol	1600	U
100-02-7	4-Nitrophenol	1600	U
132-64-9	Dibenzofuran	140	J
121-14-2	2,4-Dinitrotoluene	830	U
84-66-2	Diethylphthalate	830	U
86-73-7	Fluorene	830	J
7005-72-3	4-Chlorophenyl-phenylether	830	U
100-01-6	4-Nitroaniline	1600	U
534-52-1	4,6-Dinitro-2-methylphenol	1600	U
86-30-6	N-Nitrosodiphenylamin [1]	830	U
95-94-3	1,2,4,5-Tetrachlorobenzene	830	U
101-55-3	4-Bromophenyl-phenylether	830	U
118-74-1	Hexachlorobenzene	830	U
1912-24-9	Atrazine	830	U
87-86-5	Pentachlorophenol	1600	~~U~~ UJ
85-01-8	Phenanthrene	5300	
120-12-7	Anthracene	1100	
86-74-8	Carbazole	830	U
84-74-2	Di-n-butylphthalate	830	U
206-44-0	Fluoranthene	5000	
129-00-0	Pyrene	6200	
85-68-7	Butylbenzylphthalate	830	U
91-94-1	3,3'-Dichlorobenzidine	830	U
56-55-3	Benzo(a)anthracene	3300	
218-01-9	Chrysene	4000	
117-81-7	Bis(2-ethylhexyl)phthalate	830 ~~250~~	~~J B~~ U
117-84-0	Di-n-octylphthalate	830	U
205-99-2	Benzo(b)fluoranthene	2600	
207-08-9	Benzo(k)fluoranthene	2000	
50-32-8	Benzo(a)pyrene	2500	
193-39-5	Indeno(1,2,3-cd)pyrene	1200	
53-70-3	Dibenzo(a,h)anthracene	470	J
191-24-2	Benzo(g,h,i)perylene	1500	
58-90-2	2,3,4,6-Tetrachlorophenol	830	U

[1] Cannot be separated from Diphenylamine

MW 08/12/13

1D - FORM I SV-1

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-42-072

5

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 16995

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-16995-5

Sample wt/vol: 30.3 (g/mL) g Lab File ID: PJUWC13.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 40 Decanted: (Y/N) Date Received: 06/13/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/17/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/11/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.4

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
100-52-7	Benzaldehyde	74	J
108-95-2	Phenol	390	U
111-44-4	Bis(2-chloroethyl)ether	390	U
95-57-8	2-Chlorophenol	390	U
95-48-7	2-Methylphenol	390	U
108-60-1	2,2'-Oxybis(1-chloropropane)	390	U
98-86-2	Acetophenone	40	J
106-44-5	4-Methylphenol	390	U
621-64-7	N-Nitroso-di-n-propylamine	390	U
67-72-1	Hexachloroethane	390	U
98-95-3	Nitrobenzene	390	U
78-59-1	Isophorone	390	U
88-75-5	2-Nitrophenol	390	U
105-67-9	2,4-Dimethylphenol	390	U
111-91-1	Bis(2-chloroethoxy)methane	390	U
120-83-2	2,4-Dichlorophenol	390	U
91-20-3	Naphthalene	170	J
106-47-8	4-Chloroaniline	390	U
87-68-3	Hexachlorobutadiene	390	U
105-60-2	Caprolactam	390	U
59-50-7	4-Chloro-3-methylphenol	390	U
91-57-6	2-Methylnaphthalene	94	J
77-47-4	Hexachlorocyclopentadiene	390	U
88-06-2	2,4,6-Trichlorophenol	390	U
95-95-4	2,4,5-Trichlorophenol	390	U
92-52-4	1,1'-Biphenyl	390	U
91-58-7	2-Chloronaphthalene	390	U
88-74-4	2-Nitroaniline	760	U
131-11-3	Dimethylphthalate	390	U
606-20-2	2,6-Dinitrotoluene	390	U
208-96-8	Acenaphthylene	390	U
99-09-2	3-Nitroaniline	760	U
83-32-9	Acenaphthene	700	

NW 08/12/13

1E - FORM I SV-2

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-42-072

5

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 16995

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-16995-5

Sample wt/vol: 30.3 (g/mL) g Lab File ID: PJUWC13.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 40 Decanted: (Y/N) Date Received: 06/13/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/17/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/11/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.4

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
51-28-5	2,4-Dinitrophenol	760	U
100-02-7	4-Nitrophenol	760	U
132-64-9	Dibenzofuran	110	J
121-14-2	2,4-Dinitrotoluene	390	U
84-66-2	Diethylphthalate	390	U
86-73-7	Fluorene	590	
7005-72-3	4-Chlorophenyl-phenylether	390	U
100-01-6	4-Nitroaniline	760	U
534-52-1	4,6-Dinitro-2-methylphenol	760	U
86-30-6	N-Nitrosodiphenylamin [1]	390	U
95-94-3	1,2,4,5-Tetrachlorobenzene	390	U
101-55-3	4-Bromophenyl-phenylether	390	U
118-74-1	Hexachlorobenzene	390	U
1912-24-9	Atrazine	390	U
87-86-5	Pentachlorophenol	760	~~U~~ UJ
85-01-8	Phenanthrene	2300	
120-12-7	Anthracene	620	
86-74-8	Carbazole	390	U
84-74-2	Di-n-butylphthalate	36	J
206-44-0	Fluoranthene	1900	
129-00-0	Pyrene	2200	
85-68-7	Butylbenzylphthalate	390 ~~69~~	~~J B~~ U
91-94-1	3,3'-Dichlorobenzidine	390	U
56-55-3	Benzo(a)anthracene	870	
218-01-9	Chrysene	980	
117-81-7	Bis(2-ethylhexyl)phthalate	390 ~~240~~	~~J B~~ U
117-84-0	Di-n-octylphthalate	390	U
205-99-2	Benzo(b)fluoranthene	740	
207-08-9	Benzo(k)fluoranthene	540	
50-32-8	Benzo(a)pyrene	680	
193-39-5	Indeno(1,2,3-cd)pyrene	350	J
53-70-3	Dibenzo(a,h)anthracene	140	J
191-24-2	Benzo(g,h,i)perylene	400	
58-90-2	2,3,4,6-Tetrachlorophenol	390	U

[1] Cannot be separated from Diphenylamine

MW 08/12/13

1D - FORM I SV-1

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-42-096

6

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 16995

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-16995-6

Sample wt/vol: 30.2 (g/mL) g Lab File ID: PJUWD16.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 42 Decanted: (Y/N) Date Received: 06/13/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/17/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/12/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 2.5

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
100-52-7	Benzaldehyde	91	J
108-95-2	Phenol	730	U
111-44-4	Bis(2-chloroethyl)ether	730	U
95-57-8	2-Chlorophenol	730	U
95-48-7	2-Methylphenol	730	U
108-60-1	2,2'-Oxybis(1-chloropropane)	730	U
98-86-2	Acetophenone	76	J
106-44-5	4-Methylphenol	730	U
621-64-7	N-Nitroso-di-n-propylamine	730	U
67-72-1	Hexachloroethane	730	U
98-95-3	Nitrobenzene	730	U
78-59-1	Isophorone	730	U
88-75-5	2-Nitrophenol	730	U
105-67-9	2,4-Dimethylphenol	730	U
111-91-1	Bis(2-chloroethoxy)methane	730	U
120-83-2	2,4-Dichlorophenol	730	U
91-20-3	Naphthalene	280	J
106-47-8	4-Chloroaniline	730	U
87-68-3	Hexachlorobutadiene	730	U
105-60-2	Caprolactam	730	U
59-50-7	4-Chloro-3-methylphenol	730	U
91-57-6	2-Methylnaphthalene	130	J
77-47-4	Hexachlorocyclopentadiene	730	U
88-06-2	2,4,6-Trichlorophenol	730	U
95-95-4	2,4,5-Trichlorophenol	730	U
92-52-4	1,1'-Biphenyl	730	U
91-58-7	2-Chloronaphthalene	730	U
88-74-4	2-Nitroaniline	1400	U
131-11-3	Dimethylphthalate	730	U
606-20-2	2,6-Dinitrotoluene	730	U
208-96-8	Acenaphthylene	190	J
99-09-2	3-Nitroaniline	1400	U
83-32-9	Acenaphthene	560	J

EPA SAMPLE NO.
LMR13-42-096

6

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 16995

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-16995-6

Sample wt/vol: 30.2 (g/mL) g Lab File ID: PJUWD16.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 42 Decanted: (Y/N) Date Received: 06/13/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/17/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/12/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 2.5

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
51-28-5	2,4-Dinitrophenol	1400	U	
100-02-7	4-Nitrophenol	1400	U	
132-64-9	Dibenzofuran	270	J	
121-14-2	2,4-Dinitrotoluene	730	U	
84-66-2	Diethylphthalate	730	U	
86-73-7	Fluorene	690	J	
7005-72-3	4-Chlorophenyl-phenylether	730	U	
100-01-6	4-Nitroaniline	1400	U	
534-52-1	4,6-Dinitro-2-methylphenol	1400	U	
86-30-6	N-Nitrosodiphenylamin [1]	730	U	
95-94-3	1,2,4,5-Tetrachlorobenzene	730	U	
101-55-3	4-Bromophenyl-phenylether	730	U	
118-74-1	Hexachlorobenzene	730	U	
1912-24-9	Atrazine	730	U	
87-86-5	Pentachlorophenol	1400	U	
85-01-8	Phenanthrene	2900		
120-12-7	Anthracene	880		
86-74-8	Carbazole	60	J	
84-74-2	Di-n-butylphthalate	730	U	
206-44-0	Fluoranthene	4200		
129-00-0	Pyrene	4500		
85-68-7	Butylbenzylphthalate	730 ~~140~~ ~~J B~~	U	
91-94-1	3,3'-Dichlorobenzidine	730	U	
56-55-3	Benzo(a)anthracene	2100		
218-01-9	Chrysene	2400		
117-81-7	Bis(2-ethylhexyl)phthalate	730 ~~270~~ ~~J B~~	U	
117-84-0	Di-n-octylphthalate	730	U	
205-99-2	Benzo(b)fluoranthene	1300		
207-08-9	Benzo(k)fluoranthene	1700		
50-32-8	Benzo(a)pyrene	1700		
193-39-5	Indeno(1,2,3-cd)pyrene	850		
53-70-3	Dibenzo(a,h)anthracene	340	J	
191-24-2	Benzo(g,h,i)perylene	1000		
58-90-2	2,3,4,6-Tetrachlorophenol	730	U	

[1] Cannot be separated from Diphenylamine

MW 08/12/13

1D - FORM I SV-1

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-42-120

7

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 16995

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-16995-7

Sample wt/vol: 30.5 (g/mL) g Lab File ID: PJUWC15.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 40 Decanted: (Y/N) Date Received: 06/13/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/17/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/11/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.5

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
100-52-7	Benzaldehyde	71	J
108-95-2	Phenol	410	U
111-44-4	Bis(2-chloroethyl)ether	410	U
95-57-8	2-Chlorophenol	410	U
95-48-7	2-Methylphenol	410	U
108-60-1	2,2'-Oxybis(1-chloropropane)	410	U
98-86-2	Acetophenone	410	U
106-44-5	4-Methylphenol	410	U
621-64-7	N-Nitroso-di-n-propylamine	410	U
67-72-1	Hexachloroethane	410	U
98-95-3	Nitrobenzene	410	U
78-59-1	Isophorone	410	U
88-75-5	2-Nitrophenol	410	U
105-67-9	2,4-Dimethylphenol	410	U
111-91-1	Bis(2-chloroethoxy)methane	410	U
120-83-2	2,4-Dichlorophenol	410	U
91-20-3	Naphthalene	44	J
106-47-8	4-Chloroaniline	410	U
87-68-3	Hexachlorobutadiene	410	U
105-60-2	Caprolactam	410	U
59-50-7	4-Chloro-3-methylphenol	410	U
91-57-6	2-Methylnaphthalene	410	U
77-47-4	Hexachlorocyclopentadiene	410	U
88-06-2	2,4,6-Trichlorophenol	410	U
95-95-4	2,4,5-Trichlorophenol	410	U
92-52-4	1,1'-Biphenyl	410	U
91-58-7	2-Chloronaphthalene	410	U
88-74-4	2-Nitroaniline	810	U
131-11-3	Dimethylphthalate	410	U
606-20-2	2,6-Dinitrotoluene	410	U
208-96-8	Acenaphthylene	62	J
99-09-2	3-Nitroaniline	810	U
83-32-9	Acenaphthene	160	J

NW 08/12/13

1E - FORM I SV-2
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-42-120

7

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 16995

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-16995-7

Sample wt/vol: 30.5 (g/mL) g Lab File ID: PJUWC15.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 40 Decanted: (Y/N) Date Received: 06/13/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/17/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/11/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.5

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
51-28-5	2,4-Dinitrophenol	810	U
100-02-7	4-Nitrophenol	810	U
132-64-9	Dibenzofuran	39	J
121-14-2	2,4-Dinitrotoluene	410	U
84-66-2	Diethylphthalate	410	U
86-73-7	Fluorene	140	J
7005-72-3	4-Chlorophenyl-phenylether	410	U
100-01-6	4-Nitroaniline	810	U
534-52-1	4,6-Dinitro-2-methylphenol	810	U
86-30-6	N-Nitrosodiphenylamin [1]	410	U
95-94-3	1,2,4,5-Tetrachlorobenzene	410	U
101-55-3	4-Bromophenyl-phenylether	410	U
118-74-1	Hexachlorobenzene	410	U
1912-24-9	Atrazine	410	U
87-86-5	Pentachlorophenol	810	U UJ
85-01-8	Phenanthrene	910	
120-12-7	Anthracene	290	J
86-74-8	Carbazole	410	U
84-74-2	Di-n-butylphthalate	66	J
206-44-0	Fluoranthene	1000	
129-00-0	Pyrene	1700	
85-68-7	Butylbenzylphthalate	410 ~~53~~	~~J B~~ U
91-94-1	3,3'-Dichlorobenzidine	410	U
56-55-3	Benzo(a)anthracene	660	
218-01-9	Chrysene	790	
117-81-7	Bis(2-ethylhexyl)phthalate	410 ~~140~~	~~J B~~ U
117-84-0	Di-n-octylphthalate	410	U
205-99-2	Benzo(b)fluoranthene	450	
207-08-9	Benzo(k)fluoranthene	530	
50-32-8	Benzo(a)pyrene	680	
193-39-5	Indeno(1,2,3-cd)pyrene	350	J
53-70-3	Dibenzo(a,h)anthracene	120	J
191-24-2	Benzo(g,h,i)perylene	440	
58-90-2	2,3,4,6-Tetrachlorophenol	410	U

[1] Cannot be separated from Diphenylamine

MW 08/12/13

EPA SAMPLE NO.
LMR13-43-012

8

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 16995

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-16995-8

Sample wt/vol: 30.7 (g/mL) g Lab File ID: PJUWC16.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 44 Decanted: (Y/N) Date Received: 06/13/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/17/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/11/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 10.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
100-52-7	Benzaldehyde	3000	U
108-95-2	Phenol	3000	U
111-44-4	Bis(2-chloroethyl)ether	3000	U
95-57-8	2-Chlorophenol	3000	U
95-48-7	2-Methylphenol	3000	U
108-60-1	2,2'-Oxybis(1-chloropropane)	3000	U
98-86-2	Acetophenone	3000	U
106-44-5	4-Methylphenol	3000	U
621-64-7	N-Nitroso-di-n-propylamine	3000	U
67-72-1	Hexachloroethane	3000	U
98-95-3	Nitrobenzene	3000	U
78-59-1	Isophorone	3000	U
88-75-5	2-Nitrophenol	3000	U
105-67-9	2,4-Dimethylphenol	3000	U
111-91-1	Bis(2-chloroethoxy)methane	3000	U
120-83-2	2,4-Dichlorophenol	3000	U
91-20-3	Naphthalene	320	J
106-47-8	4-Chloroaniline	3000	U
87-68-3	Hexachlorobutadiene	3000	U
105-60-2	Caprolactam	3000	U
59-50-7	4-Chloro-3-methylphenol	3000	U
91-57-6	2-Methylnaphthalene	3000	U
77-47-4	Hexachlorocyclopentadiene	3000	U
88-06-2	2,4,6-Trichlorophenol	3000	U
95-95-4	2,4,5-Trichlorophenol	3000	U
92-52-4	1,1'-Biphenyl	3000	U
91-58-7	2-Chloronaphthalene	3000	U
88-74-4	2-Nitroaniline	5800	U
131-11-3	Dimethylphthalate	3000	U
606-20-2	2,6-Dinitrotoluene	3000	U
208-96-8	Acenaphthylene	3000	U
99-09-2	3-Nitroaniline	5800	U
83-32-9	Acenaphthene	450	J

MW 08/12/13

EPA SAMPLE NO.
LMR13-43-012

8

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 16995

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-16995-8

Sample wt/vol: 30.7 (g/mL) g Lab File ID: PJUWC16.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 44 Decanted: (Y/N) Date Received: 06/13/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/17/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/11/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 10.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
51-28-5	2,4-Dinitrophenol	5800	U
100-02-7	4-Nitrophenol	5800	U
132-64-9	Dibenzofuran	300	J
121-14-2	2,4-Dinitrotoluene	3000	U
84-66-2	Diethylphthalate	3000	U
86-73-7	Fluorene	500	J
7005-72-3	4-Chlorophenyl-phenylether	3000	U
100-01-6	4-Nitroaniline	5800	U
534-52-1	4,6-Dinitro-2-methylphenol	5800	U
86-30-6	N-Nitrosodiphenylamin [1]	3000	U
95-94-3	1,2,4,5-Tetrachlorobenzene	3000	U
101-55-3	4-Bromophenyl-phenylether	3000	U
118-74-1	Hexachlorobenzene	3000	U
1912-24-9	Atrazine	3000	U
87-86-5	Pentachlorophenol	5800	~~U~~ UJ
85-01-8	Phenanthrene	2400	J
120-12-7	Anthracene	750	J
86-74-8	Carbazole	3000	U
84-74-2	Di-n-butylphthalate	3000	U
206-44-0	Fluoranthene	3600	
129-00-0	Pyrene	3700	
85-68-7	Butylbenzylphthalate	3000	U
91-94-1	3,3'-Dichlorobenzidine	3000	U
56-55-3	Benzo(a)anthracene	1900	J
218-01-9	Chrysene	2300	J
117-81-7	Bis(2-ethylhexyl)phthalate	41000	~~B~~
117-84-0	Di-n-octylphthalate	5800 ~~1400~~	~~J B~~ U
205-99-2	Benzo(b)fluoranthene	1800	J
207-08-9	Benzo(k)fluoranthene	1300	J
50-32-8	Benzo(a)pyrene	1700	J
193-39-5	Indeno(1,2,3-cd)pyrene	1100	J
53-70-3	Dibenzo(a,h)anthracene	590	J
191-24-2	Benzo(g,h,i)perylene	1400	J
58-90-2	2,3,4,6-Tetrachlorophenol	3000	U

[1] Cannot be separated from Diphenylamine

MW 08/12/13

EPA SAMPLE NO.
LMR13-43-024

9

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 16995

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-16995-9

Sample wt/vol: 30.6 (g/mL) g Lab File ID: PJUWD17.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 52 Decanted: (Y/N) Date Received: 06/13/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/17/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/12/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 33.3

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
100-52-7	Benzaldehyde	12000	U
108-95-2	Phenol	12000	U
111-44-4	Bis(2-chloroethyl)ether	12000	U
95-57-8	2-Chlorophenol	12000	U
95-48-7	2-Methylphenol	12000	U
108-60-1	2,2'-Oxybis(1-chloropropane)	12000	U
98-86-2	Acetophenone	12000	U
106-44-5	4-Methylphenol	12000	U
621-64-7	N-Nitroso-di-n-propylamine	12000	U
67-72-1	Hexachloroethane	12000	U
98-95-3	Nitrobenzene	12000	U
78-59-1	Isophorone	12000	U
88-75-5	2-Nitrophenol	12000	U
105-67-9	2,4-Dimethylphenol	12000	U
111-91-1	Bis(2-chloroethoxy)methane	12000	U
120-83-2	2,4-Dichlorophenol	12000	U
91-20-3	Naphthalene	12000	U
106-47-8	4-Chloroaniline	12000	U
87-68-3	Hexachlorobutadiene	12000	U
105-60-2	Caprolactam	12000	U
59-50-7	4-Chloro-3-methylphenol	12000	U
91-57-6	2-Methylnaphthalene	12000	U
77-47-4	Hexachlorocyclopentadiene	12000	U
88-06-2	2,4,6-Trichlorophenol	12000	U
95-95-4	2,4,5-Trichlorophenol	12000	U
92-52-4	1,1'-Biphenyl	12000	U
91-58-7	2-Chloronaphthalene	12000	U
88-74-4	2-Nitroaniline	23000	U
131-11-3	Dimethylphthalate	12000	U
606-20-2	2,6-Dinitrotoluene	12000	U
208-96-8	Acenaphthylene	12000	U
99-09-2	3-Nitroaniline	23000	U
83-32-9	Acenaphthene	1400	J

NW 08/12/13

EPA SAMPLE NO.
LMR13-43-024

9

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 16995

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-16995-9

Sample wt/vol: 30.6 (g/mL) g Lab File ID: PJUWD17.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 52 Decanted: (Y/N) Date Received: 06/13/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/17/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/12/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 33.3

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
51-28-5	2,4-Dinitrophenol	23000	U
100-02-7	4-Nitrophenol	23000	U
132-64-9	Dibenzofuran	710	J
121-14-2	2,4-Dinitrotoluene	12000	U
84-66-2	Diethylphthalate	12000	U
86-73-7	Fluorene	3800	J
7005-72-3	4-Chlorophenyl-phenylether	12000	U
100-01-6	4-Nitroaniline	23000	U
534-52-1	4,6-Dinitro-2-methylphenol	23000	U
86-30-6	N-Nitrosodiphenylamin [1]	12000	U
95-94-3	1,2,4,5-Tetrachlorobenzene	12000	U
101-55-3	4-Bromophenyl-phenylether	12000	U
118-74-1	Hexachlorobenzene	12000	U
1912-24-9	Atrazine	12000	U
87-86-5	Pentachlorophenol	23000	U
85-01-8	Phenanthrene	4700	J
120-12-7	Anthracene	1400	J
86-74-8	Carbazole	12000	U
84-74-2	Di-n-butylphthalate	390	J
206-44-0	Fluoranthene	6800	J
129-00-0	Pyrene	7400	J
85-68-7	Butylbenzylphthalate	12000	U
91-94-1	3,3'-Dichlorobenzidine	12000	U
56-55-3	Benzo(a)anthracene	3600	J
218-01-9	Chrysene	4700	J
117-81-7	Bis(2-ethylhexyl)phthalate	120000	~~B~~
117-84-0	Di-n-octylphthalate	23000 ~~3000~~	~~J B~~ U
205-99-2	Benzo(b)fluoranthene	2900	J
207-08-9	Benzo(k)fluoranthene	2000	J
50-32-8	Benzo(a)pyrene	2900	J
193-39-5	Indeno(1,2,3-cd)pyrene	1600	J
53-70-3	Dibenzo(a,h)anthracene	12000	U
191-24-2	Benzo(g,h,i)perylene	1700	J
58-90-2	2,3,4,6-Tetrachlorophenol	12000	U

[1] Cannot be separated from Diphenylamine

NW 08/12/13

1D - FORM I SV-1

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-43-048

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 16995

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-16995-11

Sample wt/vol: 30.9 (g/mL) g Lab File ID: PJUWD18.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 49 Decanted: (Y/N) Date Received: 06/13/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/17/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/12/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 20.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
100-52-7	Benzaldehyde	6400	U
108-95-2	Phenol	6400	U
111-44-4	Bis(2-chloroethyl)ether	6400	U
95-57-8	2-Chlorophenol	6400	U
95-48-7	2-Methylphenol	6400	U
108-60-1	2,2'-Oxybis(1-chloropropane)	6400	U
98-86-2	Acetophenone	6400	U
106-44-5	4-Methylphenol	6400	U
621-64-7	N-Nitroso-di-n-propylamine	6400	U
67-72-1	Hexachloroethane	6400	U
98-95-3	Nitrobenzene	6400	U
78-59-1	Isophorone	6400	U
88-75-5	2-Nitrophenol	6400	U
105-67-9	2,4-Dimethylphenol	6400	U
111-91-1	Bis(2-chloroethoxy)methane	6400	U
120-83-2	2,4-Dichlorophenol	6400	U
91-20-3	Naphthalene	320	J
106-47-8	4-Chloroaniline	6400	U
87-68-3	Hexachlorobutadiene	6400	U
105-60-2	Caprolactam	6400	U
59-50-7	4-Chloro-3-methylphenol	6400	U
91-57-6	2-Methylnaphthalene	530	J
77-47-4	Hexachlorocyclopentadiene	6400	U
88-06-2	2,4,6-Trichlorophenol	6400	U
95-95-4	2,4,5-Trichlorophenol	6400	U
92-52-4	1,1'-Biphenyl	6400	U
91-58-7	2-Chloronaphthalene	6400	U
88-74-4	2-Nitroaniline	12000	U
131-11-3	Dimethylphthalate	6400	U
606-20-2	2,6-Dinitrotoluene	6400	U
208-96-8	Acenaphthylene	6400	U
99-09-2	3-Nitroaniline	12000	U
83-32-9	Acenaphthene	800	J

MW 08/12/13

EPA SAMPLE NO.
LMR13-43-048

11

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 16995

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-16995-11

Sample wt/vol: 30.9 (g/mL) g Lab File ID: PJUWD18.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 49 Decanted: (Y/N) Date Received: 06/13/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/17/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/12/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 20.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
51-28-5	2,4-Dinitrophenol	12000	U
100-02-7	4-Nitrophenol	12000	U
132-64-9	Dibenzofuran	470	J
121-14-2	2,4-Dinitrotoluene	6400	U
84-66-2	Diethylphthalate	6400	U
86-73-7	Fluorene	880	J
7005-72-3	4-Chlorophenyl-phenylether	6400	U
100-01-6	4-Nitroaniline	12000	U
534-52-1	4,6-Dinitro-2-methylphenol	12000	U
86-30-6	N-Nitrosodiphenylamin [1]	6400	U
95-94-3	1,2,4,5-Tetrachlorobenzene	6400	U
101-55-3	4-Bromophenyl-phenylether	6400	U
118-74-1	Hexachlorobenzene	6400	U
1912-24-9	Atrazine	6400	U
87-86-5	Pentachlorophenol	12000	U
85-01-8	Phenanthrene	3100	J
120-12-7	Anthracene	990	J
86-74-8	Carbazole	6400	U
84-74-2	Di-n-butylphthalate	6400	U
206-44-0	Fluoranthene	4600	J
129-00-0	Pyrene	5000	J
85-68-7	Butylbenzylphthalate	6400	U
91-94-1	3,3'-Dichlorobenzidine	6400	U
56-55-3	Benzo(a)anthracene	2400	J
218-01-9	Chrysene	3000	J
117-81-7	Bis(2-ethylhexyl)phthalate	83000	~~B~~
117-84-0	Di-n-octylphthalate	6400	U
205-99-2	Benzo(b)fluoranthene	1600	J
207-08-9	Benzo(k)fluoranthene	1800	J
50-32-8	Benzo(a)pyrene	1800	J
193-39-5	Indeno(1,2,3-cd)pyrene	1000	J
53-70-3	Dibenzo(a,h)anthracene	510	J
191-24-2	Benzo(g,h,i)perylene	1200	J
58-90-2	2,3,4,6-Tetrachlorophenol	6400	U

[1] Cannot be separated from Diphenylamine

NW 08/12/13

1D - FORM I SV-1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-43-096

12

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 16995

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-16995-12

Sample wt/vol: 30.2 (g/mL) g Lab File ID: PJUWC19.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 42 Decanted: (Y/N) Date Received: 06/13/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/17/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/11/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 3.3

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
100-52-7	Benzaldehyde	970	U
108-95-2	Phenol	970	U
111-44-4	Bis(2-chloroethyl)ether	970	U
95-57-8	2-Chlorophenol	970	U
95-48-7	2-Methylphenol	970	U
108-60-1	2,2'-Oxybis(1-chloropropane)	970	U
98-86-2	Acetophenone	970	U
106-44-5	4-Methylphenol	970	U
621-64-7	N-Nitroso-di-n-propylamine	970	U
67-72-1	Hexachloroethane	970	U
98-95-3	Nitrobenzene	970	U
78-59-1	Isophorone	970	U
88-75-5	2-Nitrophenol	970	U
105-67-9	2,4-Dimethylphenol	970	U
111-91-1	Bis(2-chloroethoxy)methane	970	U
120-83-2	2,4-Dichlorophenol	970	U
91-20-3	Naphthalene	250	J
106-47-8	4-Chloroaniline	970	U
87-68-3	Hexachlorobutadiene	970	U
105-60-2	Caprolactam	970	U
59-50-7	4-Chloro-3-methylphenol	970	U
91-57-6	2-Methylnaphthalene	97	J
77-47-4	Hexachlorocyclopentadiene	970	U
88-06-2	2,4,6-Trichlorophenol	970	U
95-95-4	2,4,5-Trichlorophenol	970	U
92-52-4	1,1'-Biphenyl	970	U
91-58-7	2-Chloronaphthalene	970	U
88-74-4	2-Nitroaniline	1900	U
131-11-3	Dimethylphthalate	970	U
606-20-2	2,6-Dinitrotoluene	970	U
208-96-8	Acenaphthylene	970	U
99-09-2	3-Nitroaniline	1900	U
83-32-9	Acenaphthene	130	J

MW 08/12/13

EPA SAMPLE NO.
LMR13-43-096

12

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 16995

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-16995-12

Sample wt/vol: 30.2 (g/mL) g Lab File ID: PJUWC19.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 42 Decanted: (Y/N) Date Received: 06/13/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/17/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/11/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 3.3

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
51-28-5	2,4-Dinitrophenol	1900	U
100-02-7	4-Nitrophenol	1900	U
132-64-9	Dibenzofuran	120	J
121-14-2	2,4-Dinitrotoluene	970	U
84-66-2	Diethylphthalate	970	U
86-73-7	Fluorene	240	J
7005-72-3	4-Chlorophenyl-phenylether	970	U
100-01-6	4-Nitroaniline	1900	U
534-52-1	4,6-Dinitro-2-methylphenol	1900	U
86-30-6	N-Nitrosodiphenylamin [1]	970	U
95-94-3	1,2,4,5-Tetrachlorobenzene	970	U
101-55-3	4-Bromophenyl-phenylether	970	U
118-74-1	Hexachlorobenzene	970	U
1912-24-9	Atrazine	970	U
87-86-5	Pentachlorophenol	1900	~~U~~ UJ
85-01-8	Phenanthrene	1200	
120-12-7	Anthracene	400	J
86-74-8	Carbazole	970	U
84-74-2	Di-n-butylphthalate	970	U
206-44-0	Fluoranthene	1700	
129-00-0	Pyrene	2200	
85-68-7	Butylbenzylphthalate	970	U
91-94-1	3,3'-Dichlorobenzidine	970	U
56-55-3	Benzo(a)anthracene	1200	
218-01-9	Chrysene	1600	
117-81-7	Bis(2-ethylhexyl)phthalate	3600	~~B~~
117-84-0	Di-n-octylphthalate	970	U
205-99-2	Benzo(b)fluoranthene	950	J
207-08-9	Benzo(k)fluoranthene	840	J
50-32-8	Benzo(a)pyrene	980	
193-39-5	Indeno(1,2,3-cd)pyrene	540	J
53-70-3	Dibenzo(a,h)anthracene	220	J
191-24-2	Benzo(g,h,i)perylene	670	J
58-90-2	2,3,4,6-Tetrachlorophenol	970	U

[1] Cannot be separated from Diphenylamine

NW 08/12/13

1D - FORM I SV-1

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-43-072

20

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 16995

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17017-2

Sample wt/vol: 30.8 (g/mL) g Lab File ID: PJUWE13.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 44 Decanted: (Y/N) Date Received: 06/14/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/21/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/14/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 33.3

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
100-52-7	Benzaldehyde	9900	U
108-95-2	Phenol	9900	U
111-44-4	Bis(2-chloroethyl)ether	9900	U
95-57-8	2-Chlorophenol	9900	U
95-48-7	2-Methylphenol	9900	U
108-60-1	2,2'-Oxybis(1-chloropropane)	9900	U
98-86-2	Acetophenone	9900	U
106-44-5	4-Methylphenol	9900	U
621-64-7	N-Nitroso-di-n-propylamine	9900	U
67-72-1	Hexachloroethane	9900	U
98-95-3	Nitrobenzene	9900	U
78-59-1	Isophorone	9900	U
88-75-5	2-Nitrophenol	9900	U
105-67-9	2,4-Dimethylphenol	9900	U
111-91-1	Bis(2-chloroethoxy)methane	9900	U
120-83-2	2,4-Dichlorophenol	9900	U
91-20-3	Naphthalene	9900	U
106-47-8	4-Chloroaniline	9900	U
87-68-3	Hexachlorobutadiene	9900	U
105-60-2	Caprolactam	9900	U
59-50-7	4-Chloro-3-methylphenol	9900	U
91-57-6	2-Methylnaphthalene	9900	U
77-47-4	Hexachlorocyclopentadiene	9900	~~U~~ UJ
88-06-2	2,4,6-Trichlorophenol	9900	U
95-95-4	2,4,5-Trichlorophenol	9900	U
92-52-4	1,1'-Biphenyl	9900	U
91-58-7	2-Chloronaphthalene	9900	U
88-74-4	2-Nitroaniline	19000	U
131-11-3	Dimethylphthalate	9900	U
606-20-2	2,6-Dinitrotoluene	9900	U
208-96-8	Acenaphthylene	9900	U
99-09-2	3-Nitroaniline	19000	U
83-32-9	Acenaphthene	9900	U

NW 08/12/13

EPA SAMPLE NO.
LMR13-43-072

20

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 16995

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17017-2

Sample wt/vol: 30.8 (g/mL) g Lab File ID: PJUWE13.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 44 Decanted: (Y/N) Date Received: 06/14/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/21/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/14/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 33.3

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
51-28-5	2,4-Dinitrophenol	19000	U
100-02-7	4-Nitrophenol	19000	U
132-64-9	Dibenzofuran	9900	U
121-14-2	2,4-Dinitrotoluene	9900	U
84-66-2	Diethylphthalate	9900	U
86-73-7	Fluorene	9900	U
7005-72-3	4-Chlorophenyl-phenylether	9900	U
100-01-6	4-Nitroaniline	19000	U
534-52-1	4,6-Dinitro-2-methylphenol	19000	U
86-30-6	N-Nitrosodiphenylamin [1]	9900	U
95-94-3	1,2,4,5-Tetrachlorobenzene	9900	U
101-55-3	4-Bromophenyl-phenylether	9900	U
118-74-1	Hexachlorobenzene	9900	U
1912-24-9	Atrazine	9900	U
87-86-5	Pentachlorophenol	19000	U
85-01-8	Phenanthrene	1500	J
120-12-7	Anthracene	570	J
86-74-8	Carbazole	9900	U
84-74-2	Di-n-butylphthalate	9900	U
206-44-0	Fluoranthene	1700	J
129-00-0	Pyrene	3000	J
85-68-7	Butylbenzylphthalate	9900	U
91-94-1	3,3'-Dichlorobenzidine	9900	U
56-55-3	Benzo(a)anthracene	1600	J
218-01-9	Chrysene	2200	J
117-81-7	Bis(2-ethylhexyl)phthalate	110000	J
117-84-0	Di-n-octylphthalate	9900	U
205-99-2	Benzo(b)fluoranthene	1200	J
207-08-9	Benzo(k)fluoranthene	1100	J
50-32-8	Benzo(a)pyrene	1300	J
193-39-5	Indeno(1,2,3-cd)pyrene	660	J
53-70-3	Dibenzo(a,h)anthracene	9900	U
191-24-2	Benzo(g,h,i)perylene	880	J
58-90-2	2,3,4,6-Tetrachlorophenol	9900	U

[1] Cannot be separated from Diphenylamine

MW 08/12/13

EPA SAMPLE NO.
LMR13-43-120

21

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 16995

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17017-3

Sample wt/vol: 30.3 (g/mL) g Lab File ID: PJUWD21.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 43 Decanted: (Y/N) Date Received: 06/14/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/21/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/12/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 2.5

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
100-52-7	Benzaldehyde	120	J
108-95-2	Phenol	730	U
111-44-4	Bis(2-chloroethyl)ether	730	U
95-57-8	2-Chlorophenol	730	U
95-48-7	2-Methylphenol	730	U
108-60-1	2,2'-Oxybis(1-chloropropane)	730	U
98-86-2	Acetophenone	730	U
106-44-5	4-Methylphenol	730	U
621-64-7	N-Nitroso-di-n-propylamine	730	U
67-72-1	Hexachloroethane	730	U
98-95-3	Nitrobenzene	730	U
78-59-1	Isophorone	730	U
88-75-5	2-Nitrophenol	730	U
105-67-9	2,4-Dimethylphenol	730	U
111-91-1	Bis(2-chloroethoxy)methane	730	U
120-83-2	2,4-Dichlorophenol	730	U
91-20-3	Naphthalene	360	J
106-47-8	4-Chloroaniline	730	U
87-68-3	Hexachlorobutadiene	730	U
105-60-2	Caprolactam	730	U
59-50-7	4-Chloro-3-methylphenol	730	U
91-57-6	2-Methylnaphthalene	140	J
77-47-4	Hexachlorocyclopentadiene	730	U
88-06-2	2,4,6-Trichlorophenol	730	U
95-95-4	2,4,5-Trichlorophenol	730	U
92-52-4	1,1'-Biphenyl	730	U
91-58-7	2-Chloronaphthalene	730	U
88-74-4	2-Nitroaniline	1400	U
131-11-3	Dimethylphthalate	730	U
606-20-2	2,6-Dinitrotoluene	730	U
208-96-8	Acenaphthylene	150	J
99-09-2	3-Nitroaniline	1400	U
83-32-9	Acenaphthene	250	J

NW 08/12/13

EPA SAMPLE NO.
LMR13-43-120

21

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 16995

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17017-3

Sample wt/vol: 30.3 (g/mL) g Lab File ID: PJUWD21.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 43 Decanted: (Y/N) Date Received: 06/14/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/21/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/12/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 2.5

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
51-28-5	2,4-Dinitrophenol	1400	U
100-02-7	4-Nitrophenol	1400	U
132-64-9	Dibenzofuran	160	J
121-14-2	2,4-Dinitrotoluene	730	U
84-66-2	Diethylphthalate	730	U
86-73-7	Fluorene	580	J
7005-72-3	4-Chlorophenyl-phenylether	730	U
100-01-6	4-Nitroaniline	1400	U
534-52-1	4,6-Dinitro-2-methylphenol	1400	U
86-30-6	N-Nitrosodiphenylamin [1]	730	U
95-94-3	1,2,4,5-Tetrachlorobenzene	730	U
101-55-3	4-Bromophenyl-phenylether	730	U
118-74-1	Hexachlorobenzene	730	U
1912-24-9	Atrazine	730	U
87-86-5	Pentachlorophenol	1400	U
85-01-8	Phenanthrene	2300	
120-12-7	Anthracene	620	J
86-74-8	Carbazole	730	U
84-74-2	Di-n-butylphthalate	730	U
206-44-0	Fluoranthene	3200	
129-00-0	Pyrene	3700	
85-68-7	Butylbenzylphthalate	730	U
91-94-1	3,3'-Dichlorobenzidine	730	U
56-55-3	Benzo(a)anthracene	2100	
218-01-9	Chrysene	3000	
117-81-7	Bis(2-ethylhexyl)phthalate	1800	~~U~~
117-84-0	Di-n-octylphthalate	730	U
205-99-2	Benzo(b)fluoranthene	1600	
207-08-9	Benzo(k)fluoranthene	1700	
50-32-8	Benzo(a)pyrene	1900	
193-39-5	Indeno(1,2,3-cd)pyrene	970	
53-70-3	Dibenzo(a,h)anthracene	560	J
191-24-2	Benzo(g,h,i)perylene	1100	
58-90-2	2,3,4,6-Tetrachlorophenol	730	U

[1] Cannot be separated from Diphenylamine

NW 08/12/13

EPA SAMPLE NO.
LMR13-44-012

22

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 16995

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17017-4

Sample wt/vol: 30.8 (g/mL) g Lab File ID: PJUWE14.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 39 Decanted: (Y/N) Date Received: 06/14/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/21/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/14/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 8.3

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
100-52-7	Benzaldehyde	2300	U
108-95-2	Phenol	2300	U
111-44-4	Bis(2-chloroethyl)ether	2300	U
95-57-8	2-Chlorophenol	2300	U
95-48-7	2-Methylphenol	2300	U
108-60-1	2,2'-Oxybis(1-chloropropane)	2300	U
98-86-2	Acetophenone	2300	U
106-44-5	4-Methylphenol	2300	U
621-64-7	N-Nitroso-di-n-propylamine	2300	U
67-72-1	Hexachloroethane	2300	U
98-95-3	Nitrobenzene	2300	U
78-59-1	Isophorone	2300	U
88-75-5	2-Nitrophenol	2300	U
105-67-9	2,4-Dimethylphenol	2300	U
111-91-1	Bis(2-chloroethoxy)methane	2300	U
120-83-2	2,4-Dichlorophenol	2300	U
91-20-3	Naphthalene	140	J
106-47-8	4-Chloroaniline	2300	U
87-68-3	Hexachlorobutadiene	2300	U
105-60-2	Caprolactam	2300	U
59-50-7	4-Chloro-3-methylphenol	2300	U
91-57-6	2-Methylnaphthalene	2300	U
77-47-4	Hexachlorocyclopentadiene	2300	~~U~~ UJ
88-06-2	2,4,6-Trichlorophenol	2300	U
95-95-4	2,4,5-Trichlorophenol	2300	U
92-52-4	1,1'-Biphenyl	2300	U
91-58-7	2-Chloronaphthalene	2300	U
88-74-4	2-Nitroaniline	4400	U
131-11-3	Dimethylphthalate	2300	U
606-20-2	2,6-Dinitrotoluene	2300	U
208-96-8	Acenaphthylene	170	J
99-09-2	3-Nitroaniline	4400	U
83-32-9	Acenaphthene	460	J

NW 08/12/13

EPA SAMPLE NO.
LMR13-44-012

22

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 16995

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17017-4

Sample wt/vol: 30.8 (g/mL) g Lab File ID: PJUWE14.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 39 Decanted: (Y/N) Date Received: 06/14/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/21/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/14/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 8.3

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
51-28-5	2,4-Dinitrophenol	4400	U
100-02-7	4-Nitrophenol	4400	U
132-64-9	Dibenzofuran	2300	U
121-14-2	2,4-Dinitrotoluene	2300	U
84-66-2	Diethylphthalate	2300	U
86-73-7	Fluorene	710	J
7005-72-3	4-Chlorophenyl-phenylether	2300	U
100-01-6	4-Nitroaniline	4400	U
534-52-1	4,6-Dinitro-2-methylphenol	4400	U
86-30-6	N-Nitrosodiphenylamin [1]	2300	U
95-94-3	1,2,4,5-Tetrachlorobenzene	2300	U
101-55-3	4-Bromophenyl-phenylether	2300	U
118-74-1	Hexachlorobenzene	2300	U
1912-24-9	Atrazine	2300	U
87-86-5	Pentachlorophenol	4400	U
85-01-8	Phenanthrene	2400	
120-12-7	Anthracene	630	J
86-74-8	Carbazole	2300	U
84-74-2	Di-n-butylphthalate	2300	U
206-44-0	Fluoranthene	2800	
129-00-0	Pyrene	4000	
85-68-7	Butylbenzylphthalate	2300	U
91-94-1	3,3'-Dichlorobenzidine	2300	U
56-55-3	Benzo(a)anthracene	2000	J
218-01-9	Chrysene	2400	
117-81-7	Bis(2-ethylhexyl)phthalate	18000	B
117-84-0	Di-n-octylphthalate	2300	U
205-99-2	Benzo(b)fluoranthene	1100	J
207-08-9	Benzo(k)fluoranthene	1400	J
50-32-8	Benzo(a)pyrene	1800	J
193-39-5	Indeno(1,2,3-cd)pyrene	940	J
53-70-3	Dibenzo(a,h)anthracene	400	J
191-24-2	Benzo(g,h,i)perylene	1100	J
58-90-2	2,3,4,6-Tetrachlorophenol	2300	U

[1] Cannot be separated from Diphenylamine

NW 08/12/13

1D - FORM I SV-1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-44-024

23

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 16995

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17017-5

Sample wt/vol: 30.9 (g/mL) g Lab File ID: PJUWD25.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 31 Decanted: (Y/N) Date Received: 06/14/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/21/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/12/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
100-52-7	Benzaldehyde	51	J	
108-95-2	Phenol	240	U	
111-44-4	Bis(2-chloroethyl)ether	240	U	
95-57-8	2-Chlorophenol	240	U	
95-48-7	2-Methylphenol	240	U	
108-60-1	2,2'-Oxybis(1-chloropropane)	240	U	
98-86-2	Acetophenone	240	U	
106-44-5	4-Methylphenol	240	U	
621-64-7	N-Nitroso-di-n-propylamine	240	U	
67-72-1	Hexachloroethane	240	U	
98-95-3	Nitrobenzene	240	U	
78-59-1	Isophorone	240	U	
88-75-5	2-Nitrophenol	240	U	
105-67-9	2,4-Dimethylphenol	240	U	
111-91-1	Bis(2-chloroethoxy)methane	240	U	
120-83-2	2,4-Dichlorophenol	240	U	
91-20-3	Naphthalene	9.7	J	
106-47-8	4-Chloroaniline	240	U	R
87-68-3	Hexachlorobutadiene	240	U	
105-60-2	Caprolactam	240	U	
59-50-7	4-Chloro-3-methylphenol	240	U	
91-57-6	2-Methylnaphthalene	240	U	
77-47-4	Hexachlorocyclopentadiene	240	U	R
88-06-2	2,4,6-Trichlorophenol	240	U	
95-95-4	2,4,5-Trichlorophenol	240	U	
92-52-4	1,1'-Biphenyl	240	U	
91-58-7	2-Chloronaphthalene	240	U	
88-74-4	2-Nitroaniline	460	U	
131-11-3	Dimethylphthalate	240	U	
606-20-2	2,6-Dinitrotoluene	240	U	
208-96-8	Acenaphthylene	22	J	
99-09-2	3-Nitroaniline	460	U	
83-32-9	Acenaphthene	46	J	

MW 08/12/13

EPA SAMPLE NO.
LMR13-44-024

23

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 16995

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17017-5

Sample wt/vol: 30.9 (g/mL) g Lab File ID: PJUWD25.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 31 Decanted: (Y/N) Date Received: 06/14/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/21/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/12/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
51-28-5	2,4-Dinitrophenol	460	U
100-02-7	4-Nitrophenol	460	U
132-64-9	Dibenzofuran	18	J
121-14-2	2,4-Dinitrotoluene	240	U
84-66-2	Diethylphthalate	240	U
86-73-7	Fluorene	45	J
7005-72-3	4-Chlorophenyl-phenylether	240	U
100-01-6	4-Nitroaniline	460	U
534-52-1	4,6-Dinitro-2-methylphenol	460	U
86-30-6	N-Nitrosodiphenylamin [1]	240	U
95-94-3	1,2,4,5-Tetrachlorobenzene	240	U
101-55-3	4-Bromophenyl-phenylether	240	U
118-74-1	Hexachlorobenzene	240	U
1912-24-9	Atrazine	240	U
87-86-5	Pentachlorophenol	460	U
85-01-8	Phenanthrene	270	
120-12-7	Anthracene	120	J
86-74-8	Carbazole	240	U
84-74-2	Di-n-butylphthalate	12	J
206-44-0	Fluoranthene	540	
129-00-0	Pyrene	840	
85-68-7	Butylbenzylphthalate	240 ~~69~~ ~~J B~~	U
91-94-1	3,3'-Dichlorobenzidine	240 ~~U~~	R
56-55-3	Benzo(a)anthracene	310	
218-01-9	Chrysene	350	
117-81-7	Bis(2-ethylhexyl)phthalate	510 ~~B~~	U
117-84-0	Di-n-octylphthalate	240	U
205-99-2	Benzo(b)fluoranthene	230	J
207-08-9	Benzo(k)fluoranthene	210	J
50-32-8	Benzo(a)pyrene	290	
193-39-5	Indeno(1,2,3-cd)pyrene	140	J
53-70-3	Dibenzo(a,h)anthracene	61	J
191-24-2	Benzo(g,h,i)perylene	180	J
58-90-2	2,3,4,6-Tetrachlorophenol	240	U

[1] Cannot be separated from Diphenylamine

MW 08/12/13

EPA SAMPLE NO.
LMR13-44-024FD

24

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 16995

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17017-6

Sample wt/vol: 30.3 (g/mL) g Lab File ID: PJUWD26.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 30 Decanted: (Y/N) Date Received: 06/14/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/21/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/12/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
100-52-7	Benzaldehyde	46	J
108-95-2	Phenol	240	U
111-44-4	Bis(2-chloroethyl)ether	240	U
95-57-8	2-Chlorophenol	240	U
95-48-7	2-Methylphenol	240	U
108-60-1	2,2'-Oxybis(1-chloropropane)	240	U
98-86-2	Acetophenone	11	J
106-44-5	4-Methylphenol	240	U
621-64-7	N-Nitroso-di-n-propylamine	240	U
67-72-1	Hexachloroethane	240	U
98-95-3	Nitrobenzene	240	U
78-59-1	Isophorone	240	U
88-75-5	2-Nitrophenol	240	U
105-67-9	2,4-Dimethylphenol	240	U
111-91-1	Bis(2-chloroethoxy)methane	240	U
120-83-2	2,4-Dichlorophenol	240	U
91-20-3	Naphthalene	11	J
106-47-8	4-Chloroaniline	240	U
87-68-3	Hexachlorobutadiene	240	U
105-60-2	Caprolactam	240	U
59-50-7	4-Chloro-3-methylphenol	240	U
91-57-6	2-Methylnaphthalene	240	U
77-47-4	Hexachlorocyclopentadiene	240	U
88-06-2	2,4,6-Trichlorophenol	240	U
95-95-4	2,4,5-Trichlorophenol	240	U
92-52-4	1,1'-Biphenyl	240	U
91-58-7	2-Chloronaphthalene	240	U
88-74-4	2-Nitroaniline	470	U
131-11-3	Dimethylphthalate	240	U
606-20-2	2,6-Dinitrotoluene	240	U
208-96-8	Acenaphthylene	24	J
99-09-2	3-Nitroaniline	470	U
83-32-9	Acenaphthene	44	J

MW 08/12/13

EPA SAMPLE NO.
LMR13-44-024FD
24

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 16995

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17017-6

Sample wt/vol: 30.3 (g/mL) g Lab File ID: PJUWD26.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 30 Decanted: (Y/N) Date Received: 06/14/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/21/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/12/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
51-28-5	2,4-Dinitrophenol	470	U
100-02-7	4-Nitrophenol	470	U
132-64-9	Dibenzofuran	18	J
121-14-2	2,4-Dinitrotoluene	240	U
84-66-2	Diethylphthalate	240	U
86-73-7	Fluorene	47	J
7005-72-3	4-Chlorophenyl-phenylether	240	U
100-01-6	4-Nitroaniline	470	U
534-52-1	4,6-Dinitro-2-methylphenol	470	U
86-30-6	N-Nitrosodiphenylamin [1]	240	U
95-94-3	1,2,4,5-Tetrachlorobenzene	240	U
101-55-3	4-Bromophenyl-phenylether	240	U
118-74-1	Hexachlorobenzene	240	U
1912-24-9	Atrazine	240	U
87-86-5	Pentachlorophenol	470	U
85-01-8	Phenanthrene	290	
120-12-7	Anthracene	150	J
86-74-8	Carbazole	240	U
84-74-2	Di-n-butylphthalate	10	J
206-44-0	Fluoranthene	610	
129-00-0	Pyrene	880	
85-68-7	Butylbenzylphthalate	240 ~~65~~	~~J B~~ U
91-94-1	3,3'-Dichlorobenzidine	240	U
56-55-3	Benzo(a)anthracene	350	
218-01-9	Chrysene	370	
117-81-7	Bis(2-ethylhexyl)phthalate	430	~~B~~ U
117-84-0	Di-n-octylphthalate	240	U
205-99-2	Benzo(b)fluoranthene	260	
207-08-9	Benzo(k)fluoranthene	230	J
50-32-8	Benzo(a)pyrene	320	
193-39-5	Indeno(1,2,3-cd)pyrene	150	J
53-70-3	Dibenzo(a,h)anthracene	71	J
191-24-2	Benzo(g,h,i)perylene	180	J
58-90-2	2,3,4,6-Tetrachlorophenol	240	U

[1] Cannot be separated from Diphenylamine

NW 08/12/13

EPA SAMPLE NO.
LMR13-44-048

25

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 16995

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17017-7

Sample wt/vol: 30.3 (g/mL) g Lab File ID: PJUWD27.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 29 Decanted: (Y/N) Date Received: 06/14/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/21/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/12/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
100-52-7	Benzaldehyde	40	~~J~~ J
108-95-2	Phenol	240	U
111-44-4	Bis(2-chloroethyl)ether	240	U
95-57-8	2-Chlorophenol	240	U
95-48-7	2-Methylphenol	240	U
108-60-1	2,2'-Oxybis(1-chloropropane)	240	U
98-86-2	Acetophenone	13	J
106-44-5	4-Methylphenol	240	U
621-64-7	N-Nitroso-di-n-propylamine	240	U
67-72-1	Hexachloroethane	240	U
98-95-3	Nitrobenzene	240	U
78-59-1	Isophorone	240	U
88-75-5	2-Nitrophenol	240	U
105-67-9	2,4-Dimethylphenol	240	U
111-91-1	Bis(2-chloroethoxy)methane	240	U
120-83-2	2,4-Dichlorophenol	240	U
91-20-3	Naphthalene	240	U
106-47-8	4-Chloroaniline	240	~~U~~ R
87-68-3	Hexachlorobutadiene	240	U
105-60-2	Caprolactam	240	U
59-50-7	4-Chloro-3-methylphenol	240	U
91-57-6	2-Methylnaphthalene	240	U
77-47-4	Hexachlorocyclopentadiene	240	~~U~~ R
88-06-2	2,4,6-Trichlorophenol	240	U
95-95-4	2,4,5-Trichlorophenol	240	U
92-52-4	1,1'-Biphenyl	240	U
91-58-7	2-Chloronaphthalene	240	U
88-74-4	2-Nitroaniline	460	U
131-11-3	Dimethylphthalate	240	U
606-20-2	2,6-Dinitrotoluene	240	U
208-96-8	Acenaphthylene	240	U
99-09-2	3-Nitroaniline	460	U
83-32-9	Acenaphthene	22	J

NW 08/12/13

EPA SAMPLE NO.
LMR13-44-048

25

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 16995

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17017-7

Sample wt/vol: 30.3 (g/mL) g Lab File ID: PJUWD27.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 29 Decanted: (Y/N) Date Received: 06/14/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/21/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/12/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
51-28-5	2,4-Dinitrophenol	460	U
100-02-7	4-Nitrophenol	460	U
132-64-9	Dibenzofuran	17	J
121-14-2	2,4-Dinitrotoluene	240	U
84-66-2	Diethylphthalate	240	U
86-73-7	Fluorene	28	J
7005-72-3	4-Chlorophenyl-phenylether	240	U
100-01-6	4-Nitroaniline	460	U
534-52-1	4,6-Dinitro-2-methylphenol	460	U
86-30-6	N-Nitrosodiphenylamin [1]	240	U
95-94-3	1,2,4,5-Tetrachlorobenzene	240	U
101-55-3	4-Bromophenyl-phenylether	240	U
118-74-1	Hexachlorobenzene	240	U
1912-24-9	Atrazine	240	U
87-86-5	Pentachlorophenol	460	U
85-01-8	Phenanthrene	160	J
120-12-7	Anthracene	74	J
86-74-8	Carbazole	240	U
84-74-2	Di-n-butylphthalate	14	J
206-44-0	Fluoranthene	270	
129-00-0	Pyrene	290	
85-68-7	Butylbenzylphthalate	240 ~~57~~ ~~J B~~	U
91-94-1	3,3'-Dichlorobenzidine	240 ~~U~~	R
56-55-3	Benzo(a)anthracene	150	J
218-01-9	Chrysene	150	J
117-81-7	Bis(2-ethylhexyl)phthalate	260 ~~B~~	U
117-84-0	Di-n-octylphthalate	240	U
205-99-2	Benzo(b)fluoranthene	81	J
207-08-9	Benzo(k)fluoranthene	100	J
50-32-8	Benzo(a)pyrene	100	J
193-39-5	Indeno(1,2,3-cd)pyrene	53	J
53-70-3	Dibenzo(a,h)anthracene	25	J
191-24-2	Benzo(g,h,i)perylene	57	J
58-90-2	2,3,4,6-Tetrachlorophenol	240	U

[1] Cannot be separated from Diphenylamine

MW 08/12/13

1F - FORM I SV-SIM
SEMIVOLATILE SIM ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-42-012

1

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: 1734.2 SDG No.: 16995

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-16995-1

Sample wt/vol: 30.1 (g/mL) g Lab File ID: SER09.D

Extraction: (Type) SONC

% Moisture: 23 Decanted: (Y/N) Date Received: 06/13/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/17/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/22/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 6.7

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
91-20-3	Naphthalene	180	~~E~~
90-12-0	1-Methylnaphthalene	57	
91-57-6	2-Methylnaphthalene	97	
208-96-8	Acenaphthylene	160	
83-32-9	Acenaphthene	740 ~~660 E~~	
86-73-7	Fluorene	2300 ~~880 E~~	J
85-01-8	Phenanthrene	5400 ~~4600 E~~	J
120-12-7	Anthracene	1300 ~~1000 E~~	
206-44-0	Fluoranthene	5500 ~~5200 E~~	J
129-00-0	Pyrene	4900 ~~4800 E~~	J
56-55-3	Benzo(a)anthracene	2500 ~~2300 E~~	J
218-01-9	Chrysene	2700 ~~2400 E~~	J
205-99-2	Benzo(b)fluoranthene	1800 ~~1600 E~~	
207-08-9	Benzo(k)fluoranthene	1600 ~~1100 E~~	
192-97-2	Benzo(e)pyrene	1300 ~~1200 E~~	
50-32-8	Benzo(a)pyrene	2100 ~~1500 E~~	
198-55-0	Perylene	660 ~~520 E~~	
193-39-5	Indeno(1,2,3-cd)pyrene	970 ~~1300 E~~	
53-70-3	Dibenzo(a,h)anthracene	350 ~~510 E~~	J
191-24-2	Benzo(g,h,i)perylene	900 ~~1400 E~~	
C1NAPH	C1-Naphthalenes	110	J
C2NAPH	C2-Naphthalenes	3300	J
C3NAPH	C3-Naphthalenes	7000	J
C4NAPH	C4-Naphthalenes	4600	J
C1FLUOR	C1 Fluorenes	460	J
C2FLUOR	C2 Fluorenes	940	J
C3FLUOR	C3 Fluorenes	2100	J
C1PHAN	C1-Phenanthrenes/Anthracenes	4300	J
C2PHAN	C2-Phenanthrenes/Anthracenes	4600	J
C3PHAN	C3-Phenanthrenes/Anthracenes	5400	J
C4PHAN	C4-Phenanthrenes/Anthracenes	3600	J
C1FLPY	C1-Fluoranthenes/Pyrenes	3300	J
C2FLPY	C2-Fluoranthenes/Pyrenes	2300	J
C3FLPY	C3-Fluoranthenes/Pyrenes	1600	J
C1CHRYS	C1 Chrysenes	2300	J
C2CHRYS	C2 Chrysenes	1200	J
C3CHRYS	C3 Chrysenes	590	J
C4CHRYS	C4 Chrysenes	280	J

NW 08/12/13

1F - FORM I SV-SIM
SEMIVOLATILE SIM ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-42-012

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: 1734.2 SDG No.: 16995

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-16995-1

Sample wt/vol: 30.1 (g/mL) g Lab File ID: SER09.D

Extraction: (Type) SONC

% Moisture: 23 Decanted: (Y/N) Date Received: 06/13/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/17/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/22/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 6.7

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
TPPAH	Total 16 PPAH	30000	B J
TPAH	Total PAH	79000	B J

MW 08/12/13

1F - FORM I SV-SIM

SEMIVOLATILE SIM ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-42-012DL

1DL

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: 1734.2 SDG No.: 16995

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-16995-1

Sample wt/vol: 30.1 (g/mL) g Lab File ID: HQISM08.D

Extraction: (Type) SONC

% Moisture: 23 Decanted: (Y/N) Date Received: 06/13/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/17/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/30/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 50.0

use original results

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
91-20-3	Naphthalene	200	J D B
90-12-0	1-Methylnaphthalene	74	J D
91-57-6	2-Methylnaphthalene	100	J D
208-96-8	Acenaphthylene	51	J D
83-32-9	Acenaphthene	740	D
86-73-7	Fluorene	2300	E D J
85-01-8	Phenanthrene	5400	E D J
120-12-7	Anthracene	1300	D
206-44-0	Fluoranthene	5500	E D B J
129-00-0	Pyrene	4900	E D B
56-55-3	Benzo(a)anthracene	2500	E D B
218-01-9	Chrysene	2700	E D B
205-99-2	Benzo(b)fluoranthene	1800	D B
207-08-9	Benzo(k)fluoranthene	1600	D B
192-97-2	Benzo(e)pyrene	1300	D
50-32-8	Benzo(a)pyrene	2100	D
198-55-0	Perylene	660	D
193-39-5	Indeno(1,2,3-cd)pyrene	970	D
53-70-3	Dibenzo(a,h)anthracene	350	D J
191-24-2	Benzo(g,h,i)perylene	900	D
C1NAPH	C1-Naphthalenes	120	J D
C2NAPH	C2-Naphthalenes	2600	J D
C3NAPH	C3-Naphthalenes	5400	J D
C4NAPH	C4-Naphthalenes	5200	J D
C1FLUOR	C1 Fluorenes	680	J D
C2FLUOR	C2 Fluorenes	1100	J D
C3FLUOR	C3 Fluorenes	2000	J D
C1PHAN	C1-Phenanthrenes/Anthracenes	4400	J D
C2PHAN	C2-Phenanthrenes/Anthracenes	4800	J D
C3PHAN	C3-Phenanthrenes/Anthracenes	5800	J D
C4PHAN	C4-Phenanthrenes/Anthracenes	3700	J D
C1FLPY	C1-Fluoranthenes/Pyrenes	3400	J D
C2FLPY	C2-Fluoranthenes/Pyrenes	2400	J D
C3FLPY	C3-Fluoranthenes/Pyrenes	1900	J D
C1CHRYS	C1 Chrysenes	2300	J D
C2CHRYS	C2 Chrysenes	1900	J D
C3CHRYS	C3 Chrysenes	710	J D
C4CHRYS	C4 Chrysenes	360	J D

MW 08/12/13

1F - FORM I SV-SIM

SEMIVOLATILE SIM ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-42-012DL

1DL

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: 1734.2 SDG No.: 16995

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-16995-1

Sample wt/vol: 30.1 (g/mL) g Lab File ID: HQISM08.D

Extraction: (Type) SONC

% Moisture: 23 Decanted: (Y/N) Date Received: 06/13/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/17/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/30/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 50.0

use original results

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
TPPAH	Total 16 PPAH	33000	D E J
TPAH	Total PAH	84000	D E J

NW 08/12/13

1F - FORM I SV-SIM
SEMIVOLATILE SIM ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-44-012

22

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: 1734.2 SDG No.: 16995

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17017-4

Sample wt/vol: 30.8 (g/mL) g Lab File ID: HQISM11.D

Extraction: (Type) SONC

% Moisture: 39 Decanted: (Y/N) Date Received: 06/14/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/21/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/30/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 33.3

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
91-20-3	Naphthalene	160	J ~~B~~
90-12-0	1-Methylnaphthalene	50	J
91-57-6	2-Methylnaphthalene	83	J
208-96-8	Acenaphthylene	130	J
83-32-9	Acenaphthene	540	
86-73-7	Fluorene	900	
85-01-8	Phenanthrene	2400	~~E~~ ~~B~~ J
120-12-7	Anthracene	700	
206-44-0	Fluoranthene	3200	~~E~~ J
129-00-0	Pyrene	4100	~~E~~
56-55-3	Benzo(a)anthracene	2600	~~E~~
218-01-9	Chrysene	2700	~~E~~
205-99-2	Benzo(b)fluoranthene	1800	~~E~~
207-08-9	Benzo(k)fluoranthene	1600	
192-97-2	Benzo(e)pyrene	1400	
50-32-8	Benzo(a)pyrene	2300	~~E~~ J
198-55-0	Perylene	900	
193-39-5	Indeno(1,2,3-cd)pyrene	1000	
53-70-3	Dibenzo(a,h)anthracene	370	J
191-24-2	Benzo(g,h,i)perylene	950	
C1NAPH	C1-Naphthalenes	87	J
C2NAPH	C2-Naphthalenes	610	J
C3NAPH	C3-Naphthalenes	2000	J
C4NAPH	C4-Naphthalenes	2000	J
C1FLUOR	C1 Fluorenes	330	J
C2FLUOR	C2 Fluorenes	500	J
C3FLUOR	C3 Fluorenes	960	J
C1PHAN	C1-Phenanthrenes/Anthracenes	3100	J
C2PHAN	C2-Phenanthrenes/Anthracenes	2700	J
C3PHAN	C3-Phenanthrenes/Anthracenes	3700	J
C4PHAN	C4-Phenanthrenes/Anthracenes	2800	J
C1FLPY	C1-Fluoranthenes/Pyrenes	4300	J
C2FLPY	C2-Fluoranthenes/Pyrenes	2900	J
C3FLPY	C3-Fluoranthenes/Pyrenes	2000	J
C1CHRYS	C1 Chrysenes	3200	J
C2CHRYS	C2 Chrysenes	2500	J
C3CHRYS	C3 Chrysenes	1200	J
C4CHRYS	C4 Chrysenes	470	J

MW 08/12/13

1F - FORM I SV-SIM

SEMIVOLATILE SIM ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-44-012

22

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: 1734.2 SDG No.: 16995

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17017-4

Sample wt/vol: 30.8 (g/mL) g Lab File ID: HQISM11.D

Extraction: (Type) SONC

% Moisture: 39 Decanted: (Y/N) Date Received: 06/14/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/21/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/30/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 33.3

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
TPPAH	Total 16 PPAH	26000	B J
TPAH	Total PAH	63000	B J

MW 08/12/13

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-42-012

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 16995

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-16995-1

Sample wt/vol: 30.4 (g/mL) g Lab File ID: 5253AXASOM05.D

% Moisture: 23 Decanted: (Y/N) Date Received: 06/13/2013

Extraction: (Type) SONC Date Extracted: 06/18/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 07/11/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	42	U UJ
11104-28-2	Aroclor-1221	42	U
11141-16-5	Aroclor-1232	42	U
53469-21-9	Aroclor-1242	230	J
12672-29-6	Aroclor-1248	42	UJ
11097-69-1	Aroclor-1254	330	J
11096-82-5	Aroclor-1260	69	J
37324-23-5	Aroclor-1262	42	U UJ
11100-14-4	Aroclor-1268	42	U

NW 08/12/13

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-42-024

2

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 16995

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-16995-2

Sample wt/vol: 30.1 (g/mL) g Lab File ID: 5253AWASOM15.D

% Moisture: 44 Decanted: (Y/N) Date Received: 06/13/2013

Extraction: (Type) SONC Date Extracted: 06/18/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 07/08/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	59	U UJ
11104-28-2	Aroclor-1221	59	U ↓
11141-16-5	Aroclor-1232	59	U ↓
53469-21-9	Aroclor-1242	20	~~J~~ P J
12672-29-6	Aroclor-1248	59	~~U~~ UJ
11097-69-1	Aroclor-1254	31	~~J~~ P J
11096-82-5	Aroclor-1260	13	~~J~~ P J
37324-23-5	Aroclor-1262	59	U UJ
11100-14-4	Aroclor-1268	59	U ↓

NW 08/12/13

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-42-048

4

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 16995

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-16995-4

Sample wt/vol: 30.3 (g/mL) g Lab File ID: 5253AVASOM49.D

% Moisture: 41 Decanted: (Y/N) Date Received: 06/13/2013

Extraction: (Type) SONC Date Extracted: 06/18/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 07/04/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	56	U
11104-28-2	Aroclor-1221	56	U
11141-16-5	Aroclor-1232	56	U
53469-21-9	Aroclor-1242	56	U
12672-29-6	Aroclor-1248	56	U
11097-69-1	Aroclor-1254	56	U
11096-82-5	Aroclor-1260	56	U
37324-23-5	Aroclor-1262	56	U
11100-14-4	Aroclor-1268	56	U

UJ

NW 08/12/13

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-42-072

5

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 16995

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-16995-5

Sample wt/vol: 30.0 (g/mL) g Lab File ID: 5253AVASOM50.D

% Moisture: 40 Decanted: (Y/N) Date Received: 06/13/2013

Extraction: (Type) SONC Date Extracted: 06/18/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 07/04/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	54	U
11104-28-2	Aroclor-1221	54	U
11141-16-5	Aroclor-1232	54	U
53469-21-9	Aroclor-1242	54	U
12672-29-6	Aroclor-1248	54	U
11097-69-1	Aroclor-1254	54	U
11096-82-5	Aroclor-1260	54	U
37324-23-5	Aroclor-1262	54	U
11100-14-4	Aroclor-1268	54	U

NW 08/12/13

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-42-096

6

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 16995

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-16995-6

Sample wt/vol: 29.9 (g/mL) g Lab File ID: 5253AVASOM51.D

% Moisture: 42 Decanted: (Y/N) Date Received: 06/13/2013

Extraction: (Type) SONC Date Extracted: 06/18/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 07/04/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	57	U
11104-28-2	Aroclor-1221	57	U
11141-16-5	Aroclor-1232	57	U
53469-21-9	Aroclor-1242	57	U
12672-29-6	Aroclor-1248	57	U
11097-69-1	Aroclor-1254	57	U
11096-82-5	Aroclor-1260	57	U
37324-23-5	Aroclor-1262	57	U
11100-14-4	Aroclor-1268	57	U

UJ

NW 08/12/13

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-42-120

7

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 16995

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-16995-7

Sample wt/vol: 29.7 (g/mL) g Lab File ID: 5253AVASOM52.D

% Moisture: 40 Decanted: (Y/N) Date Received: 06/13/2013

Extraction: (Type) SONC Date Extracted: 06/18/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 07/04/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	55	U
11104-28-2	Aroclor-1221	55	U
11141-16-5	Aroclor-1232	55	U
53469-21-9	Aroclor-1242	55	U
12672-29-6	Aroclor-1248	55	U
11097-69-1	Aroclor-1254	55	U
11096-82-5	Aroclor-1260	55	U
37324-23-5	Aroclor-1262	55	U
11100-14-4	Aroclor-1268	55	U

MW 08/12/13

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-43-012

8

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 16995

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-16995-8

Sample wt/vol: 30.6 (g/mL) g Lab File ID: 5253AXASOM06.D

% Moisture: 44 Decanted: (Y/N) Date Received: 06/13/2013

Extraction: (Type) SONC Date Extracted: 06/18/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 07/11/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	58	U UJ
11104-28-2	Aroclor-1221	58	U ↓
11141-16-5	Aroclor-1232	58	U ↓
53469-21-9	Aroclor-1242	400	J
12672-29-6	Aroclor-1248	58	U UJ
11097-69-1	Aroclor-1254	480	J
11096-82-5	Aroclor-1260	85	↓
37324-23-5	Aroclor-1262	58	U UJ
11100-14-4	Aroclor-1268	58	U ↓

NW 08/12/13

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-43-024

9

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 16995

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-16995-9

Sample wt/vol: 30.6 (g/mL) g Lab File ID: 5253AXASOM07.D

% Moisture: 52 Decanted: (Y/N) Date Received: 06/13/2013

Extraction: (Type) SONC Date Extracted: 06/18/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 07/11/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	68	U UJ
11104-28-2	Aroclor-1221	68	U
11141-16-5	Aroclor-1232	68	U
53469-21-9	Aroclor-1242	1000	J
12672-29-6	Aroclor-1248	68	U UJ
11097-69-1	Aroclor-1254	1300 ~~1600~~	~~E P~~ J
11096-82-5	Aroclor-1260	170	J
37324-23-5	Aroclor-1262	68	U UJ
11100-14-4	Aroclor-1268	68	U

NW 08/12/13

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-43-024DL

9DL

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 16995

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-16995-9

Sample wt/vol: 30.6 (g/mL) g Lab File ID: 5253AWASOM17.D

% Moisture: 52 Decanted: (Y/N) Date Received: 06/13/2013

Extraction: (Type) SONC Date Extracted: 06/18/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 07/08/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 5.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

use original results

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	340	U
11104-28-2	Aroclor-1221	340	U
11141-16-5	Aroclor-1232	340	U
53469-21-9	Aroclor-1242	880	~~P D~~ J
12672-29-6	Aroclor-1248	340	U
11097-69-1	Aroclor-1254	1300	~~P D~~ J
11096-82-5	Aroclor-1260	230	~~J P D~~ J
37324-23-5	Aroclor-1262	340	U
11100-14-4	Aroclor-1268	340	U

NW 08/12/13

1H - FORM I ARO
AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-43-024FD

10

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 16995

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-16995-10

Sample wt/vol: 30.0 (g/mL) g Lab File ID: 5253AXASOM09.D

% Moisture: 51 Decanted: (Y/N) Date Received: 06/13/2013

Extraction: (Type) SONC Date Extracted: 06/18/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 07/11/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	68	U UJ
11104-28-2	Aroclor-1221	68	U
11141-16-5	Aroclor-1232	68	U
53469-21-9	Aroclor-1242	940	J
12672-29-6	Aroclor-1248	68	U UJ
11097-69-1	Aroclor-1254	1800 ~~1400~~ E P	
11096-82-5	Aroclor-1260	170	J
37324-23-5	Aroclor-1262	68	U UJ
11100-14-4	Aroclor-1268	68	U

NW 08/12/13

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-43-024FDDL

10DL

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 16995

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-16995-10

Sample wt/vol: 30.0 (g/mL) g Lab File ID: 5253AXASOM08.D

% Moisture: 51 Decanted: (Y/N) Date Received: 06/13/2013

Extraction: (Type) SONC Date Extracted: 06/18/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 07/11/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 5.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

Use original results

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	340	U
11104-28-2	Aroclor-1221	340	U
11141-16-5	Aroclor-1232	340	U
53469-21-9	Aroclor-1242	1200	~~P D~~ J
12672-29-6	Aroclor-1248	340	U
11097-69-1	Aroclor-1254	1800	~~D~~
11096-82-5	Aroclor-1260	280	J ~~D~~
37324-23-5	Aroclor-1262	340	U
11100-14-4	Aroclor-1268	340	U

NW 08/12/13

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-43-048

11

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 16995

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-16995-11

Sample wt/vol: 30.5 (g/mL) g Lab File ID: 5253AXASOM11.D

% Moisture: 49 Decanted: (Y/N) Date Received: 06/13/2013

Extraction: (Type) SONC Date Extracted: 06/18/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 07/11/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	63	U UJ
11104-28-2	Aroclor-1221	63	U
11141-16-5	Aroclor-1232	63	U
53469-21-9	Aroclor-1242	2900 ~~2300~~	~~E~~
12672-29-6	Aroclor-1248	63	~~P~~ UJ
11097-69-1	Aroclor-1254	2200 ~~1700~~	~~E P~~
11096-82-5	Aroclor-1260	320	J
37324-23-5	Aroclor-1262	63	U UJ
11100-14-4	Aroclor-1268	63	U

NW 08/12/13

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-43-048DL

11DL

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 16995

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-16995-11

Sample wt/vol: 30.5 (g/mL) g Lab File ID: 5253AXASOM10.D

% Moisture: 49 Decanted: (Y/N) Date Received: 06/13/2013

Extraction: (Type) SONC Date Extracted: 06/18/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 07/11/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 10.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

Use original results

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	630	U
11104-28-2	Aroclor-1221	630	U
11141-16-5	Aroclor-1232	630	U
53469-21-9	Aroclor-1242	2900	D
12672-29-6	Aroclor-1248	630	U
11097-69-1	Aroclor-1254	2200	D
11096-82-5	Aroclor-1260	490	J D
37324-23-5	Aroclor-1262	630	U
11100-14-4	Aroclor-1268	630	U

NW 08/12/13

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-43-096

12

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 16995

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-16995-12

Sample wt/vol: 29.7 (g/mL) g Lab File ID: 5253AXASOM14.D

% Moisture: 42 Decanted: (Y/N) Date Received: 06/13/2013

Extraction: (Type) SONC Date Extracted: 06/18/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 07/11/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
12674-11-2	Aroclor-1016	58	U	UJ
11104-28-2	Aroclor-1221	58	U	↓
11141-16-5	Aroclor-1232	58	U	↓
53469-21-9	Aroclor-1242	26	J	J
12672-29-6	Aroclor-1248	58	U	UJ
11097-69-1	Aroclor-1254	120	P	J
11096-82-5	Aroclor-1260	49	P	J
37324-23-5	Aroclor-1262	58	U	UJ
11100-14-4	Aroclor-1268	58	U	↓

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1H - FORM I ARO
AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-43-120

13

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 16995

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-16995-13

Sample wt/vol: 30.7 (g/mL) g Lab File ID: 5253AXASOM15.D

% Moisture: 43 Decanted: (Y/N) Date Received: 06/13/2013

Extraction: (Type) SONC Date Extracted: 06/18/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 07/11/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	57	U UJ
11104-28-2	Aroclor-1221	57	U
11141-16-5	Aroclor-1232	57	U
53469-21-9	Aroclor-1242	17	J J
12672-29-6	Aroclor-1248	57	U UJ
11097-69-1	Aroclor-1254	83	J
11096-82-5	Aroclor-1260	18	~~J~~ J
37324-23-5	Aroclor-1262	57	U UJ
11100-14-4	Aroclor-1268	57	U

NW 08/12/13

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-43-072

20

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 16995

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17017-2

Sample wt/vol: 30.9 (g/mL) g Lab File ID: 5253AYASOM11.D

% Moisture: 44 Decanted: (Y/N) Date Received: 06/14/2013

Extraction: (Type) SONC Date Extracted: 06/21/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 07/18/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	57	U UJ
11104-28-2	Aroclor-1221	57	U
11141-16-5	Aroclor-1232	57	U
53469-21-9	Aroclor-1242	57	U
12672-29-6	Aroclor-1248	290	J
11097-69-1	Aroclor-1254	760 ~~590~~	
11096-82-5	Aroclor-1260	140	
37324-23-5	Aroclor-1262	57	U UJ
11100-14-4	Aroclor-1268	57	U UJ

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1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-43-072DL

20DL

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 16995

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17017-2

Sample wt/vol: 30.9 (g/mL) g Lab File ID: 5253AXBSOM13.D

% Moisture: 44 Decanted: (Y/N) Date Received: 06/14/2013

Extraction: (Type) SONC Date Extracted: 06/21/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 07/12/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 4.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

Use orginal results

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	230	U
11104-28-2	Aroclor-1221	230	U
11141-16-5	Aroclor-1232	230	U
53469-21-9	Aroclor-1242	230	U
12672-29-6	Aroclor-1248	420	~~P~~ D
11097-69-1	Aroclor-1254	760	~~P~~ D
11096-82-5	Aroclor-1260	180	~~J P~~ D
37324-23-5	Aroclor-1262	230	U
11100-14-4	Aroclor-1268	230	U

J

NW 08/12/13

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-44-012

22

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 16995

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17017-4

Sample wt/vol: 30.8 (g/mL) g Lab File ID: 5253AYASOM12.D

% Moisture: 39 Decanted: (Y/N) Date Received: 06/14/2013

Extraction: (Type) SONC Date Extracted: 06/21/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 07/18/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	53	U UJ
11104-28-2	Aroclor-1221	53	U
11141-16-5	Aroclor-1232	53	U
53469-21-9	Aroclor-1242	53	U
12672-29-6	Aroclor-1248	2600 ~~2000~~	~~E~~
11097-69-1	Aroclor-1254	650	J
11096-82-5	Aroclor-1260	130	J
37324-23-5	Aroclor-1262	53	U UJ
11100-14-4	Aroclor-1268	53	U UJ

MW 08/12/13

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-44-012DL

22DL

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 16995

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17017-4

Sample wt/vol: 30.8 (g/mL) g Lab File ID: 5253AXBSOM14.D

% Moisture: 39 Decanted: (Y/N) Date Received: 06/14/2013

Extraction: (Type) SONC Date Extracted: 06/21/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 07/12/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 5.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

Use original results

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	260	U
11104-28-2	Aroclor-1221	260	U
11141-16-5	Aroclor-1232	260	U
53469-21-9	Aroclor-1242	260	U
12672-29-6	Aroclor-1248	2600	~~D~~
11097-69-1	Aroclor-1254	830	~~P D~~ J
11096-82-5	Aroclor-1260	160	~~J P D~~ J
37324-23-5	Aroclor-1262	260	U
11100-14-4	Aroclor-1268	260	U

NW 08/12/13

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-44-024

23

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 16995

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17017-5

Sample wt/vol: 30.5 (g/mL) g Lab File ID: 5253AXBSOM15.D

% Moisture: 31 Decanted: (Y/N) Date Received: 06/14/2013

Extraction: (Type) SONC Date Extracted: 06/21/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 07/12/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	47	U
11104-28-2	Aroclor-1221	47	U
11141-16-5	Aroclor-1232	47	U
53469-21-9	Aroclor-1242	38	~~J P~~ J
12672-29-6	Aroclor-1248	47	U
11097-69-1	Aroclor-1254	28	J
11096-82-5	Aroclor-1260	4.3	~~J P~~ J
37324-23-5	Aroclor-1262	47	U
11100-14-4	Aroclor-1268	47	U

MW 08/12/13

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-44-048

25

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 16995

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17017-7

Sample wt/vol: 29.9 (g/mL) g Lab File ID: 5253AXBSOM16.D

% Moisture: 29 Decanted: (Y/N) Date Received: 06/14/2013

Extraction: (Type) SONC Date Extracted: 06/21/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 07/12/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	47	U
11104-28-2	Aroclor-1221	47	U
11141-16-5	Aroclor-1232	47	U
53469-21-9	Aroclor-1242	21	J
12672-29-6	Aroclor-1248	47	U
11097-69-1	Aroclor-1254	17	~~J P~~ J
11096-82-5	Aroclor-1260	47	U
37324-23-5	Aroclor-1262	47	U
11100-14-4	Aroclor-1268	47	U

NW 08/12/13

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-44-048FD

26

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 16995

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17017-8

Sample wt/vol: 30.5 (g/mL) g Lab File ID: 5253AXBSOM17.D

% Moisture: 28 Decanted: (Y/N) Date Received: 06/14/2013

Extraction: (Type) SONC Date Extracted: 06/21/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 07/12/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	45	U
11104-28-2	Aroclor-1221	45	U
11141-16-5	Aroclor-1232	45	U
53469-21-9	Aroclor-1242	18	~~J P~~ J
12672-29-6	Aroclor-1248	45	U
11097-69-1	Aroclor-1254	14	~~J P~~ J
11096-82-5	Aroclor-1260	45	U
37324-23-5	Aroclor-1262	45	U
11100-14-4	Aroclor-1268	45	U

NW 08/12/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO. 1
LMR13-42-012

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678
Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 16995
Matrix: SED | Lab Sample Id: 200-16995-1
% Solids: 77.1 | Date Received: 06/13/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	7.6			P
7440-43-9	Cadmium	7.5		J E	P
7440-47-3	Chromium	115		J E	P
7440-50-8	Copper	82.7		E	P
7439-92-1	Lead	104			P
7440-02-0	Nickel	43.3		J E	P
7440-66-6	Zinc	297		J E	P

Color Before: BROWN | Clarity Before: | Texture:
Color After: LIGHT YELLOW | Clarity After: CLOUDY | Artifacts: FINE
Comments:

NW 08/12/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-42-012

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678
Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 16995
Matrix: SED Lab Sample Id: 200-16995-1
% Solids: 77.1 Date Received: 06/13/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.54			CV

Color Before: GRAY Clarity Before: CLOUDY Texture: FINE
Color After: COLORLESS Clarity After: CLEAR Artifacts:
Comments:

NW 08/12/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO. 2

LMR13-42-024

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 16995

Matrix: SED Lab Sample Id: 200-16995-2

% Solids: 55.7 Date Received: 06/13/2013

Concentration Units (**ug/L, ug,** or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	15.0			P
7440-43-9	Cadmium	4.7		J ~~E~~	P
7440-47-3	Chromium	61.7		J ~~E~~	P
7440-50-8	Copper	65.3		~~E~~	P
7439-92-1	Lead	158			P
7440-02-0	Nickel	37.0		J ~~E~~	P
7440-66-6	Zinc	311		J ~~E~~	P

Color Before: BROWN Clarity Before: Texture:

Color After: LIGHT YELLOW Clarity After: CLOUDY Artifacts: FINE

Comments:

NW 08/12/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO. 2

LMR13-42-024

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 16995

Matrix: SED Lab Sample Id: 200-16995-2

% Solids: 55.7 Date Received: 06/13/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.50			CV

Color Before: GRAY Clarity Before: CLOUDY Texture: FINE

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

MW 08/12/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO. 4
LMR13-42-048

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678
Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 16995
Matrix: SED | Lab Sample Id: 200-16995-4
% Solids: 58.8 | Date Received: 06/13/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	20.6			P
7440-43-9	Cadmium	1.6		J ~~E~~	P
7440-47-3	Chromium	28.0		J ~~E~~	P
7440-50-8	Copper	52.9		~~E~~	P
7439-92-1	Lead	222			P
7440-02-0	Nickel	35.9		J ~~E~~	P
7440-66-6	Zinc	327		J ~~E~~	P

Color Before: BROWN | Clarity Before: | Texture:
Color After: LIGHT YELLOW | Clarity After: CLOUDY | Artifacts: FINE
Comments:

NW 08/12/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO. 4
LMR13-42-048

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678
Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 16995
Matrix: SED Lab Sample Id: 200-16995-4
% Solids: 58.8 Date Received: 06/13/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.73			CV

Color Before: GRAY Clarity Before: CLOUDY Texture: FINE
Color After: COLORLESS Clarity After: CLEAR Artifacts:
Comments:

NW 08/12/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO. 5
LMR13-42-072

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678
Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 16995
Matrix: SED | Lab Sample Id: 200-16995-5
% Solids: 60.5 | Date Received: 06/13/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	11.6			P
7440-43-9	Cadmium	0.68	~~J~~	J ~~E~~	P
7440-47-3	Chromium	19.3		J ~~E~~	P
7440-50-8	Copper	25.1		~~E~~	P
7439-92-1	Lead	170			P
7440-02-0	Nickel	25.8		J ~~E~~	P
7440-66-6	Zinc	130		J ~~E~~	P

Color Before: BROWN | Clarity Before: | Texture:
Color After: LIGHT YELLOW | Clarity After: CLOUDY | Artifacts: FINE
Comments:

NW 08/12/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO. 5

LMR13-42-072

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 16995

Matrix: SED Lab Sample Id: 200-16995-5

% Solids: 60.5 Date Received: 06/13/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.23			CV

Color Before: GRAY Clarity Before: CLOUDY Texture: FINE

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

MW 08/12/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO. 6
LMR13-42-096

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678
Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 16995
Matrix: SED | Lab Sample Id: 200-16995-6
% Solids: 58.0 | Date Received: 06/13/2013

Concentration Units (**ug/L, ug,** or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	17.0			P
7440-43-9	Cadmium	0.73	~~J~~	J ~~E~~	P
7440-47-3	Chromium	25.8		J ~~E~~	P
7440-50-8	Copper	33.1		~~E~~	P
7439-92-1	Lead	133			P
7440-02-0	Nickel	32.0		J ~~E~~	P
7440-66-6	Zinc	200		J ~~E~~	P

Color Before: BROWN | Clarity Before: | Texture:
Color After: LIGHT YELLOW | Clarity After: CLOUDY | Artifacts: FINE
Comments:

NW 08/12/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO. 6
LMR13-42-096

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678
Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 16995
Matrix: SED Lab Sample Id: 200-16995-6
% Solids: 58.0 Date Received: 06/13/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.40			CV

Color Before: GRAY Clarity Before: CLOUDY Texture: FINE
Color After: COLORLESS Clarity After: CLEAR Artifacts:
Comments:

NW 08/12/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO. 8

LMR13-43-012

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 16995

Matrix: SED Lab Sample Id: 200-16995-8

% Solids: 55.7 Date Received: 06/13/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	9.0			P
7440-43-9	Cadmium	4.5		J ~~E~~	P
7440-47-3	Chromium	99.1		J ~~E~~	P
7440-50-8	Copper	71.6		~~E~~	P
7439-92-1	Lead	71.0			P
7440-02-0	Nickel	50.1		J ~~E~~	P
7440-66-6	Zinc	256		J ~~E~~	P

Color Before: BROWN Clarity Before: Texture:

Color After: LIGHT YELLOW Clarity After: CLOUDY Artifacts: FINE

Comments:

NW 08/12/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO. 8
LMR13-43-012

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678
Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 16995
Matrix: SED Lab Sample Id: 200-16995-8
% Solids: 55.7 Date Received: 06/13/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.48			CV

Color Before: GRAY Clarity Before: CLOUDY Texture: FINE
Color After: COLORLESS Clarity After: CLEAR Artifacts:
Comments:

NW 08/12/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO. 9

LMR13-43-024

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 16995

Matrix: SED Lab Sample Id: 200-16995-9

% Solids: 47.6 Date Received: 06/13/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	15.5			P
7440-43-9	Cadmium	15.4		J ~~E~~	P
7440-47-3	Chromium	318		J ~~E~~	P
7440-50-8	Copper	169		~~E~~	P
7439-92-1	Lead	171			P
7440-02-0	Nickel	108		J ~~E~~	P
7440-66-6	Zinc	602		J ~~E~~	P

Color Before: BROWN Clarity Before: Texture:

Color After: LIGHT YELLOW Clarity After: CLOUDY Artifacts: FINE

Comments:

NW 08/12/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO. 9

LMR13-43-024

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 16995

Matrix: SED Lab Sample Id: 200-16995-9

% Solids: 47.6 Date Received: 06/13/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	1.4			CV

Color Before: GRAY Clarity Before: CLOUDY Texture: FINE

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

NW 08/12/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO. 10
LMR13-43-024FD

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678
Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 16995
Matrix: SED Lab Sample Id: 200-16995-10
% Solids: 48.6 Date Received: 06/13/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	14.8			P
7440-43-9	Cadmium	13.7		J ~~E~~	P
7440-47-3	Chromium	291		J ~~E~~	P
7440-50-8	Copper	158		~~E~~	P
7439-92-1	Lead	157			P
7440-02-0	Nickel	102		J ~~E~~	P
7440-66-6	Zinc	552		J ~~E~~	P

Color Before: BROWN Clarity Before: Texture:
Color After: LIGHT YELLOW Clarity After: CLOUDY Artifacts: FINE
Comments:

NW 08/12/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO. 10
LMR13-43-024FD

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678
Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 16995
Matrix: SED Lab Sample Id: 200-16995-10
% Solids: 48.6 Date Received: 06/13/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	1.4			CV

Color Before: GRAY Clarity Before: CLOUDY Texture: FINE
Color After: COLORLESS Clarity After: CLEAR Artifacts:
Comments:

MW 08/12/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO. 11
LMR13-43-048

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678
Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 16995
Matrix: SED | Lab Sample Id: 200-16995-11
% Solids: 51.5 | Date Received: 06/13/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	13.3			P
7440-43-9	Cadmium	8.7		J ~~B~~	P
7440-47-3	Chromium	160		J ~~E~~	P
7440-50-8	Copper	105		~~E~~	P
7439-92-1	Lead	132			P
7440-02-0	Nickel	55.6		J ~~E~~	P
7440-66-6	Zinc	365		J ~~E~~	P

Color Before: BROWN | Clarity Before: | Texture:
Color After: LIGHT YELLOW | Clarity After: CLOUDY | Artifacts: FINE
Comments:

NW 08/12/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-43-048

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 16995

Matrix: SED Lab Sample Id: 200-16995-11

% Solids: 51.5 Date Received: 06/13/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.94			CV

Color Before: GRAY Clarity Before: CLOUDY Texture: FINE

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

NW 08/12/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO. 12

LMR13-43-096

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 16995

Matrix: SED Lab Sample Id: 200-16995-12

% Solids: 57.7 Date Received: 06/13/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	12.1			P
7440-43-9	Cadmium	7.3		J ~~E~~	P
7440-47-3	Chromium	86.1		J ~~E~~	P
7440-50-8	Copper	90.1		~~E~~	P
7439-92-1	Lead	133			P
7440-02-0	Nickel	39.3		J ~~E~~	P
7440-66-6	Zinc	321		J ~~E~~	P

Color Before: BROWN Clarity Before: Texture:

Color After: LIGHT YELLOW Clarity After: CLOUDY Artifacts: FINE

Comments:

MW 08/12/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO. 12

LMR13-43-096

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 16995

Matrix: SED Lab Sample Id: 200-16995-12

% Solids: 57.7 Date Received: 06/13/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.50			CV

Color Before: GRAY Clarity Before: CLOUDY Texture: FINE

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

MW 05/12/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO. 15
LMR13-44-012

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678
Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 16995
Matrix: SED | Lab Sample Id: 200-16995-15
% Solids: 61.8 | Date Received: 06/13/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	11.1			P
7440-43-9	Cadmium	2.8		J ~~E~~	P
7440-47-3	Chromium	51.4		J ~~E~~	P
7440-50-8	Copper	47.6		~~E~~	P
7439-92-1	Lead	91.8			P
7440-02-0	Nickel	32.2		J ~~E~~	P
7440-66-6	Zinc	211		J ~~E~~	P

Color Before: BROWN | Clarity Before: | Texture:
Color After: LIGHT YELLOW | Clarity After: CLOUDY | Artifacts: FINE
Comments:

NW 08/12/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO. 15

LMR13-44-012

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 16995

Matrix: SED Lab Sample Id: 200-16995-15

% Solids: 61.8 Date Received: 06/13/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.49			CV

Color Before: GRAY Clarity Before: CLOUDY Texture: FINE

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

MW 08/12/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO. 19
LMR13-42-120

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678
Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 16995
Matrix: SED | Lab Sample Id: 200-17017-1
% Solids: 61.2 | Date Received: 06/14/2013

Concentration Units (**ug/L, ug,** or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	10.5			P
7440-43-9	Cadmium	0.60	~~J~~	J ~~E~~	P
7440-47-3	Chromium	23.2		↓ ~~E~~	P
7440-50-8	Copper	26.7		↓ ~~E~~	P
7439-92-1	Lead	81.9			P
7440-02-0	Nickel	29.0		J ~~E~~	P
7440-66-6	Zinc	120		J ~~E~~	P

Color Before: GREY | Clarity Before: | Texture: FINE
Color After: BROWN | Clarity After: CLOUDY | Artifacts:
Comments:

NW 08/12/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO. 19

LMR13-42-120

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 16995

Matrix: SED Lab Sample Id: 200-17017-1

% Solids: 61.2 Date Received: 06/14/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.33			CV

Color Before: GRAY Clarity Before: CLOUDY Texture: FINE

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

MW 08/12/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO. 20
LMR13-43-072

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678
Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 16995
Matrix: SED | Lab Sample Id: 200-17017-2
% Solids: 55.8 | Date Received: 06/14/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	13.0			P
7440-43-9	Cadmium	8.6		J ~~B~~	P
7440-47-3	Chromium	124		↓ ~~B~~	P
7440-50-8	Copper	103		↓ ~~B~~	P
7439-92-1	Lead	127			P
7440-02-0	Nickel	45.9		J ~~B~~	P
7440-66-6	Zinc	335		J ~~B~~	P

Color Before: BROWN | Clarity Before: | Texture: FINE
Color After: BROWN | Clarity After: CLOUDY | Artifacts:
Comments:

MW 08/12/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO. 20
LMR13-43-072

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678
Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 16995
Matrix: SED Lab Sample Id: 200-17017-2
% Solids: 55.8 Date Received: 06/14/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.69			CV

Color Before: GRAY Clarity Before: CLOUDY Texture: FINE
Color After: COLORLESS Clarity After: CLEAR Artifacts:
Comments:

NW 08/12/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO. 21

LMR13-43-120

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 16995

Matrix: SED Lab Sample Id: 200-17017-3

% Solids: 57.5 Date Received: 06/14/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	12.7			P
7440-43-9	Cadmium	9.7		J ~~E~~	P
7440-47-3	Chromium	81.5		↓ ~~E~~	P
7440-50-8	Copper	80.3		↓ ~~E~~	P
7439-92-1	Lead	192			P
7440-02-0	Nickel	36.8		J ~~E~~	P
7440-66-6	Zinc	444		J ~~E~~	P

Color Before: BROWN Clarity Before: Texture: FINE

Color After: BROWN Clarity After: CLOUDY Artifacts:

Comments:

MW 08/12/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO. 21
LMR13-43-120

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678
Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 16995
Matrix: SED Lab Sample Id: 200-17017-3
% Solids: 57.5 Date Received: 06/14/2013

Concentration Units (**ug/L, ug,** or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.58			CV

Color Before: GRAY Clarity Before: CLOUDY Texture: FINE
Color After: COLORLESS Clarity After: CLEAR Artifacts:
Comments:

MW 08/12/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO. 23
LMR13-44-024

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678
Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 16995
Matrix: SED | Lab Sample Id: 200-17017-5
% Solids: 69.1 | Date Received: 06/14/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	11.6			P
7440-43-9	Cadmium	3.3		J ~~B~~	P
7440-47-3	Chromium	58.5		↓ ~~B~~	P
7440-50-8	Copper	49.3		↓ ~~B~~	P
7439-92-1	Lead	91.7			P
7440-02-0	Nickel	30.4		J ~~B~~	P
7440-66-6	Zinc	215		↓ ~~B~~	P

Color Before: GREY | Clarity Before: | Texture: FINE
Color After: BROWN | Clarity After: CLOUDY | Artifacts:
Comments:

NW 08/12/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO. 23
LMR13-44-024

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678
Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 16995
Matrix: SED Lab Sample Id: 200-17017-5
% Solids: 69.1 Date Received: 06/14/2013

Concentration Units (**ug/L, ug,** or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.096	J		CV

Color Before: GRAY Clarity Before: CLOUDY Texture: FINE
Color After: COLORLESS Clarity After: CLEAR Artifacts:
Comments:

NW 08/12/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO. 25
LMR13-44-048

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678
Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 16995
Matrix: SED | Lab Sample Id: 200-17017-7
% Solids: 71.2 | Date Received: 06/14/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	4.6			P
7440-43-9	Cadmium	0.39	~~J~~	J ~~E~~	P
7440-47-3	Chromium	13.1		↓ ~~E~~	P
7440-50-8	Copper	13.9		↓ ~~E~~	P
7439-92-1	Lead	13.6			P
7440-02-0	Nickel	18.9		J ~~E~~	P
7440-66-6	Zinc	48.8		J ~~E~~	P

Color Before: BROWN | Clarity Before: | Texture: FINE
Color After: BROWN | Clarity After: CLOUDY | Artifacts:
Comments:

NW 08/12/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO. 25
LMR13-44-048

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678
Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 16995
Matrix: SED | Lab Sample Id: 200-17017-7
% Solids: 71.2 | Date Received: 06/14/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.065	J		CV

Color Before: GRAY | Clarity Before: CLOUDY | Texture: FINE
Color After: COLORLESS | Clarity After: CLEAR | Artifacts:
Comments:

MW 08/12/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO. 26
LMR13-44-048FD

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678
Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 16995
Matrix: SED | Lab Sample Id: 200-17017-8
% Solids: 72.3 | Date Received: 06/14/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	4.4			P
7440-43-9	Cadmium	0.34	~~J~~	~~J~~ ~~E~~	P
7440-47-3	Chromium	12.4		↓ ~~E~~	P
7440-50-8	Copper	12.3		↓ ~~E~~	P
7439-92-1	Lead	13.5			P
7440-02-0	Nickel	17.2		J ~~E~~	P
7440-66-6	Zinc	45.9		J ~~E~~	P

Color Before: BROWN | Clarity Before: | Texture: FINE
Color After: BROWN | Clarity After: CLOUDY | Artifacts:
Comments:

MW 08/12/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO. 26
LMR13-44-048FD

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678
Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 16995
Matrix: SED Lab Sample Id: 200-17017-8
% Solids: 72.3 Date Received: 06/14/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.15			CV

Color Before: GRAY Clarity Before: CLOUDY Texture: FINE
Color After: COLORLESS Clarity After: CLEAR Artifacts:
Comments:

MW 08/12/13

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - SEM/AVS

Client Sample ID: LMR13-42-012
Lab Sample ID: 200-16995-1
Lab Name: TestAmerica Burlington
Job No.: 200-16995-1
SDG ID.: 16995
Matrix: Sediment
Date Sampled: 06/12/2013 08:30
Reporting Basis: DRY
Date Received: 06/13/2013 10:50
% Solids: 77.1

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-43-9	Cadmium SEM	2.4	1.6	0.25	mg/Kg			10	6010C
7440-43-9	Cadmium SEM	0.022	0.014	0.0022	umol/g			10	6010C
7440-50-8	Copper SEM	1.4	8.0	0.70	mg/Kg	J		10	6010C
7440-50-8	Copper SEM	0.022	0.13	0.011	umol/g	J		10	6010C
7439-92-1	Lead SEM	28.2	3.2	1.4	mg/Kg			10	6010C
7439-92-1	Lead SEM	0.14	0.016	0.0069	umol/g			10	6010C
7440-02-0	Nickel SEM	8.4	13.0	0.93	mg/Kg	J		10	6010C
7440-02-0	Nickel SEM	0.14	0.22	0.016	umol/g	J		10	6010C
7440-66-6	Zinc SEM	85.2	6.5	1.8	mg/Kg			10	6010C
7440-66-6	Zinc SEM	1.3	0.099	0.028	umol/g			10	6010C
7439-97-6	Mercury SEM	0.0039	0.0065	0.0021	mg/Kg	J		1	7470A
7439-97-6	Mercury SEM	0.000020	0.000032	0.000011	umol/g	J		1	7470A

MW 08/12/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY - SEM/AVS

Client Sample ID: LMR13-42-012 | Lab Sample ID: 200-16995-1

Lab Name: TestAmerica Burlington | Job No.: 200-16995-1

SDG ID.: 16995

Matrix: Sediment | Date Sampled: 06/12/2013 08:30

Reporting Basis: DRY | Date Received: 06/13/2013 10:50

% Solids: 77.1

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
18496-25-8	Acid Volatile Sulfides (AVS)	337	20.7		mg/Kg			1	AVS
18496-25-8	Acid Volatile Sulfides (AVS)	10.5	0.65		umol/g			1	AVS

NW 08/12/13

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - SEM/AVS

Client Sample ID: LMR13-42-012 | Lab Sample ID: 200-16995-1

Lab Name: TestAmerica Burlington | Job No.: 200-16995-1

SDG ID.: 16995

Matrix: Sediment | Date Sampled: 06/12/2013 08:30

Reporting Basis: WET | Date Received: 06/13/2013 10:50

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	SEM/AVS Ratio	0.155	0.00100	0.00100	NONE			1	SEM

AW 08/12/13

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - SEM/AVS

15

Client Sample ID: LMR13-44-012 Lab Sample ID: 200-16995-15

Lab Name: TestAmerica Burlington Job No.: 200-16995-1

SDG ID.: 16995

Matrix: Sediment Date Sampled: 06/12/2013 11:30

Reporting Basis: DRY Date Received: 06/13/2013 10:50

% Solids: 61.8

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-43-9	Cadmium SEM	1.1	1.9	0.31	mg/Kg	J		10	6010C
7440-43-9	Cadmium SEM	0.0098	0.017	0.0027	umol/g	J		10	6010C
7440-50-8	Copper SEM	2.8	10	0.87	mg/Kg	J		10	6010C
7440-50-8	Copper SEM	0.044	0.16	0.014	umol/g	J		10	6010C
7439-92-1	Lead SEM	22.2	4.0	1.8	mg/Kg			10	6010C
7439-92-1	Lead SEM	0.11	0.019	0.0086	umol/g			10	6010C
7440-02-0	Nickel SEM	4.8	16.1	1.2	mg/Kg	J		10	6010C
7440-02-0	Nickel SEM	0.082	0.27	0.020	umol/g	J		10	6010C
7440-66-6	Zinc SEM	52.6	8.1	2.3	mg/Kg			10	6010C
7440-66-6	Zinc SEM	0.80	0.12	0.035	umol/g			10	6010C
7439-97-6	Mercury SEM	0.0081	0.0081	0.0027	mg/Kg	U		1	7470A
7439-97-6	Mercury SEM	0.000040	0.000040	0.000013	umol/g	U		1	7470A

NW 08/12/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY - SEM/AVS

15

Client Sample ID: LMR13-44-012 Lab Sample ID: 200-16995-15

Lab Name: TestAmerica Burlington Job No.: 200-16995-1

SDG ID.: 16995

Matrix: Sediment Date Sampled: 06/12/2013 11:30

Reporting Basis: DRY Date Received: 06/13/2013 10:50

% Solids: 61.8

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
18496-25-8	Acid Volatile Sulfides (AVS)	174	25.8		mg/Kg			1	AVS
18496-25-8	Acid Volatile Sulfides (AVS)	5.4	0.80		umol/g			1	AVS

NW 08/12/13

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - SEM/AVS

15

Client Sample ID: LMR13-44-012 Lab Sample ID: 200-16995-15

Lab Name: TestAmerica Burlington Job No.: 200-16995-1

SDG ID.: 16995

Matrix: Sediment Date Sampled: 06/12/2013 11:30

Reporting Basis: WET Date Received: 06/13/2013 10:50

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	SEM/AVS Ratio	0.193	0.00100	0.00100	NONE			1	SEM

NW 08/12/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

1

Client Sample ID: LMR13-42-012 | Lab Sample ID: 200-16995-1

Lab Name: TestAmerica Burlington | Job No.: 200-16995-1

SDG ID.: 16995

Matrix: Sediment | Date Sampled: 06/12/2013 08:30

Reporting Basis: WET | Date Received: 06/13/2013 10:50

% Solids: 77.1

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	24800	1000		mg/Kg			1	Lloyd Kahn

NW 06/12/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

2

Client Sample ID: LMR13-42-024
Lab Sample ID: 200-16995-2
Lab Name: TestAmerica Burlington
Job No.: 200-16995-1
SDG ID.: 16995
Matrix: Sediment
Date Sampled: 06/12/2013 08:40
Reporting Basis: WET
Date Received: 06/13/2013 10:50
% Solids: 55.7

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	37000	1000		mg/Kg			1	Lloyd Kahn

NW 08/12/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

4

Client Sample ID: LMR13-42-048
Lab Sample ID: 200-16995-4
Lab Name: TestAmerica Burlington
Job No.: 200-16995-1
SDG ID.: 16995
Matrix: Sediment
Date Sampled: 06/12/2013 08:50
Reporting Basis: WET
Date Received: 06/13/2013 10:50
% Solids: 58.8

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	31200	1000		mg/Kg			1	Lloyd Kahn

NW 08/12/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

5

Client Sample ID: LMR13-42-072
Lab Sample ID: 200-16995-5
Lab Name: TestAmerica Burlington
Job No.: 200-16995-1
SDG ID.: 16995
Matrix: Sediment
Date Sampled: 06/12/2013 09:00
Reporting Basis: WET
Date Received: 06/13/2013 10:50
% Solids: 60.5

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	26200	1000		mg/Kg			1	Lloyd Kahn

MW 08/12/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

6

Client Sample ID: LMR13-42-096
Lab Sample ID: 200-16995-6
Lab Name: TestAmerica Burlington
Job No.: 200-16995-1
SDG ID.: 16995
Matrix: Sediment
Date Sampled: 06/12/2013 09:10
Reporting Basis: WET
Date Received: 06/13/2013 10:50
% Solids: 58.0

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	30200	1000		mg/Kg			1	Lloyd Kahn

NW 08/12/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

8

Client Sample ID: LMR13-43-012
Lab Sample ID: 200-16995-8
Lab Name: TestAmerica Burlington
Job No.: 200-16995-1
SDG ID.: 16995
Matrix: Sediment
Date Sampled: 06/12/2013 10:15
Reporting Basis: WET
Date Received: 06/13/2013 10:50
% Solids: 55.7

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	26700	1000		mg/Kg			1	Lloyd Kahn

MW 08/12/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

9

Client Sample ID: LMR13-43-024
Lab Sample ID: 200-16995-9
Lab Name: TestAmerica Burlington
Job No.: 200-16995-1
SDG ID.: 16995
Matrix: Sediment
Date Sampled: 06/12/2013 10:25
Reporting Basis: WET
Date Received: 06/13/2013 10:50
% Solids: 47.6

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	45900	1000		mg/Kg			1	Lloyd Kahn

NW 08/12/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: LMR13-43-024FD
Lab Sample ID: 200-16995-10
10
Lab Name: TestAmerica Burlington
Job No.: 200-16995-1
SDG ID.: 16995
Matrix: Sediment
Date Sampled: 06/12/2013 10:25
Reporting Basis: WET
Date Received: 06/13/2013 10:50
% Solids: 48.6

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	45500	1000		mg/Kg			1	Lloyd Kahn

NW 08/12/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

11

Client Sample ID: LMR13-43-048
Lab Sample ID: 200-16995-11
Lab Name: TestAmerica Burlington
Job No.: 200-16995-1
SDG ID.: 16995
Matrix: Sediment
Date Sampled: 06/12/2013 10:35
Reporting Basis: WET
Date Received: 06/13/2013 10:50
% Solids: 51.5

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	45100	1000		mg/Kg			1	Lloyd Kahn

NW 08/12/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

12

Client Sample ID: LMR13-43-096
Lab Sample ID: 200-16995-12
Lab Name: TestAmerica Burlington
Job No.: 200-16995-1
SDG ID.: 16995
Matrix: Sediment
Date Sampled: 06/12/2013 10:55
Reporting Basis: WET
Date Received: 06/13/2013 10:50
% Solids: 57.7

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	31100	1000		mg/Kg			1	Lloyd Kahn

NW 08/12/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

15

Client Sample ID: LMR13-44-012 Lab Sample ID: 200-16995-15

Lab Name: TestAmerica Burlington Job No.: 200-16995-1

SDG ID.: 16995

Matrix: Sediment Date Sampled: 06/12/2013 11:30

Reporting Basis: WET Date Received: 06/13/2013 10:50

% Solids: 61.8

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	26000	1000		mg/Kg			1	Lloyd Kahn

NW 08/12/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

19

Client Sample ID: LMR13-42-120 | Lab Sample ID: 200-17017-1

Lab Name: TestAmerica Burlington | Job No.: 200-16995-1

SDG ID.: 16995

Matrix: Sediment | Date Sampled: 06/12/2013 09:20

Reporting Basis: WET | Date Received: 06/14/2013 10:40

% Solids: 61.2

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	24200	1000		mg/Kg			1	Lloyd Kahn

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1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

20

Client Sample ID: LMR13-43-072
Lab Sample ID: 200-17017-2
Lab Name: TestAmerica Burlington
Job No.: 200-16995-1
SDG ID.: 16995
Matrix: Sediment
Date Sampled: 06/12/2013 10:45
Reporting Basis: WET
Date Received: 06/14/2013 10:40
% Solids: 55.8

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	31700	1000		mg/Kg			1	Lloyd Kahn

NW 08/12/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

21

Client Sample ID: LMR13-43-120 Lab Sample ID: 200-17017-3

Lab Name: TestAmerica Burlington Job No.: 200-16995-1

SDG ID.: 16995

Matrix: Sediment Date Sampled: 06/12/2013 11:05

Reporting Basis: WET Date Received: 06/14/2013 10:40

% Solids: 57.5

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	34800	1000		mg/Kg			1	Lloyd Kahn

MW 08/12/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

23

Client Sample ID: LMR13-44-024 Lab Sample ID: 200-17017-5

Lab Name: TestAmerica Burlington Job No.: 200-16995-1

SDG ID.: 16995

Matrix: Sediment Date Sampled: 06/12/2013 11:40

Reporting Basis: WET Date Received: 06/14/2013 10:40

% Solids: 69.1

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	20000	1000		mg/Kg			1	Lloyd Kahn

NW 08/12/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

25

Client Sample ID: LMR13-44-048
Lab Sample ID: 200-17017-7
Lab Name: TestAmerica Burlington
Job No.: 200-16995-1
SDG ID.: 16995
Matrix: Sediment
Date Sampled: 06/12/2013 11:50
Reporting Basis: WET
Date Received: 06/14/2013 10:40
% Solids: 71.2

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	23600	1000		mg/Kg			1	Lloyd Kahn

NW 08/12/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

26

Client Sample ID: LMR13-44-048FD
Lab Sample ID: 200-17017-8
Lab Name: TestAmerica Burlington
Job No.: 200-16995-1
SDG ID.: 16995
Matrix: Sediment
Date Sampled: 06/12/2013 11:50
Reporting Basis: WET
Date Received: 06/14/2013 10:40
% Solids: 72.3

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	20700	1000		mg/Kg			1	Lloyd Kahn

NW 08/12/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: LMR13-42-012
Lab Sample ID: 200-16995-1
Lab Name: TestAmerica Canton
Job No.: 200-16995-1
SDG ID.: 16995
Matrix: Sediment
Date Sampled: 06/12/2013 08:30
Reporting Basis: DRY
Date Received: 06/13/2013 10:50
% Solids: 77.1

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	4840	J	258	114	mg/Kg		1	9071B

NW 08/12/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

2

Client Sample ID: LMR13-42-024
Lab Sample ID: 200-16995-2
Lab Name: TestAmerica Canton
Job No.: 200-16995-1
SDG ID.: 16995
Matrix: Sediment
Date Sampled: 06/12/2013 08:40
Reporting Basis: DRY
Date Received: 06/13/2013 10:50
% Solids: 55.7

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	2720 J	361	159	mg/Kg		B	1	9071B

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1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

3

Client Sample ID: LMR13-42-024FD
Lab Sample ID: 200-16995-3
Lab Name: TestAmerica Canton
Job No.: 200-16995-1
SDG ID.: 16995
Matrix: Sediment
Date Sampled: 06/12/2013 08:40
Reporting Basis: DRY
Date Received: 06/13/2013 10:50
% Solids: 57.0

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	2030 J	350	155	mg/Kg		B	1	9071B

NW 08/12/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

4

Client Sample ID: LMR13-42-048
Lab Sample ID: 200-16995-4
Lab Name: TestAmerica Canton
Job No.: 200-16995-1
SDG ID.: 16995
Matrix: Sediment
Date Sampled: 06/12/2013 08:50
Reporting Basis: DRY
Date Received: 06/13/2013 10:50
% Solids: 58.8

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	4540 J	340	150	mg/Kg		B	1	9071B

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1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

5

Client Sample ID: LMR13-42-072
Lab Sample ID: 200-16995-5
Lab Name: TestAmerica Canton
Job No.: 200-16995-1
SDG ID.: 16995
Matrix: Sediment
Date Sampled: 06/12/2013 09:00
Reporting Basis: DRY
Date Received: 06/13/2013 10:50
% Solids: 60.5

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	1100 J	332	147	mg/Kg		B	1	9071B

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1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

6

Client Sample ID: LMR13-42-096
Lab Sample ID: 200-16995-6
Lab Name: TestAmerica Canton
Job No.: 200-16995-1
SDG ID.: 16995
Matrix: Sediment
Date Sampled: 06/12/2013 09:10
Reporting Basis: DRY
Date Received: 06/13/2013 10:50
% Solids: 58.0

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	970	J 346	153	mg/Kg			1	9071B

NW 06/12/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

7

Client Sample ID: LMR13-42-120
Lab Sample ID: 200-16995-7
Lab Name: TestAmerica Canton
Job No.: 200-16995-1
SDG ID.: 16995
Matrix: Sediment
Date Sampled: 06/12/2013 09:20
Reporting Basis: DRY
Date Received: 06/13/2013 10:50
% Solids: 60.5

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	963	J 332	147	mg/Kg		F	1	9071B

MW 08/12/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

8

Client Sample ID: LMR13-43-012
Lab Sample ID: 200-16995-8
Lab Name: TestAmerica Canton
Job No.: 200-16995-1
SDG ID.: 16995
Matrix: Sediment
Date Sampled: 06/12/2013 10:15
Reporting Basis: DRY
Date Received: 06/13/2013 10:50
% Solids: 55.7

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	3800	J 361	159	mg/Kg		F	1	9071B

MW 08/12/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

9

Client Sample ID: LMR13-43-024
Lab Sample ID: 200-16995-9
Lab Name: TestAmerica Canton
Job No.: 200-16995-1
SDG ID.: 16995
Matrix: Sediment
Date Sampled: 06/12/2013 10:25
Reporting Basis: DRY
Date Received: 06/13/2013 10:50
% Solids: 47.6

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	6110	J 421	186	mg/Kg		F	1	9071B

NW 08/12/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

11

Client Sample ID: LMR13-43-048
Lab Sample ID: 200-16995-11
Lab Name: TestAmerica Canton
Job No.: 200-16995-1
SDG ID.: 16995
Matrix: Sediment
Date Sampled: 06/12/2013 10:35
Reporting Basis: DRY
Date Received: 06/13/2013 10:50
% Solids: 51.5

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	6310	J 387	171	mg/Kg		J	1	9071B

NW 6/12/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

12

Client Sample ID: LMR13-43-096 | Lab Sample ID: 200-16995-12

Lab Name: TestAmerica Canton | Job No.: 200-16995-1

SDG ID.: 16995

Matrix: Sediment | Date Sampled: 06/12/2013 10:55

Reporting Basis: DRY | Date Received: 06/13/2013 10:50

% Solids: 57.7

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	1270 J	348	154	mg/Kg		P	1	9071B

NW 08/12/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

13

Client Sample ID: LMR13-43-120
Lab Sample ID: 200-16995-13
Lab Name: TestAmerica Canton
Job No.: 200-16995-1
SDG ID.: 16995
Matrix: Sediment
Date Sampled: 06/12/2013 11:05
Reporting Basis: DRY
Date Received: 06/13/2013 10:50
% Solids: 56.8

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	2140	J 350	155	mg/Kg		P	1	9071B

MW 08/12/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

14

Client Sample ID: LMR13-43-072
Lab Sample ID: 200-16995-14
Lab Name: TestAmerica Canton
Job No.: 200-16995-1
SDG ID.: 16995
Matrix: Sediment
Date Sampled: 06/12/2013 10:45
Reporting Basis: DRY
Date Received: 06/13/2013 10:50
% Solids: 56.1

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	6340	J 349	154	mg/Kg		B	1	9071B

MW 08/12/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

15

Client Sample ID: LMR13-44-012 | Lab Sample ID: 200-16995-15

Lab Name: TestAmerica Canton | Job No.: 200-16995-1

SDG ID.: 16995

Matrix: Sediment | Date Sampled: 06/12/2013 11:30

Reporting Basis: DRY | Date Received: 06/13/2013 10:50

% Solids: 61.8

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	1620	J 325	143	mg/Kg		J	1	9071B

NW 08/12/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

16

Client Sample ID: LMR13-44-024 | Lab Sample ID: 200-16995-16

Lab Name: TestAmerica Canton | Job No.: 200-16995-1

SDG ID.: 16995

Matrix: Sediment | Date Sampled: 06/12/2013 11:40

Reporting Basis: DRY | Date Received: 06/13/2013 10:50

% Solids: 69.1

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	288 ~~202~~	U 288	127	mg/Kg			1	9071B

NW 08/12/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

17

Client Sample ID: LMR13-44-024FD
Lab Sample ID: 200-16995-17
Lab Name: TestAmerica Canton
Job No.: 200-16995-1
SDG ID.: 16995
Matrix: Sediment
Date Sampled: 06/12/2013 11:40
Reporting Basis: DRY
Date Received: 06/13/2013 10:50
% Solids: 69.1

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	289 ~~217~~	U 289	128	mg/Kg			1	9071B

NW 08/12/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

18

Client Sample ID: LMR13-44-048
Lab Sample ID: 200-16995-18
Lab Name: TestAmerica Canton
Job No.: 200-16995-1
SDG ID.: 16995
Matrix: Sediment
Date Sampled: 06/12/2013 11:50
Reporting Basis: DRY
Date Received: 06/13/2013 10:50
% Solids: 70.4

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	280	280	124	mg/Kg	U		1	9071B

MW 08/12/13

ENVIRONMENTAL
Data Services, Inc.

DATA VALIDATION SUMMARY REPORT
LOWER MAUMEE RIVER, TOLEDO, OHIO

Client: EA Engineering, Science & Technology, Inc., Hunt Valley, Maryland
SDG: 200-16999
Laboratory: Test America Laboratories, Burlington, Vermont
Test America Laboratories, North Canton, Ohio
Site: Lower Maumee River, Maumee Area of Concern, Toledo, Ohio
Date: August 12, 2013

SVOC/PCB			
EDS ID	Client Sample ID	Laboratory Sample ID	Matrix
1	LMR13-44-072	200-16999-1	Sediment
2	LMR13-44-096	200-16999-2	Sediment
3	LMR13-46-012	200-16999-3	Sediment
4	LMR13-46-024	200-16999-4	Sediment
5*	LMR13-46-024FD	200-16999-5	Sediment
6	LMR13-46-048	200-16999-6	Sediment
7	LMR13-46-072	200-16999-7	Sediment
7DL†	LMR13-46-072DL	200-16999-7DL	Sediment
8	LMR13-46-096	200-16999-8	Sediment
8DL†	LMR13-46-096DL	200-16999-8DL	Sediment
9	LMR13-46-120	200-16999-9	Sediment
9DL†	LMR13-46-120DL	200-16999-9DL	Sediment
10	LMR13-81-012	200-16999-10	Sediment
11*	LMR13-81-012FD	200-16999-11	Sediment
12	LMR13-81-024	200-16999-12	Sediment
13*	LMR13-81-024FD	200-16999-13	Sediment
14	LMR13-81-048	200-16999-14	Sediment
14MS*	LMR13-81-048MS	200-16999-14MS	Sediment
14MSD*	LMR13-81-048MSD	200-16999-14MSD	Sediment
15	LMR13-81-072	200-16999-15	Sediment
15MS†	LMR13-81-072MS	200-16999-15MS	Sediment
15MSD†	LMR13-81-072MSD	200-16999-15MSD	Sediment
16	LMR13-81-096	200-16999-16	Sediment
17	LMR13-81-120	200-16999-17	Sediment

* - Analyzed for SVOC only † - Analyzed for PCB only

PAH 34			
EDS ID	Client Sample ID	Laboratory Sample ID	Matrix
10	LMR13-81-012	200-16999-10	Sediment
10DL	LMR13-81-012DL	200-16999-10DL	Sediment
11	LMR13-81-012FD	200-16999-11	Sediment
11DL	LMR13-81-012FDDL	200-16999-11DL	Sediment

Metals/Mercury/TOC			
EDS ID	Client Sample ID	Laboratory Sample ID	Matrix
1	LMR13-44-072	200-16999-1	Sediment
2	LMR13-44-096	200-16999-2	Sediment
3	LMR13-46-012	200-16999-3	Sediment
4	LMR13-46-024	200-16999-4	Sediment
6	LMR13-46-048	200-16999-6	Sediment
7	LMR13-46-072	200-16999-7	Sediment
8	LMR13-46-096	200-16999-8	Sediment
9	LMR13-46-120	200-16999-9	Sediment
10	LMR13-81-012	200-16999-10	Sediment
12	LMR13-81-024	200-16999-12	Sediment
14	LMR13-81-048	200-16999-14	Sediment
15	LMR13-81-072	200-16999-15	Sediment
16	LMR13-81-096	200-16999-16	Sediment
16MS	LMR13-81-096MS	200-16999-16MS	Sediment
16DUP	LMR13-81-096DUP	200-16999-16DUP	Sediment
17	LMR13-81-120	200-16999-17	Sediment

AVS/SEM			
EDS ID	Client Sample ID	Laboratory Sample ID	Matrix
10	LMR13-81-012	200-16999-10	Sediment
11	LMR13-81-012FD	200-16999-11	Sediment
18	LMR13-42-012FD	200-16999-18	Sediment

HEM			
EDS ID	Client Sample ID	Laboratory Sample ID	Matrix
1	LMR13-44-072	200-16999-1	Sediment
2	LMR13-44-096	200-16999-2	Sediment
3	LMR13-46-012	200-16999-3	Sediment
4	LMR13-46-024	200-16999-4	Sediment
5	LMR13-46-024FD	200-16999-5	Sediment
6	LMR13-46-048	200-16999-6	Sediment
7	LMR13-46-072	200-16999-7	Sediment
8	LMR13-46-096	200-16999-8	Sediment
9	LMR13-46-120	200-16999-9	Sediment
10	LMR13-81-012	200-16999-10	Sediment
12	LMR13-81-024	200-16999-12	Sediment
13	LMR13-81-024FD	200-16999-13	Sediment
14	LMR13-81-048	200-16999-14	Sediment
15	LMR13-81-072	200-16999-15	Sediment
16	LMR13-81-096	200-16999-16	Sediment
17	LMR13-81-120	200-16999-17	Sediment
17MS	LMR13-81-120MS	200-16999-17MS	Sediment
17MSD	LMR13-81-120MSD	200-16999-17MSD	Sediment

A full data validation was performed on the analytical data for eighteen sediment samples collected on June 12, 2013 by EA Engineering at the Lower Maumee River site in Toledo, Ohio. The samples were analyzed under the Environmental Protection Agency (USEPA) Contract Laboratory Program (CLP) Multi-Media Multi-Concentration Organics Analysis SOM01.2 and Inorganic Analysis ILM05.4 and the Test Methods for the Evaluation of Solid Waste, USEPA SW-846, Third Edition, September 1986, with revisions.

Specific method references are as follows:

Analysis	*Method References*
SVOCs	USEPA CLP SOM01.2
PAH 34	USEPA CLP SOM01.2
PCBs	USEPA CLP SOM01.2
Michigan Metals & Mercury	USEPA CLP ISM01.3
AVS/SEM	USEPA SW-846 Methods 6010C/7470A
TOC	Lloyd Kahn
Oil & Grease (HEM)	USEPA SW-846 Method 9071B

The data have been validated according to the protocols and quality control (QC) requirements of the analytical methods, the Great Lakes Legacy Act, March 2010, the Quality Assurance Project Plan for Phase 2 of the Lower Maumee River Site Characterization, May 2013, and the USEPA National Functional Guidelines for Organic Data Review as follows:

- The USEPA "Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review," June 2008;
- The USEPA "Contract Laboratory Program National Functional Guidelines for Inorganic Superfund Data Review," January 2010;
- and the reviewer's professional judgment.

The following items/criteria were reviewed for this report:

Organics

- Holding times and sample preservation
- Gas Chromatography/Mass Spectroscopy (GC/MS) Tuning
- Initial and continuing calibration summaries
- Method blank and field blank contamination
- Surrogate Spike recoveries
- Matrix Spike/Matrix Spike Duplicate (MS/MSD) recoveries
- Laboratory Control Sample (LCS) recoveries
- Internal standard area and retention time summary forms
- Target Compound Identification
- Compound Quantitation
- Tentatively Identified Compounds (TICs)
- Field Duplicate sample precision

Inorganics

- Holding times and sample preservation
- ICP/MS Tuning
- Initial and continuing calibration verifications
- Method blank and field blank contamination
- ICP Interference Check Sample
- Laboratory Control Sample (LCS) recoveries
- Matrix Spike Analysis
- Duplicate Sample Analysis

- ICP Serial Dilution
- Compound Quantitation
- Field Duplicate sample precision

Overall Usability Issues:

There were minor rejections of data. This data cannot be used in the decision-making process for this project.

- Three SVOC compounds were rejected in two samples due to severely low surrogate recoveries.

Overall the remaining data is acceptable for the intended purposes as qualified for the deficiencies detailed in this report.

Please note that any results qualified (U) due to blank contamination may be then qualified (J) due to another action. Therefore, the results may be qualified (UJ) due to the culmination of the blank contaminations and actions from other exceedences of QC criteria.

Semivolatile Organic Compounds (SVOCs)

Holding Times

- All samples were extracted within 14 days for sediment samples and analyzed within 40 days for all samples.

GC/MS Tuning

- All criteria were met.

Initial Calibration

- All %RSD and mean RRF criteria were met except the following.

ICAL Date	Compound	%RSD/RRF	Qualifier	Affected Samples
07/24/13	2,4-Dinitrophenol	34.2%	J/UJ	9

Continuing Calibration

- All %D and RRF criteria were met except the following.

CCAL Date	Compound	%D/RRF	Qualifier	Affected Samples
07/15/13 (1414)	Pentachlorophenol	28.6%	J/UJ	8, 17
07/15/13 (2359)	Hexachlorocyclopentadiene	50.8%	J/UJ	
07/16/13 (2141)	Hexachlorocyclopentadiene	72.8%	J/UJ	10-16
07/18/13 (0108)	Hexachlorocyclopentadiene	85.9%	J/UJ	7
07/27/13 (0926)	Indeno(1,2,3-cd)pyrene	29.2%	J/UJ	9
	Dibenzo(a,h)anthracene	25.7%	J/UJ	
	Benzo(g,h,i)perylene	31.4%	J/UJ	
07/27/13 (1931)	Hexachlorocyclopentadiene	67.6%	J/UJ	

Method Blank

- The method blanks exhibited the following contamination.

Blank ID	Compound	Conc. ug/kg	Qualifier	Affected Samples
SBLKL5	Butylbenzylphthalate	15	U	1, 2, 15, 17
	bis(2-Ethylhexyl)phthalate	30	U	1, 2, 10, 12-17

Field Blank

- Field QC samples were not analyzed.

Surrogate Spike Recoveries

- All samples exhibited acceptable surrogate %R values except the following.

Sample ID	Surrogate	%R	Qualifier
1	Phenol-d5	106%	J - Positive Results
	4-Chloroaniline-d4	0%	R - Associated Compounds
2	Phenol-d5	105%	J - Positive Results
	4-Chloroaniline-d4	0%	R - Associated Compounds
17	Phenol-d5	107%	J - Positive Results
	4-Methylphenol-d8	113%	
Several	Several	Diluted*	Dilution Results Not Valid

Matrix Spike/Matrix Spike Duplicate (MS/MSD) Recoveries

- The MS/MSD sample exhibited acceptable %R and RPD values except the following.

MS/MSD Sample ID	Compound	MS %R/MSD %R/ RPD	Qualifier
14	Pyrene	OK/10%/115	J

Laboratory Control Samples

- A LCS sample was not analyzed.

Internal Standard (IS) Area Performance

- All internal standards met response and retention time (RT) criteria.

Target Compound Identification

- All mass spectra and quantitation criteria were met.

Compound Quantitation

- Several samples were analyzed at a dilution due to high concentrations of target compounds. No action was required.

Field Duplicate Sample Precision

- Field duplicate results are summarized below.

SVOC				
Compound	LMR13-46-024 ug/kg	LMR13-46-024FD ug/kg	RPD	Qualifier
Benzaldehyde	170	140	19%	None
Acetophenone	240	100	82%	
Naphthalene	180	1600U	NC	
4-Chloroaniline	1200	1100	9%	
2-Methylnaphthalene	220	200	10%	
Acenaphthylene	210	170	21%	
Acenaphthene	240	230	4%	
Dibenzofuran	190	190	0%	
Fluorene	430	410	5%	
Phenanthrene	1900	1700	11%	
Anthracene	760	640	17%	
Fluoranthene	3200	2800	13%	
Pyrene	4400	4000	10%	
Benzo(a)anthracene	2100	1900	10%	
Chrysene	2700	2300	16%	
bis(2-Ethylhexyl)phthalate	22000	21000	5%	
di-n-Octylphthalate	1400	1300	7%	
Benzo(b)fluoranthene	2500	2300	8%	
Benzo(k)fluoranthene	1700	2000	16%	
Benzo(a)pyrene	2300	2100	9%	
Indeno(1,2,3-cd)pyrene	1100	1000	10%	
Dibenzo(a,h)anthracene	410	350	16%	
Benzo(g,h,i)perylene	1200	1100	9%	

SVOC				
Compound	LMR13-81-012 ug/kg	LMR13-81-012FD ug/kg	RPD	Qualifier
Naphthalene	60	61	2%	None
2-Methylnaphthalene	520U	46	NC	
Acenaphthylene	140	120	15%	None
Acenaphthene	270	310	14%	
Dibenzofuran	47	93	66%	
Fluorene	480	450	6%	
Phenanthrene	2900	3200	10%	
Anthracene	630	510	21%	
Fluoranthene	2700	2400	12%	
Pyrene	3400	3100	9%	
Benzo(a)anthracene	2000	1500	29%	
Chrysene	2500	2000	22%	
bis(2-Ethylhexyl)phthalate	520U	1100	NC	
Benzo(b)fluoranthene	1600	1100	37%	
Benzo(k)fluoranthene	990	960	3%	
Benzo(a)pyrene	1500	1100	31%	
Indeno(1,2,3-cd)pyrene	660	500	28%	
Dibenzo(a,h)anthracene	290	180	47%	
Benzo(g,h,i)perylene	800	600	29%	

SVOC				
Compound	LMR13-81-24 ug/kg	LMR13-81-24FD ug/kg	RPD	Qualifier
Naphthalene	71	70	1%	None
2-Methylnaphthalene	21	57	92%	
Acenaphthylene	130	140	7%	
Acenaphthene	340	370	8%	
Dibenzofuran	78	83	6%	
Fluorene	600	610	2%	
Phenanthrene	3700	3900	5%	
Anthracene	730	790	8%	
Fluoranthene	2800	3200	13%	
Pyrene	3800	4100	8%	
Benzo(a)anthracene	1800	2100	15%	
Chrysene	2400	2700	12%	
Benzo(b)fluoranthene	1200	1500	22%	
Benzo(k)fluoranthene	910	880	3%	
Benzo(a)pyrene	1200	1300	8%	
Indeno(1,2,3-cd)pyrene	530	590	11%	
Dibenzo(a,h)anthracene	190	220	15%	
Benzo(g,h,i)perylene	600	660	10%	

Polynuclear Aromatic Hydrocarbons (PAH 34)

Holding Times

- All samples were extracted within 14 days for sediment samples and analyzed within 40 days for all samples.

GC/MS Tuning

- All criteria were met.

Initial Calibration

- All %RSD and mean RRF criteria were met.

Continuing Calibration

- All %D and RRF criteria were met except the following.

CCAL Date	Compound	%D/RRF	Qualifier	Affected Samples
07/30/13 (0925)	Dibenzo(a,h)anthracene	31.2%	J/UJ	10DL, 11DL

Method Blank

- The method blanks exhibited the following contamination.

Blank ID	Compound	Conc. ug/kg	Qualifier	Affected Samples
SBLKL5	Naphthalene	0.37	U	10DL, 11DL
	1-Methylnaphthalene	0.090	U	
	2-Methylnaphthalene	0.12	U	
	Fluoranthene	0.11	None	All >5X
	Pyrene	0.11	None	
	Benzo(a)anthracene	0.084	None	
	Chrysene	0.11	None	
	Benzo(b)fluoranthene	0.13	None	
	Benzo(k)fluoranthene	0.12	None	

Field Blank

- Field QC samples were not analyzed.

Surrogate Spike Recoveries

- All samples exhibited acceptable surrogate %R values except the following.

Sample ID	Surrogate	%R	Qualifier
10DL	Fluoranthene-d10	Diluted*	Dilution Results Not Valid
	2-Methylnaphthalene-d10	Diluted*	
11DL	Fluoranthene-d10	Diluted*	
	2-Methylnaphthalene-d10	Diluted*	

Matrix Spike/Matrix Spike Duplicate (MS/MSD) Recoveries

- A MS/MSD sample was not analyzed.

Laboratory Control Samples

- A LCS sample was not analyzed.

Internal Standard (IS) Area Performance

- All internal standards met response and retention time (RT) criteria.

Target Compound Identification

- All mass spectra and quantitation criteria were met.

Compound Quantitation

- EDS Sample IDs #10 and 11 exhibited high concentrations of several target compounds and were flagged (E) by the laboratory. Theses samples were reanalyzed at a dilution and the dilution results should be used for these compounds. Several of the compounds remained flagged (E) in the dilution analysis and these results were qualified estimated (J).
- Total 16 PPAH and Total PAH were estimated (J) in all samples due to blank contamination.

Field Duplicate Sample Precision

- Field duplicate samples were not analyzed.

Polychlorinated Biphenyls (PCBs)

Holding Times

- All samples were extracted within 14 days for sediment samples and analyzed within 40 days.

Initial Calibration

- All %RSD and/or correlation coefficient criteria were met.

Continuing Calibration

- All %D criteria were met.

Method Blank

- The method blanks were free of contamination.

Field Blank

- Field QC samples were not analyzed.

Surrogate Spike Recoveries

- All samples exhibited acceptable surrogate recoveries except the following.

Sample ID	Surrogate	%R	Qualifier
3	DCB1/DCB2	12%/13%	J/UJ
4	DCB1/DCB2	10%/13%	
6	DCB1/DCB2	13%/17%	
7	TCX1/DCB1/DCB2	25%/16%/19%	
7DL	DCB1/DCB2	18%D/24%D	None - Diluted Out
8	TCX1/DCB1/DCB2	28%/13%/14%	J/UJ
9	TCX1/DCB1/DCB2	29%/14%/15%	
10	DCB1/DCB2	19%/24%	
12	DCB1	24%	
14	DCB1	28%	

Matrix Spike/Matrix Spike Duplicate (MS/MSD) Recoveries

- The MS/MSD sample exhibited acceptable %R and RPD values.

Laboratory Control Samples

- The LCS sample exhibited acceptable %R values.

Compound Quantitation

- EDS Sample ID #7 contained high concentrations of target compounds and should have been flagged (E) by the laboratory. The sample was reanalyzed at a 4X dilution and the dilution results for these compounds should be used for reporting purposes
- EDS Sample ID #8 contained high concentrations of target compounds and were flagged (E) by the laboratory. The sample was reanalyzed at a 20X dilution and the dilution results for these compounds should be used for reporting purposes.
- EDS Sample ID #9 contained high concentrations of target compounds and was flagged (E) by the laboratory. The sample was reanalyzed at a 10X dilution and the dilution results for these compounds should be used for reporting purposes.

Field Duplicate Sample Precision

- Field duplicate samples were not analyzed.

GC Column Difference Results

- Several samples exhibited high %D values > 25% between columns and have been qualified as estimated (J) by the reviewer.

Metals & Mercury

Holding Times

- All samples were prepared and analyzed within 28 days for mercury and 180 days for all other metals.

ICP/MS Tuning

- Not applicable.

Initial Calibration Verification

- All initial calibration criteria were met.

Continuing Calibration Verification

- All continuing calibration criteria were met.

Method Blank

- The method blanks were free of contamination.

Field Blank

- Field QC samples were not analyzed.

ICP Interference Check Sample

- The ICP interference check sample exhibited acceptable %R values.

Laboratory Control Samples

- The LCS sample exhibited acceptable recoveries.

Matrix Spike/Duplicate (MS/DUP) Analysis

- The MS/DUP samples exhibited acceptable %R and RPD values.

ICP Serial Dilution

- ICP serial dilution percent differences (%D) were within acceptance limits except the following.

ICP Sample ID	Compound	%D	Qualifier	Affected Samples
16	Chromium	16%	J	All Samples
	Copper	14%	J	
	Nickel	20%	J	
	Zinc	18%	J	

Compound Quantitation

- All criteria were met.

Field Duplicate Sample Precision

- Field duplicate samples were not analyzed.

Oil & Grease, Total Organic Carbon, AVS/SEM (Metals & Hg)

Holding Times

- All samples were analyzed within the recommended holding time for each analysis.

Initial and Continuing Calibration

- All %R criteria were met.

Method Blank

- The method blanks exhibited the following contamination.

Blank ID	Compound	Conc. mg/kg	Qualifier	Affected Samples
240-90545/1-A	HEM	191.0	U	14, 15, 16

Field Blank

- Field QC samples were not included in this data package.

Laboratory Control Samples

- The LCS samples exhibited acceptable %R values.

Matrix Spike/Duplicate (MS/DUP) Recoveries

- The MS/DUP samples exhibited acceptable %R and RPD values.

Compound Quantitation

- Several samples were analyzed at a dilution due to high concentrations of target compounds.

Field Duplicate Sample Precision

- Field duplicate results are summarized below.

HEM				
Compound	LMR13-46-024 mg/kg	LMR13-46-024FD mg/kg	RPD	Qualifier
HEM	11700	13300	13%	None

AVS/SEM				
Compound	LMR13-81-012 mg/kg	LMR13-81-012FD mg/kg	RPD	Qualifier
Cadmium SEM	1.6	0.74	74%	None
Copper SEM	3.3	5.0	41%	
Lead SEM	33.4	35.2	5%	
Nickel SEM	6.0	4.7	24%	
Zinc SEM	65.3	67.4	3%	
Mercury SEM	0.0099	0.0079	22%	
Acid Volatile Sulfides (AVS)	304	273	11%	
SEM/AVS Ratio	0.140	0.160	13%	

HEM				
Compound	LMR13-81-024 mg/kg	LMR13-81-024FD mg/kg	RPD	Qualifier
HEM	2590	2240	14%	None

AVS/SEM				
Compound	LMR13-42-012 mg/kg (200-16995)	LMR13-42-012FD mg/kg	RPD	Qualifier
Cadmium SEM	2.4	3.0	22%	None
Copper SEM	1.4	1.2	15%	
Lead SEM	28.2	38.0	30%	
Nickel SEM	8.4	12.3	38%	
Zinc SEM	85.2	124	37%	
Mercury SEM	0.0039	0.0086	75%	
Acid Volatile Sulfides (AVS)	337	598	56%	
SEM/AVS Ratio	0.155	0.125	21%	

Please contact the undersigned at (757) 564-0090 if you have any questions or need further information.

Signed: Nancy Weaver Dated: 8/16/13

Nancy Weaver
Senior Chemist

Data Qualifiers

U	=	The analyte was analyzed for, but was not detected at a level greater than or equal to the level of the adjusted Contract Required Quantitation Limit (CRQL) for sample and method.
UJ	=	The analyte was not detected at a level greater than or equal to the adjusted CRQL. However, the reported adjusted CRQL is approximate and may be inaccurate or imprecise.
J	=	The analyte was positively identified and the associated numerical value is the approximate concentration of the analyte in the sample (due either to the quality of the data generated because certain quality control criteria were not met, or the concentration of the analyte was below the CRQL).
J+	=	The result is an estimated quantity, but the result may be biased high.
J-	=	The result is an estimated quantity, but the result may be biased low.
R	=	The sample results are unusable due to the quality of the data generated because certain criteria were not met. The analyte may or may not be present in the sample.
NJ	=	The analysis indicates the presence of an analyte that has been "tentatively identified" and the associated numerical value represents its approximate concentration.

1D - FORM I SV-1

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-44-072

1

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 16999

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-16999-1

Sample wt/vol: 30.3 (g/mL) g Lab File ID: PJUWE16.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 30 Decanted: (Y/N) Date Received: 06/13/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/19/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/14/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
100-52-7	Benzaldehyde	230	~~J~~ J
108-95-2	Phenol	150	~~J~~ J
111-44-4	Bis(2-chloroethyl)ether	240	U
95-57-8	2-Chlorophenol	240	U
95-48-7	2-Methylphenol	240	U
108-60-1	2,2'-Oxybis(1-chloropropane)	240	U
98-86-2	Acetophenone	230	J
106-44-5	4-Methylphenol	240	U
621-64-7	N-Nitroso-di-n-propylamine	240	U
67-72-1	Hexachloroethane	240	U
98-95-3	Nitrobenzene	240	U
78-59-1	Isophorone	240	U
88-75-5	2-Nitrophenol	240	U
105-67-9	2,4-Dimethylphenol	240	U
111-91-1	Bis(2-chloroethoxy)methane	240	U
120-83-2	2,4-Dichlorophenol	240	U
91-20-3	Naphthalene	240	U
106-47-8	4-Chloroaniline	240	~~U~~ R
87-68-3	Hexachlorobutadiene	240	U
105-60-2	Caprolactam	240	U
59-50-7	4-Chloro-3-methylphenol	240	U
91-57-6	2-Methylnaphthalene	240	U
77-47-4	Hexachlorocyclopentadiene	240	~~U~~ R
88-06-2	2,4,6-Trichlorophenol	240	U
95-95-4	2,4,5-Trichlorophenol	240	U
92-52-4	1,1'-Biphenyl	240	U
91-58-7	2-Chloronaphthalene	240	U
88-74-4	2-Nitroaniline	470	U
131-11-3	Dimethylphthalate	240	U
606-20-2	2,6-Dinitrotoluene	240	U
208-96-8	Acenaphthylene	240	U
99-09-2	3-Nitroaniline	470	U
83-32-9	Acenaphthene	240	U

NW 08/12/13

EPA SAMPLE NO.
LMR13-44-072

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 16999

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-16999-1

Sample wt/vol: 30.3 (g/mL) g Lab File ID: PJUWE16.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 30 Decanted: (Y/N) Date Received: 06/13/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/19/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/14/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
51-28-5	2,4-Dinitrophenol	470	U
100-02-7	4-Nitrophenol	470	U
132-64-9	Dibenzofuran	240	U
121-14-2	2,4-Dinitrotoluene	240	U
84-66-2	Diethylphthalate	240	U
86-73-7	Fluorene	240	U
7005-72-3	4-Chlorophenyl-phenylether	240	U
100-01-6	4-Nitroaniline	470	U
534-52-1	4,6-Dinitro-2-methylphenol	470	U
86-30-6	N-Nitrosodiphenylamin [1]	240	U
95-94-3	1,2,4,5-Tetrachlorobenzene	240	U
101-55-3	4-Bromophenyl-phenylether	240	U
118-74-1	Hexachlorobenzene	240	U
1912-24-9	Atrazine	240	U
87-86-5	Pentachlorophenol	470	U
85-01-8	Phenanthrene	36	J
120-12-7	Anthracene	10	J
86-74-8	Carbazole	240	U
84-74-2	Di-n-butylphthalate	240	U
206-44-0	Fluoranthene	34	J
129-00-0	Pyrene	42	J
85-68-7	Butylbenzylphthalate	240 ~~27~~ ~~J B~~ U	
91-94-1	3,3'-Dichlorobenzidine	240 ~~U~~ R	
56-55-3	Benzo(a)anthracene	18	J
218-01-9	Chrysene	29	J
117-81-7	Bis(2-ethylhexyl)phthalate	240 ~~87~~ ~~J B~~ U	
117-84-0	Di-n-octylphthalate	240	U
205-99-2	Benzo(b)fluoranthene	240	U
207-08-9	Benzo(k)fluoranthene	240	U
50-32-8	Benzo(a)pyrene	240	U
193-39-5	Indeno(1,2,3-cd)pyrene	240	U
53-70-3	Dibenzo(a,h)anthracene	240	U
191-24-2	Benzo(g,h,i)perylene	240	U
58-90-2	2,3,4,6-Tetrachlorophenol	240	U

[1] Cannot be separated from Diphenylamine

NW 08/12/13

EPA SAMPLE NO.
LMR13-44-096

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678 2

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 16999

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-16999-2

Sample wt/vol: 30.9 (g/mL) g Lab File ID: PJUWE17.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 30 Decanted: (Y/N) Date Received: 06/13/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/19/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/14/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
100-52-7	Benzaldehyde	61	~~J~~ J
108-95-2	Phenol	240	U
111-44-4	Bis(2-chloroethyl)ether	240	U
95-57-8	2-Chlorophenol	240	U
95-48-7	2-Methylphenol	240	U
108-60-1	2,2'-Oxybis(1-chloropropane)	240	U
98-86-2	Acetophenone	29	J
106-44-5	4-Methylphenol	240	U
621-64-7	N-Nitroso-di-n-propylamine	240	U
67-72-1	Hexachloroethane	240	U
98-95-3	Nitrobenzene	240	U
78-59-1	Isophorone	240	U
88-75-5	2-Nitrophenol	240	U
105-67-9	2,4-Dimethylphenol	240	U
111-91-1	Bis(2-chloroethoxy)methane	240	U
120-83-2	2,4-Dichlorophenol	240	U
91-20-3	Naphthalene	240	U
106-47-8	4-Chloroaniline	240	~~U~~ R
87-68-3	Hexachlorobutadiene	240	U
105-60-2	Caprolactam	240	U
59-50-7	4-Chloro-3-methylphenol	240	U
91-57-6	2-Methylnaphthalene	240	U
77-47-4	Hexachlorocyclopentadiene	240	~~U~~ R
88-06-2	2,4,6-Trichlorophenol	240	U
95-95-4	2,4,5-Trichlorophenol	240	U
92-52-4	1,1'-Biphenyl	240	U
91-58-7	2-Chloronaphthalene	240	U
88-74-4	2-Nitroaniline	460	U
131-11-3	Dimethylphthalate	240	U
606-20-2	2,6-Dinitrotoluene	240	U
208-96-8	Acenaphthylene	240	U
99-09-2	3-Nitroaniline	460	U
83-32-9	Acenaphthene	240	U

MW 08/12/13

EPA SAMPLE NO.
LMR13-44-096

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 16999

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-16999-2

Sample wt/vol: 30.9 (g/mL) g Lab File ID: PJUWE17.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 30 Decanted: (Y/N) Date Received: 06/13/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/19/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/14/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
51-28-5	2,4-Dinitrophenol	460	U
100-02-7	4-Nitrophenol	460	U
132-64-9	Dibenzofuran	240	U
121-14-2	2,4-Dinitrotoluene	240	U
84-66-2	Diethylphthalate	240	U
86-73-7	Fluorene	240	U
7005-72-3	4-Chlorophenyl-phenylether	240	U
100-01-6	4-Nitroaniline	460	U
534-52-1	4,6-Dinitro-2-methylphenol	460	U
86-30-6	N-Nitrosodiphenylamin [1]	240	U
95-94-3	1,2,4,5-Tetrachlorobenzene	240	U
101-55-3	4-Bromophenyl-phenylether	240	U
118-74-1	Hexachlorobenzene	240	U
1912-24-9	Atrazine	240	U
87-86-5	Pentachlorophenol	460	U
85-01-8	Phenanthrene	240	U
120-12-7	Anthracene	240	U
86-74-8	Carbazole	240	U
84-74-2	Di-n-butylphthalate	16	J
206-44-0	Fluoranthene	240	U
129-00-0	Pyrene	240	U
85-68-7	Butylbenzylphthalate	240 ~~43~~ ~~J B~~ U	
91-94-1	3,3'-Dichlorobenzidine	240	U R
56-55-3	Benzo(a)anthracene	240	U
218-01-9	Chrysene	240	U
117-81-7	Bis(2-ethylhexyl)phthalate	240 ~~97~~ ~~J B~~ U	
117-84-0	Di-n-octylphthalate	240	U
205-99-2	Benzo(b)fluoranthene	240	U
207-08-9	Benzo(k)fluoranthene	240	U
50-32-8	Benzo(a)pyrene	240	U
193-39-5	Indeno(1,2,3-cd)pyrene	240	U
53-70-3	Dibenzo(a,h)anthracene	240	U
191-24-2	Benzo(g,h,i)perylene	240	U
58-90-2	2,3,4,6-Tetrachlorophenol	240	U

[1] Cannot be separated from Diphenylamine

MW 08/12/13

EPA SAMPLE NO.
LMR13-46-012

3

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 16999

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-16999-3

Sample wt/vol: 29.9 (g/mL) g Lab File ID: PJUWE18.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 46 Decanted: (Y/N) Date Received: 06/13/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/19/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/14/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 5.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
100-52-7	Benzaldehyde	130	J
108-95-2	Phenol	1600	U
111-44-4	Bis(2-chloroethyl)ether	1600	U
95-57-8	2-Chlorophenol	1600	U
95-48-7	2-Methylphenol	1600	U
108-60-1	2,2'-Oxybis(1-chloropropane)	1600	U
98-86-2	Acetophenone	180	J
106-44-5	4-Methylphenol	1600	U
621-64-7	N-Nitroso-di-n-propylamine	1600	U
67-72-1	Hexachloroethane	1600	U
98-95-3	Nitrobenzene	1600	U
78-59-1	Isophorone	1600	U
88-75-5	2-Nitrophenol	1600	U
105-67-9	2,4-Dimethylphenol	1600	U
111-91-1	Bis(2-chloroethoxy)methane	1600	U
120-83-2	2,4-Dichlorophenol	1600	U
91-20-3	Naphthalene	120	J
106-47-8	4-Chloroaniline	640	J
87-68-3	Hexachlorobutadiene	1600	U
105-60-2	Caprolactam	1600	U
59-50-7	4-Chloro-3-methylphenol	1600	U
91-57-6	2-Methylnaphthalene	48	J
77-47-4	Hexachlorocyclopentadiene	1600	U
88-06-2	2,4,6-Trichlorophenol	1600	U
95-95-4	2,4,5-Trichlorophenol	1600	U
92-52-4	1,1'-Biphenyl	1600	U
91-58-7	2-Chloronaphthalene	1600	U
88-74-4	2-Nitroaniline	3100	U
131-11-3	Dimethylphthalate	1600	U
606-20-2	2,6-Dinitrotoluene	1600	U
208-96-8	Acenaphthylene	180	J
99-09-2	3-Nitroaniline	3100	U
83-32-9	Acenaphthene	390	J

MW 08/12/13

1E - FORM I SV-2
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-46-012

3

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 16999

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-16999-3

Sample wt/vol: 29.9 (g/mL) g Lab File ID: PJUWE18.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 46 Decanted: (Y/N) Date Received: 06/13/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/19/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/14/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 5.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
51-28-5	2,4-Dinitrophenol	3100	U
100-02-7	4-Nitrophenol	3100	U
132-64-9	Dibenzofuran	210	J
121-14-2	2,4-Dinitrotoluene	1600	U
84-66-2	Diethylphthalate	1600	U
86-73-7	Fluorene	410	J
7005-72-3	4-Chlorophenyl-phenylether	1600	U
100-01-6	4-Nitroaniline	3100	U
534-52-1	4,6-Dinitro-2-methylphenol	3100	U
86-30-6	N-Nitrosodiphenylamin [1]	1600	U
95-94-3	1,2,4,5-Tetrachlorobenzene	1600	U
101-55-3	4-Bromophenyl-phenylether	1600	U
118-74-1	Hexachlorobenzene	1600	U
1912-24-9	Atrazine	1600	U
87-86-5	Pentachlorophenol	3100	U
85-01-8	Phenanthrene	1700	
120-12-7	Anthracene	420	J
86-74-8	Carbazole	1600	U
84-74-2	Di-n-butylphthalate	1600	U
206-44-0	Fluoranthene	2600	
129-00-0	Pyrene	3000	
85-68-7	Butylbenzylphthalate	1600	U
91-94-1	3,3'-Dichlorobenzidine	1600	U
56-55-3	Benzo(a)anthracene	1500	J
218-01-9	Chrysene	1900	
117-81-7	Bis(2-ethylhexyl)phthalate	15000	B
117-84-0	Di-n-octylphthalate	810	J
205-99-2	Benzo(b)fluoranthene	1900	
207-08-9	Benzo(k)fluoranthene	1200	J
50-32-8	Benzo(a)pyrene	1700	
193-39-5	Indeno(1,2,3-cd)pyrene	950	J
53-70-3	Dibenzo(a,h)anthracene	410	J
191-24-2	Benzo(g,h,i)perylene	1000	J
58-90-2	2,3,4,6-Tetrachlorophenol	1600	U

[1] Cannot be separated from Diphenylamine

NW 08/12/13

1D - FORM I SV-1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-46-024

4

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 16999

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-16999-4

Sample wt/vol: 30.7 (g/mL) g Lab File ID: PJUWE19.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 46 Decanted: (Y/N) Date Received: 06/13/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/19/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/14/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 5.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
100-52-7	Benzaldehyde	170	J
108-95-2	Phenol	1500	U
111-44-4	Bis(2-chloroethyl)ether	1500	U
95-57-8	2-Chlorophenol	1500	U
95-48-7	2-Methylphenol	1500	U
108-60-1	2,2'-Oxybis(1-chloropropane)	1500	U
98-86-2	Acetophenone	240	J
106-44-5	4-Methylphenol	1500	U
621-64-7	N-Nitroso-di-n-propylamine	1500	U
67-72-1	Hexachloroethane	1500	U
98-95-3	Nitrobenzene	1500	U
78-59-1	Isophorone	1500	U
88-75-5	2-Nitrophenol	1500	U
105-67-9	2,4-Dimethylphenol	1500	U
111-91-1	Bis(2-chloroethoxy)methane	1500	U
120-83-2	2,4-Dichlorophenol	1500	U
91-20-3	Naphthalene	180	J
106-47-8	4-Chloroaniline	1200	J
87-68-3	Hexachlorobutadiene	1500	U
105-60-2	Caprolactam	1500	U
59-50-7	4-Chloro-3-methylphenol	1500	U
91-57-6	2-Methylnaphthalene	220	J
77-47-4	Hexachlorocyclopentadiene	1500	U
88-06-2	2,4,6-Trichlorophenol	1500	U
95-95-4	2,4,5-Trichlorophenol	1500	U
92-52-4	1,1'-Biphenyl	1500	U
91-58-7	2-Chloronaphthalene	1500	U
88-74-4	2-Nitroaniline	3000	U
131-11-3	Dimethylphthalate	1500	U
606-20-2	2,6-Dinitrotoluene	1500	U
208-96-8	Acenaphthylene	210	J
99-09-2	3-Nitroaniline	3000	U
83-32-9	Acenaphthene	240	J

NW 08/12/13

1E - FORM I SV-2
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-46-024

4

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 16999

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-16999-4

Sample wt/vol: 30.7 (g/mL) g Lab File ID: PJUWE19.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 46 Decanted: (Y/N) Date Received: 06/13/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/19/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/14/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 5.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
51-28-5	2,4-Dinitrophenol	3000	U
100-02-7	4-Nitrophenol	3000	U
132-64-9	Dibenzofuran	190	J
121-14-2	2,4-Dinitrotoluene	1500	U
84-66-2	Diethylphthalate	1500	U
86-73-7	Fluorene	430	J
7005-72-3	4-Chlorophenyl-phenylether	1500	U
100-01-6	4-Nitroaniline	3000	U
534-52-1	4,6-Dinitro-2-methylphenol	3000	U
86-30-6	N-Nitrosodiphenylamin [1]	1500	U
95-94-3	1,2,4,5-Tetrachlorobenzene	1500	U
101-55-3	4-Bromophenyl-phenylether	1500	U
118-74-1	Hexachlorobenzene	1500	U
1912-24-9	Atrazine	1500	U
87-86-5	Pentachlorophenol	3000	U
85-01-8	Phenanthrene	1900	
120-12-7	Anthracene	760	J
86-74-8	Carbazole	1500	U
84-74-2	Di-n-butylphthalate	1500	U
206-44-0	Fluoranthene	3200	
129-00-0	Pyrene	4400	
85-68-7	Butylbenzylphthalate	1500	U
91-94-1	3,3'-Dichlorobenzidine	1500	U
56-55-3	Benzo(a)anthracene	2100	
218-01-9	Chrysene	2700	
117-81-7	Bis(2-ethylhexyl)phthalate	22000	B
117-84-0	Di-n-octylphthalate	1400	J
205-99-2	Benzo(b)fluoranthene	2500	
207-08-9	Benzo(k)fluoranthene	1700	
50-32-8	Benzo(a)pyrene	2300	
193-39-5	Indeno(1,2,3-cd)pyrene	1100	J
53-70-3	Dibenzo(a,h)anthracene	410	J
191-24-2	Benzo(g,h,i)perylene	1200	J
58-90-2	2,3,4,6-Tetrachlorophenol	1500	U

[1] Cannot be separated from Diphenylamine

MW 08/12/13

1D - FORM I SV-1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-46-024FD

5

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 16999

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-16999-5

Sample wt/vol: 30.1 (g/mL) g Lab File ID: PJUWE20.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 46 Decanted: (Y/N) Date Received: 06/13/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/19/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/14/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 5.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
100-52-7	Benzaldehyde	140	J
108-95-2	Phenol	1600	U
111-44-4	Bis(2-chloroethyl)ether	1600	U
95-57-8	2-Chlorophenol	1600	U
95-48-7	2-Methylphenol	1600	U
108-60-1	2,2'-Oxybis(1-chloropropane)	1600	U
98-86-2	Acetophenone	100	J
106-44-5	4-Methylphenol	1600	U
621-64-7	N-Nitroso-di-n-propylamine	1600	U
67-72-1	Hexachloroethane	1600	U
98-95-3	Nitrobenzene	1600	U
78-59-1	Isophorone	1600	U
88-75-5	2-Nitrophenol	1600	U
105-67-9	2,4-Dimethylphenol	1600	U
111-91-1	Bis(2-chloroethoxy)methane	1600	U
120-83-2	2,4-Dichlorophenol	1600	U
91-20-3	Naphthalene	1600	U
106-47-8	4-Chloroaniline	1100	J
87-68-3	Hexachlorobutadiene	1600	U
105-60-2	Caprolactam	1600	U
59-50-7	4-Chloro-3-methylphenol	1600	U
91-57-6	2-Methylnaphthalene	200	J
77-47-4	Hexachlorocyclopentadiene	1600	U
88-06-2	2,4,6-Trichlorophenol	1600	U
95-95-4	2,4,5-Trichlorophenol	1600	U
92-52-4	1,1'-Biphenyl	1600	U
91-58-7	2-Chloronaphthalene	1600	U
88-74-4	2-Nitroaniline	3000	U
131-11-3	Dimethylphthalate	1600	U
606-20-2	2,6-Dinitrotoluene	1600	U
208-96-8	Acenaphthylene	170	J
99-09-2	3-Nitroaniline	3000	U
83-32-9	Acenaphthene	230	J

NW 08/12/13

1E - FORM I SV-2
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-46-024FD

5

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 16999

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-16999-5

Sample wt/vol: 30.1 (g/mL) g Lab File ID: PJUWE20.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 46 Decanted: (Y/N) Date Received: 06/13/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/19/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/14/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 5.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
51-28-5	2,4-Dinitrophenol	3000	U
100-02-7	4-Nitrophenol	3000	U
132-64-9	Dibenzofuran	190	J
121-14-2	2,4-Dinitrotoluene	1600	U
84-66-2	Diethylphthalate	1600	U
86-73-7	Fluorene	410	J
7005-72-3	4-Chlorophenyl-phenylether	1600	U
100-01-6	4-Nitroaniline	3000	U
534-52-1	4,6-Dinitro-2-methylphenol	3000	U
86-30-6	N-Nitrosodiphenylamin [1]	1600	U
95-94-3	1,2,4,5-Tetrachlorobenzene	1600	U
101-55-3	4-Bromophenyl-phenylether	1600	U
118-74-1	Hexachlorobenzene	1600	U
1912-24-9	Atrazine	1600	U
87-86-5	Pentachlorophenol	3000	U
85-01-8	Phenanthrene	1700	
120-12-7	Anthracene	640	J
86-74-8	Carbazole	1600	U
84-74-2	Di-n-butylphthalate	1600	U
206-44-0	Fluoranthene	2800	
129-00-0	Pyrene	4000	
85-68-7	Butylbenzylphthalate	1600	U
91-94-1	3,3'-Dichlorobenzidine	1600	U
56-55-3	Benzo(a)anthracene	1900	
218-01-9	Chrysene	2300	
117-81-7	Bis(2-ethylhexyl)phthalate	21000	B
117-84-0	Di-n-octylphthalate	1300	J
205-99-2	Benzo(b)fluoranthene	2300	
207-08-9	Benzo(k)fluoranthene	2000	
50-32-8	Benzo(a)pyrene	2100	
193-39-5	Indeno(1,2,3-cd)pyrene	1000	J
53-70-3	Dibenzo(a,h)anthracene	350	J
191-24-2	Benzo(g,h,i)perylene	1100	J
58-90-2	2,3,4,6-Tetrachlorophenol	1600	U

[1] Cannot be separated from Diphenylamine

NW 08/12/13

EPA SAMPLE NO.
LMR13-46-048

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 16999

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-16999-6

Sample wt/vol: 30.4 (g/mL) g Lab File ID: PJUWE21.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 51 Decanted: (Y/N) Date Received: 06/13/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/19/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/14/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 6.7

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
100-52-7	Benzaldehyde	2300	U
108-95-2	Phenol	2300	U
111-44-4	Bis(2-chloroethyl)ether	2300	U
95-57-8	2-Chlorophenol	2300	U
95-48-7	2-Methylphenol	2300	U
108-60-1	2,2'-Oxybis(1-chloropropane)	2300	U
98-86-2	Acetophenone	2300	U
106-44-5	4-Methylphenol	2300	U
621-64-7	N-Nitroso-di-n-propylamine	2300	U
67-72-1	Hexachloroethane	2300	U
98-95-3	Nitrobenzene	2300	U
78-59-1	Isophorone	2300	U
88-75-5	2-Nitrophenol	2300	U
105-67-9	2,4-Dimethylphenol	2300	U
111-91-1	Bis(2-chloroethoxy)methane	2300	U
120-83-2	2,4-Dichlorophenol	2300	U
91-20-3	Naphthalene	380	J
106-47-8	4-Chloroaniline	1300	J
87-68-3	Hexachlorobutadiene	2300	U
105-60-2	Caprolactam	2300	U
59-50-7	4-Chloro-3-methylphenol	2300	U
91-57-6	2-Methylnaphthalene	250	J
77-47-4	Hexachlorocyclopentadiene	2300	U
88-06-2	2,4,6-Trichlorophenol	2300	U
95-95-4	2,4,5-Trichlorophenol	2300	U
92-52-4	1,1'-Biphenyl	2300	U
91-58-7	2-Chloronaphthalene	2300	U
88-74-4	2-Nitroaniline	4400	U
131-11-3	Dimethylphthalate	2300	U
606-20-2	2,6-Dinitrotoluene	2300	U
208-96-8	Acenaphthylene	280	J
99-09-2	3-Nitroaniline	4400	U
83-32-9	Acenaphthene	290	J

MW 08/12/13

1E - FORM I SV-2
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-46-048

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 16999

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-16999-6

Sample wt/vol: 30.4 (g/mL) g Lab File ID: PJUWE21.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 51 Decanted: (Y/N) Date Received: 06/13/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/19/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/14/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 6.7

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
51-28-5	2,4-Dinitrophenol	4400	U
100-02-7	4-Nitrophenol	4400	U
132-64-9	Dibenzofuran	220	J
121-14-2	2,4-Dinitrotoluene	2300	U
84-66-2	Diethylphthalate	2300	U
86-73-7	Fluorene	430	J
7005-72-3	4-Chlorophenyl-phenylether	2300	U
100-01-6	4-Nitroaniline	4400	U
534-52-1	4,6-Dinitro-2-methylphenol	4400	U
86-30-6	N-Nitrosodiphenylamin [1]	2300	U
95-94-3	1,2,4,5-Tetrachlorobenzene	2300	U
101-55-3	4-Bromophenyl-phenylether	2300	U
118-74-1	Hexachlorobenzene	2300	U
1912-24-9	Atrazine	2300	U
87-86-5	Pentachlorophenol	4400	U
85-01-8	Phenanthrene	1600	J
120-12-7	Anthracene	500	J
86-74-8	Carbazole	2300	U
84-74-2	Di-n-butylphthalate	2300	U
206-44-0	Fluoranthene	2900	
129-00-0	Pyrene	4500	
85-68-7	Butylbenzylphthalate	2300	U
91-94-1	3,3'-Dichlorobenzidine	2300	U
56-55-3	Benzo(a)anthracene	1900	J
218-01-9	Chrysene	2500	
117-81-7	Bis(2-ethylhexyl)phthalate	35000	B
117-84-0	Di-n-octylphthalate	2100	J
205-99-2	Benzo(b)fluoranthene	3100	
207-08-9	Benzo(k)fluoranthene	2100	J
50-32-8	Benzo(a)pyrene	3000	
193-39-5	Indeno(1,2,3-cd)pyrene	1600	J
53-70-3	Dibenzo(a,h)anthracene	430	J
191-24-2	Benzo(g,h,i)perylene	2100	J
58-90-2	2,3,4,6-Tetrachlorophenol	2300	U

[1] Cannot be separated from Diphenylamine

NW 08/12/13

EPA SAMPLE NO.
LMR13-46-072

7

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 16999

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-16999-7

Sample wt/vol: 29.8 (g/mL) g Lab File ID: PJUWH13.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 52 Decanted: (Y/N) Date Received: 06/13/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/19/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/17/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 8.3

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
100-52-7	Benzaldehyde	2900	U
108-95-2	Phenol	2900	U
111-44-4	Bis(2-chloroethyl)ether	2900	U
95-57-8	2-Chlorophenol	2900	U
95-48-7	2-Methylphenol	2900	U
108-60-1	2,2'-Oxybis(1-chloropropane)	2900	U
98-86-2	Acetophenone	2900	U
106-44-5	4-Methylphenol	2900	U
621-64-7	N-Nitroso-di-n-propylamine	2900	U
67-72-1	Hexachloroethane	2900	U
98-95-3	Nitrobenzene	2900	U
78-59-1	Isophorone	2900	U
88-75-5	2-Nitrophenol	2900	U
105-67-9	2,4-Dimethylphenol	2900	U
111-91-1	Bis(2-chloroethoxy)methane	2900	U
120-83-2	2,4-Dichlorophenol	2900	U
91-20-3	Naphthalene	1400	J
106-47-8	4-Chloroaniline	750	J
87-68-3	Hexachlorobutadiene	2900	U
105-60-2	Caprolactam	2900	U
59-50-7	4-Chloro-3-methylphenol	2900	U
91-57-6	2-Methylnaphthalene	310	J
77-47-4	Hexachlorocyclopentadiene	2900	~~U~~ UJ
88-06-2	2,4,6-Trichlorophenol	2900	U
95-95-4	2,4,5-Trichlorophenol	2900	U
92-52-4	1,1'-Biphenyl	2900	U
91-58-7	2-Chloronaphthalene	2900	U
88-74-4	2-Nitroaniline	5700	U
131-11-3	Dimethylphthalate	2900	U
606-20-2	2,6-Dinitrotoluene	2900	U
208-96-8	Acenaphthylene	270	J
99-09-2	3-Nitroaniline	5700	U
83-32-9	Acenaphthene	360	J

MW 08/12/13

1E - FORM I SV-2
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-46-072

7

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 16999

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-16999-7

Sample wt/vol: 29.8 (g/mL) g Lab File ID: PJUWH13.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 52 Decanted: (Y/N) Date Received: 06/13/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/19/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/17/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 8.3

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
51-28-5	2,4-Dinitrophenol	5700	U
100-02-7	4-Nitrophenol	5700	U
132-64-9	Dibenzofuran	180	J
121-14-2	2,4-Dinitrotoluene	2900	U
84-66-2	Diethylphthalate	2900	U
86-73-7	Fluorene	410	J
7005-72-3	4-Chlorophenyl-phenylether	2900	U
100-01-6	4-Nitroaniline	5700	U
534-52-1	4,6-Dinitro-2-methylphenol	5700	U
86-30-6	N-Nitrosodiphenylamin [1]	2900	U
95-94-3	1,2,4,5-Tetrachlorobenzene	2900	U
101-55-3	4-Bromophenyl-phenylether	2900	U
118-74-1	Hexachlorobenzene	2900	U
1912-24-9	Atrazine	2900	U
87-86-5	Pentachlorophenol	5700	U
85-01-8	Phenanthrene	1400	J
120-12-7	Anthracene	430	J
86-74-8	Carbazole	2900	U
84-74-2	Di-n-butylphthalate	2900	U
206-44-0	Fluoranthene	2800	J
129-00-0	Pyrene	3600	
85-68-7	Butylbenzylphthalate	2900	U
91-94-1	3,3'-Dichlorobenzidine	2900	U
56-55-3	Benzo(a)anthracene	1500	J
218-01-9	Chrysene	2000	J
117-81-7	Bis(2-ethylhexyl)phthalate	32000	B
117-84-0	Di-n-octylphthalate	1200	J
205-99-2	Benzo(b)fluoranthene	2300	J
207-08-9	Benzo(k)fluoranthene	1700	J
50-32-8	Benzo(a)pyrene	2700	J
193-39-5	Indeno(1,2,3-cd)pyrene	1900	J
53-70-3	Dibenzo(a,h)anthracene	640	J
191-24-2	Benzo(g,h,i)perylene	2300	J
58-90-2	2,3,4,6-Tetrachlorophenol	2900	U

[1] Cannot be separated from Diphenylamine

MW 08/12/13

1D - FORM I SV-1

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-46-096

8

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 16999

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-16999-8

Sample wt/vol: 30.8 (g/mL) g Lab File ID: PJUWF11.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 55 Decanted: (Y/N) Date Received: 06/13/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/19/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/15/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 10.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
100-52-7	Benzaldehyde	3700	U
108-95-2	Phenol	3700	U
111-44-4	Bis(2-chloroethyl)ether	3700	U
95-57-8	2-Chlorophenol	3700	U
95-48-7	2-Methylphenol	3700	U
108-60-1	2,2'-Oxybis(1-chloropropane)	3700	U
98-86-2	Acetophenone	3700	U
106-44-5	4-Methylphenol	3700	U
621-64-7	N-Nitroso-di-n-propylamine	3700	U
67-72-1	Hexachloroethane	3700	U
98-95-3	Nitrobenzene	3700	U
78-59-1	Isophorone	3700	U
88-75-5	2-Nitrophenol	3700	U
105-67-9	2,4-Dimethylphenol	3700	U
111-91-1	Bis(2-chloroethoxy)methane	3700	U
120-83-2	2,4-Dichlorophenol	3700	U
91-20-3	Naphthalene	1200	J
106-47-8	4-Chloroaniline	3700	U
87-68-3	Hexachlorobutadiene	3700	U
105-60-2	Caprolactam	3700	U
59-50-7	4-Chloro-3-methylphenol	3700	U
91-57-6	2-Methylnaphthalene	3700	U
77-47-4	Hexachlorocyclopentadiene	3700	~~U~~ UJ
88-06-2	2,4,6-Trichlorophenol	3700	U
95-95-4	2,4,5-Trichlorophenol	3700	U
92-52-4	1,1'-Biphenyl	3700	U
91-58-7	2-Chloronaphthalene	3700	U
88-74-4	2-Nitroaniline	7100	U
131-11-3	Dimethylphthalate	3700	U
606-20-2	2,6-Dinitrotoluene	3700	U
208-96-8	Acenaphthylene	3700	U
99-09-2	3-Nitroaniline	7100	U
83-32-9	Acenaphthene	410	J

MW 08/12/13

1E - FORM I SV-2
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-46-096

8

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 16999

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-16999-8

Sample wt/vol: 30.8 (g/mL) g Lab File ID: PJUWF11.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 55 Decanted: (Y/N) Date Received: 06/13/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/19/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/15/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 10.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
51-28-5	2,4-Dinitrophenol	7100	U
100-02-7	4-Nitrophenol	7100	U
132-64-9	Dibenzofuran	270	J
121-14-2	2,4-Dinitrotoluene	3700	U
84-66-2	Diethylphthalate	3700	U
86-73-7	Fluorene	370	J
7005-72-3	4-Chlorophenyl-phenylether	3700	U
100-01-6	4-Nitroaniline	7100	U
534-52-1	4,6-Dinitro-2-methylphenol	7100	U
86-30-6	N-Nitrosodiphenylamin [1]	3700	U
95-94-3	1,2,4,5-Tetrachlorobenzene	3700	U
101-55-3	4-Bromophenyl-phenylether	3700	U
118-74-1	Hexachlorobenzene	3700	U
1912-24-9	Atrazine	3700	U
87-86-5	Pentachlorophenol	7100	~~U~~ UJ
85-01-8	Phenanthrene	1900	J
120-12-7	Anthracene	450	J
86-74-8	Carbazole	3700	U
84-74-2	Di-n-butylphthalate	3700	U
206-44-0	Fluoranthene	2900	J
129-00-0	Pyrene	3600	J
85-68-7	Butylbenzylphthalate	3700	U
91-94-1	3,3'-Dichlorobenzidine	3700	U
56-55-3	Benzo(a)anthracene	1500	J
218-01-9	Chrysene	2300	J
117-81-7	Bis(2-ethylhexyl)phthalate	46000	~~B~~
117-84-0	Di-n-octylphthalate	1100	J
205-99-2	Benzo(b)fluoranthene	2200	J
207-08-9	Benzo(k)fluoranthene	1200	J
50-32-8	Benzo(a)pyrene	2000	J
193-39-5	Indeno(1,2,3-cd)pyrene	1300	J
53-70-3	Dibenzo(a,h)anthracene	440	J
191-24-2	Benzo(g,h,i)perylene	1500	J
58-90-2	2,3,4,6-Tetrachlorophenol	3700	U

[1] Cannot be separated from Diphenylamine

MW 08/12/13

1D - FORM I SV-1

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-46-120

9

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 16999

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-16999-9

Sample wt/vol: 30.3 (g/mL) g Lab File ID: PJXXE03.D

Level: (LOW/MED) LOW Extraction: (Type) SOM01.2SV_SONC

% Moisture: 41 Decanted: (Y/N) Date Received: 06/13/2013

Concentrated Extract Volume: 1000 (uL) Date Extracted: 06/19/2013

Injection Volume: 2.0 (uL) GPC Factor: 1.0 Date Analyzed: 07/27/2013

GPC Cleanup: (Y/N) N pH: Dilution Factor: 5.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
100-52-7	Benzaldehyde	1400	U
108-95-2	Phenol	1400	U
111-44-4	Bis(2-chloroethyl)ether	1400	U
95-57-8	2-Chlorophenol	1400	U
95-48-7	2-Methylphenol	1400	U
108-60-1	2,2'-Oxybis(1-chloropropane)	1400	U
98-86-2	Acetophenone	1400	U
106-44-5	4-Methylphenol	1400	U
621-64-7	N-Nitroso-di-n-propylamine	1400	U
67-72-1	Hexachloroethane	1400	U
98-95-3	Nitrobenzene	1400	U
78-59-1	Isophorone	1400	U
88-75-5	2-Nitrophenol	1400	U
105-67-9	2,4-Dimethylphenol	1400	U
111-91-1	Bis(2-chloroethoxy)methane	1400	U
120-83-2	2,4-Dichlorophenol	1400	U
91-20-3	Naphthalene	100	J
106-47-8	4-Chloroaniline	1400	U
87-68-3	Hexachlorobutadiene	1400	U
105-60-2	Caprolactam	1400	U
59-50-7	4-Chloro-3-methylphenol	1400	U
91-57-6	2-Methylnaphthalene	110	J
77-47-4	Hexachlorocyclopentadiene	1400	~~U~~ UJ
88-06-2	2,4,6-Trichlorophenol	1400	U
95-95-4	2,4,5-Trichlorophenol	1400	U
92-52-4	1,1'-Biphenyl	1400	U
91-58-7	2-Chloronaphthalene	1400	U
88-74-4	2-Nitroaniline	2800	U
131-11-3	Dimethylphthalate	1400	U
606-20-2	2,6-Dinitrotoluene	1400	U
208-96-8	Acenaphthylene	95	J
99-09-2	3-Nitroaniline	2800	U
83-32-9	Acenaphthene	200	J

NW 08/12/13

1E - FORM I SV-2
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-46-120

9

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 16999

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-16999-9

Sample wt/vol: 30.3 (g/mL) g Lab File ID: PJXXE03.D

Level: (LOW/MED) LOW Extraction: (Type) SOM01.2SV_SONC

% Moisture: 41 Decanted: (Y/N) Date Received: 06/13/2013

Concentrated Extract Volume: 1000 (uL) Date Extracted: 06/19/2013

Injection Volume: 2.0 (uL) GPC Factor: 1.0 Date Analyzed: 07/27/2013

GPC Cleanup: (Y/N) N pH: Dilution Factor: 5.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
51-28-5	2,4-Dinitrophenol	2800	U UJ
100-02-7	4-Nitrophenol	2800	U
132-64-9	Dibenzofuran	120	J
121-14-2	2,4-Dinitrotoluene	1400	U
84-66-2	Diethylphthalate	1400	U
86-73-7	Fluorene	250	J
7005-72-3	4-Chlorophenyl-phenylether	1400	U
100-01-6	4-Nitroaniline	2800	U
534-52-1	4,6-Dinitro-2-methylphenol	2800	U
86-30-6	N-Nitrosodiphenylamin [1]	1400	U
95-94-3	1,2,4,5-Tetrachlorobenzene	1400	U
101-55-3	4-Bromophenyl-phenylether	1400	U
118-74-1	Hexachlorobenzene	1400	U
1912-24-9	Atrazine	1400	U
87-86-5	Pentachlorophenol	2800	U
85-01-8	Phenanthrene	1500	
120-12-7	Anthracene	620	J
86-74-8	Carbazole	69	J
84-74-2	Di-n-butylphthalate	1400	U
206-44-0	Fluoranthene	2600	
129-00-0	Pyrene	1700	
85-68-7	Butylbenzylphthalate	1400	U
91-94-1	3,3'-Dichlorobenzidine	1400	U
56-55-3	Benzo(a)anthracene	1200	J
218-01-9	Chrysene	1200	J
117-81-7	Bis(2-ethylhexyl)phthalate	20000	B
117-84-0	Di-n-octylphthalate	1400	U
205-99-2	Benzo(b)fluoranthene	840	J
207-08-9	Benzo(k)fluoranthene	690	J
50-32-8	Benzo(a)pyrene	860	J
193-39-5	Indeno(1,2,3-cd)pyrene	390	J J
53-70-3	Dibenzo(a,h)anthracene	100	J J
191-24-2	Benzo(g,h,i)perylene	420	J J
58-90-2	2,3,4,6-Tetrachlorophenol	1400	U

[1] Cannot be separated from Diphenylamine

MW 08/12/13

EPA SAMPLE NO.
LMR13-81-012

10

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 16999

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-16999-10

Sample wt/vol: 29.9 (g/mL) g Lab File ID: PJUWG11.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 35 Decanted: (Y/N) Date Received: 06/13/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/19/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/16/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 2.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
100-52-7	Benzaldehyde	520	U
108-95-2	Phenol	520	U
111-44-4	Bis(2-chloroethyl)ether	520	U
95-57-8	2-Chlorophenol	520	U
95-48-7	2-Methylphenol	520	U
108-60-1	2,2'-Oxybis(1-chloropropane)	520	U
98-86-2	Acetophenone	520	U
106-44-5	4-Methylphenol	520	U
621-64-7	N-Nitroso-di-n-propylamine	520	U
67-72-1	Hexachloroethane	520	U
98-95-3	Nitrobenzene	520	U
78-59-1	Isophorone	520	U
88-75-5	2-Nitrophenol	520	U
105-67-9	2,4-Dimethylphenol	520	U
111-91-1	Bis(2-chloroethoxy)methane	520	U
120-83-2	2,4-Dichlorophenol	520	U
91-20-3	Naphthalene	60	J
106-47-8	4-Chloroaniline	520	U
87-68-3	Hexachlorobutadiene	520	U
105-60-2	Caprolactam	520	U
59-50-7	4-Chloro-3-methylphenol	520	U
91-57-6	2-Methylnaphthalene	520	U
77-47-4	Hexachlorocyclopentadiene	520	U UJ
88-06-2	2,4,6-Trichlorophenol	520	U
95-95-4	2,4,5-Trichlorophenol	520	U
92-52-4	1,1'-Biphenyl	520	U
91-58-7	2-Chloronaphthalene	520	U
88-74-4	2-Nitroaniline	1000	U
131-11-3	Dimethylphthalate	520	U
606-20-2	2,6-Dinitrotoluene	520	U
208-96-8	Acenaphthylene	140	J
99-09-2	3-Nitroaniline	1000	U
83-32-9	Acenaphthene	270	J

MW 08/12/13

1E - FORM I SV-2
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-81-012

10

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 16999

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-16999-10

Sample wt/vol: 29.9 (g/mL) g Lab File ID: PJUWG11.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 35 Decanted: (Y/N) Date Received: 06/13/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/19/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/16/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 2.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
51-28-5	2,4-Dinitrophenol	1000	U
100-02-7	4-Nitrophenol	1000	U
132-64-9	Dibenzofuran	47	J
121-14-2	2,4-Dinitrotoluene	520	U
84-66-2	Diethylphthalate	520	U
86-73-7	Fluorene	480	J
7005-72-3	4-Chlorophenyl-phenylether	520	U
100-01-6	4-Nitroaniline	1000	U
534-52-1	4,6-Dinitro-2-methylphenol	1000	U
86-30-6	N-Nitrosodiphenylamin [1]	520	U
95-94-3	1,2,4,5-Tetrachlorobenzene	520	U
101-55-3	4-Bromophenyl-phenylether	520	U
118-74-1	Hexachlorobenzene	520	U
1912-24-9	Atrazine	520	U
87-86-5	Pentachlorophenol	1000	U
85-01-8	Phenanthrene	2900	
120-12-7	Anthracene	630	
86-74-8	Carbazole	520	U
84-74-2	Di-n-butylphthalate	520	U
206-44-0	Fluoranthene	2700	
129-00-0	Pyrene	3400	
85-68-7	Butylbenzylphthalate	520	U
91-94-1	3,3'-Dichlorobenzidine	520	U
56-55-3	Benzo(a)anthracene	2000	
218-01-9	Chrysene	2500	
117-81-7	Bis(2-ethylhexyl)phthalate	520 ~~510~~	~~J B~~ U
117-84-0	Di-n-octylphthalate	520	U
205-99-2	Benzo(b)fluoranthene	1600	
207-08-9	Benzo(k)fluoranthene	990	
50-32-8	Benzo(a)pyrene	1500	
193-39-5	Indeno(1,2,3-cd)pyrene	660	
53-70-3	Dibenzo(a,h)anthracene	290	J
191-24-2	Benzo(g,h,i)perylene	800	
58-90-2	2,3,4,6-Tetrachlorophenol	520	U

[1] Cannot be separated from Diphenylamine

NW 08/12/13

1D - FORM I SV-1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-81-012FD

11

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 16999

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-16999-11

Sample wt/vol: 30.0 (g/mL) g Lab File ID: PJUWG12.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 40 Decanted: (Y/N) Date Received: 06/13/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/19/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/16/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.7

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
100-52-7	Benzaldehyde	480	U
108-95-2	Phenol	480	U
111-44-4	Bis(2-chloroethyl)ether	480	U
95-57-8	2-Chlorophenol	480	U
95-48-7	2-Methylphenol	480	U
108-60-1	2,2'-Oxybis(1-chloropropane)	480	U
98-86-2	Acetophenone	480	U
106-44-5	4-Methylphenol	480	U
621-64-7	N-Nitroso-di-n-propylamine	480	U
67-72-1	Hexachloroethane	480	U
98-95-3	Nitrobenzene	480	U
78-59-1	Isophorone	480	U
88-75-5	2-Nitrophenol	480	U
105-67-9	2,4-Dimethylphenol	480	U
111-91-1	Bis(2-chloroethoxy)methane	480	U
120-83-2	2,4-Dichlorophenol	480	U
91-20-3	Naphthalene	61	J
106-47-8	4-Chloroaniline	480	U
87-68-3	Hexachlorobutadiene	480	U
105-60-2	Caprolactam	480	U
59-50-7	4-Chloro-3-methylphenol	480	U
91-57-6	2-Methylnaphthalene	46	J
77-47-4	Hexachlorocyclopentadiene	480	~~U~~ UJ
88-06-2	2,4,6-Trichlorophenol	480	U
95-95-4	2,4,5-Trichlorophenol	480	U
92-52-4	1,1'-Biphenyl	480	U
91-58-7	2-Chloronaphthalene	480	U
88-74-4	2-Nitroaniline	930	U
131-11-3	Dimethylphthalate	480	U
606-20-2	2,6-Dinitrotoluene	480	U
208-96-8	Acenaphthylene	120	J
99-09-2	3-Nitroaniline	930	U
83-32-9	Acenaphthene	310	J

MW 08/12/13

1E - FORM I SV-2
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-81-012FD

11

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 16999

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-16999-11

Sample wt/vol: 30.0 (g/mL) g Lab File ID: PJUWG12.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 40 Decanted: (Y/N) Date Received: 06/13/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/19/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/16/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.7

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
51-28-5	2,4-Dinitrophenol	930	U
100-02-7	4-Nitrophenol	930	U
132-64-9	Dibenzofuran	93	J
121-14-2	2,4-Dinitrotoluene	480	U
84-66-2	Diethylphthalate	480	U
86-73-7	Fluorene	450	J
7005-72-3	4-Chlorophenyl-phenylether	480	U
100-01-6	4-Nitroaniline	930	U
534-52-1	4,6-Dinitro-2-methylphenol	930	U
86-30-6	N-Nitrosodiphenylamin [1]	480	U
95-94-3	1,2,4,5-Tetrachlorobenzene	480	U
101-55-3	4-Bromophenyl-phenylether	480	U
118-74-1	Hexachlorobenzene	480	U
1912-24-9	Atrazine	480	U
87-86-5	Pentachlorophenol	930	U
85-01-8	Phenanthrene	3200	
120-12-7	Anthracene	510	
86-74-8	Carbazole	480	U
84-74-2	Di-n-butylphthalate	480	U
206-44-0	Fluoranthene	2400	
129-00-0	Pyrene	3100	
85-68-7	Butylbenzylphthalate	480	U
91-94-1	3,3'-Dichlorobenzidine	480	U
56-55-3	Benzo(a)anthracene	1500	
218-01-9	Chrysene	2000	
117-81-7	Bis(2-ethylhexyl)phthalate	1100	
117-84-0	Di-n-octylphthalate	480	U
205-99-2	Benzo(b)fluoranthene	1100	
207-08-9	Benzo(k)fluoranthene	960	
50-32-8	Benzo(a)pyrene	1100	
193-39-5	Indeno(1,2,3-cd)pyrene	500	
53-70-3	Dibenzo(a,h)anthracene	180	J
191-24-2	Benzo(g,h,i)perylene	600	
58-90-2	2,3,4,6-Tetrachlorophenol	480	U

[1] Cannot be separated from Diphenylamine

MW 08/12/13

1D - FORM I SV-1

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-81-024

12

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 16999

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-16999-12

Sample wt/vol: 30.5 (g/mL) g Lab File ID: PJUWG13.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 40 Decanted: (Y/N) Date Received: 06/13/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/19/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/16/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 2.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
100-52-7	Benzaldehyde	550	U
108-95-2	Phenol	550	U
111-44-4	Bis(2-chloroethyl)ether	550	U
95-57-8	2-Chlorophenol	550	U
95-48-7	2-Methylphenol	550	U
108-60-1	2,2'-Oxybis(1-chloropropane)	550	U
98-86-2	Acetophenone	550	U
106-44-5	4-Methylphenol	550	U
621-64-7	N-Nitroso-di-n-propylamine	550	U
67-72-1	Hexachloroethane	550	U
98-95-3	Nitrobenzene	550	U
78-59-1	Isophorone	550	U
88-75-5	2-Nitrophenol	550	U
105-67-9	2,4-Dimethylphenol	550	U
111-91-1	Bis(2-chloroethoxy)methane	550	U
120-83-2	2,4-Dichlorophenol	550	U
91-20-3	Naphthalene	71	J
106-47-8	4-Chloroaniline	550	U
87-68-3	Hexachlorobutadiene	550	U
105-60-2	Caprolactam	550	U
59-50-7	4-Chloro-3-methylphenol	550	U
91-57-6	2-Methylnaphthalene	51	J
77-47-4	Hexachlorocyclopentadiene	550	~~U~~ UJ
88-06-2	2,4,6-Trichlorophenol	550	U
95-95-4	2,4,5-Trichlorophenol	550	U
92-52-4	1,1'-Biphenyl	550	U
91-58-7	2-Chloronaphthalene	550	U
88-74-4	2-Nitroaniline	1100	U
131-11-3	Dimethylphthalate	550	U
606-20-2	2,6-Dinitrotoluene	550	U
208-96-8	Acenaphthylene	130	J
99-09-2	3-Nitroaniline	1100	U
83-32-9	Acenaphthene	340	J

MW 08/12/13

EPA SAMPLE NO.
LMR13-81-024

12

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 16999

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-16999-12

Sample wt/vol: 30.5 (g/mL) g Lab File ID: PJUWG13.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 40 Decanted: (Y/N) Date Received: 06/13/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/19/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/16/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 2.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
51-28-5	2,4-Dinitrophenol	1100	U
100-02-7	4-Nitrophenol	1100	U
132-64-9	Dibenzofuran	78	J
121-14-2	2,4-Dinitrotoluene	550	U
84-66-2	Diethylphthalate	550	U
86-73-7	Fluorene	600	
7005-72-3	4-Chlorophenyl-phenylether	550	U
100-01-6	4-Nitroaniline	1100	U
534-52-1	4,6-Dinitro-2-methylphenol	1100	U
86-30-6	N-Nitrosodiphenylamin [1]	550	U
95-94-3	1,2,4,5-Tetrachlorobenzene	550	U
101-55-3	4-Bromophenyl-phenylether	550	U
118-74-1	Hexachlorobenzene	550	U
1912-24-9	Atrazine	550	U
87-86-5	Pentachlorophenol	1100	U
85-01-8	Phenanthrene	3700	
120-12-7	Anthracene	730	
86-74-8	Carbazole	550	U
84-74-2	Di-n-butylphthalate	550	U
206-44-0	Fluoranthene	2800	
129-00-0	Pyrene	3800	
85-68-7	Butylbenzylphthalate	550	U
91-94-1	3,3'-Dichlorobenzidine	550	U
56-55-3	Benzo(a)anthracene	1800	
218-01-9	Chrysene	2400	
117-81-7	Bis(2-ethylhexyl)phthalate	550 ~~220~~	J ~~B~~ 4
117-84-0	Di-n-octylphthalate	550	U
205-99-2	Benzo(b)fluoranthene	1200	
207-08-9	Benzo(k)fluoranthene	910	
50-32-8	Benzo(a)pyrene	1200	
193-39-5	Indeno(1,2,3-cd)pyrene	530	J
53-70-3	Dibenzo(a,h)anthracene	190	J
191-24-2	Benzo(g,h,i)perylene	600	
58-90-2	2,3,4,6-Tetrachlorophenol	550	U

[1] Cannot be separated from Diphenylamine

MW 08/12/13

1D - FORM I SV-1

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-81-024FD

13

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 16999

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-16999-13

Sample wt/vol: 30.0 (g/mL) g Lab File ID: PJUWG14.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 39 Decanted: (Y/N) Date Received: 06/13/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/19/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/16/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 2.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
100-52-7	Benzaldehyde	560	U
108-95-2	Phenol	560	U
111-44-4	Bis(2-chloroethyl)ether	560	U
95-57-8	2-Chlorophenol	560	U
95-48-7	2-Methylphenol	560	U
108-60-1	2,2'-Oxybis(1-chloropropane)	560	U
98-86-2	Acetophenone	560	U
106-44-5	4-Methylphenol	560	U
621-64-7	N-Nitroso-di-n-propylamine	560	U
67-72-1	Hexachloroethane	560	U
98-95-3	Nitrobenzene	560	U
78-59-1	Isophorone	560	U
88-75-5	2-Nitrophenol	560	U
105-67-9	2,4-Dimethylphenol	560	U
111-91-1	Bis(2-chloroethoxy)methane	560	U
120-83-2	2,4-Dichlorophenol	560	U
91-20-3	Naphthalene	70	J
106-47-8	4-Chloroaniline	560	U
87-68-3	Hexachlorobutadiene	560	U
105-60-2	Caprolactam	560	U
59-50-7	4-Chloro-3-methylphenol	560	U
91-57-6	2-Methylnaphthalene	57	J
77-47-4	Hexachlorocyclopentadiene	560	~~U~~ UJ
88-06-2	2,4,6-Trichlorophenol	560	U
95-95-4	2,4,5-Trichlorophenol	560	U
92-52-4	1,1'-Biphenyl	560	U
91-58-7	2-Chloronaphthalene	560	U
88-74-4	2-Nitroaniline	1100	U
131-11-3	Dimethylphthalate	560	U
606-20-2	2,6-Dinitrotoluene	560	U
208-96-8	Acenaphthylene	140	J
99-09-2	3-Nitroaniline	1100	U
83-32-9	Acenaphthene	370	J

MW 08/12/13

1E - FORM I SV-2
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-81-024FD

13

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 16999

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-16999-13

Sample wt/vol: 30.0 (g/mL) g Lab File ID: PJUWG14.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 39 Decanted: (Y/N) Date Received: 06/13/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/19/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/16/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 2.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
51-28-5	2,4-Dinitrophenol	1100	U
100-02-7	4-Nitrophenol	1100	U
132-64-9	Dibenzofuran	83	J
121-14-2	2,4-Dinitrotoluene	560	U
84-66-2	Diethylphthalate	560	U
86-73-7	Fluorene	610	
7005-72-3	4-Chlorophenyl-phenylether	560	U
100-01-6	4-Nitroaniline	1100	U
534-52-1	4,6-Dinitro-2-methylphenol	1100	U
86-30-6	N-Nitrosodiphenylamin [1]	560	U
95-94-3	1,2,4,5-Tetrachlorobenzene	560	U
101-55-3	4-Bromophenyl-phenylether	560	U
118-74-1	Hexachlorobenzene	560	U
1912-24-9	Atrazine	560	U
87-86-5	Pentachlorophenol	1100	U
85-01-8	Phenanthrene	3900	
120-12-7	Anthracene	790	
86-74-8	Carbazole	560	U
84-74-2	Di-n-butylphthalate	560	U
206-44-0	Fluoranthene	3200	
129-00-0	Pyrene	4100	
85-68-7	Butylbenzylphthalate	560	U
91-94-1	3,3'-Dichlorobenzidine	560	U
56-55-3	Benzo(a)anthracene	2100	
218-01-9	Chrysene	2700	
117-81-7	Bis(2-ethylhexyl)phthalate	560 ~~200~~	~~J B~~ U
117-84-0	Di-n-octylphthalate	560	U
205-99-2	Benzo(b)fluoranthene	1500	
207-08-9	Benzo(k)fluoranthene	880	
50-32-8	Benzo(a)pyrene	1300	
193-39-5	Indeno(1,2,3-cd)pyrene	590	
53-70-3	Dibenzo(a,h)anthracene	220	J
191-24-2	Benzo(g,h,i)perylene	660	
58-90-2	2,3,4,6-Tetrachlorophenol	560	U

[1] Cannot be separated from Diphenylamine

MW 08/12/13

1D - FORM I SV-1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-81-048

14

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 16999

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-16999-14

Sample wt/vol: 30.5 (g/mL) g Lab File ID: PJUWG15.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 38 Decanted: (Y/N) Date Received: 06/13/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/19/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/16/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 3.3

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
100-52-7	Benzaldehyde	900	U
108-95-2	Phenol	900	U
111-44-4	Bis(2-chloroethyl)ether	900	U
95-57-8	2-Chlorophenol	900	U
95-48-7	2-Methylphenol	900	U
108-60-1	2,2'-Oxybis(1-chloropropane)	900	U
98-86-2	Acetophenone	900	U
106-44-5	4-Methylphenol	900	U
621-64-7	N-Nitroso-di-n-propylamine	900	U
67-72-1	Hexachloroethane	900	U
98-95-3	Nitrobenzene	900	U
78-59-1	Isophorone	900	U
88-75-5	2-Nitrophenol	900	U
105-67-9	2,4-Dimethylphenol	900	U
111-91-1	Bis(2-chloroethoxy)methane	900	U
120-83-2	2,4-Dichlorophenol	900	U
91-20-3	Naphthalene	130	J
106-47-8	4-Chloroaniline	900	U
87-68-3	Hexachlorobutadiene	900	U
105-60-2	Caprolactam	900	U
59-50-7	4-Chloro-3-methylphenol	900	U
91-57-6	2-Methylnaphthalene	150	J
77-47-4	Hexachlorocyclopentadiene	900	~~U~~ UJ
88-06-2	2,4,6-Trichlorophenol	900	U
95-95-4	2,4,5-Trichlorophenol	900	U
92-52-4	1,1'-Biphenyl	900	U
91-58-7	2-Chloronaphthalene	900	U
88-74-4	2-Nitroaniline	1700	U
131-11-3	Dimethylphthalate	900	U
606-20-2	2,6-Dinitrotoluene	900	U
208-96-8	Acenaphthylene	260	J
99-09-2	3-Nitroaniline	1700	U
83-32-9	Acenaphthene	2100	

MW 08/12/13

1E - FORM I SV-2
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-81-048

14

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 16999

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-16999-14

Sample wt/vol: 30.5 (g/mL) g Lab File ID: PJUWG15.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 38 Decanted: (Y/N) Date Received: 06/13/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/19/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/16/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 3.3

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
51-28-5	2,4-Dinitrophenol	1700	U
100-02-7	4-Nitrophenol	1700	U
132-64-9	Dibenzofuran	590	J
121-14-2	2,4-Dinitrotoluene	900	U
84-66-2	Diethylphthalate	900	U
86-73-7	Fluorene	2500	
7005-72-3	4-Chlorophenyl-phenylether	900	U
100-01-6	4-Nitroaniline	1700	U
534-52-1	4,6-Dinitro-2-methylphenol	1700	U
86-30-6	N-Nitrosodiphenylamin [1]	900	U
95-94-3	1,2,4,5-Tetrachlorobenzene	900	U
101-55-3	4-Bromophenyl-phenylether	900	U
118-74-1	Hexachlorobenzene	900	U
1912-24-9	Atrazine	900	U
87-86-5	Pentachlorophenol	1700	U
85-01-8	Phenanthrene	10000	
120-12-7	Anthracene	2300	
86-74-8	Carbazole	900	U
84-74-2	Di-n-butylphthalate	900	U
206-44-0	Fluoranthene	6200	
129-00-0	Pyrene	6000	J
85-68-7	Butylbenzylphthalate	900	U
91-94-1	3,3'-Dichlorobenzidine	900	U
56-55-3	Benzo(a)anthracene	2700	
218-01-9	Chrysene	3100	
117-81-7	Bis(2-ethylhexyl)phthalate	900 ~~120~~	~~J B~~ U
117-84-0	Di-n-octylphthalate	900	U
205-99-2	Benzo(b)fluoranthene	1900	
207-08-9	Benzo(k)fluoranthene	1600	
50-32-8	Benzo(a)pyrene	2000	
193-39-5	Indeno(1,2,3-cd)pyrene	1000	
53-70-3	Dibenzo(a,h)anthracene	400	J
191-24-2	Benzo(g,h,i)perylene	1100	
58-90-2	2,3,4,6-Tetrachlorophenol	900	U

[1] Cannot be separated from Diphenylamine

NW 08/12/13

EPA SAMPLE NO.
LMR13-81-072

15

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 16999

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-16999-15

Sample wt/vol: 30.3 (g/mL) g Lab File ID: PJUWG18.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 39 Decanted: (Y/N) Date Received: 06/13/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/19/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/16/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
100-52-7	Benzaldehyde	50	J
108-95-2	Phenol	270	U
111-44-4	Bis(2-chloroethyl)ether	270	U
95-57-8	2-Chlorophenol	270	U
95-48-7	2-Methylphenol	270	U
108-60-1	2,2'-Oxybis(1-chloropropane)	270	U
98-86-2	Acetophenone	31	J
106-44-5	4-Methylphenol	11	J
621-64-7	N-Nitroso-di-n-propylamine	270	U
67-72-1	Hexachloroethane	270	U
98-95-3	Nitrobenzene	270	U
78-59-1	Isophorone	270	U
88-75-5	2-Nitrophenol	270	U
105-67-9	2,4-Dimethylphenol	270	U
111-91-1	Bis(2-chloroethoxy)methane	270	U
120-83-2	2,4-Dichlorophenol	270	U
91-20-3	Naphthalene	54	J
106-47-8	4-Chloroaniline	270	U
87-68-3	Hexachlorobutadiene	270	U
105-60-2	Caprolactam	270	U
59-50-7	4-Chloro-3-methylphenol	270	U
91-57-6	2-Methylnaphthalene	42	J
77-47-4	Hexachlorocyclopentadiene	270	~~U~~ UJ
88-06-2	2,4,6-Trichlorophenol	270	U
95-95-4	2,4,5-Trichlorophenol	270	U
92-52-4	1,1'-Biphenyl	270	U
91-58-7	2-Chloronaphthalene	270	U
88-74-4	2-Nitroaniline	530	U
131-11-3	Dimethylphthalate	270	U
606-20-2	2,6-Dinitrotoluene	270	U
208-96-8	Acenaphthylene	98	J
99-09-2	3-Nitroaniline	530	U
83-32-9	Acenaphthene	380	

NW 08/12/13

1E - FORM I SV-2
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-81-072

15

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 16999

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-16999-15

Sample wt/vol: 30.3 (g/mL) g Lab File ID: PJUWG18.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 39 Decanted: (Y/N) Date Received: 06/13/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/19/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/16/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
51-28-5	2,4-Dinitrophenol	530	U
100-02-7	4-Nitrophenol	530	U
132-64-9	Dibenzofuran	74	J
121-14-2	2,4-Dinitrotoluene	270	U
84-66-2	Diethylphthalate	270	U
86-73-7	Fluorene	460	
7005-72-3	4-Chlorophenyl-phenylether	270	U
100-01-6	4-Nitroaniline	530	U
534-52-1	4,6-Dinitro-2-methylphenol	530	U
86-30-6	N-Nitrosodiphenylamin [1]	270	U
95-94-3	1,2,4,5-Tetrachlorobenzene	270	U
101-55-3	4-Bromophenyl-phenylether	270	U
118-74-1	Hexachlorobenzene	270	U
1912-24-9	Atrazine	270	U
87-86-5	Pentachlorophenol	530	U
85-01-8	Phenanthrene	2400	
120-12-7	Anthracene	670	
86-74-8	Carbazole	270	U
84-74-2	Di-n-butylphthalate	270	U
206-44-0	Fluoranthene	2600	
129-00-0	Pyrene	2900	
85-68-7	Butylbenzylphthalate	~~270 73 J B~~ 270 U	
91-94-1	3,3'-Dichlorobenzidine	270	U
56-55-3	Benzo(a)anthracene	1300	
218-01-9	Chrysene	1400	
117-81-7	Bis(2-ethylhexyl)phthalate	~~270 95 J B~~ 270 U	
117-84-0	Di-n-octylphthalate	270	U
205-99-2	Benzo(b)fluoranthene	1200	
207-08-9	Benzo(k)fluoranthene	680	
50-32-8	Benzo(a)pyrene	1000	
193-39-5	Indeno(1,2,3-cd)pyrene	470	
53-70-3	Dibenzo(a,h)anthracene	180	J
191-24-2	Benzo(g,h,i)perylene	550	
58-90-2	2,3,4,6-Tetrachlorophenol	270	U

[1] Cannot be separated from Diphenylamine

AW 08/12/13

1D - FORM I SV-1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-81-096

16

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 16999

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-16999-16

Sample wt/vol: 30.7 (g/mL) g Lab File ID: PJUWG19.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 36 Decanted: (Y/N) Date Received: 06/13/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/19/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/16/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 2.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
100-52-7	Benzaldehyde	520	U
108-95-2	Phenol	520	U
111-44-4	Bis(2-chloroethyl)ether	520	U
95-57-8	2-Chlorophenol	520	U
95-48-7	2-Methylphenol	520	U
108-60-1	2,2'-Oxybis(1-chloropropane)	520	U
98-86-2	Acetophenone	520	U
106-44-5	4-Methylphenol	520	U
621-64-7	N-Nitroso-di-n-propylamine	520	U
67-72-1	Hexachloroethane	520	U
98-95-3	Nitrobenzene	520	U
78-59-1	Isophorone	520	U
88-75-5	2-Nitrophenol	520	U
105-67-9	2,4-Dimethylphenol	520	U
111-91-1	Bis(2-chloroethoxy)methane	520	U
120-83-2	2,4-Dichlorophenol	520	U
91-20-3	Naphthalene	140	J
106-47-8	4-Chloroaniline	520	U
87-68-3	Hexachlorobutadiene	520	U
105-60-2	Caprolactam	520	U
59-50-7	4-Chloro-3-methylphenol	520	U
91-57-6	2-Methylnaphthalene	110	J
77-47-4	Hexachlorocyclopentadiene	520	U UJ
88-06-2	2,4,6-Trichlorophenol	520	U
95-95-4	2,4,5-Trichlorophenol	520	U
92-52-4	1,1'-Biphenyl	41	J
91-58-7	2-Chloronaphthalene	520	U
88-74-4	2-Nitroaniline	1000	U
131-11-3	Dimethylphthalate	520	U
606-20-2	2,6-Dinitrotoluene	520	U
208-96-8	Acenaphthylene	130	J
99-09-2	3-Nitroaniline	1000	U
83-32-9	Acenaphthene	2200	

MW 08/12/13

1E - FORM I SV-2
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-81-096

16

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 16999

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-16999-16

Sample wt/vol: 30.7 (g/mL) g Lab File ID: PJUWG19.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 36 Decanted: (Y/N) Date Received: 06/13/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/19/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/16/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 2.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
51-28-5	2,4-Dinitrophenol	1000	U
100-02-7	4-Nitrophenol	1000	U
132-64-9	Dibenzofuran	210	J
121-14-2	2,4-Dinitrotoluene	520	U
84-66-2	Diethylphthalate	520	U
86-73-7	Fluorene	1100	
7005-72-3	4-Chlorophenyl-phenylether	520	U
100-01-6	4-Nitroaniline	1000	U
534-52-1	4,6-Dinitro-2-methylphenol	1000	U
86-30-6	N-Nitrosodiphenylamin [1]	520	U
95-94-3	1,2,4,5-Tetrachlorobenzene	520	U
101-55-3	4-Bromophenyl-phenylether	520	U
118-74-1	Hexachlorobenzene	520	U
1912-24-9	Atrazine	520	U
87-86-5	Pentachlorophenol	1000	U
85-01-8	Phenanthrene	5500	
120-12-7	Anthracene	1400	
86-74-8	Carbazole	26	J
84-74-2	Di-n-butylphthalate	21	J
206-44-0	Fluoranthene	3100	
129-00-0	Pyrene	4300	
85-68-7	Butylbenzylphthalate	520	U
91-94-1	3,3'-Dichlorobenzidine	520	U
56-55-3	Benzo(a)anthracene	1500	
218-01-9	Chrysene	1600	
117-81-7	Bis(2-ethylhexyl)phthalate	520 ~~110~~ ~~J B~~	U
117-84-0	Di-n-octylphthalate	520	U
205-99-2	Benzo(b)fluoranthene	930	
207-08-9	Benzo(k)fluoranthene	980	
50-32-8	Benzo(a)pyrene	1500	
193-39-5	Indeno(1,2,3-cd)pyrene	690	
53-70-3	Dibenzo(a,h)anthracene	260	J
191-24-2	Benzo(g,h,i)perylene	900	
58-90-2	2,3,4,6-Tetrachlorophenol	520	U

[1] Cannot be separated from Diphenylamine

MW 08/12/13

1D - FORM I SV-1

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-81-120

17

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 16999

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-16999-17

Sample wt/vol: 30.7 (g/mL) g Lab File ID: PJUWF21.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 37 Decanted: (Y/N) Date Received: 06/13/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/19/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/15/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
100-52-7	Benzaldehyde	39	~~J~~ J
108-95-2	Phenol	260	U
111-44-4	Bis(2-chloroethyl)ether	260	U
95-57-8	2-Chlorophenol	260	U
95-48-7	2-Methylphenol	260	U
108-60-1	2,2'-Oxybis(1-chloropropane)	260	U
98-86-2	Acetophenone	260	U
106-44-5	4-Methylphenol	7.6	~~J~~ J
621-64-7	N-Nitroso-di-n-propylamine	260	U
67-72-1	Hexachloroethane	260	U
98-95-3	Nitrobenzene	260	U
78-59-1	Isophorone	260	U
88-75-5	2-Nitrophenol	260	U
105-67-9	2,4-Dimethylphenol	260	U
111-91-1	Bis(2-chloroethoxy)methane	260	U
120-83-2	2,4-Dichlorophenol	260	U
91-20-3	Naphthalene	76	J
106-47-8	4-Chloroaniline	260	U
87-68-3	Hexachlorobutadiene	260	U
105-60-2	Caprolactam	260	U
59-50-7	4-Chloro-3-methylphenol	260	U
91-57-6	2-Methylnaphthalene	55	J
77-47-4	Hexachlorocyclopentadiene	260	~~U~~ UJ
88-06-2	2,4,6-Trichlorophenol	260	U
95-95-4	2,4,5-Trichlorophenol	260	U
92-52-4	1,1'-Biphenyl	24	J
91-58-7	2-Chloronaphthalene	260	U
88-74-4	2-Nitroaniline	510	U
131-11-3	Dimethylphthalate	260	U
606-20-2	2,6-Dinitrotoluene	260	U
208-96-8	Acenaphthylene	58	J
99-09-2	3-Nitroaniline	510	U
83-32-9	Acenaphthene	1000	

MW 08/12/13

EPA SAMPLE NO.
LMR13-81-120

17

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 16999

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-16999-17

Sample wt/vol: 30.7 (g/mL) g Lab File ID: PJUWF21.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 37 Decanted: (Y/N) Date Received: 06/13/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/19/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/15/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
51-28-5	2,4-Dinitrophenol	510	U
100-02-7	4-Nitrophenol	510	U
132-64-9	Dibenzofuran	85	J
121-14-2	2,4-Dinitrotoluene	260	U
84-66-2	Diethylphthalate	260	U
86-73-7	Fluorene	490	
7005-72-3	4-Chlorophenyl-phenylether	260	U
100-01-6	4-Nitroaniline	510	U
534-52-1	4,6-Dinitro-2-methylphenol	510	U
86-30-6	N-Nitrosodiphenylamin [1]	260	U
95-94-3	1,2,4,5-Tetrachlorobenzene	260	U
101-55-3	4-Bromophenyl-phenylether	260	U
118-74-1	Hexachlorobenzene	260	U
1912-24-9	Atrazine	260	U
87-86-5	Pentachlorophenol	510	~~U~~ UJ
85-01-8	Phenanthrene	2900	
120-12-7	Anthracene	850	
86-74-8	Carbazole	14	J
84-74-2	Di-n-butylphthalate	10	J
206-44-0	Fluoranthene	1800	
129-00-0	Pyrene	3500	
85-68-7	Butylbenzylphthalate	260 ~~29~~	~~J B~~ U
91-94-1	3,3'-Dichlorobenzidine	260	U
56-55-3	Benzo(a)anthracene	1200	
218-01-9	Chrysene	1200	
117-81-7	Bis(2-ethylhexyl)phthalate	260 ~~78~~	~~J B~~ U
117-84-0	Di-n-octylphthalate	260	U
205-99-2	Benzo(b)fluoranthene	710	
207-08-9	Benzo(k)fluoranthene	860	
50-32-8	Benzo(a)pyrene	1200	
193-39-5	Indeno(1,2,3-cd)pyrene	510	
53-70-3	Dibenzo(a,h)anthracene	190	J
191-24-2	Benzo(g,h,i)perylene	710	
58-90-2	2,3,4,6-Tetrachlorophenol	260	U

[1] Cannot be separated from Diphenylamine

MW 08/12/13

1F - FORM I SV-SIM

SEMIVOLATILE SIM ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-81-012

10

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: 1734.2] SDG No.: 16999

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-16999-10

Sample wt/vol: 29.9 (g/mL) g Lab File ID: HQISA06.D

Extraction: (Type) SONC

% Moisture: 35 Decanted: (Y/N) Date Received: 06/13/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/19/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/26/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 6.7

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
91-20-3	Naphthalene	73	
90-12-0	1-Methylnaphthalene	37	
91-57-6	2-Methylnaphthalene	67	
208-96-8	Acenaphthylene	110	
83-32-9	Acenaphthene	280	
86-73-7	Fluorene	550 ~~490~~ E	
85-01-8	Phenanthrene	3200 ~~2600~~ E	J
120-12-7	Anthracene	730 ~~610~~ E	
206-44-0	Fluoranthene	2800 ~~2100~~ E	J
129-00-0	Pyrene	3700 ~~4000~~ E	
56-55-3	Benzo(a)anthracene	2600 ~~2600~~ E	
218-01-9	Chrysene	2800 ~~2900~~ E	
205-99-2	Benzo(b)fluoranthene	1500 ~~1400~~ E	
207-08-9	Benzo(k)fluoranthene	1600 ~~1300~~ E	
192-97-2	Benzo(e)pyrene	1500 ~~1200~~ E	
50-32-8	Benzo(a)pyrene	2000 ~~1600~~ E	J
198-55-0	Perylene	540 ~~420~~ E	
193-39-5	Indeno(1,2,3-cd)pyrene	810 ~~580~~ E	
53-70-3	Dibenzo(a,h)anthracene	250	
191-24-2	Benzo(g,h,i)perylene	770 ~~580~~ E	
C1NAPH	C1-Naphthalenes	65	
C2NAPH	C2-Naphthalenes	460 ~~390~~ E	J
C3NAPH	C3-Naphthalenes	2200 ~~2000~~ E	J
C4NAPH	C4-Naphthalenes	1400 ~~1100~~ E	J
C1FLUOR	C1 Fluorenes	250	
C2FLUOR	C2 Fluorenes	560 ~~460~~ E	J
C3FLUOR	C3 Fluorenes	920 ~~780~~ E	
C1PHAN	C1-Phenanthrenes/Anthracenes	4700 ~~4200~~ E	
C2PHAN	C2-Phenanthrenes/Anthracenes	3400 ~~2700~~ E	
C3PHAN	C3-Phenanthrenes/Anthracenes	3700 ~~4600~~ E	
C4PHAN	C4-Phenanthrenes/Anthracenes	1900 ~~2300~~ E	
C1FLPY	C1-Fluoranthenes/Pyrenes	4700 ~~5800~~ E	
C2FLPY	C2-Fluoranthenes/Pyrenes	3100 ~~3800~~ E	
C3FLPY	C3-Fluoranthenes/Pyrenes	2000 ~~1900~~ E	
C1CHRYS	C1 Chrysenes	3700 ~~3100~~ E	
C2CHRYS	C2 Chrysenes	2700 ~~2600~~ E	
C3CHRYS	C3 Chrysenes	1300 ~~880~~ E	
C4CHRYS	C4 Chrysenes	300	

NW 8/12/13

1F - FORM I SV-SIM

SEMIVOLATILE SIM ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-81-012

10

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: 1734.2] SDG No.: 16999

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-16999-10

Sample wt/vol: 29.9 (g/mL) g Lab File ID: HQISA06.D

Extraction: (Type) SONC

% Moisture: 35 Decanted: (Y/N) Date Received: 06/13/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/19/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/26/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 6.7

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
TPPAH	Total 16 PPAH	21000	
TPAH	Total PAH	60000	

JJ

NW 8/12/13

1F - FORM I SV-SIM

SEMIVOLATILE SIM ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-81-012DL

10DL

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: 1734.2] SDG No.: 16999

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-16999-10

Sample wt/vol: 29.9 (g/mL) g Lab File ID: HQISM12.D

Extraction: (Type) SONC

% Moisture: 35 Decanted: (Y/N) Date Received: 06/13/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/19/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/30/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 33.3

use orginal results

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
91-20-3	Naphthalene	170 ~~71~~	~~J D B~~ U
90-12-0	1-Methylnaphthalene	~~30~~	~~J D B~~
91-57-6	2-Methylnaphthalene	~~57~~	~~J D B~~
208-96-8	Acenaphthylene	98	J ~~D~~
83-32-9	Acenaphthene	290	~~D~~
86-73-7	Fluorene	550	~~D~~
85-01-8	Phenanthrene	3200	~~E D~~ J
120-12-7	Anthracene	730	~~D~~
206-44-0	Fluoranthene	2800	~~E D B~~ J
129-00-0	Pyrene	3700	~~E D B~~
56-55-3	Benzo(a)anthracene	2600	~~E D B~~
218-01-9	Chrysene	2800	~~E D B~~
205-99-2	Benzo(b)fluoranthene	1500	~~D B~~
207-08-9	Benzo(k)fluoranthene	1600	~~D B~~
192-97-2	Benzo(e)pyrene	1500	~~D~~
50-32-8	Benzo(a)pyrene	2000	~~E D~~ J
198-55-0	Perylene	540	D
193-39-5	Indeno(1,2,3-cd)pyrene	810	D
53-70-3	Dibenzo(a,h)anthracene	310	D J
191-24-2	Benzo(g,h,i)perylene	770	D
C1NAPH	C1-Naphthalenes	60	J D
C2NAPH	C2-Naphthalenes	460	J D
C3NAPH	C3-Naphthalenes	2200	J D
C4NAPH	C4-Naphthalenes	1400	J D
C1FLUOR	C1 Fluorenes	320	J D
C2FLUOR	C2 Fluorenes	560	J D
C3FLUOR	C3 Fluorenes	920	J D
C1PHAN	C1-Phenanthrenes/Anthracenes	4700	J D
C2PHAN	C2-Phenanthrenes/Anthracenes	3400	J D
C3PHAN	C3-Phenanthrenes/Anthracenes	3700	J D
C4PHAN	C4-Phenanthrenes/Anthracenes	1900	J D
C1FLPY	C1-Fluoranthenes/Pyrenes	4700	J D
C2FLPY	C2-Fluoranthenes/Pyrenes	3100	J D
C3FLPY	C3-Fluoranthenes/Pyrenes	2000	J D
C1CHRYS	C1 Chrysenes	3700	J D
C2CHRYS	C2 Chrysenes	2700	J D
C3CHRYS	C3 Chrysenes	1300	J D
C4CHRYS	C4 Chrysenes	490	J D

NW 8/12/13

1F - FORM I SV-SIM

SEMIVOLATILE SIM ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-81-012DL

10DL

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: 1734.2] SDG No.: 16999

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-16999-10

Sample wt/vol: 29.9 (g/mL) g Lab File ID: HQISM12.D

Extraction: (Type) SONC

% Moisture: 35 Decanted: (Y/N) Date Received: 06/13/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/19/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/30/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 33.3

use original results

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
TPPAH	Total 16 PPAH	24000	~~D~~ ~~B~~ J
TPAH	Total PAH	63000	~~D~~ ~~B~~ J

NW 8/12/13

1F - FORM I SV-SIM

SEMIVOLATILE SIM ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-81-012FD

11

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: 1734.2] SDG No.: 16999

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-16999-11

Sample wt/vol: 30.0 (g/mL) g Lab File ID: HQISA07.D

Extraction: (Type) SONC

% Moisture: 40 Decanted: (Y/N) Date Received: 06/13/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/19/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/26/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 5.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
91-20-3	Naphthalene	68	
90-12-0	1-Methylnaphthalene	59	
91-57-6	2-Methylnaphthalene	63	
208-96-8	Acenaphthylene	99	
83-32-9	Acenaphthene	280 ~~310~~	E
86-73-7	Fluorene	440 ~~440~~	E
85-01-8	Phenanthrene	2700 ~~2700~~	E J
120-12-7	Anthracene	430 ~~570~~	E
206-44-0	Fluoranthene	1800 ~~2100~~	E J
129-00-0	Pyrene	2700 ~~3100~~	E
56-55-3	Benzo(a)anthracene	1400 ~~4700~~	E
218-01-9	Chrysene	1700 ~~2000~~	E
205-99-2	Benzo(b)fluoranthene	760 ~~1200~~	E
207-08-9	Benzo(k)fluoranthene	830 ~~1000~~	E
192-97-2	Benzo(e)pyrene	650 ~~840~~	E
50-32-8	Benzo(a)pyrene	950 ~~1200~~	E
198-55-0	Perylene	270 ~~340~~	E
193-39-5	Indeno(1,2,3-cd)pyrene	420 ~~450~~	E
53-70-3	Dibenzo(a,h)anthracene	180	
191-24-2	Benzo(g,h,i)perylene	380 ~~420~~	E
C1NAPH	C1-Naphthalenes	80	
C2NAPH	C2-Naphthalenes	840 ~~870~~	E J
C3NAPH	C3-Naphthalenes	1600 ~~1800~~	E
C4NAPH	C4-Naphthalenes	1000 ~~1200~~	E
C1FLUOR	C1 Fluorenes	260 ~~310~~	E
C2FLUOR	C2 Fluorenes	410 ~~540~~	E
C3FLUOR	C3 Fluorenes	680 ~~810~~	E
C1PHAN	C1-Phenanthrenes/Anthracenes	3400 ~~5000~~	E
C2PHAN	C2-Phenanthrenes/Anthracenes	2100 ~~2800~~	E
C3PHAN	C3-Phenanthrenes/Anthracenes	2400 ~~3900~~	E
C4PHAN	C4-Phenanthrenes/Anthracenes	1500 ~~2200~~	E
C1FLPY	C1-Fluoranthenes/Pyrenes	2800 4100	E
C2FLPY	C2-Fluoranthenes/Pyrenes	1700 ~~2600~~	E
C3FLPY	C3-Fluoranthenes/Pyrenes	1100 ~~1400~~	E
C1CHRYS	C1 Chrysenes	1900 2000	E
C2CHRYS	C2 Chrysenes	1300 ~~1700~~	E
C3CHRYS	C3 Chrysenes	580 ~~690~~	E
C4CHRYS	C4 Chrysenes	240	

NW 8/12/13

1F - FORM I SV-SIM

SEMIVOLATILE SIM ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-81-012FD

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: 1734.2] SDG No.: 16999

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-16999-11

Sample wt/vol: 30.0 (g/mL) g Lab File ID: HQISA07.D

Extraction: (Type) SONC

% Moisture: 40 Decanted: (Y/N) Date Received: 06/13/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/19/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/26/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 5.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
TPPAH	Total 16 PPAH	18000	J
TPAH	Total PAH	51000	J

NW 8/12/13

1F - FORM I SV-SIM

SEMIVOLATILE SIM ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-81-012FDDL

1 IDL

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: 1734.2] SDG No.: 16999

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-16999-11

Sample wt/vol: 30.0 (g/mL) g Lab File ID: HQISM13.D

Extraction: (Type) SONC

% Moisture: 40 Decanted: (Y/N) Date Received: 06/13/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/19/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/30/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 20.0

Use original results

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
91-20-3	Naphthalene	110 54	~~J D B~~ U
90-12-0	1-Methylnaphthalene	41	~~J D B~~
91-57-6	2-Methylnaphthalene	43	~~J D B~~
208-96-8	Acenaphthylene	70	J D
83-32-9	Acenaphthene	280	D
86-73-7	Fluorene	440	D
85-01-8	Phenanthrene	2700	~~E~~ D J
120-12-7	Anthracene	430	D
206-44-0	Fluoranthene	1800	~~E D B~~ J
129-00-0	Pyrene	2700	~~E D B~~
56-55-3	Benzo(a)anthracene	1400	~~E D B~~
218-01-9	Chrysene	1700	~~E D B~~
205-99-2	Benzo(b)fluoranthene	760	~~D B~~
207-08-9	Benzo(k)fluoranthene	830	~~D B~~
192-97-2	Benzo(e)pyrene	650	D
50-32-8	Benzo(a)pyrene	950	D
198-55-0	Perylene	270	D
193-39-5	Indeno(1,2,3-cd)pyrene	420	D
53-70-3	Dibenzo(a,h)anthracene	140	D J
191-24-2	Benzo(g,h,i)perylene	380	D
C1NAPH	C1-Naphthalenes	56	J D
C2NAPH	C2-Naphthalenes	840	J D
C3NAPH	C3-Naphthalenes	1600	J D
C4NAPH	C4-Naphthalenes	1000	J D
C1FLUOR	C1 Fluorenes	260	J D
C2FLUOR	C2 Fluorenes	410	J D
C3FLUOR	C3 Fluorenes	680	J D
C1PHAN	C1-Phenanthrenes/Anthracenes	3400	J D
C2PHAN	C2-Phenanthrenes/Anthracenes	2100	J D
C3PHAN	C3-Phenanthrenes/Anthracenes	2400	J D
C4PHAN	C4-Phenanthrenes/Anthracenes	1500	J D
C1FLPY	C1-Fluoranthenes/Pyrenes	2800	J D
C2FLPY	C2-Fluoranthenes/Pyrenes	1700	J D
C3FLPY	C3-Fluoranthenes/Pyrenes	1100	J D
C1CHRYS	C1 Chrysenes	1900	J D
C2CHRYS	C2 Chrysenes	1300	J D
C3CHRYS	C3 Chrysenes	580	J D
C4CHRYS	C4 Chrysenes	240	J D

NW 8/12/13

1F - FORM I SV-SIM

SEMIVOLATILE SIM ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-81-012FDDL

11DL

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: 1734.2] SDG No.: 16999

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-16999-11

Sample wt/vol: 30.0 (g/mL) g Lab File ID: HQISM13.D

Extraction: (Type) SONC

% Moisture: 40 Decanted: (Y/N) Date Received: 06/13/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/19/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/30/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 20.0

use original results

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
TPPAH	Total 16 PPAH	15000	~~D~~ B J
TPAH	Total PAH	40000	~~D~~ B J

NW 8/12/13

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-44-072

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 16999

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-16999-1

Sample wt/vol: 29.7 (g/mL) g Lab File ID: 5253AVASOM55.D

% Moisture: 30 Decanted: (Y/N) Date Received: 06/13/2013

Extraction: (Type) SONC Date Extracted: 06/18/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 07/04/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	48	U
11104-28-2	Aroclor-1221	48	U
11141-16-5	Aroclor-1232	48	U
53469-21-9	Aroclor-1242	48	U
12672-29-6	Aroclor-1248	48	U
11097-69-1	Aroclor-1254	48	U
11096-82-5	Aroclor-1260	48	U
37324-23-5	Aroclor-1262	48	U
11100-14-4	Aroclor-1268	48	U

NW 08/12/13

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-44-096

2

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 16999

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-16999-2

Sample wt/vol: 29.5 (g/mL) g Lab File ID: 5253AVASOM56.D

% Moisture: 30 Decanted: (Y/N) Date Received: 06/13/2013

Extraction: (Type) SONC Date Extracted: 06/18/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 07/04/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	48	U
11104-28-2	Aroclor-1221	48	U
11141-16-5	Aroclor-1232	48	U
53469-21-9	Aroclor-1242	48	U
12672-29-6	Aroclor-1248	48	U
11097-69-1	Aroclor-1254	48	U
11096-82-5	Aroclor-1260	48	U
37324-23-5	Aroclor-1262	48	U
11100-14-4	Aroclor-1268	48	U

MW 08/12/13

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-46-012

3

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 16999

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-16999-3

Sample wt/vol: 30.8 (g/mL) g Lab File ID: 5253AWASOM01.D

% Moisture: 46 Decanted: (Y/N) Date Received: 06/13/2013

Extraction: (Type) SONC Date Extracted: 06/18/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 07/08/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
12674-11-2	Aroclor-1016	60	U	UJ
11104-28-2	Aroclor-1221	60	U	↓
11141-16-5	Aroclor-1232	60	U	↓
53469-21-9	Aroclor-1242	160		J
12672-29-6	Aroclor-1248	60	U	UJ
11097-69-1	Aroclor-1254	93	P	J
11096-82-5	Aroclor-1260	60	U	UJ
37324-23-5	Aroclor-1262	60	U	↓
11100-14-4	Aroclor-1268	60	U	↓

NW 08/12/13

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-46-024

4

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 16999

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-16999-4

Sample wt/vol: 30.3 (g/mL) g Lab File ID: 5253AWASOM02.D

% Moisture: 46 Decanted: (Y/N) Date Received: 06/13/2013

Extraction: (Type) SONC Date Extracted: 06/18/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 07/08/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	61	U UJ
11104-28-2	Aroclor-1221	61	U ↓
11141-16-5	Aroclor-1232	61	U ↓
53469-21-9	Aroclor-1242	210	P J
12672-29-6	Aroclor-1248	61	U UJ
11097-69-1	Aroclor-1254	150	P J
11096-82-5	Aroclor-1260	61	U UJ
37324-23-5	Aroclor-1262	61	U ↓
11100-14-4	Aroclor-1268	61	U ↓

NW 08/12/13

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-46-048

6

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 16999

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-16999-6

Sample wt/vol: 30.2 (g/mL) g Lab File ID: 5253AXASOM01.D

% Moisture: 51 Decanted: (Y/N) Date Received: 06/13/2013

Extraction: (Type) SONC Date Extracted: 06/18/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 07/11/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
12674-11-2	Aroclor-1016	67	U	UJ
11104-28-2	Aroclor-1221	67	U	↓
11141-16-5	Aroclor-1232	67	U	↓
53469-21-9	Aroclor-1242	370	P	J
12672-29-6	Aroclor-1248	67	U	UJ
11097-69-1	Aroclor-1254	350	P	J
11096-82-5	Aroclor-1260	81	P	J
37324-23-5	Aroclor-1262	67	U	UJ
11100-14-4	Aroclor-1268	67	U	↓

MW 08/12/13

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-46-072

7

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 16999

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-16999-7

Sample wt/vol: 30.2 (g/mL) g Lab File ID: 5253AXASOM02.D

% Moisture: 52 Decanted: (Y/N) Date Received: 06/13/2013

Extraction: (Type) SONC Date Extracted: 06/18/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 07/11/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
12674-11-2	Aroclor-1016	68	U	UJ
11104-28-2	Aroclor-1221	68	U	↓
11141-16-5	Aroclor-1232	68	U	↓
53469-21-9	Aroclor-1242	930 ~~650~~	P	J
12672-29-6	Aroclor-1248	68	U	UJ
11097-69-1	Aroclor-1254	700 ~~570~~	P	J
11096-82-5	Aroclor-1260	180	P	J
37324-23-5	Aroclor-1262	68	U	UJ
11100-14-4	Aroclor-1268	68	U	↓

NW 08/02/13

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-46-072DL

7DL

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 16999

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-16999-7

Sample wt/vol: 30.2 (g/mL) g Lab File ID: 5253AWASOM04.D

% Moisture: 52 Decanted: (Y/N) Date Received: 06/13/2013

Extraction: (Type) SONC Date Extracted: 06/18/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 07/08/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 4.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

use original results

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	270	U
11104-28-2	Aroclor-1221	270	U
11141-16-5	Aroclor-1232	270	U
53469-21-9	Aroclor-1242	930	~~P D~~ J
12672-29-6	Aroclor-1248	270	U
11097-69-1	Aroclor-1254	700	~~P D~~ J
11096-82-5	Aroclor-1260	220	~~J P D~~ J
37324-23-5	Aroclor-1262	270	U
11100-14-4	Aroclor-1268	270	U

MW 08/12/13

1H - FORM I ARO
AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-46-096

8

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 16999

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-16999-8

Sample wt/vol: 30.3 (g/mL) g Lab File ID: 5253AXASOM03.D

% Moisture: 55 Decanted: (Y/N) Date Received: 06/13/2013

Extraction: (Type) SONC Date Extracted: 06/18/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 07/11/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	72	U UJ
11104-28-2	Aroclor-1221	72	U
11141-16-5	Aroclor-1232	72	U
53469-21-9	Aroclor-1242	8600 ~~5700~~	~~E~~
12672-29-6	Aroclor-1248	72	~~U~~ UJ
11097-69-1	Aroclor-1254	3500 ~~2100~~	~~E P~~
11096-82-5	Aroclor-1260	760	~~P~~ J
37324-23-5	Aroclor-1262	72	~~U~~ UJ
11100-14-4	Aroclor-1268	72	~~U~~ UJ

NW 08/12/13

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-46-096DL

8DL

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 16999

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-16999-8

Sample wt/vol: 30.3 (g/mL) g Lab File ID: 5253AYASOM01.D

% Moisture: 55 Decanted: (Y/N) Date Received: 06/13/2013

Extraction: (Type) SONC Date Extracted: 06/18/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 07/18/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 20.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

use original results

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	1400	U
11104-28-2	Aroclor-1221	1400	U
11141-16-5	Aroclor-1232	1400	U
53469-21-9	Aroclor-1242	8600	~~D~~
12672-29-6	Aroclor-1248	1400	U
11097-69-1	Aroclor-1254	3500	~~D~~
11096-82-5	Aroclor-1260	1300	~~J P D~~ J
37324-23-5	Aroclor-1262	1400	U
11100-14-4	Aroclor-1268	1400	U

NW 08/12/13

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-46-120

9

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 16999

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-16999-9

Sample wt/vol: 30.1 (g/mL) g Lab File ID: 5253AXASOM04.D

% Moisture: 41 Decanted: (Y/N) Date Received: 06/13/2013

Extraction: (Type) SONC Date Extracted: 06/18/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 07/11/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	56	U UJ
11104-28-2	Aroclor-1221	56	U
11141-16-5	Aroclor-1232	56	U
53469-21-9	Aroclor-1242	56	U
12672-29-6	Aroclor-1248	7200 ~~4700~~	~~E~~
11097-69-1	Aroclor-1254	3100 ~~2100~~	~~E P~~ J
11096-82-5	Aroclor-1260	190	J
37324-23-5	Aroclor-1262	56	U UJ
11100-14-4	Aroclor-1268	56	U UJ

MW 08/12/13

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-46-120DL

9DL

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 16999

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-16999-9

Sample wt/vol: 30.1 (g/mL) g Lab File ID: 5253AWASOM06.D

% Moisture: 41 Decanted: (Y/N) Date Received: 06/13/2013

Extraction: (Type) SONC Date Extracted: 06/18/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 07/08/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 10.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

use original results

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	560	U
11104-28-2	Aroclor-1221	560	U
11141-16-5	Aroclor-1232	560	U
53469-21-9	Aroclor-1242	560	U
12672-29-6	Aroclor-1248	7200	~~D~~
11097-69-1	Aroclor-1254	3100	~~P D~~ J
11096-82-5	Aroclor-1260	450	~~J P D~~ J
37324-23-5	Aroclor-1262	560	U
11100-14-4	Aroclor-1268	560	U

NW 08/12/13

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-81-012

10

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 16999

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-16999-10

Sample wt/vol: 30.9 (g/mL) g Lab File ID: 5253AWASOM07.D

% Moisture: 35 Decanted: (Y/N) Date Received: 06/13/2013

Extraction: (Type) SONC Date Extracted: 06/18/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 07/08/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
12674-11-2	Aroclor-1016	49	U	UJ
11104-28-2	Aroclor-1221	49	U	↓
11141-16-5	Aroclor-1232	49	U	
53469-21-9	Aroclor-1242	34	J P	J
12672-29-6	Aroclor-1248	49	U	UJ
11097-69-1	Aroclor-1254	21	J P	J
11096-82-5	Aroclor-1260	4.7	J P	J
37324-23-5	Aroclor-1262	49	U	UJ
11100-14-4	Aroclor-1268	49	U	↓

NW 08/12/13

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-81-024

12

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 16999

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-16999-12

Sample wt/vol: 30.8 (g/mL) g Lab File ID: 5253AVASOM57.D

% Moisture: 40 Decanted: (Y/N) Date Received: 06/13/2013

Extraction: (Type) SONC Date Extracted: 06/18/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 07/04/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	53	U UJ
11104-28-2	Aroclor-1221	53	U
11141-16-5	Aroclor-1232	53	U
53469-21-9	Aroclor-1242	53	U
12672-29-6	Aroclor-1248	53	U
11097-69-1	Aroclor-1254	53	U
11096-82-5	Aroclor-1260	53	U
37324-23-5	Aroclor-1262	53	U
11100-14-4	Aroclor-1268	53	U

MW 08/12/13

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-81-048

14

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 16999

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-16999-14

Sample wt/vol: 30.8 (g/mL) g Lab File ID: 5253AVASOM58.D

% Moisture: 38 Decanted: (Y/N) Date Received: 06/13/2013

Extraction: (Type) SONC Date Extracted: 06/18/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 07/04/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	52	U UJ
11104-28-2	Aroclor-1221	52	U
11141-16-5	Aroclor-1232	52	U
53469-21-9	Aroclor-1242	52	U
12672-29-6	Aroclor-1248	52	U
11097-69-1	Aroclor-1254	52	U
11096-82-5	Aroclor-1260	52	U
37324-23-5	Aroclor-1262	52	U
11100-14-4	Aroclor-1268	52	U

MW 08/12/13

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-81-072

15

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 16999

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-16999-15

Sample wt/vol: 29.9 (g/mL) g Lab File ID: 5253AVASOM59.D

% Moisture: 39 Decanted: (Y/N) Date Received: 06/13/2013

Extraction: (Type) SONC Date Extracted: 06/18/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 07/04/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	54	U
11104-28-2	Aroclor-1221	54	U
11141-16-5	Aroclor-1232	54	U
53469-21-9	Aroclor-1242	54	U
12672-29-6	Aroclor-1248	54	U
11097-69-1	Aroclor-1254	54	U
11096-82-5	Aroclor-1260	54	U
37324-23-5	Aroclor-1262	54	U
11100-14-4	Aroclor-1268	54	U

MW 08/12/13

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-81-096

16

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 16999

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-16999-16

Sample wt/vol: 30.8 (g/mL) g Lab File ID: 5253AVASOM62.D

% Moisture: 36 Decanted: (Y/N) Date Received: 06/13/2013

Extraction: (Type) SONC Date Extracted: 06/18/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 07/04/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	51	U
11104-28-2	Aroclor-1221	51	U
11141-16-5	Aroclor-1232	51	U
53469-21-9	Aroclor-1242	51	U
12672-29-6	Aroclor-1248	51	U
11097-69-1	Aroclor-1254	51	U
11096-82-5	Aroclor-1260	51	U
37324-23-5	Aroclor-1262	51	U
11100-14-4	Aroclor-1268	51	U

MW 08/12/13

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-81-120

17

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 16999

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-16999-17

Sample wt/vol: 29.9 (g/mL) g Lab File ID: 5253AVASOM63.D

% Moisture: 37 Decanted: (Y/N) Date Received: 06/13/2013

Extraction: (Type) SONC Date Extracted: 06/18/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 07/04/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	53	U
11104-28-2	Aroclor-1221	53	U
11141-16-5	Aroclor-1232	53	U
53469-21-9	Aroclor-1242	53	U
12672-29-6	Aroclor-1248	53	U
11097-69-1	Aroclor-1254	53	U
11096-82-5	Aroclor-1260	53	U
37324-23-5	Aroclor-1262	53	U
11100-14-4	Aroclor-1268	53	U

MW 08/12/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-44-072

1

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 16999

Matrix: SED Lab Sample Id: 200-16999-1

% Solids: 70.0 Date Received: 06/13/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	4.0			P
7440-43-9	Cadmium	0.39	J		P
7440-47-3	Chromium	12.8		J ~~E~~	P
7440-50-8	Copper	13.5		J ~~E~~	P
7439-92-1	Lead	12.4			P
7440-02-0	Nickel	18.8		J ~~E~~	P
7440-66-6	Zinc	48.2		J ~~E~~	P

Color Before: BROWN Clarity Before: Texture:

Color After: LIGHT YELLOW Clarity After: CLOUDY Artifacts: FINE

Comments:

MW 08/12/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-44-072

1

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678

Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 16999

Matrix: SED | Lab Sample Id: 200-16999-1

% Solids: 70.0 | Date Received: 06/13/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.071	J		CV

Color Before: GRAY | Clarity Before: CLOUDY | Texture: FINE

Color After: COLORLESS | Clarity After: CLEAR | Artifacts:

Comments:

MW 08/12/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-44-096

2

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678

Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 16999

Matrix: SED | Lab Sample Id: 200-16999-2

% Solids: 69.9 | Date Received: 06/13/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	3.3			P
7440-43-9	Cadmium	0.41	J		P
7440-47-3	Chromium	11.1		J ~~E~~	P
7440-50-8	Copper	10.9		J ~~E~~	P
7439-92-1	Lead	8.0			P
7440-02-0	Nickel	16.3		J ~~E~~	P
7440-66-6	Zinc	41.3		J ~~E~~	P

Color Before: BROWN | Clarity Before: | Texture:

Color After: LIGHT YELLOW | Clarity After: CLOUDY | Artifacts: FINE

Comments:

MW 08/12/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-44-096

2

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678

Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 16999

Matrix: SED | Lab Sample Id: 200-16999-2

% Solids: 69.9 | Date Received: 06/13/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.027	J		CV

Color Before: GRAY | Clarity Before: CLOUDY | Texture: FINE

Color After: COLORLESS | Clarity After: CLEAR | Artifacts:

Comments:

MW 08/12/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-46-012

3

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678

Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 16999

Matrix: SED | Lab Sample Id: 200-16999-3

% Solids: 53.6 | Date Received: 06/13/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	11.7			P
7440-43-9	Cadmium	2.9			P
7440-47-3	Chromium	147		J ~~E~~	P
7440-50-8	Copper	77.3		J ~~E~~	P
7439-92-1	Lead	78.2			P
7440-02-0	Nickel	76.9		J ~~E~~	P
7440-66-6	Zinc	342		J ~~E~~	P

Color Before: BROWN | Clarity Before: | Texture:

Color After: LIGHT YELLOW | Clarity After: CLOUDY | Artifacts: FINE

Comments:

MW 08/12/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-46-012

3

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 16999

Matrix: SED Lab Sample Id: 200-16999-3

% Solids: 53.6 Date Received: 06/13/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.56			CV

Color Before: GRAY Clarity Before: CLOUDY Texture: FINE

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

MW 08/12/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-46-024

4

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678

Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 16999

Matrix: SED | Lab Sample Id: 200-16999-4

% Solids: 53.8 | Date Received: 06/13/2013

Concentration Units (**ug/L, ug,** or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	11.3			P
7440-43-9	Cadmium	3.5			P
7440-47-3	Chromium	150		J ~~E~~	P
7440-50-8	Copper	86.4		J ~~E~~	P
7439-92-1	Lead	113			P
7440-02-0	Nickel	89.3		J ~~E~~	P
7440-66-6	Zinc	393		J ~~E~~	P

Color Before: BROWN | Clarity Before: | Texture:

Color After: LIGHT YELLOW | Clarity After: CLOUDY | Artifacts: FINE

Comments:

MW 08/12/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-46-024

4

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678
Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 16999
Matrix: SED Lab Sample Id: 200-16999-4
% Solids: 53.8 Date Received: 06/13/2013

Concentration Units (**ug/L, ug,** or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.74			CV

Color Before: GRAY Clarity Before: CLOUDY Texture: FINE
Color After: COLORLESS Clarity After: CLEAR Artifacts:
Comments:

MW 08/12/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-46-048

6

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678
Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 16999
Matrix: SED | Lab Sample Id: 200-16999-6
% Solids: 49.1 | Date Received: 06/13/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	15.4			P
7440-43-9	Cadmium	6.2			P
7440-47-3	Chromium	278		J ~~E~~	P
7440-50-8	Copper	145		J ~~E~~	P
7439-92-1	Lead	199			P
7440-02-0	Nickel	116		J ~~E~~	P
7440-66-6	Zinc	703		J ~~E~~	P

Color Before: BROWN | Clarity Before: | Texture:
Color After: LIGHT YELLOW | Clarity After: CLOUDY | Artifacts: FINE
Comments:

MW 08/12/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-46-048

6

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 16999

Matrix: SED Lab Sample Id: 200-16999-6

% Solids: 49.1 Date Received: 06/13/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.63			CV

Color Before: GRAY Clarity Before: CLOUDY Texture: FINE

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

MW 08/12/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-46-072

7

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 16999

Matrix: SED Lab Sample Id: 200-16999-7

% Solids: 48.3 Date Received: 06/13/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	13.4			P
7440-43-9	Cadmium	8.4			P
7440-47-3	Chromium	246		J E	P
7440-50-8	Copper	142		J E	P
7439-92-1	Lead	163			P
7440-02-0	Nickel	132		J E	P
7440-66-6	Zinc	627		J E	P

Color Before: BROWN Clarity Before: Texture:

Color After: LIGHT YELLOW Clarity After: CLOUDY Artifacts: FINE

Comments:

MW 08/12/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-46-072

7

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 16999

Matrix: SED Lab Sample Id: 200-16999-7

% Solids: 48.3 Date Received: 06/13/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.85			CV

Color Before: GRAY Clarity Before: CLOUDY Texture: FINE

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

MW 08/12/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-46-096

8

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 16999

Matrix: SED Lab Sample Id: 200-16999-8

% Solids: 45.1 Date Received: 06/13/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	13.5			P
7440-43-9	Cadmium	11.1			P
7440-47-3	Chromium	262		J ~~E~~	P
7440-50-8	Copper	145		J ~~E~~	P
7439-92-1	Lead	172			P
7440-02-0	Nickel	94.7		J ~~E~~	P
7440-66-6	Zinc	638		J ~~E~~	P

Color Before: BROWN Clarity Before: Texture:

Color After: LIGHT YELLOW Clarity After: CLOUDY Artifacts: FINE

Comments:

NW 08/12/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-46-096

8

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 16999

Matrix: SED Lab Sample Id: 200-16999-8

% Solids: 45.1 Date Received: 06/13/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	2.1			CV

Color Before: GRAY Clarity Before: CLOUDY Texture: FINE

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

MW 08/12/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-46-120

9

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678

Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 16999

Matrix: SED | Lab Sample Id: 200-16999-9

% Solids: 58.9 | Date Received: 06/13/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	15.1			P
7440-43-9	Cadmium	12.2			P
7440-47-3	Chromium	288		J ~~E~~	P
7440-50-8	Copper	159		J ~~E~~	P
7439-92-1	Lead	152			P
7440-02-0	Nickel	85.1		J ~~E~~	P
7440-66-6	Zinc	566		J ~~E~~	P

Color Before: BROWN | Clarity Before: | Texture:

Color After: LIGHT YELLOW | Clarity After: CLOUDY | Artifacts: FINE

Comments:

MW 08/12/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-46-120

9

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 16999

Matrix: SED Lab Sample Id: 200-16999-9

% Solids: 58.9 Date Received: 06/13/2013

Concentration Units (**ug/L, ug,** or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.99			CV

Color Before: GRAY Clarity Before: CLOUDY Texture: FINE

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

MW 08/12/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-81-012

10

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678

Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 16999

Matrix: SED | Lab Sample Id: 200-16999-10

% Solids: 65.1 | Date Received: 06/13/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	14.9			P
7440-43-9	Cadmium	1.6			P
7440-47-3	Chromium	27.5		J ~~E~~	P
7440-50-8	Copper	39.8		J ~~E~~	P
7439-92-1	Lead	116			P
7440-02-0	Nickel	28.7		J ~~E~~	P
7440-66-6	Zinc	208		J ~~E~~	P

Color Before: BROWN | Clarity Before: | Texture:

Color After: LIGHT YELLOW | Clarity After: CLOUDY | Artifacts: FINE

Comments:

MW 08/12/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-81-012

10

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678

Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 16999

Matrix: SED | Lab Sample Id: 200-16999-10

% Solids: 65.1 | Date Received: 06/13/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.51			CV

Color Before: GRAY | Clarity Before: CLOUDY | Texture: FINE

Color After: COLORLESS | Clarity After: CLEAR | Artifacts:

Comments:

NW 08/12/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-81-024

12

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678

Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 16999

Matrix: SED | Lab Sample Id: 200-16999-12

% Solids: 60.5 | Date Received: 06/13/2013

Concentration Units (**ug/L, ug,** or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	14.2			P
7440-43-9	Cadmium	1.5			P
7440-47-3	Chromium	29.4		J ~~E~~	P
7440-50-8	Copper	47.2		J ~~E~~	P
7439-92-1	Lead	120			P
7440-02-0	Nickel	34.5		J ~~E~~	P
7440-66-6	Zinc	245		J ~~E~~	P

Color Before: BROWN | Clarity Before: | Texture:

Color After: LIGHT YELLOW | Clarity After: CLOUDY | Artifacts: FINE

Comments:

MW 08/12/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-81-024

12

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678

Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 16999

Matrix: SED | Lab Sample Id: 200-16999-12

% Solids: 60.5 | Date Received: 06/13/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.60			CV

Color Before: GRAY | Clarity Before: CLOUDY | Texture: FINE

Color After: COLORLESS | Clarity After: CLEAR | Artifacts:

Comments:

MW 08/12/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-81-048

14

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678
Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 16999
Matrix: SED | Lab Sample Id: 200-16999-14
% Solids: 61.6 | Date Received: 06/13/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	16.4			P
7440-43-9	Cadmium	0.96			P
7440-47-3	Chromium	24.6		J ~~E~~	P
7440-50-8	Copper	42.1		J ~~E~~	P
7439-92-1	Lead	158			P
7440-02-0	Nickel	33.0		J ~~E~~	P
7440-66-6	Zinc	269		J ~~E~~	P

Color Before: BROWN | Clarity Before: | Texture:
Color After: LIGHT YELLOW | Clarity After: CLOUDY | Artifacts: FINE
Comments:

MW 08/12/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-81-048

14

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678
Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 16999
Matrix: SED | Lab Sample Id: 200-16999-14
% Solids: 61.6 | Date Received: 06/13/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.71			CV

Color Before: GRAY | Clarity Before: CLOUDY | Texture: FINE
Color After: COLORLESS | Clarity After: CLEAR | Artifacts:
Comments:

MW 08/12/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-81-072

15

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678
Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 16999
Matrix: SED | Lab Sample Id: 200-16999-15
% Solids: 61.4 | Date Received: 06/13/2013

Concentration Units (**ug/L, ug,** or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	14.8			P
7440-43-9	Cadmium	0.64	J		P
7440-47-3	Chromium	22.7		J ~~E~~	P
7440-50-8	Copper	29.6		J ~~E~~	P
7439-92-1	Lead	79.9			P
7440-02-0	Nickel	28.7		J ~~E~~	P
7440-66-6	Zinc	160		J ~~E~~	P

Color Before: BROWN | Clarity Before: | Texture:
Color After: LIGHT YELLOW | Clarity After: CLOUDY | Artifacts: FINE
Comments:

MW 08/12/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-81-072

15

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678
Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 16999
Matrix: SED Lab Sample Id: 200-16999-15
% Solids: 61.4 Date Received: 06/13/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.37			CV

Color Before: GRAY Clarity Before: CLOUDY Texture: FINE
Color After: COLORLESS Clarity After: CLEAR Artifacts:
Comments:

MW 08/12/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-81-096

16

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678
Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 16999
Matrix: SED | Lab Sample Id: 200-16999-16
% Solids: 63.6 | Date Received: 06/13/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	9.4			P
7440-43-9	Cadmium	0.46	J		P
7440-47-3	Chromium	17.5		J ~~B~~	P
7440-50-8	Copper	20.9		J ~~B~~	P
7439-92-1	Lead	53.7			P
7440-02-0	Nickel	24.2		J ~~B~~	P
7440-66-6	Zinc	92.8		J ~~B~~	P

Color Before: BROWN | Clarity Before: | Texture:
Color After: LIGHT YELLOW | Clarity After: CLOUDY | Artifacts: FINE
Comments:

MW 08/12/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-81-096

16

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 16999

Matrix: SED Lab Sample Id: 200-16999-16

% Solids: 63.6 Date Received: 06/13/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.26			CV

Color Before: GRAY Clarity Before: CLOUDY Texture: FINE

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

MW 08/12/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-81-120

17

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678

Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 16999

Matrix: SED | Lab Sample Id: 200-16999-17

% Solids: 62.8 | Date Received: 06/13/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	8.1			P
7440-43-9	Cadmium	0.49	J		P
7440-47-3	Chromium	21.3		J E	P
7440-50-8	Copper	25.9		J E	P
7439-92-1	Lead	46.2			P
7440-02-0	Nickel	26.5		J E	P
7440-66-6	Zinc	95.4		J E	P

Color Before: BROWN | Clarity Before: | Texture:

Color After: LIGHT YELLOW | Clarity After: CLOUDY | Artifacts: FINE

Comments:

MW 08/12/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-81-120

17

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 16999

Matrix: SED Lab Sample Id: 200-16999-17

% Solids: 62.8 Date Received: 06/13/2013

Concentration Units (**ug/L, ug,** or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.35			CV

Color Before: GRAY Clarity Before: CLOUDY Texture: FINE

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

MW 08/12/13

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - SEM/AVS

10

Client Sample ID: LMR13-81-012 | Lab Sample ID: 200-16999-10

Lab Name: TestAmerica Burlington | Job No.: 200-16999-1

SDG ID.: 16999

Matrix: Sediment | Date Sampled: 06/12/2013 14:20

Reporting Basis: DRY | Date Received: 06/13/2013 10:50

% Solids: 65.1

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-43-9	Cadmium SEM	1.6	1.8	0.29	mg/Kg	J		10	6010C
7440-43-9	Cadmium SEM	0.014	0.016	0.0026	umol/g	J		10	6010C
7440-50-8	Copper SEM	3.3	9.4	0.82	mg/Kg	J		10	6010C
7440-50-8	Copper SEM	0.053	0.15	0.013	umol/g	J		10	6010C
7439-92-1	Lead SEM	33.4	3.8	1.7	mg/Kg			10	6010C
7439-92-1	Lead SEM	0.16	0.018	0.0081	umol/g			10	6010C
7440-02-0	Nickel SEM	6.0	15.2	1.1	mg/Kg	J		10	6010C
7440-02-0	Nickel SEM	0.10	0.26	0.019	umol/g	J		10	6010C
7440-66-6	Zinc SEM	65.3	7.6	2.1	mg/Kg			10	6010C
7440-66-6	Zinc SEM	1.0	0.12	0.033	umol/g			10	6010C
7439-97-6	Mercury SEM	0.0099	0.0076	0.0025	mg/Kg			1	7470A
7439-97-6	Mercury SEM	0.000049	0.000038	0.000013	umol/g			1	7470A

NW 08/12/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY - SEM/AVS

10

Client Sample ID: LMR13-81-012 Lab Sample ID: 200-16999-10

Lab Name: TestAmerica Burlington Job No.: 200-16999-1

SDG ID.: 16999

Matrix: Sediment Date Sampled: 06/12/2013 14:20

Reporting Basis: DRY Date Received: 06/13/2013 10:50

% Solids: 65.1

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
18496-25-8	Acid Volatile Sulfides (AVS)	304	24.3		mg/Kg			1	AVS
18496-25-8	Acid Volatile Sulfides (AVS)	9.5	0.76		umol/g			1	AVS

NW 08/12/13

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - SEM/AVS

10

Client Sample ID: LMR13-81-012 | Lab Sample ID: 200-16999-10

Lab Name: TestAmerica Burlington | Job No.: 200-16999-1

SDG ID.: 16999

Matrix: Sediment | Date Sampled: 06/12/2013 14:20

Reporting Basis: WET | Date Received: 06/13/2013 10:50

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	SEM/AVS Ratio	0.140	0.00100	0.00100	NONE			1	SEM

MW 08/12/13

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - SEM/AVS

Client Sample ID: LMR13-81-012FD
Lab Sample ID: 200-16999-11
Lab Name: TestAmerica Burlington
Job No.: 200-16999-1
SDG ID.: 16999
Matrix: Sediment
Date Sampled: 06/12/2013 14:20
Reporting Basis: DRY
Date Received: 06/13/2013 10:50
% Solids: 60.4

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-43-9	Cadmium SEM	0.74	1.9	0.30	mg/Kg	J		10	6010C
7440-43-9	Cadmium SEM	0.0065	0.017	0.0027	umol/g	J		10	6010C
7440-50-8	Copper SEM	5.0	9.8	0.86	mg/Kg	J		10	6010C
7440-50-8	Copper SEM	0.079	0.15	0.013	umol/g	J		10	6010C
7439-92-1	Lead SEM	35.2	4.0	1.7	mg/Kg			10	6010C
7439-92-1	Lead SEM	0.17	0.019	0.0084	umol/g			10	6010C
7440-02-0	Nickel SEM	4.7	15.9	1.1	mg/Kg	J		10	6010C
7440-02-0	Nickel SEM	0.079	0.27	0.019	umol/g	J		10	6010C
7440-66-6	Zinc SEM	67.4	7.9	2.2	mg/Kg			10	6010C
7440-66-6	Zinc SEM	1.0	0.12	0.034	umol/g			10	6010C
7439-97-6	Mercury SEM	0.0079	0.0079	0.0026	mg/Kg	U		1	7470A
7439-97-6	Mercury SEM	0.000040	0.000040	0.000013	umol/g	U		1	7470A

MW 08/12/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY - SEM/AVS

11

Client Sample ID: LMR13-81-012FD
Lab Sample ID: 200-16999-11
Lab Name: TestAmerica Burlington
Job No.: 200-16999-1
SDG ID.: 16999
Matrix: Sediment
Date Sampled: 06/12/2013 14:20
Reporting Basis: DRY
Date Received: 06/13/2013 10:50
% Solids: 60.4

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
18496-25-8	Acid Volatile Sulfides (AVS)	273	25.4		mg/Kg			1	AVS
18496-25-8	Acid Volatile Sulfides (AVS)	8.5	0.79		umol/g			1	AVS

MW 08/12/13

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - SEM/AVS

Client Sample ID: LMR13-81-012FD
Lab Sample ID: 200-16999-11
Lab Name: TestAmerica Burlington
Job No.: 200-16999-1
SDG ID.: 16999
Matrix: Sediment
Date Sampled: 06/12/2013 14:20
Reporting Basis: WET
Date Received: 06/13/2013 10:50

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	SEM/AVS Ratio	0.160	0.00100	0.00100	NONE			1	SEM

MW 08/12/13

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - SEM/AVS

18

Client Sample ID: LMR13-42-012FD
Lab Sample ID: 200-16999-18
Lab Name: TestAmerica Burlington
Job No.: 200-16999-1
SDG ID.: 16999
Matrix: Sediment
Date Sampled: 06/12/2013 08:30
Reporting Basis: DRY
Date Received: 06/13/2013 10:50
% Solids: 58.2

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-43-9	Cadmium SEM	3.0	2.1	0.33	mg/Kg			10	6010C
7440-43-9	Cadmium SEM	0.026	0.018	0.0029	umol/g			10	6010C
7440-50-8	Copper SEM	1.2	10.6	0.93	mg/Kg	J		10	6010C
7440-50-8	Copper SEM	0.019	0.17	0.015	umol/g	J		10	6010C
7439-92-1	Lead SEM	38.0	4.3	1.9	mg/Kg			10	6010C
7439-92-1	Lead SEM	0.18	0.021	0.0091	umol/g			10	6010C
7440-02-0	Nickel SEM	12.3	17.2	1.2	mg/Kg	J		10	6010C
7440-02-0	Nickel SEM	0.21	0.29	0.021	umol/g	J		10	6010C
7440-66-6	Zinc SEM	124	8.6	2.4	mg/Kg			10	6010C
7440-66-6	Zinc SEM	1.9	0.13	0.037	umol/g			10	6010C
7439-97-6	Mercury SEM	0.0086	0.0086	0.0028	mg/Kg	U		1	7470A
7439-97-6	Mercury SEM	0.000043	0.000043	0.000014	umol/g	U		1	7470A

NW 8/12/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY - SEM/AVS

18

Client Sample ID: LMR13-42-012FD
Lab Sample ID: 200-16999-18
Lab Name: TestAmerica Burlington
Job No.: 200-16999-1
SDG ID.: 16999
Matrix: Sediment
Date Sampled: 06/12/2013 08:30
Reporting Basis: DRY
Date Received: 06/13/2013 10:50
% Solids: 58.2

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
18496-25-8	Acid Volatile Sulfides (AVS)	598	27.5		mg/Kg			1	AVS
18496-25-8	Acid Volatile Sulfides (AVS)	18.6	0.86		umol/g			1	AVS

MW 08/12/13

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - SEM/AVS

18

Client Sample ID: LMR13-42-012FD
Lab Sample ID: 200-16999-18
Lab Name: TestAmerica Burlington
Job No.: 200-16999-1
SDG ID.: 16999
Matrix: Sediment
Date Sampled: 06/12/2013 08:30
Reporting Basis: WET
Date Received: 06/13/2013 10:50

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	SEM/AVS Ratio	0.125	0.00100	0.00100	NONE			1	SEM

MW 8/21/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

1

Client Sample ID: LMR13-44-072
Lab Sample ID: 200-16999-1
Lab Name: TestAmerica Burlington
Job No.: 200-16999-1
SDG ID.: 16999
Matrix: Sediment
Date Sampled: 06/12/2013 12:00
Reporting Basis: WET
Date Received: 06/13/2013 10:50
% Solids: 70.0

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	32700	1000		mg/Kg			1	Lloyd Kahn

MW 08/12/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

2

Client Sample ID: LMR13-44-096
Lab Sample ID: 200-16999-2
Lab Name: TestAmerica Burlington
Job No.: 200-16999-1
SDG ID.: 16999
Matrix: Sediment
Date Sampled: 06/12/2013 12:10
Reporting Basis: WET
Date Received: 06/13/2013 10:50
% Solids: 69.9

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	28600	1000		mg/Kg			1	Lloyd Kahn

MW 08/12/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

3

Client Sample ID: LMR13-46-012 Lab Sample ID: 200-16999-3

Lab Name: TestAmerica Burlington Job No.: 200-16999-1

SDG ID.: 16999

Matrix: Sediment Date Sampled: 06/12/2013 13:15

Reporting Basis: WET Date Received: 06/13/2013 10:50

% Solids: 53.6

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	43600	1000		mg/Kg			1	Lloyd Kahn

MW 08/12/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

4

Client Sample ID: LMR13-46-024 Lab Sample ID: 200-16999-4

Lab Name: TestAmerica Burlington Job No.: 200-16999-1

SDG ID.: 16999

Matrix: Sediment Date Sampled: 06/12/2013 13:25

Reporting Basis: WET Date Received: 06/13/2013 10:50

% Solids: 53.8

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	52100	1000		mg/Kg			1	Lloyd Kahn

NW 08/12/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

6

Client Sample ID: LMR13-46-048
Lab Sample ID: 200-16999-6
Lab Name: TestAmerica Burlington
Job No.: 200-16999-1
SDG ID.: 16999
Matrix: Sediment
Date Sampled: 06/12/2013 13:35
Reporting Basis: WET
Date Received: 06/13/2013 10:50
% Solids: 49.1

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	52900	1000		mg/Kg			1	Lloyd Kahn

MW 08/12/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

7

Client Sample ID: LMR13-46-072
Lab Sample ID: 200-16999-7
Lab Name: TestAmerica Burlington
Job No.: 200-16999-1
SDG ID.: 16999
Matrix: Sediment
Date Sampled: 06/12/2013 13:45
Reporting Basis: WET
Date Received: 06/13/2013 10:50
% Solids: 48.3

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	54200	1000		mg/Kg			1	Lloyd Kahn

NW 08/12/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

8

Client Sample ID: LMR13-46-096
Lab Sample ID: 200-16999-8
Lab Name: TestAmerica Burlington
Job No.: 200-16999-1
SDG ID.: 16999
Matrix: Sediment
Date Sampled: 06/12/2013 13:55
Reporting Basis: WET
Date Received: 06/13/2013 10:50
% Solids: 45.1

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	73300	1000		mg/Kg			1	Lloyd Kahn

MW 08/12/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

9

Client Sample ID: LMR13-46-120 Lab Sample ID: 200-16999-9

Lab Name: TestAmerica Burlington Job No.: 200-16999-1

SDG ID.: 16999

Matrix: Sediment Date Sampled: 06/12/2013 14:05

Reporting Basis: WET Date Received: 06/13/2013 10:50

% Solids: 58.9

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	50500	1000		mg/Kg			1	Lloyd Kahn

MW 08/12/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

10

Client Sample ID: LMR13-81-012 Lab Sample ID: 200-16999-10

Lab Name: TestAmerica Burlington Job No.: 200-16999-1

SDG ID.: 16999

Matrix: Sediment Date Sampled: 06/12/2013 14:20

Reporting Basis: WET Date Received: 06/13/2013 10:50

% Solids: 65.1

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	27700	1000		mg/Kg			1	Lloyd Kahn

MW 08/12/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

12

Client Sample ID: LMR13-81-024
Lab Sample ID: 200-16999-12
Lab Name: TestAmerica Burlington
Job No.: 200-16999-1
SDG ID.: 16999
Matrix: Sediment
Date Sampled: 06/12/2013 14:30
Reporting Basis: WET
Date Received: 06/13/2013 10:50
% Solids: 60.5

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	29200	1000		mg/Kg			1	Lloyd Kahn

MW 08/14/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

14

Client Sample ID: LMR13-81-048
Lab Sample ID: 200-16999-14
Lab Name: TestAmerica Burlington
Job No.: 200-16999-1
SDG ID.: 16999
Matrix: Sediment
Date Sampled: 06/12/2013 14:40
Reporting Basis: WET
Date Received: 06/13/2013 10:50
% Solids: 61.6

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	29400	1000		mg/Kg			1	Lloyd Kahn

NW 08/12/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

15

Client Sample ID: LMR13-81-072
Lab Sample ID: 200-16999-15
Lab Name: TestAmerica Burlington
Job No.: 200-16999-1
SDG ID.: 16999
Matrix: Sediment
Date Sampled: 06/12/2013 14:50
Reporting Basis: WET
Date Received: 06/13/2013 10:50
% Solids: 61.4

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	26600	1000		mg/Kg			1	Lloyd Kahn

NW 08/12/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

16

Client Sample ID: LMR13-81-096
Lab Sample ID: 200-16999-16
Lab Name: TestAmerica Burlington
Job No.: 200-16999-1
SDG ID.: 16999
Matrix: Sediment
Date Sampled: 06/12/2013 15:00
Reporting Basis: WET
Date Received: 06/13/2013 10:50
% Solids: 63.6

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	26800	1000		mg/Kg			1	Lloyd Kahn

MW 08/12/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

17

Client Sample ID: LMR13-81-120
Lab Sample ID: 200-16999-17
Lab Name: TestAmerica Burlington
Job No.: 200-16999-1
SDG ID.: 16999
Matrix: Sediment
Date Sampled: 06/12/2013 15:10
Reporting Basis: WET
Date Received: 06/13/2013 10:50
% Solids: 62.8

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	25400	1000		mg/Kg			1	Lloyd Kahn

MW 08/12/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: LMR13-44-072
Lab Sample ID: 200-16999-1
Lab Name: TestAmerica Canton
Job No.: 200-16999-1
SDG ID.: 16999
Matrix: Sediment
Date Sampled: 06/12/2013 12:00
Reporting Basis: DRY
Date Received: 06/13/2013 10:50
% Solids: 70.0

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	223	279	123	mg/Kg	J		1	9071B

MW 08/12/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: LMR13-44-096
Lab Sample ID: 200-16999-2
2
Lab Name: TestAmerica Canton
Job No.: 200-16999-1
SDG ID.: 16999
Matrix: Sediment
Date Sampled: 06/12/2013 12:10
Reporting Basis: DRY
Date Received: 06/13/2013 10:50
% Solids: 69.9

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	156	284	126	mg/Kg	J		1	9071B

MW 08/12/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

3

Client Sample ID: LMR13-46-012
Lab Sample ID: 200-16999-3
Lab Name: TestAmerica Canton
Job No.: 200-16999-1
SDG ID.: 16999
Matrix: Sediment
Date Sampled: 06/12/2013 13:15
Reporting Basis: DRY
Date Received: 06/13/2013 10:50
% Solids: 53.6

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	7600	370	163	mg/Kg			1	9071B

NW 08/12/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

4

Client Sample ID: LMR13-46-024
Lab Sample ID: 200-16999-4
Lab Name: TestAmerica Canton
Job No.: 200-16999-1
SDG ID.: 16999
Matrix: Sediment
Date Sampled: 06/12/2013 13:25
Reporting Basis: DRY
Date Received: 06/13/2013 10:50
% Solids: 53.8

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	11700	367	162	mg/Kg			1	9071B

NW 08/12/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

5

Client Sample ID: LMR13-46-024FD
Lab Sample ID: 200-16999-5
Lab Name: TestAmerica Canton
Job No.: 200-16999-1
SDG ID.: 16999
Matrix: Sediment
Date Sampled: 06/12/2013 13:25
Reporting Basis: DRY
Date Received: 06/13/2013 10:50
% Solids: 54.1

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	13300	368	163	mg/Kg			1	9071B

MW 08/12/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: LMR13-46-048
Lab Sample ID: 200-16999-6
Lab Name: TestAmerica Canton
Job No.: 200-16999-1
SDG ID.: 16999
Matrix: Sediment
Date Sampled: 06/12/2013 13:35
Reporting Basis: DRY
Date Received: 06/13/2013 10:50
% Solids: 49.1

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	19900	407	180	mg/Kg			1	9071B

AW 08/02/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

7

Client Sample ID: LMR13-46-072
Lab Sample ID: 200-16999-7
Lab Name: TestAmerica Canton
Job No.: 200-16999-1
SDG ID.: 16999
Matrix: Sediment
Date Sampled: 06/12/2013 13:45
Reporting Basis: DRY
Date Received: 06/13/2013 10:50
% Solids: 48.3

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	12500	401	177	mg/Kg			1	9071B

MW 08/12/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

8

Client Sample ID: LMR13-46-096
Lab Sample ID: 200-16999-8
Lab Name: TestAmerica Canton
Job No.: 200-16999-1
SDG ID.: 16999
Matrix: Sediment
Date Sampled: 06/12/2013 13:55
Reporting Basis: DRY
Date Received: 06/13/2013 10:50
% Solids: 45.1

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	30700	440	195	mg/Kg			1	9071B

MW 08/12/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

9

Client Sample ID: LMR13-46-120
Lab Sample ID: 200-16999-9
Lab Name: TestAmerica Canton
Job No.: 200-16999-1
SDG ID.: 16999
Matrix: Sediment
Date Sampled: 06/12/2013 14:05
Reporting Basis: DRY
Date Received: 06/13/2013 10:50
% Solids: 58.9

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	16200	335	148	mg/Kg			1	9071B

MW 08/12/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

10

Client Sample ID: LMR13-81-012
Lab Sample ID: 200-16999-10
Lab Name: TestAmerica Canton
Job No.: 200-16999-1
SDG ID.: 16999
Matrix: Sediment
Date Sampled: 06/12/2013 14:20
Reporting Basis: DRY
Date Received: 06/13/2013 10:50
% Solids: 65.1

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	2020	298	131	mg/Kg			1	9071B

MW 06/12/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

12

Client Sample ID: LMR13-81-024
Lab Sample ID: 200-16999-12
Lab Name: TestAmerica Canton
Job No.: 200-16999-1
SDG ID.: 16999
Matrix: Sediment
Date Sampled: 06/12/2013 14:30
Reporting Basis: DRY
Date Received: 06/13/2013 10:50
% Solids: 60.5

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	2590	325	144	mg/Kg			1	9071B

MW 08/12/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

13

Client Sample ID: LMR13-81-024FD
Lab Sample ID: 200-16999-13
Lab Name: TestAmerica Canton
Job No.: 200-16999-1
SDG ID.: 16999
Matrix: Sediment
Date Sampled: 06/12/2013 14:30
Reporting Basis: DRY
Date Received: 06/13/2013 10:50
% Solids: 60.9

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	2240	321	142	mg/Kg			1	9071B

MW 05/12/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

14

Client Sample ID: LMR13-81-048 Lab Sample ID: 200-16999-14

Lab Name: TestAmerica Canton Job No.: 200-16999-1

SDG ID.: 16999

Matrix: Sediment Date Sampled: 06/12/2013 14:40

Reporting Basis: DRY Date Received: 06/13/2013 10:50

% Solids: 61.6

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	614	U 323	143	mg/Kg		B	1	9071B

MW 08/12/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

15

Client Sample ID: LMR13-81-072 | Lab Sample ID: 200-16999-15

Lab Name: TestAmerica Canton | Job No.: 200-16999-1

SDG ID.: 16999

Matrix: Sediment | Date Sampled: 06/12/2013 14:50

Reporting Basis: DRY | Date Received: 06/13/2013 10:50

% Solids: 61.4

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	632	U 324	143	mg/Kg		B	1	9071B

MW 08/12/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

16

Client Sample ID: LMR13-81-096
Lab Sample ID: 200-16999-16
Lab Name: TestAmerica Canton
Job No.: 200-16999-1
SDG ID.: 16999
Matrix: Sediment
Date Sampled: 06/12/2013 15:00
Reporting Basis: DRY
Date Received: 06/13/2013 10:50
% Solids: 63.6

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	314 ~~100~~	U 314	139	mg/Kg			1	9071B

MW 08/12/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

17

Client Sample ID: LMR13-81-120
Lab Sample ID: 200-16999-17
Lab Name: TestAmerica Canton
Job No.: 200-16999-1
SDG ID.: 16999
Matrix: Sediment
Date Sampled: 06/12/2013 15:10
Reporting Basis: DRY
Date Received: 06/13/2013 10:50
% Solids: 62.8

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	424	314	139	mg/Kg			1	9071B

NW 08/12/13

ENVIRONMENTAL
Data Services, Inc.

DATA VALIDATION SUMMARY REPORT
LOWER MAUMEE RIVER, TOLEDO, OHIO

Client: EA Engineering, Science & Technology, Inc., Hunt Valley, Maryland
SDG: 200-17010
Laboratory: Test America Laboratories, Burlington, Vermont
Test America Laboratories, Canton, Ohio
Site: Lower Maumee River, Maumee Area of Concern, Toledo, Ohio
Date: August 21, 2013

SVOC			
EDS ID	Client Sample ID	Laboratory Sample ID	Matrix
1	LMR13-93-012	200-17017-1	Sediment
2	LMR13-93-024	200-17017-2	Sediment
3	LMR13-93-048	200-17017-3	Sediment
4	LMR13-93-072	200-17017-4	Sediment
5	LMR13-93-096	200-17017-5	Sediment
6	LMR13-93-120	200-17017-6	Sediment
9	LMR13-62-024	200-17017-9	Sediment
10	LMR13-90-012	200-17017-10	Sediment
11	LMR13-90-024	200-17017-11	Sediment
12	LMR13-90-048	200-17017-12	Sediment
13	LMR13-90-072	200-17017-13	Sediment
14	LMR13-62-012	200-17017-14	Sediment
15	LMR13-62-048	200-17017-15	Sediment
16	LMR13-62-072	200-17017-16	Sediment
17	LMR13-62-096	200-17017-17	Sediment
18	LMR13-91-024	200-17017-18	Sediment
19	LMR13-92-048	200-17017-19	Sediment
20	LMR13-47-012	200-17017-20	Sediment
21	LMR13-91-012	200-17017-21	Sediment
22	LMR13-90-048FD	200-17017-22	Sediment
23	LMR13-93-024FD	200-17017-23	Sediment
24	LMR13-90-012FD	200-17017-24	Sediment

PAH 34			
EDS ID	Client Sample ID	Laboratory Sample ID	Matrix
10	LMR13-90-012	200-17017-10	Sediment
20	LMR13-47-012	200-17017-20	Sediment
21	LMR13-91-012	200-17017-21	Sediment
24	LMR13-90-012FD	200-17017-24	Sediment

PCBs			
EDS ID	Client Sample ID	Laboratory Sample ID	Matrix
1	LMR13-93-012	200-17017-1	Sediment
1DL	LMR13-93-012DL	200-17017-1DL	Sediment
2	LMR13-93-024	200-17017-2	Sediment

PCBs			
EDS ID	Client Sample ID	Laboratory Sample ID	Matrix
2DL	LMR13-93-024DL	200-17017-2DL	Sediment
3	LMR13-93-048	200-17017-3	Sediment
4	LMR13-93-072	200-17017-4	Sediment
5	LMR13-93-096	200-17017-5	Sediment
6	LMR13-93-120	200-17017-6	Sediment
7	LMR13-62-024FD	200-17017-7	Sediment
8	LMR13-90-024FD	200-17017-8	Sediment
9	LMR13-62-024	200-17017-9	Sediment
10	LMR13-90-012	200-17017-10	Sediment
11	LMR13-90-024	200-17017-11	Sediment
12	LMR13-90-048	200-17017-12	Sediment
13	LMR13-90-072	200-17017-13	Sediment
14	LMR13-62-012	200-17017-14	Sediment
15	LMR13-62-048	200-17017-15	Sediment
16	LMR13-62-072	200-17017-16	Sediment
17	LMR13-62-096	200-17017-17	Sediment
18	LMR13-91-024	200-17017-18	Sediment
19	LMR13-92-048	200-17017-19	Sediment
20	LMR13-47-012	200-17017-20	Sediment
21	LMR13-91-012	200-17017-21	Sediment

Metals/Mercury/TOC			
EDS ID	Client Sample ID	Laboratory Sample ID	Matrix
1	LMR13-93-012	200-17017-1	Sediment
2	LMR13-93-024	200-17017-2	Sediment
3	LMR13-93-048	200-17017-3	Sediment
4	LMR13-93-072	200-17017-4	Sediment
5	LMR13-93-096	200-17017-5	Sediment
6	LMR13-93-120	200-17017-6	Sediment
7	LMR13-62-024FD	200-17017-7	Sediment
8	LMR13-90-024FD	200-17017-8	Sediment
9	LMR13-62-024	200-17017-9	Sediment
9MS*	LMR13-62-024MS	200-17017-9MS	Sediment
9MSD*	LMR13-62-024MSD	200-17017-9MSD	Sediment
10	LMR13-90-012	200-17017-10	Sediment
11	LMR13-90-024	200-17017-11	Sediment
12	LMR13-90-048	200-17017-12	Sediment
13	LMR13-90-072	200-17017-13	Sediment
14	LMR13-62-012	200-17017-14	Sediment
15	LMR13-62-048	200-17017-15	Sediment
16	LMR13-62-072	200-17017-16	Sediment
17	LMR13-62-096	200-17017-17	Sediment
18	LMR13-91-024	200-17017-18	Sediment
19	LMR13-92-048	200-17017-19	Sediment
20	LMR13-47-012	200-17017-20	Sediment
20MSβ	LMR13-47-012MS	200-17017-20MS	Sediment
20MSDβ	LMR13-47-012MSD	200-17017-20MSD	Sediment
21	LMR13-91-012	200-17017-21	Sediment

* - Mercury only β - Metals only

AVS/SEM			
EDS ID	Client Sample ID	Laboratory Sample ID	Matrix
10	LMR13-90-012	200-17017-10	Sediment
20	LMR13-47-012	200-17017-20	Sediment
21	LMR13-91-012	200-17017-21	Sediment

HEM			
EDS ID	Client Sample ID	Laboratory Sample ID	Matrix
1	LMR13-93-012	200-17017-1	Sediment
2	LMR13-93-024	200-17017-2	Sediment
3	LMR13-93-048	200-17017-3	Sediment
4	LMR13-93-072	200-17017-4	Sediment
5	LMR13-93-096	200-17017-5	Sediment
6	LMR13-93-120	200-17017-6	Sediment
9	LMR13-62-024	200-17017-9	Sediment
10	LMR13-90-012	200-17017-10	Sediment
11	LMR13-90-024	200-17017-11	Sediment
12	LMR13-90-048	200-17017-12	Sediment
13	LMR13-90-072	200-17017-13	Sediment
14	LMR13-62-012	200-17017-14	Sediment
15	LMR13-62-048	200-17017-15	Sediment
16	LMR13-62-072	200-17017-16	Sediment
17	LMR13-62-096	200-17017-17	Sediment
18	LMR13-91-024	200-17017-18	Sediment
19	LMR13-92-048	200-17017-19	Sediment
20	LMR13-47-012	200-17017-20	Sediment
21	LMR13-91-012	200-17017-21	Sediment
22	LMR13-90-048FD	200-17017-22	Sediment
23	LMR13-93-024FD	200-17017-23	Sediment
25	LMR13-91-024FD	200-17017-25	Sediment

A full data validation was performed on the analytical data for twenty-five sediment samples collected on June 13, 2013 by EA Engineering at the Lower Maumee River site in Toledo, Ohio. The samples were analyzed under the Environmental Protection Agency (USEPA) Contract Laboratory Program (CLP) Multi-Media Multi-Concentration Organics Analysis SOM01.2 and Inorganic Analysis ILM05.4 and the Test Methods for the Evaluation of Solid Waste, USEPA SW-846, Third Edition, September 1986, with revisions.

Specific method references are as follows:

Analysis	*Method References*
SVOC	USEPA CLP SOM01.2
PAH 34	USEPA CLP SOM01.2
PCBs	USEPA CLP SOM01.2
Michigan Metals & Mercury	USEPA CLP ISM01.3
AVS/SEM	USEPA SW-846 Methods 6010C/7470A
TOC	Lloyd Kahn
Oil & Grease (HEM)	USEPA SW-846 Method 9071B

The data have been validated according to the protocols and quality control (QC) requirements of the analytical methods, the Great Lakes Legacy Act, March 2010, the Quality Assurance Project Plan for Phase 2 of the Lower Maumee River Site Characterization, May 2013, and the USEPA National Functional Guidelines for Organic Data Review as follows:

- The USEPA "Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review," June 2008;
- The USEPA "Contract Laboratory Program National Functional Guidelines for Inorganic Superfund Data Review," January 2010;
- and the reviewer's professional judgment.

The following items/criteria were reviewed for this report:

Organics

- Holding times and sample preservation
- Gas Chromatography/Mass Spectroscopy (GC/MS) Tuning
- Initial and continuing calibration summaries
- Method blank and field blank contamination
- Surrogate Spike recoveries
- Matrix Spike/Matrix Spike Duplicate (MS/MSD) recoveries
- Laboratory Control Sample (LCS) recoveries
- Internal standard area and retention time summary forms
- Target Compound Identification
- Compound Quantitation
- Tentatively Identified Compounds (TICs)
- Field Duplicate sample precision

Inorganics

- Holding times and sample preservation
- ICP/MS Tuning
- Initial and continuing calibration verifications
- Method blank and field blank contamination
- ICP Interference Check Sample
- Laboratory Control Sample (LCS) recoveries
- Matrix Spike Analysis
- Duplicate Sample Analysis
- ICP Serial Dilution
- Compound Quantitation
- Field Duplicate sample precision

Overall Usability Issues:

There were minor rejections of data. This data cannot be used in the decision-making process for this project.

- Three SVOC compounds were rejected in ten samples due to severely low surrogate recoveries.

Overall the remaining data is acceptable for the intended purposes as qualified for the deficiencies detailed in this report.

Please note that any results qualified (U) due to blank contamination may be then qualified (J) due to another action. Therefore, the results may be qualified (UJ) due to the culmination of the blank contaminations and actions from other exceedences of QC criteria.

Semivolatile Organic Compounds (SVOC)

Holding Times

- All samples were extracted within 14 days for sediment samples and analyzed within 40 days for all samples.

GC/MS Tuning

- All criteria were met.

Initial Calibration

- All %RSD and mean RRF criteria were met except the following.

ICAL Date	Compound	%RSD/RRF	Qualifier	Affected Samples
06/26/13	Fluoranthene	21.6%	J/UJ	All Samples

Continuing Calibration

- All %D and RRF criteria were met except the following.

CCAL Date	Compound	%D/RRF	Qualifier	Affected Samples
07/11/13 (0858)	Fluoranthene	32.0%	None	See ICAL
	Benzo(g,h,i)perylene	30.9%	J/UJ	6, 9, 10-14
07/11/13 (1754)	Hexachlorocyclopentadiene	68.2%	J/UJ Unless R due to Surrogate	
	4-Nitrophenol	50.6%	J/UJ	
07/17/13 (1209)	Pentachlorophenol	27.9%	J/UJ	15-17, 19-22
07/17/13 (1837)	Hexachlorocyclopentadiene	67.4%	J/UJ Unless R due to Surrogate	
07/18/13 (1539)	Hexachlorocyclopentadiene	61.0%	J/UJ Unless R due to Surrogate	4, 5, 18, 24
07/19/13 (0828)	n-Nitroso-di-n-propylamine	28.3%	J/UJ	1-3, 23
	4-Bromophenyl-phenylether	28.5%	J/UJ	
07/19/13 (1218)	Hexachlorocyclopentadiene	50.2%	J/UJ	1-3, 23

Method Blank

- The method blanks exhibited the following contamination.

Blank ID	Compound	Conc. ug/kg	Qualifier	Affected Samples
SBLKL7	bis(2-Ethylhexyl)phthalate	33	U	24

Field Blank

- Field QC samples were not analyzed.

Surrogate Spike Recoveries

- All samples exhibited acceptable surrogate %R values except the following.

Sample ID	Surrogate	%R	Qualifier
5	4-Chloroaniline-d5	0%	R- Associated Compounds
9	4-Chloroaniline-d5	0%	
10	4-Chloroaniline-d5	0%	
12	4-Methylphenol-d8	101%	J – Associated Positive Results
	4-Chloroaniline-d5	0%	R- Associated Compounds
14	4-Methylphenol-d8	101%	None – Associated Cmpds ND
15	4-Methylphenol-d8	104%	
	4-Chloroaniline-d5	0%	R- Associated Compounds
16	4-Methylphenol-d8	103%	None – Associated Cmpds ND
	Acenaphthylene-d8	98%	
	Anthracene-d10	100%	
17	4-Chloroaniline-d5	0%	R- Associated Compounds
19	4-Chloroaniline-d5	0%	
20	4-Methylphenol-d8	120%	J – Associated Positive Results
	Nitrobenzene-d5	106%	None – Associated Cmpds ND
	4-Chloroaniline-d5	0%	R- Associated Compounds
	Acenaphthylene-d8	113%	J – Associated Positive Results
	Anthracene-d10	109%	
21	4-Chloroaniline-d5	0%	R- Associated Compounds
24	4-Chloroaniline-d5	0%	

Matrix Spike/Matrix Spike Duplicate (MS/MSD) Recoveries

- A MS/MSD sample was not analyzed.

Laboratory Control Samples

- A LCS sample was not analyzed.

Internal Standard (IS) Area Performance

- All internal standards met response and retention time (RT) criteria except the following.

Sample ID	Internal Standard	Area Count	Qualifier
20	Perylene-d12	Low	J/UJ – Associated Compounds
20RE*	Perylene-d12	Low	
22	Perylene-d12	Low	
22RE*	Perylene-d12	Low	

* EDS Sample IDs # 20 and 22 were reanalyzed with similar results. The raw data was reported in the data package, but there are no Form Is for the reanalysis. Use the original results for reporting purposes.

Target Compound Identification

- All mass spectra and quantitation criteria were met.

Compound Quantitation

- Several samples were analyzed at various dilutions due to high concentrations of target compounds. No action was required.

Field Duplicate Sample Precision

- Field duplicate results are summarized below.

SVOC				
Compound	LMR13-93-024 ug/kg	LMR13-93-024FD ug/kg	RPD	Qualifier
Naphthalene	260	150	54%	None
Acenaphthene	190	200	5%	
Dibenzofuran	66	3000U	NC	
Fluorene	260	260	0%	
Phenanthrene	1100	1100	0%	
Anthracene	300	310	3%	
Fluoranthene	2400	1900	23%	
Pyrene	2300	2300	0%	
Benzo(a)anthracene	1500	1300	14%	
Chrysene	1700	1700	0%	
bis(2-Ethylhexyl)phthalate	27000	32000	17%	
Benzo(b)fluoranthene	1400	1200	15%	
Benzo(k)fluoranthene	1400	1200	15%	
Benzo(a)pyrene	1400	1200	15%	
Indeno(1,2,3-cd)pyrene	420	430	2%	
Dibenzo(a,h)anthracene	190	210	10%	
Benzo(g,h,i)perylene	560	530	6%	

SVOC				
Compound	LMR13-90-048 ug/kg	LMR13-90-048FD ug/kg	RPD	Qualifier
Benzaldehyde	45	46	2%	None
4-Methylphenol	25	24	4%	
Naphthalene	80	74	8%	
2-Methylnaphthalene	22	20	10%	
Acenaphthene	33	35	6%	
Dibenzofuran	24	27	12%	
Diethylphthalate	300U	180	NC	
Fluorene	46	46	0%	
Phenanthrene	220	230	4%	
Anthracene	54	50	8%	
Fluoranthene	510	430	17%	
Pyrene	340	340	0%	
Butylbenzylphthalate	48	38	23%	
Benzo(a)anthracene	150	190	24%	
Chrysene	250	300	18%	
bis(2-Ethylhexyl)phthalate	580	540	7%	
Benzo(b)fluoranthene	200	280	33%	
Benzo(k)fluoranthene	220	250	13%	
Benzo(a)pyrene	160	220	32%	
Indeno(1,2,3-cd)pyrene	75	96	25%	
Dibenzo(a,h)anthracene	24	20	18%	
Benzo(g,h,i)perylene	91	110	19%	

SVOC				
Compound	LMR13-90-012 ug/kg	LMR13-90-012FD ug/kg	RPD	Qualifier
Benzaldehyde	45	330U	NC	None
Naphthalene	11	330U	NC	
Dibenzofuran	9.0	330U	NC	
Diethylphthalate	17	330U	NC	
Phenanthrene	76	94	21%	
Anthracene	14	21	40%	
di-n-Butylphthalate	330U	9.7	NC	
Fluoranthene	170	220	26%	
Pyrene	130	200	42%	
Butylbenzylphthalate	29	330U	NC	
Benzo(a)anthracene	64	82	25%	
Chrysene	120	140	15%	
bis(2-Ethylhexyl)phthalate	120	330U	NC	
Benzo(b)fluoranthene	110	140	24%	
Benzo(k)fluoranthene	110	92	18%	
Benzo(a)pyrene	76	76	0%	
Indeno(1,2,3-cd)pyrene	48	57	17%	
Dibenzo(a,h)anthracene	18	330U	NC	
Benzo(g,h,i)perylene	61	75	21%	

Polynuclear Aromatic Hydrocarbons (PAH 34)

Holding Times

- All samples were extracted within 14 days for sediment samples and analyzed within 40 days for all samples.

GC/MS Tuning

- All criteria were met.

Initial Calibration

- All %RSD and mean RRF criteria were met.

Continuing Calibration

- All %D and RRF criteria were met except the following.

CCAL Date	Compound	%D/RRF	Qualifier	Affected Samples
07/30/13 (0925)	Dibenzo(a,h)anthracene	31.2%	J/UJ	10, 21

Method Blank

- The method blanks exhibited the following contamination.

Blank ID	Compound	Conc. ug/kg	Qualifier	Affected Samples
SBLKM3	Naphthalene	0.15	U	20
	Fluoranthene	0.20	None	All >5X
	Pyrene	0.16	None	
	Benzo(a)anthracene	0.12	None	
	Chrysene	0.14	None	
	Benzo(b)fluoranthene	0.14	None	
	Benzo(k)fluoranthene	0.12	None	
	Benzo(e)pyrene	0.094	None	
	Total 16 PPAH	1.0	J	20
	Total PAH	1.1	J	
SBLKL6	Naphthalene	0.26	U	10
	2-Methylnaphthalene	0.086	U	10, 21
	Phenanthrene	0.093	U	10
	Fluoranthene	0.11	None	All >5X
	Pyrene	0.10	None	
	Total 16 PPAH	0.57	J	10, 21
	Total PAH	0.57	J	

Blank ID	Compound	Conc. ug/kg	Qualifier	Affected Samples
SBLKL7	Naphthalene	0.16	U	24
SBLKL7	Total 16 PPAH	0.16	J	24
	Total PAH	0.16	J	

Field Blank

- Field QC samples were not analyzed.

Surrogate Spike Recoveries

- All samples exhibited acceptable surrogate %R values.

Matrix Spike/Matrix Spike Duplicate (MS/MSD) Recoveries

- A MS/MSD sample was not analyzed.

Laboratory Control Samples

- A LCS sample was not analyzed.

Internal Standard (IS) Area Performance

- All internal standards met response and retention time (RT) criteria.

Target Compound Identification

- All mass spectra and quantitation criteria were met.

Compound Quantitation

- EDS Sample ID #20 exhibited high concentrations of several target compounds and were flagged (E) by the laboratory. However, a dilution analysis was not performed and these compounds were qualified estimated (J).
- Total 16 PPAH and Total PAH were estimated (J) in all samples due to blank contamination.

Field Duplicate Sample Precision

- Field duplicate samples were not analyzed.

Polychlorinated Biphenyls (PCBs)

Holding Times

- All samples were extracted within 14 days for sediment samples and analyzed within 40 days.

Initial Calibration

- All %RSD and/or correlation coefficient criteria were met.

Continuing Calibration

- All %D criteria were met.

Method Blank

- The method blanks were free of contamination.

Field Blank

- Field QC samples were not analyzed.

Surrogate Spike Recoveries

- All samples exhibited acceptable surrogate recoveries except the following.

Sample ID	Surrogate	%R	Qualifier
2	DCB1	26%	J/UJ

Matrix Spike/Matrix Spike Duplicate (MS/MSD) Recoveries

- A MS/MSD sample was not analyzed.

Laboratory Control Samples

- The LCS sample exhibited acceptable %R values.

Compound Quantitation

- Several samples exhibited high concentrations of PCBs which were flagged (E) by the laboratory indicating calibration range exceedences. The laboratory diluted and reanalyzed these samples and the dilution results for these PCBs should be used for reporting purposes.

Field Duplicate Sample Precision

- Field duplicate results are summarized below.

PCBs				
Compound	LMR13-62-024FD ug/kg	LMR13-62-024 ug/kg	RPD	Qualifier
None	ND	ND	-	-

PCBs				
Compound	LMR13-90-024FD ug/kg	LMR13-90-024 ug/kg	RPD	Qualifier
Aroclor-1248	63	42	40%	None
Aroclor-1254	43	29	39%	
Aroclor-1260	10	7.4	30%	

GC Column Difference Results

- Several samples exhibited high %D values > 25% between columns and have been qualified as estimated (J) by the reviewer.

Metals & Mercury

Holding Times

- All samples were prepared and analyzed within 28 days for mercury and 180 days for all other metals.

ICP/MS Tuning

- Not applicable.

Initial Calibration Verification

- All initial calibration criteria were met.

Continuing Calibration Verification

- All continuing calibration criteria were met.

Method Blank

- The method blanks exhibited the following contamination.

Blank ID	Compound	Conc. mg/kg	Qualifier	Affected Samples
PBSE6	Zinc	1.3	None	All >10X
PBSE7	Zinc	0.78	None	

Field Blank

- Field QC samples were not analyzed.

ICP Interference Check Sample

- The ICP interference check sample exhibited acceptable %R values.

Laboratory Control Samples

- The LCS sample exhibited acceptable recoveries.

Matrix Spike Analysis

- The matrix spike sample exhibited acceptable %R values.

Duplicate Sample Analysis

- The duplicate sample exhibited acceptable RPD values.

ICP Serial Dilution

- ICP serial dilution percent differences (%D) were within acceptance limits except the following.

ICP Sample ID	Compound	%D	Qualifier	Affected Samples
20	Chromium	16%	J	All Samples
	Copper	13%	J	
	Nickel	21%	J	
	Zinc	18%	J	

Compound Quantitation

- All criteria were met.

Field Duplicate Sample Precision

- Field duplicate results are summarized below.

Metals				
Compound	LMR13-62-024FD mg/kg	LMR13-62-024 mg/kg	RPD	Qualifier
Arsenic	5.0	6.3	23%	None
Cadmium	0.37	0.81	75%	
Chromium	15.0	24.5	48%	
Copper	14.1	23.4	50%	
Lead	12.8	25.6	67%	
Nickel	20.9	27.1	26%	
Zinc	51.2	165	105%	None - See SD
Mercury	0.054	0.042	25%	None

Metals				
Compound	LMR13-90-024FD mg/kg	LMR13-90-024 mg/kg	RPD	Qualifier
Arsenic	7.9	7.9	0%	None
Cadmium	1.0	1.1	10%	
Chromium	30.8	31.9	4%	

Metals				
Compound	LMR13-90-024FD mg/kg	LMR13-90-024 mg/kg	RPD	Qualifier
Copper	30.2	29.7	2%	None
Lead	34.5	31.6	9%	
Nickel	34.3	34.0	1%	
Zinc	230	209	10%	
Mercury	0.12	0.11	9%	

Oil & Grease, Total Organic Carbon, AVS/SEM (Metals & Hg)

Holding Times

- All samples were analyzed within the recommended holding time for each analysis.

Initial and Continuing Calibration

- All %R criteria were met.

Method Blank

- The method blanks exhibited the following contamination.

Blank ID	Compound	Conc. mg/kg	Qualifier	Affected Samples
240-91726/1-A	HEM	197.8	None	All >5X
240-91908/1-A	HEM	100.3	U	18, 19, 21, 25

Field Blank

- Field QC samples were not included in this data package.

Laboratory Control Samples

- The LCS samples exhibited acceptable %R values.

Matrix Spike/Duplicate (MS/DUP) Recoveries

- A MS/MSD sample was not analyzed.

Compound Quantitation

- All criteria were met.

Field Duplicate Sample Precision

- Field duplicate results are summarized below.

HEM				
Compound	LMR13-93-024 mg/kg	LMR13-93-024FD mg/kg	RPD	Qualifier
HEM	3600	5500	42%	None

TOC				
Compound	LMR13-62-024FD mg/kg	LMR13-62-024 mg/kg	RPD	Qualifier
TOC	19900	21100	6%	None

TOC				
Compound	LMR13-90-024FD mg/kg	LMR13-90-024 mg/kg	RPD	Qualifier
TOC	22300	25400	13%	None

HEM				
Compound	LMR13-90-048 mg/kg	LMR13-90-048FD mg/kg	RPD	Qualifier
HEM	784	694	12%	None

HEM				
Compound	LMR13-91-024 mg/kg	LMR13-91-024FD mg/kg	RPD	Qualifier
None	ND	ND	-	-

Please contact the undersigned at (757) 564-0090 if you have any questions or need further information.

Signed: Nancy Weaver Dated: 8/21/13

Nancy Weaver
Senior Chemist

Data Qualifiers

U = The analyte was analyzed for, but was not detected at a level greater than or equal to the level of the adjusted Contract Required Quantitation Limit (CRQL) for sample and method.

UJ = The analyte was not detected at a level greater than or equal to the adjusted CRQL. However, the reported adjusted CRQL is approximate and may be inaccurate or imprecise.

J = The analyte was positively identified and the associated numerical value is the approximate concentration of the analyte in the sample (due either to the quality of the data generated because certain quality control criteria were not met, or the concentration of the analyte was below the CRQL).

J+ = The result is an estimated quantity, but the result may be biased high.

J- = The result is an estimated quantity, but the result may be biased low.

R = The sample results are unusable due to the quality of the data generated because certain criteria were not met. The analyte may or may not be present in the sample.

NJ = The analysis indicates the presence of an analyte that has been "tentatively identified" and the associated numerical value represents its approximate concentration.

EPA SAMPLE NO.
LMR13-93-012

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17010

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17010-1

Sample wt/vol: 29.8 (g/mL) g Lab File ID: RKTVD05.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 40 Decanted: (Y/N) Date Received: 06/14/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/20/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/19/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 3.3

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
100-52-7	Benzaldehyde	940	U
108-95-2	Phenol	940	U
111-44-4	Bis(2-chloroethyl)ether	940	U
95-57-8	2-Chlorophenol	940	U
95-48-7	2-Methylphenol	940	U
108-60-1	2,2'-Oxybis(1-chloropropane)	940	U
98-86-2	Acetophenone	940	U
106-44-5	4-Methylphenol	940	U
621-64-7	N-Nitroso-di-n-propylamine	940	U UJ
67-72-1	Hexachloroethane	940	U
98-95-3	Nitrobenzene	940	U
78-59-1	Isophorone	940	U
88-75-5	2-Nitrophenol	940	U
105-67-9	2,4-Dimethylphenol	940	U
111-91-1	Bis(2-chloroethoxy)methane	940	U
120-83-2	2,4-Dichlorophenol	940	U
91-20-3	Naphthalene	91	J
106-47-8	4-Chloroaniline	940	U
87-68-3	Hexachlorobutadiene	940	U
105-60-2	Caprolactam	940	U
59-50-7	4-Chloro-3-methylphenol	940	U
91-57-6	2-Methylnaphthalene	940	U
77-47-4	Hexachlorocyclopentadiene	940	U UJ
88-06-2	2,4,6-Trichlorophenol	940	U
95-95-4	2,4,5-Trichlorophenol	940	U
92-52-4	1,1'-Biphenyl	940	U
91-58-7	2-Chloronaphthalene	940	U
88-74-4	2-Nitroaniline	1800	U
131-11-3	Dimethylphthalate	940	U
606-20-2	2,6-Dinitrotoluene	940	U
208-96-8	Acenaphthylene	940	U
99-09-2	3-Nitroaniline	1800	U
83-32-9	Acenaphthene	97	J

NW 8/15/13

1E - FORM I SV-2
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-93-012

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17010

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17010-1

Sample wt/vol: 29.8 (g/mL) g Lab File ID: RKTVD05.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 40 Decanted: (Y/N) Date Received: 06/14/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/20/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/19/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 3.3

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
51-28-5	2,4-Dinitrophenol	1800	U
100-02-7	4-Nitrophenol	1800	U
132-64-9	Dibenzofuran	940	U
121-14-2	2,4-Dinitrotoluene	940	U
84-66-2	Diethylphthalate	940	U
86-73-7	Fluorene	940	U
7005-72-3	4-Chlorophenyl-phenylether	940	U
100-01-6	4-Nitroaniline	1800	U
534-52-1	4,6-Dinitro-2-methylphenol	1800	U
86-30-6	N-Nitrosodiphenylamin [1]	940	U
95-94-3	1,2,4,5-Tetrachlorobenzene	940	U
101-55-3	4-Bromophenyl-phenylether	940	U UJ
118-74-1	Hexachlorobenzene	940	U
1912-24-9	Atrazine	940	U
87-86-5	Pentachlorophenol	1800	U
85-01-8	Phenanthrene	620	J
120-12-7	Anthracene	140	J
86-74-8	Carbazole	940	U
84-74-2	Di-n-butylphthalate	940	U
206-44-0	Fluoranthene	1400	J
129-00-0	Pyrene	1200	
85-68-7	Butylbenzylphthalate	940	U
91-94-1	3,3'-Dichlorobenzidine	940	U
56-55-3	Benzo(a)anthracene	610	J
218-01-9	Chrysene	960	
117-81-7	Bis(2-ethylhexyl)phthalate	12000	
117-84-0	Di-n-octylphthalate	940	U
205-99-2	Benzo(b)fluoranthene	810	J
207-08-9	Benzo(k)fluoranthene	730	J
50-32-8	Benzo(a)pyrene	700	J
193-39-5	Indeno(1,2,3-cd)pyrene	280	J
53-70-3	Dibenzo(a,h)anthracene	99	J
191-24-2	Benzo(g,h,i)perylene	340	J
58-90-2	2,3,4,6-Tetrachlorophenol	940	U

[1] Cannot be separated from Diphenylamine

NW 8/15/13

1D - FORM I SV-1

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-93-024

2

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17010

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17010-2

Sample wt/vol: 29.8 (g/mL) g Lab File ID: RKTVD07.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 43 Decanted: (Y/N) Date Received: 06/14/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/20/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/19/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 6.7

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
100-52-7	Benzaldehyde	2000	U
108-95-2	Phenol	2000	U
111-44-4	Bis(2-chloroethyl)ether	2000	U
95-57-8	2-Chlorophenol	2000	U
95-48-7	2-Methylphenol	2000	U
108-60-1	2,2'-Oxybis(1-chloropropane)	2000	U
98-86-2	Acetophenone	2000	U
106-44-5	4-Methylphenol	2000	U
621-64-7	N-Nitroso-di-n-propylamine	2000	~~U~~ UJ
67-72-1	Hexachloroethane	2000	U
98-95-3	Nitrobenzene	2000	U
78-59-1	Isophorone	2000	U
88-75-5	2-Nitrophenol	2000	U
105-67-9	2,4-Dimethylphenol	2000	U
111-91-1	Bis(2-chloroethoxy)methane	2000	U
120-83-2	2,4-Dichlorophenol	2000	U
91-20-3	Naphthalene	260	J
106-47-8	4-Chloroaniline	2000	U
87-68-3	Hexachlorobutadiene	2000	U
105-60-2	Caprolactam	2000	U
59-50-7	4-Chloro-3-methylphenol	2000	U
91-57-6	2-Methylnaphthalene	2000	U
77-47-4	Hexachlorocyclopentadiene	2000	~~U~~ UJ
88-06-2	2,4,6-Trichlorophenol	2000	U
95-95-4	2,4,5-Trichlorophenol	2000	U
92-52-4	1,1'-Biphenyl	2000	U
91-58-7	2-Chloronaphthalene	2000	U
88-74-4	2-Nitroaniline	3900	U
131-11-3	Dimethylphthalate	2000	U
606-20-2	2,6-Dinitrotoluene	2000	U
208-96-8	Acenaphthylene	2000	U
99-09-2	3-Nitroaniline	3900	U
83-32-9	Acenaphthene	190	J

MW 8/15/13

1E - FORM I SV-2
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-93-024

2

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17010

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17010-2

Sample wt/vol: 29.8 (g/mL) g Lab File ID: RKTVD07.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 43 Decanted: (Y/N) Date Received: 06/14/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/20/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/19/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 6.7

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
51-28-5	2,4-Dinitrophenol	3900	U
100-02-7	4-Nitrophenol	3900	U
132-64-9	Dibenzofuran	66	J
121-14-2	2,4-Dinitrotoluene	2000	U
84-66-2	Diethylphthalate	2000	U
86-73-7	Fluorene	260	J
7005-72-3	4-Chlorophenyl-phenylether	2000	U
100-01-6	4-Nitroaniline	3900	U
534-52-1	4,6-Dinitro-2-methylphenol	3900	U
86-30-6	N-Nitrosodiphenylamin [1]	2000	U
95-94-3	1,2,4,5-Tetrachlorobenzene	2000	U
101-55-3	4-Bromophenyl-phenylether	2000	~~U~~ UJ
118-74-1	Hexachlorobenzene	2000	U
1912-24-9	Atrazine	2000	U
87-86-5	Pentachlorophenol	3900	U
85-01-8	Phenanthrene	1100	J
120-12-7	Anthracene	300	J
86-74-8	Carbazole	2000	U
84-74-2	Di-n-butylphthalate	2000	U
206-44-0	Fluoranthene	2400	J
129-00-0	Pyrene	2300	
85-68-7	Butylbenzylphthalate	2000	U
91-94-1	3,3'-Dichlorobenzidine	2000	U
56-55-3	Benzo(a)anthracene	1500	J
218-01-9	Chrysene	1700	J
117-81-7	Bis(2-ethylhexyl)phthalate	27000	
117-84-0	Di-n-octylphthalate	2000	U
205-99-2	Benzo(b)fluoranthene	1400	J
207-08-9	Benzo(k)fluoranthene	1400	J
50-32-8	Benzo(a)pyrene	1400	J
193-39-5	Indeno(1,2,3-cd)pyrene	420	J
53-70-3	Dibenzo(a,h)anthracene	190	J
191-24-2	Benzo(g,h,i)perylene	560	J
58-90-2	2,3,4,6-Tetrachlorophenol	2000	U

[1] Cannot be separated from Diphenylamine

NW 8/15/13

1D - FORM I SV-1

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-93-048

3

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17010

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17010-3

Sample wt/vol: 30.5 (g/mL) g Lab File ID: RKTVD08.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 38 Decanted: (Y/N) Date Received: 06/14/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/20/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/19/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 2.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
100-52-7	Benzaldehyde	540	U
108-95-2	Phenol	540	U
111-44-4	Bis(2-chloroethyl)ether	540	U
95-57-8	2-Chlorophenol	540	U
95-48-7	2-Methylphenol	540	U
108-60-1	2,2'-Oxybis(1-chloropropane)	540	U
98-86-2	Acetophenone	540	U
106-44-5	4-Methylphenol	540	U
621-64-7	N-Nitroso-di-n-propylamine	540	U UJ
67-72-1	Hexachloroethane	540	U
98-95-3	Nitrobenzene	540	U
78-59-1	Isophorone	540	U
88-75-5	2-Nitrophenol	540	U
105-67-9	2,4-Dimethylphenol	540	U
111-91-1	Bis(2-chloroethoxy)methane	540	U
120-83-2	2,4-Dichlorophenol	540	U
91-20-3	Naphthalene	91	J
106-47-8	4-Chloroaniline	540	U
87-68-3	Hexachlorobutadiene	540	U
105-60-2	Caprolactam	540	U
59-50-7	4-Chloro-3-methylphenol	540	U
91-57-6	2-Methylnaphthalene	57	J
77-47-4	Hexachlorocyclopentadiene	540	U UJ
88-06-2	2,4,6-Trichlorophenol	540	U
95-95-4	2,4,5-Trichlorophenol	540	U
92-52-4	1,1'-Biphenyl	540	U
91-58-7	2-Chloronaphthalene	540	U
88-74-4	2-Nitroaniline	1000	U
131-11-3	Dimethylphthalate	540	U
606-20-2	2,6-Dinitrotoluene	540	U
208-96-8	Acenaphthylene	31	J
99-09-2	3-Nitroaniline	1000	U
83-32-9	Acenaphthene	300	J

MW 8/15/13

1E - FORM I SV-2
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-93-048

3

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17010

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17010-3

Sample wt/vol: 30.5 (g/mL) g Lab File ID: RKTVD08.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 38 Decanted: (Y/N) Date Received: 06/14/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/20/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/19/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 2.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
51-28-5	2,4-Dinitrophenol	1000	U
100-02-7	4-Nitrophenol	1000	U
132-64-9	Dibenzofuran	42	J
121-14-2	2,4-Dinitrotoluene	540	U
84-66-2	Diethylphthalate	540	U
86-73-7	Fluorene	350	J
7005-72-3	4-Chlorophenyl-phenylether	540	U
100-01-6	4-Nitroaniline	1000	U
534-52-1	4,6-Dinitro-2-methylphenol	1000	U
86-30-6	N-Nitrosodiphenylamin [1]	540	U
95-94-3	1,2,4,5-Tetrachlorobenzene	540	U
101-55-3	4-Bromophenyl-phenylether	540	U UJ
118-74-1	Hexachlorobenzene	540	U
1912-24-9	Atrazine	540	U
87-86-5	Pentachlorophenol	1000	U
85-01-8	Phenanthrene	2500	
120-12-7	Anthracene	530	J
86-74-8	Carbazole	540	U
84-74-2	Di-n-butylphthalate	540	U
206-44-0	Fluoranthene	4100	J
129-00-0	Pyrene	3200	
85-68-7	Butylbenzylphthalate	540	U
91-94-1	3,3'-Dichlorobenzidine	540	U
56-55-3	Benzo(a)anthracene	1700	
218-01-9	Chrysene	2200	
117-81-7	Bis(2-ethylhexyl)phthalate	2900	
117-84-0	Di-n-octylphthalate	540	U
205-99-2	Benzo(b)fluoranthene	1600	
207-08-9	Benzo(k)fluoranthene	1600	
50-32-8	Benzo(a)pyrene	1600	
193-39-5	Indeno(1,2,3-cd)pyrene	530	J
53-70-3	Dibenzo(a,h)anthracene	200	J
191-24-2	Benzo(g,h,i)perylene	620	
58-90-2	2,3,4,6-Tetrachlorophenol	540	U

[1] Cannot be separated from Diphenylamine

MW 8/15/13

1D - FORM I SV-1

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-93-072

4

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17010

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17010-4

Sample wt/vol: 30.6 (g/mL) g Lab File ID: RKTVA12.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 38 Decanted: (Y/N) Date Received: 06/14/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/20/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/18/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
100-52-7	Benzaldehyde	26	J
108-95-2	Phenol	270	U
111-44-4	Bis(2-chloroethyl)ether	270	U
95-57-8	2-Chlorophenol	270	U
95-48-7	2-Methylphenol	270	U
108-60-1	2,2'-Oxybis(1-chloropropane)	270	U
98-86-2	Acetophenone	270	U
106-44-5	4-Methylphenol	270	U
621-64-7	N-Nitroso-di-n-propylamine	270	U
67-72-1	Hexachloroethane	270	U
98-95-3	Nitrobenzene	270	U
78-59-1	Isophorone	270	U
88-75-5	2-Nitrophenol	270	U
105-67-9	2,4-Dimethylphenol	270	U
111-91-1	Bis(2-chloroethoxy)methane	270	U
120-83-2	2,4-Dichlorophenol	270	U
91-20-3	Naphthalene	45	J
106-47-8	4-Chloroaniline	270	U
87-68-3	Hexachlorobutadiene	270	U
105-60-2	Caprolactam	270	U
59-50-7	4-Chloro-3-methylphenol	270	U
91-57-6	2-Methylnaphthalene	19	J
77-47-4	Hexachlorocyclopentadiene	270	~~U~~ UJ
88-06-2	2,4,6-Trichlorophenol	270	U
95-95-4	2,4,5-Trichlorophenol	270	U
92-52-4	1,1'-Biphenyl	270	U
91-58-7	2-Chloronaphthalene	270	U
88-74-4	2-Nitroaniline	520	U
131-11-3	Dimethylphthalate	270	U
606-20-2	2,6-Dinitrotoluene	270	U
208-96-8	Acenaphthylene	20	J
99-09-2	3-Nitroaniline	520	U
83-32-9	Acenaphthene	110	J

MW 8/15/13

1E - FORM I SV-2
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-93-072

4

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17010

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17010-4

Sample wt/vol: 30.6 (g/mL) g Lab File ID: RKTVA12.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 38 Decanted: (Y/N) Date Received: 06/14/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/20/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/18/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
51-28-5	2,4-Dinitrophenol	520	U
100-02-7	4-Nitrophenol	520	U
132-64-9	Dibenzofuran	40	J
121-14-2	2,4-Dinitrotoluene	270	U
84-66-2	Diethylphthalate	270	U
86-73-7	Fluorene	150	J
7005-72-3	4-Chlorophenyl-phenylether	270	U
100-01-6	4-Nitroaniline	520	U
534-52-1	4,6-Dinitro-2-methylphenol	520	U
86-30-6	N-Nitrosodiphenylamin [1]	270	U
95-94-3	1,2,4,5-Tetrachlorobenzene	270	U
101-55-3	4-Bromophenyl-phenylether	270	U
118-74-1	Hexachlorobenzene	270	U
1912-24-9	Atrazine	270	U
87-86-5	Pentachlorophenol	520	U
85-01-8	Phenanthrene	830	
120-12-7	Anthracene	230	J
86-74-8	Carbazole	270	U
84-74-2	Di-n-butylphthalate	270	U
206-44-0	Fluoranthene	1900	J
129-00-0	Pyrene	1400	
85-68-7	Butylbenzylphthalate	270	U
91-94-1	3,3'-Dichlorobenzidine	270	U
56-55-3	Benzo(a)anthracene	670	
218-01-9	Chrysene	810	
117-81-7	Bis(2-ethylhexyl)phthalate	340	
117-84-0	Di-n-octylphthalate	270	U
205-99-2	Benzo(b)fluoranthene	740	
207-08-9	Benzo(k)fluoranthene	580	
50-32-8	Benzo(a)pyrene	620	
193-39-5	Indeno(1,2,3-cd)pyrene	220	J
53-70-3	Dibenzo(a,h)anthracene	78	J
191-24-2	Benzo(g,h,i)perylene	240	J
58-90-2	2,3,4,6-Tetrachlorophenol	270	U

[1] Cannot be separated from Diphenylamine

MW 8/15/13

1D - FORM I SV-1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-93-096

5

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17010

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17010-5

Sample wt/vol: 30.7 (g/mL) g Lab File ID: RKTVA13.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 35 Decanted: (Y/N) Date Received: 06/14/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/20/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/18/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
100-52-7	Benzaldehyde	31	J
108-95-2	Phenol	250	U
111-44-4	Bis(2-chloroethyl)ether	250	U
95-57-8	2-Chlorophenol	250	U
95-48-7	2-Methylphenol	250	U
108-60-1	2,2'-Oxybis(1-chloropropane)	250	U
98-86-2	Acetophenone	250	U
106-44-5	4-Methylphenol	250	U
621-64-7	N-Nitroso-di-n-propylamine	250	U
67-72-1	Hexachloroethane	250	U
98-95-3	Nitrobenzene	250	U
78-59-1	Isophorone	250	U
88-75-5	2-Nitrophenol	250	U
105-67-9	2,4-Dimethylphenol	250	U
111-91-1	Bis(2-chloroethoxy)methane	250	U
120-83-2	2,4-Dichlorophenol	250	U
91-20-3	Naphthalene	19	J
106-47-8	4-Chloroaniline	250	~~U~~ R
87-68-3	Hexachlorobutadiene	250	U
105-60-2	Caprolactam	250	U
59-50-7	4-Chloro-3-methylphenol	250	U
91-57-6	2-Methylnaphthalene	250	U
77-47-4	Hexachlorocyclopentadiene	250	~~U~~ R
88-06-2	2,4,6-Trichlorophenol	250	U
95-95-4	2,4,5-Trichlorophenol	250	U
92-52-4	1,1'-Biphenyl	250	U
91-58-7	2-Chloronaphthalene	250	U
88-74-4	2-Nitroaniline	490	U
131-11-3	Dimethylphthalate	250	U
606-20-2	2,6-Dinitrotoluene	250	U
208-96-8	Acenaphthylene	250	U
99-09-2	3-Nitroaniline	490	U
83-32-9	Acenaphthene	80	J

NW 8/15/13

1E - FORM I SV-2
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-93-096

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678 5

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17010

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17010-5

Sample wt/vol: 30.7 (g/mL) g Lab File ID: RKTVA13.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 35 Decanted: (Y/N) Date Received: 06/14/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/20/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/18/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
51-28-5	2,4-Dinitrophenol	490	U
100-02-7	4-Nitrophenol	490	U
132-64-9	Dibenzofuran	35	J
121-14-2	2,4-Dinitrotoluene	250	U
84-66-2	Diethylphthalate	250	U
86-73-7	Fluorene	89	J
7005-72-3	4-Chlorophenyl-phenylether	250	U
100-01-6	4-Nitroaniline	490	U
534-52-1	4,6-Dinitro-2-methylphenol	490	U
86-30-6	N-Nitrosodiphenylamin [1]	250	U
95-94-3	1,2,4,5-Tetrachlorobenzene	250	U
101-55-3	4-Bromophenyl-phenylether	250	U
118-74-1	Hexachlorobenzene	250	U
1912-24-9	Atrazine	250	U
87-86-5	Pentachlorophenol	490	U
85-01-8	Phenanthrene	580	
120-12-7	Anthracene	150	J
86-74-8	Carbazole	250	U
84-74-2	Di-n-butylphthalate	250	U
206-44-0	Fluoranthene	1300	J
129-00-0	Pyrene	1100	
85-68-7	Butylbenzylphthalate	250	U
91-94-1	3,3'-Dichlorobenzidine	250	U R
56-55-3	Benzo(a)anthracene	440	
218-01-9	Chrysene	600	
117-81-7	Bis(2-ethylhexyl)phthalate	120	J
117-84-0	Di-n-octylphthalate	250	U
205-99-2	Benzo(b)fluoranthene	490	
207-08-9	Benzo(k)fluoranthene	340	
50-32-8	Benzo(a)pyrene	420	
193-39-5	Indeno(1,2,3-cd)pyrene	150	J
53-70-3	Dibenzo(a,h)anthracene	49	J
191-24-2	Benzo(g,h,i)perylene	190	J
58-90-2	2,3,4,6-Tetrachlorophenol	250	U

[1] Cannot be separated from Diphenylamine

NW 8/15/13

1D - FORM I SV-1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-93-120

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678 6

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17010

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17010-6

Sample wt/vol: 30.4 (g/mL) g Lab File ID: RKTUP15.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 34 Decanted: (Y/N) Date Received: 06/14/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/20/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/11/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
100-52-7	Benzaldehyde	27	J
108-95-2	Phenol	250	U
111-44-4	Bis(2-chloroethyl)ether	250	U
95-57-8	2-Chlorophenol	250	U
95-48-7	2-Methylphenol	250	U
108-60-1	2,2'-Oxybis(1-chloropropane)	250	U
98-86-2	Acetophenone	250	U
106-44-5	4-Methylphenol	10	J
621-64-7	N-Nitroso-di-n-propylamine	250	U
67-72-1	Hexachloroethane	250	U
98-95-3	Nitrobenzene	250	U
78-59-1	Isophorone	250	U
88-75-5	2-Nitrophenol	250	U
105-67-9	2,4-Dimethylphenol	250	U
111-91-1	Bis(2-chloroethoxy)methane	250	U
120-83-2	2,4-Dichlorophenol	250	U
91-20-3	Naphthalene	14	J
106-47-8	4-Chloroaniline	250	U
87-68-3	Hexachlorobutadiene	250	U
105-60-2	Caprolactam	250	U
59-50-7	4-Chloro-3-methylphenol	250	U
91-57-6	2-Methylnaphthalene	250	U
77-47-4	Hexachlorocyclopentadiene	250	U UJ
88-06-2	2,4,6-Trichlorophenol	250	U
95-95-4	2,4,5-Trichlorophenol	250	U
92-52-4	1,1'-Biphenyl	250	U
91-58-7	2-Chloronaphthalene	250	U
88-74-4	2-Nitroaniline	490	U
131-11-3	Dimethylphthalate	250	U
606-20-2	2,6-Dinitrotoluene	250	U
208-96-8	Acenaphthylene	250	U
99-09-2	3-Nitroaniline	490	U
83-32-9	Acenaphthene	44	J

MW 8/15/13

1E - FORM I SV-2
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-93-120

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678 6

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17010

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17010-6

Sample wt/vol: 30.4 (g/mL) g Lab File ID: RKTUP15.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 34 Decanted: (Y/N) Date Received: 06/14/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/20/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/11/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
51-28-5	2,4-Dinitrophenol	490	U
100-02-7	4-Nitrophenol	490	~~U~~ UJ
132-64-9	Dibenzofuran	9.9	J
121-14-2	2,4-Dinitrotoluene	250	U
84-66-2	Diethylphthalate	250	U
86-73-7	Fluorene	26	J
7005-72-3	4-Chlorophenyl-phenylether	250	U
100-01-6	4-Nitroaniline	490	U
534-52-1	4,6-Dinitro-2-methylphenol	490	U
86-30-6	N-Nitrosodiphenylamin [1]	250	U
95-94-3	1,2,4,5-Tetrachlorobenzene	250	U
101-55-3	4-Bromophenyl-phenylether	250	U
118-74-1	Hexachlorobenzene	250	U
1912-24-9	Atrazine	250	U
87-86-5	Pentachlorophenol	490	U
85-01-8	Phenanthrene	260	
120-12-7	Anthracene	69	J
86-74-8	Carbazole	250	U
84-74-2	Di-n-butylphthalate	250	U
206-44-0	Fluoranthene	480	J
129-00-0	Pyrene	450	
85-68-7	Butylbenzylphthalate	21	J
91-94-1	3,3'-Dichlorobenzidine	250	U
56-55-3	Benzo(a)anthracene	190	J
218-01-9	Chrysene	250	
117-81-7	Bis(2-ethylhexyl)phthalate	42	J
117-84-0	Di-n-octylphthalate	250	U
205-99-2	Benzo(b)fluoranthene	150	J
207-08-9	Benzo(k)fluoranthene	210	J
50-32-8	Benzo(a)pyrene	240	J
193-39-5	Indeno(1,2,3-cd)pyrene	86	J
53-70-3	Dibenzo(a,h)anthracene	26	J
191-24-2	Benzo(g,h,i)perylene	110	~~J~~ J
58-90-2	2,3,4,6-Tetrachlorophenol	250	U

[1] Cannot be separated from Diphenylamine

NW 8/15/13

1D - FORM I SV-1

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-62-024

9

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17010

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17010-9

Sample wt/vol: 29.9 (g/mL) g Lab File ID: RKTUP16.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 31 Decanted: (Y/N) Date Received: 06/14/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/20/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/11/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
100-52-7	Benzaldehyde	33	J
108-95-2	Phenol	250	U
111-44-4	Bis(2-chloroethyl)ether	250	U
95-57-8	2-Chlorophenol	250	U
95-48-7	2-Methylphenol	250	U
108-60-1	2,2'-Oxybis(1-chloropropane)	250	U
98-86-2	Acetophenone	250	U
106-44-5	4-Methylphenol	250	U
621-64-7	N-Nitroso-di-n-propylamine	250	U
67-72-1	Hexachloroethane	250	U
98-95-3	Nitrobenzene	250	U
78-59-1	Isophorone	250	U
88-75-5	2-Nitrophenol	250	U
105-67-9	2,4-Dimethylphenol	250	U
111-91-1	Bis(2-chloroethoxy)methane	250	U
120-83-2	2,4-Dichlorophenol	250	U
91-20-3	Naphthalene	250	U
106-47-8	4-Chloroaniline	250	U R
87-68-3	Hexachlorobutadiene	250	U
105-60-2	Caprolactam	250	U
59-50-7	4-Chloro-3-methylphenol	250	U
91-57-6	2-Methylnaphthalene	250	U
77-47-4	Hexachlorocyclopentadiene	250	U R
88-06-2	2,4,6-Trichlorophenol	250	U
95-95-4	2,4,5-Trichlorophenol	250	U
92-52-4	1,1'-Biphenyl	250	U
91-58-7	2-Chloronaphthalene	250	U
88-74-4	2-Nitroaniline	480	U
131-11-3	Dimethylphthalate	250	U
606-20-2	2,6-Dinitrotoluene	250	U
208-96-8	Acenaphthylene	250	U
99-09-2	3-Nitroaniline	480	U
83-32-9	Acenaphthene	3.6	J

NW 8/15/13

1E - FORM I SV-2
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-62-024

9

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17010

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17010-9

Sample wt/vol: 29.9 (g/mL) g Lab File ID: RKTUP16.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 31 Decanted: (Y/N) Date Received: 06/14/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/20/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/11/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
51-28-5	2,4-Dinitrophenol	480	U
100-02-7	4-Nitrophenol	480	~~U~~ UJ
132-64-9	Dibenzofuran	3.4	J
121-14-2	2,4-Dinitrotoluene	250	U
84-66-2	Diethylphthalate	250	U
86-73-7	Fluorene	7.1	J
7005-72-3	4-Chlorophenyl-phenylether	250	U
100-01-6	4-Nitroaniline	480	U
534-52-1	4,6-Dinitro-2-methylphenol	480	U
86-30-6	N-Nitrosodiphenylamin [1]	250	U
95-94-3	1,2,4,5-Tetrachlorobenzene	250	U
101-55-3	4-Bromophenyl-phenylether	250	U
118-74-1	Hexachlorobenzene	250	U
1912-24-9	Atrazine	250	U
87-86-5	Pentachlorophenol	480	U
85-01-8	Phenanthrene	20	J
120-12-7	Anthracene	12	J
86-74-8	Carbazole	250	U
84-74-2	Di-n-butylphthalate	250	U
206-44-0	Fluoranthene	47	~~J~~ J
129-00-0	Pyrene	44	J
85-68-7	Butylbenzylphthalate	17	J
91-94-1	3,3'-Dichlorobenzidine	250	~~U~~ R
56-55-3	Benzo(a)anthracene	26	J
218-01-9	Chrysene	28	J
117-81-7	Bis(2-ethylhexyl)phthalate	33	J
117-84-0	Di-n-octylphthalate	250	U
205-99-2	Benzo(b)fluoranthene	22	J
207-08-9	Benzo(k)fluoranthene	18	J
50-32-8	Benzo(a)pyrene	20	J
193-39-5	Indeno(1,2,3-cd)pyrene	8.9	J
53-70-3	Dibenzo(a,h)anthracene	250	U
191-24-2	Benzo(g,h,i)perylene	12	~~J~~ J
58-90-2	2,3,4,6-Tetrachlorophenol	250	U

[1] Cannot be separated from Diphenylamine

NW 8/15/13

1D - FORM I SV-1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-90-012

10

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17010

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17010-10

Sample wt/vol: 30.5 (g/mL) g Lab File ID: RKTUP17.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 50 Decanted: (Y/N) Date Received: 06/14/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/20/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/11/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
100-52-7	Benzaldehyde	45	J
108-95-2	Phenol	330	U
111-44-4	Bis(2-chloroethyl)ether	330	U
95-57-8	2-Chlorophenol	330	U
95-48-7	2-Methylphenol	330	U
108-60-1	2,2'-Oxybis(1-chloropropane)	330	U
98-86-2	Acetophenone	330	U
106-44-5	4-Methylphenol	330	U
621-64-7	N-Nitroso-di-n-propylamine	330	U
67-72-1	Hexachloroethane	330	U
98-95-3	Nitrobenzene	330	U
78-59-1	Isophorone	330	U
88-75-5	2-Nitrophenol	330	U
105-67-9	2,4-Dimethylphenol	330	U
111-91-1	Bis(2-chloroethoxy)methane	330	U
120-83-2	2,4-Dichlorophenol	330	U
91-20-3	Naphthalene	11	J
106-47-8	4-Chloroaniline	330	U R
87-68-3	Hexachlorobutadiene	330	U
105-60-2	Caprolactam	330	U
59-50-7	4-Chloro-3-methylphenol	330	U
91-57-6	2-Methylnaphthalene	330	U
77-47-4	Hexachlorocyclopentadiene	330	U R
88-06-2	2,4,6-Trichlorophenol	330	U
95-95-4	2,4,5-Trichlorophenol	330	U
92-52-4	1,1'-Biphenyl	330	U
91-58-7	2-Chloronaphthalene	330	U
88-74-4	2-Nitroaniline	640	U
131-11-3	Dimethylphthalate	330	U
606-20-2	2,6-Dinitrotoluene	330	U
208-96-8	Acenaphthylene	330	U
99-09-2	3-Nitroaniline	640	U
83-32-9	Acenaphthene	330	U

NW 8/15/13

1E - FORM I SV-2
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-90-012

10

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17010

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17010-10

Sample wt/vol: 30.5 (g/mL) g Lab File ID: RKTUP17.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 50 Decanted: (Y/N) Date Received: 06/14/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/20/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/11/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
51-28-5	2,4-Dinitrophenol	640	U
100-02-7	4-Nitrophenol	640	~~U~~ UJ
132-64-9	Dibenzofuran	9.0	J
121-14-2	2,4-Dinitrotoluene	330	U
84-66-2	Diethylphthalate	330	U
86-73-7	Fluorene	17	J
7005-72-3	4-Chlorophenyl-phenylether	330	U
100-01-6	4-Nitroaniline	640	U
534-52-1	4,6-Dinitro-2-methylphenol	640	U
86-30-6	N-Nitrosodiphenylamin [1]	330	U
95-94-3	1,2,4,5-Tetrachlorobenzene	330	U
101-55-3	4-Bromophenyl-phenylether	330	U
118-74-1	Hexachlorobenzene	330	U
1912-24-9	Atrazine	330	U
87-86-5	Pentachlorophenol	640	U
85-01-8	Phenanthrene	76	J
120-12-7	Anthracene	14	J
86-74-8	Carbazole	330	U
84-74-2	Di-n-butylphthalate	330	U
206-44-0	Fluoranthene	170	~~J~~ J
129-00-0	Pyrene	130	J
85-68-7	Butylbenzylphthalate	29	J
91-94-1	3,3'-Dichlorobenzidine	330	~~U~~ R
56-55-3	Benzo(a)anthracene	64	J
218-01-9	Chrysene	120	J
117-81-7	Bis(2-ethylhexyl)phthalate	120	J
117-84-0	Di-n-octylphthalate	330	U
205-99-2	Benzo(b)fluoranthene	110	J
207-08-9	Benzo(k)fluoranthene	110	J
50-32-8	Benzo(a)pyrene	76	J
193-39-5	Indeno(1,2,3-cd)pyrene	48	J
53-70-3	Dibenzo(a,h)anthracene	18	J
191-24-2	Benzo(g,h,i)perylene	61	~~U~~ J
58-90-2	2,3,4,6-Tetrachlorophenol	330	U

[1] Cannot be separated from Diphenylamine

NW 8/15/13

1D - FORM I SV-1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-90-024

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678 11

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17010

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17010-11

Sample wt/vol: 30.2 (g/mL) g Lab File ID: RKTUP18.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 45 Decanted: (Y/N) Date Received: 06/14/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/20/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/11/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
100-52-7	Benzaldehyde	50	J
108-95-2	Phenol	310	U
111-44-4	Bis(2-chloroethyl)ether	310	U
95-57-8	2-Chlorophenol	310	U
95-48-7	2-Methylphenol	310	U
108-60-1	2,2'-Oxybis(1-chloropropane)	310	U
98-86-2	Acetophenone	310	U
106-44-5	4-Methylphenol	310	U
621-64-7	N-Nitroso-di-n-propylamine	310	U
67-72-1	Hexachloroethane	310	U
98-95-3	Nitrobenzene	310	U
78-59-1	Isophorone	310	U
88-75-5	2-Nitrophenol	310	U
105-67-9	2,4-Dimethylphenol	310	U
111-91-1	Bis(2-chloroethoxy)methane	310	U
120-83-2	2,4-Dichlorophenol	310	U
91-20-3	Naphthalene	33	J
106-47-8	4-Chloroaniline	310	U
87-68-3	Hexachlorobutadiene	310	U
105-60-2	Caprolactam	310	U
59-50-7	4-Chloro-3-methylphenol	310	U
91-57-6	2-Methylnaphthalene	18	J
77-47-4	Hexachlorocyclopentadiene	310	~~U~~ UJ
88-06-2	2,4,6-Trichlorophenol	310	U
95-95-4	2,4,5-Trichlorophenol	310	U
92-52-4	1,1'-Biphenyl	310	U
91-58-7	2-Chloronaphthalene	310	U
88-74-4	2-Nitroaniline	600	U
131-11-3	Dimethylphthalate	310	U
606-20-2	2,6-Dinitrotoluene	310	U
208-96-8	Acenaphthylene	310	U
99-09-2	3-Nitroaniline	600	U
83-32-9	Acenaphthene	26	J

MW 8/15/13

EPA SAMPLE NO.
LMR13-90-024

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678 11

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17010

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17010-11

Sample wt/vol: 30.2 (g/mL) g Lab File ID: RKTUP18.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 45 Decanted: (Y/N) Date Received: 06/14/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/20/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/11/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
51-28-5	2,4-Dinitrophenol	600	U
100-02-7	4-Nitrophenol	600	~~U~~ UJ
132-64-9	Dibenzofuran	16	J
121-14-2	2,4-Dinitrotoluene	310	U
84-66-2	Diethylphthalate	310	U
86-73-7	Fluorene	35	J
7005-72-3	4-Chlorophenyl-phenylether	310	U
100-01-6	4-Nitroaniline	600	U
534-52-1	4,6-Dinitro-2-methylphenol	600	U
86-30-6	N-Nitrosodiphenylamin [1]	310	U
95-94-3	1,2,4,5-Tetrachlorobenzene	310	U
101-55-3	4-Bromophenyl-phenylether	310	U
118-74-1	Hexachlorobenzene	310	U
1912-24-9	Atrazine	310	U
87-86-5	Pentachlorophenol	600	U
85-01-8	Phenanthrene	140	J
120-12-7	Anthracene	43	J
86-74-8	Carbazole	310	U
84-74-2	Di-n-butylphthalate	310	U
206-44-0	Fluoranthene	280	~~J~~ J
129-00-0	Pyrene	190	J
85-68-7	Butylbenzylphthalate	35	J
91-94-1	3,3'-Dichlorobenzidine	310	U
56-55-3	Benzo(a)anthracene	92	J
218-01-9	Chrysene	160	J
117-81-7	Bis(2-ethylhexyl)phthalate	200	J
117-84-0	Di-n-octylphthalate	310	U
205-99-2	Benzo(b)fluoranthene	160	J
207-08-9	Benzo(k)fluoranthene	110	J
50-32-8	Benzo(a)pyrene	110	J
193-39-5	Indeno(1,2,3-cd)pyrene	59	J
53-70-3	Dibenzo(a,h)anthracene	26	J
191-24-2	Benzo(g,h,i)perylene	68	~~J~~ J
58-90-2	2,3,4,6-Tetrachlorophenol	310	U

[1] Cannot be separated from Diphenylamine

NW 8/15/13

1D - FORM I SV-1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-90-048

12

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17010

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17010-12

Sample wt/vol: 30.0 (g/mL) g Lab File ID: RKTUP19.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 43 Decanted: (Y/N) Date Received: 06/14/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/20/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/11/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
100-52-7	Benzaldehyde	45	J
108-95-2	Phenol	300	U
111-44-4	Bis(2-chloroethyl)ether	300	U
95-57-8	2-Chlorophenol	300	U
95-48-7	2-Methylphenol	300	U
108-60-1	2,2'-Oxybis(1-chloropropane)	300	U
98-86-2	Acetophenone	300	U
106-44-5	4-Methylphenol	25	~~U~~ J
621-64-7	N-Nitroso-di-n-propylamine	300	U
67-72-1	Hexachloroethane	300	U
98-95-3	Nitrobenzene	300	U
78-59-1	Isophorone	300	U
88-75-5	2-Nitrophenol	300	U
105-67-9	2,4-Dimethylphenol	300	U
111-91-1	Bis(2-chloroethoxy)methane	300	U
120-83-2	2,4-Dichlorophenol	300	U
91-20-3	Naphthalene	80	J
106-47-8	4-Chloroaniline	300	~~U~~ R
87-68-3	Hexachlorobutadiene	300	U
105-60-2	Caprolactam	300	U
59-50-7	4-Chloro-3-methylphenol	300	U
91-57-6	2-Methylnaphthalene	22	J
77-47-4	Hexachlorocyclopentadiene	300	~~U~~ R
88-06-2	2,4,6-Trichlorophenol	300	U
95-95-4	2,4,5-Trichlorophenol	300	U
92-52-4	1,1'-Biphenyl	300	U
91-58-7	2-Chloronaphthalene	300	U
88-74-4	2-Nitroaniline	580	U
131-11-3	Dimethylphthalate	300	U
606-20-2	2,6-Dinitrotoluene	300	U
208-96-8	Acenaphthylene	300	U
99-09-2	3-Nitroaniline	580	U
83-32-9	Acenaphthene	33	J

NW 8/15/13

1E - FORM I SV-2
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-90-048

12

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17010

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17010-12

Sample wt/vol: 30.0 (g/mL) g Lab File ID: RKTUP19.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 43 Decanted: (Y/N) Date Received: 06/14/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/20/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/11/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
51-28-5	2,4-Dinitrophenol	580	U
100-02-7	4-Nitrophenol	580	~~U~~ UJ
132-64-9	Dibenzofuran	24	J
121-14-2	2,4-Dinitrotoluene	300	U
84-66-2	Diethylphthalate	300	U
86-73-7	Fluorene	46	J
7005-72-3	4-Chlorophenyl-phenylether	300	U
100-01-6	4-Nitroaniline	580	U
534-52-1	4,6-Dinitro-2-methylphenol	580	U
86-30-6	N-Nitrosodiphenylamin [1]	300	U
95-94-3	1,2,4,5-Tetrachlorobenzene	300	U
101-55-3	4-Bromophenyl-phenylether	300	U
118-74-1	Hexachlorobenzene	300	U
1912-24-9	Atrazine	300	U
87-86-5	Pentachlorophenol	580	U
85-01-8	Phenanthrene	220	J
120-12-7	Anthracene	54	J
86-74-8	Carbazole	300	U
84-74-2	Di-n-butylphthalate	300	U
206-44-0	Fluoranthene	510	J
129-00-0	Pyrene	340	
85-68-7	Butylbenzylphthalate	48	J
91-94-1	3,3'-Dichlorobenzidine	300	~~U~~ R
56-55-3	Benzo(a)anthracene	150	J
218-01-9	Chrysene	250	J
117-81-7	Bis(2-ethylhexyl)phthalate	580	
117-84-0	Di-n-octylphthalate	300	U
205-99-2	Benzo(b)fluoranthene	200	J
207-08-9	Benzo(k)fluoranthene	220	J
50-32-8	Benzo(a)pyrene	160	J
193-39-5	Indeno(1,2,3-cd)pyrene	75	J
53-70-3	Dibenzo(a,h)anthracene	24	J
191-24-2	Benzo(g,h,i)perylene	91	~~J~~ J
58-90-2	2,3,4,6-Tetrachlorophenol	300	U

[1] Cannot be separated from Diphenylamine

MW 8/15/13

EPA SAMPLE NO.
LMR13-90-072

13

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17010

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17010-13

Sample wt/vol: 29.5 (g/mL) g Lab File ID: RKTUP20.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 17 Decanted: (Y/N) Date Received: 06/14/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/20/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/11/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
100-52-7	Benzaldehyde	210	U
108-95-2	Phenol	210	U
111-44-4	Bis(2-chloroethyl)ether	210	U
95-57-8	2-Chlorophenol	210	U
95-48-7	2-Methylphenol	210	U
108-60-1	2,2'-Oxybis(1-chloropropane)	210	U
98-86-2	Acetophenone	210	U
106-44-5	4-Methylphenol	210	U
621-64-7	N-Nitroso-di-n-propylamine	210	U
67-72-1	Hexachloroethane	210	U
98-95-3	Nitrobenzene	210	U
78-59-1	Isophorone	210	U
88-75-5	2-Nitrophenol	210	U
105-67-9	2,4-Dimethylphenol	210	U
111-91-1	Bis(2-chloroethoxy)methane	210	U
120-83-2	2,4-Dichlorophenol	210	U
91-20-3	Naphthalene	27	J
106-47-8	4-Chloroaniline	210	U
87-68-3	Hexachlorobutadiene	210	U
105-60-2	Caprolactam	210	U
59-50-7	4-Chloro-3-methylphenol	210	U
91-57-6	2-Methylnaphthalene	210	U
77-47-4	Hexachlorocyclopentadiene	210	U UJ
88-06-2	2,4,6-Trichlorophenol	210	U
95-95-4	2,4,5-Trichlorophenol	210	U
92-52-4	1,1'-Biphenyl	210	U
91-58-7	2-Chloronaphthalene	210	U
88-74-4	2-Nitroaniline	400	U
131-11-3	Dimethylphthalate	210	U
606-20-2	2,6-Dinitrotoluene	210	U
208-96-8	Acenaphthylene	210	U
99-09-2	3-Nitroaniline	400	U
83-32-9	Acenaphthene	12	J

NW 8/15/13

EPA SAMPLE NO.
LMR13-90-072

13

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17010

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17010-13

Sample wt/vol: 29.5 (g/mL) g Lab File ID: RKTUP20.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 17 Decanted: (Y/N) Date Received: 06/14/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/20/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/11/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
51-28-5	2,4-Dinitrophenol	400	U
100-02-7	4-Nitrophenol	400	~~U~~ UJ
132-64-9	Dibenzofuran	11	J
121-14-2	2,4-Dinitrotoluene	210	U
84-66-2	Diethylphthalate	210	U
86-73-7	Fluorene	10	J
7005-72-3	4-Chlorophenyl-phenylether	210	U
100-01-6	4-Nitroaniline	400	U
534-52-1	4,6-Dinitro-2-methylphenol	400	U
86-30-6	N-Nitrosodiphenylamin [1]	210	U
95-94-3	1,2,4,5-Tetrachlorobenzene	210	U
101-55-3	4-Bromophenyl-phenylether	210	U
118-74-1	Hexachlorobenzene	210	U
1912-24-9	Atrazine	210	U
87-86-5	Pentachlorophenol	400	U
85-01-8	Phenanthrene	74	J
120-12-7	Anthracene	16	J
86-74-8	Carbazole	210	U
84-74-2	Di-n-butylphthalate	210	U
206-44-0	Fluoranthene	79	~~J~~ J
129-00-0	Pyrene	74	J
85-68-7	Butylbenzylphthalate	22	J
91-94-1	3,3'-Dichlorobenzidine	210	U
56-55-3	Benzo(a)anthracene	45	J
218-01-9	Chrysene	71	J
117-81-7	Bis(2-ethylhexyl)phthalate	210	
117-84-0	Di-n-octylphthalate	210	U
205-99-2	Benzo(b)fluoranthene	45	J
207-08-9	Benzo(k)fluoranthene	46	J
50-32-8	Benzo(a)pyrene	41	J
193-39-5	Indeno(1,2,3-cd)pyrene	20	J
53-70-3	Dibenzo(a,h)anthracene	7.2	J
191-24-2	Benzo(g,h,i)perylene	28	~~J~~ J
58-90-2	2,3,4,6-Tetrachlorophenol	210	U

[1] Cannot be separated from Diphenylamine

NW 8/15/13

EPA SAMPLE NO.
LMR13-62-012

14

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17010

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17010-14

Sample wt/vol: 29.9 (g/mL) g Lab File ID: RKTUP21.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 31 Decanted: (Y/N) Date Received: 06/14/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/20/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/11/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
100-52-7	Benzaldehyde	33	J
108-95-2	Phenol	250	U
111-44-4	Bis(2-chloroethyl)ether	250	U
95-57-8	2-Chlorophenol	250	U
95-48-7	2-Methylphenol	250	U
108-60-1	2,2'-Oxybis(1-chloropropane)	250	U
98-86-2	Acetophenone	250	U
106-44-5	4-Methylphenol	250	U
621-64-7	N-Nitroso-di-n-propylamine	250	U
67-72-1	Hexachloroethane	250	U
98-95-3	Nitrobenzene	250	U
78-59-1	Isophorone	250	U
88-75-5	2-Nitrophenol	250	U
105-67-9	2,4-Dimethylphenol	250	U
111-91-1	Bis(2-chloroethoxy)methane	250	U
120-83-2	2,4-Dichlorophenol	250	U
91-20-3	Naphthalene	250	U
106-47-8	4-Chloroaniline	250	U
87-68-3	Hexachlorobutadiene	250	U
105-60-2	Caprolactam	250	U
59-50-7	4-Chloro-3-methylphenol	250	U
91-57-6	2-Methylnaphthalene	250	U
77-47-4	Hexachlorocyclopentadiene	250	U UJ
88-06-2	2,4,6-Trichlorophenol	250	U
95-95-4	2,4,5-Trichlorophenol	250	U
92-52-4	1,1'-Biphenyl	250	U
91-58-7	2-Chloronaphthalene	250	U
88-74-4	2-Nitroaniline	480	U
131-11-3	Dimethylphthalate	250	U
606-20-2	2,6-Dinitrotoluene	250	U
208-96-8	Acenaphthylene	250	U
99-09-2	3-Nitroaniline	480	U
83-32-9	Acenaphthene	250	U

NW 8/15/13

1E - FORM I SV-2
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-62-012

14

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17010

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17010-14

Sample wt/vol: 29.9 (g/mL) g Lab File ID: RKTUP21.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 31 Decanted: (Y/N) Date Received: 06/14/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/20/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/11/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
51-28-5	2,4-Dinitrophenol	480	U
100-02-7	4-Nitrophenol	480	U UJ
132-64-9	Dibenzofuran	250	U
121-14-2	2,4-Dinitrotoluene	250	U
84-66-2	Diethylphthalate	250	U
86-73-7	Fluorene	250	U
7005-72-3	4-Chlorophenyl-phenylether	250	U
100-01-6	4-Nitroaniline	480	U
534-52-1	4,6-Dinitro-2-methylphenol	480	U
86-30-6	N-Nitrosodiphenylamin [1]	250	U
95-94-3	1,2,4,5-Tetrachlorobenzene	250	U
101-55-3	4-Bromophenyl-phenylether	250	U
118-74-1	Hexachlorobenzene	250	U
1912-24-9	Atrazine	250	U
87-86-5	Pentachlorophenol	480	U
85-01-8	Phenanthrene	39	J
120-12-7	Anthracene	18	J
86-74-8	Carbazole	250	U
84-74-2	Di-n-butylphthalate	11	J
206-44-0	Fluoranthene	76	J J
129-00-0	Pyrene	76	J
85-68-7	Butylbenzylphthalate	17	J
91-94-1	3,3'-Dichlorobenzidine	250	U
56-55-3	Benzo(a)anthracene	35	J
218-01-9	Chrysene	40	J
117-81-7	Bis(2-ethylhexyl)phthalate	50	J
117-84-0	Di-n-octylphthalate	250	U
205-99-2	Benzo(b)fluoranthene	29	J
207-08-9	Benzo(k)fluoranthene	31	J
50-32-8	Benzo(a)pyrene	29	J
193-39-5	Indeno(1,2,3-cd)pyrene	15	J
53-70-3	Dibenzo(a,h)anthracene	5.4	J
191-24-2	Benzo(g,h,i)perylene	16	J J
58-90-2	2,3,4,6-Tetrachlorophenol	250	U

[1] Cannot be separated from Diphenylamine

NW 8/15/13

EPA SAMPLE NO.
LMR13-62-048

15

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17010

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17010-15

Sample wt/vol: 29.4 (g/mL) g Lab File ID: RKTUV11.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 31 Decanted: (Y/N) Date Received: 06/14/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/20/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/17/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
100-52-7	Benzaldehyde	34	J
108-95-2	Phenol	250	U
111-44-4	Bis(2-chloroethyl)ether	250	U
95-57-8	2-Chlorophenol	250	U
95-48-7	2-Methylphenol	250	U
108-60-1	2,2'-Oxybis(1-chloropropane)	250	U
98-86-2	Acetophenone	250	U
106-44-5	4-Methylphenol	250	U
621-64-7	N-Nitroso-di-n-propylamine	250	U
67-72-1	Hexachloroethane	250	U
98-95-3	Nitrobenzene	250	U
78-59-1	Isophorone	250	U
88-75-5	2-Nitrophenol	250	U
105-67-9	2,4-Dimethylphenol	250	U
111-91-1	Bis(2-chloroethoxy)methane	250	U
120-83-2	2,4-Dichlorophenol	250	U
91-20-3	Naphthalene	250	U
106-47-8	4-Chloroaniline	250	~~U~~ R
87-68-3	Hexachlorobutadiene	250	U
105-60-2	Caprolactam	250	U
59-50-7	4-Chloro-3-methylphenol	250	U
91-57-6	2-Methylnaphthalene	250	U
77-47-4	Hexachlorocyclopentadiene	250	~~U~~ R
88-06-2	2,4,6-Trichlorophenol	250	U
95-95-4	2,4,5-Trichlorophenol	250	U
92-52-4	1,1'-Biphenyl	250	U
91-58-7	2-Chloronaphthalene	250	U
88-74-4	2-Nitroaniline	490	U
131-11-3	Dimethylphthalate	250	U
606-20-2	2,6-Dinitrotoluene	250	U
208-96-8	Acenaphthylene	250	U
99-09-2	3-Nitroaniline	490	U
83-32-9	Acenaphthene	250	U

NW 8/15/13

EPA SAMPLE NO.
LMR13-62-048

15

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17010

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17010-15

Sample wt/vol: 29.4 (g/mL) g Lab File ID: RKTUV11.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 31 Decanted: (Y/N) Date Received: 06/14/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/20/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/17/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
51-28-5	2,4-Dinitrophenol	490	U
100-02-7	4-Nitrophenol	490	U
132-64-9	Dibenzofuran	250	U
121-14-2	2,4-Dinitrotoluene	250	U
84-66-2	Diethylphthalate	250	U
86-73-7	Fluorene	250	U
7005-72-3	4-Chlorophenyl-phenylether	250	U
100-01-6	4-Nitroaniline	490	U
534-52-1	4,6-Dinitro-2-methylphenol	490	U
86-30-6	N-Nitrosodiphenylamin [1]	250	U
95-94-3	1,2,4,5-Tetrachlorobenzene	250	U
101-55-3	4-Bromophenyl-phenylether	250	U
118-74-1	Hexachlorobenzene	250	U
1912-24-9	Atrazine	250	U
87-86-5	Pentachlorophenol	490	U UJ
85-01-8	Phenanthrene	9.8	J
120-12-7	Anthracene	250	U
86-74-8	Carbazole	250	U
84-74-2	Di-n-butylphthalate	5.1	J
206-44-0	Fluoranthene	250	U UJ
129-00-0	Pyrene	250	U
85-68-7	Butylbenzylphthalate	30	J
91-94-1	3,3'-Dichlorobenzidine	250	U R
56-55-3	Benzo(a)anthracene	250	U
218-01-9	Chrysene	11	J
117-81-7	Bis(2-ethylhexyl)phthalate	57	J
117-84-0	Di-n-octylphthalate	250	U
205-99-2	Benzo(b)fluoranthene	250	U
207-08-9	Benzo(k)fluoranthene	250	U
50-32-8	Benzo(a)pyrene	250	U
193-39-5	Indeno(1,2,3-cd)pyrene	250	U
53-70-3	Dibenzo(a,h)anthracene	250	U
191-24-2	Benzo(g,h,i)perylene	250	U
58-90-2	2,3,4,6-Tetrachlorophenol	250	U

[1] Cannot be separated from Diphenylamine

NW 8/15/13

EPA SAMPLE NO.
LMR13-62-072

16

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17010

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17010-16

Sample wt/vol: 30.2 (g/mL) g Lab File ID: RKTUV12.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 25 Decanted: (Y/N) Date Received: 06/14/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/20/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/17/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
100-52-7	Benzaldehyde	18	J
108-95-2	Phenol	220	U
111-44-4	Bis(2-chloroethyl)ether	220	U
95-57-8	2-Chlorophenol	220	U
95-48-7	2-Methylphenol	220	U
108-60-1	2,2'-Oxybis(1-chloropropane)	220	U
98-86-2	Acetophenone	220	U
106-44-5	4-Methylphenol	220	U
621-64-7	N-Nitroso-di-n-propylamine	220	U
67-72-1	Hexachloroethane	220	U
98-95-3	Nitrobenzene	220	U
78-59-1	Isophorone	220	U
88-75-5	2-Nitrophenol	220	U
105-67-9	2,4-Dimethylphenol	220	U
111-91-1	Bis(2-chloroethoxy)methane	220	U
120-83-2	2,4-Dichlorophenol	220	U
91-20-3	Naphthalene	220	U
106-47-8	4-Chloroaniline	220	U
87-68-3	Hexachlorobutadiene	220	U
105-60-2	Caprolactam	220	U
59-50-7	4-Chloro-3-methylphenol	220	U
91-57-6	2-Methylnaphthalene	220	U
77-47-4	Hexachlorocyclopentadiene	220	U UJ
88-06-2	2,4,6-Trichlorophenol	220	U
95-95-4	2,4,5-Trichlorophenol	220	U
92-52-4	1,1'-Biphenyl	220	U
91-58-7	2-Chloronaphthalene	220	U
88-74-4	2-Nitroaniline	440	U
131-11-3	Dimethylphthalate	220	U
606-20-2	2,6-Dinitrotoluene	220	U
208-96-8	Acenaphthylene	220	U
99-09-2	3-Nitroaniline	440	U
83-32-9	Acenaphthene	220	U

NW 8/15/13

EPA SAMPLE NO.
LMR13-62-072

16

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17010

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17010-16

Sample wt/vol: 30.2 (g/mL) g Lab File ID: RKTUV12.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 25 Decanted: (Y/N) Date Received: 06/14/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/20/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/17/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
51-28-5	2,4-Dinitrophenol	440	U
100-02-7	4-Nitrophenol	440	U
132-64-9	Dibenzofuran	220	U
121-14-2	2,4-Dinitrotoluene	220	U
84-66-2	Diethylphthalate	220	U
86-73-7	Fluorene	220	U
7005-72-3	4-Chlorophenyl-phenylether	220	U
100-01-6	4-Nitroaniline	440	U
534-52-1	4,6-Dinitro-2-methylphenol	440	U
86-30-6	N-Nitrosodiphenylamin [1]	220	U
95-94-3	1,2,4,5-Tetrachlorobenzene	220	U
101-55-3	4-Bromophenyl-phenylether	220	U
118-74-1	Hexachlorobenzene	220	U
1912-24-9	Atrazine	220	U
87-86-5	Pentachlorophenol	440	~~U~~ UJ
85-01-8	Phenanthrene	220	U
120-12-7	Anthracene	220	U
86-74-8	Carbazole	220	U
84-74-2	Di-n-butylphthalate	5.8	J
206-44-0	Fluoranthene	220	~~U~~ UJ
129-00-0	Pyrene	220	U
85-68-7	Butylbenzylphthalate	220	U
91-94-1	3,3'-Dichlorobenzidine	220	U
56-55-3	Benzo(a)anthracene	220	U
218-01-9	Chrysene	220	U
117-81-7	Bis(2-ethylhexyl)phthalate	52	J
117-84-0	Di-n-octylphthalate	220	U
205-99-2	Benzo(b)fluoranthene	220	U
207-08-9	Benzo(k)fluoranthene	220	U
50-32-8	Benzo(a)pyrene	220	U
193-39-5	Indeno(1,2,3-cd)pyrene	220	U
53-70-3	Dibenzo(a,h)anthracene	220	U
191-24-2	Benzo(g,h,i)perylene	220	U
58-90-2	2,3,4,6-Tetrachlorophenol	220	U

[1] Cannot be separated from Diphenylamine

NW 8/15/13

1D - FORM I SV-1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LRM13-91-024

17

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17010

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17010-17

Sample wt/vol: 30.3 (g/mL) g Lab File ID: RKTUV13.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 18 Decanted: (Y/N) Date Received: 06/14/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/20/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/17/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
100-52-7	Benzaldehyde	210	U
108-95-2	Phenol	210	U
111-44-4	Bis(2-chloroethyl)ether	210	U
95-57-8	2-Chlorophenol	210	U
95-48-7	2-Methylphenol	210	U
108-60-1	2,2'-Oxybis(1-chloropropane)	210	U
98-86-2	Acetophenone	210	U
106-44-5	4-Methylphenol	210	U
621-64-7	N-Nitroso-di-n-propylamine	210	U
67-72-1	Hexachloroethane	210	U
98-95-3	Nitrobenzene	210	U
78-59-1	Isophorone	210	U
88-75-5	2-Nitrophenol	210	U
105-67-9	2,4-Dimethylphenol	210	U
111-91-1	Bis(2-chloroethoxy)methane	210	U
120-83-2	2,4-Dichlorophenol	210	U
91-20-3	Naphthalene	210	U
106-47-8	4-Chloroaniline	210	U R
87-68-3	Hexachlorobutadiene	210	U
105-60-2	Caprolactam	210	U
59-50-7	4-Chloro-3-methylphenol	210	U
91-57-6	2-Methylnaphthalene	210	U
77-47-4	Hexachlorocyclopentadiene	210	U R
88-06-2	2,4,6-Trichlorophenol	210	U
95-95-4	2,4,5-Trichlorophenol	210	U
92-52-4	1,1'-Biphenyl	210	U
91-58-7	2-Chloronaphthalene	210	U
88-74-4	2-Nitroaniline	400	U
131-11-3	Dimethylphthalate	210	U
606-20-2	2,6-Dinitrotoluene	210	U
208-96-8	Acenaphthylene	210	U
99-09-2	3-Nitroaniline	400	U
83-32-9	Acenaphthene	210	U

NW 8/15/13

EPA SAMPLE NO.
LRM13-91-024

17

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17010

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17010-17

Sample wt/vol: 30.3 (g/mL) g Lab File ID: RKTUV13.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 18 Decanted: (Y/N) Date Received: 06/14/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/20/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/17/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
51-28-5	2,4-Dinitrophenol	400	U
100-02-7	4-Nitrophenol	400	U
132-64-9	Dibenzofuran	210	U
121-14-2	2,4-Dinitrotoluene	210	U
84-66-2	Diethylphthalate	210	U
86-73-7	Fluorene	210	U
7005-72-3	4-Chlorophenyl-phenylether	210	U
100-01-6	4-Nitroaniline	400	U
534-52-1	4,6-Dinitro-2-methylphenol	400	U
86-30-6	N-Nitrosodiphenylamin [1]	210	U
95-94-3	1,2,4,5-Tetrachlorobenzene	210	U
101-55-3	4-Bromophenyl-phenylether	210	U
118-74-1	Hexachlorobenzene	210	U
1912-24-9	Atrazine	210	U
87-86-5	Pentachlorophenol	400	~~U~~ UJ
85-01-8	Phenanthrene	17	J
120-12-7	Anthracene	210	U
86-74-8	Carbazole	210	U
84-74-2	Di-n-butylphthalate	8.0	J
206-44-0	Fluoranthene	210	~~U~~ UJ
129-00-0	Pyrene	210	U
85-68-7	Butylbenzylphthalate	21	J
91-94-1	3,3'-Dichlorobenzidine	210	~~U~~ R
56-55-3	Benzo(a)anthracene	210	U
218-01-9	Chrysene	16	J
117-81-7	Bis(2-ethylhexyl)phthalate	48	J
117-84-0	Di-n-octylphthalate	210	U
205-99-2	Benzo(b)fluoranthene	210	U
207-08-9	Benzo(k)fluoranthene	210	U
50-32-8	Benzo(a)pyrene	210	U
193-39-5	Indeno(1,2,3-cd)pyrene	210	U
53-70-3	Dibenzo(a,h)anthracene	210	U
191-24-2	Benzo(g,h,i)perylene	210	U
58-90-2	2,3,4,6-Tetrachlorophenol	210	U

[1] Cannot be separated from Diphenylamine

NW 8/15/13

EPA SAMPLE NO.
LMR13-91-024

18

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17010

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17010-18

Sample wt/vol: 30.4 (g/mL) g Lab File ID: RKTVA14.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 47 Decanted: (Y/N) Date Received: 06/14/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/20/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/18/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
100-52-7	Benzaldehyde	320	U
108-95-2	Phenol	320	U
111-44-4	Bis(2-chloroethyl)ether	320	U
95-57-8	2-Chlorophenol	320	U
95-48-7	2-Methylphenol	320	U
108-60-1	2,2'-Oxybis(1-chloropropane)	320	U
98-86-2	Acetophenone	320	U
106-44-5	4-Methylphenol	320	U
621-64-7	N-Nitroso-di-n-propylamine	320	U
67-72-1	Hexachloroethane	320	U
98-95-3	Nitrobenzene	320	U
78-59-1	Isophorone	320	U
88-75-5	2-Nitrophenol	320	U
105-67-9	2,4-Dimethylphenol	320	U
111-91-1	Bis(2-chloroethoxy)methane	320	U
120-83-2	2,4-Dichlorophenol	320	U
91-20-3	Naphthalene	23	J
106-47-8	4-Chloroaniline	320	U
87-68-3	Hexachlorobutadiene	320	U
105-60-2	Caprolactam	320	U
59-50-7	4-Chloro-3-methylphenol	320	U
91-57-6	2-Methylnaphthalene	19	J
77-47-4	Hexachlorocyclopentadiene	320	U UJ
88-06-2	2,4,6-Trichlorophenol	320	U
95-95-4	2,4,5-Trichlorophenol	320	U
92-52-4	1,1'-Biphenyl	320	U
91-58-7	2-Chloronaphthalene	320	U
88-74-4	2-Nitroaniline	620	U
131-11-3	Dimethylphthalate	320	U
606-20-2	2,6-Dinitrotoluene	320	U
208-96-8	Acenaphthylene	320	U
99-09-2	3-Nitroaniline	620	U
83-32-9	Acenaphthene	320	U

NW 8/15/13

EPA SAMPLE NO.
LMR13-91-024

18

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17010

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17010-18

Sample wt/vol: 30.4 (g/mL) g Lab File ID: RKTVA14.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 47 Decanted: (Y/N) Date Received: 06/14/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/20/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/18/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
51-28-5	2,4-Dinitrophenol	620	U
100-02-7	4-Nitrophenol	620	U
132-64-9	Dibenzofuran	10	J
121-14-2	2,4-Dinitrotoluene	320	U
84-66-2	Diethylphthalate	320	U
86-73-7	Fluorene	16	J
7005-72-3	4-Chlorophenyl-phenylether	320	U
100-01-6	4-Nitroaniline	620	U
534-52-1	4,6-Dinitro-2-methylphenol	620	U
86-30-6	N-Nitrosodiphenylamin [1]	320	U
95-94-3	1,2,4,5-Tetrachlorobenzene	320	U
101-55-3	4-Bromophenyl-phenylether	320	U
118-74-1	Hexachlorobenzene	320	U
1912-24-9	Atrazine	320	U
87-86-5	Pentachlorophenol	620	U
85-01-8	Phenanthrene	82	J
120-12-7	Anthracene	20	J
86-74-8	Carbazole	320	U
84-74-2	Di-n-butylphthalate	320	U
206-44-0	Fluoranthene	190	~~J~~ J
129-00-0	Pyrene	170	J
85-68-7	Butylbenzylphthalate	31	J
91-94-1	3,3'-Dichlorobenzidine	320	U
56-55-3	Benzo(a)anthracene	68	J
218-01-9	Chrysene	120	J
117-81-7	Bis(2-ethylhexyl)phthalate	170	J
117-84-0	Di-n-octylphthalate	320	U
205-99-2	Benzo(b)fluoranthene	120	J
207-08-9	Benzo(k)fluoranthene	100	J
50-32-8	Benzo(a)pyrene	90	J
193-39-5	Indeno(1,2,3-cd)pyrene	54	J
53-70-3	Dibenzo(a,h)anthracene	20	J
191-24-2	Benzo(g,h,i)perylene	65	J
58-90-2	2,3,4,6-Tetrachlorophenol	320	U

[1]Cannot be separated from Diphenylamine

NW 8/15/13

EPA SAMPLE NO.
LRM13-91-048

19

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17010

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17010-19

Sample wt/vol: 30.4 (g/mL) g Lab File ID: RKTUV14.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 46 Decanted: (Y/N) Date Received: 06/14/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/20/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/17/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
100-52-7	Benzaldehyde	35	J	
108-95-2	Phenol	310	U	
111-44-4	Bis(2-chloroethyl)ether	310	U	
95-57-8	2-Chlorophenol	310	U	
95-48-7	2-Methylphenol	310	U	
108-60-1	2,2'-Oxybis(1-chloropropane)	310	U	
98-86-2	Acetophenone	310	U	
106-44-5	4-Methylphenol	310	U	
621-64-7	N-Nitroso-di-n-propylamine	310	U	
67-72-1	Hexachloroethane	310	U	
98-95-3	Nitrobenzene	310	U	
78-59-1	Isophorone	310	U	
88-75-5	2-Nitrophenol	310	U	
105-67-9	2,4-Dimethylphenol	310	U	
111-91-1	Bis(2-chloroethoxy)methane	310	U	
120-83-2	2,4-Dichlorophenol	310	U	
91-20-3	Naphthalene	11	J	
106-47-8	4-Chloroaniline	310	~~U~~	R
87-68-3	Hexachlorobutadiene	310	U	
105-60-2	Caprolactam	310	U	
59-50-7	4-Chloro-3-methylphenol	310	U	
91-57-6	2-Methylnaphthalene	310	U	
77-47-4	Hexachlorocyclopentadiene	310	~~U~~	R
88-06-2	2,4,6-Trichlorophenol	310	U	
95-95-4	2,4,5-Trichlorophenol	310	U	
92-52-4	1,1'-Biphenyl	310	U	
91-58-7	2-Chloronaphthalene	310	U	
88-74-4	2-Nitroaniline	600	U	
131-11-3	Dimethylphthalate	310	U	
606-20-2	2,6-Dinitrotoluene	310	U	
208-96-8	Acenaphthylene	310	U	
99-09-2	3-Nitroaniline	600	U	
83-32-9	Acenaphthene	13	J	

JW 8/15/13

EPA SAMPLE NO.
LRM13-91-048

19

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17010

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17010-19

Sample wt/vol: 30.4 (g/mL) g Lab File ID: RKTUV14.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 46 Decanted: (Y/N) Date Received: 06/14/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/20/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/17/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
51-28-5	2,4-Dinitrophenol	600	U
100-02-7	4-Nitrophenol	600	U
132-64-9	Dibenzofuran	9.1	J
121-14-2	2,4-Dinitrotoluene	310	U
84-66-2	Diethylphthalate	310	U
86-73-7	Fluorene	15	J
7005-72-3	4-Chlorophenyl-phenylether	310	U
100-01-6	4-Nitroaniline	600	U
534-52-1	4,6-Dinitro-2-methylphenol	600	U
86-30-6	N-Nitrosodiphenylamin [1]	310	U
95-94-3	1,2,4,5-Tetrachlorobenzene	310	U
101-55-3	4-Bromophenyl-phenylether	310	U
118-74-1	Hexachlorobenzene	310	U
1912-24-9	Atrazine	310	U
87-86-5	Pentachlorophenol	600	~~U~~ UJ
85-01-8	Phenanthrene	78	J
120-12-7	Anthracene	17	J
86-74-8	Carbazole	310	U
84-74-2	Di-n-butylphthalate	310	U
206-44-0	Fluoranthene	140	~~J~~ J
129-00-0	Pyrene	150	J
85-68-7	Butylbenzylphthalate	31	J
91-94-1	3,3'-Dichlorobenzidine	310	~~U~~ R
56-55-3	Benzo(a)anthracene	65	J
218-01-9	Chrysene	110	J
117-81-7	Bis(2-ethylhexyl)phthalate	180	J
117-84-0	Di-n-octylphthalate	310	U
205-99-2	Benzo(b)fluoranthene	96	J
207-08-9	Benzo(k)fluoranthene	100	J
50-32-8	Benzo(a)pyrene	75	J
193-39-5	Indeno(1,2,3-cd)pyrene	46	J
53-70-3	Dibenzo(a,h)anthracene	21	J
191-24-2	Benzo(g,h,i)perylene	58	J
58-90-2	2,3,4,6-Tetrachlorophenol	310	U

[1] Cannot be separated from Diphenylamine

MW 8/15/13

1D - FORM I SV-1

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LRM13-47-012

20

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17010

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17010-20

Sample wt/vol: 30.8 (g/mL) g Lab File ID: RKTUV15.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 60 Decanted: (Y/N) Date Received: 06/14/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/20/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/17/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
100-52-7	Benzaldehyde	60	J
108-95-2	Phenol	410	U
111-44-4	Bis(2-chloroethyl)ether	410	U
95-57-8	2-Chlorophenol	410	U
95-48-7	2-Methylphenol	410	U
108-60-1	2,2'-Oxybis(1-chloropropane)	410	U
98-86-2	Acetophenone	410	U
106-44-5	4-Methylphenol	51	~~J~~ J
621-64-7	N-Nitroso-di-n-propylamine	410	U
67-72-1	Hexachloroethane	410	U
98-95-3	Nitrobenzene	410	U
78-59-1	Isophorone	410	U
88-75-5	2-Nitrophenol	410	U
105-67-9	2,4-Dimethylphenol	410	U
111-91-1	Bis(2-chloroethoxy)methane	410	U
120-83-2	2,4-Dichlorophenol	410	U
91-20-3	Naphthalene	22	~~J~~ J
106-47-8	4-Chloroaniline	410	~~J~~ R
87-68-3	Hexachlorobutadiene	410	U
105-60-2	Caprolactam	410	U
59-50-7	4-Chloro-3-methylphenol	410	U
91-57-6	2-Methylnaphthalene	12	~~J~~ J
77-47-4	Hexachlorocyclopentadiene	410	~~J~~ R
88-06-2	2,4,6-Trichlorophenol	410	U
95-95-4	2,4,5-Trichlorophenol	410	U
92-52-4	1,1'-Biphenyl	410	U
91-58-7	2-Chloronaphthalene	410	U
88-74-4	2-Nitroaniline	800	U
131-11-3	Dimethylphthalate	410	U
606-20-2	2,6-Dinitrotoluene	410	U
208-96-8	Acenaphthylene	410	U
99-09-2	3-Nitroaniline	800	U
83-32-9	Acenaphthene	25	~~J~~ J

NW 8/15/13

1E - FORM I SV-2
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LRM13-47-012

20

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17010

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17010-20

Sample wt/vol: 30.8 (g/mL) g Lab File ID: RKTUV15.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 60 Decanted: (Y/N) Date Received: 06/14/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/20/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/17/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
51-28-5	2,4-Dinitrophenol	800	U	
100-02-7	4-Nitrophenol	800	U	
132-64-9	Dibenzofuran	410	U	
121-14-2	2,4-Dinitrotoluene	410	U	
84-66-2	Diethylphthalate	410	U	
86-73-7	Fluorene	23	J	
7005-72-3	4-Chlorophenyl-phenylether	410	U	
100-01-6	4-Nitroaniline	800	U	
534-52-1	4,6-Dinitro-2-methylphenol	800	U	
86-30-6	N-Nitrosodiphenylamin [1]	410	U	
95-94-3	1,2,4,5-Tetrachlorobenzene	410	U	
101-55-3	4-Bromophenyl-phenylether	410	U	
118-74-1	Hexachlorobenzene	410	U	
1912-24-9	Atrazine	410	U	
87-86-5	Pentachlorophenol	800	~~U~~	UJ
85-01-8	Phenanthrene	200	~~J~~	J
120-12-7	Anthracene	42	~~J~~	J
86-74-8	Carbazole	21	J	
84-74-2	Di-n-butylphthalate	14	J	
206-44-0	Fluoranthene	510		J
129-00-0	Pyrene	340	J	
85-68-7	Butylbenzylphthalate	66	J	
91-94-1	3,3'-Dichlorobenzidine	410	~~U~~	R
56-55-3	Benzo(a)anthracene	150	J	
218-01-9	Chrysene	260	J	
117-81-7	Bis(2-ethylhexyl)phthalate	400	J	
117-84-0	Di-n-octylphthalate	410	~~U~~	UJ
205-99-2	Benzo(b)fluoranthene	260	J	J
207-08-9	Benzo(k)fluoranthene	290	J	
50-32-8	Benzo(a)pyrene	200	J	
193-39-5	Indeno(1,2,3-cd)pyrene	110	J	
53-70-3	Dibenzo(a,h)anthracene	33	J	
191-24-2	Benzo(g,h,i)perylene	170	J	
58-90-2	2,3,4,6-Tetrachlorophenol	410	U	

[1] Cannot be separated from Diphenylamine

NW 8/15/13

1D - FORM I SV-1

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LRM13-91-012

21

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17010

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17010-21

Sample wt/vol: 30.5 (g/mL) g Lab File ID: RKTUV16.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 53 Decanted: (Y/N) Date Received: 06/14/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/20/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/17/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
100-52-7	Benzaldehyde	43	J
108-95-2	Phenol	360	U
111-44-4	Bis(2-chloroethyl)ether	360	U
95-57-8	2-Chlorophenol	360	U
95-48-7	2-Methylphenol	360	U
108-60-1	2,2'-Oxybis(1-chloropropane)	360	U
98-86-2	Acetophenone	360	U
106-44-5	4-Methylphenol	360	U
621-64-7	N-Nitroso-di-n-propylamine	360	U
67-72-1	Hexachloroethane	360	U
98-95-3	Nitrobenzene	360	U
78-59-1	Isophorone	360	U
88-75-5	2-Nitrophenol	360	U
105-67-9	2,4-Dimethylphenol	360	U
111-91-1	Bis(2-chloroethoxy)methane	360	U
120-83-2	2,4-Dichlorophenol	360	U
91-20-3	Naphthalene	45	J
106-47-8	4-Chloroaniline	360	U R
87-68-3	Hexachlorobutadiene	360	U
105-60-2	Caprolactam	360	U
59-50-7	4-Chloro-3-methylphenol	360	U
91-57-6	2-Methylnaphthalene	30	J
77-47-4	Hexachlorocyclopentadiene	360	U R
88-06-2	2,4,6-Trichlorophenol	360	U
95-95-4	2,4,5-Trichlorophenol	360	U
92-52-4	1,1'-Biphenyl	360	U
91-58-7	2-Chloronaphthalene	360	U
88-74-4	2-Nitroaniline	690	U
131-11-3	Dimethylphthalate	360	U
606-20-2	2,6-Dinitrotoluene	360	U
208-96-8	Acenaphthylene	360	U
99-09-2	3-Nitroaniline	690	U
83-32-9	Acenaphthene	22	J

NW 8/15/13

EPA SAMPLE NO.
LRM13-91-012

21

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17010

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17010-21

Sample wt/vol: 30.5 (g/mL) g Lab File ID: RKTUV16.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 53 Decanted: (Y/N) Date Received: 06/14/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/20/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/17/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
51-28-5	2,4-Dinitrophenol	690	U
100-02-7	4-Nitrophenol	690	U
132-64-9	Dibenzofuran	17	J
121-14-2	2,4-Dinitrotoluene	360	U
84-66-2	Diethylphthalate	5.6	J
86-73-7	Fluorene	29	J
7005-72-3	4-Chlorophenyl-phenylether	360	U
100-01-6	4-Nitroaniline	690	U
534-52-1	4,6-Dinitro-2-methylphenol	690	U
86-30-6	N-Nitrosodiphenylamin [1]	360	U
95-94-3	1,2,4,5-Tetrachlorobenzene	360	U
101-55-3	4-Bromophenyl-phenylether	360	U
118-74-1	Hexachlorobenzene	360	U
1912-24-9	Atrazine	360	U
87-86-5	Pentachlorophenol	690	~~U~~ UJ
85-01-8	Phenanthrene	140	J
120-12-7	Anthracene	37	J
86-74-8	Carbazole	360	U
84-74-2	Di-n-butylphthalate	360	U
206-44-0	Fluoranthene	330	~~J~~ J
129-00-0	Pyrene	280	J
85-68-7	Butylbenzylphthalate	360	U
91-94-1	3,3'-Dichlorobenzidine	360	~~U~~ R
56-55-3	Benzo(a)anthracene	130	J
218-01-9	Chrysene	250	J
117-81-7	Bis(2-ethylhexyl)phthalate	190	J
117-84-0	Di-n-octylphthalate	360	U
205-99-2	Benzo(b)fluoranthene	210	J
207-08-9	Benzo(k)fluoranthene	210	J
50-32-8	Benzo(a)pyrene	190	J
193-39-5	Indeno(1,2,3-cd)pyrene	97	J
53-70-3	Dibenzo(a,h)anthracene	35	J
191-24-2	Benzo(g,h,i)perylene	160	J
58-90-2	2,3,4,6-Tetrachlorophenol	360	U

[1] Cannot be separated from Diphenylamine

NDS 8/15/13

1D - FORM I SV-1

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LRM13-90-048FD

22

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17010

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17010-22

Sample wt/vol: 30.5 (g/mL) g Lab File ID: RKTUV17.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 45 Decanted: (Y/N) Date Received: 06/14/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/20/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/17/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
100-52-7	Benzaldehyde	46	J
108-95-2	Phenol	300	U
111-44-4	Bis(2-chloroethyl)ether	300	U
95-57-8	2-Chlorophenol	300	U
95-48-7	2-Methylphenol	300	U
108-60-1	2,2'-Oxybis(1-chloropropane)	300	U
98-86-2	Acetophenone	300	U
106-44-5	4-Methylphenol	24	J
621-64-7	N-Nitroso-di-n-propylamine	300	U
67-72-1	Hexachloroethane	300	U
98-95-3	Nitrobenzene	300	U
78-59-1	Isophorone	300	U
88-75-5	2-Nitrophenol	300	U
105-67-9	2,4-Dimethylphenol	300	U
111-91-1	Bis(2-chloroethoxy)methane	300	U
120-83-2	2,4-Dichlorophenol	300	U
91-20-3	Naphthalene	74	J
106-47-8	4-Chloroaniline	300	U
87-68-3	Hexachlorobutadiene	300	U
105-60-2	Caprolactam	300	U
59-50-7	4-Chloro-3-methylphenol	300	U
91-57-6	2-Methylnaphthalene	20	J
77-47-4	Hexachlorocyclopentadiene	300	U UJ
88-06-2	2,4,6-Trichlorophenol	300	U
95-95-4	2,4,5-Trichlorophenol	300	U
92-52-4	1,1'-Biphenyl	300	U
91-58-7	2-Chloronaphthalene	300	U
88-74-4	2-Nitroaniline	590	U
131-11-3	Dimethylphthalate	300	U
606-20-2	2,6-Dinitrotoluene	300	U
208-96-8	Acenaphthylene	300	U
99-09-2	3-Nitroaniline	590	U
83-32-9	Acenaphthene	35	J

NW 8/15/13

EPA SAMPLE NO.
LRM13-90-048FD

22

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17010

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17010-22

Sample wt/vol: 30.5 (g/mL) g Lab File ID: RKTUV17.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 45 Decanted: (Y/N) Date Received: 06/14/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/20/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/17/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
51-28-5	2,4-Dinitrophenol	590	U
100-02-7	4-Nitrophenol	590	U
132-64-9	Dibenzofuran	27	J
121-14-2	2,4-Dinitrotoluene	300	U
84-66-2	Diethylphthalate	180	J
86-73-7	Fluorene	46	J
7005-72-3	4-Chlorophenyl-phenylether	300	U
100-01-6	4-Nitroaniline	590	U
534-52-1	4,6-Dinitro-2-methylphenol	590	U
86-30-6	N-Nitrosodiphenylamin [1]	300	U
95-94-3	1,2,4,5-Tetrachlorobenzene	300	U
101-55-3	4-Bromophenyl-phenylether	300	U
118-74-1	Hexachlorobenzene	300	U
1912-24-9	Atrazine	300	U
87-86-5	Pentachlorophenol	590	~~U~~ UJ
85-01-8	Phenanthrene	230	J
120-12-7	Anthracene	50	J
86-74-8	Carbazole	300	U
84-74-2	Di-n-butylphthalate	300	U
206-44-0	Fluoranthene	430	J
129-00-0	Pyrene	340	
85-68-7	Butylbenzylphthalate	38	J
91-94-1	3,3'-Dichlorobenzidine	300	U
56-55-3	Benzo(a)anthracene	190	J
218-01-9	Chrysene	300	J
117-81-7	Bis(2-ethylhexyl)phthalate	540	
117-84-0	Di-n-octylphthalate	300	~~U~~ UJ
205-99-2	Benzo(b)fluoranthene	280	J
207-08-9	Benzo(k)fluoranthene	250	J
50-32-8	Benzo(a)pyrene	220	J
193-39-5	Indeno(1,2,3-cd)pyrene	96	J
53-70-3	Dibenzo(a,h)anthracene	20	J
191-24-2	Benzo(g,h,i)perylene	110	J
58-90-2	2,3,4,6-Tetrachlorophenol	300	U

J

J

[1] Cannot be separated from Diphenylamine

NW 8/15/13

1D - FORM I SV-1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-93-024FD

23

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17010

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17010-23

Sample wt/vol: 30.5 (g/mL) g Lab File ID: RKTVD04.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 45 Decanted: (Y/N) Date Received: 06/14/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/20/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/19/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 10.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
100-52-7	Benzaldehyde	3000	U
108-95-2	Phenol	3000	U
111-44-4	Bis(2-chloroethyl)ether	3000	U
95-57-8	2-Chlorophenol	3000	U
95-48-7	2-Methylphenol	3000	U
108-60-1	2,2'-Oxybis(1-chloropropane)	3000	U
98-86-2	Acetophenone	3000	U
106-44-5	4-Methylphenol	3000	U
621-64-7	N-Nitroso-di-n-propylamine	3000	U UJ
67-72-1	Hexachloroethane	3000	U
98-95-3	Nitrobenzene	3000	U
78-59-1	Isophorone	3000	U
88-75-5	2-Nitrophenol	3000	U
105-67-9	2,4-Dimethylphenol	3000	U
111-91-1	Bis(2-chloroethoxy)methane	3000	U
120-83-2	2,4-Dichlorophenol	3000	U
91-20-3	Naphthalene	150	J
106-47-8	4-Chloroaniline	3000	U
87-68-3	Hexachlorobutadiene	3000	U
105-60-2	Caprolactam	3000	U
59-50-7	4-Chloro-3-methylphenol	3000	U
91-57-6	2-Methylnaphthalene	3000	U
77-47-4	Hexachlorocyclopentadiene	3000	U UJ
88-06-2	2,4,6-Trichlorophenol	3000	U
95-95-4	2,4,5-Trichlorophenol	3000	U
92-52-4	1,1'-Biphenyl	3000	U
91-58-7	2-Chloronaphthalene	3000	U
88-74-4	2-Nitroaniline	5900	U
131-11-3	Dimethylphthalate	3000	U
606-20-2	2,6-Dinitrotoluene	3000	U
208-96-8	Acenaphthylene	3000	U
99-09-2	3-Nitroaniline	5900	U
83-32-9	Acenaphthene	200	J

NW 8/15/13

1E - FORM I SV-2
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-93-024FD

23

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17010

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17010-23

Sample wt/vol: 30.5 (g/mL) g Lab File ID: RKTVD04.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 45 Decanted: (Y/N) Date Received: 06/14/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/20/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/19/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 10.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
51-28-5	2,4-Dinitrophenol	5900	U
100-02-7	4-Nitrophenol	5900	U
132-64-9	Dibenzofuran	3000	U
121-14-2	2,4-Dinitrotoluene	3000	U
84-66-2	Diethylphthalate	3000	U
86-73-7	Fluorene	260	J
7005-72-3	4-Chlorophenyl-phenylether	3000	U
100-01-6	4-Nitroaniline	5900	U
534-52-1	4,6-Dinitro-2-methylphenol	5900	U
86-30-6	N-Nitrosodiphenylamin [1]	3000	U
95-94-3	1,2,4,5-Tetrachlorobenzene	3000	U
101-55-3	4-Bromophenyl-phenylether	3000	~~U~~ UJ
118-74-1	Hexachlorobenzene	3000	U
1912-24-9	Atrazine	3000	U
87-86-5	Pentachlorophenol	5900	U
85-01-8	Phenanthrene	1100	J
120-12-7	Anthracene	310	J
86-74-8	Carbazole	3000	U
84-74-2	Di-n-butylphthalate	3000	U
206-44-0	Fluoranthene	1900	~~J~~ J
129-00-0	Pyrene	2300	J
85-68-7	Butylbenzylphthalate	3000	U
91-94-1	3,3'-Dichlorobenzidine	3000	U
56-55-3	Benzo(a)anthracene	1300	J
218-01-9	Chrysene	1700	J
117-81-7	Bis(2-ethylhexyl)phthalate	32000	~~B~~
117-84-0	Di-n-octylphthalate	3000	U
205-99-2	Benzo(b)fluoranthene	1200	J
207-08-9	Benzo(k)fluoranthene	1200	J
50-32-8	Benzo(a)pyrene	1200	J
193-39-5	Indeno(1,2,3-cd)pyrene	430	J
53-70-3	Dibenzo(a,h)anthracene	210	J
191-24-2	Benzo(g,h,i)perylene	530	J
58-90-2	2,3,4,6-Tetrachlorophenol	3000	U

[1] Cannot be separated from Diphenylamine

NW 8/15/13

EPA SAMPLE NO.
LMR13-90-012FD

24

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17010

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17010-24

Sample wt/vol: 30.0 (g/mL) g Lab File ID: RKTVA08.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 49 Decanted: (Y/N) Date Received: 06/14/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/20/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/18/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
100-52-7	Benzaldehyde	330	U	
108-95-2	Phenol	330	U	
111-44-4	Bis(2-chloroethyl)ether	330	U	
95-57-8	2-Chlorophenol	330	U	
95-48-7	2-Methylphenol	330	U	
108-60-1	2,2'-Oxybis(1-chloropropane)	330	U	
98-86-2	Acetophenone	330	U	
106-44-5	4-Methylphenol	330	U	
621-64-7	N-Nitroso-di-n-propylamine	330	U	
67-72-1	Hexachloroethane	330	U	
98-95-3	Nitrobenzene	330	U	
78-59-1	Isophorone	330	U	
88-75-5	2-Nitrophenol	330	U	
105-67-9	2,4-Dimethylphenol	330	U	
111-91-1	Bis(2-chloroethoxy)methane	330	U	
120-83-2	2,4-Dichlorophenol	330	U	
91-20-3	Naphthalene	330	U	
106-47-8	4-Chloroaniline	330	U	R
87-68-3	Hexachlorobutadiene	330	U	
105-60-2	Caprolactam	330	U	
59-50-7	4-Chloro-3-methylphenol	330	U	
91-57-6	2-Methylnaphthalene	330	U	
77-47-4	Hexachlorocyclopentadiene	330	U	R
88-06-2	2,4,6-Trichlorophenol	330	U	
95-95-4	2,4,5-Trichlorophenol	330	U	
92-52-4	1,1'-Biphenyl	330	U	
91-58-7	2-Chloronaphthalene	330	U	
88-74-4	2-Nitroaniline	640	U	
131-11-3	Dimethylphthalate	330	U	
606-20-2	2,6-Dinitrotoluene	330	U	
208-96-8	Acenaphthylene	330	U	
99-09-2	3-Nitroaniline	640	U	
83-32-9	Acenaphthene	330	U	

NW 8/15/13

1E - FORM I SV-2
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-90-012FD

24

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17010

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17010-24

Sample wt/vol: 30.0 (g/mL) g Lab File ID: RKTVA08.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 49 Decanted: (Y/N) Date Received: 06/14/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/20/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/18/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
51-28-5	2,4-Dinitrophenol	640	U
100-02-7	4-Nitrophenol	640	U
132-64-9	Dibenzofuran	330	U
121-14-2	2,4-Dinitrotoluene	330	U
84-66-2	Diethylphthalate	330	U
86-73-7	Fluorene	330	U
7005-72-3	4-Chlorophenyl-phenylether	330	U
100-01-6	4-Nitroaniline	640	U
534-52-1	4,6-Dinitro-2-methylphenol	640	U
86-30-6	N-Nitrosodiphenylamin [1]	330	U
95-94-3	1,2,4,5-Tetrachlorobenzene	330	U
101-55-3	4-Bromophenyl-phenylether	330	U
118-74-1	Hexachlorobenzene	330	U
1912-24-9	Atrazine	330	U
87-86-5	Pentachlorophenol	640	U
85-01-8	Phenanthrene	94	J
120-12-7	Anthracene	21	J
86-74-8	Carbazole	330	U
84-74-2	Di-n-butylphthalate	9.7	J
206-44-0	Fluoranthene	220	~~U~~ J
129-00-0	Pyrene	200	J
85-68-7	Butylbenzylphthalate	330	U
91-94-1	3,3'-Dichlorobenzidine	330	~~U~~ R
56-55-3	Benzo(a)anthracene	82	J
218-01-9	Chrysene	140	J
117-81-7	Bis(2-ethylhexyl)phthalate	330 ~~170~~	~~J B~~ U
117-84-0	Di-n-octylphthalate	330	U
205-99-2	Benzo(b)fluoranthene	140	J
207-08-9	Benzo(k)fluoranthene	92	J
50-32-8	Benzo(a)pyrene	76	J
193-39-5	Indeno(1,2,3-cd)pyrene	57	J
53-70-3	Dibenzo(a,h)anthracene	330	U
191-24-2	Benzo(g,h,i)perylene	75	J
58-90-2	2,3,4,6-Tetrachlorophenol	330	U

[1] Cannot be separated from Diphenylamine

NW 8/15/13

1F - FORM I SV-SIM

SEMIVOLATILE SIM ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-90-012

10

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: 1734.2] SDG No.: 17010

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17010-10

Sample wt/vol: 30.5 (g/mL) g Lab File ID: HQISM05.D

Extraction: (Type) SONC

% Moisture: 50 Decanted: (Y/N) Date Received: 06/14/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/20/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/30/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 20.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
91-20-3	Naphthalene	130 ~~13~~	~~J~~	U
90-12-0	1-Methylnaphthalene	4.9	J	
91-57-6	2-Methylnaphthalene	130 ~~7.4~~	~~J~~	U
208-96-8	Acenaphthylene	4.1	J	
83-32-9	Acenaphthene	10	J	
86-73-7	Fluorene	22	J	
85-01-8	Phenanthrene	130 ~~100~~	~~J~~	U
120-12-7	Anthracene	23	J	
206-44-0	Fluoranthene	180		
129-00-0	Pyrene	160		
56-55-3	Benzo(a)anthracene	84	J	
218-01-9	Chrysene	160		
205-99-2	Benzo(b)fluoranthene	100	J	
207-08-9	Benzo(k)fluoranthene	110	J	
192-97-2	Benzo(e)pyrene	83	J	
50-32-8	Benzo(a)pyrene	87	J	
198-55-0	Perylene	680		
193-39-5	Indeno(1,2,3-cd)pyrene	49	J	
53-70-3	Dibenzo(a,h)anthracene	17	~~J~~	J
191-24-2	Benzo(g,h,i)perylene	48	J	
C1NAPH	C1-Naphthalenes	8.2	J	
C2NAPH	C2-Naphthalenes	48	J	
C3NAPH	C3-Naphthalenes	62	J	
C4NAPH	C4-Naphthalenes	57	J	
C1FLUOR	C1 Fluorenes	6.6	J	
C2FLUOR	C2 Fluorenes	11	J	
C3FLUOR	C3 Fluorenes	22	J	
C1PHAN	C1-Phenanthrenes/Anthracenes	72	J	
C2PHAN	C2-Phenanthrenes/Anthracenes	72	J	
C3PHAN	C3-Phenanthrenes/Anthracenes	86	J	
C4PHAN	C4-Phenanthrenes/Anthracenes	46	J	
C1FLPY	C1-Fluoranthenes/Pyrenes	110	J	
C2FLPY	C2-Fluoranthenes/Pyrenes	80	J	
C3FLPY	C3-Fluoranthenes/Pyrenes	53	J	
C1CHRYS	C1 Chrysenes	100	J	
C2CHRYS	C2 Chrysenes	64	J	
C3CHRYS	C3 Chrysenes	32	J	
C4CHRYS	C4 Chrysenes	130	U	

NW 8/15/13

1F - FORM I SV-SIM

SEMIVOLATILE SIM ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-90-012

10

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: 1734.2] SDG No.: 17010

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17010-10

Sample wt/vol: 30.5 (g/mL) g Lab File ID: HQISM05.D

Extraction: (Type) SONC

% Moisture: 50 Decanted: (Y/N) Date Received: 06/14/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/20/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/30/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 20.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
TPPAH	Total 16 PPAH	1200	J
TPAH	Total PAH	2900	J

MW 8/15/13

1F - FORM I SV-SIM

SEMIVOLATILE SIM ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-47-012

20

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: 1734.2] SDG No.: 17010

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17010-20

Sample wt/vol: 29.9 (g/mL) g Lab File ID: HQISA04.D

Extraction: (Type) SONC

% Moisture: 60 Decanted: (Y/N) Date Received: 06/14/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/24/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/26/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 4.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
91-20-3	Naphthalene	33 ~~17~~	~~J B~~ U
90-12-0	1-Methylnaphthalene	7.3	J
91-57-6	2-Methylnaphthalene	11	J
208-96-8	Acenaphthylene	5.4	J
83-32-9	Acenaphthene	16	J
86-73-7	Fluorene	28	J
85-01-8	Phenanthrene	150	
120-12-7	Anthracene	33	J
206-44-0	Fluoranthene	380	~~J B~~ J
129-00-0	Pyrene	320	~~B~~
56-55-3	Benzo(a)anthracene	150	~~B~~
218-01-9	Chrysene	230	~~B~~
205-99-2	Benzo(b)fluoranthene	250	~~B~~
207-08-9	Benzo(k)fluoranthene	240	~~B~~
192-97-2	Benzo(e)pyrene	170	~~B~~
50-32-8	Benzo(a)pyrene	190	
198-55-0	Perylene	150	
193-39-5	Indeno(1,2,3-cd)pyrene	110	
53-70-3	Dibenzo(a,h)anthracene	30	~~J~~ J
191-24-2	Benzo(g,h,i)perylene	110	
C1NAPH	C1-Naphthalenes	12	J
C2NAPH	C2-Naphthalenes	38	J
C3NAPH	C3-Naphthalenes	65	J
C4NAPH	C4-Naphthalenes	52	J
C1FLUOR	C1 Fluorenes	6.2	J
C2FLUOR	C2 Fluorenes	13	J
C3FLUOR	C3 Fluorenes	14	J
C1PHAN	C1-Phenanthrenes/Anthracenes	110	J
C2PHAN	C2-Phenanthrenes/Anthracenes	78	J
C3PHAN	C3-Phenanthrenes/Anthracenes	96	J
C4PHAN	C4-Phenanthrenes/Anthracenes	52	J
C1FLPY	C1-Fluoranthenes/Pyrenes	180	J
C2FLPY	C2-Fluoranthenes/Pyrenes	120	J
C3FLPY	C3-Fluoranthenes/Pyrenes	58	J
C1CHRYS	C1 Chrysenes	110	J
C2CHRYS	C2 Chrysenes	110	J
C3CHRYS	C3 Chrysenes	60	J
C4CHRYS	C4 Chrysenes	20	J

NW 8/15/13

1F - FORM I SV-SIM

SEMIVOLATILE SIM ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-47-012

20

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: 1734.2] SDG No.: 17010

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17010-20

Sample wt/vol: 29.9 (g/mL) g Lab File ID: HQISA04.D

Extraction: (Type) SONC

% Moisture: 60 Decanted: (Y/N) Date Received: 06/14/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/24/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/26/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 4.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
TPPAH	Total 16 PPAH	2300	~~B~~ J
TPAH	Total PAH	3800	~~B~~ J

NW 8/15/13

1F - FORM I SV-SIM
SEMIVOLATILE SIM ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-91-012

21

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: 1734.2] SDG No.: 17010

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17010-21

Sample wt/vol: 30.5 (g/mL) g Lab File ID: HQISM14.D

Extraction: (Type) SONC

% Moisture: 53 Decanted: (Y/N) Date Received: 06/14/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/20/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/30/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 6.7

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
91-20-3	Naphthalene	52	~~B~~
90-12-0	1-Methylnaphthalene	16	J
91-57-6	2-Methylnaphthalene	46 ~~34~~	~~J B~~ 4
208-96-8	Acenaphthylene	5.7	J
83-32-9	Acenaphthene	18	J
86-73-7	Fluorene	41	J
85-01-8	Phenanthrene	150	~~B~~
120-12-7	Anthracene	44	J
206-44-0	Fluoranthene	280	~~B~~
129-00-0	Pyrene	280	~~B~~
56-55-3	Benzo(a)anthracene	160	
218-01-9	Chrysene	240	
205-99-2	Benzo(b)fluoranthene	170	
207-08-9	Benzo(k)fluoranthene	140	
192-97-2	Benzo(e)pyrene	130	
50-32-8	Benzo(a)pyrene	170	
198-55-0	Perylene	330	
193-39-5	Indeno(1,2,3-cd)pyrene	89	
53-70-3	Dibenzo(a,h)anthracene	36	J
191-24-2	Benzo(g,h,i)perylene	100	
C1NAPH	C1-Naphthalenes	32	J
C2NAPH	C2-Naphthalenes	95	J
C3NAPH	C3-Naphthalenes	93	J
C4NAPH	C4-Naphthalenes	75	J
C1FLUOR	C1 Fluorenes	10	J
C2FLUOR	C2 Fluorenes	18	J
C3FLUOR	C3 Fluorenes	28	J
C1PHAN	C1-Phenanthrenes/Anthracenes	130	J
C2PHAN	C2-Phenanthrenes/Anthracenes	110	J
C3PHAN	C3-Phenanthrenes/Anthracenes	120	J
C4PHAN	C4-Phenanthrenes/Anthracenes	77	J
C1FLPY	C1-Fluoranthenes/Pyrenes	210	J
C2FLPY	C2-Fluoranthenes/Pyrenes	160	J
C3FLPY	C3-Fluoranthenes/Pyrenes	110	J
C1CHRYS	C1 Chrysenes	220	J
C2CHRYS	C2 Chrysenes	160	J
C3CHRYS	C3 Chrysenes	78	J
C4CHRYS	C4 Chrysenes	24	J

MW 8/15/13

1F - FORM I SV-SIM

SEMIVOLATILE SIM ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-91-012

21

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: 1734.2] SDG No.: 17010

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17010-21

Sample wt/vol: 30.5 (g/mL) g Lab File ID: HQISM14.D

Extraction: (Type) SONC

% Moisture: 53 Decanted: (Y/N) Date Received: 06/14/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/20/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/30/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 6.7

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
TPPAH	Total 16 PPAH	2000	~~B~~ J
TPAH	Total PAH	4200	~~B~~ J

MW 8/15/13

1F - FORM I SV-SIM
SEMIVOLATILE SIM ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-83-024FD

24

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: 1734.2] SDG No.: 17010

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17010-24

Sample wt/vol: 30.0 (g/mL) g Lab File ID: HQISQ07.D

Extraction: (Type) SONC

% Moisture: 49 Decanted: (Y/N) Date Received: 06/14/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/20/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/31/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 10.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
91-20-3	Naphthalene	64 ~~7.2~~	~~J~~ U
90-12-0	1-Methylnaphthalene	3.8	J
91-57-6	2-Methylnaphthalene	5.5	J
208-96-8	Acenaphthylene	3.4	J
83-32-9	Acenaphthene	9.6	J
86-73-7	Fluorene	21	J
85-01-8	Phenanthrene	89	
120-12-7	Anthracene	18	J
206-44-0	Fluoranthene	210	
129-00-0	Pyrene	150	
56-55-3	Benzo(a)anthracene	86	
218-01-9	Chrysene	130	
205-99-2	Benzo(b)fluoranthene	95	
207-08-9	Benzo(k)fluoranthene	86	
192-97-2	Benzo(e)pyrene	71	
50-32-8	Benzo(a)pyrene	69	
198-55-0	Perylene	460	
193-39-5	Indeno(1,2,3-cd)pyrene	53	J
53-70-3	Dibenzo(a,h)anthracene	17	J
191-24-2	Benzo(g,h,i)perylene	58	J
C1NAPH	C1-Naphthalenes	64	U
C2NAPH	C2-Naphthalenes	38	J
C3NAPH	C3-Naphthalenes	57	J
C4NAPH	C4-Naphthalenes	49	J
C1FLUOR	C1 Fluorenes	64	U
C2FLUOR	C2 Fluorenes	10	J
C3FLUOR	C3 Fluorenes	21	J
C1PHAN	C1-Phenanthrenes/Anthracenes	81	J
C2PHAN	C2-Phenanthrenes/Anthracenes	69	J
C3PHAN	C3-Phenanthrenes/Anthracenes	69	J
C4PHAN	C4-Phenanthrenes/Anthracenes	39	J
C1FLPY	C1-Fluoranthenes/Pyrenes	110	J
C2FLPY	C2-Fluoranthenes/Pyrenes	82	J
C3FLPY	C3-Fluoranthenes/Pyrenes	49	J
C1CHRYS	C1 Chrysenes	85	J
C2CHRYS	C2 Chrysenes	62	J
C3CHRYS	C3 Chrysenes	27	J
C4CHRYS	C4 Chrysenes	8.4	J

MW 8/15/13

1F - FORM I SV-SIM

SEMIVOLATILE SIM ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-83-024FD

24

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: 1734.2] SDG No.: 17010

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17010-24

Sample wt/vol: 30.0 (g/mL) g Lab File ID: HQISQ07.D

Extraction: (Type) SONC

% Moisture: 49 Decanted: (Y/N) Date Received: 06/14/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/20/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/31/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 10.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
TPPAH	Total 16 PPAH	1100	J
TPAH	Total PAH	2500	J

MW 8/15/13

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-93-012

1

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17010

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17010-1

Sample wt/vol: 29.7 (g/mL) g Lab File ID: 0825ACBSOM31.D

% Moisture: 40 Decanted: (Y/N) Date Received: 06/14/2013

Extraction: (Type) SONC Date Extracted: 06/20/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 07/12/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	56	U
11104-28-2	Aroclor-1221	56	U
11141-16-5	Aroclor-1232	56	U
53469-21-9	Aroclor-1242	56	U
12672-29-6	Aroclor-1248	970 ~~920~~	~~E~~
11097-69-1	Aroclor-1254	520	~~P~~ J
11096-82-5	Aroclor-1260	81	~~P~~ J
37324-23-5	Aroclor-1262	56	U
11100-14-4	Aroclor-1268	56	U

NW 8/15/13

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-93-012DL

1DL

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17010

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17010-1

Sample wt/vol: 29.7 (g/mL) g Lab File ID: 0825ACBSOM15.D

% Moisture: 40 Decanted: (Y/N) Date Received: 06/14/2013

Extraction: (Type) SONC Date Extracted: 06/20/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 07/12/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 3.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

use original results

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	170	U
11104-28-2	Aroclor-1221	170	U
11141-16-5	Aroclor-1232	170	U
53469-21-9	Aroclor-1242	170	U
12672-29-6	Aroclor-1248	970	D
11097-69-1	Aroclor-1254	560	D
11096-82-5	Aroclor-1260	90	J D
37324-23-5	Aroclor-1262	170	U
11100-14-4	Aroclor-1268	170	U

NW 8/15/13

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-93-024

2

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17010

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17010-2

Sample wt/vol: 30.5 (g/mL) g Lab File ID: 0825ACBSOM32.D

% Moisture: 43 Decanted: (Y/N) Date Received: 06/14/2013

Extraction: (Type) SONC Date Extracted: 06/20/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 07/13/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	57	~~U~~ UJ
11104-28-2	Aroclor-1221	57	~~U~~ ↓
11141-16-5	Aroclor-1232	57	~~U~~
53469-21-9	Aroclor-1242	57	~~U~~
12672-29-6	Aroclor-1248	5100 ~~4700~~	~~E~~
11097-69-1	Aroclor-1254	1700 1500	~~E P~~
11096-82-5	Aroclor-1260	160	~~P~~ J
37324-23-5	Aroclor-1262	57	~~U~~ UJ
11100-14-4	Aroclor-1268	57	~~U~~ UJ

NW 8/15/13

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-93-024DL

2DL

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17010

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17010-2

Sample wt/vol: 30.5 (g/mL) g Lab File ID: 0825AFBSOM07.D

% Moisture: 43 Decanted: (Y/N) Date Received: 06/14/2013

Extraction: (Type) SONC Date Extracted: 06/20/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 07/24/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 10.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

use original results

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	570	U
11104-28-2	Aroclor-1221	570	U
11141-16-5	Aroclor-1232	570	U
53469-21-9	Aroclor-1242	570	U
12672-29-6	Aroclor-1248	5100	D
11097-69-1	Aroclor-1254	1700	D
11096-82-5	Aroclor-1260	220	J D
37324-23-5	Aroclor-1262	570	U
11100-14-4	Aroclor-1268	570	U

NW 8/15/13

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-93-048

3

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17010

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17010-3

Sample wt/vol: 30.4 (g/mL) g Lab File ID: 0825ACBSOM17.D

% Moisture: 38 Decanted: (Y/N) Date Received: 06/14/2013

Extraction: (Type) SONC Date Extracted: 06/20/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 07/12/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	52	U
11104-28-2	Aroclor-1221	52	U
11141-16-5	Aroclor-1232	52	U
53469-21-9	Aroclor-1242	52	U
12672-29-6	Aroclor-1248	180	
11097-69-1	Aroclor-1254	96	
11096-82-5	Aroclor-1260	19	~~J P~~ J
37324-23-5	Aroclor-1262	52	U
11100-14-4	Aroclor-1268	52	U

NW 8/15/13

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-93-072

4

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17010

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17010-4

Sample wt/vol: 29.7 (g/mL) g Lab File ID: 0825ACBSOM18.D

% Moisture: 38 Decanted: (Y/N) Date Received: 06/14/2013

Extraction: (Type) SONC Date Extracted: 06/20/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 07/12/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	54	U
11104-28-2	Aroclor-1221	54	U
11141-16-5	Aroclor-1232	54	U
53469-21-9	Aroclor-1242	54	U
12672-29-6	Aroclor-1248	79	
11097-69-1	Aroclor-1254	29	J
11096-82-5	Aroclor-1260	54	U
37324-23-5	Aroclor-1262	54	U
11100-14-4	Aroclor-1268	54	U

NW 8/15/13

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-93-096

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678 5

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17010

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17010-5

Sample wt/vol: 30.5 (g/mL) g Lab File ID: 0825ACBSOM19.D

% Moisture: 35 Decanted: (Y/N) Date Received: 06/14/2013

Extraction: (Type) SONC Date Extracted: 06/20/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 07/12/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	50	U
11104-28-2	Aroclor-1221	50	U
11141-16-5	Aroclor-1232	50	U
53469-21-9	Aroclor-1242	50	U
12672-29-6	Aroclor-1248	21	~~J P~~ J
11097-69-1	Aroclor-1254	7.4	J
11096-82-5	Aroclor-1260	50	U
37324-23-5	Aroclor-1262	50	U
11100-14-4	Aroclor-1268	50	U

NW 8/15/13

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-93-120

6

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17010

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17010-6

Sample wt/vol: 30.1 (g/mL) g Lab File ID: 0825ACBSOM08.D

% Moisture: 34 Decanted: (Y/N) Date Received: 06/14/2013

Extraction: (Type) SONC Date Extracted: 06/20/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 07/12/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	49	U
11104-28-2	Aroclor-1221	49	U
11141-16-5	Aroclor-1232	49	U
53469-21-9	Aroclor-1242	49	U
12672-29-6	Aroclor-1248	49	U
11097-69-1	Aroclor-1254	49	U
11096-82-5	Aroclor-1260	49	U
37324-23-5	Aroclor-1262	49	U
11100-14-4	Aroclor-1268	49	U

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1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-62-024FD

7

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17010

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17010-7

Sample wt/vol: 29.9 (g/mL) g Lab File ID: 0825ACBSOM09.D

% Moisture: 31 Decanted: (Y/N) Date Received: 06/14/2013

Extraction: (Type) SONC Date Extracted: 06/20/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 07/12/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	48	U
11104-28-2	Aroclor-1221	48	U
11141-16-5	Aroclor-1232	48	U
53469-21-9	Aroclor-1242	48	U
12672-29-6	Aroclor-1248	48	U
11097-69-1	Aroclor-1254	48	U
11096-82-5	Aroclor-1260	48	U
37324-23-5	Aroclor-1262	48	U
11100-14-4	Aroclor-1268	48	U

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1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-90-024FD

8

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17010

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17010-8

Sample wt/vol: 30.0 (g/mL) g Lab File ID: 0825ACBSOM20.D

% Moisture: 45 Decanted: (Y/N) Date Received: 06/14/2013

Extraction: (Type) SONC Date Extracted: 06/20/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 07/12/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	60	U
11104-28-2	Aroclor-1221	60	U
11141-16-5	Aroclor-1232	60	U
53469-21-9	Aroclor-1242	60	U
12672-29-6	Aroclor-1248	63	
11097-69-1	Aroclor-1254	43	J
11096-82-5	Aroclor-1260	10	~~J P~~ J
37324-23-5	Aroclor-1262	60	U
11100-14-4	Aroclor-1268	60	U

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1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-62-024

9

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17010

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17010-9

Sample wt/vol: 30.0 (g/mL) g Lab File ID: 0825ACBSOM10.D

% Moisture: 31 Decanted: (Y/N) Date Received: 06/14/2013

Extraction: (Type) SONC Date Extracted: 06/20/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 07/12/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	48	U
11104-28-2	Aroclor-1221	48	U
11141-16-5	Aroclor-1232	48	U
53469-21-9	Aroclor-1242	48	U
12672-29-6	Aroclor-1248	48	U
11097-69-1	Aroclor-1254	48	U
11096-82-5	Aroclor-1260	48	U
37324-23-5	Aroclor-1262	48	U
11100-14-4	Aroclor-1268	48	U

NW 8/15/13

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-90-012

10

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17010

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17010-10

Sample wt/vol: 30.7 (g/mL) g Lab File ID: 0825AFBSOM08.D

% Moisture: 50 Decanted: (Y/N) Date Received: 06/14/2013

Extraction: (Type) SONC Date Extracted: 06/20/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 07/24/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 5.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	320	U
11104-28-2	Aroclor-1221	320	U
11141-16-5	Aroclor-1232	320	U
53469-21-9	Aroclor-1242	320	U
12672-29-6	Aroclor-1248	47	~~J P~~ J
11097-69-1	Aroclor-1254	31	J
11096-82-5	Aroclor-1260	9.7	~~J P~~ J
37324-23-5	Aroclor-1262	320	U
11100-14-4	Aroclor-1268	320	U

MW 8/15/13

1H - FORM I ARO
AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-90-024

11

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17010

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17010-11

Sample wt/vol: 29.3 (g/mL) g Lab File ID: 0825AFBSOM09.D

% Moisture: 45 Decanted: (Y/N) Date Received: 06/14/2013

Extraction: (Type) SONC Date Extracted: 06/20/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 07/24/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 5.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	310	U
11104-28-2	Aroclor-1221	310	U
11141-16-5	Aroclor-1232	310	U
53469-21-9	Aroclor-1242	310	U
12672-29-6	Aroclor-1248	42	J
11097-69-1	Aroclor-1254	29	~~J P~~ J
11096-82-5	Aroclor-1260	7.4	~~J P~~ J
37324-23-5	Aroclor-1262	310	U
11100-14-4	Aroclor-1268	310	U

JW 8/15/13

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-90-048

12

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17010

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17010-12

Sample wt/vol: 30.1 (g/mL) g Lab File ID: 0825ACBSOM26.D

% Moisture: 43 Decanted: (Y/N) Date Received: 06/14/2013

Extraction: (Type) SONC Date Extracted: 06/20/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 07/12/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	58	U
11104-28-2	Aroclor-1221	58	U
11141-16-5	Aroclor-1232	58	U
53469-21-9	Aroclor-1242	58	U
12672-29-6	Aroclor-1248	110	
11097-69-1	Aroclor-1254	69	
11096-82-5	Aroclor-1260	17	~~J P~~ J
37324-23-5	Aroclor-1262	58	U
11100-14-4	Aroclor-1268	58	U

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1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-90-072

13

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17010

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17010-13

Sample wt/vol: 29.4 (g/mL) g Lab File ID: 0825ACBSOM27.D

% Moisture: 17 Decanted: (Y/N) Date Received: 06/14/2013

Extraction: (Type) SONC Date Extracted: 06/20/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 07/12/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	41	U
11104-28-2	Aroclor-1221	41	U
11141-16-5	Aroclor-1232	41	U
53469-21-9	Aroclor-1242	41	U
12672-29-6	Aroclor-1248	67	
11097-69-1	Aroclor-1254	32	J
11096-82-5	Aroclor-1260	6.5	~~J P~~ J
37324-23-5	Aroclor-1262	41	U
11100-14-4	Aroclor-1268	41	U

MW 8/15/13

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-62-012

14

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17010

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17010-14

Sample wt/vol: 30.6 (g/mL) g Lab File ID: 0825ACBSOM11.D

% Moisture: 31 Decanted: (Y/N) Date Received: 06/14/2013

Extraction: (Type) SONC Date Extracted: 06/20/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 07/12/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	47	U
11104-28-2	Aroclor-1221	47	U
11141-16-5	Aroclor-1232	47	U
53469-21-9	Aroclor-1242	47	U
12672-29-6	Aroclor-1248	47	U
11097-69-1	Aroclor-1254	47	U
11096-82-5	Aroclor-1260	47	U
37324-23-5	Aroclor-1262	47	U
11100-14-4	Aroclor-1268	47	U

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1H - FORM I ARO
AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-62-048

15

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17010

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17010-15

Sample wt/vol: 30.1 (g/mL) g Lab File ID: 0825ACBSOM12.D

% Moisture: 31 Decanted: (Y/N) Date Received: 06/14/2013

Extraction: (Type) SONC Date Extracted: 06/20/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 07/12/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	48	U
11104-28-2	Aroclor-1221	48	U
11141-16-5	Aroclor-1232	48	U
53469-21-9	Aroclor-1242	48	U
12672-29-6	Aroclor-1248	48	U
11097-69-1	Aroclor-1254	48	U
11096-82-5	Aroclor-1260	48	U
37324-23-5	Aroclor-1262	48	U
11100-14-4	Aroclor-1268	48	U

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1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-62-072

16

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17010

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17010-16

Sample wt/vol: 30.5 (g/mL) g Lab File ID: 0825ACBSOM13.D

% Moisture: 25 Decanted: (Y/N) Date Received: 06/14/2013

Extraction: (Type) SONC Date Extracted: 06/20/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 07/12/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	43	U
11104-28-2	Aroclor-1221	43	U
11141-16-5	Aroclor-1232	43	U
53469-21-9	Aroclor-1242	43	U
12672-29-6	Aroclor-1248	43	U
11097-69-1	Aroclor-1254	43	U
11096-82-5	Aroclor-1260	43	U
37324-23-5	Aroclor-1262	43	U
11100-14-4	Aroclor-1268	43	U

MW 8/15/13

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-62-096

17

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17010

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17010-17

Sample wt/vol: 30.8 (g/mL) g Lab File ID: 0825ACBSOM14.D

% Moisture: 18 Decanted: (Y/N) Date Received: 06/14/2013

Extraction: (Type) SONC Date Extracted: 06/20/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 07/12/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	39	U
11104-28-2	Aroclor-1221	39	U
11141-16-5	Aroclor-1232	39	U
53469-21-9	Aroclor-1242	39	U
12672-29-6	Aroclor-1248	39	U
11097-69-1	Aroclor-1254	39	U
11096-82-5	Aroclor-1260	39	U
37324-23-5	Aroclor-1262	39	U
11100-14-4	Aroclor-1268	39	U

MW 8/15/13

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-91-024

18

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17010

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17010-18

Sample wt/vol: 30.4 (g/mL) g Lab File ID: 0825ACBSOM28.D

% Moisture: 47 Decanted: (Y/N) Date Received: 06/14/2013

Extraction: (Type) SONC Date Extracted: 06/20/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 07/12/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	62	U
11104-28-2	Aroclor-1221	62	U
11141-16-5	Aroclor-1232	62	U
53469-21-9	Aroclor-1242	62	U
12672-29-6	Aroclor-1248	48	J
11097-69-1	Aroclor-1254	30	J
11096-82-5	Aroclor-1260	8.7	J
37324-23-5	Aroclor-1262	62	U
11100-14-4	Aroclor-1268	62	U

MW 8/15/13

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-91-048

19

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17010

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17010-19

Sample wt/vol: 30.9 (g/mL) g Lab File ID: 0825ACBSOM29.D

% Moisture: 46 Decanted: (Y/N) Date Received: 06/14/2013

Extraction: (Type) SONC Date Extracted: 06/20/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 07/12/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	59	U
11104-28-2	Aroclor-1221	59	U
11141-16-5	Aroclor-1232	59	U
53469-21-9	Aroclor-1242	59	U
12672-29-6	Aroclor-1248	48	~~J P~~ J
11097-69-1	Aroclor-1254	32	J
11096-82-5	Aroclor-1260	9.0	J
37324-23-5	Aroclor-1262	59	U
11100-14-4	Aroclor-1268	59	U

NW 8/15/13

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-47-012

20

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17010

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17010-20

Sample wt/vol: 29.8 (g/mL) g Lab File ID: 0825ACBSOM30.D

% Moisture: 60 Decanted: (Y/N) Date Received: 06/14/2013

Extraction: (Type) SONC Date Extracted: 06/20/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 07/12/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	83	U
11104-28-2	Aroclor-1221	83	U
11141-16-5	Aroclor-1232	83	U
53469-21-9	Aroclor-1242	83	U
12672-29-6	Aroclor-1248	34	~~J P~~ J
11097-69-1	Aroclor-1254	22	J
11096-82-5	Aroclor-1260	7.5	J
37324-23-5	Aroclor-1262	83	U
11100-14-4	Aroclor-1268	83	U

NW 8/15/13

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR-13-91-012

21

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17010

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17010-21

Sample wt/vol: 29.8 (g/mL) g Lab File ID: 0825ACBSOM35.D

% Moisture: 53 Decanted: (Y/N) Date Received: 06/14/2013

Extraction: (Type) SONC Date Extracted: 06/20/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 07/13/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	71	U
11104-28-2	Aroclor-1221	71	U
11141-16-5	Aroclor-1232	71	U
53469-21-9	Aroclor-1242	25	~~J P~~ J
12672-29-6	Aroclor-1248	71	U
11097-69-1	Aroclor-1254	26	J
11096-82-5	Aroclor-1260	8.9	J
37324-23-5	Aroclor-1262	71	U
11100-14-4	Aroclor-1268	71	U

NW 8/15/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO. 1

LMR13-93-012

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17010

Matrix: SED Lab Sample Id: 200-17010-1

% Solids: 60.0 Date Received: 06/14/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	7.5			P
7440-43-9	Cadmium	2.5			P
7440-47-3	Chromium	56.4		J	P
7440-50-8	Copper	46.0		J	P
7439-92-1	Lead	56.8			P
7440-02-0	Nickel	33.7		J	P
7440-66-6	Zinc	157		J	P

Color Before: GREY Clarity Before: Texture: FINE

Color After: TAN Clarity After: CLOUDY Artifacts:

Comments:

NW 8/15/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO. 1

LMR13-93-012

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17010

Matrix: SED Lab Sample Id: 200-17010-1

% Solids: 60.0 Date Received: 06/14/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.35			CV

Color Before: GRAY Clarity Before: CLOUDY Texture: FINE

Color After: COLORLESS Clarity After: CLEAR Artifacts: NONE

Comments:

NW 8/15/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO. 2

LMR13-93-024

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17010

Matrix: SED Lab Sample Id: 200-17010-2

% Solids: 56.8 Date Received: 06/14/2013

Concentration Units (**ug/L, ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	11.8			P
7440-43-9	Cadmium	6.4			P
7440-47-3	Chromium	154		J ~~F~~	P
7440-50-8	Copper	90.8		J ~~F~~	P
7439-92-1	Lead	102			P
7440-02-0	Nickel	53.5		J ~~F~~	P
7440-66-6	Zinc	305		J ~~F~~	P

Color Before: GREY Clarity Before: Texture: FINE

Color After: TAN Clarity After: CLOUDY Artifacts:

Comments:

NW 8/15/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO. 2

LMR13-93-024

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17010

Matrix: SED Lab Sample Id: 200-17010-2

% Solids: 56.8 Date Received: 06/14/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.60			CV

Color Before: GRAY Clarity Before: CLOUDY Texture: FINE

Color After: COLORLESS Clarity After: CLEAR Artifacts: NONE

Comments:

NW 8/15/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO. 3
LMR13-93-048

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678
Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 17010
Matrix: SED | Lab Sample Id: 200-17010-3
% Solids: 62.0 | Date Received: 06/14/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	14.7			P
7440-43-9	Cadmium	1.7			P
7440-47-3	Chromium	32.0		J ~~E~~	P
7440-50-8	Copper	41.6		J ~~E~~	P
7439-92-1	Lead	135			P
7440-02-0	Nickel	29.3		J ~~E~~	P
7440-66-6	Zinc	233		J ~~E~~	P

Color Before: GREY | Clarity Before: | Texture: FINE
Color After: TAN | Clarity After: CLOUDY | Artifacts:
Comments:

NW 8/15/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO. 3

LMR13-93-048

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678

Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 17010

Matrix: SED | Lab Sample Id: 200-17010-3

% Solids: 62.0 | Date Received: 06/14/2013

Concentration Units (**ug/L, ug,** or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.58			CV

Color Before: GRAY | Clarity Before: CLOUDY | Texture: FINE

Color After: COLORLESS | Clarity After: CLEAR | Artifacts: NONE

Comments:

NW 8/15/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO. 4

LMR13-93-072

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17010

Matrix: SED Lab Sample Id: 200-17010-4

% Solids: 61.7 Date Received: 06/14/2013

Concentration Units (**ug/L, ug,** or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	14.9			P
7440-43-9	Cadmium	0.67			P
7440-47-3	Chromium	22.0		J ~~E~~	P
7440-50-8	Copper	26.6		J ~~E~~	P
7439-92-1	Lead	97.8			P
7440-02-0	Nickel	25.7		J ~~E~~	P
7440-66-6	Zinc	155		J ~~E~~	P

Color Before: GREY Clarity Before: Texture: FINE

Color After: TAN Clarity After: CLOUDY Artifacts:

Comments:

NW 8/15/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO. 4
LMR13-93-072

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678
Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 17010
Matrix: SED | Lab Sample Id: 200-17010-4
% Solids: 61.7 | Date Received: 06/14/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.30			CV

Color Before: GRAY | Clarity Before: CLOUDY | Texture: FINE
Color After: COLORLESS | Clarity After: CLEAR | Artifacts: NONE
Comments:

NW 8/15/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO. 5
LMR13-93-096

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678
Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 17010
Matrix: SED | Lab Sample Id: 200-17010-5
% Solids: 65.2 | Date Received: 06/14/2013

Concentration Units (**ug/L, ug,** or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	12.3			P
7440-43-9	Cadmium	0.50	J		P
7440-47-3	Chromium	18.0		J ~~E~~	P
7440-50-8	Copper	21.3		J ~~E~~	P
7439-92-1	Lead	59.6			P
7440-02-0	Nickel	23.8		J ~~E~~	P
7440-66-6	Zinc	112		J ~~E~~	P

Color Before: GREY | Clarity Before: | Texture: FINE
Color After: TAN | Clarity After: CLOUDY | Artifacts:
Comments:

NW 8/15/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO. 5
LMR13-93-096

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678
Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 17010
Matrix: SED | Lab Sample Id: 200-17010-5
% Solids: 65.2 | Date Received: 06/14/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.20			CV

Color Before: GRAY | Clarity Before: CLOUDY | Texture: FINE
Color After: COLORLESS | Clarity After: CLEAR | Artifacts: NONE
Comments:

MW 8/15/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO. 6
LMR13-93-120

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678
Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 17010
Matrix: SED | Lab Sample Id: 200-17010-6
% Solids: 66.5 | Date Received: 06/14/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	8.4			P
7440-43-9	Cadmium	0.45	J		P
7440-47-3	Chromium	17.4		J E	P
7440-50-8	Copper	20.0		J E	P
7439-92-1	Lead	46.3			P
7440-02-0	Nickel	23.2		J E	P
7440-66-6	Zinc	83.2		J E	P

Color Before: GREY | Clarity Before: | Texture: FINE
Color After: TAN | Clarity After: CLOUDY | Artifacts:
Comments:

NW 8/15/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO. 6
LMR13-93-120

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678
Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 17010
Matrix: SED | Lab Sample Id: 200-17010-6
% Solids: 66.5 | Date Received: 06/14/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.18			CV

Color Before: GRAY | Clarity Before: CLOUDY | Texture: FINE
Color After: COLORLESS | Clarity After: CLEAR | Artifacts: NONE
Comments:

NW 8/15/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO. 7
LMR13-62-024FD

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678
Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 17010
Matrix: SED | Lab Sample Id: 200-17010-7
% Solids: 68.7 | Date Received: 06/14/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	5.0			P
7440-43-9	Cadmium	0.37	J		P
7440-47-3	Chromium	15.0		J ~~E~~	P
7440-50-8	Copper	14.1		J ~~E~~	P
7439-92-1	Lead	12.8			P
7440-02-0	Nickel	20.9		J ~~E~~	P
7440-66-6	Zinc	51.2		J ~~E~~	P

Color Before: GREY | Clarity Before: | Texture: FINE
Color After: TAN | Clarity After: CLOUDY | Artifacts:
Comments:

MW 8/15/13

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USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-62-024FD

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678
Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17010
Matrix: SED Lab Sample Id: 200-17010-7
% Solids: 68.7 Date Received: 06/14/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.054	J		CV

Color Before: GRAY Clarity Before: CLOUDY Texture: FINE
Color After: COLORLESS Clarity After: CLEAR Artifacts: NONE
Comments:

MW 8/15/13

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USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-90-024FD

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678
Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 17010
Matrix: SED | Lab Sample Id: 200-17010-8
% Solids: 54.9 | Date Received: 06/14/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	7.9			P
7440-43-9	Cadmium	1.0			P
7440-47-3	Chromium	30.8		J ~~E~~	P
7440-50-8	Copper	30.2		J ~~E~~	P
7439-92-1	Lead	34.5			P
7440-02-0	Nickel	34.3		J ~~E~~	P
7440-66-6	Zinc	230		J ~~E~~	P

Color Before: GREY | Clarity Before: | Texture: FINE
Color After: TAN | Clarity After: CLOUDY | Artifacts:
Comments:

NW 8/15/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO. 8
LMR13-90-024FD

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678
Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17010
Matrix: SED Lab Sample Id: 200-17010-8
% Solids: 54.9 Date Received: 06/14/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.12	J		CV

Color Before: GRAY Clarity Before: CLOUDY Texture: FINE
Color After: COLORLESS Clarity After: CLEAR Artifacts: NONE
Comments:

NW 8/15/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO. 9

LMR13-62-024

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17010

Matrix: SED Lab Sample Id: 200-17010-9

% Solids: 68.8 Date Received: 06/14/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	6.3			P
7440-43-9	Cadmium	0.81			P
7440-47-3	Chromium	24.5		J	P
7440-50-8	Copper	23.4		J	P
7439-92-1	Lead	25.6			P
7440-02-0	Nickel	27.1		J	P
7440-66-6	Zinc	165		J	P

Color Before: GREY Clarity Before: Texture: FINE

Color After: TAN Clarity After: CLOUDY Artifacts:

Comments:

MW 8/15/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO. 9

LMR13-62-024

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17010

Matrix: SED Lab Sample Id: 200-17010-9

% Solids: 68.8 Date Received: 06/14/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.042	J		CV

Color Before: GRAY Clarity Before: CLOUDY Texture: FINE

Color After: COLORLESS Clarity After: CLEAR Artifacts: NONE

Comments:

NW 8/15/13

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USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-90-012

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678
Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 17010
Matrix: SED | Lab Sample Id: 200-17010-10
% Solids: 50.5 | Date Received: 06/14/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	19.6			P
7440-43-9	Cadmium	0.84			P
7440-47-3	Chromium	27.6		J ~~E~~	P
7440-50-8	Copper	35.4		J ~~E~~	P
7439-92-1	Lead	130			P
7440-02-0	Nickel	33.3		J ~~E~~	P
7440-66-6	Zinc	205		J ~~E~~	P

Color Before: GREY | Clarity Before: | Texture: FINE
Color After: TAN | Clarity After: CLOUDY | Artifacts:
Comments:

NW 8/15/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO. 10

LMR13-90-012

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17010

Matrix: SED Lab Sample Id: 200-17010-10

% Solids: 50.5 Date Received: 06/14/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.11	J		CV

Color Before: GRAY Clarity Before: CLOUDY Texture: FINE

Color After: COLORLESS Clarity After: CLEAR Artifacts: NONE

Comments:

MW 8/15/13

11

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-90-024

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678
Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 17010
Matrix: SED | Lab Sample Id: 200-17010-11
% Solids: 54.8 | Date Received: 06/14/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	7.9			P
7440-43-9	Cadmium	1.1			P
7440-47-3	Chromium	31.9		J ~~E~~	P
7440-50-8	Copper	29.7		J ~~E~~	P
7439-92-1	Lead	31.6			P
7440-02-0	Nickel	34.0		J ~~E~~	P
7440-66-6	Zinc	209		J ~~E~~	P

Color Before: GREY | Clarity Before: | Texture: FINE
Color After: TAN | Clarity After: CLOUDY | Artifacts:
Comments:

MW 8/15/13

11

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-90-024

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678
Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 17010
Matrix: SED | Lab Sample Id: 200-17010-11
% Solids: 54.8 | Date Received: 06/14/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.11	J		CV

Color Before: GRAY | Clarity Before: CLOUDY | Texture: FINE
Color After: COLORLESS | Clarity After: CLEAR | Artifacts: NONE
Comments:

NW 8/15/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO. 12

LMR13-90-048

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17010

Matrix: SED Lab Sample Id: 200-17010-12

% Solids: 57.1 Date Received: 06/14/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	8.3			P
7440-43-9	Cadmium	1.9			P
7440-47-3	Chromium	34.8		J ~~E~~	P
7440-50-8	Copper	33.7		J ~~E~~	P
7439-92-1	Lead	39.7			P
7440-02-0	Nickel	35.9		J ~~E~~	P
7440-66-6	Zinc	139		J ~~E~~	P

Color Before: GREY Clarity Before: Texture: FINE

Color After: TAN Clarity After: CLOUDY Artifacts:

Comments:

MW 8/15/13

12

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-90-048

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678
Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 17010
Matrix: SED | Lab Sample Id: 200-17010-12
% Solids: 57.1 | Date Received: 06/14/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.16			CV

Color Before: GRAY | Clarity Before: CLOUDY | Texture: FINE
Color After: COLORLESS | Clarity After: CLEAR | Artifacts: NONE
Comments:

NW 8/15/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO. 13

LMR13-90-072

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17010

Matrix: SED Lab Sample Id: 200-17010-13

% Solids: 83.0 Date Received: 06/14/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	6.9			P
7440-43-9	Cadmium	0.50			P
7440-47-3	Chromium	14.0		J ~~E~~	P
7440-50-8	Copper	17.1		J ~~E~~	P
7439-92-1	Lead	11.8			P
7440-02-0	Nickel	22.2		J ~~E~~	P
7440-66-6	Zinc	67.6		J ~~E~~	P

Color Before: GREY Clarity Before: Texture: FINE

Color After: TAN Clarity After: CLOUDY Artifacts:

Comments:

MW 8/15/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO. 13

LMR13-90-072

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17010

Matrix: SED Lab Sample Id: 200-17010-13

% Solids: 83.0 Date Received: 06/14/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.039	J		CV

Color Before: GRAY Clarity Before: CLOUDY Texture: FINE

Color After: COLORLESS Clarity After: CLEAR Artifacts: NONE

Comments:

MW 8/15/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO. 14

LMR13-62-012

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17010

Matrix: SED Lab Sample Id: 200-17010-14

% Solids: 69.3 Date Received: 06/14/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	5.2			P
7440-43-9	Cadmium	0.37	J		P
7440-47-3	Chromium	15.4		J ~~E~~	P
7440-50-8	Copper	15.1		J ~~E~~	P
7439-92-1	Lead	13.9			P
7440-02-0	Nickel	21.5		J ~~E~~	P
7440-66-6	Zinc	54.3		J ~~E~~	P

Color Before: GREY Clarity Before: Texture: FINE

Color After: TAN Clarity After: CLOUDY Artifacts:

Comments:

NW 8/15/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO. 14

LMR13-62-012

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17010

Matrix: SED Lab Sample Id: 200-17010-14

% Solids: 69.3 Date Received: 06/14/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.039	J		CV

Color Before: GRAY Clarity Before: CLOUDY Texture: FINE

Color After: COLORLESS Clarity After: CLEAR Artifacts: NONE

Comments:

NW 8/15/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO. 15

LMR13-62-048

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17010

Matrix: SED Lab Sample Id: 200-17010-15

% Solids: 69.0 Date Received: 06/14/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	4.2			P
7440-43-9	Cadmium	0.34	J		P
7440-47-3	Chromium	13.0		J ~~E~~	P
7440-50-8	Copper	12.5		J ~~E~~	P
7439-92-1	Lead	11.2			P
7440-02-0	Nickel	18.8		J ~~E~~	P
7440-66-6	Zinc	44.2		J ~~E~~	P

Color Before: DARK GREY Clarity Before: Texture: COARSE

Color After: TAN Clarity After: CLOUDY Artifacts:

Comments:

NW 8/15/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO. 15

LMR13-62-048

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17010

Matrix: SED Lab Sample Id: 200-17010-15

% Solids: 69.0 Date Received: 06/14/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.056	J		CV

Color Before: GRAY Clarity Before: CLOUDY Texture: FINE

Color After: COLORLESS Clarity After: CLEAR Artifacts: NONE

Comments:

NDW 8/15/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-62-072

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678
Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 17010
Matrix: SED | Lab Sample Id: 200-17010-16
% Solids: 75.2 | Date Received: 06/14/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	4.9			P
7440-43-9	Cadmium	0.31	J		P
7440-47-3	Chromium	8.1		J ~~E~~	P
7440-50-8	Copper	7.2		J ~~E~~	P
7439-92-1	Lead	6.0			P
7440-02-0	Nickel	12.4		J ~~E~~	P
7440-66-6	Zinc	34.9		J ~~E~~	P

Color Before: GREY | Clarity Before: | Texture: FINE
Color After: TAN | Clarity After: CLOUDY | Artifacts:
Comments:

NW 8/15/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO. 16

LMR13-62-072

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17010

Matrix: SED Lab Sample Id: 200-17010-16

% Solids: 75.2 Date Received: 06/14/2013

Concentration Units (**ug/L, ug,** or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.046	J		CV

Color Before: GRAY Clarity Before: CLOUDY Texture: FINE

Color After: COLORLESS Clarity After: CLEAR Artifacts: NONE

Comments:

NW 8/15/13

17

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-62-096

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678
Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17010
Matrix: SED Lab Sample Id: 200-17010-17
% Solids: 82.0 Date Received: 06/14/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	18.9			P
7440-43-9	Cadmium	0.19	J		P
7440-47-3	Chromium	8.4		J ~~E~~	P
7440-50-8	Copper	8.2		J ~~E~~	P
7439-92-1	Lead	6.9			P
7440-02-0	Nickel	14.3		J ~~E~~	P
7440-66-6	Zinc	32.0		J ~~E~~	P

Color Before: GREY Clarity Before: Texture: FINE
Color After: TAN Clarity After: CLOUDY Artifacts:
Comments:

NW 8/15/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO. 17

LMR13-62-096

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17010

Matrix: SED Lab Sample Id: 200-17010-17

% Solids: 82.0 Date Received: 06/14/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.037	J		CV

Color Before: GRAY Clarity Before: CLOUDY Texture: FINE

Color After: COLORLESS Clarity After: CLEAR Artifacts: NONE

Comments:

NW 8/15/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO. 18
LMR13-91-024

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678
Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 17010
Matrix: SED | Lab Sample Id: 200-17010-18
% Solids: 52.6 | Date Received: 06/14/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	7.7			P
7440-43-9	Cadmium	0.72			P
7440-47-3	Chromium	32.3		J ~~E~~	P
7440-50-8	Copper	29.3		J ~~E~~	P
7439-92-1	Lead	27.4			P
7440-02-0	Nickel	37.8		J ~~E~~	P
7440-66-6	Zinc	136		J ~~E~~	P

Color Before: GREY | Clarity Before: | Texture: FINE
Color After: TAN | Clarity After: CLOUDY | Artifacts:
Comments:

NW 8/15/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO. 18

LMR13-91-024

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17010

Matrix: SED Lab Sample Id: 200-17010-18

% Solids: 52.6 Date Received: 06/14/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.092	J		CV

Color Before: GRAY Clarity Before: CLOUDY Texture: FINE

Color After: COLORLESS Clarity After: CLEAR Artifacts: NONE

Comments:

NW 8/15/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO. 19
LMR13-91-048

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678
Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 17010
Matrix: SED | Lab Sample Id: 200-17010-19
% Solids: 54.2 | Date Received: 06/14/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	8.0			P
7440-43-9	Cadmium	0.85			P
7440-47-3	Chromium	32.6		J ~~E~~	P
7440-50-8	Copper	30.5		J ~~E~~	P
7439-92-1	Lead	30.2			P
7440-02-0	Nickel	37.0		J ~~E~~	P
7440-66-6	Zinc	172		J ~~E~~	P

Color Before: GREY | Clarity Before: | Texture: FINE
Color After: TAN | Clarity After: CLOUDY | Artifacts:
Comments:

NW 8/15/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO. 19

LMR13-91-048

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17010

Matrix: SED Lab Sample Id: 200-17010-19

% Solids: 54.2 Date Received: 06/14/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.065	J		CV

Color Before: GRAY Clarity Before: CLOUDY Texture: FINE

Color After: COLORLESS Clarity After: CLEAR Artifacts: NONE

Comments:

JW 8/15/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO. 20

LMR13-47-012

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17010

Matrix: SED Lab Sample Id: 200-17010-20

% Solids: 40.2 Date Received: 06/14/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	8.3			P
7440-43-9	Cadmium	0.90			P
7440-47-3	Chromium	29.1		J E	P
7440-50-8	Copper	31.9		J E	P
7439-92-1	Lead	25.1			P
7440-02-0	Nickel	33.1		J E	P
7440-66-6	Zinc	131		J E	P

Color Before: GREY Clarity Before: Texture: FINE

Color After: TAN Clarity After: CLOUDY Artifacts:

Comments:

NW 8/15/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO. 20

LMR13-47-012

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17010

Matrix: SED Lab Sample Id: 200-17010-20

% Solids: 40.2 Date Received: 06/14/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.045	J		CV

Color Before: GRAY Clarity Before: CLOUDY Texture: FINE

Color After: COLORLESS Clarity After: CLEAR Artifacts: NONE

Comments:

MW 8/15/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO. 21

LMR13-91-012

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678

Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 17010

Matrix: SED | Lab Sample Id: 200-17010-21

% Solids: 47.0 | Date Received: 06/14/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	6.8			P
7440-43-9	Cadmium	0.72			P
7440-47-3	Chromium	24.3		J ~~E~~	P
7440-50-8	Copper	27.2		J ~~E~~	P
7439-92-1	Lead	22.2			P
7440-02-0	Nickel	29.9		J ~~E~~	P
7440-66-6	Zinc	111		J ~~E~~	P

Color Before: GREY | Clarity Before: | Texture: FINE

Color After: YELLOW | Clarity After: CLOUDY | Artifacts:

Comments:

MW 8/15/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO. 21

LMR13-91-012

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17010

Matrix: SED Lab Sample Id: 200-17010-21

% Solids: 47.0 Date Received: 06/14/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.044	J		CV

Color Before: GRAY Clarity Before: CLOUDY Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts: NONE

Comments:

NW 8/15/13

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - SEM/AVS

10

Client Sample ID: LMR13-90-012
Lab Sample ID: 200-17010-10
Lab Name: TestAmerica Burlington
Job No.: 200-17010-1
SDG ID.: 17010
Matrix: Sediment
Date Sampled: 06/13/2013 09:30
Reporting Basis: DRY
Date Received: 06/14/2013 10:40
% Solids: 50.5

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-43-9	Cadmium SEM	0.49	2.3	0.36	mg/Kg	J		10	6010C
7440-43-9	Cadmium SEM	0.0044	0.020	0.0032	umol/g	J		10	6010C
7440-50-8	Copper SEM	3.8	11.8	1.0	mg/Kg	J		10	6010C
7440-50-8	Copper SEM	0.059	0.19	0.016	umol/g	J		10	6010C
7439-92-1	Lead SEM	8.9	4.8	2.1	mg/Kg			10	6010C
7439-92-1	Lead SEM	0.043	0.023	0.010	umol/g			10	6010C
7440-02-0	Nickel SEM	3.8	19.0	1.4	mg/Kg	J		10	6010C
7440-02-0	Nickel SEM	0.064	0.32	0.023	umol/g	J		10	6010C
7440-66-6	Zinc SEM	25.0	9.5	2.7	mg/Kg			10	6010C
7440-66-6	Zinc SEM	0.38	0.15	0.041	umol/g			10	6010C
7439-97-6	Mercury SEM	0.0059	0.0095	0.0031	mg/Kg	J		1	7470A
7439-97-6	Mercury SEM	0.000029	0.000047	0.000016	umol/g	J		1	7470A

NW 8/15/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY - SEM/AVS

10

Client Sample ID: LMR13-90-012 Lab Sample ID: 200-17010-10

Lab Name: TestAmerica Burlington Job No.: 200-17010-1

SDG ID.: 17010

Matrix: Sediment Date Sampled: 06/13/2013 09:30

Reporting Basis: DRY Date Received: 06/14/2013 10:40

% Solids: 50.5

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
18496-25-8	Acid Volatile Sulfides (AVS)	99.0	30.4		mg/Kg			1	AVS
18496-25-8	Acid Volatile Sulfides (AVS)	3.1	0.95		umol/g			1	AVS

NW 8/15/13

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - SEM/AVS

10

Client Sample ID: LMR13-90-012 Lab Sample ID: 200-17010-10

Lab Name: TestAmerica Burlington Job No.: 200-17010-1

SDG ID.: 17010

Matrix: Sediment Date Sampled: 06/13/2013 09:30

Reporting Basis: WET Date Received: 06/14/2013 10:40

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	SEM/AVS Ratio	0.179	0.00100	0.00100	NONE			1	SEM

MW 8/15/13

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - SEM/AVS

20

Client Sample ID: LMR13-47-012 | Lab Sample ID: 200-17010-20

Lab Name: TestAmerica Burlington | Job No.: 200-17010-1

SDG ID.: 17010

Matrix: Sediment | Date Sampled: 06/13/2013 13:35

Reporting Basis: DRY | Date Received: 06/14/2013 10:40

% Solids: 40.2

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-43-9	Cadmium SEM	3.0	3.0	0.47	mg/Kg	U		10	6010C
7440-43-9	Cadmium SEM	0.026	0.026	0.0042	umol/g	U		10	6010C
7440-50-8	Copper SEM	3.9	15.3	1.3	mg/Kg	J		10	6010C
7440-50-8	Copper SEM	0.062	0.24	0.021	umol/g	J		10	6010C
7439-92-1	Lead SEM	6.9	6.2	2.7	mg/Kg			10	6010C
7439-92-1	Lead SEM	0.033	0.030	0.013	umol/g			10	6010C
7440-02-0	Nickel SEM	2.6	24.6	1.8	mg/Kg	J		10	6010C
7440-02-0	Nickel SEM	0.045	0.42	0.030	umol/g	J		10	6010C
7440-66-6	Zinc SEM	19.0	12.3	3.4	mg/Kg			10	6010C
7440-66-6	Zinc SEM	0.29	0.19	0.053	umol/g			10	6010C
7439-97-6	Mercury SEM	0.012	0.012	0.0041	mg/Kg	U		1	7470A
7439-97-6	Mercury SEM	0.000061	0.000061	0.000020	umol/g	U		1	7470A

NW 8/15/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY - SEM/AVS

20

Client Sample ID: LMR13-47-012 | Lab Sample ID: 200-17010-20

Lab Name: TestAmerica Burlington | Job No.: 200-17010-1

SDG ID.: 17010

Matrix: Sediment | Date Sampled: 06/13/2013 13:35

Reporting Basis: DRY | Date Received: 06/14/2013 10:40

% Solids: 40.2

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
18496-25-8	Acid Volatile Sulfides (AVS)	49.2	39.4		mg/Kg			1	AVS
18496-25-8	Acid Volatile Sulfides (AVS)	1.5	1.2		umol/g			1	AVS

NW 8/15/13

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - SEM/AVS

20

Client Sample ID: LMR13-47-012 Lab Sample ID: 200-17010-20

Lab Name: TestAmerica Burlington Job No.: 200-17010-1

SDG ID.: 17010

Matrix: Sediment Date Sampled: 06/13/2013 13:35

Reporting Basis: WET Date Received: 06/14/2013 10:40

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	SEM/AVS Ratio	0.281	0.00100	0.00100	NONE			1	SEM

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1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - SEM/AVS

21

Client Sample ID: LMR13-91-012 | Lab Sample ID: 200-17010-21

Lab Name: TestAmerica Burlington | Job No.: 200-17010-1

SDG ID.: 17010

Matrix: Sediment | Date Sampled: 06/13/2013 11:40

Reporting Basis: DRY | Date Received: 06/14/2013 10:40

% Solids: 47.0

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-43-9	Cadmium SEM	2.6	2.6	0.40	mg/Kg	U		10	6010C
7440-43-9	Cadmium SEM	0.023	0.023	0.0036	umol/g	U		10	6010C
7440-50-8	Copper SEM	3.9	13.2	1.1	mg/Kg	J		10	6010C
7440-50-8	Copper SEM	0.061	0.21	0.018	umol/g	J		10	6010C
7439-92-1	Lead SEM	8.4	5.3	2.3	mg/Kg			10	6010C
7439-92-1	Lead SEM	0.040	0.026	0.011	umol/g			10	6010C
7440-02-0	Nickel SEM	3.6	21.3	1.5	mg/Kg	J		10	6010C
7440-02-0	Nickel SEM	0.061	0.36	0.026	umol/g	J		10	6010C
7440-66-6	Zinc SEM	23.3	10.6	3.0	mg/Kg			10	6010C
7440-66-6	Zinc SEM	0.36	0.16	0.046	umol/g			10	6010C
7439-97-6	Mercury SEM	0.011	0.011	0.0035	mg/Kg	U		1	7470A
7439-97-6	Mercury SEM	0.000053	0.000053	0.000017	umol/g	U		1	7470A

NW 8/15/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY - SEM/AVS

21

Client Sample ID: LMR13-91-012 | Lab Sample ID: 200-17010-21

Lab Name: TestAmerica Burlington | Job No.: 200-17010-1

SDG ID.: 17010

Matrix: Sediment | Date Sampled: 06/13/2013 11:40

Reporting Basis: DRY | Date Received: 06/14/2013 10:40

% Solids: 47.0

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
18496-25-8	Acid Volatile Sulfides (AVS)	128	34.0		mg/Kg			1	AVS
18496-25-8	Acid Volatile Sulfides (AVS)	4.0	1.1		umol/g			1	AVS

MW 8/15/13

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - SEM/AVS

21

Client Sample ID: LMR13-91-012 | Lab Sample ID: 200-17010-21

Lab Name: TestAmerica Burlington | Job No.: 200-17010-1

SDG ID.: 17010

Matrix: Sediment | Date Sampled: 06/13/2013 11:40

Reporting Basis: WET | Date Received: 06/14/2013 10:40

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	SEM/AVS Ratio	0.130	0.00100	0.00100	NONE			1	SEM

MW 8/15/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

1

Client Sample ID: LMR13-93-012
Lab Sample ID: 200-17010-1
Lab Name: TestAmerica Burlington
Job No.: 200-17010-1
SDG ID.: 17010
Matrix: Sediment
Date Sampled: 06/13/2013 08:20
Reporting Basis: WET
Date Received: 06/14/2013 10:40
% Solids: 60.0

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	32600	1000		mg/Kg			1	Lloyd Kahn

MW 8/15/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

2

Client Sample ID: LMR13-93-024 Lab Sample ID: 200-17010-2

Lab Name: TestAmerica Burlington Job No.: 200-17010-1

SDG ID.: 17010

Matrix: Sediment Date Sampled: 06/13/2013 08:30

Reporting Basis: WET Date Received: 06/14/2013 10:40

% Solids: 56.8

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	42900	1000		mg/Kg			1	Lloyd Kahn

MW 8/15/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

3

Client Sample ID: LMR13-93-048
Lab Sample ID: 200-17010-3
Lab Name: TestAmerica Burlington
Job No.: 200-17010-1
SDG ID.: 17010
Matrix: Sediment
Date Sampled: 06/13/2013 08:40
Reporting Basis: WET
Date Received: 06/14/2013 10:40
% Solids: 62.0

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	30300	1000		mg/Kg			1	Lloyd Kahn

MW 8/15/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

4

Client Sample ID: LMR13-93-072 | Lab Sample ID: 200-17010-4

Lab Name: TestAmerica Burlington | Job No.: 200-17010-1

SDG ID.: 17010

Matrix: Sediment | Date Sampled: 06/13/2013 08:50

Reporting Basis: WET | Date Received: 06/14/2013 10:40

% Solids: 61.7

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	28000	1000		mg/Kg			1	Lloyd Kahn

MW 8/15/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

5

Client Sample ID: LMR13-93-096
Lab Sample ID: 200-17010-5
Lab Name: TestAmerica Burlington
Job No.: 200-17010-1
SDG ID.: 17010
Matrix: Sediment
Date Sampled: 06/13/2013 09:00
Reporting Basis: WET
Date Received: 06/14/2013 10:40
% Solids: 65.2

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	24800	1000		mg/Kg			1	Lloyd Kahn

MW 8/15/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

6

Client Sample ID: LMR13-93-120 Lab Sample ID: 200-17010-6

Lab Name: TestAmerica Burlington Job No.: 200-17010-1

SDG ID.: 17010

Matrix: Sediment Date Sampled: 06/13/2013 09:10

Reporting Basis: WET Date Received: 06/14/2013 10:40

% Solids: 66.5

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	23500	1000		mg/Kg			1	Lloyd Kahn

MW 8/15/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

7

Client Sample ID: LMR13-62-024FD
Lab Sample ID: 200-17010-7
Lab Name: TestAmerica Burlington
Job No.: 200-17010-1
SDG ID.: 17010
Matrix: Sediment
Date Sampled: 06/13/2013 10:35
Reporting Basis: WET
Date Received: 06/14/2013 10:40
% Solids: 68.7

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	19900	1000		mg/Kg			1	Lloyd Kahn

NW 8/15/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

8

Client Sample ID: LMR13-90-024FD
Lab Sample ID: 200-17010-8
Lab Name: TestAmerica Burlington
Job No.: 200-17010-1
SDG ID.: 17010
Matrix: Sediment
Date Sampled: 06/13/2013 09:40
Reporting Basis: WET
Date Received: 06/14/2013 10:40
% Solids: 54.9

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	22300	1000		mg/Kg			1	Lloyd Kahn

NW 8/15/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

9

Client Sample ID: LMR13-62-024
Lab Sample ID: 200-17010-9
Lab Name: TestAmerica Burlington
Job No.: 200-17010-1
SDG ID.: 17010
Matrix: Sediment
Date Sampled: 06/13/2013 10:35
Reporting Basis: WET
Date Received: 06/14/2013 10:40
% Solids: 68.8

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	21100	1000		mg/Kg			1	Lloyd Kahn

NW 8/15/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

10

Client Sample ID: LMR13-90-012 | Lab Sample ID: 200-17010-10

Lab Name: TestAmerica Burlington | Job No.: 200-17010-1

SDG ID.: 17010

Matrix: Sediment | Date Sampled: 06/13/2013 09:30

Reporting Basis: WET | Date Received: 06/14/2013 10:40

% Solids: 50.5

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	23800	1000		mg/Kg			1	Lloyd Kahn

NW 8/15/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

11

Client Sample ID: LMR13-90-024
Lab Sample ID: 200-17010-11
Lab Name: TestAmerica Burlington
Job No.: 200-17010-1
SDG ID.: 17010
Matrix: Sediment
Date Sampled: 06/13/2013 09:40
Reporting Basis: WET
Date Received: 06/14/2013 10:40
% Solids: 54.8

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	25400	1000		mg/Kg			1	Lloyd Kahn

NJS 8/15/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

12

Client Sample ID: LMR13-90-048 Lab Sample ID: 200-17010-12

Lab Name: TestAmerica Burlington Job No.: 200-17010-1

SDG ID.: 17010

Matrix: Sediment Date Sampled: 06/13/2013 09:50

Reporting Basis: WET Date Received: 06/14/2013 10:40

% Solids: 57.1

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	29300	1000		mg/Kg			1	Lloyd Kahn

NW 8/15/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

13

Client Sample ID: LMR13-90-072 Lab Sample ID: 200-17010-13

Lab Name: TestAmerica Burlington Job No.: 200-17010-1

SDG ID.: 17010

Matrix: Sediment Date Sampled: 06/13/2013 10:00

Reporting Basis: WET Date Received: 06/14/2013 10:40

% Solids: 83.0

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	23800	1000		mg/Kg			1	Lloyd Kahn

MW 8/15/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

14

Client Sample ID: LMR13-62-012 Lab Sample ID: 200-17010-14

Lab Name: TestAmerica Burlington Job No.: 200-17010-1

SDG ID.: 17010

Matrix: Sediment Date Sampled: 06/13/2013 10:25

Reporting Basis: WET Date Received: 06/14/2013 10:40

% Solids: 69.3

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	20800	1000		mg/Kg			1	Lloyd Kahn

NW 8/15/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

15

Client Sample ID: LMR13-62-048 Lab Sample ID: 200-17010-15

Lab Name: TestAmerica Burlington Job No.: 200-17010-1

SDG ID.: 17010

Matrix: Sediment Date Sampled: 06/13/2013 10:45

Reporting Basis: WET Date Received: 06/14/2013 10:40

% Solids: 69.0

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	21400	1000		mg/Kg			1	Lloyd Kahn

LW 8/15/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

16

Client Sample ID: LMR13-62-072 Lab Sample ID: 200-17010-16

Lab Name: TestAmerica Burlington Job No.: 200-17010-1

SDG ID.: 17010

Matrix: Sediment Date Sampled: 06/13/2013 10:55

Reporting Basis: WET Date Received: 06/14/2013 10:40

% Solids: 75.2

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	16600	1000		mg/Kg			1	Lloyd Kahn

MW 8/15/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

17

Client Sample ID: LMR13-62-096 | Lab Sample ID: 200-17010-17

Lab Name: TestAmerica Burlington | Job No.: 200-17010-1

SDG ID.: 17010

Matrix: Sediment | Date Sampled: 06/13/2013 11:05

Reporting Basis: WET | Date Received: 06/14/2013 10:40

% Solids: 82.0

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	17500	1000		mg/Kg			1	Lloyd Kahn

MW 8/15/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

18

Client Sample ID: LMR13-91-024 | Lab Sample ID: 200-17010-18

Lab Name: TestAmerica Burlington | Job No.: 200-17010-1

SDG ID.: 17010

Matrix: Sediment | Date Sampled: 06/13/2013 11:50

Reporting Basis: WET | Date Received: 06/14/2013 10:40

% Solids: 52.6

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	21400	1000		mg/Kg			1	Lloyd Kahn

MW 8/15/13

INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

19

Client Sample ID: LMR13-91-048 | Lab Sample ID: 200-17010-19

Lab Name: TestAmerica Burlington | Job No.: 200-17010-1

SDG ID.: 17010

Matrix: Sediment | Date Sampled: 06/13/2013 12:00

Reporting Basis: WET | Date Received: 06/14/2013 10:40

% Solids: 54.2

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	22200	1000		mg/Kg			1	Lloyd Kahn

MW 8/15/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

20

Client Sample ID: LMR13-47-012
Lab Sample ID: 200-17010-20
Lab Name: TestAmerica Burlington
Job No.: 200-17010-1
SDG ID.: 17010
Matrix: Sediment
Date Sampled: 06/13/2013 13:35
Reporting Basis: WET
Date Received: 06/14/2013 10:40
% Solids: 40.2

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	33700	1000		mg/Kg			1	Lloyd Kahn

NW 8/15/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

21

Client Sample ID: LMR13-91-012
Lab Sample ID: 200-17010-21
Lab Name: TestAmerica Burlington
Job No.: 200-17010-1
SDG ID.: 17010
Matrix: Sediment
Date Sampled: 06/13/2013 11:40
Reporting Basis: WET
Date Received: 06/14/2013 10:40
% Solids: 47.0

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	27500	1000		mg/Kg			1	Lloyd Kahn

NW 8/15/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

1

Client Sample ID: LMR13-93-012 Lab Sample ID: 200-17010-1

Lab Name: TestAmerica Canton Job No.: 200-17010-1

SDG ID.: 17010

Matrix: Sediment Date Sampled: 06/13/2013 08:20

Reporting Basis: DRY Date Received: 06/14/2013 10:40

% Solids: 60.0

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	1950	334	147	mg/Kg			1	9071B

NW 8/15/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

2

Client Sample ID: LMR13-93-024 Lab Sample ID: 200-17010-2

Lab Name: TestAmerica Canton Job No.: 200-17010-1

SDG ID.: 17010

Matrix: Sediment Date Sampled: 06/13/2013 08:30

Reporting Basis: DRY Date Received: 06/14/2013 10:40

% Solids: 56.8

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	3600	353	156	mg/Kg			1	9071B

NW 8/15/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

3

Client Sample ID: LMR13-93-048 Lab Sample ID: 200-17010-3

Lab Name: TestAmerica Canton Job No.: 200-17010-1

SDG ID.: 17010

Matrix: Sediment Date Sampled: 06/13/2013 08:40

Reporting Basis: DRY Date Received: 06/14/2013 10:40

% Solids: 62.0

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	2040	321	142	mg/Kg			1	9071B

NW 8/15/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

4

Client Sample ID: LMR13-93-072
Lab Sample ID: 200-17010-4
Lab Name: TestAmerica Canton
Job No.: 200-17010-1
SDG ID.: 17010
Matrix: Sediment
Date Sampled: 06/13/2013 08:50
Reporting Basis: DRY
Date Received: 06/14/2013 10:40
% Solids: 61.7

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	1340	323	143	mg/Kg			1	9071B

NW 8/15/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

5

Client Sample ID: LMR13-93-096
Lab Sample ID: 200-17010-5
Lab Name: TestAmerica Canton
Job No.: 200-17010-1
SDG ID.: 17010
Matrix: Sediment
Date Sampled: 06/13/2013 09:00
Reporting Basis: DRY
Date Received: 06/14/2013 10:40
% Solids: 65.2

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	954	308	136	mg/Kg			1	9071B

MW 8/15/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

6

Client Sample ID: LMR13-93-120 | Lab Sample ID: 200-17010-6

Lab Name: TestAmerica Canton | Job No.: 200-17010-1

SDG ID.: 17010

Matrix: Sediment | Date Sampled: 06/13/2013 09:10

Reporting Basis: DRY | Date Received: 06/14/2013 10:40

% Solids: 66.5

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	599	300	132	mg/Kg			1	9071B

NW 8/15/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

9

Client Sample ID: LMR13-62-024 Lab Sample ID: 200-17010-9

Lab Name: TestAmerica Canton Job No.: 200-17010-1

SDG ID.: 17010

Matrix: Sediment Date Sampled: 06/13/2013 10:35

Reporting Basis: DRY Date Received: 06/14/2013 10:40

% Solids: 68.8

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	245	289	127	mg/Kg	J		1	9071B

NW 8/15/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

10

Client Sample ID: LMR13-90-012 Lab Sample ID: 200-17010-10

Lab Name: TestAmerica Canton Job No.: 200-17010-1

SDG ID.: 17010

Matrix: Sediment Date Sampled: 06/13/2013 09:30

Reporting Basis: DRY Date Received: 06/14/2013 10:40

% Solids: 50.5

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	451	392	173	mg/Kg			1	9071B

NW 8/15/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

11

Client Sample ID: LMR13-90-024
Lab Sample ID: 200-17010-11
Lab Name: TestAmerica Canton
Job No.: 200-17010-1
SDG ID.: 17010
Matrix: Sediment
Date Sampled: 06/13/2013 09:40
Reporting Basis: DRY
Date Received: 06/14/2013 10:40
% Solids: 54.8

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	531	367	162	mg/Kg			1	9071B

MW 8/15/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

12

Client Sample ID: LMR13-90-048 Lab Sample ID: 200-17010-12

Lab Name: TestAmerica Canton Job No.: 200-17010-1

SDG ID.: 17010

Matrix: Sediment Date Sampled: 06/13/2013 09:50

Reporting Basis: DRY Date Received: 06/14/2013 10:40

% Solids: 57.1

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	784	349	154	mg/Kg			1	9071B

MW 8/15/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

13

Client Sample ID: LMR13-90-072
Lab Sample ID: 200-17010-13
Lab Name: TestAmerica Canton
Job No.: 200-17010-1
SDG ID.: 17010
Matrix: Sediment
Date Sampled: 06/13/2013 10:00
Reporting Basis: DRY
Date Received: 06/14/2013 10:40
% Solids: 83.0

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	109	242	107	mg/Kg	J		1	9071B

MW 8/15/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

14

Client Sample ID: LMR13-62-012 Lab Sample ID: 200-17010-14

Lab Name: TestAmerica Canton Job No.: 200-17010-1

SDG ID.: 17010

Matrix: Sediment Date Sampled: 06/13/2013 10:25

Reporting Basis: DRY Date Received: 06/14/2013 10:40

% Solids: 69.3

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	288	288	127	mg/Kg	U		1	9071B

NW 8/15/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

15

Client Sample ID: LMR13-62-048 Lab Sample ID: 200-17010-15

Lab Name: TestAmerica Canton Job No.: 200-17010-1

SDG ID.: 17010

Matrix: Sediment Date Sampled: 06/13/2013 10:45

Reporting Basis: DRY Date Received: 06/14/2013 10:40

% Solids: 69.0

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	289	289	128	mg/Kg	U		1	9071B

NW 8/15/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

16

Client Sample ID: LMR13-62-072 Lab Sample ID: 200-17010-16

Lab Name: TestAmerica Canton Job No.: 200-17010-1

SDG ID.: 17010

Matrix: Sediment Date Sampled: 06/13/2013 10:55

Reporting Basis: DRY Date Received: 06/14/2013 10:40

% Solids: 75.2

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	261	261	115	mg/Kg	U		1	9071B

NW 8/15/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

17

Client Sample ID: LMR13-62-096 Lab Sample ID: 200-17010-17

Lab Name: TestAmerica Canton Job No.: 200-17010-1

SDG ID.: 17010

Matrix: Sediment Date Sampled: 06/13/2013 11:05

Reporting Basis: DRY Date Received: 06/14/2013 10:40

% Solids: 82.0

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	242	242	107	mg/Kg	U		1	9071B

NW 8/15/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

18

Client Sample ID: LMR13-91-024 Lab Sample ID: 200-17010-18

Lab Name: TestAmerica Canton Job No.: 200-17010-1

SDG ID.: 17010

Matrix: Sediment Date Sampled: 06/13/2013 11:50

Reporting Basis: DRY Date Received: 06/14/2013 10:40

% Solids: 52.6

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	373	U 373	165	mg/Kg		U	1	9071B

NN 8/15/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

19

Client Sample ID: LMR13-91-048 Lab Sample ID: 200-17010-19

Lab Name: TestAmerica Canton Job No.: 200-17010-1

SDG ID.: 17010

Matrix: Sediment Date Sampled: 06/13/2013 12:00

Reporting Basis: DRY Date Received: 06/14/2013 10:40

% Solids: 54.2

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	480	U 369	163	mg/Kg			1	9071B

NW 8/15/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

20

Client Sample ID: LMR13-47-012 Lab Sample ID: 200-17010-20

Lab Name: TestAmerica Canton Job No.: 200-17010-1

SDG ID.: 17010

Matrix: Sediment Date Sampled: 06/13/2013 13:35

Reporting Basis: DRY Date Received: 06/14/2013 10:40

% Solids: 40.2

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	650	500	221	mg/Kg		B	1	9071B

NW 8/15/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

21

Client Sample ID: LMR13-91-012 Lab Sample ID: 200-17010-21

Lab Name: TestAmerica Canton Job No.: 200-17010-1

SDG ID.: 17010

Matrix: Sediment Date Sampled: 06/13/2013 11:40

Reporting Basis: DRY Date Received: 06/14/2013 10:40

% Solids: 47.0

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	440	U	419	185	mg/Kg		B	1	9071B

MW 8/15/13

22

Client Sample ID: LMR13-90-048FD
Lab Sample ID: 200-17010-22
Lab Name: TestAmerica Canton
Job No.: 200-17010-1
SDG ID.: 17010
Matrix: Sediment
Date Sampled: 06/13/2013 09:50
Reporting Basis: DRY
Date Received: 06/14/2013 10:40
% Solids: 54.9

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	694	365	161	mg/Kg		B	1	9071B

NW 8/15/13

23

Client Sample ID: LMR13-93-024FD
Lab Sample ID: 200-17010-23
Lab Name: TestAmerica Canton
Job No.: 200-17010-1
SDG ID.: 17010
Matrix: Sediment
Date Sampled: 06/13/2013 08:30
Reporting Basis: DRY
Date Received: 06/14/2013 10:40
% Solids: 55.4

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	5500	363	160	mg/Kg		F	1	9071B

NW 8/15/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

25

Client Sample ID: LMR13-91-024FD
Lab Sample ID: 200-17010-25
Lab Name: TestAmerica Canton
Job No.: 200-17010-1
SDG ID.: 17010
Matrix: Sediment
Date Sampled: 06/13/2013 11:50
Reporting Basis: DRY
Date Received: 06/14/2013 10:40
% Solids: 49.9

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	401 ~~301~~	U 401	177	mg/Kg			1	9071B

NW 8/15/13

ENVIRONMENTAL
Data Services, Inc.

DATA VALIDATION SUMMARY REPORT
LOWER MAUMEE RIVER, TOLEDO, OHIO

Client: EA Engineering, Science & Technology, Inc., Hunt Valley, Maryland
SDG: 200-17014
Laboratory: Test America Laboratories, Burlington, Vermont
Test America Laboratories, Canton, Ohio
Site: Lower Maumee River, Maumee Area of Concern, Toledo, Ohio
Date: August 21, 2013

SVOC			
EDS ID	Client Sample ID	Laboratory Sample ID	Matrix
1	LMR13-91-072	200-17014-1	Sediment
2	LMR13-91-096	200-17014-2	Sediment
2MS	LMR13-91-096MS	200-17014-2MS	Sediment
2MSD	LMR13-91-096MSD	200-17014-2MSD	Sediment
3	LMR13-47-024	200-17014-3	Sediment
4	LMR13-47-048	200-17014-4	Sediment
5	LMR13-47-072	200-17014-5	Sediment
6	LMR13-47-096	200-17014-6	Sediment
7	LMR13-47-120	200-17014-7	Sediment
8	LMR13-47-144	200-17014-8	Sediment
9	LMR13-63-012	200-17014-9	Sediment
10	LMR13-63-024	200-17014-10	Sediment
11	LMR13-63-048	200-17014-11	Sediment
12	LMR13-63-072	200-17014-12	Sediment
13	LMR13-63-120	200-17014-13	Sediment
15	LMR13-63-096	200-17014-15	Sediment
16	LMR13-63-144	200-17014-16	Sediment
18	LMR13-51-012	200-17014-18	Sediment
19	LMR13-51-024	200-17014-19	Sediment
20	LMR13-51-048	200-17014-20	Sediment
20MS	LMR13-51-048MS	200-17014-20MS	Sediment
20MSD	LMR13-51-048MSD	200-17014-20MSD	Sediment
21	LMR13-51-072	200-17014-21	Sediment
23	LMR13-63-024FD	200-17014-23	Sediment
24	LMR13-51-012FD	200-17014-24	Sediment

PAH 34			
EDS ID	Client Sample ID	Laboratory Sample ID	Matrix
18	LMR13-51-012	200-17014-18	Sediment
24	LMR13-51-012FD	200-17014-24	Sediment

PCBs			
EDS ID	Client Sample ID	Laboratory Sample ID	Matrix
1	LMR13-91-072	200-17014-1	Sediment
2	LMR13-91-096	200-17014-2	Sediment

PCBs			
EDS ID	Client Sample ID	Laboratory Sample ID	Matrix
2MS	LMR13-91-096MS	200-17014-2MS	Sediment
2MSD	LMR13-91-096MSD	200-17014-2MSD	Sediment
3	LMR13-47-024	200-17014-3	Sediment
4	LMR13-47-048	200-17014-4	Sediment
5	LMR13-47-072	200-17014-5	Sediment
6	LMR13-47-096	200-17014-6	Sediment
7	LMR13-47-120	200-17014-7	Sediment
8	LMR13-47-144	200-17014-8	Sediment
9	LMR13-63-012	200-17014-9	Sediment
10	LMR13-63-024	200-17014-10	Sediment
11	LMR13-63-048	200-17014-11	Sediment
12	LMR13-63-072	200-17014-12	Sediment
13	LMR13-63-120	200-17014-13	Sediment
14	LMR13-47-024FD	200-17014-14	Sediment
15	LMR13-63-096	200-17014-15	Sediment
16	LMR13-63-144	200-17014-16	Sediment
17	LMR13-51-024FD	200-17014-17	Sediment
18	LMR13-51-012	200-17014-18	Sediment
19	LMR13-51-024	200-17014-19	Sediment
20	LMR13-51-048	200-17014-20	Sediment
20MS	LMR13-51-048MS	200-17014-20MS	Sediment
20MSD	LMR13-51-048MSD	200-17014-20MSD	Sediment
21	LMR13-51-072	200-17014-21	Sediment
25	LMR13-51-024FD	200-17014-25	Sediment

Metals/Mercury/TOC			
EDS ID	Client Sample ID	Laboratory Sample ID	Matrix
1	LMR13-91-072	200-17014-1	Sediment
2	LMR13-91-096	200-17014-2	Sediment
2MS	LMR13-91-096MS	200-17014-2MS	Sediment
2DUP	LMR13-91-096DUP	200-17014-2DUP	Sediment
3	LMR13-47-024	200-17014-3	Sediment
4	LMR13-47-048	200-17014-4	Sediment
5	LMR13-47-072	200-17014-5	Sediment
6	LMR13-47-096	200-17014-6	Sediment
7	LMR13-47-120	200-17014-7	Sediment
8	LMR13-47-144	200-17014-8	Sediment
9	LMR13-63-012	200-17014-9	Sediment
10	LMR13-63-024	200-17014-10	Sediment
11	LMR13-63-048	200-17014-11	Sediment
12	LMR13-63-072	200-17014-12	Sediment
13	LMR13-63-120	200-17014-13	Sediment
14	LMR13-47-024FD	200-17014-14	Sediment
15	LMR13-63-096	200-17014-15	Sediment
16	LMR13-63-144	200-17014-16	Sediment
17	LMR13-51-024FD	200-17014-17	Sediment
18	LMR13-51-012	200-17014-18	Sediment
19	LMR13-51-024	200-17014-19	Sediment
20	LMR13-51-048	200-17014-20	Sediment
20MS	LMR13-51-048MS	200-17014-20MS	Sediment
20DUP	LMR13-51-048DUP	200-17014-20DUP	Sediment

Metals/Mercury/TOC			
EDS ID	Client Sample ID	Laboratory Sample ID	Matrix
21	LMR13-51-072	200-17014-21	Sediment

AVS/SEM			
EDS ID	Client Sample ID	Laboratory Sample ID	Matrix
18	LMR13-51-012	200-17014-18	Sediment

HEM			
EDS ID	Client Sample ID	Laboratory Sample ID	Matrix
1	LMR13-91-072	200-17014-1	Sediment
2	LMR13-91-096	200-17014-2	Sediment
2MS	LMR13-91-096MS	200-17014-2MS	Sediment
2MSD	LMR13-91-096MSD	200-17014-2MSD	Sediment
3	LMR13-47-024	200-17014-3	Sediment
4	LMR13-47-048	200-17014-4	Sediment
5	LMR13-47-072	200-17014-5	Sediment
6	LMR13-47-096	200-17014-6	Sediment
7	LMR13-47-120	200-17014-7	Sediment
8	LMR13-47-144	200-17014-8	Sediment
9	LMR13-63-012	200-17014-9	Sediment
10	LMR13-63-024	200-17014-10	Sediment
11	LMR13-63-048	200-17014-11	Sediment
12	LMR13-63-072	200-17014-12	Sediment
13	LMR13-63-120	200-17014-13	Sediment
15	LMR13-63-096	200-17014-15	Sediment
16	LMR13-63-144	200-17014-16	Sediment
18	LMR13-51-012	200-17014-18	Sediment
19	LMR13-51-024	200-17014-19	Sediment
20	LMR13-51-048	200-17014-20	Sediment
20MS	LMR13-51-048MS	200-17014-20MS	Sediment
20MSD	LMR13-51-048MSD	200-17014-20MSD	Sediment
21	LMR13-51-072	200-17014-21	Sediment
22	LMR13-47-048FD	200-17014-22	Sediment
23	LMR13-63-024FD	200-17014-23	Sediment

A full data validation was performed on the analytical data for twenty-five sediment samples collected on June 13, 2013 by EA Engineering at the Lower Maumee River site in Toledo, Ohio. The samples were analyzed under the Environmental Protection Agency (USEPA) Contract Laboratory Program (CLP) Multi-Media Multi-Concentration Organics Analysis SOM01.2 and Inorganic Analysis ILM05.4 and the Test Methods for the Evaluation of Solid Waste, USEPA SW-846, Third Edition, September 1986, with revisions.

Specific method references are as follows:

Analysis	*Method References*
SVOC	USEPA CLP SOM01.2
PAH 34	USEPA CLP SOM01.2
PCBs	USEPA CLP SOM01.2
Michigan Metals & Mercury	USEPA CLP ISM01.3
AVS/SEM	USEPA SW-846 Methods 6010C/7470A
TOC	Lloyd Kahn

Analysis	*Method References*
Oil & Grease (HEM)	USEPA SW-846 Method 9071B

The data have been validated according to the protocols and quality control (QC) requirements of the analytical methods, the Great Lakes Legacy Act, March 2010, the Quality Assurance Project Plan for Phase 2 of the Lower Maumee River Site Characterization, May 2013, and the USEPA National Functional Guidelines for Organic Data Review as follows:

- The USEPA "Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review," June 2008;
- The USEPA "Contract Laboratory Program National Functional Guidelines for Inorganic Superfund Data Review," January 2010;
- and the reviewer's professional judgment.

The following items/criteria were reviewed for this report:

Organics

- Holding times and sample preservation
- Gas Chromatography/Mass Spectroscopy (GC/MS) Tuning
- Initial and continuing calibration summaries
- Method blank and field blank contamination
- Surrogate Spike recoveries
- Matrix Spike/Matrix Spike Duplicate (MS/MSD) recoveries
- Laboratory Control Sample (LCS) recoveries
- Internal standard area and retention time summary forms
- Target Compound Identification
- Compound Quantitation
- Tentatively Identified Compounds (TICs)
- Field Duplicate sample precision

Inorganics

- Holding times and sample preservation
- ICP/MS Tuning
- Initial and continuing calibration verifications
- Method blank and field blank contamination
- ICP Interference Check Sample
- Laboratory Control Sample (LCS) recoveries
- Matrix Spike Analysis
- Duplicate Sample Analysis
- ICP Serial Dilution
- Compound Quantitation
- Field Duplicate sample precision

Overall Usability Issues:

There were minor rejections of data. This data cannot be used in the decision-making process for this project.

- Three SVOC compounds were rejected in sixteen samples due to severely low surrogate recoveries.

Overall the remaining data is acceptable for the intended purposes as qualified for the deficiencies detailed in this report.

Please note that any results qualified (U) due to blank contamination may be then qualified (J) due to another action. Therefore, the results may be qualified (UJ) due to the culmination of the blank contaminations and actions from other exceedences of QC criteria.

Semivolatile Organic Compounds (SVOC)

Holding Times

- All samples were extracted within 14 days for sediment samples and analyzed within 40 days for all samples.

GC/MS Tuning

- All criteria were met.

Initial Calibration

- All %RSD and mean RRF criteria were met.

Continuing Calibration

- All %D and RRF criteria were met except the following.

CCAL Date	Compound	%D/RRF	Qualifier	Affected Samples
07/18/13 (0108)	Hexachlorocyclopentadiene	85.9%	J/UJ Unless R due to Surrogates	3-11
07/19/13 (0052)	Hexachlorocyclopentadiene	71.6%	J/UJ Unless R due to Surrogates	1, 2, 12, 13, 16, 18-21, 23, 24
	2,4-Dinitrophenol	54.3%	J/UJ	
	Pentachlorophenol	59.9%	J/UJ	
07/20/13 (1051)	Hexachlorocyclopentadiene	66.8%	None - See Surrogates	15
	Pentachlorophenol	50.2%	J/UJ	

Method Blank

- The method blanks exhibited the following contamination.

Blank ID	Compound	Conc. ug/kg	Qualifier	Affected Samples
SBLKL7	Butylbenzylphthalate	18	U	3-12, 18-20
	bis(2-Ethylhexyl)phthalate	55	U	3-6, 9, 18-20
SBLKL8	Butylbenzylphthalate	29	U	21, 23, 24
	bis(2-Ethylhexyl)phthalate	83	U	

Field Blank

- Field QC samples were not analyzed.

Surrogate Spike Recoveries

- All samples exhibited acceptable surrogate %R values except the following.

Sample ID	Surrogate	%R	Qualifier
1	4-Chloroaniline-d4	0%	R - Associated Compounds
	Pyrene-d10	49%	J/UJ - Associated Compounds
2	4-Chloroaniline-d4	0%	R - Associated Compounds
3	4-Methylphenol-d8	103%	None - ND
	4-Chloroaniline-d4	0%	R - Associated Compounds
4	4-Chloroaniline-d4	0%	R - Associated Compounds
5	Phenol-d5	111%	J - Positive Associated Compounds
	4-Methylphenol-d8	111%	None- ND
	4-Chloroaniline-d4	0%	R - Associated Compounds
6	4-Chloroaniline-d4	0%	R - Associated Compounds
8	4-Methylphenol-d8	102%	None - ND
9	4-Chloroaniline-d4	0%	R - Associated Compounds
10	Phenol-d5	109%	J - Positive Associated Compounds
	4-Methylphenol-d8	106%	None - ND
	4-Chloroaniline-d4	0%	R - Associated Compounds
11	4-Chloroaniline-d4	0%	R - Associated Compounds
12	Phenol-d5	108%	J - Positive Associated Compounds
	4-Methylphenol-d8	108%	
	4-Chloroaniline-d4	0%	R - Associated Compounds
15	4-Chloroaniline-d4	0%	R - Associated Compounds
18	4-Chloroaniline-d4	0%	R - Associated Compounds
19	4-Chloroaniline-d4	0%	R - Associated Compounds
20	4-Chloroaniline-d4	0%	R - Associated Compounds
21	Phenol-d5	106%	J - Positive Associated Compounds
23	4-Chloroaniline-d4	0%	R - Associated Compounds
24	4-Chloroaniline-d4	0%	R - Associated Compounds

Matrix Spike/Matrix Spike Duplicate (MS/MSD) Recoveries

- The MS/MSD sample exhibited acceptable %R and RPD values except the following.

MS/MSD Sample ID	Compound	MS %R/MSD %R/ RPD	Qualifier
2	Pentachlorophenol	0%/0%/OK	Results Not Valid - 5X Dilution

Laboratory Control Samples

- A LCS sample was not analyzed.

Internal Standard (IS) Area Performance

- All internal standards met response and retention time (RT) criteria except the following.

Sample ID	Internal Standard	Area Count	Qualifier
2	IS5=Chrysene-d12	Low	J/UJ - Associated Compounds
	IS6=Perylene-d12	Low	

Target Compound Identification

- All mass spectra and quantitation criteria were met.

Compound Quantitation

- Several samples were analyzed at various dilutions due to high concentrations of target compounds. No action was required.

Field Duplicate Sample Precision

- Field duplicate results are summarized below.

SVOC				
Compound	LMR13-63-024 ug/kg	LMR13-63-024FD ug/kg	RPD	Qualifier
Benzaldehyde	70	58	19%	None
Acetophenone	36	21	53%	
Naphthalene	27	30	11%	
Acenaphthene	25	24	4%	
Dibenzofuran	20	20	0%	
Fluorene	48	350U	NC	None - 5X Rule Applies
Phenanthrene	180	160	12%	None
Anthracene	35	40	13%	
di-n-Butylphthalate	22	18	20%	
Fluoranthene	290	240	19%	

Pyrene	460	410	11%	None
Benzo(a)anthracene	180	180	0%	
Chrysene	290	300	3%	
bis(2-Ethylhexyl)phthalate	580	770	28%	
Benzo(b)fluoranthene	190	220	15%	
Benzo(k)fluoranthene	180	170	6%	
Benzo(a)pyrene	150	200	29%	
Indeno(1,2,3-cd)pyrene	130	150	14%	
Dibenzo(a,h)anthracene	60	69	14%	
Benzo(g,h,i)perylene	190	200	5%	

SVOC				
Compound	LMR13-51-012 ug/kg	LMR13-51-012FD ug/kg	RPD	Qualifier
Benzaldehyde	51	51	0%	None
Acetophenone	19	15	24%	
Naphthalene	11	310U	NC	
Acenaphthene	26	32	21%	
Dibenzofuran	13	14	7%	
Fluorene	33	40	19%	
Phenanthrene	130	180	32%	
Anthracene	40	54	30%	
di-n-Butylphthalate	16	18	12%	
Fluoranthene	290	360	22%	
Pyrene	490	540	10%	
Benzo(a)anthracene	160	180	12%	
Chrysene	260	270	4%	
Benzo(b)fluoranthene	200	180	11%	
Benzo(k)fluoranthene	120	180	40%	
Benzo(a)pyrene	140	160	13%	
Indeno(1,2,3-cd)pyrene	110	130	17%	
Dibenzo(a,h)anthracene	45	49	9%	
Benzo(g,h,i)perylene	160	170	6%	

Polynuclear Aromatic Hydrocarbons (PAH 34)

Holding Times

- All samples were extracted within 14 days for sediment samples and analyzed within 40 days for all samples.

GC/MS Tuning

- All criteria were met.

Initial Calibration

- All %RSD and mean RRF criteria were met.

Continuing Calibration

- All %D and RRF criteria were met except the following.

CCAL Date	Compound	%D/RRF	Qualifier	Affected Samples
07/30/13	Dibenzo(a,h)anthracene	31.2%	J/UJ	18, 24

Method Blank

- The method blanks exhibited the following contamination.

Blank ID	Compound	Conc. ug/kg	Qualifier	Affected Samples
SBLKL7	Naphthalene	0.16	U	18
	Total 16 PPAH	0.16	J	
	Total PAH	0.16	J	
SBLKL8	Naphthalene	0.17	U	24
	Phenanthrene	0.17	None	All >5X
	Total 16 PPAH	0.35	J	24
	Total PAH	0.35	J	

Field Blank

- Field QC samples were not analyzed.

Surrogate Spike Recoveries

- All samples exhibited acceptable surrogate %R values.

Matrix Spike/Matrix Spike Duplicate (MS/MSD) Recoveries

- The MS/MSD sample exhibited acceptable %R and RPD values.

Laboratory Control Samples

- A LCS sample was not analyzed.

Internal Standard (IS) Area Performance

- All internal standards met response and retention time (RT) criteria.

Target Compound Identification

- All mass spectra and quantitation criteria were met.

Compound Quantitation

- Total 16 PPAH and Total PAH were estimated (J) in all samples due to blank contamination.

Field Duplicate Sample Precision

- Field duplicate results are summarized below.

PAH 34				
Compound	LMR13-51-012 ug/kg	LMR13-51-012FD ug/kg	RPD	Qualifier
1-Methylnaphthalene	5.6	5.9	5%	None
2-Methylnaphthalene	7.4	8.2	10%	
Acenaphthylene	5.7	6.2	8%	
Acenaphthene	21	29	32%	
Fluorene	25	36	36%	
Phenanthrene	130	170	27%	
Anthracene	43	55	24%	
Fluoranthene	280	350	22%	
Pyrene	310	400	25%	
Benzo(a)anthracene	140	170	19%	
Chrysene	190	250	27%	
Benzo(b)fluorene	120	140	15%	

PAH 34				
Compound	LMR13-51-012 ug/kg	LMR13-51-012FD ug/kg	RPD	Qualifier
Benzo(k)fluorene	130	150	14%	None
Benzo(e)pyrene	94	110	16%	
Benzo(a)pyrene	120	140	15%	
Perylene	780	940	19%	
Indeno(12,3-cd)pyrene	62	89	36%	
Dibenzo(a,h)anthracene	19	27	35%	
Benzo(g,h,i)perylene	65	92	34%	
C1-Naphthalenes	8.7	9.9	13%	
C2-Naphthalenes	50	60	18%	
C3-Naphthalenes	74	90	20%	
C4-Naphthalenes	84	110	27%	
C1 Fluorenes	12	14	15%	
C2 Fluorenes	18	23	24%	
C3 Fluorenes	34	39	14%	
C1-Phenanthrenes/Anthracenes	130	170	27%	
C2-Phenanthrenes/Anthracenes	120	150	22%	
C3-Phenanthrenes/Anthracenes	150	190	24%	
C4-Phenanthrenes/Anthracenes	96	130	30%	
C1-Fluoranthenes/Pyrenes	210	270	25%	
C2-Fluoranthenes/Pyrenes	140	170	19%	
C3-Fluoranthenes/Pyrenes	87	120	32%	
C1 Chyrsenes	140	190	30%	
C2 Chyrsenes	110	150	31%	
C3 Chyrsenes	50	72	36%	
C4 Chyrsenes	16	23	36%	
Total 16 PPAH	1700	2100	21%	
Total PAH	4100	5200	24%	

Polychlorinated Biphenyls (PCBs)

Holding Times

- All samples were extracted within 14 days for sediment samples and analyzed within 40 days.

Initial Calibration

- All %RSD and/or correlation coefficient criteria were met.

Continuing Calibration

- All %D criteria were met.

Method Blank

- The method blanks were free of contamination.

Field Blank

- Field QC samples were not analyzed.

Surrogate Spike Recoveries

- All samples exhibited acceptable surrogate recoveries.

Matrix Spike/Matrix Spike Duplicate (MS/MSD) Recoveries

- The MS/MSD sample exhibited acceptable %R and RPD values except the following.

MS/MSD Sample ID	Compound	MS %R/MSD %R/ RPD	Qualifier
2	Aroclor-1016	509%/545%/OK	None – 5X Dilution
	Aroclor-1260	18%/17%/OK	

Laboratory Control Samples

- The LCS sample exhibited acceptable %R values.

Compound Quantitation

- Several samples were analyzed at a dilution. EDS Sample IDs 17 and 19 were analyzed at a 5X dilution even though all results were non-detect.

Field Duplicate Sample Precision

- Field duplicate results are summarized below.

PCBs				
Compound	LMR13-47-024 ug/kg	LMR13-47-024FD ug/kg	RPD	Qualifier
Aroclor-1242	29	30	%	None
Aroclor-1254	24	25	%	
Aroclor-1260	7.2	4.7	%	

PCBs				
Compound	LMR13-51-024 ug/kg	LMR13-51-024FD ug/kg	RPD	Qualifier
None	ND	ND	-	-

GC Column Difference Results

- Several samples exhibited high %D values > 25% between columns and have been qualified as estimated (J) by the reviewer.

Metals & Mercury

Holding Times

- All samples were prepared and analyzed within 28 days for mercury and 180 days for all other metals.

ICP/MS Tuning

- Not applicable.

Initial Calibration Verification

- All initial calibration criteria were met.

Continuing Calibration Verification

- All continuing calibration criteria were met.

Method Blank

- The method blanks exhibited the following contamination.

Blank ID	Compound	Conc. mg/kg	Qualifier	Affected Samples
MB	Zinc	0.78	None	All Associated >5X
	Zinc	0.26	None	
	Zinc	0.56	None	
	Mercury	0.30	None	

Field Blank

- Field QC samples were not analyzed.

ICP Interference Check Sample

- The ICP interference check sample exhibited acceptable %R values.

Laboratory Control Samples

- The LCS sample exhibited acceptable recoveries.

Matrix Spike Analysis

- The matrix spike sample exhibited acceptable %R values.

Duplicate Sample Analysis

- The duplicate sample exhibited acceptable RPD values.

ICP Serial Dilution

- ICP serial dilution percent differences (%D) were within acceptance limits except the following.

ICP Sample ID	Compound	%D	Qualifier	Affected Samples
2	Cadmium	15%	J	1-19, 22, 23
	Chromium	16%	J	
	Nickel	19%	J	
	Zinc	16%	J	
20	Chromium	15%	J	20, 21
	Zinc	14%	J	

Compound Quantitation

- All criteria were met.

Field Duplicate Sample Precision

- Field duplicate results are summarized below.

Metals				
Compound	LMR13-47-024 mg/kg	LMR13-47-024FD mg/kg	RPD	Qualifier
Arsenic	7.3	7.8	7%	None
Cadmium	0.82	0.83	1%	
Chromium	27.4	28.4	4%	
Copper	28.4	30.6	7%	
Lead	23.5	25.8	9%	
Nickel	30.0	32.9	9%	
Zinc	118	128	8%	
Mercury	0.11	0.094	16%	

Metals				
Compound	LMR13-51-024 mg/kg	LMR13-51-024FD mg/kg	RPD	Qualifier
Arsenic	6.5	6.1	6%	None
Cadmium	0.57	0.49	15%	
Chromium	25.7	22.5	13%	
Copper	23.7	22.0	7%	
Lead	22.5	29.3	26%	
Nickel	30.2	28.4	6%	
Zinc	110	91.0	19%	
Mercury	0.20	0.19	5%	

Oil & Grease, Total Organic Carbon, AVS/SEM (Metals & Hg)

Holding Times

- All samples were analyzed within the recommended holding time for each analysis.

Initial and Continuing Calibration

- All %R criteria were met.

Method Blank

- The method blanks exhibited the following contamination.

Blank ID	Compound	Conc. mg/kg	Qualifier	Affected Samples
240-91726/1-A	HEM	197.8	U	7-11, 18
240-91908/1-A	HEM	100.3	None	All Associated >5X

Field Blank

- Field QC samples were not included in this data package.

Laboratory Control Samples

- The LCS samples exhibited acceptable %R values.

Matrix Spike/Duplicate (MS/DUP) Recoveries

- The MS/MSD samples exhibited acceptable %R and RPD values.

Compound Quantitation

- All criteria were met.

Field Duplicate Sample Precision

- Field duplicate results are summarized below.

TOC				
Compound	LMR13-63-120 mg/kg	LMR13-63-120FD mg/kg	RPD	Qualifier
TOC	30700	31400	2%	None

HEM				
Compound	LMR13-47-048 mg/kg	LMR13-47-048FD mg/kg	RPD	Qualifier
HEM	532	956	57%	None

HEM				
Compound	LMR13-63-024 mg/kg	LMR13-63-024FD mg/kg	RPD	Qualifier
HEM	470	866	59%	None

TOC				
Compound	LMR13-51-024 mg/kg	LMR13-51-024FD mg/kg	RPD	Qualifier
TOC	21600	23400	8%	None

Please contact the undersigned at (757) 564-0090 if you have any questions or need further information.

Signed: Nancy Weaver Dated: 8/21/13

Nancy Weaver
Senior Chemist

Data Qualifiers

U = The analyte was analyzed for, but was not detected at a level greater than or equal to the level of the adjusted Contract Required Quantitation Limit (CRQL) for sample and method.

UJ = The analyte was not detected at a level greater than or equal to the adjusted CRQL. However, the reported adjusted CRQL is approximate and may be inaccurate or imprecise.

J = The analyte was positively identified and the associated numerical value is the approximate concentration of the analyte in the sample (due either to the quality of the data generated because certain quality control criteria were not met, or the concentration of the analyte was below the CRQL).

J+ = The result is an estimated quantity, but the result may be biased high.

J- = The result is an estimated quantity, but the result may be biased low.

R = The sample results are unusable due to the quality of the data generated because certain criteria were not met. The analyte may or may not be present in the sample.

NJ = The analysis indicates the presence of an analyte that has been "tentatively identified" and the associated numerical value represents its approximate concentration.

1D - FORM I SV-1

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-91-072

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17014

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17014-1

Sample wt/vol: 30.0 (g/mL) g Lab File ID: PJUWI09.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 42 Decanted: (Y/N) Date Received: 06/14/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/20/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/18/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.7

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
100-52-7	Benzaldehyde	28	J	
108-95-2	Phenol	500	U	
111-44-4	Bis(2-chloroethyl)ether	500	U	
95-57-8	2-Chlorophenol	500	U	
95-48-7	2-Methylphenol	500	U	
108-60-1	2,2'-Oxybis(1-chloropropane)	500	U	
98-86-2	Acetophenone	32	J	
106-44-5	4-Methylphenol	500	U	
621-64-7	N-Nitroso-di-n-propylamine	500	U	
67-72-1	Hexachloroethane	500	U	
98-95-3	Nitrobenzene	500	U	
78-59-1	Isophorone	500	U	
88-75-5	2-Nitrophenol	500	U	
105-67-9	2,4-Dimethylphenol	500	U	
111-91-1	Bis(2-chloroethoxy)methane	500	U	
120-83-2	2,4-Dichlorophenol	500	U	
91-20-3	Naphthalene	120	J	
106-47-8	4-Chloroaniline	500	~~U~~	R
87-68-3	Hexachlorobutadiene	500	U	
105-60-2	Caprolactam	500	U	
59-50-7	4-Chloro-3-methylphenol	500	U	
91-57-6	2-Methylnaphthalene	30	J	
77-47-4	Hexachlorocyclopentadiene	500	~~U~~	R
88-06-2	2,4,6-Trichlorophenol	500	U	
95-95-4	2,4,5-Trichlorophenol	500	U	
92-52-4	1,1'-Biphenyl	500	U	
91-58-7	2-Chloronaphthalene	500	U	
88-74-4	2-Nitroaniline	970	U	
131-11-3	Dimethylphthalate	500	U	
606-20-2	2,6-Dinitrotoluene	500	U	
208-96-8	Acenaphthylene	500	U	
99-09-2	3-Nitroaniline	970	U	
83-32-9	Acenaphthene	88	J	

NW 08/18/13

1E - FORM I SV-2

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-91-072

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17014

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17014-1

Sample wt/vol: 30.0 (g/mL) g Lab File ID: PJUWI09.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 42 Decanted: (Y/N) Date Received: 06/14/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/20/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/18/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.7

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
51-28-5	2,4-Dinitrophenol	970	~~U~~	UJ
100-02-7	4-Nitrophenol	970	U	
132-64-9	Dibenzofuran	54	J	
121-14-2	2,4-Dinitrotoluene	500	U	
84-66-2	Diethylphthalate	500	U	
86-73-7	Fluorene	110	J	
7005-72-3	4-Chlorophenyl-phenylether	500	U	
100-01-6	4-Nitroaniline	970	U	
534-52-1	4,6-Dinitro-2-methylphenol	970	U	
86-30-6	N-Nitrosodiphenylamin [1]	500	U	
95-94-3	1,2,4,5-Tetrachlorobenzene	500	U	
101-55-3	4-Bromophenyl-phenylether	500	U	
118-74-1	Hexachlorobenzene	500	U	
1912-24-9	Atrazine	500	U	
87-86-5	Pentachlorophenol	970	~~U~~	UJ
85-01-8	Phenanthrene	420	J	
120-12-7	Anthracene	89	J	
86-74-8	Carbazole	28	J	
84-74-2	Di-n-butylphthalate	27	J	
206-44-0	Fluoranthene	460	J	
129-00-0	Pyrene	610		
85-68-7	Butylbenzylphthalate	500	U	
91-94-1	3,3'-Dichlorobenzidine	500	~~U~~	R
56-55-3	Benzo(a)anthracene	280	J	
218-01-9	Chrysene	480	J	
117-81-7	Bis(2-ethylhexyl)phthalate	4700	~~B~~	
117-84-0	Di-n-octylphthalate	500	U	
205-99-2	Benzo(b)fluoranthene	300	J	
207-08-9	Benzo(k)fluoranthene	180	J	
50-32-8	Benzo(a)pyrene	240	J	
193-39-5	Indeno(1,2,3-cd)pyrene	160	J	
53-70-3	Dibenzo(a,h)anthracene	93	J	
191-24-2	Benzo(g,h,i)perylene	220	J	
58-90-2	2,3,4,6-Tetrachlorophenol	500	U	

[1] Cannot be separated from Diphenylamine

NW 08/18/13

1D - FORM I SV-1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-91-096

2

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678
Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17014
Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17014-2
Sample wt/vol: 30.3 (g/mL) g Lab File ID: PJUWI10.D
Level: (LOW/MED) LOW Extraction: (Type) SONC
% Moisture: 44 Decanted: (Y/N) Date Received: 06/14/2013
Concentrated Extract Volume: 500 (uL) Date Extracted: 06/20/2013
Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/18/2013
GPC Cleanup: (Y/N) Y pH: Dilution Factor: 5.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
100-52-7	Benzaldehyde	1500	U	
108-95-2	Phenol	1500	U	
111-44-4	Bis(2-chloroethyl)ether	1500	U	
95-57-8	2-Chlorophenol	1500	U	
95-48-7	2-Methylphenol	1500	U	
108-60-1	2,2'-Oxybis(1-chloropropane)	1500	U	
98-86-2	Acetophenone	1500	U	
106-44-5	4-Methylphenol	1500	U	
621-64-7	N-Nitroso-di-n-propylamine	1500	U	
67-72-1	Hexachloroethane	1500	U	
98-95-3	Nitrobenzene	1500	U	
78-59-1	Isophorone	1500	U	
88-75-5	2-Nitrophenol	1500	U	
105-67-9	2,4-Dimethylphenol	1500	U	
111-91-1	Bis(2-chloroethoxy)methane	1500	U	
120-83-2	2,4-Dichlorophenol	1500	U	
91-20-3	Naphthalene	350	J	
106-47-8	4-Chloroaniline	1500	~~U~~	R
87-68-3	Hexachlorobutadiene	1500	U	
105-60-2	Caprolactam	1500	U	
59-50-7	4-Chloro-3-methylphenol	1500	U	
91-57-6	2-Methylnaphthalene	1500	U	
77-47-4	Hexachlorocyclopentadiene	1500	~~U~~	R
88-06-2	2,4,6-Trichlorophenol	1500	U	
95-95-4	2,4,5-Trichlorophenol	1500	U	
92-52-4	1,1'-Biphenyl	1500	U	
91-58-7	2-Chloronaphthalene	1500	U	
88-74-4	2-Nitroaniline	2900	U	
131-11-3	Dimethylphthalate	1500	U	
606-20-2	2,6-Dinitrotoluene	1500	U	
208-96-8	Acenaphthylene	1500	U	
99-09-2	3-Nitroaniline	2900	U	
83-32-9	Acenaphthene	190	J	

MW 08/18/13

EPA SAMPLE NO.
LMR13-91-096

2

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17014

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17014-2

Sample wt/vol: 30.3 (g/mL) g Lab File ID: PJUWI10.D

~~Level: (LOW/MED)~~ LOW ~~Extraction: (Type)~~ SONC

% Moisture: 44 Decanted: (Y/N) Date Received: 06/14/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/20/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/18/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 5.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
51-28-5	2,4-Dinitrophenol	2900	~~U~~	UJ
100-02-7	4-Nitrophenol	2900	U	
132-64-9	Dibenzofuran	92	J	
121-14-2	2,4-Dinitrotoluene	1500	U	
84-66-2	Diethylphthalate	1500	U	
86-73-7	Fluorene	260	J	
7005-72-3	4-Chlorophenyl-phenylether	1500	U	
100-01-6	4-Nitroaniline	2900	U	
534-52-1	4,6-Dinitro-2-methylphenol	2900	U	
86-30-6	N-Nitrosodiphenylamin [1]	1500	U	
95-94-3	1,2,4,5-Tetrachlorobenzene	1500	U	
101-55-3	4-Bromophenyl-phenylether	1500	U	
118-74-1	Hexachlorobenzene	1500	U	
1912-24-9	Atrazine	1500	U	
87-86-5	Pentachlorophenol	2900	~~U~~	UJ
85-01-8	Phenanthrene	1000	J	
120-12-7	Anthracene	260	J	
86-74-8	Carbazole	1500	U	
84-74-2	Di-n-butylphthalate	1500	U	
206-44-0	Fluoranthene	900	J	
129-00-0	Pyrene	1600		J
85-68-7	Butylbenzylphthalate	1500	U	R
91-94-1	3,3'-Dichlorobenzidine	1500	U	UJ
56-55-3	Benzo(a)anthracene	760	J	J
218-01-9	Chrysene	1600		J
117-81-7	Bis(2-ethylhexyl)phthalate	12000	~~B~~	J
117-84-0	Di-n-octylphthalate	1500	~~U~~	UJ
205-99-2	Benzo(b)fluoranthene	750	J	J
207-08-9	Benzo(k)fluoranthene	500	J	
50-32-8	Benzo(a)pyrene	720	J	
193-39-5	Indeno(1,2,3-cd)pyrene	410	J	
53-70-3	Dibenzo(a,h)anthracene	360	J	
191-24-2	Benzo(g,h,i)perylene	680	J	
58-90-2	2,3,4,6-Tetrachlorophenol	1500	U	

[1] Cannot be separated from Diphenylamine

MW 08/18/13

1D - FORM I SV-1

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LRM13-47-024

3

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17014

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17014-3

Sample wt/vol: 30.7 (g/mL) g Lab File ID: PJUWH15.D

~~Level: (LOW/MED)~~ LOW ~~Extraction: (Type)~~ SONC

% Moisture: 53 Decanted: (Y/N) Date Received: 06/14/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/20/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/17/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
100-52-7	Benzaldehyde	63	J
108-95-2	Phenol	350	U
111-44-4	Bis(2-chloroethyl)ether	350	U
95-57-8	2-Chlorophenol	350	U
95-48-7	2-Methylphenol	350	U
108-60-1	2,2'-Oxybis(1-chloropropane)	350	U
98-86-2	Acetophenone	63	J
106-44-5	4-Methylphenol	350	U
621-64-7	N-Nitroso-di-n-propylamine	350	U
67-72-1	Hexachloroethane	350	U
98-95-3	Nitrobenzene	350	U
78-59-1	Isophorone	350	U
88-75-5	2-Nitrophenol	350	U
105-67-9	2,4-Dimethylphenol	350	U
111-91-1	Bis(2-chloroethoxy)methane	350	U
120-83-2	2,4-Dichlorophenol	350	U
91-20-3	Naphthalene	350	U
106-47-8	4-Chloroaniline	350	~~U~~ R
87-68-3	Hexachlorobutadiene	350	U
105-60-2	Caprolactam	350	U
59-50-7	4-Chloro-3-methylphenol	350	U
91-57-6	2-Methylnaphthalene	350	U
77-47-4	Hexachlorocyclopentadiene	350	~~U~~ R
88-06-2	2,4,6-Trichlorophenol	350	U
95-95-4	2,4,5-Trichlorophenol	350	U
92-52-4	1,1'-Biphenyl	350	U
91-58-7	2-Chloronaphthalene	350	U
88-74-4	2-Nitroaniline	680	U
131-11-3	Dimethylphthalate	350	U
606-20-2	2,6-Dinitrotoluene	350	U
208-96-8	Acenaphthylene	350	U
99-09-2	3-Nitroaniline	680	U
83-32-9	Acenaphthene	25	J

MW 08/18/13

EPA SAMPLE NO.
LRM13-47-024

3

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17014

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17014-3

Sample wt/vol: 30.7 (g/mL) g Lab File ID: PJUWH15.D

~~Level: (LOW/MED)~~ LOW ~~Extraction: (Type)~~ SONC

% Moisture: 53 Decanted: (Y/N) Date Received: 06/14/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/20/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/17/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
51-28-5	2,4-Dinitrophenol	680	U	
100-02-7	4-Nitrophenol	680	U	
132-64-9	Dibenzofuran	16	J	
121-14-2	2,4-Dinitrotoluene	350	U	
84-66-2	Diethylphthalate	350	U	
86-73-7	Fluorene	42	J	
7005-72-3	4-Chlorophenyl-phenylether	350	U	
100-01-6	4-Nitroaniline	680	U	
534-52-1	4,6-Dinitro-2-methylphenol	680	U	
86-30-6	N-Nitrosodiphenylamin [1]	350	U	
95-94-3	1,2,4,5-Tetrachlorobenzene	350	U	
101-55-3	4-Bromophenyl-phenylether	350	U	
118-74-1	Hexachlorobenzene	350	U	
1912-24-9	Atrazine	350	U	
87-86-5	Pentachlorophenol	680	U	
85-01-8	Phenanthrene	230	J	
120-12-7	Anthracene	94	J	
86-74-8	Carbazole	24	J	
84-74-2	Di-n-butylphthalate	25	J	
206-44-0	Fluoranthene	470		
129-00-0	Pyrene	580		
85-68-7	Butylbenzylphthalate	~~61~~ 350	~~J B~~	U
91-94-1	3,3'-Dichlorobenzidine	350	~~U~~	R
56-55-3	Benzo(a)anthracene	270	J	
218-01-9	Chrysene	390		
117-81-7	Bis(2-ethylhexyl)phthalate	410	~~B~~	U
117-84-0	Di-n-octylphthalate	350	U	
205-99-2	Benzo(b)fluoranthene	340	J	
207-08-9	Benzo(k)fluoranthene	250	J	
50-32-8	Benzo(a)pyrene	270	J	
193-39-5	Indeno(1,2,3-cd)pyrene	210	J	
53-70-3	Dibenzo(a,h)anthracene	80	J	
191-24-2	Benzo(g,h,i)perylene	250	J	
58-90-2	2,3,4,6-Tetrachlorophenol	350	U	

[1] Cannot be separated from Diphenylamine

MW 08/18/13

EPA SAMPLE NO.
LRM13-47-048

4

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17014

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17014-4

Sample wt/vol: 30.2 (g/mL) g Lab File ID: PJUWH16.D

~~Level: (LOW/MED)~~ LOW ~~Extraction: (Type)~~ SONC

% Moisture: 50 Decanted: (Y/N) Date Received: 06/14/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/20/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/17/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
100-52-7	Benzaldehyde	46	J	
108-95-2	Phenol	340	U	
111-44-4	Bis(2-chloroethyl)ether	340	U	
95-57-8	2-Chlorophenol	340	U	
95-48-7	2-Methylphenol	340	U	
108-60-1	2,2'-Oxybis(1-chloropropane)	340	U	
98-86-2	Acetophenone	69	J	
106-44-5	4-Methylphenol	340	U	
621-64-7	N-Nitroso-di-n-propylamine	340	U	
67-72-1	Hexachloroethane	340	U	
98-95-3	Nitrobenzene	340	U	
78-59-1	Isophorone	340	U	
88-75-5	2-Nitrophenol	340	U	
105-67-9	2,4-Dimethylphenol	340	U	
111-91-1	Bis(2-chloroethoxy)methane	340	U	
120-83-2	2,4-Dichlorophenol	340	U	
91-20-3	Naphthalene	18	J	
106-47-8	4-Chloroaniline	340	~~U~~	R
87-68-3	Hexachlorobutadiene	340	U	
105-60-2	Caprolactam	340	U	
59-50-7	4-Chloro-3-methylphenol	340	U	
91-57-6	2-Methylnaphthalene	13	J	
77-47-4	Hexachlorocyclopentadiene	340	~~U~~	R
88-06-2	2,4,6-Trichlorophenol	340	U	
95-95-4	2,4,5-Trichlorophenol	340	U	
92-52-4	1,1'-Biphenyl	340	U	
91-58-7	2-Chloronaphthalene	340	U	
88-74-4	2-Nitroaniline	650	U	
131-11-3	Dimethylphthalate	340	U	
606-20-2	2,6-Dinitrotoluene	340	U	
208-96-8	Acenaphthylene	340	U	
99-09-2	3-Nitroaniline	650	U	
83-32-9	Acenaphthene	26	J	

MW 08/19/13

1E - FORM I SV-2
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LRM13-47-048

4

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17014

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17014-4

Sample wt/vol: 30.2 (g/mL) g Lab File ID: PJUWH16.D

~~Level: (LOW/MED)~~ LOW ~~Extraction: (Type)~~ SONC

% Moisture: 50 Decanted: (Y/N) Date Received: 06/14/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/20/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/17/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
51-28-5	2,4-Dinitrophenol	650	U	
100-02-7	4-Nitrophenol	650	U	
132-64-9	Dibenzofuran	19	J	
121-14-2	2,4-Dinitrotoluene	340	U	
84-66-2	Diethylphthalate	340	U	
86-73-7	Fluorene	40	J	
7005-72-3	4-Chlorophenyl-phenylether	340	U	
100-01-6	4-Nitroaniline	650	U	
534-52-1	4,6-Dinitro-2-methylphenol	650	U	
86-30-6	N-Nitrosodiphenylamin [1]	340	U	
95-94-3	1,2,4,5-Tetrachlorobenzene	340	U	
101-55-3	4-Bromophenyl-phenylether	340	U	
118-74-1	Hexachlorobenzene	340	U	
1912-24-9	Atrazine	340	U	
87-86-5	Pentachlorophenol	650	U	
85-01-8	Phenanthrene	220	J	
120-12-7	Anthracene	50	J	
86-74-8	Carbazole	25	J	
84-74-2	Di-n-butylphthalate	22	J	
206-44-0	Fluoranthene	450		
129-00-0	Pyrene	590		
85-68-7	Butylbenzylphthalate	340 ~~60~~	~~J B~~	4
91-94-1	3,3'-Dichlorobenzidine	340	~~U~~	R
56-55-3	Benzo(a)anthracene	200	J	
218-01-9	Chrysene	310	J	
117-81-7	Bis(2-ethylhexyl)phthalate	510	~~B~~	4
117-84-0	Di-n-octylphthalate	340	U	
205-99-2	Benzo(b)fluoranthene	320	J	
207-08-9	Benzo(k)fluoranthene	230	J	
50-32-8	Benzo(a)pyrene	210	J	
193-39-5	Indeno(1,2,3-cd)pyrene	210	J	
53-70-3	Dibenzo(a,h)anthracene	82	J	
191-24-2	Benzo(g,h,i)perylene	260	J	
58-90-2	2,3,4,6-Tetrachlorophenol	340	U	

[1] Cannot be separated from Diphenylamine

NW 08/18/13

EPA SAMPLE NO.
LRM13-47-072

5

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17014

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17014-5

Sample wt/vol: 30.2 (g/mL) g Lab File ID: PJUWH17.D

~~Level: (LOW/MED)~~ LOW ~~Extraction: (Type)~~ SONC

% Moisture: 46 Decanted: (Y/N) Date Received: 06/14/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/20/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/17/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
100-52-7	Benzaldehyde	50	~~U~~	J
108-95-2	Phenol	310	U	
111-44-4	Bis(2-chloroethyl)ether	310	U	
95-57-8	2-Chlorophenol	310	U	
95-48-7	2-Methylphenol	310	U	
108-60-1	2,2'-Oxybis(1-chloropropane)	310	U	
98-86-2	Acetophenone	310	U	
106-44-5	4-Methylphenol	310	U	
621-64-7	N-Nitroso-di-n-propylamine	310	U	
67-72-1	Hexachloroethane	310	U	
98-95-3	Nitrobenzene	310	U	
78-59-1	Isophorone	310	U	
88-75-5	2-Nitrophenol	310	U	
105-67-9	2,4-Dimethylphenol	310	U	
111-91-1	Bis(2-chloroethoxy)methane	310	U	
120-83-2	2,4-Dichlorophenol	310	U	
91-20-3	Naphthalene	20	J	
106-47-8	4-Chloroaniline	310	~~U~~	R
87-68-3	Hexachlorobutadiene	310	U	
105-60-2	Caprolactam	310	U	
59-50-7	4-Chloro-3-methylphenol	310	U	
91-57-6	2-Methylnaphthalene	14	J	
77-47-4	Hexachlorocyclopentadiene	310	~~U~~	R
88-06-2	2,4,6-Trichlorophenol	310	U	
95-95-4	2,4,5-Trichlorophenol	310	U	
92-52-4	1,1'-Biphenyl	310	U	
91-58-7	2-Chloronaphthalene	310	U	
88-74-4	2-Nitroaniline	600	U	
131-11-3	Dimethylphthalate	310	U	
606-20-2	2,6-Dinitrotoluene	310	U	
208-96-8	Acenaphthylene	310	U	
99-09-2	3-Nitroaniline	600	U	
83-32-9	Acenaphthene	27	J	

NW 08/18/13

EPA SAMPLE NO.
LRM13-47-072

5

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17014

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17014-5

Sample wt/vol: 30.2 (g/mL) g Lab File ID: PJUWH17.D

~~Level: (LOW/MED)~~ LOW ~~Extraction: (Type)~~ SONC

% Moisture: 46 Decanted: (Y/N) Date Received: 06/14/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/20/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/17/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
51-28-5	2,4-Dinitrophenol	600	U
100-02-7	4-Nitrophenol	600	U
132-64-9	Dibenzofuran	20	J
121-14-2	2,4-Dinitrotoluene	310	U
84-66-2	Diethylphthalate	310	U
86-73-7	Fluorene	48	J
7005-72-3	4-Chlorophenyl-phenylether	310	U
100-01-6	4-Nitroaniline	600	U
534-52-1	4,6-Dinitro-2-methylphenol	600	U
86-30-6	N-Nitrosodiphenylamin [1]	310	U
95-94-3	1,2,4,5-Tetrachlorobenzene	310	U
101-55-3	4-Bromophenyl-phenylether	310	U
118-74-1	Hexachlorobenzene	310	U
1912-24-9	Atrazine	310	U
87-86-5	Pentachlorophenol	600	U
85-01-8	Phenanthrene	230	J
120-12-7	Anthracene	55	J
86-74-8	Carbazole	25	J
84-74-2	Di-n-butylphthalate	21	J
206-44-0	Fluoranthene	440	
129-00-0	Pyrene	570	
85-68-7	Butylbenzylphthalate	310 ~~55~~	~~J B~~ U
91-94-1	3,3'-Dichlorobenzidine	310	~~U~~ R
56-55-3	Benzo(a)anthracene	210	J
218-01-9	Chrysene	300	J
117-81-7	Bis(2-ethylhexyl)phthalate	550	~~B~~ U
117-84-0	Di-n-octylphthalate	310	U
205-99-2	Benzo(b)fluoranthene	300	J
207-08-9	Benzo(k)fluoranthene	200	J
50-32-8	Benzo(a)pyrene	200	J
193-39-5	Indeno(1,2,3-cd)pyrene	180	J
53-70-3	Dibenzo(a,h)anthracene	67	J
191-24-2	Benzo(g,h,i)perylene	240	J
58-90-2	2,3,4,6-Tetrachlorophenol	310	U

[1] Cannot be separated from Diphenylamine

MW 08/18/13

EPA SAMPLE NO.
LRM13-47-096

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678 b

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17014

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17014-6

Sample wt/vol: 30.1 (g/mL) g Lab File ID: PJUWH18.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 47 Decanted: (Y/N) Date Received: 06/14/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/20/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/17/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
100-52-7	Benzaldehyde	43	J	
108-95-2	Phenol	320	U	
111-44-4	Bis(2-chloroethyl)ether	320	U	
95-57-8	2-Chlorophenol	320	U	
95-48-7	2-Methylphenol	320	U	
108-60-1	2,2'-Oxybis(1-chloropropane)	320	U	
98-86-2	Acetophenone	76	J	
106-44-5	4-Methylphenol	320	U	
621-64-7	N-Nitroso-di-n-propylamine	320	U	
67-72-1	Hexachloroethane	320	U	
98-95-3	Nitrobenzene	320	U	
78-59-1	Isophorone	320	U	
88-75-5	2-Nitrophenol	320	U	
105-67-9	2,4-Dimethylphenol	320	U	
111-91-1	Bis(2-chloroethoxy)methane	320	U	
120-83-2	2,4-Dichlorophenol	320	U	
91-20-3	Naphthalene	320	U	
106-47-8	4-Chloroaniline	320	U	R
87-68-3	Hexachlorobutadiene	320	U	
105-60-2	Caprolactam	320	U	
59-50-7	4-Chloro-3-methylphenol	320	U	
91-57-6	2-Methylnaphthalene	320	U	
77-47-4	Hexachlorocyclopentadiene	320	U	R
88-06-2	2,4,6-Trichlorophenol	320	U	
95-95-4	2,4,5-Trichlorophenol	320	U	
92-52-4	1,1'-Biphenyl	320	U	
91-58-7	2-Chloronaphthalene	320	U	
88-74-4	2-Nitroaniline	620	U	
131-11-3	Dimethylphthalate	320	U	
606-20-2	2,6-Dinitrotoluene	320	U	
208-96-8	Acenaphthylene	320	U	
99-09-2	3-Nitroaniline	620	U	
83-32-9	Acenaphthene	320	U	

NW 08/18/13

EPA SAMPLE NO.
LRM13-47-096

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678 6

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17014

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17014-6

Sample wt/vol: 30.1 (g/mL) g Lab File ID: PJUWH18.D

~~Level: (LOW/MED)~~ LOW ~~Extraction: (Type)~~ SONC

% Moisture: 47 Decanted: (Y/N) Date Received: 06/14/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/20/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/17/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
51-28-5	2,4-Dinitrophenol	620	U
100-02-7	4-Nitrophenol	620	U
132-64-9	Dibenzofuran	11	J
121-14-2	2,4-Dinitrotoluene	320	U
84-66-2	Diethylphthalate	320	U
86-73-7	Fluorene	320	U
7005-72-3	4-Chlorophenyl-phenylether	320	U
100-01-6	4-Nitroaniline	620	U
534-52-1	4,6-Dinitro-2-methylphenol	620	U
86-30-6	N-Nitrosodiphenylamin [1]	320	U
95-94-3	1,2,4,5-Tetrachlorobenzene	320	U
101-55-3	4-Bromophenyl-phenylether	320	U
118-74-1	Hexachlorobenzene	320	U
1912-24-9	Atrazine	320	U
87-86-5	Pentachlorophenol	620	U
85-01-8	Phenanthrene	150	J
120-12-7	Anthracene	36	J
86-74-8	Carbazole	320	U
84-74-2	Di-n-butylphthalate	18	J
206-44-0	Fluoranthene	310	J
129-00-0	Pyrene	410	
85-68-7	Butylbenzylphthalate	~~45~~ 320 ~~J B~~	U
91-94-1	3,3'-Dichlorobenzidine	320 ~~U~~	R
56-55-3	Benzo(a)anthracene	140	J
218-01-9	Chrysene	230	J
117-81-7	Bis(2-ethylhexyl)phthalate	360 ~~B~~	U
117-84-0	Di-n-octylphthalate	320	U
205-99-2	Benzo(b)fluoranthene	190	J
207-08-9	Benzo(k)fluoranthene	170	J
50-32-8	Benzo(a)pyrene	150	J
193-39-5	Indeno(1,2,3-cd)pyrene	140	J
53-70-3	Dibenzo(a,h)anthracene	49	J
191-24-2	Benzo(g,h,i)perylene	180	J
58-90-2	2,3,4,6-Tetrachlorophenol	320	U

[1] Cannot be separated from Diphenylamine

NW 08/18/13

EPA SAMPLE NO.
LRM13-47-120

7

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17014

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17014-7

Sample wt/vol: 29.8 (g/mL) g Lab File ID: PJUWH19.D

~~Level: (LOW/MED)~~ LOW ~~Extraction: (Type)~~ SONC

% Moisture: 47 Decanted: (Y/N) Date Received: 06/14/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/20/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/17/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
100-52-7	Benzaldehyde	56	J
108-95-2	Phenol	320	U
111-44-4	Bis(2-chloroethyl)ether	320	U
95-57-8	2-Chlorophenol	320	U
95-48-7	2-Methylphenol	320	U
108-60-1	2,2'-Oxybis(1-chloropropane)	320	U
98-86-2	Acetophenone	76	J
106-44-5	4-Methylphenol	320	U
621-64-7	N-Nitroso-di-n-propylamine	320	U
67-72-1	Hexachloroethane	320	U
98-95-3	Nitrobenzene	320	U
78-59-1	Isophorone	320	U
88-75-5	2-Nitrophenol	320	U
105-67-9	2,4-Dimethylphenol	320	U
111-91-1	Bis(2-chloroethoxy)methane	320	U
120-83-2	2,4-Dichlorophenol	320	U
91-20-3	Naphthalene	18	J
106-47-8	4-Chloroaniline	320	U
87-68-3	Hexachlorobutadiene	320	U
105-60-2	Caprolactam	320	U
59-50-7	4-Chloro-3-methylphenol	320	U
91-57-6	2-Methylnaphthalene	13	J
77-47-4	Hexachlorocyclopentadiene	320	~~U~~ UJ
88-06-2	2,4,6-Trichlorophenol	320	U
95-95-4	2,4,5-Trichlorophenol	320	U
92-52-4	1,1'-Biphenyl	320	U
91-58-7	2-Chloronaphthalene	320	U
88-74-4	2-Nitroaniline	630	U
131-11-3	Dimethylphthalate	320	U
606-20-2	2,6-Dinitrotoluene	320	U
208-96-8	Acenaphthylene	320	U
99-09-2	3-Nitroaniline	630	U
83-32-9	Acenaphthene	21	J

MW 08/18/13

1E - FORM I SV-2
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LRM13-47-120

7

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17014

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17014-7

Sample wt/vol: 29.8 (g/mL) g Lab File ID: PJUWH19.D

~~Level: (LOW/MED)~~ LOW ~~Extraction: (Type)~~ SONC

% Moisture: 47 Decanted: (Y/N) Date Received: 06/14/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/20/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/17/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
51-28-5	2,4-Dinitrophenol	630	U
100-02-7	4-Nitrophenol	630	U
132-64-9	Dibenzofuran	15	J
121-14-2	2,4-Dinitrotoluene	320	U
84-66-2	Diethylphthalate	320	U
86-73-7	Fluorene	320	U
7005-72-3	4-Chlorophenyl-phenylether	320	U
100-01-6	4-Nitroaniline	630	U
534-52-1	4,6-Dinitro-2-methylphenol	630	U
86-30-6	N-Nitrosodiphenylamin [1]	320	U
95-94-3	1,2,4,5-Tetrachlorobenzene	320	U
101-55-3	4-Bromophenyl-phenylether	320	U
118-74-1	Hexachlorobenzene	320	U
1912-24-9	Atrazine	320	U
87-86-5	Pentachlorophenol	630	U
85-01-8	Phenanthrene	180	J
120-12-7	Anthracene	49	J
86-74-8	Carbazole	320	U
84-74-2	Di-n-butylphthalate	22	J
206-44-0	Fluoranthene	360	
129-00-0	Pyrene	480	
85-68-7	Butylbenzylphthalate	320 ~~68~~ ~~J B~~	U
91-94-1	3,3'-Dichlorobenzidine	320	U
56-55-3	Benzo(a)anthracene	190	J
218-01-9	Chrysene	290	J
117-81-7	Bis(2-ethylhexyl)phthalate	670	~~B~~
117-84-0	Di-n-octylphthalate	320	U
205-99-2	Benzo(b)fluoranthene	260	J
207-08-9	Benzo(k)fluoranthene	220	J
50-32-8	Benzo(a)pyrene	220	J
193-39-5	Indeno(1,2,3-cd)pyrene	180	J
53-70-3	Dibenzo(a,h)anthracene	67	J
191-24-2	Benzo(g,h,i)perylene	220	J
58-90-2	2,3,4,6-Tetrachlorophenol	320	U

[1] Cannot be separated from Diphenylamine

NW 08/18/13

1D - FORM I SV-1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LRM13-47-144

8

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17014

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17014-8

Sample wt/vol: 29.6 (g/mL) g Lab File ID: PJUWH20.D

~~Level: (LOW/MED)~~ LOW ~~Extraction: (Type)~~ SONC

% Moisture: 44 Decanted: (Y/N) Date Received: 06/14/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/20/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/17/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
100-52-7	Benzaldehyde	45	J
108-95-2	Phenol	310	U
111-44-4	Bis(2-chloroethyl)ether	310	U
95-57-8	2-Chlorophenol	310	U
95-48-7	2-Methylphenol	310	U
108-60-1	2,2'-Oxybis(1-chloropropane)	310	U
98-86-2	Acetophenone	55	J
106-44-5	4-Methylphenol	310	U
621-64-7	N-Nitroso-di-n-propylamine	310	U
67-72-1	Hexachloroethane	310	U
98-95-3	Nitrobenzene	310	U
78-59-1	Isophorone	310	U
88-75-5	2-Nitrophenol	310	U
105-67-9	2,4-Dimethylphenol	310	U
111-91-1	Bis(2-chloroethoxy)methane	310	U
120-83-2	2,4-Dichlorophenol	310	U
91-20-3	Naphthalene	21	J
106-47-8	4-Chloroaniline	310	U
87-68-3	Hexachlorobutadiene	310	U
105-60-2	Caprolactam	310	U
59-50-7	4-Chloro-3-methylphenol	310	U
91-57-6	2-Methylnaphthalene	310	U
77-47-4	Hexachlorocyclopentadiene	310	U UJ
88-06-2	2,4,6-Trichlorophenol	310	U
95-95-4	2,4,5-Trichlorophenol	310	U
92-52-4	1,1'-Biphenyl	310	U
91-58-7	2-Chloronaphthalene	310	U
88-74-4	2-Nitroaniline	600	U
131-11-3	Dimethylphthalate	310	U
606-20-2	2,6-Dinitrotoluene	310	U
208-96-8	Acenaphthylene	310	U
99-09-2	3-Nitroaniline	600	U
83-32-9	Acenaphthene	39	J

NW 08/18/13

1E - FORM I SV-2
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LRM13-47-144

8

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17014

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17014-8

Sample wt/vol: 29.6 (g/mL) g Lab File ID: PJUWH20.D

~~Level: (LOW/MED)~~ LOW ~~Extraction: (Type)~~ SONC

% Moisture: 44 Decanted: (Y/N) Date Received: 06/14/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/20/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/17/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
51-28-5	2,4-Dinitrophenol	600	U
100-02-7	4-Nitrophenol	600	U
132-64-9	Dibenzofuran	26	J
121-14-2	2,4-Dinitrotoluene	310	U
84-66-2	Diethylphthalate	310	U
86-73-7	Fluorene	61	J
7005-72-3	4-Chlorophenyl-phenylether	310	U
100-01-6	4-Nitroaniline	600	U
534-52-1	4,6-Dinitro-2-methylphenol	600	U
86-30-6	N-Nitrosodiphenylamin [1]	310	U
95-94-3	1,2,4,5-Tetrachlorobenzene	310	U
101-55-3	4-Bromophenyl-phenylether	310	U
118-74-1	Hexachlorobenzene	310	U
1912-24-9	Atrazine	310	U
87-86-5	Pentachlorophenol	600	U
85-01-8	Phenanthrene	270	J
120-12-7	Anthracene	71	J
86-74-8	Carbazole	310	U
84-74-2	Di-n-butylphthalate	310	U
206-44-0	Fluoranthene	500	
129-00-0	Pyrene	550	
85-68-7	Butylbenzylphthalate	310 ~~78~~ ~~J B~~	U
91-94-1	3,3'-Dichlorobenzidine	310	U
56-55-3	Benzo(a)anthracene	260	J
218-01-9	Chrysene	380	
117-81-7	Bis(2-ethylhexyl)phthalate	1800	~~B~~
117-84-0	Di-n-octylphthalate	310	U
205-99-2	Benzo(b)fluoranthene	260	J
207-08-9	Benzo(k)fluoranthene	270	J
50-32-8	Benzo(a)pyrene	250	J
193-39-5	Indeno(1,2,3-cd)pyrene	210	J
53-70-3	Dibenzo(a,h)anthracene	87	J
191-24-2	Benzo(g,h,i)perylene	250	J
58-90-2	2,3,4,6-Tetrachlorophenol	310	U

[1] Cannot be separated from Diphenylamine

NW 08/18/13

EPA SAMPLE NO.
LRM13-63-012

9

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17014

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17014-9

Sample wt/vol: 29.8 (g/mL) g Lab File ID: PJUWH21.D

~~Level: (LOW/MED)~~ LOW ~~Extraction: (Type)~~ SONC

% Moisture: 54 Decanted: (Y/N) Date Received: 06/14/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/20/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/17/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
100-52-7	Benzaldehyde	56	J	
108-95-2	Phenol	370	U	
111-44-4	Bis(2-chloroethyl)ether	370	U	
95-57-8	2-Chlorophenol	370	U	
95-48-7	2-Methylphenol	370	U	
108-60-1	2,2'-Oxybis(1-chloropropane)	370	U	
98-86-2	Acetophenone	30	J	
106-44-5	4-Methylphenol	370	U	
621-64-7	N-Nitroso-di-n-propylamine	370	U	
67-72-1	Hexachloroethane	370	U	
98-95-3	Nitrobenzene	370	U	
78-59-1	Isophorone	370	U	
88-75-5	2-Nitrophenol	370	U	
105-67-9	2,4-Dimethylphenol	370	U	
111-91-1	Bis(2-chloroethoxy)methane	370	U	
120-83-2	2,4-Dichlorophenol	370	U	
91-20-3	Naphthalene	19	J	
106-47-8	4-Chloroaniline	370	~~U~~	R
87-68-3	Hexachlorobutadiene	370	U	
105-60-2	Caprolactam	370	U	
59-50-7	4-Chloro-3-methylphenol	370	U	
91-57-6	2-Methylnaphthalene	12	J	
77-47-4	Hexachlorocyclopentadiene	370	~~U~~	R
88-06-2	2,4,6-Trichlorophenol	370	U	
95-95-4	2,4,5-Trichlorophenol	370	U	
92-52-4	1,1'-Biphenyl	370	U	
91-58-7	2-Chloronaphthalene	370	U	
88-74-4	2-Nitroaniline	720	U	
131-11-3	Dimethylphthalate	370	U	
606-20-2	2,6-Dinitrotoluene	370	U	
208-96-8	Acenaphthylene	370	U	
99-09-2	3-Nitroaniline	720	U	
83-32-9	Acenaphthene	16	J	

MW 08/18/13

EPA SAMPLE NO.
LRM13-63-012

9

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17014

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17014-9

Sample wt/vol: 29.8 (g/mL) g Lab File ID: PJUWH21.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 54 Decanted: (Y/N) Date Received: 06/14/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/20/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/17/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
51-28-5	2,4-Dinitrophenol	720	U	
100-02-7	4-Nitrophenol	720	U	
132-64-9	Dibenzofuran	370	U	
121-14-2	2,4-Dinitrotoluene	370	U	
84-66-2	Diethylphthalate	370	U	
86-73-7	Fluorene	370	U	
7005-72-3	4-Chlorophenyl-phenylether	370	U	
100-01-6	4-Nitroaniline	720	U	
534-52-1	4,6-Dinitro-2-methylphenol	720	U	
86-30-6	N-Nitrosodiphenylamin [1]	370	U	
95-94-3	1,2,4,5-Tetrachlorobenzene	370	U	
101-55-3	4-Bromophenyl-phenylether	370	U	
118-74-1	Hexachlorobenzene	370	U	
1912-24-9	Atrazine	370	U	
87-86-5	Pentachlorophenol	720	U	
85-01-8	Phenanthrene	130	J	
120-12-7	Anthracene	37	J	
86-74-8	Carbazole	370	U	
84-74-2	Di-n-butylphthalate	20	J	
206-44-0	Fluoranthene	280	J	
129-00-0	Pyrene	400		
85-68-7	Butylbenzylphthalate	370 ~~59~~	~~J B~~ U	
91-94-1	3,3'-Dichlorobenzidine	370	~~U~~ R	
56-55-3	Benzo(a)anthracene	130	J	
218-01-9	Chrysene	220	J	
117-81-7	Bis(2-ethylhexyl)phthalate	370 ~~360~~	J B U	
117-84-0	Di-n-octylphthalate	370	U	
205-99-2	Benzo(b)fluoranthene	200	J	
207-08-9	Benzo(k)fluoranthene	120	J	
50-32-8	Benzo(a)pyrene	130	J	
193-39-5	Indeno(1,2,3-cd)pyrene	120	J	
53-70-3	Dibenzo(a,h)anthracene	54	J	
191-24-2	Benzo(g,h,i)perylene	160	J	
58-90-2	2,3,4,6-Tetrachlorophenol	370	U	

[1] Cannot be separated from Diphenylamine

MW 08/18/13

EPA SAMPLE NO.
LRM13-63-024

10

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17014

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17014-10

Sample wt/vol: 29.7 (g/mL) g Lab File ID: PJUWH22.D

~~Level: (LOW/MED)~~ LOW ~~Extraction: (Type)~~ SONC

% Moisture: 51 Decanted: (Y/N) Date Received: 06/14/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/20/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/17/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
100-52-7	Benzaldehyde	70	~~U~~	J
108-95-2	Phenol	350	U	
111-44-4	Bis(2-chloroethyl)ether	350	U	
95-57-8	2-Chlorophenol	350	U	
95-48-7	2-Methylphenol	350	U	
108-60-1	2,2'-Oxybis(1-chloropropane)	350	U	
98-86-2	Acetophenone	36	J	
106-44-5	4-Methylphenol	350	U	
621-64-7	N-Nitroso-di-n-propylamine	350	U	
67-72-1	Hexachloroethane	350	U	
98-95-3	Nitrobenzene	350	U	
78-59-1	Isophorone	350	U	
88-75-5	2-Nitrophenol	350	U	
105-67-9	2,4-Dimethylphenol	350	U	
111-91-1	Bis(2-chloroethoxy)methane	350	U	
120-83-2	2,4-Dichlorophenol	350	U	
91-20-3	Naphthalene	27	J	
106-47-8	4-Chloroaniline	350	~~U~~	R
87-68-3	Hexachlorobutadiene	350	U	
105-60-2	Caprolactam	350	U	
59-50-7	4-Chloro-3-methylphenol	350	U	
91-57-6	2-Methylnaphthalene	350	U	
77-47-4	Hexachlorocyclopentadiene	350	~~U~~	R
88-06-2	2,4,6-Trichlorophenol	350	U	
95-95-4	2,4,5-Trichlorophenol	350	U	
92-52-4	1,1'-Biphenyl	350	U	
91-58-7	2-Chloronaphthalene	350	U	
88-74-4	2-Nitroaniline	690	U	
131-11-3	Dimethylphthalate	350	U	
606-20-2	2,6-Dinitrotoluene	350	U	
208-96-8	Acenaphthylene	350	U	
99-09-2	3-Nitroaniline	690	U	
83-32-9	Acenaphthene	25	J	

NW 08/18/13

1E - FORM I SV-2

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LRM13-63-024

10

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17014

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17014-10

Sample wt/vol: 29.7 (g/mL) g Lab File ID: PJUWH22.D

~~Level: (LOW/MED)~~ LOW ~~Extraction: (Type)~~ SONC

% Moisture: 51 Decanted: (Y/N) Date Received: 06/14/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/20/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/17/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
51-28-5	2,4-Dinitrophenol	690	U
100-02-7	4-Nitrophenol	690	U
132-64-9	Dibenzofuran	20	J
121-14-2	2,4-Dinitrotoluene	350	U
84-66-2	Diethylphthalate	350	U
86-73-7	Fluorene	48	J
7005-72-3	4-Chlorophenyl-phenylether	350	U
100-01-6	4-Nitroaniline	690	U
534-52-1	4,6-Dinitro-2-methylphenol	690	U
86-30-6	N-Nitrosodiphenylamin [1]	350	U
95-94-3	1,2,4,5-Tetrachlorobenzene	350	U
101-55-3	4-Bromophenyl-phenylether	350	U
118-74-1	Hexachlorobenzene	350	U
1912-24-9	Atrazine	350	U
87-86-5	Pentachlorophenol	690	U
85-01-8	Phenanthrene	180	J
120-12-7	Anthracene	35	J
86-74-8	Carbazole	350	U
84-74-2	Di-n-butylphthalate	22	J
206-44-0	Fluoranthene	290	J
129-00-0	Pyrene	460	
85-68-7	Butylbenzylphthalate	350 ~~110~~ ~~J B~~	UR
91-94-1	3,3'-Dichlorobenzidine	350 ~~U~~	
56-55-3	Benzo(a)anthracene	180	J
218-01-9	Chrysene	290	J
117-81-7	Bis(2-ethylhexyl)phthalate	580 ~~B~~	
117-84-0	Di-n-octylphthalate	350	U
205-99-2	Benzo(b)fluoranthene	190	J
207-08-9	Benzo(k)fluoranthene	180	J
50-32-8	Benzo(a)pyrene	150	J
193-39-5	Indeno(1,2,3-cd)pyrene	130	J
53-70-3	Dibenzo(a,h)anthracene	60	J
191-24-2	Benzo(g,h,i)perylene	190	J
58-90-2	2,3,4,6-Tetrachlorophenol	350	U

[1] Cannot be separated from Diphenylamine

MW 08/18/13

EPA SAMPLE NO.
LRM13-63-048

11

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17014

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17014-11

Sample wt/vol: 30.8 (g/mL) g Lab File ID: PJUWH23.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 47 Decanted: (Y/N) Date Received: 06/14/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/20/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/18/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
100-52-7	Benzaldehyde	310	U	
108-95-2	Phenol	310	U	
111-44-4	Bis(2-chloroethyl)ether	310	U	
95-57-8	2-Chlorophenol	310	U	
95-48-7	2-Methylphenol	310	U	
108-60-1	2,2'-Oxybis(1-chloropropane)	310	U	
98-86-2	Acetophenone	23	J	
106-44-5	4-Methylphenol	310	U	
621-64-7	N-Nitroso-di-n-propylamine	310	U	
67-72-1	Hexachloroethane	310	U	
98-95-3	Nitrobenzene	310	U	
78-59-1	Isophorone	310	U	
88-75-5	2-Nitrophenol	310	U	
105-67-9	2,4-Dimethylphenol	310	U	
111-91-1	Bis(2-chloroethoxy)methane	310	U	
120-83-2	2,4-Dichlorophenol	310	U	
91-20-3	Naphthalene	44	J	
106-47-8	4-Chloroaniline	310	~~U~~	R
87-68-3	Hexachlorobutadiene	310	U	
105-60-2	Caprolactam	310	U	
59-50-7	4-Chloro-3-methylphenol	310	U	
91-57-6	2-Methylnaphthalene	21	J	
77-47-4	Hexachlorocyclopentadiene	310	~~U~~	R
88-06-2	2,4,6-Trichlorophenol	310	U	
95-95-4	2,4,5-Trichlorophenol	310	U	
92-52-4	1,1'-Biphenyl	310	U	
91-58-7	2-Chloronaphthalene	310	U	
88-74-4	2-Nitroaniline	600	U	
131-11-3	Dimethylphthalate	310	U	
606-20-2	2,6-Dinitrotoluene	310	U	
208-96-8	Acenaphthylene	310	U	
99-09-2	3-Nitroaniline	600	U	
83-32-9	Acenaphthene	33	J	

NW 08/18/13

EPA SAMPLE NO.
LRM13-63-048

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17014

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17014-11

Sample wt/vol: 30.8 (g/mL) g Lab File ID: PJUWH23.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 47 Decanted: (Y/N) Date Received: 06/14/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/20/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/18/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
51-28-5	2,4-Dinitrophenol	600	U
100-02-7	4-Nitrophenol	600	U
132-64-9	Dibenzofuran	24	J
121-14-2	2,4-Dinitrotoluene	310	U
84-66-2	Diethylphthalate	310	U
86-73-7	Fluorene	68	J
7005-72-3	4-Chlorophenyl-phenylether	310	U
100-01-6	4-Nitroaniline	600	U
534-52-1	4,6-Dinitro-2-methylphenol	600	U
86-30-6	N-Nitrosodiphenylamin [1]	310	U
95-94-3	1,2,4,5-Tetrachlorobenzene	310	U
101-55-3	4-Bromophenyl-phenylether	310	U
118-74-1	Hexachlorobenzene	310	U
1912-24-9	Atrazine	310	U
87-86-5	Pentachlorophenol	600	U
85-01-8	Phenanthrene	230	J
120-12-7	Anthracene	61	J
86-74-8	Carbazole	310	U
84-74-2	Di-n-butylphthalate	310	U
206-44-0	Fluoranthene	330	
129-00-0	Pyrene	490	
85-68-7	Butylbenzylphthalate	310 ~~45~~ ~~J B~~	U R
91-94-1	3,3'-Dichlorobenzidine	310 ~~U~~	~~U~~
56-55-3	Benzo(a)anthracene	210	J
218-01-9	Chrysene	310	
117-81-7	Bis(2-ethylhexyl)phthalate	710	~~B~~
117-84-0	Di-n-octylphthalate	310	U
205-99-2	Benzo(b)fluoranthene	190	J
207-08-9	Benzo(k)fluoranthene	220	J
50-32-8	Benzo(a)pyrene	190	J
193-39-5	Indeno(1,2,3-cd)pyrene	160	J
53-70-3	Dibenzo(a,h)anthracene	78	J
191-24-2	Benzo(g,h,i)perylene	210	J
58-90-2	2,3,4,6-Tetrachlorophenol	310	U

[1] Cannot be separated from Diphenylamine

MW 08/18/13

1D - FORM I SV-1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-63-072

12

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17014

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17014-12

Sample wt/vol: 30.3 (g/mL) g Lab File ID: PJUWI13.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 43 Decanted: (Y/N) Date Received: 06/14/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/20/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/18/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
100-52-7	Benzaldehyde	59	J	J
108-95-2	Phenol	300	U	
111-44-4	Bis(2-chloroethyl)ether	300	U	
95-57-8	2-Chlorophenol	300	U	
95-48-7	2-Methylphenol	300	U	
108-60-1	2,2'-Oxybis(1-chloropropane)	300	U	
98-86-2	Acetophenone	45	J	
106-44-5	4-Methylphenol	23	J	J
621-64-7	N-Nitroso-di-n-propylamine	300	U	
67-72-1	Hexachloroethane	300	U	
98-95-3	Nitrobenzene	300	U	
78-59-1	Isophorone	300	U	
88-75-5	2-Nitrophenol	300	U	
105-67-9	2,4-Dimethylphenol	300	U	
111-91-1	Bis(2-chloroethoxy)methane	300	U	
120-83-2	2,4-Dichlorophenol	300	U	
91-20-3	Naphthalene	120	J	
106-47-8	4-Chloroaniline	300	U	R
87-68-3	Hexachlorobutadiene	300	U	
105-60-2	Caprolactam	300	U	
59-50-7	4-Chloro-3-methylphenol	300	U	
91-57-6	2-Methylnaphthalene	300	U	
77-47-4	Hexachlorocyclopentadiene	300	U	R
88-06-2	2,4,6-Trichlorophenol	300	U	
95-95-4	2,4,5-Trichlorophenol	300	U	
92-52-4	1,1'-Biphenyl	300	U	
91-58-7	2-Chloronaphthalene	300	U	
88-74-4	2-Nitroaniline	580	U	
131-11-3	Dimethylphthalate	300	U	
606-20-2	2,6-Dinitrotoluene	300	U	
208-96-8	Acenaphthylene	28	J	
99-09-2	3-Nitroaniline	580	U	
83-32-9	Acenaphthene	52	J	

MW 08/16/13

1E - FORM I SV-2
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-63-072

12

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17014

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17014-12

Sample wt/vol: 30.3 (g/mL) g Lab File ID: PJUWI13.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 43 Decanted: (Y/N) Date Received: 06/14/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/20/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/18/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
51-28-5	2,4-Dinitrophenol	580	~~U~~	UJ
100-02-7	4-Nitrophenol	580	U	
132-64-9	Dibenzofuran	40	J	
121-14-2	2,4-Dinitrotoluene	300	U	
84-66-2	Diethylphthalate	300	U	
86-73-7	Fluorene	78	J	
7005-72-3	4-Chlorophenyl-phenylether	300	U	
100-01-6	4-Nitroaniline	580	U	
534-52-1	4,6-Dinitro-2-methylphenol	580	U	
86-30-6	N-Nitrosodiphenylamin [1]	300	U	
95-94-3	1,2,4,5-Tetrachlorobenzene	300	U	
101-55-3	4-Bromophenyl-phenylether	300	U	
118-74-1	Hexachlorobenzene	300	U	
1912-24-9	Atrazine	300	U	
87-86-5	Pentachlorophenol	580	~~U~~	UJ
85-01-8	Phenanthrene	380		
120-12-7	Anthracene	92	J	
86-74-8	Carbazole	24	J	
84-74-2	Di-n-butylphthalate	19	J	
206-44-0	Fluoranthene	510		
129-00-0	Pyrene	690		
85-68-7	Butylbenzylphthalate	300 ~~46~~	~~J B~~	U
91-94-1	3,3'-Dichlorobenzidine	300	~~U~~	R
56-55-3	Benzo(a)anthracene	370		
218-01-9	Chrysene	620		
117-81-7	Bis(2-ethylhexyl)phthalate	2700	~~B~~	
117-84-0	Di-n-octylphthalate	300	U	
205-99-2	Benzo(b)fluoranthene	330		
207-08-9	Benzo(k)fluoranthene	350		
50-32-8	Benzo(a)pyrene	360		
193-39-5	Indeno(1,2,3-cd)pyrene	190	J	
53-70-3	Dibenzo(a,h)anthracene	110	J	
191-24-2	Benzo(g,h,i)perylene	280	J	
58-90-2	2,3,4,6-Tetrachlorophenol	300	U	

[1] Cannot be separated from Diphenylamine

NW 08/18/13

1D - FORM I SV-1

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-63-120

13

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17014

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17014-13

Sample wt/vol: 31.0 (g/mL) g Lab File ID: PJUWI14.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 44 Decanted: (Y/N) Date Received: 06/14/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/20/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/18/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 2.5

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
100-52-7	Benzaldehyde	730	U
108-95-2	Phenol	730	U
111-44-4	Bis(2-chloroethyl)ether	730	U
95-57-8	2-Chlorophenol	730	U
95-48-7	2-Methylphenol	730	U
108-60-1	2,2'-Oxybis(1-chloropropane)	730	U
98-86-2	Acetophenone	730	U
106-44-5	4-Methylphenol	730	U
621-64-7	N-Nitroso-di-n-propylamine	730	U
67-72-1	Hexachloroethane	730	U
98-95-3	Nitrobenzene	730	U
78-59-1	Isophorone	730	U
88-75-5	2-Nitrophenol	730	U
105-67-9	2,4-Dimethylphenol	730	U
111-91-1	Bis(2-chloroethoxy)methane	730	U
120-83-2	2,4-Dichlorophenol	730	U
91-20-3	Naphthalene	290	J
106-47-8	4-Chloroaniline	730	U
87-68-3	Hexachlorobutadiene	730	U
105-60-2	Caprolactam	730	U
59-50-7	4-Chloro-3-methylphenol	730	U
91-57-6	2-Methylnaphthalene	53	J
77-47-4	Hexachlorocyclopentadiene	730	~~U~~ UJ
88-06-2	2,4,6-Trichlorophenol	730	U
95-95-4	2,4,5-Trichlorophenol	730	U
92-52-4	1,1'-Biphenyl	730	U
91-58-7	2-Chloronaphthalene	730	U
88-74-4	2-Nitroaniline	1400	U
131-11-3	Dimethylphthalate	730	U
606-20-2	2,6-Dinitrotoluene	730	U
208-96-8	Acenaphthylene	730	U
99-09-2	3-Nitroaniline	1400	U
83-32-9	Acenaphthene	86	J

NW 08/18/13

EPA SAMPLE NO.
LMR13-63-120

13

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17014

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17014-13

Sample wt/vol: 31.0 (g/mL) g Lab File ID: PJUWI14.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 44 Decanted: (Y/N) Date Received: 06/14/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/20/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/18/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 2.5

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
51-28-5	2,4-Dinitrophenol	1400	~~U~~	UJ
100-02-7	4-Nitrophenol	1400	U	
132-64-9	Dibenzofuran	49	J	
121-14-2	2,4-Dinitrotoluene	730	U	
84-66-2	Diethylphthalate	730	U	
86-73-7	Fluorene	110	J	
7005-72-3	4-Chlorophenyl-phenylether	730	U	
100-01-6	4-Nitroaniline	1400	U	
534-52-1	4,6-Dinitro-2-methylphenol	1400	U	
86-30-6	N-Nitrosodiphenylamin [1]	730	U	
95-94-3	1,2,4,5-Tetrachlorobenzene	730	U	
101-55-3	4-Bromophenyl-phenylether	730	U	
118-74-1	Hexachlorobenzene	730	U	
1912-24-9	Atrazine	730	U	
87-86-5	Pentachlorophenol	1400	~~U~~	UJ
85-01-8	Phenanthrene	510	J	
120-12-7	Anthracene	130	J	
86-74-8	Carbazole	730	U	
84-74-2	Di-n-butylphthalate	730	U	
206-44-0	Fluoranthene	520	J	
129-00-0	Pyrene	910		
85-68-7	Butylbenzylphthalate	730	U	
91-94-1	3,3'-Dichlorobenzidine	730	U	
56-55-3	Benzo(a)anthracene	520	J	
218-01-9	Chrysene	930		
117-81-7	Bis(2-ethylhexyl)phthalate	4400	~~B~~	
117-84-0	Di-n-octylphthalate	730	U	
205-99-2	Benzo(b)fluoranthene	430	J	
207-08-9	Benzo(k)fluoranthene	300	J	
50-32-8	Benzo(a)pyrene	440	J	
193-39-5	Indeno(1,2,3-cd)pyrene	270	J	
53-70-3	Dibenzo(a,h)anthracene	270	J	
191-24-2	Benzo(g,h,i)perylene	440	J	
58-90-2	2,3,4,6-Tetrachlorophenol	730	U	

[1] Cannot be separated from Diphenylamine

NW 08/18/13

1D - FORM I SV-1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-63-096

15

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17014

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17014-15

Sample wt/vol: 30.7 (g/mL) g Lab File ID: PJUWJ14.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 43 Decanted: (Y/N) Date Received: 06/14/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/20/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/20/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 4.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
100-52-7	Benzaldehyde	1200	U	
108-95-2	Phenol	1200	U	
111-44-4	Bis(2-chloroethyl)ether	1200	U	
95-57-8	2-Chlorophenol	1200	U	
95-48-7	2-Methylphenol	1200	U	
108-60-1	2,2'-Oxybis(1-chloropropane)	1200	U	
98-86-2	Acetophenone	1200	U	
106-44-5	4-Methylphenol	1200	U	
621-64-7	N-Nitroso-di-n-propylamine	1200	U	
67-72-1	Hexachloroethane	1200	U	
98-95-3	Nitrobenzene	1200	U	
78-59-1	Isophorone	1200	U	
88-75-5	2-Nitrophenol	1200	U	
105-67-9	2,4-Dimethylphenol	1200	U	
111-91-1	Bis(2-chloroethoxy)methane	1200	U	
120-83-2	2,4-Dichlorophenol	1200	U	
91-20-3	Naphthalene	240	J	
106-47-8	4-Chloroaniline	1200	~~U~~	R
87-68-3	Hexachlorobutadiene	1200	U	
105-60-2	Caprolactam	1200	U	
59-50-7	4-Chloro-3-methylphenol	1200	U	
91-57-6	2-Methylnaphthalene	1200	U	
77-47-4	Hexachlorocyclopentadiene	1200	~~U~~	R
88-06-2	2,4,6-Trichlorophenol	1200	U	
95-95-4	2,4,5-Trichlorophenol	1200	U	
92-52-4	1,1'-Biphenyl	1200	U	
91-58-7	2-Chloronaphthalene	1200	U	
88-74-4	2-Nitroaniline	2300	U	
131-11-3	Dimethylphthalate	1200	U	
606-20-2	2,6-Dinitrotoluene	1200	U	
208-96-8	Acenaphthylene	1200	U	
99-09-2	3-Nitroaniline	2300	U	
83-32-9	Acenaphthene	140	J	

MW 08/18/13

EPA SAMPLE NO.
LMR13-63-096

15

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17014

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17014-15

Sample wt/vol: 30.7 (g/mL) g Lab File ID: PJUWJ14.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 43 Decanted: (Y/N) Date Received: 06/14/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/20/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/20/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 4.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
51-28-5	2,4-Dinitrophenol	2300	U	
100-02-7	4-Nitrophenol	2300	U	
132-64-9	Dibenzofuran	87	J	
121-14-2	2,4-Dinitrotoluene	1200	U	
84-66-2	Diethylphthalate	27	J	
86-73-7	Fluorene	120	J	
7005-72-3	4-Chlorophenyl-phenylether	1200	U	
100-01-6	4-Nitroaniline	2300	U	
534-52-1	4,6-Dinitro-2-methylphenol	2300	U	
86-30-6	N-Nitrosodiphenylamin [1]	1200	U	
95-94-3	1,2,4,5-Tetrachlorobenzene	1200	U	
101-55-3	4-Bromophenyl-phenylether	1200	U	
118-74-1	Hexachlorobenzene	1200	U	
1912-24-9	Atrazine	1200	U	
87-86-5	Pentachlorophenol	2300	~~U~~	UJ
85-01-8	Phenanthrene	910	J	
120-12-7	Anthracene	170	J	
86-74-8	Carbazole	1200	U	
84-74-2	Di-n-butylphthalate	1200	U	
206-44-0	Fluoranthene	870	J	
129-00-0	Pyrene	1800		
85-68-7	Butylbenzylphthalate	1200	U	
91-94-1	3,3'-Dichlorobenzidine	1200	~~U~~	R
56-55-3	Benzo(a)anthracene	910	J	
218-01-9	Chrysene	2000		
117-81-7	Bis(2-ethylhexyl)phthalate	11000	~~B~~	
117-84-0	Di-n-octylphthalate	1200	U	
205-99-2	Benzo(b)fluoranthene	770	J	
207-08-9	Benzo(k)fluoranthene	550	J	
50-32-8	Benzo(a)pyrene	790	J	
193-39-5	Indeno(1,2,3-cd)pyrene	450	J	
53-70-3	Dibenzo(a,h)anthracene	290	J	
191-24-2	Benzo(g,h,i)perylene	710	J	
58-90-2	2,3,4,6-Tetrachlorophenol	1200	U	

[1] Cannot be separated from Diphenylamine

NW 08/18/13

EPA SAMPLE NO.
LMR13-63-144

16

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17014

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17014-16

Sample wt/vol: 30.4 (g/mL) g Lab File ID: PJUWI16.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 40 Decanted: (Y/N) Date Received: 06/14/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/20/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/18/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 5.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
100-52-7	Benzaldehyde	1400	U
108-95-2	Phenol	1400	U
111-44-4	Bis(2-chloroethyl)ether	1400	U
95-57-8	2-Chlorophenol	1400	U
95-48-7	2-Methylphenol	1400	U
108-60-1	2,2'-Oxybis(1-chloropropane)	1400	U
98-86-2	Acetophenone	1400	U
106-44-5	4-Methylphenol	1400	U
621-64-7	N-Nitroso-di-n-propylamine	1400	U
67-72-1	Hexachloroethane	1400	U
98-95-3	Nitrobenzene	1400	U
78-59-1	Isophorone	1400	U
88-75-5	2-Nitrophenol	1400	U
105-67-9	2,4-Dimethylphenol	1400	U
111-91-1	Bis(2-chloroethoxy)methane	1400	U
120-83-2	2,4-Dichlorophenol	1400	U
91-20-3	Naphthalene	210	J
106-47-8	4-Chloroaniline	1400	U
87-68-3	Hexachlorobutadiene	1400	U
105-60-2	Caprolactam	1400	U
59-50-7	4-Chloro-3-methylphenol	1400	U
91-57-6	2-Methylnaphthalene	1400	U
77-47-4	Hexachlorocyclopentadiene	1400	~~U~~ UJ
88-06-2	2,4,6-Trichlorophenol	1400	U
95-95-4	2,4,5-Trichlorophenol	1400	U
92-52-4	1,1'-Biphenyl	1400	U
91-58-7	2-Chloronaphthalene	1400	U
88-74-4	2-Nitroaniline	2700	U
131-11-3	Dimethylphthalate	1400	U
606-20-2	2,6-Dinitrotoluene	1400	U
208-96-8	Acenaphthylene	1400	U
99-09-2	3-Nitroaniline	2700	U
83-32-9	Acenaphthene	210	J

MW 08/18/13

1E - FORM I SV-2
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-63-144

16

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17014

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17014-16

Sample wt/vol: 30.4 (g/mL) g Lab File ID: PJUWI16.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 40 Decanted: (Y/N) Date Received: 06/14/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/20/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/18/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 5.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
51-28-5	2,4-Dinitrophenol	2700	~~U~~	UJ
100-02-7	4-Nitrophenol	2700	U	
132-64-9	Dibenzofuran	110	J	
121-14-2	2,4-Dinitrotoluene	1400	U	
84-66-2	Diethylphthalate	1400	U	
86-73-7	Fluorene	230	J	
7005-72-3	4-Chlorophenyl-phenylether	1400	U	
100-01-6	4-Nitroaniline	2700	U	
534-52-1	4,6-Dinitro-2-methylphenol	2700	U	
86-30-6	N-Nitrosodiphenylamin [1]	1400	U	
95-94-3	1,2,4,5-Tetrachlorobenzene	1400	U	
101-55-3	4-Bromophenyl-phenylether	1400	U	
118-74-1	Hexachlorobenzene	1400	U	
1912-24-9	Atrazine	1400	U	
87-86-5	Pentachlorophenol	2700	~~U~~	UJ
85-01-8	Phenanthrene	1300	J	
120-12-7	Anthracene	280	J	
86-74-8	Carbazole	1400	U	
84-74-2	Di-n-butylphthalate	110	J	
206-44-0	Fluoranthene	950	J	
129-00-0	Pyrene	1900		
85-68-7	Butylbenzylphthalate	1400	U	
91-94-1	3,3'-Dichlorobenzidine	1400	U	
56-55-3	Benzo(a)anthracene	1100	J	
218-01-9	Chrysene	1900		
117-81-7	Bis(2-ethylhexyl)phthalate	7500	~~B~~	
117-84-0	Di-n-octylphthalate	1400	U	
205-99-2	Benzo(b)fluoranthene	1000	J	
207-08-9	Benzo(k)fluoranthene	520	J	
50-32-8	Benzo(a)pyrene	990	J	
193-39-5	Indeno(1,2,3-cd)pyrene	500	J	
53-70-3	Dibenzo(a,h)anthracene	580	J	
191-24-2	Benzo(g,h,i)perylene	990	J	
58-90-2	2,3,4,6-Tetrachlorophenol	1400	U	

[1] Cannot be separated from Diphenylamine

NW 08/18/13

EPA SAMPLE NO.
LMR13-51-012

18

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17014

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17014-18

Sample wt/vol: 29.2 (g/mL) g Lab File ID: PJUWI17.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 46 Decanted: (Y/N) Date Received: 06/14/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/20/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/18/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
100-52-7	Benzaldehyde	51	J	
108-95-2	Phenol	320	U	
111-44-4	Bis(2-chloroethyl)ether	320	U	
95-57-8	2-Chlorophenol	320	U	
95-48-7	2-Methylphenol	320	U	
108-60-1	2,2'-Oxybis(1-chloropropane)	320	U	
98-86-2	Acetophenone	19	J	
106-44-5	4-Methylphenol	320	U	
621-64-7	N-Nitroso-di-n-propylamine	320	U	
67-72-1	Hexachloroethane	320	U	
98-95-3	Nitrobenzene	320	U	
78-59-1	Isophorone	320	U	
88-75-5	2-Nitrophenol	320	U	
105-67-9	2,4-Dimethylphenol	320	U	
111-91-1	Bis(2-chloroethoxy)methane	320	U	
120-83-2	2,4-Dichlorophenol	320	U	
91-20-3	Naphthalene	11	J	
106-47-8	4-Chloroaniline	320	~~U~~	R
87-68-3	Hexachlorobutadiene	320	U	
105-60-2	Caprolactam	320	U	
59-50-7	4-Chloro-3-methylphenol	320	U	
91-57-6	2-Methylnaphthalene	320	U	
77-47-4	Hexachlorocyclopentadiene	320	~~U~~	R
88-06-2	2,4,6-Trichlorophenol	320	U	
95-95-4	2,4,5-Trichlorophenol	320	U	
92-52-4	1,1'-Biphenyl	320	U	
91-58-7	2-Chloronaphthalene	320	U	
88-74-4	2-Nitroaniline	620	U	
131-11-3	Dimethylphthalate	320	U	
606-20-2	2,6-Dinitrotoluene	320	U	
208-96-8	Acenaphthylene	320	U	
99-09-2	3-Nitroaniline	620	U	
83-32-9	Acenaphthene	26	J	

MW 08/18/13

1E - FORM I SV-2
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-51-012

18

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17014

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17014-18

Sample wt/vol: 29.2 (g/mL) g Lab File ID: PJUWI17.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 46 Decanted: (Y/N) Date Received: 06/14/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/20/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/18/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
51-28-5	2,4-Dinitrophenol	620	~~U~~	UJ
100-02-7	4-Nitrophenol	620	U	
132-64-9	Dibenzofuran	13	J	
121-14-2	2,4-Dinitrotoluene	320	U	
84-66-2	Diethylphthalate	320	U	
86-73-7	Fluorene	33	J	
7005-72-3	4-Chlorophenyl-phenylether	320	U	
100-01-6	4-Nitroaniline	620	U	
534-52-1	4,6-Dinitro-2-methylphenol	620	U	
86-30-6	N-Nitrosodiphenylamin [1]	320	U	
95-94-3	1,2,4,5-Tetrachlorobenzene	320	U	
101-55-3	4-Bromophenyl-phenylether	320	U	
118-74-1	Hexachlorobenzene	320	U	
1912-24-9	Atrazine	320	U	
87-86-5	Pentachlorophenol	620	~~U~~	UJ
85-01-8	Phenanthrene	130	J	
120-12-7	Anthracene	40	J	
86-74-8	Carbazole	320	U	
84-74-2	Di-n-butylphthalate	16	J	
206-44-0	Fluoranthene	290	J	
129-00-0	Pyrene	490		
85-68-7	Butylbenzylphthalate	320 ~~59~~	~~J B~~	U
91-94-1	3,3'-Dichlorobenzidine	320	~~U~~	R
56-55-3	Benzo(a)anthracene	160	J	
218-01-9	Chrysene	260	J	
117-81-7	Bis(2-ethylhexyl)phthalate	320 ~~270~~	~~J B~~	U
117-84-0	Di-n-octylphthalate	320	U	
205-99-2	Benzo(b)fluoranthene	200	J	
207-08-9	Benzo(k)fluoranthene	120	J	
50-32-8	Benzo(a)pyrene	140	J	
193-39-5	Indeno(1,2,3-cd)pyrene	110	J	
53-70-3	Dibenzo(a,h)anthracene	45	J	
191-24-2	Benzo(g,h,i)perylene	160	J	
58-90-2	2,3,4,6-Tetrachlorophenol	320	U	

[1] Cannot be separated from Diphenylamine

NW 08/18/13

EPA SAMPLE NO.
LMR13-51-024

19

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17014

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17014-19

Sample wt/vol: 29.5 (g/mL) g Lab File ID: PJUWI18.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 40 Decanted: (Y/N) Date Received: 06/14/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/20/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/18/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
100-52-7	Benzaldehyde	57	J	
108-95-2	Phenol	290	U	
111-44-4	Bis(2-chloroethyl)ether	290	U	
95-57-8	2-Chlorophenol	290	U	
95-48-7	2-Methylphenol	290	U	
108-60-1	2,2'-Oxybis(1-chloropropane)	290	U	
98-86-2	Acetophenone	22	J	
106-44-5	4-Methylphenol	290	U	
621-64-7	N-Nitroso-di-n-propylamine	290	U	
67-72-1	Hexachloroethane	290	U	
98-95-3	Nitrobenzene	290	U	
78-59-1	Isophorone	290	U	
88-75-5	2-Nitrophenol	290	U	
105-67-9	2,4-Dimethylphenol	290	U	
111-91-1	Bis(2-chloroethoxy)methane	290	U	
120-83-2	2,4-Dichlorophenol	290	U	
91-20-3	Naphthalene	290	U	
106-47-8	4-Chloroaniline	290	~~U~~	R
87-68-3	Hexachlorobutadiene	290	U	
105-60-2	Caprolactam	290	U	
59-50-7	4-Chloro-3-methylphenol	290	U	
91-57-6	2-Methylnaphthalene	290	U	
77-47-4	Hexachlorocyclopentadiene	290	~~U~~	R
88-06-2	2,4,6-Trichlorophenol	290	U	
95-95-4	2,4,5-Trichlorophenol	290	U	
92-52-4	1,1'-Biphenyl	290	U	
91-58-7	2-Chloronaphthalene	290	U	
88-74-4	2-Nitroaniline	560	U	
131-11-3	Dimethylphthalate	290	U	
606-20-2	2,6-Dinitrotoluene	290	U	
208-96-8	Acenaphthylene	16	J	
99-09-2	3-Nitroaniline	560	U	
83-32-9	Acenaphthene	36	J	

NW 08/18/13

EPA SAMPLE NO.
LMR13-51-024

19

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17014

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17014-19

Sample wt/vol: 29.5 (g/mL) g Lab File ID: PJUWI18.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 40 Decanted: (Y/N) Date Received: 06/14/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/20/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/18/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
51-28-5	2,4-Dinitrophenol	560	~~U~~	UJ
100-02-7	4-Nitrophenol	560	U	
132-64-9	Dibenzofuran	16	J	
121-14-2	2,4-Dinitrotoluene	290	U	
84-66-2	Diethylphthalate	290	U	
86-73-7	Fluorene	37	J	
7005-72-3	4-Chlorophenyl-phenylether	290	U	
100-01-6	4-Nitroaniline	560	U	
534-52-1	4,6-Dinitro-2-methylphenol	560	U	
86-30-6	N-Nitrosodiphenylamin [1]	290	U	
95-94-3	1,2,4,5-Tetrachlorobenzene	290	U	
101-55-3	4-Bromophenyl-phenylether	290	U	
118-74-1	Hexachlorobenzene	290	U	
1912-24-9	Atrazine	290	U	
87-86-5	Pentachlorophenol	560	~~U~~	UJ
85-01-8	Phenanthrene	200	J	
120-12-7	Anthracene	91	J	
86-74-8	Carbazole	290	U	
84-74-2	Di-n-butylphthalate	290	U	
206-44-0	Fluoranthene	470		
129-00-0	Pyrene	870		
85-68-7	Butylbenzylphthalate	290 ~~46~~	~~J B~~	U
91-94-1	3,3'-Dichlorobenzidine	290	~~U~~	R
56-55-3	Benzo(a)anthracene	290		
218-01-9	Chrysene	320		
117-81-7	Bis(2-ethylhexyl)phthalate	290 ~~200~~	~~J B~~	U
117-84-0	Di-n-octylphthalate	290	U	
205-99-2	Benzo(b)fluoranthene	200	J	
207-08-9	Benzo(k)fluoranthene	220	J	
50-32-8	Benzo(a)pyrene	260	J	
193-39-5	Indeno(1,2,3-cd)pyrene	180	J	
53-70-3	Dibenzo(a,h)anthracene	96	J	
191-24-2	Benzo(g,h,i)perylene	240	J	
58-90-2	2,3,4,6-Tetrachlorophenol	290	U	

[1] Cannot be separated from Diphenylamine

NW 08/18/13

EPA SAMPLE NO.
LMR13-51-048

20

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17014

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17014-20

Sample wt/vol: 30.9 (g/mL) g Lab File ID: PJUWI19.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 23 Decanted: (Y/N) Date Received: 06/14/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/20/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/18/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
100-52-7	Benzaldehyde	27	J	
108-95-2	Phenol	210	U	
111-44-4	Bis(2-chloroethyl)ether	210	U	
95-57-8	2-Chlorophenol	210	U	
95-48-7	2-Methylphenol	210	U	
108-60-1	2,2'-Oxybis(1-chloropropane)	210	U	
98-86-2	Acetophenone	13	J	
106-44-5	4-Methylphenol	210	U	
621-64-7	N-Nitroso-di-n-propylamine	210	U	
67-72-1	Hexachloroethane	210	U	
98-95-3	Nitrobenzene	210	U	
78-59-1	Isophorone	210	U	
88-75-5	2-Nitrophenol	210	U	
105-67-9	2,4-Dimethylphenol	210	U	
111-91-1	Bis(2-chloroethoxy)methane	210	U	
120-83-2	2,4-Dichlorophenol	210	U	
91-20-3	Naphthalene	210	U	
106-47-8	4-Chloroaniline	210	~~U~~	R
87-68-3	Hexachlorobutadiene	210	U	
105-60-2	Caprolactam	210	U	
59-50-7	4-Chloro-3-methylphenol	210	U	
91-57-6	2-Methylnaphthalene	210	U	
77-47-4	Hexachlorocyclopentadiene	210	~~U~~	R
88-06-2	2,4,6-Trichlorophenol	210	U	
95-95-4	2,4,5-Trichlorophenol	210	U	
92-52-4	1,1'-Biphenyl	210	U	
91-58-7	2-Chloronaphthalene	210	U	
88-74-4	2-Nitroaniline	410	U	
131-11-3	Dimethylphthalate	210	U	
606-20-2	2,6-Dinitrotoluene	210	U	
208-96-8	Acenaphthylene	210	U	
99-09-2	3-Nitroaniline	410	U	
83-32-9	Acenaphthene	7.1	J	

MW 08/16/13

EPA SAMPLE NO.
LMR13-51-048

20

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17014

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17014-20

Sample wt/vol: 30.9 (g/mL) g Lab File ID: PJUWI19.D

~~Level: (LOW/MED)~~ LOW ~~Extraction: (Type)~~ SONC

% Moisture: 23 Decanted: (Y/N) Date Received: 06/14/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/20/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/18/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
51-28-5	2,4-Dinitrophenol	410	~~U~~	UJ
100-02-7	4-Nitrophenol	410	U	
132-64-9	Dibenzofuran	8.2	J	
121-14-2	2,4-Dinitrotoluene	210	U	
84-66-2	Diethylphthalate	210	U	
86-73-7	Fluorene	210	U	
7005-72-3	4-Chlorophenyl-phenylether	210	U	
100-01-6	4-Nitroaniline	410	U	
534-52-1	4,6-Dinitro-2-methylphenol	410	U	
86-30-6	N-Nitrosodiphenylamin [1]	210	U	
95-94-3	1,2,4,5-Tetrachlorobenzene	210	U	
101-55-3	4-Bromophenyl-phenylether	210	U	
118-74-1	Hexachlorobenzene	210	U	
1912-24-9	Atrazine	210	U	
87-86-5	Pentachlorophenol	410	~~U~~	UJ
85-01-8	Phenanthrene	59	J	
120-12-7	Anthracene	35	J	
86-74-8	Carbazole	210	U	
84-74-2	Di-n-butylphthalate	10	J	
206-44-0	Fluoranthene	120	J	
129-00-0	Pyrene	140	J	
85-68-7	Butylbenzylphthalate	210 ~~51~~	~~J B~~	U
91-94-1	3,3'-Dichlorobenzidine	210	~~U~~	R
56-55-3	Benzo(a)anthracene	73	J	
218-01-9	Chrysene	78	J	
117-81-7	Bis(2-ethylhexyl)phthalate	210 ~~100~~	~~J B~~	U
117-84-0	Di-n-octylphthalate	210	U	
205-99-2	Benzo(b)fluoranthene	38	J	
207-08-9	Benzo(k)fluoranthene	50	J	
50-32-8	Benzo(a)pyrene	40	J	
193-39-5	Indeno(1,2,3-cd)pyrene	23	J	
53-70-3	Dibenzo(a,h)anthracene	210	U	
191-24-2	Benzo(g,h,i)perylene	30	J	
58-90-2	2,3,4,6-Tetrachlorophenol	210	U	

[1] Cannot be separated from Diphenylamine

NW 08/18/13

EPA SAMPLE NO.
LMR13-51-012

21

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17014

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17014-21

Sample wt/vol: 30.2 (g/mL) g Lab File ID: PJUWI20.D

~~Level: (LOW/MED)~~ LOW ~~Extraction: (Type)~~ SONC

% Moisture: 22 Decanted: (Y/N) Date Received: 06/14/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/21/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/18/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
100-52-7	Benzaldehyde	18	~~J~~ J
108-95-2	Phenol	220	U
111-44-4	Bis(2-chloroethyl)ether	220	U
95-57-8	2-Chlorophenol	220	U
95-48-7	2-Methylphenol	220	U
108-60-1	2,2'-Oxybis(1-chloropropane)	220	U
98-86-2	Acetophenone	15	J
106-44-5	4-Methylphenol	220	U
621-64-7	N-Nitroso-di-n-propylamine	220	U
67-72-1	Hexachloroethane	220	U
98-95-3	Nitrobenzene	220	U
78-59-1	Isophorone	220	U
88-75-5	2-Nitrophenol	220	U
105-67-9	2,4-Dimethylphenol	220	U
111-91-1	Bis(2-chloroethoxy)methane	220	U
120-83-2	2,4-Dichlorophenol	220	U
91-20-3	Naphthalene	220	U
106-47-8	4-Chloroaniline	220	U
87-68-3	Hexachlorobutadiene	220	U
105-60-2	Caprolactam	220	U
59-50-7	4-Chloro-3-methylphenol	220	U
91-57-6	2-Methylnaphthalene	220	U
77-47-4	Hexachlorocyclopentadiene	220	~~U~~ UJ
88-06-2	2,4,6-Trichlorophenol	220	U
95-95-4	2,4,5-Trichlorophenol	220	U
92-52-4	1,1'-Biphenyl	220	U
91-58-7	2-Chloronaphthalene	220	U
88-74-4	2-Nitroaniline	420	U
131-11-3	Dimethylphthalate	220	U
606-20-2	2,6-Dinitrotoluene	220	U
208-96-8	Acenaphthylene	220	U
99-09-2	3-Nitroaniline	420	U
83-32-9	Acenaphthene	220	U

NW 08/18/13

1E - FORM I SV-2
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-51-012

21

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17014

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17014-21

Sample wt/vol: 30.2 (g/mL) g Lab File ID: PJUWI20.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 22 Decanted: (Y/N) Date Received: 06/14/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/21/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/18/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
51-28-5	2,4-Dinitrophenol	420	~~U~~	UJ
100-02-7	4-Nitrophenol	420	U	
132-64-9	Dibenzofuran	220	U	
121-14-2	2,4-Dinitrotoluene	220	U	
84-66-2	Diethylphthalate	220	U	
86-73-7	Fluorene	220	U	
7005-72-3	4-Chlorophenyl-phenylether	220	U	
100-01-6	4-Nitroaniline	420	U	
534-52-1	4,6-Dinitro-2-methylphenol	420	U	
86-30-6	N-Nitrosodiphenylamin [1]	220	U	
95-94-3	1,2,4,5-Tetrachlorobenzene	220	U	
101-55-3	4-Bromophenyl-phenylether	220	U	
118-74-1	Hexachlorobenzene	220	U	
1912-24-9	Atrazine	220	U	
87-86-5	Pentachlorophenol	420	~~U~~	UJ
85-01-8	Phenanthrene	220	U	
120-12-7	Anthracene	220	U	
86-74-8	Carbazole	220	U	
84-74-2	Di-n-butylphthalate	220	U	
206-44-0	Fluoranthene	220	U	
129-00-0	Pyrene	220	U	
85-68-7	Butylbenzylphthalate	220 ~~57~~	~~J~~	U
91-94-1	3,3'-Dichlorobenzidine	220	U	
56-55-3	Benzo(a)anthracene	220	U	
218-01-9	Chrysene	12	J	
117-81-7	Bis(2-ethylhexyl)phthalate	220 ~~130~~	~~J~~	U
117-84-0	Di-n-octylphthalate	220	U	
205-99-2	Benzo(b)fluoranthene	220	U	
207-08-9	Benzo(k)fluoranthene	220	U	
50-32-8	Benzo(a)pyrene	220	U	
193-39-5	Indeno(1,2,3-cd)pyrene	220	U	
53-70-3	Dibenzo(a,h)anthracene	220	U	
191-24-2	Benzo(g,h,i)perylene	220	U	
58-90-2	2,3,4,6-Tetrachlorophenol	220	U	

[1] Cannot be separated from Diphenylamine

NW 08/18/13

1D - FORM I SV-1

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-63-024FD

23

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17014

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17014-23

Sample wt/vol: 30.3 (g/mL) g Lab File ID: PJUWI21.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 52 Decanted: (Y/N) Date Received: 06/14/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/21/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/18/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
100-52-7	Benzaldehyde	58	J	
108-95-2	Phenol	350	U	
111-44-4	Bis(2-chloroethyl)ether	350	U	
95-57-8	2-Chlorophenol	350	U	
95-48-7	2-Methylphenol	350	U	
108-60-1	2,2'-Oxybis(1-chloropropane)	350	U	
98-86-2	Acetophenone	21	J	
106-44-5	4-Methylphenol	350	U	
621-64-7	N-Nitroso-di-n-propylamine	350	U	
67-72-1	Hexachloroethane	350	U	
98-95-3	Nitrobenzene	350	U	
78-59-1	Isophorone	350	U	
88-75-5	2-Nitrophenol	350	U	
105-67-9	2,4-Dimethylphenol	350	U	
111-91-1	Bis(2-chloroethoxy)methane	350	U	
120-83-2	2,4-Dichlorophenol	350	U	
91-20-3	Naphthalene	30	J	
106-47-8	4-Chloroaniline	350	U	R
87-68-3	Hexachlorobutadiene	350	U	
105-60-2	Caprolactam	350	U	
59-50-7	4-Chloro-3-methylphenol	350	U	
91-57-6	2-Methylnaphthalene	350	U	
77-47-4	Hexachlorocyclopentadiene	350	U	R
88-06-2	2,4,6-Trichlorophenol	350	U	
95-95-4	2,4,5-Trichlorophenol	350	U	
92-52-4	1,1'-Biphenyl	350	U	
91-58-7	2-Chloronaphthalene	350	U	
88-74-4	2-Nitroaniline	670	U	
131-11-3	Dimethylphthalate	350	U	
606-20-2	2,6-Dinitrotoluene	350	U	
208-96-8	Acenaphthylene	350	U	
99-09-2	3-Nitroaniline	670	U	
83-32-9	Acenaphthene	24	J	

NW 08/18/13

1E - FORM I SV-2
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-63-024FD

23

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17014

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17014-23

Sample wt/vol: 30.3 (g/mL) g Lab File ID: PJUWI21.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 52 Decanted: (Y/N) Date Received: 06/14/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/21/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/18/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
51-28-5	2,4-Dinitrophenol	670	~~U~~	UJ
100-02-7	4-Nitrophenol	670	U	
132-64-9	Dibenzofuran	20	J	
121-14-2	2,4-Dinitrotoluene	350	U	
84-66-2	Diethylphthalate	350	U	
86-73-7	Fluorene	350	U	
7005-72-3	4-Chlorophenyl-phenylether	350	U	
100-01-6	4-Nitroaniline	670	U	
534-52-1	4,6-Dinitro-2-methylphenol	670	U	
86-30-6	N-Nitrosodiphenylamin [1]	350	U	
95-94-3	1,2,4,5-Tetrachlorobenzene	350	U	
101-55-3	4-Bromophenyl-phenylether	350	U	
118-74-1	Hexachlorobenzene	350	U	
1912-24-9	Atrazine	350	U	
87-86-5	Pentachlorophenol	670	~~U~~	UJ
85-01-8	Phenanthrene	160	J	
120-12-7	Anthracene	40	J	
86-74-8	Carbazole	350	U	
84-74-2	Di-n-butylphthalate	18	J	
206-44-0	Fluoranthene	240	J	
129-00-0	Pyrene	410		
85-68-7	Butylbenzylphthalate	350 ~~82~~	~~J~~	U
91-94-1	3,3'-Dichlorobenzidine	350	~~U~~	R
56-55-3	Benzo(a)anthracene	180	J	
218-01-9	Chrysene	300	J	
117-81-7	Bis(2-ethylhexyl)phthalate	770		U
117-84-0	Di-n-octylphthalate	350	U	
205-99-2	Benzo(b)fluoranthene	220	J	
207-08-9	Benzo(k)fluoranthene	170	J	
50-32-8	Benzo(a)pyrene	200	J	
193-39-5	Indeno(1,2,3-cd)pyrene	150	J	
53-70-3	Dibenzo(a,h)anthracene	69	J	
191-24-2	Benzo(g,h,i)perylene	200	J	
58-90-2	2,3,4,6-Tetrachlorophenol	350	U	

[1] Cannot be separated from Diphenylamine

NW 08/18/13

1D - FORM I SV-1

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-51-012FD

24

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17014

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17014-24

Sample wt/vol: 30.6 (g/mL) g Lab File ID: PJUWI22.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 47 Decanted: (Y/N) Date Received: 06/14/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/21/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/19/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
100-52-7	Benzaldehyde	51	J	
108-95-2	Phenol	310	U	
111-44-4	Bis(2-chloroethyl)ether	310	U	
95-57-8	2-Chlorophenol	310	U	
95-48-7	2-Methylphenol	310	U	
108-60-1	2,2'-Oxybis(1-chloropropane)	310	U	
98-86-2	Acetophenone	15	J	
106-44-5	4-Methylphenol	310	U	
621-64-7	N-Nitroso-di-n-propylamine	310	U	
67-72-1	Hexachloroethane	310	U	
98-95-3	Nitrobenzene	310	U	
78-59-1	Isophorone	310	U	
88-75-5	2-Nitrophenol	310	U	
105-67-9	2,4-Dimethylphenol	310	U	
111-91-1	Bis(2-chloroethoxy)methane	310	U	
120-83-2	2,4-Dichlorophenol	310	U	
91-20-3	Naphthalene	310	U	
106-47-8	4-Chloroaniline	310	~~U~~	R
87-68-3	Hexachlorobutadiene	310	U	
105-60-2	Caprolactam	310	U	
59-50-7	4-Chloro-3-methylphenol	310	U	
91-57-6	2-Methylnaphthalene	310	U	
77-47-4	Hexachlorocyclopentadiene	310	~~U~~	R
88-06-2	2,4,6-Trichlorophenol	310	U	
95-95-4	2,4,5-Trichlorophenol	310	U	
92-52-4	1,1'-Biphenyl	310	U	
91-58-7	2-Chloronaphthalene	310	U	
88-74-4	2-Nitroaniline	610	U	
131-11-3	Dimethylphthalate	310	U	
606-20-2	2,6-Dinitrotoluene	310	U	
208-96-8	Acenaphthylene	310	U	
99-09-2	3-Nitroaniline	610	U	
83-32-9	Acenaphthene	32	J	

MW 08/18/13

1E - FORM I SV-2
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-51-012FD

24

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17014

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17014-24

Sample wt/vol: 30.6 (g/mL) g Lab File ID: PJUWI22.D

~~Level: (LOW/MED)~~ LOW ~~Extraction: (Type)~~ SONC

% Moisture: 47 Decanted: (Y/N) Date Received: 06/14/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/21/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/19/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
51-28-5	2,4-Dinitrophenol	610	~~U~~	UJ
100-02-7	4-Nitrophenol	610	U	
132-64-9	Dibenzofuran	14	J	
121-14-2	2,4-Dinitrotoluene	310	U	
84-66-2	Diethylphthalate	310	U	
86-73-7	Fluorene	40	J	
7005-72-3	4-Chlorophenyl-phenylether	310	U	
100-01-6	4-Nitroaniline	610	U	
534-52-1	4,6-Dinitro-2-methylphenol	610	U	
86-30-6	N-Nitrosodiphenylamin [1]	310	U	
95-94-3	1,2,4,5-Tetrachlorobenzene	310	U	
101-55-3	4-Bromophenyl-phenylether	310	U	
118-74-1	Hexachlorobenzene	310	U	
1912-24-9	Atrazine	310	U	
87-86-5	Pentachlorophenol	610	~~U~~	UJ
85-01-8	Phenanthrene	180	J	
120-12-7	Anthracene	54	J	
86-74-8	Carbazole	310	U	
84-74-2	Di-n-butylphthalate	18	J	
206-44-0	Fluoranthene	360		
129-00-0	Pyrene	540		
85-68-7	Butylbenzylphthalate	310 ~~75~~	~~J~~	U
91-94-1	3,3'-Dichlorobenzidine	310	~~U~~	R
56-55-3	Benzo(a)anthracene	180	J	
218-01-9	Chrysene	270	J	
117-81-7	Bis(2-ethylhexyl)phthalate	400		U
117-84-0	Di-n-octylphthalate	310	U	
205-99-2	Benzo(b)fluoranthene	180	J	
207-08-9	Benzo(k)fluoranthene	180	J	
50-32-8	Benzo(a)pyrene	160	J	
193-39-5	Indeno(1,2,3-cd)pyrene	130	J	
53-70-3	Dibenzo(a,h)anthracene	49	J	
191-24-2	Benzo(g,h,i)perylene	170	J	
58-90-2	2,3,4,6-Tetrachlorophenol	310	U	

[1] Cannot be separated from Diphenylamine

NW 08/18/13

1F - FORM I SV-SIM
SEMIVOLATILE SIM ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-51-012

18

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: 1734.2] SDG No.: 17014

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17014-18

Sample wt/vol: 29.2 (g/mL) g Lab File ID: HQISM06.D

Extraction: (Type) SONC

% Moisture: 46 Decanted: (Y/N) Date Received: 06/14/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/20/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/30/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 20.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
91-20-3	Naphthalene	120 ~~11~~	~~J B~~ U
90-12-0	1-Methylnaphthalene	5.6	J
91-57-6	2-Methylnaphthalene	7.4	J
208-96-8	Acenaphthylene	5.7	J
83-32-9	Acenaphthene	21	J
86-73-7	Fluorene	25	J
85-01-8	Phenanthrene	130	
120-12-7	Anthracene	43	J
206-44-0	Fluoranthene	280	
129-00-0	Pyrene	310	
56-55-3	Benzo(a)anthracene	140	
218-01-9	Chrysene	190	
205-99-2	Benzo(b)fluoranthene	120	J
207-08-9	Benzo(k)fluoranthene	130	
192-97-2	Benzo(e)pyrene	94	J
50-32-8	Benzo(a)pyrene	120	J
198-55-0	Perylene	780	
193-39-5	Indeno(1,2,3-cd)pyrene	62	J
53-70-3	Dibenzo(a,h)anthracene	19	~~J~~ J
191-24-2	Benzo(g,h,i)perylene	65	J
C1NAPH	C1-Naphthalenes	8.7	J
C2NAPH	C2-Naphthalenes	50	J
C3NAPH	C3-Naphthalenes	74	J
C4NAPH	C4-Naphthalenes	84	J
C1FLUOR	C1 Fluorenes	12	J
C2FLUOR	C2 Fluorenes	18	J
C3FLUOR	C3 Fluorenes	34	J
C1PHAN	C1-Phenanthrenes/Anthracenes	130	J
C2PHAN	C2-Phenanthrenes/Anthracenes	120	J
C3PHAN	C3-Phenanthrenes/Anthracenes	150	J
C4PHAN	C4-Phenanthrenes/Anthracenes	96	J
C1FLPY	C1-Fluoranthenes/Pyrenes	210	J
C2FLPY	C2-Fluoranthenes/Pyrenes	140	J
C3FLPY	C3-Fluoranthenes/Pyrenes	87	J
C1CHRYS	C1 Chrysenes	140	J
C2CHRYS	C2 Chrysenes	110	J
C3CHRYS	C3 Chrysenes	50	J
C4CHRYS	C4 Chrysenes	16	J

NW 08/18/13

1F - FORM I SV-SIM

SEMIVOLATILE SIM ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-51-012

18

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: 1734.2] SDG No.: 17014

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17014-18

Sample wt/vol: 29.2 (g/mL) g Lab File ID: HQISM06.D

Extraction: (Type) SONC

% Moisture: 46 Decanted: (Y/N) Date Received: 06/14/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/20/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/30/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 20.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
TPPAH	Total 16 PPAH	1700	~~B~~ J
TPAH	Total PAH	4100	~~B~~ J

NW 08/18/13

EPA SAMPLE NO.
LMR13-51-048

24

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: 1734.2] SDG No.: 17014

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17014-24

Sample wt/vol: 30.6 (g/mL) g Lab File ID: HQISM10.D

Extraction: (Type) SONC

% Moisture: 47 Decanted: (Y/N) Date Received: 06/14/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/21/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/30/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 20.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
91-20-3	Naphthalene	120 ~~14~~	~~J B~~ U
90-12-0	1-Methylnaphthalene	5.9	J
91-57-6	2-Methylnaphthalene	8.2	J
208-96-8	Acenaphthylene	6.2	J
83-32-9	Acenaphthene	29	J
86-73-7	Fluorene	36	J
85-01-8	Phenanthrene	170	~~B~~
120-12-7	Anthracene	55	J
206-44-0	Fluoranthene	350	
129-00-0	Pyrene	400	
56-55-3	Benzo(a)anthracene	170	
218-01-9	Chrysene	250	
205-99-2	Benzo(b)fluoranthene	140	
207-08-9	Benzo(k)fluoranthene	150	
192-97-2	Benzo(e)pyrene	110	J
50-32-8	Benzo(a)pyrene	140	
198-55-0	Perylene	940	
193-39-5	Indeno(1,2,3-cd)pyrene	89	J
53-70-3	Dibenzo(a,h)anthracene	27	~~J~~ J
191-24-2	Benzo(g,h,i)perylene	92	J
C1NAPH	C1-Naphthalenes	9.9	J
C2NAPH	C2-Naphthalenes	60	J
C3NAPH	C3-Naphthalenes	90	J
C4NAPH	C4-Naphthalenes	110	J
C1FLUOR	C1 Fluorenes	14	J
C2FLUOR	C2 Fluorenes	23	J
C3FLUOR	C3 Fluorenes	39	J
C1PHAN	C1-Phenanthrenes/Anthracenes	170	J
C2PHAN	C2-Phenanthrenes/Anthracenes	150	J
C3PHAN	C3-Phenanthrenes/Anthracenes	190	J
C4PHAN	C4-Phenanthrenes/Anthracenes	130	J
C1FLPY	C1-Fluoranthenes/Pyrenes	270	J
C2FLPY	C2-Fluoranthenes/Pyrenes	170	J
C3FLPY	C3-Fluoranthenes/Pyrenes	120	J
C1CHRYS	C1 Chrysenes	190	J
C2CHRYS	C2 Chrysenes	150	J
C3CHRYS	C3 Chrysenes	72	J
C4CHRYS	C4 Chrysenes	23	J

MW 08/18/13

1F - FORM I SV-SIM

SEMIVOLATILE SIM ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-51-048

24

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: 1734.2] SDG No.: 17014

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17014-24

Sample wt/vol: 30.6 (g/mL) g Lab File ID: HQISM10.D

Extraction: (Type) SONC

% Moisture: 47 Decanted: (Y/N) Date Received: 06/14/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/21/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/30/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 20.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
TPPAH	Total 16 PPAH	2100	~~B~~	J
TPAH	Total PAH	5200	~~B~~	J

MW 08/16/13

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-91-072

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17014

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17014-1

Sample wt/vol: 29.8 (g/mL) g Lab File ID: 0825ACBSOM36.D

% Moisture: 42 Decanted: (Y/N) Date Received: 06/14/2013

Extraction: (Type) SONC Date Extracted: 06/20/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 07/13/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 3.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	170	U
11104-28-2	Aroclor-1221	170	U
11141-16-5	Aroclor-1232	170	U
53469-21-9	Aroclor-1242	690	
12672-29-6	Aroclor-1248	170	U
11097-69-1	Aroclor-1254	370	
11096-82-5	Aroclor-1260	51	J
37324-23-5	Aroclor-1262	170	U
11100-14-4	Aroclor-1268	170	U

MW 08/18/13

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-91-096

2

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17014

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17014-2

Sample wt/vol: 29.4 (g/mL) g Lab File ID: 0825ACBSOM37.D

% Moisture: 44 Decanted: (Y/N) Date Received: 06/14/2013

Extraction: (Type) SONC Date Extracted: 06/20/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 07/13/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 5.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	300	U
11104-28-2	Aroclor-1221	300	U
11141-16-5	Aroclor-1232	300	U
53469-21-9	Aroclor-1242	1700	
12672-29-6	Aroclor-1248	300	U
11097-69-1	Aroclor-1254	1100	
11096-82-5	Aroclor-1260	140	J
37324-23-5	Aroclor-1262	300	U
11100-14-4	Aroclor-1268	300	U

MW 08/18/13

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-47-024

3

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17014

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17014-3

Sample wt/vol: 29.7 (g/mL) g Lab File ID: 0825AGASOM01.D

% Moisture: 53 Decanted: (Y/N) Date Received: 06/14/2013

Extraction: (Type) SONC Date Extracted: 06/20/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 07/29/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 5.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	350	U
11104-28-2	Aroclor-1221	350	U
11141-16-5	Aroclor-1232	350	U
53469-21-9	Aroclor-1242	29	J
12672-29-6	Aroclor-1248	350	U
11097-69-1	Aroclor-1254	24	~~J P~~ J
11096-82-5	Aroclor-1260	7.2	~~J P~~ J
37324-23-5	Aroclor-1262	350	U
11100-14-4	Aroclor-1268	350	U

NW 08/18/13

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-47-048

4

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17014

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17014-4

Sample wt/vol: 29.4 (g/mL) g Lab File ID: 0825AGASOM02.D

% Moisture: 50 Decanted: (Y/N) Date Received: 06/14/2013

Extraction: (Type) SONC Date Extracted: 06/20/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 07/29/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 5.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	330	U
11104-28-2	Aroclor-1221	330	U
11141-16-5	Aroclor-1232	330	U
53469-21-9	Aroclor-1242	33	J
12672-29-6	Aroclor-1248	330	U
11097-69-1	Aroclor-1254	26	J
11096-82-5	Aroclor-1260	6.4	~~J P~~ J
37324-23-5	Aroclor-1262	330	U
11100-14-4	Aroclor-1268	330	U

NW 08/18/13

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-47-072

5

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17014

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17014-5

Sample wt/vol: 30.8 (g/mL) g Lab File ID: 0825AGASOM03.D

% Moisture: 46 Decanted: (Y/N) Date Received: 06/14/2013

Extraction: (Type) SONC Date Extracted: 06/20/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 07/29/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 5.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	290	U
11104-28-2	Aroclor-1221	290	U
11141-16-5	Aroclor-1232	290	U
53469-21-9	Aroclor-1242	41	J
12672-29-6	Aroclor-1248	290	U
11097-69-1	Aroclor-1254	42	J
11096-82-5	Aroclor-1260	8.9	~~J P~~ J
37324-23-5	Aroclor-1262	290	U
11100-14-4	Aroclor-1268	290	U

MW 08/18/13

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-47-096

6

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17014

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17014-6

Sample wt/vol: 29.3 (g/mL) g Lab File ID: 0825AGASOM04.D

% Moisture: 47 Decanted: (Y/N) Date Received: 06/14/2013

Extraction: (Type) SONC Date Extracted: 06/20/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 07/29/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 5.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	320	U
11104-28-2	Aroclor-1221	320	U
11141-16-5	Aroclor-1232	320	U
53469-21-9	Aroclor-1242	29	J
12672-29-6	Aroclor-1248	320	U
11097-69-1	Aroclor-1254	26	J
11096-82-5	Aroclor-1260	6.0	~~J P~~ J
37324-23-5	Aroclor-1262	320	U
11100-14-4	Aroclor-1268	320	U

MW 08/18/13

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-47-120

7

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17014

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17014-7

Sample wt/vol: 30.3 (g/mL) g Lab File ID: 0825AGASOM05.D

% Moisture: 47 Decanted: (Y/N) Date Received: 06/14/2013

Extraction: (Type) SONC Date Extracted: 06/20/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 07/29/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 5.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	310	U
11104-28-2	Aroclor-1221	310	U
11141-16-5	Aroclor-1232	310	U
53469-21-9	Aroclor-1242	43	J
12672-29-6	Aroclor-1248	310	U
11097-69-1	Aroclor-1254	41	J
11096-82-5	Aroclor-1260	8.6	J
37324-23-5	Aroclor-1262	310	U
11100-14-4	Aroclor-1268	310	U

MW 08/18/13

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-47-144

8

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17014

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17014-8

Sample wt/vol: 30.5 (g/mL) g Lab File ID: 0825AGASOM06.D

% Moisture: 44 Decanted: (Y/N) Date Received: 06/14/2013

Extraction: (Type) SONC Date Extracted: 06/20/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 07/29/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 5.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	290	U
11104-28-2	Aroclor-1221	290	U
11141-16-5	Aroclor-1232	290	U
53469-21-9	Aroclor-1242	52	J
12672-29-6	Aroclor-1248	290	U
11097-69-1	Aroclor-1254	35	J
11096-82-5	Aroclor-1260	9.5	~~J P~~ J
37324-23-5	Aroclor-1262	290	U
11100-14-4	Aroclor-1268	290	U

NW 08/18/13

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-63-012

9

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17014

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17014-9

Sample wt/vol: 29.5 (g/mL) g Lab File ID: 0825AGASOM07.D

% Moisture: 54 Decanted: (Y/N) Date Received: 06/14/2013

Extraction: (Type) SONC Date Extracted: 06/20/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 07/29/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 5.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	360	U
11104-28-2	Aroclor-1221	360	U
11141-16-5	Aroclor-1232	360	U
53469-21-9	Aroclor-1242	46	J
12672-29-6	Aroclor-1248	360	U
11097-69-1	Aroclor-1254	38	J
11096-82-5	Aroclor-1260	8.8	J
37324-23-5	Aroclor-1262	360	U
11100-14-4	Aroclor-1268	360	U

NW 08/18/13

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-63-024

10

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17014

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17014-10

Sample wt/vol: 30.0 (g/mL) g Lab File ID: 0825AGASOM08.D

% Moisture: 51 Decanted: (Y/N) Date Received: 06/14/2013

Extraction: (Type) SONC Date Extracted: 06/20/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 07/29/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 5.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	340	U
11104-28-2	Aroclor-1221	340	U
11141-16-5	Aroclor-1232	340	U
53469-21-9	Aroclor-1242	72	J
12672-29-6	Aroclor-1248	340	U
11097-69-1	Aroclor-1254	65	J
11096-82-5	Aroclor-1260	13	~~J P~~ J
37324-23-5	Aroclor-1262	340	U
11100-14-4	Aroclor-1268	340	U

NW 08/18/13

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-63-048

11

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17014

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17014-11

Sample wt/vol: 29.4 (g/mL) g Lab File ID: 0825AGASOM09.D

% Moisture: 47 Decanted: (Y/N) Date Received: 06/14/2013

Extraction: (Type) SONC Date Extracted: 06/20/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 07/29/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 5.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	320	U
11104-28-2	Aroclor-1221	320	U
11141-16-5	Aroclor-1232	320	U
53469-21-9	Aroclor-1242	64	J
12672-29-6	Aroclor-1248	320	U
11097-69-1	Aroclor-1254	67	J
11096-82-5	Aroclor-1260	15	J
37324-23-5	Aroclor-1262	320	U
11100-14-4	Aroclor-1268	320	U

NW 08/18/13

1H - FORM I ARO
AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-63-072

12

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17014

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17014-12

Sample wt/vol: 30.3 (g/mL) g Lab File ID: 0825AGASOM10.D

% Moisture: 43 Decanted: (Y/N) Date Received: 06/14/2013

Extraction: (Type) SONC Date Extracted: 06/20/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 07/29/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 5.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	290	U
11104-28-2	Aroclor-1221	290	U
11141-16-5	Aroclor-1232	290	U
53469-21-9	Aroclor-1242	490	
12672-29-6	Aroclor-1248	290	U
11097-69-1	Aroclor-1254	320	
11096-82-5	Aroclor-1260	54	~~J P~~ J
37324-23-5	Aroclor-1262	290	U
11100-14-4	Aroclor-1268	290	U

NW 08/18/13

1H - FORM I ARO
AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-63-120

13

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17014

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17014-13

Sample wt/vol: 30.4 (g/mL) g Lab File ID: 0825AGASOM11.D

% Moisture: 44 Decanted: (Y/N) Date Received: 06/14/2013

Extraction: (Type) SONC Date Extracted: 06/20/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 07/29/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 5.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	290	U
11104-28-2	Aroclor-1221	290	U
11141-16-5	Aroclor-1232	290	U
53469-21-9	Aroclor-1242	290	U
12672-29-6	Aroclor-1248	860	
11097-69-1	Aroclor-1254	720	
11096-82-5	Aroclor-1260	110	J
37324-23-5	Aroclor-1262	290	U
11100-14-4	Aroclor-1268	290	U

MW 08/18/13

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-47-024FD

14

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17014

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17014-14

Sample wt/vol: 29.5 (g/mL) g Lab File ID: 0825AGASOM12.D

% Moisture: 54 Decanted: (Y/N) Date Received: 06/14/2013

Extraction: (Type) SOM01.2/PCB Date Extracted: 06/20/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 07/29/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 5.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	370	U
11104-28-2	Aroclor-1221	370	U
11141-16-5	Aroclor-1232	370	U
53469-21-9	Aroclor-1242	30	J
12672-29-6	Aroclor-1248	370	U
11097-69-1	Aroclor-1254	25	~~J P~~ J
11096-82-5	Aroclor-1260	4.7	~~J P~~ J
37324-23-5	Aroclor-1262	370	U
11100-14-4	Aroclor-1268	370	U

NW 08/18/13

1H - FORM I ARO
AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-63-096

15

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17014

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17014-15

Sample wt/vol: 29.5 (g/mL) g Lab File ID: 0825AGASOM13.D

% Moisture: 43 Decanted: (Y/N) Date Received: 06/14/2013

Extraction: (Type) SONC Date Extracted: 06/20/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 07/29/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 5.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	300	U
11104-28-2	Aroclor-1221	300	U
11141-16-5	Aroclor-1232	300	U
53469-21-9	Aroclor-1242	1400	
12672-29-6	Aroclor-1248	300	U
11097-69-1	Aroclor-1254	860	
11096-82-5	Aroclor-1260	110	J
37324-23-5	Aroclor-1262	300	U
11100-14-4	Aroclor-1268	300	U

NW 08/18/13

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-63-144

16

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17014

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17014-16

Sample wt/vol: 29.2 (g/mL) g Lab File ID: 0825AGASOM14.D

% Moisture: 40 Decanted: (Y/N) Date Received: 06/14/2013

Extraction: (Type) SONC Date Extracted: 06/20/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 07/29/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 5.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	280	U
11104-28-2	Aroclor-1221	280	U
11141-16-5	Aroclor-1232	280	U
53469-21-9	Aroclor-1242	280	U
12672-29-6	Aroclor-1248	800	
11097-69-1	Aroclor-1254	700	
11096-82-5	Aroclor-1260	120	J
37324-23-5	Aroclor-1262	280	U
11100-14-4	Aroclor-1268	280	U

MW 08/18/13

1H - FORM I ARO
AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-51-024FD

17

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17014

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17014-17

Sample wt/vol: 30.9 (g/mL) g Lab File ID: 0825AGASOM15.D

% Moisture: 38 Decanted: (Y/N) Date Received: 06/14/2013

Extraction: (Type) SOM01.2/PCB Date Extracted: 06/20/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 07/29/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 5.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	260	U
11104-28-2	Aroclor-1221	260	U
11141-16-5	Aroclor-1232	260	U
53469-21-9	Aroclor-1242	260	U
12672-29-6	Aroclor-1248	260	U
11097-69-1	Aroclor-1254	260	U
11096-82-5	Aroclor-1260	260	U
37324-23-5	Aroclor-1262	260	U
11100-14-4	Aroclor-1268	260	U

NW 08/18/13

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-51-012

18

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17014

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17014-18

Sample wt/vol: 30.2 (g/mL) g Lab File ID: 0825AGASOM16.D

% Moisture: 46 Decanted: (Y/N) Date Received: 06/14/2013

Extraction: (Type) SONC Date Extracted: 06/20/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 07/29/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 5.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	300	U
11104-28-2	Aroclor-1221	300	U
11141-16-5	Aroclor-1232	300	U
53469-21-9	Aroclor-1242	28	J
12672-29-6	Aroclor-1248	300	U
11097-69-1	Aroclor-1254	38	J
11096-82-5	Aroclor-1260	8.3	~~J P~~ J
37324-23-5	Aroclor-1262	300	U
11100-14-4	Aroclor-1268	300	U

MW 08/18/13

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-51-024

19

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17014

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17014-19

Sample wt/vol: 29.3 (g/mL) g Lab File ID: 0825AGASOM17.D

% Moisture: 40 Decanted: (Y/N) Date Received: 06/14/2013

Extraction: (Type) SONC Date Extracted: 06/20/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 07/29/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 5.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	280	U
11104-28-2	Aroclor-1221	280	U
11141-16-5	Aroclor-1232	280	U
53469-21-9	Aroclor-1242	280	U
12672-29-6	Aroclor-1248	280	U
11097-69-1	Aroclor-1254	280	U
11096-82-5	Aroclor-1260	280	U
37324-23-5	Aroclor-1262	280	U
11100-14-4	Aroclor-1268	280	U

NN 08/18/13

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-51-048

20

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17014

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17014-20

Sample wt/vol: 30.4 (g/mL) g Lab File ID: 5253AXBSOM08.D

% Moisture: 23 Decanted: (Y/N) Date Received: 06/14/2013

Extraction: (Type) SONC Date Extracted: 06/21/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 07/12/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	42	U
11104-28-2	Aroclor-1221	42	U
11141-16-5	Aroclor-1232	42	U
53469-21-9	Aroclor-1242	42	U
12672-29-6	Aroclor-1248	42	U
11097-69-1	Aroclor-1254	42	U
11096-82-5	Aroclor-1260	42	U
37324-23-5	Aroclor-1262	42	U
11100-14-4	Aroclor-1268	42	U

NW 08/16/13

1H - FORM I ARO
AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-51-072

21

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17014

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17014-21

Sample wt/vol: 30.3 (g/mL) g Lab File ID: 5253AXBSOM11.D

% Moisture: 22 Decanted: (Y/N) Date Received: 06/14/2013

Extraction: (Type) SONC Date Extracted: 06/21/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 07/12/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	42	U
11104-28-2	Aroclor-1221	42	U
11141-16-5	Aroclor-1232	42	U
53469-21-9	Aroclor-1242	42	U
12672-29-6	Aroclor-1248	42	U
11097-69-1	Aroclor-1254	42	U
11096-82-5	Aroclor-1260	42	U
37324-23-5	Aroclor-1262	42	U
11100-14-4	Aroclor-1268	42	U

NW 08/18/13

1H - FORM I ARO
AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-51-024FD

25

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17014

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17014-25

Sample wt/vol: 29.5 (g/mL) g Lab File ID: 5253AXBSOM12.D

% Moisture: 39 Decanted: (Y/N) Date Received: 06/14/2013

Extraction: (Type) SOM01.2/PCB Date Extracted: 06/21/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 07/12/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	55	U
11104-28-2	Aroclor-1221	55	U
11141-16-5	Aroclor-1232	55	U
53469-21-9	Aroclor-1242	55	U
12672-29-6	Aroclor-1248	55	U
11097-69-1	Aroclor-1254	55	U
11096-82-5	Aroclor-1260	55	U
37324-23-5	Aroclor-1262	55	U
11100-14-4	Aroclor-1268	55	U

MW 08/18/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-91-072

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678
Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 17014
Matrix: SED | Lab Sample Id: 200-17014-1
% Solids: 58.0 | Date Received: 06/14/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	10.7			P
7440-43-9	Cadmium	3.6		J	P
7440-47-3	Chromium	76.7		J	P
7440-50-8	Copper	53.9			P
7439-92-1	Lead	73.3			P
7440-02-0	Nickel	45.8		J	P
7440-66-6	Zinc	315		J	P

Color Before: GREY | Clarity Before: | Texture: FINE
Color After: YELLOW | Clarity After: CLOUDY | Artifacts:
Comments:

NW 08/18/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO. 1
LMR13-91-072

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678
Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17014
Matrix: SED Lab Sample Id: 200-17014-1
% Solids: 58.0 Date Received: 06/14/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.27			CV

Color Before: GRAY Clarity Before: CLOUDY Texture: FINE
Color After: COLORLESS Clarity After: CLEAR Artifacts:
Comments:

NW 08/18/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO. 2

LM13-91-096

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17014

Matrix: SED Lab Sample Id: 200-17014-2

% Solids: 55.7 Date Received: 06/14/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	10.4			P
7440-43-9	Cadmium	4.7		J E	P
7440-47-3	Chromium	87.1		J E	P
7440-50-8	Copper	60.6			P
7439-92-1	Lead	76.8			P
7440-02-0	Nickel	49.7		J E	P
7440-66-6	Zinc	230		J E	P

Color Before: GREY Clarity Before: Texture: FINE

Color After: BROWN Clarity After: CLOUDY Artifacts:

Comments:

MW 08/18/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO. 2

LMR13-91-096

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17014

Matrix: SED Lab Sample Id: 200-17014-2

% Solids: 55.7 Date Received: 06/14/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.44			CV

Color Before: GRAY Clarity Before: CLOUDY Texture: FINE

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

NW 08/18/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO. 3

LMR13-47-024

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17014

Matrix: SED Lab Sample Id: 200-17014-3

% Solids: 47.5 Date Received: 06/14/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	7.3		~~J~~	P
7440-43-9	Cadmium	0.82		J ~~E~~	P
7440-47-3	Chromium	27.4		J ~~E~~	P
7440-50-8	Copper	28.4			P
7439-92-1	Lead	23.5			P
7440-02-0	Nickel	30.0		J ~~E~~	P
7440-66-6	Zinc	118		J ~~E~~	P

Color Before: GREY Clarity Before: Texture: FINE

Color After: YELLOW Clarity After: CLOUDY Artifacts:

Comments:

NW 08/18/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO. 3

LMR13-47-024

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17014

Matrix: SED Lab Sample Id: 200-17014-3

% Solids: 47.5 Date Received: 06/14/2013

Concentration Units (**ug/L, ug,** or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.11	J		CV

Color Before: GRAY Clarity Before: CLOUDY Texture: FINE

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

MW 08/18/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO. 4
LMR13-47-048

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678
Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 17014
Matrix: SED | Lab Sample Id: 200-17014-4
% Solids: 50.4 | Date Received: 06/14/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	7.9		~~J~~	P
7440-43-9	Cadmium	0.85		J ~~J~~	P
7440-47-3	Chromium	27.5		J ~~J~~	P
7440-50-8	Copper	34.4			P
7439-92-1	Lead	26.6			P
7440-02-0	Nickel	30.8		J ~~J~~	P
7440-66-6	Zinc	124		J ~~J~~	P

Color Before: GREY | Clarity Before: | Texture: FINE
Color After: YELLOW | Clarity After: CLOUDY | Artifacts:
Comments:

NW 08/15/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO. 4
LMR13-47-048

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678
Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17014
Matrix: SED Lab Sample Id: 200-17014-4
% Solids: 50.4 Date Received: 06/14/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.16	J		CV

Color Before: GRAY Clarity Before: CLOUDY Texture: FINE
Color After: COLORLESS Clarity After: CLEAR Artifacts:
Comments:

NW 08/18/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO. 5
LMR13-47-072

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678
Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 17014
Matrix: SED | Lab Sample Id: 200-17014-5
% Solids: 54.5 | Date Received: 06/14/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	7.5		~~E~~	P
7440-43-9	Cadmium	0.88		J ~~E~~	P
7440-47-3	Chromium	25.8		J ~~E~~	P
7440-50-8	Copper	30.8			P
7439-92-1	Lead	27.1			P
7440-02-0	Nickel	28.9		J ~~E~~	P
7440-66-6	Zinc	119		J ~~E~~	P

Color Before: GREY | Clarity Before: | Texture: FINE
Color After: YELLOW | Clarity After: CLOUDY | Artifacts:
Comments:

NW 08/18/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-47-072

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678
Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17014
Matrix: SED Lab Sample Id: 200-17014-5
% Solids: 54.5 Date Received: 06/14/2013

Concentration Units (**ug/L, ug,** or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.16			CV

Color Before: GRAY Clarity Before: CLOUDY Texture: FINE
Color After: COLORLESS Clarity After: CLEAR Artifacts:
Comments:

MW 08/18/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO. 6
LMR13-47-096

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678
Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 17014
Matrix: SED | Lab Sample Id: 200-17014-6
% Solids: 53.3 | Date Received: 06/14/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	7.8		~~*~~	P
7440-43-9	Cadmium	0.88		J ~~E~~	P
7440-47-3	Chromium	28.8		J ~~E~~	P
7440-50-8	Copper	31.3			P
7439-92-1	Lead	26.2			P
7440-02-0	Nickel	31.9		J ~~E~~	P
7440-66-6	Zinc	125		J ~~E~~	P

Color Before: GREY | Clarity Before: | Texture: FINE
Color After: YELLOW | Clarity After: CLOUDY | Artifacts:
Comments:

MW 08/18/13

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USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-47-096

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678
Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 17014
Matrix: SED | Lab Sample Id: 200-17014-6
% Solids: 53.3 | Date Received: 06/14/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.054	J		CV

Color Before: GRAY | Clarity Before: CLOUDY | Texture: FINE
Color After: COLORLESS | Clarity After: CLEAR | Artifacts:
Comments:

NW 08/16/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO. 7

LMR13-47-120

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678

Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 17014

Matrix: SED | Lab Sample Id: 200-17014-7

% Solids: 52.9 | Date Received: 06/14/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	7.4		~~*~~	P
7440-43-9	Cadmium	0.94		J ~~E~~	P
7440-47-3	Chromium	29.3		J ~~E~~	P
7440-50-8	Copper	31.7			P
7439-92-1	Lead	26.4			P
7440-02-0	Nickel	31.8		J ~~E~~	P
7440-66-6	Zinc	129		J ~~E~~	P

Color Before: GREY | Clarity Before: | Texture: FINE

Color After: YELLOW | Clarity After: CLOUDY | Artifacts:

Comments:

NW 08/18/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO. 7

LMR13-47-120

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17014

Matrix: SED Lab Sample Id: 200-17014-7

% Solids: 52.9 Date Received: 06/14/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.10	J		CV

Color Before: GRAY Clarity Before: CLOUDY Texture: FINE

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

MW 08/18/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO. 8
LMR13-47-144

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678
Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 17014
Matrix: SED | Lab Sample Id: 200-17014-8
% Solids: 55.7 | Date Received: 06/14/2013

Concentration Units (**ug/L, ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	8.7			P
7440-43-9	Cadmium	1.3		J E	P
7440-47-3	Chromium	52.1		J E	P
7440-50-8	Copper	39.7			P
7439-92-1	Lead	39.0			P
7440-02-0	Nickel	41.3		J E	P
7440-66-6	Zinc	232		J E	P

Color Before: GREY | Clarity Before: | Texture: FINE
Color After: YELLOW | Clarity After: CLOUDY | Artifacts:
Comments:

NW 08/18/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO. 8
LMR13-47-144

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678
Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17014
Matrix: SED Lab Sample Id: 200-17014-8
% Solids: 55.7 Date Received: 06/14/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.18			CV

Color Before: GRAY Clarity Before: CLOUDY Texture: FINE
Color After: COLORLESS Clarity After: CLEAR Artifacts:
Comments:

MW 08/18/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO. 9
LMR13-63-012

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678
Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 17014
Matrix: SED | Lab Sample Id: 200-17014-9
% Solids: 46.3 | Date Received: 06/14/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	7.4		~~J~~	P
7440-43-9	Cadmium	0.89		J ~~B~~	P
7440-47-3	Chromium	29.5		J ~~B~~	P
7440-50-8	Copper	30.3			P
7439-92-1	Lead	25.9			P
7440-02-0	Nickel	34.1		J ~~B~~	P
7440-66-6	Zinc	128		J ~~B~~	P

Color Before: GREY | Clarity Before: | Texture: FINE
Color After: YELLOW | Clarity After: CLOUDY | Artifacts:
Comments:

MW 08/18/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO. 9

LMR13-63-012

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17014

Matrix: SED Lab Sample Id: 200-17014-9

% Solids: 46.3 Date Received: 06/14/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.16	J		CV

Color Before: GRAY Clarity Before: CLOUDY Texture: FINE

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

MW 08/18/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO. 10
LMR13-63-024

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678
Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 17014
Matrix: SED | Lab Sample Id: 200-17014-10
% Solids: 48.6 | Date Received: 06/14/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	8.5		~~*~~	P
7440-43-9	Cadmium	1.1		J ~~E~~	P
7440-47-3	Chromium	34.5		J ~~E~~	P
7440-50-8	Copper	33.7			P
7439-92-1	Lead	31.7			P
7440-02-0	Nickel	36.9		J ~~E~~	P
7440-66-6	Zinc	154		J ~~E~~	P

Color Before: GREY | Clarity Before: | Texture: FINE
Color After: YELLOW | Clarity After: CLOUDY | Artifacts:
Comments:

NW 08/18/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO. 10

LMR13-63-024

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17014

Matrix: SED Lab Sample Id: 200-17014-10

% Solids: 48.6 Date Received: 06/14/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.13	J		CV

Color Before: GRAY Clarity Before: CLOUDY Texture: FINE

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

MW 08/18/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO. 11

LMR13-63-048

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678

Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 17014

Matrix: SED | Lab Sample Id: 200-17014-11

% Solids: 53.4 | Date Received: 06/14/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	9.0		~~J~~	P
7440-43-9	Cadmium	1.5		J ~~E~~	P
7440-47-3	Chromium	38.6		J ~~E~~	P
7440-50-8	Copper	34.8			P
7439-92-1	Lead	38.8			P
7440-02-0	Nickel	39.5		J ~~E~~	P
7440-66-6	Zinc	198		J ~~E~~	P

Color Before: GREY | Clarity Before: | Texture: FINE

Color After: YELLOW | Clarity After: CLOUDY | Artifacts:

Comments:

MW 08/15/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO. 11
LMR13-63-048

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678
Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 17014
Matrix: SED | Lab Sample Id: 200-17014-11
% Solids: 53.4 | Date Received: 06/14/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.15	J		CV

Color Before: GRAY | Clarity Before: CLOUDY | Texture: FINE
Color After: COLORLESS | Clarity After: CLEAR | Artifacts:
Comments:

MW 08/16/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO. 12
LMR13-63-072

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678
Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 17014
Matrix: SED | Lab Sample Id: 200-17014-12
% Solids: 56.6 | Date Received: 06/14/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	9.3		~~J~~	P
7440-43-9	Cadmium	2.5		J ~~E~~	P
7440-47-3	Chromium	47.3		J ~~E~~	P
7440-50-8	Copper	40.5			P
7439-92-1	Lead	49.8			P
7440-02-0	Nickel	41.2		J ~~E~~	P
7440-66-6	Zinc	172		J ~~E~~	P

Color Before: GREY | Clarity Before: | Texture: FINE
Color After: YELLOW | Clarity After: CLOUDY | Artifacts:
Comments:

NW 08/18/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO. 12

LMR13-63-072

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17014

Matrix: SED Lab Sample Id: 200-17014-12

% Solids: 56.6 Date Received: 06/14/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.20			CV

Color Before: GRAY Clarity Before: CLOUDY Texture: FINE

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

MW 08/18/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO. 13

LMR13-63-120

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678

Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 17014

Matrix: SED | Lab Sample Id: 200-17014-13

% Solids: 56.0 | Date Received: 06/14/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	10.5			P
7440-43-9	Cadmium	4.2		J	P
7440-47-3	Chromium	79.1		J	P
7440-50-8	Copper	56.3			P
7439-92-1	Lead	73.2			P
7440-02-0	Nickel	47.3		J	P
7440-66-6	Zinc	210		J	P

Color Before: GREY | Clarity Before: | Texture: FINE

Color After: YELLOW | Clarity After: CLOUDY | Artifacts:

Comments:

MW 08/18/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO. 13

LMR13-63-120

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678

Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 17014

Matrix: SED | Lab Sample Id: 200-17014-13

% Solids: 56.0 | Date Received: 06/14/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.44			CV

Color Before: GRAY | Clarity Before: CLOUDY | Texture: FINE

Color After: COLORLESS | Clarity After: CLEAR | Artifacts:

Comments:

MW 08/18/13

14

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-47-024FD

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678
Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 17014
Matrix: SED | Lab Sample Id: 200-17014-14
% Solids: 45.6 | Date Received: 06/14/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	7.8		~~J~~	P
7440-43-9	Cadmium	0.83		J ~~B~~	P
7440-47-3	Chromium	28.4		J ~~B~~	P
7440-50-8	Copper	30.6			P
7439-92-1	Lead	25.8			P
7440-02-0	Nickel	32.9		J ~~B~~	P
7440-66-6	Zinc	128		J ~~B~~	P

Color Before: GREY | Clarity Before: | Texture: FINE
Color After: YELLOW | Clarity After: CLOUDY | Artifacts:
Comments:

MW 08/18/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO. 14
LMR13-47-024FD

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678
Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17014
Matrix: SED Lab Sample Id: 200-17014-14
% Solids: 45.6 Date Received: 06/14/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.094	J		CV

Color Before: GRAY Clarity Before: CLOUDY Texture: FINE
Color After: COLORLESS Clarity After: CLEAR Artifacts:
Comments:

NW 08/18/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO. 15
LMR13-63-096

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678
Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 17014
Matrix: SED | Lab Sample Id: 200-17014-15
% Solids: 56.7 | Date Received: 06/14/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	10.4		~~J~~	P
7440-43-9	Cadmium	4.3		J ~~E~~	P
7440-47-3	Chromium	88.3		J ~~E~~	P
7440-50-8	Copper	58.9			P
7439-92-1	Lead	77.9			P
7440-02-0	Nickel	48.6		J ~~E~~	P
7440-66-6	Zinc	224		J ~~E~~	P

Color Before: GREY | Clarity Before: | Texture: FINE
Color After: YELLOW | Clarity After: CLOUDY | Artifacts:
Comments:

NW 08/18/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO. 15

LMR13-63-096

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17014

Matrix: SED Lab Sample Id: 200-17014-15

% Solids: 56.7 Date Received: 06/14/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.32			CV

Color Before: GRAY Clarity Before: CLOUDY Texture: FINE

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

NW 08/18/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO. 16
LMR13-63-144

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678
Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 17014
Matrix: SED | Lab Sample Id: 200-17014-16
% Solids: 59.8 | Date Received: 06/14/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	10.9		~~J~~	P
7440-43-9	Cadmium	3.8		J ~~E~~	P
7440-47-3	Chromium	77.9		J ~~E~~	P
7440-50-8	Copper	56.8			P
7439-92-1	Lead	71.4			P
7440-02-0	Nickel	45.1		J ~~E~~	P
7440-66-6	Zinc	201		J ~~E~~	P

Color Before: GREY | Clarity Before: | Texture: FINE
Color After: YELLOW | Clarity After: CLOUDY | Artifacts:
Comments:

NW 08/18/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO. 16
LMR13-63-144

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678
Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17014
Matrix: SED Lab Sample Id: 200-17014-16
% Solids: 59.8 Date Received: 06/14/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.39			CV

Color Before: GRAY Clarity Before: CLOUDY Texture: FINE
Color After: COLORLESS Clarity After: CLEAR Artifacts:
Comments:

MW 08/18/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO. 17

LMR13-51-024FD

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678

Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 17014

Matrix: SED | Lab Sample Id: 200-17014-17

% Solids: 61.9 | Date Received: 06/14/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	6.5		~~J~~	P
7440-43-9	Cadmium	0.57	~~J~~	J ~~B~~	P
7440-47-3	Chromium	25.7		J ~~B~~	P
7440-50-8	Copper	23.7			P
7439-92-1	Lead	22.5			P
7440-02-0	Nickel	30.2		J ~~B~~	P
7440-66-6	Zinc	110		J ~~B~~	P

Color Before: GREY | Clarity Before: | Texture: FINE

Color After: YELLOW | Clarity After: CLOUDY | Artifacts:

Comments:

MW 08/18/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO. 17
LMR13-51-024FD

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678
Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 17014
Matrix: SED | Lab Sample Id: 200-17014-17
% Solids: 61.9 | Date Received: 06/14/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.20			CV

Color Before: GRAY | Clarity Before: CLOUDY | Texture: FINE
Color After: COLORLESS | Clarity After: CLEAR | Artifacts:
Comments:

NW 08/18/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO. 18
LMR13-51-012

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678
Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 17014
Matrix: SED | Lab Sample Id: 200-17014-18
% Solids: 54.5 | Date Received: 06/14/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	7.1		~~J~~	P
7440-43-9	Cadmium	0.84		J ~~E~~	P
7440-47-3	Chromium	22.3		J ~~E~~	P
7440-50-8	Copper	26.3			P
7439-92-1	Lead	39.3			P
7440-02-0	Nickel	28.5		J ~~E~~	P
7440-66-6	Zinc	137		J ~~E~~	P

Color Before: GREY | Clarity Before: | Texture: FINE
Color After: YELLOW | Clarity After: CLOUDY | Artifacts:
Comments:

MW 08/18/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO. 18
LMR13-51-012

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678
Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 17014
Matrix: SED | Lab Sample Id: 200-17014-18
% Solids: 54.5 | Date Received: 06/14/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.16	J		CV

Color Before: GRAY | Clarity Before: CLOUDY | Texture: FINE
Color After: COLORLESS | Clarity After: CLEAR | Artifacts:
Comments:

MW 08/18/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO. 19

LMR13-51-024

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17014

Matrix: SED Lab Sample Id: 200-17014-19

% Solids: 60.2 Date Received: 06/14/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	6.1		~~J~~	P
7440-43-9	Cadmium	0.49	~~J~~	J ~~E~~	P
7440-47-3	Chromium	22.5		J ~~E~~	P
7440-50-8	Copper	22.0			P
7439-92-1	Lead	29.3			P
7440-02-0	Nickel	28.4		J ~~E~~	P
7440-66-6	Zinc	91.0		J ~~E~~	P

Color Before: GREY Clarity Before: Texture: FINE

Color After: YELLOW Clarity After: CLOUDY Artifacts:

Comments:

NW 08/18/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO. 19

LMR13-51-024

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17014

Matrix: SED Lab Sample Id: 200-17014-19

% Solids: 60.2 Date Received: 06/14/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.19			CV

Color Before: GRAY Clarity Before: CLOUDY Texture: FINE

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

AW 08/18/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO. 20

LMR13-51-048

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678

Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 17014

Matrix: SED | Lab Sample Id: 200-17014-20

% Solids: 77.5 | Date Received: 06/14/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	3.6		~~J~~	P
7440-43-9	Cadmium	0.26	J	~~J~~	P
7440-47-3	Chromium	7.7		J ~~J~~	P
7440-50-8	Copper	7.5			P
7439-92-1	Lead	6.7			P
7440-02-0	Nickel	11.7		~~J~~	P
7440-66-6	Zinc	35.4		J ~~J~~	P

Color Before: BROWN | Clarity Before: | Texture: MEDIUM

Color After: TAN | Clarity After: CLOUDY | Artifacts:

Comments:

NW 08/18/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO. 20

LMR13-51-048

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678

Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 17014

Matrix: SED | Lab Sample Id: 200-17014-20

% Solids: 77.5 | Date Received: 06/14/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.055	J		CV

Color Before: GRAY | Clarity Before: CLOUDY | Texture: FINE

Color After: COLORLESS | Clarity After: CLEAR | Artifacts:

Comments:

MW 08/18/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO. 21

LMR13-51-072

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678

Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 17014

Matrix: SED | Lab Sample Id: 200-17014-21

% Solids: 77.8 | Date Received: 06/14/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	2.9		~~E~~	P
7440-43-9	Cadmium	0.27	J	~~E~~	P
7440-47-3	Chromium	6.9		J ~~E~~	P
7440-50-8	Copper	6.1			P
7439-92-1	Lead	4.9			P
7440-02-0	Nickel	10.5		~~E~~	P
7440-66-6	Zinc	27.4		J ~~E~~	P

Color Before: BROWN | Clarity Before: | Texture: MEDIUM

Color After: TAN | Clarity After: CLOUDY | Artifacts:

Comments:

NW 08/18/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO. 21

LMR13-51-072

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678

Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 17014

Matrix: SED | Lab Sample Id: 200-17014-21

% Solids: 77.8 | Date Received: 06/14/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.11	U		CV

Color Before: GRAY | Clarity Before: CLOUDY | Texture: FINE

Color After: COLORLESS | Clarity After: CLEAR | Artifacts:

Comments:

MW 08/18/13

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - SEM/AVS

18

Client Sample ID: LMR13-51-012 | Lab Sample ID: 200-17014-18

Lab Name: TestAmerica Burlington | Job No.: 200-17014-1

SDG ID.: 17014

Matrix: Sediment | Date Sampled: 06/13/2013 16:10

Reporting Basis: DRY | Date Received: 06/14/2013 10:40

% Solids: 54.5

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-43-9	Cadmium SEM	0.38	2.2	0.35	mg/Kg	J		10	6010C
7440-43-9	Cadmium SEM	0.0034	0.019	0.0031	umol/g	J		10	6010C
7440-50-8	Copper SEM	3.8	11.3	0.99	mg/Kg	J		10	6010C
7440-50-8	Copper SEM	0.060	0.18	0.016	umol/g	J		10	6010C
7439-92-1	Lead SEM	14.7	4.6	2.0	mg/Kg			10	6010C
7439-92-1	Lead SEM	0.071	0.022	0.0097	umol/g			10	6010C
7440-02-0	Nickel SEM	4.3	18.3	1.3	mg/Kg	J		10	6010C
7440-02-0	Nickel SEM	0.073	0.31	0.022	umol/g	J		10	6010C
7440-66-6	Zinc SEM	36.2	9.1	2.6	mg/Kg			10	6010C
7440-66-6	Zinc SEM	0.55	0.14	0.039	umol/g			10	6010C
7439-97-6	Mercury SEM	0.0091	0.0091	0.0030	mg/Kg	U		1	7470A
7439-97-6	Mercury SEM	0.000046	0.000046	0.000015	umol/g	U		1	7470A

NW 08/18/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY - SEM/AVS

18

Client Sample ID: LMR13-51-012 Lab Sample ID: 200-17014-18

Lab Name: TestAmerica Burlington Job No.: 200-17014-1

SDG ID.: 17014

Matrix: Sediment Date Sampled: 06/13/2013 16:10

Reporting Basis: DRY Date Received: 06/14/2013 10:40

% Solids: 54.5

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
18496-25-8	Acid Volatile Sulfides (AVS)	146	29.2		mg/Kg			1	AVS
18496-25-8	Acid Volatile Sulfides (AVS)	4.6	0.91		umol/g			1	AVS

MW 08/18/13

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - SEM/AVS

18

Client Sample ID: LMR13-51-012 Lab Sample ID: 200-17014-18

Lab Name: TestAmerica Burlington Job No.: 200-17014-1

SDG ID.: 17014

Matrix: Sediment Date Sampled: 06/13/2013 16:10

Reporting Basis: WET Date Received: 06/14/2013 10:40

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	SEM/AVS Ratio	0.167	0.00100	0.00100	NONE			1	SEM

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1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: LMR13-91-072 | Lab Sample ID: 200-17014-1

Lab Name: TestAmerica Burlington | Job No.: 200-17014-1

SDG ID.: 17014

Matrix: Sediment | Date Sampled: 06/13/2013 12:10

Reporting Basis: WET | Date Received: 06/14/2013 10:40

% Solids: 58.0

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	29800	1000		mg/Kg			1	Lloyd Kahn

MW 08/18/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

2

Client Sample ID: LMR13-91-096 Lab Sample ID: 200-17014-2

Lab Name: TestAmerica Burlington Job No.: 200-17014-1

SDG ID.: 17014

Matrix: Sediment Date Sampled: 06/13/2013 12:20

Reporting Basis: WET Date Received: 06/14/2013 10:40

% Solids: 55.7

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	33800	1000		mg/Kg			1	Lloyd Kahn

MW 08/18/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

3

Client Sample ID: LMR13-47-024 Lab Sample ID: 200-17014-3

Lab Name: TestAmerica Burlington Job No.: 200-17014-1

SDG ID.: 17014

Matrix: Sediment Date Sampled: 06/13/2013 13:45

Reporting Basis: WET Date Received: 06/14/2013 10:40

% Solids: 47.5

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	30700	1000		mg/Kg			1	Lloyd Kahn

NW 08/18/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

4

Client Sample ID: LMR13-47-048 Lab Sample ID: 200-17014-4

Lab Name: TestAmerica Burlington Job No.: 200-17014-1

SDG ID.: 17014

Matrix: Sediment Date Sampled: 06/13/2013 13:55

Reporting Basis: WET Date Received: 06/14/2013 10:40

% Solids: 50.4

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	29700	1000		mg/Kg			1	Lloyd Kahn

NW 08/18/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

5

Client Sample ID: LMR13-47-072
Lab Sample ID: 200-17014-5
Lab Name: TestAmerica Burlington
Job No.: 200-17014-1
SDG ID.: 17014
Matrix: Sediment
Date Sampled: 06/13/2013 14:05
Reporting Basis: WET
Date Received: 06/14/2013 10:40
% Solids: 54.5

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	31500	1000		mg/Kg			1	Lloyd Kahn

MW 08/18/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

6

Client Sample ID: LMR13-47-096 | Lab Sample ID: 200-17014-6

Lab Name: TestAmerica Burlington | Job No.: 200-17014-1

SDG ID.: 17014

Matrix: Sediment | Date Sampled: 06/13/2013 14:15

Reporting Basis: WET | Date Received: 06/14/2013 10:40

% Solids: 53.3

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	29400	1000		mg/Kg			1	Lloyd Kahn

MW 08/18/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

7

Client Sample ID: LMR13-47-120
Lab Sample ID: 200-17014-7
Lab Name: TestAmerica Burlington
Job No.: 200-17014-1
SDG ID.: 17014
Matrix: Sediment
Date Sampled: 06/13/2013 14:25
Reporting Basis: WET
Date Received: 06/14/2013 10:40
% Solids: 52.9

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	31300	1000		mg/Kg			1	Lloyd Kahn

NW 08/18/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

8

Client Sample ID: LMR13-47-144
Lab Sample ID: 200-17014-8
Lab Name: TestAmerica Burlington
Job No.: 200-17014-1
SDG ID.: 17014
Matrix: Sediment
Date Sampled: 06/13/2013 14:35
Reporting Basis: WET
Date Received: 06/14/2013 10:40
% Solids: 55.7

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	34900	1000		mg/Kg			1	Lloyd Kahn

MW 08/18/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

9

Client Sample ID: LMR13-63-012 | Lab Sample ID: 200-17014-9

Lab Name: TestAmerica Burlington | Job No.: 200-17014-1

SDG ID.: 17014

Matrix: Sediment | Date Sampled: 06/13/2013 14:55

Reporting Basis: WET | Date Received: 06/14/2013 10:40

% Solids: 46.3

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	24400	1000		mg/Kg			1	Lloyd Kahn

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1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

10

Client Sample ID: LMR13-63-024
Lab Sample ID: 200-17014-10
Lab Name: TestAmerica Burlington
Job No.: 200-17014-1
SDG ID.: 17014
Matrix: Sediment
Date Sampled: 06/13/2013 15:05
Reporting Basis: WET
Date Received: 06/14/2013 10:40
% Solids: 48.6

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	23300	1000		mg/Kg			1	Lloyd Kahn

NW 08/18/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

11

Client Sample ID: LMR13-63-048
Lab Sample ID: 200-17014-11
Lab Name: TestAmerica Burlington
Job No.: 200-17014-1
SDG ID.: 17014
Matrix: Sediment
Date Sampled: 06/13/2013 15:15
Reporting Basis: WET
Date Received: 06/14/2013 10:40
% Solids: 53.4

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	26100	1000		mg/Kg			1	Lloyd Kahn

MW 08/18/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

12

Client Sample ID: LMR13-63-072
Lab Sample ID: 200-17014-12
Lab Name: TestAmerica Burlington
Job No.: 200-17014-1
SDG ID.: 17014
Matrix: Sediment
Date Sampled: 06/13/2013 15:25
Reporting Basis: WET
Date Received: 06/14/2013 10:40
% Solids: 56.6

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	27600	1000		mg/Kg			1	Lloyd Kahn

MW 08/18/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

13

Client Sample ID: LMR13-63-120
Lab Sample ID: 200-17014-13
Lab Name: TestAmerica Burlington
Job No.: 200-17014-1
SDG ID.: 17014
Matrix: Sediment
Date Sampled: 06/13/2013 15:45
Reporting Basis: WET
Date Received: 06/14/2013 10:40
% Solids: 56.0

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	48200	1000		mg/Kg			1	Lloyd Kahn

NW 08/18/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

14

Client Sample ID: LMR13-47-024FD
Lab Sample ID: 200-17014-14
Lab Name: TestAmerica Burlington
Job No.: 200-17014-1
SDG ID.: 17014
Matrix: Sediment
Date Sampled: 06/13/2013 13:45
Reporting Basis: WET
Date Received: 06/14/2013 10:40
% Solids: 45.6

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	31400	1000		mg/Kg			1	Lloyd Kahn

AW 08/18/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

15

Client Sample ID: LMR13-63-096
Lab Sample ID: 200-17014-15
Lab Name: TestAmerica Burlington
Job No.: 200-17014-1
SDG ID.: 17014
Matrix: Sediment
Date Sampled: 06/13/2013 15:35
Reporting Basis: WET
Date Received: 06/14/2013 10:40
% Solids: 56.7

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	30800	1000		mg/Kg			1	Lloyd Kahn

NW 08/18/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

16

Client Sample ID: LMR13-63-144
Lab Sample ID: 200-17014-16
Lab Name: TestAmerica Burlington
Job No.: 200-17014-1
SDG ID.: 17014
Matrix: Sediment
Date Sampled: 06/13/2013 15:55
Reporting Basis: WET
Date Received: 06/14/2013 10:40
% Solids: 59.8

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	39000	1000		mg/Kg			1	Lloyd Kahn

MW 08/18/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

17

Client Sample ID: LMR13-51-024FD
Lab Sample ID: 200-17014-17
Lab Name: TestAmerica Burlington
Job No.: 200-17014-1
SDG ID.: 17014
Matrix: Sediment
Date Sampled: 06/13/2013 16:20
Reporting Basis: WET
Date Received: 06/14/2013 10:40
% Solids: 61.9

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	23400	1000		mg/Kg			1	Lloyd Kahn

NW 08/18/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

18

Client Sample ID: LMR13-51-012 | Lab Sample ID: 200-17014-18

Lab Name: TestAmerica Burlington | Job No.: 200-17014-1

SDG ID.: 17014

Matrix: Sediment | Date Sampled: 06/13/2013 16:10

Reporting Basis: WET | Date Received: 06/14/2013 10:40

% Solids: 54.5

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	19500	1000		mg/Kg			1	Lloyd Kahn

MW 08/18/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

19

Client Sample ID: LMR13-51-024
Lab Sample ID: 200-17014-19
Lab Name: TestAmerica Burlington
Job No.: 200-17014-1
SDG ID.: 17014
Matrix: Sediment
Date Sampled: 06/13/2013 16:20
Reporting Basis: WET
Date Received: 06/14/2013 10:40
% Solids: 60.2

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	21600	1000		mg/Kg			1	Lloyd Kahn

MW 08/18/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

20

Client Sample ID: LMR13-51-048
Lab Sample ID: 200-17014-20
Lab Name: TestAmerica Burlington
Job No.: 200-17014-1
SDG ID.: 17014
Matrix: Sediment
Date Sampled: 06/13/2013 16:30
Reporting Basis: WET
Date Received: 06/14/2013 10:40
% Solids: 77.5

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	17700	1000		mg/Kg			1	Lloyd Kahn

MW 08/18/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

21

Client Sample ID: LMR13-51-072 Lab Sample ID: 200-17014-21

Lab Name: TestAmerica Burlington Job No.: 200-17014-1

SDG ID.: 17014

Matrix: Sediment Date Sampled: 06/13/2013 16:40

Reporting Basis: WET Date Received: 06/14/2013 10:40

% Solids: 77.8

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	28000	1000		mg/Kg			1	Lloyd Kahn

NW 08/16/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: LMR13-91-072
Lab Sample ID: 200-17014-1
Lab Name: TestAmerica Canton
Job No.: 200-17014-1
SDG ID.: 17014
Matrix: Sediment
Date Sampled: 06/13/2013 12:10
Reporting Basis: DRY
Date Received: 06/14/2013 10:40
% Solids: 58.0

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	2940	346	153	mg/Kg		P	1	9071B

NW 08/18/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

2

Client Sample ID: LMR13-91-096
Lab Sample ID: 200-17014-2
Lab Name: TestAmerica Canton
Job No.: 200-17014-1
SDG ID.: 17014
Matrix: Sediment
Date Sampled: 06/13/2013 12:20
Reporting Basis: DRY
Date Received: 06/14/2013 10:40
% Solids: 55.7

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	3450	353	156	mg/Kg		F	1	9071B

NW 08/16/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

3

Client Sample ID: LMR13-47-024
Lab Sample ID: 200-17014-3
Lab Name: TestAmerica Canton
Job No.: 200-17014-1
SDG ID.: 17014
Matrix: Sediment
Date Sampled: 06/13/2013 13:45
Reporting Basis: DRY
Date Received: 06/14/2013 10:40
% Solids: 47.5

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	505	421	186	mg/Kg		J	1	9071B

NW 08/18/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

4

Client Sample ID: LMR13-47-048 Lab Sample ID: 200-17014-4

Lab Name: TestAmerica Canton Job No.: 200-17014-1

SDG ID.: 17014

Matrix: Sediment Date Sampled: 06/13/2013 13:55

Reporting Basis: DRY Date Received: 06/14/2013 10:40

% Solids: 50.4

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	532	394	174	mg/Kg		B	1	9071B

NW 08/18/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

5

Client Sample ID: LMR13-47-072 | Lab Sample ID: 200-17014-5

Lab Name: TestAmerica Canton | Job No.: 200-17014-1

SDG ID.: 17014

Matrix: Sediment | Date Sampled: 06/13/2013 14:05

Reporting Basis: DRY | Date Received: 06/14/2013 10:40

% Solids: 54.5

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	529	365	161	mg/Kg		F	1	9071B

NW 08/18/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

6

Client Sample ID: LMR13-47-096
Lab Sample ID: 200-17014-6
Lab Name: TestAmerica Canton
Job No.: 200-17014-1
SDG ID.: 17014
Matrix: Sediment
Date Sampled: 06/13/2013 14:15
Reporting Basis: DRY
Date Received: 06/14/2013 10:40
% Solids: 53.3

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	616	373	165	mg/Kg		F	1	9071B

MW 08/18/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

7

Client Sample ID: LMR13-47-120
Lab Sample ID: 200-17014-7
Lab Name: TestAmerica Canton
Job No.: 200-17014-1
SDG ID.: 17014
Matrix: Sediment
Date Sampled: 06/13/2013 14:25
Reporting Basis: DRY
Date Received: 06/14/2013 10:40
% Solids: 52.9

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	646	U 380	168	mg/Kg		B	1	9071B

MW 08/18/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

8

Client Sample ID: LMR13-47-144
Lab Sample ID: 200-17014-8
Lab Name: TestAmerica Canton
Job No.: 200-17014-1
SDG ID.: 17014
Matrix: Sediment
Date Sampled: 06/13/2013 14:35
Reporting Basis: DRY
Date Received: 06/14/2013 10:40
% Solids: 55.7

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	972	U 354	156	mg/Kg			1	9071B

MW 08/18/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

9

Client Sample ID: LMR13-63-012 | Lab Sample ID: 200-17014-9

Lab Name: TestAmerica Canton | Job No.: 200-17014-1

SDG ID.: 17014

Matrix: Sediment | Date Sampled: 06/13/2013 14:55

Reporting Basis: DRY | Date Received: 06/14/2013 10:40

% Solids: 46.3

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	559	U 430	190	mg/Kg		B	1	9071B

MW 08/18/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

10

Client Sample ID: LMR13-63-024 | Lab Sample ID: 200-17014-10

Lab Name: TestAmerica Canton | Job No.: 200-17014-1

SDG ID.: 17014

Matrix: Sediment | Date Sampled: 06/13/2013 15:05

Reporting Basis: DRY | Date Received: 06/14/2013 10:40

% Solids: 48.6

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	470	U 409	181	mg/Kg		B	1	9071B

NW 08/18/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

11

Client Sample ID: LMR13-63-048 | Lab Sample ID: 200-17014-11

Lab Name: TestAmerica Canton | Job No.: 200-17014-1

SDG ID.: 17014

Matrix: Sediment | Date Sampled: 06/13/2013 15:15

Reporting Basis: DRY | Date Received: 06/14/2013 10:40

% Solids: 53.4

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	597	U 373	165	mg/Kg		~~B~~	1	9071B

MW 08/18/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

12

Client Sample ID: LMR13-63-072
Lab Sample ID: 200-17014-12
Lab Name: TestAmerica Canton
Job No.: 200-17014-1
SDG ID.: 17014
Matrix: Sediment
Date Sampled: 06/13/2013 15:25
Reporting Basis: DRY
Date Received: 06/14/2013 10:40
% Solids: 56.6

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	1120	355	157	mg/Kg		B	1	9071B

MW 05/18/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

13

Client Sample ID: LMR13-63-120
Lab Sample ID: 200-17014-13
Lab Name: TestAmerica Canton
Job No.: 200-17014-1
SDG ID.: 17014
Matrix: Sediment
Date Sampled: 06/13/2013 15:45
Reporting Basis: DRY
Date Received: 06/14/2013 10:40
% Solids: 56.0

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	2140	343	152	mg/Kg		B	1	9071B

NW 08/18/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

15

Client Sample ID: LMR13-63-096
Lab Sample ID: 200-17014-15
Lab Name: TestAmerica Canton
Job No.: 200-17014-1
SDG ID.: 17014
Matrix: Sediment
Date Sampled: 06/13/2013 15:35
Reporting Basis: DRY
Date Received: 06/14/2013 10:40
% Solids: 56.7

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	2560	343	152	mg/Kg		B	1	9071B

NW 08/18/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

16

Client Sample ID: LMR13-63-144
Lab Sample ID: 200-17014-16
Lab Name: TestAmerica Canton
Job No.: 200-17014-1
SDG ID.: 17014
Matrix: Sediment
Date Sampled: 06/13/2013 15:55
Reporting Basis: DRY
Date Received: 06/14/2013 10:40
% Solids: 59.8

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	2760	335	148	mg/Kg		F	1	9071B

MW 08/18/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: LMR13-51-012
Lab Sample ID: 200-17014-18 18
Lab Name: TestAmerica Canton
Job No.: 200-17014-1
SDG ID.: 17014
Matrix: Sediment
Date Sampled: 06/13/2013 16:10
Reporting Basis: DRY
Date Received: 06/14/2013 10:40
% Solids: 54.5

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	459 U	367	162	mg/Kg		B	1	9071B

NW 08/18/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

19

Client Sample ID: LMR13-51-024 | Lab Sample ID: 200-17014-19

Lab Name: TestAmerica Canton | Job No.: 200-17014-1

SDG ID.: 17014

Matrix: Sediment | Date Sampled: 06/13/2013 16:20

Reporting Basis: DRY | Date Received: 06/14/2013 10:40

% Solids: 60.2

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	461	329	145	mg/Kg		B	1	9071B

NW 08/18/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

20

Client Sample ID: LMR13-51-048
Lab Sample ID: 200-17014-20
Lab Name: TestAmerica Canton
Job No.: 200-17014-1
SDG ID.: 17014
Matrix: Sediment
Date Sampled: 06/13/2013 16:30
Reporting Basis: DRY
Date Received: 06/14/2013 10:40
% Solids: 77.5

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	238	250	110	mg/Kg	J		1	9071B

NW 08/18/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

21

Client Sample ID: LMR13-51-072
Lab Sample ID: 200-17014-21
Lab Name: TestAmerica Canton
Job No.: 200-17014-1
SDG ID.: 17014
Matrix: Sediment
Date Sampled: 06/13/2013 16:40
Reporting Basis: DRY
Date Received: 06/14/2013 10:40
% Solids: 77.8

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	148	246	109	mg/Kg	J		1	9071B

NW 08/18/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

22

Client Sample ID: LMR13-47-048FD
Lab Sample ID: 200-17014-22
Lab Name: TestAmerica Canton
Job No.: 200-17014-1
SDG ID.: 17014
Matrix: Sediment
Date Sampled: 06/13/2013 13:55
Reporting Basis: DRY
Date Received: 06/14/2013 10:40
% Solids: 51.2

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	956	382	169	mg/Kg			1	9071B

MW 08/18/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

23

Client Sample ID: LMR13-63-024FD
Lab Sample ID: 200-17014-23
Lab Name: TestAmerica Canton
Job No.: 200-17014-1
SDG ID.: 17014
Matrix: Sediment
Date Sampled: 06/13/2013 11:50
Reporting Basis: DRY
Date Received: 06/14/2013 10:40
% Solids: 48.5

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	866	403	178	mg/Kg			1	9071B

NW 08/18/13

ENVIRONMENTAL
Data Services, Inc.

DATA VALIDATION SUMMARY REPORT
LOWER MAUMEE RIVER, TOLEDO, OHIO

Client: EA Engineering, Science & Technology, Inc., Hunt Valley, Maryland
SDG: 200-17024
Laboratory: Test America Laboratories, Burlington, Vermont
Test America Laboratories, Canton, Ohio
Site: Lower Maumee River, Maumee Area of Concern, Toledo, Ohio
Date: August 16, 2013

SVOC			
EDS ID	Client Sample ID	Laboratory Sample ID	Matrix
1	LMR13-45-012	200-17024-1	Sediment
2	LMR13-45-024	200-17024-2	Sediment
2RE	LMR13-45-024RE	200-17024-2RE	Sediment
4	LMR13-45-048	200-17024-4	Sediment
4MS	LMR13-45-048MS	200-17024-4MS	Sediment
4MSD	LMR13-45-048MSD	200-17024-4MSD	Sediment
5	LMR13-45-072	200-17024-5	Sediment
5RE	LMR13-45-072RE	200-17024-5RE	Sediment
6	LMR13-45-096	200-17024-6	Sediment
7	LMR13-45-120	200-17024-7	Sediment
7RE	LMR13-45-120RE	200-17024-7RE	Sediment
8	LMR13-50-012	200-17024-8	Sediment
9	LMR13-50-024	200-17024-9	Sediment
10	LMR13-50-048	200-17024-10	Sediment
11	LMR13-50-072	200-17024-11	Sediment
12	LMR13-50-096	200-17024-12	Sediment
13	LMR13-49-012	200-17024-13	Sediment
14	LMR13-49-024	200-17024-14	Sediment
16	LMR13-49-048	200-17024-16	Sediment
17	LMR13-49-072	200-17024-17	Sediment
18	LMR13-50-120	200-17024-18	Sediment
19	LMR13-49-096	200-17024-19	Sediment
20	LMR13-49-120	200-17024-20	Sediment
21	LMR13-83-012	200-17024-21	Sediment
22	LMR13-83-024	200-17024-22	Sediment
23	LMR13-50-024FD	200-17024-23	Sediment
24	LMR13-83-024FD	200-17024-24	Sediment

PAH 34			
EDS ID	Client Sample ID	Laboratory Sample ID	Matrix
1	LMR13-45-012	200-17024-1	Sediment
8	LMR13-50-012	200-17024-8	Sediment
13	LMR13-49-012	200-17024-13	Sediment
13DL	LMR13-49-012DL	200-17024-13DL	Sediment

PCBs			
EDS ID	Client Sample ID	Laboratory Sample ID	Matrix
1	LMR13-45-012	200-17024-1	Sediment
2	LMR13-45-024	200-17024-2	Sediment
2DL	LMR13-45-024DL	200-17024-2DL	Sediment
3	LMR13-45-024FD	200-17024-3	Sediment
4	LMR13-45-048	200-17024-4	Sediment
5	LMR13-45-072	200-17024-5	Sediment
6	LMR13-45-096	200-17024-6	Sediment
7	LMR13-45-120	200-17024-7	Sediment
8	LMR13-50-012	200-17024-8	Sediment
9	LMR13-50-024	200-17024-9	Sediment
10	LMR13-50-048	200-17024-10	Sediment
11	LMR13-50-072	200-17024-11	Sediment
12	LMR13-50-096	200-17024-12	Sediment
13	LMR13-49-012	200-17024-13	Sediment
14	LMR13-49-024	200-17024-14	Sediment
15	LMR13-49-024FD	200-17024-15	Sediment
16	LMR13-49-048	200-17024-16	Sediment
17	LMR13-49-072	200-17024-17	Sediment
18	LMR13-50-120	200-17024-18	Sediment
19	LMR13-49-096	200-17024-19	Sediment
20	LMR13-49-120	200-17024-20	Sediment
21	LMR13-83-012	200-17024-21	Sediment
22	LMR13-83-024	200-17024-22	Sediment

Metals/Mercury/TOC			
EDS ID	Client Sample ID	Laboratory Sample ID	Matrix
1	LMR13-45-012	200-17024-1	Sediment
1MS*	LMR13-45-012MS	200-17024-1MS	Sediment
1MSD*	LMR13-45-012MSD	200-17024-1MSD	Sediment
2	LMR13-45-024	200-17024-2	Sediment
3	LMR13-45-024FD	200-17024-3	Sediment
4	LMR13-45-048	200-17024-4	Sediment
5	LMR13-45-072	200-17024-5	Sediment
6	LMR13-45-096	200-17024-6	Sediment
7	LMR13-45-120	200-17024-7	Sediment
8	LMR13-50-012	200-17024-8	Sediment
9	LMR13-50-024	200-17024-9	Sediment
10	LMR13-50-048	200-17024-10	Sediment
11	LMR13-50-072	200-17024-11	Sediment
12	LMR13-50-096	200-17024-12	Sediment
13	LMR13-49-012	200-17024-13	Sediment
14	LMR13-49-024	200-17024-14	Sediment
15	LMR13-49-024FD	200-17024-15	Sediment
16	LMR13-49-048	200-17024-16	Sediment
17	LMR13-49-072	200-17024-17	Sediment
18	LMR13-50-120	200-17024-18	Sediment
19	LMR13-49-096	200-17024-19	Sediment
20	LMR13-49-120	200-17024-20	Sediment
20MSβ	LMR13-49-120MS	200-17024-20MS	Sediment
20MSDβ	LMR13-49-120MSD	200-17024-20MSD	Sediment
21	LMR13-83-012	200-17024-21	Sediment

Metals/Mercury/TOC			
EDS ID	Client Sample ID	Laboratory Sample ID	Matrix
21MS*	LMR13-83-012MS	200-17024-21MS	Sediment
21MSD*	LMR13-83-012MSD	200-17024-21MSD	Sediment
22	LMR13-83-024	200-17024-22	Sediment

* - Mercury only β – Metals Only

AVS/SEM			
EDS ID	Client Sample ID	Laboratory Sample ID	Matrix
1	LMR13-45-012	200-17024-1	Sediment
8	LMR13-50-012	200-17024-8	Sediment
13	LMR13-49-012	200-17024-13	Sediment

HEM			
EDS ID	Client Sample ID	Laboratory Sample ID	Matrix
1	LMR13-45-012	200-17024-1	Sediment
2	LMR13-45-024	200-17024-2	Sediment
4	LMR13-45-048	200-17024-4	Sediment
5	LMR13-45-072	200-17024-5	Sediment
6	LMR13-45-096	200-17024-6	Sediment
7	LMR13-45-120	200-17024-7	Sediment
8	LMR13-50-012	200-17024-8	Sediment
9	LMR13-50-024	200-17024-9	Sediment
10	LMR13-50-048	200-17024-10	Sediment
11	LMR13-50-072	200-17024-11	Sediment
11MS	LMR13-50-072MS	200-17024-11MS	Sediment
11DUP	LMR13-50-072DUP	200-17024-11DUP	Sediment
12	LMR13-50-096	200-17024-12	Sediment
13	LMR13-49-012	200-17024-13	Sediment
14	LMR13-49-024	200-17024-14	Sediment
16	LMR13-49-048	200-17024-16	Sediment
17	LMR13-49-072	200-17024-17	Sediment
18	LMR13-50-120	200-17024-18	Sediment
19	LMR13-49-096	200-17024-19	Sediment
20	LMR13-49-120	200-17024-20	Sediment
21	LMR13-83-012	200-17024-21	Sediment
22	LMR13-83-024	200-17024-22	Sediment
23	LMR13-50-024FD	200-17024-23	Sediment
24	LMR13-83-024FD	200-17024-24	Sediment

A full data validation was performed on the analytical data for twenty-four sediment samples collected on June 14, 2013 by EA Engineering at the Lower Maumee River site in Toledo, Ohio. The samples were analyzed under the Environmental Protection Agency (USEPA) Contract Laboratory Program (CLP) Multi-Media Multi-Concentration Organics Analysis SOM01.2 and Inorganic Analysis ILM05.4 and the Test Methods for the Evaluation of Solid Waste, USEPA SW-846, Third Edition, September 1986, with revisions.

Specific method references are as follows:

Analysis	*Method References*
SVOC	USEPA CLP SOM01.2
PAH 34	USEPA CLP SOM01.2
PCBs	USEPA CLP SOM01.2
Michigan Metals & Mercury	USEPA CLP ISM01.3
AVS/SEM	USEPA SW-846 Methods 6010C/7470A
TOC	Lloyd Kahn
Oil & Grease (HEM)	USEPA SW-846 Method 9071B

The data have been validated according to the protocols and quality control (QC) requirements of the analytical methods, the Great Lakes Legacy Act, March 2010, the Quality Assurance Project Plan for Phase 2 of the Lower Maumee River Site Characterization, May 2013, and the USEPA National Functional Guidelines for Organic Data Review as follows:

- The USEPA "Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review," June 2008;
- The USEPA "Contract Laboratory Program National Functional Guidelines for Inorganic Superfund Data Review," January 2010;
- and the reviewer's professional judgment.

The following items/criteria were reviewed for this report:

Organics

- Holding times and sample preservation
- Gas Chromatography/Mass Spectroscopy (GC/MS) Tuning
- Initial and continuing calibration summaries
- Method blank and field blank contamination
- Surrogate Spike recoveries
- Matrix Spike/Matrix Spike Duplicate (MS/MSD) recoveries
- Laboratory Control Sample (LCS) recoveries
- Internal standard area and retention time summary forms
- Target Compound Identification
- Compound Quantitation
- Tentatively Identified Compounds (TICs)
- Field Duplicate sample precision

Inorganics

- Holding times and sample preservation
- ICP/MS Tuning
- Initial and continuing calibration verifications
- Method blank and field blank contamination
- ICP Interference Check Sample
- Laboratory Control Sample (LCS) recoveries
- Matrix Spike Analysis
- Duplicate Sample Analysis

- Compound Quantitation
- Field Duplicate sample precision

Overall Usability Issues:

There were minor rejections of data. This data cannot be used in the decision-making process for this project.

- Three SVOC compounds were rejected in seven samples due to severely low surrogate recoveries.

Overall the remaining data is acceptable for the intended purposes as qualified for the deficiencies detailed in this report.

Please note that any results qualified (U) due to blank contamination may be then qualified (J) due to another action. Therefore, the results may be qualified (UJ) due to the culmination of the blank contaminations and actions from other exceedences of QC criteria.

Semivolatile Organic Compounds (SVOC)

Holding Times

- All samples were extracted within 14 days for sediment samples and analyzed within 40 days for all samples.

GC/MS Tuning

- All criteria were met.

Initial Calibration

- All %RSD and mean RRF criteria were met except the following

ICAL Date	Compound	%RSD/RRF	Qualifier	Affected Samples
07/29/13	Pentachlorophenol	21.2%	J/UJ	2, 2RE, 4, 5, 5RE, 6, 7, 7RE, 8
	Pyrene	22.6%	J/UJ	

Continuing Calibration

- All %D and RRF criteria were met except the following.

CCAL Date	Compound	%D/RRF	Qualifier	Affected Samples
07/21/13 (1253)	4-Methylphenol	29.9%	J/UJ	23, 24
	n-Nitroso-di-n-propylamine	33.8%	J/UJ	
07/21/13 (2241)	Hexachlorocyclopentadiene	58.3%	None	See Surrogate
	di-n-Octylphthalate	51.8%	J/UJ	23, 24
07/27/13 (0926)	Indeno(1,2,3-cd)pyrene	29.2%	J/UJ	1, 9-13
	Pyrene	29.2%	J/UJ	
	Dibenzo(a,h)anthracene	25.7%	J/UJ	
07/27/13 (2014)	Benzo(g,h,i)perylene	31.4%	J/UJ Unless R due to Surrogates	1, 9-13
	Pentachlorophenol	50.2%		
	Hexachlorocyclopentadiene	66.5%		
07/29/13 (0752)	Pentachlorophenol	32.6%	J/UJ	14, 16-22
07/29/13 (1753)	Hexachlorocyclopentadiene	76.3%	J/UJ Unless R due to Surrogates	14, 16-22
07/29/13 (1833)	2,4-Dinitrophenol	50.2%	J/UJ	14, 16-22
07/31/13 (0923)	Fluoranthene	30.8%	J/UJ	2, 4-7, 8
07/31/13 (1710)	Hexachlorocyclopentadiene	56.9%	J/UJ Unless R due to Surrogates	2, 4-7, 8
08/02/13 (0617)	Dibenzo(a,h)anthracene	25.1%	J/UJ	2RE, 5RE, 7RE
08/02/13 (1349)	Hexachlorocyclopentadiene	55.2%	J/UJ	2RE, 5RE, 7RE

Method Blank

- The method blanks exhibited the following contamination.

Blank ID	Compound	Conc. ug/kg	Qualifier	Affected Samples
SBLK9L	di-n-Butylphthalate	6.2	None	All Associated ND
	Butylbenzylphthalate	13	None	
	bis(2-Ethylhexyl)phthalate	31	U	8
SBLKL9	Butylbenzylphthalate	26	U	9-14, 16-24
	bis(2-Ethylhexyl)phthalate	46	U	9-11, 13, 14, 16, 17, 19-24

Field Blank

- Field QC samples were not analyzed.

Surrogate Spike Recoveries

- All samples exhibited acceptable surrogate %R values except the following.

Sample ID	Surrogate	%R	Qualifier
1	4-Chloroaniline-d4	0%	R – Associated Compounds
2	4-Chloroaniline-d4	0%	R – Associated Compounds
2RE	4-Chloroaniline-d4	0%D	R – Associated Compounds
4	4-Methylphenol-d8	105%	None – All Associated ND
	4-Chloroaniline-d4	0%	J/R – Associated Compounds
7	Dimethylphthalate-d6	36%D	None – Dilution
	Fluorene-d10	31%D	

7 (cont)	Pyrene-d10	28%	None- Dilution
	Benzo(a)pyrene-d12	36%	
7RE	Dimethylphthalate-d6	37%D	None- Dilution
	Fluorene-d10	29%D	
	Pyrene-d10	29%D	
	Benzo(a)pyrene-d12	33%D	
	4-Methylphenol-d8	135%D	
9	4-Methylphenol-d8	111%	None – All Associated ND
12	Pyrene-d10	48%	J/UJ – Associated Compounds
14	Benzo(a)pyrene-d12	30%	J/UJ - Associated Compounds
16	4-Chloroaniline-d4	0%	R – Associated Compounds
22	4-Chloroaniline-d4	0%	R – Associated Compounds
23	4-Chloroaniline-d4	0%	R – Associated Compounds
24	Phenol-d5	111%	J – Associated Positive Results
	4-Chloroaniline	0%	R – Associated Compounds

Matrix Spike/Matrix Spike Duplicate (MS/MSD) Recoveries

- The MS/MSD sample exhibited acceptable %R and RPD values except the following.

MS/MSD Sample ID	Compound	MS %R/MSD %R/ RPD	Qualifier
4	Pyrene	OK/172%/OK	None – Sample Analyzed at 5X Dilution

Laboratory Control Samples

- A LCS sample was not analyzed.

Internal Standard (IS) Area Performance

- All internal standards met response and retention time (RT) criteria except the following.

Sample ID	Internal Standard	Area Count	Qualifier
2	IS4=Phenanthrene-d10	Low	J/UJ – Associated Compounds
2RE	IS3=Acenaphthalene-d10	Low	J/UJ – Unless R due to Surrogates
	IS4=Phenanthrene-d10	Low	
	IS6=Perylene-d12	Low	
4	IS4=Phenanthrene-d10	Low	J/UJ – Associated Compounds
	IS6=Perylene-d12	Low	
5	IS4=Phenanthrene-d10	Low	
	IS6=Perylene-d12	Low	
5RE	IS4=Phenanthrene-d10	Low	
	IS6=Perylene-d12	Low	
7	IS4=Phenanthrene-d10	Low	
7RE	IS4=Phenanthrene-d10	Low	
	IS6=Perylene-d12	Low	

Target Compound Identification

- All mass spectra and quantitation criteria were met.

Compound Quantitation

- Several samples were analyzed at various dilutions due to high concentrations of target compounds. No action was required.
- Several samples were reanalyzed due to IS or surrogate deficiencies. See Form Is for which results to report.

Field Duplicate Sample Precision

- Field duplicate results are summarized below.

SVOC				
Compound	LMR13-50-024 ug/kg	LMR13-50-024FD ug/kg	RPD	Qualifier
Benzaldehyde	52	70	30%	None
Acenaphthene	360U	16	NC	
Fluorene	360U	27	NC	
Phenanthrene	130	160	21%	
Anthracene	29	33	13%	
Carbazole	15	350U	NC	
di-n-Butylphthalate	24	20	18%	
Fluoranthene	300	290	3%	
Pyrene	310	320	3%	
Benzo(a)anthracene	120	110	9%	
Chrysene	190	200	5%	
Benzo(b)fluoranthene	160	140	13%	
Benzo(k)fluoranthene	140	160	13%	
Benzo(a)pyrene	130	120	8%	
Indeno(1,2,3-cd)pyrene	83	79	5%	
Dibenzo(a,h)anthracene	46	350U	NC	
Benzo(g,h,i)perylene	130	97	29%	

SVOC				
Compound	LMR13-83-024 ug/kg	LMR13-83-024FD ug/kg	RPD	Qualifier
Benzaldehyde	43	40	7%	None
Naphthalene	14	230U	NC	
2-Methylnaphthalene	11	230U	NC	
Acenaphthylene	21	21	0%	
Acenaphthene	39	43	10%	
Dibenzofuran	17	17	0%	
Fluorene	23	39	52%	
Phenanthrene	200	230	14%	
Anthracene	76	100	27%	
di-n-Butylphthalate	20	31	43%	
Fluoranthene	650	630	3%	

SVOC				
Compound	LMR13-83-024 ug/kg	LMR13-83-024FD ug/kg	RPD	Qualifier
Pyrene	790	870	10%	None
Benzo(a)anthracene	320	310	3%	
Chrysene	390	380	3%	
Benzo(b)fluoranthene	330	250	28%	
Benzo(k)fluoranthene	220	280	24%	
Benzo(a)pyrene	230	250	8%	
Indeno(1,2,3-cd)pyrene	150	170	13%	
Dibenzo(a,h)anthracene	50	52	4%	
Benzo(g,h,i)perylene	190	200	5%	

Polynuclear Aromatic Hydrocarbons (PAH 34)

Holding Times

- All samples were extracted within 14 days for sediment samples and analyzed within 40 days for all samples.

GC/MS Tuning

- All criteria were met.

Initial Calibration

- All %RSD and mean RRF criteria were met.

Continuing Calibration

- All %D and RRF criteria were met except the following.

CCAL Date	Compound	%D/RRF	Qualifier	Affected Samples
07/29/13 (0806)	Indeno(1,2,3-cd)pyrene	26.6%	None	None - Dilution Used
	Dibenzo(a,h)anthracene	37.6%	J/UJ	13

Method Blank

- The method blanks exhibited the following contamination.

Blank ID	Compound	Conc. ug/kg	Qualifier	Affected Samples
SBLKL9	Naphthalene	0.21	U	1, 8, 13 13DL
	2-Methylnaphthalene	0.092	U	1, 8, 13DL
	Fluoranthene	0.39	None	All >5X
	Pyrene	0.42	None	
	Benzo(a)anthracene	0.25	None	
	Chrysene	0.24	None	
	Benzo(b)fluoranthene	0.17	None	
	Benzo(k)fluoranthene	0.17	None	
	Benzo(a)pyrene	0.13	None	
	Benzo(e)pyrene	0.12	None	
	Perylene	0.29	None	
	Total 16 PPAH	2.2	J	1, 8, 13, 13DL
	Total PAH	2.6	J	

Field Blank

- Field QC samples were not analyzed.

Surrogate Spike Recoveries

- All samples exhibited acceptable surrogate %R values.

Matrix Spike/Matrix Spike Duplicate (MS/MSD) Recoveries

- A MS/MSD sample was not analyzed.

Laboratory Control Samples

- A LCS sample was not analyzed.

Internal Standard (IS) Area Performance

- All internal standards met response and retention time (RT) criteria.

Target Compound Identification

- All mass spectra and quantitation criteria were met.

Compound Quantitation

- EDS Sample ID #13 exhibited high concentrations of several target compounds and were flagged (E) by the laboratory. The sample was reanalyzed at a 14.3X dilution and the dilution results should be used for these compounds. Several of the compounds remained flagged (E) in the dilution analysis and these results were qualified estimated (J).
- EDS Sample ID #22 exhibited high concentrations of several target compounds and were flagged (E) by the laboratory. However, a dilution analysis was not performed and these compounds were qualified estimated (J).
- Total 16 PPAH and Total PAH were estimated (J) in all samples due to blank contamination.

Field Duplicate Sample Precision

- Field duplicate samples were not analyzed.

Polychlorinated Biphenyls (PCBs)

Holding Times

- All samples were extracted within 14 days for sediment samples and analyzed within 40 days.

Initial Calibration

- All %RSD and/or correlation coefficient criteria were met.

Continuing Calibration

- All %D criteria were met.

Method Blank

- The method blanks were free of contamination.

Field Blank

- Field QC samples were not analyzed.

Surrogate Spike Recoveries

- All samples exhibited acceptable surrogate recoveries except the following.

Sample ID	Surrogate	%R	Qualifier
2	TCX1/TCX2/DCB1/DCB2	26%/OK/11%/16%	J/UJ

Matrix Spike/Matrix Spike Duplicate (MS/MSD) Recoveries

- A MS/MSD sample was not analyzed.

Laboratory Control Samples

- The LCS sample exhibited acceptable %R values.

Compound Quantitation

- EDS Sample ID #2 exhibited low surrogate %R values. The sample was reanalyzed at a 3X dilution with acceptable surrogate values. Use the reanalysis results for reporting purposes.

Field Duplicate Sample Precision

- Field duplicate results are summarized below.

PCBs				
Compound	LMR13-45-024DL ug/kg	LMR13-45-024FD ug/kg	RPD	Qualifier
Aroclor-1242	140	170	19%	None
Aroclor-1254	120	160	29%	
Aroclor-1260	52	65	22%	

PCBs				
Compound	LMR13-49-024 ug/kg	LMR13-49-024FD ug/kg	RPD	Qualifier
Aroclor-1248	61	68	11%	None
Aroclor-1254	51	77	41%	
Aroclor-1260	12	14	15%	

GC Column Difference Results

- Several samples exhibited high %D values > 25% between columns and have been qualified as estimated (J) by the reviewer.

Metals & Mercury

Holding Times

- All samples were prepared and analyzed within 28 days for mercury and 180 days for all other metals.

ICP/MS Tuning

- Not applicable.

Initial Calibration Verification

- All initial calibration criteria were met.

Continuing Calibration Verification

- All continuing calibration criteria were met.

Method Blank

- The method blanks exhibited the following contamination.

Blank ID	Compound	Conc. mg/kg	Qualifier	Affected Samples
PBSE8	Copper	0.67	None	All Associated >10X
	Nickel	0.30	None	
	Zinc	0.26	None	
PBSF2	Chromium	0.091	None	
	Lead	0.25	None	
	Zinc	0.99	None	

Field Blank

- Field QC samples were not analyzed.

ICP Interference Check Sample

- The ICP interference check sample exhibited acceptable %R values.

Laboratory Control Samples

- The LCS sample exhibited acceptable recoveries.

Matrix Spike Analysis

- The matrix spike sample exhibited acceptable %R values.

Duplicate Sample Analysis

- The duplicate sample exhibited acceptable RPD values.

ICP Serial Dilution

- ICP serial dilution percent differences (%D) were within acceptance limits except the following.

ICP Sample ID	Compound	%D	Qualifier	Affected Samples
20	Chromium	20%	J	All Samples
	Zinc	17%	J	

Compound Quantitation

- All criteria were met.

Field Duplicate Sample Precision

- Field duplicate results are summarized below.

Metals				
Compound	LMR13-45-024 mg/kg	LMR13-45-024FD mg/kg	RPD	Qualifier
Arsenic	18.1	19.2	6%	None
Cadmium	4.4	4.7	7%	
Chromium	220	235	7%	
Copper	118	131	10%	
Lead	95.8	101	5%	
Nickel	135	140	4%	
Zinc	1160	1210	4%	
Mercury	0.13	0.55	124%	

Metals				
Compound	LMR13-49-024 mg/kg	LMR13-49-024FD mg/kg	RPD	Qualifier
Arsenic	6.6	6.6	0%	None
Cadmium	1.3	1.2	8%	

Metals				
Compound	LMR13-49-024 mg/kg	LMR13-49-024FD mg/kg	RPD	Qualifier
Chromium	20.4	20.5	0%	None
Copper	23.4	23.8	2%	
Lead	37.2	31.6	16%	
Nickel	24.2	24.2	0%	
Zinc	128	133	4%	
Mercury	0.12	0.12	0%	

Oil & Grease, Total Organic Carbon, AVS/SEM (Metals & Hg)

Holding Times

- All samples were analyzed within the recommended holding time for each analysis.

Initial and Continuing Calibration

- All %R criteria were met.

Method Blank

- The method blanks exhibited the following contamination.

Blank ID	Compound	Conc. mg/kg	Qualifier	Affected Samples
240-91121/1-A	HEM	116.8	U	19, 20, 21
240-91726/1-A	HEM	197.8	U	8, 9, 11, 12

Field Blank

- Field QC samples were not included in this data package.

Laboratory Control Samples

- The LCS samples exhibited acceptable %R values.

Matrix Spike/Duplicate (MS/DUP) Recoveries

- The MS/DUP samples exhibited acceptable %R and RPD values.

Compound Quantitation

- All criteria were met.

Field Duplicate Sample Precision

- Field duplicate results are summarized below.

TOC				
Compound	LMR13-45-024 mg/kg	LMR13-45-024FD mg/kg	RPD	Qualifier
TOC	71100	77600	9%	None

HEM				
Compound	LMR13-50-024 mg/kg	LMR13-50-024FD mg/kg	RPD	Qualifier
HEM	573U	995	NC	None

TOC				
Compound	LMR13-49-024 mg/kg	LMR13-49-024FD mg/kg	RPD	Qualifier
TOC	26500	26300	1%	None

HEM				
Compound	LMR13-83-024 mg/kg	LMR13-83-024FD mg/kg	RPD	Qualifier
HEM	700	699	0%	None

Please contact the undersigned at (757) 564-0090 if you have any questions or need further information.

Signed: Nancy Weaver Dated: 8/23/13

Nancy Weaver
Senior Chemist

Data Qualifiers

U = The analyte was analyzed for, but was not detected at a level greater than or equal to the level of the adjusted Contract Required Quantitation Limit (CRQL) for sample and method.

UJ = The analyte was not detected at a level greater than or equal to the adjusted CRQL. However, the reported adjusted CRQL is approximate and may be inaccurate or imprecise.

J = The analyte was positively identified and the associated numerical value is the approximate concentration of the analyte in the sample (due either to the quality of the data generated because certain quality control criteria were not met, or the concentration of the analyte was below the CRQL).

J+ = The result is an estimated quantity, but the result may be biased high.

J- = The result is an estimated quantity, but the result may be biased low.

R = The sample results are unusable due to the quality of the data generated because certain criteria were not met. The analyte may or may not be present in the sample.

NJ = The analysis indicates the presence of an analyte that has been "tentatively identified" and the associated numerical value represents its approximate concentration.

EPA SAMPLE NO.
LMR13-45-012

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17024

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17024-1

Sample wt/vol: 30.3 (g/mL) g Lab File ID: PJXXE09.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 53 Decanted: (Y/N) Date Received: 06/15/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/21/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/27/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 2.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
100-52-7	Benzaldehyde	720	U	
108-95-2	Phenol	720	U	
111-44-4	Bis(2-chloroethyl)ether	720	U	
95-57-8	2-Chlorophenol	720	U	
95-48-7	2-Methylphenol	720	U	
108-60-1	2,2'-Oxybis(1-chloropropane)	720	U	
98-86-2	Acetophenone	720	U	
106-44-5	4-Methylphenol	720	U	
621-64-7	N-Nitroso-di-n-propylamine	720	U	
67-72-1	Hexachloroethane	720	U	
98-95-3	Nitrobenzene	720	U	
78-59-1	Isophorone	720	U	
88-75-5	2-Nitrophenol	720	U	
105-67-9	2,4-Dimethylphenol	720	U	
111-91-1	Bis(2-chloroethoxy)methane	720	U	
120-83-2	2,4-Dichlorophenol	720	U	
91-20-3	Naphthalene	44	J	
106-47-8	4-Chloroaniline	720	~~U~~	R
87-68-3	Hexachlorobutadiene	720	U	
105-60-2	Caprolactam	720	U	
59-50-7	4-Chloro-3-methylphenol	720	U	
91-57-6	2-Methylnaphthalene	720	U	
77-47-4	Hexachlorocyclopentadiene	720	~~U~~	R
88-06-2	2,4,6-Trichlorophenol	720	U	
95-95-4	2,4,5-Trichlorophenol	720	U	
92-52-4	1,1'-Biphenyl	720	U	
91-58-7	2-Chloronaphthalene	720	U	
88-74-4	2-Nitroaniline	1400	U	
131-11-3	Dimethylphthalate	720	U	
606-20-2	2,6-Dinitrotoluene	720	U	
208-96-8	Acenaphthylene	720	U	
99-09-2	3-Nitroaniline	1400	U	
83-32-9	Acenaphthene	720	U	

NW 8/16/13

EPA SAMPLE NO.
LMR13-45-012

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17024

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17024-1

Sample wt/vol: 30.3 (g/mL) g Lab File ID: PJXXE09.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 53 Decanted: (Y/N) Date Received: 06/15/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/21/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/27/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 2.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
51-28-5	2,4-Dinitrophenol	1400	U	
100-02-7	4-Nitrophenol	1400	U	
132-64-9	Dibenzofuran	720	U	
121-14-2	2,4-Dinitrotoluene	720	U	
84-66-2	Diethylphthalate	720	U	
86-73-7	Fluorene	720	U	
7005-72-3	4-Chlorophenyl-phenylether	720	U	
100-01-6	4-Nitroaniline	1400	U	
534-52-1	4,6-Dinitro-2-methylphenol	1400	U	
86-30-6	N-Nitrosodiphenylamin [1]	720	U	
95-94-3	1,2,4,5-Tetrachlorobenzene	720	U	
101-55-3	4-Bromophenyl-phenylether	720	U	
118-74-1	Hexachlorobenzene	720	U	
1912-24-9	Atrazine	720	U	
87-86-5	Pentachlorophenol	1400	~~U~~	UJ
85-01-8	Phenanthrene	350	J	
120-12-7	Anthracene	110	J	
86-74-8	Carbazole	720	U	
84-74-2	Di-n-butylphthalate	720	U	
206-44-0	Fluoranthene	900		
129-00-0	Pyrene	1100		
85-68-7	Butylbenzylphthalate	720	U	
91-94-1	3,3'-Dichlorobenzidine	720	~~U~~	R
56-55-3	Benzo(a)anthracene	540	J	
218-01-9	Chrysene	720		
117-81-7	Bis(2-ethylhexyl)phthalate	7300	~~B~~	
117-84-0	Di-n-octylphthalate	720	U	
205-99-2	Benzo(b)fluoranthene	750		
207-08-9	Benzo(k)fluoranthene	610	J	
50-32-8	Benzo(a)pyrene	610	J	
193-39-5	Indeno(1,2,3-cd)pyrene	440	~~J~~	J
53-70-3	Dibenzo(a,h)anthracene	170	~~J~~	J
191-24-2	Benzo(g,h,i)perylene	430	~~J~~	J
58-90-2	2,3,4,6-Tetrachlorophenol	720	U	

[1] Cannot be separated from Diphenylamine

NW 8/16/13

EPA SAMPLE NO.
LMR13-45-024

2

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17024

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17024-2

Sample wt/vol: 30.9 (g/mL) g Lab File ID: RKXVX11.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 62 Decanted: (Y/N) Date Received: 06/15/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/21/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/31/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 6.7

Use reanalysis results

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
100-52-7	Benzaldehyde	2900	U	
108-95-2	Phenol	2900	U	
111-44-4	Bis(2-chloroethyl)ether	2900	U	
95-57-8	2-Chlorophenol	2900	U	
95-48-7	2-Methylphenol	2900	U	
108-60-1	2,2'-Oxybis(1-chloropropane)	2900	U	
98-86-2	Acetophenone	2900	U	
106-44-5	4-Methylphenol	2900	U	
621-64-7	N-Nitroso-di-n-propylamine	2900	U	
67-72-1	Hexachloroethane	2900	U	
98-95-3	Nitrobenzene	2900	U	
78-59-1	Isophorone	2900	U	
88-75-5	2-Nitrophenol	2900	U	
105-67-9	2,4-Dimethylphenol	2900	U	
111-91-1	Bis(2-chloroethoxy)methane	2900	U	
120-83-2	2,4-Dichlorophenol	2900	U	
91-20-3	Naphthalene	2900	U	
106-47-8	4-Chloroaniline	2900	~~U~~	R
87-68-3	Hexachlorobutadiene	2900	U	
105-60-2	Caprolactam	2900	U	
59-50-7	4-Chloro-3-methylphenol	2900	U	
91-57-6	2-Methylnaphthalene	2900	U	
77-47-4	Hexachlorocyclopentadiene	2900	~~U~~	R
88-06-2	2,4,6-Trichlorophenol	2900	U	
95-95-4	2,4,5-Trichlorophenol	2900	U	
92-52-4	1,1'-Biphenyl	2900	U	
91-58-7	2-Chloronaphthalene	2900	U	
88-74-4	2-Nitroaniline	5700	U	
131-11-3	Dimethylphthalate	2900	U	
606-20-2	2,6-Dinitrotoluene	2900	U	
208-96-8	Acenaphthylene	2900	U	
99-09-2	3-Nitroaniline	5700	U	
83-32-9	Acenaphthene	2900	U	

NW 8/16/13

EPA SAMPLE NO.
LMR13-45-024

2

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17024

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17024-2

Sample wt/vol: 30.9 (g/mL) g Lab File ID: RKXVX11.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 62 Decanted: (Y/N) Date Received: 06/15/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/21/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/31/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 6.7

Use reanalysis results

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
51-28-5	2,4-Dinitrophenol	5700	U
100-02-7	4-Nitrophenol	5700	U
132-64-9	Dibenzofuran	2900	U
121-14-2	2,4-Dinitrotoluene	2900	U
84-66-2	Diethylphthalate	2900	U
86-73-7	Fluorene	2900	U
7005-72-3	4-Chlorophenyl-phenylether	2900	U
100-01-6	4-Nitroaniline	5700	U
534-52-1	4,6-Dinitro-2-methylphenol	5700	~~U~~ UJ
86-30-6	N-Nitrosodiphenylamin [1]	2900	~~U~~
95-94-3	1,2,4,5-Tetrachlorobenzene	2900	~~U~~
101-55-3	4-Bromophenyl-phenylether	2900	~~U~~
118-74-1	Hexachlorobenzene	2900	~~U~~
1912-24-9	Atrazine	2900	~~U~~
87-86-5	Pentachlorophenol	5700	~~U~~
85-01-8	Phenanthrene	530	J
120-12-7	Anthracene	250	J
86-74-8	Carbazole	2900	~~U~~ UJ
84-74-2	Di-n-butylphthalate	2900	~~U~~ UJ
206-44-0	Fluoranthene	2100	~~J~~ J
129-00-0	Pyrene	2000	~~J~~ J
85-68-7	Butylbenzylphthalate	2900	~~U~~ UJ
91-94-1	3,3'-Dichlorobenzidine	2900	~~U~~ R
56-55-3	Benzo(a)anthracene	980	J
218-01-9	Chrysene	1300	J
117-81-7	Bis(2-ethylhexyl)phthalate	28000	~~B~~
117-84-0	Di-n-octylphthalate	2900	U
205-99-2	Benzo(b)fluoranthene	1200	J
207-08-9	Benzo(k)fluoranthene	1500	J
50-32-8	Benzo(a)pyrene	1100	J
193-39-5	Indeno(1,2,3-cd)pyrene	590	J
53-70-3	Dibenzo(a,h)anthracene	150	J
191-24-2	Benzo(g,h,i)perylene	650	J
58-90-2	2,3,4,6-Tetrachlorophenol	2900	U

[1] Cannot be separated from Diphenylamine

NW 8/16/13

1D - FORM I SV-1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-45-024RE

2RE

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678
Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17024
Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17024-2
Sample wt/vol: 30.9 (g/mL) g Lab File ID: RKXYA09.D
Level: (LOW/MED) LOW Extraction: (Type) SONC
% Moisture: 62 Decanted: (Y/N) Date Received: 06/15/2013
Concentrated Extract Volume: 500 (uL) Date Extracted: 06/21/2013
Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/02/2013
GPC Cleanup: (Y/N) Y pH: Dilution Factor: 6.7

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
100-52-7	Benzaldehyde	2900	U	
108-95-2	Phenol	2900	U	
111-44-4	Bis(2-chloroethyl)ether	2900	U	
95-57-8	2-Chlorophenol	2900	U	
95-48-7	2-Methylphenol	2900	U	
108-60-1	2,2'-Oxybis(1-chloropropane)	2900	U	
98-86-2	Acetophenone	2900	U	
106-44-5	4-Methylphenol	2900	U	
621-64-7	N-Nitroso-di-n-propylamine	2900	U	
67-72-1	Hexachloroethane	2900	U	
98-95-3	Nitrobenzene	2900	U	
78-59-1	Isophorone	2900	U	
88-75-5	2-Nitrophenol	2900	U	
105-67-9	2,4-Dimethylphenol	2900	U	
111-91-1	Bis(2-chloroethoxy)methane	2900	U	
120-83-2	2,4-Dichlorophenol	2900	U	
91-20-3	Naphthalene	77	J	
106-47-8	4-Chloroaniline	2900	U	R
87-68-3	Hexachlorobutadiene	2900	U	
105-60-2	Caprolactam	2900	U	
59-50-7	4-Chloro-3-methylphenol	2900	U	
91-57-6	2-Methylnaphthalene	2900	U	
77-47-4	Hexachlorocyclopentadiene	2900	U	R
88-06-2	2,4,6-Trichlorophenol	2900	U	UJ
95-95-4	2,4,5-Trichlorophenol	2900	U	
92-52-4	1,1'-Biphenyl	2900	U	
91-58-7	2-Chloronaphthalene	2900	U	
88-74-4	2-Nitroaniline	5700	U	
131-11-3	Dimethylphthalate	2900	U	
606-20-2	2,6-Dinitrotoluene	2900	U	
208-96-8	Acenaphthylene	2900	U	
99-09-2	3-Nitroaniline	5700	U	
83-32-9	Acenaphthene	2900	U	

NW 8/16/13

1E - FORM I SV-2
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-45-024RE

2RE

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17024

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17024-2

Sample wt/vol: 30.9 (g/mL) g Lab File ID: RKXYA09.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 62 Decanted: (Y/N) Date Received: 06/15/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/21/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/02/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 6.7

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
51-28-5	2,4-Dinitrophenol	5700	~~U~~	UJ
100-02-7	4-Nitrophenol	5700	~~U~~	UJ
132-64-9	Dibenzofuran	2900	~~U~~	UJ
121-14-2	2,4-Dinitrotoluene	2900	~~U~~	UJ
84-66-2	Diethylphthalate	2900	~~U~~	UJ
86-73-7	Fluorene	120	~~J~~	J
7005-72-3	4-Chlorophenyl-phenylether	2900	~~U~~	UJ
100-01-6	4-Nitroaniline	5700	~~U~~	UJ
534-52-1	4,6-Dinitro-2-methylphenol	5700	~~U~~	UJ
86-30-6	N-Nitrosodiphenylamin [1]	2900	~~U~~	UJ
95-94-3	1,2,4,5-Tetrachlorobenzene	2900	~~U~~	UJ
101-55-3	4-Bromophenyl-phenylether	2900	~~U~~	UJ
118-74-1	Hexachlorobenzene	2900	~~U~~	UJ
1912-24-9	Atrazine	2900	~~U~~	UJ
87-86-5	Pentachlorophenol	5700	~~U~~	UJ
85-01-8	Phenanthrene	500	~~J~~	J
120-12-7	Anthracene	2900	~~U~~	UJ
86-74-8	Carbazole	2900	~~U~~	UJ
84-74-2	Di-n-butylphthalate	2900	~~U~~	UJ
206-44-0	Fluoranthene	2400	~~J~~	J
129-00-0	Pyrene	2500	~~J~~	J
85-68-7	Butylbenzylphthalate	2900	U	R
91-94-1	3,3'-Dichlorobenzidine	2900	~~U~~	R
56-55-3	Benzo(a)anthracene	1100	J	
218-01-9	Chrysene	1400	J	
117-81-7	Bis(2-ethylhexyl)phthalate	33000	~~B~~	
117-84-0	Di-n-octylphthalate	2900	~~U~~	UJ
205-99-2	Benzo(b)fluoranthene	1400	~~J~~	J
207-08-9	Benzo(k)fluoranthene	1600	~~J~~	J
50-32-8	Benzo(a)pyrene	1300	~~J~~	J
193-39-5	Indeno(1,2,3-cd)pyrene	490	~~J~~	J
53-70-3	Dibenzo(a,h)anthracene	150	~~J~~	J
191-24-2	Benzo(g,h,i)perylene	650	~~J~~	J
58-90-2	2,3,4,6-Tetrachlorophenol	2900	U	

[1] Cannot be separated from Diphenylamine

NW 8/16/13

1D - FORM I SV-1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-45-048

4

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17024

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17024-4

Sample wt/vol: 30.4 (g/mL) g Lab File ID: RKXVX12.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 58 Decanted: (Y/N) Date Received: 06/15/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/21/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/31/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 5.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
100-52-7	Benzaldehyde	2000	U	
108-95-2	Phenol	2000	U	
111-44-4	Bis(2-chloroethyl)ether	2000	U	
95-57-8	2-Chlorophenol	2000	U	
95-48-7	2-Methylphenol	2000	U	
108-60-1	2,2'-Oxybis(1-chloropropane)	2000	U	
98-86-2	Acetophenone	2000	U	
106-44-5	4-Methylphenol	2000	U	
621-64-7	N-Nitroso-di-n-propylamine	2000	U	
67-72-1	Hexachloroethane	2000	U	
98-95-3	Nitrobenzene	2000	U	
78-59-1	Isophorone	2000	U	
88-75-5	2-Nitrophenol	2000	U	
105-67-9	2,4-Dimethylphenol	2000	U	
111-91-1	Bis(2-chloroethoxy)methane	2000	U	
120-83-2	2,4-Dichlorophenol	2000	U	
91-20-3	Naphthalene	200	J	
106-47-8	4-Chloroaniline	390	~~J~~	J
87-68-3	Hexachlorobutadiene	2000	U	
105-60-2	Caprolactam	2000	U	
59-50-7	4-Chloro-3-methylphenol	2000	U	
91-57-6	2-Methylnaphthalene	2000	U	
77-47-4	Hexachlorocyclopentadiene	2000	~~U~~	R
88-06-2	2,4,6-Trichlorophenol	2000	U	
95-95-4	2,4,5-Trichlorophenol	2000	U	
92-52-4	1,1'-Biphenyl	2000	U	
91-58-7	2-Chloronaphthalene	2000	U	
88-74-4	2-Nitroaniline	3900	U	
131-11-3	Dimethylphthalate	2000	U	
606-20-2	2,6-Dinitrotoluene	2000	U	
208-96-8	Acenaphthylene	2000	U	
99-09-2	3-Nitroaniline	3900	U	
83-32-9	Acenaphthene	270	J	

NW 8/16/13

1E - FORM I SV-2
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-45-048

4

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678
Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17024
Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17024-4
Sample wt/vol: 30.4 (g/mL) g Lab File ID: RKXVX12.D
Level: (LOW/MED) LOW Extraction: (Type) SONC
% Moisture: 58 Decanted: (Y/N) Date Received: 06/15/2013
Concentrated Extract Volume: 500 (uL) Date Extracted: 06/21/2013
Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/31/2013
GPC Cleanup: (Y/N) Y pH: Dilution Factor: 5.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
51-28-5	2,4-Dinitrophenol	3900	U
100-02-7	4-Nitrophenol	3900	U
132-64-9	Dibenzofuran	210	J
121-14-2	2,4-Dinitrotoluene	2000	U
84-66-2	Diethylphthalate	2000	U
86-73-7	Fluorene	260	J
7005-72-3	4-Chlorophenyl-phenylether	2000	U
100-01-6	4-Nitroaniline	3900	U
534-52-1	4,6-Dinitro-2-methylphenol	3900	U
86-30-6	N-Nitrosodiphenylamin [1]	2000	U
95-94-3	1,2,4,5-Tetrachlorobenzene	2000	U
101-55-3	4-Bromophenyl-phenylether	2000	U
118-74-1	Hexachlorobenzene	2000	U
1912-24-9	Atrazine	2000	U
87-86-5	Pentachlorophenol	3900	U
85-01-8	Phenanthrene	990	J
120-12-7	Anthracene	360	J
86-74-8	Carbazole	2000	U
84-74-2	Di-n-butylphthalate	2000	U
206-44-0	Fluoranthene	3100	
129-00-0	Pyrene	2500	
85-68-7	Butylbenzylphthalate	2000	U
91-94-1	3,3'-Dichlorobenzidine	2000	U
56-55-3	Benzo(a)anthracene	920	J
218-01-9	Chrysene	1300	J
117-81-7	Bis(2-ethylhexyl)phthalate	23000	B
117-84-0	Di-n-octylphthalate	2000	U
205-99-2	Benzo(b)fluoranthene	1500	J
207-08-9	Benzo(k)fluoranthene	1200	J
50-32-8	Benzo(a)pyrene	1200	J
193-39-5	Indeno(1,2,3-cd)pyrene	590	J
53-70-3	Dibenzo(a,h)anthracene	110	J
191-24-2	Benzo(g,h,i)perylene	640	J
58-90-2	2,3,4,6-Tetrachlorophenol	2000	U

UJ
J
J
UJ
UJ
J
R
UJ
J

[1] Cannot be separated from Diphenylamine

NW 8/16/13

1D - FORM I SV-1

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-45-072

5

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17024

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17024-5

Sample wt/vol: 30.4 (g/mL) g Lab File ID: RKXVX15.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 56 Decanted: (Y/N) Date Received: 06/15/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/21/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/31/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 10.0

Use reanalysis results

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
100-52-7	Benzaldehyde	3800	U
108-95-2	Phenol	3800	U
111-44-4	Bis(2-chloroethyl)ether	3800	U
95-57-8	2-Chlorophenol	3800	U
95-48-7	2-Methylphenol	3800	U
108-60-1	2,2'-Oxybis(1-chloropropane)	3800	U
98-86-2	Acetophenone	3800	U
106-44-5	4-Methylphenol	3800	U
621-64-7	N-Nitroso-di-n-propylamine	3800	U
67-72-1	Hexachloroethane	3800	U
98-95-3	Nitrobenzene	3800	U
78-59-1	Isophorone	3800	U
88-75-5	2-Nitrophenol	3800	U
105-67-9	2,4-Dimethylphenol	3800	U
111-91-1	Bis(2-chloroethoxy)methane	3800	U
120-83-2	2,4-Dichlorophenol	3800	U
91-20-3	Naphthalene	260	J
106-47-8	4-Chloroaniline	3800	U
87-68-3	Hexachlorobutadiene	3800	U
105-60-2	Caprolactam	3800	U
59-50-7	4-Chloro-3-methylphenol	3800	U
91-57-6	2-Methylnaphthalene	3800	U
77-47-4	Hexachlorocyclopentadiene	3800	U UJ
88-06-2	2,4,6-Trichlorophenol	3800	U
95-95-4	2,4,5-Trichlorophenol	3800	U
92-52-4	1,1'-Biphenyl	3800	U
91-58-7	2-Chloronaphthalene	3800	U
88-74-4	2-Nitroaniline	7400	U
131-11-3	Dimethylphthalate	3800	U
606-20-2	2,6-Dinitrotoluene	3800	U
208-96-8	Acenaphthylene	3800	U
99-09-2	3-Nitroaniline	7400	U
83-32-9	Acenaphthene	3800	U

NW 8/16/13

1E - FORM I SV-2
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-45-072

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678 5

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17024

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17024-5

Sample wt/vol: 30.4 (g/mL) g Lab File ID: RKXVX15.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 56 Decanted: (Y/N) Date Received: 06/15/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/21/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/31/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 10.0

Use reanalysis results

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
51-28-5	2,4-Dinitrophenol	7400	U	
100-02-7	4-Nitrophenol	7400	U	
132-64-9	Dibenzofuran	3800	U	
121-14-2	2,4-Dinitrotoluene	3800	U	
84-66-2	Diethylphthalate	3800	U	
86-73-7	Fluorene	160	J	
7005-72-3	4-Chlorophenyl-phenylether	3800	U	
100-01-6	4-Nitroaniline	7400	U	
534-52-1	4,6-Dinitro-2-methylphenol	7400	U	UJ
86-30-6	N-Nitrosodiphenylamin [1]	3800	U	
95-94-3	1,2,4,5-Tetrachlorobenzene	3800	U	
101-55-3	4-Bromophenyl-phenylether	3800	U	
118-74-1	Hexachlorobenzene	3800	U	
1912-24-9	Atrazine	3800	U	
87-86-5	Pentachlorophenol	7400	U	
85-01-8	Phenanthrene	700	J	J
120-12-7	Anthracene	350	J	J
86-74-8	Carbazole	3800	U	UJ
84-74-2	Di-n-butylphthalate	3800	U	UJ
206-44-0	Fluoranthene	2200	J	J
129-00-0	Pyrene	1800	J	J
85-68-7	Butylbenzylphthalate	3800	U	
91-94-1	3,3'-Dichlorobenzidine	3800	U	
56-55-3	Benzo(a)anthracene	930	J	
218-01-9	Chrysene	1400	J	
117-81-7	Bis(2-ethylhexyl)phthalate	25000	B	
117-84-0	Di-n-octylphthalate	1800	J	J
205-99-2	Benzo(b)fluoranthene	1400	J	
207-08-9	Benzo(k)fluoranthene	1100	J	
50-32-8	Benzo(a)pyrene	1400	J	
193-39-5	Indeno(1,2,3-cd)pyrene	690	J	
53-70-3	Dibenzo(a,h)anthracene	3800	U	UJ
191-24-2	Benzo(g,h,i)perylene	870	J	J
58-90-2	2,3,4,6-Tetrachlorophenol	3800	U	

[1] Cannot be separated from Diphenylamine

NW 8/16/13

1D - FORM I SV-1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-45-072RE

5RE

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17024

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17024-5

Sample wt/vol: 30.4 (g/mL) g Lab File ID: RKXYA10.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 56 Decanted: (Y/N) Date Received: 06/15/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/21/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/02/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 10.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
100-52-7	Benzaldehyde	3800	U
108-95-2	Phenol	3800	U
111-44-4	Bis(2-chloroethyl)ether	3800	U
95-57-8	2-Chlorophenol	3800	U
95-48-7	2-Methylphenol	3800	U
108-60-1	2,2'-Oxybis(1-chloropropane)	3800	U
98-86-2	Acetophenone	3800	U
106-44-5	4-Methylphenol	3800	U
621-64-7	N-Nitroso-di-n-propylamine	3800	U
67-72-1	Hexachloroethane	3800	U
98-95-3	Nitrobenzene	3800	U
78-59-1	Isophorone	3800	U
88-75-5	2-Nitrophenol	3800	U
105-67-9	2,4-Dimethylphenol	3800	U
111-91-1	Bis(2-chloroethoxy)methane	3800	U
120-83-2	2,4-Dichlorophenol	3800	U
91-20-3	Naphthalene	260	J
106-47-8	4-Chloroaniline	3800	U
87-68-3	Hexachlorobutadiene	3800	U
105-60-2	Caprolactam	3800	U
59-50-7	4-Chloro-3-methylphenol	3800	U
91-57-6	2-Methylnaphthalene	170	J
77-47-4	Hexachlorocyclopentadiene	3800	U UJ
88-06-2	2,4,6-Trichlorophenol	3800	U
95-95-4	2,4,5-Trichlorophenol	3800	U
92-52-4	1,1'-Biphenyl	3800	U
91-58-7	2-Chloronaphthalene	3800	U
88-74-4	2-Nitroaniline	7400	U
131-11-3	Dimethylphthalate	3800	U
606-20-2	2,6-Dinitrotoluene	3800	U
208-96-8	Acenaphthylene	3800	U
99-09-2	3-Nitroaniline	7400	U
83-32-9	Acenaphthene	3800	U

NW 8/16/13

1E - FORM I SV-2
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-45-072RE

5RE

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17024

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17024-5

Sample wt/vol: 30.4 (g/mL) g Lab File ID: RKXYA10.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 56 Decanted: (Y/N) Date Received: 06/15/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/21/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/02/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 10.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
51-28-5	2,4-Dinitrophenol	7400	U
100-02-7	4-Nitrophenol	7400	U
132-64-9	Dibenzofuran	3800	U
121-14-2	2,4-Dinitrotoluene	3800	U
84-66-2	Diethylphthalate	3800	U
86-73-7	Fluorene	150	J
7005-72-3	4-Chlorophenyl-phenylether	3800	U
100-01-6	4-Nitroaniline	7400	U
534-52-1	4,6-Dinitro-2-methylphenol	7400	U
86-30-6	N-Nitrosodiphenylamin [1]	3800	U
95-94-3	1,2,4,5-Tetrachlorobenzene	3800	U
101-55-3	4-Bromophenyl-phenylether	3800	U
118-74-1	Hexachlorobenzene	3800	U
1912-24-9	Atrazine	3800	U
87-86-5	Pentachlorophenol	7400	U
85-01-8	Phenanthrene	750	J
120-12-7	Anthracene	250	J
86-74-8	Carbazole	3800	U
84-74-2	Di-n-butylphthalate	3800	U
206-44-0	Fluoranthene	1900	J
129-00-0	Pyrene	2100	J
85-68-7	Butylbenzylphthalate	3800	U
91-94-1	3,3'-Dichlorobenzidine	3800	U
56-55-3	Benzo(a)anthracene	820	J
218-01-9	Chrysene	1300	J
117-81-7	Bis(2-ethylhexyl)phthalate	30000	E
117-84-0	Di-n-octylphthalate	2300	J
205-99-2	Benzo(b)fluoranthene	1500	J
207-08-9	Benzo(k)fluoranthene	1300	J
50-32-8	Benzo(a)pyrene	1400	J
193-39-5	Indeno(1,2,3-cd)pyrene	730	J
53-70-3	Dibenzo(a,h)anthracene	150	J
191-24-2	Benzo(g,h,i)perylene	1100	J
58-90-2	2,3,4,6-Tetrachlorophenol	3800	U

UJ
JJ UJJ
JJ
J

[1] Cannot be separated from Diphenylamine

NW 8/16/13

EPA SAMPLE NO.
LMR13-45-096

6

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17024

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17024-6

Sample wt/vol: 30.4 (g/mL) g Lab File ID: RKXVX16.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 53 Decanted: (Y/N) Date Received: 06/15/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/21/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/31/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 6.7

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
100-52-7	Benzaldehyde	2400	U
108-95-2	Phenol	2400	U
111-44-4	Bis(2-chloroethyl)ether	2400	U
95-57-8	2-Chlorophenol	2400	U
95-48-7	2-Methylphenol	2400	U
108-60-1	2,2'-Oxybis(1-chloropropane)	2400	U
98-86-2	Acetophenone	2400	U
106-44-5	4-Methylphenol	2400	U
621-64-7	N-Nitroso-di-n-propylamine	2400	U
67-72-1	Hexachloroethane	2400	U
98-95-3	Nitrobenzene	2400	U
78-59-1	Isophorone	2400	U
88-75-5	2-Nitrophenol	2400	U
105-67-9	2,4-Dimethylphenol	2400	U
111-91-1	Bis(2-chloroethoxy)methane	2400	U
120-83-2	2,4-Dichlorophenol	2400	U
91-20-3	Naphthalene	450	J
106-47-8	4-Chloroaniline	2400	U
87-68-3	Hexachlorobutadiene	2400	U
105-60-2	Caprolactam	2400	U
59-50-7	4-Chloro-3-methylphenol	2400	U
91-57-6	2-Methylnaphthalene	190	J
77-47-4	Hexachlorocyclopentadiene	2400	~~U~~ UJ
88-06-2	2,4,6-Trichlorophenol	2400	U
95-95-4	2,4,5-Trichlorophenol	2400	U
92-52-4	1,1'-Biphenyl	2400	U
91-58-7	2-Chloronaphthalene	2400	U
88-74-4	2-Nitroaniline	4700	U
131-11-3	Dimethylphthalate	2400	U
606-20-2	2,6-Dinitrotoluene	2400	U
208-96-8	Acenaphthylene	2400	U
99-09-2	3-Nitroaniline	4700	U
83-32-9	Acenaphthene	270	J

NW 8/16/13

1E - FORM I SV-2
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-45-096

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17024

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17024-6

Sample wt/vol: 30.4 (g/mL) g Lab File ID: RKXVX16.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 53 Decanted: (Y/N) Date Received: 06/15/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/21/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/31/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 6.7

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
51-28-5	2,4-Dinitrophenol	4700	U
100-02-7	4-Nitrophenol	4700	U
132-64-9	Dibenzofuran	110	J
121-14-2	2,4-Dinitrotoluene	2400	U
84-66-2	Diethylphthalate	2400	U
86-73-7	Fluorene	270	J
7005-72-3	4-Chlorophenyl-phenylether	2400	U
100-01-6	4-Nitroaniline	4700	U
534-52-1	4,6-Dinitro-2-methylphenol	4700	U
86-30-6	N-Nitrosodiphenylamin [1]	2400	U
95-94-3	1,2,4,5-Tetrachlorobenzene	2400	U
101-55-3	4-Bromophenyl-phenylether	2400	U
118-74-1	Hexachlorobenzene	2400	U
1912-24-9	Atrazine	2400	U
87-86-5	Pentachlorophenol	4700	~~U~~ UJ
85-01-8	Phenanthrene	1100	J
120-12-7	Anthracene	330	J
86-74-8	Carbazole	2400	U
84-74-2	Di-n-butylphthalate	2400	U
206-44-0	Fluoranthene	3000	J
129-00-0	Pyrene	2900	J
85-68-7	Butylbenzylphthalate	2400	U
91-94-1	3,3'-Dichlorobenzidine	2400	U
56-55-3	Benzo(a)anthracene	1100	J
218-01-9	Chrysene	1900	J
117-81-7	Bis(2-ethylhexyl)phthalate	30000	~~B~~
117-84-0	Di-n-octylphthalate	2800	
205-99-2	Benzo(b)fluoranthene	2300	J
207-08-9	Benzo(k)fluoranthene	1500	J
50-32-8	Benzo(a)pyrene	2300	J
193-39-5	Indeno(1,2,3-cd)pyrene	1100	J
53-70-3	Dibenzo(a,h)anthracene	370	J
191-24-2	Benzo(g,h,i)perylene	1500	J
58-90-2	2,3,4,6-Tetrachlorophenol	2400	U

[1] Cannot be separated from Diphenylamine

NW 8/16/13

EPA SAMPLE NO.
LMR13-45-120

7

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17024

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17024-7

Sample wt/vol: 30.9 (g/mL) g Lab File ID: RKXVX17.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 50 Decanted: (Y/N) Date Received: 06/15/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/21/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/31/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 6.7

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
100-52-7	Benzaldehyde	2200	U
108-95-2	Phenol	2200	U
111-44-4	Bis(2-chloroethyl)ether	2200	U
95-57-8	2-Chlorophenol	2200	U
95-48-7	2-Methylphenol	2200	U
108-60-1	2,2'-Oxybis(1-chloropropane)	2200	U
98-86-2	Acetophenone	2200	U
106-44-5	4-Methylphenol	2200	U
621-64-7	N-Nitroso-di-n-propylamine	2200	U
67-72-1	Hexachloroethane	2200	U
98-95-3	Nitrobenzene	2200	U
78-59-1	Isophorone	2200	U
88-75-5	2-Nitrophenol	2200	U
105-67-9	2,4-Dimethylphenol	2200	U
111-91-1	Bis(2-chloroethoxy)methane	2200	U
120-83-2	2,4-Dichlorophenol	2200	U
91-20-3	Naphthalene	150	J
106-47-8	4-Chloroaniline	2200	U
87-68-3	Hexachlorobutadiene	2200	U
105-60-2	Caprolactam	2200	U
59-50-7	4-Chloro-3-methylphenol	2200	U
91-57-6	2-Methylnaphthalene	160	J
77-47-4	Hexachlorocyclopentadiene	2200	~~U~~ UJ
88-06-2	2,4,6-Trichlorophenol	2200	U
95-95-4	2,4,5-Trichlorophenol	2200	U
92-52-4	1,1'-Biphenyl	2200	U
91-58-7	2-Chloronaphthalene	2200	U
88-74-4	2-Nitroaniline	4300	U
131-11-3	Dimethylphthalate	2200	U
606-20-2	2,6-Dinitrotoluene	2200	U
208-96-8	Acenaphthylene	2200	U
99-09-2	3-Nitroaniline	4300	U
83-32-9	Acenaphthene	200	J

NW 8/16/13

1E - FORM I SV-2
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-45-120

7

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17024

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17024-7

Sample wt/vol: 30.9 (g/mL) g Lab File ID: RKXVX17.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 50 Decanted: (Y/N) Date Received: 06/15/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/21/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/31/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 6.7

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
51-28-5	2,4-Dinitrophenol	4300	U	
100-02-7	4-Nitrophenol	4300	U	
132-64-9	Dibenzofuran	110	J	
121-14-2	2,4-Dinitrotoluene	2200	U	
84-66-2	Diethylphthalate	2200	U	
86-73-7	Fluorene	2200	U	
7005-72-3	4-Chlorophenyl-phenylether	2200	U	
100-01-6	4-Nitroaniline	4300	U	
534-52-1	4,6-Dinitro-2-methylphenol	4300	~~U~~	UJ
86-30-6	N-Nitrosodiphenylamin [1]	2200	~~U~~	
95-94-3	1,2,4,5-Tetrachlorobenzene	2200	~~U~~	
101-55-3	4-Bromophenyl-phenylether	2200	~~U~~	
118-74-1	Hexachlorobenzene	2200	~~U~~	
1912-24-9	Atrazine	2200	~~U~~	
87-86-5	Pentachlorophenol	4300	~~U~~	
85-01-8	Phenanthrene	810	~~J~~	J
120-12-7	Anthracene	160	~~J~~	J
86-74-8	Carbazole	2200	~~U~~	UJ
84-74-2	Di-n-butylphthalate	2200	~~U~~	UJ
206-44-0	Fluoranthene	1700	~~J~~	J
129-00-0	Pyrene	1300	~~J~~	J
85-68-7	Butylbenzylphthalate	2200	U	
91-94-1	3,3'-Dichlorobenzidine	2200	U	
56-55-3	Benzo(a)anthracene	660	J	
218-01-9	Chrysene	1100	J	
117-81-7	Bis(2-ethylhexyl)phthalate	32000	~~B~~	
117-84-0	Di-n-octylphthalate	2200	U	
205-99-2	Benzo(b)fluoranthene	780	J	
207-08-9	Benzo(k)fluoranthene	840	J	
50-32-8	Benzo(a)pyrene	800	J	
193-39-5	Indeno(1,2,3-cd)pyrene	440	J	
53-70-3	Dibenzo(a,h)anthracene	200	J	
191-24-2	Benzo(g,h,i)perylene	560	J	
58-90-2	2,3,4,6-Tetrachlorophenol	2200	U	

[1] Cannot be separated from Diphenylamine

NW 8/16/13

1D - FORM I SV-1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-45-120RE

7RE

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17024

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17024-7

Sample wt/vol: 30.9 (g/mL) g Lab File ID: RKXYA12.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 50 Decanted: (Y/N) Date Received: 06/15/2013

Use original results

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/21/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/02/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 10.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
100-52-7	Benzaldehyde	3300	U
108-95-2	Phenol	3300	U
111-44-4	Bis(2-chloroethyl)ether	3300	U
95-57-8	2-Chlorophenol	3300	U
95-48-7	2-Methylphenol	3300	U
108-60-1	2,2'-Oxybis(1-chloropropane)	3300	U
98-86-2	Acetophenone	3300	U
106-44-5	4-Methylphenol	3300	U
621-64-7	N-Nitroso-di-n-propylamine	3300	U
67-72-1	Hexachloroethane	3300	U
98-95-3	Nitrobenzene	3300	U
78-59-1	Isophorone	3300	U
88-75-5	2-Nitrophenol	3300	U
105-67-9	2,4-Dimethylphenol	3300	U
111-91-1	Bis(2-chloroethoxy)methane	3300	U
120-83-2	2,4-Dichlorophenol	3300	U
91-20-3	Naphthalene	150	J
106-47-8	4-Chloroaniline	3300	U
87-68-3	Hexachlorobutadiene	3300	U
105-60-2	Caprolactam	3300	U
59-50-7	4-Chloro-3-methylphenol	3300	U
91-57-6	2-Methylnaphthalene	3300	U
77-47-4	Hexachlorocyclopentadiene	3300	U UJ
88-06-2	2,4,6-Trichlorophenol	3300	U
95-95-4	2,4,5-Trichlorophenol	3300	U
92-52-4	1,1'-Biphenyl	3300	U
91-58-7	2-Chloronaphthalene	3300	U
88-74-4	2-Nitroaniline	6400	U
131-11-3	Dimethylphthalate	3300	U
606-20-2	2,6-Dinitrotoluene	3300	U
208-96-8	Acenaphthylene	3300	U
99-09-2	3-Nitroaniline	6400	U
83-32-9	Acenaphthene	230	J

MW 8/16/13

1E - FORM I SV-2
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-45-120RE

7RE

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17024

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17024-7

Sample wt/vol: 30.9 (g/mL) g Lab File ID: RKXYA12.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 50 Decanted: (Y/N) Date Received: 06/15/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/21/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/02/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 10.0

Use original results

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
51-28-5	2,4-Dinitrophenol	6400	U	
100-02-7	4-Nitrophenol	6400	U	
132-64-9	Dibenzofuran	3300	U	
121-14-2	2,4-Dinitrotoluene	3300	U	
84-66-2	Diethylphthalate	3300	U	
86-73-7	Fluorene	3300	U	
7005-72-3	4-Chlorophenyl-phenylether	3300	U	
100-01-6	4-Nitroaniline	6400	U	
534-52-1	4,6-Dinitro-2-methylphenol	6400	U	UJ
86-30-6	N-Nitrosodiphenylamin [1]	3300	U	
95-94-3	1,2,4,5-Tetrachlorobenzene	3300	U	
101-55-3	4-Bromophenyl-phenylether	3300	U	
118-74-1	Hexachlorobenzene	3300	U	
1912-24-9	Atrazine	3300	U	
87-86-5	Pentachlorophenol	6400	U	
85-01-8	Phenanthrene	820	J	J
120-12-7	Anthracene	220	J	J
86-74-8	Carbazole	3300	U	UJ
84-74-2	Di-n-butylphthalate	3300	U	UJ
206-44-0	Fluoranthene	1500	J	J
129-00-0	Pyrene	1300	J	J
85-68-7	Butylbenzylphthalate	3300	U	
91-94-1	3,3'-Dichlorobenzidine	3300	U	
56-55-3	Benzo(a)anthracene	680	J	
218-01-9	Chrysene	1200	J	
117-81-7	Bis(2-ethylhexyl)phthalate	35000	B	
117-84-0	Di-n-octylphthalate	3300	U	UJ
205-99-2	Benzo(b)fluoranthene	910	J	J
207-08-9	Benzo(k)fluoranthene	780	J	
50-32-8	Benzo(a)pyrene	820	J	
193-39-5	Indeno(1,2,3-cd)pyrene	410	J	
53-70-3	Dibenzo(a,h)anthracene	220	J	
191-24-2	Benzo(g,h,i)perylene	510	J	
58-90-2	2,3,4,6-Tetrachlorophenol	3300	U	

[1] Cannot be separated from Diphenylamine

NW 8/16/13

1D - FORM I SV-1

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-50-012

8

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17024

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17024-8

Sample wt/vol: 30.2 (g/mL) g Lab File ID: RKXVX08.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 54 Decanted: (Y/N) Date Received: 06/15/2013

Concentrated Extract Volume: 1000 (uL) Date Extracted: 06/21/2013

Injection Volume: 2.0 (uL) GPC Factor: 1.0 Date Analyzed: 07/31/2013

GPC Cleanup: (Y/N) N pH: Dilution Factor: 5.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
100-52-7	Benzaldehyde	1800	U
108-95-2	Phenol	1800	U
111-44-4	Bis(2-chloroethyl)ether	1800	U
95-57-8	2-Chlorophenol	1800	U
95-48-7	2-Methylphenol	1800	U
108-60-1	2,2'-Oxybis(1-chloropropane)	1800	U
98-86-2	Acetophenone	1800	U
106-44-5	4-Methylphenol	1800	U
621-64-7	N-Nitroso-di-n-propylamine	1800	U
67-72-1	Hexachloroethane	1800	U
98-95-3	Nitrobenzene	1800	U
78-59-1	Isophorone	1800	U
88-75-5	2-Nitrophenol	1800	U
105-67-9	2,4-Dimethylphenol	1800	U
111-91-1	Bis(2-chloroethoxy)methane	1800	U
120-83-2	2,4-Dichlorophenol	1800	U
91-20-3	Naphthalene	1800	U
106-47-8	4-Chloroaniline	1800	U
87-68-3	Hexachlorobutadiene	1800	U
105-60-2	Caprolactam	1800	U
59-50-7	4-Chloro-3-methylphenol	1800	U
91-57-6	2-Methylnaphthalene	1800	U
77-47-4	Hexachlorocyclopentadiene	1800	~~U~~ UJ
88-06-2	2,4,6-Trichlorophenol	1800	U
95-95-4	2,4,5-Trichlorophenol	1800	U
92-52-4	1,1'-Biphenyl	1800	U
91-58-7	2-Chloronaphthalene	1800	U
88-74-4	2-Nitroaniline	3600	U
131-11-3	Dimethylphthalate	1800	U
606-20-2	2,6-Dinitrotoluene	1800	U
208-96-8	Acenaphthylene	1800	U
99-09-2	3-Nitroaniline	3600	U
83-32-9	Acenaphthene	1800	U

NW 8/16/13

1E - FORM I SV-2
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-50-012

8

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17024

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17024-8

Sample wt/vol: 30.2 (g/mL) g Lab File ID: RKXVX08.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 54 Decanted: (Y/N) Date Received: 06/15/2013

Concentrated Extract Volume: 1000 (uL) Date Extracted: 06/21/2013

Injection Volume: 2.0 (uL) GPC Factor: 1.0 Date Analyzed: 07/31/2013

GPC Cleanup: (Y/N) N pH: Dilution Factor: 5.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
51-28-5	2,4-Dinitrophenol	3600	U	
100-02-7	4-Nitrophenol	3600	U	
132-64-9	Dibenzofuran	1800	U	
121-14-2	2,4-Dinitrotoluene	1800	U	
84-66-2	Diethylphthalate	1800	U	
86-73-7	Fluorene	1800	U	
7005-72-3	4-Chlorophenyl-phenylether	1800	U	
100-01-6	4-Nitroaniline	3600	U	
534-52-1	4,6-Dinitro-2-methylphenol	3600	U	
86-30-6	N-Nitrosodiphenylamin [1]	1800	U	
95-94-3	1,2,4,5-Tetrachlorobenzene	1800	U	
101-55-3	4-Bromophenyl-phenylether	1800	U	
118-74-1	Hexachlorobenzene	1800	U	
1912-24-9	Atrazine	1800	U	
87-86-5	Pentachlorophenol	3600	~~U~~	UJ
85-01-8	Phenanthrene	200	J	
120-12-7	Anthracene	1800	U	
86-74-8	Carbazole	1800	U	
84-74-2	Di-n-butylphthalate	1800	U	
206-44-0	Fluoranthene	480	~~J~~	J
129-00-0	Pyrene	430	~~J~~	J
85-68-7	Butylbenzylphthalate	1800	U	
91-94-1	3,3'-Dichlorobenzidine	1800	U	
56-55-3	Benzo(a)anthracene	200	J	
218-01-9	Chrysene	310	J	
117-81-7	Bis(2-ethylhexyl)phthalate	1800 ~~250~~	~~J B~~	U
117-84-0	Di-n-octylphthalate	1800	U	
205-99-2	Benzo(b)fluoranthene	240	J	
207-08-9	Benzo(k)fluoranthene	280	J	
50-32-8	Benzo(a)pyrene	230	J	
193-39-5	Indeno(1,2,3-cd)pyrene	150	J	
53-70-3	Dibenzo(a,h)anthracene	1800	U	
191-24-2	Benzo(g,h,i)perylene	150	J	
58-90-2	2,3,4,6-Tetrachlorophenol	1800	U	

[1] Cannot be separated from Diphenylamine

JW 8/16/13

1D - FORM I SV-1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-50-024

9

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17024

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17024-9

Sample wt/vol: 30.2 (g/mL) g Lab File ID: PJXXE11.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 53 Decanted: (Y/N) Date Received: 06/15/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/21/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/27/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
100-52-7	Benzaldehyde	52	J
108-95-2	Phenol	360	U
111-44-4	Bis(2-chloroethyl)ether	360	U
95-57-8	2-Chlorophenol	360	U
95-48-7	2-Methylphenol	360	U
108-60-1	2,2'-Oxybis(1-chloropropane)	360	U
98-86-2	Acetophenone	360	U
106-44-5	4-Methylphenol	360	U
621-64-7	N-Nitroso-di-n-propylamine	360	U
67-72-1	Hexachloroethane	360	U
98-95-3	Nitrobenzene	360	U
78-59-1	Isophorone	360	U
88-75-5	2-Nitrophenol	360	U
105-67-9	2,4-Dimethylphenol	360	U
111-91-1	Bis(2-chloroethoxy)methane	360	U
120-83-2	2,4-Dichlorophenol	360	U
91-20-3	Naphthalene	360	U
106-47-8	4-Chloroaniline	360	U
87-68-3	Hexachlorobutadiene	360	U
105-60-2	Caprolactam	360	U
59-50-7	4-Chloro-3-methylphenol	360	U
91-57-6	2-Methylnaphthalene	360	U
77-47-4	Hexachlorocyclopentadiene	360	U UJ
88-06-2	2,4,6-Trichlorophenol	360	U
95-95-4	2,4,5-Trichlorophenol	360	U
92-52-4	1,1'-Biphenyl	360	U
91-58-7	2-Chloronaphthalene	360	U
88-74-4	2-Nitroaniline	700	U
131-11-3	Dimethylphthalate	360	U
606-20-2	2,6-Dinitrotoluene	360	U
208-96-8	Acenaphthylene	360	U
99-09-2	3-Nitroaniline	700	U
83-32-9	Acenaphthene	360	U

NW 8/16/13

1E - FORM I SV-2
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-50-024

9

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17024

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17024-9

Sample wt/vol: 30.2 (g/mL) g Lab File ID: PJXXE11.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 53 Decanted: (Y/N) Date Received: 06/15/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/21/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/27/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
51-28-5	2,4-Dinitrophenol	700	U	
100-02-7	4-Nitrophenol	700	U	
132-64-9	Dibenzofuran	360	U	
121-14-2	2,4-Dinitrotoluene	360	U	
84-66-2	Diethylphthalate	360	U	
86-73-7	Fluorene	360	U	
7005-72-3	4-Chlorophenyl-phenylether	360	U	
100-01-6	4-Nitroaniline	700	U	
534-52-1	4,6-Dinitro-2-methylphenol	700	U	
86-30-6	N-Nitrosodiphenylamin [1]	360	U	
95-94-3	1,2,4,5-Tetrachlorobenzene	360	U	
101-55-3	4-Bromophenyl-phenylether	360	U	
118-74-1	Hexachlorobenzene	360	U	
1912-24-9	Atrazine	360	U	
87-86-5	Pentachlorophenol	700	~~U~~	UJ
85-01-8	Phenanthrene	130	J	
120-12-7	Anthracene	29	J	
86-74-8	Carbazole	15	J	
84-74-2	Di-n-butylphthalate	24	J	
206-44-0	Fluoranthene	300	J	
129-00-0	Pyrene	310	J	
85-68-7	Butylbenzylphthalate	360 ~~41~~	~~J B~~	U
91-94-1	3,3'-Dichlorobenzidine	360	U	
56-55-3	Benzo(a)anthracene	120	J	
218-01-9	Chrysene	190	J	
117-81-7	Bis(2-ethylhexyl)phthalate	360 ~~180~~	~~J B~~	U
117-84-0	Di-n-octylphthalate	360	U	
205-99-2	Benzo(b)fluoranthene	160	J	
207-08-9	Benzo(k)fluoranthene	140	J	
50-32-8	Benzo(a)pyrene	130	J	
193-39-5	Indeno(1,2,3-cd)pyrene	83	~~J~~	J
53-70-3	Dibenzo(a,h)anthracene	46	~~J~~	↓
191-24-2	Benzo(g,h,i)perylene	130	~~J~~	
58-90-2	2,3,4,6-Tetrachlorophenol	360	U	

[1] Cannot be separated from Diphenylamine

MW 8/16/13

EPA SAMPLE NO.
LMR13-50-048

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678 10

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17024

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17024-10

Sample wt/vol: 30.0 (g/mL) g Lab File ID: PJXXE12.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 47 Decanted: (Y/N) Date Received: 06/15/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/21/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/27/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
100-52-7	Benzaldehyde	44	J
108-95-2	Phenol	320	U
111-44-4	Bis(2-chloroethyl)ether	320	U
95-57-8	2-Chlorophenol	320	U
95-48-7	2-Methylphenol	320	U
108-60-1	2,2'-Oxybis(1-chloropropane)	320	U
98-86-2	Acetophenone	320	U
106-44-5	4-Methylphenol	320	U
621-64-7	N-Nitroso-di-n-propylamine	320	U
67-72-1	Hexachloroethane	320	U
98-95-3	Nitrobenzene	320	U
78-59-1	Isophorone	320	U
88-75-5	2-Nitrophenol	320	U
105-67-9	2,4-Dimethylphenol	320	U
111-91-1	Bis(2-chloroethoxy)methane	320	U
120-83-2	2,4-Dichlorophenol	320	U
91-20-3	Naphthalene	320	U
106-47-8	4-Chloroaniline	320	U
87-68-3	Hexachlorobutadiene	320	U
105-60-2	Caprolactam	320	U
59-50-7	4-Chloro-3-methylphenol	320	U
91-57-6	2-Methylnaphthalene	320	U
77-47-4	Hexachlorocyclopentadiene	320	~~U~~ UJ
88-06-2	2,4,6-Trichlorophenol	320	U
95-95-4	2,4,5-Trichlorophenol	320	U
92-52-4	1,1'-Biphenyl	320	U
91-58-7	2-Chloronaphthalene	320	U
88-74-4	2-Nitroaniline	620	U
131-11-3	Dimethylphthalate	320	U
606-20-2	2,6-Dinitrotoluene	320	U
208-96-8	Acenaphthylene	320	U
99-09-2	3-Nitroaniline	620	U
83-32-9	Acenaphthene	17	J

NW 8/16/13

EPA SAMPLE NO.
LMR13-50-048

10

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17024

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17024-10

Sample wt/vol: 30.0 (g/mL) g Lab File ID: PJXXE12.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 47 Decanted: (Y/N) Date Received: 06/15/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/21/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/27/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
51-28-5	2,4-Dinitrophenol	620	U	
100-02-7	4-Nitrophenol	620	U	
132-64-9	Dibenzofuran	13	J	
121-14-2	2,4-Dinitrotoluene	320	U	
84-66-2	Diethylphthalate	320	U	
86-73-7	Fluorene	34	J	
7005-72-3	4-Chlorophenyl-phenylether	320	U	
100-01-6	4-Nitroaniline	620	U	
534-52-1	4,6-Dinitro-2-methylphenol	620	U	
86-30-6	N-Nitrosodiphenylamin [1]	320	U	
95-94-3	1,2,4,5-Tetrachlorobenzene	320	U	
101-55-3	4-Bromophenyl-phenylether	320	U	
118-74-1	Hexachlorobenzene	320	U	
1912-24-9	Atrazine	320	U	
87-86-5	Pentachlorophenol	620	~~U~~	UJ
85-01-8	Phenanthrene	170	J	
120-12-7	Anthracene	35	J	
86-74-8	Carbazole	15	J	
84-74-2	Di-n-butylphthalate	23	J	
206-44-0	Fluoranthene	290	J	
129-00-0	Pyrene	350		
85-68-7	Butylbenzylphthalate	320 ~~36~~	~~J B~~	U
91-94-1	3,3'-Dichlorobenzidine	320	U	
56-55-3	Benzo(a)anthracene	130	J	
218-01-9	Chrysene	180	J	
117-81-7	Bis(2-ethylhexyl)phthalate	320 ~~170~~	~~J B~~	U
117-84-0	Di-n-octylphthalate	320	U	
205-99-2	Benzo(b)fluoranthene	130	J	
207-08-9	Benzo(k)fluoranthene	120	J	
50-32-8	Benzo(a)pyrene	100	J	
193-39-5	Indeno(1,2,3-cd)pyrene	85	~~J~~	J
53-70-3	Dibenzo(a,h)anthracene	37	~~J~~	↓
191-24-2	Benzo(g,h,i)perylene	99	~~J~~	↓
58-90-2	2,3,4,6-Tetrachlorophenol	320	U	

[1] Cannot be separated from Diphenylamine

NW 8/16/13

1D - FORM I SV-1

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-50-072

11

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17024

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17024-11

Sample wt/vol: 30.8 (g/mL) g Lab File ID: PJXXE13.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 40 Decanted: (Y/N) Date Received: 06/15/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/21/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/27/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
100-52-7	Benzaldehyde	39	J
108-95-2	Phenol	270	U
111-44-4	Bis(2-chloroethyl)ether	270	U
95-57-8	2-Chlorophenol	270	U
95-48-7	2-Methylphenol	270	U
108-60-1	2,2'-Oxybis(1-chloropropane)	270	U
98-86-2	Acetophenone	270	U
106-44-5	4-Methylphenol	270	U
621-64-7	N-Nitroso-di-n-propylamine	270	U
67-72-1	Hexachloroethane	270	U
98-95-3	Nitrobenzene	270	U
78-59-1	Isophorone	270	U
88-75-5	2-Nitrophenol	270	U
105-67-9	2,4-Dimethylphenol	270	U
111-91-1	Bis(2-chloroethoxy)methane	270	U
120-83-2	2,4-Dichlorophenol	270	U
91-20-3	Naphthalene	10	J
106-47-8	4-Chloroaniline	270	U
87-68-3	Hexachlorobutadiene	270	U
105-60-2	Caprolactam	270	U
59-50-7	4-Chloro-3-methylphenol	270	U
91-57-6	2-Methylnaphthalene	270	U
77-47-4	Hexachlorocyclopentadiene	270	~~U~~ UJ
88-06-2	2,4,6-Trichlorophenol	270	U
95-95-4	2,4,5-Trichlorophenol	270	U
92-52-4	1,1'-Biphenyl	270	U
91-58-7	2-Chloronaphthalene	270	U
88-74-4	2-Nitroaniline	530	U
131-11-3	Dimethylphthalate	270	U
606-20-2	2,6-Dinitrotoluene	270	U
208-96-8	Acenaphthylene	270	U
99-09-2	3-Nitroaniline	530	U
83-32-9	Acenaphthene	23	J

NW 8/16/13

1E - FORM I SV-2
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-50-072

11

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17024

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17024-11

Sample wt/vol: 30.8 (g/mL) g Lab File ID: PJXXE13.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 40 Decanted: (Y/N) Date Received: 06/15/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/21/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/27/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
51-28-5	2,4-Dinitrophenol	530	U	
100-02-7	4-Nitrophenol	530	U	
132-64-9	Dibenzofuran	15	J	
121-14-2	2,4-Dinitrotoluene	270	U	
84-66-2	Diethylphthalate	270	U	
86-73-7	Fluorene	40	J	
7005-72-3	4-Chlorophenyl-phenylether	270	U	
100-01-6	4-Nitroaniline	530	U	
534-52-1	4,6-Dinitro-2-methylphenol	530	U	
86-30-6	N-Nitrosodiphenylamin [1]	270	U	
95-94-3	1,2,4,5-Tetrachlorobenzene	270	U	
101-55-3	4-Bromophenyl-phenylether	270	U	
118-74-1	Hexachlorobenzene	270	U	
1912-24-9	Atrazine	270	U	
87-86-5	Pentachlorophenol	530	~~U~~	UJ
85-01-8	Phenanthrene	170	J	
120-12-7	Anthracene	40	J	
86-74-8	Carbazole	14	J	
84-74-2	Di-n-butylphthalate	25	J	
206-44-0	Fluoranthene	260	J	
129-00-0	Pyrene	330		
85-68-7	Butylbenzylphthalate	270 ~~35~~	J ~~B~~	U
91-94-1	3,3'-Dichlorobenzidine	270	U	
56-55-3	Benzo(a)anthracene	140	J	
218-01-9	Chrysene	180	J	
117-81-7	Bis(2-ethylhexyl)phthalate	270 ~~180~~	J ~~B~~	U
117-84-0	Di-n-octylphthalate	270	U	
205-99-2	Benzo(b)fluoranthene	120	J	
207-08-9	Benzo(k)fluoranthene	97	J	
50-32-8	Benzo(a)pyrene	98	J	
193-39-5	Indeno(1,2,3-cd)pyrene	76	~~J~~	J
53-70-3	Dibenzo(a,h)anthracene	38	~~J~~	↓
191-24-2	Benzo(g,h,i)perylene	94	~~J~~	
58-90-2	2,3,4,6-Tetrachlorophenol	270	U	

[1] Cannot be separated from Diphenylamine

NW 8/16/13

1D - FORM I SV-1

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-50-096

12

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17024

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17024-12

Sample wt/vol: 30.9 (g/mL) g Lab File ID: PJXXE14.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 40 Decanted: (Y/N) Date Received: 06/15/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/21/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/27/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
100-52-7	Benzaldehyde	38	J
108-95-2	Phenol	280	U
111-44-4	Bis(2-chloroethyl)ether	280	U
95-57-8	2-Chlorophenol	280	U
95-48-7	2-Methylphenol	280	U
108-60-1	2,2'-Oxybis(1-chloropropane)	280	U
98-86-2	Acetophenone	35	J
106-44-5	4-Methylphenol	16	J
621-64-7	N-Nitroso-di-n-propylamine	280	U
67-72-1	Hexachloroethane	280	U
98-95-3	Nitrobenzene	280	U
78-59-1	Isophorone	280	U
88-75-5	2-Nitrophenol	280	U
105-67-9	2,4-Dimethylphenol	280	U
111-91-1	Bis(2-chloroethoxy)methane	280	U
120-83-2	2,4-Dichlorophenol	280	U
91-20-3	Naphthalene	36	J
106-47-8	4-Chloroaniline	280	U
87-68-3	Hexachlorobutadiene	280	U
105-60-2	Caprolactam	280	U
59-50-7	4-Chloro-3-methylphenol	280	U
91-57-6	2-Methylnaphthalene	280	U
77-47-4	Hexachlorocyclopentadiene	280	~~U~~ UJ
88-06-2	2,4,6-Trichlorophenol	280	U
95-95-4	2,4,5-Trichlorophenol	280	U
92-52-4	1,1'-Biphenyl	280	U
91-58-7	2-Chloronaphthalene	280	U
88-74-4	2-Nitroaniline	540	U
131-11-3	Dimethylphthalate	280	U
606-20-2	2,6-Dinitrotoluene	280	U
208-96-8	Acenaphthylene	13	J
99-09-2	3-Nitroaniline	540	U
83-32-9	Acenaphthene	32	J

NW 8/16/13

1E - FORM I SV-2
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-50-096

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678 12

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17024

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17024-12

Sample wt/vol: 30.9 (g/mL) g Lab File ID: PJXXE14.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 40 Decanted: (Y/N) Date Received: 06/15/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/21/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/27/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
51-28-5	2,4-Dinitrophenol	540	U	
100-02-7	4-Nitrophenol	540	U	
132-64-9	Dibenzofuran	18	J	
121-14-2	2,4-Dinitrotoluene	280	U	
84-66-2	Diethylphthalate	280	U	
86-73-7	Fluorene	40	J	
7005-72-3	4-Chlorophenyl-phenylether	280	U	
100-01-6	4-Nitroaniline	540	U	
534-52-1	4,6-Dinitro-2-methylphenol	540	U	
86-30-6	N-Nitrosodiphenylamin [1]	280	U	
95-94-3	1,2,4,5-Tetrachlorobenzene	280	U	
101-55-3	4-Bromophenyl-phenylether	280	U	
118-74-1	Hexachlorobenzene	280	U	
1912-24-9	Atrazine	280	U	
87-86-5	Pentachlorophenol	540	~~U~~	UJ
85-01-8	Phenanthrene	190	J	
120-12-7	Anthracene	40	J	
86-74-8	Carbazole	12	J	
84-74-2	Di-n-butylphthalate	25	J	
206-44-0	Fluoranthene	300		J
129-00-0	Pyrene	360		J
85-68-7	Butylbenzylphthalate	280 ~~57~~	~~J B~~	U
91-94-1	3,3'-Dichlorobenzidine	280	U	
56-55-3	Benzo(a)anthracene	160	~~J~~	J
218-01-9	Chrysene	230	~~J~~	J
117-81-7	Bis(2-ethylhexyl)phthalate	530	~~B~~	
117-84-0	Di-n-octylphthalate	280	U	
205-99-2	Benzo(b)fluoranthene	150	J	
207-08-9	Benzo(k)fluoranthene	140	J	
50-32-8	Benzo(a)pyrene	140	~~J~~	
193-39-5	Indeno(1,2,3-cd)pyrene	100	~~J~~	J
53-70-3	Dibenzo(a,h)anthracene	32	~~J~~	↓
191-24-2	Benzo(g,h,i)perylene	100	~~J~~	↓
58-90-2	2,3,4,6-Tetrachlorophenol	280	U	

[1] Cannot be separated from Diphenylamine

MW 8/16/13

EPA SAMPLE NO.
LMR13-49-012

13

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17024

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17024-13

Sample wt/vol: 30.0 (g/mL) g Lab File ID: PJXXE15.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 47 Decanted: (Y/N) Date Received: 06/15/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/21/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/27/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
100-52-7	Benzaldehyde	53	J
108-95-2	Phenol	320	U
111-44-4	Bis(2-chloroethyl)ether	320	U
95-57-8	2-Chlorophenol	320	U
95-48-7	2-Methylphenol	320	U
108-60-1	2,2'-Oxybis(1-chloropropane)	320	U
98-86-2	Acetophenone	320	U
106-44-5	4-Methylphenol	320	U
621-64-7	N-Nitroso-di-n-propylamine	320	U
67-72-1	Hexachloroethane	320	U
98-95-3	Nitrobenzene	320	U
78-59-1	Isophorone	320	U
88-75-5	2-Nitrophenol	320	U
105-67-9	2,4-Dimethylphenol	320	U
111-91-1	Bis(2-chloroethoxy)methane	320	U
120-83-2	2,4-Dichlorophenol	320	U
91-20-3	Naphthalene	7.8	J
106-47-8	4-Chloroaniline	320	U
87-68-3	Hexachlorobutadiene	320	U
105-60-2	Caprolactam	320	U
59-50-7	4-Chloro-3-methylphenol	320	U
91-57-6	2-Methylnaphthalene	320	U
77-47-4	Hexachlorocyclopentadiene	320	~~U~~ UJ
88-06-2	2,4,6-Trichlorophenol	320	U
95-95-4	2,4,5-Trichlorophenol	320	U
92-52-4	1,1'-Biphenyl	320	U
91-58-7	2-Chloronaphthalene	320	U
88-74-4	2-Nitroaniline	620	U
131-11-3	Dimethylphthalate	320	U
606-20-2	2,6-Dinitrotoluene	320	U
208-96-8	Acenaphthylene	320	U
99-09-2	3-Nitroaniline	620	U
83-32-9	Acenaphthene	17	J

NW 8/16/13

EPA SAMPLE NO.
LMR13-49-012

13

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17024

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17024-13

Sample wt/vol: 30.0 (g/mL) g Lab File ID: PJXXE15.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 47 Decanted: (Y/N) Date Received: 06/15/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/21/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/27/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
51-28-5	2,4-Dinitrophenol	620	U	
100-02-7	4-Nitrophenol	620	U	
132-64-9	Dibenzofuran	320	U	
121-14-2	2,4-Dinitrotoluene	320	U	
84-66-2	Diethylphthalate	320	U	
86-73-7	Fluorene	30	J	
7005-72-3	4-Chlorophenyl-phenylether	320	U	
100-01-6	4-Nitroaniline	620	U	
534-52-1	4,6-Dinitro-2-methylphenol	620	U	
86-30-6	N-Nitrosodiphenylamin [1]	320	U	
95-94-3	1,2,4,5-Tetrachlorobenzene	320	U	
101-55-3	4-Bromophenyl-phenylether	320	U	
118-74-1	Hexachlorobenzene	320	U	
1912-24-9	Atrazine	320	U	
87-86-5	Pentachlorophenol	620	~~U~~	UJ
85-01-8	Phenanthrene	170	J	
120-12-7	Anthracene	45	J	
86-74-8	Carbazole	17	J	
84-74-2	Di-n-butylphthalate	28	J	
206-44-0	Fluoranthene	390		
129-00-0	Pyrene	400		
85-68-7	Butylbenzylphthalate	320 ~~55~~	~~J B~~	U
91-94-1	3,3'-Dichlorobenzidine	320	U	
56-55-3	Benzo(a)anthracene	160	J	
218-01-9	Chrysene	220	J	
117-81-7	Bis(2-ethylhexyl)phthalate	320 ~~180~~	~~J B~~	U
117-84-0	Di-n-octylphthalate	17	J	
205-99-2	Benzo(b)fluoranthene	220	J	
207-08-9	Benzo(k)fluoranthene	130	J	
50-32-8	Benzo(a)pyrene	150	J	
193-39-5	Indeno(1,2,3-cd)pyrene	110	~~J~~	J
53-70-3	Dibenzo(a,h)anthracene	37	~~J~~	↓
191-24-2	Benzo(g,h,i)perylene	150	~~J~~	
58-90-2	2,3,4,6-Tetrachlorophenol	320	U	

[1] Cannot be separated from Diphenylamine

MW 8/16/13

EPA SAMPLE NO.
LMR13-49-024

14

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17024

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17024-14

Sample wt/vol: 30.6 (g/mL) g Lab File ID: PJXXH05.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 37 Decanted: (Y/N) Date Received: 06/15/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/21/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/29/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
100-52-7	Benzaldehyde	33	J
108-95-2	Phenol	260	U
111-44-4	Bis(2-chloroethyl)ether	260	U
95-57-8	2-Chlorophenol	260	U
95-48-7	2-Methylphenol	260	U
108-60-1	2,2'-Oxybis(1-chloropropane)	260	U
98-86-2	Acetophenone	260	U
106-44-5	4-Methylphenol	260	U
621-64-7	N-Nitroso-di-n-propylamine	260	U
67-72-1	Hexachloroethane	260	U
98-95-3	Nitrobenzene	260	U
78-59-1	Isophorone	260	U
88-75-5	2-Nitrophenol	260	U
105-67-9	2,4-Dimethylphenol	260	U
111-91-1	Bis(2-chloroethoxy)methane	260	U
120-83-2	2,4-Dichlorophenol	260	U
91-20-3	Naphthalene	11	J
106-47-8	4-Chloroaniline	260	U
87-68-3	Hexachlorobutadiene	260	U
105-60-2	Caprolactam	63	J
59-50-7	4-Chloro-3-methylphenol	260	U
91-57-6	2-Methylnaphthalene	260	U
77-47-4	Hexachlorocyclopentadiene	260	~~U~~ UJ
88-06-2	2,4,6-Trichlorophenol	260	U
95-95-4	2,4,5-Trichlorophenol	260	U
92-52-4	1,1'-Biphenyl	260	U
91-58-7	2-Chloronaphthalene	260	U
88-74-4	2-Nitroaniline	510	U
131-11-3	Dimethylphthalate	260	U
606-20-2	2,6-Dinitrotoluene	260	U
208-96-8	Acenaphthylene	260	U
99-09-2	3-Nitroaniline	510	U
83-32-9	Acenaphthene	19	J

NW 8/16/13

1E - FORM I SV-2
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-49-024

14

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17024

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17024-14

Sample wt/vol: 30.6 (g/mL) g Lab File ID: PJXXH05.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 37 Decanted: (Y/N) Date Received: 06/15/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/21/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/29/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
51-28-5	2,4-Dinitrophenol	510	~~U~~	UJ
100-02-7	4-Nitrophenol	510	U	
132-64-9	Dibenzofuran	12	J	
121-14-2	2,4-Dinitrotoluene	260	U	
84-66-2	Diethylphthalate	260	U	
86-73-7	Fluorene	27	J	
7005-72-3	4-Chlorophenyl-phenylether	260	U	
100-01-6	4-Nitroaniline	510	U	
534-52-1	4,6-Dinitro-2-methylphenol	510	U	
86-30-6	N-Nitrosodiphenylamin [1]	260	U	
95-94-3	1,2,4,5-Tetrachlorobenzene	260	U	
101-55-3	4-Bromophenyl-phenylether	260	U	
118-74-1	Hexachlorobenzene	260	U	
1912-24-9	Atrazine	260	U	
87-86-5	Pentachlorophenol	510	~~U~~	UJ
85-01-8	Phenanthrene	150	J	
120-12-7	Anthracene	35	J	
86-74-8	Carbazole	12	J	
84-74-2	Di-n-butylphthalate	22	J	
206-44-0	Fluoranthene	240	J	
129-00-0	Pyrene	320		
85-68-7	Butylbenzylphthalate	260 ~~43~~	~~J B~~	U
91-94-1	3,3'-Dichlorobenzidine	260	U	
56-55-3	Benzo(a)anthracene	100	J	
218-01-9	Chrysene	150	J	
117-81-7	Bis(2-ethylhexyl)phthalate	260 ~~130~~	~~J B~~	U
117-84-0	Di-n-octylphthalate	260	U	
205-99-2	Benzo(b)fluoranthene	110	~~J~~	J
207-08-9	Benzo(k)fluoranthene	96	~~J~~	↓
50-32-8	Benzo(a)pyrene	87	~~J~~	↓
193-39-5	Indeno(1,2,3-cd)pyrene	63	~~J~~	↓
53-70-3	Dibenzo(a,h)anthracene	260	~~U~~	UJ
191-24-2	Benzo(g,h,i)perylene	75	~~J~~	J
58-90-2	2,3,4,6-Tetrachlorophenol	260	U	

[1] Cannot be separated from Diphenylamine

NW 8/16/13

1D - FORM I SV-1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-49-048

16

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17024

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17024-16

Sample wt/vol: 30.7 (g/mL) g Lab File ID: PJXXH06.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 35 Decanted: (Y/N) Date Received: 06/15/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/21/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/29/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
100-52-7	Benzaldehyde	46	J	
108-95-2	Phenol	260	U	
111-44-4	Bis(2-chloroethyl)ether	260	U	
95-57-8	2-Chlorophenol	260	U	
95-48-7	2-Methylphenol	260	U	
108-60-1	2,2'-Oxybis(1-chloropropane)	260	U	
98-86-2	Acetophenone	260	U	
106-44-5	4-Methylphenol	260	U	
621-64-7	N-Nitroso-di-n-propylamine	260	U	
67-72-1	Hexachloroethane	260	U	
98-95-3	Nitrobenzene	260	U	
78-59-1	Isophorone	260	U	
88-75-5	2-Nitrophenol	260	U	
105-67-9	2,4-Dimethylphenol	260	U	
111-91-1	Bis(2-chloroethoxy)methane	260	U	
120-83-2	2,4-Dichlorophenol	260	U	
91-20-3	Naphthalene	44	J	
106-47-8	4-Chloroaniline	260	~~U~~	R
87-68-3	Hexachlorobutadiene	260	U	
105-60-2	Caprolactam	260	U	
59-50-7	4-Chloro-3-methylphenol	260	U	
91-57-6	2-Methylnaphthalene	30	J	
77-47-4	Hexachlorocyclopentadiene	260	~~U~~	R
88-06-2	2,4,6-Trichlorophenol	260	U	
95-95-4	2,4,5-Trichlorophenol	260	U	
92-52-4	1,1'-Biphenyl	260	U	
91-58-7	2-Chloronaphthalene	260	U	
88-74-4	2-Nitroaniline	500	U	
131-11-3	Dimethylphthalate	260	U	
606-20-2	2,6-Dinitrotoluene	260	U	
208-96-8	Acenaphthylene	19	J	
99-09-2	3-Nitroaniline	500	U	
83-32-9	Acenaphthene	34	J	

NW 8/16/13

1E - FORM I SV-2
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-49-048

16

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17024

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17024-16

Sample wt/vol: 30.7 (g/mL) g Lab File ID: PJXXH06.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 35 Decanted: (Y/N) Date Received: 06/15/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/21/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/29/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
51-28-5	2,4-Dinitrophenol	500	~~U~~	UJ
100-02-7	4-Nitrophenol	500	U	
132-64-9	Dibenzofuran	26	J	
121-14-2	2,4-Dinitrotoluene	260	U	
84-66-2	Diethylphthalate	260	U	
86-73-7	Fluorene	42	J	
7005-72-3	4-Chlorophenyl-phenylether	260	U	
100-01-6	4-Nitroaniline	500	U	
534-52-1	4,6-Dinitro-2-methylphenol	500	U	
86-30-6	N-Nitrosodiphenylamin [1]	260	U	
95-94-3	1,2,4,5-Tetrachlorobenzene	260	U	
101-55-3	4-Bromophenyl-phenylether	260	U	
118-74-1	Hexachlorobenzene	260	U	
1912-24-9	Atrazine	260	U	
87-86-5	Pentachlorophenol	500	~~U~~	UJ
85-01-8	Phenanthrene	280		
120-12-7	Anthracene	56	J	
86-74-8	Carbazole	16	J	
84-74-2	Di-n-butylphthalate	24	J	
206-44-0	Fluoranthene	570		
129-00-0	Pyrene	590		
85-68-7	Butylbenzylphthalate	260 ~~39~~	~~J B~~	U
91-94-1	3,3'-Dichlorobenzidine	260	~~U~~	R
56-55-3	Benzo(a)anthracene	270		
218-01-9	Chrysene	350		
117-81-7	Bis(2-ethylhexyl)phthalate	260 ~~200~~	~~J B~~	U
117-84-0	Di-n-octylphthalate	260	U	
205-99-2	Benzo(b)fluoranthene	270		
207-08-9	Benzo(k)fluoranthene	250	J	
50-32-8	Benzo(a)pyrene	210	J	
193-39-5	Indeno(1,2,3-cd)pyrene	140	J	
53-70-3	Dibenzo(a,h)anthracene	49	J	
191-24-2	Benzo(g,h,i)perylene	170	J	
58-90-2	2,3,4,6-Tetrachlorophenol	260	U	

[1] Cannot be separated from Diphenylamine

NW 8/16/13

1D - FORM I SV-1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-49-072

17

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17024

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17024-17

Sample wt/vol: 30.2 (g/mL) g Lab File ID: PJXXH07.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 32 Decanted: (Y/N) Date Received: 06/15/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/21/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/29/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
100-52-7	Benzaldehyde	48	J
108-95-2	Phenol	250	U
111-44-4	Bis(2-chloroethyl)ether	250	U
95-57-8	2-Chlorophenol	250	U
95-48-7	2-Methylphenol	250	U
108-60-1	2,2'-Oxybis(1-chloropropane)	250	U
98-86-2	Acetophenone	250	U
106-44-5	4-Methylphenol	250	U
621-64-7	N-Nitroso-di-n-propylamine	250	U
67-72-1	Hexachloroethane	250	U
98-95-3	Nitrobenzene	250	U
78-59-1	Isophorone	250	U
88-75-5	2-Nitrophenol	250	U
105-67-9	2,4-Dimethylphenol	250	U
111-91-1	Bis(2-chloroethoxy)methane	250	U
120-83-2	2,4-Dichlorophenol	250	U
91-20-3	Naphthalene	6.8	J
106-47-8	4-Chloroaniline	250	U
87-68-3	Hexachlorobutadiene	250	U
105-60-2	Caprolactam	250	U
59-50-7	4-Chloro-3-methylphenol	250	U
91-57-6	2-Methylnaphthalene	250	U
77-47-4	Hexachlorocyclopentadiene	250	~~U~~ UJ
88-06-2	2,4,6-Trichlorophenol	250	U
95-95-4	2,4,5-Trichlorophenol	250	U
92-52-4	1,1'-Biphenyl	250	U
91-58-7	2-Chloronaphthalene	250	U
88-74-4	2-Nitroaniline	480	U
131-11-3	Dimethylphthalate	250	U
606-20-2	2,6-Dinitrotoluene	250	U
208-96-8	Acenaphthylene	10	J
99-09-2	3-Nitroaniline	480	U
83-32-9	Acenaphthene	24	J

MW 8/16/13

EPA SAMPLE NO.
LMR13-49-072

17

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17024

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17024-17

Sample wt/vol: 30.2 (g/mL) g Lab File ID: PJXXH07.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 32 Decanted: (Y/N) Date Received: 06/15/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/21/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/29/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
51-28-5	2,4-Dinitrophenol	480	~~U~~	UJ
100-02-7	4-Nitrophenol	480	U	
132-64-9	Dibenzofuran	20	J	
121-14-2	2,4-Dinitrotoluene	250	U	
84-66-2	Diethylphthalate	250	U	
86-73-7	Fluorene	25	J	
7005-72-3	4-Chlorophenyl-phenylether	250	U	
100-01-6	4-Nitroaniline	480	U	
534-52-1	4,6-Dinitro-2-methylphenol	480	U	
86-30-6	N-Nitrosodiphenylamin [1]	250	U	
95-94-3	1,2,4,5-Tetrachlorobenzene	250	U	
101-55-3	4-Bromophenyl-phenylether	250	U	
118-74-1	Hexachlorobenzene	250	U	
1912-24-9	Atrazine	250	U	
87-86-5	Pentachlorophenol	480	~~U~~	UJ
85-01-8	Phenanthrene	170	J	
120-12-7	Anthracene	62	J	
86-74-8	Carbazole	250	U	
84-74-2	Di-n-butylphthalate	18	J	
206-44-0	Fluoranthene	340		
129-00-0	Pyrene	520		
85-68-7	Butylbenzylphthalate	250 ~~36~~ ~~J B~~		U
91-94-1	3,3'-Dichlorobenzidine	250	U	
56-55-3	Benzo(a)anthracene	180	J	
218-01-9	Chrysene	220	J	
117-81-7	Bis(2-ethylhexyl)phthalate	250 ~~74~~ ~~J B~~		U
117-84-0	Di-n-octylphthalate	250	U	
205-99-2	Benzo(b)fluoranthene	160	J	
207-08-9	Benzo(k)fluoranthene	160	J	
50-32-8	Benzo(a)pyrene	170	J	
193-39-5	Indeno(1,2,3-cd)pyrene	110	J	
53-70-3	Dibenzo(a,h)anthracene	33	J	
191-24-2	Benzo(g,h,i)perylene	130	J	
58-90-2	2,3,4,6-Tetrachlorophenol	250	U	

[1] Cannot be separated from Diphenylamine

NW 8/16/13

EPA SAMPLE NO.
LMR13-50-120

18

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17024

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17024-18

Sample wt/vol: 30.9 (g/mL) g Lab File ID: PJXXH08.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 40 Decanted: (Y/N) Date Received: 06/15/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/21/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/29/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
100-52-7	Benzaldehyde	43	J
108-95-2	Phenol	270	U
111-44-4	Bis(2-chloroethyl)ether	270	U
95-57-8	2-Chlorophenol	270	U
95-48-7	2-Methylphenol	270	U
108-60-1	2,2'-Oxybis(1-chloropropane)	270	U
98-86-2	Acetophenone	270	U
106-44-5	4-Methylphenol	21	J
621-64-7	N-Nitroso-di-n-propylamine	270	U
67-72-1	Hexachloroethane	270	U
98-95-3	Nitrobenzene	270	U
78-59-1	Isophorone	270	U
88-75-5	2-Nitrophenol	270	U
105-67-9	2,4-Dimethylphenol	270	U
111-91-1	Bis(2-chloroethoxy)methane	270	U
120-83-2	2,4-Dichlorophenol	270	U
91-20-3	Naphthalene	44	J
106-47-8	4-Chloroaniline	270	U
87-68-3	Hexachlorobutadiene	270	U
105-60-2	Caprolactam	270	U
59-50-7	4-Chloro-3-methylphenol	270	U
91-57-6	2-Methylnaphthalene	31	J
77-47-4	Hexachlorocyclopentadiene	270	~~U~~ UJ
88-06-2	2,4,6-Trichlorophenol	270	U
95-95-4	2,4,5-Trichlorophenol	270	U
92-52-4	1,1'-Biphenyl	270	U
91-58-7	2-Chloronaphthalene	270	U
88-74-4	2-Nitroaniline	530	U
131-11-3	Dimethylphthalate	270	U
606-20-2	2,6-Dinitrotoluene	270	U
208-96-8	Acenaphthylene	14	J
99-09-2	3-Nitroaniline	530	U
83-32-9	Acenaphthene	33	J

NW 8/16/13

1E - FORM I SV-2
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-50-120

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678 18

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17024

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17024-18

Sample wt/vol: 30.9 (g/mL) g Lab File ID: PJXXH08.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 40 Decanted: (Y/N) Date Received: 06/15/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/21/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/29/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
51-28-5	2,4-Dinitrophenol	530	~~U~~ UJ
100-02-7	4-Nitrophenol	530	U
132-64-9	Dibenzofuran	34	J
121-14-2	2,4-Dinitrotoluene	270	U
84-66-2	Diethylphthalate	270	U
86-73-7	Fluorene	47	J
7005-72-3	4-Chlorophenyl-phenylether	270	U
100-01-6	4-Nitroaniline	530	U
534-52-1	4,6-Dinitro-2-methylphenol	530	U
86-30-6	N-Nitrosodiphenylamin [1]	270	U
95-94-3	1,2,4,5-Tetrachlorobenzene	270	U
101-55-3	4-Bromophenyl-phenylether	270	U
118-74-1	Hexachlorobenzene	270	U
1912-24-9	Atrazine	270	U
87-86-5	Pentachlorophenol	530	~~U~~ UJ
85-01-8	Phenanthrene	270	J
120-12-7	Anthracene	59	J
86-74-8	Carbazole	15	J
84-74-2	Di-n-butylphthalate	32	J
206-44-0	Fluoranthene	450	
129-00-0	Pyrene	580	
85-68-7	Butylbenzylphthalate	270 ~~60~~ ~~J B~~	U
91-94-1	3,3'-Dichlorobenzidine	270	U
56-55-3	Benzo(a)anthracene	230	J
218-01-9	Chrysene	340	
117-81-7	Bis(2-ethylhexyl)phthalate	940	~~B~~
117-84-0	Di-n-octylphthalate	270	U
205-99-2	Benzo(b)fluoranthene	290	
207-08-9	Benzo(k)fluoranthene	230	J
50-32-8	Benzo(a)pyrene	200	J
193-39-5	Indeno(1,2,3-cd)pyrene	130	J
53-70-3	Dibenzo(a,h)anthracene	54	J
191-24-2	Benzo(g,h,i)perylene	150	J
58-90-2	2,3,4,6-Tetrachlorophenol	270	U

[1] Cannot be separated from Diphenylamine

JW 8/16/13

EPA SAMPLE NO.
LMR13-49-096

19

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17024

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17024-19

Sample wt/vol: 30.7 (g/mL) g Lab File ID: PJXXH09.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 24 Decanted: (Y/N) Date Received: 06/15/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/21/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/29/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
100-52-7	Benzaldehyde	26	J
108-95-2	Phenol	220	U
111-44-4	Bis(2-chloroethyl)ether	220	U
95-57-8	2-Chlorophenol	220	U
95-48-7	2-Methylphenol	220	U
108-60-1	2,2'-Oxybis(1-chloropropane)	220	U
98-86-2	Acetophenone	220	U
106-44-5	4-Methylphenol	220	U
621-64-7	N-Nitroso-di-n-propylamine	220	U
67-72-1	Hexachloroethane	220	U
98-95-3	Nitrobenzene	220	U
78-59-1	Isophorone	220	U
88-75-5	2-Nitrophenol	220	U
105-67-9	2,4-Dimethylphenol	220	U
111-91-1	Bis(2-chloroethoxy)methane	220	U
120-83-2	2,4-Dichlorophenol	220	U
91-20-3	Naphthalene	220	U
106-47-8	4-Chloroaniline	220	U
87-68-3	Hexachlorobutadiene	220	U
105-60-2	Caprolactam	220	U
59-50-7	4-Chloro-3-methylphenol	220	U
91-57-6	2-Methylnaphthalene	220	U
77-47-4	Hexachlorocyclopentadiene	220	U UJ
88-06-2	2,4,6-Trichlorophenol	220	U
95-95-4	2,4,5-Trichlorophenol	220	U
92-52-4	1,1'-Biphenyl	220	U
91-58-7	2-Chloronaphthalene	220	U
88-74-4	2-Nitroaniline	420	U
131-11-3	Dimethylphthalate	220	U
606-20-2	2,6-Dinitrotoluene	220	U
208-96-8	Acenaphthylene	220	U
99-09-2	3-Nitroaniline	420	U
83-32-9	Acenaphthene	220	U

MW 8/16/13

EPA SAMPLE NO.
LMR13-49-096

19

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17024

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17024-19

Sample wt/vol: 30.7 (g/mL) g Lab File ID: PJXXH09.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 24 Decanted: (Y/N) Date Received: 06/15/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/21/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/29/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
51-28-5	2,4-Dinitrophenol	420	~~U~~	UJ
100-02-7	4-Nitrophenol	420	U	
132-64-9	Dibenzofuran	220	U	
121-14-2	2,4-Dinitrotoluene	220	U	
84-66-2	Diethylphthalate	220	U	
86-73-7	Fluorene	9.6	J	
7005-72-3	4-Chlorophenyl-phenylether	220	U	
100-01-6	4-Nitroaniline	420	U	
534-52-1	4,6-Dinitro-2-methylphenol	420	U	
86-30-6	N-Nitrosodiphenylamin [1]	220	U	
95-94-3	1,2,4,5-Tetrachlorobenzene	220	U	
101-55-3	4-Bromophenyl-phenylether	220	U	
118-74-1	Hexachlorobenzene	220	U	
1912-24-9	Atrazine	220	U	
87-86-5	Pentachlorophenol	420	~~U~~	UJ
85-01-8	Phenanthrene	36	J	
120-12-7	Anthracene	17	J	
86-74-8	Carbazole	220	U	
84-74-2	Di-n-butylphthalate	23	J	
206-44-0	Fluoranthene	76	J	
129-00-0	Pyrene	95	J	
85-68-7	Butylbenzylphthalate	220 ~~32~~	~~J B~~	U
91-94-1	3,3'-Dichlorobenzidine	220	U	
56-55-3	Benzo(a)anthracene	52	J	
218-01-9	Chrysene	56	J	
117-81-7	Bis(2-ethylhexyl)phthalate	220 ~~78~~	~~J B~~	U
117-84-0	Di-n-octylphthalate	220	U	
205-99-2	Benzo(b)fluoranthene	31	J	
207-08-9	Benzo(k)fluoranthene	39	J	
50-32-8	Benzo(a)pyrene	35	J	
193-39-5	Indeno(1,2,3-cd)pyrene	220	U	
53-70-3	Dibenzo(a,h)anthracene	220	U	
191-24-2	Benzo(g,h,i)perylene	220	U	
58-90-2	2,3,4,6-Tetrachlorophenol	220	U	

[1] Cannot be separated from Diphenylamine

NW 8/16/13

1D - FORM I SV-1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-49-120

20

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17024

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17024-20

Sample wt/vol: 30.8 (g/mL) g Lab File ID: PJXXH10.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 24 Decanted: (Y/N) Date Received: 06/15/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/21/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/29/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
100-52-7	Benzaldehyde	23	J
108-95-2	Phenol	220	U
111-44-4	Bis(2-chloroethyl)ether	220	U
95-57-8	2-Chlorophenol	220	U
95-48-7	2-Methylphenol	220	U
108-60-1	2,2'-Oxybis(1-chloropropane)	220	U
98-86-2	Acetophenone	220	U
106-44-5	4-Methylphenol	220	U
621-64-7	N-Nitroso-di-n-propylamine	220	U
67-72-1	Hexachloroethane	220	U
98-95-3	Nitrobenzene	220	U
78-59-1	Isophorone	220	U
88-75-5	2-Nitrophenol	220	U
105-67-9	2,4-Dimethylphenol	220	U
111-91-1	Bis(2-chloroethoxy)methane	220	U
120-83-2	2,4-Dichlorophenol	220	U
91-20-3	Naphthalene	220	U
106-47-8	4-Chloroaniline	220	U
87-68-3	Hexachlorobutadiene	220	U
105-60-2	Caprolactam	220	U
59-50-7	4-Chloro-3-methylphenol	220	U
91-57-6	2-Methylnaphthalene	220	U
77-47-4	Hexachlorocyclopentadiene	220	U UJ
88-06-2	2,4,6-Trichlorophenol	220	U
95-95-4	2,4,5-Trichlorophenol	220	U
92-52-4	1,1'-Biphenyl	220	U
91-58-7	2-Chloronaphthalene	220	U
88-74-4	2-Nitroaniline	420	U
131-11-3	Dimethylphthalate	220	U
606-20-2	2,6-Dinitrotoluene	220	U
208-96-8	Acenaphthylene	220	U
99-09-2	3-Nitroaniline	420	U
83-32-9	Acenaphthene	220	U

MW 8/16/13

1E - FORM I SV-2
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-49-120

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678 20

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17024

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17024-20

Sample wt/vol: 30.8 (g/mL) g Lab File ID: PJXXH10.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 24 Decanted: (Y/N) Date Received: 06/15/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/21/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/29/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
51-28-5	2,4-Dinitrophenol	420	~~U~~	UJ
100-02-7	4-Nitrophenol	420	U	
132-64-9	Dibenzofuran	220	U	
121-14-2	2,4-Dinitrotoluene	220	U	
84-66-2	Diethylphthalate	220	U	
86-73-7	Fluorene	220	U	
7005-72-3	4-Chlorophenyl-phenylether	220	U	
100-01-6	4-Nitroaniline	420	U	
534-52-1	4,6-Dinitro-2-methylphenol	420	U	
86-30-6	N-Nitrosodiphenylamin [1]	220	U	
95-94-3	1,2,4,5-Tetrachlorobenzene	220	U	
101-55-3	4-Bromophenyl-phenylether	220	U	
118-74-1	Hexachlorobenzene	220	U	
1912-24-9	Atrazine	220	U	
87-86-5	Pentachlorophenol	420	~~U~~	UJ
85-01-8	Phenanthrene	220	U	
120-12-7	Anthracene	220	U	
86-74-8	Carbazole	220	U	
84-74-2	Di-n-butylphthalate	25	J	
206-44-0	Fluoranthene	220	U	
129-00-0	Pyrene	220	U	
85-68-7	Butylbenzylphthalate	220 ~~33~~	~~J B~~	U
91-94-1	3,3'-Dichlorobenzidine	220	U	
56-55-3	Benzo(a)anthracene	220	U	
218-01-9	Chrysene	17	J	
117-81-7	Bis(2-ethylhexyl)phthalate	220 ~~60~~	~~J B~~	U
117-84-0	Di-n-octylphthalate	220	U	
205-99-2	Benzo(b)fluoranthene	220	U	
207-08-9	Benzo(k)fluoranthene	220	U	
50-32-8	Benzo(a)pyrene	220	U	
193-39-5	Indeno(1,2,3-cd)pyrene	220	U	
53-70-3	Dibenzo(a,h)anthracene	220	U	
191-24-2	Benzo(g,h,i)perylene	220	U	
58-90-2	2,3,4,6-Tetrachlorophenol	220	U	

[1] Cannot be separated from Diphenylamine

MW 8/16/13

1D - FORM I SV-1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-83-012

21

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17024

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17024-21

Sample wt/vol: 30.7 (g/mL) g Lab File ID: PJXXH11.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 29 Decanted: (Y/N) Date Received: 06/15/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/21/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/29/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
100-52-7	Benzaldehyde	28	J
108-95-2	Phenol	230	U
111-44-4	Bis(2-chloroethyl)ether	230	U
95-57-8	2-Chlorophenol	230	U
95-48-7	2-Methylphenol	230	U
108-60-1	2,2'-Oxybis(1-chloropropane)	230	U
98-86-2	Acetophenone	19	J
106-44-5	4-Methylphenol	230	U
621-64-7	N-Nitroso-di-n-propylamine	230	U
67-72-1	Hexachloroethane	230	U
98-95-3	Nitrobenzene	230	U
78-59-1	Isophorone	230	U
88-75-5	2-Nitrophenol	230	U
105-67-9	2,4-Dimethylphenol	230	U
111-91-1	Bis(2-chloroethoxy)methane	230	U
120-83-2	2,4-Dichlorophenol	230	U
91-20-3	Naphthalene	8.9	J
106-47-8	4-Chloroaniline	230	U
87-68-3	Hexachlorobutadiene	230	U
105-60-2	Caprolactam	230	U
59-50-7	4-Chloro-3-methylphenol	230	U
91-57-6	2-Methylnaphthalene	230	U
77-47-4	Hexachlorocyclopentadiene	230	~~U~~ UJ
88-06-2	2,4,6-Trichlorophenol	230	U
95-95-4	2,4,5-Trichlorophenol	230	U
92-52-4	1,1'-Biphenyl	230	U
91-58-7	2-Chloronaphthalene	230	U
88-74-4	2-Nitroaniline	460	U
131-11-3	Dimethylphthalate	230	U
606-20-2	2,6-Dinitrotoluene	230	U
208-96-8	Acenaphthylene	230	U
99-09-2	3-Nitroaniline	460	U
83-32-9	Acenaphthene	18	J

NW 8/16/13

1E - FORM I SV-2
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-83-012

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678 21

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17024

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17024-21

Sample wt/vol: 30.7 (g/mL) g Lab File ID: PJXXH11.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 29 Decanted: (Y/N) Date Received: 06/15/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/21/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/29/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
51-28-5	2,4-Dinitrophenol	460	~~U~~	UJ
100-02-7	4-Nitrophenol	460	U	
132-64-9	Dibenzofuran	230	U	
121-14-2	2,4-Dinitrotoluene	230	U	
84-66-2	Diethylphthalate	230	U	
86-73-7	Fluorene	17	J	
7005-72-3	4-Chlorophenyl-phenylether	230	U	
100-01-6	4-Nitroaniline	460	U	
534-52-1	4,6-Dinitro-2-methylphenol	460	U	
86-30-6	N-Nitrosodiphenylamin [1]	230	U	
95-94-3	1,2,4,5-Tetrachlorobenzene	230	U	
101-55-3	4-Bromophenyl-phenylether	230	U	
118-74-1	Hexachlorobenzene	230	U	
1912-24-9	Atrazine	230	U	
87-86-5	Pentachlorophenol	460	~~U~~	UJ
85-01-8	Phenanthrene	140	J	
120-12-7	Anthracene	37	J	
86-74-8	Carbazole	11	J	
84-74-2	Di-n-butylphthalate	22	J	
206-44-0	Fluoranthene	280		
129-00-0	Pyrene	340		
85-68-7	Butylbenzylphthalate	230 ~~67~~	~~J B~~	U
91-94-1	3,3'-Dichlorobenzidine	230	U	
56-55-3	Benzo(a)anthracene	110	J	
218-01-9	Chrysene	150	J	
117-81-7	Bis(2-ethylhexyl)phthalate	270	~~B~~	U
117-84-0	Di-n-octylphthalate	230	U	
205-99-2	Benzo(b)fluoranthene	140	J	
207-08-9	Benzo(k)fluoranthene	73	J	
50-32-8	Benzo(a)pyrene	92	J	
193-39-5	Indeno(1,2,3-cd)pyrene	67	J	
53-70-3	Dibenzo(a,h)anthracene	17	J	
191-24-2	Benzo(g,h,i)perylene	66	J	
58-90-2	2,3,4,6-Tetrachlorophenol	230	U	

[1] Cannot be separated from Diphenylamine

NW 8/16/13

1D - FORM I SV-1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-83-024

22

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17024

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17024-22

Sample wt/vol: 30.1 (g/mL) g Lab File ID: PJXXH12.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 29 Decanted: (Y/N) Date Received: 06/15/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/21/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/29/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
100-52-7	Benzaldehyde	43	J	
108-95-2	Phenol	240	U	
111-44-4	Bis(2-chloroethyl)ether	240	U	
95-57-8	2-Chlorophenol	240	U	
95-48-7	2-Methylphenol	240	U	
108-60-1	2,2'-Oxybis(1-chloropropane)	240	U	
98-86-2	Acetophenone	240	U	
106-44-5	4-Methylphenol	240	U	
621-64-7	N-Nitroso-di-n-propylamine	240	U	
67-72-1	Hexachloroethane	240	U	
98-95-3	Nitrobenzene	240	U	
78-59-1	Isophorone	240	U	
88-75-5	2-Nitrophenol	240	U	
105-67-9	2,4-Dimethylphenol	240	U	
111-91-1	Bis(2-chloroethoxy)methane	240	U	
120-83-2	2,4-Dichlorophenol	240	U	
91-20-3	Naphthalene	14	J	
106-47-8	4-Chloroaniline	240	~~U~~	R
87-68-3	Hexachlorobutadiene	240	U	
105-60-2	Caprolactam	240	U	
59-50-7	4-Chloro-3-methylphenol	240	U	
91-57-6	2-Methylnaphthalene	11	J	
77-47-4	Hexachlorocyclopentadiene	240	~~U~~	R
88-06-2	2,4,6-Trichlorophenol	240	U	
95-95-4	2,4,5-Trichlorophenol	240	U	
92-52-4	1,1'-Biphenyl	240	U	
91-58-7	2-Chloronaphthalene	240	U	
88-74-4	2-Nitroaniline	470	U	
131-11-3	Dimethylphthalate	240	U	
606-20-2	2,6-Dinitrotoluene	240	U	
208-96-8	Acenaphthylene	21	J	
99-09-2	3-Nitroaniline	470	U	
83-32-9	Acenaphthene	39	J	

NW 8/16/13

1E - FORM I SV-2
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-83-024

22

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17024

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17024-22

Sample wt/vol: 30.1 (g/mL) g Lab File ID: PJXXH12.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 29 Decanted: (Y/N) Date Received: 06/15/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/21/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/29/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
51-28-5	2,4-Dinitrophenol	470	~~U~~	UJ
100-02-7	4-Nitrophenol	470	U	
132-64-9	Dibenzofuran	17	J	
121-14-2	2,4-Dinitrotoluene	240	U	
84-66-2	Diethylphthalate	240	U	
86-73-7	Fluorene	23	J	
7005-72-3	4-Chlorophenyl-phenylether	240	U	
100-01-6	4-Nitroaniline	470	U	
534-52-1	4,6-Dinitro-2-methylphenol	470	U	
86-30-6	N-Nitrosodiphenylamin [1]	240	U	
95-94-3	1,2,4,5-Tetrachlorobenzene	240	U	
101-55-3	4-Bromophenyl-phenylether	240	U	
118-74-1	Hexachlorobenzene	240	U	
1912-24-9	Atrazine	240	U	
87-86-5	Pentachlorophenol	470	~~U~~	UJ
85-01-8	Phenanthrene	200	J	
120-12-7	Anthracene	76	J	
86-74-8	Carbazole	240	U	
84-74-2	Di-n-butylphthalate	20	J	
206-44-0	Fluoranthene	650		
129-00-0	Pyrene	790		
85-68-7	Butylbenzylphthalate	240 ~~32~~	~~J B~~	U
91-94-1	3,3'-Dichlorobenzidine	240	~~U~~	R
56-55-3	Benzo(a)anthracene	320		
218-01-9	Chrysene	390		
117-81-7	Bis(2-ethylhexyl)phthalate	240 ~~130~~	~~J B~~	U
117-84-0	Di-n-octylphthalate	240	U	
205-99-2	Benzo(b)fluoranthene	330		
207-08-9	Benzo(k)fluoranthene	220	J	
50-32-8	Benzo(a)pyrene	230	J	
193-39-5	Indeno(1,2,3-cd)pyrene	150	J	
53-70-3	Dibenzo(a,h)anthracene	50	J	
191-24-2	Benzo(g,h,i)perylene	190	J	
58-90-2	2,3,4,6-Tetrachlorophenol	240	U	

[1] Cannot be separated from Diphenylamine

MW 8/16/13

1D - FORM I SV-1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-50-024FD

23

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678
Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17024
Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17024-23
Sample wt/vol: 30.3 (g/mL) g Lab File ID: PJUWQ11.D
Level: (LOW/MED) LOW Extraction: (Type) SONC
% Moisture: 52 Decanted: (Y/N) Date Received: 06/15/2013
Concentrated Extract Volume: 500 (uL) Date Extracted: 06/21/2013
Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/21/2013
GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
100-52-7	Benzaldehyde	70	J	
108-95-2	Phenol	350	U	
111-44-4	Bis(2-chloroethyl)ether	350	U	
95-57-8	2-Chlorophenol	350	U	
95-48-7	2-Methylphenol	350	U	
108-60-1	2,2'-Oxybis(1-chloropropane)	350	U	
98-86-2	Acetophenone	350	U	
106-44-5	4-Methylphenol	350	~~U~~	UJ
621-64-7	N-Nitroso-di-n-propylamine	350	~~U~~	UJ
67-72-1	Hexachloroethane	350	U	
98-95-3	Nitrobenzene	350	U	
78-59-1	Isophorone	350	U	
88-75-5	2-Nitrophenol	350	U	
105-67-9	2,4-Dimethylphenol	350	U	
111-91-1	Bis(2-chloroethoxy)methane	350	U	
120-83-2	2,4-Dichlorophenol	350	U	
91-20-3	Naphthalene	350	U	
106-47-8	4-Chloroaniline	350	~~U~~	R
87-68-3	Hexachlorobutadiene	350	U	
105-60-2	Caprolactam	350	U	
59-50-7	4-Chloro-3-methylphenol	350	U	
91-57-6	2-Methylnaphthalene	350	U	
77-47-4	Hexachlorocyclopentadiene	350	~~U~~	R
88-06-2	2,4,6-Trichlorophenol	350	U	
95-95-4	2,4,5-Trichlorophenol	350	U	
92-52-4	1,1'-Biphenyl	350	U	
91-58-7	2-Chloronaphthalene	350	U	
88-74-4	2-Nitroaniline	690	U	
131-11-3	Dimethylphthalate	350	U	
606-20-2	2,6-Dinitrotoluene	350	U	
208-96-8	Acenaphthylene	350	U	
99-09-2	3-Nitroaniline	690	U	
83-32-9	Acenaphthene	16	J	

MW 8/16/13

1E - FORM I SV-2
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-50-024FD

23

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17024

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17024-23

Sample wt/vol: 30.3 (g/mL) g Lab File ID: PJUWQ11.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 52 Decanted: (Y/N) Date Received: 06/15/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/21/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/21/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
51-28-5	2,4-Dinitrophenol	690	U	
100-02-7	4-Nitrophenol	690	U	
132-64-9	Dibenzofuran	350	U	
121-14-2	2,4-Dinitrotoluene	350	U	
84-66-2	Diethylphthalate	350	U	
86-73-7	Fluorene	27	J	
7005-72-3	4-Chlorophenyl-phenylether	350	U	
100-01-6	4-Nitroaniline	690	U	
534-52-1	4,6-Dinitro-2-methylphenol	690	U	
86-30-6	N-Nitrosodiphenylamin [1]	350	U	
95-94-3	1,2,4,5-Tetrachlorobenzene	350	U	
101-55-3	4-Bromophenyl-phenylether	350	U	
118-74-1	Hexachlorobenzene	350	U	
1912-24-9	Atrazine	350	U	
87-86-5	Pentachlorophenol	690	~~U~~	UJ
85-01-8	Phenanthrene	160	J	
120-12-7	Anthracene	33	J	
86-74-8	Carbazole	350	U	
84-74-2	Di-n-butylphthalate	20	J	
206-44-0	Fluoranthene	290	J	
129-00-0	Pyrene	320	J	
85-68-7	Butylbenzylphthalate	350 ~~110~~ ~~J B~~	U	
91-94-1	3,3'-Dichlorobenzidine	350	~~U~~	R
56-55-3	Benzo(a)anthracene	110	J	
218-01-9	Chrysene	200	J	
117-81-7	Bis(2-ethylhexyl)phthalate	350 ~~310~~ ~~J B~~	U	
117-84-0	Di-n-octylphthalate	350	~~U~~	UJ
205-99-2	Benzo(b)fluoranthene	140	J	
207-08-9	Benzo(k)fluoranthene	160	J	
50-32-8	Benzo(a)pyrene	120	J	
193-39-5	Indeno(1,2,3-cd)pyrene	79	J	
53-70-3	Dibenzo(a,h)anthracene	350	U	
191-24-2	Benzo(g,h,i)perylene	97	J	
58-90-2	2,3,4,6-Tetrachlorophenol	350	U	

[1] Cannot be separated from Diphenylamine

MW 8/16/13

1D - FORM I SV-1

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-83-024FD

24

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17024

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17024-24

Sample wt/vol: 30.9 (g/mL) g Lab File ID: PJUWQ12.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 29 Decanted: (Y/N) Date Received: 06/15/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/21/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/21/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
100-52-7	Benzaldehyde	40	~~J~~	J
108-95-2	Phenol	230	U	
111-44-4	Bis(2-chloroethyl)ether	230	U	
95-57-8	2-Chlorophenol	230	U	
95-48-7	2-Methylphenol	230	U	
108-60-1	2,2'-Oxybis(1-chloropropane)	230	U	
98-86-2	Acetophenone	230	U	
106-44-5	4-Methylphenol	230	~~U~~	UJ
621-64-7	N-Nitroso-di-n-propylamine	230	~~U~~	UJ
67-72-1	Hexachloroethane	230	U	
98-95-3	Nitrobenzene	230	U	
78-59-1	Isophorone	230	U	
88-75-5	2-Nitrophenol	230	U	
105-67-9	2,4-Dimethylphenol	230	U	
111-91-1	Bis(2-chloroethoxy)methane	230	U	
120-83-2	2,4-Dichlorophenol	230	U	
91-20-3	Naphthalene	230	U	
106-47-8	4-Chloroaniline	230	~~U~~	R
87-68-3	Hexachlorobutadiene	230	U	
105-60-2	Caprolactam	230	U	
59-50-7	4-Chloro-3-methylphenol	230	U	
91-57-6	2-Methylnaphthalene	230	U	
77-47-4	Hexachlorocyclopentadiene	230	~~U~~	R
88-06-2	2,4,6-Trichlorophenol	230	U	
95-95-4	2,4,5-Trichlorophenol	230	U	
92-52-4	1,1'-Biphenyl	230	U	
91-58-7	2-Chloronaphthalene	230	U	
88-74-4	2-Nitroaniline	450	U	
131-11-3	Dimethylphthalate	230	U	
606-20-2	2,6-Dinitrotoluene	230	U	
208-96-8	Acenaphthylene	21	J	
99-09-2	3-Nitroaniline	450	U	
83-32-9	Acenaphthene	43	J	

MW 8/16/13

1E - FORM I SV-2

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-83-024FD

24

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17024

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17024-24

Sample wt/vol: 30.9 (g/mL) g Lab File ID: PJUWQ12.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 29 Decanted: (Y/N) Date Received: 06/15/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/21/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/21/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
51-28-5	2,4-Dinitrophenol	450	U	
100-02-7	4-Nitrophenol	450	U	
132-64-9	Dibenzofuran	17	J	
121-14-2	2,4-Dinitrotoluene	230	U	
84-66-2	Diethylphthalate	230	U	
86-73-7	Fluorene	39	J	
7005-72-3	4-Chlorophenyl-phenylether	230	U	
100-01-6	4-Nitroaniline	450	U	
534-52-1	4,6-Dinitro-2-methylphenol	450	U	
86-30-6	N-Nitrosodiphenylamin [1]	230	U	
95-94-3	1,2,4,5-Tetrachlorobenzene	230	U	
101-55-3	4-Bromophenyl-phenylether	230	U	
118-74-1	Hexachlorobenzene	230	U	
1912-24-9	Atrazine	230	U	
87-86-5	Pentachlorophenol	450	~~U~~	UJ
85-01-8	Phenanthrene	230	J	
120-12-7	Anthracene	100	J	
86-74-8	Carbazole	230	U	
84-74-2	Di-n-butylphthalate	31	J	
206-44-0	Fluoranthene	630		
129-00-0	Pyrene	870		
85-68-7	Butylbenzylphthalate	230 ~~79~~	~~J B~~	U
91-94-1	3,3'-Dichlorobenzidine	230	~~U~~	R
56-55-3	Benzo(a)anthracene	310		
218-01-9	Chrysene	380		
117-81-7	Bis(2-ethylhexyl)phthalate	230 ~~210~~	~~J B~~	U
117-84-0	Di-n-octylphthalate	230	~~U~~	UJ
205-99-2	Benzo(b)fluoranthene	250		
207-08-9	Benzo(k)fluoranthene	280		
50-32-8	Benzo(a)pyrene	250		
193-39-5	Indeno(1,2,3-cd)pyrene	170	J	
53-70-3	Dibenzo(a,h)anthracene	52	J	
191-24-2	Benzo(g,h,i)perylene	200	J	
58-90-2	2,3,4,6-Tetrachlorophenol	230	U	

[1] Cannot be separated from Diphenylamine

NW 8/16/13

1F - FORM I SV-SIM

SEMIVOLATILE SIM ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-45-012

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: 1734.2] SDG No.: 17024

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17024-1

Sample wt/vol: 30.3 (g/mL) g Lab File ID: HQISQ17.D

Extraction: (Type) SONC

% Moisture: 53 Decanted: (Y/N) Date Received: 06/15/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/21/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/31/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 10.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
91-20-3	Naphthalene	~~70~~ ~~45~~ ~~J~~	~~U~~
90-12-0	1-Methylnaphthalene	~~70~~ ~~15~~ ~~J~~	~~U~~
91-57-6	2-Methylnaphthalene	29	J
208-96-8	Acenaphthylene	40	J
83-32-9	Acenaphthene	57	J
86-73-7	Fluorene	60	J
85-01-8	Phenanthrene	330	
120-12-7	Anthracene	120	
206-44-0	Fluoranthene	1100	~~E~~ J
129-00-0	Pyrene	820	~~E~~ J
56-55-3	Benzo(a)anthracene	500	
218-01-9	Chrysene	640	
205-99-2	Benzo(b)fluoranthene	740	~~E~~ J
207-08-9	Benzo(k)fluoranthene	600	
192-97-2	Benzo(e)pyrene	420	
50-32-8	Benzo(a)pyrene	570	
198-55-0	Perylene	280	
193-39-5	Indeno(1,2,3-cd)pyrene	270	
53-70-3	Dibenzo(a,h)anthracene	91	
191-24-2	Benzo(g,h,i)perylene	270	
C1NAPH	C1-Naphthalenes	29	J
C2NAPH	C2-Naphthalenes	150	J
C3NAPH	C3-Naphthalenes	210	J
C4NAPH	C4-Naphthalenes	210	J
C1FLUOR	C1 Fluorenes	31	J
C2FLUOR	C2 Fluorenes	47	J
C3FLUOR	C3 Fluorenes	200	J
C1PHAN	C1-Phenanthrenes/Anthracenes	320	J
C2PHAN	C2-Phenanthrenes/Anthracenes	380	J
C3PHAN	C3-Phenanthrenes/Anthracenes	430	J
C4PHAN	C4-Phenanthrenes/Anthracenes	380	J
C1FLPY	C1-Fluoranthenes/Pyrenes	590	J
C2FLPY	C2-Fluoranthenes/Pyrenes	500	J
C3FLPY	C3-Fluoranthenes/Pyrenes	320	J
C1CHRYS	C1 Chrysenes	450	J
C2CHRYS	C2 Chrysenes	420	J
C3CHRYS	C3 Chrysenes	150	J
C4CHRYS	C4 Chrysenes	70	U

NW 8/16/13

1F - FORM I SV-SIM

SEMIVOLATILE SIM ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-45-012

1

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: 1734.2] SDG No.: 17024

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17024-1

Sample wt/vol: 30.3 (g/mL) g Lab File ID: HQISQ17.D

Extraction: (Type) SONC

% Moisture: 53 Decanted: (Y/N) Date Received: 06/15/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/21/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/31/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 10.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
TPPAH	Total 16 PPAH	6200		J
TPAH	Total PAH	12000		J

NW 8/16/13

1F - FORM I SV-SIM
SEMIVOLATILE SIM ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-50-012

8

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: 1734.2] SDG No.: 17024

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17024-8

Sample wt/vol: 30.2 (g/mL) g Lab File ID: HQISQ16.D

Extraction: (Type) SOM01.2SV_SONC

% Moisture: 54 Decanted: (Y/N) Date Received: 06/15/2013

Concentrated Extract Volume: 1000 (uL) Date Extracted: 06/21/2013

Injection Volume: 2.0 (uL) GPC Factor: 1.0 Date Analyzed: 07/31/2013

GPC Cleanup: (Y/N) N pH: Dilution Factor: 10.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
91-20-3	Naphthalene	~~16~~ 72	~~J B~~ U
91-57-6	2-Methylnaphthalene	~~15~~ 72	~~J B~~ U
208-96-8	Acenaphthylene	6.0	J
83-32-9	Acenaphthene	22	J
86-73-7	Fluorene	35	J
85-01-8	Phenanthrene	210	~~B~~
120-12-7	Anthracene	52	J
206-44-0	Fluoranthene	480	~~B~~
129-00-0	Pyrene	380	~~B~~
56-55-3	Benzo(a)anthracene	220	~~B~~
218-01-9	Chrysene	300	~~B~~
205-99-2	Benzo(b)fluoranthene	260	~~B~~
207-08-9	Benzo(k)fluoranthene	260	~~B~~
50-32-8	Benzo(a)pyrene	250	~~B~~
193-39-5	Indeno(1,2,3-cd)pyrene	150	
53-70-3	Dibenzo(a,h)anthracene	43	J
191-24-2	Benzo(g,h,i)perylene	150	
90-12-0	1-Methylnaphthalene	9.9	J
C1NAPH	C1-Naphthalenes	16	J
C2NAPH	C2-Naphthalenes	66	J
C3NAPH	C3-Naphthalenes	91	
C4NAPH	C4-Naphthalenes	91	
C1FLUOR	C1 Fluorenes	9.6	J
C2FLUOR	C2 Fluorenes	11	J
C3FLUOR	C3 Fluorenes	72	U
C1PHAN	C1-Phenanthrenes/Anthracenes	170	
C2PHAN	C2-Phenanthrenes/Anthracenes	110	
C4PHAN	C4-Phenanthrenes/Anthracenes	55	J
C1FLPY	C1-Fluoranthenes/Pyrenes	210	
C2FLPY	C2-Fluoranthenes/Pyrenes	170	
C3FLPY	C3-Fluoranthenes/Pyrenes	72	
C2CHRYS	C2 Chrysenes	110	
C1CHRYS	C1 Chrysenes	170	
C3CHRYS	C3 Chrysenes	43	J
C4CHRYS	C4 Chrysenes	16	J
192-97-2	Benzo(e)pyrene	190	~~B~~
198-55-0	Perylene	370	~~B~~
TPAH	Total PAH	4900	~~B~~ J

NW 8/16/13

1F - FORM I SV-SIM

SEMIVOLATILE SIM ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-50-012

8

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: 1734.2] SDG No.: 17024

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17024-8

Sample wt/vol: 30.2 (g/mL) g Lab File ID: HQISQ16.D

Extraction: (Type) SOM01.2SV_SONC

% Moisture: 54 Decanted: (Y/N) Date Received: 06/15/2013

Concentrated Extract Volume: 1000 (uL) Date Extracted: 06/21/2013

Injection Volume: 2.0 (uL) GPC Factor: 1.0 Date Analyzed: 07/31/2013

GPC Cleanup: (Y/N) N pH: Dilution Factor: 10.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
TPPAH	Total 16 PPAH	2800	~~B~~ J
C3PHAN	C3-Phenanthrenes/Anthracenes	110	

MW 8/16/13

1F - FORM I SV-SIM

SEMIVOLATILE SIM ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-49-012

13

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: 1734.2] SDG No.: 17024

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17024-13

Sample wt/vol: 30.0 (g/mL) g Lab File ID: HQISJ13.D

Extraction: (Type) SONC

% Moisture: 47 Decanted: (Y/N) Date Received: 06/15/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/21/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/29/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
91-20-3	Naphthalene	6.2 ~~6.2~~	~~J B~~ U
90-12-0	1-Methylnaphthalene	5.9	J
91-57-6	2-Methylnaphthalene	7.7	~~B~~
208-96-8	Acenaphthylene	3.0	J
83-32-9	Acenaphthene	12	
86-73-7	Fluorene	25	
85-01-8	Phenanthrene	150 ~~190~~	~~E B~~
120-12-7	Anthracene	49	
206-44-0	Fluoranthene	340 ~~370~~	~~E B~~
129-00-0	Pyrene	270 ~~270~~	~~E B~~
56-55-3	Benzo(a)anthracene	150 ~~150~~	~~E B~~
218-01-9	Chrysene	190 ~~180~~	~~E B~~
205-99-2	Benzo(b)fluoranthene	160 ~~210~~	~~E B~~
207-08-9	Benzo(k)fluoranthene	130 ~~170~~	~~E B~~
192-97-2	Benzo(e)pyrene	100 ~~120~~	~~E B~~
50-32-8	Benzo(a)pyrene	130 ~~170~~	~~E B~~
198-55-0	Perylene	510 ~~610~~	~~E B~~
193-39-5	Indeno(1,2,3-cd)pyrene	70 ~~69~~	~~E~~ J
53-70-3	Dibenzo(a,h)anthracene	25	J
191-24-2	Benzo(g,h,i)perylene	68 ~~62~~	~~E~~ J
C1NAPH	C1-Naphthalenes	9.0	J
C2NAPH	C2-Naphthalenes	36	J
C3NAPH	C3-Naphthalenes	57	J
C4NAPH	C4-Naphthalenes	76	J
C1FLUOR	C1 Fluorenes	8.8	J
C2FLUOR	C2 Fluorenes	13	J
C3FLUOR	C3 Fluorenes	16	J
C1PHAN	C1-Phenanthrenes/Anthracenes	130	J
C2PHAN	C2-Phenanthrenes/Anthracenes	90	J
C3PHAN	C3-Phenanthrenes/Anthracenes	79	J
C4PHAN	C4-Phenanthrenes/Anthracenes	40	J
C1FLPY	C1-Fluoranthenes/Pyrenes	160	J
C2FLPY	C2-Fluoranthenes/Pyrenes	100	J
C3FLPY	C3-Fluoranthenes/Pyrenes	48	J
C1CHRYS	C1 Chrysenes	110	J
C2CHRYS	C2 Chrysenes	86	J
C3CHRYS	C3 Chrysenes	50	J
C4CHRYS	C4 Chrysenes	13	J

MW 8/16/13

1F - FORM I SV-SIM

SEMIVOLATILE SIM ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-49-012

13

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: 1734.2] SDG No.: 17024

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17024-13

Sample wt/vol: 30.0 (g/mL) g Lab File ID: HQISJ13.D

Extraction: (Type) SONC

% Moisture: 47 Decanted: (Y/N) Date Received: 06/15/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/21/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/29/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
TPPAH	Total 16 PPAH	2000	~~B~~	J
TPAH	Total PAH	3800	~~B~~	J

NW 8/16/13

1F - FORM I SV-SIM

SEMIVOLATILE SIM ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-49-012DL

13DL

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: 1734.2] SDG No.: 17024

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17024-13

Sample wt/vol: 30.0 (g/mL) g Lab File ID: HQISQ18.D

Extraction: (Type) SONC

% Moisture: 47 Decanted: (Y/N) Date Received: 06/15/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/21/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/31/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 14.3

use orig. val results

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
91-20-3	Naphthalene	88 ~~6.6~~	~~J D B~~ U
90-12-0	1-Methylnaphthalene	6.1	J D
91-57-6	2-Methylnaphthalene	88 ~~8.1~~	~~J D B~~ U
208-96-8	Acenaphthylene	3.4	J D
83-32-9	Acenaphthene	14	J D
86-73-7	Fluorene	25	J D
85-01-8	Phenanthrene	150	~~D B~~
120-12-7	Anthracene	38	J D
206-44-0	Fluoranthene	340	~~D B~~
129-00-0	Pyrene	270	~~D B~~
56-55-3	Benzo(a)anthracene	150	~~D B~~
218-01-9	Chrysene	190	~~D B~~
205-99-2	Benzo(b)fluoranthene	160	~~D B~~
207-08-9	Benzo(k)fluoranthene	130	~~D B~~
192-97-2	Benzo(e)pyrene	100	~~D B~~
50-32-8	Benzo(a)pyrene	130	~~D B~~
198-55-0	Perylene	510	~~D B~~
193-39-5	Indeno(1,2,3-cd)pyrene	70	J D
53-70-3	Dibenzo(a,h)anthracene	24	J D
191-24-2	Benzo(g,h,i)perylene	68	J D
C1NAPH	C1-Naphthalenes	9.5	J D
C2NAPH	C2-Naphthalenes	42	J D
C3NAPH	C3-Naphthalenes	61	J D
C4NAPH	C4-Naphthalenes	61	J D
C1FLUOR	C1 Fluorenes	6.9	J D
C2FLUOR	C2 Fluorenes	11	J D
C3FLUOR	C3 Fluorenes	14	J D
C1PHAN	C1-Phenanthrenes/Anthracenes	110	J D
C2PHAN	C2-Phenanthrenes/Anthracenes	76	J D
C3PHAN	C3-Phenanthrenes/Anthracenes	74	J D
C4PHAN	C4-Phenanthrenes/Anthracenes	47	J D
C1FLPY	C1-Fluoranthenes/Pyrenes	160	J D
C2FLPY	C2-Fluoranthenes/Pyrenes	100	J D
C3FLPY	C3-Fluoranthenes/Pyrenes	52	J D
C1CHRYS	C1 Chrysenes	110	J D
C2CHRYS	C2 Chrysenes	96	J D
C3CHRYS	C3 Chrysenes	47	J D
C4CHRYS	C4 Chrysenes	88	U

MW 8/16/13

1F - FORM I SV-SIM

SEMIVOLATILE SIM ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-49-012DL

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678 13DL

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: 1734.2] SDG No.: 17024

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17024-13

Sample wt/vol: 30.0 (g/mL) g Lab File ID: HQISQ18.D

Extraction: (Type) SONC

% Moisture: 47 Decanted: (Y/N) Date Received: 06/15/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/21/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/31/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 14.3

use original results

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
TPPAH	Total 16 PPAH	1800	~~D B~~
TPAH	Total PAH	3400	~~D B~~

JJ

NW 8/16/13

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-45-012

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17024

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17024-1

Sample wt/vol: 29.6 (g/mL) g Lab File ID: 5253AXBSOM18.D

% Moisture: 53 Decanted: (Y/N) Date Received: 06/15/2013

Extraction: (Type) SONC Date Extracted: 06/21/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 07/12/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	71	U
11104-28-2	Aroclor-1221	71	U
11141-16-5	Aroclor-1232	71	U
53469-21-9	Aroclor-1242	96	~~P~~ J
12672-29-6	Aroclor-1248	71	U
11097-69-1	Aroclor-1254	90	~~P~~ J
11096-82-5	Aroclor-1260	40	~~P~~ P J
37324-23-5	Aroclor-1262	71	U
11100-14-4	Aroclor-1268	71	U

NW 8/16/13

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-45-024

2

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17024

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17024-2

Sample wt/vol: 30.0 (g/mL) g Lab File ID: 5253AXBSOM19.D

% Moisture: 62 Decanted: (Y/N) Date Received: 06/15/2013

Extraction: (Type) SONC Date Extracted: 06/21/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 07/12/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

use reanalysis results

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	87	U UJ
11104-28-2	Aroclor-1221	87	U ↓
11141-16-5	Aroclor-1232	87	U ↓
53469-21-9	Aroclor-1242	91	P J
12672-29-6	Aroclor-1248	87	U UJ
11097-69-1	Aroclor-1254	79	J P J
11096-82-5	Aroclor-1260	32	J J
37324-23-5	Aroclor-1262	87	U UJ
11100-14-4	Aroclor-1268	87	U UJ

NW 8/16/13

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-45-024DL

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678 2DL

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17024

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17024-2

Sample wt/vol: 30.0 (g/mL) g Lab File ID: 5253AZASOM03.D

% Moisture: 62 Decanted: (Y/N) Date Received: 06/15/2013

Extraction: (Type) SONC Date Extracted: 06/21/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 07/23/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 3.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	260	U
11104-28-2	Aroclor-1221	260	U
11141-16-5	Aroclor-1232	260	U
53469-21-9	Aroclor-1242	140	~~J P D~~ J
12672-29-6	Aroclor-1248	260	U
11097-69-1	Aroclor-1254	120	~~J P D~~ J
11096-82-5	Aroclor-1260	52	~~J P D~~ J
37324-23-5	Aroclor-1262	260	U
11100-14-4	Aroclor-1268	260	U

NW 8/16/13

1H - FORM I ARO
AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-45-024FD

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678 3

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17024

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17024-3

Sample wt/vol: 30.7 (g/mL) g Lab File ID: 0825AFBSOM12.D

% Moisture: 63 Decanted: (Y/N) Date Received: 06/15/2013

Extraction: (Type) SONC Date Extracted: 06/21/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 07/24/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 5.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	440	U
11104-28-2	Aroclor-1221	440	U
11141-16-5	Aroclor-1232	440	U
53469-21-9	Aroclor-1242	170	J
12672-29-6	Aroclor-1248	440	U
11097-69-1	Aroclor-1254	160	~~J P~~ J
11096-82-5	Aroclor-1260	65	~~J P~~ J
37324-23-5	Aroclor-1262	440	U
11100-14-4	Aroclor-1268	440	U

NW 8/16/13

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-45-048

4

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17024

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17024-4

Sample wt/vol: 30.9 (g/mL) g Lab File ID: 0825AFBSOM13.D

% Moisture: 58 Decanted: (Y/N) Date Received: 06/15/2013

Extraction: (Type) SONC Date Extracted: 06/21/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 07/24/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 5.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	380	U
11104-28-2	Aroclor-1221	380	U
11141-16-5	Aroclor-1232	380	U
53469-21-9	Aroclor-1242	380	U
12672-29-6	Aroclor-1248	390	
11097-69-1	Aroclor-1254	210	~~J P~~ J
11096-82-5	Aroclor-1260	86	~~J P~~ J
37324-23-5	Aroclor-1262	380	U
11100-14-4	Aroclor-1268	380	U

MW 8/16/13

1H - FORM I ARO
AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-45-072

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678 5

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17024

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17024-5

Sample wt/vol: 30.5 (g/mL) g Lab File ID: 0825AFBSOM14.D

% Moisture: 56 Decanted: (Y/N) Date Received: 06/15/2013

Extraction: (Type) SONC Date Extracted: 06/21/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 07/24/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 5.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	370	U
11104-28-2	Aroclor-1221	370	U
11141-16-5	Aroclor-1232	370	U
53469-21-9	Aroclor-1242	370	U
12672-29-6	Aroclor-1248	1000	
11097-69-1	Aroclor-1254	560	
11096-82-5	Aroclor-1260	190	~~J P~~ J
37324-23-5	Aroclor-1262	370	U
11100-14-4	Aroclor-1268	370	U

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1H - FORM I ARO
AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-45-096

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678 6

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17024

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17024-6

Sample wt/vol: 30.1 (g/mL) g Lab File ID: 0825ACESOM09.D

% Moisture: 53 Decanted: (Y/N) Date Received: 06/15/2013

Extraction: (Type) SONC Date Extracted: 06/21/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 07/16/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 10.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	700	U
11104-28-2	Aroclor-1221	700	U
11141-16-5	Aroclor-1232	700	U
53469-21-9	Aroclor-1242	700	U
12672-29-6	Aroclor-1248	2200	
11097-69-1	Aroclor-1254	1900	~~Y~~ J
11096-82-5	Aroclor-1260	360	~~J P~~ J
37324-23-5	Aroclor-1262	700	U
11100-14-4	Aroclor-1268	700	U

NW 8/16/13

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-45-120

7

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17024

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17024-7

Sample wt/vol: 29.9 (g/mL) g Lab File ID: 0825ACESOM10.D

% Moisture: 50 Decanted: (Y/N) Date Received: 06/15/2013

Extraction: (Type) SONC Date Extracted: 06/21/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 07/16/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 10.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	660	U
11104-28-2	Aroclor-1221	660	U
11141-16-5	Aroclor-1232	660	U
53469-21-9	Aroclor-1242	4300	
12672-29-6	Aroclor-1248	660	U
11097-69-1	Aroclor-1254	2200	
11096-82-5	Aroclor-1260	450	~~J P~~ J
37324-23-5	Aroclor-1262	660	U
11100-14-4	Aroclor-1268	660	U

NW 8/16/13

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-50-012

8

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17024

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17024-8

Sample wt/vol: 30.5 (g/mL) g Lab File ID: 0825ACESOM11.D

% Moisture: 54 Decanted: (Y/N) Date Received: 06/15/2013

Extraction: (Type) SONC Date Extracted: 06/21/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 07/16/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	71	U
11104-28-2	Aroclor-1221	71	U
11141-16-5	Aroclor-1232	71	U
53469-21-9	Aroclor-1242	71	U
12672-29-6	Aroclor-1248	28	~~J P~~ J
11097-69-1	Aroclor-1254	22	J
11096-82-5	Aroclor-1260	7.3	J
37324-23-5	Aroclor-1262	71	U
11100-14-4	Aroclor-1268	71	U

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1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-50-024

9

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17024

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17024-9

Sample wt/vol: 30.5 (g/mL) g Lab File ID: 0825ACESOM12.D

% Moisture: 53 Decanted: (Y/N) Date Received: 06/15/2013

Extraction: (Type) SONC Date Extracted: 06/21/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 07/16/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	69	U
11104-28-2	Aroclor-1221	69	U
11141-16-5	Aroclor-1232	69	U
53469-21-9	Aroclor-1242	69	U
12672-29-6	Aroclor-1248	18	~~J P~~ J
11097-69-1	Aroclor-1254	19	J
11096-82-5	Aroclor-1260	7.0	J
37324-23-5	Aroclor-1262	69	U
11100-14-4	Aroclor-1268	69	U

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1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-50-048

10

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17024

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17024-10

Sample wt/vol: 30.1 (g/mL) g Lab File ID: 0825ACESOM13.D

% Moisture: 47 Decanted: (Y/N) Date Received: 06/15/2013

Extraction: (Type) SONC Date Extracted: 06/21/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 07/16/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	62	U
11104-28-2	Aroclor-1221	62	U
11141-16-5	Aroclor-1232	62	U
53469-21-9	Aroclor-1242	62	U
12672-29-6	Aroclor-1248	63	
11097-69-1	Aroclor-1254	51	J
11096-82-5	Aroclor-1260	14	J
37324-23-5	Aroclor-1262	62	U
11100-14-4	Aroclor-1268	62	U

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1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-50-072

11

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17024

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17024-11

Sample wt/vol: 30.2 (g/mL) g Lab File ID: 0825ACESOM14.D

% Moisture: 40 Decanted: (Y/N) Date Received: 06/15/2013

Extraction: (Type) SONC Date Extracted: 06/21/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 07/16/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	54	U
11104-28-2	Aroclor-1221	54	U
11141-16-5	Aroclor-1232	54	U
53469-21-9	Aroclor-1242	54	U
12672-29-6	Aroclor-1248	61	
11097-69-1	Aroclor-1254	50	J
11096-82-5	Aroclor-1260	13	J
37324-23-5	Aroclor-1262	54	U
11100-14-4	Aroclor-1268	54	U

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1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-50-096

12

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17024

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17024-12

Sample wt/vol: 29.9 (g/mL) g Lab File ID: 0825ACESOM15.D

% Moisture: 40 Decanted: (Y/N) Date Received: 06/15/2013

Extraction: (Type) SONC Date Extracted: 06/21/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 07/16/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	55	U
11104-28-2	Aroclor-1221	55	U
11141-16-5	Aroclor-1232	55	U
53469-21-9	Aroclor-1242	55	U
12672-29-6	Aroclor-1248	170	
11097-69-1	Aroclor-1254	140	
11096-82-5	Aroclor-1260	37	J
37324-23-5	Aroclor-1262	55	U
11100-14-4	Aroclor-1268	55	U

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1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-49-012

13

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17024

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17024-13

Sample wt/vol: 30.1 (g/mL) g Lab File ID: 0825ACESOM16.D

% Moisture: 47 Decanted: (Y/N) Date Received: 06/15/2013

Extraction: (Type) SONC Date Extracted: 06/21/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 07/16/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	62	U
11104-28-2	Aroclor-1221	62	U
11141-16-5	Aroclor-1232	62	U
53469-21-9	Aroclor-1242	62	U
12672-29-6	Aroclor-1248	28	~~J P~~ J
11097-69-1	Aroclor-1254	26	J
11096-82-5	Aroclor-1260	7.1	J
37324-23-5	Aroclor-1262	62	U
11100-14-4	Aroclor-1268	62	U

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1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-49-024

14

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17024

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17024-14

Sample wt/vol: 30.0 (g/mL) g Lab File ID: 0825ACESOM17.D

% Moisture: 37 Decanted: (Y/N) Date Received: 06/15/2013

Extraction: (Type) SONC Date Extracted: 06/21/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 07/16/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	52	U
11104-28-2	Aroclor-1221	52	U
11141-16-5	Aroclor-1232	52	U
53469-21-9	Aroclor-1242	52	U
12672-29-6	Aroclor-1248	61	
11097-69-1	Aroclor-1254	51	J
11096-82-5	Aroclor-1260	12	J
37324-23-5	Aroclor-1262	52	U
11100-14-4	Aroclor-1268	52	U

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1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-49-024FD

15

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17024

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17024-15

Sample wt/vol: 30.3 (g/mL) g Lab File ID: 0825ACESOM18.D

% Moisture: 38 Decanted: (Y/N) Date Received: 06/15/2013

Extraction: (Type) SONC Date Extracted: 06/21/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 07/16/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	52	U
11104-28-2	Aroclor-1221	52	U
11141-16-5	Aroclor-1232	52	U
53469-21-9	Aroclor-1242	52	U
12672-29-6	Aroclor-1248	68	
11097-69-1	Aroclor-1254	77	
11096-82-5	Aroclor-1260	14	J
37324-23-5	Aroclor-1262	52	U
11100-14-4	Aroclor-1268	52	U

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1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-49-048

16

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17024

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17024-16

Sample wt/vol: 30.2 (g/mL) g Lab File ID: 0825ACESOM19.D

% Moisture: 35 Decanted: (Y/N) Date Received: 06/15/2013

Extraction: (Type) SONC Date Extracted: 06/21/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 07/16/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	51	U
11104-28-2	Aroclor-1221	51	U
11141-16-5	Aroclor-1232	51	U
53469-21-9	Aroclor-1242	51	U
12672-29-6	Aroclor-1248	100	
11097-69-1	Aroclor-1254	100	
11096-82-5	Aroclor-1260	26	J
37324-23-5	Aroclor-1262	51	U
11100-14-4	Aroclor-1268	51	U

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1H - FORM I ARO
AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-49-072

17

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17024

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17024-17

Sample wt/vol: 30.0 (g/mL) g Lab File ID: 0825ACESOM20.D

% Moisture: 32 Decanted: (Y/N) Date Received: 06/15/2013

Extraction: (Type) SONC Date Extracted: 06/21/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 07/16/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	48	U
11104-28-2	Aroclor-1221	48	U
11141-16-5	Aroclor-1232	48	U
53469-21-9	Aroclor-1242	48	U
12672-29-6	Aroclor-1248	8.9	~~J P~~ J
11097-69-1	Aroclor-1254	6.8	J
11096-82-5	Aroclor-1260	48	U
37324-23-5	Aroclor-1262	48	U
11100-14-4	Aroclor-1268	48	U

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1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-50-120

18

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17024

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17024-18

Sample wt/vol: 29.7 (g/mL) g Lab File ID: 0825ACESOM21.D

% Moisture: 40 Decanted: (Y/N) Date Received: 06/15/2013

Extraction: (Type) SONC Date Extracted: 06/21/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 07/16/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	55	U
11104-28-2	Aroclor-1221	55	U
11141-16-5	Aroclor-1232	55	U
53469-21-9	Aroclor-1242	55	U
12672-29-6	Aroclor-1248	240	
11097-69-1	Aroclor-1254	170	
11096-82-5	Aroclor-1260	49	~~J~~ P J
37324-23-5	Aroclor-1262	55	U
11100-14-4	Aroclor-1268	55	U

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1H - FORM I ARO
AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-49-096

19

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17024

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17024-19

Sample wt/vol: 30.2 (g/mL) g Lab File ID: 0825ACESOM22.D

% Moisture: 24 Decanted: (Y/N) Date Received: 06/15/2013

Extraction: (Type) SONC Date Extracted: 06/21/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 07/16/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	43	U
11104-28-2	Aroclor-1221	43	U
11141-16-5	Aroclor-1232	43	U
53469-21-9	Aroclor-1242	43	U
12672-29-6	Aroclor-1248	43	U
11097-69-1	Aroclor-1254	43	U
11096-82-5	Aroclor-1260	43	U
37324-23-5	Aroclor-1262	43	U
11100-14-4	Aroclor-1268	43	U

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1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-49-120

20

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17024

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17024-20

Sample wt/vol: 30.7 (g/mL) g Lab File ID: 0825ACESOM23.D

% Moisture: 24 Decanted: (Y/N) Date Received: 06/15/2013

Extraction: (Type) SONC Date Extracted: 06/21/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 07/16/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	42	U
11104-28-2	Aroclor-1221	42	U
11141-16-5	Aroclor-1232	42	U
53469-21-9	Aroclor-1242	42	U
12672-29-6	Aroclor-1248	42	U
11097-69-1	Aroclor-1254	42	U
11096-82-5	Aroclor-1260	42	U
37324-23-5	Aroclor-1262	42	U
11100-14-4	Aroclor-1268	42	U

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1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-83-012

21

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17024

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17024-21

Sample wt/vol: 29.9 (g/mL) g Lab File ID: 0825AFBSOM15.D

% Moisture: 29 Decanted: (Y/N) Date Received: 06/15/2013

Extraction: (Type) SONC Date Extracted: 06/21/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 07/24/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 5.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	230	U
11104-28-2	Aroclor-1221	230	U
11141-16-5	Aroclor-1232	230	U
53469-21-9	Aroclor-1242	230	U
12672-29-6	Aroclor-1248	89	J
11097-69-1	Aroclor-1254	61	J
11096-82-5	Aroclor-1260	14	~~J P~~ J
37324-23-5	Aroclor-1262	230	U
11100-14-4	Aroclor-1268	230	U

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1H - FORM I ARO
AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-83-024

22

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17024

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17024-22

Sample wt/vol: 30.0 (g/mL) g Lab File ID: 0825AFBSOM16.D

% Moisture: 29 Decanted: (Y/N) Date Received: 06/15/2013

Extraction: (Type) SONC Date Extracted: 06/21/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 07/24/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 5.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	230	U
11104-28-2	Aroclor-1221	230	U
11141-16-5	Aroclor-1232	230	U
53469-21-9	Aroclor-1242	230	U
12672-29-6	Aroclor-1248	230	U
11097-69-1	Aroclor-1254	230	U
11096-82-5	Aroclor-1260	230	U
37324-23-5	Aroclor-1262	230	U
11100-14-4	Aroclor-1268	230	U

NW 8/16/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-45-012

1

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678
Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 17024
Matrix: SED | Lab Sample Id: 200-17024-1
% Solids: 47.0 | Date Received: 06/15/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	10.2			P
7440-43-9	Cadmium	1.8			P
7440-47-3	Chromium	60.7		J ~~E~~	P
7440-50-8	Copper	57.8			P
7439-92-1	Lead	53.7			P
7440-02-0	Nickel	50.4			P
7440-66-6	Zinc	305		J ~~E~~	P

Color Before: GREY | Clarity Before: | Texture: FINE
Color After: TAN | Clarity After: CLOUDY | Artifacts:
Comments:

NW 8/14/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-45-012

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17024

Matrix: SED Lab Sample Id: 200-17024-1

% Solids: 47.0 Date Received: 06/15/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.39			CV

Color Before: GRAY Clarity Before: CLOUDY Texture: FINE

Color After: COLORLESS Clarity After: SLIGHTLY Artifacts:

Comments:

JW 8/16/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-45-024

2

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17024

Matrix: SED Lab Sample Id: 200-17024-2

% Solids: 37.8 Date Received: 06/15/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	18.1			P
7440-43-9	Cadmium	4.4			P
7440-47-3	Chromium	220		J ~~E~~	P
7440-50-8	Copper	118			P
7439-92-1	Lead	95.8			P
7440-02-0	Nickel	135			P
7440-66-6	Zinc	1160		J ~~E~~	P

Color Before: GREY Clarity Before: Texture: FINE

Color After: TAN Clarity After: CLOUDY Artifacts:

Comments:

NW 8/16/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-45-024

2

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17024

Matrix: SED Lab Sample Id: 200-17024-2

% Solids: 37.8 Date Received: 06/15/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.13	J		CV

Color Before: GRAY Clarity Before: CLOUDY Texture: FINE

Color After: COLORLESS Clarity After: SLIGHTLY Artifacts:

Comments:

NW 8/16/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-45-024FD

3

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678

Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 17024

Matrix: SED | Lab Sample Id: 200-17024-3

% Solids: 36.9 | Date Received: 06/15/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	19.2			P
7440-43-9	Cadmium	4.7			P
7440-47-3	Chromium	235		J E	P
7440-50-8	Copper	131			P
7439-92-1	Lead	101			P
7440-02-0	Nickel	140			P
7440-66-6	Zinc	1210		J E	P

Color Before: GREY | Clarity Before: | Texture: FINE

Color After: TAN | Clarity After: CLOUDY | Artifacts:

Comments:

NSW 8/16/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-45-024FD

3

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678

Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 17024

Matrix: SED | Lab Sample Id: 200-17024-3

% Solids: 36.9 | Date Received: 06/15/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.55			CV

Color Before: GRAY | Clarity Before: CLOUDY | Texture: FINE

Color After: COLORLESS | Clarity After: SLIGHTLY | Artifacts:

Comments:

MW 8/16/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-45-048

4

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678
Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17024
Matrix: SED Lab Sample Id: 200-17024-4
% Solids: 42.0 Date Received: 06/15/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	14.3			P
7440-43-9	Cadmium	4.6			P
7440-47-3	Chromium	259		J E	P
7440-50-8	Copper	106			P
7439-92-1	Lead	121			P
7440-02-0	Nickel	126			P
7440-66-6	Zinc	535		J E	P

Color Before: GREY Clarity Before: Texture: FINE
Color After: TAN Clarity After: CLOUDY Artifacts:
Comments:

NW 8/16/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-45-048
4

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678
Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 17024
Matrix: SED | Lab Sample Id: 200-17024-4
% Solids: 42.0 | Date Received: 06/15/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.42			CV

Color Before: GRAY | Clarity Before: CLOUDY | Texture: FINE
Color After: COLORLESS | Clarity After: SLIGHTLY | Artifacts:
Comments:

NW 8/16/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-45-072

5

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17024

Matrix: SED Lab Sample Id: 200-17024-5

% Solids: 44.0 Date Received: 06/15/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	15.9			P
7440-43-9	Cadmium	6.7			P
7440-47-3	Chromium	319		J ~~E~~	P
7440-50-8	Copper	172			P
7439-92-1	Lead	220			P
7440-02-0	Nickel	141			P
7440-66-6	Zinc	797		J ~~E~~	P

Color Before: GREY Clarity Before: Texture: FINE

Color After: TAN Clarity After: CLOUDY Artifacts:

Comments:

NW 8/16/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-45-072

5

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678
Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 17024
Matrix: SED | Lab Sample Id: 200-17024-5
% Solids: 44.0 | Date Received: 06/15/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.68			CV

Color Before: GRAY | Clarity Before: CLOUDY | Texture: FINE
Color After: COLORLESS | Clarity After: SLIGHTLY | Artifacts:
Comments:

MW 8/16/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-45-096

6

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678
Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 17024
Matrix: SED | Lab Sample Id: 200-17024-6
% Solids: 46.9 | Date Received: 06/15/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	13.7			P
7440-43-9	Cadmium	7.8			P
7440-47-3	Chromium	247		J E	P
7440-50-8	Copper	143			P
7439-92-1	Lead	181			P
7440-02-0	Nickel	128			P
7440-66-6	Zinc	591		J E	P

Color Before: GREY | Clarity Before: | Texture: FINE
Color After: TAN | Clarity After: CLOUDY | Artifacts:
Comments:

NW 8/16/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-45-096

6

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17024

Matrix: SED Lab Sample Id: 200-17024-6

% Solids: 46.9 Date Received: 06/15/2013

Concentration Units (**ug/L, ug,** or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.75			CV

Color Before: GRAY Clarity Before: CLOUDY Texture: FINE

Color After: COLORLESS Clarity After: SLIGHTLY Artifacts:

Comments:

NW 8/16/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-45-120

7

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678
Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 17024
Matrix: SED | Lab Sample Id: 200-17024-7
% Solids: 50.5 | Date Received: 06/15/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	12.9			P
7440-43-9	Cadmium	8.8			P
7440-47-3	Chromium	220		J ~~E~~	P
7440-50-8	Copper	123			P
7439-92-1	Lead	144			P
7440-02-0	Nickel	82.2			P
7440-66-6	Zinc	520		J ~~E~~	P

Color Before: GREY | Clarity Before: | Texture: FINE
Color After: TAN | Clarity After: CLOUDY | Artifacts:
Comments:

NW 8/16/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-45-120

7

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678

Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 17024

Matrix: SED | Lab Sample Id: 200-17024-7

% Solids: 50.5 | Date Received: 06/15/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	1.1			CV

Color Before: GRAY | Clarity Before: CLOUDY | Texture: FINE

Color After: COLORLESS | Clarity After: SLIGHTLY | Artifacts:

Comments:

MW 8/16/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-50-012

8

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678
Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 17024
Matrix: SED | Lab Sample Id: 200-17024-8
% Solids: 45.7 | Date Received: 06/15/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	7.2			P
7440-43-9	Cadmium	0.76	J		P
7440-47-3	Chromium	22.1		J E	P
7440-50-8	Copper	26.5			P
7439-92-1	Lead	21.3			P
7440-02-0	Nickel	26.7			P
7440-66-6	Zinc	101		J E	P

Color Before: GREY | Clarity Before: | Texture: FINE
Color After: TAN | Clarity After: CLOUDY | Artifacts:
Comments:

MW 8/16/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-50-012

8

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678

Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 17024

Matrix: SED | Lab Sample Id: 200-17024-8

% Solids: 45.7 | Date Received: 06/15/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.066	J		CV

Color Before: GRAY | Clarity Before: CLOUDY | Texture: FINE

Color After: COLORLESS | Clarity After: SLIGHTLY | Artifacts:

Comments:

MW 8/16/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-50-024

9

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678
Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 17024
Matrix: SED | Lab Sample Id: 200-17024-9
% Solids: 46.7 | Date Received: 06/15/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	8.0			P
7440-43-9	Cadmium	0.86	J		P
7440-47-3	Chromium	26.5		J ~~E~~	P
7440-50-8	Copper	29.9			P
7439-92-1	Lead	22.6			P
7440-02-0	Nickel	32.0			P
7440-66-6	Zinc	120		J ~~E~~	P

Color Before: GREY | Clarity Before: | Texture: FINE
Color After: TAN | Clarity After: CLOUDY | Artifacts:
Comments:

NW 8/16/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-50-024

9

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678

Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 17024

Matrix: SED | Lab Sample Id: 200-17024-9

% Solids: 46.7 | Date Received: 06/15/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.071	J		CV

Color Before: GRAY | Clarity Before: CLOUDY | Texture: FINE

Color After: COLORLESS | Clarity After: SLIGHTLY | Artifacts:

Comments:

NW 8/16/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-50-048

10

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17024

Matrix: SED Lab Sample Id: 200-17024-10

% Solids: 53.5 Date Received: 06/15/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	7.7			P
7440-43-9	Cadmium	1.0			P
7440-47-3	Chromium	25.7		J ~~E~~	P
7440-50-8	Copper	28.7			P
7439-92-1	Lead	60.6			P
7440-02-0	Nickel	29.1			P
7440-66-6	Zinc	127		J ~~E~~	P

Color Before: GREY Clarity Before: Texture: FINE

Color After: TAN Clarity After: CLOUDY Artifacts:

Comments:

MW 8/16/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-50-048

10

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17024

Matrix: SED Lab Sample Id: 200-17024-10

% Solids: 53.5 Date Received: 06/15/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.093	J		CV

Color Before: GRAY Clarity Before: CLOUDY Texture: FINE

Color After: COLORLESS Clarity After: SLIGHTLY Artifacts:

Comments:

MW 8/16/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-50-072

11

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678
Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 17024
Matrix: SED | Lab Sample Id: 200-17024-11
% Solids: 60.4 | Date Received: 06/15/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	7.4			P
7440-43-9	Cadmium	1.2			P
7440-47-3	Chromium	25.1		J E	P
7440-50-8	Copper	27.3			P
7439-92-1	Lead	66.1			P
7440-02-0	Nickel	28.6			P
7440-66-6	Zinc	176		J E	P

Color Before: GREY | Clarity Before: | Texture: FINE
Color After: TAN | Clarity After: CLOUDY | Artifacts:
Comments:

NW 8/16/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-50-072

11

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678
Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 17024
Matrix: SED | Lab Sample Id: 200-17024-11
% Solids: 60.4 | Date Received: 06/15/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.14	J		CV

Color Before: GRAY | Clarity Before: CLOUDY | Texture: FINE
Color After: COLORLESS | Clarity After: SLIGHTLY | Artifacts:
Comments:

NW 8/16/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-50-096

12

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678

Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 17024

Matrix: SED | Lab Sample Id: 200-17024-12

% Solids: 59.9 | Date Received: 06/15/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	8.7			P
7440-43-9	Cadmium	2.5			P
7440-47-3	Chromium	32.0		J ~~E~~	P
7440-50-8	Copper	38.0			P
7439-92-1	Lead	51.4			P
7440-02-0	Nickel	32.6			P
7440-66-6	Zinc	135		J ~~E~~	P

Color Before: GREY | Clarity Before: | Texture: FINE

Color After: TAN | Clarity After: CLOUDY | Artifacts:

Comments:

NW 8/16/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-50-096

12

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678

Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 17024

Matrix: SED | Lab Sample Id: 200-17024-12

% Solids: 59.9 | Date Received: 06/15/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.12	J		CV

Color Before: GRAY | Clarity Before: CLOUDY | Texture: FINE

Color After: COLORLESS | Clarity After: SLIGHTLY | Artifacts:

Comments:

NW 8/16/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-49-012

13

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678
Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 17024
Matrix: SED | Lab Sample Id: 200-17024-13
% Solids: 53.4 | Date Received: 06/15/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	6.2			P
7440-43-9	Cadmium	0.80			P
7440-47-3	Chromium	23.3		J ~~E~~	P
7440-50-8	Copper	26.5			P
7439-92-1	Lead	23.3			P
7440-02-0	Nickel	28.1			P
7440-66-6	Zinc	107		J ~~E~~	P

Color Before: GREY | Clarity Before: | Texture: FINE
Color After: TAN | Clarity After: CLOUDY | Artifacts:
Comments:

MW 8/16/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-49-012

13

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17024

Matrix: SED Lab Sample Id: 200-17024-13

% Solids: 53.4 Date Received: 06/15/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.075	J		CV

Color Before: GRAY Clarity Before: CLOUDY Texture: FINE

Color After: COLORLESS Clarity After: SLIGHTLY Artifacts:

Comments:

NW 8/16/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-49-024

14

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678
Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17024
Matrix: SED Lab Sample Id: 200-17024-14
% Solids: 63.5 Date Received: 06/15/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	6.6			P
7440-43-9	Cadmium	1.3			P
7440-47-3	Chromium	20.4		J F	P
7440-50-8	Copper	23.4			P
7439-92-1	Lead	37.2			P
7440-02-0	Nickel	24.2			P
7440-66-6	Zinc	128		J F	P

Color Before: GREY Clarity Before: Texture: FINE
Color After: TAN Clarity After: CLOUDY Artifacts:
Comments:

NW 8/16/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-49-024

14

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17024

Matrix: SED Lab Sample Id: 200-17024-14

% Solids: 63.5 Date Received: 06/15/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.12	J		CV

Color Before: GRAY Clarity Before: CLOUDY Texture: FINE

Color After: COLORLESS Clarity After: SLIGHTLY Artifacts:

Comments:

NW 8/16/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-49-024FD

15

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678
Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 17024
Matrix: SED | Lab Sample Id: 200-17024-15
% Solids: 62.3 | Date Received: 06/15/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	6.6			P
7440-43-9	Cadmium	1.2			P
7440-47-3	Chromium	20.5		J E	P
7440-50-8	Copper	23.8			P
7439-92-1	Lead	31.6			P
7440-02-0	Nickel	24.2			P
7440-66-6	Zinc	133		J E	P

Color Before: GREY | Clarity Before: | Texture: FINE
Color After: TAN | Clarity After: CLOUDY | Artifacts:
Comments:

NW 8/16/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-49-024FD

15

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17024

Matrix: SED Lab Sample Id: 200-17024-15

% Solids: 62.3 Date Received: 06/15/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.12	J		CV

Color Before: GRAY Clarity Before: CLOUDY Texture: FINE

Color After: COLORLESS Clarity After: SLIGHTLY Artifacts:

Comments:

MN 8/16/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-49-048

16

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678
Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 17024
Matrix: SED | Lab Sample Id: 200-17024-16
% Solids: 64.9 | Date Received: 06/15/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	8.3			P
7440-43-9	Cadmium	2.1			P
7440-47-3	Chromium	23.0		J ~~L~~	P
7440-50-8	Copper	28.2			P
7439-92-1	Lead	38.2			P
7440-02-0	Nickel	25.0			P
7440-66-6	Zinc	113		J ~~L~~	P

Color Before: GREY | Clarity Before: | Texture: FINE
Color After: TAN | Clarity After: CLOUDY | Artifacts:
Comments:

NW 8/16/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-49-048

16

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17024

Matrix: SED Lab Sample Id: 200-17024-16

% Solids: 64.9 Date Received: 06/15/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.16			CV

Color Before: GRAY Clarity Before: CLOUDY Texture: FINE

Color After: COLORLESS Clarity After: SLIGHTLY Artifacts:

Comments:

MW 8/16/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-49-072

17

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678
Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 17024
Matrix: SED | Lab Sample Id: 200-17024-17
% Solids: 68.3 | Date Received: 06/15/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	6.2			P
7440-43-9	Cadmium	0.48	J		P
7440-47-3	Chromium	16.7		J ~~E~~	P
7440-50-8	Copper	18.6			P
7439-92-1	Lead	23.6			P
7440-02-0	Nickel	22.4			P
7440-66-6	Zinc	84.0		J ~~E~~	P

Color Before: GREY | Clarity Before: | Texture: FINE
Color After: TAN | Clarity After: CLOUDY | Artifacts:
Comments:

NW 8/16/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-49-072

17

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17024

Matrix: SED Lab Sample Id: 200-17024-17

% Solids: 68.3 Date Received: 06/15/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.084	J		CV

Color Before: GRAY Clarity Before: CLOUDY Texture: FINE

Color After: COLORLESS Clarity After: SLIGHTLY Artifacts:

Comments:

NW 8/16/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-50-120

18

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678
Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 17024
Matrix: SED | Lab Sample Id: 200-17024-18
% Solids: 60.1 | Date Received: 06/15/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	9.8			P
7440-43-9	Cadmium	2.8			P
7440-47-3	Chromium	34.3		J ~~E~~	P
7440-50-8	Copper	36.0			P
7439-92-1	Lead	53.1			P
7440-02-0	Nickel	34.8			P
7440-66-6	Zinc	145		J ~~E~~	P

Color Before: GREY | Clarity Before: | Texture: FINE
Color After: TAN | Clarity After: CLOUDY | Artifacts:
Comments:

NW 8/16/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-50-120

18

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678

Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 17024

Matrix: SED | Lab Sample Id: 200-17024-18

% Solids: 60.1 | Date Received: 06/15/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.16			CV

Color Before: GRAY | Clarity Before: CLOUDY | Texture: FINE

Color After: COLORLESS | Clarity After: SLIGHTLY | Artifacts:

Comments:

NW 8/16/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-49-096

19

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678
Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 17024
Matrix: SED | Lab Sample Id: 200-17024-19
% Solids: 76.4 | Date Received: 06/15/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	3.3			P
7440-43-9	Cadmium	0.33	J		P
7440-47-3	Chromium	9.5		J ~~E~~	P
7440-50-8	Copper	9.5			P
7439-92-1	Lead	8.5			P
7440-02-0	Nickel	14.0			P
7440-66-6	Zinc	39.6		J ~~E~~	P

Color Before: GREY | Clarity Before: | Texture: FINE
Color After: TAN | Clarity After: CLOUDY | Artifacts:
Comments:

MW 8/16/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-49-096

19

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678

Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 17024

Matrix: SED | Lab Sample Id: 200-17024-19

% Solids: 76.4 | Date Received: 06/15/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.32			CV

Color Before: GRAY | Clarity Before: CLOUDY | Texture: FINE

Color After: COLORLESS | Clarity After: SLIGHTLY | Artifacts:

Comments:

NW 8/16/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-49-120

20

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17024

Matrix: SED Lab Sample Id: 200-17024-20

% Solids: 76.1 Date Received: 06/15/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	3.0			P
7440-43-9	Cadmium	0.29	J		P
7440-47-3	Chromium	6.5		J F	P
7440-50-8	Copper	6.3			P
7439-92-1	Lead	4.8			P
7440-02-0	Nickel	10.2			P
7440-66-6	Zinc	27.9		J F	P

Color Before: GREY Clarity Before: Texture: FINE

Color After: TAN Clarity After: CLOUDY Artifacts:

Comments:

NW 8/16/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-49-120

20

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678
Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17024
Matrix: SED Lab Sample Id: 200-17024-20
% Solids: 76.1 Date Received: 06/15/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.11	U		CV

Color Before: GRAY Clarity Before: CLOUDY Texture: FINE
Color After: COLORLESS Clarity After: SLIGHTLY Artifacts:
Comments:

NW 8/16/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-83-012

21

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678
Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 17024
Matrix: SED | Lab Sample Id: 200-17024-21
% Solids: 70.8 | Date Received: 06/15/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	8.5			P
7440-43-9	Cadmium	2.1			P
7440-47-3	Chromium	98.8		J F	P
7440-50-8	Copper	53.8			P
7439-92-1	Lead	43.9			P
7440-02-0	Nickel	61.5			P
7440-66-6	Zinc	511		J F	P

Color Before: GREY | Clarity Before: | Texture: FINE
Color After: TAN | Clarity After: CLOUDY | Artifacts:
Comments:

NW 8/16/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-83-012

21

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678
Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 17024
Matrix: SED | Lab Sample Id: 200-17024-21
% Solids: 70.8 | Date Received: 06/15/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.069	J		CV

Color Before: GRAY | Clarity Before: CLOUDY | Texture: FINE
Color After: COLORLESS | Clarity After: CLEAR | Artifacts:
Comments:

NW 8/16/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-83-024

22

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678
Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 17024
Matrix: SED | Lab Sample Id: 200-17024-22
% Solids: 70.6 | Date Received: 06/15/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	8.0			P
7440-43-9	Cadmium	1.4			P
7440-47-3	Chromium	48.7		J ~~E~~	P
7440-50-8	Copper	45.5			P
7439-92-1	Lead	42.6			P
7440-02-0	Nickel	38.8			P
7440-66-6	Zinc	236		J ~~E~~	P

Color Before: GREY | Clarity Before: | Texture: MEDIUM
Color After: TAN | Clarity After: CLOUDY | Artifacts:
Comments:

NW 8/16/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-83-024

22

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678

Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 17024

Matrix: SED | Lab Sample Id: 200-17024-22

% Solids: 70.6 | Date Received: 06/15/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.13	J		CV

Color Before: GRAY | Clarity Before: CLOUDY | Texture: FINE

Color After: COLORLESS | Clarity After: CLEAR | Artifacts:

Comments:

NW 8/16/13

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - SEM/AVS

Client Sample ID: LMR13-45-012
Lab Sample ID: 200-17024-1
Lab Name: TestAmerica Burlington
Job No.: 200-17024-1
SDG ID.: 17024
Matrix: Sediment
Date Sampled: 06/14/2013 08:15
Reporting Basis: DRY
Date Received: 06/15/2013 10:05
% Solids: 47.0

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-43-9	Cadmium SEM	1.1	2.6	0.40	mg/Kg	J		10	6010C
7440-43-9	Cadmium SEM	0.010	0.023	0.0036	umol/g	J		10	6010C
7440-50-8	Copper SEM	2.4	13.2	1.1	mg/Kg	J		10	6010C
7440-50-8	Copper SEM	0.037	0.21	0.018	umol/g	J		10	6010C
7439-92-1	Lead SEM	31.1	5.3	2.3	mg/Kg			10	6010C
7439-92-1	Lead SEM	0.15	0.026	0.011	umol/g			10	6010C
7440-02-0	Nickel SEM	20.8	21.3	1.5	mg/Kg	J		10	6010C
7440-02-0	Nickel SEM	0.35	0.36	0.026	umol/g	J		10	6010C
7440-66-6	Zinc SEM	184	10.6	3.0	mg/Kg			10	6010C
7440-66-6	Zinc SEM	2.8	0.16	0.046	umol/g			10	6010C
7439-97-6	Mercury SEM	0.011	0.011	0.0035	mg/Kg	U		1	7470A
7439-97-6	Mercury SEM	0.000053	0.000053	0.000017	umol/g	U		1	7470A

NW 8/16/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY - SEM/AVS

1

Client Sample ID: LMR13-45-012 | Lab Sample ID: 200-17024-1

Lab Name: TestAmerica Burlington | Job No.: 200-17024-1

SDG ID.: 17024

Matrix: Sediment | Date Sampled: 06/14/2013 08:15

Reporting Basis: DRY | Date Received: 06/15/2013 10:05

% Solids: 47.0

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
18496-25-8	Acid Volatile Sulfides (AVS)	366	34.0		mg/Kg			1	AVS
18496-25-8	Acid Volatile Sulfides (AVS)	11.4	1.1		umol/g			1	AVS

NW 8/16/13

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - SEM/AVS

Client Sample ID: LMR13-45-012 | Lab Sample ID: 200-17024-1

Lab Name: TestAmerica Burlington | Job No.: 200-17024-1

SDG ID.: 17024

Matrix: Sediment | Date Sampled: 06/14/2013 08:15

Reporting Basis: WET | Date Received: 06/15/2013 10:05

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	SEM/AVS Ratio	0.295	0.00100	0.00100	NONE			1	SEM

NW 8/16/13

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - SEM/AVS

8

Client Sample ID: LMR13-50-012 | Lab Sample ID: 200-17024-8

Lab Name: TestAmerica Burlington | Job No.: 200-17024-1

SDG ID.: 17024

Matrix: Sediment | Date Sampled: 06/14/2013 09:10

Reporting Basis: DRY | Date Received: 06/15/2013 10:05

% Solids: 45.7

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-43-9	Cadmium SEM	1.1	2.6	0.42	mg/Kg	J		10	6010C
7440-43-9	Cadmium SEM	0.010	0.023	0.0037	umol/g	J		10	6010C
7440-50-8	Copper SEM	2.2	13.6	1.2	mg/Kg	J		10	6010C
7440-50-8	Copper SEM	0.034	0.21	0.019	umol/g	J		10	6010C
7439-92-1	Lead SEM	26.7	5.5	2.4	mg/Kg			10	6010C
7439-92-1	Lead SEM	0.13	0.026	0.012	umol/g			10	6010C
7440-02-0	Nickel SEM	19.3	21.9	1.6	mg/Kg	J		10	6010C
7440-02-0	Nickel SEM	0.33	0.37	0.027	umol/g	J		10	6010C
7440-66-6	Zinc SEM	167	10.9	3.1	mg/Kg			10	6010C
7440-66-6	Zinc SEM	2.5	0.17	0.047	umol/g			10	6010C
7439-97-6	Mercury SEM	0.0080	0.011	0.0036	mg/Kg	J		1	7470A
7439-97-6	Mercury SEM	0.000040	0.000055	0.000018	umol/g	J		1	7470A

NW 8/16/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY - SEM/AVS

8

Client Sample ID: LMR13-50-012 Lab Sample ID: 200-17024-8

Lab Name: TestAmerica Burlington Job No.: 200-17024-1

SDG ID.: 17024

Matrix: Sediment Date Sampled: 06/14/2013 09:10

Reporting Basis: DRY Date Received: 06/15/2013 10:05

% Solids: 45.7

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
18496-25-8	Acid Volatile Sulfides (AVS)	131	35.0		mg/Kg			1	AVS
18496-25-8	Acid Volatile Sulfides (AVS)	4.1	1.1		umol/g			1	AVS

NW 8/16/13

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - SEM/AVS

8

Client Sample ID: LMR13-50-012 Lab Sample ID: 200-17024-8

Lab Name: TestAmerica Burlington Job No.: 200-17024-1

SDG ID.: 17024

Matrix: Sediment Date Sampled: 06/14/2013 09:10

Reporting Basis: WET Date Received: 06/15/2013 10:05

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	SEM/AVS Ratio	0.745	0.00100	0.00100	NONE			1	SEM

NW 8/16/13

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - SEM/AVS

13

Client Sample ID: LMR13-49-012
Lab Sample ID: 200-17024-13
Lab Name: TestAmerica Burlington
Job No.: 200-17024-1
SDG ID.: 17024
Matrix: Sediment
Date Sampled: 06/14/2013 10:10
Reporting Basis: DRY
Date Received: 06/15/2013 10:05
% Solids: 53.4

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-43-9	Cadmium SEM	1.6	2.2	0.35	mg/Kg	J		10	6010C
7440-43-9	Cadmium SEM	0.014	0.020	0.0032	umol/g	J		10	6010C
7440-50-8	Copper SEM	4.0	11.6	1.0	mg/Kg	J		10	6010C
7440-50-8	Copper SEM	0.062	0.18	0.016	umol/g	J		10	6010C
7439-92-1	Lead SEM	37.7	4.7	2.1	mg/Kg			10	6010C
7439-92-1	Lead SEM	0.18	0.023	0.0099	umol/g			10	6010C
7440-02-0	Nickel SEM	3.3	18.7	1.3	mg/Kg	J		10	6010C
7440-02-0	Nickel SEM	0.057	0.32	0.023	umol/g	J		10	6010C
7440-66-6	Zinc SEM	67.7	9.3	2.6	mg/Kg			10	6010C
7440-66-6	Zinc SEM	1.0	0.14	0.040	umol/g			10	6010C
7439-97-6	Mercury SEM	0.0093	0.0093	0.0031	mg/Kg	U		1	7470A
7439-97-6	Mercury SEM	0.000047	0.000047	0.000015	umol/g	U		1	7470A

NW 8/16/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY - SEM/AVS

13

Client Sample ID: LMR13-49-012 Lab Sample ID: 200-17024-13

Lab Name: TestAmerica Burlington Job No.: 200-17024-1

SDG ID.: 17024

Matrix: Sediment Date Sampled: 06/14/2013 10:10

Reporting Basis: DRY Date Received: 06/15/2013 10:05

% Solids: 53.4

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
18496-25-8	Acid Volatile Sulfides (AVS)	82.2	29.9		mg/Kg			1	AVS
18496-25-8	Acid Volatile Sulfides (AVS)	2.6	0.93		umol/g			1	AVS

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1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - SEM/AVS

13

Client Sample ID: LMR13-49-012 | Lab Sample ID: 200-17024-13

Lab Name: TestAmerica Burlington | Job No.: 200-17024-1

SDG ID.: 17024

Matrix: Sediment | Date Sampled: 06/14/2013 10:10

Reporting Basis: WET | Date Received: 06/15/2013 10:05

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	SEM/AVS Ratio	0.527	0.00100	0.00100	NONE			1	SEM

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1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: LMR13-45-012
Lab Sample ID: 200-17024-1
Lab Name: TestAmerica Burlington
Job No.: 200-17024-1
SDG ID.: 17024
Matrix: Sediment
Date Sampled: 06/14/2013 08:15
Reporting Basis: WET
Date Received: 06/15/2013 10:05
% Solids: 47.0

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	44600	1000		mg/Kg			1	Lloyd Kahn

NW 8/16/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

2

Client Sample ID: LMR13-45-024
Lab Sample ID: 200-17024-2
Lab Name: TestAmerica Burlington
Job No.: 200-17024-1
SDG ID.: 17024
Matrix: Sediment
Date Sampled: 06/14/2013 08:25
Reporting Basis: WET
Date Received: 06/15/2013 10:05
% Solids: 37.8

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	71100	1000		mg/Kg			1	Lloyd Kahn

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1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

3

Client Sample ID: LMR13-45-024FD
Lab Sample ID: 200-17024-3
Lab Name: TestAmerica Burlington
Job No.: 200-17024-1
SDG ID.: 17024
Matrix: Sediment
Date Sampled: 06/14/2013 08:25
Reporting Basis: WET
Date Received: 06/15/2013 10:05
% Solids: 36.9

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	77600	1000		mg/Kg			1	Lloyd Kahn

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1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

4

Client Sample ID: LMR13-45-048
Lab Sample ID: 200-17024-4
Lab Name: TestAmerica Burlington
Job No.: 200-17024-1
SDG ID.: 17024
Matrix: Sediment
Date Sampled: 06/14/2013 08:35
Reporting Basis: WET
Date Received: 06/15/2013 10:05
% Solids: 42.0

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	65200	1000		mg/Kg			1	Lloyd Kahn

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1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

5

Client Sample ID: LMR13-45-072 Lab Sample ID: 200-17024-5

Lab Name: TestAmerica Burlington Job No.: 200-17024-1

SDG ID.: 17024

Matrix: Sediment Date Sampled: 06/14/2013 08:45

Reporting Basis: WET Date Received: 06/15/2013 10:05

% Solids: 44.0

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	73300	1000		mg/Kg			1	Lloyd Kahn

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1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

6

Client Sample ID: LMR13-45-096
Lab Sample ID: 200-17024-6
Lab Name: TestAmerica Burlington
Job No.: 200-17024-1
SDG ID.: 17024
Matrix: Sediment
Date Sampled: 06/14/2013 08:55
Reporting Basis: WET
Date Received: 06/15/2013 10:05
% Solids: 46.9

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	57900	1000		mg/Kg			1	Lloyd Kahn

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1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

7

Client Sample ID: LMR13-45-120 | Lab Sample ID: 200-17024-7

Lab Name: TestAmerica Burlington | Job No.: 200-17024-1

SDG ID.: 17024

Matrix: Sediment | Date Sampled: 06/14/2013 09:05

Reporting Basis: WET | Date Received: 06/15/2013 10:05

% Solids: 50.4

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	50200	1000		mg/Kg			1	Lloyd Kahn

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1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

8

Client Sample ID: LMR13-50-012
Lab Sample ID: 200-17024-8
Lab Name: TestAmerica Burlington
Job No.: 200-17024-1
SDG ID.: 17024
Matrix: Sediment
Date Sampled: 06/14/2013 09:10
Reporting Basis: WET
Date Received: 06/15/2013 10:05
% Solids: 45.7

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	35000	1000		mg/Kg			1	Lloyd Kahn

JW 8/16/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

9

Client Sample ID: LMR13-50-024 Lab Sample ID: 200-17024-9

Lab Name: TestAmerica Burlington Job No.: 200-17024-1

SDG ID.: 17024

Matrix: Sediment Date Sampled: 06/14/2013 09:20

Reporting Basis: WET Date Received: 06/15/2013 10:05

% Solids: 46.7

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	35400	1000		mg/Kg			1	Lloyd Kahn

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1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

10

Client Sample ID: LMR13-50-048
Lab Sample ID: 200-17024-10
Lab Name: TestAmerica Burlington
Job No.: 200-17024-1
SDG ID.: 17024
Matrix: Sediment
Date Sampled: 06/14/2013 09:30
Reporting Basis: WET
Date Received: 06/15/2013 10:05
% Solids: 53.5

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	26000	1000		mg/Kg			1	Lloyd Kahn

JW 8/16/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

11

Client Sample ID: LMR13-50-072 | Lab Sample ID: 200-17024-11

Lab Name: TestAmerica Burlington | Job No.: 200-17024-1

SDG ID.: 17024

Matrix: Sediment | Date Sampled: 06/14/2013 09:40

Reporting Basis: WET | Date Received: 06/15/2013 10:05

% Solids: 60.4

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	24800	1000		mg/Kg			1	Lloyd Kahn

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1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

12

Client Sample ID: LMR13-50-096
Lab Sample ID: 200-17024-12
Lab Name: TestAmerica Burlington
Job No.: 200-17024-1
SDG ID.: 17024
Matrix: Sediment
Date Sampled: 06/14/2013 09:50
Reporting Basis: WET
Date Received: 06/15/2013 10:05
% Solids: 59.9

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	31400	1000		mg/Kg			1	Lloyd Kahn

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1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

13

Client Sample ID: LMR13-49-012
Lab Sample ID: 200-17024-13
Lab Name: TestAmerica Burlington
Job No.: 200-17024-1
SDG ID.: 17024
Matrix: Sediment
Date Sampled: 06/14/2013 10:10
Reporting Basis: WET
Date Received: 06/15/2013 10:05
% Solids: 53.4

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	25500	1000		mg/Kg			1	Lloyd Kahn

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1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

14

Client Sample ID: LMR13-49-024
Lab Sample ID: 200-17024-14
Lab Name: TestAmerica Burlington
Job No.: 200-17024-1
SDG ID.: 17024
Matrix: Sediment
Date Sampled: 06/14/2013 10:20
Reporting Basis: WET
Date Received: 06/15/2013 10:05
% Solids: 63.5

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	26500	1000		mg/Kg			1	Lloyd Kahn

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1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

15

Client Sample ID: LMR13-49-024FD
Lab Sample ID: 200-17024-15
Lab Name: TestAmerica Burlington
Job No.: 200-17024-1
SDG ID.: 17024
Matrix: Sediment
Date Sampled: 06/14/2013 10:20
Reporting Basis: WET
Date Received: 06/15/2013 10:05
% Solids: 62.3

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	26300	1000		mg/Kg			1	Lloyd Kahn

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1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

16

Client Sample ID: LMR13-49-048 Lab Sample ID: 200-17024-16

Lab Name: TestAmerica Burlington Job No.: 200-17024-1

SDG ID.: 17024

Matrix: Sediment Date Sampled: 06/14/2013 10:30

Reporting Basis: WET Date Received: 06/15/2013 10:05

% Solids: 64.9

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	31800	1000		mg/Kg			1	Lloyd Kahn

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1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

17

Client Sample ID: LMR13-49-072
Lab Sample ID: 200-17024-17
Lab Name: TestAmerica Burlington
Job No.: 200-17024-1
SDG ID.: 17024
Matrix: Sediment
Date Sampled: 06/14/2013 10:40
Reporting Basis: WET
Date Received: 06/15/2013 10:05
% Solids: 68.3

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	24200	1000		mg/Kg			1	Lloyd Kahn

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1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

18

Client Sample ID: LMR13-50-120
Lab Sample ID: 200-17024-18
Lab Name: TestAmerica Burlington
Job No.: 200-17024-1
SDG ID.: 17024
Matrix: Sediment
Date Sampled: 06/14/2013 10:00
Reporting Basis: WET
Date Received: 06/15/2013 10:05
% Solids: 60.1

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	21100	1000		mg/Kg			1	Lloyd Kahn

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1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

19

Client Sample ID: LMR13-49-096 | Lab Sample ID: 200-17024-19

Lab Name: TestAmerica Burlington | Job No.: 200-17024-1

SDG ID.: 17024

Matrix: Sediment | Date Sampled: 06/14/2013 10:50

Reporting Basis: WET | Date Received: 06/15/2013 10:05

% Solids: 76.4

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	17300	1000		mg/Kg			1	Lloyd Kahn

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1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

20

Client Sample ID: LMR13-49-120
Lab Sample ID: 200-17024-20
Lab Name: TestAmerica Burlington
Job No.: 200-17024-1
SDG ID.: 17024
Matrix: Sediment
Date Sampled: 06/14/2013 11:00
Reporting Basis: WET
Date Received: 06/15/2013 10:05
% Solids: 76.1

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	19000	1000		mg/Kg			1	Lloyd Kahn

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1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

21

Client Sample ID: LMR13-83-012
Lab Sample ID: 200-17024-21
Lab Name: TestAmerica Burlington
Job No.: 200-17024-1
SDG ID.: 17024
Matrix: Sediment
Date Sampled: 06/14/2013 11:15
Reporting Basis: WET
Date Received: 06/15/2013 10:05
% Solids: 70.8

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	20100	1000		mg/Kg			1	Lloyd Kahn

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1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

22

Client Sample ID: LMR13-83-024
Lab Sample ID: 200-17024-22
Lab Name: TestAmerica Burlington
Job No.: 200-17024-1
SDG ID.: 17024
Matrix: Sediment
Date Sampled: 06/14/2013 11:25
Reporting Basis: WET
Date Received: 06/15/2013 10:05
% Solids: 70.6

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	25300	1000		mg/Kg			1	Lloyd Kahn

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1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: LMR13-45-012
Lab Sample ID: 200-17024-1
Lab Name: TestAmerica Canton
Job No.: 200-17024-1
SDG ID.: 17024
Matrix: Sediment
Date Sampled: 06/14/2013 08:15
Reporting Basis: DRY
Date Received: 06/15/2013 10:05
% Solids: 47.0

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	3270	421	186	mg/Kg			1	9071B

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1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

2

Client Sample ID: LMR13-45-024
Lab Sample ID: 200-17024-2
Lab Name: TestAmerica Canton
Job No.: 200-17024-1
SDG ID.: 17024
Matrix: Sediment
Date Sampled: 06/14/2013 08:25
Reporting Basis: DRY
Date Received: 06/15/2013 10:05
% Solids: 37.8

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	16500	508	224	mg/Kg			1	9071B

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1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

4

Client Sample ID: LMR13-45-048 Lab Sample ID: 200-17024-4

Lab Name: TestAmerica Canton Job No.: 200-17024-1

SDG ID.: 17024

Matrix: Sediment Date Sampled: 06/14/2013 08:35

Reporting Basis: DRY Date Received: 06/15/2013 10:05

% Solids: 42.0

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	15500	470	208	mg/Kg			1	9071B

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1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

5

Client Sample ID: LMR13-45-072
Lab Sample ID: 200-17024-5
Lab Name: TestAmerica Canton
Job No.: 200-17024-1
SDG ID.: 17024
Matrix: Sediment
Date Sampled: 06/14/2013 08:45
Reporting Basis: DRY
Date Received: 06/15/2013 10:05
% Solids: 44.0

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	23800	452	200	mg/Kg			1	9071B

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1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

6

Client Sample ID: LMR13-45-096
Lab Sample ID: 200-17024-6
Lab Name: TestAmerica Canton
Job No.: 200-17024-1
SDG ID.: 17024
Matrix: Sediment
Date Sampled: 06/14/2013 08:55
Reporting Basis: DRY
Date Received: 06/15/2013 10:05
% Solids: 46.9

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	8240	413	182	mg/Kg			1	9071B

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1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

7

Client Sample ID: LMR13-45-120
Lab Sample ID: 200-17024-7
Lab Name: TestAmerica Canton
Job No.: 200-17024-1
SDG ID.: 17024
Matrix: Sediment
Date Sampled: 06/14/2013 09:05
Reporting Basis: DRY
Date Received: 06/15/2013 10:05
% Solids: 50.4

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	12500	388	171	mg/Kg			1	9071B

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1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

8

Client Sample ID: LMR13-50-012
Lab Sample ID: 200-17024-8
Lab Name: TestAmerica Canton
Job No.: 200-17024-1
SDG ID.: 17024
Matrix: Sediment
Date Sampled: 06/14/2013 09:10
Reporting Basis: DRY
Date Received: 06/15/2013 10:05
% Solids: 45.7

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	700	U 437	193	mg/Kg		~~B~~	1	9071B

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1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

9

Client Sample ID: LMR13-50-024
Lab Sample ID: 200-17024-9
Lab Name: TestAmerica Canton
Job No.: 200-17024-1
SDG ID.: 17024
Matrix: Sediment
Date Sampled: 06/14/2013 09:20
Reporting Basis: DRY
Date Received: 06/15/2013 10:05
% Solids: 46.7

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	573	U 424	187	mg/Kg		~~B~~	1	9071B

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1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

10

Client Sample ID: LMR13-50-048
Lab Sample ID: 200-17024-10
Lab Name: TestAmerica Canton
Job No.: 200-17024-1
SDG ID.: 17024
Matrix: Sediment
Date Sampled: 06/14/2013 09:30
Reporting Basis: DRY
Date Received: 06/15/2013 10:05
% Solids: 53.5

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	853	363	160	mg/Kg			1	9071B

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1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

11

Client Sample ID: LMR13-50-072
Lab Sample ID: 200-17024-11
Lab Name: TestAmerica Canton
Job No.: 200-17024-1
SDG ID.: 17024
Matrix: Sediment
Date Sampled: 06/14/2013 09:40
Reporting Basis: DRY
Date Received: 06/15/2013 10:05
% Solids: 60.4

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	953	U 329	145	mg/Kg		B	1	9071B

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1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

12

Client Sample ID: LMR13-50-096
Lab Sample ID: 200-17024-12
Lab Name: TestAmerica Canton
Job No.: 200-17024-1
SDG ID.: 17024
Matrix: Sediment
Date Sampled: 06/14/2013 09:50
Reporting Basis: DRY
Date Received: 06/15/2013 10:05
% Solids: 59.9

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	907	U 324	143	mg/Kg		~~B~~	1	9071B

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1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

13

Client Sample ID: LMR13-49-012 Lab Sample ID: 200-17024-13

Lab Name: TestAmerica Canton Job No.: 200-17024-1

SDG ID.: 17024

Matrix: Sediment Date Sampled: 06/14/2013 10:10

Reporting Basis: DRY Date Received: 06/15/2013 10:05

% Solids: 53.4

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	635	363	160	mg/Kg			1	9071B

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1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

14

Client Sample ID: LMR13-49-024
Lab Sample ID: 200-17024-14
Lab Name: TestAmerica Canton
Job No.: 200-17024-1
SDG ID.: 17024
Matrix: Sediment
Date Sampled: 06/14/2013 10:20
Reporting Basis: DRY
Date Received: 06/15/2013 10:05
% Solids: 63.5

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	529	311	137	mg/Kg			1	9071B

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1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

16

Client Sample ID: LMR13-49-048
Lab Sample ID: 200-17024-16
Lab Name: TestAmerica Canton
Job No.: 200-17024-1
SDG ID.: 17024
Matrix: Sediment
Date Sampled: 06/14/2013 10:30
Reporting Basis: DRY
Date Received: 06/15/2013 10:05
% Solids: 64.9

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	914	300	132	mg/Kg			1	9071B

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1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

17

Client Sample ID: LMR13-49-072 Lab Sample ID: 200-17024-17

Lab Name: TestAmerica Canton Job No.: 200-17024-1

SDG ID.: 17024

Matrix: Sediment Date Sampled: 06/14/2013 10:40

Reporting Basis: DRY Date Received: 06/15/2013 10:05

% Solids: 68.3

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	366	282	124	mg/Kg			1	9071B

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1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

18

Client Sample ID: LMR13-50-120
Lab Sample ID: 200-17024-18
Lab Name: TestAmerica Canton
Job No.: 200-17024-1
SDG ID.: 17024
Matrix: Sediment
Date Sampled: 06/14/2013 10:00
Reporting Basis: DRY
Date Received: 06/15/2013 10:05
% Solids: 60.1

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	1050	328	145	mg/Kg		F	1	9071B

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1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

19

Client Sample ID: LMR13-49-096
Lab Sample ID: 200-17024-19
Lab Name: TestAmerica Canton
Job No.: 200-17024-1
SDG ID.: 17024
Matrix: Sediment
Date Sampled: 06/14/2013 10:50
Reporting Basis: DRY
Date Received: 06/15/2013 10:05
% Solids: 76.4

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	259 ~~168~~	U 259	114	mg/Kg	J	J	1	9071B

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1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

20

Client Sample ID: LMR13-49-120
Lab Sample ID: 200-17024-20
Lab Name: TestAmerica Canton
Job No.: 200-17024-1
SDG ID.: 17024
Matrix: Sediment
Date Sampled: 06/14/2013 11:00
Reporting Basis: DRY
Date Received: 06/15/2013 10:05
% Solids: 76.1

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	256 ~~141~~	U 256	113	mg/Kg			1	9071B

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1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

21

Client Sample ID: LMR13-83-012
Lab Sample ID: 200-17024-21
Lab Name: TestAmerica Canton
Job No.: 200-17024-1
SDG ID.: 17024
Matrix: Sediment
Date Sampled: 06/14/2013 11:15
Reporting Basis: DRY
Date Received: 06/15/2013 10:05
% Solids: 70.8

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	363	U 279	123	mg/Kg		~~B~~	1	9071B

MW 8/16/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

22

Client Sample ID: LMR13-83-024
Lab Sample ID: 200-17024-22
Lab Name: TestAmerica Canton
Job No.: 200-17024-1
SDG ID.: 17024
Matrix: Sediment
Date Sampled: 06/14/2013 11:25
Reporting Basis: DRY
Date Received: 06/15/2013 10:05
% Solids: 70.6

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	700	275	121	mg/Kg		F	1	9071B

NW 8/16/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

23

Client Sample ID: LMR13-50-024FD
Lab Sample ID: 200-17024-23
Lab Name: TestAmerica Canton
Job No.: 200-17024-1
SDG ID.: 17024
Matrix: Sediment
Date Sampled: 06/14/2013 09:20
Reporting Basis: DRY
Date Received: 06/15/2013 10:05
% Solids: 47.6

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	995	406	179	mg/Kg		B	1	9071B

NW 8/16/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

24

Client Sample ID: LMR13-83-024FD
Lab Sample ID: 200-17024-24
Lab Name: TestAmerica Canton
Job No.: 200-17024-1
SDG ID.: 17024
Matrix: Sediment
Date Sampled: 06/14/2013 11:25
Reporting Basis: DRY
Date Received: 06/15/2013 10:05
% Solids: 70.8

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	699	274	121	mg/Kg		B	1	9071B

MW 8/16/13

ENVIRONMENTAL
Data Services, Inc.

DATA VALIDATION SUMMARY REPORT
LOWER MAUMEE RIVER, TOLEDO, OHIO

Client: EA Engineering, Science & Technology, Inc., Hunt Valley, Maryland
SDG: 200-17028
Laboratory: Test America Laboratories, Burlington, Vermont
Test America Laboratories, North Canton, Ohio
Site: Lower Maumee River, Maumee Area of Concern, Toledo, Ohio
Date: August 28, 2013

SVOC/PCB			
EDS ID	Client Sample ID	Laboratory Sample ID	Matrix
1	LMR13-83-048	200-17028-1	Sediment
1MS†	LMR13-83-048MS	200-17028-1MS	Sediment
1MSD†	LMR13-83-048MSD	200-17028-1MSD	Sediment
2	LMR13-83-072	200-17028-2	Sediment
3	LMR13-41-012	200-17028-3	Sediment
4	LMR13-41-024	200-17028-4	Sediment
5†	LMR13-41-024FD	200-17028-5	Sediment
6	LMR13-41-048	200-17028-6	Sediment
7	LMR13-57-012	200-17028-7	Sediment
7DL†	LMR13-57-012DL	200-17028-7DL	Sediment
8	LMR13-26-012	200-17028-8	Sediment
9	LMR13-26-012FD	200-17028-9	Sediment
10	LMR13-57-024	200-17028-10	Sediment
10DL†	LMR13-57-024DL	200-17028-10DL	Sediment
11	LMR13-57-048	200-17028-11	Sediment
12	LMR13-72-048	200-17028-12	Sediment
13	LMR13-27-012	200-17028-13	Sediment
14	LMR13-27-024	200-17028-14	Sediment
15†	LMR13-27-024FD	200-17028-15	Sediment
16	LMR13-27-048	200-17028-16	Sediment
16MS*	LMR13-27-048MS	200-17028-16MS	Sediment
16MSD*	LMR13-27-048MSD	200-17028-16MSD	Sediment
17	LMR13-27-072	200-17028-17	Sediment
18	LMR13-72-012	200-17028-18	Sediment
19	LMR13-72-024	200-17028-19	Sediment
20	LMR13-72-024FD	200-17028-20	Sediment
21	LMR13-72-096	200-17028-21	Sediment
22	LMR13-27-096	200-17028-22	Sediment
23	LMR13-72-072	200-17028-23	Sediment
24*	LMR13-57-024FD	200-17028-24	Sediment

* - Analyzed for SVOC only

† - Analyzed for PCB only

PAH 34			
EDS ID	Client Sample ID	Laboratory Sample ID	Matrix
7	LMR13-57-012	200-17028-7	Sediment
18	LMR13-72-012	200-17028-18	Sediment

Metals/Mercury/TOC			
EDS ID	Client Sample ID	Laboratory Sample ID	Matrix
1	LMR13-83-048	200-17028-1	Sediment
1MS	LMR13-83-048MS	200-17028-1MS	Sediment
1MSD	LMR13-83-048MSD	200-17028-1MSD	Sediment
2	LMR13-83-072	200-17028-2	Sediment
3	LMR13-41-012	200-17028-3	Sediment
4	LMR13-41-024	200-17028-4	Sediment
5	LMR13-41-024FD	200-17028-5	Sediment
6	LMR13-41-048	200-17028-6	Sediment
7	LMR13-57-012	200-17028-7	Sediment
8	LMR13-26-012	200-17028-8	Sediment
9	LMR13-26-012FD	200-17028-9	Sediment
9MS	LMR13-26-012FDMS	200-17028-9MS	Sediment
9MSD	LMR13-26-012FDMSD	200-17028-9MSD	Sediment
10	LMR13-57-024	200-17028-10	Sediment
11	LMR13-57-048	200-17028-11	Sediment
12	LMR13-72-048	200-17028-12	Sediment
13	LMR13-27-012	200-17028-13	Sediment
14	LMR13-27-024	200-17028-14	Sediment
15	LMR13-27-024FD	200-17028-15	Sediment
16	LMR13-27-048	200-17028-16	Sediment
17	LMR13-27-072	200-17028-17	Sediment
18	LMR13-72-012	200-17028-18	Sediment
19	LMR13-72-024	200-17028-19	Sediment
20	LMR13-72-024FD	200-17028-20	Sediment
21	LMR13-72-096	200-17028-21	Sediment
22	LMR13-27-096	200-17028-22	Sediment
23	LMR13-72-072	200-17028-23	Sediment

AVS/SEM			
EDS ID	Client Sample ID	Laboratory Sample ID	Matrix
7	LMR13-57-012	200-17028-7	Sediment
18	LMR13-72-012	200-17028-18	Sediment

HEM			
EDS ID	Client Sample ID	Laboratory Sample ID	Matrix
1	LMR13-83-048	200-17028-1	Sediment
1MS	LMR13-83-048MS	200-17028-1MS	Sediment
1MSD	LMR13-83-048MSD	200-17028-1MSD	Sediment
2	LMR13-83-072	200-17028-2	Sediment
3	LMR13-41-012	200-17028-3	Sediment
4	LMR13-41-024	200-17028-4	Sediment
6	LMR13-41-048	200-17028-6	Sediment
7	LMR13-57-012	200-17028-7	Sediment
8	LMR13-26-012	200-17028-8	Sediment
9	LMR13-26-012FD	200-17028-9	Sediment

HEM			
EDS ID	Client Sample ID	Laboratory Sample ID	Matrix
9MS	LMR13-26-012FDMS	200-17028-9MS	Sediment
9MSD	LMR13-26-012FDMSD	200-17028-9MSD	Sediment
10	LMR13-57-024	200-17028-10	Sediment
11	LMR13-57-048	200-17028-11	Sediment
12	LMR13-72-048	200-17028-12	Sediment
13	LMR13-27-012	200-17028-13	Sediment
14	LMR13-27-024	200-17028-14	Sediment
16	LMR13-27-048	200-17028-16	Sediment
17	LMR13-27-072	200-17028-17	Sediment
18	LMR13-72-012	200-17028-18	Sediment
19	LMR13-72-024	200-17028-19	Sediment
20	LMR13-72-024FD	200-17028-20	Sediment
21	LMR13-72-096	200-17028-21	Sediment
22	LMR13-27-096	200-17028-22	Sediment
23	LMR13-72-072	200-17028-23	Sediment
24	LMR13-57-024FD	200-17028-24	Sediment

A full data validation was performed on the analytical data for twenty-four sediment samples collected on June 14, 2013 by EA Engineering at the Lower Maumee River site in Toledo, Ohio. The samples were analyzed under the Environmental Protection Agency (USEPA) Contract Laboratory Program (CLP) Multi-Media Multi-Concentration Organics Analysis SOM01.2 and Inorganic Analysis ILM05.4 and the Test Methods for the Evaluation of Solid Waste, USEPA SW-846, Third Edition, September 1986, with revisions.

Specific method references are as follows:

Analysis	*Method References*
SVOCs	USEPA CLP SOM01.2
PAH 34	USEPA CLP SOM01.2
PCBs	USEPA CLP SOM01.2
Michigan Metals & Mercury	USEPA CLP ISM01.3
AVS/SEM	USEPA SW-846 Methods 6010C/7470A
TOC	Lloyd Kahn
Oil & Grease (HEM)	USEPA SW-846 Method 9071B

The data have been validated according to the protocols and quality control (QC) requirements of the analytical methods, the Great Lakes Legacy Act, March 2010, the Quality Assurance Project Plan for Phase 2 of the Lower Maumee River Site Characterization, May 2013, and the USEPA National Functional Guidelines for Organic Data Review as follows:

- The USEPA "Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review," June 2008;
- The USEPA "Contract Laboratory Program National Functional Guidelines for Inorganic Superfund Data Review," January 2010;
- and the reviewer's professional judgment.

The following items/criteria were reviewed for this report:

Organics

- Holding times and sample preservation
- Gas Chromatography/Mass Spectroscopy (GC/MS) Tuning
- Initial and continuing calibration summaries
- Method blank and field blank contamination
- Surrogate Spike recoveries
- Matrix Spike/Matrix Spike Duplicate (MS/MSD) recoveries
- Laboratory Control Sample (LCS) recoveries
- Internal standard area and retention time summary forms
- Target Compound Identification
- Compound Quantitation
- Tentatively Identified Compounds (TICs)
- Field Duplicate sample precision

Inorganics

- Holding times and sample preservation
- ICP/MS Tuning
- Initial and continuing calibration verifications
- Method blank and field blank contamination
- ICP Interference Check Sample
- Laboratory Control Sample (LCS) recoveries
- Matrix Spike Analysis
- Duplicate Sample Analysis
- ICP Serial Dilution
- Compound Quantitation
- Field Duplicate sample precision

Overall Usability Issues:

There were minor rejections of data. This data cannot be used in the decision-making process for this project.

- Several SVOC compounds were rejected in ten samples due to severely low surrogate recoveries.

Overall the remaining data is acceptable for the intended purposes as qualified for the deficiencies detailed in this report.

Please note that any results qualified (U) due to blank contamination may be then qualified (J) due to another action. Therefore, the results may be qualified (UJ) due to the culmination of the blank contaminations and actions from other exceedences of QC criteria.

Semivolatile Organic Compounds (SVOCs)

Holding Times

- All samples were extracted within 14 days for sediment samples and analyzed within 40 days for all samples.

GC/MS Tuning

- All criteria were met.

Initial Calibration

- All %RSD and mean RRF criteria were met except the following.

ICAL Date	Compound	%RSD/RRF	Qualifier	Affected Samples
07/20/13	Pentachlorophenol	23.1%	J/UJ	7, 10, 12, 14, 19, 20, 21
	Benzo(b)fluoranthene	35.7%	J/UJ	
	Dibenzo(a,h)anthracene	23.2%	J/UJ	

Continuing Calibration

- All %D and RRF criteria were met except the following.

CCAL Date	Compound	%D/RRF	Qualifier	Affected Samples
07/21/13 (1253)	4-Methylphenol	29.9%	J/UJ	2, 4, 6, 8
	n-Nitroso-di-n-propylamine	33.8%	J/UJ	1, 2, 4, 6, 8
	Pentachlorophenol	36.8%	J/UJ	
07/21/13 (2241)	Hexachlorocyclopentadiene	58.3%	J/UJ	2, 4
	di-n-Octylphthalate	51.8%	J/UJ	1, 2, 4, 6, 8
07/24/13 (2222)	Hexachlorocyclopentadiene	67.0%	J/UJ	11, 13
	2,4-Dinitrophenol	54.3%	J/UJ	3, 9, 11, 13, 16, 17, 18
	Pentachlorophenol	93.7%	J/UJ	
07/27/13 (0926)	Indeno(1,2,3-cd)pyrene	29.2%	J/UJ	22-24
	Dibenzo(a,h)anthracene	25.7%	J/UJ	
	Benzo(g,h,i)perylene	31.4%	J/UJ	
07/27/13 (1931)	Hexachlorocyclopentadiene	67.6%	J/UJ	24
07/31/13 (1731)	di-n-Octylphthalate	65.6%	J/UJ	7, 10, 12, 14, 19, 20, 21

Method Blank

- The method blanks exhibited the following contamination.

Blank ID	Compound	Conc. ug/kg	Qualifier	Affected Samples
SBLKM1	di-n-Butylphthalate	11	U	1, 4, 6, 8
	Butylbenzylphthalate	18	U	1, 2, 4, 6, 8
	bis(2-Ethylhexyl)phthalate	49	U	1, 2, 4, 6
SBLK1M	Butylbenzylphthalate	7.5	None	ND or >10X
	bis(2-Ethylhexyl)phthalate	21	U	12, 14, 19-21
SBLKM3	Butylbenzylphthalate	22	U	22
	bis(2-Ethylhexyl)phthalate	44	U	22, 23, 24

Field Blank

- Field QC samples were not analyzed.

Surrogate Spike Recoveries

- All samples exhibited acceptable surrogate %R values except the following.

Sample ID	Surrogate	%R	Qualifier
1	4-Methylphenol-d8	2%	R – Associated Positive Results
	4-Chloroaniline-d4	0%	R – Associated Compounds
3	Phenol-d5	120%	J – Associated Positive Results
	4-Chloroaniline-d4	0%	R – Associated Compounds
6	4-Chloroaniline-d4	0%	R – Associated Compounds
8	Phenol-d5	108%	J – Associated Positive Results
	4-Methylphenol-d8	103%	None - ND
	4-Chloroaniline-d4	0%	R – Associated Compounds
9	4-Chloroaniline-d4	0%	R – Associated Compounds
13	Phenol-d5	104%	J – Associated Positive Results
	4-Methylphenol-d8	118%	None - ND
16	4-Chloroaniline-d4	0%	R – Associated Compounds
17	4-Chloroaniline-d4	0%	R – Associated Compounds
18	4-Chloroaniline-d4	0%	R – Associated Compounds
22	4-Methylphenol-d8	2%	R – Associated Compounds
	4-Chloroaniline-d4	0%	R – Associated Compounds
23	4-Chloroaniline-d4	0%	R – Associated Compounds

Matrix Spike/Matrix Spike Duplicate (MS/MSD) Recoveries

- The MS/MSD sample exhibited acceptable %R and RPD values except the following.

MS/MSD Sample ID	Compound	MS %R/MSD %R/ RPD	Qualifier
16	Pentachlorophenol	12%/OK/58	None - See CCAL

Laboratory Control Samples

- A LCS sample was not analyzed.

Internal Standard (IS) Area Performance

- All internal standards met response and retention time (RT) criteria.

Target Compound Identification

- All mass spectra and quantitation criteria were met.

Compound Quantitation

- Several samples were analyzed at a dilution due to high concentrations of target compounds. No action was required.

Field Duplicate Sample Precision

- Field duplicate results are summarized below.

SVOC				
Compound	LMR13-26-012 ug/kg	LMR13-26-012FD ug/kg	RPD	Qualifier
Benzaldehyde	59	55	7%	None
Naphthalene	23	20	14%	
2-Methylnaphthalene	18	18	0%	
Acenaphthene	51	83	48%	
Dibenzofuran	29	330U	NC	
Fluorene	70	110	44%	
Phenanthrene	320	430	29%	
Anthracene	86	82	5%	
Carbazole	350U	18	NC	
di-n-Butylphthalate	350U	12	NC	
Fluoranthene	570	620	8%	
Pyrene	690	660	4%	
Butylbenzylphthalate	350U	56	NC	
Benzo(a)anthracene	220	230	4%	
Chrysene	360	350	3%	
bis(2-Ethylhexyl)phthalate	500	240	70%	
Benzo(b)fluoranthene	260	330	24%	
Benzo(k)fluoranthene	260	270	4%	
Benzo(a)pyrene	200	190	5%	
Indeno(1,2,3-cd)pyrene	150	210	33%	
Dibenzo(a,h)anthracene	61	82	29%	
Benzo(g,h,i)perylene	180	250	33%	

SVOC				
Compound	LMR13-57-024 ug/kg	LMR13-57-024FD ug/kg	RPD	Qualifier
Naphthalene	230	180	24%	None
Acenaphthene	620	650	5%	
Dibenzofuran	3000U	190	NC	

SVOC				
Compound	LMR13-57-024 ug/kg	LMR13-57-024FD ug/kg	RPD	Qualifier
Fluorene	610	610	0%	
Phenanthrene	1700	1500	13%	None
Anthracene	370	370	0%	
Fluoranthene	1900	1400	30%	
Pyrene	2000	1600	22%	
Benzo(a)anthracene	1500	1000	40%	
Chrysene	1800	1700	6%	
Benzo(b)fluoranthene	750	560	29%	
Benzo(k)fluoranthene	360	370	3%	
Benzo(a)pyrene	680	540	23%	
Indeno(1,2,3-cd)pyrene	440	310	35%	
Dibenzo(a,h)anthracene	250	130	63%	
Benzo(g,h,i)perylene	600	390	42%	

SVOC				
Compound	LMR13-72-024 ug/kg	LMR13-72-024FD ug/kg	RPD	Qualifier
Benzaldehyde	40	42	5%	None
Acetophenone	22	21	5%	
Naphthalene	140	120	15%	
2-Methylnaphthalene	77	69	11%	
1,1'-Biphenyl	26	280U	NC	
Acenaphthylene	88	90	2%	
Acenaphthene	150	170	13%	
Dibenzofuran	78	47	50%	
Fluorene	270	260	4%	
Phenanthrene	900	990	10%	
Anthracene	150	140	7%	
Carbazole	23	20	14%	
di-n-Butylphthalate	290U	150	NC	
Fluoranthene	1700	1800	6%	
Pyrene	2800	3200	13%	
Benzo(a)anthracene	1900	2000	5%	
Chrysene	1400	1600	13%	
Benzo(b)fluoranthene	1600	1500	6%	
Benzo(k)fluoranthene	820	920	11%	
Benzo(a)pyrene	1000	930	7%	
Indeno(1,2,3-cd)pyrene	860	760	12%	
Dibenzo(a,h)anthracene	410	370	10%	
Benzo(g,h,i)perylene	980	920	6%	

Polynuclear Aromatic Hydrocarbons (PAH 34)

Holding Times

- All samples were extracted within 14 days for sediment samples and analyzed within 40 days for all samples.

GC/MS Tuning

- All criteria were met.

Initial Calibration

- All %RSD and mean RRF criteria were met.

Continuing Calibration

- All %D and RRF criteria were met.

Method Blank

- The method blanks exhibited the following contamination.

Blank ID	Compound	Conc. ug/kg	Qualifier	Affected Samples
SBLKM1	Naphthalene	0.17	U	18
	Phenanthrene	0.33	None	All >5X
	Fluoranthene	0.27	None	
	Pyrene	0.26	None	
	Benzo(a)anthracene	0.19	None	
	Chrysene	0.20	None	
	Benzo(b)fluoranthene	0.16	None	
	Benzo(k)fluoranthene	0.14	None	
	Total PPAH	1.7	J	All Samples
	Total PAH	1.7	J	

Field Blank

- Field QC samples were not analyzed.

Surrogate Spike Recoveries

- All samples exhibited acceptable surrogate %R values.

Matrix Spike/Matrix Spike Duplicate (MS/MSD) Recoveries

- A MS/MSD sample was not analyzed.

Laboratory Control Samples

- A LCS sample was not analyzed.

Internal Standard (IS) Area Performance

- All internal standards met response and retention time (RT) criteria.

Target Compound Identification

- All mass spectra and quantitation criteria were met.

Compound Quantitation

- EDS Sample IDs #7 and #18 exhibited high concentrations of several target compounds and were flagged (E) by the laboratory. Theses samples were not reanalyzed at a dilution and these results have been qualified as estimated (J).
- Total 16 PPAH and Total PAH were estimated (J) in all samples due to blank contamination.

Field Duplicate Sample Precision

- Field duplicate samples were not analyzed.

Polychlorinated Biphenyls (PCBs)

Holding Times

- All samples were extracted within 14 days for sediment samples and analyzed within 40 days.

Initial Calibration

- All %RSD and/or correlation coefficient criteria were met.

Continuing Calibration

- All %D criteria were met.

Method Blank

- The method blanks were free of contamination.

Field Blank

- Field QC samples were not analyzed.

Surrogate Spike Recoveries

- All samples exhibited acceptable surrogate recoveries except the following.

Sample ID	Surrogate	%R	Qualifier
7	TCX1/DCB1/DCB2	26%/13%/17%	J/UJ
10	TCX1/TCX2/DCB1/DCB2	25%/32%/12%/17%	J/UJ

Matrix Spike/Matrix Spike Duplicate (MS/MSD) Recoveries

- The MS/MSD sample exhibited acceptable %R and RPD values.

Laboratory Control Samples

- The LCS sample exhibited acceptable %R values.

Compound Quantitation

- EDS Sample ID #s 7 and 10 were analyzed at a dilution due to surrogate problems in the original analysis. Use the dilution results for reporting purposes.

Field Duplicate Sample Precision

- Field duplicate results are summarized below.

PCBs				
Compound	LMR13-41-024 ug/kg	LMR13-41-024FD ug/kg	RPD	Qualifier
None	ND	ND	-	-

PCBs				
Compound	LMR13-26-012 ug/kg	LMR13-26-012FD ug/kg	RPD	Qualifier
Aroclor-1242	46	47	2%	None
Aroclor-1254	35	35	0%	

PCBs				
Compound	LMR13-27-024 ug/kg	LMR13-27-024FD ug/kg	RPD	Qualifier
Aroclor-1242	20	34	52%	None
Aroclor-1254	19	35	59%	
Aroclor-1260	3.7	5.7	43%	

PCBs				
Compound	LMR13-72-024 ug/kg	LMR13-72-024FD ug/kg	RPD	Qualifier
Aroclor-1260	22	26	17%	None

GC Column Difference Results

- Several samples exhibited high %D values > 25% between columns and have been qualified as estimated (J) by the reviewer.

Metals & Mercury

Holding Times

- All samples were prepared and analyzed within 28 days for mercury and 180 days for all other metals.

ICP/MS Tuning

- Not applicable.

Initial Calibration Verification

- All initial calibration criteria were met.

Continuing Calibration Verification

- All continuing calibration criteria were met.

Method Blank

- The method blanks exhibited the following contamination.

Blank ID	Compound	Action Level mg/kg	Qualifier	Affected Samples
MB	Cadmium	0.033	U	1-6, 9, 11, 17, 22
	Zinc	0.30	None	All >10X
PBS	Mercury	0.030	U	2-4, 6, 8, 9, 11, 13, 17, 18

Field Blank

- Field QC samples were not analyzed.

ICP Interference Check Sample

- The ICP interference check sample exhibited acceptable %R values.

Laboratory Control Samples

- The LCS sample exhibited acceptable recoveries.

Matrix Spike/Duplicate (MS/DUP) Analysis

- The MS/DUP samples exhibited acceptable %R and RPD values except the following.

MS/MSD Sample ID	Compound	MS %R/MSD %R/ RPD	Qualifier	Affected Samples
1	Lead	195%/OK/OK	J	All Samples
	Mercury	132%/OK/OK	J	7, 10, 12, 14-16, 19-21, 23

ICP Serial Dilution

- ICP serial dilution percent differences (%D) were within acceptance limits except the following.

ICP Sample ID	Compound	%D	Qualifier	Affected Samples
1	Chromium	12%	J	All Samples
	Nickel	16%	J	
	Zinc	12%	J	

Compound Quantitation

- All criteria were met.

Field Duplicate Sample Precision

- Field duplicate results are summarized below.

Compound	LMR13-41-024 mg/kg	LMR13-41-024FD mg/kg	RPD	Qualifier
Arsenic	4.3	4.3	0%	None
Chromium	14.0	14.3	2%	
Copper	15.5	16.0	3%	
Lead	21.0	23.7	12%	
Nickel	20.1	20.4	1%	
Zinc	52.5	54.8	4%	

Compound	LMR13-26-012 mg/kg	LMR13-26-012FD mg/kg	RPD	Qualifier
Arsenic	7.1	7.1	0%	None
Cadmium	0.90	0.97U	NC	
Chromium	27.9	27.3	2%	
Copper	60.7	28.9	71%	
Lead	31.6	32.5	3%	
Nickel	31.3	31.5	1%	
Zinc	123	121	2%	

Compound	LMR13-27-024 mg/kg	LMR13-27-024FD mg/kg	RPD	Qualifier
Arsenic	22.3	24.7	10%	None
Cadmium	2.0	2.1	5%	
Chromium	40.1	43.0	7%	
Copper	50.4	50.8	1%	
Lead	107	116	8%	
Nickel	37.0	36.9	0%	
Zinc	342	363	6%	
Mercury	0.57	0.44	26%	

Compound	LMR13-72-024 mg/kg	LMR13-72-024FD mg/kg	RPD	Qualifier
Arsenic	15.6	13.2	17%	None
Cadmium	5.1	5.4	6%	
Chromium	43.1	41.9	3%	
Copper	91.5	85.5	7%	
Lead	245	246	0%	
Nickel	30.3	30.3	0%	
Zinc	424	353	18%	
Mercury	0.54	0.44	20%	

Oil & Grease, Total Organic Carbon, AVS/SEM (Metals & Hg)

Holding Times

- All samples were analyzed within the recommended holding time for each analysis.

Initial and Continuing Calibration

- All %R criteria were met.

Method Blank

- The method blanks exhibited the following contamination.

Blank ID	Compound	Conc. mg/kg	Qualifier	Affected Samples
240-90718/1-A	HEM	117.9	U	3, 4, 11, 22
240-91121/1-A	HEM	116.8	U	1

Field Blank

- Field QC samples were not included in this data package.

Laboratory Control Samples

- The LCS samples exhibited acceptable %R values.

Matrix Spike/Matrix Spike Duplicate (MS/MSD) Recoveries

- The MS/MSD samples exhibited acceptable %R and RPD values except the following.

MS/MSD Sample ID	Compound	MS %R/MSD %R/ RPD	Qualifier	Affected Samples
1	HEM	65%/OK/OK	J/UJ	All Samples
9	HEM	65%/OK/OK	J/UJ	

Compound Quantitation

- Several samples were analyzed at a dilution due to high concentrations of target compounds.

Field Duplicate Sample Precision

- Field duplicate results are summarized below.

TOC				
Compound	LMR13-41-024 mg/kg	LMR13-41-024FD mg/kg	RPD	Qualifier
TOC	28600	27900	2%	None

TOC				
Compound	LMR13-26-012 mg/kg	LMR13-26-012FD mg/kg	RPD	Qualifier
TOC	23200	25900	11%	None

HEM				
Compound	LMR13-26-012 mg/kg	LMR13-26-012FD mg/kg	RPD	Qualifier
HEM	618	618	0%	None

HEM				
Compound	LMR13-57-024 mg/kg	LMR13-57-024FD mg/kg	RPD	Qualifier
HEM	10800	16200	40%	None

TOC				
Compound	LMR13-27-024 mg/kg	LMR13-27-024FD mg/kg	RPD	Qualifier
TOC	29900	31300	5%	None

TOC				
Compound	LMR13-72-024 mg/kg	LMR13-72-024FD mg/kg	RPD	Qualifier
TOC	38700	37300	4%	None

HEM				
Compound	LMR13-72-024 mg/kg	LMR13-72-024FD mg/kg	RPD	Qualifier
HEM	2420	3090	24%	None

Please contact the undersigned at (757) 564-0090 if you have any questions or need further information.

Signed: Nancy Weaver Dated: 8/30/13

Nancy Weaver
Senior Chemist

Data Qualifiers

U = The analyte was analyzed for, but was not detected at a level greater than or equal to the level of the adjusted Contract Required Quantitation Limit (CRQL) for sample and method.

UJ = The analyte was not detected at a level greater than or equal to the adjusted CRQL. However, the reported adjusted CRQL is approximate and may be inaccurate or imprecise.

J = The analyte was positively identified and the associated numerical value is the approximate concentration of the analyte in the sample (due either to the quality of the data generated because certain quality control criteria were not met, or the concentration of the analyte was below the CRQL).

J+ = The result is an estimated quantity, but the result may be biased high.

J- = The result is an estimated quantity, but the result may be biased low.

R = The sample results are unusable due to the quality of the data generated because certain criteria were not met. The analyte may or may not be present in the sample.

NJ = The analysis indicates the presence of an analyte that has been "tentatively identified" and the associated numerical value represents its approximate concentration.

EPA SAMPLE NO.
LMR13-83-048

1

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17028

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17028-1

Sample wt/vol: 30.1 (g/mL) g Lab File ID: PJUWQ13.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 24 Decanted: (Y/N) Date Received: 06/15/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/22/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/21/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
100-52-7	Benzaldehyde	43	J	
108-95-2	Phenol	220	U	
111-44-4	Bis(2-chloroethyl)ether	220	U	
95-57-8	2-Chlorophenol	220	U	
95-48-7	2-Methylphenol	220	~~U~~	R
108-60-1	2,2'-Oxybis(1-chloropropane)	220	U	
98-86-2	Acetophenone	220	U	
106-44-5	4-Methylphenol	220	~~U~~	R
621-64-7	N-Nitroso-di-n-propylamine	220	~~U~~	UJ
67-72-1	Hexachloroethane	220	U	
98-95-3	Nitrobenzene	220	U	
78-59-1	Isophorone	220	U	
88-75-5	2-Nitrophenol	220	U	
105-67-9	2,4-Dimethylphenol	220	~~U~~	R
111-91-1	Bis(2-chloroethoxy)methane	220	U	
120-83-2	2,4-Dichlorophenol	220	U	
91-20-3	Naphthalene	220	U	
106-47-8	4-Chloroaniline	220	~~U~~	R
87-68-3	Hexachlorobutadiene	220	U	
105-60-2	Caprolactam	220	U	
59-50-7	4-Chloro-3-methylphenol	220	U	
91-57-6	2-Methylnaphthalene	220	U	
77-47-4	Hexachlorocyclopentadiene	220	~~U~~	R
88-06-2	2,4,6-Trichlorophenol	220	U	
95-95-4	2,4,5-Trichlorophenol	220	U	
92-52-4	1,1'-Biphenyl	220	U	
91-58-7	2-Chloronaphthalene	220	U	
88-74-4	2-Nitroaniline	430	U	
131-11-3	Dimethylphthalate	220	U	
606-20-2	2,6-Dinitrotoluene	220	U	
208-96-8	Acenaphthylene	220	U	
99-09-2	3-Nitroaniline	430	U	
83-32-9	Acenaphthene	66	J	

NW 8/28/13

EPA SAMPLE NO.
LMR13-83-048

1

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17028

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17028-1

Sample wt/vol: 30.1 (g/mL) g Lab File ID: PJUWQ13.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 24 Decanted: (Y/N) Date Received: 06/15/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/22/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/21/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
51-28-5	2,4-Dinitrophenol	430	U	
100-02-7	4-Nitrophenol	430	U	
132-64-9	Dibenzofuran	20	J	
121-14-2	2,4-Dinitrotoluene	220	U	
84-66-2	Diethylphthalate	220	U	
86-73-7	Fluorene	38	J	
7005-72-3	4-Chlorophenyl-phenylether	220	U	
100-01-6	4-Nitroaniline	430	U	
534-52-1	4,6-Dinitro-2-methylphenol	430	U	
86-30-6	N-Nitrosodiphenylamin [1]	220	U	
95-94-3	1,2,4,5-Tetrachlorobenzene	220	U	
101-55-3	4-Bromophenyl-phenylether	220	U	
118-74-1	Hexachlorobenzene	220	U	
1912-24-9	Atrazine	220	U	
87-86-5	Pentachlorophenol	430	~~U~~	UJ
85-01-8	Phenanthrene	280		
120-12-7	Anthracene	110	J	
86-74-8	Carbazole	220	U	
84-74-2	Di-n-butylphthalate	220 ~~12~~	~~J B~~	U
206-44-0	Fluoranthene	460		
129-00-0	Pyrene	470		
85-68-7	Butylbenzylphthalate	220 ~~31~~	~~J B~~	U
91-94-1	3,3'-Dichlorobenzidine	220	~~U~~	R
56-55-3	Benzo(a)anthracene	250		
218-01-9	Chrysene	220	J	
117-81-7	Bis(2-ethylhexyl)phthalate	220 ~~84~~	~~J B~~	U
117-84-0	Di-n-octylphthalate	220	~~U~~	UJ
205-99-2	Benzo(b)fluoranthene	130	J	
207-08-9	Benzo(k)fluoranthene	180	J	
50-32-8	Benzo(a)pyrene	150	J	
193-39-5	Indeno(1,2,3-cd)pyrene	89	J	
53-70-3	Dibenzo(a,h)anthracene	41	J	
191-24-2	Benzo(g,h,i)perylene	89	J	
58-90-2	2,3,4,6-Tetrachlorophenol	220	U	

[1] Cannot be separated from Diphenylamine

NW 8/28/13

1D - FORM I SV-1

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-83-072

2

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17028

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17028-2

Sample wt/vol: 30.1 (g/mL) g Lab File ID: PJUWQ14.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 19 Decanted: (Y/N) Date Received: 06/15/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/22/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/21/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
100-52-7	Benzaldehyde	210	U	
108-95-2	Phenol	210	U	
111-44-4	Bis(2-chloroethyl)ether	210	U	
95-57-8	2-Chlorophenol	210	U	
95-48-7	2-Methylphenol	210	U	
108-60-1	2,2'-Oxybis(1-chloropropane)	210	U	
98-86-2	Acetophenone	210	U	
106-44-5	4-Methylphenol	210	~~U~~	UJ
621-64-7	N-Nitroso-di-n-propylamine	210	~~U~~	UJ
67-72-1	Hexachloroethane	210	U	
98-95-3	Nitrobenzene	210	U	
78-59-1	Isophorone	210	U	
88-75-5	2-Nitrophenol	210	U	
105-67-9	2,4-Dimethylphenol	210	U	
111-91-1	Bis(2-chloroethoxy)methane	210	U	
120-83-2	2,4-Dichlorophenol	210	U	
91-20-3	Naphthalene	210	U	
106-47-8	4-Chloroaniline	210	U	
87-68-3	Hexachlorobutadiene	210	U	
105-60-2	Caprolactam	210	U	
59-50-7	4-Chloro-3-methylphenol	210	U	
91-57-6	2-Methylnaphthalene	210	U	
77-47-4	Hexachlorocyclopentadiene	210	~~U~~	UJ
88-06-2	2,4,6-Trichlorophenol	210	U	
95-95-4	2,4,5-Trichlorophenol	210	U	
92-52-4	1,1'-Biphenyl	210	U	
91-58-7	2-Chloronaphthalene	210	U	
88-74-4	2-Nitroaniline	400	U	
131-11-3	Dimethylphthalate	210	U	
606-20-2	2,6-Dinitrotoluene	210	U	
208-96-8	Acenaphthylene	210	U	
99-09-2	3-Nitroaniline	400	U	
83-32-9	Acenaphthene	210	U	

NW 8/28/13

EPA SAMPLE NO.
LMR13-83-072

2

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17028

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17028-2

Sample wt/vol: 30.1 (g/mL) g Lab File ID: PJUWQ14.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 19 Decanted: (Y/N) Date Received: 06/15/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/22/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/21/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
51-28-5	2,4-Dinitrophenol	400	U	
100-02-7	4-Nitrophenol	400	U	
132-64-9	Dibenzofuran	210	U	
121-14-2	2,4-Dinitrotoluene	210	U	
84-66-2	Diethylphthalate	210	U	
86-73-7	Fluorene	210	U	
7005-72-3	4-Chlorophenyl-phenylether	210	U	
100-01-6	4-Nitroaniline	400	U	
534-52-1	4,6-Dinitro-2-methylphenol	400	U	
86-30-6	N-Nitrosodiphenylamin [1]	210	U	
95-94-3	1,2,4,5-Tetrachlorobenzene	210	U	
101-55-3	4-Bromophenyl-phenylether	210	U	
118-74-1	Hexachlorobenzene	210	U	
1912-24-9	Atrazine	210	U	
87-86-5	Pentachlorophenol	400	~~U~~	UJ
85-01-8	Phenanthrene	210	U	
120-12-7	Anthracene	210	U	
86-74-8	Carbazole	210	U	
84-74-2	Di-n-butylphthalate	210	U	
206-44-0	Fluoranthene	210	U	
129-00-0	Pyrene	210	U	
85-68-7	Butylbenzylphthalate	210 ~~37~~	~~J B~~	U
91-94-1	3,3'-Dichlorobenzidine	210	U	
56-55-3	Benzo(a)anthracene	210	U	
218-01-9	Chrysene	210	U	
117-81-7	Bis(2-ethylhexyl)phthalate	210 ~~65~~	~~J B~~	U
117-84-0	Di-n-octylphthalate	210	~~U~~	UJ
205-99-2	Benzo(b)fluoranthene	210	U	
207-08-9	Benzo(k)fluoranthene	210	U	
50-32-8	Benzo(a)pyrene	210	U	
193-39-5	Indeno(1,2,3-cd)pyrene	210	U	
53-70-3	Dibenzo(a,h)anthracene	210	U	
191-24-2	Benzo(g,h,i)perylene	210	U	
58-90-2	2,3,4,6-Tetrachlorophenol	210	U	

[1] Cannot be separated from Diphenylamine

NW 8/28/13

EPA SAMPLE NO.
LMR13-41-012

3

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17028

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17028-3

Sample wt/vol: 30.4 (g/mL) g Lab File ID: PJX12.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 32 Decanted: (Y/N) Date Received: 06/15/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/22/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/24/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
100-52-7	Benzaldehyde	89	J	J
108-95-2	Phenol	250	U	
111-44-4	Bis(2-chloroethyl)ether	250	U	
95-57-8	2-Chlorophenol	250	U	
95-48-7	2-Methylphenol	250	U	
108-60-1	2,2'-Oxybis(1-chloropropane)	250	U	
98-86-2	Acetophenone	250	U	
106-44-5	4-Methylphenol	250	U	
621-64-7	N-Nitroso-di-n-propylamine	250	U	
67-72-1	Hexachloroethane	250	U	
98-95-3	Nitrobenzene	250	U	
78-59-1	Isophorone	250	U	
88-75-5	2-Nitrophenol	250	U	
105-67-9	2,4-Dimethylphenol	250	U	
111-91-1	Bis(2-chloroethoxy)methane	250	U	
120-83-2	2,4-Dichlorophenol	250	U	
91-20-3	Naphthalene	17	J	
106-47-8	4-Chloroaniline	250	U	R
87-68-3	Hexachlorobutadiene	250	U	
105-60-2	Caprolactam	250	U	
59-50-7	4-Chloro-3-methylphenol	250	U	
91-57-6	2-Methylnaphthalene	250	U	
77-47-4	Hexachlorocyclopentadiene	250	U	R
88-06-2	2,4,6-Trichlorophenol	250	U	
95-95-4	2,4,5-Trichlorophenol	250	U	
92-52-4	1,1'-Biphenyl	250	U	
91-58-7	2-Chloronaphthalene	250	U	
88-74-4	2-Nitroaniline	480	U	
131-11-3	Dimethylphthalate	250	U	
606-20-2	2,6-Dinitrotoluene	250	U	
208-96-8	Acenaphthylene	24	J	
99-09-2	3-Nitroaniline	480	U	
83-32-9	Acenaphthene	73	J	

NW 8/28/13

EPA SAMPLE NO.
LMR13-41-012

3

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17028

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17028-3

Sample wt/vol: 30.4 (g/mL) g Lab File ID: PJX12.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 32 Decanted: (Y/N) Date Received: 06/15/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/22/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/24/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
51-28-5	2,4-Dinitrophenol	480	~~U~~	UJ
100-02-7	4-Nitrophenol	480	U	
132-64-9	Dibenzofuran	55	J	
121-14-2	2,4-Dinitrotoluene	250	U	
84-66-2	Diethylphthalate	250	U	
86-73-7	Fluorene	190	J	
7005-72-3	4-Chlorophenyl-phenylether	250	U	
100-01-6	4-Nitroaniline	480	U	
534-52-1	4,6-Dinitro-2-methylphenol	480	U	
86-30-6	N-Nitrosodiphenylamin [1]	250	U	
95-94-3	1,2,4,5-Tetrachlorobenzene	250	U	
101-55-3	4-Bromophenyl-phenylether	250	U	
118-74-1	Hexachlorobenzene	250	U	
1912-24-9	Atrazine	250	U	
87-86-5	Pentachlorophenol	480	~~U~~	UJ
85-01-8	Phenanthrene	1000		
120-12-7	Anthracene	450		
86-74-8	Carbazole	250	U	
84-74-2	Di-n-butylphthalate	250	U	
206-44-0	Fluoranthene	1200		
129-00-0	Pyrene	1200		
85-68-7	Butylbenzylphthalate	250	U	
91-94-1	3,3'-Dichlorobenzidine	250	~~U~~	R
56-55-3	Benzo(a)anthracene	780		
218-01-9	Chrysene	680		
117-81-7	Bis(2-ethylhexyl)phthalate	92	J	
117-84-0	Di-n-octylphthalate	250	U	
205-99-2	Benzo(b)fluoranthene	460		
207-08-9	Benzo(k)fluoranthene	390		
50-32-8	Benzo(a)pyrene	490		
193-39-5	Indeno(1,2,3-cd)pyrene	220	J	
53-70-3	Dibenzo(a,h)anthracene	93	J	
191-24-2	Benzo(g,h,i)perylene	210	J	
58-90-2	2,3,4,6-Tetrachlorophenol	250	U	

[1] Cannot be separated from Diphenylamine

NW 8/28/13

EPA SAMPLE NO.
LMR13-41-024

4

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17028

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17028-4

Sample wt/vol: 30.8 (g/mL) g Lab File ID: PJUWQ16.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 34 Decanted: (Y/N) Date Received: 06/15/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/22/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/21/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
100-52-7	Benzaldehyde	250	U	
108-95-2	Phenol	250	U	
111-44-4	Bis(2-chloroethyl)ether	250	U	
95-57-8	2-Chlorophenol	250	U	
95-48-7	2-Methylphenol	250	U	
108-60-1	2,2'-Oxybis(1-chloropropane)	250	U	
98-86-2	Acetophenone	250	U	
106-44-5	4-Methylphenol	250	~~U~~	UJ
621-64-7	N-Nitroso-di-n-propylamine	250	~~U~~	UJ
67-72-1	Hexachloroethane	250	U	
98-95-3	Nitrobenzene	250	U	
78-59-1	Isophorone	250	U	
88-75-5	2-Nitrophenol	250	U	
105-67-9	2,4-Dimethylphenol	250	U	
111-91-1	Bis(2-chloroethoxy)methane	250	U	
120-83-2	2,4-Dichlorophenol	250	U	
91-20-3	Naphthalene	250	U	
106-47-8	4-Chloroaniline	250	U	
87-68-3	Hexachlorobutadiene	250	U	
105-60-2	Caprolactam	250	U	
59-50-7	4-Chloro-3-methylphenol	250	U	
91-57-6	2-Methylnaphthalene	250	U	
77-47-4	Hexachlorocyclopentadiene	250	~~U~~	UJ
88-06-2	2,4,6-Trichlorophenol	250	U	
95-95-4	2,4,5-Trichlorophenol	250	U	
92-52-4	1,1'-Biphenyl	250	U	
91-58-7	2-Chloronaphthalene	250	U	
88-74-4	2-Nitroaniline	490	U	
131-11-3	Dimethylphthalate	250	U	
606-20-2	2,6-Dinitrotoluene	250	U	
208-96-8	Acenaphthylene	250	U	
99-09-2	3-Nitroaniline	490	U	
83-32-9	Acenaphthene	11	J	

NW 8/28/13

EPA SAMPLE NO.
LMR13-41-024

4

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17028

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17028-4

Sample wt/vol: 30.8 (g/mL) g Lab File ID: PJUWQ16.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 34 Decanted: (Y/N) Date Received: 06/15/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/22/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/21/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
51-28-5	2,4-Dinitrophenol	490	U	
100-02-7	4-Nitrophenol	490	U	
132-64-9	Dibenzofuran	250	U	
121-14-2	2,4-Dinitrotoluene	250	U	
84-66-2	Diethylphthalate	250	U	
86-73-7	Fluorene	250	U	
7005-72-3	4-Chlorophenyl-phenylether	250	U	
100-01-6	4-Nitroaniline	490	U	
534-52-1	4,6-Dinitro-2-methylphenol	490	U	
86-30-6	N-Nitrosodiphenylamin [1]	250	U	
95-94-3	1,2,4,5-Tetrachlorobenzene	250	U	
101-55-3	4-Bromophenyl-phenylether	250	U	
118-74-1	Hexachlorobenzene	250	U	
1912-24-9	Atrazine	250	U	
87-86-5	Pentachlorophenol	490	~~U~~	UJ
85-01-8	Phenanthrene	76	J	
120-12-7	Anthracene	27	J	
86-74-8	Carbazole	250	U	
84-74-2	Di-n-butylphthalate	250 ~~44~~	~~J B~~	U
206-44-0	Fluoranthene	81	J	
129-00-0	Pyrene	85	J	
85-68-7	Butylbenzylphthalate	250 ~~39~~	~~J B~~	U
91-94-1	3,3'-Dichlorobenzidine	250	U	
56-55-3	Benzo(a)anthracene	44	J	
218-01-9	Chrysene	51	J	
117-81-7	Bis(2-ethylhexyl)phthalate	250 ~~87~~	~~J B~~	U
117-84-0	Di-n-octylphthalate	250	~~U~~	UJ
205-99-2	Benzo(b)fluoranthene	25	J	
207-08-9	Benzo(k)fluoranthene	31	J	
50-32-8	Benzo(a)pyrene	33	J	
193-39-5	Indeno(1,2,3-cd)pyrene	250	U	
53-70-3	Dibenzo(a,h)anthracene	250	U	
191-24-2	Benzo(g,h,i)perylene	250	U	
58-90-2	2,3,4,6-Tetrachlorophenol	250	U	

[1] Cannot be separated from Diphenylamine

NW 8/28/13

1D - FORM I SV-1

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-41-048

6

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17028

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17028-6

Sample wt/vol: 30.5 (g/mL) g Lab File ID: PJUWQ17.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 27 Decanted: (Y/N) Date Received: 06/15/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/22/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/21/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
100-52-7	Benzaldehyde	230	U	
108-95-2	Phenol	230	U	
111-44-4	Bis(2-chloroethyl)ether	230	U	
95-57-8	2-Chlorophenol	230	U	
95-48-7	2-Methylphenol	230	U	
108-60-1	2,2'-Oxybis(1-chloropropane)	230	U	
98-86-2	Acetophenone	230	U	
106-44-5	4-Methylphenol	230	~~U~~	UJ
621-64-7	N-Nitroso-di-n-propylamine	230	~~U~~	UJ
67-72-1	Hexachloroethane	230	U	
98-95-3	Nitrobenzene	230	U	
78-59-1	Isophorone	230	U	
88-75-5	2-Nitrophenol	230	U	
105-67-9	2,4-Dimethylphenol	230	U	
111-91-1	Bis(2-chloroethoxy)methane	230	U	
120-83-2	2,4-Dichlorophenol	230	U	
91-20-3	Naphthalene	230	U	
106-47-8	4-Chloroaniline	230	~~U~~	R
87-68-3	Hexachlorobutadiene	230	U	
105-60-2	Caprolactam	230	U	
59-50-7	4-Chloro-3-methylphenol	230	U	
91-57-6	2-Methylnaphthalene	230	U	
77-47-4	Hexachlorocyclopentadiene	230	~~U~~	R
88-06-2	2,4,6-Trichlorophenol	230	U	
95-95-4	2,4,5-Trichlorophenol	230	U	
92-52-4	1,1'-Biphenyl	230	U	
91-58-7	2-Chloronaphthalene	230	U	
88-74-4	2-Nitroaniline	440	U	
131-11-3	Dimethylphthalate	230	U	
606-20-2	2,6-Dinitrotoluene	230	U	
208-96-8	Acenaphthylene	230	U	
99-09-2	3-Nitroaniline	440	U	
83-32-9	Acenaphthene	230	U	

NW 8/28/13

EPA SAMPLE NO.
LMR13-41-048

6

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17028

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17028-6

Sample wt/vol: 30.5 (g/mL) g Lab File ID: PJUWQ17.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 27 Decanted: (Y/N) Date Received: 06/15/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/22/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/21/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
51-28-5	2,4-Dinitrophenol	440	U	
100-02-7	4-Nitrophenol	440	U	
132-64-9	Dibenzofuran	230	U	
121-14-2	2,4-Dinitrotoluene	230	U	
84-66-2	Diethylphthalate	230	U	
86-73-7	Fluorene	230	U	
7005-72-3	4-Chlorophenyl-phenylether	230	U	
100-01-6	4-Nitroaniline	440	U	
534-52-1	4,6-Dinitro-2-methylphenol	440	U	
86-30-6	N-Nitrosodiphenylamin [1]	230	U	
95-94-3	1,2,4,5-Tetrachlorobenzene	230	U	
101-55-3	4-Bromophenyl-phenylether	230	U	
118-74-1	Hexachlorobenzene	230	U	
1912-24-9	Atrazine	230	U	
87-86-5	Pentachlorophenol	440	~~U~~	UJ
85-01-8	Phenanthrene	30	J	
120-12-7	Anthracene	230	U	
86-74-8	Carbazole	230	U	
84-74-2	Di-n-butylphthalate	230 ~~29~~ ~~J B~~	U	
206-44-0	Fluoranthene	17	J	
129-00-0	Pyrene	23	J	
85-68-7	Butylbenzylphthalate	230 ~~31~~ ~~J B~~	U	
91-94-1	3,3'-Dichlorobenzidine	230	~~U~~	R
56-55-3	Benzo(a)anthracene	230	U	
218-01-9	Chrysene	21	J	
117-81-7	Bis(2-ethylhexyl)phthalate	230 ~~79~~ ~~J B~~	U	
117-84-0	Di-n-octylphthalate	230	~~U~~	UJ
205-99-2	Benzo(b)fluoranthene	230	U	
207-08-9	Benzo(k)fluoranthene	230	U	
50-32-8	Benzo(a)pyrene	230	U	
193-39-5	Indeno(1,2,3-cd)pyrene	230	U	
53-70-3	Dibenzo(a,h)anthracene	230	U	
191-24-2	Benzo(g,h,i)perylene	230	U	
58-90-2	2,3,4,6-Tetrachlorophenol	230	U	

[1] Cannot be separated from Diphenylamine

NW 8/28/13

EPA SAMPLE NO.
LMR13-57-012

7

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17028

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17028-7

Sample wt/vol: 30.9 (g/mL) g Lab File ID: ULKBA08.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 43 Decanted: (Y/N) Date Received: 06/15/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/22/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/31/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 10.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
100-52-7	Benzaldehyde	2900	U
108-95-2	Phenol	2900	U
111-44-4	Bis(2-chloroethyl)ether	2900	U
95-57-8	2-Chlorophenol	2900	U
95-48-7	2-Methylphenol	2900	U
108-60-1	2,2'-Oxybis(1-chloropropane)	2900	U
98-86-2	Acetophenone	2900	U
106-44-5	4-Methylphenol	2900	U
621-64-7	N-Nitroso-di-n-propylamine	2900	U
67-72-1	Hexachloroethane	2900	U
98-95-3	Nitrobenzene	2900	U
78-59-1	Isophorone	2900	U
88-75-5	2-Nitrophenol	2900	U
105-67-9	2,4-Dimethylphenol	2900	U
111-91-1	Bis(2-chloroethoxy)methane	2900	U
120-83-2	2,4-Dichlorophenol	2900	U
91-20-3	Naphthalene	730	J
106-47-8	4-Chloroaniline	2900	U
87-68-3	Hexachlorobutadiene	2900	U
105-60-2	Caprolactam	2900	U
59-50-7	4-Chloro-3-methylphenol	2900	U
91-57-6	2-Methylnaphthalene	350	J
77-47-4	Hexachlorocyclopentadiene	2900	U
88-06-2	2,4,6-Trichlorophenol	2900	U
95-95-4	2,4,5-Trichlorophenol	2900	U
92-52-4	1,1'-Biphenyl	2900	U
91-58-7	2-Chloronaphthalene	2900	U
88-74-4	2-Nitroaniline	5700	U
131-11-3	Dimethylphthalate	2900	U
606-20-2	2,6-Dinitrotoluene	2900	U
208-96-8	Acenaphthylene	300	J
99-09-2	3-Nitroaniline	5700	U
83-32-9	Acenaphthene	4000	

NW 8/28/13

1E - FORM I SV-2
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-57-012

7

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678
Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17028
Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17028-7
Sample wt/vol: 30.9 (g/mL) g Lab File ID: ULKBA08.D
Level: (LOW/MED) LOW Extraction: (Type) SONC
% Moisture: 43 Decanted: (Y/N) Date Received: 06/15/2013
Concentrated Extract Volume: 500 (uL) Date Extracted: 06/22/2013
Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/31/2013
GPC Cleanup: (Y/N) Y pH: Dilution Factor: 10.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
51-28-5	2,4-Dinitrophenol	5700	U	
100-02-7	4-Nitrophenol	5700	U	
132-64-9	Dibenzofuran	3200		
121-14-2	2,4-Dinitrotoluene	2900	U	
84-66-2	Diethylphthalate	2900	U	
86-73-7	Fluorene	5300		
7005-72-3	4-Chlorophenyl-phenylether	2900	U	
100-01-6	4-Nitroaniline	54	J	
534-52-1	4,6-Dinitro-2-methylphenol	5700	U	
86-30-6	N-Nitrosodiphenylamin [1]	2900	U	
95-94-3	1,2,4,5-Tetrachlorobenzene	2900	U	
101-55-3	4-Bromophenyl-phenylether	2900	U	
118-74-1	Hexachlorobenzene	2900	U	
1912-24-9	Atrazine	2900	U	
87-86-5	Pentachlorophenol	5700	~~U~~	UJ
85-01-8	Phenanthrene	17000		
120-12-7	Anthracene	4600		
86-74-8	Carbazole	2900	U	
84-74-2	Di-n-butylphthalate	2900	U	
206-44-0	Fluoranthene	14000		
129-00-0	Pyrene	10000		
85-68-7	Butylbenzylphthalate	2900	U	
91-94-1	3,3'-Dichlorobenzidine	2900	U	
56-55-3	Benzo(a)anthracene	6000		
218-01-9	Chrysene	5100		
117-81-7	Bis(2-ethylhexyl)phthalate	2900	U	
117-84-0	Di-n-octylphthalate	2900	~~U~~	UJ
205-99-2	Benzo(b)fluoranthene	2900	~~J~~	J
207-08-9	Benzo(k)fluoranthene	2600	J	
50-32-8	Benzo(a)pyrene	3000		
193-39-5	Indeno(1,2,3-cd)pyrene	1800	J	
53-70-3	Dibenzo(a,h)anthracene	790	~~J~~	J
191-24-2	Benzo(g,h,i)perylene	2300	J	
58-90-2	2,3,4,6-Tetrachlorophenol	2900	U	

[1] Cannot be separated from Diphenylamine

NW 8/28/13

EPA SAMPLE NO.
LMR13-26-012

8

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17028

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17028-8

Sample wt/vol: 30.6 (g/mL) g Lab File ID: PJUWQ18.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 53 Decanted: (Y/N) Date Received: 06/15/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/22/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/21/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
100-52-7	Benzaldehyde	59	~~J~~	J
108-95-2	Phenol	350	U	
111-44-4	Bis(2-chloroethyl)ether	350	U	
95-57-8	2-Chlorophenol	350	U	
95-48-7	2-Methylphenol	350	U	
108-60-1	2,2'-Oxybis(1-chloropropane)	350	U	
98-86-2	Acetophenone	350	U	
106-44-5	4-Methylphenol	350	~~U~~	UJ
621-64-7	N-Nitroso-di-n-propylamine	350	~~U~~	UJ
67-72-1	Hexachloroethane	350	U	
98-95-3	Nitrobenzene	350	U	
78-59-1	Isophorone	350	U	
88-75-5	2-Nitrophenol	350	U	
105-67-9	2,4-Dimethylphenol	350	U	
111-91-1	Bis(2-chloroethoxy)methane	350	U	
120-83-2	2,4-Dichlorophenol	350	U	
91-20-3	Naphthalene	23	J	
106-47-8	4-Chloroaniline	350	~~U~~	R
87-68-3	Hexachlorobutadiene	350	U	
105-60-2	Caprolactam	350	U	
59-50-7	4-Chloro-3-methylphenol	350	U	
91-57-6	2-Methylnaphthalene	18	J	
77-47-4	Hexachlorocyclopentadiene	350	~~U~~	R
88-06-2	2,4,6-Trichlorophenol	350	U	
95-95-4	2,4,5-Trichlorophenol	350	U	
92-52-4	1,1'-Biphenyl	350	U	
91-58-7	2-Chloronaphthalene	350	U	
88-74-4	2-Nitroaniline	690	U	
131-11-3	Dimethylphthalate	350	U	
606-20-2	2,6-Dinitrotoluene	350	U	
208-96-8	Acenaphthylene	350	U	
99-09-2	3-Nitroaniline	690	U	
83-32-9	Acenaphthene	51	J	

NW 8/28/13

EPA SAMPLE NO.
LMR13-26-012

8

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17028

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17028-8

Sample wt/vol: 30.6 (g/mL) g Lab File ID: PJUWQ18.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 53 Decanted: (Y/N) Date Received: 06/15/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/22/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/21/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
51-28-5	2,4-Dinitrophenol	690	U	
100-02-7	4-Nitrophenol	690	U	
132-64-9	Dibenzofuran	29	J	
121-14-2	2,4-Dinitrotoluene	350	U	
84-66-2	Diethylphthalate	350	U	
86-73-7	Fluorene	70	J	
7005-72-3	4-Chlorophenyl-phenylether	350	U	
100-01-6	4-Nitroaniline	690	U	
534-52-1	4,6-Dinitro-2-methylphenol	690	U	
86-30-6	N-Nitrosodiphenylamin [1]	350	U	
95-94-3	1,2,4,5-Tetrachlorobenzene	350	U	
101-55-3	4-Bromophenyl-phenylether	350	U	
118-74-1	Hexachlorobenzene	350	U	
1912-24-9	Atrazine	350	U	
87-86-5	Pentachlorophenol	690	~~U~~	UJ
85-01-8	Phenanthrene	320	J	
120-12-7	Anthracene	86	J	
86-74-8	Carbazole	350	U	
84-74-2	Di-n-butylphthalate	350 ~~15~~	~~J B~~	U
206-44-0	Fluoranthene	570		
129-00-0	Pyrene	690		
85-68-7	Butylbenzylphthalate	350 ~~55~~	~~J B~~	U
91-94-1	3,3'-Dichlorobenzidine	350	~~U~~	R
56-55-3	Benzo(a)anthracene	220	J	
218-01-9	Chrysene	360		
117-81-7	Bis(2-ethylhexyl)phthalate	500	~~B~~	
117-84-0	Di-n-octylphthalate	350	~~U~~	UJ
205-99-2	Benzo(b)fluoranthene	260	J	
207-08-9	Benzo(k)fluoranthene	260	J	
50-32-8	Benzo(a)pyrene	200	J	
193-39-5	Indeno(1,2,3-cd)pyrene	150	J	
53-70-3	Dibenzo(a,h)anthracene	61	J	
191-24-2	Benzo(g,h,i)perylene	180	J	
58-90-2	2,3,4,6-Tetrachlorophenol	350	U	

[1] Cannot be separated from Diphenylamine

NW 8/28/13

EPA SAMPLE NO.
LMR13-26-012FD

9

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678
Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17028
Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17028-9
Sample wt/vol: 30.8 (g/mL) g Lab File ID: PJX13.D
Level: (LOW/MED) LOW Extraction: (Type) SONC
% Moisture: 50 Decanted: (Y/N) Date Received: 06/15/2013
Concentrated Extract Volume: 500 (uL) Date Extracted: 06/22/2013
Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/24/2013
GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
100-52-7	Benzaldehyde	55	J	
108-95-2	Phenol	330	U	
111-44-4	Bis(2-chloroethyl)ether	330	U	
95-57-8	2-Chlorophenol	330	U	
95-48-7	2-Methylphenol	330	U	
108-60-1	2,2'-Oxybis(1-chloropropane)	330	U	
98-86-2	Acetophenone	330	U	
106-44-5	4-Methylphenol	330	U	
621-64-7	N-Nitroso-di-n-propylamine	330	U	
67-72-1	Hexachloroethane	330	U	
98-95-3	Nitrobenzene	330	U	
78-59-1	Isophorone	330	U	
88-75-5	2-Nitrophenol	330	U	
105-67-9	2,4-Dimethylphenol	330	U	
111-91-1	Bis(2-chloroethoxy)methane	330	U	
120-83-2	2,4-Dichlorophenol	330	U	
91-20-3	Naphthalene	20	J	
106-47-8	4-Chloroaniline	330	~~U~~	R
87-68-3	Hexachlorobutadiene	330	U	
105-60-2	Caprolactam	330	U	
59-50-7	4-Chloro-3-methylphenol	330	U	
91-57-6	2-Methylnaphthalene	18	J	
77-47-4	Hexachlorocyclopentadiene	330	~~U~~	R
88-06-2	2,4,6-Trichlorophenol	330	U	
95-95-4	2,4,5-Trichlorophenol	330	U	
92-52-4	1,1'-Biphenyl	330	U	
91-58-7	2-Chloronaphthalene	330	U	
88-74-4	2-Nitroaniline	650	U	
131-11-3	Dimethylphthalate	330	U	
606-20-2	2,6-Dinitrotoluene	330	U	
208-96-8	Acenaphthylene	330	U	
99-09-2	3-Nitroaniline	650	U	
83-32-9	Acenaphthene	83	J	

NW 8/28/13

EPA SAMPLE NO.
LMR13-26-012FD

9

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17028

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17028-9

Sample wt/vol: 30.8 (g/mL) g Lab File ID: PJX13.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 50 Decanted: (Y/N) Date Received: 06/15/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/22/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/24/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
51-28-5	2,4-Dinitrophenol	650	~~U~~	UJ
100-02-7	4-Nitrophenol	650	U	
132-64-9	Dibenzofuran	330	U	
121-14-2	2,4-Dinitrotoluene	330	U	
84-66-2	Diethylphthalate	330	U	
86-73-7	Fluorene	110	J	
7005-72-3	4-Chlorophenyl-phenylether	330	U	
100-01-6	4-Nitroaniline	650	U	
534-52-1	4,6-Dinitro-2-methylphenol	650	U	
86-30-6	N-Nitrosodiphenylamin [1]	330	U	
95-94-3	1,2,4,5-Tetrachlorobenzene	330	U	
101-55-3	4-Bromophenyl-phenylether	330	U	
118-74-1	Hexachlorobenzene	330	U	
1912-24-9	Atrazine	330	U	
87-86-5	Pentachlorophenol	650	~~U~~	UJ
85-01-8	Phenanthrene	430		
120-12-7	Anthracene	82	J	
86-74-8	Carbazole	18	J	
84-74-2	Di-n-butylphthalate	12	J	
206-44-0	Fluoranthene	620		
129-00-0	Pyrene	660		
85-68-7	Butylbenzylphthalate	56	J	
91-94-1	3,3'-Dichlorobenzidine	330	~~U~~	R
56-55-3	Benzo(a)anthracene	230	J	
218-01-9	Chrysene	350		
117-81-7	Bis(2-ethylhexyl)phthalate	240	J	
117-84-0	Di-n-octylphthalate	330	U	
205-99-2	Benzo(b)fluoranthene	330	J	
207-08-9	Benzo(k)fluoranthene	270	J	
50-32-8	Benzo(a)pyrene	190	J	
193-39-5	Indeno(1,2,3-cd)pyrene	210	J	
53-70-3	Dibenzo(a,h)anthracene	82	J	
191-24-2	Benzo(g,h,i)perylene	250	J	
58-90-2	2,3,4,6-Tetrachlorophenol	330	U	

[1] Cannot be separated from Diphenylamine

NW 8/28/13

EPA SAMPLE NO.
LMR13-57-024

10

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17028

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17028-10

Sample wt/vol: 30.2 (g/mL) g Lab File ID: ULKBA09.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 43 Decanted: (Y/N) Date Received: 06/15/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/22/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/31/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 10.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
100-52-7	Benzaldehyde	3000	U
108-95-2	Phenol	3000	U
111-44-4	Bis(2-chloroethyl)ether	3000	U
95-57-8	2-Chlorophenol	3000	U
95-48-7	2-Methylphenol	3000	U
108-60-1	2,2'-Oxybis(1-chloropropane)	3000	U
98-86-2	Acetophenone	3000	U
106-44-5	4-Methylphenol	3000	U
621-64-7	N-Nitroso-di-n-propylamine	3000	U
67-72-1	Hexachloroethane	3000	U
98-95-3	Nitrobenzene	3000	U
78-59-1	Isophorone	3000	U
88-75-5	2-Nitrophenol	3000	U
105-67-9	2,4-Dimethylphenol	3000	U
111-91-1	Bis(2-chloroethoxy)methane	3000	U
120-83-2	2,4-Dichlorophenol	3000	U
91-20-3	Naphthalene	230	J
106-47-8	4-Chloroaniline	3000	U
87-68-3	Hexachlorobutadiene	3000	U
105-60-2	Caprolactam	3000	U
59-50-7	4-Chloro-3-methylphenol	3000	U
91-57-6	2-Methylnaphthalene	3000	U
77-47-4	Hexachlorocyclopentadiene	3000	U
88-06-2	2,4,6-Trichlorophenol	3000	U
95-95-4	2,4,5-Trichlorophenol	3000	U
92-52-4	1,1'-Biphenyl	3000	U
91-58-7	2-Chloronaphthalene	3000	U
88-74-4	2-Nitroaniline	5700	U
131-11-3	Dimethylphthalate	3000	U
606-20-2	2,6-Dinitrotoluene	3000	U
208-96-8	Acenaphthylene	3000	U
99-09-2	3-Nitroaniline	5700	U
83-32-9	Acenaphthene	620	J

NW 8/28/13

EPA SAMPLE NO.
LMR13-57-024

10

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17028

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17028-10

Sample wt/vol: 30.2 (g/mL) g Lab File ID: ULKBA09.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 43 Decanted: (Y/N) Date Received: 06/15/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/22/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/31/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 10.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
51-28-5	2,4-Dinitrophenol	5700	U	
100-02-7	4-Nitrophenol	5700	U	
132-64-9	Dibenzofuran	3000	U	
121-14-2	2,4-Dinitrotoluene	3000	U	
84-66-2	Diethylphthalate	3000	U	
86-73-7	Fluorene	610	J	
7005-72-3	4-Chlorophenyl-phenylether	3000	U	
100-01-6	4-Nitroaniline	5700	U	
534-52-1	4,6-Dinitro-2-methylphenol	5700	U	
86-30-6	N-Nitrosodiphenylamin [1]	3000	U	
95-94-3	1,2,4,5-Tetrachlorobenzene	3000	U	
101-55-3	4-Bromophenyl-phenylether	3000	U	
118-74-1	Hexachlorobenzene	3000	U	
1912-24-9	Atrazine	3000	U	
87-86-5	Pentachlorophenol	5700	~~U~~	UJ
85-01-8	Phenanthrene	1700	J	
120-12-7	Anthracene	370	J	
86-74-8	Carbazole	3000	U	
84-74-2	Di-n-butylphthalate	3000	U	
206-44-0	Fluoranthene	1900	J	
129-00-0	Pyrene	2000	J	
85-68-7	Butylbenzylphthalate	3000	U	
91-94-1	3,3'-Dichlorobenzidine	3000	U	
56-55-3	Benzo(a)anthracene	1500	J	
218-01-9	Chrysene	1800	J	
117-81-7	Bis(2-ethylhexyl)phthalate	3000	U	
117-84-0	Di-n-octylphthalate	3000	~~U~~	UJ
205-99-2	Benzo(b)fluoranthene	750	~~J~~	J
207-08-9	Benzo(k)fluoranthene	360	J	
50-32-8	Benzo(a)pyrene	680	J	
193-39-5	Indeno(1,2,3-cd)pyrene	440	J	
53-70-3	Dibenzo(a,h)anthracene	250	~~J~~	J
191-24-2	Benzo(g,h,i)perylene	600	J	
58-90-2	2,3,4,6-Tetrachlorophenol	3000	U	

[1] Cannot be separated from Diphenylamine

NW 8/28/13

1D - FORM I SV-1

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-57-048

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17028

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17028-11

Sample wt/vol: 30.1 (g/mL) g Lab File ID: PJX14.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 33 Decanted: (Y/N) Date Received: 06/15/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/22/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/24/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
100-52-7	Benzaldehyde	250	U
108-95-2	Phenol	250	U
111-44-4	Bis(2-chloroethyl)ether	250	U
95-57-8	2-Chlorophenol	250	U
95-48-7	2-Methylphenol	250	U
108-60-1	2,2'-Oxybis(1-chloropropane)	250	U
98-86-2	Acetophenone	250	U
106-44-5	4-Methylphenol	250	U
621-64-7	N-Nitroso-di-n-propylamine	250	U
67-72-1	Hexachloroethane	250	U
98-95-3	Nitrobenzene	250	U
78-59-1	Isophorone	250	U
88-75-5	2-Nitrophenol	250	U
105-67-9	2,4-Dimethylphenol	250	U
111-91-1	Bis(2-chloroethoxy)methane	250	U
120-83-2	2,4-Dichlorophenol	250	U
91-20-3	Naphthalene	250	U
106-47-8	4-Chloroaniline	250	U
87-68-3	Hexachlorobutadiene	250	U
105-60-2	Caprolactam	250	U
59-50-7	4-Chloro-3-methylphenol	250	U
91-57-6	2-Methylnaphthalene	250	U
77-47-4	Hexachlorocyclopentadiene	250	~~U~~ UJ
88-06-2	2,4,6-Trichlorophenol	250	U
95-95-4	2,4,5-Trichlorophenol	250	U
92-52-4	1,1'-Biphenyl	250	U
91-58-7	2-Chloronaphthalene	250	U
88-74-4	2-Nitroaniline	490	U
131-11-3	Dimethylphthalate	250	U
606-20-2	2,6-Dinitrotoluene	250	U
208-96-8	Acenaphthylene	250	U
99-09-2	3-Nitroaniline	490	U
83-32-9	Acenaphthene	25	J

NW 8/28/13

1E - FORM I SV-2

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-57-048

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678 11

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17028

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17028-11

Sample wt/vol: 30.1 (g/mL) g Lab File ID: PJX14.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 33 Decanted: (Y/N) Date Received: 06/15/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/22/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/24/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
51-28-5	2,4-Dinitrophenol	490	~~U~~	UJ
100-02-7	4-Nitrophenol	490	U	
132-64-9	Dibenzofuran	250	U	
121-14-2	2,4-Dinitrotoluene	250	U	
84-66-2	Diethylphthalate	250	U	
86-73-7	Fluorene	26	J	
7005-72-3	4-Chlorophenyl-phenylether	250	U	
100-01-6	4-Nitroaniline	490	U	
534-52-1	4,6-Dinitro-2-methylphenol	490	U	
86-30-6	N-Nitrosodiphenylamin [1]	250	U	
95-94-3	1,2,4,5-Tetrachlorobenzene	250	U	
101-55-3	4-Bromophenyl-phenylether	250	U	
118-74-1	Hexachlorobenzene	250	U	
1912-24-9	Atrazine	250	U	
87-86-5	Pentachlorophenol	490	~~U~~	UJ
85-01-8	Phenanthrene	130	J	
120-12-7	Anthracene	36	J	
86-74-8	Carbazole	250	U	
84-74-2	Di-n-butylphthalate	250	U	
206-44-0	Fluoranthene	110	J	
129-00-0	Pyrene	140	J	
85-68-7	Butylbenzylphthalate	26	J	
91-94-1	3,3'-Dichlorobenzidine	250	U	
56-55-3	Benzo(a)anthracene	66	J	
218-01-9	Chrysene	110	J	
117-81-7	Bis(2-ethylhexyl)phthalate	57	J	
117-84-0	Di-n-octylphthalate	250	U	
205-99-2	Benzo(b)fluoranthene	45	J	
207-08-9	Benzo(k)fluoranthene	41	J	
50-32-8	Benzo(a)pyrene	49	J	
193-39-5	Indeno(1,2,3-cd)pyrene	29	J	
53-70-3	Dibenzo(a,h)anthracene	19	J	
191-24-2	Benzo(g,h,i)perylene	43	J	
58-90-2	2,3,4,6-Tetrachlorophenol	250	U	

[1] Cannot be separated from Diphenylamine

NW 8/28/13

1D - FORM I SV-1

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-72-048

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17028

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17028-12

Sample wt/vol: 30.7 (g/mL) g Lab File ID: ULKBA10.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 42 Decanted: (Y/N) Date Received: 06/15/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/22/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/31/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 2.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
100-52-7	Benzaldehyde	57	J
108-95-2	Phenol	580	U
111-44-4	Bis(2-chloroethyl)ether	580	U
95-57-8	2-Chlorophenol	580	U
95-48-7	2-Methylphenol	580	U
108-60-1	2,2'-Oxybis(1-chloropropane)	580	U
98-86-2	Acetophenone	580	U
106-44-5	4-Methylphenol	580	U
621-64-7	N-Nitroso-di-n-propylamine	580	U
67-72-1	Hexachloroethane	580	U
98-95-3	Nitrobenzene	580	U
78-59-1	Isophorone	580	U
88-75-5	2-Nitrophenol	580	U
105-67-9	2,4-Dimethylphenol	580	U
111-91-1	Bis(2-chloroethoxy)methane	580	U
120-83-2	2,4-Dichlorophenol	580	U
91-20-3	Naphthalene	200	J
106-47-8	4-Chloroaniline	580	U
87-68-3	Hexachlorobutadiene	580	U
105-60-2	Caprolactam	580	U
59-50-7	4-Chloro-3-methylphenol	580	U
91-57-6	2-Methylnaphthalene	120	J
77-47-4	Hexachlorocyclopentadiene	580	U
88-06-2	2,4,6-Trichlorophenol	580	U
95-95-4	2,4,5-Trichlorophenol	580	U
92-52-4	1,1'-Biphenyl	580	U
91-58-7	2-Chloronaphthalene	580	U
88-74-4	2-Nitroaniline	1100	U
131-11-3	Dimethylphthalate	580	U
606-20-2	2,6-Dinitrotoluene	580	U
208-96-8	Acenaphthylene	140	J
99-09-2	3-Nitroaniline	1100	U
83-32-9	Acenaphthene	290	J

NW 8/28/13

EPA SAMPLE NO.
LMR13-72-048

12

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17028

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17028-12

Sample wt/vol: 30.7 (g/mL) g Lab File ID: ULKBA10.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 42 Decanted: (Y/N) Date Received: 06/15/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/22/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/31/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 2.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
51-28-5	2,4-Dinitrophenol	1100	U	
100-02-7	4-Nitrophenol	1100	U	
132-64-9	Dibenzofuran	120	J	
121-14-2	2,4-Dinitrotoluene	580	U	
84-66-2	Diethylphthalate	580	U	
86-73-7	Fluorene	490	J	
7005-72-3	4-Chlorophenyl-phenylether	580	U	
100-01-6	4-Nitroaniline	1100	U	
534-52-1	4,6-Dinitro-2-methylphenol	1100	U	
86-30-6	N-Nitrosodiphenylamin [1]	580	U	
95-94-3	1,2,4,5-Tetrachlorobenzene	580	U	
101-55-3	4-Bromophenyl-phenylether	580	U	
118-74-1	Hexachlorobenzene	580	U	
1912-24-9	Atrazine	580	U	
87-86-5	Pentachlorophenol	1100	~~U~~	UJ
85-01-8	Phenanthrene	2300		
120-12-7	Anthracene	520	J	
86-74-8	Carbazole	580	U	
84-74-2	Di-n-butylphthalate	580	U	
206-44-0	Fluoranthene	3900		
129-00-0	Pyrene	3400		
85-68-7	Butylbenzylphthalate	580	U	
91-94-1	3,3'-Dichlorobenzidine	580	U	
56-55-3	Benzo(a)anthracene	2800		
218-01-9	Chrysene	2400		
117-81-7	Bis(2-ethylhexyl)phthalate	580 ~~140~~	~~J B~~	U
117-84-0	Di-n-octylphthalate	580	~~U~~	UJ
205-99-2	Benzo(b)fluoranthene	1900		J
207-08-9	Benzo(k)fluoranthene	1100		
50-32-8	Benzo(a)pyrene	1400		
193-39-5	Indeno(1,2,3-cd)pyrene	1100		
53-70-3	Dibenzo(a,h)anthracene	580		J
191-24-2	Benzo(g,h,i)perylene	1400		
58-90-2	2,3,4,6-Tetrachlorophenol	580	U	

[1] Cannot be separated from Diphenylamine

NW 8/28/13

EPA SAMPLE NO.
LMR13-27-012

13

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17028

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17028-13

Sample wt/vol: 30.1 (g/mL) g Lab File ID: PJX15.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 52 Decanted: (Y/N) Date Received: 06/15/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/22/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/24/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
100-52-7	Benzaldehyde	57	~~J~~	J
108-95-2	Phenol	350	U	
111-44-4	Bis(2-chloroethyl)ether	350	U	
95-57-8	2-Chlorophenol	350	U	
95-48-7	2-Methylphenol	350	U	
108-60-1	2,2'-Oxybis(1-chloropropane)	350	U	
98-86-2	Acetophenone	350	U	
106-44-5	4-Methylphenol	350	U	
621-64-7	N-Nitroso-di-n-propylamine	350	U	
67-72-1	Hexachloroethane	350	U	
98-95-3	Nitrobenzene	350	U	
78-59-1	Isophorone	350	U	
88-75-5	2-Nitrophenol	350	U	
105-67-9	2,4-Dimethylphenol	350	U	
111-91-1	Bis(2-chloroethoxy)methane	350	U	
120-83-2	2,4-Dichlorophenol	350	U	
91-20-3	Naphthalene	27	J	
106-47-8	4-Chloroaniline	350	U	
87-68-3	Hexachlorobutadiene	350	U	
105-60-2	Caprolactam	350	U	
59-50-7	4-Chloro-3-methylphenol	350	U	
91-57-6	2-Methylnaphthalene	350	U	
77-47-4	Hexachlorocyclopentadiene	350	~~U~~	UJ
88-06-2	2,4,6-Trichlorophenol	350	U	
95-95-4	2,4,5-Trichlorophenol	350	U	
92-52-4	1,1'-Biphenyl	350	U	
91-58-7	2-Chloronaphthalene	350	U	
88-74-4	2-Nitroaniline	680	U	
131-11-3	Dimethylphthalate	350	U	
606-20-2	2,6-Dinitrotoluene	350	U	
208-96-8	Acenaphthylene	350	U	
99-09-2	3-Nitroaniline	680	U	
83-32-9	Acenaphthene	34	J	

NW 8/28/13

EPA SAMPLE NO.
LMR13-27-012

13

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17028

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17028-13

Sample wt/vol: 30.1 (g/mL) g Lab File ID: PJX15.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 52 Decanted: (Y/N) Date Received: 06/15/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/22/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/24/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
51-28-5	2,4-Dinitrophenol	680	~~U~~	UJ
100-02-7	4-Nitrophenol	680	U	
132-64-9	Dibenzofuran	350	U	
121-14-2	2,4-Dinitrotoluene	350	U	
84-66-2	Diethylphthalate	350	U	
86-73-7	Fluorene	68	J	
7005-72-3	4-Chlorophenyl-phenylether	350	U	
100-01-6	4-Nitroaniline	680	U	
534-52-1	4,6-Dinitro-2-methylphenol	680	U	
86-30-6	N-Nitrosodiphenylamin [1]	350	U	
95-94-3	1,2,4,5-Tetrachlorobenzene	350	U	
101-55-3	4-Bromophenyl-phenylether	350	U	
118-74-1	Hexachlorobenzene	350	U	
1912-24-9	Atrazine	350	U	
87-86-5	Pentachlorophenol	680	~~U~~	UJ
85-01-8	Phenanthrene	320	J	
120-12-7	Anthracene	190	J	
86-74-8	Carbazole	23	J	
84-74-2	Di-n-butylphthalate	17	J	
206-44-0	Fluoranthene	850		
129-00-0	Pyrene	1300		
85-68-7	Butylbenzylphthalate	72	J	
91-94-1	3,3'-Dichlorobenzidine	350	U	
56-55-3	Benzo(a)anthracene	640		
218-01-9	Chrysene	830		
117-81-7	Bis(2-ethylhexyl)phthalate	900		
117-84-0	Di-n-octylphthalate	350	U	
205-99-2	Benzo(b)fluoranthene	570		
207-08-9	Benzo(k)fluoranthene	600		
50-32-8	Benzo(a)pyrene	530		
193-39-5	Indeno(1,2,3-cd)pyrene	360		
53-70-3	Dibenzo(a,h)anthracene	110	J	
191-24-2	Benzo(g,h,i)perylene	420		
58-90-2	2,3,4,6-Tetrachlorophenol	350	U	

[1] Cannot be separated from Diphenylamine

NW 8/28/13

EPA SAMPLE NO.
LMR13-27-024

14

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17028

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17028-14

Sample wt/vol: 30.5 (g/mL) g Lab File ID: ULKBA11.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 48 Decanted: (Y/N) Date Received: 06/15/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/22/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/31/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 2.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
100-52-7	Benzaldehyde	640	U
108-95-2	Phenol	640	U
111-44-4	Bis(2-chloroethyl)ether	640	U
95-57-8	2-Chlorophenol	640	U
95-48-7	2-Methylphenol	640	U
108-60-1	2,2'-Oxybis(1-chloropropane)	640	U
98-86-2	Acetophenone	29	J
106-44-5	4-Methylphenol	640	U
621-64-7	N-Nitroso-di-n-propylamine	640	U
67-72-1	Hexachloroethane	640	U
98-95-3	Nitrobenzene	640	U
78-59-1	Isophorone	640	U
88-75-5	2-Nitrophenol	640	U
105-67-9	2,4-Dimethylphenol	640	U
111-91-1	Bis(2-chloroethoxy)methane	640	U
120-83-2	2,4-Dichlorophenol	640	U
91-20-3	Naphthalene	150	J
106-47-8	4-Chloroaniline	640	U
87-68-3	Hexachlorobutadiene	640	U
105-60-2	Caprolactam	640	U
59-50-7	4-Chloro-3-methylphenol	640	U
91-57-6	2-Methylnaphthalene	85	J
77-47-4	Hexachlorocyclopentadiene	640	U
88-06-2	2,4,6-Trichlorophenol	640	U
95-95-4	2,4,5-Trichlorophenol	640	U
92-52-4	1,1'-Biphenyl	640	U
91-58-7	2-Chloronaphthalene	640	U
88-74-4	2-Nitroaniline	1200	U
131-11-3	Dimethylphthalate	640	U
606-20-2	2,6-Dinitrotoluene	640	U
208-96-8	Acenaphthylene	130	J
99-09-2	3-Nitroaniline	1200	U
83-32-9	Acenaphthene	72	J

NW 8/28/13

EPA SAMPLE NO.
LMR13-27-024

14

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17028

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17028-14

Sample wt/vol: 30.5 (g/mL) g Lab File ID: ULKBA11.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 48 Decanted: (Y/N) Date Received: 06/15/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/22/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/31/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 2.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
51-28-5	2,4-Dinitrophenol	1200	U	
100-02-7	4-Nitrophenol	1200	U	
132-64-9	Dibenzofuran	66	J	
121-14-2	2,4-Dinitrotoluene	640	U	
84-66-2	Diethylphthalate	640	U	
86-73-7	Fluorene	100	J	
7005-72-3	4-Chlorophenyl-phenylether	640	U	
100-01-6	4-Nitroaniline	1200	U	
534-52-1	4,6-Dinitro-2-methylphenol	1200	U	
86-30-6	N-Nitrosodiphenylamin [1]	640	U	
95-94-3	1,2,4,5-Tetrachlorobenzene	640	U	
101-55-3	4-Bromophenyl-phenylether	640	U	
118-74-1	Hexachlorobenzene	640	U	
1912-24-9	Atrazine	640	U	
87-86-5	Pentachlorophenol	1200	~~U~~	UJ
85-01-8	Phenanthrene	790		
120-12-7	Anthracene	250	J	
86-74-8	Carbazole	640	U	
84-74-2	Di-n-butylphthalate	640	U	
206-44-0	Fluoranthene	2000		
129-00-0	Pyrene	4000		
85-68-7	Butylbenzylphthalate	640	U	
91-94-1	3,3'-Dichlorobenzidine	640	U	
56-55-3	Benzo(a)anthracene	2700		
218-01-9	Chrysene	2300		
117-81-7	Bis(2-ethylhexyl)phthalate	640 ~~260~~	~~J B~~	U
117-84-0	Di-n-octylphthalate	640	~~U~~	UJ
205-99-2	Benzo(b)fluoranthene	1700		J
207-08-9	Benzo(k)fluoranthene	900		
50-32-8	Benzo(a)pyrene	1200		
193-39-5	Indeno(1,2,3-cd)pyrene	980		
53-70-3	Dibenzo(a,h)anthracene	370	~~J~~	J
191-24-2	Benzo(g,h,i)perylene	1100		
58-90-2	2,3,4,6-Tetrachlorophenol	640	U	

[1] Cannot be separated from Diphenylamine

NW 8/28/13

EPA SAMPLE NO.
LMR13-27-048

16

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17028

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17028-16

Sample wt/vol: 30.3 (g/mL) g Lab File ID: PJX17.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 45 Decanted: (Y/N) Date Received: 06/15/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/22/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/24/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
100-52-7	Benzaldehyde	310	U	
108-95-2	Phenol	310	U	
111-44-4	Bis(2-chloroethyl)ether	310	U	
95-57-8	2-Chlorophenol	310	U	
95-48-7	2-Methylphenol	310	U	
108-60-1	2,2'-Oxybis(1-chloropropane)	310	U	
98-86-2	Acetophenone	310	U	
106-44-5	4-Methylphenol	310	U	
621-64-7	N-Nitroso-di-n-propylamine	310	U	
67-72-1	Hexachloroethane	310	U	
98-95-3	Nitrobenzene	310	U	
78-59-1	Isophorone	310	U	
88-75-5	2-Nitrophenol	310	U	
105-67-9	2,4-Dimethylphenol	310	U	
111-91-1	Bis(2-chloroethoxy)methane	310	U	
120-83-2	2,4-Dichlorophenol	310	U	
91-20-3	Naphthalene	130	J	
106-47-8	4-Chloroaniline	310	~~U~~	R
87-68-3	Hexachlorobutadiene	310	U	
105-60-2	Caprolactam	310	U	
59-50-7	4-Chloro-3-methylphenol	310	U	
91-57-6	2-Methylnaphthalene	62	J	
77-47-4	Hexachlorocyclopentadiene	310	~~U~~	R
88-06-2	2,4,6-Trichlorophenol	310	U	
95-95-4	2,4,5-Trichlorophenol	310	U	
92-52-4	1,1'-Biphenyl	310	U	
91-58-7	2-Chloronaphthalene	310	U	
88-74-4	2-Nitroaniline	600	U	
131-11-3	Dimethylphthalate	310	U	
606-20-2	2,6-Dinitrotoluene	310	U	
208-96-8	Acenaphthylene	120	J	
99-09-2	3-Nitroaniline	600	U	
83-32-9	Acenaphthene	120	J	

NW 8/28/13

EPA SAMPLE NO.
LMR13-27-048

16

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17028

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17028-16

Sample wt/vol: 30.3 (g/mL) g Lab File ID: PJX17.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 45 Decanted: (Y/N) Date Received: 06/15/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/22/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/24/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
51-28-5	2,4-Dinitrophenol	600	~~U~~	UJ
100-02-7	4-Nitrophenol	600	U	
132-64-9	Dibenzofuran	73	J	
121-14-2	2,4-Dinitrotoluene	310	U	
84-66-2	Diethylphthalate	310	U	
86-73-7	Fluorene	250	J	
7005-72-3	4-Chlorophenyl-phenylether	310	U	
100-01-6	4-Nitroaniline	600	U	
534-52-1	4,6-Dinitro-2-methylphenol	600	U	
86-30-6	N-Nitrosodiphenylamin [1]	310	U	
95-94-3	1,2,4,5-Tetrachlorobenzene	310	U	
101-55-3	4-Bromophenyl-phenylether	310	U	
118-74-1	Hexachlorobenzene	310	U	
1912-24-9	Atrazine	310	U	
87-86-5	Pentachlorophenol	600	~~U~~	UJ
85-01-8	Phenanthrene	1100		
120-12-7	Anthracene	400		
86-74-8	Carbazole	310	U	
84-74-2	Di-n-butylphthalate	90	J	
206-44-0	Fluoranthene	3200		
129-00-0	Pyrene	3800		
85-68-7	Butylbenzylphthalate	310	U	
91-94-1	3,3'-Dichlorobenzidine	310	~~U~~	R
56-55-3	Benzo(a)anthracene	1900		
218-01-9	Chrysene	2100		
117-81-7	Bis(2-ethylhexyl)phthalate	95	J	
117-84-0	Di-n-octylphthalate	310	U	
205-99-2	Benzo(b)fluoranthene	1900		
207-08-9	Benzo(k)fluoranthene	1300		
50-32-8	Benzo(a)pyrene	1600		
193-39-5	Indeno(1,2,3-cd)pyrene	800		
53-70-3	Dibenzo(a,h)anthracene	300	J	
191-24-2	Benzo(g,h,i)perylene	940		
58-90-2	2,3,4,6-Tetrachlorophenol	310	U	

[1] Cannot be separated from Diphenylamine

NW 8/28/13

EPA SAMPLE NO.
LMR13-27-072

17

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17028

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17028-17

Sample wt/vol: 30.8 (g/mL) g Lab File ID: PJX20.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 30 Decanted: (Y/N) Date Received: 06/15/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/22/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/24/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
100-52-7	Benzaldehyde	27	J	
108-95-2	Phenol	240	U	
111-44-4	Bis(2-chloroethyl)ether	240	U	
95-57-8	2-Chlorophenol	240	U	
95-48-7	2-Methylphenol	240	U	
108-60-1	2,2'-Oxybis(1-chloropropane)	240	U	
98-86-2	Acetophenone	240	U	
106-44-5	4-Methylphenol	240	U	
621-64-7	N-Nitroso-di-n-propylamine	240	U	
67-72-1	Hexachloroethane	240	U	
98-95-3	Nitrobenzene	240	U	
78-59-1	Isophorone	240	U	
88-75-5	2-Nitrophenol	240	U	
105-67-9	2,4-Dimethylphenol	240	U	
111-91-1	Bis(2-chloroethoxy)methane	240	U	
120-83-2	2,4-Dichlorophenol	240	U	
91-20-3	Naphthalene	45	J	
106-47-8	4-Chloroaniline	240	~~U~~	R
87-68-3	Hexachlorobutadiene	240	U	
105-60-2	Caprolactam	240	U	
59-50-7	4-Chloro-3-methylphenol	240	U	
91-57-6	2-Methylnaphthalene	21	J	
77-47-4	Hexachlorocyclopentadiene	240	~~U~~	R
88-06-2	2,4,6-Trichlorophenol	240	U	
95-95-4	2,4,5-Trichlorophenol	240	U	
92-52-4	1,1'-Biphenyl	240	U	
91-58-7	2-Chloronaphthalene	240	U	
88-74-4	2-Nitroaniline	460	U	
131-11-3	Dimethylphthalate	240	U	
606-20-2	2,6-Dinitrotoluene	240	U	
208-96-8	Acenaphthylene	41	J	
99-09-2	3-Nitroaniline	460	U	
83-32-9	Acenaphthene	50	J	

NW 8/28/13

EPA SAMPLE NO.
LMR13-27-072

17

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17028

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17028-17

Sample wt/vol: 30.8 (g/mL) g Lab File ID: PJX20.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 30 Decanted: (Y/N) Date Received: 06/15/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/22/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/24/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
51-28-5	2,4-Dinitrophenol	460	~~U~~	UJ
100-02-7	4-Nitrophenol	460	U	
132-64-9	Dibenzofuran	26	J	
121-14-2	2,4-Dinitrotoluene	240	U	
84-66-2	Diethylphthalate	240	U	
86-73-7	Fluorene	61	J	
7005-72-3	4-Chlorophenyl-phenylether	240	U	
100-01-6	4-Nitroaniline	460	U	
534-52-1	4,6-Dinitro-2-methylphenol	460	U	
86-30-6	N-Nitrosodiphenylamin [1]	240	U	
95-94-3	1,2,4,5-Tetrachlorobenzene	240	U	
101-55-3	4-Bromophenyl-phenylether	240	U	
118-74-1	Hexachlorobenzene	240	U	
1912-24-9	Atrazine	240	U	
87-86-5	Pentachlorophenol	460	~~U~~	UJ
85-01-8	Phenanthrene	300		
120-12-7	Anthracene	120	J	
86-74-8	Carbazole	240	U	
84-74-2	Di-n-butylphthalate	44	J	
206-44-0	Fluoranthene	920		
129-00-0	Pyrene	1200		
85-68-7	Butylbenzylphthalate	240	U	
91-94-1	3,3'-Dichlorobenzidine	240	~~U~~	R
56-55-3	Benzo(a)anthracene	560		
218-01-9	Chrysene	620		
117-81-7	Bis(2-ethylhexyl)phthalate	56	J	
117-84-0	Di-n-octylphthalate	240	U	
205-99-2	Benzo(b)fluoranthene	410		
207-08-9	Benzo(k)fluoranthene	500		
50-32-8	Benzo(a)pyrene	440		
193-39-5	Indeno(1,2,3-cd)pyrene	260		
53-70-3	Dibenzo(a,h)anthracene	99	J	
191-24-2	Benzo(g,h,i)perylene	350		
58-90-2	2,3,4,6-Tetrachlorophenol	240	U	

[1] Cannot be separated from Diphenylamine

NW 8/28/13

1D - FORM I SV-1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-72-012

18

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678
Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17028
Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17028-18
Sample wt/vol: 31.0 (g/mL) g Lab File ID: PJX21.D
Level: (LOW/MED) LOW Extraction: (Type) SONC
% Moisture: 41 Decanted: (Y/N) Date Received: 06/15/2013
Concentrated Extract Volume: 500 (uL) Date Extracted: 06/22/2013
Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/24/2013
GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
100-52-7	Benzaldehyde	65	J	
108-95-2	Phenol	280	U	
111-44-4	Bis(2-chloroethyl)ether	280	U	
95-57-8	2-Chlorophenol	280	U	
95-48-7	2-Methylphenol	280	U	
108-60-1	2,2'-Oxybis(1-chloropropane)	280	U	
98-86-2	Acetophenone	280	U	
106-44-5	4-Methylphenol	280	U	
621-64-7	N-Nitroso-di-n-propylamine	280	U	
67-72-1	Hexachloroethane	280	U	
98-95-3	Nitrobenzene	280	U	
78-59-1	Isophorone	280	U	
88-75-5	2-Nitrophenol	280	U	
105-67-9	2,4-Dimethylphenol	280	U	
111-91-1	Bis(2-chloroethoxy)methane	280	U	
120-83-2	2,4-Dichlorophenol	280	U	
91-20-3	Naphthalene	100	J	
106-47-8	4-Chloroaniline	280	~~U~~	R
87-68-3	Hexachlorobutadiene	280	U	
105-60-2	Caprolactam	280	U	
59-50-7	4-Chloro-3-methylphenol	280	U	
91-57-6	2-Methylnaphthalene	38	J	
77-47-4	Hexachlorocyclopentadiene	280	~~U~~	R
88-06-2	2,4,6-Trichlorophenol	280	U	
95-95-4	2,4,5-Trichlorophenol	280	U	
92-52-4	1,1'-Biphenyl	280	U	
91-58-7	2-Chloronaphthalene	280	U	
88-74-4	2-Nitroaniline	540	U	
131-11-3	Dimethylphthalate	280	U	
606-20-2	2,6-Dinitrotoluene	280	U	
208-96-8	Acenaphthylene	81	J	
99-09-2	3-Nitroaniline	540	U	
83-32-9	Acenaphthene	110	J	

NW 8/28/13

EPA SAMPLE NO.
LMR13-72-012

18

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17028

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17028-18

Sample wt/vol: 31.0 (g/mL) g Lab File ID: PJX21.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 41 Decanted: (Y/N) Date Received: 06/15/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/22/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/24/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
51-28-5	2,4-Dinitrophenol	540	~~U~~	UJ
100-02-7	4-Nitrophenol	540	U	
132-64-9	Dibenzofuran	52	J	
121-14-2	2,4-Dinitrotoluene	280	U	
84-66-2	Diethylphthalate	280	U	
86-73-7	Fluorene	170	J	
7005-72-3	4-Chlorophenyl-phenylether	280	U	
100-01-6	4-Nitroaniline	540	U	
534-52-1	4,6-Dinitro-2-methylphenol	540	U	
86-30-6	N-Nitrosodiphenylamin [1]	280	U	
95-94-3	1,2,4,5-Tetrachlorobenzene	280	U	
101-55-3	4-Bromophenyl-phenylether	280	U	
118-74-1	Hexachlorobenzene	280	U	
1912-24-9	Atrazine	280	U	
87-86-5	Pentachlorophenol	540	~~U~~	UJ
85-01-8	Phenanthrene	1000		
120-12-7	Anthracene	240	J	
86-74-8	Carbazole	280	U	
84-74-2	Di-n-butylphthalate	280	U	
206-44-0	Fluoranthene	2300		
129-00-0	Pyrene	2400		
85-68-7	Butylbenzylphthalate	280	U	
91-94-1	3,3'-Dichlorobenzidine	280	~~U~~	R
56-55-3	Benzo(a)anthracene	1100		
218-01-9	Chrysene	1500		
117-81-7	Bis(2-ethylhexyl)phthalate	390		
117-84-0	Di-n-octylphthalate	280	U	
205-99-2	Benzo(b)fluoranthene	1200		
207-08-9	Benzo(k)fluoranthene	1200		
50-32-8	Benzo(a)pyrene	1200		
193-39-5	Indeno(1,2,3-cd)pyrene	690		
53-70-3	Dibenzo(a,h)anthracene	260	J	
191-24-2	Benzo(g,h,i)perylene	790		
58-90-2	2,3,4,6-Tetrachlorophenol	280	U	

[1] Cannot be separated from Diphenylamine

NW 8/28/13

EPA SAMPLE NO.
LMR13-72-024

19

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17028

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17028-19

Sample wt/vol: 30.3 (g/mL) g Lab File ID: ULKBA12.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 41 Decanted: (Y/N) Date Received: 06/15/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/22/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/31/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
100-52-7	Benzaldehyde	40	J
108-95-2	Phenol	290	U
111-44-4	Bis(2-chloroethyl)ether	290	U
95-57-8	2-Chlorophenol	290	U
95-48-7	2-Methylphenol	290	U
108-60-1	2,2'-Oxybis(1-chloropropane)	290	U
98-86-2	Acetophenone	22	J
106-44-5	4-Methylphenol	290	U
621-64-7	N-Nitroso-di-n-propylamine	290	U
67-72-1	Hexachloroethane	290	U
98-95-3	Nitrobenzene	290	U
78-59-1	Isophorone	290	U
88-75-5	2-Nitrophenol	290	U
105-67-9	2,4-Dimethylphenol	290	U
111-91-1	Bis(2-chloroethoxy)methane	290	U
120-83-2	2,4-Dichlorophenol	290	U
91-20-3	Naphthalene	140	J
106-47-8	4-Chloroaniline	290	U
87-68-3	Hexachlorobutadiene	290	U
105-60-2	Caprolactam	290	U
59-50-7	4-Chloro-3-methylphenol	290	U
91-57-6	2-Methylnaphthalene	77	J
77-47-4	Hexachlorocyclopentadiene	290	U
88-06-2	2,4,6-Trichlorophenol	290	U
95-95-4	2,4,5-Trichlorophenol	290	U
92-52-4	1,1'-Biphenyl	26	J
91-58-7	2-Chloronaphthalene	290	U
88-74-4	2-Nitroaniline	560	U
131-11-3	Dimethylphthalate	290	U
606-20-2	2,6-Dinitrotoluene	290	U
208-96-8	Acenaphthylene	88	J
99-09-2	3-Nitroaniline	560	U
83-32-9	Acenaphthene	150	J

NW 8/28/13

EPA SAMPLE NO.
LMR13-72-024

19

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17028

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17028-19

Sample wt/vol: 30.3 (g/mL) g Lab File ID: ULKBA12.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 41 Decanted: (Y/N) Date Received: 06/15/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/22/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/31/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
51-28-5	2,4-Dinitrophenol	560	U	
100-02-7	4-Nitrophenol	560	U	
132-64-9	Dibenzofuran	78	J	
121-14-2	2,4-Dinitrotoluene	290	U	
84-66-2	Diethylphthalate	290	U	
86-73-7	Fluorene	270	J	
7005-72-3	4-Chlorophenyl-phenylether	290	U	
100-01-6	4-Nitroaniline	560	U	
534-52-1	4,6-Dinitro-2-methylphenol	560	U	
86-30-6	N-Nitrosodiphenylamin [1]	290	U	
95-94-3	1,2,4,5-Tetrachlorobenzene	290	U	
101-55-3	4-Bromophenyl-phenylether	290	U	
118-74-1	Hexachlorobenzene	290	U	
1912-24-9	Atrazine	290	U	
87-86-5	Pentachlorophenol	560	~~U~~	UJ
85-01-8	Phenanthrene	900		
120-12-7	Anthracene	150	J	
86-74-8	Carbazole	23	J	
84-74-2	Di-n-butylphthalate	290	U	
206-44-0	Fluoranthene	1700		
129-00-0	Pyrene	2800		
85-68-7	Butylbenzylphthalate	290	U	
91-94-1	3,3'-Dichlorobenzidine	290	U	
56-55-3	Benzo(a)anthracene	1900		
218-01-9	Chrysene	1400		
117-81-7	Bis(2-ethylhexyl)phthalate	290 ~~120~~	~~J B~~	U
117-84-0	Di-n-octylphthalate	290	~~U~~	UJ
205-99-2	Benzo(b)fluoranthene	1600		J
207-08-9	Benzo(k)fluoranthene	820		
50-32-8	Benzo(a)pyrene	1000		
193-39-5	Indeno(1,2,3-cd)pyrene	860		
53-70-3	Dibenzo(a,h)anthracene	410		J
191-24-2	Benzo(g,h,i)perylene	980		
58-90-2	2,3,4,6-Tetrachlorophenol	290	U	

[1] Cannot be separated from Diphenylamine

NW 8/28/13

EPA SAMPLE NO.
LMR13-72-024FD

20

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17028

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17028-20

Sample wt/vol: 30.3 (g/mL) g Lab File ID: ULKBA13.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 41 Decanted: (Y/N) Date Received: 06/15/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/22/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/31/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
100-52-7	Benzaldehyde	42	J
108-95-2	Phenol	280	U
111-44-4	Bis(2-chloroethyl)ether	280	U
95-57-8	2-Chlorophenol	280	U
95-48-7	2-Methylphenol	280	U
108-60-1	2,2'-Oxybis(1-chloropropane)	280	U
98-86-2	Acetophenone	21	J
106-44-5	4-Methylphenol	280	U
621-64-7	N-Nitroso-di-n-propylamine	280	U
67-72-1	Hexachloroethane	280	U
98-95-3	Nitrobenzene	280	U
78-59-1	Isophorone	280	U
88-75-5	2-Nitrophenol	280	U
105-67-9	2,4-Dimethylphenol	280	U
111-91-1	Bis(2-chloroethoxy)methane	280	U
120-83-2	2,4-Dichlorophenol	280	U
91-20-3	Naphthalene	120	J
106-47-8	4-Chloroaniline	280	U
87-68-3	Hexachlorobutadiene	280	U
105-60-2	Caprolactam	280	U
59-50-7	4-Chloro-3-methylphenol	280	U
91-57-6	2-Methylnaphthalene	69	J
77-47-4	Hexachlorocyclopentadiene	280	U
88-06-2	2,4,6-Trichlorophenol	280	U
95-95-4	2,4,5-Trichlorophenol	280	U
92-52-4	1,1'-Biphenyl	280	U
91-58-7	2-Chloronaphthalene	280	U
88-74-4	2-Nitroaniline	550	U
131-11-3	Dimethylphthalate	280	U
606-20-2	2,6-Dinitrotoluene	280	U
208-96-8	Acenaphthylene	90	J
99-09-2	3-Nitroaniline	550	U
83-32-9	Acenaphthene	170	J

NW 8/28/13

1E - FORM I SV-2
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-72-024FD

20

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17028

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17028-20

Sample wt/vol: 30.3 (g/mL) g Lab File ID: ULKBA13.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 41 Decanted: (Y/N) Date Received: 06/15/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/22/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/31/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
51-28-5	2,4-Dinitrophenol	550	U	
100-02-7	4-Nitrophenol	550	U	
132-64-9	Dibenzofuran	47	J	
121-14-2	2,4-Dinitrotoluene	280	U	
84-66-2	Diethylphthalate	280	U	
86-73-7	Fluorene	260	J	
7005-72-3	4-Chlorophenyl-phenylether	280	U	
100-01-6	4-Nitroaniline	550	U	
534-52-1	4,6-Dinitro-2-methylphenol	550	U	
86-30-6	N-Nitrosodiphenylamin [1]	280	U	
95-94-3	1,2,4,5-Tetrachlorobenzene	280	U	
101-55-3	4-Bromophenyl-phenylether	280	U	
118-74-1	Hexachlorobenzene	280	U	
1912-24-9	Atrazine	280	U	
87-86-5	Pentachlorophenol	550	~~U~~	UJ
85-01-8	Phenanthrene	990		
120-12-7	Anthracene	140	J	
86-74-8	Carbazole	20	J	
84-74-2	Di-n-butylphthalate	150	J	
206-44-0	Fluoranthene	1800		
129-00-0	Pyrene	3200		
85-68-7	Butylbenzylphthalate	280	U	
91-94-1	3,3'-Dichlorobenzidine	280	U	
56-55-3	Benzo(a)anthracene	2000		
218-01-9	Chrysene	1600		
117-81-7	Bis(2-ethylhexyl)phthalate	280 ~~170 J B~~		U
117-84-0	Di-n-octylphthalate	280	~~U~~	UJ
205-99-2	Benzo(b)fluoranthene	1500		J
207-08-9	Benzo(k)fluoranthene	920		
50-32-8	Benzo(a)pyrene	930		
193-39-5	Indeno(1,2,3-cd)pyrene	760		
53-70-3	Dibenzo(a,h)anthracene	370		J
191-24-2	Benzo(g,h,i)perylene	920		
58-90-2	2,3,4,6-Tetrachlorophenol	280	U	

[1] Cannot be separated from Diphenylamine

NW 8/28/13

EPA SAMPLE NO.
LMR13-72-096

21

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17028

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17028-21

Sample wt/vol: 30.4 (g/mL) g Lab File ID: ULKBA14.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 43 Decanted: (Y/N) Date Received: 06/15/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/22/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/31/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 4.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
100-52-7	Benzaldehyde	1200	U
108-95-2	Phenol	1200	U
111-44-4	Bis(2-chloroethyl)ether	1200	U
95-57-8	2-Chlorophenol	1200	U
95-48-7	2-Methylphenol	1200	U
108-60-1	2,2'-Oxybis(1-chloropropane)	1200	U
98-86-2	Acetophenone	1200	U
106-44-5	4-Methylphenol	1200	U
621-64-7	N-Nitroso-di-n-propylamine	1200	U
67-72-1	Hexachloroethane	1200	U
98-95-3	Nitrobenzene	1200	U
78-59-1	Isophorone	1200	U
88-75-5	2-Nitrophenol	1200	U
105-67-9	2,4-Dimethylphenol	1200	U
111-91-1	Bis(2-chloroethoxy)methane	1200	U
120-83-2	2,4-Dichlorophenol	1200	U
91-20-3	Naphthalene	150	J
106-47-8	4-Chloroaniline	1200	U
87-68-3	Hexachlorobutadiene	1200	U
105-60-2	Caprolactam	1200	U
59-50-7	4-Chloro-3-methylphenol	1200	U
91-57-6	2-Methylnaphthalene	150	J
77-47-4	Hexachlorocyclopentadiene	1200	U
88-06-2	2,4,6-Trichlorophenol	1200	U
95-95-4	2,4,5-Trichlorophenol	1200	U
92-52-4	1,1'-Biphenyl	1200	U
91-58-7	2-Chloronaphthalene	1200	U
88-74-4	2-Nitroaniline	2300	U
131-11-3	Dimethylphthalate	1200	U
606-20-2	2,6-Dinitrotoluene	1200	U
208-96-8	Acenaphthylene	220	J
99-09-2	3-Nitroaniline	2300	U
83-32-9	Acenaphthene	1200	

NW 8/28/13

1E - FORM I SV-2

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-72-096

21

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17028

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17028-21

Sample wt/vol: 30.4 (g/mL) g Lab File ID: ULKBA14.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 43 Decanted: (Y/N) Date Received: 06/15/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/22/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/31/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 4.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
51-28-5	2,4-Dinitrophenol	2300	U	
100-02-7	4-Nitrophenol	2300	U	
132-64-9	Dibenzofuran	100	J	
121-14-2	2,4-Dinitrotoluene	1200	U	
84-66-2	Diethylphthalate	1200	U	
86-73-7	Fluorene	1600		
7005-72-3	4-Chlorophenyl-phenylether	1200	U	
100-01-6	4-Nitroaniline	2300	U	
534-52-1	4,6-Dinitro-2-methylphenol	2300	U	
86-30-6	N-Nitrosodiphenylamin [1]	1200	U	
95-94-3	1,2,4,5-Tetrachlorobenzene	1200	U	
101-55-3	4-Bromophenyl-phenylether	1200	U	
118-74-1	Hexachlorobenzene	1200	U	
1912-24-9	Atrazine	1200	U	
87-86-5	Pentachlorophenol	2300	~~U~~	UJ
85-01-8	Phenanthrene	9300		
120-12-7	Anthracene	2300		
86-74-8	Carbazole	50	J	
84-74-2	Di-n-butylphthalate	1200	U	
206-44-0	Fluoranthene	8900		
129-00-0	Pyrene	7600		
85-68-7	Butylbenzylphthalate	1200	U	
91-94-1	3,3'-Dichlorobenzidine	1200	U	
56-55-3	Benzo(a)anthracene	3700		
218-01-9	Chrysene	4000		
117-81-7	Bis(2-ethylhexyl)phthalate	1200 62	~~J B~~	U
117-84-0	Di-n-octylphthalate	1200	~~U~~	UJ
205-99-2	Benzo(b)fluoranthene	2400		J
207-08-9	Benzo(k)fluoranthene	2200		
50-32-8	Benzo(a)pyrene	2400		
193-39-5	Indeno(1,2,3-cd)pyrene	1400		
53-70-3	Dibenzo(a,h)anthracene	550	~~J~~	J
191-24-2	Benzo(g,h,i)perylene	1700		
58-90-2	2,3,4,6-Tetrachlorophenol	1200	U	

[1] Cannot be separated from Diphenylamine

NW 8/28/13

EPA SAMPLE NO.
LMR13-27-096

22

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17028

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17028-22

Sample wt/vol: 29.9 (g/mL) g Lab File ID: PJXXE05.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 23 Decanted: (Y/N) Date Received: 06/15/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/24/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/27/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
100-52-7	Benzaldehyde	22	J	
108-95-2	Phenol	220	U	
111-44-4	Bis(2-chloroethyl)ether	220	U	
95-57-8	2-Chlorophenol	220	U	
95-48-7	2-Methylphenol	220	U	R
108-60-1	2,2'-Oxybis(1-chloropropane)	220	U	
98-86-2	Acetophenone	220	U	
106-44-5	4-Methylphenol	220	U	R
621-64-7	N-Nitroso-di-n-propylamine	220	U	
67-72-1	Hexachloroethane	220	U	
98-95-3	Nitrobenzene	220	U	
78-59-1	Isophorone	220	U	
88-75-5	2-Nitrophenol	220	U	
105-67-9	2,4-Dimethylphenol	220	U	R
111-91-1	Bis(2-chloroethoxy)methane	220	U	
120-83-2	2,4-Dichlorophenol	220	U	
91-20-3	Naphthalene	220	U	
106-47-8	4-Chloroaniline	220	U	R
87-68-3	Hexachlorobutadiene	220	U	
105-60-2	Caprolactam	220	U	
59-50-7	4-Chloro-3-methylphenol	220	U	
91-57-6	2-Methylnaphthalene	220	U	
77-47-4	Hexachlorocyclopentadiene	220	U	R
88-06-2	2,4,6-Trichlorophenol	220	U	
95-95-4	2,4,5-Trichlorophenol	220	U	
92-52-4	1,1'-Biphenyl	220	U	
91-58-7	2-Chloronaphthalene	220	U	
88-74-4	2-Nitroaniline	430	U	
131-11-3	Dimethylphthalate	220	U	
606-20-2	2,6-Dinitrotoluene	220	U	
208-96-8	Acenaphthylene	220	U	
99-09-2	3-Nitroaniline	430	U	
83-32-9	Acenaphthene	220	U	

NW 8/28/13

1E - FORM I SV-2
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-27-096

22

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17028

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17028-22

Sample wt/vol: 29.9 (g/mL) g Lab File ID: PJXXE05.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 23 Decanted: (Y/N) Date Received: 06/15/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/24/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/27/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
51-28-5	2,4-Dinitrophenol	430	U	
100-02-7	4-Nitrophenol	430	U	
132-64-9	Dibenzofuran	220	U	
121-14-2	2,4-Dinitrotoluene	220	U	
84-66-2	Diethylphthalate	220	U	
86-73-7	Fluorene	220	U	
7005-72-3	4-Chlorophenyl-phenylether	220	U	
100-01-6	4-Nitroaniline	430	U	
534-52-1	4,6-Dinitro-2-methylphenol	430	U	
86-30-6	N-Nitrosodiphenylamin [1]	220	U	
95-94-3	1,2,4,5-Tetrachlorobenzene	220	U	
101-55-3	4-Bromophenyl-phenylether	220	U	
118-74-1	Hexachlorobenzene	220	U	
1912-24-9	Atrazine	220	U	
87-86-5	Pentachlorophenol	430	U	
85-01-8	Phenanthrene	220	U	
120-12-7	Anthracene	220	U	
86-74-8	Carbazole	220	U	
84-74-2	Di-n-butylphthalate	46	J	
206-44-0	Fluoranthene	220	U	
129-00-0	Pyrene	220	U	
85-68-7	Butylbenzylphthalate	220 ~~32~~	~~J B~~	U
91-94-1	3,3'-Dichlorobenzidine	220	~~U~~	R
56-55-3	Benzo(a)anthracene	220	U	
218-01-9	Chrysene	220	U	
117-81-7	Bis(2-ethylhexyl)phthalate	220 ~~61~~	~~J B~~	U
117-84-0	Di-n-octylphthalate	220	U	
205-99-2	Benzo(b)fluoranthene	220	U	
207-08-9	Benzo(k)fluoranthene	220	U	
50-32-8	Benzo(a)pyrene	220	U	
193-39-5	Indeno(1,2,3-cd)pyrene	220	~~U~~	UJ
53-70-3	Dibenzo(a,h)anthracene	220	~~U~~	↓
191-24-2	Benzo(g,h,i)perylene	220	~~U~~	
58-90-2	2,3,4,6-Tetrachlorophenol	220	U	

[1] Cannot be separated from Diphenylamine

MW 8/28/13

EPA SAMPLE NO.
LMR13-72-072

23

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17028

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17028-23

Sample wt/vol: 30.6 (g/mL) g Lab File ID: PJXXE06.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 40 Decanted: (Y/N) Date Received: 06/15/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/24/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/27/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 2.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
100-52-7	Benzaldehyde	560	U
108-95-2	Phenol	560	U
111-44-4	Bis(2-chloroethyl)ether	560	U
95-57-8	2-Chlorophenol	560	U
95-48-7	2-Methylphenol	560	U
108-60-1	2,2'-Oxybis(1-chloropropane)	560	U
98-86-2	Acetophenone	560	U
106-44-5	4-Methylphenol	560	U
621-64-7	N-Nitroso-di-n-propylamine	560	U
67-72-1	Hexachloroethane	560	U
98-95-3	Nitrobenzene	560	U
78-59-1	Isophorone	560	U
88-75-5	2-Nitrophenol	560	U
105-67-9	2,4-Dimethylphenol	560	U
111-91-1	Bis(2-chloroethoxy)methane	560	U
120-83-2	2,4-Dichlorophenol	560	U
91-20-3	Naphthalene	95	J
106-47-8	4-Chloroaniline	560	U
87-68-3	Hexachlorobutadiene	560	U
105-60-2	Caprolactam	560	U
59-50-7	4-Chloro-3-methylphenol	560	U
91-57-6	2-Methylnaphthalene	560	U
77-47-4	Hexachlorocyclopentadiene	560	~~U~~ R
88-06-2	2,4,6-Trichlorophenol	560	U
95-95-4	2,4,5-Trichlorophenol	560	U
92-52-4	1,1'-Biphenyl	560	U
91-58-7	2-Chloronaphthalene	560	U
88-74-4	2-Nitroaniline	1100	U
131-11-3	Dimethylphthalate	560	U
606-20-2	2,6-Dinitrotoluene	560	U
208-96-8	Acenaphthylene	87	J
99-09-2	3-Nitroaniline	1100	U
83-32-9	Acenaphthene	220	J

NW 8/28/13

1E - FORM I SV-2

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-72-072

23

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17028

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17028-23

Sample wt/vol: 30.6 (g/mL) g Lab File ID: PJXXE06.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 40 Decanted: (Y/N) Date Received: 06/15/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/24/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/27/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 2.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
51-28-5	2,4-Dinitrophenol	1100	U	
100-02-7	4-Nitrophenol	1100	U	
132-64-9	Dibenzofuran	62	J	
121-14-2	2,4-Dinitrotoluene	560	U	
84-66-2	Diethylphthalate	560	U	
86-73-7	Fluorene	250	J	
7005-72-3	4-Chlorophenyl-phenylether	560	U	
100-01-6	4-Nitroaniline	1100	U	
534-52-1	4,6-Dinitro-2-methylphenol	1100	U	
86-30-6	N-Nitrosodiphenylamin [1]	560	U	
95-94-3	1,2,4,5-Tetrachlorobenzene	560	U	
101-55-3	4-Bromophenyl-phenylether	560	U	
118-74-1	Hexachlorobenzene	560	U	
1912-24-9	Atrazine	560	U	
87-86-5	Pentachlorophenol	1100	U	
85-01-8	Phenanthrene	2000		
120-12-7	Anthracene	400	J	
86-74-8	Carbazole	27	J	
84-74-2	Di-n-butylphthalate	26	J	
206-44-0	Fluoranthene	2000		
129-00-0	Pyrene	2000		
85-68-7	Butylbenzylphthalate	560	U	
91-94-1	3,3'-Dichlorobenzidine	560	U	
56-55-3	Benzo(a)anthracene	1100		
218-01-9	Chrysene	1200		
117-81-7	Bis(2-ethylhexyl)phthalate	560 ~~80~~	~~J B~~	U
117-84-0	Di-n-octylphthalate	560	U	
205-99-2	Benzo(b)fluoranthene	860		
207-08-9	Benzo(k)fluoranthene	820		
50-32-8	Benzo(a)pyrene	790		
193-39-5	Indeno(1,2,3-cd)pyrene	520	J	J
53-70-3	Dibenzo(a,h)anthracene	220	J	J
191-24-2	Benzo(g,h,i)perylene	630		UJ
58-90-2	2,3,4,6-Tetrachlorophenol	560	U	

[1] Cannot be separated from Diphenylamine

NW 8/28/13

EPA SAMPLE NO.
LMR13-57-024FD

24

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17028

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17028-24

Sample wt/vol: 30.3 (g/mL) g Lab File ID: PJXXE07.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 43 Decanted: (Y/N) Date Received: 06/15/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/24/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/27/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 5.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
100-52-7	Benzaldehyde	1500	U
108-95-2	Phenol	1500	U
111-44-4	Bis(2-chloroethyl)ether	1500	U
95-57-8	2-Chlorophenol	1500	U
95-48-7	2-Methylphenol	1500	U
108-60-1	2,2'-Oxybis(1-chloropropane)	1500	U
98-86-2	Acetophenone	1500	U
106-44-5	4-Methylphenol	1500	U
621-64-7	N-Nitroso-di-n-propylamine	1500	U
67-72-1	Hexachloroethane	1500	U
98-95-3	Nitrobenzene	1500	U
78-59-1	Isophorone	1500	U
88-75-5	2-Nitrophenol	1500	U
105-67-9	2,4-Dimethylphenol	1500	U
111-91-1	Bis(2-chloroethoxy)methane	1500	U
120-83-2	2,4-Dichlorophenol	1500	U
91-20-3	Naphthalene	180	J
106-47-8	4-Chloroaniline	1500	U
87-68-3	Hexachlorobutadiene	1500	U
105-60-2	Caprolactam	1500	U
59-50-7	4-Chloro-3-methylphenol	1500	U
91-57-6	2-Methylnaphthalene	1500	U
77-47-4	Hexachlorocyclopentadiene	1500	U UJ
88-06-2	2,4,6-Trichlorophenol	1500	U
95-95-4	2,4,5-Trichlorophenol	1500	U
92-52-4	1,1'-Biphenyl	1500	U
91-58-7	2-Chloronaphthalene	1500	U
88-74-4	2-Nitroaniline	2900	U
131-11-3	Dimethylphthalate	1500	U
606-20-2	2,6-Dinitrotoluene	1500	U
208-96-8	Acenaphthylene	1500	U
99-09-2	3-Nitroaniline	2900	U
83-32-9	Acenaphthene	650	J

NW 8/28/13

EPA SAMPLE NO.
LMR13-57-024FD

24

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17028

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17028-24

Sample wt/vol: 30.3 (g/mL) g Lab File ID: PJXXE07.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 43 Decanted: (Y/N) Date Received: 06/15/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/24/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/27/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 5.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
51-28-5	2,4-Dinitrophenol	2900	U
100-02-7	4-Nitrophenol	2900	U
132-64-9	Dibenzofuran	190	J
121-14-2	2,4-Dinitrotoluene	1500	U
84-66-2	Diethylphthalate	1500	U
86-73-7	Fluorene	610	J
7005-72-3	4-Chlorophenyl-phenylether	1500	U
100-01-6	4-Nitroaniline	2900	U
534-52-1	4,6-Dinitro-2-methylphenol	2900	U
86-30-6	N-Nitrosodiphenylamin [1]	1500	U
95-94-3	1,2,4,5-Tetrachlorobenzene	1500	U
101-55-3	4-Bromophenyl-phenylether	1500	U
118-74-1	Hexachlorobenzene	1500	U
1912-24-9	Atrazine	1500	U
87-86-5	Pentachlorophenol	2900	U
85-01-8	Phenanthrene	1500	
120-12-7	Anthracene	370	J
86-74-8	Carbazole	1500	U
84-74-2	Di-n-butylphthalate	1500	U
206-44-0	Fluoranthene	1400	J
129-00-0	Pyrene	1600	
85-68-7	Butylbenzylphthalate	1500	U
91-94-1	3,3'-Dichlorobenzidine	1500	U
56-55-3	Benzo(a)anthracene	1000	J
218-01-9	Chrysene	1700	
117-81-7	Bis(2-ethylhexyl)phthalate	1500 ~~120~~	~~J B~~ U
117-84-0	Di-n-octylphthalate	1500	U
205-99-2	Benzo(b)fluoranthene	560	J
207-08-9	Benzo(k)fluoranthene	370	J
50-32-8	Benzo(a)pyrene	540	J
193-39-5	Indeno(1,2,3-cd)pyrene	310	J
53-70-3	Dibenzo(a,h)anthracene	130	J
191-24-2	Benzo(g,h,i)perylene	390	J
58-90-2	2,3,4,6-Tetrachlorophenol	1500	U

J ↓

[1] Cannot be separated from Diphenylamine

NW 8/28/13

1F - FORM I SV-SIM

SEMIVOLATILE SIM ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-57-012

7

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17028

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17028-7

Sample wt/vol: 30.9 (g/mL) g Lab File ID: HQISQ08.D

Extraction: (Type) SONC

% Moisture: 43 Decanted: (Y/N) Date Received: 06/15/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/22/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/31/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 66.7

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
91-20-3	Naphthalene	840	~~B~~
90-12-0	1-Methylnaphthalene	220	J
91-57-6	2-Methylnaphthalene	430	
208-96-8	Acenaphthylene	280	J
83-32-9	Acenaphthene	4800	~~B~~
86-73-7	Fluorene	5200	~~B~~
85-01-8	Phenanthrene	18000	~~B~~ ~~B~~
120-12-7	Anthracene	5100	~~B~~
206-44-0	Fluoranthene	12000	~~B~~ ~~B~~
129-00-0	Pyrene	10000	~~B~~ ~~B~~
56-55-3	Benzo(a)anthracene	5300	~~B~~ ~~B~~
218-01-9	Chrysene	5600	~~B~~ ~~B~~
205-99-2	Benzo(b)fluoranthene	2800	~~B~~
207-08-9	Benzo(k)fluoranthene	3200	~~B~~
192-97-2	Benzo(e)pyrene	2500	
50-32-8	Benzo(a)pyrene	3900	~~B~~
198-55-0	Perylene	810	
193-39-5	Indeno(1,2,3-cd)pyrene	1600	
53-70-3	Dibenzo(a,h)anthracene	680	
191-24-2	Benzo(g,h,i)perylene	1500	
C1NAPH	C1-Naphthalenes	440	J
C2NAPH	C2-Naphthalenes	3900	J
C3NAPH	C3-Naphthalenes	12000	J
C4NAPH	C4-Naphthalenes	7000	J
C1FLUOR	C1 Fluorenes	960	J
C2FLUOR	C2 Fluorenes	1300	J
C3FLUOR	C3 Fluorenes	2700	J
C1PHAN	C1-Phenanthrenes/Anthracenes	12000	J
C2PHAN	C2-Phenanthrenes/Anthracenes	9400	J
C3PHAN	C3-Phenanthrenes/Anthracenes	13000	J
C4PHAN	C4-Phenanthrenes/Anthracenes	8300	J
C1FLPY	C1-Fluoranthenes/Pyrenes	8700	J
C2FLPY	C2-Fluoranthenes/Pyrenes	6000	J
C3FLPY	C3-Fluoranthenes/Pyrenes	4600	J
C1CHRYS	C1 Chrysenes	6800	J
C2CHRYS	C2 Chrysenes	8200	J
C3CHRYS	C3 Chrysenes	3900	J
C4CHRYS	C4 Chrysenes	1700	J

J

J

NW 8/28/13

1F - FORM I SV-SIM

SEMIVOLATILE SIM ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-57-012

7

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17028

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17028-7

Sample wt/vol: 30.9 (g/mL) g Lab File ID: HQISQ08.D

Extraction: (Type) SONC

% Moisture: 43 Decanted: (Y/N) Date Received: 06/15/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/22/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/31/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 66.7

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
TPPAH	Total 16 PPAH	81000	~~B~~ J
TPAH	Total PAH	190000	~~B~~ J

NW 8/28/13

1F - FORM I SV-SIM
SEMIVOLATILE SIM ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-72-012

18

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17028

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17028-18

Sample wt/vol: 31.0 (g/mL) g Lab File ID: HQISQ09.D

Extraction: (Type) SONC

% Moisture: 41 Decanted: (Y/N) Date Received: 06/15/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/22/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/31/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 20.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
91-20-3	Naphthalene	110 ~~78~~	~~J B~~ U
90-12-0	1-Methylnaphthalene	18	J
91-57-6	2-Methylnaphthalene	30	J
208-96-8	Acenaphthylene	50	J
83-32-9	Acenaphthene	85	J
86-73-7	Fluorene	140	
85-01-8	Phenanthrene	680	~~B~~
120-12-7	Anthracene	160	
206-44-0	Fluoranthene	1600	~~E B~~ J
129-00-0	Pyrene	1300	~~E B~~ J
56-55-3	Benzo(a)anthracene	870	~~B~~
218-01-9	Chrysene	960	~~B~~
205-99-2	Benzo(b)fluoranthene	670	~~B~~
207-08-9	Benzo(k)fluoranthene	720	~~B~~
192-97-2	Benzo(e)pyrene	550	
50-32-8	Benzo(a)pyrene	810	
198-55-0	Perylene	630	
193-39-5	Indeno(1,2,3-cd)pyrene	590	
53-70-3	Dibenzo(a,h)anthracene	190	
191-24-2	Benzo(g,h,i)perylene	590	
C1NAPH	C1-Naphthalenes	31	J
C2NAPH	C2-Naphthalenes	160	J
C3NAPH	C3-Naphthalenes	460	J
C4NAPH	C4-Naphthalenes	440	J
C1FLUOR	C1 Fluorenes	50	J
C2FLUOR	C2 Fluorenes	110	J
C3FLUOR	C3 Fluorenes	270	J
C1PHAN	C1-Phenanthrenes/Anthracenes	620	J
C2PHAN	C2-Phenanthrenes/Anthracenes	670	J
C3PHAN	C3-Phenanthrenes/Anthracenes	820	J
C4PHAN	C4-Phenanthrenes/Anthracenes	670	J
C1FLPY	C1-Fluoranthenes/Pyrenes	920	J
C2FLPY	C2-Fluoranthenes/Pyrenes	650	J
C3FLPY	C3-Fluoranthenes/Pyrenes	430	J
C1CHRYS	C1 Chrysenes	730	J
C2CHRYS	C2 Chrysenes	480	J
C3CHRYS	C3 Chrysenes	190	J
C4CHRYS	C4 Chrysenes	120	J

NW 8/28/13

1F - FORM I SV-SIM

SEMIVOLATILE SIM ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-72-012

18

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17028

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17028-18

Sample wt/vol: 31.0 (g/mL) g Lab File ID: HQISQ09.D

Extraction: (Type) SONC

% Moisture: 41 Decanted: (Y/N) Date Received: 06/15/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/22/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/31/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 20.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
TPPAH	Total 16 PPAH	9500	~~B~~	J
TPAH	Total PAH	19000	~~B~~	J

NW 8/28/13

1H - FORM I ARO
AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-83-048

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17028

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17028-1

Sample wt/vol: 30.6 (g/mL) g Lab File ID: 5253AXCSOM08.D

% Moisture: 24 Decanted: (Y/N) Date Received: 06/15/2013

Extraction: (Type) SONC Date Extracted: 06/22/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 07/14/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	43	U
11104-28-2	Aroclor-1221	43	U
11141-16-5	Aroclor-1232	43	U
53469-21-9	Aroclor-1242	43	U
12672-29-6	Aroclor-1248	43	U
11097-69-1	Aroclor-1254	43	U
11096-82-5	Aroclor-1260	43	U
37324-23-5	Aroclor-1262	43	U
11100-14-4	Aroclor-1268	43	U

NW 8/28/13

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-83-072

2

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17028

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17028-2

Sample wt/vol: 30.2 (g/mL) g Lab File ID: 5253AXCSOM11.D

% Moisture: 19 Decanted: (Y/N) Date Received: 06/15/2013

Extraction: (Type) SONC Date Extracted: 06/22/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 07/14/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	40	U
11104-28-2	Aroclor-1221	40	U
11141-16-5	Aroclor-1232	40	U
53469-21-9	Aroclor-1242	40	U
12672-29-6	Aroclor-1248	40	U
11097-69-1	Aroclor-1254	40	U
11096-82-5	Aroclor-1260	40	U
37324-23-5	Aroclor-1262	40	U
11100-14-4	Aroclor-1268	40	U

NW 8/28/13

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-41-012

3

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17028

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17028-3

Sample wt/vol: 29.7 (g/mL) g Lab File ID: 5253AXCSOM12.D

% Moisture: 32 Decanted: (Y/N) Date Received: 06/15/2013

Extraction: (Type) SONC Date Extracted: 06/22/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 07/14/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	49	U
11104-28-2	Aroclor-1221	49	U
11141-16-5	Aroclor-1232	49	U
53469-21-9	Aroclor-1242	49	U
12672-29-6	Aroclor-1248	49	U
11097-69-1	Aroclor-1254	49	U
11096-82-5	Aroclor-1260	49	U
37324-23-5	Aroclor-1262	49	U
11100-14-4	Aroclor-1268	49	U

NW 8/28/13

1H - FORM I ARO
AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-41-024

4

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17028

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17028-4

Sample wt/vol: 30.1 (g/mL) g Lab File ID: 5253AXCSOM13.D

% Moisture: 34 Decanted: (Y/N) Date Received: 06/15/2013

Extraction: (Type) SONC Date Extracted: 06/22/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 07/14/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	50	U
11104-28-2	Aroclor-1221	50	U
11141-16-5	Aroclor-1232	50	U
53469-21-9	Aroclor-1242	50	U
12672-29-6	Aroclor-1248	50	U
11097-69-1	Aroclor-1254	50	U
11096-82-5	Aroclor-1260	50	U
37324-23-5	Aroclor-1262	50	U
11100-14-4	Aroclor-1268	50	U

NW 8/28/13

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-41-024FD

5

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17028

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17028-5

Sample wt/vol: 30.2 (g/mL) g Lab File ID: 5253AXCSOM14.D

% Moisture: 32 Decanted: (Y/N) Date Received: 06/15/2013

Extraction: (Type) SONC Date Extracted: 06/22/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 07/14/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	48	U
11104-28-2	Aroclor-1221	48	U
11141-16-5	Aroclor-1232	48	U
53469-21-9	Aroclor-1242	48	U
12672-29-6	Aroclor-1248	48	U
11097-69-1	Aroclor-1254	48	U
11096-82-5	Aroclor-1260	48	U
37324-23-5	Aroclor-1262	48	U
11100-14-4	Aroclor-1268	48	U

NW 8/28/13

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-41-048

6

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17028

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17028-6

Sample wt/vol: 30.5 (g/mL) g Lab File ID: 5253AXCSOM15.D

% Moisture: 27 Decanted: (Y/N) Date Received: 06/15/2013

Extraction: (Type) SONC Date Extracted: 06/22/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 07/14/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	44	U
11104-28-2	Aroclor-1221	44	U
11141-16-5	Aroclor-1232	44	U
53469-21-9	Aroclor-1242	44	U
12672-29-6	Aroclor-1248	44	U
11097-69-1	Aroclor-1254	44	U
11096-82-5	Aroclor-1260	44	U
37324-23-5	Aroclor-1262	44	U
11100-14-4	Aroclor-1268	44	U

NW 8/28/13

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-57-012

7

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17028

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17028-7

Sample wt/vol: 30.2 (g/mL) g Lab File ID: 5253AXCSOM16.D

% Moisture: 43 Decanted: (Y/N) Date Received: 06/15/2013

Extraction: (Type) SONC Date Extracted: 06/22/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 07/14/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

Use dilution results

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	58	U
11104-28-2	Aroclor-1221	58	U
11141-16-5	Aroclor-1232	58	U
53469-21-9	Aroclor-1242	58	U
12672-29-6	Aroclor-1248	58	U
11097-69-1	Aroclor-1254	58	U
11096-82-5	Aroclor-1260	58	U
37324-23-5	Aroclor-1262	58	U
11100-14-4	Aroclor-1268	58	U

4J

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1H - FORM I ARO
AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-57-012DL

7DL

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17028

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17028-7

Sample wt/vol: 30.2 (g/mL) g Lab File ID: 5253AZASOM04.D

% Moisture: 43 Decanted: (Y/N) Date Received: 06/15/2013

Extraction: (Type) SONC Date Extracted: 06/22/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 07/23/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 3.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	170	U
11104-28-2	Aroclor-1221	170	U
11141-16-5	Aroclor-1232	170	U
53469-21-9	Aroclor-1242	170	U
12672-29-6	Aroclor-1248	170	U
11097-69-1	Aroclor-1254	170	U
11096-82-5	Aroclor-1260	170	U
37324-23-5	Aroclor-1262	170	U
11100-14-4	Aroclor-1268	170	U

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1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-26-012

8

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17028

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17028-8

Sample wt/vol: 30.6 (g/mL) g Lab File ID: 5253AXCSOM17.D

% Moisture: 53 Decanted: (Y/N) Date Received: 06/15/2013

Extraction: (Type) SONC Date Extracted: 06/22/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 07/14/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
12674-11-2	Aroclor-1016	69	U	
11104-28-2	Aroclor-1221	69	U	
11141-16-5	Aroclor-1232	69	U	
53469-21-9	Aroclor-1242	46	~~J P~~	J
12672-29-6	Aroclor-1248	69	U	
11097-69-1	Aroclor-1254	35	~~J P~~	J
11096-82-5	Aroclor-1260	69	U	
37324-23-5	Aroclor-1262	69	U	
11100-14-4	Aroclor-1268	69	U	

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1H - FORM I ARO
AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-26-012FD

9

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17028

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17028-9

Sample wt/vol: 30.3 (g/mL) g Lab File ID: 5253AXCSOM18.D

% Moisture: 50 Decanted: (Y/N) Date Received: 06/15/2013

Extraction: (Type) SONC Date Extracted: 06/22/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 07/14/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	66	U
11104-28-2	Aroclor-1221	66	U
11141-16-5	Aroclor-1232	66	U
53469-21-9	Aroclor-1242	47	~~J P~~ J
12672-29-6	Aroclor-1248	66	U
11097-69-1	Aroclor-1254	35	~~J P~~ J
11096-82-5	Aroclor-1260	66	U
37324-23-5	Aroclor-1262	66	U
11100-14-4	Aroclor-1268	66	U

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1H - FORM I ARO
AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-57-024
10

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17028

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17028-10

Sample wt/vol: 30.4 (g/mL) g Lab File ID: 5253AXCSOM19.D

% Moisture: 43 Decanted: (Y/N) Date Received: 06/15/2013

Extraction: (Type) SONC Date Extracted: 06/22/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 07/14/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

use dilution results

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	57	U UJ
11104-28-2	Aroclor-1221	57	U
11141-16-5	Aroclor-1232	57	U
53469-21-9	Aroclor-1242	57	U
12672-29-6	Aroclor-1248	57	U
11097-69-1	Aroclor-1254	57	U
11096-82-5	Aroclor-1260	57	U
37324-23-5	Aroclor-1262	57	U
11100-14-4	Aroclor-1268	57	U

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1H - FORM I ARO
AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-57-024DL

10DL

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17028

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17028-10

Sample wt/vol: 30.4 (g/mL) g Lab File ID: 5253AZASOM05.D

% Moisture: 43 Decanted: (Y/N) Date Received: 06/15/2013

Extraction: (Type) SONC Date Extracted: 06/22/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 07/23/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 3.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	170	U
11104-28-2	Aroclor-1221	170	U
11141-16-5	Aroclor-1232	170	U
53469-21-9	Aroclor-1242	170	U
12672-29-6	Aroclor-1248	170	U
11097-69-1	Aroclor-1254	170	U
11096-82-5	Aroclor-1260	170	U
37324-23-5	Aroclor-1262	170	U
11100-14-4	Aroclor-1268	170	U

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1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-57-048

11

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17028

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17028-11

Sample wt/vol: 30.1 (g/mL) g Lab File ID: 5253AXDSOM06.D

% Moisture: 33 Decanted: (Y/N) Date Received: 06/15/2013

Extraction: (Type) SONC Date Extracted: 06/22/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 07/15/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	49	U
11104-28-2	Aroclor-1221	49	U
11141-16-5	Aroclor-1232	49	U
53469-21-9	Aroclor-1242	49	U
12672-29-6	Aroclor-1248	49	U
11097-69-1	Aroclor-1254	49	U
11096-82-5	Aroclor-1260	49	U
37324-23-5	Aroclor-1262	49	U
11100-14-4	Aroclor-1268	49	U

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1H - FORM I ARO
AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-72-048

12

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17028

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17028-12

Sample wt/vol: 30.5 (g/mL) g Lab File ID: 5253AXDSOM07.D

% Moisture: 42 Decanted: (Y/N) Date Received: 06/15/2013

Extraction: (Type) SONC Date Extracted: 06/22/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 07/15/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	56	U
11104-28-2	Aroclor-1221	56	U
11141-16-5	Aroclor-1232	56	U
53469-21-9	Aroclor-1242	56	U
12672-29-6	Aroclor-1248	56	U
11097-69-1	Aroclor-1254	56	U
11096-82-5	Aroclor-1260	21	~~J P~~ J
37324-23-5	Aroclor-1262	56	U
11100-14-4	Aroclor-1268	56	U

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1H - FORM I ARO
AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-27-012

13

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17028

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17028-13

Sample wt/vol: 30.3 (g/mL) g Lab File ID: 5253AXDSOM08.D

% Moisture: 52 Decanted: (Y/N) Date Received: 06/15/2013

Extraction: (Type) SONC Date Extracted: 06/22/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 07/15/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
12674-11-2	Aroclor-1016	67	U	
11104-28-2	Aroclor-1221	67	U	
11141-16-5	Aroclor-1232	67	U	
53469-21-9	Aroclor-1242	60	~~J P~~	J
12672-29-6	Aroclor-1248	67	U	
11097-69-1	Aroclor-1254	73		
11096-82-5	Aroclor-1260	13	~~J P~~	J
37324-23-5	Aroclor-1262	67	U	
11100-14-4	Aroclor-1268	67	U	

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1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-27-024

14

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17028

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17028-14

Sample wt/vol: 30.4 (g/mL) g Lab File ID: 5253AXDSOM09.D

% Moisture: 48 Decanted: (Y/N) Date Received: 06/15/2013

Extraction: (Type) SONC Date Extracted: 06/22/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 07/15/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
12674-11-2	Aroclor-1016	63	U	
11104-28-2	Aroclor-1221	63	U	
11141-16-5	Aroclor-1232	63	U	
53469-21-9	Aroclor-1242	20	~~J P~~	J
12672-29-6	Aroclor-1248	63	U	
11097-69-1	Aroclor-1254	19	~~J P~~	J
11096-82-5	Aroclor-1260	3.7	~~J P~~	J
37324-23-5	Aroclor-1262	63	U	
11100-14-4	Aroclor-1268	63	U	

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1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-27-024FD

15

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17028

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17028-15

Sample wt/vol: 30.2 (g/mL) g Lab File ID: 5253AXDSOM10.D

% Moisture: 48 Decanted: (Y/N) Date Received: 06/15/2013

Extraction: (Type) SONC Date Extracted: 06/22/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 07/15/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
12674-11-2	Aroclor-1016	63	U	
11104-28-2	Aroclor-1221	63	U	
11141-16-5	Aroclor-1232	63	U	
53469-21-9	Aroclor-1242	34	~~J P~~	J
12672-29-6	Aroclor-1248	63	U	
11097-69-1	Aroclor-1254	35	~~J P~~	J
11096-82-5	Aroclor-1260	5.7	~~J P~~	J
37324-23-5	Aroclor-1262	63	U	
11100-14-4	Aroclor-1268	63	U	

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1H - FORM I ARO
AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-27-048

16

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17028

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17028-16

Sample wt/vol: 30.4 (g/mL) g Lab File ID: 5253AXDSOM11.D

% Moisture: 45 Decanted: (Y/N) Date Received: 06/15/2013

Extraction: (Type) SONC Date Extracted: 06/22/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 07/15/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	60	U
11104-28-2	Aroclor-1221	60	U
11141-16-5	Aroclor-1232	60	U
53469-21-9	Aroclor-1242	60	U
12672-29-6	Aroclor-1248	60	U
11097-69-1	Aroclor-1254	60	U
11096-82-5	Aroclor-1260	60	U
37324-23-5	Aroclor-1262	60	U
11100-14-4	Aroclor-1268	60	U

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1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-27-072

17

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17028

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17028-17

Sample wt/vol: 30.2 (g/mL) g Lab File ID: 5253AXDSOM12.D

% Moisture: 30 Decanted: (Y/N) Date Received: 06/15/2013

Extraction: (Type) SONC Date Extracted: 06/22/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 07/15/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	47	U
11104-28-2	Aroclor-1221	47	U
11141-16-5	Aroclor-1232	47	U
53469-21-9	Aroclor-1242	47	U
12672-29-6	Aroclor-1248	47	U
11097-69-1	Aroclor-1254	47	U
11096-82-5	Aroclor-1260	47	U
37324-23-5	Aroclor-1262	47	U
11100-14-4	Aroclor-1268	47	U

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1H - FORM I ARO
AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-72-012

18

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17028

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17028-18

Sample wt/vol: 30.5 (g/mL) g Lab File ID: 5253AXDSOM13.D

% Moisture: 41 Decanted: (Y/N) Date Received: 06/15/2013

Extraction: (Type) SONC Date Extracted: 06/22/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 07/15/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	55	U
11104-28-2	Aroclor-1221	55	U
11141-16-5	Aroclor-1232	55	U
53469-21-9	Aroclor-1242	52	J
12672-29-6	Aroclor-1248	55	U
11097-69-1	Aroclor-1254	66	~~P~~ J
11096-82-5	Aroclor-1260	25	~~J P~~ J
37324-23-5	Aroclor-1262	55	U
11100-14-4	Aroclor-1268	55	U

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1H - FORM I ARO
AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-72-024

19

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17028

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17028-19

Sample wt/vol: 30.1 (g/mL) g Lab File ID: 5253AXDSOM14.D

% Moisture: 41 Decanted: (Y/N) Date Received: 06/15/2013

Extraction: (Type) SONC Date Extracted: 06/22/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 07/15/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	56	U
11104-28-2	Aroclor-1221	56	U
11141-16-5	Aroclor-1232	56	U
53469-21-9	Aroclor-1242	56	U
12672-29-6	Aroclor-1248	56	U
11097-69-1	Aroclor-1254	56	U
11096-82-5	Aroclor-1260	22	~~J P~~ J
37324-23-5	Aroclor-1262	56	U
11100-14-4	Aroclor-1268	56	U

NW 8/28/13

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-72-024FD

20

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17028

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17028-20

Sample wt/vol: 30.4 (g/mL) g Lab File ID: 5253AXDSOM15.D

% Moisture: 41 Decanted: (Y/N) Date Received: 06/15/2013

Extraction: (Type) SONC Date Extracted: 06/22/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 07/15/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	55	U
11104-28-2	Aroclor-1221	55	U
11141-16-5	Aroclor-1232	55	U
53469-21-9	Aroclor-1242	55	U
12672-29-6	Aroclor-1248	55	U
11097-69-1	Aroclor-1254	55	U
11096-82-5	Aroclor-1260	26	J
37324-23-5	Aroclor-1262	55	U
11100-14-4	Aroclor-1268	55	U

NW 8/28/13

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-72-096

21

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17028

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17028-21

Sample wt/vol: 30.4 (g/mL) g Lab File ID: 5253AXDSOM18.D

% Moisture: 43 Decanted: (Y/N) Date Received: 06/15/2013

Extraction: (Type) SONC Date Extracted: 06/24/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 07/15/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	57	U
11104-28-2	Aroclor-1221	57	U
11141-16-5	Aroclor-1232	57	U
53469-21-9	Aroclor-1242	57	U
12672-29-6	Aroclor-1248	57	U
11097-69-1	Aroclor-1254	57	U
11096-82-5	Aroclor-1260	57	U
37324-23-5	Aroclor-1262	57	U
11100-14-4	Aroclor-1268	57	U

NW 8/28/13

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-27-096

22

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17028

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17028-22

Sample wt/vol: 30.9 (g/mL) g Lab File ID: 5253AXDSOM19.D

% Moisture: 23 Decanted: (Y/N) Date Received: 06/15/2013

Extraction: (Type) SONC Date Extracted: 06/24/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 07/15/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	42	U
11104-28-2	Aroclor-1221	42	U
11141-16-5	Aroclor-1232	42	U
53469-21-9	Aroclor-1242	42	U
12672-29-6	Aroclor-1248	42	U
11097-69-1	Aroclor-1254	42	U
11096-82-5	Aroclor-1260	42	U
37324-23-5	Aroclor-1262	42	U
11100-14-4	Aroclor-1268	42	U

MW 8/28/13

EPA SAMPLE NO.
LMR13-72-072

23

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17028

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17028-23

Sample wt/vol: 30.1 (g/mL) g Lab File ID: 5253AXDSOM20.D

% Moisture: 40 Decanted: (Y/N) Date Received: 06/15/2013

Extraction: (Type) SONC Date Extracted: 06/24/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 07/15/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	55	U
11104-28-2	Aroclor-1221	55	U
11141-16-5	Aroclor-1232	55	U
53469-21-9	Aroclor-1242	55	U
12672-29-6	Aroclor-1248	55	U
11097-69-1	Aroclor-1254	55	U
11096-82-5	Aroclor-1260	5.3	~~J P~~ J
37324-23-5	Aroclor-1262	55	U
11100-14-4	Aroclor-1268	55	U

NW 8/28/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-83-048

1

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678
Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 17028
Matrix: SED | Lab Sample Id: 200-17028-1
% Solids: 75.8 | Date Received: 06/15/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	3.6			P
7440-43-9	Cadmium	0.57 ~~0.32~~	~~J~~	U	P
7440-47-3	Chromium	10.4		J ~~E~~	P
7440-50-8	Copper	9.8			P
7439-92-1	Lead	12.5		J ~~N~~	P
7440-02-0	Nickel	13.8		J ~~E~~	P
7440-66-6	Zinc	38.6		J ~~E~~	P

Color Before: GRAY | Clarity Before: | Texture: MEDIUM
Color After: TAN | Clarity After: CLOUDY | Artifacts:
Comments:

NW 8/28/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-83-048

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678
Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 17028
Matrix: SED | Lab Sample Id: 200-17028-1
% Solids: 75.8 | Date Received: 06/15/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.12	U	N	CV

Color Before: GRAY | Clarity Before: CLOUDY | Texture: FINE
Color After: COLORLESS | Clarity After: CLEAR | Artifacts:
Comments:

MW 8/28/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-83-072

2

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678

Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 17028

Matrix: SED | Lab Sample Id: 200-17028-2

% Solids: 81.2 | Date Received: 06/15/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	3.1			P
7440-43-9	Cadmium	0.51 ~~0.20~~	~~J~~	U	P
7440-47-3	Chromium	6.6		J ~~E~~	P
7440-50-8	Copper	4.8			P
7439-92-1	Lead	4.5		J ~~*~~ N	P
7440-02-0	Nickel	9.4		↓ ~~E~~	P
7440-66-6	Zinc	24.9		↓ ~~E~~	P

Color Before: BROWN | Clarity Before: | Texture: MEDIUM

Color After: TAN | Clarity After: CLOUDY | Artifacts:

Comments:

NW 8/28/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-83-072

2

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678

Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 17028

Matrix: SED | Lab Sample Id: 200-17028-2

% Solids: 81.2 | Date Received: 06/15/2013

Concentration Units (**ug/L, ug,** or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.11 ~~0.046~~	~~0~~	U ~~N~~	CV

Color Before: GRAY | Clarity Before: CLOUDY | Texture: FINE

Color After: COLORLESS | Clarity After: CLEAR | Artifacts:

Comments:

MW 8/28/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-41-012

3

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678
Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 17028
Matrix: SED | Lab Sample Id: 200-17028-3
% Solids: 68.0 | Date Received: 06/15/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	4.1			P
7440-43-9	Cadmium	0.69 ~~0.46~~	~~J~~	U	P
7440-47-3	Chromium	14.1		J ~~E~~	P
7440-50-8	Copper	15.1			P
7439-92-1	Lead	14.0		J ~~N~~*	P
7440-02-0	Nickel	19.7		~~E~~	P
7440-66-6	Zinc	52.4		~~E~~	P

Color Before: BROWN | Clarity Before: | Texture: MEDIUM
Color After: TAN | Clarity After: CLOUDY | Artifacts:
Comments:

MW 8/28/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-41-012

3

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678
Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 17028
Matrix: SED | Lab Sample Id: 200-17028-3
% Solids: 68.0 | Date Received: 06/15/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.13 ~~0.028~~		U	CV

Color Before: GRAY | Clarity Before: CLOUDY | Texture: FINE
Color After: COLORLESS | Clarity After: CLEAR | Artifacts:
Comments:

NW 8/28/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-41-024

4

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678
Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 17028
Matrix: SED | Lab Sample Id: 200-17028-4
% Solids: 65.6 | Date Received: 06/15/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	4.3			P
7440-43-9	Cadmium	0.67 ~~0.46~~	8	U	P
7440-47-3	Chromium	14.0		J ~~B~~	P
7440-50-8	Copper	15.5			P
7439-92-1	Lead	21.0		J ~~N*~~	P
7440-02-0	Nickel	20.1		J ~~E~~	P
7440-66-6	Zinc	52.5		J ~~E~~	P

Color Before: BROWN | Clarity Before: | Texture: MEDIUM
Color After: TAN | Clarity After: CLOUDY | Artifacts:
Comments:

NW 8/28/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-41-024

41

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678
Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 17028
Matrix: SED | Lab Sample Id: 200-17028-4
% Solids: 65.6 | Date Received: 06/15/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.13 ~~0.045~~	~~J~~	U ~~N~~	CV

Color Before: GRAY | Clarity Before: CLOUDY | Texture: FINE
Color After: COLORLESS | Clarity After: CLEAR | Artifacts:
Comments:

NW 8/28/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-41-024FD

5

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678
Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 17028
Matrix: SED | Lab Sample Id: 200-17028-5
% Solids: 67.7 | Date Received: 06/15/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	4.3			P
7440-43-9	Cadmium	0.61 ~~0.47~~	∅	U	P
7440-47-3	Chromium	14.3		J ~~E~~	P
7440-50-8	Copper	16.0			P
7439-92-1	Lead	23.7		J ~~N~~	P
7440-02-0	Nickel	20.4		~~E~~	P
7440-66-6	Zinc	54.8		~~E~~	P

Color Before: BROWN | Clarity Before: | Texture: MEDIUM
Color After: TAN | Clarity After: CLOUDY | Artifacts:
Comments:

MW 8/28/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-41-024FD

5

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678
Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 17028
Matrix: SED | Lab Sample Id: 200-17028-5
% Solids: 67.7 | Date Received: 06/15/2013

Concentration Units (**ug/L, ug,** or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.13	U	~~N~~	CV

Color Before: GRAY | Clarity Before: CLOUDY | Texture: FINE
Color After: COLORLESS | Clarity After: CLEAR | Artifacts:
Comments:

MW 8/28/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-41-048

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678

Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 17028

Matrix: SED | Lab Sample Id: 200-17028-6

% Solids: 73.4 | Date Received: 06/15/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	3.1			P
7440-43-9	Cadmium	0.49 ~~0.38~~	~~J~~	U J ~~B~~	P
7440-47-3	Chromium	11.1			P
7440-50-8	Copper	10.4			P
7439-92-1	Lead	11.6		J ~~N~~*	P
7440-02-0	Nickel	15.3		~~B~~	P
7440-66-6	Zinc	40.6		~~B~~	P

Color Before: BROWN | Clarity Before: | Texture: MEDIUM

Color After: TAN | Clarity After: CLOUDY | Artifacts:

Comments:

MW 8/28/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-41-048

6

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17028

Matrix: SED Lab Sample Id: 200-17028-6

% Solids: 73.4 Date Received: 06/15/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.13 ~~0.092~~	✓	U ~~N~~ ✓	CV

Color Before: GRAY Clarity Before: CLOUDY Texture: FINE

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

NN 8/28/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-57-012

7

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678
Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 17028
Matrix: SED | Lab Sample Id: 200-17028-7
% Solids: 56.6 | Date Received: 06/15/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	22.1			P
7440-43-9	Cadmium	0.96			P
7440-47-3	Chromium	25.7		J ~~E~~	P
7440-50-8	Copper	29.9			P
7439-92-1	Lead	616		J ~~N~~	P
7440-02-0	Nickel	30.0		~~E~~	P
7440-66-6	Zinc	287		~~E~~	P

Color Before: GRAYISH BROWN | Clarity Before: | Texture: MEDIUM
Color After: TAN | Clarity After: CLOUDY | Artifacts:
Comments:

NW 8/28/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-57-012

7

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678
Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 17028
Matrix: SED | Lab Sample Id: 200-17028-7
% Solids: 56.6 | Date Received: 06/15/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.46		J N	CV

Color Before: GRAY | Clarity Before: CLOUDY | Texture: FINE
Color After: COLORLESS | Clarity After: CLEAR | Artifacts:
Comments:

NW 8/28/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-26-012

8

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678

Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 17028

Matrix: SED | Lab Sample Id: 200-17028-8

% Solids: 47.3 | Date Received: 06/15/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	7.1			P
7440-43-9	Cadmium	0.90			P
7440-47-3	Chromium	27.9		J ~~E~~	P
7440-50-8	Copper	60.7			P
7439-92-1	Lead	31.6		J ~~N~~*	P
7440-02-0	Nickel	31.3		↓ ~~E~~	P
7440-66-6	Zinc	123		↓ ~~E~~	P

Color Before: GRAY | Clarity Before: | Texture: MEDIUM

Color After: TAN | Clarity After: CLOUDY | Artifacts:

Comments:

NW 8/28/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-26-012

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678
Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 17028
Matrix: SED | Lab Sample Id: 200-17028-8
% Solids: 47.3 | Date Received: 06/15/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.18 ~~0.12~~	~~J~~	U ~~N~~	CV

Color Before: GRAY | Clarity Before: CLOUDY | Texture: FINE
Color After: COLORLESS | Clarity After: CLEAR | Artifacts:
Comments:

NW 8/28/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-26-012FD 9

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678
Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 17028
Matrix: SED | Lab Sample Id: 200-17028-9
% Solids: 49.7 | Date Received: 06/15/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	7.1			P
7440-43-9	Cadmium	0.97 ~~0.89~~	J	U	P
7440-47-3	Chromium	27.3		J ~~B~~	P
7440-50-8	Copper	28.9			P
7439-92-1	Lead	32.5		J ~~N*~~	P
7440-02-0	Nickel	31.5		J ~~B~~	P
7440-66-6	Zinc	121		J ~~E~~	P

Color Before: GRAY | Clarity Before: | Texture: MEDIUM
Color After: TAN | Clarity After: CLOUDY | Artifacts:
Comments:

NW 8/28/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-26-012FD

9

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678
Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 17028
Matrix: SED | Lab Sample Id: 200-17028-9
% Solids: 49.7 | Date Received: 06/15/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.18 ~~0.040~~		U ~~N~~	CV

Color Before: GRAY | Clarity Before: CLOUDY | Texture: FINE
Color After: COLORLESS | Clarity After: CLEAR | Artifacts:
Comments:

NW 8/28/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-57-024

10

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678
Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 17028
Matrix: SED | Lab Sample Id: 200-17028-10
% Solids: 57.1 | Date Received: 06/15/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	15.5			P
7440-43-9	Cadmium	0.84			P
7440-47-3	Chromium	23.3		J ~~E~~	P
7440-50-8	Copper	28.5			P
7439-92-1	Lead	522		J ~~N~~ *	P
7440-02-0	Nickel	28.1		↓ ~~E~~	P
7440-66-6	Zinc	148		↓ ~~E~~	P

Color Before: GRAYISH BROWN | Clarity Before: | Texture: MEDIUM
Color After: TAN | Clarity After: CLOUDY | Artifacts:
Comments:

MW 8/28/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-57-024
10

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678
Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17028
Matrix: SED Lab Sample Id: 200-17028-10
% Solids: 57.1 Date Received: 06/15/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.38		J W	CV

Color Before: GRAY Clarity Before: CLOUDY Texture: FINE
Color After: COLORLESS Clarity After: CLEAR Artifacts:
Comments:

AW 8/28/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-57-048

11

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678
Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 17028
Matrix: SED | Lab Sample Id: 200-17028-11
% Solids: 67.4 | Date Received: 06/15/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	4.7			P
7440-43-9	Cadmium	0.53 ~~0.42~~	~~J~~	U	P
7440-47-3	Chromium	15.0		J ~~B~~	P
7440-50-8	Copper	15.4			P
7439-92-1	Lead	56.9		J ~~N~~*	P
7440-02-0	Nickel	20.7		↓ ~~B~~	P
7440-66-6	Zinc	57.3		↓ ~~B~~	P

Color Before: BROWN | Clarity Before: | Texture: MEDIUM
Color After: TAN | Clarity After: CLOUDY | Artifacts:
Comments:

NW 8/28/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-57-048

11

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678

Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 17028

Matrix: SED | Lab Sample Id: 200-17028-11

% Solids: 67.4 | Date Received: 06/15/2013

Concentration Units (**ug/L, ug,** or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.13 ~~0.062~~	~~I~~	U ~~M~~	CV

Color Before: GRAY | Clarity Before: CLOUDY | Texture: FINE

Color After: COLORLESS | Clarity After: CLEAR | Artifacts:

Comments:

VW 8/28/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-72-048

12

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17028

Matrix: SED Lab Sample Id: 200-17028-12

% Solids: 57.7 Date Received: 06/15/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	14.2			P
7440-43-9	Cadmium	2.7			P
7440-47-3	Chromium	32.6		J ~~E~~	P
7440-50-8	Copper	55.5			P
7439-92-1	Lead	157		J ~~N~~ *	P
7440-02-0	Nickel	30.9		~~E~~	P
7440-66-6	Zinc	256		J ~~E~~	P

Color Before: GRAYISH BROWN Clarity Before: Texture: MEDIUM

Color After: TAN Clarity After: CLOUDY Artifacts:

Comments:

NW 8/28/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-72-048

12

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678
Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 17028
Matrix: SED | Lab Sample Id: 200-17028-12
% Solids: 57.7 | Date Received: 06/15/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.50		J N	CV

Color Before: GRAY | Clarity Before: CLOUDY | Texture: FINE
Color After: COLORLESS | Clarity After: CLEAR | Artifacts:
Comments:

NW 8/28/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-27-012 13

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678
Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 17028
Matrix: SED | Lab Sample Id: 200-17028-13
% Solids: 48.4 | Date Received: 06/15/2013

Concentration Units (**ug/L, ug,** or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	9.1			P
7440-43-9	Cadmium	1.3			P
7440-47-3	Chromium	33.5		J ~~E~~	P
7440-50-8	Copper	36.0			P
7439-92-1	Lead	40.6		J ~~N~~	P
7440-02-0	Nickel	35.1		↓ ~~E~~	P
7440-66-6	Zinc	159		↓ ~~E~~	P

Color Before: GRAY | Clarity Before: | Texture: MEDIUM
Color After: TAN | Clarity After: CLOUDY | Artifacts:
Comments:

NW 8/28/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-27-012

13

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678
Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 17028
Matrix: SED | Lab Sample Id: 200-17028-13
% Solids: 48.4 | Date Received: 06/15/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.20 ~~0.15~~		U ~~N~~	CV

Color Before: GRAY | Clarity Before: CLOUDY | Texture: FINE
Color After: COLORLESS | Clarity After: CLEAR | Artifacts:
Comments:

NW 8/28/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-27-024

14

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678

Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 17028

Matrix: SED | Lab Sample Id: 200-17028-14

% Solids: 52.1 | Date Received: 06/15/2013

Concentration Units (**ug/L, ug,** or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	22.3			P
7440-43-9	Cadmium	2.0			P
7440-47-3	Chromium	40.1		J ~~E~~	P
7440-50-8	Copper	50.4			P
7439-92-1	Lead	107		J ~~N~~*	P
7440-02-0	Nickel	37.0		↓ ~~E~~	P
7440-66-6	Zinc	342		↓ ~~E~~	P

Color Before: GRAY | Clarity Before: | Texture: MEDIUM

Color After: TAN | Clarity After: CLOUDY | Artifacts:

Comments:

MW 8/28/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-27-024
14

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678
Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 17028
Matrix: SED | Lab Sample Id: 200-17028-14
% Solids: 52.1 | Date Received: 06/15/2013

Concentration Units (**ug/L, ug,** or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.57		J ~~N~~	CV

Color Before: GRAY | Clarity Before: CLOUDY | Texture: FINE
Color After: COLORLESS | Clarity After: CLEAR | Artifacts:
Comments:

NLV 8/28/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-27-024FD
15

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678
Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17028
Matrix: SED Lab Sample Id: 200-17028-15
% Solids: 52.1 Date Received: 06/15/2013

Concentration Units (**ug/L, ug,** or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	24.7			P
7440-43-9	Cadmium	2.1			P
7440-47-3	Chromium	43.0		J ~~E~~	P
7440-50-8	Copper	50.8			P
7439-92-1	Lead	116		J ~~N~~*	P
7440-02-0	Nickel	36.9		~~E~~	P
7440-66-6	Zinc	363		~~E~~	P

Color Before: GRAY Clarity Before: Texture: MEDIUM
Color After: TAN Clarity After: CLOUDY Artifacts:
Comments:

NVT 8/28/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-27-024FD

15

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17028

Matrix: SED Lab Sample Id: 200-17028-15

% Solids: 52.1 Date Received: 06/15/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.44		J	CV

Color Before: GRAY Clarity Before: CLOUDY Texture: FINE

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

MW 8/28/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-27-048

16

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678
Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 17028
Matrix: SED | Lab Sample Id: 200-17028-16
% Solids: 54.6 | Date Received: 06/15/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	21.0			P
7440-43-9	Cadmium	1.0			P
7440-47-3	Chromium	30.9		J ~~E~~	P
7440-50-8	Copper	39.6			P
7439-92-1	Lead	97.8		J ~~N*~~	P
7440-02-0	Nickel	34.5		~~E~~	P
7440-66-6	Zinc	310		~~E~~	P

Color Before: GRAY | Clarity Before: | Texture: MEDIUM
Color After: TAN | Clarity After: CLOUDY | Artifacts:
Comments:

MW 8/28/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-27-048

16

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678
Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 17028
Matrix: SED | Lab Sample Id: 200-17028-16
% Solids: 54.6 | Date Received: 06/15/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.45		J N	CV

Color Before: GRAY | Clarity Before: CLOUDY | Texture: FINE
Color After: COLORLESS | Clarity After: CLEAR | Artifacts:
Comments:

NW 8/28/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-27-072 17

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678
Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17028
Matrix: SED Lab Sample Id: 200-17028-17
% Solids: 69.9 Date Received: 06/15/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	10.5			P
7440-43-9	Cadmium	0.63 ~~0.48~~		U	P
7440-47-3	Chromium	14.5		J ~~B~~	P
7440-50-8	Copper	16.7			P
7439-92-1	Lead	35.6		J ~~N*~~	P
7440-02-0	Nickel	17.3		↓ ~~E~~	P
7440-66-6	Zinc	106		↓ ~~E~~	P

Color Before: GRAYISH BROWN Clarity Before: Texture: MEDIUM
Color After: TAN Clarity After: CLOUDY Artifacts:
Comments:

MW 8/28/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-27-072
17

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678
Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 17028
Matrix: SED | Lab Sample Id: 200-17028-17
% Solids: 69.9 | Date Received: 06/15/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.19		U ~~N~~	CV

Color Before: GRAY | Clarity Before: CLOUDY | Texture: FINE
Color After: COLORLESS | Clarity After: CLEAR | Artifacts:
Comments:

MW 8/28/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-72-012
18

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678
Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17028
Matrix: SED Lab Sample Id: 200-17028-18
% Solids: 59.2 Date Received: 06/15/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	13.9			P
7440-43-9	Cadmium	5.5			P
7440-47-3	Chromium	40.2		J ~~E~~	P
7440-50-8	Copper	58.2			P
7439-92-1	Lead	133		J ~~N~~ *	P
7440-02-0	Nickel	33.2		↓ ~~E~~	P
7440-66-6	Zinc	314		↓ ~~E~~	P

Color Before: GRAYISH BROWN Clarity Before: Texture: MEDIUM
Color After: TAN Clarity After: CLOUDY Artifacts:
Comments:

NW 8/28/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-72-012

18

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17028

Matrix: SED Lab Sample Id: 200-17028-18

% Solids: 59.2 Date Received: 06/15/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.28		U ~~N~~	CV

Color Before: GRAY Clarity Before: CLOUDY Texture: FINE

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

NW 8/28/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-72-024

19

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678
Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17028
Matrix: SED Lab Sample Id: 200-17028-19
% Solids: 58.6 Date Received: 06/15/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	15.6			P
7440-43-9	Cadmium	5.1			P
7440-47-3	Chromium	43.1		J ~~E~~	P
7440-50-8	Copper	91.5			P
7439-92-1	Lead	245		J ~~N~~	P
7440-02-0	Nickel	30.3		~~E~~	P
7440-66-6	Zinc	424		↓ ~~E~~	P

Color Before: BROWN Clarity Before: Texture: MEDIUM
Color After: TAN Clarity After: CLOUDY Artifacts:
Comments:

PW 8/28/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-72-024

19

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17028

Matrix: SED Lab Sample Id: 200-17028-19

% Solids: 58.6 Date Received: 06/15/2013

Concentration Units (**ug/L, ug,** or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.54		J ~~N~~	CV

Color Before: GRAY Clarity Before: CLOUDY Texture: FINE

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

NW 8/28/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-72-024FD

20

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678
Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 17028
Matrix: SED | Lab Sample Id: 200-17028-20
% Solids: 59.3 | Date Received: 06/15/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	13.2			P
7440-43-9	Cadmium	5.4			P
7440-47-3	Chromium	41.9		J ~~E~~	P
7440-50-8	Copper	85.5			P
7439-92-1	Lead	246		J ~~N~~	P
7440-02-0	Nickel	30.3		J ~~E~~	P
7440-66-6	Zinc	353		J ~~E~~	P

Color Before: BROWN | Clarity Before: | Texture: MEDIUM
Color After: TAN | Clarity After: CLOUDY | Artifacts:
Comments:

NW 8/28/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-72-024FD

20

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678
Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 17028
Matrix: SED | Lab Sample Id: 200-17028-20
% Solids: 59.3 | Date Received: 06/15/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.44		J N	CV

Color Before: GRAY | Clarity Before: CLOUDY | Texture: FINE
Color After: COLORLESS | Clarity After: CLEAR | Artifacts:
Comments:

NW 8/28/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-72-096

21

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678
Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 17028
Matrix: SED | Lab Sample Id: 200-17028-21
% Solids: 57.4 | Date Received: 06/15/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	23.0			P
7440-43-9	Cadmium	1.2			P
7440-47-3	Chromium	30.5		J ~~E~~	P
7440-50-8	Copper	42.1			P
7439-92-1	Lead	113		J ~~N~~ *	P
7440-02-0	Nickel	33.5		~~E~~	P
7440-66-6	Zinc	280		~~E~~	P

Color Before: BROWN | Clarity Before: | Texture: FINE
Color After: BROWN | Clarity After: CLOUDY | Artifacts:
Comments:

NW 8/28/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-72-096

21

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17028

Matrix: SED Lab Sample Id: 200-17028-21

% Solids: 57.4 Date Received: 06/15/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.60		J N	CV

Color Before: GRAY Clarity Before: CLOUDY Texture: FINE

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

MW 8/28/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-27-096

22

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678
Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 17028
Matrix: SED | Lab Sample Id: 200-17028-22
% Solids: 77.1 | Date Received: 06/15/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	4.0			P
7440-43-9	Cadmium	0.44 ~~0.23~~	~~J~~	J	P
7440-47-3	Chromium	7.1		J ~~E~~	P
7440-50-8	Copper	7.7			P
7439-92-1	Lead	5.0		J ~~N~~	P
7440-02-0	Nickel	9.8		↓ ~~E~~	P
7440-66-6	Zinc	26.0		↓ ~~E~~	P

Color Before: BROWN | Clarity Before: | Texture: FINE
Color After: BROWN | Clarity After: CLOUDY | Artifacts:
Comments:

NW 8/28/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-27-096

22

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678

Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 17028

Matrix: SED | Lab Sample Id: 200-17028-22

% Solids: 77.1 | Date Received: 06/15/2013

Concentration Units (**ug/L, ug,** or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.12	U		CV

Color Before: GRAY | Clarity Before: CLOUDY | Texture: FINE

Color After: COLORLESS | Clarity After: CLEAR | Artifacts:

Comments:

MW 8/28/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-72-072

23

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678
Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 17028
Matrix: SED | Lab Sample Id: 200-17028-23
% Solids: 59.6 | Date Received: 06/15/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	18.7			P
7440-43-9	Cadmium	1.8			P
7440-47-3	Chromium	40.6		J ~~E~~	P
7440-50-8	Copper	46.6			P
7439-92-1	Lead	97.9		J ~~N*~~	P
7440-02-0	Nickel	29.6		↓ ~~E~~	P
7440-66-6	Zinc	209		↓ ~~E~~	P

Color Before: BROWN | Clarity Before: | Texture: FINE
Color After: BROWN | Clarity After: CLOUDY | Artifacts:
Comments:

NW 8/28/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-72-072

23

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678
Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 17028
Matrix: SED | Lab Sample Id: 200-17028-23
% Solids: 59.6 | Date Received: 06/15/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.45		J N	CV

Color Before: GRAY | Clarity Before: CLOUDY | Texture: FINE
Color After: COLORLESS | Clarity After: CLEAR | Artifacts:
Comments:

NW 8/28/13

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - SEM/AVS

Client Sample ID: LMR13-57-012 | Lab Sample ID: 200-17028-7

Lab Name: TestAmerica Burlington | Job No.: 200-17028-1

SDG ID.: 17028

Matrix: Sediment | Date Sampled: 06/14/2013 13:50

Reporting Basis: DRY | Date Received: 06/15/2013 10:05

% Solids: 56.6

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-43-9	Cadmium SEM	0.47	2.1	0.33	mg/Kg	J		10	6010C
7440-43-9	Cadmium SEM	0.0042	0.019	0.0030	umol/g	J		10	6010C
7440-50-8	Copper SEM	3.6	10.8	0.94	mg/Kg	J		10	6010C
7440-50-8	Copper SEM	0.056	0.17	0.015	umol/g	J		10	6010C
7439-92-1	Lead SEM	169	4.4	1.9	mg/Kg			10	6010C
7439-92-1	Lead SEM	0.82	0.021	0.0093	umol/g			10	6010C
7440-02-0	Nickel SEM	4.2	17.5	1.3	mg/Kg	J		10	6010C
7440-02-0	Nickel SEM	0.071	0.30	0.021	umol/g	J		10	6010C
7440-66-6	Zinc SEM	109	8.7	2.4	mg/Kg			10	6010C
7440-66-6	Zinc SEM	1.7	0.13	0.037	umol/g			10	6010C
7439-97-6	Mercury SEM	0.0064	0.0087	0.0029	mg/Kg	J		1	7470A
7439-97-6	Mercury SEM	0.000032	0.000044	0.000014	umol/g	J		1	7470A

NW 8/28/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY - SEM/AVS

Client Sample ID: LMR13-57-012
Lab Sample ID: 200-17028-7
Lab Name: TestAmerica Burlington
Job No.: 200-17028-1
SDG ID.: 17028
Matrix: Sediment
Date Sampled: 06/14/2013 13:50
Reporting Basis: DRY
Date Received: 06/15/2013 10:05
% Solids: 56.6

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
18496-25-8	Acid Volatile Sulfides (AVS)	335	28.0		mg/Kg			1	AVS
18496-25-8	Acid Volatile Sulfides (AVS)	10.5	0.87		umol/g			1	AVS

MR 8/28/13

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - SEM/AVS

7

Client Sample ID: LMR13-57-012 Lab Sample ID: 200-17028-7

Lab Name: TestAmerica Burlington Job No.: 200-17028-1

SDG ID.: 17028

Matrix: Sediment Date Sampled: 06/14/2013 13:50

Reporting Basis: WET Date Received: 06/15/2013 10:05

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	SEM/AVS Ratio	0.251	0.00100	0.00100	NONE			1	SEM

NW 8/28/13

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - SEM/AVS

Client Sample ID: LMR13-72-012 | Lab Sample ID: 200-17028-18

Lab Name: TestAmerica Burlington | Job No.: 200-17028-1

SDG ID.: 17028

Matrix: Sediment | Date Sampled: 06/14/2013 15:05

Reporting Basis: DRY | Date Received: 06/15/2013 10:05

% Solids: 59.2

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-43-9	Cadmium SEM	1.6	2.0	0.32	mg/Kg	J		10	6010C
7440-43-9	Cadmium SEM	0.014	0.018	0.0029	umol/g	J		10	6010C
7440-50-8	Copper SEM	5.3	10.5	0.91	mg/Kg	J		10	6010C
7440-50-8	Copper SEM	0.083	0.16	0.014	umol/g	J		10	6010C
7439-92-1	Lead SEM	46.0	4.2	1.9	mg/Kg			10	6010C
7439-92-1	Lead SEM	0.22	0.020	0.0090	umol/g			10	6010C
7440-02-0	Nickel SEM	3.5	16.9	1.2	mg/Kg	J		10	6010C
7440-02-0	Nickel SEM	0.059	0.29	0.021	umol/g	J		10	6010C
7440-66-6	Zinc SEM	72.5	8.4	2.4	mg/Kg			10	6010C
7440-66-6	Zinc SEM	1.1	0.13	0.036	umol/g			10	6010C
7439-97-6	Mercury SEM	0.0084	0.0084	0.0028	mg/Kg	U		1	7470A
7439-97-6	Mercury SEM	0.000042	0.000042	0.000014	umol/g	U		1	7470A

NW 8/28/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY - SEM/AVS

18

Client Sample ID: LMR13-72-012 Lab Sample ID: 200-17028-18

Lab Name: TestAmerica Burlington Job No.: 200-17028-1

SDG ID.: 17028

Matrix: Sediment Date Sampled: 06/14/2013 15:05

Reporting Basis: DRY Date Received: 06/15/2013 10:05

% Solids: 59.2

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
18496-25-8	Acid Volatile Sulfides (AVS)	142	27.0		mg/Kg			1	AVS
18496-25-8	Acid Volatile Sulfides (AVS)	4.4	0.84		umol/g			1	AVS

NW 8/28/13

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - SEM/AVS

Client Sample ID: LMR13-72-012 Lab Sample ID: 200-17028-18

18

Lab Name: TestAmerica Burlington Job No.: 200-17028-1

SDG ID.: 17028

Matrix: Sediment Date Sampled: 06/14/2013 15:05

Reporting Basis: WET Date Received: 06/15/2013 10:05

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	SEM/AVS Ratio	0.336	0.00100	0.00100	NONE			1	SEM

NW 8/28/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: LMR13-83-048 | Lab Sample ID: 200-17028-1

Lab Name: TestAmerica Burlington | Job No.: 200-17028-1

SDG ID.: 17028

Matrix: Sediment | Date Sampled: 06/14/2013 11:35

Reporting Basis: WET | Date Received: 06/15/2013 10:05

% Solids: 75.8

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	17100	1000		mg/Kg			1	Lloyd Kahn

MW 8/28/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

2

Client Sample ID: LMR13-83-072 | Lab Sample ID: 200-17028-2

Lab Name: TestAmerica Burlington | Job No.: 200-17028-1

SDG ID.: 17028

Matrix: Sediment | Date Sampled: 06/14/2013 11:45

Reporting Basis: WET | Date Received: 06/15/2013 10:05

% Solids: 81.2

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	13200	1000		mg/Kg			1	Lloyd Kahn

MW 8/28/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

3

Client Sample ID: LMR13-41-012 Lab Sample ID: 200-17028-3

Lab Name: TestAmerica Burlington Job No.: 200-17028-1

SDG ID.: 17028

Matrix: Sediment Date Sampled: 06/14/2013 12:50

Reporting Basis: WET Date Received: 06/15/2013 10:05

% Solids: 68.0

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	25700	1000		mg/Kg			1	Lloyd Kahn

NW 8/28/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

4

Client Sample ID: LMR13-41-024 | Lab Sample ID: 200-17028-4

Lab Name: TestAmerica Burlington | Job No.: 200-17028-1

SDG ID.: 17028

Matrix: Sediment | Date Sampled: 06/14/2013 13:00

Reporting Basis: WET | Date Received: 06/15/2013 10:05

% Solids: 65.6

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	28600	1000		mg/Kg			1	Lloyd Kahn

MW 8/28/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

5

Client Sample ID: LMR13-41-024FD
Lab Sample ID: 200-17028-5
Lab Name: TestAmerica Burlington
Job No.: 200-17028-1
SDG ID.: 17028
Matrix: Sediment
Date Sampled: 06/14/2013 13:00
Reporting Basis: WET
Date Received: 06/15/2013 10:05
% Solids: 67.7

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	27900	1000		mg/Kg			1	Lloyd Kahn

NW 8/28/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: LMR13-41-048 Lab Sample ID: 200-17028-6 6

Lab Name: TestAmerica Burlington Job No.: 200-17028-1

SDG ID.: 17028

Matrix: Sediment Date Sampled: 06/14/2013 13:10

Reporting Basis: WET Date Received: 06/15/2013 10:05

% Solids: 73.4

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	21900	1000		mg/Kg			1	Lloyd Kahn

NW 8/28/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

7

Client Sample ID: LMR13-57-012 | Lab Sample ID: 200-17028-7

Lab Name: TestAmerica Burlington | Job No.: 200-17028-1

SDG ID.: 17028

Matrix: Sediment | Date Sampled: 06/14/2013 13:50

Reporting Basis: WET | Date Received: 06/15/2013 10:05

% Solids: 56.6

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	38800	1000		mg/Kg			1	Lloyd Kahn

MW 8/28/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

8

Client Sample ID: LMR13-26-012 | Lab Sample ID: 200-17028-8

Lab Name: TestAmerica Burlington | Job No.: 200-17028-1

SDG ID.: 17028

Matrix: Sediment | Date Sampled: 06/14/2013 14:30

Reporting Basis: WET | Date Received: 06/15/2013 10:05

% Solids: 47.3

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	23200	1000		mg/Kg			1	Lloyd Kahn

NW 8/28/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

9

Client Sample ID: LMR13-26-012FD
Lab Sample ID: 200-17028-9
Lab Name: TestAmerica Burlington
Job No.: 200-17028-1
SDG ID.: 17028
Matrix: Sediment
Date Sampled: 06/14/2013 14:30
Reporting Basis: WET
Date Received: 06/15/2013 10:05
% Solids: 49.7

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	25900	1000		mg/Kg			1	Lloyd Kahn

NW 8/28/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

10

Client Sample ID: LMR13-57-024 Lab Sample ID: 200-17028-10

Lab Name: TestAmerica Burlington Job No.: 200-17028-1

SDG ID.: 17028

Matrix: Sediment Date Sampled: 06/14/2013 14:00

Reporting Basis: WET Date Received: 06/15/2013 10:05

% Solids: 57.1

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	36000	1000		mg/Kg			1	Lloyd Kahn

MW 8/28/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

11

Client Sample ID: LMR13-57-048 Lab Sample ID: 200-17028-11

Lab Name: TestAmerica Burlington Job No.: 200-17028-1

SDG ID.: 17028

Matrix: Sediment Date Sampled: 06/14/2013 14:10

Reporting Basis: WET Date Received: 06/15/2013 10:05

% Solids: 67.4

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	21700	1000		mg/Kg			1	Lloyd Kahn

MW 8/28/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

12

Client Sample ID: LMR13-72-048
Lab Sample ID: 200-17028-12
Lab Name: TestAmerica Burlington
Job No.: 200-17028-1
SDG ID.: 17028
Matrix: Sediment
Date Sampled: 06/14/2013 15:25
Reporting Basis: WET
Date Received: 06/15/2013 10:05
% Solids: 57.7

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	34800	1000		mg/Kg			1	Lloyd Kahn

MW 8/28/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

13

Client Sample ID: LMR13-27-012 | Lab Sample ID: 200-17028-13

Lab Name: TestAmerica Burlington | Job No.: 200-17028-1

SDG ID.: 17028

Matrix: Sediment | Date Sampled: 06/14/2013 16:15

Reporting Basis: WET | Date Received: 06/15/2013 10:05

% Solids: 48.4

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	24000	1000		mg/Kg			1	Lloyd Kahn

MW 8/28/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

14

Client Sample ID: LMR13-27-024
Lab Sample ID: 200-17028-14
Lab Name: TestAmerica Burlington
Job No.: 200-17028-1
SDG ID.: 17028
Matrix: Sediment
Date Sampled: 06/14/2013 16:25
Reporting Basis: WET
Date Received: 06/15/2013 10:05
% Solids: 52.1

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	29900	1000		mg/Kg			1	Lloyd Kahn

MW 8/28/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

15

Client Sample ID: LMR13-27-024FD
Lab Sample ID: 200-17028-15
Lab Name: TestAmerica Burlington
Job No.: 200-17028-1
SDG ID.: 17028
Matrix: Sediment
Date Sampled: 06/14/2013 16:25
Reporting Basis: WET
Date Received: 06/15/2013 10:05
% Solids: 52.1

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	31300	1000		mg/Kg			1	Lloyd Kahn

LW 8/28/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

16

Client Sample ID: LMR13-27-048 | Lab Sample ID: 200-17028-16

Lab Name: TestAmerica Burlington | Job No.: 200-17028-1

SDG ID.: 17028

Matrix: Sediment | Date Sampled: 06/14/2013 16:35

Reporting Basis: WET | Date Received: 06/15/2013 10:05

% Solids: 54.6

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	28200	1000		mg/Kg			1	Lloyd Kahn

MW 8/28/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

17

Client Sample ID: LMR13-27-072 Lab Sample ID: 200-17028-17

Lab Name: TestAmerica Burlington Job No.: 200-17028-1

SDG ID.: 17028

Matrix: Sediment Date Sampled: 06/14/2013 16:45

Reporting Basis: WET Date Received: 06/15/2013 10:05

% Solids: 69.9

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	24400	1000		mg/Kg			1	Lloyd Kahn

MW 8/28/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

18

Client Sample ID: LMR13-72-012
Lab Sample ID: 200-17028-18
Lab Name: TestAmerica Burlington
Job No.: 200-17028-1
SDG ID.: 17028
Matrix: Sediment
Date Sampled: 06/14/2013 15:05
Reporting Basis: WET
Date Received: 06/15/2013 10:05
% Solids: 59.2

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	29400	1000		mg/Kg			1	Lloyd Kahn

MW 8/28/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

19

Client Sample ID: LMR13-72-024 Lab Sample ID: 200-17028-19

Lab Name: TestAmerica Burlington Job No.: 200-17028-1

SDG ID.: 17028

Matrix: Sediment Date Sampled: 06/14/2013 15:15

Reporting Basis: WET Date Received: 06/15/2013 10:05

% Solids: 58.6

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	38700	1000		mg/Kg			1	Lloyd Kahn

MW 8/28/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

20

Client Sample ID: LMR13-72-024FD
Lab Sample ID: 200-17028-20
Lab Name: TestAmerica Burlington
Job No.: 200-17028-1
SDG ID.: 17028
Matrix: Sediment
Date Sampled: 06/14/2013 15:15
Reporting Basis: WET
Date Received: 06/15/2013 10:05
% Solids: 59.3

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	37300	1000		mg/Kg			1	Lloyd Kahn

MW 8/28/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

21

Client Sample ID: LMR13-72-096 Lab Sample ID: 200-17028-21

Lab Name: TestAmerica Burlington Job No.: 200-17028-1

SDG ID.: 17028

Matrix: Sediment Date Sampled: 06/14/2013 15:45

Reporting Basis: WET Date Received: 06/15/2013 10:05

% Solids: 57.4

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	28100	1000		mg/Kg			1	Lloyd Kahn

NW 8/28/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

22

Client Sample ID: LMR13-27-096 Lab Sample ID: 200-17028-22

Lab Name: TestAmerica Burlington Job No.: 200-17028-1

SDG ID.: 17028

Matrix: Sediment Date Sampled: 06/14/2013 16:55

Reporting Basis: WET Date Received: 06/15/2013 10:05

% Solids: 77.1

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	24600	1000		mg/Kg			1	Lloyd Kahn

NW 8/28/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

23

Client Sample ID: LMR13-72-072
Lab Sample ID: 200-17028-23
Lab Name: TestAmerica Burlington
Job No.: 200-17028-1
SDG ID.: 17028
Matrix: Sediment
Date Sampled: 06/14/2013 15:35
Reporting Basis: WET
Date Received: 06/15/2013 10:05
% Solids: 59.6

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	33800	1000		mg/Kg			1	Lloyd Kahn

MW 8/28/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

1

Client Sample ID: LMR13-83-048
Lab Sample ID: 200-17028-1
Lab Name: TestAmerica Canton
Job No.: 200-17028-1
SDG ID.: 17028
Matrix: Sediment
Date Sampled: 06/14/2013 11:35
Reporting Basis: DRY
Date Received: 06/15/2013 10:05
% Solids: 75.8

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	262 ~~144~~	UJ 262	116	mg/Kg	J	~~P~~	1	9071B

NW 8/28/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

2

Client Sample ID: LMR13-83-072 | Lab Sample ID: 200-17028-2

Lab Name: TestAmerica Canton | Job No.: 200-17028-1

SDG ID.: 17028

Matrix: Sediment | Date Sampled: 06/14/2013 11:45

Reporting Basis: DRY | Date Received: 06/15/2013 10:05

% Solids: 81.2

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	242	UJ 242	107	mg/Kg			1	9071B

MW 8/28/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

3

Client Sample ID: LMR13-41-012 | Lab Sample ID: 200-17028-3

Lab Name: TestAmerica Canton | Job No.: 200-17028-1

SDG ID.: 17028

Matrix: Sediment | Date Sampled: 06/14/2013 12:50

Reporting Basis: DRY | Date Received: 06/15/2013 10:05

% Solids: 68.0

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	283 ~~142~~	UJ 283	125	mg/Kg	~~J~~	~~B~~	1	9071B

MW 8/28/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

4

Client Sample ID: LMR13-41-024 | Lab Sample ID: 200-17028-4

Lab Name: TestAmerica Canton | Job No.: 200-17028-1

SDG ID.: 17028

Matrix: Sediment | Date Sampled: 06/14/2013 13:00

Reporting Basis: DRY | Date Received: 06/15/2013 10:05

% Solids: 65.6

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	292 ~~146~~	UJ 292	129	mg/Kg	~~J~~	~~B~~	1	9071B

MW 8/28/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

6

Client Sample ID: LMR13-41-048 Lab Sample ID: 200-17028-6

Lab Name: TestAmerica Canton Job No.: 200-17028-1

SDG ID.: 17028

Matrix: Sediment Date Sampled: 06/14/2013 13:10

Reporting Basis: DRY Date Received: 06/15/2013 10:05

% Solids: 73.4

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	260	UJ 260	115	mg/Kg			1	9071B

MW 8/28/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

7

Client Sample ID: LMR13-57-012 Lab Sample ID: 200-17028-7

Lab Name: TestAmerica Canton Job No.: 200-17028-1

SDG ID.: 17028

Matrix: Sediment Date Sampled: 06/14/2013 13:50

Reporting Basis: DRY Date Received: 06/15/2013 10:05

% Solids: 56.6

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	15400	J 347	153	mg/Kg		P	1	9071B

MW 8/28/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

8

Client Sample ID: LMR13-26-012 | Lab Sample ID: 200-17028-8

Lab Name: TestAmerica Canton | Job No.: 200-17028-1

SDG ID.: 17028

Matrix: Sediment | Date Sampled: 06/14/2013 14:30

Reporting Basis: DRY | Date Received: 06/15/2013 10:05

% Solids: 47.3

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	618	J 412	182	mg/Kg		B	1	9071B

MW 8/28/13

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INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

9

Client Sample ID: LMR13-26-012FD
Lab Sample ID: 200-17028-9
Lab Name: TestAmerica Canton
Job No.: 200-17028-1
SDG ID.: 17028
Matrix: Sediment
Date Sampled: 06/14/2013 14:30
Reporting Basis: DRY
Date Received: 06/15/2013 10:05
% Solids: 49.7

CAS No.	Analyte	Result		RL	MDL	Units	C	Q	DIL	Method
	HEM	618	J	386	171	mg/Kg		F	1	9071B

MW 8/28/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

10

Client Sample ID: LMR13-57-024
Lab Sample ID: 200-17028-10
Lab Name: TestAmerica Canton
Job No.: 200-17028-1
SDG ID.: 17028
Matrix: Sediment
Date Sampled: 06/14/2013 14:00
Reporting Basis: DRY
Date Received: 06/15/2013 10:05
% Solids: 57.1

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	10800	J 348	154	mg/Kg		~~B~~	1	9071B

MW 8/28/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

11

Client Sample ID: LMR13-57-048
Lab Sample ID: 200-17028-11
Lab Name: TestAmerica Canton
Job No.: 200-17028-1
SDG ID.: 17028
Matrix: Sediment
Date Sampled: 06/14/2013 14:10
Reporting Basis: DRY
Date Received: 06/15/2013 10:05
% Solids: 67.4

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	485	UJ 286	126	mg/Kg		~~B~~	1	9071B

MW 8/28/13

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INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

12

Client Sample ID: LMR13-72-048
Lab Sample ID: 200-17028-12
Lab Name: TestAmerica Canton
Job No.: 200-17028-1
SDG ID.: 17028
Matrix: Sediment
Date Sampled: 06/14/2013 15:25
Reporting Basis: DRY
Date Received: 06/15/2013 10:05
% Solids: 57.7

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	1930	J 335	148	mg/Kg		~~B~~	1	9071B

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1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

13

Client Sample ID: LMR13-27-012
Lab Sample ID: 200-17028-13
Lab Name: TestAmerica Canton
Job No.: 200-17028-1
SDG ID.: 17028
Matrix: Sediment
Date Sampled: 06/14/2013 16:15
Reporting Basis: DRY
Date Received: 06/15/2013 10:05
% Solids: 48.4

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	1400	J 407	180	mg/Kg		~~B~~	1	9071B

MW 8/28/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

14

Client Sample ID: LMR13-27-024
Lab Sample ID: 200-17028-14
Lab Name: TestAmerica Canton
Job No.: 200-17028-1
SDG ID.: 17028
Matrix: Sediment
Date Sampled: 06/14/2013 16:25
Reporting Basis: DRY
Date Received: 06/15/2013 10:05
% Solids: 52.1

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	2500	J 370	163	mg/Kg		B	1	9071B

MW 8/28/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

16

Client Sample ID: LMR13-27-048
Lab Sample ID: 200-17028-16
Lab Name: TestAmerica Canton
Job No.: 200-17028-1
SDG ID.: 17028
Matrix: Sediment
Date Sampled: 06/14/2013 16:35
Reporting Basis: DRY
Date Received: 06/15/2013 10:05
% Solids: 54.6

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	2300	J 359	159	mg/Kg		~~J~~	1	9071B

MW 8/28/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

17

Client Sample ID: LMR13-27-072
Lab Sample ID: 200-17028-17
Lab Name: TestAmerica Canton
Job No.: 200-17028-1
SDG ID.: 17028
Matrix: Sediment
Date Sampled: 06/14/2013 16:45
Reporting Basis: DRY
Date Received: 06/15/2013 10:05
% Solids: 69.9

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	725	J 279	123	mg/Kg		B	1	9071B

NW 8/28/13

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INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: LMR13-72-012 | Lab Sample ID: 200-17028-18 | 18

Lab Name: TestAmerica Canton | Job No.: 200-17028-1

SDG ID.: 17028

Matrix: Sediment | Date Sampled: 06/14/2013 15:05

Reporting Basis: DRY | Date Received: 06/15/2013 10:05

% Solids: 59.2

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	1760	J 332	147	mg/Kg		~~B~~	1	9071B

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1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

19

Client Sample ID: LMR13-72-024
Lab Sample ID: 200-17028-19
Lab Name: TestAmerica Canton
Job No.: 200-17028-1
SDG ID.: 17028
Matrix: Sediment
Date Sampled: 06/14/2013 15:15
Reporting Basis: DRY
Date Received: 06/15/2013 10:05
% Solids: 58.6

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	2420	J 329	145	mg/Kg		P	1	9071B

MW 8/28/13

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INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: LMR13-72-024FD
Lab Sample ID: 200-17028-20 20
Lab Name: TestAmerica Canton
Job No.: 200-17028-1
SDG ID.: 17028
Matrix: Sediment
Date Sampled: 06/14/2013 15:15
Reporting Basis: DRY
Date Received: 06/15/2013 10:05
% Solids: 59.3

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	3090	J 322	142	mg/Kg		B	1	9071B

MW 8/28/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

21

Client Sample ID: LMR13-72-096
Lab Sample ID: 200-17028-21
Lab Name: TestAmerica Canton
Job No.: 200-17028-1
SDG ID.: 17028
Matrix: Sediment
Date Sampled: 06/14/2013 15:45
Reporting Basis: DRY
Date Received: 06/15/2013 10:05
% Solids: 57.4

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	2370	J 341	151	mg/Kg		✓	1	9071B

MW 8/28/13

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INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

22

Client Sample ID: LMR13-27-096 | Lab Sample ID: 200-17028-22

Lab Name: TestAmerica Canton | Job No.: 200-17028-1

SDG ID.: 17028

Matrix: Sediment | Date Sampled: 06/14/2013 16:55

Reporting Basis: DRY | Date Received: 06/15/2013 10:05

% Solids: 77.1

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	253 ~~126~~	UJ 253	112	mg/Kg			1	9071B

NW 8/28/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: LMR13-72-072
Lab Sample ID: 200-17028-23
23
Lab Name: TestAmerica Canton
Job No.: 200-17028-1
SDG ID.: 17028
Matrix: Sediment
Date Sampled: 06/14/2013 15:35
Reporting Basis: DRY
Date Received: 06/15/2013 10:05
% Solids: 59.6

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	1480	J 328	145	mg/Kg		B	1	9071B

MW 8/28/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

24

Client Sample ID: LMR13-57-024FD
Lab Sample ID: 200-17028-24
Lab Name: TestAmerica Canton
Job No.: 200-17028-1
SDG ID.: 17028
Matrix: Sediment
Date Sampled: 06/14/2013 14:00
Reporting Basis: DRY
Date Received: 06/15/2013 10:05
% Solids: 57.3

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	16200	J 338	149	mg/Kg		~~B~~	1	9071B

NW 8/28/13

ENVIRONMENTAL
Data Services, Inc.

DATA VALIDATION SUMMARY REPORT
LOWER MAUMEE RIVER, TOLEDO, OHIO

Client: EA Engineering, Science & Technology, Inc., Hunt Valley, Maryland
SDG: 200-17052
Laboratory: Test America Laboratories, Burlington, Vermont
Test America Laboratories, Canton, Ohio
Site: Lower Maumee River, Maumee Area of Concern, Toledo, Ohio
Date: August 29, 2013

SVOC			
EDS ID	Client Sample ID	Laboratory Sample ID	Matrix
1	LMR13-28-012	200-17052-1	Sediment
2	LMR13-28-024	200-17052-2	Sediment
3	LMR13-28-048	200-17052-3	Sediment
4	LMR13-28-072	200-17052-4	Sediment
5	LMR13-28-096	200-17052-5	Sediment
6	LMR13-28-120	200-17052-6	Sediment
7	LMR13-29-012	200-17052-7	Sediment
8	LMR13-29-024	200-17052-8	Sediment
10	LMR13-29-048	200-17052-10	Sediment
11	LMR13-29-072	200-17052-11	Sediment
12	LMR13-29-096	200-17052-12	Sediment
13	LMR34-34-012	200-17052-13	Sediment
14	LMR34-34-024	200-17052-14	Sediment
15	LMR34-34-048	200-17052-15	Sediment
17	LMR34-34-072	200-17052-17	Sediment
18	LMR34-34-096	200-17052-18	Sediment
19	LMR34-34-120	200-17052-19	Sediment
19MS	LMR34-34-120MS	200-17052-19MS	Sediment
19MSD	LMR34-34-120MSD	200-17052-19MSD	Sediment
20	LMR34-34-144	200-17052-20	Sediment
21	LMR13-28-024FD	200-17052-21	Sediment
22	LMR13-34-024FD	200-17052-22	Sediment

PAH 34			
EDS ID	Client Sample ID	Laboratory Sample ID	Matrix
1	LMR13-28-012	200-17052-1	Sediment

PCBs			
EDS ID	Client Sample ID	Laboratory Sample ID	Matrix
1	LMR13-28-012	200-17052-1	Sediment
2	LMR13-28-024	200-17052-2	Sediment
3	LMR13-28-048	200-17052-3	Sediment
3MS	LMR13-28-048MS	200-17052-3MS	Sediment
3MSD	LMR13-28-048MSD	200-17052-3MSD	Sediment
4	LMR13-28-072	200-17052-4	Sediment

PCBs			
EDS ID	Client Sample ID	Laboratory Sample ID	Matrix
5	LMR13-28-096	200-17052-5	Sediment
6	LMR13-28-120	200-17052-6	Sediment
7	LMR13-29-012	200-17052-7	Sediment
8	LMR13-29-024	200-17052-8	Sediment
9	LMR13-29-024FD	200-17052-9	Sediment
10	LMR13-29-048	200-17052-10	Sediment
11	LMR13-29-072	200-17052-11	Sediment
12	LMR13-29-096	200-17052-12	Sediment
13	LMR34-34-012	200-17052-13	Sediment
14	LMR34-34-024	200-17052-14	Sediment
15	LMR34-34-048	200-17052-15	Sediment
16	LMR34-34-048FD	200-17052-16	Sediment
17	LMR34-34-072	200-17052-17	Sediment
18	LMR34-34-096	200-17052-18	Sediment
19	LMR34-34-120	200-17052-19	Sediment
20	LMR34-34-144	200-17052-20	Sediment

Metals/Mercury/TOC			
EDS ID	Client Sample ID	Laboratory Sample ID	Matrix
1	LMR13-28-012	200-17052-1	Sediment
2	LMR13-28-024	200-17052-2	Sediment
3	LMR13-28-048	200-17052-3	Sediment
3MS	LMR13-28-048MS	200-17052-3MS	Sediment
3MSD	LMR13-28-048MSD	200-17052-3MSD	Sediment
4	LMR13-28-072	200-17052-4	Sediment
5	LMR13-28-096	200-17052-5	Sediment
6	LMR13-28-120	200-17052-6	Sediment
7	LMR13-29-012	200-17052-7	Sediment
8	LMR13-29-024	200-17052-8	Sediment
9	LMR13-29-024FD	200-17052-9	Sediment
10	LMR13-29-048	200-17052-10	Sediment
11	LMR13-29-072	200-17052-11	Sediment
12	LMR13-29-096	200-17052-12	Sediment
13	LMR34-34-012	200-17052-13	Sediment
14	LMR34-34-024	200-17052-14	Sediment
15	LMR34-34-048	200-17052-15	Sediment
16	LMR34-34-048FD	200-17052-16	Sediment
17	LMR34-34-072	200-17052-17	Sediment
18	LMR34-34-096	200-17052-18	Sediment
19	LMR34-34-120	200-17052-19	Sediment
20	LMR34-34-144	200-17052-20	Sediment

AVS/SEM			
EDS ID	Client Sample ID	Laboratory Sample ID	Matrix
1	LMR13-28-012	200-17052-1	Sediment

HEM			
EDS ID	Client Sample ID	Laboratory Sample ID	Matrix
1	LMR13-28-012	200-17052-1	Sediment
2	LMR13-28-024	200-17052-2	Sediment

HEM			
EDS ID	Client Sample ID	Laboratory Sample ID	Matrix
3	LMR13-28-048	200-17052-3	Sediment
3MS	LMR13-28-048MS	200-17052-3MS	Sediment
3MSD	LMR13-28-048MSD	200-17052-3MSD	Sediment
4	LMR13-28-072	200-17052-4	Sediment
5	LMR13-28-096	200-17052-5	Sediment
6	LMR13-28-120	200-17052-6	Sediment
7	LMR13-29-012	200-17052-7	Sediment
8	LMR13-29-024	200-17052-8	Sediment
10	LMR13-29-048	200-17052-10	Sediment
11	LMR13-29-072	200-17052-11	Sediment
12	LMR13-29-096	200-17052-12	Sediment
13	LMR34-34-012	200-17052-13	Sediment
14	LMR34-34-024	200-17052-14	Sediment
15	LMR34-34-048	200-17052-15	Sediment
17	LMR34-34-072	200-17052-17	Sediment
18	LMR34-34-096	200-17052-18	Sediment
19	LMR34-34-120	200-17052-19	Sediment
20	LMR34-34-144	200-17052-20	Sediment
21	LMR13-28-024FD	200-17052-21	Sediment
22	LMR13-34-024FD	200-17052-22	Sediment

A full data validation was performed on the analytical data for twenty-two sediment samples collected on June 15, 2013 by EA Engineering at the Lower Maumee River site in Toledo, Ohio. The samples were analyzed under the Environmental Protection Agency (USEPA) Contract Laboratory Program (CLP) Multi-Media Multi-Concentration Organics Analysis SOM01.2 and Inorganic Analysis ILM05.4 and the Test Methods for the Evaluation of Solid Waste, USEPA SW-846, Third Edition, September 1986, with revisions.

Specific method references are as follows:

Analysis	*Method References*
SVOC	USEPA CLP SOM01.2
PAH 34	USEPA CLP SOM01.2
PCBs	USEPA CLP SOM01.2
Michigan Metals & Mercury	USEPA CLP ISM01.3
AVS/SEM	USEPA SW-846 Methods 6010C/7470A
TOC	Lloyd Kahn
Oil & Grease (HEM)	USEPA SW-846 Method 9071B

The data have been validated according to the protocols and quality control (QC) requirements of the analytical methods, the Great Lakes Legacy Act, March 2010, the Quality Assurance Project Plan for Phase 2 of the Lower Maumee River Site Characterization, May 2013, and the USEPA National Functional Guidelines for Organic Data Review as follows:

- The USEPA "Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review," June 2008;

- The USEPA "Contract Laboratory Program National Functional Guidelines for Inorganic Superfund Data Review," January 2010;
- and the reviewer's professional judgment.

The following items/criteria were reviewed for this report:

Organics

- Holding times and sample preservation
- Gas Chromatography/Mass Spectroscopy (GC/MS) Tuning
- Initial and continuing calibration summaries
- Method blank and field blank contamination
- Surrogate Spike recoveries
- Matrix Spike/Matrix Spike Duplicate (MS/MSD) recoveries
- Laboratory Control Sample (LCS) recoveries
- Internal standard area and retention time summary forms
- Target Compound Identification
- Compound Quantitation
- Tentatively Identified Compounds (TICs)
- Field Duplicate sample precision

Inorganics

- Holding times and sample preservation
- ICP/MS Tuning
- Initial and continuing calibration verifications
- Method blank and field blank contamination
- ICP Interference Check Sample
- Laboratory Control Sample (LCS) recoveries
- Matrix Spike Analysis
- Duplicate Sample Analysis
- ICP Serial Dilution
- Compound Quantitation
- Field Duplicate sample precision

Overall Usability Issues:

There were minor rejections of data. This data cannot be used in the decision-making process for this project.

- Three SVOC compounds were rejected in thirteen samples due to severely low surrogate recoveries.

Overall the remaining data is acceptable for the intended purposes as qualified for the deficiencies detailed in this report.

Please note that any results qualified (U) due to blank contamination may be then qualified (J) due to another action. Therefore, the results may be qualified (UJ) due to the culmination of the blank contaminations and actions from other exceedences of QC criteria.

Semivolatile Organic Compounds (SVOC)

Holding Times

- All samples were extracted within 14 days for sediment samples and analyzed within 40 days for all samples.

GC/MS Tuning

- All criteria were met.

Initial Calibration

- All %RSD and mean RRF criteria.

Continuing Calibration

- All %D and RRF criteria were met except the following.

CCAL Date	Compound	%D/RRF	Qualifier	Affected Samples
07/20/13 (1009)	Hexachlorocyclopentadiene	63.1%	J/UJ	4, 5, 10-12
07/20/13 (1051)	Pentachlorophenol	50.2%	J/UJ	1-8, 10-13
07/20/13 (1321)	Pentachlorophenol	31.8%	J/UJ	14, 15, 17-22
07/20/13 (2311)	Hexachlorocyclopentadiene	85.5%	J/UJ	19, 20

Method Blank

- The method blanks exhibited the following contamination.

Blank ID	Compound	Conc. ug/kg	Qualifier	Affected Samples
SBLKM2	Butylbenzylphthalate	29	U	1-4, 6-10, 11-22
	bis(2-Ethylhexyl)phthalate	77	U	1-9, 11-14, 17, 21, 22

Field Blank

- Field QC samples were not analyzed.

Surrogate Spike Recoveries

- All samples exhibited acceptable surrogate %R values except the following.

Sample ID	Surrogate	%R	Qualifier
1	4-Chloroaniline-d4	0%	R – Associated Compounds
2	4-Chloroaniline-d4	0%	R – Associated Compounds
3	4-Methylphenol-d8	103%	None - All ND
	4-Chloroaniline-d4	0%	R – Associated Compounds
6	Phenol-d5	108%	None - All ND
	4-Chloroaniline-d4	0%	R – Associated Compounds
7	4-Chloroaniline-d4	0%	R – Associated Compounds
8	4-Chloroaniline-d4	0%	R – Associated Compounds
11	Phenol-d5	107%	None - All ND
13	4-Methylphenol-d8	104%	None - All ND
	4-Chloroaniline-d4	0%	R – Associated Compounds
14	4-Methylphenol-d8	101%	None - All ND
	4-Chloroaniline-d4	0%	R – Associated Compounds
15	Phenol-d5	120%	None - All ND
	4-Methylphenol-d8	119%	None - All ND
	4-Chloroaniline-d4	0%	R – Associated Compounds
17	4-Chloroaniline-d4	0%	R – Associated Compounds
18	Phenol-d5	107%	J – Associated Positive Results
	4-Methylphenol-d8	108%	None - All ND
	4-Chloroaniline-d4	0%	R – Associated Compounds
20	4-Methylphenol-d8	102%	J – Associated Positive Results
21	4-Chloroaniline	0%	R – Associated Compounds
22	4-Chloroaniline	0%	R – Associated Compounds

Matrix Spike/Matrix Spike Duplicate (MS/MSD) Recoveries

- The MS/MSD sample exhibited acceptable %R and RPD values except the following.

MS/MSD Sample ID	Compound	MS %R/MSD %R/ RPD	Qualifier
19	Pyrene	OK/OK/39	None for RPD Alone

Laboratory Control Samples

- A LCS sample was not analyzed.

Internal Standard (IS) Area Performance

- All internal standards met response and retention time (RT) criteria.

Target Compound Identification

- All mass spectra and quantitation criteria were met.

Compound Quantitation

- Several samples were analyzed at various dilutions due to high concentrations of target compounds. No action was required.

Field Duplicate Sample Precision

- Field duplicate results are summarized below.

SVOC				
Compound	LMR13-28-024 ug/kg	LMR13-28-024FD ug/kg	RPD	Qualifier
Benzaldehyde	72	61	17%	None
Acetophenone	26	340U	NC	
Acenaphthene	23	22	4%	
Dibenzofuran	17	15	13%	
Fluorene	38	36	5%	
Phenanthrene	200	190	5%	
Anthracene	44	42	5%	
Carbazole	17	19	11%	
di-n-Butylphthalate	30	28	7%	
Fluoranthene	490	390	23%	
Pyrene	620	510	19%	
Benzo(a)anthracene	190	170	11%	
Chrysene	350	300	15%	
Benzo(b)fluoranthene	250	270	8%	
Benzo(k)fluoranthene	280	280	0%	
Benzo(a)pyrene	210	190	10%	
Indeno(1,2,3-cd)pyrene	180	160	12%	
Dibenzo(a,h)anthracene	65	63	3%	
Benzo(g,h,i)perylene	190	180	5%	

SVOC				
Compound	LMR13-34-024 ug/kg	LMR13-34-024FD ug/kg	RPD	Qualifier
Benzaldehyde	350U	65	NC	None
Naphthalene	23	22	4%	
Acenaphthylene	18	360U	NC	
Acenaphthene	44	33	29%	
Dibenzofuran	28	23	20%	
Fluorene	70	57	20%	
Phenanthrene	270	210	25%	
Anthracene	83	57	37%	
Carbazole	21	360U	NC	
di-n-Butylphthalate	40	29	32%	
Fluoranthene	610	430	35%	

SVOC				
Compound	LMR13-34-024 ug/kg	LMR13-34-024FD ug/kg	RPD	Qualifier
Pyrene	770	610	23%	None
Benzo(a)anthracene	270	210	25%	
Chrysene	450	350	25%	
Benzo(b)fluoranthene	330	410	22%	
Benzo(k)fluoranthene	400	240	50%	
Benzo(a)pyrene	280	230	20%	
Indeno(1,2,3-cd)pyrene	280	170	49%	
Dibenzo(a,h)anthracene	85	61	33%	
Benzo(g,h,i)perylene	330	200	49%	

Polynuclear Aromatic Hydrocarbons (PAH 34)

Holding Times

- All samples were extracted within 14 days for sediment samples and analyzed within 40 days for all samples.

GC/MS Tuning

- All criteria were met.

Initial Calibration

- All %RSD and mean RRF criteria were met.

Continuing Calibration

- All %D and RRF criteria were met.

Method Blank

- The method blanks exhibited the following contamination.

Blank ID	Compound	Conc. ug/kg	Qualifier	Affected Samples
SBLKM2	Naphthalene	0.24	U	1
	Fluoranthene	0.14	None	All >5X
	Pyrene	0.090	None	
	Chrysene	0.086	None	
	Benzo(b)fluoranthene	0.092	None	
	Total 16 PPAH	0.65	J	1
	Total PAH	0.65	J	

Field Blank

- Field QC samples were not analyzed.

Surrogate Spike Recoveries

- All samples exhibited acceptable surrogate %R values.

Matrix Spike/Matrix Spike Duplicate (MS/MSD) Recoveries

- A MS/MSD sample was not analyzed.

Laboratory Control Samples

- A LCS sample was not analyzed.

Internal Standard (IS) Area Performance

- All internal standards met response and retention time (RT) criteria.

Target Compound Identification

- All mass spectra and quantitation criteria were met.

Compound Quantitation

- EDS Sample ID #1 was analyzed at a 10X dilution due to high concentrations of target compounds.
- Total 16 PPAH and Total PAH were estimated (J) in all samples due to blank contamination.

Field Duplicate Sample Precision

- Field duplicate samples were not analyzed.

Polychlorinated Biphenyls (PCBs)

Holding Times

- All samples were extracted within 14 days for sediment samples and analyzed within 40 days.

Initial Calibration

- All %RSD and/or correlation coefficient criteria were met.

Continuing Calibration

- All %D criteria were met.

Method Blank

- The method blanks were free of contamination.

Field Blank

- Field QC samples were not analyzed.

Surrogate Spike Recoveries

- All samples exhibited acceptable surrogate recoveries.

Matrix Spike/Matrix Spike Duplicate (MS/MSD) Recoveries

- The MS/MSD sample exhibited acceptable %R and RPD values.

Laboratory Control Samples

- The LCS sample exhibited acceptable %R values.

Compound Quantitation

- All criteria were met.

Field Duplicate Sample Precision

- Field duplicate results are summarized below.

PCBs				
Compound	LMR13-29-024 ug/kg	LMR13-29-024FD ug/kg	RPD	Qualifier
Aroclor-1248	110	100	10%	None
Aroclor-1254	43	43	0%	
Aroclor-1260	7.2	8.9	21%	

PCBs				
Compound	LMR13-34-048 ug/kg	LMR13-34-048FD ug/kg	RPD	Qualifier
Aroclor-1242	57	58	2%	None
Aroclor-1254	51	53	4%	
Aroclor-1260	12	12	0%	

GC Column Difference Results

- Several samples exhibited high %D values > 25% between columns and have been qualified as estimated (J) by the reviewer.

Metals & Mercury

Holding Times

- All samples were prepared and analyzed within 28 days for mercury and 180 days for all other metals.

ICP/MS Tuning

- Not applicable.

Initial Calibration Verification

- All initial calibration criteria were met.

Continuing Calibration Verification

- All continuing calibration criteria were met.

Method Blank

- The method blanks exhibited the following contamination.

Blank ID	Compound	Conc. mg/kg	Qualifier	Affected Samples
PBSF2	Chromium	0.091	None	All Associated >10X
	Lead	0.25	None	
	Zinc	0.99	None	

Field Blank

- Field QC samples were not analyzed.

ICP Interference Check Sample

- The ICP interference check sample exhibited acceptable %R values.

Laboratory Control Samples

- The LCS sample exhibited acceptable recoveries.

Matrix Spike Analysis

- The matrix spike sample exhibited acceptable %R values.

Duplicate Sample Analysis

- The duplicate sample exhibited acceptable RPD values.

ICP Serial Dilution

- ICP serial dilution percent differences (%D) were within acceptance limits except the following.

ICP Sample ID	Compound	%D	Qualifier	Affected Samples
3	Chromium	23%	J	All Samples
	Copper	21%	J	
	Nickel	27%	J	
	Zinc	23%	J	

Compound Quantitation

- All criteria were met.

Field Duplicate Sample Precision

- Field duplicate results are summarized below.

Metals				
Compound	LMR13-29-024 mg/kg	LMR13-29-024FD mg/kg	RPD	Qualifier
Arsenic	7.1	7.3	3%	None
Cadmium	0.94	0.96	2%	
Chromium	27.3	26.6	3%	
Copper	31.9	30.8	4%	
Lead	29.2	30.5	4%	
Nickel	32.1	30.7	4%	
Zinc	129	130	1%	
Mercury	0.071	0.17U	NC	

Metals				
Compound	LMR13-34-048 mg/kg	LMR13-34-048FD mg/kg	RPD	Qualifier
Arsenic	8.0	8.4	5%	None
Cadmium	1.1	1.2	9%	
Chromium	31.9	30.8	4%	
Copper	33.6	34.4	2%	
Lead	31.8	33.4	5%	

Metals				
Compound	LMR13-34-048 mg/kg	LMR13-34-048FD mg/kg	RPD	Qualifier
Nickel	34.6	34.6	0%	None
Zinc	147	150	2%	
Mercury	0.12	0.085	34%	

Oil & Grease, Total Organic Carbon, AVS/SEM (Metals & Hg)

Holding Times

- All samples were analyzed within the recommended holding time for each analysis.

Initial and Continuing Calibration

- All %R criteria were met.

Method Blank

- The method blanks were free of contamination.

Field Blank

- Field QC samples were not included in this data package.

Laboratory Control Samples

- The LCS samples exhibited acceptable %R values.

Matrix Spike/Duplicate (MS/DUP) Recoveries

- The MS/DUP samples exhibited acceptable %R and RPD values except the following.

MS/DUP ID	Compound	MS %R/MSD %R/RPD	Qualifier	Affected Samples
3	HEM	64%/67%/Ok	J/UJ	All Samples

Compound Quantitation

- All criteria were met.

Field Duplicate Sample Precision

- Field duplicate results are summarized below.

TOC				
Compound	LMR13-29-024 mg/kg	LMR13-29-024FD mg/kg	RPD	Qualifier
TOC	24900	23800	5%	None

HEM				
Compound	LMR13-28-024 mg/kg	LMR13-28-024FD mg/kg	RPD	Qualifier
HEM	137	247	57%	None

TOC				
Compound	LMR13-34-048 mg/kg	LMR13-34-048FD mg/kg	RPD	Qualifier
TOC	25400	31700	22%	None

HEM				
Compound	LMR13-34-024 mg/kg	LMR13-34-024FD mg/kg	RPD	Qualifier
HEM	273	208	27%	None

Please contact the undersigned at (757) 564-0090 if you have any questions or need further information.

Signed: Nancy Weaver Dated: 8/30/13

Nancy Weaver
Senior Chemist

Data Qualifiers

U = The analyte was analyzed for, but was not detected at a level greater than or equal to the level of the adjusted Contract Required Quantitation Limit (CRQL) for sample and method.

UJ = The analyte was not detected at a level greater than or equal to the adjusted CRQL. However, the reported adjusted CRQL is approximate and may be inaccurate or imprecise.

J = The analyte was positively identified and the associated numerical value is the approximate concentration of the analyte in the sample (due either to the quality of the data generated because certain quality control criteria were not met, or the concentration of the analyte was below the CRQL).

J+ = The result is an estimated quantity, but the result may be biased high.

J- = The result is an estimated quantity, but the result may be biased low.

R = The sample results are unusable due to the quality of the data generated because certain criteria were not met. The analyte may or may not be present in the sample.

NJ = The analysis indicates the presence of an analyte that has been "tentatively identified" and the associated numerical value represents its approximate concentration.

EPA SAMPLE NO.
LMR13-28-012

1

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17052

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17052-1

Sample wt/vol: 30.8 (g/mL) g Lab File ID: PJUWJ16.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 54 Decanted: (Y/N) Date Received: 06/18/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/24/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/20/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
100-52-7	Benzaldehyde	40	J	
108-95-2	Phenol	360	U	
111-44-4	Bis(2-chloroethyl)ether	360	U	
95-57-8	2-Chlorophenol	360	U	
95-48-7	2-Methylphenol	360	U	
108-60-1	2,2'-Oxybis(1-chloropropane)	360	U	
98-86-2	Acetophenone	28	J	
106-44-5	4-Methylphenol	360	U	
621-64-7	N-Nitroso-di-n-propylamine	360	U	
67-72-1	Hexachloroethane	360	U	
98-95-3	Nitrobenzene	360	U	
78-59-1	Isophorone	360	U	
88-75-5	2-Nitrophenol	360	U	
105-67-9	2,4-Dimethylphenol	360	U	
111-91-1	Bis(2-chloroethoxy)methane	360	U	
120-83-2	2,4-Dichlorophenol	360	U	
91-20-3	Naphthalene	18	J	
106-47-8	4-Chloroaniline	360	U	R
87-68-3	Hexachlorobutadiene	360	U	
105-60-2	Caprolactam	360	U	
59-50-7	4-Chloro-3-methylphenol	360	U	
91-57-6	2-Methylnaphthalene	11	J	
77-47-4	Hexachlorocyclopentadiene	360	U	R
88-06-2	2,4,6-Trichlorophenol	360	U	
95-95-4	2,4,5-Trichlorophenol	360	U	
92-52-4	1,1'-Biphenyl	360	U	
91-58-7	2-Chloronaphthalene	360	U	
88-74-4	2-Nitroaniline	700	U	
131-11-3	Dimethylphthalate	360	U	
606-20-2	2,6-Dinitrotoluene	360	U	
208-96-8	Acenaphthylene	360	U	
99-09-2	3-Nitroaniline	700	U	
83-32-9	Acenaphthene	41	J	

NW 8/29/13

1E - FORM I SV-2
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-28-012

1

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17052

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17052-1

Sample wt/vol: 30.8 (g/mL) g Lab File ID: PJUWJ16.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 54 Decanted: (Y/N) Date Received: 06/18/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/24/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/20/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
51-28-5	2,4-Dinitrophenol	700	U	
100-02-7	4-Nitrophenol	700	U	
132-64-9	Dibenzofuran	360	U	
121-14-2	2,4-Dinitrotoluene	360	U	
84-66-2	Diethylphthalate	32	J	
86-73-7	Fluorene	60	J	
7005-72-3	4-Chlorophenyl-phenylether	360	U	
100-01-6	4-Nitroaniline	700	U	
534-52-1	4,6-Dinitro-2-methylphenol	700	U	
86-30-6	N-Nitrosodiphenylamin [1]	360	U	
95-94-3	1,2,4,5-Tetrachlorobenzene	360	U	
101-55-3	4-Bromophenyl-phenylether	360	U	
118-74-1	Hexachlorobenzene	360	U	
1912-24-9	Atrazine	360	U	
87-86-5	Pentachlorophenol	700	~~U~~	UJ
85-01-8	Phenanthrene	280	J	
120-12-7	Anthracene	82	J	
86-74-8	Carbazole	28	J	
84-74-2	Di-n-butylphthalate	35	J	
206-44-0	Fluoranthene	710		
129-00-0	Pyrene	870		
85-68-7	Butylbenzylphthalate	360 ~~100~~	~~J B~~	U
91-94-1	3,3'-Dichlorobenzidine	360	~~U~~	R
56-55-3	Benzo(a)anthracene	300	J	
218-01-9	Chrysene	460		
117-81-7	Bis(2-ethylhexyl)phthalate	430	~~B~~	U
117-84-0	Di-n-octylphthalate	360	U	
205-99-2	Benzo(b)fluoranthene	380		
207-08-9	Benzo(k)fluoranthene	340	J	
50-32-8	Benzo(a)pyrene	300	J	
193-39-5	Indeno(1,2,3-cd)pyrene	260	J	
53-70-3	Dibenzo(a,h)anthracene	120	J	
191-24-2	Benzo(g,h,i)perylene	330	J	
58-90-2	2,3,4,6-Tetrachlorophenol	360	U	

[1] Cannot be separated from Diphenylamine

NW 8/29/13

1D - FORM I SV-1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-28-024

2

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17052

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17052-2

Sample wt/vol: 30.3 (g/mL) g Lab File ID: PJUWJ17.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 52 Decanted: (Y/N) Date Received: 06/18/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/24/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/20/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
100-52-7	Benzaldehyde	72	J	
108-95-2	Phenol	350	U	
111-44-4	Bis(2-chloroethyl)ether	350	U	
95-57-8	2-Chlorophenol	350	U	
95-48-7	2-Methylphenol	350	U	
108-60-1	2,2'-Oxybis(1-chloropropane)	350	U	
98-86-2	Acetophenone	26	J	
106-44-5	4-Methylphenol	350	U	
621-64-7	N-Nitroso-di-n-propylamine	350	U	
67-72-1	Hexachloroethane	350	U	
98-95-3	Nitrobenzene	350	U	
78-59-1	Isophorone	350	U	
88-75-5	2-Nitrophenol	350	U	
105-67-9	2,4-Dimethylphenol	350	U	
111-91-1	Bis(2-chloroethoxy)methane	350	U	
120-83-2	2,4-Dichlorophenol	350	U	
91-20-3	Naphthalene	350	U	
106-47-8	4-Chloroaniline	350	~~U~~	R
87-68-3	Hexachlorobutadiene	350	U	
105-60-2	Caprolactam	350	U	
59-50-7	4-Chloro-3-methylphenol	350	U	
91-57-6	2-Methylnaphthalene	350	U	
77-47-4	Hexachlorocyclopentadiene	350	~~U~~	R
88-06-2	2,4,6-Trichlorophenol	350	U	
95-95-4	2,4,5-Trichlorophenol	350	U	
92-52-4	1,1'-Biphenyl	350	U	
91-58-7	2-Chloronaphthalene	350	U	
88-74-4	2-Nitroaniline	680	U	
131-11-3	Dimethylphthalate	350	U	
606-20-2	2,6-Dinitrotoluene	350	U	
208-96-8	Acenaphthylene	350	U	
99-09-2	3-Nitroaniline	680	U	
83-32-9	Acenaphthene	23	J	

NW 8/29/13

1E - FORM I SV-2
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-28-024

2

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17052

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17052-2

Sample wt/vol: 30.3 (g/mL) g Lab File ID: PJUWJ17.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 52 Decanted: (Y/N) Date Received: 06/18/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/24/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/20/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
51-28-5	2,4-Dinitrophenol	680	U	
100-02-7	4-Nitrophenol	680	U	
132-64-9	Dibenzofuran	17	J	
121-14-2	2,4-Dinitrotoluene	350	U	
84-66-2	Diethylphthalate	350	U	
86-73-7	Fluorene	38	J	
7005-72-3	4-Chlorophenyl-phenylether	350	U	
100-01-6	4-Nitroaniline	680	U	
534-52-1	4,6-Dinitro-2-methylphenol	680	U	
86-30-6	N-Nitrosodiphenylamin [1]	350	U	
95-94-3	1,2,4,5-Tetrachlorobenzene	350	U	
101-55-3	4-Bromophenyl-phenylether	350	U	
118-74-1	Hexachlorobenzene	350	U	
1912-24-9	Atrazine	350	U	
87-86-5	Pentachlorophenol	680	~~U~~	UJ
85-01-8	Phenanthrene	200	J	
120-12-7	Anthracene	44	J	
86-74-8	Carbazole	17	J	
84-74-2	Di-n-butylphthalate	30	J	
206-44-0	Fluoranthene	490		
129-00-0	Pyrene	620		
85-68-7	Butylbenzylphthalate	350 ~~94~~ ~~J B~~		U
91-94-1	3,3'-Dichlorobenzidine	350	~~U~~	R
56-55-3	Benzo(a)anthracene	190	J	
218-01-9	Chrysene	350	J	
117-81-7	Bis(2-ethylhexyl)phthalate	350	~~B~~	U
117-84-0	Di-n-octylphthalate	350	U	
205-99-2	Benzo(b)fluoranthene	250	J	
207-08-9	Benzo(k)fluoranthene	280	J	
50-32-8	Benzo(a)pyrene	210	J	
193-39-5	Indeno(1,2,3-cd)pyrene	180	J	
53-70-3	Dibenzo(a,h)anthracene	65	J	
191-24-2	Benzo(g,h,i)perylene	190	J	
58-90-2	2,3,4,6-Tetrachlorophenol	350	U	

[1] Cannot be separated from Diphenylamine

NW 8/29/13

EPA SAMPLE NO.
LMR13-28-048

3

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17052

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17052-3

Sample wt/vol: 30.0 (g/mL) g Lab File ID: PJUWJ18.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 48 Decanted: (Y/N) Date Received: 06/18/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/24/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/20/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
100-52-7	Benzaldehyde	61	J	
108-95-2	Phenol	330	U	
111-44-4	Bis(2-chloroethyl)ether	330	U	
95-57-8	2-Chlorophenol	330	U	
95-48-7	2-Methylphenol	330	U	
108-60-1	2,2'-Oxybis(1-chloropropane)	330	U	
98-86-2	Acetophenone	330	U	
106-44-5	4-Methylphenol	330	U	
621-64-7	N-Nitroso-di-n-propylamine	330	U	
67-72-1	Hexachloroethane	330	U	
98-95-3	Nitrobenzene	330	U	
78-59-1	Isophorone	330	U	
88-75-5	2-Nitrophenol	330	U	
105-67-9	2,4-Dimethylphenol	330	U	
111-91-1	Bis(2-chloroethoxy)methane	330	U	
120-83-2	2,4-Dichlorophenol	330	U	
91-20-3	Naphthalene	330	U	
106-47-8	4-Chloroaniline	330	~~U~~	R
87-68-3	Hexachlorobutadiene	330	U	
105-60-2	Caprolactam	330	U	
59-50-7	4-Chloro-3-methylphenol	330	U	
91-57-6	2-Methylnaphthalene	330	U	
77-47-4	Hexachlorocyclopentadiene	330	~~U~~	R
88-06-2	2,4,6-Trichlorophenol	330	U	
95-95-4	2,4,5-Trichlorophenol	330	U	
92-52-4	1,1'-Biphenyl	330	U	
91-58-7	2-Chloronaphthalene	330	U	
88-74-4	2-Nitroaniline	630	U	
131-11-3	Dimethylphthalate	330	U	
606-20-2	2,6-Dinitrotoluene	330	U	
208-96-8	Acenaphthylene	330	U	
99-09-2	3-Nitroaniline	630	U	
83-32-9	Acenaphthene	35	J	

NW 8/29/13

EPA SAMPLE NO.
LMR13-28-048

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678 3

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17052

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17052-3

Sample wt/vol: 30.0 (g/mL) g Lab File ID: PJUWJ18.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 48 Decanted: (Y/N) Date Received: 06/18/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/24/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/20/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
51-28-5	2,4-Dinitrophenol	630	U	
100-02-7	4-Nitrophenol	630	U	
132-64-9	Dibenzofuran	20	J	
121-14-2	2,4-Dinitrotoluene	330	U	
84-66-2	Diethylphthalate	330	U	
86-73-7	Fluorene	61	J	
7005-72-3	4-Chlorophenyl-phenylether	330	U	
100-01-6	4-Nitroaniline	630	U	
534-52-1	4,6-Dinitro-2-methylphenol	630	U	
86-30-6	N-Nitrosodiphenylamin [1]	330	U	
95-94-3	1,2,4,5-Tetrachlorobenzene	330	U	
101-55-3	4-Bromophenyl-phenylether	330	U	
118-74-1	Hexachlorobenzene	330	U	
1912-24-9	Atrazine	330	U	
87-86-5	Pentachlorophenol	630	~~U~~	UJ
85-01-8	Phenanthrene	250	J	
120-12-7	Anthracene	75	J	
86-74-8	Carbazole	330	U	
84-74-2	Di-n-butylphthalate	27	J	
206-44-0	Fluoranthene	490		
129-00-0	Pyrene	670		
85-68-7	Butylbenzylphthalate	330 91	~~J B~~	U
91-94-1	3,3'-Dichlorobenzidine	330	~~U~~	R
56-55-3	Benzo(a)anthracene	230	J	
218-01-9	Chrysene	400		
117-81-7	Bis(2-ethylhexyl)phthalate	410	~~B~~	U
117-84-0	Di-n-octylphthalate	330	U	
205-99-2	Benzo(b)fluoranthene	320	J	
207-08-9	Benzo(k)fluoranthene	250	J	
50-32-8	Benzo(a)pyrene	220	J	
193-39-5	Indeno(1,2,3-cd)pyrene	160	J	
53-70-3	Dibenzo(a,h)anthracene	72	J	
191-24-2	Benzo(g,h,i)perylene	190	J	
58-90-2	2,3,4,6-Tetrachlorophenol	330	U	

[1] Cannot be separated from Diphenylamine

NW 8/29/13

EPA SAMPLE NO.
LMR13-28-072

4

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17052

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17052-4

Sample wt/vol: 30.7 (g/mL) g Lab File ID: PJUWJ19.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 36 Decanted: (Y/N) Date Received: 06/18/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/24/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/20/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
100-52-7	Benzaldehyde	40	J
108-95-2	Phenol	260	U
111-44-4	Bis(2-chloroethyl)ether	260	U
95-57-8	2-Chlorophenol	260	U
95-48-7	2-Methylphenol	260	U
108-60-1	2,2'-Oxybis(1-chloropropane)	260	U
98-86-2	Acetophenone	25	J
106-44-5	4-Methylphenol	260	U
621-64-7	N-Nitroso-di-n-propylamine	260	U
67-72-1	Hexachloroethane	260	U
98-95-3	Nitrobenzene	260	U
78-59-1	Isophorone	260	U
88-75-5	2-Nitrophenol	260	U
105-67-9	2,4-Dimethylphenol	260	U
111-91-1	Bis(2-chloroethoxy)methane	260	U
120-83-2	2,4-Dichlorophenol	260	U
91-20-3	Naphthalene	100	J
106-47-8	4-Chloroaniline	260	U
87-68-3	Hexachlorobutadiene	260	U
105-60-2	Caprolactam	260	U
59-50-7	4-Chloro-3-methylphenol	260	U
91-57-6	2-Methylnaphthalene	46	J
77-47-4	Hexachlorocyclopentadiene	260	~~U~~ UJ
88-06-2	2,4,6-Trichlorophenol	260	U
95-95-4	2,4,5-Trichlorophenol	260	U
92-52-4	1,1'-Biphenyl	260	U
91-58-7	2-Chloronaphthalene	260	U
88-74-4	2-Nitroaniline	500	U
131-11-3	Dimethylphthalate	260	U
606-20-2	2,6-Dinitrotoluene	260	U
208-96-8	Acenaphthylene	67	J
99-09-2	3-Nitroaniline	500	U
83-32-9	Acenaphthene	340	

NW 8/29/13

1E - FORM I SV-2

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-28-072

4

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17052

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17052-4

Sample wt/vol: 30.7 (g/mL) g Lab File ID: PJUWJ19.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 36 Decanted: (Y/N) Date Received: 06/18/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/24/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/20/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
51-28-5	2,4-Dinitrophenol	500	U	
100-02-7	4-Nitrophenol	500	U	
132-64-9	Dibenzofuran	51	J	
121-14-2	2,4-Dinitrotoluene	260	U	
84-66-2	Diethylphthalate	260	U	
86-73-7	Fluorene	510		
7005-72-3	4-Chlorophenyl-phenylether	260	U	
100-01-6	4-Nitroaniline	500	U	
534-52-1	4,6-Dinitro-2-methylphenol	500	U	
86-30-6	N-Nitrosodiphenylamin [1]	260	U	
95-94-3	1,2,4,5-Tetrachlorobenzene	260	U	
101-55-3	4-Bromophenyl-phenylether	260	U	
118-74-1	Hexachlorobenzene	260	U	
1912-24-9	Atrazine	260	U	
87-86-5	Pentachlorophenol	500	~~U~~	UJ
85-01-8	Phenanthrene	2900		
120-12-7	Anthracene	590		
86-74-8	Carbazole	260	U	
84-74-2	Di-n-butylphthalate	24	J	
206-44-0	Fluoranthene	1800		
129-00-0	Pyrene	2800		
85-68-7	Butylbenzylphthalate	260 ~~53~~	~~J B~~	U
91-94-1	3,3'-Dichlorobenzidine	260	U	
56-55-3	Benzo(a)anthracene	1200		
218-01-9	Chrysene	1600		
117-81-7	Bis(2-ethylhexyl)phthalate	380	~~B~~	U
117-84-0	Di-n-octylphthalate	260	U	
205-99-2	Benzo(b)fluoranthene	1200		
207-08-9	Benzo(k)fluoranthene	740		
50-32-8	Benzo(a)pyrene	960		
193-39-5	Indeno(1,2,3-cd)pyrene	360		
53-70-3	Dibenzo(a,h)anthracene	140	J	
191-24-2	Benzo(g,h,i)perylene	410		
58-90-2	2,3,4,6-Tetrachlorophenol	260	U	

[1] Cannot be separated from Diphenylamine

NW 8/29/13

1D - FORM I SV-1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-28-096

5

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17052

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17052-5

Sample wt/vol: 30.4 (g/mL) g Lab File ID: PJUWJ20.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 36 Decanted: (Y/N) Date Received: 06/18/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/24/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/20/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
100-52-7	Benzaldehyde	260	U
108-95-2	Phenol	260	U
111-44-4	Bis(2-chloroethyl)ether	260	U
95-57-8	2-Chlorophenol	260	U
95-48-7	2-Methylphenol	260	U
108-60-1	2,2'-Oxybis(1-chloropropane)	260	U
98-86-2	Acetophenone	45	J
106-44-5	4-Methylphenol	260	U
621-64-7	N-Nitroso-di-n-propylamine	260	U
67-72-1	Hexachloroethane	260	U
98-95-3	Nitrobenzene	260	U
78-59-1	Isophorone	260	U
88-75-5	2-Nitrophenol	260	U
105-67-9	2,4-Dimethylphenol	260	U
111-91-1	Bis(2-chloroethoxy)methane	260	U
120-83-2	2,4-Dichlorophenol	260	U
91-20-3	Naphthalene	68	J
106-47-8	4-Chloroaniline	260	U
87-68-3	Hexachlorobutadiene	260	U
105-60-2	Caprolactam	260	U
59-50-7	4-Chloro-3-methylphenol	260	U
91-57-6	2-Methylnaphthalene	53	J
77-47-4	Hexachlorocyclopentadiene	260	~~U~~ UJ
88-06-2	2,4,6-Trichlorophenol	260	U
95-95-4	2,4,5-Trichlorophenol	260	U
92-52-4	1,1'-Biphenyl	260	U
91-58-7	2-Chloronaphthalene	260	U
88-74-4	2-Nitroaniline	510	U
131-11-3	Dimethylphthalate	260	U
606-20-2	2,6-Dinitrotoluene	260	U
208-96-8	Acenaphthylene	81	J
99-09-2	3-Nitroaniline	510	U
83-32-9	Acenaphthene	470	

MW 8/29/13

EPA SAMPLE NO.
LMR13-28-096

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678 5

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17052

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17052-5

Sample wt/vol: 30.4 (g/mL) g Lab File ID: PJUWJ20.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 36 Decanted: (Y/N) Date Received: 06/18/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/24/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/20/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
51-28-5	2,4-Dinitrophenol	510	U	
100-02-7	4-Nitrophenol	510	U	
132-64-9	Dibenzofuran	46	J	
121-14-2	2,4-Dinitrotoluene	260	U	
84-66-2	Diethylphthalate	260	U	
86-73-7	Fluorene	510		
7005-72-3	4-Chlorophenyl-phenylether	260	U	
100-01-6	4-Nitroaniline	510	U	
534-52-1	4,6-Dinitro-2-methylphenol	510	U	
86-30-6	N-Nitrosodiphenylamin [1]	260	U	
95-94-3	1,2,4,5-Tetrachlorobenzene	260	U	
101-55-3	4-Bromophenyl-phenylether	260	U	
118-74-1	Hexachlorobenzene	260	U	
1912-24-9	Atrazine	260	U	
87-86-5	Pentachlorophenol	510	~~U~~	UJ
85-01-8	Phenanthrene	2700		
120-12-7	Anthracene	610		
86-74-8	Carbazole	260	U	
84-74-2	Di-n-butylphthalate	29	J	
206-44-0	Fluoranthene	1900		
129-00-0	Pyrene	2600		
85-68-7	Butylbenzylphthalate	260	U	
91-94-1	3,3'-Dichlorobenzidine	260	U	
56-55-3	Benzo(a)anthracene	1100		
218-01-9	Chrysene	1300		
117-81-7	Bis(2-ethylhexyl)phthalate	260 ~~110~~	J ~~B~~	U
117-84-0	Di-n-octylphthalate	260	U	
205-99-2	Benzo(b)fluoranthene	1100		
207-08-9	Benzo(k)fluoranthene	660		
50-32-8	Benzo(a)pyrene	860		
193-39-5	Indeno(1,2,3-cd)pyrene	370		
53-70-3	Dibenzo(a,h)anthracene	130	J	
191-24-2	Benzo(g,h,i)perylene	430		
58-90-2	2,3,4,6-Tetrachlorophenol	260	U	

[1] Cannot be separated from Diphenylamine

MW 8/29/13

EPA SAMPLE NO.
LMR13-28-120

6

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17052

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17052-6

Sample wt/vol: 30.2 (g/mL) g Lab File ID: PJUWJ21.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 28 Decanted: (Y/N) Date Received: 06/18/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/24/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/20/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
100-52-7	Benzaldehyde	230	U	
108-95-2	Phenol	230	U	
111-44-4	Bis(2-chloroethyl)ether	230	U	
95-57-8	2-Chlorophenol	230	U	
95-48-7	2-Methylphenol	230	U	
108-60-1	2,2'-Oxybis(1-chloropropane)	230	U	
98-86-2	Acetophenone	36	J	
106-44-5	4-Methylphenol	230	U	
621-64-7	N-Nitroso-di-n-propylamine	230	U	
67-72-1	Hexachloroethane	230	U	
98-95-3	Nitrobenzene	230	U	
78-59-1	Isophorone	230	U	
88-75-5	2-Nitrophenol	230	U	
105-67-9	2,4-Dimethylphenol	230	U	
111-91-1	Bis(2-chloroethoxy)methane	230	U	
120-83-2	2,4-Dichlorophenol	230	U	
91-20-3	Naphthalene	27	J	
106-47-8	4-Chloroaniline	230	U	R
87-68-3	Hexachlorobutadiene	230	U	
105-60-2	Caprolactam	230	U	
59-50-7	4-Chloro-3-methylphenol	230	U	
91-57-6	2-Methylnaphthalene	230	U	
77-47-4	Hexachlorocyclopentadiene	230	U	R
88-06-2	2,4,6-Trichlorophenol	230	U	
95-95-4	2,4,5-Trichlorophenol	230	U	
92-52-4	1,1'-Biphenyl	230	U	
91-58-7	2-Chloronaphthalene	230	U	
88-74-4	2-Nitroaniline	450	U	
131-11-3	Dimethylphthalate	230	U	
606-20-2	2,6-Dinitrotoluene	230	U	
208-96-8	Acenaphthylene	47	J	
99-09-2	3-Nitroaniline	450	U	
83-32-9	Acenaphthene	190	J	

MW 8/29/13

1E - FORM I SV-2

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-28-120

6

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17052

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17052-6

Sample wt/vol: 30.2 (g/mL) g Lab File ID: PJUWJ21.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 28 Decanted: (Y/N) Date Received: 06/18/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/24/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/20/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
51-28-5	2,4-Dinitrophenol	450	U	
100-02-7	4-Nitrophenol	450	U	
132-64-9	Dibenzofuran	44	J	
121-14-2	2,4-Dinitrotoluene	230	U	
84-66-2	Diethylphthalate	230	U	
86-73-7	Fluorene	220	J	
7005-72-3	4-Chlorophenyl-phenylether	230	U	
100-01-6	4-Nitroaniline	450	U	
534-52-1	4,6-Dinitro-2-methylphenol	450	U	
86-30-6	N-Nitrosodiphenylamin [1]	230	U	
95-94-3	1,2,4,5-Tetrachlorobenzene	230	U	
101-55-3	4-Bromophenyl-phenylether	230	U	
118-74-1	Hexachlorobenzene	230	U	
1912-24-9	Atrazine	230	U	
87-86-5	Pentachlorophenol	450	~~U~~	UJ
85-01-8	Phenanthrene	1400		
120-12-7	Anthracene	400		
86-74-8	Carbazole	230	U	
84-74-2	Di-n-butylphthalate	110	J	
206-44-0	Fluoranthene	1300		
129-00-0	Pyrene	1900		
85-68-7	Butylbenzylphthalate	230 ~~65~~	~~J B~~	U
91-94-1	3,3'-Dichlorobenzidine	230	~~U~~	R
56-55-3	Benzo(a)anthracene	700		
218-01-9	Chrysene	820		
117-81-7	Bis(2-ethylhexyl)phthalate	230 ~~140~~	~~J B~~	U
117-84-0	Di-n-octylphthalate	230	U	
205-99-2	Benzo(b)fluoranthene	480		
207-08-9	Benzo(k)fluoranthene	470		
50-32-8	Benzo(a)pyrene	540		
193-39-5	Indeno(1,2,3-cd)pyrene	270		
53-70-3	Dibenzo(a,h)anthracene	100	J	
191-24-2	Benzo(g,h,i)perylene	310		
58-90-2	2,3,4,6-Tetrachlorophenol	230	U	

[1] Cannot be separated from Diphenylamine

NW 8/29/13

EPA SAMPLE NO.
LMR13-29-012

7

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17052

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17052-7

Sample wt/vol: 30.1 (g/mL) g Lab File ID: PJUWJ22.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 47 Decanted: (Y/N) Date Received: 06/18/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/24/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/20/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
100-52-7	Benzaldehyde	54	J	
108-95-2	Phenol	320	U	
111-44-4	Bis(2-chloroethyl)ether	320	U	
95-57-8	2-Chlorophenol	320	U	
95-48-7	2-Methylphenol	320	U	
108-60-1	2,2'-Oxybis(1-chloropropane)	320	U	
98-86-2	Acetophenone	30	J	
106-44-5	4-Methylphenol	320	U	
621-64-7	N-Nitroso-di-n-propylamine	320	U	
67-72-1	Hexachloroethane	320	U	
98-95-3	Nitrobenzene	320	U	
78-59-1	Isophorone	320	U	
88-75-5	2-Nitrophenol	320	U	
105-67-9	2,4-Dimethylphenol	320	U	
111-91-1	Bis(2-chloroethoxy)methane	320	U	
120-83-2	2,4-Dichlorophenol	320	U	
91-20-3	Naphthalene	320	U	
106-47-8	4-Chloroaniline	320	~~U~~	R
87-68-3	Hexachlorobutadiene	320	U	
105-60-2	Caprolactam	320	U	
59-50-7	4-Chloro-3-methylphenol	320	U	
91-57-6	2-Methylnaphthalene	320	U	
77-47-4	Hexachlorocyclopentadiene	320	~~U~~	R
88-06-2	2,4,6-Trichlorophenol	320	U	
95-95-4	2,4,5-Trichlorophenol	320	U	
92-52-4	1,1'-Biphenyl	320	U	
91-58-7	2-Chloronaphthalene	320	U	
88-74-4	2-Nitroaniline	620	U	
131-11-3	Dimethylphthalate	320	U	
606-20-2	2,6-Dinitrotoluene	320	U	
208-96-8	Acenaphthylene	320	U	
99-09-2	3-Nitroaniline	620	U	
83-32-9	Acenaphthene	18	J	

NW 8/29/13

EPA SAMPLE NO.
LMR13-29-012

7

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17052

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17052-7

Sample wt/vol: 30.1 (g/mL) g Lab File ID: PJUWJ22.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 47 Decanted: (Y/N) Date Received: 06/18/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/24/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/20/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
51-28-5	2,4-Dinitrophenol	620	U	
100-02-7	4-Nitrophenol	620	U	
132-64-9	Dibenzofuran	320	U	
121-14-2	2,4-Dinitrotoluene	320	U	
84-66-2	Diethylphthalate	320	U	
86-73-7	Fluorene	31	J	
7005-72-3	4-Chlorophenyl-phenylether	320	U	
100-01-6	4-Nitroaniline	620	U	
534-52-1	4,6-Dinitro-2-methylphenol	620	U	
86-30-6	N-Nitrosodiphenylamin [1]	320	U	
95-94-3	1,2,4,5-Tetrachlorobenzene	320	U	
101-55-3	4-Bromophenyl-phenylether	320	U	
118-74-1	Hexachlorobenzene	320	U	
1912-24-9	Atrazine	320	U	
87-86-5	Pentachlorophenol	620	~~U~~	UJ
85-01-8	Phenanthrene	140	J	
120-12-7	Anthracene	49	J	
86-74-8	Carbazole	16	J	
84-74-2	Di-n-butylphthalate	27	J	
206-44-0	Fluoranthene	440		
129-00-0	Pyrene	530		
85-68-7	Butylbenzylphthalate	320 ~~85~~	~~J B~~	U
91-94-1	3,3'-Dichlorobenzidine	320	~~U~~	R
56-55-3	Benzo(a)anthracene	180	J	
218-01-9	Chrysene	270	J	
117-81-7	Bis(2-ethylhexyl)phthalate	320 ~~290~~	~~J B~~	U
117-84-0	Di-n-octylphthalate	320	U	
205-99-2	Benzo(b)fluoranthene	250	J	
207-08-9	Benzo(k)fluoranthene	200	J	
50-32-8	Benzo(a)pyrene	190	J	
193-39-5	Indeno(1,2,3-cd)pyrene	130	J	
53-70-3	Dibenzo(a,h)anthracene	49	J	
191-24-2	Benzo(g,h,i)perylene	160	J	
58-90-2	2,3,4,6-Tetrachlorophenol	320	U	

[1] Cannot be separated from Diphenylamine

NW 8/29/13

1D - FORM I SV-1

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-29-024

8

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17052

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17052-8

Sample wt/vol: 30.1 (g/mL) g Lab File ID: PJUWJ23.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 48 Decanted: (Y/N) Date Received: 06/18/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/24/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/20/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
100-52-7	Benzaldehyde	47	J	
108-95-2	Phenol	330	U	
111-44-4	Bis(2-chloroethyl)ether	330	U	
95-57-8	2-Chlorophenol	330	U	
95-48-7	2-Methylphenol	330	U	
108-60-1	2,2'-Oxybis(1-chloropropane)	330	U	
98-86-2	Acetophenone	330	U	
106-44-5	4-Methylphenol	330	U	
621-64-7	N-Nitroso-di-n-propylamine	330	U	
67-72-1	Hexachloroethane	330	U	
98-95-3	Nitrobenzene	330	U	
78-59-1	Isophorone	330	U	
88-75-5	2-Nitrophenol	330	U	
105-67-9	2,4-Dimethylphenol	330	U	
111-91-1	Bis(2-chloroethoxy)methane	330	U	
120-83-2	2,4-Dichlorophenol	330	U	
91-20-3	Naphthalene	330	U	
106-47-8	4-Chloroaniline	330	U	R
87-68-3	Hexachlorobutadiene	330	U	
105-60-2	Caprolactam	330	U	
59-50-7	4-Chloro-3-methylphenol	330	U	
91-57-6	2-Methylnaphthalene	330	U	
77-47-4	Hexachlorocyclopentadiene	330	U	R
88-06-2	2,4,6-Trichlorophenol	330	U	
95-95-4	2,4,5-Trichlorophenol	330	U	
92-52-4	1,1'-Biphenyl	330	U	
91-58-7	2-Chloronaphthalene	330	U	
88-74-4	2-Nitroaniline	630	U	
131-11-3	Dimethylphthalate	330	U	
606-20-2	2,6-Dinitrotoluene	330	U	
208-96-8	Acenaphthylene	330	U	
99-09-2	3-Nitroaniline	630	U	
83-32-9	Acenaphthene	30	J	

MW 8/29/13

EPA SAMPLE NO.
LMR13-29-024

8

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17052

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17052-8

Sample wt/vol: 30.1 (g/mL) g Lab File ID: PJUWJ23.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 48 Decanted: (Y/N) Date Received: 06/18/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/24/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/20/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
51-28-5	2,4-Dinitrophenol	630	U	
100-02-7	4-Nitrophenol	630	U	
132-64-9	Dibenzofuran	19	J	
121-14-2	2,4-Dinitrotoluene	330	U	
84-66-2	Diethylphthalate	330	U	
86-73-7	Fluorene	42	J	
7005-72-3	4-Chlorophenyl-phenylether	330	U	
100-01-6	4-Nitroaniline	630	U	
534-52-1	4,6-Dinitro-2-methylphenol	630	U	
86-30-6	N-Nitrosodiphenylamin [1]	330	U	
95-94-3	1,2,4,5-Tetrachlorobenzene	330	U	
101-55-3	4-Bromophenyl-phenylether	330	U	
118-74-1	Hexachlorobenzene	330	U	
1912-24-9	Atrazine	330	U	
87-86-5	Pentachlorophenol	630	~~U~~	UJ
85-01-8	Phenanthrene	190	J	
120-12-7	Anthracene	60	J	
86-74-8	Carbazole	330	U	
84-74-2	Di-n-butylphthalate	22	J	
206-44-0	Fluoranthene	430		
129-00-0	Pyrene	560		
85-68-7	Butylbenzylphthalate	330 ~~70~~	~~J B~~	U
91-94-1	3,3'-Dichlorobenzidine	330	~~U~~	R
56-55-3	Benzo(a)anthracene	180	J	
218-01-9	Chrysene	320	J	
117-81-7	Bis(2-ethylhexyl)phthalate	430	~~B~~	U
117-84-0	Di-n-octylphthalate	330	U	
205-99-2	Benzo(b)fluoranthene	260	J	
207-08-9	Benzo(k)fluoranthene	180	J	
50-32-8	Benzo(a)pyrene	170	J	
193-39-5	Indeno(1,2,3-cd)pyrene	130	J	
53-70-3	Dibenzo(a,h)anthracene	55	J	
191-24-2	Benzo(g,h,i)perylene	140	J	
58-90-2	2,3,4,6-Tetrachlorophenol	330	U	

[1] Cannot be separated from Diphenylamine

NW 8/29/13

1D - FORM I SV-1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-29-048

10

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17052

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17052-10

Sample wt/vol: 30.9 (g/mL) g Lab File ID: PJUWJ24.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 39 Decanted: (Y/N) Date Received: 06/18/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/24/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/20/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
100-52-7	Benzaldehyde	42	J
108-95-2	Phenol	270	U
111-44-4	Bis(2-chloroethyl)ether	270	U
95-57-8	2-Chlorophenol	270	U
95-48-7	2-Methylphenol	270	U
108-60-1	2,2'-Oxybis(1-chloropropane)	270	U
98-86-2	Acetophenone	33	J
106-44-5	4-Methylphenol	270	U
621-64-7	N-Nitroso-di-n-propylamine	270	U
67-72-1	Hexachloroethane	270	U
98-95-3	Nitrobenzene	270	U
78-59-1	Isophorone	270	U
88-75-5	2-Nitrophenol	270	U
105-67-9	2,4-Dimethylphenol	270	U
111-91-1	Bis(2-chloroethoxy)methane	270	U
120-83-2	2,4-Dichlorophenol	270	U
91-20-3	Naphthalene	68	J
106-47-8	4-Chloroaniline	270	U
87-68-3	Hexachlorobutadiene	270	U
105-60-2	Caprolactam	270	U
59-50-7	4-Chloro-3-methylphenol	270	U
91-57-6	2-Methylnaphthalene	31	J
77-47-4	Hexachlorocyclopentadiene	270	~~U~~ UJ
88-06-2	2,4,6-Trichlorophenol	270	U
95-95-4	2,4,5-Trichlorophenol	270	U
92-52-4	1,1'-Biphenyl	270	U
91-58-7	2-Chloronaphthalene	270	U
88-74-4	2-Nitroaniline	520	U
131-11-3	Dimethylphthalate	270	U
606-20-2	2,6-Dinitrotoluene	270	U
208-96-8	Acenaphthylene	55	J
99-09-2	3-Nitroaniline	520	U
83-32-9	Acenaphthene	180	J

NW 8/29/13

EPA SAMPLE NO.
LMR13-29-048

10

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17052

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17052-10

Sample wt/vol: 30.9 (g/mL) g Lab File ID: PJUWJ24.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 39 Decanted: (Y/N) Date Received: 06/18/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/24/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/20/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
51-28-5	2,4-Dinitrophenol	520	U	
100-02-7	4-Nitrophenol	520	U	
132-64-9	Dibenzofuran	51	J	
121-14-2	2,4-Dinitrotoluene	270	U	
84-66-2	Diethylphthalate	270	U	
86-73-7	Fluorene	130	J	
7005-72-3	4-Chlorophenyl-phenylether	270	U	
100-01-6	4-Nitroaniline	520	U	
534-52-1	4,6-Dinitro-2-methylphenol	520	U	
86-30-6	N-Nitrosodiphenylamin [1]	270	U	
95-94-3	1,2,4,5-Tetrachlorobenzene	270	U	
101-55-3	4-Bromophenyl-phenylether	270	U	
118-74-1	Hexachlorobenzene	270	U	
1912-24-9	Atrazine	270	U	
87-86-5	Pentachlorophenol	520	~~U~~	UJ
85-01-8	Phenanthrene	660		
120-12-7	Anthracene	240	J	
86-74-8	Carbazole	37	J	
84-74-2	Di-n-butylphthalate	25	J	
206-44-0	Fluoranthene	1300		
129-00-0	Pyrene	1800		
85-68-7	Butylbenzylphthalate	270 ~~130~~	~~J B~~	U
91-94-1	3,3'-Dichlorobenzidine	270	U	
56-55-3	Benzo(a)anthracene	890		
218-01-9	Chrysene	1200		
117-81-7	Bis(2-ethylhexyl)phthalate	1000	~~B~~	
117-84-0	Di-n-octylphthalate	54	J	
205-99-2	Benzo(b)fluoranthene	790		
207-08-9	Benzo(k)fluoranthene	960		
50-32-8	Benzo(a)pyrene	850		
193-39-5	Indeno(1,2,3-cd)pyrene	390		
53-70-3	Dibenzo(a,h)anthracene	140	J	
191-24-2	Benzo(g,h,i)perylene	400		
58-90-2	2,3,4,6-Tetrachlorophenol	270	U	

[1] Cannot be separated from Diphenylamine

NW 8/29/13

1D - FORM I SV-1

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-29-072

11

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17052

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17052-11

Sample wt/vol: 30.4 (g/mL) g Lab File ID: PJUWJ25.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 27 Decanted: (Y/N) Date Received: 06/18/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/24/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/20/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
100-52-7	Benzaldehyde	230	U
108-95-2	Phenol	230	U
111-44-4	Bis(2-chloroethyl)ether	230	U
95-57-8	2-Chlorophenol	230	U
95-48-7	2-Methylphenol	230	U
108-60-1	2,2'-Oxybis(1-chloropropane)	230	U
98-86-2	Acetophenone	22	J
106-44-5	4-Methylphenol	230	U
621-64-7	N-Nitroso-di-n-propylamine	230	U
67-72-1	Hexachloroethane	230	U
98-95-3	Nitrobenzene	230	U
78-59-1	Isophorone	230	U
88-75-5	2-Nitrophenol	230	U
105-67-9	2,4-Dimethylphenol	230	U
111-91-1	Bis(2-chloroethoxy)methane	230	U
120-83-2	2,4-Dichlorophenol	230	U
91-20-3	Naphthalene	39	J
106-47-8	4-Chloroaniline	230	U
87-68-3	Hexachlorobutadiene	230	U
105-60-2	Caprolactam	230	U
59-50-7	4-Chloro-3-methylphenol	230	U
91-57-6	2-Methylnaphthalene	230	U
77-47-4	Hexachlorocyclopentadiene	230	U UJ
88-06-2	2,4,6-Trichlorophenol	230	U
95-95-4	2,4,5-Trichlorophenol	230	U
92-52-4	1,1'-Biphenyl	230	U
91-58-7	2-Chloronaphthalene	230	U
88-74-4	2-Nitroaniline	450	U
131-11-3	Dimethylphthalate	230	U
606-20-2	2,6-Dinitrotoluene	230	U
208-96-8	Acenaphthylene	31	J
99-09-2	3-Nitroaniline	450	U
83-32-9	Acenaphthene	120	J

NW 8/29/13

EPA SAMPLE NO.
LMR13-29-072

11

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17052

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17052-11

Sample wt/vol: 30.4 (g/mL) g Lab File ID: PJUWJ25.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 27 Decanted: (Y/N) Date Received: 06/18/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/24/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/20/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
51-28-5	2,4-Dinitrophenol	450	U	
100-02-7	4-Nitrophenol	450	U	
132-64-9	Dibenzofuran	22	J	
121-14-2	2,4-Dinitrotoluene	230	U	
84-66-2	Diethylphthalate	230	U	
86-73-7	Fluorene	64	J	
7005-72-3	4-Chlorophenyl-phenylether	230	U	
100-01-6	4-Nitroaniline	450	U	
534-52-1	4,6-Dinitro-2-methylphenol	450	U	
86-30-6	N-Nitrosodiphenylamin [1]	230	U	
95-94-3	1,2,4,5-Tetrachlorobenzene	230	U	
101-55-3	4-Bromophenyl-phenylether	230	U	
118-74-1	Hexachlorobenzene	230	U	
1912-24-9	Atrazine	230	U	
87-86-5	Pentachlorophenol	450	~~U~~	UJ
85-01-8	Phenanthrene	400		
120-12-7	Anthracene	150	J	
86-74-8	Carbazole	230	U	
84-74-2	Di-n-butylphthalate	22	J	
206-44-0	Fluoranthene	780		
129-00-0	Pyrene	1200		
85-68-7	Butylbenzylphthalate	230 ~~58~~	~~J B~~	U
91-94-1	3,3'-Dichlorobenzidine	230	U	
56-55-3	Benzo(a)anthracene	420		
218-01-9	Chrysene	510		
117-81-7	Bis(2-ethylhexyl)phthalate	230 ~~130~~	~~J B~~	U
117-84-0	Di-n-octylphthalate	230	U	
205-99-2	Benzo(b)fluoranthene	270		
207-08-9	Benzo(k)fluoranthene	370		
50-32-8	Benzo(a)pyrene	320		
193-39-5	Indeno(1,2,3-cd)pyrene	160	J	
53-70-3	Dibenzo(a,h)anthracene	57	J	
191-24-2	Benzo(g,h,i)perylene	200	J	
58-90-2	2,3,4,6-Tetrachlorophenol	230	U	

[1] Cannot be separated from Diphenylamine

MW 8/29/13

1D - FORM I SV-1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-29-096

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678 12

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17052

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17052-12

Sample wt/vol: 30.1 (g/mL) g Lab File ID: PJUWJ26.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 18 Decanted: (Y/N) Date Received: 06/18/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/24/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/20/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
100-52-7	Benzaldehyde	210	U
108-95-2	Phenol	210	U
111-44-4	Bis(2-chloroethyl)ether	210	U
95-57-8	2-Chlorophenol	210	U
95-48-7	2-Methylphenol	210	U
108-60-1	2,2'-Oxybis(1-chloropropane)	210	U
98-86-2	Acetophenone	210	U
106-44-5	4-Methylphenol	210	U
621-64-7	N-Nitroso-di-n-propylamine	210	U
67-72-1	Hexachloroethane	210	U
98-95-3	Nitrobenzene	210	U
78-59-1	Isophorone	210	U
88-75-5	2-Nitrophenol	210	U
105-67-9	2,4-Dimethylphenol	210	U
111-91-1	Bis(2-chloroethoxy)methane	210	U
120-83-2	2,4-Dichlorophenol	210	U
91-20-3	Naphthalene	210	U
106-47-8	4-Chloroaniline	210	U
87-68-3	Hexachlorobutadiene	210	U
105-60-2	Caprolactam	210	U
59-50-7	4-Chloro-3-methylphenol	210	U
91-57-6	2-Methylnaphthalene	210	U
77-47-4	Hexachlorocyclopentadiene	210	~~U~~ UJ
88-06-2	2,4,6-Trichlorophenol	210	U
95-95-4	2,4,5-Trichlorophenol	210	U
92-52-4	1,1'-Biphenyl	210	U
91-58-7	2-Chloronaphthalene	210	U
88-74-4	2-Nitroaniline	400	U
131-11-3	Dimethylphthalate	210	U
606-20-2	2,6-Dinitrotoluene	210	U
208-96-8	Acenaphthylene	210	U
99-09-2	3-Nitroaniline	400	U
83-32-9	Acenaphthene	210	U

MW 8/29/13

1E - FORM I SV-2
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-29-096

12

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17052

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17052-12

Sample wt/vol: 30.1 (g/mL) g Lab File ID: PJUWJ26.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 18 Decanted: (Y/N) Date Received: 06/18/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/24/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/20/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
51-28-5	2,4-Dinitrophenol	400	U	
100-02-7	4-Nitrophenol	400	U	
132-64-9	Dibenzofuran	210	U	
121-14-2	2,4-Dinitrotoluene	210	U	
84-66-2	Diethylphthalate	210	U	
86-73-7	Fluorene	210	U	
7005-72-3	4-Chlorophenyl-phenylether	210	U	
100-01-6	4-Nitroaniline	400	U	
534-52-1	4,6-Dinitro-2-methylphenol	400	U	
86-30-6	N-Nitrosodiphenylamin [1]	210	U	
95-94-3	1,2,4,5-Tetrachlorobenzene	210	U	
101-55-3	4-Bromophenyl-phenylether	210	U	
118-74-1	Hexachlorobenzene	210	U	
1912-24-9	Atrazine	210	U	
87-86-5	Pentachlorophenol	400	~~U~~	UJ
85-01-8	Phenanthrene	21	J	
120-12-7	Anthracene	210	U	
86-74-8	Carbazole	210	U	
84-74-2	Di-n-butylphthalate	36	J	
206-44-0	Fluoranthene	29	J	
129-00-0	Pyrene	43	J	
85-68-7	Butylbenzylphthalate	210 ~~39~~	~~J B~~	U
91-94-1	3,3'-Dichlorobenzidine	210	U	
56-55-3	Benzo(a)anthracene	210	U	
218-01-9	Chrysene	210	U	
117-81-7	Bis(2-ethylhexyl)phthalate	210 ~~95~~	~~J B~~	U
117-84-0	Di-n-octylphthalate	210	U	
205-99-2	Benzo(b)fluoranthene	210	U	
207-08-9	Benzo(k)fluoranthene	210	U	
50-32-8	Benzo(a)pyrene	210	U	
193-39-5	Indeno(1,2,3-cd)pyrene	210	U	
53-70-3	Dibenzo(a,h)anthracene	210	U	
191-24-2	Benzo(g,h,i)perylene	210	U	
58-90-2	2,3,4,6-Tetrachlorophenol	210	U	

[1] Cannot be separated from Diphenylamine

NW 8/29/13

EPA SAMPLE NO.
LMR13-34-012

13

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17052

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17052-13

Sample wt/vol: 30.6 (g/mL) g Lab File ID: PJUWJ27.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 62 Decanted: (Y/N) Date Received: 06/18/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/24/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/20/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
100-52-7	Benzaldehyde	430	U	
108-95-2	Phenol	430	U	
111-44-4	Bis(2-chloroethyl)ether	430	U	
95-57-8	2-Chlorophenol	430	U	
95-48-7	2-Methylphenol	430	U	
108-60-1	2,2'-Oxybis(1-chloropropane)	430	U	
98-86-2	Acetophenone	430	U	
106-44-5	4-Methylphenol	430	U	
621-64-7	N-Nitroso-di-n-propylamine	430	U	
67-72-1	Hexachloroethane	430	U	
98-95-3	Nitrobenzene	430	U	
78-59-1	Isophorone	430	U	
88-75-5	2-Nitrophenol	430	U	
105-67-9	2,4-Dimethylphenol	430	U	
111-91-1	Bis(2-chloroethoxy)methane	430	U	
120-83-2	2,4-Dichlorophenol	430	U	
91-20-3	Naphthalene	40	J	
106-47-8	4-Chloroaniline	430	~~U~~	R
87-68-3	Hexachlorobutadiene	430	U	
105-60-2	Caprolactam	430	U	
59-50-7	4-Chloro-3-methylphenol	430	U	
91-57-6	2-Methylnaphthalene	430	U	
77-47-4	Hexachlorocyclopentadiene	430	~~U~~	R
88-06-2	2,4,6-Trichlorophenol	430	U	
95-95-4	2,4,5-Trichlorophenol	430	U	
92-52-4	1,1'-Biphenyl	430	U	
91-58-7	2-Chloronaphthalene	430	U	
88-74-4	2-Nitroaniline	840	U	
131-11-3	Dimethylphthalate	430	U	
606-20-2	2,6-Dinitrotoluene	430	U	
208-96-8	Acenaphthylene	430	U	
99-09-2	3-Nitroaniline	840	U	
83-32-9	Acenaphthene	65	J	

NW 8/29/13

1E - FORM I SV-2

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-34-012

13

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17052

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17052-13

Sample wt/vol: 30.6 (g/mL) g Lab File ID: PJUWJ27.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 62 Decanted: (Y/N) Date Received: 06/18/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/24/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/20/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
51-28-5	2,4-Dinitrophenol	840	U	
100-02-7	4-Nitrophenol	840	U	
132-64-9	Dibenzofuran	41	J	
121-14-2	2,4-Dinitrotoluene	430	U	
84-66-2	Diethylphthalate	430	U	
86-73-7	Fluorene	95	J	
7005-72-3	4-Chlorophenyl-phenylether	430	U	
100-01-6	4-Nitroaniline	840	U	
534-52-1	4,6-Dinitro-2-methylphenol	840	U	
86-30-6	N-Nitrosodiphenylamin [1]	430	U	
95-94-3	1,2,4,5-Tetrachlorobenzene	430	U	
101-55-3	4-Bromophenyl-phenylether	430	U	
118-74-1	Hexachlorobenzene	430	U	
1912-24-9	Atrazine	430	U	
87-86-5	Pentachlorophenol	840	~~U~~	UJ
85-01-8	Phenanthrene	290	J	
120-12-7	Anthracene	120	J	
86-74-8	Carbazole	22	J	
84-74-2	Di-n-butylphthalate	59	J	
206-44-0	Fluoranthene	740		
129-00-0	Pyrene	1000		
85-68-7	Butylbenzylphthalate	430 ~~120~~	~~J B~~	U
91-94-1	3,3'-Dichlorobenzidine	430	~~U~~	R
56-55-3	Benzo(a)anthracene	310	J	
218-01-9	Chrysene	490		
117-81-7	Bis(2-ethylhexyl)phthalate	630	~~B~~	U
117-84-0	Di-n-octylphthalate	430	U	
205-99-2	Benzo(b)fluoranthene	550		
207-08-9	Benzo(k)fluoranthene	350	J	
50-32-8	Benzo(a)pyrene	370	J	
193-39-5	Indeno(1,2,3-cd)pyrene	240	J	
53-70-3	Dibenzo(a,h)anthracene	95	J	
191-24-2	Benzo(g,h,i)perylene	290	J	
58-90-2	2,3,4,6-Tetrachlorophenol	430	U	

[1] Cannot be separated from Diphenylamine

MW 8/29/13

EPA SAMPLE NO.
LMR13-34-024

14

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17052

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17052-14

Sample wt/vol: 30.9 (g/mL) g Lab File ID: PJUWM06.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 52 Decanted: (Y/N) Date Received: 06/18/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/24/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/20/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
100-52-7	Benzaldehyde	350	U	
108-95-2	Phenol	350	U	
111-44-4	Bis(2-chloroethyl)ether	350	U	
95-57-8	2-Chlorophenol	350	U	
95-48-7	2-Methylphenol	350	U	
108-60-1	2,2'-Oxybis(1-chloropropane)	350	U	
98-86-2	Acetophenone	350	U	
106-44-5	4-Methylphenol	350	U	
621-64-7	N-Nitroso-di-n-propylamine	350	U	
67-72-1	Hexachloroethane	350	U	
98-95-3	Nitrobenzene	350	U	
78-59-1	Isophorone	350	U	
88-75-5	2-Nitrophenol	350	U	
105-67-9	2,4-Dimethylphenol	350	U	
111-91-1	Bis(2-chloroethoxy)methane	350	U	
120-83-2	2,4-Dichlorophenol	350	U	
91-20-3	Naphthalene	23	J	
106-47-8	4-Chloroaniline	350	U	R
87-68-3	Hexachlorobutadiene	350	U	
105-60-2	Caprolactam	350	U	
59-50-7	4-Chloro-3-methylphenol	350	U	
91-57-6	2-Methylnaphthalene	350	U	
77-47-4	Hexachlorocyclopentadiene	350	U	R
88-06-2	2,4,6-Trichlorophenol	350	U	
95-95-4	2,4,5-Trichlorophenol	350	U	
92-52-4	1,1'-Biphenyl	350	U	
91-58-7	2-Chloronaphthalene	350	U	
88-74-4	2-Nitroaniline	670	U	
131-11-3	Dimethylphthalate	350	U	
606-20-2	2,6-Dinitrotoluene	350	U	
208-96-8	Acenaphthylene	18	J	
99-09-2	3-Nitroaniline	670	U	
83-32-9	Acenaphthene	44	J	

NW 8/29/13

EPA SAMPLE NO.
LMR13-34-024

14

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17052

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17052-14

Sample wt/vol: 30.9 (g/mL) g Lab File ID: PJUWM06.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 52 Decanted: (Y/N) Date Received: 06/18/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/24/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/20/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
51-28-5	2,4-Dinitrophenol	670	U	
100-02-7	4-Nitrophenol	670	U	
132-64-9	Dibenzofuran	28	J	
121-14-2	2,4-Dinitrotoluene	350	U	
84-66-2	Diethylphthalate	350	U	
86-73-7	Fluorene	70	J	
7005-72-3	4-Chlorophenyl-phenylether	350	U	
100-01-6	4-Nitroaniline	670	U	
534-52-1	4,6-Dinitro-2-methylphenol	670	U	
86-30-6	N-Nitrosodiphenylamin [1]	350	U	
95-94-3	1,2,4,5-Tetrachlorobenzene	350	U	
101-55-3	4-Bromophenyl-phenylether	350	U	
118-74-1	Hexachlorobenzene	350	U	
1912-24-9	Atrazine	350	U	
87-86-5	Pentachlorophenol	670	~~U~~	UJ
85-01-8	Phenanthrene	270	J	
120-12-7	Anthracene	83	J	
86-74-8	Carbazole	21	J	
84-74-2	Di-n-butylphthalate	40	J	
206-44-0	Fluoranthene	610		
129-00-0	Pyrene	770		
85-68-7	Butylbenzylphthalate	350 ~~110~~	~~J B~~	U
91-94-1	3,3'-Dichlorobenzidine	350	~~U~~	R
56-55-3	Benzo(a)anthracene	270	J	
218-01-9	Chrysene	450		
117-81-7	Bis(2-ethylhexyl)phthalate	620	~~B~~	U
117-84-0	Di-n-octylphthalate	350	U	
205-99-2	Benzo(b)fluoranthene	330	J	
207-08-9	Benzo(k)fluoranthene	400		
50-32-8	Benzo(a)pyrene	280	J	
193-39-5	Indeno(1,2,3-cd)pyrene	280	J	
53-70-3	Dibenzo(a,h)anthracene	85	J	
191-24-2	Benzo(g,h,i)perylene	330	J	
58-90-2	2,3,4,6-Tetrachlorophenol	350	U	

[1] Cannot be separated from Diphenylamine

NW 8/29/13

EPA SAMPLE NO.
LMR13-34-048

15

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17052

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17052-15

Sample wt/vol: 30.4 (g/mL) g Lab File ID: PJUWM07.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 52 Decanted: (Y/N) Date Received: 06/18/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/24/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/20/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
100-52-7	Benzaldehyde	350	U	
108-95-2	Phenol	350	U	
111-44-4	Bis(2-chloroethyl)ether	350	U	
95-57-8	2-Chlorophenol	350	U	
95-48-7	2-Methylphenol	350	U	
108-60-1	2,2'-Oxybis(1-chloropropane)	350	U	
98-86-2	Acetophenone	350	U	
106-44-5	4-Methylphenol	350	U	
621-64-7	N-Nitroso-di-n-propylamine	350	U	
67-72-1	Hexachloroethane	350	U	
98-95-3	Nitrobenzene	350	U	
78-59-1	Isophorone	350	U	
88-75-5	2-Nitrophenol	350	U	
105-67-9	2,4-Dimethylphenol	350	U	
111-91-1	Bis(2-chloroethoxy)methane	350	U	
120-83-2	2,4-Dichlorophenol	350	U	
91-20-3	Naphthalene	34	J	
106-47-8	4-Chloroaniline	350	U	R
87-68-3	Hexachlorobutadiene	350	U	
105-60-2	Caprolactam	350	U	
59-50-7	4-Chloro-3-methylphenol	350	U	
91-57-6	2-Methylnaphthalene	350	U	
77-47-4	Hexachlorocyclopentadiene	350	U	R
88-06-2	2,4,6-Trichlorophenol	350	U	
95-95-4	2,4,5-Trichlorophenol	350	U	
92-52-4	1,1'-Biphenyl	350	U	
91-58-7	2-Chloronaphthalene	350	U	
88-74-4	2-Nitroaniline	670	U	
131-11-3	Dimethylphthalate	350	U	
606-20-2	2,6-Dinitrotoluene	350	U	
208-96-8	Acenaphthylene	21	J	
99-09-2	3-Nitroaniline	670	U	
83-32-9	Acenaphthene	40	J	

NW 8/29/13

EPA SAMPLE NO.
LMR13-34-048

15

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17052

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17052-15

Sample wt/vol: 30.4 (g/mL) g Lab File ID: PJUWM07.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 52 Decanted: (Y/N) Date Received: 06/18/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/24/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/20/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
51-28-5	2,4-Dinitrophenol	670	U	
100-02-7	4-Nitrophenol	670	U	
132-64-9	Dibenzofuran	27	J	
121-14-2	2,4-Dinitrotoluene	350	U	
84-66-2	Diethylphthalate	350	U	
86-73-7	Fluorene	78	J	
7005-72-3	4-Chlorophenyl-phenylether	350	U	
100-01-6	4-Nitroaniline	670	U	
534-52-1	4,6-Dinitro-2-methylphenol	670	U	
86-30-6	N-Nitrosodiphenylamin [1]	350	U	
95-94-3	1,2,4,5-Tetrachlorobenzene	350	U	
101-55-3	4-Bromophenyl-phenylether	350	U	
118-74-1	Hexachlorobenzene	350	U	
1912-24-9	Atrazine	350	U	
87-86-5	Pentachlorophenol	670	~~U~~	UJ
85-01-8	Phenanthrene	250	J	
120-12-7	Anthracene	78	J	
86-74-8	Carbazole	350	U	
84-74-2	Di-n-butylphthalate	38	J	
206-44-0	Fluoranthene	540		
129-00-0	Pyrene	680		
85-68-7	Butylbenzylphthalate	350 ~~120~~	~~J B~~	U
91-94-1	3,3'-Dichlorobenzidine	350	~~U~~	R
56-55-3	Benzo(a)anthracene	250	J	
218-01-9	Chrysene	410		
117-81-7	Bis(2-ethylhexyl)phthalate	780	~~B~~	
117-84-0	Di-n-octylphthalate	350	U	
205-99-2	Benzo(b)fluoranthene	370		
207-08-9	Benzo(k)fluoranthene	300	J	
50-32-8	Benzo(a)pyrene	300	J	
193-39-5	Indeno(1,2,3-cd)pyrene	250	J	
53-70-3	Dibenzo(a,h)anthracene	85	J	
191-24-2	Benzo(g,h,i)perylene	280	J	
58-90-2	2,3,4,6-Tetrachlorophenol	350	U	

[1] Cannot be separated from Diphenylamine

NW 8/29/13

1D - FORM I SV-1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-34-072

17

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17052

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17052-17

Sample wt/vol: 30.8 (g/mL) g Lab File ID: PJUWM08.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 48 Decanted: (Y/N) Date Received: 06/18/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/24/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/20/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
100-52-7	Benzaldehyde	61	J	
108-95-2	Phenol	320	U	
111-44-4	Bis(2-chloroethyl)ether	320	U	
95-57-8	2-Chlorophenol	320	U	
95-48-7	2-Methylphenol	320	U	
108-60-1	2,2'-Oxybis(1-chloropropane)	320	U	
98-86-2	Acetophenone	320	U	
106-44-5	4-Methylphenol	320	U	
621-64-7	N-Nitroso-di-n-propylamine	320	U	
67-72-1	Hexachloroethane	320	U	
98-95-3	Nitrobenzene	320	U	
78-59-1	Isophorone	320	U	
88-75-5	2-Nitrophenol	320	U	
105-67-9	2,4-Dimethylphenol	320	U	
111-91-1	Bis(2-chloroethoxy)methane	320	U	
120-83-2	2,4-Dichlorophenol	320	U	
91-20-3	Naphthalene	24	J	
106-47-8	4-Chloroaniline	320	~~U~~	R
87-68-3	Hexachlorobutadiene	320	U	
105-60-2	Caprolactam	320	U	
59-50-7	4-Chloro-3-methylphenol	320	U	
91-57-6	2-Methylnaphthalene	320	U	
77-47-4	Hexachlorocyclopentadiene	320	~~U~~	R
88-06-2	2,4,6-Trichlorophenol	320	U	
95-95-4	2,4,5-Trichlorophenol	320	U	
92-52-4	1,1'-Biphenyl	320	U	
91-58-7	2-Chloronaphthalene	320	U	
88-74-4	2-Nitroaniline	620	U	
131-11-3	Dimethylphthalate	320	U	
606-20-2	2,6-Dinitrotoluene	320	U	
208-96-8	Acenaphthylene	320	U	
99-09-2	3-Nitroaniline	620	U	
83-32-9	Acenaphthene	39	J	

NW 8/29/13

EPA SAMPLE NO.
LMR13-34-072

17

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17052

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17052-17

Sample wt/vol: 30.8 (g/mL) g Lab File ID: PJUWM08.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 48 Decanted: (Y/N) Date Received: 06/18/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/24/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/20/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
51-28-5	2,4-Dinitrophenol	620	U	
100-02-7	4-Nitrophenol	620	U	
132-64-9	Dibenzofuran	27	J	
121-14-2	2,4-Dinitrotoluene	320	U	
84-66-2	Diethylphthalate	320	U	
86-73-7	Fluorene	65	J	
7005-72-3	4-Chlorophenyl-phenylether	320	U	
100-01-6	4-Nitroaniline	620	U	
534-52-1	4,6-Dinitro-2-methylphenol	620	U	
86-30-6	N-Nitrosodiphenylamin [1]	320	U	
95-94-3	1,2,4,5-Tetrachlorobenzene	320	U	
101-55-3	4-Bromophenyl-phenylether	320	U	
118-74-1	Hexachlorobenzene	320	U	
1912-24-9	Atrazine	320	U	
87-86-5	Pentachlorophenol	620	~~U~~	UJ
85-01-8	Phenanthrene	230	J	
120-12-7	Anthracene	68	J	
86-74-8	Carbazole	320	U	
84-74-2	Di-n-butylphthalate	33	J	
206-44-0	Fluoranthene	450		
129-00-0	Pyrene	610		
85-68-7	Butylbenzylphthalate	320 ~~110~~	~~J B~~	U
91-94-1	3,3'-Dichlorobenzidine	320	~~U~~	R
56-55-3	Benzo(a)anthracene	230	J	
218-01-9	Chrysene	370		
117-81-7	Bis(2-ethylhexyl)phthalate	670	~~B~~	U
117-84-0	Di-n-octylphthalate	320	U	
205-99-2	Benzo(b)fluoranthene	250	J	
207-08-9	Benzo(k)fluoranthene	290	J	
50-32-8	Benzo(a)pyrene	240	J	
193-39-5	Indeno(1,2,3-cd)pyrene	210	J	
53-70-3	Dibenzo(a,h)anthracene	68	J	
191-24-2	Benzo(g,h,i)perylene	240	J	
58-90-2	2,3,4,6-Tetrachlorophenol	320	U	

[1] Cannot be separated from Diphenylamine

NW 8/29/13

1D - FORM I SV-1

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-34-096

18

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17052

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17052-18

Sample wt/vol: 30.2 (g/mL) g Lab File ID: PJUWM09.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 45 Decanted: (Y/N) Date Received: 06/18/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/24/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/20/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
100-52-7	Benzaldehyde	60	~~U~~ J	J
108-95-2	Phenol	310	U	
111-44-4	Bis(2-chloroethyl)ether	310	U	
95-57-8	2-Chlorophenol	310	U	
95-48-7	2-Methylphenol	310	U	
108-60-1	2,2'-Oxybis(1-chloropropane)	310	U	
98-86-2	Acetophenone	310	U	
106-44-5	4-Methylphenol	310	U	
621-64-7	N-Nitroso-di-n-propylamine	310	U	
67-72-1	Hexachloroethane	310	U	
98-95-3	Nitrobenzene	310	U	
78-59-1	Isophorone	310	U	
88-75-5	2-Nitrophenol	310	U	
105-67-9	2,4-Dimethylphenol	310	U	
111-91-1	Bis(2-chloroethoxy)methane	310	U	
120-83-2	2,4-Dichlorophenol	310	U	
91-20-3	Naphthalene	17	J	
106-47-8	4-Chloroaniline	310	~~U~~ J	R
87-68-3	Hexachlorobutadiene	310	U	
105-60-2	Caprolactam	310	U	
59-50-7	4-Chloro-3-methylphenol	310	U	
91-57-6	2-Methylnaphthalene	310	U	
77-47-4	Hexachlorocyclopentadiene	310	~~U~~ J	R
88-06-2	2,4,6-Trichlorophenol	310	U	
95-95-4	2,4,5-Trichlorophenol	310	U	
92-52-4	1,1'-Biphenyl	310	U	
91-58-7	2-Chloronaphthalene	310	U	
88-74-4	2-Nitroaniline	590	U	
131-11-3	Dimethylphthalate	310	U	
606-20-2	2,6-Dinitrotoluene	310	U	
208-96-8	Acenaphthylene	20	J	
99-09-2	3-Nitroaniline	590	U	
83-32-9	Acenaphthene	74	J	

MW 8/29/13

EPA SAMPLE NO.
LMR13-34-096

18

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17052

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17052-18

Sample wt/vol: 30.2 (g/mL) g Lab File ID: PJUWM09.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 45 Decanted: (Y/N) Date Received: 06/18/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/24/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/20/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
51-28-5	2,4-Dinitrophenol	590	U	
100-02-7	4-Nitrophenol	590	U	
132-64-9	Dibenzofuran	54	J	
121-14-2	2,4-Dinitrotoluene	310	U	
84-66-2	Diethylphthalate	310	U	
86-73-7	Fluorene	98	J	
7005-72-3	4-Chlorophenyl-phenylether	310	U	
100-01-6	4-Nitroaniline	590	U	
534-52-1	4,6-Dinitro-2-methylphenol	590	U	
86-30-6	N-Nitrosodiphenylamin [1]	310	U	
95-94-3	1,2,4,5-Tetrachlorobenzene	310	U	
101-55-3	4-Bromophenyl-phenylether	310	U	
118-74-1	Hexachlorobenzene	310	U	
1912-24-9	Atrazine	310	U	
87-86-5	Pentachlorophenol	590	~~U~~	UJ
85-01-8	Phenanthrene	440		
120-12-7	Anthracene	130	J	
86-74-8	Carbazole	15	J	
84-74-2	Di-n-butylphthalate	30	J	
206-44-0	Fluoranthene	610		
129-00-0	Pyrene	780		
85-68-7	Butylbenzylphthalate	310 ~~120~~	~~J B~~	U
91-94-1	3,3'-Dichlorobenzidine	310	~~U~~	R
56-55-3	Benzo(a)anthracene	280	J	
218-01-9	Chrysene	410		
117-81-7	Bis(2-ethylhexyl)phthalate	890	~~B~~	
117-84-0	Di-n-octylphthalate	310	U	
205-99-2	Benzo(b)fluoranthene	330		
207-08-9	Benzo(k)fluoranthene	290	J	
50-32-8	Benzo(a)pyrene	250	J	
193-39-5	Indeno(1,2,3-cd)pyrene	190	J	
53-70-3	Dibenzo(a,h)anthracene	85	J	
191-24-2	Benzo(g,h,i)perylene	200	J	
58-90-2	2,3,4,6-Tetrachlorophenol	310	U	

[1] Cannot be separated from Diphenylamine

MW 8/29/13

EPA SAMPLE NO.
LMR13-34-120

19

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17052

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17052-19

Sample wt/vol: 30.8 (g/mL) g Lab File ID: PJUWM10.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 44 Decanted: (Y/N) Date Received: 06/18/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/24/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/20/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
100-52-7	Benzaldehyde	300	U
108-95-2	Phenol	300	U
111-44-4	Bis(2-chloroethyl)ether	300	U
95-57-8	2-Chlorophenol	300	U
95-48-7	2-Methylphenol	300	U
108-60-1	2,2'-Oxybis(1-chloropropane)	300	U
98-86-2	Acetophenone	300	U
106-44-5	4-Methylphenol	300	U
621-64-7	N-Nitroso-di-n-propylamine	300	U
67-72-1	Hexachloroethane	300	U
98-95-3	Nitrobenzene	300	U
78-59-1	Isophorone	300	U
88-75-5	2-Nitrophenol	300	U
105-67-9	2,4-Dimethylphenol	300	U
111-91-1	Bis(2-chloroethoxy)methane	300	U
120-83-2	2,4-Dichlorophenol	300	U
91-20-3	Naphthalene	74	J
106-47-8	4-Chloroaniline	300	U
87-68-3	Hexachlorobutadiene	300	U
105-60-2	Caprolactam	300	U
59-50-7	4-Chloro-3-methylphenol	300	U
91-57-6	2-Methylnaphthalene	22	J
77-47-4	Hexachlorocyclopentadiene	300	~~U~~ UJ
88-06-2	2,4,6-Trichlorophenol	300	U
95-95-4	2,4,5-Trichlorophenol	300	U
92-52-4	1,1'-Biphenyl	300	U
91-58-7	2-Chloronaphthalene	300	U
88-74-4	2-Nitroaniline	580	U
131-11-3	Dimethylphthalate	300	U
606-20-2	2,6-Dinitrotoluene	300	U
208-96-8	Acenaphthylene	31	J
99-09-2	3-Nitroaniline	580	U
83-32-9	Acenaphthene	130	J

NW 8/29/13

EPA SAMPLE NO.
LMR13-34-120

19

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17052

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17052-19

Sample wt/vol: 30.8 (g/mL) g Lab File ID: PJUWM10.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 44 Decanted: (Y/N) Date Received: 06/18/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/24/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/20/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
51-28-5	2,4-Dinitrophenol	580	U	
100-02-7	4-Nitrophenol	580	U	
132-64-9	Dibenzofuran	93	J	
121-14-2	2,4-Dinitrotoluene	300	U	
84-66-2	Diethylphthalate	300	U	
86-73-7	Fluorene	180	J	
7005-72-3	4-Chlorophenyl-phenylether	300	U	
100-01-6	4-Nitroaniline	580	U	
534-52-1	4,6-Dinitro-2-methylphenol	580	U	
86-30-6	N-Nitrosodiphenylamin [1]	300	U	
95-94-3	1,2,4,5-Tetrachlorobenzene	300	U	
101-55-3	4-Bromophenyl-phenylether	300	U	
118-74-1	Hexachlorobenzene	300	U	
1912-24-9	Atrazine	300	U	
87-86-5	Pentachlorophenol	580	~~U~~	UJ
85-01-8	Phenanthrene	810		
120-12-7	Anthracene	230	J	
86-74-8	Carbazole	300	U	
84-74-2	Di-n-butylphthalate	300	U	
206-44-0	Fluoranthene	1100		
129-00-0	Pyrene	1400		
85-68-7	Butylbenzylphthalate	300 ~~110~~	~~J B~~	U
91-94-1	3,3'-Dichlorobenzidine	300	U	
56-55-3	Benzo(a)anthracene	840		
218-01-9	Chrysene	1000		
117-81-7	Bis(2-ethylhexyl)phthalate	1400	~~B~~	
117-84-0	Di-n-octylphthalate	300	U	
205-99-2	Benzo(b)fluoranthene	860		
207-08-9	Benzo(k)fluoranthene	600		
50-32-8	Benzo(a)pyrene	660		
193-39-5	Indeno(1,2,3-cd)pyrene	240	J	
53-70-3	Dibenzo(a,h)anthracene	86	J	
191-24-2	Benzo(g,h,i)perylene	290	J	
58-90-2	2,3,4,6-Tetrachlorophenol	300	U	

[1] Cannot be separated from Diphenylamine

NW 8/29/13

1D - FORM I SV-1

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-34-144

20

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17052

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17052-20

Sample wt/vol: 30.2 (g/mL) g Lab File ID: PJUWM13.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 42 Decanted: (Y/N) Date Received: 06/18/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/24/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/20/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
100-52-7	Benzaldehyde	55	J	
108-95-2	Phenol	290	U	
111-44-4	Bis(2-chloroethyl)ether	290	U	
95-57-8	2-Chlorophenol	290	U	
95-48-7	2-Methylphenol	290	U	
108-60-1	2,2'-Oxybis(1-chloropropane)	290	U	
98-86-2	Acetophenone	290	U	
106-44-5	4-Methylphenol	32	~~J~~	J
621-64-7	N-Nitroso-di-n-propylamine	290	U	
67-72-1	Hexachloroethane	290	U	
98-95-3	Nitrobenzene	290	U	
78-59-1	Isophorone	290	U	
88-75-5	2-Nitrophenol	290	U	
105-67-9	2,4-Dimethylphenol	290	U	
111-91-1	Bis(2-chloroethoxy)methane	290	U	
120-83-2	2,4-Dichlorophenol	290	U	
91-20-3	Naphthalene	110	J	
106-47-8	4-Chloroaniline	290	U	
87-68-3	Hexachlorobutadiene	290	U	
105-60-2	Caprolactam	290	U	
59-50-7	4-Chloro-3-methylphenol	290	U	
91-57-6	2-Methylnaphthalene	35	J	
77-47-4	Hexachlorocyclopentadiene	290	~~U~~	UJ
88-06-2	2,4,6-Trichlorophenol	290	U	
95-95-4	2,4,5-Trichlorophenol	290	U	
92-52-4	1,1'-Biphenyl	290	U	
91-58-7	2-Chloronaphthalene	290	U	
88-74-4	2-Nitroaniline	570	U	
131-11-3	Dimethylphthalate	290	U	
606-20-2	2,6-Dinitrotoluene	290	U	
208-96-8	Acenaphthylene	39	J	
99-09-2	3-Nitroaniline	570	U	
83-32-9	Acenaphthene	120	J	

MW 8/29/13

EPA SAMPLE NO.
LMR13-34-144

20

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17052

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17052-20

Sample wt/vol: 30.2 (g/mL) g Lab File ID: PJUWM13.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 42 Decanted: (Y/N) Date Received: 06/18/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/24/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/20/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
51-28-5	2,4-Dinitrophenol	570	U	
100-02-7	4-Nitrophenol	570	U	
132-64-9	Dibenzofuran	81	J	
121-14-2	2,4-Dinitrotoluene	290	U	
84-66-2	Diethylphthalate	290	U	
86-73-7	Fluorene	170	J	
7005-72-3	4-Chlorophenyl-phenylether	290	U	
100-01-6	4-Nitroaniline	570	U	
534-52-1	4,6-Dinitro-2-methylphenol	570	U	
86-30-6	N-Nitrosodiphenylamin [1]	290	U	
95-94-3	1,2,4,5-Tetrachlorobenzene	290	U	
101-55-3	4-Bromophenyl-phenylether	290	U	
118-74-1	Hexachlorobenzene	290	U	
1912-24-9	Atrazine	290	U	
87-86-5	Pentachlorophenol	570	~~U~~	UJ
85-01-8	Phenanthrene	620		
120-12-7	Anthracene	170	J	
86-74-8	Carbazole	290	U	
84-74-2	Di-n-butylphthalate	40	J	
206-44-0	Fluoranthene	790		
129-00-0	Pyrene	1000		
85-68-7	Butylbenzylphthalate	290 ~~74~~	~~J B~~	U
91-94-1	3,3'-Dichlorobenzidine	290	U	
56-55-3	Benzo(a)anthracene	450		
218-01-9	Chrysene	620		
117-81-7	Bis(2-ethylhexyl)phthalate	1600	~~B~~	
117-84-0	Di-n-octylphthalate	290	U	
205-99-2	Benzo(b)fluoranthene	550		
207-08-9	Benzo(k)fluoranthene	410		
50-32-8	Benzo(a)pyrene	450		
193-39-5	Indeno(1,2,3-cd)pyrene	200	J	
53-70-3	Dibenzo(a,h)anthracene	69	J	
191-24-2	Benzo(g,h,i)perylene	210	J	
58-90-2	2,3,4,6-Tetrachlorophenol	290	U	

[1] Cannot be separated from Diphenylamine

NW 8/29/13

EPA SAMPLE NO.
LMR13-28-024FD

21

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17052

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17052-21

Sample wt/vol: 30.7 (g/mL) g Lab File ID: PJUWM14.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 51 Decanted: (Y/N) Date Received: 06/18/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/24/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/20/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
100-52-7	Benzaldehyde	61	J	
108-95-2	Phenol	340	U	
111-44-4	Bis(2-chloroethyl)ether	340	U	
95-57-8	2-Chlorophenol	340	U	
95-48-7	2-Methylphenol	340	U	
108-60-1	2,2'-Oxybis(1-chloropropane)	340	U	
98-86-2	Acetophenone	340	U	
106-44-5	4-Methylphenol	340	U	
621-64-7	N-Nitroso-di-n-propylamine	340	U	
67-72-1	Hexachloroethane	340	U	
98-95-3	Nitrobenzene	340	U	
78-59-1	Isophorone	340	U	
88-75-5	2-Nitrophenol	340	U	
105-67-9	2,4-Dimethylphenol	340	U	
111-91-1	Bis(2-chloroethoxy)methane	340	U	
120-83-2	2,4-Dichlorophenol	340	U	
91-20-3	Naphthalene	340	U	
106-47-8	4-Chloroaniline	340	~~U~~	R
87-68-3	Hexachlorobutadiene	340	U	
105-60-2	Caprolactam	340	U	
59-50-7	4-Chloro-3-methylphenol	340	U	
91-57-6	2-Methylnaphthalene	340	U	
77-47-4	Hexachlorocyclopentadiene	340	~~U~~	R
88-06-2	2,4,6-Trichlorophenol	340	U	
95-95-4	2,4,5-Trichlorophenol	340	U	
92-52-4	1,1'-Biphenyl	340	U	
91-58-7	2-Chloronaphthalene	340	U	
88-74-4	2-Nitroaniline	660	U	
131-11-3	Dimethylphthalate	340	U	
606-20-2	2,6-Dinitrotoluene	340	U	
208-96-8	Acenaphthylene	340	U	
99-09-2	3-Nitroaniline	660	U	
83-32-9	Acenaphthene	22	J	

NW 8/29/13

EPA SAMPLE NO.
LMR13-28-024FD

21

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17052

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17052-21

Sample wt/vol: 30.7 (g/mL) g Lab File ID: PJUWM14.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 51 Decanted: (Y/N) Date Received: 06/18/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/24/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/20/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
51-28-5	2,4-Dinitrophenol	660	U	
100-02-7	4-Nitrophenol	660	U	
132-64-9	Dibenzofuran	15	J	
121-14-2	2,4-Dinitrotoluene	340	U	
84-66-2	Diethylphthalate	340	U	
86-73-7	Fluorene	36	J	
7005-72-3	4-Chlorophenyl-phenylether	340	U	
100-01-6	4-Nitroaniline	660	U	
534-52-1	4,6-Dinitro-2-methylphenol	660	U	
86-30-6	N-Nitrosodiphenylamin [1]	340	U	
95-94-3	1,2,4,5-Tetrachlorobenzene	340	U	
101-55-3	4-Bromophenyl-phenylether	340	U	
118-74-1	Hexachlorobenzene	340	U	
1912-24-9	Atrazine	340	U	
87-86-5	Pentachlorophenol	660	~~U~~	UJ
85-01-8	Phenanthrene	190	J	
120-12-7	Anthracene	42	J	
86-74-8	Carbazole	19	J	
84-74-2	Di-n-butylphthalate	28	J	
206-44-0	Fluoranthene	390		
129-00-0	Pyrene	510		
85-68-7	Butylbenzylphthalate	340 ~~79~~	~~J B~~	U
91-94-1	3,3'-Dichlorobenzidine	340	~~U~~	R
56-55-3	Benzo(a)anthracene	170	J	
218-01-9	Chrysene	300	J	
117-81-7	Bis(2-ethylhexyl)phthalate	340	~~J B~~	U
117-84-0	Di-n-octylphthalate	340	U	
205-99-2	Benzo(b)fluoranthene	270	J	
207-08-9	Benzo(k)fluoranthene	280	J	
50-32-8	Benzo(a)pyrene	190	J	
193-39-5	Indeno(1,2,3-cd)pyrene	160	J	
53-70-3	Dibenzo(a,h)anthracene	63	J	
191-24-2	Benzo(g,h,i)perylene	180	J	
58-90-2	2,3,4,6-Tetrachlorophenol	340	U	

[1] Cannot be separated from Diphenylamine

NW 8/29/13

1D - FORM I SV-1

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-34-024FD

22

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17052

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17052-22

Sample wt/vol: 30.3 (g/mL) g Lab File ID: PJUWM15.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 53 Decanted: (Y/N) Date Received: 06/18/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/24/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/20/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
100-52-7	Benzaldehyde	65	J	
108-95-2	Phenol	360	U	
111-44-4	Bis(2-chloroethyl)ether	360	U	
95-57-8	2-Chlorophenol	360	U	
95-48-7	2-Methylphenol	360	U	
108-60-1	2,2'-Oxybis(1-chloropropane)	360	U	
98-86-2	Acetophenone	360	U	
106-44-5	4-Methylphenol	360	U	
621-64-7	N-Nitroso-di-n-propylamine	360	U	
67-72-1	Hexachloroethane	360	U	
98-95-3	Nitrobenzene	360	U	
78-59-1	Isophorone	360	U	
88-75-5	2-Nitrophenol	360	U	
105-67-9	2,4-Dimethylphenol	360	U	
111-91-1	Bis(2-chloroethoxy)methane	360	U	
120-83-2	2,4-Dichlorophenol	360	U	
91-20-3	Naphthalene	22	J	
106-47-8	4-Chloroaniline	360	~~U~~	R
87-68-3	Hexachlorobutadiene	360	U	
105-60-2	Caprolactam	360	U	
59-50-7	4-Chloro-3-methylphenol	360	U	
91-57-6	2-Methylnaphthalene	360	U	
77-47-4	Hexachlorocyclopentadiene	360	~~U~~	R
88-06-2	2,4,6-Trichlorophenol	360	U	
95-95-4	2,4,5-Trichlorophenol	360	U	
92-52-4	1,1'-Biphenyl	360	U	
91-58-7	2-Chloronaphthalene	360	U	
88-74-4	2-Nitroaniline	700	U	
131-11-3	Dimethylphthalate	360	U	
606-20-2	2,6-Dinitrotoluene	360	U	
208-96-8	Acenaphthylene	360	U	
99-09-2	3-Nitroaniline	700	U	
83-32-9	Acenaphthene	33	J	

MW 8/29/13

1E - FORM I SV-2

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-34-024FD

22

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17052

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17052-22

Sample wt/vol: 30.3 (g/mL) g Lab File ID: PJUWM15.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 53 Decanted: (Y/N) Date Received: 06/18/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/24/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/20/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
51-28-5	2,4-Dinitrophenol	700	U	
100-02-7	4-Nitrophenol	700	U	
132-64-9	Dibenzofuran	23	J	
121-14-2	2,4-Dinitrotoluene	360	U	
84-66-2	Diethylphthalate	360	U	
86-73-7	Fluorene	57	J	
7005-72-3	4-Chlorophenyl-phenylether	360	U	
100-01-6	4-Nitroaniline	700	U	
534-52-1	4,6-Dinitro-2-methylphenol	700	U	
86-30-6	N-Nitrosodiphenylamin [1]	360	U	
95-94-3	1,2,4,5-Tetrachlorobenzene	360	U	
101-55-3	4-Bromophenyl-phenylether	360	U	
118-74-1	Hexachlorobenzene	360	U	
1912-24-9	Atrazine	360	U	
87-86-5	Pentachlorophenol	700	~~U~~	UJ
85-01-8	Phenanthrene	210	J	
120-12-7	Anthracene	57	J	
86-74-8	Carbazole	360	U	
84-74-2	Di-n-butylphthalate	29	J	
206-44-0	Fluoranthene	430		
129-00-0	Pyrene	610		
85-68-7	Butylbenzylphthalate	360 ~~87~~	~~J B~~	u
91-94-1	3,3'-Dichlorobenzidine	360	~~U~~	R
56-55-3	Benzo(a)anthracene	210	J	
218-01-9	Chrysene	350	J	
117-81-7	Bis(2-ethylhexyl)phthalate	570	~~B~~	u
117-84-0	Di-n-octylphthalate	360	U	
205-99-2	Benzo(b)fluoranthene	410		
207-08-9	Benzo(k)fluoranthene	240	J	
50-32-8	Benzo(a)pyrene	230	J	
193-39-5	Indeno(1,2,3-cd)pyrene	170	J	
53-70-3	Dibenzo(a,h)anthracene	61	J	
191-24-2	Benzo(g,h,i)perylene	200	J	
58-90-2	2,3,4,6-Tetrachlorophenol	360	U	

[1] Cannot be separated from Diphenylamine

NW 8/29/13

1F - FORM I SV-SIM
SEMIVOLATILE SIM ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-28-012

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: 1734.2] SDG No.: 17052

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17052-1

Sample wt/vol: 30.8 (g/mL) g Lab File ID: HQISQ10.D

Extraction: (Type) SONC

% Moisture: 54 Decanted: (Y/N) Date Received: 06/18/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/24/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/31/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 10.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
91-20-3	Naphthalene	70 ~~18~~	~~J B~~ U
90-12-0	1-Methylnaphthalene	8.2	J
91-57-6	2-Methylnaphthalene	13	J
208-96-8	Acenaphthylene	8.0	J
83-32-9	Acenaphthene	33	J
86-73-7	Fluorene	53	J
85-01-8	Phenanthrene	220	
120-12-7	Anthracene	64	J
206-44-0	Fluoranthene	600	~~B~~
129-00-0	Pyrene	470	~~B~~
56-55-3	Benzo(a)anthracene	260	
218-01-9	Chrysene	350	~~B~~
205-99-2	Benzo(b)fluoranthene	340	~~B~~
207-08-9	Benzo(k)fluoranthene	300	
192-97-2	Benzo(e)pyrene	230	
50-32-8	Benzo(a)pyrene	280	
198-55-0	Perylene	450	
193-39-5	Indeno(1,2,3-cd)pyrene	210	
53-70-3	Dibenzo(a,h)anthracene	68	J
191-24-2	Benzo(g,h,i)perylene	220	
C1NAPH	C1-Naphthalenes	14	J
C2NAPH	C2-Naphthalenes	55	J
C3NAPH	C3-Naphthalenes	88	J
C4NAPH	C4-Naphthalenes	74	J
C1FLUOR	C1 Fluorenes	11	J
C2FLUOR	C2 Fluorenes	16	J
C3FLUOR	C3 Fluorenes	21	J
C1PHAN	C1-Phenanthrenes/Anthracenes	180	J
C2PHAN	C2-Phenanthrenes/Anthracenes	120	J
C3PHAN	C3-Phenanthrenes/Anthracenes	120	J
C4PHAN	C4-Phenanthrenes/Anthracenes	69	J
C1FLPY	C1-Fluoranthenes/Pyrenes	280	J
C2FLPY	C2-Fluoranthenes/Pyrenes	200	J
C3FLPY	C3-Fluoranthenes/Pyrenes	89	J
C1CHRYS	C1 Chrysenes	190	J
C2CHRYS	C2 Chrysenes	130	J
C3CHRYS	C3 Chrysenes	66	J
C4CHRYS	C4 Chrysenes	21	J

NW 8/29/13

EPA SAMPLE NO.
LMR13-28-012

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: 1734.2] SDG No.: 17052

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17052-1

Sample wt/vol: 30.8 (g/mL) g Lab File ID: HQISQ10.D

Extraction: (Type) SONC

% Moisture: 54 Decanted: (Y/N) Date Received: 06/18/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/24/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/31/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 10.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
TPPAH	Total 16 PPAH	3500	~~B~~ J
TPAH	Total PAH	5900	~~B~~ J

NW 8/29/13

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-28-012

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17052

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17052-1

Sample wt/vol: 30.3 (g/mL) g Lab File ID: 5253AXFSOM08.D

% Moisture: 54 Decanted: (Y/N) Date Received: 06/18/2013

Extraction: (Type) SONC Date Extracted: 06/22/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 07/16/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	72	U
11104-28-2	Aroclor-1221	72	U
11141-16-5	Aroclor-1232	72	U
53469-21-9	Aroclor-1242	72	U
12672-29-6	Aroclor-1248	89	
11097-69-1	Aroclor-1254	42	~~J P~~
11096-82-5	Aroclor-1260	11	~~J P~~
37324-23-5	Aroclor-1262	72	U
11100-14-4	Aroclor-1268	72	U

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NW 8/29/13

1H - FORM I ARO
AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-28-024

2

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17052

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17052-2

Sample wt/vol: 29.7 (g/mL) g Lab File ID: 5253AXFSOM09.D

% Moisture: 52 Decanted: (Y/N) Date Received: 06/18/2013

Extraction: (Type) SONC Date Extracted: 06/22/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 07/16/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	69	U
11104-28-2	Aroclor-1221	69	U
11141-16-5	Aroclor-1232	69	U
53469-21-9	Aroclor-1242	69	U
12672-29-6	Aroclor-1248	67	J
11097-69-1	Aroclor-1254	32	~~J P~~ J
11096-82-5	Aroclor-1260	6.9	~~J P~~ J
37324-23-5	Aroclor-1262	69	U
11100-14-4	Aroclor-1268	69	U

NW 8/29/13

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-28-048

3

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17052

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17052-3

Sample wt/vol: 30.1 (g/mL) g Lab File ID: 5253AXFSOM10.D

% Moisture: 48 Decanted: (Y/N) Date Received: 06/18/2013

Extraction: (Type) SONC Date Extracted: 06/22/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 07/16/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	63	U
11104-28-2	Aroclor-1221	63	U
11141-16-5	Aroclor-1232	63	U
53469-21-9	Aroclor-1242	63	U
12672-29-6	Aroclor-1248	100	
11097-69-1	Aroclor-1254	47	J
11096-82-5	Aroclor-1260	8.8	~~J P~~ J
37324-23-5	Aroclor-1262	63	U
11100-14-4	Aroclor-1268	63	U

NW 8/29/13

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-28-072

4

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17052

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17052-4

Sample wt/vol: 29.6 (g/mL) g Lab File ID: 5253AXFSOM13.D

% Moisture: 36 Decanted: (Y/N) Date Received: 06/18/2013

Extraction: (Type) SONC Date Extracted: 06/22/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 07/16/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	52	U
11104-28-2	Aroclor-1221	52	U
11141-16-5	Aroclor-1232	52	U
53469-21-9	Aroclor-1242	52	U
12672-29-6	Aroclor-1248	99	
11097-69-1	Aroclor-1254	64	
11096-82-5	Aroclor-1260	10	~~J P~~ J
37324-23-5	Aroclor-1262	52	U
11100-14-4	Aroclor-1268	52	U

NW 8/29/13

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-28-096

5

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17052

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17052-5

Sample wt/vol: 30.9 (g/mL) g Lab File ID: 5253AXFSOM14.D

% Moisture: 36 Decanted: (Y/N) Date Received: 06/18/2013

Extraction: (Type) SONC Date Extracted: 06/22/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 07/16/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	50	U
11104-28-2	Aroclor-1221	50	U
11141-16-5	Aroclor-1232	50	U
53469-21-9	Aroclor-1242	50	U
12672-29-6	Aroclor-1248	50	U
11097-69-1	Aroclor-1254	50	U
11096-82-5	Aroclor-1260	50	U
37324-23-5	Aroclor-1262	50	U
11100-14-4	Aroclor-1268	50	U

NW 8/29/13

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-28-120

6

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17052

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17052-6

Sample wt/vol: 30.3 (g/mL) g Lab File ID: 5253AXFSOM15.D

% Moisture: 28 Decanted: (Y/N) Date Received: 06/18/2013

Extraction: (Type) SONC Date Extracted: 06/22/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 07/16/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	45	U
11104-28-2	Aroclor-1221	45	U
11141-16-5	Aroclor-1232	45	U
53469-21-9	Aroclor-1242	45	U
12672-29-6	Aroclor-1248	45	U
11097-69-1	Aroclor-1254	45	U
11096-82-5	Aroclor-1260	45	U
37324-23-5	Aroclor-1262	45	U
11100-14-4	Aroclor-1268	45	U

NW 8/29/13

1H - FORM I ARO
AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-29-012

7

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17052

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17052-7

Sample wt/vol: 29.9 (g/mL) g Lab File ID: 5253AXFSOM16.D

% Moisture: 47 Decanted: (Y/N) Date Received: 06/18/2013

Extraction: (Type) SONC Date Extracted: 06/22/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 07/16/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	62	U
11104-28-2	Aroclor-1221	62	U
11141-16-5	Aroclor-1232	62	U
53469-21-9	Aroclor-1242	45	J
12672-29-6	Aroclor-1248	62	U
11097-69-1	Aroclor-1254	34	~~J P~~ J
11096-82-5	Aroclor-1260	7.3	~~J P~~ J
37324-23-5	Aroclor-1262	62	U
11100-14-4	Aroclor-1268	62	U

NW 8/29/13

1H - FORM I ARO
AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-29-024

8

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17052

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17052-8

Sample wt/vol: 29.5 (g/mL) g Lab File ID: 5253AXFSOM17.D

% Moisture: 48 Decanted: (Y/N) Date Received: 06/18/2013

Extraction: (Type) SONC Date Extracted: 06/22/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 07/16/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	64	U
11104-28-2	Aroclor-1221	64	U
11141-16-5	Aroclor-1232	64	U
53469-21-9	Aroclor-1242	64	U
12672-29-6	Aroclor-1248	110	
11097-69-1	Aroclor-1254	43	J
11096-82-5	Aroclor-1260	7.2	~~J P~~ J
37324-23-5	Aroclor-1262	64	U
11100-14-4	Aroclor-1268	64	U

NW 8/29/13

1H - FORM I ARO
AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-29-024FD

9

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17052

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17052-9

Sample wt/vol: 30.2 (g/mL) g Lab File ID: 5253AXFSOM18.D

% Moisture: 49 Decanted: (Y/N) Date Received: 06/18/2013

Extraction: (Type) SONC Date Extracted: 06/22/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 07/16/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	64	U
11104-28-2	Aroclor-1221	64	U
11141-16-5	Aroclor-1232	64	U
53469-21-9	Aroclor-1242	64	U
12672-29-6	Aroclor-1248	100	
11097-69-1	Aroclor-1254	43	J
11096-82-5	Aroclor-1260	8.9	~~J P~~ J
37324-23-5	Aroclor-1262	64	U
11100-14-4	Aroclor-1268	64	U

NW 8/29/13

1H - FORM I ARO
AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-29-048

10

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17052

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17052-10

Sample wt/vol: 29.4 (g/mL) g Lab File ID: 5253AXFSOM19.D

% Moisture: 39 Decanted: (Y/N) Date Received: 06/18/2013

Extraction: (Type) SONC Date Extracted: 06/22/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 07/17/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	55	U
11104-28-2	Aroclor-1221	55	U
11141-16-5	Aroclor-1232	55	U
53469-21-9	Aroclor-1242	160	
12672-29-6	Aroclor-1248	55	U
11097-69-1	Aroclor-1254	100	
11096-82-5	Aroclor-1260	14	~~J P~~ J
37324-23-5	Aroclor-1262	55	U
11100-14-4	Aroclor-1268	55	U

NW 8/29/13

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-29-072

11

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17052

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17052-11

Sample wt/vol: 29.4 (g/mL) g Lab File ID: 5253AXFSOM20.D

% Moisture: 27 Decanted: (Y/N) Date Received: 06/18/2013

Extraction: (Type) SONC Date Extracted: 06/22/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 07/17/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	46	U
11104-28-2	Aroclor-1221	46	U
11141-16-5	Aroclor-1232	46	U
53469-21-9	Aroclor-1242	46	U
12672-29-6	Aroclor-1248	15	~~J P~~ J
11097-69-1	Aroclor-1254	46	U
11096-82-5	Aroclor-1260	46	U
37324-23-5	Aroclor-1262	46	U
11100-14-4	Aroclor-1268	46	U

MW 8/29/13

1H - FORM I ARO
AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-29-096

12

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17052

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17052-12

Sample wt/vol: 30.7 (g/mL) g Lab File ID: 5253AYASOM02.D

% Moisture: 18 Decanted: (Y/N) Date Received: 06/18/2013

Extraction: (Type) SONC Date Extracted: 06/22/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 07/18/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	39	U
11104-28-2	Aroclor-1221	39	U
11141-16-5	Aroclor-1232	39	U
53469-21-9	Aroclor-1242	39	U
12672-29-6	Aroclor-1248	39	U
11097-69-1	Aroclor-1254	39	U
11096-82-5	Aroclor-1260	39	U
37324-23-5	Aroclor-1262	39	U
11100-14-4	Aroclor-1268	39	U

VW 8/29/13

1H - FORM I ARO
AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-34-012

13

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17052

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17052-13

Sample wt/vol: 30.0 (g/mL) g Lab File ID: 5253AYASOM03.D

% Moisture: 62 Decanted: (Y/N) Date Received: 06/18/2013

Extraction: (Type) SONC Date Extracted: 06/22/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 07/18/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
12674-11-2	Aroclor-1016	86	U	
11104-28-2	Aroclor-1221	86	U	
11141-16-5	Aroclor-1232	86	U	
53469-21-9	Aroclor-1242	86	U	
12672-29-6	Aroclor-1248	130		
11097-69-1	Aroclor-1254	61	~~J P~~	J
11096-82-5	Aroclor-1260	37	~~J P~~	J
37324-23-5	Aroclor-1262	86	U	
11100-14-4	Aroclor-1268	86	U	

MW 8/29/13

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-34-024

14

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17052

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17052-14

Sample wt/vol: 30.6 (g/mL) g Lab File ID: 5253AYASOM04.D

% Moisture: 52 Decanted: (Y/N) Date Received: 06/18/2013

Extraction: (Type) SONC Date Extracted: 06/22/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 07/18/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
12674-11-2	Aroclor-1016	68	U	
11104-28-2	Aroclor-1221	68	U	
11141-16-5	Aroclor-1232	68	U	
53469-21-9	Aroclor-1242	68	U	
12672-29-6	Aroclor-1248	95		
11097-69-1	Aroclor-1254	44	~~J P~~	J
11096-82-5	Aroclor-1260	11	~~J P~~	J
37324-23-5	Aroclor-1262	68	U	
11100-14-4	Aroclor-1268	68	U	

MW 8/29/13

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-34-048

15

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17052

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17052-15

Sample wt/vol: 30.1 (g/mL) g Lab File ID: 5253AYASOM05.D

% Moisture: 52 Decanted: (Y/N) Date Received: 06/18/2013

Extraction: (Type) SONC Date Extracted: 06/22/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 07/18/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
12674-11-2	Aroclor-1016	68	U	
11104-28-2	Aroclor-1221	68	U	
11141-16-5	Aroclor-1232	68	U	
53469-21-9	Aroclor-1242	57	~~J P~~	J
12672-29-6	Aroclor-1248	68	U	
11097-69-1	Aroclor-1254	51	~~J P~~	J
11096-82-5	Aroclor-1260	12	~~J P~~	J
37324-23-5	Aroclor-1262	68	U	
11100-14-4	Aroclor-1268	68	U	

MW 8/29/13

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-34-048FD

16

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17052

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17052-16

Sample wt/vol: 30.5 (g/mL) g Lab File ID: 5253AYASOM06.D

% Moisture: 51 Decanted: (Y/N) Date Received: 06/18/2013

Extraction: (Type) SONC Date Extracted: 06/22/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 07/18/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
12674-11-2	Aroclor-1016	66	U	
11104-28-2	Aroclor-1221	66	U	
11141-16-5	Aroclor-1232	66	U	
53469-21-9	Aroclor-1242	58	~~J P~~	J
12672-29-6	Aroclor-1248	66	U	
11097-69-1	Aroclor-1254	53	~~J P~~	J
11096-82-5	Aroclor-1260	12	~~J P~~	J
37324-23-5	Aroclor-1262	66	U	
11100-14-4	Aroclor-1268	66	U	

NW 8/29/13

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-34-072

17

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17052

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17052-17

Sample wt/vol: 30.5 (g/mL) g Lab File ID: 5253AYASOM07.D

% Moisture: 48 Decanted: (Y/N) Date Received: 06/18/2013

Extraction: (Type) SONC Date Extracted: 06/22/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 07/18/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	62	U
11104-28-2	Aroclor-1221	62	U
11141-16-5	Aroclor-1232	62	U
53469-21-9	Aroclor-1242	48	J
12672-29-6	Aroclor-1248	62	U
11097-69-1	Aroclor-1254	41	~~J P~~ J
11096-82-5	Aroclor-1260	10	~~J P~~ J
37324-23-5	Aroclor-1262	62	U
11100-14-4	Aroclor-1268	62	U

MW 8/29/13

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-34-096

18

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17052

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17052-18

Sample wt/vol: 30.3 (g/mL) g Lab File ID: 5253AYASOM08.D

% Moisture: 45 Decanted: (Y/N) Date Received: 06/18/2013

Extraction: (Type) SONC Date Extracted: 06/22/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 07/18/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	59	U
11104-28-2	Aroclor-1221	59	U
11141-16-5	Aroclor-1232	59	U
53469-21-9	Aroclor-1242	67	
12672-29-6	Aroclor-1248	59	U
11097-69-1	Aroclor-1254	48	~~J P~~ J
11096-82-5	Aroclor-1260	11	~~J P~~ J
37324-23-5	Aroclor-1262	59	U
11100-14-4	Aroclor-1268	59	U

MW 8/29/13

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-34-120

19

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17052

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17052-19

Sample wt/vol: 30.4 (g/mL) g Lab File ID: 5253AYASOM10.D

% Moisture: 44 Decanted: (Y/N) Date Received: 06/18/2013

Extraction: (Type) SONC Date Extracted: 06/22/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 07/18/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	58	U
11104-28-2	Aroclor-1221	58	U
11141-16-5	Aroclor-1232	58	U
53469-21-9	Aroclor-1242	58	U
12672-29-6	Aroclor-1248	190	
11097-69-1	Aroclor-1254	82	~~P~~ J
11096-82-5	Aroclor-1260	18	~~J P~~ J
37324-23-5	Aroclor-1262	58	U
11100-14-4	Aroclor-1268	58	U

NW 8/29/13

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-34-144

20

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17052

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17052-20

Sample wt/vol: 30.5 (g/mL) g Lab File ID: 5253AYASOM09.D

% Moisture: 42 Decanted: (Y/N) Date Received: 06/18/2013

Extraction: (Type) SONC Date Extracted: 06/22/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 07/18/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
12674-11-2	Aroclor-1016	56	U	
11104-28-2	Aroclor-1221	56	U	
11141-16-5	Aroclor-1232	56	U	
53469-21-9	Aroclor-1242	56	U	
12672-29-6	Aroclor-1248	270		
11097-69-1	Aroclor-1254	120	~~P~~	J
11096-82-5	Aroclor-1260	26	~~J P~~	J
37324-23-5	Aroclor-1262	56	U	
11100-14-4	Aroclor-1268	56	U	

NW 8/29/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-28-012

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678
Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 17052
Matrix: SED | Lab Sample Id: 200-17052-1
% Solids: 45.6 | Date Received: 06/18/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	7.4			P
7440-43-9	Cadmium	0.90			P
7440-47-3	Chromium	25.2		J ~~E~~	P
7440-50-8	Copper	29.8		J ~~E~~	P
7439-92-1	Lead	28.1			P
7440-02-0	Nickel	28.1		J ~~E~~	P
7440-66-6	Zinc	119		J ~~E~~	P

Color Before: GREY | Clarity Before: | Texture: FINE
Color After: TAN | Clarity After: CLOUDY | Artifacts:
Comments:

NW 8/29/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-28-012

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678
Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17052
Matrix: SED Lab Sample Id: 200-17052-1
% Solids: 45.6 Date Received: 06/18/2013

Concentration Units (**ug/L, ug,** or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.19	U		CV

Color Before: GRAY Clarity Before: CLOUDY Texture: FINE
Color After: COLORLESS Clarity After: CLEAR Artifacts:
Comments:

NW 8/29/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO. 2

LMR13-28-024

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17052

Matrix: SED Lab Sample Id: 200-17052-2

% Solids: 48.3 Date Received: 06/18/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	7.5			P
7440-43-9	Cadmium	0.91			P
7440-47-3	Chromium	29.1		J ~~E~~	P
7440-50-8	Copper	30.8		J ~~E~~	P
7439-92-1	Lead	26.3			P
7440-02-0	Nickel	33.2		J ~~E~~	P
7440-66-6	Zinc	128		J ~~E~~	P

Color Before: GREY Clarity Before: Texture: FINE

Color After: TAN Clarity After: CLOUDY Artifacts:

Comments:

NW 8/29/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO. 2

LMR13-28-024

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17052

Matrix: SED Lab Sample Id: 200-17052-2

% Solids: 48.3 Date Received: 06/18/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.20	U		CV

Color Before: GRAY Clarity Before: CLOUDY Texture: FINE

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

NW 8/29/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO. 3
LMR13-28-048

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678
Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 17052
Matrix: SED | Lab Sample Id: 200-17052-3
% Solids: 52.1 | Date Received: 06/18/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	7.7			P
7440-43-9	Cadmium	1.0			P
7440-47-3	Chromium	29.1		J ~~F~~	P
7440-50-8	Copper	32.3		J ~~F~~	P
7439-92-1	Lead	37.3			P
7440-02-0	Nickel	31.9		J ~~F~~	P
7440-66-6	Zinc	141		J ~~F~~	P

Color Before: GREY | Clarity Before: | Texture: FINE
Color After: TAN | Clarity After: CLOUDY | Artifacts:
Comments:

MW 8/29/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO. 3

LMR13-28-048

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17052

Matrix: SED Lab Sample Id: 200-17052-3

% Solids: 52.1 Date Received: 06/18/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.069	J		CV

Color Before: GRAY Clarity Before: CLOUDY Texture: FINE

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

NH 8/29/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO. 4
LMR13-28-072

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678
Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17052
Matrix: SED Lab Sample Id: 200-17052-4
% Solids: 64.3 Date Received: 06/18/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	12.3			P
7440-43-9	Cadmium	1.2			P
7440-47-3	Chromium	25.4		J	P
7440-50-8	Copper	31.5		J	P
7439-92-1	Lead	70.3			P
7440-02-0	Nickel	27.7		J	P
7440-66-6	Zinc	210		J	P

Color Before: GREY Clarity Before: Texture: FINE
Color After: TAN Clarity After: CLOUDY Artifacts:
Comments:

MW 8/29/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO. 4
LMR13-28-072

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678
Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17052
Matrix: SED Lab Sample Id: 200-17052-4
% Solids: 64.3 Date Received: 06/18/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.29			CV

Color Before: GRAY Clarity Before: CLOUDY Texture: FINE
Color After: COLORLESS Clarity After: CLEAR Artifacts:
Comments:

MW 8/29/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO. 5
LMR13-28-096

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678
Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 17052
Matrix: SED | Lab Sample Id: 200-17052-5
% Solids: 63.8 | Date Received: 06/18/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	15.8			P
7440-43-9	Cadmium	0.71			P
7440-47-3	Chromium	20.7		J ~~E~~	P
7440-50-8	Copper	33.9		J ~~E~~	P
7439-92-1	Lead	78.2			P
7440-02-0	Nickel	26.0		J ~~E~~	P
7440-66-6	Zinc	211		J ~~E~~	P

Color Before: GREY | Clarity Before: | Texture: FINE
Color After: TAN | Clarity After: CLOUDY | Artifacts:
Comments:

NW 8/29/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO. 5
LMR13-28-096

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678
Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 17052
Matrix: SED | Lab Sample Id: 200-17052-5
% Solids: 63.8 | Date Received: 06/18/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.55			CV

Color Before: GRAY | Clarity Before: CLOUDY | Texture: FINE
Color After: COLORLESS | Clarity After: CLEAR | Artifacts:
Comments:

NW 8/28/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO. 6

LMR13-28-120

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678

Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 17052

Matrix: SED | Lab Sample Id: 200-17052-6

% Solids: 72.5 | Date Received: 06/18/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	8.2			P
7440-43-9	Cadmium	0.34	J		P
7440-47-3	Chromium	9.9		J ~~E~~	P
7440-50-8	Copper	14.1		J ~~E~~	P
7439-92-1	Lead	30.5			P
7440-02-0	Nickel	14.8		J ~~E~~	P
7440-66-6	Zinc	84.7		J ~~E~~	P

Color Before: GREY | Clarity Before: | Texture: FINE

Color After: TAN | Clarity After: CLOUDY | Artifacts:

Comments:

NW 8/29/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO. 6
LMR13-28-120

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678
Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17052
Matrix: SED Lab Sample Id: 200-17052-6
% Solids: 72.5 Date Received: 06/18/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.18			CV

Color Before: GRAY Clarity Before: CLOUDY Texture: FINE
Color After: COLORLESS Clarity After: CLEAR Artifacts:
Comments:

MW 8/29/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO. 7

LMR13-29-012

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678

Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 17052

Matrix: SED | Lab Sample Id: 200-17052-7

% Solids: 53.3 | Date Received: 06/18/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	6.4			P
7440-43-9	Cadmium	0.86			P
7440-47-3	Chromium	22.3		J ~~E~~	P
7440-50-8	Copper	27.5		J ~~E~~	P
7439-92-1	Lead	24.5			P
7440-02-0	Nickel	26.7		J ~~E~~	P
7440-66-6	Zinc	106		J ~~E~~	P

Color Before: GREY | Clarity Before: | Texture: FINE

Color After: TAN | Clarity After: CLOUDY | Artifacts:

Comments:

NW 8/29/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO. 7

LMR13-29-012

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17052

Matrix: SED Lab Sample Id: 200-17052-7

% Solids: 53.3 Date Received: 06/18/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.095	J		CV

Color Before: GRAY Clarity Before: CLOUDY Texture: FINE

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

MW 7/29/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO. 8
LMR13-29-024

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678
Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 17052
Matrix: SED | Lab Sample Id: 200-17052-8
% Solids: 52.1 | Date Received: 06/18/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	7.1			P
7440-43-9	Cadmium	0.94			P
7440-47-3	Chromium	27.3		J ~~E~~	P
7440-50-8	Copper	31.9		J ~~E~~	P
7439-92-1	Lead	29.2			P
7440-02-0	Nickel	32.1		J ~~E~~	P
7440-66-6	Zinc	129		J ~~E~~	P

Color Before: GREY | Clarity Before: | Texture: FINE
Color After: TAN | Clarity After: CLOUDY | Artifacts:
Comments:

NR 8/29/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO. 8

LMR13-29-024

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17052

Matrix: SED Lab Sample Id: 200-17052-8

% Solids: 52.1 Date Received: 06/18/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.071	J		CV

Color Before: GRAY Clarity Before: CLOUDY Texture: FINE

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

NW 8/29/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO. 9
LMR13-29-024FD

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678
Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 17052
Matrix: SED | Lab Sample Id: 200-17052-9
% Solids: 51.5 | Date Received: 06/18/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	7.3			P
7440-43-9	Cadmium	0.96			P
7440-47-3	Chromium	26.6		J ~~E~~	P
7440-50-8	Copper	30.8		J ~~E~~	P
7439-92-1	Lead	30.5			P
7440-02-0	Nickel	30.7		J ~~E~~	P
7440-66-6	Zinc	130		J ~~E~~	P

Color Before: GREY | Clarity Before: | Texture: FINE
Color After: TAN | Clarity After: CLOUDY | Artifacts:
Comments:

NW 8/29/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO. 9
LMR13-29-024FD

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678
Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17052
Matrix: SED Lab Sample Id: 200-17052-9
% Solids: 51.5 Date Received: 06/18/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.17	U		CV

Color Before: GRAY Clarity Before: CLOUDY Texture: FINE
Color After: COLORLESS Clarity After: CLEAR Artifacts:
Comments:

NM 8/29/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO. 10

LMR13-29-048

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17052

Matrix: SED Lab Sample Id: 200-17052-10

% Solids: 61.4 Date Received: 06/18/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	8.6			P
7440-43-9	Cadmium	1.5			P
7440-47-3	Chromium	24.4		J ~~E~~	P
7440-50-8	Copper	40.1		J ~~E~~	P
7439-92-1	Lead	52.4			P
7440-02-0	Nickel	26.6		J ~~E~~	P
7440-66-6	Zinc	156		J ~~E~~	P

Color Before: GREY Clarity Before: Texture: MEDIUM

Color After: TAN Clarity After: CLOUDY Artifacts:

Comments:

NW 8/29/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO. 10

LMR13-29-048

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17052

Matrix: SED Lab Sample Id: 200-17052-10

% Solids: 61.4 Date Received: 06/18/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.17			CV

Color Before: GRAY Clarity Before: CLOUDY Texture: FINE

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

NW 8/29/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO. 11

LMR13-29-072

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678

Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 17052

Matrix: SED | Lab Sample Id: 200-17052-11

% Solids: 73.2 | Date Received: 06/18/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	7.6			P
7440-43-9	Cadmium	0.36	J		P
7440-47-3	Chromium	12.4		J E	P
7440-50-8	Copper	14.5		J E	P
7439-92-1	Lead	33.0			P
7440-02-0	Nickel	15.5		J E	P
7440-66-6	Zinc	88.8		J E	P

Color Before: GREY | Clarity Before: | Texture: FINE

Color After: TAN | Clarity After: CLOUDY | Artifacts:

Comments:

NW 8/29/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO. 11

LMR13-29-072

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17052

Matrix: SED Lab Sample Id: 200-17052-11

% Solids: 73.2 Date Received: 06/18/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.13			CV

Color Before: GRAY Clarity Before: CLOUDY Texture: FINE

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

NW 8/29/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO. 12

LMR13-29-096

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678

Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 17052

Matrix: SED | Lab Sample Id: 200-17052-12

% Solids: 81.6 | Date Received: 06/18/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	2.5			P
7440-43-9	Cadmium	0.20	J		P
7440-47-3	Chromium	5.5		J ~~E~~	P
7440-50-8	Copper	5.1		J ~~E~~	P
7439-92-1	Lead	4.1			P
7440-02-0	Nickel	8.6		J ~~E~~	P
7440-66-6	Zinc	22.5		J ~~E~~	P

Color Before: GREY | Clarity Before: | Texture: FINE

Color After: TAN | Clarity After: CLOUDY | Artifacts:

Comments:

NW 8/29/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO. 12

LMR13-29-096

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17052

Matrix: SED Lab Sample Id: 200-17052-12

% Solids: 81.6 Date Received: 06/18/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.12	U		CV

Color Before: GRAY Clarity Before: CLOUDY Texture: FINE

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

NW 8/29/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO. 13

LMR13-34-012

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17052

Matrix: SED Lab Sample Id: 200-17052-13

% Solids: 38.5 Date Received: 06/18/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	7.6			P
7440-43-9	Cadmium	0.97			P
7440-47-3	Chromium	26.7		J ~~E~~	P
7440-50-8	Copper	32.4		J ~~E~~	P
7439-92-1	Lead	28.7			P
7440-02-0	Nickel	30.4		J ~~E~~	P
7440-66-6	Zinc	129		J ~~E~~	P

Color Before: GREY Clarity Before: Texture: FINE

Color After: TAN Clarity After: CLOUDY Artifacts:

Comments:

NW 8/29/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO. 13

LMR13-34-012

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17052

Matrix: SED Lab Sample Id: 200-17052-13

% Solids: 38.5 Date Received: 06/18/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.25	U		CV

Color Before: GRAY Clarity Before: CLOUDY Texture: FINE

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

NW 8/29/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO. 14
LMR13-34-024

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678
Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 17052
Matrix: SED | Lab Sample Id: 200-17052-14
% Solids: 47.6 | Date Received: 06/18/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	7.9			P
7440-43-9	Cadmium	1.0			P
7440-47-3	Chromium	29.2		J ~~E~~	P
7440-50-8	Copper	34.0		J ~~B~~	P
7439-92-1	Lead	29.7			P
7440-02-0	Nickel	32.7		J ~~B~~	P
7440-66-6	Zinc	140		J ~~E~~	P

Color Before: GREY | Clarity Before: | Texture: FINE
Color After: TAN | Clarity After: CLOUDY | Artifacts:
Comments:

NW 8/29/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO. 14

LMR13-34-024

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17052

Matrix: SED Lab Sample Id: 200-17052-14

% Solids: 47.6 Date Received: 06/18/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.14	J		CV

Color Before: GRAY Clarity Before: CLOUDY Texture: FINE

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

NW 8/29/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO. 15

LMR13-34-048

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17052

Matrix: SED Lab Sample Id: 200-17052-15

% Solids: 48.5 Date Received: 06/18/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	8.0			P
7440-43-9	Cadmium	1.1			P
7440-47-3	Chromium	31.9		J ~~E~~	P
7440-50-8	Copper	33.6		J ~~E~~	P
7439-92-1	Lead	31.8			P
7440-02-0	Nickel	34.6		J ~~E~~	P
7440-66-6	Zinc	147		J ~~E~~	P

Color Before: GREY Clarity Before: Texture: FINE

Color After: TAN Clarity After: CLOUDY Artifacts:

Comments:

NW 8/29/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO. 15
LMR13-34-048

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678
Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 17052
Matrix: SED | Lab Sample Id: 200-17052-15
% Solids: 48.5 | Date Received: 06/18/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.12	J		CV

Color Before: GRAY | Clarity Before: CLOUDY | Texture: FINE
Color After: COLORLESS | Clarity After: CLEAR | Artifacts:
Comments:

MW 8/29/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO. 16
LMR13-34-048FD

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678
Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17052
Matrix: SED Lab Sample Id: 200-17052-16
% Solids: 49.5 Date Received: 06/18/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	8.4			P
7440-43-9	Cadmium	1.2			P
7440-47-3	Chromium	30.8		J ~~E~~	P
7440-50-8	Copper	34.4		J ~~E~~	P
7439-92-1	Lead	33.4			P
7440-02-0	Nickel	34.6		J ~~E~~	P
7440-66-6	Zinc	150		J ~~E~~	P

Color Before: GREY Clarity Before: Texture: FINE
Color After: TAN Clarity After: CLOUDY Artifacts:
Comments:

NW 8/29/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO. 16

LMR13-34-048FD

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17052

Matrix: SED Lab Sample Id: 200-17052-16

% Solids: 49.5 Date Received: 06/18/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.085	J		CV

Color Before: GRAY Clarity Before: CLOUDY Texture: FINE

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

NW 8/29/13

17

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-34-072

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678
Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 17052
Matrix: SED | Lab Sample Id: 200-17052-17
% Solids: 52.3 | Date Received: 06/18/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	8.3			P
7440-43-9	Cadmium	1.1			P
7440-47-3	Chromium	31.4		J ~~E~~	P
7440-50-8	Copper	34.3		J ~~E~~	P
7439-92-1	Lead	32.0			P
7440-02-0	Nickel	34.4		J ~~E~~	P
7440-66-6	Zinc	144		J ~~E~~	P

Color Before: GREY | Clarity Before: | Texture: FINE
Color After: TAN | Clarity After: CLOUDY | Artifacts:
Comments:

NW 8/29/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO. 17

LMR13-34-072

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17052

Matrix: SED Lab Sample Id: 200-17052-17

% Solids: 52.3 Date Received: 06/18/2013

Concentration Units (**ug/L, ug,** or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.17	U		CV

Color Before: GRAY Clarity Before: CLOUDY Texture: FINE

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

NW 8/29/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO. 18

LMR13-34-096

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17052

Matrix: SED Lab Sample Id: 200-17052-18

% Solids: 55.2 Date Received: 06/18/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	8.1			P
7440-43-9	Cadmium	1.1			P
7440-47-3	Chromium	32.3		J ~~E~~	P
7440-50-8	Copper	35.0		J ~~E~~	P
7439-92-1	Lead	35.5			P
7440-02-0	Nickel	34.4		J ~~E~~	P
7440-66-6	Zinc	157		J ~~E~~	P

Color Before: GREY Clarity Before: Texture: FINE

Color After: TAN Clarity After: CLOUDY Artifacts:

Comments:

NW 8/29/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO. 18

LMR13-34-096

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17052

Matrix: SED Lab Sample Id: 200-17052-18

% Solids: 55.2 Date Received: 06/18/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.098	J		CV

Color Before: GRAY Clarity Before: CLOUDY Texture: FINE

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

NW 8/29/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO. 19

LMR13-34-120

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17052

Matrix: SED Lab Sample Id: 200-17052-19

% Solids: 55.7 Date Received: 06/18/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	9.5			P
7440-43-9	Cadmium	2.2			P
7440-47-3	Chromium	44.3		J ~~E~~	P
7440-50-8	Copper	50.4		J ~~E~~	P
7439-92-1	Lead	49.3			P
7440-02-0	Nickel	41.0		J ~~E~~	P
7440-66-6	Zinc	166		J ~~E~~	P

Color Before: GREY Clarity Before: Texture: MEDIUM

Color After: TAN Clarity After: CLOUDY Artifacts:

Comments:

MW 8/29/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO. 19

LMR13-34-120

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17052

Matrix: SED Lab Sample Id: 200-17052-19

% Solids: 55.7 Date Received: 06/18/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.15	J		CV

Color Before: GRAY Clarity Before: CLOUDY Texture: FINE

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

MW 8/29/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO. 20

LMR13-34-144

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17052

Matrix: SED Lab Sample Id: 200-17052-20

% Solids: 57.6 Date Received: 06/18/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	9.9			P
7440-43-9	Cadmium	2.4			P
7440-47-3	Chromium	40.1		J ~~E~~	P
7440-50-8	Copper	41.5		J ~~E~~	P
7439-92-1	Lead	55.7			P
7440-02-0	Nickel	37.6		J ~~E~~	P
7440-66-6	Zinc	169		J ~~E~~	P

Color Before: GREY Clarity Before: Texture: FINE

Color After: TAN Clarity After: CLOUDY Artifacts:

Comments:

MW 8/29/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO. 20

LMR13-34-144

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17052

Matrix: SED Lab Sample Id: 200-17052-20

% Solids: 57.6 Date Received: 06/18/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.16	J		CV

Color Before: GRAY Clarity Before: CLOUDY Texture: FINE

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

NW 8/29/13

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - SEM/AVS

Client Sample ID: LMR13-28-012 | Lab Sample ID: 200-17052-1

Lab Name: TestAmerica Burlington | Job No.: 200-17052-1

SDG ID.: 17052

Matrix: Sediment | Date Sampled: 06/15/2013 09:50

Reporting Basis: DRY | Date Received: 06/18/2013 10:30

% Solids: 45.6

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-43-9	Cadmium SEM	2.1	2.6	0.41	mg/Kg	J		10	6010C
7440-43-9	Cadmium SEM	0.019	0.023	0.0036	umol/g	J		10	6010C
7440-50-8	Copper SEM	12.1	13.3	1.2	mg/Kg	J		10	6010C
7440-50-8	Copper SEM	0.19	0.21	0.018	umol/g	J		10	6010C
7439-92-1	Lead SEM	17.8	5.4	2.4	mg/Kg			10	6010C
7439-92-1	Lead SEM	0.086	0.026	0.011	umol/g			10	6010C
7440-02-0	Nickel SEM	6.7	21.5	1.5	mg/Kg	J		10	6010C
7440-02-0	Nickel SEM	0.11	0.37	0.026	umol/g	J		10	6010C
7440-66-6	Zinc SEM	46.9	10.8	3.0	mg/Kg			10	6010C
7440-66-6	Zinc SEM	0.72	0.16	0.046	umol/g			10	6010C
7439-97-6	Mercury SEM	0.011	0.011	0.0036	mg/Kg	U		1	7470A
7439-97-6	Mercury SEM	0.000054	0.000054	0.000018	umol/g	U		1	7470A

NW 8/29/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY - SEM/AVS

1

Client Sample ID: LMR13-28-012 | Lab Sample ID: 200-17052-1

Lab Name: TestAmerica Burlington | Job No.: 200-17052-1

SDG ID.: 17052

Matrix: Sediment | Date Sampled: 06/15/2013 09:50

Reporting Basis: DRY | Date Received: 06/18/2013 10:30

% Solids: 45.6

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
18496-25-8	Acid Volatile Sulfides (AVS)	327	34.4		mg/Kg			1	AVS
18496-25-8	Acid Volatile Sulfides (AVS)	10.2	1.1		umol/g			1	AVS

MV 8/29/13

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - SEM/AVS

1

Client Sample ID: LMR13-28-012 Lab Sample ID: 200-17052-1

Lab Name: TestAmerica Burlington Job No.: 200-17052-1

SDG ID.: 17052

Matrix: Sediment Date Sampled: 06/15/2013 09:50

Reporting Basis: WET Date Received: 06/18/2013 10:30

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	SEM/AVS Ratio	0.110	0.00100	0.00100	NONE			1	SEM

MR 8/29/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: LMR13-28-012 | Lab Sample ID: 200-17052-1

Lab Name: TestAmerica Burlington | Job No.: 200-17052-1

SDG ID.: 17052

Matrix: Sediment | Date Sampled: 06/15/2013 09:50

Reporting Basis: WET | Date Received: 06/18/2013 10:30

% Solids: 45.6

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	28400	1000		mg/Kg			1	Lloyd Kahn

NW 8/29/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

2

Client Sample ID: LMR13-28-024 Lab Sample ID: 200-17052-2

Lab Name: TestAmerica Burlington Job No.: 200-17052-1

SDG ID.: 17052

Matrix: Sediment Date Sampled: 06/15/2013 10:00

Reporting Basis: WET Date Received: 06/18/2013 10:30

% Solids: 48.3

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	26000	1000		mg/Kg			1	Lloyd Kahn

MV 8/29/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

3

Client Sample ID: LMR13-28-048
Lab Sample ID: 200-17052-3
Lab Name: TestAmerica Burlington
Job No.: 200-17052-1
SDG ID.: 17052
Matrix: Sediment
Date Sampled: 06/15/2013 10:10
Reporting Basis: WET
Date Received: 06/18/2013 10:30
% Solids: 52.1

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	26100	1000		mg/Kg			1	Lloyd Kahn

MW 8/29/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

4

Client Sample ID: LMR13-28-072
Lab Sample ID: 200-17052-4
Lab Name: TestAmerica Burlington
Job No.: 200-17052-1
SDG ID.: 17052
Matrix: Sediment
Date Sampled: 06/15/2013 10:20
Reporting Basis: WET
Date Received: 06/18/2013 10:30
% Solids: 64.3

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	24700	1000		mg/Kg			1	Lloyd Kahn

MW 8/29/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

5

Client Sample ID: LMR13-28-096 | Lab Sample ID: 200-17052-5

Lab Name: TestAmerica Burlington | Job No.: 200-17052-1

SDG ID.: 17052

Matrix: Sediment | Date Sampled: 06/15/2013 10:30

Reporting Basis: WET | Date Received: 06/18/2013 10:30

% Solids: 63.8

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	28400	1000		mg/Kg			1	Lloyd Kahn

NW 8/29/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

6

Client Sample ID: LMR13-28-120 Lab Sample ID: 200-17052-6

Lab Name: TestAmerica Burlington Job No.: 200-17052-1

SDG ID.: 17052

Matrix: Sediment Date Sampled: 06/15/2013 10:40

Reporting Basis: WET Date Received: 06/18/2013 10:30

% Solids: 72.5

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	31600	1000		mg/Kg			1	Lloyd Kahn

NW 8/29/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

7

Client Sample ID: LMR13-29-012 Lab Sample ID: 200-17052-7

Lab Name: TestAmerica Burlington Job No.: 200-17052-1

SDG ID.: 17052

Matrix: Sediment Date Sampled: 06/15/2013 10:55

Reporting Basis: WET Date Received: 06/18/2013 10:30

% Solids: 53.3

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	25000	1000		mg/Kg			1	Lloyd Kahn

NW 8/29/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

8

Client Sample ID: LMR13-29-024 Lab Sample ID: 200-17052-8

Lab Name: TestAmerica Burlington Job No.: 200-17052-1

SDG ID.: 17052

Matrix: Sediment Date Sampled: 06/15/2013 11:05

Reporting Basis: WET Date Received: 06/18/2013 10:30

% Solids: 52.1

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	24900	1000		mg/Kg			1	Lloyd Kahn

NW 8/29/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

9

Client Sample ID: LMR13-29-024FD
Lab Sample ID: 200-17052-9
Lab Name: TestAmerica Burlington
Job No.: 200-17052-1
SDG ID.: 17052
Matrix: Sediment
Date Sampled: 06/15/2013 11:05
Reporting Basis: WET
Date Received: 06/18/2013 10:30
% Solids: 51.5

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	23800	1000		mg/Kg			1	Lloyd Kahn

MV 8/29/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

10

Client Sample ID: LMR13-29-048 Lab Sample ID: 200-17052-10

Lab Name: TestAmerica Burlington Job No.: 200-17052-1

SDG ID.: 17052

Matrix: Sediment Date Sampled: 06/15/2013 11:15

Reporting Basis: WET Date Received: 06/18/2013 10:30

% Solids: 61.4

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	27800	1000		mg/Kg			1	Lloyd Kahn

MW 8/29/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

11

Client Sample ID: LMR13-29-072
Lab Sample ID: 200-17052-11
Lab Name: TestAmerica Burlington
Job No.: 200-17052-1
SDG ID.: 17052
Matrix: Sediment
Date Sampled: 06/15/2013 11:25
Reporting Basis: WET
Date Received: 06/18/2013 10:30
% Solids: 73.2

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	18900	1000		mg/Kg			1	Lloyd Kahn

MW 8/29/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

12

Client Sample ID: LMR13-29-096 Lab Sample ID: 200-17052-12

Lab Name: TestAmerica Burlington Job No.: 200-17052-1

SDG ID.: 17052

Matrix: Sediment Date Sampled: 06/15/2013 11:35

Reporting Basis: WET Date Received: 06/18/2013 10:30

% Solids: 81.6

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	7450	1000		mg/Kg			1	Lloyd Kahn

NW 8/29/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

13

Client Sample ID: LMR13-34-012 Lab Sample ID: 200-17052-13

Lab Name: TestAmerica Burlington Job No.: 200-17052-1

SDG ID.: 17052

Matrix: Sediment Date Sampled: 06/15/2013 11:50

Reporting Basis: WET Date Received: 06/18/2013 10:30

% Solids: 38.5

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	33100	1000		mg/Kg			1	Lloyd Kahn

NW 8/29/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

14

Client Sample ID: LMR13-34-024
Lab Sample ID: 200-17052-14
Lab Name: TestAmerica Burlington
Job No.: 200-17052-1
SDG ID.: 17052
Matrix: Sediment
Date Sampled: 06/15/2013 12:00
Reporting Basis: WET
Date Received: 06/18/2013 10:30
% Solids: 47.6

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	29700	1000		mg/Kg			1	Lloyd Kahn

MW 8/29/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

15

Client Sample ID: LMR13-34-048 | Lab Sample ID: 200-17052-15

Lab Name: TestAmerica Burlington | Job No.: 200-17052-1

SDG ID.: 17052

Matrix: Sediment | Date Sampled: 06/15/2013 12:10

Reporting Basis: WET | Date Received: 06/18/2013 10:30

% Solids: 48.5

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	25400	1000		mg/Kg			1	Lloyd Kahn

NW 8/29/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

16

Client Sample ID: LMR13-34-048FD
Lab Sample ID: 200-17052-16
Lab Name: TestAmerica Burlington
Job No.: 200-17052-1
SDG ID.: 17052
Matrix: Sediment
Date Sampled: 06/15/2013 12:10
Reporting Basis: WET
Date Received: 06/18/2013 10:30
% Solids: 49.5

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	31700	1000		mg/Kg			1	Lloyd Kahn

MW 8/29/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

17

Client Sample ID: LMR13-34-072 | Lab Sample ID: 200-17052-17

Lab Name: TestAmerica Burlington | Job No.: 200-17052-1

SDG ID.: 17052

Matrix: Sediment | Date Sampled: 06/15/2013 12:20

Reporting Basis: WET | Date Received: 06/18/2013 10:30

% Solids: 52.3

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	29900	1000		mg/Kg			1	Lloyd Kahn

MW 8/29/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

18

Client Sample ID: LMR13-34-096 Lab Sample ID: 200-17052-18

Lab Name: TestAmerica Burlington Job No.: 200-17052-1

SDG ID.: 17052

Matrix: Sediment Date Sampled: 06/15/2013 12:30

Reporting Basis: WET Date Received: 06/18/2013 10:30

% Solids: 55.2

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	30400	1000		mg/Kg			1	Lloyd Kahn

MW 8/29/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

19

Client Sample ID: LMR13-34-120 | Lab Sample ID: 200-17052-19

Lab Name: TestAmerica Burlington | Job No.: 200-17052-1

SDG ID.: 17052

Matrix: Sediment | Date Sampled: 06/15/2013 12:40

Reporting Basis: WET | Date Received: 06/18/2013 10:30

% Solids: 55.7

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	30800	1000		mg/Kg			1	Lloyd Kahn

MW 8/29/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

20

Client Sample ID: LMR13-34-144 | Lab Sample ID: 200-17052-20

Lab Name: TestAmerica Burlington | Job No.: 200-17052-1

SDG ID.: 17052

Matrix: Sediment | Date Sampled: 06/15/2013 12:50

Reporting Basis: WET | Date Received: 06/18/2013 10:30

% Solids: 57.6

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	31500	1000		mg/Kg			1	Lloyd Kahn

MW 8/29/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: LMR13-28-012
Lab Sample ID: 200-17052-1
Lab Name: TestAmerica Pittsburgh
Job No.: 200-17052-1
SDG ID.: 17052
Matrix: Sediment
Date Sampled: 06/15/2013 09:50
Reporting Basis: DRY
Date Received: 06/18/2013 10:30
% Solids: 45.6

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	343	J 365	50.7	mg/Kg			1	9071B

NW 8/29/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

2

Client Sample ID: LMR13-28-024
Lab Sample ID: 200-17052-2
Lab Name: TestAmerica Pittsburgh
Job No.: 200-17052-1
SDG ID.: 17052
Matrix: Sediment
Date Sampled: 06/15/2013 10:00
Reporting Basis: DRY
Date Received: 06/18/2013 10:30
% Solids: 48.3

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	137	J 343	47.7	mg/Kg	J		1	9071B

MW 8/29/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

3

Client Sample ID: LMR13-28-048
Lab Sample ID: 200-17052-3
Lab Name: TestAmerica Pittsburgh
Job No.: 200-17052-1
SDG ID.: 17052
Matrix: Sediment
Date Sampled: 06/15/2013 10:10
Reporting Basis: DRY
Date Received: 06/18/2013 10:30
% Solids: 52.1

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	250	J 320	44.4	mg/Kg			1	9071B

MW 8/29/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

4

Client Sample ID: LMR13-28-072
Lab Sample ID: 200-17052-4
Lab Name: TestAmerica Pittsburgh
Job No.: 200-17052-1
SDG ID.: 17052
Matrix: Sediment
Date Sampled: 06/15/2013 10:20
Reporting Basis: DRY
Date Received: 06/18/2013 10:30
% Solids: 64.3

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	739	J 258	35.9	mg/Kg			1	9071B

MW 8/29/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

5

Client Sample ID: LMR13-28-096 | Lab Sample ID: 200-17052-5

Lab Name: TestAmerica Pittsburgh | Job No.: 200-17052-1

SDG ID.: 17052

Matrix: Sediment | Date Sampled: 06/15/2013 10:30

Reporting Basis: DRY | Date Received: 06/18/2013 10:30

% Solids: 63.8

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	533	J 261	36.3	mg/Kg			1	9071B

MW 8/29/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

6

Client Sample ID: LMR13-28-120
Lab Sample ID: 200-17052-6
Lab Name: TestAmerica Pittsburgh
Job No.: 200-17052-1
SDG ID.: 17052
Matrix: Sediment
Date Sampled: 06/15/2013 10:40
Reporting Basis: DRY
Date Received: 06/18/2013 10:30
% Solids: 72.5

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	276	J 230	31.9	mg/Kg			1	9071B

MW 8/29/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

7

Client Sample ID: LMR13-29-012
Lab Sample ID: 200-17052-7
Lab Name: TestAmerica Pittsburgh
Job No.: 200-17052-1
SDG ID.: 17052
Matrix: Sediment
Date Sampled: 06/15/2013 10:55
Reporting Basis: DRY
Date Received: 06/18/2013 10:30
% Solids: 53.3

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	237 J	312	43.3	mg/Kg			1	9071B

MW 8/29/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

8

Client Sample ID: LMR13-29-024 Lab Sample ID: 200-17052-8

Lab Name: TestAmerica Pittsburgh Job No.: 200-17052-1

SDG ID.: 17052

Matrix: Sediment Date Sampled: 06/15/2013 11:05

Reporting Basis: DRY Date Received: 06/18/2013 10:30

% Solids: 52.1

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	127	J 319	44.3	mg/Kg			1	9071B

MW 8/28/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

10

Client Sample ID: LMR13-29-048 | Lab Sample ID: 200-17052-10

Lab Name: TestAmerica Pittsburgh | Job No.: 200-17052-1

SDG ID.: 17052

Matrix: Sediment | Date Sampled: 06/15/2013 11:15

Reporting Basis: DRY | Date Received: 06/18/2013 10:30

% Solids: 61.4

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	429	J 271	37.7	mg/Kg			1	9071B

MW 8/29/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

11

Client Sample ID: LMR13-29-072 | Lab Sample ID: 200-17052-11

Lab Name: TestAmerica Pittsburgh | Job No.: 200-17052-1

SDG ID.: 17052

Matrix: Sediment | Date Sampled: 06/15/2013 11:25

Reporting Basis: DRY | Date Received: 06/18/2013 10:30

% Solids: 73.2

CAS No.	Analyte	Result		RL	MDL	Units	C	Q	DIL	Method
	HEM	249	J	227	31.5	mg/Kg			1	9071B

MW 8/29/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

12

Client Sample ID: LMR13-29-096 | Lab Sample ID: 200-17052-12

Lab Name: TestAmerica Pittsburgh | Job No.: 200-17052-1

SDG ID.: 17052

Matrix: Sediment | Date Sampled: 06/15/2013 11:35

Reporting Basis: DRY | Date Received: 06/18/2013 10:30

% Solids: 81.6

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	77.3 J	204	28.3	mg/Kg	J		1	9071B

MW 8/29/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

13

Client Sample ID: LMR13-34-012
Lab Sample ID: 200-17052-13
Lab Name: TestAmerica Pittsburgh
Job No.: 200-17052-1
SDG ID.: 17052
Matrix: Sediment
Date Sampled: 06/15/2013 11:50
Reporting Basis: DRY
Date Received: 06/18/2013 10:30
% Solids: 38.5

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	440	J 431	59.9	mg/Kg			1	9071B

MW 8/29/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

14

Client Sample ID: LMR13-34-024 Lab Sample ID: 200-17052-14

Lab Name: TestAmerica Pittsburgh Job No.: 200-17052-1

SDG ID.: 17052

Matrix: Sediment Date Sampled: 06/15/2013 12:00

Reporting Basis: DRY Date Received: 06/18/2013 10:30

% Solids: 47.6

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	273	J 350	48.6	mg/Kg			1	9071B

MR 8/29/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

15

Client Sample ID: LMR13-34-048 Lab Sample ID: 200-17052-15

Lab Name: TestAmerica Pittsburgh Job No.: 200-17052-1

SDG ID.: 17052

Matrix: Sediment Date Sampled: 06/15/2013 12:10

Reporting Basis: DRY Date Received: 06/18/2013 10:30

% Solids: 48.5

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	282	J 344	47.8	mg/Kg			1	9071B

MW 8/29/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

17

Client Sample ID: LMR13-34-072 | Lab Sample ID: 200-17052-17

Lab Name: TestAmerica Pittsburgh | Job No.: 200-17052-1

SDG ID.: 17052

Matrix: Sediment | Date Sampled: 06/15/2013 12:20

Reporting Basis: DRY | Date Received: 06/18/2013 10:30

% Solids: 52.3

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	400	J 318	44.1	mg/Kg			1	9071B

NW 8/29/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

18

Client Sample ID: LMR13-34-096 Lab Sample ID: 200-17052-18

Lab Name: TestAmerica Pittsburgh Job No.: 200-17052-1

SDG ID.: 17052

Matrix: Sediment Date Sampled: 06/15/2013 12:30

Reporting Basis: DRY Date Received: 06/18/2013 10:30

% Solids: 55.2

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	319	J 301	41.8	mg/Kg			1	9071B

MW 8/29/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

19

Client Sample ID: LMR13-34-120
Lab Sample ID: 200-17052-19
Lab Name: TestAmerica Pittsburgh
Job No.: 200-17052-1
SDG ID.: 17052
Matrix: Sediment
Date Sampled: 06/15/2013 12:40
Reporting Basis: DRY
Date Received: 06/18/2013 10:30
% Solids: 55.7

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	611	J 299	41.6	mg/Kg			1	9071B

NH 8/29/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

20

Client Sample ID: LMR13-34-144
Lab Sample ID: 200-17052-20
Lab Name: TestAmerica Pittsburgh
Job No.: 200-17052-1
SDG ID.: 17052
Matrix: Sediment
Date Sampled: 06/15/2013 12:50
Reporting Basis: DRY
Date Received: 06/18/2013 10:30
% Solids: 57.6

CAS No.	Analyte	Result		RL	MDL	Units	C	Q	DIL	Method
	HEM	398	J	288	40.1	mg/Kg			1	9071B

NW 8/29/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

21

Client Sample ID: LMR13-28-024FD
Lab Sample ID: 200-17052-21
Lab Name: TestAmerica Pittsburgh
Job No.: 200-17052-1
SDG ID.: 17052
Matrix: Sediment
Date Sampled: 06/15/2013 10:00
Reporting Basis: DRY
Date Received: 06/18/2013 10:30
% Solids: 48.6

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	247 J	343	47.6	mg/Kg			1	9071B

MW 8/29/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

22

Client Sample ID: LMR13-34-024FD
Lab Sample ID: 200-17052-22
Lab Name: TestAmerica Pittsburgh
Job No.: 200-17052-1
SDG ID.: 17052
Matrix: Sediment
Date Sampled: 06/15/2013 12:00
Reporting Basis: DRY
Date Received: 06/18/2013 10:30
% Solids: 46.6

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	208	J 358	49.7	mg/Kg			1	9071B

MW 8/29/13

ENVIRONMENTAL
Data Services, Inc.

DATA VALIDATION SUMMARY REPORT
LOWER MAUMEE RIVER, TOLEDO, OHIO

Client: EA Engineering, Science & Technology, Inc., Hunt Valley, Maryland
SDG: 200-17054
Laboratory: Test America Laboratories, Burlington, Vermont
Test America Laboratories, North Canton, Ohio
Site: Lower Maumee River, Maumee Area of Concern, Toledo, Ohio
Date: August 27, 2013

SVOC/PCB			
EDS ID	Client Sample ID	Laboratory Sample ID	Matrix
1	LMR13-34-168	200-17054-1	Sediment
2	LMR13-34-192	200-17054-2	Sediment
3	LMR13-32-012	200-17054-3	Sediment
4	LMR13-32-024	200-17054-4	Sediment
4MS†	LMR13-32-024MS	200-17054-4MS	Sediment
4MSD†	LMR13-32-024MSD	200-17054-4MSD	Sediment
5	LMR13-32-048	200-17054-5	Sediment
6	LMR13-32-072	200-17054-6	Sediment
7	LMR13-75-024	200-17054-7	Sediment
8	LMR13-31-012	200-17054-8	Sediment
9	LMR13-31-024	200-17054-9	Sediment
10†	LMR13-31-024FD	200-17054-10	Sediment
11	LMR13-74-024	200-17054-11	Sediment
12†	LMR13-74-024FD	200-17054-12	Sediment
13	LMR13-75-012	200-17054-13	Sediment
14	LMR13-74-012	200-17054-14	Sediment
15	LMR13-74-048	200-17054-15	Sediment
16	LMR13-74-072	200-17054-16	Sediment
17	LMR13-76-012	200-17054-17	Sediment
18	LMR13-76-024	200-17054-18	Sediment
19	LMR13-35-012	200-17054-19	Sediment
20	LMR13-35-024	200-17054-20	Sediment
21*	LMR13-75-024FD	200-17054-21	Sediment

* - Analyzed for SVOC only

† - Analyzed for PCB only

PAH 34			
EDS ID	Client Sample ID	Laboratory Sample ID	Matrix
13	LMR13-75-012	200-17054-13	Sediment
13DL	LMR13-75-012DL	200-17054-13DL	Sediment
14	LMR13-74-012	200-17054-14	Sediment
17	LMR13-76-012	200-17054-17	Sediment
19	LMR13-35-012	200-17054-19	Sediment

Metals/Mercury/TOC			
EDS ID	Client Sample ID	Laboratory Sample ID	Matrix
1	LMR13-34-168	200-17054-1	Sediment
2	LMR13-34-192	200-17054-2	Sediment
3	LMR13-32-012	200-17054-3	Sediment
3MS*	LMR13-32-012MS	200-17054-3MS	Sediment
3MSD*	LMR13-32-012MSD	200-17054-3MSD	Sediment
4	LMR13-32-024	200-17054-4	Sediment
4MS†	LMR13-32-024MS	200-17054-4MS	Sediment
4MSD†	LMR13-32-024MSD	200-17054-4MSD	Sediment
5	LMR13-32-048	200-17054-5	Sediment
6	LMR13-32-072	200-17054-6	Sediment
7	LMR13-75-024	200-17054-7	Sediment
8	LMR13-31-012	200-17054-8	Sediment
9	LMR13-31-024	200-17054-9	Sediment
10	LMR13-31-024FD	200-17054-10	Sediment
11	LMR13-74-024	200-17054-11	Sediment
12	LMR13-74-024FD	200-17054-12	Sediment
13	LMR13-75-012	200-17054-13	Sediment
14	LMR13-74-012	200-17054-14	Sediment
15	LMR13-74-048	200-17054-15	Sediment
16	LMR13-74-072	200-17054-16	Sediment
17	LMR13-76-012	200-17054-17	Sediment
18	LMR13-76-024	200-17054-18	Sediment
19	LMR13-35-012	200-17054-19	Sediment
20	LMR13-35-024	200-17054-20	Sediment

* - Analyzed for Metals only

† - Analyzed for TOC only

AVS/SEM			
EDS ID	Client Sample ID	Laboratory Sample ID	Matrix
13	LMR13-75-012	200-17054-13	Sediment
14	LMR13-74-012	200-17054-14	Sediment
17	LMR13-76-012	200-17054-17	Sediment
19	LMR13-35-012	200-17054-19	Sediment

HEM			
EDS ID	Client Sample ID	Laboratory Sample ID	Matrix
1	LMR13-34-168	200-17054-1	Sediment
2	LMR13-34-192	200-17054-2	Sediment
3	LMR13-32-012	200-17054-3	Sediment
4	LMR13-32-024	200-17054-4	Sediment
4MS	LMR13-32-024MS	200-17054-4MS	Sediment
4MSD	LMR13-32-024MSD	200-17054-4MSD	Sediment
5	LMR13-32-048	200-17054-5	Sediment
6	LMR13-32-072	200-17054-6	Sediment
7	LMR13-75-024	200-17054-7	Sediment
8	LMR13-31-012	200-17054-8	Sediment
9	LMR13-31-024	200-17054-9	Sediment
11	LMR13-74-024	200-17054-11	Sediment
13	LMR13-75-012	200-17054-13	Sediment
14	LMR13-74-012	200-17054-14	Sediment

HEM			
EDS ID	Client Sample ID	Laboratory Sample ID	Matrix
15	LMR13-74-048	200-17054-15	Sediment
16	LMR13-74-072	200-17054-16	Sediment
17	LMR13-76-012	200-17054-17	Sediment
18	LMR13-76-024	200-17054-18	Sediment
19	LMR13-35-012	200-17054-19	Sediment
20	LMR13-35-024	200-17054-20	Sediment
21	LMR13-75-024FD	200-17054-21	Sediment

A full data validation was performed on the analytical data for twenty-one sediment samples collected on June 15 and 18, 2013 by EA Engineering at the Lower Maumee River site in Toledo, Ohio. The samples were analyzed under the Environmental Protection Agency (USEPA) Contract Laboratory Program (CLP) Multi-Media Multi-Concentration Organics Analysis SOM01.2 and Inorganic Analysis ILM05.4 and the Test Methods for the Evaluation of Solid Waste, USEPA SW-846, Third Edition, September 1986, with revisions.

Specific method references are as follows:

Analysis	*Method References*
SVOCs	USEPA CLP SOM01.2
PAH 34	USEPA CLP SOM01.2
PCBs	USEPA CLP SOM01.2
Michigan Metals & Mercury	USEPA CLP ISM01.3
AVS/SEM	USEPA SW-846 Methods 6010C/7470A
TOC	Lloyd Kahn
Oil & Grease (HEM)	USEPA SW-846 Method 9071B

The data have been validated according to the protocols and quality control (QC) requirements of the analytical methods, the Great Lakes Legacy Act, March 2010, the Quality Assurance Project Plan for Phase 2 of the Lower Maumee River Site Characterization, May 2013, and the USEPA National Functional Guidelines for Organic Data Review as follows:

- The USEPA "Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review," June 2008;
- The USEPA "Contract Laboratory Program National Functional Guidelines for Inorganic Superfund Data Review," January 2010;
- and the reviewer's professional judgment.

The following items/criteria were reviewed for this report:

Organics

- Holding times and sample preservation
- Gas Chromatography/Mass Spectroscopy (GC/MS) Tuning
- Initial and continuing calibration summaries
- Method blank and field blank contamination
- Surrogate Spike recoveries
- Matrix Spike/Matrix Spike Duplicate (MS/MSD) recoveries
- Laboratory Control Sample (LCS) recoveries

- Internal standard area and retention time summary forms
- Target Compound Identification
- Compound Quantitation
- Tentatively Identified Compounds (TICs)
- Field Duplicate sample precision

Inorganics

- Holding times and sample preservation
- ICP/MS Tuning
- Initial and continuing calibration verifications
- Method blank and field blank contamination
- ICP Interference Check Sample
- Laboratory Control Sample (LCS) recoveries
- Matrix Spike Analysis
- Duplicate Sample Analysis
- ICP Serial Dilution
- Compound Quantitation
- Field Duplicate sample precision

Overall Usability Issues:

There were minor rejections of data. This data cannot be used in the decision-making process for this project.

- Three SVOC compounds were rejected in seven samples due to severely low surrogate recoveries.

Overall the remaining data is acceptable for the intended purposes as qualified for the deficiencies detailed in this report.

Please note that any results qualified (U) due to blank contamination may be then qualified (J) due to another action. Therefore, the results may be qualified (UJ) due to the culmination of the blank contaminations and actions from other exceedences of QC criteria.

Semivolatile Organic Compounds (SVOCs)

Holding Times

- All samples were extracted within 14 days for sediment samples and analyzed within 40 days for all samples.

GC/MS Tuning

- All criteria were met.

Initial Calibration

- All %RSD and mean RRF criteria were met except the following.

ICAL Date	Compound	%RSD/RRF	Qualifier	Affected Samples
07/20/13	Pentachlorophenol	23.1%	J/UJ	All Samples
	di-n-Octylphthalate	27.9%	J/UJ	
	Benzo(b)fluoranthene	35.7%	J/UJ	
	Dibenzo(a,h)anthracene	23.2%	J/UJ	

Continuing Calibration

- All %D and RRF criteria were met except the following.

CCAL Date	Compound	%D/RRF	Qualifier	Affected Samples
07/28/13 (1217)	Indeno(1,2,3-cd)pyrene	26.0%	J/UJ	1, 2
	Benzo(g,h,i)perylene	27.8%	J/UJ	
07/29/13 (1644)	2,4-Dinitrophenol	51.4%	J/UJ	3-9, 11, 13-17
	di-n-Octylphthalate	53.5%	None	See ICAL
07/29/13 (1721)	Pentachlorophenol	52.1%	None	See ICAL
07/30/13 (0702)	Indeno(1,2,3-cd)pyrene	28.2%	J/UJ	18-21
	Dibenzo(a,h)anthracene	26.8%	None	See ICAL
	Benzo(g,h,i)perylene	35.6%	J/UJ	18-21
07/30/13 (1700)	Hexachlorocyclopentadiene	69.6%	J/UJ	18, 20
	di-n-Octylphthalate	51.1%	None	See ICAL

Method Blank

- The method blanks exhibited the following contamination.

Blank ID	Compound	Conc. ug/kg	Qualifier	Affected Samples
SBLKM7	Phenol	6.5	U	5, 6
	Acetophenone	11	U	2-9, 11, 13-21
	di-n-Butylphthalate	5.8	U	3-7, 9, 11, 13-19, 21
	Butylbenzylphthalate	8.1	U	3-7, 9, 11, 13-15, 17-19, 21
	bis(2-Ethylhexyl)phthalate	20	U	2-7, 9, 13-16, 21

Field Blank

- Field QC samples were not analyzed.

Surrogate Spike Recoveries

- All samples exhibited acceptable surrogate %R values except the following.

Sample ID	Surrogate	%R	Qualifier

4	4-Methylphenol-d8	101%	None - All ND
9	4-Chloroaniline-d4	0%	R - Associated Compounds
11	4-Chloroaniline-d4	0%	R - Associated Compounds
14	4-Chloroaniline-d4	0%	R - Associated Compounds
16	4-Chloroaniline-d4	0%	R - Associated Compounds
17	4-Chloroaniline-d4	0%	R - Associated Compounds
19	4-Chloroaniline-d4	0%	R - Associated Compounds
21	4-Chloroaniline-d4	0%	R - Associated Compounds

Matrix Spike/Matrix Spike Duplicate (MS/MSD) Recoveries

- A MS/MSD sample was not analyzed.

Laboratory Control Samples

- A LCS sample was not analyzed.

Internal Standard (IS) Area Performance

- All internal standards met response and retention time (RT) criteria.

Target Compound Identification

- All mass spectra and quantitation criteria were met.

Compound Quantitation

- Several samples were analyzed at a dilution due to high concentrations of target compounds. No action was required.

Field Duplicate Sample Precision

- Field duplicate results are summarized below.

SVOC				
Compound	LMR13-75-024 ug/kg	LMR13-75-024FD ug/kg	RPD	Qualifier
Benzaldehyde	16	19	17%	None
Fluoranthene	220U	5.3	NC	
Pyrene	220U	7.2	NC	
Chrysene	220U	10	NC	

Polynuclear Aromatic Hydrocarbons (PAH 34)

Holding Times

- All samples were extracted within 14 days for sediment samples and analyzed within 40 days for all samples.

GC/MS Tuning

- All criteria were met.

Initial Calibration

- All %RSD and mean RRF criteria were met.

Continuing Calibration

- All %D and RRF criteria were met.

Method Blank

- The method blanks exhibited the following contamination.

Blank ID	Compound	Conc. ug/kg	Qualifier	Affected Samples
SBLKM7	Naphthalene	0.49	U	13, 13DL, 14, 17, 19
	1-Methylnaphthalene	0.18	U	13, 14, 17, 19
	2-Methylnaphthalene	0.24	U	
	Fluorene	0.090	U	13, 13DL, 14, 19
	Phenanthrene	0.17	U	13DL
	Anthracene	0.091	U	13DL, 14
	Fluoranthene	0.12	None	All >5X
	Benzo(a)anthracene	0.11	U	13DL
	Chrysene	0.13	None	All >5X
	Benzo(b)fluoranthene	0.15	None	
	Benzo(k)fluoranthene	0.13	None	
	Benzo(e)pyrene	0.12	None	
	Benzo(a)pyrene	0.12	None	
	Indeno(1,2,3-cd)pyrene	0.13	U	13DL
	Benzo(g,h,i)perylene	0.13	U	
	Total PPAH	1.9	J	All Samples
	Total PAH	2.0	J	

Field Blank

- Field QC samples were not analyzed.

Surrogate Spike Recoveries

- All samples exhibited acceptable surrogate %R values.

Matrix Spike/Matrix Spike Duplicate (MS/MSD) Recoveries

- A MS/MSD sample was not analyzed.

Laboratory Control Samples

- A LCS sample was not analyzed.

Internal Standard (IS) Area Performance

- All internal standards met response and retention time (RT) criteria.

Target Compound Identification

- All mass spectra and quantitation criteria were met.

Compound Quantitation

- EDS Sample ID #s 13 and 17 exhibited high concentrations of several target compounds and were flagged (E) by the laboratory. EDS Sample ID #13 was reanalyzed at a dilution and the dilution results should be used for these compounds. EDS Sample ID #17 was not reanalyzed and these results were qualified estimated (J).
- Total 16 PPAH and Total PAH were estimated (J) in all samples due to blank contamination.

Field Duplicate Sample Precision

- Field duplicate samples were not analyzed.

Polychlorinated Biphenyls (PCBs)

Holding Times

- All samples were extracted within 14 days for sediment samples and analyzed within 40 days.

Initial Calibration

- All %RSD and/or correlation coefficient criteria were met.

Continuing Calibration

- All %D criteria were met.

Method Blank

- The method blanks were free of contamination.

Field Blank

- Field QC samples were not analyzed.

Surrogate Spike Recoveries

- All samples exhibited acceptable surrogate recoveries.

Matrix Spike/Matrix Spike Duplicate (MS/MSD) Recoveries

- The MS/MSD sample exhibited acceptable %R and RPD values.

Laboratory Control Samples

- The LCS sample exhibited acceptable %R values.

Compound Quantitation

- All criteria were met.

Field Duplicate Sample Precision

- Field duplicate results are summarized below.

PCBs				
Compound	LMR13-31-024 ug/kg	LMR13-31-024FD ug/kg	RPD	Qualifier
Aroclor-1248	8.0	8.5	6%	None
Aroclor-1254	17	20	16%	
Aroclor-1260	4.4	7.8	56%	

PCBs				
Compound	LMR13-74-024 ug/kg	LMR13-74-024FD ug/kg	RPD	Qualifier
Aroclor-1242	39	46	16%	None
Aroclor-1254	32	45	34%	
Aroclor-1260	5.9	7.4	23%	

GC Column Difference Results

- Several samples exhibited high %D values > 25% between columns and have been qualified as estimated (J) by the reviewer.

Metals & Mercury

Holding Times

- All samples were prepared and analyzed within 28 days for mercury and 180 days for all other metals.

ICP/MS Tuning

- Not applicable.

Initial Calibration Verification

- All initial calibration criteria were met.

Continuing Calibration Verification

- All continuing calibration criteria were met.

Method Blank

- The method blanks exhibited the following contamination.

Blank ID	Compound	Conc. mg/kg	Qualifier	Affected Samples
PBS	Zinc	0.41	None	All >10X

Field Blank

- Field QC samples were not analyzed.

ICP Interference Check Sample

- The ICP interference check sample exhibited acceptable %R values.

Laboratory Control Samples

- The LCS sample exhibited acceptable recoveries.

Matrix Spike/Duplicate (MS/DUP) Analysis

- The MS/DUP samples exhibited acceptable %R and RPD values except the following.

MS/DUP Sample ID	Compound	MS %R/RPD	Qualifier	Affected Samples
3	Lead	170%/OK	J	All Samples

ICP Serial Dilution

- ICP serial dilution percent differences (%D) were within acceptance limits except the following.

ICP Sample ID	Compound	%D	Qualifier	Affected Samples
3	Chromium	16%	J	All Samples
	Zinc	15%	J	

Compound Quantitation

- All criteria were met.

Field Duplicate Sample Precision

- Field duplicate results are summarized below.

Metals & Mercury				
Compound	LMR13-31-024 mg/kg	LMR13-31-024FD mg/kg	RPD	Qualifier
Arsenic	7.7	6.3	20%	None
Cadmium	1.2	0.95	23%	
Chromium	20.2	18.3	10%	
Copper	28.0	22.2	23%	
Lead	50.0	42.1	17%	
Nickel	16.2	14.6	10%	
Zinc	129	101	24%	
Mercury	0.23	0.13	56%	

Metals & Mercury				
Compound	LMR13-74-024 mg/kg	LMR13-74-024FD m/kg	RPD	Qualifier
Arsenic	7.5	7.6	1%	None
Cadmium	0.77	0.85	10%	
Chromium	21.1	21.7	3%	
Copper	23.7	23.4	1%	
Lead	36.8	37.6	2%	
Nickel	18.6	19.1	3%	
Zinc	114	114	0%	
Mercury	0.21	0.18	15%	

Oil & Grease, Total Organic Carbon, AVS/SEM (Metals & Hg)

Holding Times

- All samples were analyzed within the recommended holding time for each analysis except the following.

Compound	Sample	Date Sampled	Date Analyzed	# of Days	Qualifier
TOC	18	06/15/13	07/03/13	18	J
TOC	19	06/15/13	07/03/13	18	J
TOC	20	06/15/13	07/03/13	18	J

Initial and Continuing Calibration

- All %R criteria were met.

Method Blank

- The method blanks were free of contamination.

Field Blank

- Field QC samples were not included in this data package.

Laboratory Control Samples

- The LCS samples exhibited acceptable %R values.

Matrix Spike/Matrix Spike Duplicate (MS/MSD) Recoveries

- The MS/MSD sample exhibited acceptable %R and RPD values except the following.

MS/DUP Sample ID	Compound	MS %R/MSD %R/RPD	Qualifier	Affected Samples
4	HEM	118%/78%/38	J/UJ	All Samples

Compound Quantitation

- Several samples were analyzed at a dilution due to high concentrations of target compounds.

Field Duplicate Sample Precision

- Field duplicate results are summarized below.

TOC				
Compound	LMR13-31-024 mg/kg	LMR13-31-024FD mg/kg	RPD	Qualifier
TOC	20300	28600	34%	None

TOC				
Compound	LMR13-74-024 mg/kg	LMR13-74-024FD mg/kg	RPD	Qualifier
TOC	22100	26600	18%	None

HEM				
Compound	LMR13-75-024 mg/kg	LMR13-75-024FD mg/kg	RPD	Qualifier
HEM	75.3	43.6	53%	None

Please contact the undersigned at (757) 564-0090 if you have any questions or need further information.

Signed: Nancy Weaver Dated: 8/30/13

Nancy Weaver
Senior Chemist

Data Qualifiers

U	=	The analyte was analyzed for, but was not detected at a level greater than or equal to the level of the adjusted Contract Required Quantitation Limit (CRQL) for sample and method.
UJ	=	The analyte was not detected at a level greater than or equal to the adjusted CRQL. However, the reported adjusted CRQL is approximate and may be inaccurate or imprecise.
J	=	The analyte was positively identified and the associated numerical value is the approximate concentration of the analyte in the sample (due either to the quality of the data generated because certain quality control criteria were not met, or the concentration of the analyte was below the CRQL).
J+	=	The result is an estimated quantity, but the result may be biased high.
J-	=	The result is an estimated quantity, but the result may be biased low.
R	=	The sample results are unusable due to the quality of the data generated because certain criteria were not met. The analyte may or may not be present in the sample.
NJ	=	The analysis indicates the presence of an analyte that has been "tentatively identified" and the associated numerical value represents its approximate concentration.

1D - FORM I SV-1

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-34-168

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17054

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17054-1

Sample wt/vol: 30.3 (g/mL) g Lab File ID: ULKAR04.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 42 Decanted: (Y/N) Date Received: 06/18/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/26/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/28/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 5.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
100-52-7	Benzaldehyde	1400	U
108-95-2	Phenol	1400	U
111-44-4	Bis(2-chloroethyl)ether	1400	U
95-57-8	2-Chlorophenol	1400	U
95-48-7	2-Methylphenol	1400	U
108-60-1	2,2'-Oxybis(1-chloropropane)	1400	U
98-86-2	Acetophenone	1400	U
106-44-5	4-Methylphenol	1400	U
621-64-7	N-Nitroso-di-n-propylamine	1400	U
67-72-1	Hexachloroethane	1400	U
98-95-3	Nitrobenzene	1400	U
78-59-1	Isophorone	1400	U
88-75-5	2-Nitrophenol	1400	U
105-67-9	2,4-Dimethylphenol	1400	U
111-91-1	Bis(2-chloroethoxy)methane	1400	U
120-83-2	2,4-Dichlorophenol	1400	U
91-20-3	Naphthalene	170	J
106-47-8	4-Chloroaniline	1400	U
87-68-3	Hexachlorobutadiene	1400	U
105-60-2	Caprolactam	1400	U
59-50-7	4-Chloro-3-methylphenol	1400	U
91-57-6	2-Methylnaphthalene	1400	U
77-47-4	Hexachlorocyclopentadiene	1400	U
88-06-2	2,4,6-Trichlorophenol	1400	U
95-95-4	2,4,5-Trichlorophenol	1400	U
92-52-4	1,1'-Biphenyl	1400	U
91-58-7	2-Chloronaphthalene	1400	U
88-74-4	2-Nitroaniline	2800	U
131-11-3	Dimethylphthalate	1400	U
606-20-2	2,6-Dinitrotoluene	1400	U
208-96-8	Acenaphthylene	37	J
99-09-2	3-Nitroaniline	2800	U
83-32-9	Acenaphthene	140	J

NW 8/27/13

EPA SAMPLE NO.
LMR13-34-168

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17054

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17054-1

Sample wt/vol: 30.3 (g/mL) g Lab File ID: ULKAR04.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 42 Decanted: (Y/N) Date Received: 06/18/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/26/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/28/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 5.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
51-28-5	2,4-Dinitrophenol	2800	U	
100-02-7	4-Nitrophenol	2800	U	
132-64-9	Dibenzofuran	75	J	
121-14-2	2,4-Dinitrotoluene	1400	U	
84-66-2	Diethylphthalate	1400	U	
86-73-7	Fluorene	93	J	
7005-72-3	4-Chlorophenyl-phenylether	1400	U	
100-01-6	4-Nitroaniline	2800	U	
534-52-1	4,6-Dinitro-2-methylphenol	2800	U	
86-30-6	N-Nitrosodiphenylamin [1]	1400	U	
95-94-3	1,2,4,5-Tetrachlorobenzene	1400	U	
101-55-3	4-Bromophenyl-phenylether	1400	U	
118-74-1	Hexachlorobenzene	1400	U	
1912-24-9	Atrazine	1400	U	
87-86-5	Pentachlorophenol	2800	~~U~~	UJ
85-01-8	Phenanthrene	680	J	
120-12-7	Anthracene	160	J	
86-74-8	Carbazole	1400	U	
84-74-2	Di-n-butylphthalate	1400	U	
206-44-0	Fluoranthene	1200	J	
129-00-0	Pyrene	1000	J	
85-68-7	Butylbenzylphthalate	1400	U	
91-94-1	3,3'-Dichlorobenzidine	1400	U	
56-55-3	Benzo(a)anthracene	610	J	
218-01-9	Chrysene	710	J	
117-81-7	Bis(2-ethylhexyl)phthalate	5100	~~B~~	
117-84-0	Di-n-octylphthalate	1400	~~U~~	UJ
205-99-2	Benzo(b)fluoranthene	490	~~J~~	J
207-08-9	Benzo(k)fluoranthene	480	J	
50-32-8	Benzo(a)pyrene	490	J	
193-39-5	Indeno(1,2,3-cd)pyrene	240	~~J~~	J
53-70-3	Dibenzo(a,h)anthracene	99	~~J~~	J
191-24-2	Benzo(g,h,i)perylene	320	~~J~~	J
58-90-2	2,3,4,6-Tetrachlorophenol	1400	U	

[1] Cannot be separated from Diphenylamine

MW 8/27/13

1D - FORM I SV-1

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-34-192

2

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17054

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17054-2

Sample wt/vol: 29.9 (g/mL) g Lab File ID: ULKAR05.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 34 Decanted: (Y/N) Date Received: 06/18/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/26/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/28/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 5.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
100-52-7	Benzaldehyde	1300	U
108-95-2	Phenol	1300	U
111-44-4	Bis(2-chloroethyl)ether	1300	U
95-57-8	2-Chlorophenol	1300	U
95-48-7	2-Methylphenol	1300	U
108-60-1	2,2'-Oxybis(1-chloropropane)	1300	U
98-86-2	Acetophenone	1300 ~~63~~	~~J B~~ U
106-44-5	4-Methylphenol	1300	U
621-64-7	N-Nitroso-di-n-propylamine	1300	U
67-72-1	Hexachloroethane	1300	U
98-95-3	Nitrobenzene	1300	U
78-59-1	Isophorone	1300	U
88-75-5	2-Nitrophenol	1300	U
105-67-9	2,4-Dimethylphenol	1300	U
111-91-1	Bis(2-chloroethoxy)methane	1300	U
120-83-2	2,4-Dichlorophenol	1300	U
91-20-3	Naphthalene	97	J
106-47-8	4-Chloroaniline	1300	U
87-68-3	Hexachlorobutadiene	1300	U
105-60-2	Caprolactam	1300	U
59-50-7	4-Chloro-3-methylphenol	1300	U
91-57-6	2-Methylnaphthalene	43	J
77-47-4	Hexachlorocyclopentadiene	1300	U
88-06-2	2,4,6-Trichlorophenol	1300	U
95-95-4	2,4,5-Trichlorophenol	1300	U
92-52-4	1,1'-Biphenyl	1300	U
91-58-7	2-Chloronaphthalene	1300	U
88-74-4	2-Nitroaniline	2500	U
131-11-3	Dimethylphthalate	1300	U
606-20-2	2,6-Dinitrotoluene	1300	U
208-96-8	Acenaphthylene	1300	U
99-09-2	3-Nitroaniline	2500	U
83-32-9	Acenaphthene	130	J

MW 8/27/13

EPA SAMPLE NO.
LMR13-34-192

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678 2

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17054

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17054-2

Sample wt/vol: 29.9 (g/mL) g Lab File ID: ULKAR05.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 34 Decanted: (Y/N) Date Received: 06/18/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/26/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/28/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 5.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
51-28-5	2,4-Dinitrophenol	2500	U	
100-02-7	4-Nitrophenol	2500	U	
132-64-9	Dibenzofuran	65	J	
121-14-2	2,4-Dinitrotoluene	1300	U	
84-66-2	Diethylphthalate	1300	U	
86-73-7	Fluorene	75	J	
7005-72-3	4-Chlorophenyl-phenylether	1300	U	
100-01-6	4-Nitroaniline	2500	U	
534-52-1	4,6-Dinitro-2-methylphenol	2500	U	
86-30-6	N-Nitrosodiphenylamin [1]	1300	U	
95-94-3	1,2,4,5-Tetrachlorobenzene	1300	U	
101-55-3	4-Bromophenyl-phenylether	1300	U	
118-74-1	Hexachlorobenzene	1300	U	
1912-24-9	Atrazine	1300	U	
87-86-5	Pentachlorophenol	2500	~~U~~	UJ
85-01-8	Phenanthrene	430	J	
120-12-7	Anthracene	100	J	
86-74-8	Carbazole	1300	U	
84-74-2	Di-n-butylphthalate	1300	U	
206-44-0	Fluoranthene	530	J	
129-00-0	Pyrene	560	J	
85-68-7	Butylbenzylphthalate	1300	U	
91-94-1	3,3'-Dichlorobenzidine	1300	U	
56-55-3	Benzo(a)anthracene	380	J	
218-01-9	Chrysene	520	J	
117-81-7	Bis(2-ethylhexyl)phthalate	1300 ~~910~~	~~J B~~	U
117-84-0	Di-n-octylphthalate	1300	~~U~~	UJ
205-99-2	Benzo(b)fluoranthene	330	~~J~~	J
207-08-9	Benzo(k)fluoranthene	280	J	
50-32-8	Benzo(a)pyrene	360	J	
193-39-5	Indeno(1,2,3-cd)pyrene	190	~~J~~	J
53-70-3	Dibenzo(a,h)anthracene	96	~~J~~	↓
191-24-2	Benzo(g,h,i)perylene	250	~~J~~	
58-90-2	2,3,4,6-Tetrachlorophenol	1300	U	

[1] Cannot be separated from Diphenylamine

NW 8/27/13

1D - FORM I SV-1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-32-012
3

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678
Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17054
Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17054-3
Sample wt/vol: 29.4 (g/mL) g Lab File ID: ULKAU04.D
Level: (LOW/MED) LOW Extraction: (Type) SONC
% Moisture: 25 Decanted: (Y/N) Date Received: 06/18/2013
Concentrated Extract Volume: 500 (uL) Date Extracted: 06/26/2013
Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/29/2013
GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
100-52-7	Benzaldehyde	37	J
108-95-2	Phenol	230	U
111-44-4	Bis(2-chloroethyl)ether	230	U
95-57-8	2-Chlorophenol	230	U
95-48-7	2-Methylphenol	230	U
108-60-1	2,2'-Oxybis(1-chloropropane)	230	U
98-86-2	Acetophenone	230 ~~34~~ ~~J B~~ U	
106-44-5	4-Methylphenol	230	U
621-64-7	N-Nitroso-di-n-propylamine	230	U
67-72-1	Hexachloroethane	230	U
98-95-3	Nitrobenzene	230	U
78-59-1	Isophorone	230	U
88-75-5	2-Nitrophenol	230	U
105-67-9	2,4-Dimethylphenol	230	U
111-91-1	Bis(2-chloroethoxy)methane	230	U
120-83-2	2,4-Dichlorophenol	230	U
91-20-3	Naphthalene	15	J
106-47-8	4-Chloroaniline	230	U
87-68-3	Hexachlorobutadiene	230	U
105-60-2	Caprolactam	230	U
59-50-7	4-Chloro-3-methylphenol	230	U
91-57-6	2-Methylnaphthalene	230	U
77-47-4	Hexachlorocyclopentadiene	230	U
88-06-2	2,4,6-Trichlorophenol	230	U
95-95-4	2,4,5-Trichlorophenol	230	U
92-52-4	1,1'-Biphenyl	230	U
91-58-7	2-Chloronaphthalene	230	U
88-74-4	2-Nitroaniline	450	U
131-11-3	Dimethylphthalate	230	U
606-20-2	2,6-Dinitrotoluene	230	U
208-96-8	Acenaphthylene	23	J
99-09-2	3-Nitroaniline	450	U
83-32-9	Acenaphthene	110	J

NW 8/27/13

1E - FORM I SV-2
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-32-012

3

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17054

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17054-3

Sample wt/vol: 29.4 (g/mL) g Lab File ID: ULKAU04.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 25 Decanted: (Y/N) Date Received: 06/18/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/26/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/29/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
51-28-5	2,4-Dinitrophenol	450	~~U~~	UJ
100-02-7	4-Nitrophenol	450	U	
132-64-9	Dibenzofuran	11	J	
121-14-2	2,4-Dinitrotoluene	230	U	
84-66-2	Diethylphthalate	230	U	
86-73-7	Fluorene	43	J	
7005-72-3	4-Chlorophenyl-phenylether	230	U	
100-01-6	4-Nitroaniline	450	U	
534-52-1	4,6-Dinitro-2-methylphenol	450	U	
86-30-6	N-Nitrosodiphenylamin [1]	230	U	
95-94-3	1,2,4,5-Tetrachlorobenzene	230	U	
101-55-3	4-Bromophenyl-phenylether	230	U	
118-74-1	Hexachlorobenzene	230	U	
1912-24-9	Atrazine	230	U	
87-86-5	Pentachlorophenol	450	~~U~~	UJ
85-01-8	Phenanthrene	260		
120-12-7	Anthracene	110	J	
86-74-8	Carbazole	4.3	J	
84-74-2	Di-n-butylphthalate	230 ~~6.8~~	~~J B~~	U
206-44-0	Fluoranthene	650		
129-00-0	Pyrene	850		
85-68-7	Butylbenzylphthalate	230 ~~9.8~~	~~J B~~	U
91-94-1	3,3'-Dichlorobenzidine	230	U	
56-55-3	Benzo(a)anthracene	350		
218-01-9	Chrysene	390		
117-81-7	Bis(2-ethylhexyl)phthalate	230 ~~49~~	~~J B~~	U
117-84-0	Di-n-octylphthalate	230	~~U~~	UJ
205-99-2	Benzo(b)fluoranthene	300		J
207-08-9	Benzo(k)fluoranthene	220	J	
50-32-8	Benzo(a)pyrene	320		
193-39-5	Indeno(1,2,3-cd)pyrene	140	J	
53-70-3	Dibenzo(a,h)anthracene	46	~~J~~	J
191-24-2	Benzo(g,h,i)perylene	180	J	
58-90-2	2,3,4,6-Tetrachlorophenol	230	U	

[1] Cannot be separated from Diphenylamine

NW 8/27/13

EPA SAMPLE NO.
LMR13-32-024

4

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17054

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17054-4

Sample wt/vol: 30.1 (g/mL) g Lab File ID: ULKAU05.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 28 Decanted: (Y/N) Date Received: 06/18/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/26/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/29/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
100-52-7	Benzaldehyde	49	J
108-95-2	Phenol	240	U
111-44-4	Bis(2-chloroethyl)ether	240	U
95-57-8	2-Chlorophenol	240	U
95-48-7	2-Methylphenol	240	U
108-60-1	2,2'-Oxybis(1-chloropropane)	240	U
98-86-2	Acetophenone	240 ~~44~~ ~~J B~~	U
106-44-5	4-Methylphenol	240	U
621-64-7	N-Nitroso-di-n-propylamine	240	U
67-72-1	Hexachloroethane	240	U
98-95-3	Nitrobenzene	240	U
78-59-1	Isophorone	240	U
88-75-5	2-Nitrophenol	240	U
105-67-9	2,4-Dimethylphenol	240	U
111-91-1	Bis(2-chloroethoxy)methane	240	U
120-83-2	2,4-Dichlorophenol	240	U
91-20-3	Naphthalene	11	J
106-47-8	4-Chloroaniline	240	U
87-68-3	Hexachlorobutadiene	240	U
105-60-2	Caprolactam	240	U
59-50-7	4-Chloro-3-methylphenol	240	U
91-57-6	2-Methylnaphthalene	240	U
77-47-4	Hexachlorocyclopentadiene	240	U
88-06-2	2,4,6-Trichlorophenol	240	U
95-95-4	2,4,5-Trichlorophenol	240	U
92-52-4	1,1'-Biphenyl	240	U
91-58-7	2-Chloronaphthalene	240	U
88-74-4	2-Nitroaniline	460	U
131-11-3	Dimethylphthalate	240	U
606-20-2	2,6-Dinitrotoluene	240	U
208-96-8	Acenaphthylene	15	J
99-09-2	3-Nitroaniline	460	U
83-32-9	Acenaphthene	19	J

MW 8/27/13

EPA SAMPLE NO.
LMR13-32-024

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678 4

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17054

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17054-4

Sample wt/vol: 30.1 (g/mL) g Lab File ID: ULKAU05.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 28 Decanted: (Y/N) Date Received: 06/18/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/26/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/29/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
51-28-5	2,4-Dinitrophenol	460	~~U~~	UJ
100-02-7	4-Nitrophenol	460	U	
132-64-9	Dibenzofuran	13	J	
121-14-2	2,4-Dinitrotoluene	240	U	
84-66-2	Diethylphthalate	240	U	
86-73-7	Fluorene	25	J	
7005-72-3	4-Chlorophenyl-phenylether	240	U	
100-01-6	4-Nitroaniline	460	U	
534-52-1	4,6-Dinitro-2-methylphenol	460	U	
86-30-6	N-Nitrosodiphenylamin [1]	240	U	
95-94-3	1,2,4,5-Tetrachlorobenzene	240	U	
101-55-3	4-Bromophenyl-phenylether	240	U	
118-74-1	Hexachlorobenzene	240	U	
1912-24-9	Atrazine	240	U	
87-86-5	Pentachlorophenol	460	~~U~~	UJ
85-01-8	Phenanthrene	260		
120-12-7	Anthracene	120	J	
86-74-8	Carbazole	240	U	
84-74-2	Di-n-butylphthalate	240 ~~9.0~~	~~J B~~	U
206-44-0	Fluoranthene	520		
129-00-0	Pyrene	450		
85-68-7	Butylbenzylphthalate	240 ~~14~~	~~J B~~	U
91-94-1	3,3'-Dichlorobenzidine	240	U	
56-55-3	Benzo(a)anthracene	260		
218-01-9	Chrysene	240		
117-81-7	Bis(2-ethylhexyl)phthalate	240 ~~51~~	~~J B~~	U
117-84-0	Di-n-octylphthalate	240	~~U~~	UJ
205-99-2	Benzo(b)fluoranthene	150	~~J~~	J
207-08-9	Benzo(k)fluoranthene	180	J	
50-32-8	Benzo(a)pyrene	170	J	
193-39-5	Indeno(1,2,3-cd)pyrene	74	J	
53-70-3	Dibenzo(a,h)anthracene	30	~~J~~	J
191-24-2	Benzo(g,h,i)perylene	78	J	
58-90-2	2,3,4,6-Tetrachlorophenol	240	U	

[1] Cannot be separated from Diphenylamine

MW 8/27/13

1D - FORM I SV-1

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-32-048

5

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17054

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17054-5

Sample wt/vol: 29.7 (g/mL) g Lab File ID: ULKAU06.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 22 Decanted: (Y/N) Date Received: 06/18/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/26/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/29/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
100-52-7	Benzaldehyde	30	J	
108-95-2	Phenol	220 ~~16~~	~~J B~~	U
111-44-4	Bis(2-chloroethyl)ether	220	U	
95-57-8	2-Chlorophenol	220	U	
95-48-7	2-Methylphenol	220	U	
108-60-1	2,2'-Oxybis(1-chloropropane)	220	U	
98-86-2	Acetophenone	220 ~~36~~	~~J B~~	U
106-44-5	4-Methylphenol	220	U	
621-64-7	N-Nitroso-di-n-propylamine	220	U	
67-72-1	Hexachloroethane	220	U	
98-95-3	Nitrobenzene	220	U	
78-59-1	Isophorone	220	U	
88-75-5	2-Nitrophenol	220	U	
105-67-9	2,4-Dimethylphenol	220	U	
111-91-1	Bis(2-chloroethoxy)methane	220	U	
120-83-2	2,4-Dichlorophenol	220	U	
91-20-3	Naphthalene	5.1	J	
106-47-8	4-Chloroaniline	220	U	
87-68-3	Hexachlorobutadiene	220	U	
105-60-2	Caprolactam	220	U	
59-50-7	4-Chloro-3-methylphenol	220	U	
91-57-6	2-Methylnaphthalene	220	U	
77-47-4	Hexachlorocyclopentadiene	220	U	
88-06-2	2,4,6-Trichlorophenol	220	U	
95-95-4	2,4,5-Trichlorophenol	220	U	
92-52-4	1,1'-Biphenyl	220	U	
91-58-7	2-Chloronaphthalene	220	U	
88-74-4	2-Nitroaniline	430	U	
131-11-3	Dimethylphthalate	220	U	
606-20-2	2,6-Dinitrotoluene	220	U	
208-96-8	Acenaphthylene	6.1	J	
99-09-2	3-Nitroaniline	430	U	
83-32-9	Acenaphthene	6.4	J	

MW 8/27/13

1E - FORM I SV-2
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-32-048

5

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17054

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17054-5

Sample wt/vol: 29.7 (g/mL) g Lab File ID: ULKAU06.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 22 Decanted: (Y/N) Date Received: 06/18/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/26/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/29/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
51-28-5	2,4-Dinitrophenol	430	~~U~~	UJ
100-02-7	4-Nitrophenol	430	U	
132-64-9	Dibenzofuran	220	U	
121-14-2	2,4-Dinitrotoluene	220	U	
84-66-2	Diethylphthalate	220	U	
86-73-7	Fluorene	220	U	
7005-72-3	4-Chlorophenyl-phenylether	220	U	
100-01-6	4-Nitroaniline	430	U	
534-52-1	4,6-Dinitro-2-methylphenol	430	U	
86-30-6	N-Nitrosodiphenylamin [1]	220	U	
95-94-3	1,2,4,5-Tetrachlorobenzene	220	U	
101-55-3	4-Bromophenyl-phenylether	220	U	
118-74-1	Hexachlorobenzene	220	U	
1912-24-9	Atrazine	220	U	
87-86-5	Pentachlorophenol	430	~~U~~	UJ
85-01-8	Phenanthrene	73	J	
120-12-7	Anthracene	44	J	
86-74-8	Carbazole	220	U	
84-74-2	Di-n-butylphthalate	220 ~~8.0~~	~~J B~~	U
206-44-0	Fluoranthene	210	J	
129-00-0	Pyrene	180	J	
85-68-7	Butylbenzylphthalate	220 ~~13~~	~~J B~~	U
91-94-1	3,3'-Dichlorobenzidine	220	U	
56-55-3	Benzo(a)anthracene	140	J	
218-01-9	Chrysene	120	J	
117-81-7	Bis(2-ethylhexyl)phthalate	220 ~~49~~	~~J B~~	U
117-84-0	Di-n-octylphthalate	220	~~U~~	UJ
205-99-2	Benzo(b)fluoranthene	88	~~J~~	J
207-08-9	Benzo(k)fluoranthene	79	J	
50-32-8	Benzo(a)pyrene	87	J	
193-39-5	Indeno(1,2,3-cd)pyrene	38	J	
53-70-3	Dibenzo(a,h)anthracene	16	~~J~~	J
191-24-2	Benzo(g,h,i)perylene	40	J	
58-90-2	2,3,4,6-Tetrachlorophenol	220	U	

[1] Cannot be separated from Diphenylamine

NW 8/27/13

1D - FORM I SV-1

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-32-072

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678 6

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17054

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17054-6

Sample wt/vol: 30.5 (g/mL) g Lab File ID: ULKAU07.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 26 Decanted: (Y/N) Date Received: 06/18/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/26/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/29/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
100-52-7	Benzaldehyde	37	J	
108-95-2	Phenol	230 ~~16~~	~~J B~~	U
111-44-4	Bis(2-chloroethyl)ether	230	U	
95-57-8	2-Chlorophenol	230	U	
95-48-7	2-Methylphenol	230	U	
108-60-1	2,2'-Oxybis(1-chloropropane)	230	U	
98-86-2	Acetophenone	230 ~~34~~	~~J B~~	U
106-44-5	4-Methylphenol	230	U	
621-64-7	N-Nitroso-di-n-propylamine	230	U	
67-72-1	Hexachloroethane	230	U	
98-95-3	Nitrobenzene	230	U	
78-59-1	Isophorone	230	U	
88-75-5	2-Nitrophenol	230	U	
105-67-9	2,4-Dimethylphenol	230	U	
111-91-1	Bis(2-chloroethoxy)methane	230	U	
120-83-2	2,4-Dichlorophenol	230	U	
91-20-3	Naphthalene	230	U	
106-47-8	4-Chloroaniline	230	U	
87-68-3	Hexachlorobutadiene	230	U	
105-60-2	Caprolactam	230	U	
59-50-7	4-Chloro-3-methylphenol	230	U	
91-57-6	2-Methylnaphthalene	230	U	
77-47-4	Hexachlorocyclopentadiene	230	U	
88-06-2	2,4,6-Trichlorophenol	230	U	
95-95-4	2,4,5-Trichlorophenol	230	U	
92-52-4	1,1'-Biphenyl	230	U	
91-58-7	2-Chloronaphthalene	230	U	
88-74-4	2-Nitroaniline	440	U	
131-11-3	Dimethylphthalate	230	U	
606-20-2	2,6-Dinitrotoluene	230	U	
208-96-8	Acenaphthylene	230	U	
99-09-2	3-Nitroaniline	440	U	
83-32-9	Acenaphthene	230	U	

NW 8/27/13

EPA SAMPLE NO.
LMR13-32-072

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17054

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17054-6

Sample wt/vol: 30.5 (g/mL) g Lab File ID: ULKAU07.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 26 Decanted: (Y/N) Date Received: 06/18/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/26/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/29/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
51-28-5	2,4-Dinitrophenol	440	~~U~~	UJ
100-02-7	4-Nitrophenol	440	U	
132-64-9	Dibenzofuran	230	U	
121-14-2	2,4-Dinitrotoluene	230	U	
84-66-2	Diethylphthalate	230	U	
86-73-7	Fluorene	230	U	
7005-72-3	4-Chlorophenyl-phenylether	230	U	
100-01-6	4-Nitroaniline	440	U	
534-52-1	4,6-Dinitro-2-methylphenol	440	U	
86-30-6	N-Nitrosodiphenylamin [1]	230	U	
95-94-3	1,2,4,5-Tetrachlorobenzene	230	U	
101-55-3	4-Bromophenyl-phenylether	230	U	
118-74-1	Hexachlorobenzene	230	U	
1912-24-9	Atrazine	230	U	
87-86-5	Pentachlorophenol	440	~~U~~	UJ
85-01-8	Phenanthrene	230	U	
120-12-7	Anthracene	230	U	
86-74-8	Carbazole	230	U	
84-74-2	Di-n-butylphthalate	230 ~~7.9~~	~~J B~~	U
206-44-0	Fluoranthene	230	U	
129-00-0	Pyrene	230	U	
85-68-7	Butylbenzylphthalate	230 ~~12~~	~~J B~~	U
91-94-1	3,3'-Dichlorobenzidine	230	U	
56-55-3	Benzo(a)anthracene	230	U	
218-01-9	Chrysene	230	U	
117-81-7	Bis(2-ethylhexyl)phthalate	230 ~~48~~	~~J B~~	U
117-84-0	Di-n-octylphthalate	230	~~U~~	UJ
205-99-2	Benzo(b)fluoranthene	230	~~U~~	UJ
207-08-9	Benzo(k)fluoranthene	230	U	
50-32-8	Benzo(a)pyrene	230	U	
193-39-5	Indeno(1,2,3-cd)pyrene	230	U	
53-70-3	Dibenzo(a,h)anthracene	230	~~U~~	UJ
191-24-2	Benzo(g,h,i)perylene	230	U	
58-90-2	2,3,4,6-Tetrachlorophenol	230	U	

[1] Cannot be separated from Diphenylamine

NW 8/27/13

EPA SAMPLE NO.
LMR13-75-024

7

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17054

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17054-7

Sample wt/vol: 29.8 (g/mL) g Lab File ID: ULKAU08.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 21 Decanted: (Y/N) Date Received: 06/18/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/26/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/29/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
100-52-7	Benzaldehyde	16	J
108-95-2	Phenol	220	U
111-44-4	Bis(2-chloroethyl)ether	220	U
95-57-8	2-Chlorophenol	220	U
95-48-7	2-Methylphenol	220	U
108-60-1	2,2'-Oxybis(1-chloropropane)	220	U
98-86-2	Acetophenone	220 ~~21~~ ~~J B~~	U
106-44-5	4-Methylphenol	220	U
621-64-7	N-Nitroso-di-n-propylamine	220	U
67-72-1	Hexachloroethane	220	U
98-95-3	Nitrobenzene	220	U
78-59-1	Isophorone	220	U
88-75-5	2-Nitrophenol	220	U
105-67-9	2,4-Dimethylphenol	220	U
111-91-1	Bis(2-chloroethoxy)methane	220	U
120-83-2	2,4-Dichlorophenol	220	U
91-20-3	Naphthalene	220	U
106-47-8	4-Chloroaniline	220	U
87-68-3	Hexachlorobutadiene	220	U
105-60-2	Caprolactam	220	U
59-50-7	4-Chloro-3-methylphenol	220	U
91-57-6	2-Methylnaphthalene	220	U
77-47-4	Hexachlorocyclopentadiene	220	U
88-06-2	2,4,6-Trichlorophenol	220	U
95-95-4	2,4,5-Trichlorophenol	220	U
92-52-4	1,1'-Biphenyl	220	U
91-58-7	2-Chloronaphthalene	220	U
88-74-4	2-Nitroaniline	420	U
131-11-3	Dimethylphthalate	220	U
606-20-2	2,6-Dinitrotoluene	220	U
208-96-8	Acenaphthylene	220	U
99-09-2	3-Nitroaniline	420	U
83-32-9	Acenaphthene	220	U

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MW 8/27/13

EPA SAMPLE NO.
LMR13-75-024

7

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17054

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17054-7

Sample wt/vol: 29.8 (g/mL) g Lab File ID: ULKAU08.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 21 Decanted: (Y/N) Date Received: 06/18/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/26/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/29/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
51-28-5	2,4-Dinitrophenol	420	~~U~~	UJ
100-02-7	4-Nitrophenol	420	U	
132-64-9	Dibenzofuran	220	U	
121-14-2	2,4-Dinitrotoluene	220	U	
84-66-2	Diethylphthalate	220	U	
86-73-7	Fluorene	220	U	
7005-72-3	4-Chlorophenyl-phenylether	220	U	
100-01-6	4-Nitroaniline	420	U	
534-52-1	4,6-Dinitro-2-methylphenol	420	U	
86-30-6	N-Nitrosodiphenylamin [1]	220	U	
95-94-3	1,2,4,5-Tetrachlorobenzene	220	U	
101-55-3	4-Bromophenyl-phenylether	220	U	
118-74-1	Hexachlorobenzene	220	U	
1912-24-9	Atrazine	220	U	
87-86-5	Pentachlorophenol	420	~~U~~	UJ
85-01-8	Phenanthrene	220	U	
120-12-7	Anthracene	220	U	
86-74-8	Carbazole	220	U	
84-74-2	Di-n-butylphthalate	220 ~~33~~	~~J B~~	U
206-44-0	Fluoranthene	220	U	
129-00-0	Pyrene	220	U	
85-68-7	Butylbenzylphthalate	220 ~~2.4~~	~~J B~~	U
91-94-1	3,3'-Dichlorobenzidine	220	U	
56-55-3	Benzo(a)anthracene	220	U	
218-01-9	Chrysene	220	U	
117-81-7	Bis(2-ethylhexyl)phthalate	220 ~~37~~	~~J B~~	U
117-84-0	Di-n-octylphthalate	220	~~U~~	UJ
205-99-2	Benzo(b)fluoranthene	220	~~U~~	UJ
207-08-9	Benzo(k)fluoranthene	220	U	
50-32-8	Benzo(a)pyrene	220	U	
193-39-5	Indeno(1,2,3-cd)pyrene	220	U	
53-70-3	Dibenzo(a,h)anthracene	220	~~U~~	UJ
191-24-2	Benzo(g,h,i)perylene	220	U	
58-90-2	2,3,4,6-Tetrachlorophenol	220	U	

[1] Cannot be separated from Diphenylamine NW 8/27/13

1D - FORM I SV-1

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-31-012

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678 8

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17054

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17054-8

Sample wt/vol: 29.3 (g/mL) g Lab File ID: ULKAU09.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 25 Decanted: (Y/N) Date Received: 06/18/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/26/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/29/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 2.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
100-52-7	Benzaldehyde	37	J
108-95-2	Phenol	460	U
111-44-4	Bis(2-chloroethyl)ether	460	U
95-57-8	2-Chlorophenol	460	U
95-48-7	2-Methylphenol	460	U
108-60-1	2,2'-Oxybis(1-chloropropane)	460	U
98-86-2	Acetophenone	460 ~~40~~	~~J B~~ U
106-44-5	4-Methylphenol	460	U
621-64-7	N-Nitroso-di-n-propylamine	460	U
67-72-1	Hexachloroethane	460	U
98-95-3	Nitrobenzene	460	U
78-59-1	Isophorone	460	U
88-75-5	2-Nitrophenol	460	U
105-67-9	2,4-Dimethylphenol	460	U
111-91-1	Bis(2-chloroethoxy)methane	460	U
120-83-2	2,4-Dichlorophenol	460	U
91-20-3	Naphthalene	93	J
106-47-8	4-Chloroaniline	460	U
87-68-3	Hexachlorobutadiene	460	U
105-60-2	Caprolactam	460	U
59-50-7	4-Chloro-3-methylphenol	460	U
91-57-6	2-Methylnaphthalene	29	J
77-47-4	Hexachlorocyclopentadiene	460	U
88-06-2	2,4,6-Trichlorophenol	460	U
95-95-4	2,4,5-Trichlorophenol	460	U
92-52-4	1,1'-Biphenyl	460	U
91-58-7	2-Chloronaphthalene	460	U
88-74-4	2-Nitroaniline	890	U
131-11-3	Dimethylphthalate	460	U
606-20-2	2,6-Dinitrotoluene	460	U
208-96-8	Acenaphthylene	43	J
99-09-2	3-Nitroaniline	890	U
83-32-9	Acenaphthene	180	J

NW 8/27/13

1E - FORM I SV-2
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-31-012

8

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17054

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17054-8

Sample wt/vol: 29.3 (g/mL) g Lab File ID: ULKAU09.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 25 Decanted: (Y/N) Date Received: 06/18/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/26/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/29/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 2.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
51-28-5	2,4-Dinitrophenol	890	~~U~~	UJ
100-02-7	4-Nitrophenol	890	U	
132-64-9	Dibenzofuran	24	J	
121-14-2	2,4-Dinitrotoluene	460	U	
84-66-2	Diethylphthalate	460	U	
86-73-7	Fluorene	460	U	
7005-72-3	4-Chlorophenyl-phenylether	460	U	
100-01-6	4-Nitroaniline	890	U	
534-52-1	4,6-Dinitro-2-methylphenol	890	U	
86-30-6	N-Nitrosodiphenylamin [1]	460	U	
95-94-3	1,2,4,5-Tetrachlorobenzene	460	U	
101-55-3	4-Bromophenyl-phenylether	460	U	
118-74-1	Hexachlorobenzene	460	U	
1912-24-9	Atrazine	460	U	
87-86-5	Pentachlorophenol	890	~~U~~	UJ
85-01-8	Phenanthrene	360	J	
120-12-7	Anthracene	120	J	
86-74-8	Carbazole	460	U	
84-74-2	Di-n-butylphthalate	460	U	
206-44-0	Fluoranthene	1000		
129-00-0	Pyrene	1100		
85-68-7	Butylbenzylphthalate	460	U	
91-94-1	3,3'-Dichlorobenzidine	460	U	
56-55-3	Benzo(a)anthracene	590		
218-01-9	Chrysene	780		
117-81-7	Bis(2-ethylhexyl)phthalate	930	~~B~~	
117-84-0	Di-n-octylphthalate	460	~~U~~	UJ
205-99-2	Benzo(b)fluoranthene	660		J
207-08-9	Benzo(k)fluoranthene	560		
50-32-8	Benzo(a)pyrene	520		
193-39-5	Indeno(1,2,3-cd)pyrene	300	J	
53-70-3	Dibenzo(a,h)anthracene	110	~~J~~	J
191-24-2	Benzo(g,h,i)perylene	380	J	
58-90-2	2,3,4,6-Tetrachlorophenol	460	U	

[1]Cannot be separated from Diphenylamine

NW 8/27/13

EPA SAMPLE NO.
LMR13-31-024

9

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17054

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17054-9

Sample wt/vol: 29.6 (g/mL) g Lab File ID: ULKAU10.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 28 Decanted: (Y/N) Date Received: 06/18/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/26/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/29/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
100-52-7	Benzaldehyde	38	J	
108-95-2	Phenol	240	U	
111-44-4	Bis(2-chloroethyl)ether	240	U	
95-57-8	2-Chlorophenol	240	U	
95-48-7	2-Methylphenol	240	U	
108-60-1	2,2'-Oxybis(1-chloropropane)	240	U	
98-86-2	Acetophenone	240 ~~53~~	~~J B~~	u
106-44-5	4-Methylphenol	240	U	
621-64-7	N-Nitroso-di-n-propylamine	240	U	
67-72-1	Hexachloroethane	240	U	
98-95-3	Nitrobenzene	240	U	
78-59-1	Isophorone	240	U	
88-75-5	2-Nitrophenol	240	U	
105-67-9	2,4-Dimethylphenol	240	U	
111-91-1	Bis(2-chloroethoxy)methane	240	U	
120-83-2	2,4-Dichlorophenol	240	U	
91-20-3	Naphthalene	72	J	
106-47-8	4-Chloroaniline	240	~~U~~	R
87-68-3	Hexachlorobutadiene	240	U	
105-60-2	Caprolactam	240	U	
59-50-7	4-Chloro-3-methylphenol	240	U	
91-57-6	2-Methylnaphthalene	22	J	
77-47-4	Hexachlorocyclopentadiene	240	~~U~~	R
88-06-2	2,4,6-Trichlorophenol	240	U	
95-95-4	2,4,5-Trichlorophenol	240	U	
92-52-4	1,1'-Biphenyl	7.8	J	
91-58-7	2-Chloronaphthalene	240	U	
88-74-4	2-Nitroaniline	460	U	
131-11-3	Dimethylphthalate	240	U	
606-20-2	2,6-Dinitrotoluene	240	U	
208-96-8	Acenaphthylene	78	J	
99-09-2	3-Nitroaniline	460	U	
83-32-9	Acenaphthene	230	J	

NW 8/27/13

1E - FORM I SV-2
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-31-024

9

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17054

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17054-9

Sample wt/vol: 29.6 (g/mL) g Lab File ID: ULKAU10.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 28 Decanted: (Y/N) Date Received: 06/18/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/26/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/29/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
51-28-5	2,4-Dinitrophenol	460	~~U~~	UJ
100-02-7	4-Nitrophenol	460	U	
132-64-9	Dibenzofuran	26	J	
121-14-2	2,4-Dinitrotoluene	240	U	
84-66-2	Diethylphthalate	240	U	
86-73-7	Fluorene	150	J	
7005-72-3	4-Chlorophenyl-phenylether	240	U	
100-01-6	4-Nitroaniline	460	U	
534-52-1	4,6-Dinitro-2-methylphenol	460	U	
86-30-6	N-Nitrosodiphenylamin [1]	240	U	
95-94-3	1,2,4,5-Tetrachlorobenzene	240	U	
101-55-3	4-Bromophenyl-phenylether	240	U	
118-74-1	Hexachlorobenzene	240	U	
1912-24-9	Atrazine	240	U	
87-86-5	Pentachlorophenol	460	~~U~~	UJ
85-01-8	Phenanthrene	800		
120-12-7	Anthracene	140	J	
86-74-8	Carbazole	240	U	
84-74-2	Di-n-butylphthalate	240 ~~14~~	~~J B~~	U
206-44-0	Fluoranthene	1300		
129-00-0	Pyrene	1200		
85-68-7	Butylbenzylphthalate	240 ~~17~~	~~J B~~	U
91-94-1	3,3'-Dichlorobenzidine	240	~~U~~	R
56-55-3	Benzo(a)anthracene	800		
218-01-9	Chrysene	890		
117-81-7	Bis(2-ethylhexyl)phthalate	240 ~~86~~	~~J B~~	U
117-84-0	Di-n-octylphthalate	240	~~U~~	UJ
205-99-2	Benzo(b)fluoranthene	970		J
207-08-9	Benzo(k)fluoranthene	560		
50-32-8	Benzo(a)pyrene	650		
193-39-5	Indeno(1,2,3-cd)pyrene	450		
53-70-3	Dibenzo(a,h)anthracene	190	~~J~~	J
191-24-2	Benzo(g,h,i)perylene	520		
58-90-2	2,3,4,6-Tetrachlorophenol	240	U	

[1] Cannot be separated from Diphenylamine

NW 8/27/13

1D - FORM I SV-1

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-74-024

11

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17054

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17054-11

Sample wt/vol: 29.6 (g/mL) g Lab File ID: ULKAU11.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 30 Decanted: (Y/N) Date Received: 06/18/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/26/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/29/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
100-52-7	Benzaldehyde	43	J	
108-95-2	Phenol	240	U	
111-44-4	Bis(2-chloroethyl)ether	240	U	
95-57-8	2-Chlorophenol	240	U	
95-48-7	2-Methylphenol	240	U	
108-60-1	2,2'-Oxybis(1-chloropropane)	240	U	
98-86-2	Acetophenone	240 ~~49~~	~~J B~~	u
106-44-5	4-Methylphenol	240	U	
621-64-7	N-Nitroso-di-n-propylamine	240	U	
67-72-1	Hexachloroethane	240	U	
98-95-3	Nitrobenzene	240	U	
78-59-1	Isophorone	240	U	
88-75-5	2-Nitrophenol	240	U	
105-67-9	2,4-Dimethylphenol	240	U	
111-91-1	Bis(2-chloroethoxy)methane	240	U	
120-83-2	2,4-Dichlorophenol	240	U	
91-20-3	Naphthalene	43	J	
106-47-8	4-Chloroaniline	240	~~U~~	R
87-68-3	Hexachlorobutadiene	240	U	
105-60-2	Caprolactam	240	U	
59-50-7	4-Chloro-3-methylphenol	240	U	
91-57-6	2-Methylnaphthalene	25	J	
77-47-4	Hexachlorocyclopentadiene	240	~~U~~	R
88-06-2	2,4,6-Trichlorophenol	240	U	
95-95-4	2,4,5-Trichlorophenol	240	U	
92-52-4	1,1'-Biphenyl	8.1	J	
91-58-7	2-Chloronaphthalene	240	U	
88-74-4	2-Nitroaniline	480	U	
131-11-3	Dimethylphthalate	240	U	
606-20-2	2,6-Dinitrotoluene	240	U	
208-96-8	Acenaphthylene	35	J	
99-09-2	3-Nitroaniline	480	U	
83-32-9	Acenaphthene	150	J	

MW 8/27/13

1E - FORM I SV-2
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-74-024

11

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17054

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17054-11

Sample wt/vol: 29.6 (g/mL) g Lab File ID: ULKAU11.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 30 Decanted: (Y/N) Date Received: 06/18/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/26/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/29/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
51-28-5	2,4-Dinitrophenol	480	~~U~~	UJ
100-02-7	4-Nitrophenol	480	U	
132-64-9	Dibenzofuran	36	J	
121-14-2	2,4-Dinitrotoluene	240	U	
84-66-2	Diethylphthalate	240	U	
86-73-7	Fluorene	93	J	
7005-72-3	4-Chlorophenyl-phenylether	240	U	
100-01-6	4-Nitroaniline	480	U	
534-52-1	4,6-Dinitro-2-methylphenol	480	U	
86-30-6	N-Nitrosodiphenylamin [1]	240	U	
95-94-3	1,2,4,5-Tetrachlorobenzene	240	U	
101-55-3	4-Bromophenyl-phenylether	240	U	
118-74-1	Hexachlorobenzene	240	U	
1912-24-9	Atrazine	240	U	
87-86-5	Pentachlorophenol	480	~~U~~	UJ
85-01-8	Phenanthrene	690		
120-12-7	Anthracene	160	J	
86-74-8	Carbazole	27	J	
84-74-2	Di-n-butylphthalate	240 ~~13~~	~~J B~~	U
206-44-0	Fluoranthene	1100		
129-00-0	Pyrene	1100		
85-68-7	Butylbenzylphthalate	240 ~~27~~	~~J B~~	U
91-94-1	3,3'-Dichlorobenzidine	240	~~U~~	R
56-55-3	Benzo(a)anthracene	600		
218-01-9	Chrysene	660		
117-81-7	Bis(2-ethylhexyl)phthalate	250	~~B~~	
117-84-0	Di-n-octylphthalate	240	~~U~~	UJ
205-99-2	Benzo(b)fluoranthene	540		J
207-08-9	Benzo(k)fluoranthene	480		
50-32-8	Benzo(a)pyrene	490		
193-39-5	Indeno(1,2,3-cd)pyrene	310		
53-70-3	Dibenzo(a,h)anthracene	120	~~J~~	J
191-24-2	Benzo(g,h,i)perylene	430		
58-90-2	2,3,4,6-Tetrachlorophenol	240	U	

[1]Cannot be separated from Diphenylamine

NW 8/27/13

1D - FORM I SV-1

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-75-012

13

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17054

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17054-13

Sample wt/vol: 29.4 (g/mL) g Lab File ID: ULKAU12.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 20 Decanted: (Y/N) Date Received: 06/18/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/26/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/29/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
100-52-7	Benzaldehyde	220	U
108-95-2	Phenol	220	U
111-44-4	Bis(2-chloroethyl)ether	220	U
95-57-8	2-Chlorophenol	220	U
95-48-7	2-Methylphenol	220	U
108-60-1	2,2'-Oxybis(1-chloropropane)	220	U
98-86-2	Acetophenone	220 ~~29~~ ~~J B~~	U
106-44-5	4-Methylphenol	220	U
621-64-7	N-Nitroso-di-n-propylamine	220	U
67-72-1	Hexachloroethane	220	U
98-95-3	Nitrobenzene	220	U
78-59-1	Isophorone	220	U
88-75-5	2-Nitrophenol	220	U
105-67-9	2,4-Dimethylphenol	220	U
111-91-1	Bis(2-chloroethoxy)methane	220	U
120-83-2	2,4-Dichlorophenol	220	U
91-20-3	Naphthalene	220	U
106-47-8	4-Chloroaniline	220	U
87-68-3	Hexachlorobutadiene	220	U
105-60-2	Caprolactam	220	U
59-50-7	4-Chloro-3-methylphenol	220	U
91-57-6	2-Methylnaphthalene	220	U
77-47-4	Hexachlorocyclopentadiene	220	U
88-06-2	2,4,6-Trichlorophenol	220	U
95-95-4	2,4,5-Trichlorophenol	220	U
92-52-4	1,1'-Biphenyl	220	U
91-58-7	2-Chloronaphthalene	220	U
88-74-4	2-Nitroaniline	420	U
131-11-3	Dimethylphthalate	220	U
606-20-2	2,6-Dinitrotoluene	220	U
208-96-8	Acenaphthylene	220	U
99-09-2	3-Nitroaniline	420	U
83-32-9	Acenaphthene	9.2	J

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NW 8/27/13

EPA SAMPLE NO.
LMR13-75-012

13

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17054

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17054-13

Sample wt/vol: 29.4 (g/mL) g Lab File ID: ULKAU12.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 20 Decanted: (Y/N) Date Received: 06/18/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/26/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/29/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
51-28-5	2,4-Dinitrophenol	420	~~U~~	UJ
100-02-7	4-Nitrophenol	420	U	
132-64-9	Dibenzofuran	220	U	
121-14-2	2,4-Dinitrotoluene	220	U	
84-66-2	Diethylphthalate	220	U	
86-73-7	Fluorene	220	U	
7005-72-3	4-Chlorophenyl-phenylether	220	U	
100-01-6	4-Nitroaniline	420	U	
534-52-1	4,6-Dinitro-2-methylphenol	420	U	
86-30-6	N-Nitrosodiphenylamin [1]	220	U	
95-94-3	1,2,4,5-Tetrachlorobenzene	220	U	
101-55-3	4-Bromophenyl-phenylether	220	U	
118-74-1	Hexachlorobenzene	220	U	
1912-24-9	Atrazine	220	U	
87-86-5	Pentachlorophenol	420	~~U~~	UJ
85-01-8	Phenanthrene	27	J	
120-12-7	Anthracene	18	J	
86-74-8	Carbazole	220	U	
84-74-2	Di-n-butylphthalate	220 ~~9.3~~	~~J B~~	U
206-44-0	Fluoranthene	72	J	
129-00-0	Pyrene	61	J	
85-68-7	Butylbenzylphthalate	220 ~~11~~	~~J B~~	U
91-94-1	3,3'-Dichlorobenzidine	220	U	
56-55-3	Benzo(a)anthracene	27	J	
218-01-9	Chrysene	32	J	
117-81-7	Bis(2-ethylhexyl)phthalate	220 ~~37~~	~~J B~~	U
117-84-0	Di-n-octylphthalate	220	~~U~~	UJ
205-99-2	Benzo(b)fluoranthene	15	~~J~~	J
207-08-9	Benzo(k)fluoranthene	19	J	
50-32-8	Benzo(a)pyrene	17	J	
193-39-5	Indeno(1,2,3-cd)pyrene	9.0	J	
53-70-3	Dibenzo(a,h)anthracene	220	~~U~~	UJ
191-24-2	Benzo(g,h,i)perylene	12	J	
58-90-2	2,3,4,6-Tetrachlorophenol	220	U	

[1] Cannot be separated from Diphenylamine

NW 8/27/13

1D - FORM I SV-1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-74-012

14

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678
Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17054
Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17054-14
Sample wt/vol: 29.6 (g/mL) g Lab File ID: ULKAU13.D
Level: (LOW/MED) LOW Extraction: (Type) SONC
% Moisture: 45 Decanted: (Y/N) Date Received: 06/18/2013
Concentrated Extract Volume: 500 (uL) Date Extracted: 06/26/2013
Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/29/2013
GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
100-52-7	Benzaldehyde	32	J	
108-95-2	Phenol	310	U	
111-44-4	Bis(2-chloroethyl)ether	310	U	
95-57-8	2-Chlorophenol	310	U	
95-48-7	2-Methylphenol	310	U	
108-60-1	2,2'-Oxybis(1-chloropropane)	310	U	
98-86-2	Acetophenone	310 ~~41~~	~~J B~~	U
106-44-5	4-Methylphenol	310	U	
621-64-7	N-Nitroso-di-n-propylamine	310	U	
67-72-1	Hexachloroethane	310	U	
98-95-3	Nitrobenzene	310	U	
78-59-1	Isophorone	310	U	
88-75-5	2-Nitrophenol	310	U	
105-67-9	2,4-Dimethylphenol	310	U	
111-91-1	Bis(2-chloroethoxy)methane	310	U	
120-83-2	2,4-Dichlorophenol	310	U	
91-20-3	Naphthalene	14	J	
106-47-8	4-Chloroaniline	310	~~U~~	R
87-68-3	Hexachlorobutadiene	310	U	
105-60-2	Caprolactam	310	U	
59-50-7	4-Chloro-3-methylphenol	310	U	
91-57-6	2-Methylnaphthalene	310	U	
77-47-4	Hexachlorocyclopentadiene	310	~~U~~	R
88-06-2	2,4,6-Trichlorophenol	310	U	
95-95-4	2,4,5-Trichlorophenol	310	U	
92-52-4	1,1'-Biphenyl	310	U	
91-58-7	2-Chloronaphthalene	310	U	
88-74-4	2-Nitroaniline	610	U	
131-11-3	Dimethylphthalate	310	U	
606-20-2	2,6-Dinitrotoluene	310	U	
208-96-8	Acenaphthylene	9.8	J	
99-09-2	3-Nitroaniline	610	U	
83-32-9	Acenaphthene	23	J	

NW 8/27/13

1E - FORM I SV-2
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-74-012

14

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17054

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17054-14

Sample wt/vol: 29.6 (g/mL) g Lab File ID: ULKAU13.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 45 Decanted: (Y/N) Date Received: 06/18/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/26/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/29/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
51-28-5	2,4-Dinitrophenol	610	~~U~~	UJ
100-02-7	4-Nitrophenol	610	U	
132-64-9	Dibenzofuran	310	U	
121-14-2	2,4-Dinitrotoluene	310	U	
84-66-2	Diethylphthalate	310	U	
86-73-7	Fluorene	23	J	
7005-72-3	4-Chlorophenyl-phenylether	310	U	
100-01-6	4-Nitroaniline	610	U	
534-52-1	4,6-Dinitro-2-methylphenol	610	U	
86-30-6	N-Nitrosodiphenylamin [1]	310	U	
95-94-3	1,2,4,5-Tetrachlorobenzene	310	U	
101-55-3	4-Bromophenyl-phenylether	310	U	
118-74-1	Hexachlorobenzene	310	U	
1912-24-9	Atrazine	310	U	
87-86-5	Pentachlorophenol	610	~~U~~	UJ
85-01-8	Phenanthrene	85	J	
120-12-7	Anthracene	27	J	
86-74-8	Carbazole	6.1	J	
84-74-2	Di-n-butylphthalate	310 ~~12~~	~~J B~~	U
206-44-0	Fluoranthene	270	J	
129-00-0	Pyrene	310		
85-68-7	Butylbenzylphthalate	310 ~~28~~	~~J B~~	U
91-94-1	3,3'-Dichlorobenzidine	310	~~U~~	R
56-55-3	Benzo(a)anthracene	150	J	
218-01-9	Chrysene	230	J	
117-81-7	Bis(2-ethylhexyl)phthalate	310 ~~290~~	~~J B~~	U
117-84-0	Di-n-octylphthalate	310	~~U~~	UJ
205-99-2	Benzo(b)fluoranthene	240	~~J~~	J
207-08-9	Benzo(k)fluoranthene	150	J	
50-32-8	Benzo(a)pyrene	140	J	
193-39-5	Indeno(1,2,3-cd)pyrene	110	J	
53-70-3	Dibenzo(a,h)anthracene	36	~~J~~	J
191-24-2	Benzo(g,h,i)perylene	140	J	
58-90-2	2,3,4,6-Tetrachlorophenol	310	U	

[1] Cannot be separated from Diphenylamine

NN 8/27/13

EPA SAMPLE NO.
LMR13-74-048

15

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17054

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17054-15

Sample wt/vol: 29.7 (g/mL) g Lab File ID: ULKAU14.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 20 Decanted: (Y/N) Date Received: 06/18/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/26/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/29/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
100-52-7	Benzaldehyde	19	J
108-95-2	Phenol	220	U
111-44-4	Bis(2-chloroethyl)ether	220	U
95-57-8	2-Chlorophenol	220	U
95-48-7	2-Methylphenol	220	U
108-60-1	2,2'-Oxybis(1-chloropropane)	220	U
98-86-2	Acetophenone	220 ~~26~~ ~~J B~~	U
106-44-5	4-Methylphenol	220	U
621-64-7	N-Nitroso-di-n-propylamine	220	U
67-72-1	Hexachloroethane	220	U
98-95-3	Nitrobenzene	220	U
78-59-1	Isophorone	220	U
88-75-5	2-Nitrophenol	220	U
105-67-9	2,4-Dimethylphenol	220	U
111-91-1	Bis(2-chloroethoxy)methane	220	U
120-83-2	2,4-Dichlorophenol	220	U
91-20-3	Naphthalene	2.0	J
106-47-8	4-Chloroaniline	220	U
87-68-3	Hexachlorobutadiene	220	U
105-60-2	Caprolactam	220	U
59-50-7	4-Chloro-3-methylphenol	220	U
91-57-6	2-Methylnaphthalene	220	U
77-47-4	Hexachlorocyclopentadiene	220	U
88-06-2	2,4,6-Trichlorophenol	220	U
95-95-4	2,4,5-Trichlorophenol	220	U
92-52-4	1,1'-Biphenyl	220	U
91-58-7	2-Chloronaphthalene	220	U
88-74-4	2-Nitroaniline	420	U
131-11-3	Dimethylphthalate	220	U
606-20-2	2,6-Dinitrotoluene	220	U
208-96-8	Acenaphthylene	220	U
99-09-2	3-Nitroaniline	420	U
83-32-9	Acenaphthene	27	J

MW 8/27/13

EPA SAMPLE NO.
LMR13-74-048

15

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17054

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17054-15

Sample wt/vol: 29.7 (g/mL) g Lab File ID: ULKAU14.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 20 Decanted: (Y/N) Date Received: 06/18/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/26/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/29/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
51-28-5	2,4-Dinitrophenol	420	~~U~~	UJ
100-02-7	4-Nitrophenol	420	U	
132-64-9	Dibenzofuran	220	U	
121-14-2	2,4-Dinitrotoluene	220	U	
84-66-2	Diethylphthalate	220	U	
86-73-7	Fluorene	7.2	J	
7005-72-3	4-Chlorophenyl-phenylether	220	U	
100-01-6	4-Nitroaniline	420	U	
534-52-1	4,6-Dinitro-2-methylphenol	420	U	
86-30-6	N-Nitrosodiphenylamin [1]	220	U	
95-94-3	1,2,4,5-Tetrachlorobenzene	220	U	
101-55-3	4-Bromophenyl-phenylether	220	U	
118-74-1	Hexachlorobenzene	220	U	
1912-24-9	Atrazine	220	U	
87-86-5	Pentachlorophenol	420	~~U~~	UJ
85-01-8	Phenanthrene	67	J	
120-12-7	Anthracene	29	J	
86-74-8	Carbazole	220	U	
84-74-2	Di-n-butylphthalate	220 ~~7.6~~	~~J B~~	U
206-44-0	Fluoranthene	100	J	
129-00-0	Pyrene	130	J	
85-68-7	Butylbenzylphthalate	220 ~~13~~	~~J B~~	U
91-94-1	3,3'-Dichlorobenzidine	220	U	
56-55-3	Benzo(a)anthracene	40	J	
218-01-9	Chrysene	48	J	
117-81-7	Bis(2-ethylhexyl)phthalate	220 ~~43~~	~~J B~~	U
117-84-0	Di-n-octylphthalate	220	~~U~~	UJ
205-99-2	Benzo(b)fluoranthene	26	~~J~~	J
207-08-9	Benzo(k)fluoranthene	33	J	
50-32-8	Benzo(a)pyrene	36	J	
193-39-5	Indeno(1,2,3-cd)pyrene	19	J	
53-70-3	Dibenzo(a,h)anthracene	7.1	~~J~~	J
191-24-2	Benzo(g,h,i)perylene	26	J	
58-90-2	2,3,4,6-Tetrachlorophenol	220	U	

[1] Cannot be separated from Diphenylamine

NW 8/27/13

1D - FORM I SV-1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-74-072

16

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17054

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17054-16

Sample wt/vol: 29.3 (g/mL) g Lab File ID: ULKAU15.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 22 Decanted: (Y/N) Date Received: 06/18/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/26/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/29/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
100-52-7	Benzaldehyde	27	J	
108-95-2	Phenol	220	U	
111-44-4	Bis(2-chloroethyl)ether	220	U	
95-57-8	2-Chlorophenol	220	U	
95-48-7	2-Methylphenol	220	U	
108-60-1	2,2'-Oxybis(1-chloropropane)	220	U	
98-86-2	Acetophenone	220 ~~32~~	J B	u
106-44-5	4-Methylphenol	220	U	
621-64-7	N-Nitroso-di-n-propylamine	220	U	
67-72-1	Hexachloroethane	220	U	
98-95-3	Nitrobenzene	220	U	
78-59-1	Isophorone	220	U	
88-75-5	2-Nitrophenol	220	U	
105-67-9	2,4-Dimethylphenol	220	U	
111-91-1	Bis(2-chloroethoxy)methane	220	U	
120-83-2	2,4-Dichlorophenol	220	U	
91-20-3	Naphthalene	220	U	
106-47-8	4-Chloroaniline	220	~~U~~	R
87-68-3	Hexachlorobutadiene	220	U	
105-60-2	Caprolactam	220	U	
59-50-7	4-Chloro-3-methylphenol	220	U	
91-57-6	2-Methylnaphthalene	220	U	
77-47-4	Hexachlorocyclopentadiene	220	~~U~~	R
88-06-2	2,4,6-Trichlorophenol	220	U	
95-95-4	2,4,5-Trichlorophenol	220	U	
92-52-4	1,1'-Biphenyl	220	U	
91-58-7	2-Chloronaphthalene	220	U	
88-74-4	2-Nitroaniline	430	U	
131-11-3	Dimethylphthalate	220	U	
606-20-2	2,6-Dinitrotoluene	220	U	
208-96-8	Acenaphthylene	220	U	
99-09-2	3-Nitroaniline	430	U	
83-32-9	Acenaphthene	220	U	

MW 8/27/13

EPA SAMPLE NO.
LMR13-74-072

16

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17054

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17054-16

Sample wt/vol: 29.3 (g/mL) g Lab File ID: ULKAU15.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 22 Decanted: (Y/N) Date Received: 06/18/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/26/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/29/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
51-28-5	2,4-Dinitrophenol	430	~~U~~	UJ
100-02-7	4-Nitrophenol	430	U	
132-64-9	Dibenzofuran	220	U	
121-14-2	2,4-Dinitrotoluene	220	U	
84-66-2	Diethylphthalate	220	U	
86-73-7	Fluorene	220	U	
7005-72-3	4-Chlorophenyl-phenylether	220	U	
100-01-6	4-Nitroaniline	430	U	
534-52-1	4,6-Dinitro-2-methylphenol	430	U	
86-30-6	N-Nitrosodiphenylamin [1]	220	U	
95-94-3	1,2,4,5-Tetrachlorobenzene	220	U	
101-55-3	4-Bromophenyl-phenylether	220	U	
118-74-1	Hexachlorobenzene	220	U	
1912-24-9	Atrazine	220	U	
87-86-5	Pentachlorophenol	430	~~U~~	UJ
85-01-8	Phenanthrene	220	U	
120-12-7	Anthracene	220	U	
86-74-8	Carbazole	220	U	
84-74-2	Di-n-butylphthalate	220 ~~8.6~~	~~J B~~	U
206-44-0	Fluoranthene	220	U	
129-00-0	Pyrene	220	U	
85-68-7	Butylbenzylphthalate	220	U	
91-94-1	3,3'-Dichlorobenzidine	220	~~U~~	R
56-55-3	Benzo(a)anthracene	220	U	
218-01-9	Chrysene	220	U	
117-81-7	Bis(2-ethylhexyl)phthalate	220 ~~47~~	~~J B~~	U
117-84-0	Di-n-octylphthalate	220	~~U~~	UJ
205-99-2	Benzo(b)fluoranthene	220	~~U~~	UJ
207-08-9	Benzo(k)fluoranthene	220	U	
50-32-8	Benzo(a)pyrene	220	U	
193-39-5	Indeno(1,2,3-cd)pyrene	220	U	
53-70-3	Dibenzo(a,h)anthracene	220	~~U~~	UJ
191-24-2	Benzo(g,h,i)perylene	220	U	
58-90-2	2,3,4,6-Tetrachlorophenol	220	U	

[1] Cannot be separated from Diphenylamine

MW 8/27/13

1D - FORM I SV-1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-76-012

17

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678
Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17054
Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17054-17
Sample wt/vol: 29.2 (g/mL) g Lab File ID: ULKAU16.D
Level: (LOW/MED) LOW Extraction: (Type) SONC
% Moisture: 39 Decanted: (Y/N) Date Received: 06/18/2013
Concentrated Extract Volume: 500 (uL) Date Extracted: 06/26/2013
Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/29/2013
GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
100-52-7	Benzaldehyde	41	J	
108-95-2	Phenol	290	U	
111-44-4	Bis(2-chloroethyl)ether	290	U	
95-57-8	2-Chlorophenol	290	U	
95-48-7	2-Methylphenol	290	U	
108-60-1	2,2'-Oxybis(1-chloropropane)	290	U	
98-86-2	Acetophenone	290 ~~41~~	~~J B~~	U
106-44-5	4-Methylphenol	290	U	
621-64-7	N-Nitroso-di-n-propylamine	290	U	
67-72-1	Hexachloroethane	290	U	
98-95-3	Nitrobenzene	290	U	
78-59-1	Isophorone	290	U	
88-75-5	2-Nitrophenol	290	U	
105-67-9	2,4-Dimethylphenol	290	U	
111-91-1	Bis(2-chloroethoxy)methane	290	U	
120-83-2	2,4-Dichlorophenol	290	U	
91-20-3	Naphthalene	9.8	J	
106-47-8	4-Chloroaniline	290	~~U~~	R
87-68-3	Hexachlorobutadiene	290	U	
105-60-2	Caprolactam	290	U	
59-50-7	4-Chloro-3-methylphenol	290	U	
91-57-6	2-Methylnaphthalene	290	U	
77-47-4	Hexachlorocyclopentadiene	290	~~U~~	R
88-06-2	2,4,6-Trichlorophenol	290	U	
95-95-4	2,4,5-Trichlorophenol	290	U	
92-52-4	1,1'-Biphenyl	290	U	
91-58-7	2-Chloronaphthalene	290	U	
88-74-4	2-Nitroaniline	560	U	
131-11-3	Dimethylphthalate	290	U	
606-20-2	2,6-Dinitrotoluene	290	U	
208-96-8	Acenaphthylene	290	U	
99-09-2	3-Nitroaniline	560	U	
83-32-9	Acenaphthene	49	J	

NW 8/27/13

EPA SAMPLE NO.
LMR13-76-012

17

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17054

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17054-17

Sample wt/vol: 29.2 (g/mL) g Lab File ID: ULKAU16.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 39 Decanted: (Y/N) Date Received: 06/18/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/26/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/29/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
51-28-5	2,4-Dinitrophenol	560	~~U~~	UJ
100-02-7	4-Nitrophenol	560	U	
132-64-9	Dibenzofuran	20	J	
121-14-2	2,4-Dinitrotoluene	290	U	
84-66-2	Diethylphthalate	290	U	
86-73-7	Fluorene	49	J	
7005-72-3	4-Chlorophenyl-phenylether	290	U	
100-01-6	4-Nitroaniline	560	U	
534-52-1	4,6-Dinitro-2-methylphenol	560	U	
86-30-6	N-Nitrosodiphenylamin [1]	290	U	
95-94-3	1,2,4,5-Tetrachlorobenzene	290	U	
101-55-3	4-Bromophenyl-phenylether	290	U	
118-74-1	Hexachlorobenzene	290	U	
1912-24-9	Atrazine	290	U	
87-86-5	Pentachlorophenol	560	~~U~~	UJ
85-01-8	Phenanthrene	120	J	
120-12-7	Anthracene	46	J	
86-74-8	Carbazole	6.1	J	
84-74-2	Di-n-butylphthalate	290 ~~11~~	~~J B~~	U
206-44-0	Fluoranthene	460		
129-00-0	Pyrene	560		
85-68-7	Butylbenzylphthalate	290 ~~34~~	~~J B~~	U
91-94-1	3,3'-Dichlorobenzidine	290	~~U~~	R
56-55-3	Benzo(a)anthracene	210	J	
218-01-9	Chrysene	280	J	
117-81-7	Bis(2-ethylhexyl)phthalate	1300	~~B~~	
117-84-0	Di-n-octylphthalate	290	~~U~~	UJ
205-99-2	Benzo(b)fluoranthene	220	~~J~~	J
207-08-9	Benzo(k)fluoranthene	190	J	
50-32-8	Benzo(a)pyrene	140	J	
193-39-5	Indeno(1,2,3-cd)pyrene	110	J	
53-70-3	Dibenzo(a,h)anthracene	36	~~J~~	J
191-24-2	Benzo(g,h,i)perylene	140	J	
58-90-2	2,3,4,6-Tetrachlorophenol	290	U	

[1] Cannot be separated from Diphenylamine

NW 8/27/13

1D - FORM I SV-1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-76-024

18

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17054

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17054-18

Sample wt/vol: 29.3 (g/mL) g Lab File ID: ULKAX03.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 21 Decanted: (Y/N) Date Received: 06/18/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/26/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/30/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
100-52-7	Benzaldehyde	24	J
108-95-2	Phenol	220	U
111-44-4	Bis(2-chloroethyl)ether	220	U
95-57-8	2-Chlorophenol	220	U
95-48-7	2-Methylphenol	220	U
108-60-1	2,2'-Oxybis(1-chloropropane)	220	U
98-86-2	Acetophenone	220 ~~30~~	~~J B~~ U
106-44-5	4-Methylphenol	220	U
621-64-7	N-Nitroso-di-n-propylamine	220	U
67-72-1	Hexachloroethane	220	U
98-95-3	Nitrobenzene	220	U
78-59-1	Isophorone	220	U
88-75-5	2-Nitrophenol	220	U
105-67-9	2,4-Dimethylphenol	220	U
111-91-1	Bis(2-chloroethoxy)methane	220	U
120-83-2	2,4-Dichlorophenol	220	U
91-20-3	Naphthalene	7.5	J
106-47-8	4-Chloroaniline	220	U
87-68-3	Hexachlorobutadiene	220	U
105-60-2	Caprolactam	220	U
59-50-7	4-Chloro-3-methylphenol	220	U
91-57-6	2-Methylnaphthalene	220	U
77-47-4	Hexachlorocyclopentadiene	220	~~U~~ UJ
88-06-2	2,4,6-Trichlorophenol	220	U
95-95-4	2,4,5-Trichlorophenol	220	U
92-52-4	1,1'-Biphenyl	220	U
91-58-7	2-Chloronaphthalene	220	U
88-74-4	2-Nitroaniline	430	U
131-11-3	Dimethylphthalate	220	U
606-20-2	2,6-Dinitrotoluene	220	U
208-96-8	Acenaphthylene	220	U
99-09-2	3-Nitroaniline	430	U
83-32-9	Acenaphthene	68	J

NW 8/27/13

EPA SAMPLE NO.
LMR13-76-024

18

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17054

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17054-18

Sample wt/vol: 29.3 (g/mL) g Lab File ID: ULKAX03.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 21 Decanted: (Y/N) Date Received: 06/18/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/26/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/30/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
51-28-5	2,4-Dinitrophenol	430	U	
100-02-7	4-Nitrophenol	430	U	
132-64-9	Dibenzofuran	11	J	
121-14-2	2,4-Dinitrotoluene	220	U	
84-66-2	Diethylphthalate	220	U	
86-73-7	Fluorene	38	J	
7005-72-3	4-Chlorophenyl-phenylether	220	U	
100-01-6	4-Nitroaniline	430	U	
534-52-1	4,6-Dinitro-2-methylphenol	430	U	
86-30-6	N-Nitrosodiphenylamin [1]	220	U	
95-94-3	1,2,4,5-Tetrachlorobenzene	220	U	
101-55-3	4-Bromophenyl-phenylether	220	U	
118-74-1	Hexachlorobenzene	220	U	
1912-24-9	Atrazine	220	U	
87-86-5	Pentachlorophenol	430	~~U~~	UJ
85-01-8	Phenanthrene	220		
120-12-7	Anthracene	63	J	
86-74-8	Carbazole	220	U	
84-74-2	Di-n-butylphthalate	220 ~~9.5~~ ~~J B~~		U
206-44-0	Fluoranthene	400		
129-00-0	Pyrene	420		
85-68-7	Butylbenzylphthalate	220 ~~17~~ ~~J B~~		U
91-94-1	3,3'-Dichlorobenzidine	220	U	
56-55-3	Benzo(a)anthracene	180	J	
218-01-9	Chrysene	250		
117-81-7	Bis(2-ethylhexyl)phthalate	250	~~B~~	
117-84-0	Di-n-octylphthalate	10	~~J~~	J
205-99-2	Benzo(b)fluoranthene	130	~~J~~	J
207-08-9	Benzo(k)fluoranthene	160	J	
50-32-8	Benzo(a)pyrene	110	J	
193-39-5	Indeno(1,2,3-cd)pyrene	62	~~J~~	J
53-70-3	Dibenzo(a,h)anthracene	29	~~J~~	J
191-24-2	Benzo(g,h,i)perylene	74	~~J~~	J
58-90-2	2,3,4,6-Tetrachlorophenol	220	U	

[1] Cannot be separated from Diphenylamine

MW 8/27/13

EPA SAMPLE NO.
LMR13-35-012

19

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17054

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17054-19

Sample wt/vol: 29.8 (g/mL) g Lab File ID: ULKAX04.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 45 Decanted: (Y/N) Date Received: 06/18/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/26/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/30/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
100-52-7	Benzaldehyde	56	J	
108-95-2	Phenol	310	U	
111-44-4	Bis(2-chloroethyl)ether	310	U	
95-57-8	2-Chlorophenol	310	U	
95-48-7	2-Methylphenol	310	U	
108-60-1	2,2'-Oxybis(1-chloropropane)	310	U	
98-86-2	Acetophenone	30 ~~47~~	~~J B~~	U
106-44-5	4-Methylphenol	310	U	
621-64-7	N-Nitroso-di-n-propylamine	310	U	
67-72-1	Hexachloroethane	310	U	
98-95-3	Nitrobenzene	310	U	
78-59-1	Isophorone	310	U	
88-75-5	2-Nitrophenol	310	U	
105-67-9	2,4-Dimethylphenol	310	U	
111-91-1	Bis(2-chloroethoxy)methane	310	U	
120-83-2	2,4-Dichlorophenol	310	U	
91-20-3	Naphthalene	31	J	
106-47-8	4-Chloroaniline	310	~~U~~	R
87-68-3	Hexachlorobutadiene	310	U	
105-60-2	Caprolactam	310	U	
59-50-7	4-Chloro-3-methylphenol	310	U	
91-57-6	2-Methylnaphthalene	14	J	
77-47-4	Hexachlorocyclopentadiene	310	~~U~~	R
88-06-2	2,4,6-Trichlorophenol	310	U	
95-95-4	2,4,5-Trichlorophenol	310	U	
92-52-4	1,1'-Biphenyl	310	U	
91-58-7	2-Chloronaphthalene	310	U	
88-74-4	2-Nitroaniline	610	U	
131-11-3	Dimethylphthalate	310	U	
606-20-2	2,6-Dinitrotoluene	310	U	
208-96-8	Acenaphthylene	24	J	
99-09-2	3-Nitroaniline	610	U	
83-32-9	Acenaphthene	42	J	

NW 8/27/13

1E - FORM I SV-2
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-35-012

19

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17054

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17054-19

Sample wt/vol: 29.8 (g/mL) g Lab File ID: ULKAX04.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 45 Decanted: (Y/N) Date Received: 06/18/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/26/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/30/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
51-28-5	2,4-Dinitrophenol	610	U	
100-02-7	4-Nitrophenol	610	U	
132-64-9	Dibenzofuran	25	J	
121-14-2	2,4-Dinitrotoluene	310	U	
84-66-2	Diethylphthalate	310	U	
86-73-7	Fluorene	48	J	
7005-72-3	4-Chlorophenyl-phenylether	310	U	
100-01-6	4-Nitroaniline	610	U	
534-52-1	4,6-Dinitro-2-methylphenol	610	U	
86-30-6	N-Nitrosodiphenylamin [1]	310	U	
95-94-3	1,2,4,5-Tetrachlorobenzene	310	U	
101-55-3	4-Bromophenyl-phenylether	310	U	
118-74-1	Hexachlorobenzene	310	U	
1912-24-9	Atrazine	310	U	
87-86-5	Pentachlorophenol	610	~~U~~	UJ
85-01-8	Phenanthrene	260	J	
120-12-7	Anthracene	74	J	
86-74-8	Carbazole	310	U	
84-74-2	Di-n-butylphthalate	310 ~~23~~	~~J B~~	U
206-44-0	Fluoranthene	740		
129-00-0	Pyrene	600		
85-68-7	Butylbenzylphthalate	310 ~~37~~	~~J B~~	U
91-94-1	3,3'-Dichlorobenzidine	310	~~U~~	R
56-55-3	Benzo(a)anthracene	370		
218-01-9	Chrysene	490		
117-81-7	Bis(2-ethylhexyl)phthalate	680	~~B~~	
117-84-0	Di-n-octylphthalate	310	~~U~~	UJ
205-99-2	Benzo(b)fluoranthene	440		J
207-08-9	Benzo(k)fluoranthene	380		
50-32-8	Benzo(a)pyrene	320		
193-39-5	Indeno(1,2,3-cd)pyrene	250	~~J~~	J
53-70-3	Dibenzo(a,h)anthracene	94	~~J~~	J
191-24-2	Benzo(g,h,i)perylene	330		J
58-90-2	2,3,4,6-Tetrachlorophenol	310	U	

[1] Cannot be separated from Diphenylamine

MN 8/27/13

1D - FORM I SV-1

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-35-024

20

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17054

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17054-20

Sample wt/vol: 29.6 (g/mL) g Lab File ID: ULKAX05.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 39 Decanted: (Y/N) Date Received: 06/18/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/26/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/30/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
100-52-7	Benzaldehyde	46	J
108-95-2	Phenol	280	U
111-44-4	Bis(2-chloroethyl)ether	280	U
95-57-8	2-Chlorophenol	280	U
95-48-7	2-Methylphenol	280	U
108-60-1	2,2'-Oxybis(1-chloropropane)	280	U
98-86-2	Acetophenone	280 ~~45~~	~~J B~~ U
106-44-5	4-Methylphenol	280	U
621-64-7	N-Nitroso-di-n-propylamine	280	U
67-72-1	Hexachloroethane	280	U
98-95-3	Nitrobenzene	280	U
78-59-1	Isophorone	280	U
88-75-5	2-Nitrophenol	280	U
105-67-9	2,4-Dimethylphenol	280	U
111-91-1	Bis(2-chloroethoxy)methane	280	U
120-83-2	2,4-Dichlorophenol	280	U
91-20-3	Naphthalene	120	J
106-47-8	4-Chloroaniline	280	U
87-68-3	Hexachlorobutadiene	280	U
105-60-2	Caprolactam	280	U
59-50-7	4-Chloro-3-methylphenol	280	U
91-57-6	2-Methylnaphthalene	35	J
77-47-4	Hexachlorocyclopentadiene	280	~~U~~ UJ
88-06-2	2,4,6-Trichlorophenol	280	U
95-95-4	2,4,5-Trichlorophenol	280	U
92-52-4	1,1'-Biphenyl	280	U
91-58-7	2-Chloronaphthalene	280	U
88-74-4	2-Nitroaniline	550	U
131-11-3	Dimethylphthalate	280	U
606-20-2	2,6-Dinitrotoluene	280	U
208-96-8	Acenaphthylene	73	J
99-09-2	3-Nitroaniline	550	U
83-32-9	Acenaphthene	200	J

NW 8/27/13

EPA SAMPLE NO.
LMR13-35-024

20

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17054

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17054-20

Sample wt/vol: 29.6 (g/mL) g Lab File ID: ULKAX05.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 39 Decanted: (Y/N) Date Received: 06/18/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/26/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/30/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
51-28-5	2,4-Dinitrophenol	550	U	
100-02-7	4-Nitrophenol	550	U	
132-64-9	Dibenzofuran	42	J	
121-14-2	2,4-Dinitrotoluene	280	U	
84-66-2	Diethylphthalate	280	U	
86-73-7	Fluorene	110	J	
7005-72-3	4-Chlorophenyl-phenylether	280	U	
100-01-6	4-Nitroaniline	550	U	
534-52-1	4,6-Dinitro-2-methylphenol	550	U	
86-30-6	N-Nitrosodiphenylamin [1]	280	U	
95-94-3	1,2,4,5-Tetrachlorobenzene	280	U	
101-55-3	4-Bromophenyl-phenylether	280	U	
118-74-1	Hexachlorobenzene	280	U	
1912-24-9	Atrazine	280	U	
87-86-5	Pentachlorophenol	550	~~U~~	UJ
85-01-8	Phenanthrene	850		
120-12-7	Anthracene	170	J	
86-74-8	Carbazole	280	U	
84-74-2	Di-n-butylphthalate	280	U	
206-44-0	Fluoranthene	1700		
129-00-0	Pyrene	2000		
85-68-7	Butylbenzylphthalate	280	U	
91-94-1	3,3'-Dichlorobenzidine	280	U	
56-55-3	Benzo(a)anthracene	1000		
218-01-9	Chrysene	1100		
117-81-7	Bis(2-ethylhexyl)phthalate	2500	~~U~~	
117-84-0	Di-n-octylphthalate	280	~~U~~	UJ
205-99-2	Benzo(b)fluoranthene	940		J
207-08-9	Benzo(k)fluoranthene	610		
50-32-8	Benzo(a)pyrene	810		
193-39-5	Indeno(1,2,3-cd)pyrene	530		J
53-70-3	Dibenzo(a,h)anthracene	220	~~J~~	J
191-24-2	Benzo(g,h,i)perylene	660		J
58-90-2	2,3,4,6-Tetrachlorophenol	280	U	

[1] Cannot be separated from Diphenylamine

NW 8/27/13

EPA SAMPLE NO.
LMR13-75-024 FD

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678 21

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17054

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17054-21

Sample wt/vol: 29.4 (g/mL) g Lab File ID: ULKAX06.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 16 Decanted: (Y/N) Date Received: 06/18/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/26/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/30/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
100-52-7	Benzaldehyde	19	J	
108-95-2	Phenol	210	U	
111-44-4	Bis(2-chloroethyl)ether	210	U	
95-57-8	2-Chlorophenol	210	U	
95-48-7	2-Methylphenol	210	U	
108-60-1	2,2'-Oxybis(1-chloropropane)	210	U	
98-86-2	Acetophenone	210 ~~23~~	~~J B~~	U
106-44-5	4-Methylphenol	210	U	
621-64-7	N-Nitroso-di-n-propylamine	210	U	
67-72-1	Hexachloroethane	210	U	
98-95-3	Nitrobenzene	210	U	
78-59-1	Isophorone	210	U	
88-75-5	2-Nitrophenol	210	U	
105-67-9	2,4-Dimethylphenol	210	U	
111-91-1	Bis(2-chloroethoxy)methane	210	U	
120-83-2	2,4-Dichlorophenol	210	U	
91-20-3	Naphthalene	210	U	
106-47-8	4-Chloroaniline	210	~~U~~	R
87-68-3	Hexachlorobutadiene	210	U	
105-60-2	Caprolactam	210	U	
59-50-7	4-Chloro-3-methylphenol	210	U	
91-57-6	2-Methylnaphthalene	210	U	
77-47-4	Hexachlorocyclopentadiene	210	~~U~~	R
88-06-2	2,4,6-Trichlorophenol	210	U	
95-95-4	2,4,5-Trichlorophenol	210	U	
92-52-4	1,1'-Biphenyl	210	U	
91-58-7	2-Chloronaphthalene	210	U	
88-74-4	2-Nitroaniline	400	U	
131-11-3	Dimethylphthalate	210	U	
606-20-2	2,6-Dinitrotoluene	210	U	
208-96-8	Acenaphthylene	210	U	
99-09-2	3-Nitroaniline	400	U	
83-32-9	Acenaphthene	210	U	

NW 8/27/13

EPA SAMPLE NO.
LMR13-75-024 FD

21

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17054

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17054-21

Sample wt/vol: 29.4 (g/mL) g Lab File ID: ULKAX06.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 16 Decanted: (Y/N) Date Received: 06/18/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/26/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/30/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
51-28-5	2,4-Dinitrophenol	400	U	
100-02-7	4-Nitrophenol	400	U	
132-64-9	Dibenzofuran	210	U	
121-14-2	2,4-Dinitrotoluene	210	U	
84-66-2	Diethylphthalate	210	U	
86-73-7	Fluorene	210	U	
7005-72-3	4-Chlorophenyl-phenylether	210	U	
100-01-6	4-Nitroaniline	400	U	
534-52-1	4,6-Dinitro-2-methylphenol	400	U	
86-30-6	N-Nitrosodiphenylamin [1]	210	U	
95-94-3	1,2,4,5-Tetrachlorobenzene	210	U	
101-55-3	4-Bromophenyl-phenylether	210	U	
118-74-1	Hexachlorobenzene	210	U	
1912-24-9	Atrazine	210	U	
87-86-5	Pentachlorophenol	400	~~U~~	UJ
85-01-8	Phenanthrene	210	U	
120-12-7	Anthracene	210	U	
86-74-8	Carbazole	210	U	
84-74-2	Di-n-butylphthalate	210 ~~17~~	~~J B~~	U
206-44-0	Fluoranthene	5.3	J	
129-00-0	Pyrene	7.2	J	
85-68-7	Butylbenzylphthalate	210 ~~92~~	~~J B~~	U
91-94-1	3,3'-Dichlorobenzidine	210	~~U~~	R
56-55-3	Benzo(a)anthracene	210	U	
218-01-9	Chrysene	10	J	
117-81-7	Bis(2-ethylhexyl)phthalate	280	~~B~~	
117-84-0	Di-n-octylphthalate	210	~~U~~	UJ
205-99-2	Benzo(b)fluoranthene	210	~~U~~	UJ
207-08-9	Benzo(k)fluoranthene	210	U	
50-32-8	Benzo(a)pyrene	210	U	
193-39-5	Indeno(1,2,3-cd)pyrene	210	~~U~~	UJ
53-70-3	Dibenzo(a,h)anthracene	210	~~U~~	UJ
191-24-2	Benzo(g,h,i)perylene	210	~~U~~	UJ
58-90-2	2,3,4,6-Tetrachlorophenol	210	U	

[1] Cannot be separated from Diphenylamine

NW 8/27/13

1F - FORM I SV-SIM

SEMIVOLATILE SIM ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-75-012

13

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: 1734.2 SDG No.: 17054

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17054-13

Sample wt/vol: 29.4 (g/mL) g Lab File ID: HQISJ06.D

Extraction: (Type) SONC

% Moisture: 20 Decanted: (Y/N) Date Received: 06/18/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/26/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/29/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
91-20-3	Naphthalene	4.2 ~~1.7~~	~~J B~~	u
90-12-0	1-Methylnaphthalene	~~0.80~~	~~J B~~	
91-57-6	2-Methylnaphthalene	~~0.96~~	~~J B~~	
208-96-8	Acenaphthylene	1.3	J	
83-32-9	Acenaphthene	7.1		
86-73-7	Fluorene	4.2 ~~2.6~~	~~J B~~	u
85-01-8	Phenanthrene	23	~~B~~	
120-12-7	Anthracene	17	~~B~~	
206-44-0	Fluoranthene	60 ~~51~~	~~E B~~	
129-00-0	Pyrene	46 ~~54~~	~~E~~	
56-55-3	Benzo(a)anthracene	29	~~B~~	
218-01-9	Chrysene	27	~~B~~	
205-99-2	Benzo(b)fluoranthene	18	~~B~~	
207-08-9	Benzo(k)fluoranthene	17	~~B~~	
192-97-2	Benzo(e)pyrene	12	~~B~~	
50-32-8	Benzo(a)pyrene	22	~~B~~	
198-55-0	Perylene	140 ~~210~~	~~E~~	
193-39-5	Indeno(1,2,3-cd)pyrene	9.7	~~B~~	
53-70-3	Dibenzo(a,h)anthracene	3.8	J	
191-24-2	Benzo(g,h,i)perylene	9.1	~~B~~	
C1NAPH	C1-Naphthalenes	1.2	J	
C2NAPH	C2-Naphthalenes	5.6	J	
C3NAPH	C3-Naphthalenes	20	J	
C4NAPH	C4-Naphthalenes	34	J	
C1FLUOR	C1 Fluorenes	6.6	J	
C2FLUOR	C2 Fluorenes	6.8	J	
C3FLUOR	C3 Fluorenes	6.2	J	
C1PHAN	C1-Phenanthrenes/Anthracenes	72	J	
C2PHAN	C2-Phenanthrenes/Anthracenes	40	J	
C3PHAN	C3-Phenanthrenes/Anthracenes	35	J	
C4PHAN	C4-Phenanthrenes/Anthracenes	23	J	
C1FLPY	C1-Fluoranthenes/Pyrenes	59	J	
C2FLPY	C2-Fluoranthenes/Pyrenes	31	J	
C3FLPY	C3-Fluoranthenes/Pyrenes	17	J	
C1CHRYS	C1 Chrysenes	30	J	
C2CHRYS	C2 Chrysenes	31	J	
C3CHRYS	C3 Chrysenes	15	J	
C4CHRYS	C4 Chrysenes	5.0	J	

NW 8/27/13

1F - FORM I SV-SIM

SEMIVOLATILE SIM ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-75-012

13

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: 1734.2 SDG No.: 17054

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17054-13

Sample wt/vol: 29.4 (g/mL) g Lab File ID: HQISJ06.D

Extraction: (Type) SONC

% Moisture: 20 Decanted: (Y/N) Date Received: 06/18/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/26/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/29/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
TPPAH	Total 16 PPAH	290	~~B~~ J
TPAH	Total PAH	950	~~B~~ J

NW 8/27/13

1F - FORM I SV-SIM

SEMIVOLATILE SIM ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-75-012DL

13DL

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: 1734.2 SDG No.: 17054

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17054-13

Sample wt/vol: 29.4 (g/mL) g Lab File ID: HQISQ11.D

Extraction: (Type) SONC

% Moisture: 20 Decanted: (Y/N) Date Received: 06/18/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/26/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/31/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 8.3

use original results

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
91-20-3	Naphthalene	35 ~~1.6~~	~~J D B~~ U
90-12-0	1-Methylnaphthalene	35	U
91-57-6	2-Methylnaphthalene	35	U
208-96-8	Acenaphthylene	1.3	J D
83-32-9	Acenaphthene	7.2	J D
86-73-7	Fluorene	35 ~~3.5~~	~~J D B~~ U
85-01-8	Phenanthrene	~~23~~	~~J D B~~ U
120-12-7	Anthracene	~~18~~	~~J D B~~ U
206-44-0	Fluoranthene	60	D ~~B~~
129-00-0	Pyrene	46	D
56-55-3	Benzo(a)anthracene	35 ~~26~~	~~J D B~~ U
218-01-9	Chrysene	~~26~~	~~J D B~~
205-99-2	Benzo(b)fluoranthene	~~10~~	~~J D B~~
207-08-9	Benzo(k)fluoranthene	~~15~~	~~J D B~~
192-97-2	Benzo(e)pyrene	~~8.1~~	~~J D B~~
50-32-8	Benzo(a)pyrene	~~15~~	~~J D B~~
198-55-0	Perylene	140	D
193-39-5	Indeno(1,2,3-cd)pyrene	35 ~~6.0~~	~~J D B~~ U
53-70-3	Dibenzo(a,h)anthracene	2.1	J ~~D~~
191-24-2	Benzo(g,h,i)perylene	35 ~~6.0~~	~~J D B~~ U
C1NAPH	C1-Naphthalenes	35	U
C2NAPH	C2-Naphthalenes	5.8	J D
C3NAPH	C3-Naphthalenes	21	J D
C4NAPH	C4-Naphthalenes	32	J D
C1FLUOR	C1 Fluorenes	5.9	J D
C2FLUOR	C2 Fluorenes	6.4	J D
C3FLUOR	C3 Fluorenes	7.1	J D
C1PHAN	C1-Phenanthrenes/Anthracenes	78	D
C2PHAN	C2-Phenanthrenes/Anthracenes	45	D
C3PHAN	C3-Phenanthrenes/Anthracenes	37	D
C4PHAN	C4-Phenanthrenes/Anthracenes	20	J ~~D~~
C1FLPY	C1-Fluoranthenes/Pyrenes	48	~~D~~
C2FLPY	C2-Fluoranthenes/Pyrenes	29	J D
C3FLPY	C3-Fluoranthenes/Pyrenes	15	J D
C1CHRYS	C1 Chrysenes	27	J D
C2CHRYS	C2 Chrysenes	21	J D
C3CHRYS	C3 Chrysenes	12	J D
C4CHRYS	C4 Chrysenes	35	U

MW 8/27/13

1F - FORM I SV-SIM

SEMIVOLATILE SIM ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-75-012DL

13DL

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: 1734.2 SDG No.: 17054

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17054-13

Sample wt/vol: 29.4 (g/mL) g Lab File ID: HQISQ11.D

Extraction: (Type) SONC

% Moisture: 20 Decanted: (Y/N) Date Received: 06/18/2013

Use original results

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/26/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/31/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 8.3

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
TPPAH	Total 16 PPAH	270	~~D~~ B	J
TPAH	Total PAH	830	~~D~~ B	J

NW 8/27/13

1F - FORM I SV-SIM
SEMIVOLATILE SIM ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-74-012

14

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: 1734.2 SDG No.: 17054

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17054-14

Sample wt/vol: 29.6 (g/mL) g Lab File ID: HQISQ12.D

Extraction: (Type) SONC

% Moisture: 45 Decanted: (Y/N) Date Received: 06/18/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/26/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/31/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 10.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
91-20-3	Naphthalene	61 14	~~J B~~ U
90-12-0	1-Methylnaphthalene	4.5	~~J B~~ ↓
91-57-6	2-Methylnaphthalene	↓ 6.7	~~J B~~
208-96-8	Acenaphthylene	6.3	J
83-32-9	Acenaphthene	22	J
86-73-7	Fluorene	61 31	~~J B~~ U
85-01-8	Phenanthrene	96	~~B~~
120-12-7	Anthracene	61 34	~~J B~~ U
206-44-0	Fluoranthene	320	~~B~~
129-00-0	Pyrene	290	
56-55-3	Benzo(a)anthracene	140	~~B~~
218-01-9	Chrysene	200	~~B~~
205-99-2	Benzo(b)fluoranthene	150	~~B~~
207-08-9	Benzo(k)fluoranthene	160	~~B~~
192-97-2	Benzo(e)pyrene	110	~~B~~
50-32-8	Benzo(a)pyrene	140	~~B~~
198-55-0	Perylene	350	
193-39-5	Indeno(1,2,3-cd)pyrene	100	~~B~~
53-70-3	Dibenzo(a,h)anthracene	32	J
191-24-2	Benzo(g,h,i)perylene	100	~~B~~
C1NAPH	C1-Naphthalenes	7.7	J
C2NAPH	C2-Naphthalenes	37	J
C3NAPH	C3-Naphthalenes	63	J
C4NAPH	C4-Naphthalenes	54	J
C1FLUOR	C1 Fluorenes	7.6	J
C2FLUOR	C2 Fluorenes	13	J
C3FLUOR	C3 Fluorenes	25	J
C1PHAN	C1-Phenanthrenes/Anthracenes	92	J
C2PHAN	C2-Phenanthrenes/Anthracenes	79	J
C3PHAN	C3-Phenanthrenes/Anthracenes	94	J
C4PHAN	C4-Phenanthrenes/Anthracenes	53	J
C1FLPY	C1-Fluoranthenes/Pyrenes	180	J
C2FLPY	C2-Fluoranthenes/Pyrenes	110	J
C3FLPY	C3-Fluoranthenes/Pyrenes	63	J
C1CHRYS	C1 Chrysenes	120	J
C2CHRYS	C2 Chrysenes	80	J
C3CHRYS	C3 Chrysenes	33	J
C4CHRYS	C4 Chrysenes	12	J

NW 8/27/13

1F - FORM I SV-SIM

SEMIVOLATILE SIM ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-74-012

14

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: 1734.2 SDG No.: 17054

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17054-14

Sample wt/vol: 29.6 (g/mL) g Lab File ID: HQISQ12.D

Extraction: (Type) SONC

% Moisture: 45 Decanted: (Y/N) Date Received: 06/18/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/26/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/31/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 10.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
TPPAH	Total 16 PPAH	1800	B	J
TPAH	Total PAH	3400	B	J

MW 8/27/13

1F - FORM I SV-SIM
SEMIVOLATILE SIM ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-76-012

17

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: 1734.2 SDG No.: 17054

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17054-17

Sample wt/vol: 29.2 (g/mL) g Lab File ID: HQISQ13.D

Extraction: (Type) SONC

% Moisture: 39 Decanted: (Y/N) Date Received: 06/18/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/26/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/31/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 8.3

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
91-20-3	Naphthalene	46 ~~8.9~~	~~J B~~ U
90-12-0	1-Methylnaphthalene	~~4.7~~	~~J B~~ ↓
91-57-6	2-Methylnaphthalene	~~6.9~~	~~J B~~ ↓
208-96-8	Acenaphthylene	6.8	J
83-32-9	Acenaphthene	44	J
86-73-7	Fluorene	59	~~B~~
85-01-8	Phenanthrene	140	~~B~~
120-12-7	Anthracene	58	~~B~~
206-44-0	Fluoranthene	470	~~J B~~ J
129-00-0	Pyrene	390	
56-55-3	Benzo(a)anthracene	190	~~B~~
218-01-9	Chrysene	230	~~B~~
205-99-2	Benzo(b)fluoranthene	160	~~B~~
207-08-9	Benzo(k)fluoranthene	160	~~B~~
192-97-2	Benzo(e)pyrene	110	~~B~~
50-32-8	Benzo(a)pyrene	130	~~B~~
198-55-0	Perylene	340	
193-39-5	Indeno(1,2,3-cd)pyrene	82	~~J~~
53-70-3	Dibenzo(a,h)anthracene	28	J
191-24-2	Benzo(g,h,i)perylene	82	~~J~~
C1NAPH	C1-Naphthalenes	7.7	J
C2NAPH	C2-Naphthalenes	46	J
C3NAPH	C3-Naphthalenes	100	J
C4NAPH	C4-Naphthalenes	88	J
C1FLUOR	C1 Fluorenes	15	J
C2FLUOR	C2 Fluorenes	23	J
C3FLUOR	C3 Fluorenes	36	J
C1PHAN	C1-Phenanthrenes/Anthracenes	180	J
C2PHAN	C2-Phenanthrenes/Anthracenes	130	J
C3PHAN	C3-Phenanthrenes/Anthracenes	130	J
C4PHAN	C4-Phenanthrenes/Anthracenes	69	J
C1FLPY	C1-Fluoranthenes/Pyrenes	260	J
C2FLPY	C2-Fluoranthenes/Pyrenes	150	J
C3FLPY	C3-Fluoranthenes/Pyrenes	75	J
C1CHRYS	C1 Chrysenes	150	J
C2CHRYS	C2 Chrysenes	100	J
C3CHRYS	C3 Chrysenes	35	J
C4CHRYS	C4 Chrysenes	14	J

NW 8/27/13

1F - FORM I SV-SIM

SEMIVOLATILE SIM ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-76-012

17

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: 1734.2 SDG No.: 17054

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17054-17

Sample wt/vol: 29.2 (g/mL) g Lab File ID: HQISQ13.D

Extraction: (Type) SONC

% Moisture: 39 Decanted: (Y/N) Date Received: 06/18/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/26/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/31/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 8.3

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
TPPAH	Total 16 PPAH	2200	~~B~~ J	
TPAH	Total PAH	4300	~~B~~ J	

MW 8/27/13

1F - FORM I SV-SIM
SEMIVOLATILE SIM ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-35-012

19

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: 1734.2 SDG No.: 17054

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17054-19

Sample wt/vol: 29.8 (g/mL) g Lab File ID: HQISQ14.D

Extraction: (Type) SONC

% Moisture: 45 Decanted: (Y/N) Date Received: 06/18/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/26/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/31/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 10.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
91-20-3	Naphthalene	61 ~~30~~	~~J B~~ U
90-12-0	1-Methylnaphthalene	↓ ~~8.2~~	~~J B~~ ↓
91-57-6	2-Methylnaphthalene	↓ ~~13~~	~~J B~~
208-96-8	Acenaphthylene	17	J
83-32-9	Acenaphthene	38	J
86-73-7	Fluorene	61 ~~59~~	~~J B~~ U
85-01-8	Phenanthrene	220	~~B~~
120-12-7	Anthracene	72	~~B~~
206-44-0	Fluoranthene	530	~~B~~
129-00-0	Pyrene	450	
56-55-3	Benzo(a)anthracene	300	~~B~~
218-01-9	Chrysene	410	~~B~~
205-99-2	Benzo(b)fluoranthene	300	~~B~~
207-08-9	Benzo(k)fluoranthene	300	~~B~~
192-97-2	Benzo(e)pyrene	220	~~B~~
50-32-8	Benzo(a)pyrene	270	~~B~~
198-55-0	Perylene	510	
193-39-5	Indeno(1,2,3-cd)pyrene	200	~~B~~
53-70-3	Dibenzo(a,h)anthracene	69	
191-24-2	Benzo(g,h,i)perylene	190	~~B~~
C1NAPH	C1-Naphthalenes	15	J
C2NAPH	C2-Naphthalenes	72	J
C3NAPH	C3-Naphthalenes	120	J
C4NAPH	C4-Naphthalenes	99	J
C1FLUOR	C1 Fluorenes	14	J
C2FLUOR	C2 Fluorenes	25	J
C3FLUOR	C3 Fluorenes	31	J
C1PHAN	C1-Phenanthrenes/Anthracenes	180	J
C2PHAN	C2-Phenanthrenes/Anthracenes	150	J
C3PHAN	C3-Phenanthrenes/Anthracenes	170	J
C4PHAN	C4-Phenanthrenes/Anthracenes	110	J
C1FLPY	C1-Fluoranthenes/Pyrenes	330	J
C2FLPY	C2-Fluoranthenes/Pyrenes	220	J
C3FLPY	C3-Fluoranthenes/Pyrenes	120	J
C1CHRYS	C1 Chrysenes	250	J
C2CHRYS	C2 Chrysenes	170	J
C3CHRYS	C3 Chrysenes	65	J
C4CHRYS	C4 Chrysenes	24	J

WW 8/27/13

1F - FORM I SV-SIM

SEMIVOLATILE SIM ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-35-012

19

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: 1734.2 SDG No.: 17054

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17054-19

Sample wt/vol: 29.8 (g/mL) g Lab File ID: HQISQ14.D

Extraction: (Type) SONC

% Moisture: 45 Decanted: (Y/N) Date Received: 06/18/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/26/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/31/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 10.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
TPPAH	Total 16 PPAH	3500	B	J
TPAH	Total PAH	6300	B	J

NW 8/27/13

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-34-168

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17054

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17054-1

Sample wt/vol: 30.8 (g/mL) g Lab File ID: 5253AZASOM06.D

% Moisture: 42 Decanted: (Y/N) Date Received: 06/18/2013

Extraction: (Type) SONC Date Extracted: 06/25/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 07/23/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	55	U
11104-28-2	Aroclor-1221	55	U
11141-16-5	Aroclor-1232	55	U
53469-21-9	Aroclor-1242	55	U
12672-29-6	Aroclor-1248	460	~~P~~ J
11097-69-1	Aroclor-1254	430	~~P~~ ↓
11096-82-5	Aroclor-1260	96	~~P~~ ↓
37324-23-5	Aroclor-1262	55	U
11100-14-4	Aroclor-1268	55	U

MW 8/27/13

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-34-192

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678 2

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17054

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17054-2

Sample wt/vol: 30.3 (g/mL) g Lab File ID: 5253AZASOM07.D

% Moisture: 34 Decanted: (Y/N) Date Received: 06/18/2013

Extraction: (Type) SONC Date Extracted: 06/25/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 07/23/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	49	U
11104-28-2	Aroclor-1221	49	U
11141-16-5	Aroclor-1232	49	U
53469-21-9	Aroclor-1242	49	U
12672-29-6	Aroclor-1248	270	P
11097-69-1	Aroclor-1254	280	P
11096-82-5	Aroclor-1260	63	P
37324-23-5	Aroclor-1262	49	U
11100-14-4	Aroclor-1268	49	U

J ↓

MW 8/27/13

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-32-012

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678 3

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17054

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17054-3

Sample wt/vol: 30.3 (g/mL) g Lab File ID: 5253AYCSOM05.D

% Moisture: 25 Decanted: (Y/N) Date Received: 06/18/2013

Extraction: (Type) SONC Date Extracted: 06/25/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 07/19/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	44	U
11104-28-2	Aroclor-1221	44	U
11141-16-5	Aroclor-1232	44	U
53469-21-9	Aroclor-1242	44	U
12672-29-6	Aroclor-1248	44	U
11097-69-1	Aroclor-1254	44	U
11096-82-5	Aroclor-1260	44	U
37324-23-5	Aroclor-1262	44	U
11100-14-4	Aroclor-1268	44	U

NW 8/27/13

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-32-024

4

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17054

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17054-4

Sample wt/vol: 30.2 (g/mL) g Lab File ID: 5253AYCSOM06.D

% Moisture: 28 Decanted: (Y/N) Date Received: 06/18/2013

Extraction: (Type) SONC Date Extracted: 06/25/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 07/19/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	46	U
11104-28-2	Aroclor-1221	46	U
11141-16-5	Aroclor-1232	46	U
53469-21-9	Aroclor-1242	46	U
12672-29-6	Aroclor-1248	46	U
11097-69-1	Aroclor-1254	46	U
11096-82-5	Aroclor-1260	46	U
37324-23-5	Aroclor-1262	46	U
11100-14-4	Aroclor-1268	46	U

NW 8/27/13

1H - FORM I ARO
AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-32-048

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678 5

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17054

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17054-5

Sample wt/vol: 30.8 (g/mL) g Lab File ID: 5253AYCSOM09.D

% Moisture: 22 Decanted: (Y/N) Date Received: 06/18/2013

Extraction: (Type) SONC Date Extracted: 06/25/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 07/19/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	41	U
11104-28-2	Aroclor-1221	41	U
11141-16-5	Aroclor-1232	41	U
53469-21-9	Aroclor-1242	41	U
12672-29-6	Aroclor-1248	41	U
11097-69-1	Aroclor-1254	41	U
11096-82-5	Aroclor-1260	41	U
37324-23-5	Aroclor-1262	41	U
11100-14-4	Aroclor-1268	41	U

MW 8/27/13

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-32-072

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17054

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17054-6

Sample wt/vol: 30.3 (g/mL) g Lab File ID: 5253AYCSOM10.D

% Moisture: 26 Decanted: (Y/N) Date Received: 06/18/2013

Extraction: (Type) SONC Date Extracted: 06/25/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 07/19/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	44	U
11104-28-2	Aroclor-1221	44	U
11141-16-5	Aroclor-1232	44	U
53469-21-9	Aroclor-1242	44	U
12672-29-6	Aroclor-1248	44	U
11097-69-1	Aroclor-1254	44	U
11096-82-5	Aroclor-1260	44	U
37324-23-5	Aroclor-1262	44	U
11100-14-4	Aroclor-1268	44	U

NW 8/27/13

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-75-024

7

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17054

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17054-7

Sample wt/vol: 30.5 (g/mL) g Lab File ID: 5253AYCSOM11.D

% Moisture: 21 Decanted: (Y/N) Date Received: 06/18/2013

Extraction: (Type) SONC Date Extracted: 06/25/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 07/19/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	41	U
11104-28-2	Aroclor-1221	41	U
11141-16-5	Aroclor-1232	41	U
53469-21-9	Aroclor-1242	41	U
12672-29-6	Aroclor-1248	41	U
11097-69-1	Aroclor-1254	41	U
11096-82-5	Aroclor-1260	41	U
37324-23-5	Aroclor-1262	41	U
11100-14-4	Aroclor-1268	41	U

NW 8/27/13

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-31-012

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678 8

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17054

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17054-8

Sample wt/vol: 30.1 (g/mL) g Lab File ID: 5253AYCSOM12.D

% Moisture: 25 Decanted: (Y/N) Date Received: 06/18/2013

Extraction: (Type) SONC Date Extracted: 06/25/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 07/19/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
12674-11-2	Aroclor-1016	44	U	
11104-28-2	Aroclor-1221	44	U	
11141-16-5	Aroclor-1232	44	U	
53469-21-9	Aroclor-1242	100		
12672-29-6	Aroclor-1248	44	U	
11097-69-1	Aroclor-1254	89	~~P~~	J
11096-82-5	Aroclor-1260	19	~~J P~~	J
37324-23-5	Aroclor-1262	44	U	
11100-14-4	Aroclor-1268	44	U	

NW 8/27/13

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-31-024

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678 9

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17054

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17054-9

Sample wt/vol: 30.5 (g/mL) g Lab File ID: 5253AYCSOM13.D

% Moisture: 28 Decanted: (Y/N) Date Received: 06/18/2013

Extraction: (Type) SONC Date Extracted: 06/25/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 07/19/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	45	U
11104-28-2	Aroclor-1221	45	U
11141-16-5	Aroclor-1232	45	U
53469-21-9	Aroclor-1242	45	U
12672-29-6	Aroclor-1248	8.0	J
11097-69-1	Aroclor-1254	17	~~J P~~ J
11096-82-5	Aroclor-1260	4.4	~~J P~~ J
37324-23-5	Aroclor-1262	45	U
11100-14-4	Aroclor-1268	45	U

NW 8/27/13

1H - FORM I ARO
AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-31-024FD

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678 10

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17054

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17054-10

Sample wt/vol: 30.0 (g/mL) g Lab File ID: 5253AYCSOM14.D

% Moisture: 26 Decanted: (Y/N) Date Received: 06/18/2013

Extraction: (Type) SONC Date Extracted: 06/25/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 07/19/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	44	U
11104-28-2	Aroclor-1221	44	U
11141-16-5	Aroclor-1232	44	U
53469-21-9	Aroclor-1242	44	U
12672-29-6	Aroclor-1248	8.5	J P
11097-69-1	Aroclor-1254	20	J P
11096-82-5	Aroclor-1260	7.8	J P
37324-23-5	Aroclor-1262	44	U
11100-14-4	Aroclor-1268	44	U

J

NW 8/27/13

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-74-024

11

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17054

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17054-11

Sample wt/vol: 30.8 (g/mL) g Lab File ID: 5253AYCSOM15.D

% Moisture: 30 Decanted: (Y/N) Date Received: 06/18/2013

Extraction: (Type) SONC Date Extracted: 06/25/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 07/19/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	46	U
11104-28-2	Aroclor-1221	46	U
11141-16-5	Aroclor-1232	46	U
53469-21-9	Aroclor-1242	39	~~J P~~ J
12672-29-6	Aroclor-1248	46	U
11097-69-1	Aroclor-1254	32	J
11096-82-5	Aroclor-1260	5.9	~~J P~~ J
37324-23-5	Aroclor-1262	46	U
11100-14-4	Aroclor-1268	46	U

MW 8/27/13

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-74-024FD

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678 12

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17054

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17054-12

Sample wt/vol: 30.6 (g/mL) g Lab File ID: 5253AZASOM08.D

% Moisture: 30 Decanted: (Y/N) Date Received: 06/18/2013

Extraction: (Type) SONC Date Extracted: 06/25/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 07/23/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
12674-11-2	Aroclor-1016	46	U	
11104-28-2	Aroclor-1221	46	U	
11141-16-5	Aroclor-1232	46	U	
53469-21-9	Aroclor-1242	46	~~J P~~	J
12672-29-6	Aroclor-1248	46	U	
11097-69-1	Aroclor-1254	45	~~J P~~	J
11096-82-5	Aroclor-1260	7.4	~~J P~~	J
37324-23-5	Aroclor-1262	46	U	
11100-14-4	Aroclor-1268	46	U	

NW 8/27/13

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-75-012

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678 13

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17054

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17054-13

Sample wt/vol: 30.8 (g/mL) g Lab File ID: 5253AZASOM09.D

% Moisture: 20 Decanted: (Y/N) Date Received: 06/18/2013

Extraction: (Type) SONC Date Extracted: 06/25/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 07/23/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	40	U
11104-28-2	Aroclor-1221	40	U
11141-16-5	Aroclor-1232	40	U
53469-21-9	Aroclor-1242	40	U
12672-29-6	Aroclor-1248	40	U
11097-69-1	Aroclor-1254	40	U
11096-82-5	Aroclor-1260	40	U
37324-23-5	Aroclor-1262	40	U
11100-14-4	Aroclor-1268	40	U

NW 8/27/13

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-74-012

14

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17054

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17054-14

Sample wt/vol: 30.3 (g/mL) g Lab File ID: 5253AZASOM10.D

% Moisture: 45 Decanted: (Y/N) Date Received: 06/18/2013

Extraction: (Type) SONC Date Extracted: 06/25/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 07/23/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	59	U
11104-28-2	Aroclor-1221	59	U
11141-16-5	Aroclor-1232	59	U
53469-21-9	Aroclor-1242	59	U
12672-29-6	Aroclor-1248	58	J
11097-69-1	Aroclor-1254	39	~~J P~~ J
11096-82-5	Aroclor-1260	7.9	~~J P~~ J
37324-23-5	Aroclor-1262	59	U
11100-14-4	Aroclor-1268	59	U

NW 8/27/13

1H - FORM I ARO
AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-74-048

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678 15

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17054

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17054-15

Sample wt/vol: 30.6 (g/mL) g Lab File ID: 5253AZASOM11.D

% Moisture: 20 Decanted: (Y/N) Date Received: 06/18/2013

Extraction: (Type) SONC Date Extracted: 06/25/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 07/23/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	41	U
11104-28-2	Aroclor-1221	41	U
11141-16-5	Aroclor-1232	41	U
53469-21-9	Aroclor-1242	41	U
12672-29-6	Aroclor-1248	41	U
11097-69-1	Aroclor-1254	41	U
11096-82-5	Aroclor-1260	41	U
37324-23-5	Aroclor-1262	41	U
11100-14-4	Aroclor-1268	41	U

NW 8/27/13

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-74-072

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678 16

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17054

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17054-16

Sample wt/vol: 30.1 (g/mL) g Lab File ID: 5253AZASOM12.D

% Moisture: 22 Decanted: (Y/N) Date Received: 06/18/2013

Extraction: (Type) SONC Date Extracted: 06/25/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 07/23/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	42	U
11104-28-2	Aroclor-1221	42	U
11141-16-5	Aroclor-1232	42	U
53469-21-9	Aroclor-1242	42	U
12672-29-6	Aroclor-1248	42	U
11097-69-1	Aroclor-1254	42	U
11096-82-5	Aroclor-1260	42	U
37324-23-5	Aroclor-1262	42	U
11100-14-4	Aroclor-1268	42	U

NW 8/27/13

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-76-012

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678 17

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17054

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17054-17

Sample wt/vol: 30.2 (g/mL) g Lab File ID: 5253AZASOM13.D

% Moisture: 39 Decanted: (Y/N) Date Received: 06/18/2013

Extraction: (Type) SONC Date Extracted: 06/25/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 07/23/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	54	U
11104-28-2	Aroclor-1221	54	U
11141-16-5	Aroclor-1232	54	U
53469-21-9	Aroclor-1242	90	
12672-29-6	Aroclor-1248	54	U
11097-69-1	Aroclor-1254	69	
11096-82-5	Aroclor-1260	14	~~J P~~ J
37324-23-5	Aroclor-1262	54	U
11100-14-4	Aroclor-1268	54	U

MW 8/27/13

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-76-024

18

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17054

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17054-18

Sample wt/vol: 30.4 (g/mL) g Lab File ID: 5253AZASOM14.D

% Moisture: 21 Decanted: (Y/N) Date Received: 06/18/2013

Extraction: (Type) SONC Date Extracted: 06/25/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 07/23/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	41	U
11104-28-2	Aroclor-1221	41	U
11141-16-5	Aroclor-1232	41	U
53469-21-9	Aroclor-1242	98	
12672-29-6	Aroclor-1248	41	U
11097-69-1	Aroclor-1254	57	~~P~~ J
11096-82-5	Aroclor-1260	8.1	~~J P~~ J
37324-23-5	Aroclor-1262	41	U
11100-14-4	Aroclor-1268	41	U

MW 8/27/13

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-35-012

19

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17054

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17054-19

Sample wt/vol: 30.6 (g/mL) g Lab File ID: 5253AZASOM15.D

% Moisture: 45 Decanted: (Y/N) Date Received: 06/18/2013

Extraction: (Type) SONC Date Extracted: 06/25/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 07/23/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	59	U
11104-28-2	Aroclor-1221	59	U
11141-16-5	Aroclor-1232	59	U
53469-21-9	Aroclor-1242	99	
12672-29-6	Aroclor-1248	59	U
11097-69-1	Aroclor-1254	87	~~P~~
11096-82-5	Aroclor-1260	20	~~J P~~
37324-23-5	Aroclor-1262	59	U
11100-14-4	Aroclor-1268	59	U

JJ

MW 8/27/13

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-35-024

20

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17054

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17054-20

Sample wt/vol: 30.1 (g/mL) g Lab File ID: 5253AZASOM16.D

% Moisture: 39 Decanted: (Y/N) Date Received: 06/18/2013

Extraction: (Type) SONC Date Extracted: 06/25/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 07/23/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
12674-11-2	Aroclor-1016	54	U	
11104-28-2	Aroclor-1221	54	U	
11141-16-5	Aroclor-1232	54	U	
53469-21-9	Aroclor-1242	270	~~P~~	J
12672-29-6	Aroclor-1248	54	U	
11097-69-1	Aroclor-1254	220	~~P~~	J
11096-82-5	Aroclor-1260	54	~~P~~	J
37324-23-5	Aroclor-1262	54	U	
11100-14-4	Aroclor-1268	54	U	

JN 8/27/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO. 1
LMR13-34-168

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678
Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 17054
Matrix: SED | Lab Sample Id: 200-17054-1
% Solids: 58.5 | Date Received: 06/18/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	12.4			P
7440-43-9	Cadmium	4.5			P
7440-47-3	Chromium	78.4		J ~~E~~	P
7440-50-8	Copper	63.1		~~*~~	P
7439-92-1	Lead	80.1		J ~~*~~ ~~N~~	P
7440-02-0	Nickel	46.7			P
7440-66-6	Zinc	231		J ~~E~~ *	P

Color Before: GREY | Clarity Before: | Texture: FINE
Color After: TAN | Clarity After: CLOUDY | Artifacts:
Comments:

MW 8/27/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-34-168

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678
Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17054
Matrix: SED Lab Sample Id: 200-17054-1
% Solids: 58.5 Date Received: 06/18/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.32			CV

Color Before: GRAY Clarity Before: CLOUDY Texture: FINE
Color After: COLORLESS Clarity After: CLEAR Artifacts:
Comments:

8/27/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO. 2

LMR13-34-192

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17054

Matrix: SED Lab Sample Id: 200-17054-2

% Solids: 66.3 Date Received: 06/18/2013

Concentration Units (**ug/L, ug,** or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	9.1			P
7440-43-9	Cadmium	2.7			P
7440-47-3	Chromium	47.2		J ~~E~~	P
7440-50-8	Copper	40.3		~~*~~	P
7439-92-1	Lead	51.3		J ~~*~~ ~~N~~	P
7440-02-0	Nickel	34.7			P
7440-66-6	Zinc	142		J ~~E~~	P

Color Before: GREY Clarity Before: Texture: FINE

Color After: TAN Clarity After: CLOUDY Artifacts:

Comments:

MW 8/27/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO. 2

LMR13-34-192

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17054

Matrix: SED Lab Sample Id: 200-17054-2

% Solids: 66.3 Date Received: 06/18/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.24			CV

Color Before: GRAY Clarity Before: CLOUDY Texture: FINE

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

MW 8/27/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO. 13
LMR13-32-012

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678
Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 17054
Matrix: SED | Lab Sample Id: 200-17054-3
% Solids: 74.7 | Date Received: 06/18/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	5.2			P
7440-43-9	Cadmium	0.42	J		P
7440-47-3	Chromium	14.0		J ~~E~~	P
7440-50-8	Copper	14.1		~~*~~	P
7439-92-1	Lead	23.4		J ~~*~~ ~~N~~	P
7440-02-0	Nickel	14.9			P
7440-66-6	Zinc	64.2		J ~~E~~ ~~*~~	P

Color Before: GREY | Clarity Before: | Texture: MEDIUM
Color After: TAN | Clarity After: CLOUDY | Artifacts:
Comments:

MW 8/27/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO. 3

LMR13-32-012

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17054

Matrix: SED Lab Sample Id: 200-17054-3

% Solids: 74.7 Date Received: 06/18/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.15			CV

Color Before: GRAY Clarity Before: CLOUDY Texture: FINE

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

MW 8/27/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO. 4

LMR13-32-024

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17054

Matrix: SED Lab Sample Id: 200-17054-4

% Solids: 71.6 Date Received: 06/18/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	3.4			P
7440-43-9	Cadmium	0.28	J		P
7440-47-3	Chromium	10.3		J ~~E~~	P
7440-50-8	Copper	7.9		~~*~~	P
7439-92-1	Lead	8.1		J ~~*~~ ~~N~~	P
7440-02-0	Nickel	12.4			P
7440-66-6	Zinc	34.3		J ~~E~~	P

Color Before: GREY Clarity Before: Texture: MEDIUM

Color After: TAN Clarity After: CLOUDY Artifacts:

Comments:

MW 8/27/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO. 4

LMR13-32-024

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17054

Matrix: SED Lab Sample Id: 200-17054-4

% Solids: 71.6 Date Received: 06/18/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.069	J		CV

Color Before: GRAY Clarity Before: CLOUDY Texture: FINE

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

MW 8/27/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO. 5
LMR13-32-048

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678
Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17054
Matrix: SED Lab Sample Id: 200-17054-5
% Solids: 77.9 Date Received: 06/18/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	2.7			P
7440-43-9	Cadmium	0.23	J		P
7440-47-3	Chromium	6.3		J ~~F~~	P
7440-50-8	Copper	5.0		~~*~~	P
7439-92-1	Lead	5.1		J ~~*~~ ~~N~~	P
7440-02-0	Nickel	8.5			P
7440-66-6	Zinc	26.0		J ~~F~~	P

Color Before: GREY Clarity Before: Texture: MEDIUM
Color After: TAN Clarity After: CLOUDY Artifacts:
Comments:

MW 8/27/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO. 5

LMR13-32-048

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17054

Matrix: SED Lab Sample Id: 200-17054-5

% Solids: 77.9 Date Received: 06/18/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.034	J		CV

Color Before: GRAY Clarity Before: CLOUDY Texture: FINE

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

MW 8/27/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO. 6
LMR13-32-072

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678
Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 17054
Matrix: SED | Lab Sample Id: 200-17054-6
% Solids: 73.8 | Date Received: 06/18/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	2.6			P
7440-43-9	Cadmium	0.36	J		P
7440-47-3	Chromium	11.1		J ~~B~~	P
7440-50-8	Copper	11.2		✓	P
7439-92-1	Lead	7.5		J ✓ ~~N~~	P
7440-02-0	Nickel	15.1			P
7440-66-6	Zinc	41.4		J ~~E~~	P

Color Before: GREY | Clarity Before: | Texture: MEDIUM
Color After: TAN | Clarity After: CLOUDY | Artifacts:
Comments:

WW 8/27/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO. 6
LMR13-32-072

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678
Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 17054
Matrix: SED | Lab Sample Id: 200-17054-6
% Solids: 73.8 | Date Received: 06/18/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.11	U		CV

Color Before: GRAY | Clarity Before: CLOUDY | Texture: FINE
Color After: COLORLESS | Clarity After: CLEAR | Artifacts:
Comments:

8/27/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO. 7

LMR13-75-024

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17054

Matrix: SED Lab Sample Id: 200-17054-7

% Solids: 79.5 Date Received: 06/18/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	2.2			P
7440-43-9	Cadmium	0.19	J		P
7440-47-3	Chromium	6.3		J ~~E~~	P
7440-50-8	Copper	4.2		~~*~~	P
7439-92-1	Lead	3.4		J ~~* N~~	P
7440-02-0	Nickel	7.9			P
7440-66-6	Zinc	20.6		J ~~E *~~	P

Color Before: GREY Clarity Before: Texture: MEDIUM

Color After: TAN Clarity After: CLOUDY Artifacts:

Comments:

8/27/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO. 7

LMR13-75-024

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17054

Matrix: SED Lab Sample Id: 200-17054-7

% Solids: 79.5 Date Received: 06/18/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.11	U		CV

Color Before: GRAY Clarity Before: CLOUDY Texture: FINE

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

MW 8/22/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO. 8
LMR13-31-012

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678
Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17054
Matrix: SED Lab Sample Id: 200-17054-8
% Solids: 75.5 Date Received: 06/18/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	6.1			P
7440-43-9	Cadmium	1.0			P
7440-47-3	Chromium	16.4		J ~~E~~	P
7440-50-8	Copper	20.2		~~*~~	P
7439-92-1	Lead	36.8		J ~~*~~	P
7440-02-0	Nickel	13.5			P
7440-66-6	Zinc	73.4		J ~~E~~	P

Color Before: GREY Clarity Before: Texture: MEDIUM
Color After: TAN Clarity After: CLOUDY Artifacts:
Comments:

NW 8/27/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO. 8

LMR13-31-012

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17054

Matrix: SED Lab Sample Id: 200-17054-8

% Solids: 75.5 Date Received: 06/18/2013

Concentration Units (**ug/L, ug,** or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.080	J		CV

Color Before: GRAY Clarity Before: CLOUDY Texture: FINE

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

MW 8/27/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO. 9

LMR13-31-024

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17054

Matrix: SED Lab Sample Id: 200-17054-9

% Solids: 72.1 Date Received: 06/18/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	7.7			P
7440-43-9	Cadmium	1.2			P
7440-47-3	Chromium	20.2		J E	P
7440-50-8	Copper	28.0			P
7439-92-1	Lead	50.0		J	P
7440-02-0	Nickel	16.2			P
7440-66-6	Zinc	129		J E	P

Color Before: GREY Clarity Before: Texture: FINE

Color After: TAN Clarity After: CLOUDY Artifacts:

Comments:

MW 8/27/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO. 9

LMR13-31-024

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17054

Matrix: SED Lab Sample Id: 200-17054-9

% Solids: 72.1 Date Received: 06/18/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.23			CV

Color Before: GRAY Clarity Before: CLOUDY Texture: FINE

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

MW 8/21/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO. 10
LMR13-31-024FD

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678
Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 17054
Matrix: SED | Lab Sample Id: 200-17054-10
% Solids: 74.5 | Date Received: 06/18/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	6.3			P
7440-43-9	Cadmium	0.95			P
7440-47-3	Chromium	18.3		J ~~E~~	P
7440-50-8	Copper	22.2		~~*~~	P
7439-92-1	Lead	42.1		J ~~*~~ ~~N~~	P
7440-02-0	Nickel	14.6			P
7440-66-6	Zinc	101		J ~~E~~ ~~*~~	P

Color Before: GREY | Clarity Before: | Texture: FINE
Color After: TAN | Clarity After: CLOUDY | Artifacts:
Comments:

MW 8/27/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO. 10
LMR13-31-024FD

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678
Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17054
Matrix: SED Lab Sample Id: 200-17054-10
% Solids: 74.5 Date Received: 06/18/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.13			CV

Color Before: GRAY Clarity Before: CLOUDY Texture: FINE
Color After: COLORLESS Clarity After: CLEAR Artifacts:
Comments:

8/27/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO. 11
LMR13-74-024

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678
Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 17054
Matrix: SED | Lab Sample Id: 200-17054-11
% Solids: 70.5 | Date Received: 06/18/2013

Concentration Units (**ug/L, ug,** or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	7.5			P
7440-43-9	Cadmium	0.77			P
7440-47-3	Chromium	21.1		J ~~B~~	P
7440-50-8	Copper	23.7		~~*~~	P
7439-92-1	Lead	36.8		J ~~* N~~	P
7440-02-0	Nickel	18.6			P
7440-66-6	Zinc	114		J ~~E *~~	P

Color Before: GREY | Clarity Before: | Texture: FINE
Color After: TAN | Clarity After: CLOUDY | Artifacts:
Comments:

MW 8/27/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO. 11

LMR13-74-024

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17054

Matrix: SED Lab Sample Id: 200-17054-11

% Solids: 70.5 Date Received: 06/18/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.21			CV

Color Before: GRAY Clarity Before: CLOUDY Texture: FINE

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

MW 8/27/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO. 12
LMR13-74-024FD

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678
Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17054
Matrix: SED Lab Sample Id: 200-17054-12
% Solids: 70.2 Date Received: 06/18/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	7.6			P
7440-43-9	Cadmium	0.85			P
7440-47-3	Chromium	21.7		J ~~E~~	P
7440-50-8	Copper	23.4		~~*~~	P
7439-92-1	Lead	37.6		J ~~*~~ ~~N~~	P
7440-02-0	Nickel	19.1			P
7440-66-6	Zinc	114		J ~~E~~ ~~*~~	P

Color Before: GREY Clarity Before: Texture: FINE
Color After: TAN Clarity After: CLOUDY Artifacts:
Comments:

MW 8/27/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO. 12

LMR13-74-024FD

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17054

Matrix: SED Lab Sample Id: 200-17054-12

% Solids: 70.2 Date Received: 06/18/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.18			CV

Color Before: GRAY Clarity Before: CLOUDY Texture: FINE

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

MW 8/27/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO. 13

LMR13-75-012

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17054

Matrix: SED Lab Sample Id: 200-17054-13

% Solids: 79.6 Date Received: 06/18/2013

Concentration Units (**ug/L, ug,** or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	3.6			P
7440-43-9	Cadmium	0.25	J		P
7440-47-3	Chromium	9.2		J ~~E~~	P
7440-50-8	Copper	7.1		~~E~~	P
7439-92-1	Lead	7.3		J ~~E~~	P
7440-02-0	Nickel	11.0			P
7440-66-6	Zinc	29.6		J ~~E~~	P

Color Before: GREY Clarity Before: Texture: FINE

Color After: TAN Clarity After: CLOUDY Artifacts:

Comments:

MW 8/22/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO. 13

LMR13-75-012

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17054

Matrix: SED Lab Sample Id: 200-17054-13

% Solids: 79.6 Date Received: 06/18/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.12	U		CV

Color Before: GRAY Clarity Before: CLOUDY Texture: FINE

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

MW 8/27/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO. 14

LMR13-74-012

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17054

Matrix: SED Lab Sample Id: 200-17054-14

% Solids: 55.2 Date Received: 06/18/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	6.7			P
7440-43-9	Cadmium	0.91			P
7440-47-3	Chromium	27.0		J	P
7440-50-8	Copper	28.9			P
7439-92-1	Lead	31.9		J	P
7440-02-0	Nickel	26.8			P
7440-66-6	Zinc	130		J	P

Color Before: GREY Clarity Before: Texture: FINE

Color After: TAN Clarity After: CLOUDY Artifacts:

Comments:

MW 8/27/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO. 14

LMR13-74-012

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17054

Matrix: SED Lab Sample Id: 200-17054-14

% Solids: 55.2 Date Received: 06/18/2013

Concentration Units (**ug/L, ug,** or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.057	J		CV

Color Before: GRAY Clarity Before: CLOUDY Texture: FINE

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

MW 8/27/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO. 15
LMR13-74-048

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678
Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 17054
Matrix: SED | Lab Sample Id: 200-17054-15
% Solids: 79.8 | Date Received: 06/18/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	5.4			P
7440-43-9	Cadmium	0.23	J		P
7440-47-3	Chromium	9.7		J ~~E~~	P
7440-50-8	Copper	9.8		~~*~~	P
7439-92-1	Lead	16.2		J ~~*~~ ~~N~~	P
7440-02-0	Nickel	13.4			P
7440-66-6	Zinc	34.0		J ~~E~~ *	P

Color Before: GREY | Clarity Before: | Texture: MEDIUM
Color After: TAN | Clarity After: CLOUDY | Artifacts:
Comments:

MW 8/22/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO. 15

LMR13-74-048

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17054

Matrix: SED Lab Sample Id: 200-17054-15

% Solids: 79.8 Date Received: 06/18/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.060	J		CV

Color Before: GRAY Clarity Before: CLOUDY Texture: FINE

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

MW 8/27/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO. 16

LMR13-74-072

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17054

Matrix: SED Lab Sample Id: 200-17054-16

% Solids: 78.5 Date Received: 06/18/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	2.6			P
7440-43-9	Cadmium	0.24	J		P
7440-47-3	Chromium	8.5		J ~~B~~	P
7440-50-8	Copper	6.9		~~J~~	P
7439-92-1	Lead	5.4		J ~~J N~~	P
7440-02-0	Nickel	10.8			P
7440-66-6	Zinc	27.3		J ~~E~~ *	P

Color Before: GREY Clarity Before: Texture: MEDIUM

Color After: TAN Clarity After: CLOUDY Artifacts:

Comments:

MW 8/27/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO. 16

LMR13-74-072

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17054

Matrix: SED Lab Sample Id: 200-17054-16

% Solids: 78.5 Date Received: 06/18/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.12	U		CV

Color Before: GRAY Clarity Before: CLOUDY Texture: FINE

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

MW 8/27/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO. 17

LMR13-76-012

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17054

Matrix: SED Lab Sample Id: 200-17054-17

% Solids: 60.8 Date Received: 06/18/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	4.6			P
7440-43-9	Cadmium	0.58	J		P
7440-47-3	Chromium	20.1		J ~~E~~	P
7440-50-8	Copper	21.3		~~*~~	P
7439-92-1	Lead	17.1		J ~~*~~ ~~N~~	P
7440-02-0	Nickel	20.2			P
7440-66-6	Zinc	78.5		J ~~E~~ ~~*~~	P

Color Before: GREY Clarity Before: Texture: FINE

Color After: TAN Clarity After: CLOUDY Artifacts:

Comments:

MW 8/27/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO. 17

LMR13-76-012

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17054

Matrix: SED Lab Sample Id: 200-17054-17

% Solids: 60.8 Date Received: 06/18/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.15	U		CV

Color Before: GRAY Clarity Before: CLOUDY Texture: FINE

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

MW 8/27/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO. 18
LMR13-76-024

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678
Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 17054
Matrix: SED | Lab Sample Id: 200-17054-18
% Solids: 79.1 | Date Received: 06/18/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	3.4			P
7440-43-9	Cadmium	0.62			P
7440-47-3	Chromium	10.4		J E	P
7440-50-8	Copper	10.4			P
7439-92-1	Lead	11.8		J * N	P
7440-02-0	Nickel	11.8			P
7440-66-6	Zinc	48.7		J E *	P

Color Before: GREY | Clarity Before: | Texture: FINE
Color After: TAN | Clarity After: CLOUDY | Artifacts:
Comments:

MW 8/27/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO. 18

LMR13-76-024

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17054

Matrix: SED Lab Sample Id: 200-17054-18

% Solids: 79.1 Date Received: 06/18/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.043	J		CV

Color Before: GRAY Clarity Before: CLOUDY Texture: FINE

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

MW 8/22/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO. 19

LMR13-35-012

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17054

Matrix: SED Lab Sample Id: 200-17054-19

% Solids: 54.6 Date Received: 06/18/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	8.1			P
7440-43-9	Cadmium	1.3			P
7440-47-3	Chromium	33.2		J E	P
7440-50-8	Copper	34.9			P
7439-92-1	Lead	38.0		J	P
7440-02-0	Nickel	31.3			P
7440-66-6	Zinc	152		J E	P

Color Before: GREY Clarity Before: Texture: FINE

Color After: TAN Clarity After: CLOUDY Artifacts:

Comments:

NW 8/27/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-35-012

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678
Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 17054
Matrix: SED | Lab Sample Id: 200-17054-19
% Solids: 54.6 | Date Received: 06/18/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.054	J		CV

Color Before: GRAY | Clarity Before: CLOUDY | Texture: FINE
Color After: COLORLESS | Clarity After: CLEAR | Artifacts:
Comments:

NW 8/27/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO. 20

LMR13-35-024

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17054

Matrix: SED Lab Sample Id: 200-17054-20

% Solids: 60.8 Date Received: 06/18/2013

Concentration Units (**ug/L, ug,** or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	9.9			P
7440-43-9	Cadmium	3.3			P
7440-47-3	Chromium	37.6		J ~~E~~	P
7440-50-8	Copper	46.0		~~J~~	P
7439-92-1	Lead	81.8		J ~~J~~ ~~N~~	P
7440-02-0	Nickel	27.7			P
7440-66-6	Zinc	205		J ~~E~~ *	P

Color Before: GREY Clarity Before: Texture: FINE

Color After: TAN Clarity After: CLOUDY Artifacts:

Comments:

MW 8/27/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO. 20

LMR13-35-024

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17054

Matrix: SED Lab Sample Id: 200-17054-20

% Solids: 60.8 Date Received: 06/18/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.24			CV

Color Before: GRAY Clarity Before: CLOUDY Texture: FINE

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

MW 8/27/13

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - SEM/AVS

13

Client Sample ID: LMR13-75-012 Lab Sample ID: 200-17054-13

Lab Name: TestAmerica Burlington Job No.: 200-17054-1

SDG ID.: 17054

Matrix: Sediment Date Sampled: 06/15/2013 14:30

Reporting Basis: DRY Date Received: 06/18/2013 10:30

% Solids: 79.6

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-43-9	Cadmium SEM	1.5	1.5	0.24	mg/Kg	U		10	6010C
7440-43-9	Cadmium SEM	0.013	0.013	0.0021	umol/g	U		10	6010C
7440-50-8	Copper SEM	2.7	7.8	0.68	mg/Kg	J		10	6010C
7440-50-8	Copper SEM	0.043	0.12	0.011	umol/g	J		10	6010C
7439-92-1	Lead SEM	3.9	3.1	1.4	mg/Kg			10	6010C
7439-92-1	Lead SEM	0.019	0.015	0.0067	umol/g			10	6010C
7440-02-0	Nickel SEM	2.7	12.6	0.90	mg/Kg	J		10	6010C
7440-02-0	Nickel SEM	0.047	0.21	0.015	umol/g	J		10	6010C
7440-66-6	Zinc SEM	8.9	6.3	1.8	mg/Kg			10	6010C
7440-66-6	Zinc SEM	0.14	0.096	0.027	umol/g			10	6010C
7439-97-6	Mercury SEM	0.0063	0.0063	0.0021	mg/Kg	U		1	7470A
7439-97-6	Mercury SEM	0.000031	0.000031	0.000010	umol/g	U		1	7470A

MW 8/29/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY - SEM/AVS

13

Client Sample ID: LMR13-75-012 Lab Sample ID: 200-17054-13

Lab Name: TestAmerica Burlington Job No.: 200-17054-1

SDG ID.: 17054

Matrix: Sediment Date Sampled: 06/15/2013 14:30

Reporting Basis: DRY Date Received: 06/18/2013 10:30

% Solids: 79.6

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
18496-25-8	Acid Volatile Sulfides (AVS)	20.1	20.1		mg/Kg	U		1	AVS
18496-25-8	Acid Volatile Sulfides (AVS)	0.63	0.63		umol/g	U		1	AVS

MW 8/27/13

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - SEM/AVS

13

Client Sample ID: LMR13-75-012 Lab Sample ID: 200-17054-13

Lab Name: TestAmerica Burlington Job No.: 200-17054-1

SDG ID.: 17054

Matrix: Sediment Date Sampled: 06/15/2013 14:30

Reporting Basis: WET Date Received: 06/18/2013 10:30

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	SEM/AVS Ratio	NC	0.00100	0.00100	NONE			1	SEM

MW 8/27/13

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - SEM/AVS

14

Client Sample ID: LMR13-74-012 Lab Sample ID: 200-17054-14

Lab Name: TestAmerica Burlington Job No.: 200-17054-1

SDG ID.: 17054

Matrix: Sediment Date Sampled: 06/15/2013 15:20

Reporting Basis: DRY Date Received: 06/18/2013 10:30

% Solids: 55.2

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-43-9	Cadmium SEM	0.50	2.2	0.34	mg/Kg	J		10	6010C
7440-43-9	Cadmium SEM	0.0044	0.019	0.0031	umol/g	J		10	6010C
7440-50-8	Copper SEM	7.4	11.2	0.98	mg/Kg	J		10	6010C
7440-50-8	Copper SEM	0.12	0.18	0.015	umol/g	J		10	6010C
7439-92-1	Lead SEM	13.6	4.5	2.0	mg/Kg			10	6010C
7439-92-1	Lead SEM	0.066	0.022	0.0096	umol/g			10	6010C
7440-02-0	Nickel SEM	4.7	18.1	1.3	mg/Kg	J		10	6010C
7440-02-0	Nickel SEM	0.080	0.31	0.022	umol/g	J		10	6010C
7440-66-6	Zinc SEM	44.5	9.0	2.5	mg/Kg			10	6010C
7440-66-6	Zinc SEM	0.68	0.14	0.039	umol/g			10	6010C
7439-97-6	Mercury SEM	0.0090	0.0090	0.0030	mg/Kg	U		1	7470A
7439-97-6	Mercury SEM	0.000045	0.000045	0.000015	umol/g	U		1	7470A

MW 8/27/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY - SEM/AVS

14

Client Sample ID: LMR13-74-012
Lab Sample ID: 200-17054-14
Lab Name: TestAmerica Burlington
Job No.: 200-17054-1
SDG ID.: 17054
Matrix: Sediment
Date Sampled: 06/15/2013 15:20
Reporting Basis: DRY
Date Received: 06/18/2013 10:30
% Solids: 55.2

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
18496-25-8	Acid Volatile Sulfides (AVS)	304	28.9		mg/Kg			1	AVS
18496-25-8	Acid Volatile Sulfides (AVS)	9.5	0.90		umol/g			1	AVS

MW 8/27/13

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - SEM/AVS

14

Client Sample ID: LMR13-74-012 Lab Sample ID: 200-17054-14

Lab Name: TestAmerica Burlington Job No.: 200-17054-1

SDG ID.: 17054

Matrix: Sediment Date Sampled: 06/15/2013 15:20

Reporting Basis: WET Date Received: 06/18/2013 10:30

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	SEM/AVS Ratio	0.0999	0.00100	0.00100	NONE			1	SEM

NW 8/27/13

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - SEM/AVS

17

Client Sample ID: LMR13-76-012 Lab Sample ID: 200-17054-17

Lab Name: TestAmerica Burlington Job No.: 200-17054-1

SDG ID.: 17054

Matrix: Sediment Date Sampled: 06/15/2013 16:05

Reporting Basis: DRY Date Received: 06/18/2013 10:30

% Solids: 60.8

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-43-9	Cadmium SEM	2.0	2.0	0.31	mg/Kg	U		10	6010C
7440-43-9	Cadmium SEM	0.017	0.017	0.0027	umol/g	U		10	6010C
7440-50-8	Copper SEM	2.6	10.1	0.88	mg/Kg	J		10	6010C
7440-50-8	Copper SEM	0.041	0.16	0.014	umol/g	J		10	6010C
7439-92-1	Lead SEM	6.7	4.1	1.8	mg/Kg			10	6010C
7439-92-1	Lead SEM	0.032	0.020	0.0086	umol/g			10	6010C
7440-02-0	Nickel SEM	2.5	16.3	1.2	mg/Kg	J		10	6010C
7440-02-0	Nickel SEM	0.043	0.28	0.020	umol/g	J		10	6010C
7440-66-6	Zinc SEM	19.1	8.1	2.3	mg/Kg			10	6010C
7440-66-6	Zinc SEM	0.29	0.12	0.035	umol/g			10	6010C
7439-97-6	Mercury SEM	0.0081	0.0081	0.0027	mg/Kg	U		1	7470A
7439-97-6	Mercury SEM	0.000041	0.000041	0.000013	umol/g	U		1	7470A

NW 8/27/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY - SEM/AVS

17

Client Sample ID: LMR13-76-012 Lab Sample ID: 200-17054-17

Lab Name: TestAmerica Burlington Job No.: 200-17054-1

SDG ID.: 17054

Matrix: Sediment Date Sampled: 06/15/2013 16:05

Reporting Basis: DRY Date Received: 06/18/2013 10:30

% Solids: 60.8

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
18496-25-8	Acid Volatile Sulfides (AVS)	267	26.0		mg/Kg			1	AVS
18496-25-8	Acid Volatile Sulfides (AVS)	8.3	0.81		umol/g			1	AVS

MW 8/27/13

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - SEM/AVS

17

Client Sample ID: LMR13-76-012 Lab Sample ID: 200-17054-17

Lab Name: TestAmerica Burlington Job No.: 200-17054-1

SDG ID.: 17054

Matrix: Sediment Date Sampled: 06/15/2013 16:05

Reporting Basis: WET Date Received: 06/18/2013 10:30

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	SEM/AVS Ratio	0.0491	0.00100	0.00100	NONE			1	SEM

MW 8/29/13

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - SEM/AVS

19

Client Sample ID: LMR13-35-012 Lab Sample ID: 200-17054-19

Lab Name: TestAmerica Burlington Job No.: 200-17054-1

SDG ID.: 17054

Matrix: Sediment Date Sampled: 06/15/2013 16:40

Reporting Basis: DRY Date Received: 06/18/2013 10:30

% Solids: 54.6

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-43-9	Cadmium SEM	0.61	2.2	0.34	mg/Kg	J		10	6010C
7440-43-9	Cadmium SEM	0.0054	0.019	0.0031	umol/g	J		10	6010C
7440-50-8	Copper SEM	6.5	11.2	0.98	mg/Kg	J		10	6010C
7440-50-8	Copper SEM	0.10	0.18	0.015	umol/g	J		10	6010C
7439-92-1	Lead SEM	14.9	4.5	2.0	mg/Kg			10	6010C
7439-92-1	Lead SEM	0.072	0.022	0.0096	umol/g			10	6010C
7440-02-0	Nickel SEM	5.3	18.1	1.3	mg/Kg	J		10	6010C
7440-02-0	Nickel SEM	0.090	0.31	0.022	umol/g	J		10	6010C
7440-66-6	Zinc SEM	45.5	9.1	2.5	mg/Kg			10	6010C
7440-66-6	Zinc SEM	0.70	0.14	0.039	umol/g			10	6010C
7439-97-6	Mercury SEM	0.0091	0.0091	0.0030	mg/Kg	U		1	7470A
7439-97-6	Mercury SEM	0.000045	0.000045	0.000015	umol/g	U		1	7470A

MW 8/27/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY - SEM/AVS

19

Client Sample ID: LMR13-35-012 Lab Sample ID: 200-17054-19

Lab Name: TestAmerica Burlington Job No.: 200-17054-1

SDG ID.: 17054

Matrix: Sediment Date Sampled: 06/15/2013 16:40

Reporting Basis: DRY Date Received: 06/18/2013 10:30

% Solids: 54.6

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
18496-25-8	Acid Volatile Sulfides (AVS)	290	29.0		mg/Kg			1	AVS
18496-25-8	Acid Volatile Sulfides (AVS)	9.0	0.90		umol/g			1	AVS

MW 8/27/13

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - SEM/AVS

19

Client Sample ID: LMR13-35-012 Lab Sample ID: 200-17054-19

Lab Name: TestAmerica Burlington Job No.: 200-17054-1

SDG ID.: 17054

Matrix: Sediment Date Sampled: 06/15/2013 16:40

Reporting Basis: WET Date Received: 06/18/2013 10:30

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	SEM/AVS Ratio	0.107	0.00100	0.00100	NONE			1	SEM

MW 8/29/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: LMR13-34-168
Lab Sample ID: 200-17054-1
Lab Name: TestAmerica Burlington
Job No.: 200-17054-1
SDG ID.: 17054
Matrix: Sediment
Date Sampled: 06/15/2013 13:00
Reporting Basis: WET
Date Received: 06/18/2013 10:30
% Solids: 58.5

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	32000	1000		mg/Kg			1	Lloyd Kahn

NW 8/27/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

2

Client Sample ID: LMR13-34-192 | Lab Sample ID: 200-17054-2

Lab Name: TestAmerica Burlington | Job No.: 200-17054-1

SDG ID.: 17054

Matrix: Sediment | Date Sampled: 06/15/2013 13:10

Reporting Basis: WET | Date Received: 06/18/2013 10:30

% Solids: 66.3

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	32100	1000		mg/Kg			1	Lloyd Kahn

MW 8/27/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

3

Client Sample ID: LMR13-32-012
Lab Sample ID: 200-17054-3
Lab Name: TestAmerica Burlington
Job No.: 200-17054-1
SDG ID.: 17054
Matrix: Sediment
Date Sampled: 06/15/2013 13:50
Reporting Basis: WET
Date Received: 06/18/2013 10:30
% Solids: 74.7

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	16800	1000		mg/Kg			1	Lloyd Kahn

NW 8/27/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

4

Client Sample ID: LMR13-32-024
Lab Sample ID: 200-17054-4
Lab Name: TestAmerica Burlington
Job No.: 200-17054-1
SDG ID.: 17054
Matrix: Sediment
Date Sampled: 06/15/2013 14:00
Reporting Basis: WET
Date Received: 06/18/2013 10:30
% Solids: 71.6

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	21700	1000		mg/Kg			1	Lloyd Kahn

MW 8/27/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

5

Client Sample ID: LMR13-32-048 | Lab Sample ID: 200-17054-5

Lab Name: TestAmerica Burlington | Job No.: 200-17054-1

SDG ID.: 17054

Matrix: Sediment | Date Sampled: 06/15/2013 14:10

Reporting Basis: WET | Date Received: 06/18/2013 10:30

% Solids: 77.9

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	17300	1000		mg/Kg			1	Lloyd Kahn

MW 8/27/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

6

Client Sample ID: LMR13-32-072 | Lab Sample ID: 200-17054-6

Lab Name: TestAmerica Burlington | Job No.: 200-17054-1

SDG ID.: 17054

Matrix: Sediment | Date Sampled: 06/15/2013 14:20

Reporting Basis: WET | Date Received: 06/18/2013 10:30

% Solids: 73.8

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	24400	1000		mg/Kg			1	Lloyd Kahn

MW 8/27/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

7

Client Sample ID: LMR13-75-024 Lab Sample ID: 200-17054-7

Lab Name: TestAmerica Burlington Job No.: 200-17054-1

SDG ID.: 17054

Matrix: Sediment Date Sampled: 06/15/2013 14:40

Reporting Basis: WET Date Received: 06/18/2013 10:30

% Solids: 79.5

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	13300	1000		mg/Kg			1	Lloyd Kahn

NW 8/27/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: LMR13-31-012 | Lab Sample ID: 200-17054-8 | 8

Lab Name: TestAmerica Burlington | Job No.: 200-17054-1

SDG ID.: 17054

Matrix: Sediment | Date Sampled: 06/15/2013 14:50

Reporting Basis: WET | Date Received: 06/18/2013 10:30

% Solids: 75.5

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	20500	1000		mg/Kg			1	Lloyd Kahn

NW 8/27/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

9

Client Sample ID: LMR13-31-024
Lab Sample ID: 200-17054-9
Lab Name: TestAmerica Burlington
Job No.: 200-17054-1
SDG ID.: 17054
Matrix: Sediment
Date Sampled: 06/15/2013 15:00
Reporting Basis: WET
Date Received: 06/18/2013 10:30
% Solids: 72.1

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	20300	1000		mg/Kg			1	Lloyd Kahn

MW 8/27/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

10

Client Sample ID: LMR13-31-024FD
Lab Sample ID: 200-17054-10
Lab Name: TestAmerica Burlington
Job No.: 200-17054-1
SDG ID.: 17054
Matrix: Sediment
Date Sampled: 06/15/2013 15:00
Reporting Basis: WET
Date Received: 06/18/2013 10:30
% Solids: 74.5

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	28600	1000		mg/Kg			1	Lloyd Kahn

NW 8/27/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

11

Client Sample ID: LMR13-74-024
Lab Sample ID: 200-17054-11
Lab Name: TestAmerica Burlington
Job No.: 200-17054-1
SDG ID.: 17054
Matrix: Sediment
Date Sampled: 06/15/2013 15:30
Reporting Basis: WET
Date Received: 06/18/2013 10:30
% Solids: 70.5

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	22100	1000		mg/Kg			1	Lloyd Kahn

MW 8/27/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

12

Client Sample ID: LMR13-74-024FD
Lab Sample ID: 200-17054-12
Lab Name: TestAmerica Burlington
Job No.: 200-17054-1
SDG ID.: 17054
Matrix: Sediment
Date Sampled: 06/15/2013 15:30
Reporting Basis: WET
Date Received: 06/18/2013 10:30
% Solids: 70.2

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	26600	1000		mg/Kg			1	Lloyd Kahn

MW 8/27/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

13

Client Sample ID: LMR13-75-012
Lab Sample ID: 200-17054-13
Lab Name: TestAmerica Burlington
Job No.: 200-17054-1
SDG ID.: 17054
Matrix: Sediment
Date Sampled: 06/15/2013 14:30
Reporting Basis: WET
Date Received: 06/18/2013 10:30
% Solids: 79.6

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	20600	1000		mg/Kg			1	Lloyd Kahn

NW 8/27/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

14

Client Sample ID: LMR13-74-012
Lab Sample ID: 200-17054-14
Lab Name: TestAmerica Burlington
Job No.: 200-17054-1
SDG ID.: 17054
Matrix: Sediment
Date Sampled: 06/15/2013 15:20
Reporting Basis: WET
Date Received: 06/18/2013 10:30
% Solids: 55.2

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	22700	1000		mg/Kg			1	Lloyd Kahn

MW 8/27/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

15

Client Sample ID: LMR13-74-048
Lab Sample ID: 200-17054-15
Lab Name: TestAmerica Burlington
Job No.: 200-17054-1
SDG ID.: 17054
Matrix: Sediment
Date Sampled: 06/15/2013 15:40
Reporting Basis: WET
Date Received: 06/18/2013 10:30
% Solids: 79.8

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	11000	1000		mg/Kg			1	Lloyd Kahn

MW 8/27/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

16

Client Sample ID: LMR13-74-072 Lab Sample ID: 200-17054-16

Lab Name: TestAmerica Burlington Job No.: 200-17054-1

SDG ID.: 17054

Matrix: Sediment Date Sampled: 06/15/2013 15:50

Reporting Basis: WET Date Received: 06/18/2013 10:30

% Solids: 78.5

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	20700	1000		mg/Kg			1	Lloyd Kahn

MW 8/27/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

17

Client Sample ID: LMR13-76-012 | Lab Sample ID: 200-17054-17

Lab Name: TestAmerica Burlington | Job No.: 200-17054-1

SDG ID.: 17054

Matrix: Sediment | Date Sampled: 06/15/2013 16:05

Reporting Basis: WET | Date Received: 06/18/2013 10:30

% Solids: 60.8

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	17700	1000		mg/Kg			1	Lloyd Kahn

MW 8/27/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

18

Client Sample ID: LMR13-76-024
Lab Sample ID: 200-17054-18
Lab Name: TestAmerica Burlington
Job No.: 200-17054-1
SDG ID.: 17054
Matrix: Sediment
Date Sampled: 06/15/2013 16:15
Reporting Basis: WET
Date Received: 06/18/2013 10:30
% Solids: 79.1

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	13700	J 1000		mg/Kg		~~H~~	1	Lloyd Kahn

MW 8/27/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

19

Client Sample ID: LMR13-35-012 | Lab Sample ID: 200-17054-19

Lab Name: TestAmerica Burlington | Job No.: 200-17054-1

SDG ID.: 17054

Matrix: Sediment | Date Sampled: 06/15/2013 16:40

Reporting Basis: WET | Date Received: 06/18/2013 10:30

% Solids: 54.6

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	32200	J 1000		mg/Kg		H	1	Lloyd Kahn

NW 8/27/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

20

Client Sample ID: LMR13-35-024 Lab Sample ID: 200-17054-20

Lab Name: TestAmerica Burlington Job No.: 200-17054-1

SDG ID.: 17054

Matrix: Sediment Date Sampled: 06/15/2013 16:50

Reporting Basis: WET Date Received: 06/18/2013 10:30

% Solids: 60.8

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	36900	J 1000		mg/Kg		~~P~~	1	Lloyd Kahn

MW 8/27/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: LMR13-34-168
Lab Sample ID: 200-17054-1
Lab Name: TestAmerica Pittsburgh
Job No.: 200-17054-1
SDG ID.: 17054
Matrix: Sediment
Date Sampled: 06/15/2013 13:00
Reporting Basis: DRY
Date Received: 06/18/2013 10:30
% Solids: 58.5

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	1200	J 284	39.4	mg/Kg			1	9071B

NW 8/27/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

2

Client Sample ID: LMR13-34-192
Lab Sample ID: 200-17054-2
Lab Name: TestAmerica Pittsburgh
Job No.: 200-17054-1
SDG ID.: 17054
Matrix: Sediment
Date Sampled: 06/15/2013 13:10
Reporting Basis: DRY
Date Received: 06/18/2013 10:30
% Solids: 66.3

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	588 J	251	34.9	mg/Kg			1	9071B

MW 8/27/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

3

Client Sample ID: LMR13-32-012
Lab Sample ID: 200-17054-3
Lab Name: TestAmerica Pittsburgh
Job No.: 200-17054-1
SDG ID.: 17054
Matrix: Sediment
Date Sampled: 06/15/2013 13:50
Reporting Basis: DRY
Date Received: 06/18/2013 10:30
% Solids: 74.7

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	214	J 223	31.0	mg/Kg			1	9071B

MW 8/29/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

4

Client Sample ID: LMR13-32-024 Lab Sample ID: 200-17054-4

Lab Name: TestAmerica Pittsburgh Job No.: 200-17054-1

SDG ID.: 17054

Matrix: Sediment Date Sampled: 06/15/2013 14:00

Reporting Basis: DRY Date Received: 06/18/2013 10:30

% Solids: 71.6

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	116	J 231	32.1	mg/Kg			1	9071B

MW 8/27/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

5

Client Sample ID: LMR13-32-048
Lab Sample ID: 200-17054-5
Lab Name: TestAmerica Pittsburgh
Job No.: 200-17054-1
SDG ID.: 17054
Matrix: Sediment
Date Sampled: 06/15/2013 14:10
Reporting Basis: DRY
Date Received: 06/18/2013 10:30
% Solids: 77.9

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	103	J 214	29.7	mg/Kg			1	9071B

MW 8/27/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

6

Client Sample ID: LMR13-32-072 | Lab Sample ID: 200-17054-6

Lab Name: TestAmerica Pittsburgh | Job No.: 200-17054-1

SDG ID.: 17054

Matrix: Sediment | Date Sampled: 06/15/2013 14:20

Reporting Basis: DRY | Date Received: 06/18/2013 10:30

% Solids: 73.8

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	76.8	J 226	31.4	mg/Kg	J		1	9071B

NW 8/27/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

7

Client Sample ID: LMR13-75-024 | Lab Sample ID: 200-17054-7

Lab Name: TestAmerica Pittsburgh | Job No.: 200-17054-1

SDG ID.: 17054

Matrix: Sediment | Date Sampled: 06/15/2013 14:40

Reporting Basis: DRY | Date Received: 06/18/2013 10:30

% Solids: 79.5

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	75.3	J 209	29.0	mg/Kg			1	9071B

MW 8/27/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

8

Client Sample ID: LMR13-31-012 | Lab Sample ID: 200-17054-8

Lab Name: TestAmerica Pittsburgh | Job No.: 200-17054-1

SDG ID.: 17054

Matrix: Sediment | Date Sampled: 06/15/2013 14:50

Reporting Basis: DRY | Date Received: 06/18/2013 10:30

% Solids: 75.5

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	501	J 220	30.5	mg/Kg			1	9071B

MW 8/27/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

9

Client Sample ID: LMR13-31-024
Lab Sample ID: 200-17054-9
Lab Name: TestAmerica Pittsburgh
Job No.: 200-17054-1
SDG ID.: 17054
Matrix: Sediment
Date Sampled: 06/15/2013 15:00
Reporting Basis: DRY
Date Received: 06/18/2013 10:30
% Solids: 72.1

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	375	J 231	32.1	mg/Kg			1	9071B

NW 8/27/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

11

Client Sample ID: LMR13-74-024 | Lab Sample ID: 200-17054-11

Lab Name: TestAmerica Pittsburgh | Job No.: 200-17054-1

SDG ID.: 17054

Matrix: Sediment | Date Sampled: 06/15/2013 15:30

Reporting Basis: DRY | Date Received: 06/18/2013 10:30

% Solids: 70.5

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	193	J 236	32.7	mg/Kg			1	9071B

MW 8/27/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

13

Client Sample ID: LMR13-75-012 Lab Sample ID: 200-17054-13

Lab Name: TestAmerica Pittsburgh Job No.: 200-17054-1

SDG ID.: 17054

Matrix: Sediment Date Sampled: 06/15/2013 14:30

Reporting Basis: DRY Date Received: 06/18/2013 10:30

% Solids: 79.6

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	83.5	J 209	29.0	mg/Kg			1	9071B

MW 8/22/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

14

Client Sample ID: LMR13-74-012
Lab Sample ID: 200-17054-14
Lab Name: TestAmerica Pittsburgh
Job No.: 200-17054-1
SDG ID.: 17054
Matrix: Sediment
Date Sampled: 06/15/2013 15:20
Reporting Basis: DRY
Date Received: 06/18/2013 10:30
% Solids: 55.2

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	433	J 301	41.8	mg/Kg			1	9071B

NW 8/27/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

15

Client Sample ID: LMR13-74-048
Lab Sample ID: 200-17054-15
Lab Name: TestAmerica Pittsburgh
Job No.: 200-17054-1
SDG ID.: 17054
Matrix: Sediment
Date Sampled: 06/15/2013 15:40
Reporting Basis: DRY
Date Received: 06/18/2013 10:30
% Solids: 79.8

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	125	J 208	28.9	mg/Kg	J		1	9071B

MW 8/27/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

16

Client Sample ID: LMR13-74-072
Lab Sample ID: 200-17054-16
Lab Name: TestAmerica Pittsburgh
Job No.: 200-17054-1
SDG ID.: 17054
Matrix: Sediment
Date Sampled: 06/15/2013 15:50
Reporting Basis: DRY
Date Received: 06/18/2013 10:30
% Solids: 78.5

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	76.4	J 212	29.5	mg/Kg			1	9071B

MW 8/27/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

17

Client Sample ID: LMR13-76-012 | Lab Sample ID: 200-17054-17

Lab Name: TestAmerica Pittsburgh | Job No.: 200-17054-1

SDG ID.: 17054

Matrix: Sediment | Date Sampled: 06/15/2013 16:05

Reporting Basis: DRY | Date Received: 06/18/2013 10:30

% Solids: 60.8

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	252	J 274	38.1	mg/Kg	J		1	9071B

NW 8/27/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

18

Client Sample ID: LMR13-76-024 Lab Sample ID: 200-17054-18

Lab Name: TestAmerica Pittsburgh Job No.: 200-17054-1

SDG ID.: 17054

Matrix: Sediment Date Sampled: 06/15/2013 16:15

Reporting Basis: DRY Date Received: 06/18/2013 10:30

% Solids: 79.1

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	206	J 210	29.2	mg/Kg	J		1	9071B

MW 8/27/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

19

Client Sample ID: LMR13-35-012
Lab Sample ID: 200-17054-19
Lab Name: TestAmerica Pittsburgh
Job No.: 200-17054-1
SDG ID.: 17054
Matrix: Sediment
Date Sampled: 06/15/2013 16:40
Reporting Basis: DRY
Date Received: 06/18/2013 10:30
% Solids: 54.6

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	464	J 305	42.4	mg/Kg			1	9071B

MW 8/27/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

20

Client Sample ID: LMR13-35-024 | Lab Sample ID: 200-17054-20

Lab Name: TestAmerica Pittsburgh | Job No.: 200-17054-1

SDG ID.: 17054

Matrix: Sediment | Date Sampled: 06/15/2013 16:50

Reporting Basis: DRY | Date Received: 06/18/2013 10:30

% Solids: 60.8

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	1570	J 274	38.1	mg/Kg			1	9071B

MR 8/27/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

21

Client Sample ID: LMR13-75-024 FD
Lab Sample ID: 200-17054-21
Lab Name: TestAmerica Pittsburgh
Job No.: 200-17054-1
SDG ID.: 17054
Matrix: Sediment
Date Sampled: 06/15/2013 14:40
Reporting Basis: DRY
Date Received: 06/18/2013 10:30
% Solids: 84.2

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	43.6	J 198	27.5	mg/Kg			1	9071B

NW 8/27/13

ENVIRONMENTAL
Data Services, Inc.

DATA VALIDATION SUMMARY REPORT
LOWER MAUMEE RIVER, TOLEDO, OHIO

Client: EA Engineering, Science & Technology, Inc., Hunt Valley, Maryland
SDG: 200-17055
Laboratory: Test America Laboratories, Burlington, Vermont
Test America Laboratories, Canton, Ohio
Site: Lower Maumee River, Maumee Area of Concern, Toledo, Ohio
Date: September 17, 2013

SVOC			
EDS ID	Client Sample ID	Laboratory Sample ID	Matrix
1	LMR13-48-072	200-17055-1	Sediment
2	LMR13-48-096	200-17055-2	Sediment
3	LMR13-48-120	200-17055-3	Sediment
4	LMR13-48-144	200-17055-4	Sediment
5	LMR13-48-168	200-17055-5	Sediment
6	LMR13-82-012	200-17055-6	Sediment
7	LMR13-82-024	200-17055-7	Sediment
9	LMR13-82-072	200-17055-9	Sediment
14	LMR13-03-012	200-17055-14	Sediment
15	LMR13-03-024	200-17055-15	Sediment
16	LMR13-03-048	200-17055-16	Sediment
17	LMR13-03-072	200-17055-17	Sediment
18	LMR13-03-096	200-17055-18	Sediment
19	LMR13-03-120	200-17055-19	Sediment
20	LMR13-03-024FD	200-17070-1	Sediment
21	LMR13-82-048	200-17070-2	Sediment
22	LMR13-82-096	200-17070-3	Sediment
23	LMR13-82-120	200-17070-4	Sediment
23MS	LMR13-82-120MS	200-17070-4MS	Sediment
23MSD	LMR13-82-120MSD	200-17070-4MSD	Sediment
24	LMR13-82-144	200-17070-5	Sediment

PAH 34			
EDS ID	Client Sample ID	Laboratory Sample ID	Matrix
6	LMR13-82-012	200-17055-6	Sediment
14	LMR13-03-012	200-17055-14	Sediment

PCBs			
EDS ID	Client Sample ID	Laboratory Sample ID	Matrix
1	LMR13-48-072	200-17055-1	Sediment
2	LMR13-48-096	200-17055-2	Sediment
3	LMR13-48-120	200-17055-3	Sediment
4	LMR13-48-144	200-17055-4	Sediment
5	LMR13-48-168	200-17055-5	Sediment
6	LMR13-82-012	200-17055-6	Sediment

PCBs			
EDS ID	Client Sample ID	Laboratory Sample ID	Matrix
7	LMR13-82-024	200-17055-7	Sediment
8	LMR13-82-024FD	200-17055-8	Sediment
9	LMR13-82-072	200-17055-9	Sediment
14	LMR13-03-012	200-17055-14	Sediment
15	LMR13-03-024	200-17055-15	Sediment
16	LMR13-03-048	200-17055-16	Sediment
17	LMR13-03-072	200-17055-17	Sediment
18	LMR13-03-096	200-17055-18	Sediment
19	LMR13-03-120	200-17055-19	Sediment
21	LMR13-82-048	200-17070-2	Sediment
22	LMR13-82-096	200-17070-3	Sediment
22MS	LMR13-82-096MS	200-17070-3MS	Sediment
22MSD	LMR13-82-096MSD	200-17070-3MSD	Sediment
23	LMR13-82-120	200-17070-4	Sediment
24	LMR13-82-144	200-17070-5	Sediment

Metals/Mercury/TOC			
EDS ID	Client Sample ID	Laboratory Sample ID	Matrix
1	LMR13-48-072	200-17055-1	Sediment
1MS*	LMR13-48-072MS	200-17055-1MS	Sediment
1MSD*	LMR13-48-072MSD	200-17055-1MSD	Sediment
2	LMR13-48-096	200-17055-2	Sediment
3	LMR13-48-120	200-17055-3	Sediment
4	LMR13-48-144	200-17055-4	Sediment
5	LMR13-48-168	200-17055-5	Sediment
6	LMR13-82-012	200-17055-6	Sediment
7	LMR13-82-024	200-17055-7	Sediment
8	LMR13-82-024FD	200-17055-8	Sediment
9	LMR13-82-072	200-17055-9	Sediment
14	LMR13-03-012	200-17055-14	Sediment
15	LMR13-03-024	200-17055-15	Sediment
16	LMR13-03-048	200-17055-16	Sediment
17	LMR13-03-072	200-17055-17	Sediment
18	LMR13-03-096	200-17055-18	Sediment
19	LMR13-03-120	200-17055-19	Sediment
21	LMR13-82-048	200-17070-2	Sediment
21MS†	LMR13-82-048MS	200-17070-2MS	Sediment
21MSD†	LMR13-82-048MSD	200-17070-2MSD	Sediment
22	LMR13-82-096	200-17070-3	Sediment
22MS*	LMR13-82-096MS	200-17070-3MS	Sediment
22MSD*	LMR13-82-096MSD	200-17070-3MSD	Sediment
23	LMR13-82-120	200-17070-4	Sediment
24	LMR13-82-144	200-17070-5	Sediment

* - Metals/Mercuy Only † - TOC Only

AVS/SEM			
EDS ID	Client Sample ID	Laboratory Sample ID	Matrix
6	LMR13-82-012	200-17055-6	Sediment
14	LMR13-03-012	200-17055-14	Sediment

HEM			
EDS ID	Client Sample ID	Laboratory Sample ID	Matrix
1	LMR13-48-072	200-17055-1	Sediment
2	LMR13-48-096	200-17055-2	Sediment
3	LMR13-48-120	200-17055-3	Sediment
4	LMR13-48-144	200-17055-4	Sediment
5	LMR13-48-168	200-17055-5	Sediment
6	LMR13-82-012	200-17055-6	Sediment
7	LMR13-82-024	200-17055-7	Sediment
9	LMR13-82-072	200-17055-9	Sediment
10	LMR13-82-048	200-17055-10	Sediment
11	LMR13-82-096	200-17055-11	Sediment
12	LMR13-82-120	200-17055-12	Sediment
12MS	LMR13-82-120MS	200-17055-12MS	Sediment
12MSD	LMR13-82-120MSD	200-17055-12MSD	Sediment
13	LMR13-82-144	200-17055-13	Sediment
14	LMR13-03-012	200-17055-14	Sediment
15	LMR13-03-024	200-17055-15	Sediment
16	LMR13-03-048	200-17055-16	Sediment
17	LMR13-03-072	200-17055-17	Sediment
18	LMR13-03-096	200-17055-18	Sediment
19	LMR13-03-120	200-17055-19	Sediment

A full data validation was performed on the analytical data for twenty-four sediment samples collected on June 17, 2013 by EA Engineering at the Lower Maumee River site in Toledo, Ohio. The samples were analyzed under the Environmental Protection Agency (USEPA) Contract Laboratory Program (CLP) Multi-Media Multi-Concentration Organics Analysis SOM01.2 and Inorganic Analysis ILM05.4 and the Test Methods for the Evaluation of Solid Waste, USEPA SW-846, Third Edition, September 1986, with revisions.

Specific method references are as follows:

Analysis	*Method References*
SVOC	USEPA CLP SOM01.2
PAH 34	USEPA CLP SOM01.2
PCBs	USEPA CLP SOM01.2
Michigan Metals & Mercury	USEPA CLP ISM01.3
AVS/SEM	USEPA SW-846 Methods 6010C/7470A
TOC	Lloyd Kahn
Oil & Grease (HEM)	USEPA SW-846 Method 9071B

The data have been validated according to the protocols and quality control (QC) requirements of the analytical methods, the Great Lakes Legacy Act, March 2010, the Quality Assurance Project Plan for Phase 2 of the Lower Maumee River Site Characterization, May 2013, and the USEPA National Functional Guidelines for Organic Data Review as follows:

- The USEPA "Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review," June 2008;

- The USEPA "Contract Laboratory Program National Functional Guidelines for Inorganic Superfund Data Review," January 2010;
- and the reviewer's professional judgment.

The following items/criteria were reviewed for this report:

Organics

- Holding times and sample preservation
- Gas Chromatography/Mass Spectroscopy (GC/MS) Tuning
- Initial and continuing calibration summaries
- Method blank and field blank contamination
- Surrogate Spike recoveries
- Matrix Spike/Matrix Spike Duplicate (MS/MSD) recoveries
- Laboratory Control Sample (LCS) recoveries
- Internal standard area and retention time summary forms
- Target Compound Identification
- Compound Quantitation
- Tentatively Identified Compounds (TICs)
- Field Duplicate sample precision

Inorganics

- Holding times and sample preservation
- ICP/MS Tuning
- Initial and continuing calibration verifications
- Method blank and field blank contamination
- ICP Interference Check Sample
- Laboratory Control Sample (LCS) recoveries
- Matrix Spike Analysis
- Duplicate Sample Analysis
- ICP Serial Dilution
- Compound Quantitation
- Field Duplicate sample precision

Overall Usability Issues:

There were minor rejections of data. This data cannot be used in the decision-making process for this project.

- Three SVOC compounds were rejected in nine samples due to severely low surrogate recoveries.

Overall the remaining data is acceptable for the intended purposes as qualified for the deficiencies detailed in this report.

Please note that any results qualified (U) due to blank contamination may be then qualified (J) due to another action. Therefore, the results may be qualified (UJ) due to the culmination of the blank contaminations and actions from other exceedences of QC criteria.

Semivolatile Organic Compounds (SVOC)

Holding Times

- All samples were extracted within 14 days for sediment samples and analyzed within 40 days for all samples except the following.

Sample	Date Sampled	Date Extracted	# of Days	Qualifier
1-7, 9, 14-19	06/27/13	08/12/13	46	J/UJ - Unless R

GC/MS Tuning

- All criteria were met.

Initial Calibration

- All %RSD and mean RRF criteria were met except the following.

ICAL Date	Compound	%RSD/RRF	Qualifier	Affected Samples
08/02/13	di-n-Octylphthalate	20.5%	J/UJ	1-7, 9, 14-19
	Benzo(b)fluoranthene	23.7%	J/UJ	
	Dibenzo(a,h)anthracene	20.6%	J/UJ	

Continuing Calibration

- All %D and RRF criteria were met except the following.

CCAL Date	Compound	%D/RRF	Qualifier	Affected Samples
07/20/13 (1321)	Pentachlorophenol	31.8%	J/UJ	20, 21, 22
07/20/13 (2311)	Hexachlorocyclopentadiene	85.5%	J/UJ	21
07/21/13 (1253)	4-Methylphenol	29.9%	J/UJ	23, 24
	n-Nitroso-di-n-propylamine	33.8%	J/UJ	
	Pentachlorophenol	36.8%	J/UJ	23, 24
07/21/13 (2241, 2323)	Hexachlorocyclopentadiene	58.3%	None	See Surrogates
	di-n-Octylphthalate	51.8%	J/UJ	23, 24
08/12/13 (2218)	Hexachlorocyclopentadiene	53.6%	J/UJ	2, 5, 9, 14-19
	di-n-Octylphthalate	59.2%	None	See ICAL
08/12/13 (2254)	Benzo(k)fluoranthene	57.7%	J/UJ	1-7, 9, 14-19

Method Blank

- The method blanks exhibited the following contamination.

Blank ID	Compound	Conc. ug/kg	Qualifier	Affected Samples
SBLKL8	Butylbenzylphthalate	33	U	20-24
	bis(2-Ethylhexyl)phthalate	86	U	
SBLKM9	di-n-Butylphthalate	11	U	6, 16-19
	Butylbenzylphthalate	13	U	5, 17-19
	bis(2-Ethylhexyl)phthalate	24	U	3, 4, 5, 9, 16-19

Field Blank

- Field QC samples were not analyzed.

Surrogate Spike Recoveries

- All samples exhibited acceptable surrogate %R values except the following.

Sample ID	Surrogate	%R	Qualifier
20	Phenol-d5	117%	None - All ND
	4-Methylphenol-d8	124%	None - All ND
	4-Chloroaniline-d4	0%	R - Associated Compounds
	Acenaphthylene-d8	102%	J - Positive Associated Results
22	4-Chloroaniline-d4	0%	R - Associated Compounds
	Pyrene-d10	43%	J/UJ - Associated Compounds
	Benzo(a)pyrene-d12	34%	J/UJ - Associated Compounds
23	Phenol-d5	113%	J - Positive Associated Results
	4-Methylphenol-d8	102%	None - All ND
	4-Chloroaniline-d4	0%	R - Associated Compounds
24	4-Chloroaniline-d4	0%	R - Associated Compounds
1	4-Chloroaniline-d4	0%	R - Associated Compounds
	Pyrene-d10	50%	J/UJ - Associated Compounds
3	Phenol-d5	110%	None - All ND
	4-Methylphenol-d8	104%	None - All ND
	4-Chloroaniline-d4	0%	R - Associated Compounds
4	4-Chloroaniline-d4	0%	R - Associated Compounds
5	Phenol-d5	109%	J - Positive Associated Results
6	Phenol-d5	131%	None - All ND
	4-Methylphenol-d8	113%	None - All ND
	4-Chloroaniline-d4	0%	R - Associated Compounds
7	Phenol-d5	106%	None - All ND
	4-Methylphenol-d8	102%	None - All ND
	4-Chloroaniline-d4	0%	R - Associated Compounds
9	Phenol-d5	123%	None - All ND
	4-Methylphenol-d8	108%	None - All ND
14	Phenol-d5	106%	None - All ND
	4-Methylphenol-d8	106%	None - All ND
15	Phenol-d5	106%	None - All ND

16	Phenol-d5	109%	J - Positive Associated Results
18	Phenol-d5	106%	J - Positive Associated Results

Matrix Spike/Matrix Spike Duplicate (MS/MSD) Recoveries

- The MS/MSD sample exhibited acceptable %R and RPD values.

Laboratory Control Samples

- A LCS sample was not analyzed.

Internal Standard (IS) Area Performance

- All internal standards met response and retention time (RT) criteria.

Target Compound Identification

- All mass spectra and quantitation criteria were met.

Compound Quantitation

- Several samples were analyzed at various dilutions due to high concentrations of target compounds. No action was required.

Field Duplicate Sample Precision

- Field duplicate results are summarized below.

SVOC				
Compound	LMR13-03-024 ug/kg	LMR13-03-024FD ug/kg	RPD	Qualifier
Naphthalene	78	110	34%	None
2-Methylnaphthalene	46	530U	NC	
Acenaphthylene	120	320	91%	
Acenaphthene	480	700	37%	
Dibenzofuran	49	92	61%	
Fluorene	560	990	55%	
Phenanthrene	2700	4300	46%	
Anthracene	530	1000	61%	
Fluoranthene	3000	3800	24%	
Pyrene	3100	5200	51%	
Benzo(a)anthracene	2000	3200	46%	
Chrysene	1900	3700	64%	
Benzo(b)fluoranthene	1500	3000	67%	

SVOC				
Compound	LMR13-03-024 ug/kg	LMR13-03-024FD ug/kg	RPD	Qualifier
Benzo(k)fluoranthene	1000	1800	57%	None
Benzo(a)pyrene	1400	2700	53%	
Indeno(1,2,3-cd)pyrene	720	950	28%	
Dibenzo(a,h)anthracene	310	380	20%	
Benzo(g,h,i)perylene	920	1000	8%	

Polynuclear Aromatic Hydrocarbons (PAH 34)

Holding Times

- All samples were extracted within 14 days for sediment samples and analyzed within 40 days for all samples.

GC/MS Tuning

- All criteria were met.

Initial Calibration

- All %RSD and mean RRF criteria were met.

Continuing Calibration

- All %D and RRF criteria were met.

Method Blank

- The method blanks exhibited the following contamination.

Blank ID	Compound	Conc. ug/kg	Qualifier	Affected Samples
SBLKM9	Naphthalene	0.30	None	All >5X
	Total 16 PPAH	0.30	J	6, 14
	Total PAH	0.30	J	

Field Blank

- Field QC samples were not analyzed.

Surrogate Spike Recoveries

- All samples exhibited acceptable surrogate %R values.

Matrix Spike/Matrix Spike Duplicate (MS/MSD) Recoveries

- A MS/MSD sample was not analyzed.

Laboratory Control Samples

- A LCS sample was not analyzed.

Internal Standard (IS) Area Performance

- All internal standards met response and retention time (RT) criteria.

Target Compound Identification

- All mass spectra and quantitation criteria were met.

Compound Quantitation

- EDS Sample ID #s 6 and 14 exhibited high concentrations of target compounds over the linear range of the instrument and were flagged (E) by the laboratory. These samples were not diluted and these results have been furthered qualified as estimated (J).
- Total 16 PPAH and Total PAH were estimated (J) in all samples due to blank contamination.

Field Duplicate Sample Precision

- Field duplicate samples were not analyzed.

Polychlorinated Biphenyls (PCBs)

Holding Times

- All samples were extracted within 14 days for sediment samples and analyzed within 40 days.

Initial Calibration

- All %RSD and/or correlation coefficient criteria were met.

Continuing Calibration

- All %D criteria were met.

Method Blank

- The method blanks were free of contamination.

Field Blank

- Field QC samples were not analyzed.

Surrogate Spike Recoveries

- All samples exhibited acceptable surrogate recoveries.

Matrix Spike/Matrix Spike Duplicate (MS/MSD) Recoveries

- The MS/MSD sample exhibited acceptable %R and RPD values.

Laboratory Control Samples

- The LCS sample exhibited acceptable %R values.

Compound Quantitation

- All criteria were met.

Field Duplicate Sample Precision

- Field duplicate results are summarized below.

PCBs				
Compound	LMR13-82-024 ug/kg	LMR13-82-024FD ug/kg	RPD	Qualifier
Aroclor-1248	750	660	13%	None
Aroclor-1254	510	460	10%	
Aroclor-1260	92	81	13%	

GC Column Difference Results

- Several samples exhibited high %D values > 25% between columns and have been qualified as estimated (J) by the reviewer.

Metals & Mercury

Holding Times

- All samples were prepared and analyzed within 28 days for mercury and 180 days for all other metals.

ICP/MS Tuning

- Not applicable.

Initial Calibration Verification

- All initial calibration criteria were met.

Continuing Calibration Verification

- All continuing calibration criteria were met.

Method Blank

- The method blanks exhibited the following contamination.

Blank ID	Compound	Conc. mg/kg	Qualifier	Affected Samples
MB	Zinc	0.26	None	All >10X
MB	Cadmium	0.028	U	4, 5, 16-19, 24
	Zinc	0.81	None	All >10X

Field Blank

- Field QC samples were not analyzed.

ICP Interference Check Sample

- The ICP interference check sample exhibited acceptable %R values.

Laboratory Control Samples

- The LCS sample exhibited acceptable recoveries.

Matrix Spike Analysis

- The matrix spike sample exhibited acceptable %R values except the following.

MS Sample ID	Compound	MS %R	Qualifier	Affected samples
1	Mercury	126%	J	All Samples

Duplicate Sample Analysis

- The duplicate sample exhibited acceptable RPD values.

ICP Serial Dilution

- ICP serial dilution percent differences (%D) were within acceptance limits except the following.

ICP Sample ID	Compound	%D	Qualifier	Affected Samples
1	Chromium	18%	J	All Samples
	Copper	17%	J	
	Nickel	20%	J	
	Zinc	19%	J	
22	Chromium	18%	J	All Samples
	Copper	15%	J	
	Lead	11%	J	
	Nickel	23%	J	
	Zinc	18%	J	

Compound Quantitation

- All criteria were met.

Field Duplicate Sample Precision

- Field duplicate results are summarized below.

Metals				
Compound	LMR13-82-024 mg/kg	LMR13-82-024FD mg/kg	RPD	Qualifier
Arsenic	10.4	11.5	10%	None
Cadmium	5.0	5.2	4%	
Chromium	64.5	74.5	14%	
Copper	50.8	57.9	13%	
Lead	96.1	105	9%	
Nickel	34.0	38.2	12%	
Zinc	239	271	13%	
Mercury	0.52	0.48	8%	

Oil & Grease, Total Organic Carbon, AVS/SEM (Metals & Hg)

Holding Times

- All samples were analyzed within the recommended holding time for each analysis except the following.

TOC				
Sample ID	Date Collected	Date Analyzed	# of Days	Qualifier
1-9, 14-19	06/17/13	07/08/13-07/22/13	21-35	J/UJ

Initial and Continuing Calibration

- All %R criteria were met.

Method Blank

- The method blanks exhibited the following contamination.

Blank ID	Compound	Conc. mg/kg	Qualifier	Affected Samples
MB240-92349 (Batch 92413)	HEM	170.7	U	17

Field Blank

- Field QC samples were not included in this data package.

Laboratory Control Samples

- The LCS samples exhibited acceptable %R values.

Matrix Spike/Duplicate (MS/DUP) Recoveries

- The MS/DUP samples exhibited acceptable %R and RPD values except the following.

MS/DUP ID	Compound	MS %R/MSD %R/RPD	Qualifier	Affected Samples
12	HEM	OK/OK/21	None	None for RPD Alone

Compound Quantitation

- All criteria were met.

Field Duplicate Sample Precision

- Field duplicate results are summarized below.

TOC				
Compound	LMR13-82-024 mg/kg	LMR13-82-024FD mg/kg	RPD	Qualifier
TOC	33800	35400	5%	None

Please contact the undersigned at (757) 564-0090 if you have any questions or need further information.

Signed: Nancy Weaver Dated: 9/20/13

Nancy Weaver
Senior Chemist

Data Qualifiers

U = The analyte was analyzed for, but was not detected at a level greater than or equal to the level of the adjusted Contract Required Quantitation Limit (CRQL) for sample and method.

UJ = The analyte was not detected at a level greater than or equal to the adjusted CRQL. However, the reported adjusted CRQL is approximate and may be inaccurate or imprecise.

J = The analyte was positively identified and the associated numerical value is the approximate concentration of the analyte in the sample (due either to the quality of the data generated because certain quality control criteria were not met, or the concentration of the analyte was below the CRQL).

J+ = The result is an estimated quantity, but the result may be biased high.

J- = The result is an estimated quantity, but the result may be biased low.

R = The sample results are unusable due to the quality of the data generated because certain criteria were not met. The analyte may or may not be present in the sample.

NJ = The analysis indicates the presence of an analyte that has been "tentatively identified" and the associated numerical value represents its approximate concentration.

1D - FORM I SV-1

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-48-072

1

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17055

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17055-1

Sample wt/vol: 30.3 (g/mL) g Lab File ID: ULLCN07.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 39 Decanted: (Y/N) Date Received: 06/18/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/27/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/12/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 3.3

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
100-52-7	Benzaldehyde	910	U
108-95-2	Phenol	910	U
111-44-4	Bis(2-chloroethyl)ether	910	U
95-57-8	2-Chlorophenol	910	U
95-48-7	2-Methylphenol	910	U
108-60-1	2,2'-Oxybis(1-chloropropane)	910	U
98-86-2	Acetophenone	910	U
106-44-5	4-Methylphenol	910	U
621-64-7	N-Nitroso-di-n-propylamine	910	U
67-72-1	Hexachloroethane	910	U
98-95-3	Nitrobenzene	910	U
78-59-1	Isophorone	910	U
88-75-5	2-Nitrophenol	910	U
105-67-9	2,4-Dimethylphenol	910	U
111-91-1	Bis(2-chloroethoxy)methane	910	U
120-83-2	2,4-Dichlorophenol	910	U
91-20-3	Naphthalene	40	J
106-47-8	4-Chloroaniline	910	U
87-68-3	Hexachlorobutadiene	910	U
105-60-2	Caprolactam	910	U
59-50-7	4-Chloro-3-methylphenol	910	U
91-57-6	2-Methylnaphthalene	910	U
77-47-4	Hexachlorocyclopentadiene	910	U
88-06-2	2,4,6-Trichlorophenol	910	U
95-95-4	2,4,5-Trichlorophenol	910	U
92-52-4	1,1'-Biphenyl	910	U
91-58-7	2-Chloronaphthalene	910	U
88-74-4	2-Nitroaniline	1800	U
131-11-3	Dimethylphthalate	910	U
606-20-2	2,6-Dinitrotoluene	910	U
208-96-8	Acenaphthylene	46	J
99-09-2	3-Nitroaniline	1800	U
83-32-9	Acenaphthene	130	J

UJ
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R
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R
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J

NW 9/17/13

1E - FORM I SV-2

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-48-072

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17055

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17055-1

Sample wt/vol: 30.3 (g/mL) g Lab File ID: ULLCN07.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 39 Decanted: (Y/N) Date Received: 06/18/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/27/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/12/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 3.3

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
51-28-5	2,4-Dinitrophenol	1800	U
100-02-7	4-Nitrophenol	1800	U
132-64-9	Dibenzofuran	83	U
121-14-2	2,4-Dinitrotoluene	910	U
84-66-2	Diethylphthalate	910	U
86-73-7	Fluorene	200	J
7005-72-3	4-Chlorophenyl-phenylether	910	U
100-01-6	4-Nitroaniline	1800	U
534-52-1	4,6-Dinitro-2-methylphenol	1800	U
86-30-6	N-Nitrosodiphenylamin [1]	910	U
95-94-3	1,2,4,5-Tetrachlorobenzene	910	U
101-55-3	4-Bromophenyl-phenylether	910	U
118-74-1	Hexachlorobenzene	910	U
1912-24-9	Atrazine	910	U
87-86-5	Pentachlorophenol	1800	U
85-01-8	Phenanthrene	1300	
120-12-7	Anthracene	260	J
86-74-8	Carbazole	910	U
84-74-2	Di-n-butylphthalate	910	U
206-44-0	Fluoranthene	1500	
129-00-0	Pyrene	1300	
85-68-7	Butylbenzylphthalate	910	U
91-94-1	3,3'-Dichlorobenzidine	910	U
56-55-3	Benzo(a)anthracene	920	
218-01-9	Chrysene	1100	
117-81-7	Bis(2-ethylhexyl)phthalate	910	U
117-84-0	Di-n-octylphthalate	910	U
205-99-2	Benzo(b)fluoranthene	560	J
207-08-9	Benzo(k)fluoranthene	670	J
50-32-8	Benzo(a)pyrene	620	J
193-39-5	Indeno(1,2,3-cd)pyrene	220	J
53-70-3	Dibenzo(a,h)anthracene	150	J
191-24-2	Benzo(g,h,i)perylene	280	J
58-90-2	2,3,4,6-Tetrachlorophenol	910	U

UJ
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UJ

[1] Cannot be separated from Diphenylamine

MW 9/17/13

1D - FORM I SV-1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-48-096

2

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17055

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17055-2

Sample wt/vol: 29.4 (g/mL) g Lab File ID: ULLCN08.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 38 Decanted: (Y/N) Date Received: 06/18/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/27/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/12/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 2.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
100-52-7	Benzaldehyde	560	U
108-95-2	Phenol	560	U
111-44-4	Bis(2-chloroethyl)ether	560	U
95-57-8	2-Chlorophenol	560	U
95-48-7	2-Methylphenol	560	U
108-60-1	2,2'-Oxybis(1-chloropropane)	560	U
98-86-2	Acetophenone	65	J
106-44-5	4-Methylphenol	560	U
621-64-7	N-Nitroso-di-n-propylamine	560	U
67-72-1	Hexachloroethane	560	U
98-95-3	Nitrobenzene	560	U
78-59-1	Isophorone	560	U
88-75-5	2-Nitrophenol	560	U
105-67-9	2,4-Dimethylphenol	560	U
111-91-1	Bis(2-chloroethoxy)methane	560	U
120-83-2	2,4-Dichlorophenol	560	U
91-20-3	Naphthalene	90	J
106-47-8	4-Chloroaniline	560	U
87-68-3	Hexachlorobutadiene	560	U
105-60-2	Caprolactam	560	U
59-50-7	4-Chloro-3-methylphenol	560	U
91-57-6	2-Methylnaphthalene	90	J
77-47-4	Hexachlorocyclopentadiene	560	U
88-06-2	2,4,6-Trichlorophenol	560	U
95-95-4	2,4,5-Trichlorophenol	560	U
92-52-4	1,1'-Biphenyl	560	U
91-58-7	2-Chloronaphthalene	560	U
88-74-4	2-Nitroaniline	1100	U
131-11-3	Dimethylphthalate	560	U
606-20-2	2,6-Dinitrotoluene	560	U
208-96-8	Acenaphthylene	120	J
99-09-2	3-Nitroaniline	1100	U
83-32-9	Acenaphthene	400	U

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NW 9/17/13

1E - FORM I SV-2
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-48-096

2

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17055

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17055-2

Sample wt/vol: 29.4 (g/mL) g Lab File ID: ULLCN08.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 38 Decanted: (Y/N) Date Received: 06/18/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/27/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/12/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 2.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
51-28-5	2,4-Dinitrophenol	1100	U	UJ
100-02-7	4-Nitrophenol	1100	U	UJ
132-64-9	Dibenzofuran	250		J
121-14-2	2,4-Dinitrotoluene	560	U	UJ
84-66-2	Diethylphthalate	560	U	UJ
86-73-7	Fluorene	570		J
7005-72-3	4-Chlorophenyl-phenylether	560	U	UJ
100-01-6	4-Nitroaniline	1100	U	
534-52-1	4,6-Dinitro-2-methylphenol	1100	U	
86-30-6	N-Nitrosodiphenylamin [1]	560	U	
95-94-3	1,2,4,5-Tetrachlorobenzene	560	U	
101-55-3	4-Bromophenyl-phenylether	560	U	
118-74-1	Hexachlorobenzene	560	U	
1912-24-9	Atrazine	560	U	
87-86-5	Pentachlorophenol	1100	U	
85-01-8	Phenanthrene	4300		J
120-12-7	Anthracene	640		J
86-74-8	Carbazole	560	U	UJ
84-74-2	Di-n-butylphthalate	560	U	UJ
206-44-0	Fluoranthene	3700		J
129-00-0	Pyrene	3800		J
85-68-7	Butylbenzylphthalate	560	U	UJ
91-94-1	3,3'-Dichlorobenzidine	560	U	UJ
56-55-3	Benzo(a)anthracene	2200		J
218-01-9	Chrysene	2000		J
117-81-7	Bis(2-ethylhexyl)phthalate	560	U	UJ
117-84-0	Di-n-octylphthalate	560	U	UJ
205-99-2	Benzo(b)fluoranthene	1200		J
207-08-9	Benzo(k)fluoranthene	1300		J
50-32-8	Benzo(a)pyrene	1300		J
193-39-5	Indeno(1,2,3-cd)pyrene	690		J
53-70-3	Dibenzo(a,h)anthracene	310	J	J
191-24-2	Benzo(g,h,i)perylene	910		J
58-90-2	2,3,4,6-Tetrachlorophenol	560	U	UJ

[1] Cannot be separated from Diphenylamine

MW 9/17/13

1D - FORM I SV-1

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-48-120

3

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17055

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17055-3

Sample wt/vol: 30.4 (g/mL) g Lab File ID: ULLCN09.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 38 Decanted: (Y/N) Date Received: 06/18/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/27/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/12/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 2.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
100-52-7	Benzaldehyde	540	U	UJ
108-95-2	Phenol	540	U	
111-44-4	Bis(2-chloroethyl)ether	540	U	
95-57-8	2-Chlorophenol	540	U	
95-48-7	2-Methylphenol	540	U	
108-60-1	2,2'-Oxybis(1-chloropropane)	540	U	
98-86-2	Acetophenone	39	J	J
106-44-5	4-Methylphenol	540	U	UJ
621-64-7	N-Nitroso-di-n-propylamine	540	U	
67-72-1	Hexachloroethane	540	U	
98-95-3	Nitrobenzene	540	U	
78-59-1	Isophorone	540	U	
88-75-5	2-Nitrophenol	540	U	
105-67-9	2,4-Dimethylphenol	540	U	
111-91-1	Bis(2-chloroethoxy)methane	540	U	
120-83-2	2,4-Dichlorophenol	540	U	
91-20-3	Naphthalene	44	J	J
106-47-8	4-Chloroaniline	540	U	R
87-68-3	Hexachlorobutadiene	540	U	UJ
105-60-2	Caprolactam	540	U	
59-50-7	4-Chloro-3-methylphenol	540	U	
91-57-6	2-Methylnaphthalene	540	U	
77-47-4	Hexachlorocyclopentadiene	540	U	R
88-06-2	2,4,6-Trichlorophenol	540	U	UJ
95-95-4	2,4,5-Trichlorophenol	540	U	
92-52-4	1,1'-Biphenyl	540	U	
91-58-7	2-Chloronaphthalene	540	U	
88-74-4	2-Nitroaniline	1000	U	
131-11-3	Dimethylphthalate	540	U	
606-20-2	2,6-Dinitrotoluene	540	U	
208-96-8	Acenaphthylene	51	J	J
99-09-2	3-Nitroaniline	1000	U	UJ
83-32-9	Acenaphthene	240	J	J

MW 9/17/13

1E - FORM I SV-2

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-48-120

3

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17055

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17055-3

Sample wt/vol: 30.4 (g/mL) g Lab File ID: ULLCN09.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 38 Decanted: (Y/N) Date Received: 06/18/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/27/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/12/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 2.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
51-28-5	2,4-Dinitrophenol	1000	U	UJ
100-02-7	4-Nitrophenol	1000	U	UJ
132-64-9	Dibenzofuran	55	U	J
121-14-2	2,4-Dinitrotoluene	540	U	UJ
84-66-2	Diethylphthalate	540	U	UJ
86-73-7	Fluorene	280	J	J
7005-72-3	4-Chlorophenyl-phenylether	540	U	UJ
100-01-6	4-Nitroaniline	1000	U	
534-52-1	4,6-Dinitro-2-methylphenol	1000	U	
86-30-6	N-Nitrosodiphenylamin [1]	540	U	
95-94-3	1,2,4,5-Tetrachlorobenzene	540	U	
101-55-3	4-Bromophenyl-phenylether	540	U	
118-74-1	Hexachlorobenzene	540	U	
1912-24-9	Atrazine	540	U	
87-86-5	Pentachlorophenol	1000	U	J
85-01-8	Phenanthrene	1400		J
120-12-7	Anthracene	380	J	UJ
86-74-8	Carbazole	540	U	UJ
84-74-2	Di-n-butylphthalate	540	U	J
206-44-0	Fluoranthene	1500		J
129-00-0	Pyrene	1400		J
85-68-7	Butylbenzylphthalate	540	U	UJ
91-94-1	3,3'-Dichlorobenzidine	540	U	R
56-55-3	Benzo(a)anthracene	770		J
218-01-9	Chrysene	870		J
117-81-7	Bis(2-ethylhexyl)phthalate	540 ~~32~~	~~J B~~	UJ
117-84-0	Di-n-octylphthalate	540	U	UJ
205-99-2	Benzo(b)fluoranthene	780		J
207-08-9	Benzo(k)fluoranthene	620		J
50-32-8	Benzo(a)pyrene	810		J
193-39-5	Indeno(1,2,3-cd)pyrene	360	J	J
53-70-3	Dibenzo(a,h)anthracene	140	J	J
191-24-2	Benzo(g,h,i)perylene	440	J	J
58-90-2	2,3,4,6-Tetrachlorophenol	540	U	UJ

[1] Cannot be separated from Diphenylamine

NW 9/17/13

1D - FORM I SV-1

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-48-144

4

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17055

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17055-4

Sample wt/vol: 29.7 (g/mL) g Lab File ID: ULLCN10.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 34 Decanted: (Y/N) Date Received: 06/18/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/27/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/12/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
100-52-7	Benzaldehyde	24	J	J
108-95-2	Phenol	260	U	UJ
111-44-4	Bis(2-chloroethyl)ether	260	U	
95-57-8	2-Chlorophenol	260	U	
95-48-7	2-Methylphenol	260	U	
108-60-1	2,2'-Oxybis(1-chloropropane)	260	U	
98-86-2	Acetophenone	25	J	J
106-44-5	4-Methylphenol	260	U	UJ
621-64-7	N-Nitroso-di-n-propylamine	260	U	
67-72-1	Hexachloroethane	260	U	
98-95-3	Nitrobenzene	260	U	
78-59-1	Isophorone	260	U	
88-75-5	2-Nitrophenol	260	U	
105-67-9	2,4-Dimethylphenol	260	U	
111-91-1	Bis(2-chloroethoxy)methane	260	U	
120-83-2	2,4-Dichlorophenol	260	U	
91-20-3	Naphthalene	17	J	J
106-47-8	4-Chloroaniline	260	U	R
87-68-3	Hexachlorobutadiene	260	U	UJ
105-60-2	Caprolactam	260	U	
59-50-7	4-Chloro-3-methylphenol	260	U	
91-57-6	2-Methylnaphthalene	260	U	
77-47-4	Hexachlorocyclopentadiene	260	U	R
88-06-2	2,4,6-Trichlorophenol	260	U	UJ
95-95-4	2,4,5-Trichlorophenol	260	U	
92-52-4	1,1'-Biphenyl	260	U	
91-58-7	2-Chloronaphthalene	260	U	
88-74-4	2-Nitroaniline	500	U	
131-11-3	Dimethylphthalate	260	U	
606-20-2	2,6-Dinitrotoluene	260	U	
208-96-8	Acenaphthylene	20	J	J
99-09-2	3-Nitroaniline	500	U	UJ
83-32-9	Acenaphthene	62	J	J

NW 9/17/13

1E - FORM I SV-2
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-48-144

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678 4

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17055

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17055-4

Sample wt/vol: 29.7 (g/mL) g Lab File ID: ULLCN10.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 34 Decanted: (Y/N) Date Received: 06/18/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/27/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/12/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
51-28-5	2,4-Dinitrophenol	500	U	UJ
100-02-7	4-Nitrophenol	500	U	
132-64-9	Dibenzofuran	260	U	
121-14-2	2,4-Dinitrotoluene	260	U	
84-66-2	Diethylphthalate	260	U	
86-73-7	Fluorene	71	J	J
7005-72-3	4-Chlorophenyl-phenylether	260	U	UJ
100-01-6	4-Nitroaniline	500	U	
534-52-1	4,6-Dinitro-2-methylphenol	500	U	
86-30-6	N-Nitrosodiphenylamin [1]	260	U	
95-94-3	1,2,4,5-Tetrachlorobenzene	260	U	
101-55-3	4-Bromophenyl-phenylether	260	U	
118-74-1	Hexachlorobenzene	260	U	
1912-24-9	Atrazine	260	U	
87-86-5	Pentachlorophenol	500	U	
85-01-8	Phenanthrene	450		J
120-12-7	Anthracene	110	J	J
86-74-8	Carbazole	260	U	UJ
84-74-2	Di-n-butylphthalate	260	U	UJ
206-44-0	Fluoranthene	540		J
129-00-0	Pyrene	590		J
85-68-7	Butylbenzylphthalate	260	U	UJ
91-94-1	3,3'-Dichlorobenzidine	260	U	R
56-55-3	Benzo(a)anthracene	340		J
218-01-9	Chrysene	380		J
117-81-7	Bis(2-ethylhexyl)phthalate	260 ~~32~~	~~J B~~	UJ
117-84-0	Di-n-octylphthalate	260	U	UJ
205-99-2	Benzo(b)fluoranthene	270		J
207-08-9	Benzo(k)fluoranthene	260	J	J
50-32-8	Benzo(a)pyrene	300		J
193-39-5	Indeno(1,2,3-cd)pyrene	150	J	J
53-70-3	Dibenzo(a,h)anthracene	55	J	J
191-24-2	Benzo(g,h,i)perylene	180	J	J
58-90-2	2,3,4,6-Tetrachlorophenol	260	U	UJ

[1] Cannot be separated from Diphenylamine

NW 9/17/13

1D - FORM I SV-1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-48-168

5

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17055

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17055-5

Sample wt/vol: 30.5 (g/mL) g Lab File ID: ULLCN11.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 26 Decanted: (Y/N) Date Received: 06/18/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/27/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/12/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
100-52-7	Benzaldehyde	19	J
108-95-2	Phenol	220	UJ
111-44-4	Bis(2-chloroethyl)ether	220	U
95-57-8	2-Chlorophenol	220	U
95-48-7	2-Methylphenol	220	U
108-60-1	2,2'-Oxybis(1-chloropropane)	220	U
98-86-2	Acetophenone	17	J
106-44-5	4-Methylphenol	10	J
621-64-7	N-Nitroso-di-n-propylamine	220	UJ
67-72-1	Hexachloroethane	220	U
98-95-3	Nitrobenzene	220	U
78-59-1	Isophorone	220	U
88-75-5	2-Nitrophenol	220	U
105-67-9	2,4-Dimethylphenol	220	U
111-91-1	Bis(2-chloroethoxy)methane	220	U
120-83-2	2,4-Dichlorophenol	220	U
91-20-3	Naphthalene	12	J
106-47-8	4-Chloroaniline	220	UJ
87-68-3	Hexachlorobutadiene	220	U
105-60-2	Caprolactam	220	U
59-50-7	4-Chloro-3-methylphenol	220	U
91-57-6	2-Methylnaphthalene	14	J
77-47-4	Hexachlorocyclopentadiene	220	UJ
88-06-2	2,4,6-Trichlorophenol	220	U
95-95-4	2,4,5-Trichlorophenol	220	U
92-52-4	1,1'-Biphenyl	220	U
91-58-7	2-Chloronaphthalene	220	U
88-74-4	2-Nitroaniline	440	U
131-11-3	Dimethylphthalate	220	U
606-20-2	2,6-Dinitrotoluene	220	U
208-96-8	Acenaphthylene	220	U
99-09-2	3-Nitroaniline	440	U
83-32-9	Acenaphthene	23	J

NW 9/17/13

EPA SAMPLE NO.
LMR13-48-168

5

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17055

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17055-5

Sample wt/vol: 30.5 (g/mL) g Lab File ID: ULLCN11.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 26 Decanted: (Y/N) Date Received: 06/18/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/27/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/12/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
51-28-5	2,4-Dinitrophenol	440	U	UJ
100-02-7	4-Nitrophenol	440	U	UJ
132-64-9	Dibenzofuran	11	J	J
121-14-2	2,4-Dinitrotoluene	220	U	UJ
84-66-2	Diethylphthalate	220	U	UJ
86-73-7	Fluorene	23	J	J
7005-72-3	4-Chlorophenyl-phenylether	220	U	UJ
100-01-6	4-Nitroaniline	440	U	
534-52-1	4,6-Dinitro-2-methylphenol	440	U	
86-30-6	N-Nitrosodiphenylamin [1]	220	U	
95-94-3	1,2,4,5-Tetrachlorobenzene	220	U	
101-55-3	4-Bromophenyl-phenylether	220	U	
118-74-1	Hexachlorobenzene	220	U	
1912-24-9	Atrazine	220	U	
87-86-5	Pentachlorophenol	440	U	
85-01-8	Phenanthrene	120	J	J
120-12-7	Anthracene	32	J	J
86-74-8	Carbazole	220	U	UJ
84-74-2	Di-n-butylphthalate	220	U	UJ
206-44-0	Fluoranthene	170	J	J
129-00-0	Pyrene	240		J
85-68-7	Butylbenzylphthalate	220 ~~16~~	~~J B~~	UJ
91-94-1	3,3'-Dichlorobenzidine	220	U	UJ
56-55-3	Benzo(a)anthracene	110	J	J
218-01-9	Chrysene	140	J	J
117-81-7	Bis(2-ethylhexyl)phthalate	220 ~~31~~	~~J B~~	UJ
117-84-0	Di-n-octylphthalate	220	U	UJ
205-99-2	Benzo(b)fluoranthene	85	J	J
207-08-9	Benzo(k)fluoranthene	94	J	J
50-32-8	Benzo(a)pyrene	110	J	
193-39-5	Indeno(1,2,3-cd)pyrene	45	J	
53-70-3	Dibenzo(a,h)anthracene	16	J	J
191-24-2	Benzo(g,h,i)perylene	50	J	J
58-90-2	2,3,4,6-Tetrachlorophenol	220	U	UJ

[1] Cannot be separated from Diphenylamine

MW 9/17/13

1D - FORM I SV-1

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-82-012

6

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17055

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17055-6

Sample wt/vol: 29.7 (g/mL) g Lab File ID: ULLCN12.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 46 Decanted: (Y/N) Date Received: 06/18/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/27/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/12/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 2.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
100-52-7	Benzaldehyde	640	U
108-95-2	Phenol	640	U
111-44-4	Bis(2-chloroethyl)ether	640	U
95-57-8	2-Chlorophenol	640	U
95-48-7	2-Methylphenol	640	U
108-60-1	2,2'-Oxybis(1-chloropropane)	640	U
98-86-2	Acetophenone	42	J
106-44-5	4-Methylphenol	640	U
621-64-7	N-Nitroso-di-n-propylamine	640	U
67-72-1	Hexachloroethane	640	U
98-95-3	Nitrobenzene	640	U
78-59-1	Isophorone	640	U
88-75-5	2-Nitrophenol	640	U
105-67-9	2,4-Dimethylphenol	640	U
111-91-1	Bis(2-chloroethoxy)methane	640	U
120-83-2	2,4-Dichlorophenol	640	U
91-20-3	Naphthalene	110	J
106-47-8	4-Chloroaniline	640	U
87-68-3	Hexachlorobutadiene	640	U
105-60-2	Caprolactam	640	U
59-50-7	4-Chloro-3-methylphenol	640	U
91-57-6	2-Methylnaphthalene	45	J
77-47-4	Hexachlorocyclopentadiene	640	U
88-06-2	2,4,6-Trichlorophenol	640	U
95-95-4	2,4,5-Trichlorophenol	640	U
92-52-4	1,1'-Biphenyl	640	U
91-58-7	2-Chloronaphthalene	640	U
88-74-4	2-Nitroaniline	1200	U
131-11-3	Dimethylphthalate	640	U
606-20-2	2,6-Dinitrotoluene	640	U
208-96-8	Acenaphthylene	45	J
99-09-2	3-Nitroaniline	1200	U
83-32-9	Acenaphthene	150	J

UJ
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NW 9/17/13

1E - FORM I SV-2
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-82-012

6

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17055

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17055-6

Sample wt/vol: 29.7 (g/mL) g Lab File ID: ULLCN12.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 46 Decanted: (Y/N) Date Received: 06/18/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/27/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/12/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 2.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
51-28-5	2,4-Dinitrophenol	1200	U	UJ
100-02-7	4-Nitrophenol	1200	U	UJ
132-64-9	Dibenzofuran	65	J	J
121-14-2	2,4-Dinitrotoluene	640	U	UJ
84-66-2	Diethylphthalate	640	U	UJ
86-73-7	Fluorene	190	J	J
7005-72-3	4-Chlorophenyl-phenylether	640	U	UJ
100-01-6	4-Nitroaniline	1200	U	
534-52-1	4,6-Dinitro-2-methylphenol	1200	U	
86-30-6	N-Nitrosodiphenylamin [1]	640	U	
95-94-3	1,2,4,5-Tetrachlorobenzene	640	U	
101-55-3	4-Bromophenyl-phenylether	640	U	
118-74-1	Hexachlorobenzene	640	U	
1912-24-9	Atrazine	640	U	
87-86-5	Pentachlorophenol	1200	U	
85-01-8	Phenanthrene	870		J
120-12-7	Anthracene	180	J	
86-74-8	Carbazole	24	J	
84-74-2	Di-n-butylphthalate	640 ~~40~~	~~J B~~	UJ
206-44-0	Fluoranthene	1700		J
129-00-0	Pyrene	1500		J
85-68-7	Butylbenzylphthalate	640	U	UJ
91-94-1	3,3'-Dichlorobenzidine	640	U	R
56-55-3	Benzo(a)anthracene	830		J
218-01-9	Chrysene	950		
117-81-7	Bis(2-ethylhexyl)phthalate	4700	B	
117-84-0	Di-n-octylphthalate	150	J	J
205-99-2	Benzo(b)fluoranthene	680		J
207-08-9	Benzo(k)fluoranthene	720		J
50-32-8	Benzo(a)pyrene	720		
193-39-5	Indeno(1,2,3-cd)pyrene	370	J	
53-70-3	Dibenzo(a,h)anthracene	170	J	J
191-24-2	Benzo(g,h,i)perylene	550	J	J
58-90-2	2,3,4,6-Tetrachlorophenol	640	U	UJ

[1] Cannot be separated from Diphenylamine

NW 9/17/13

SOM01.2 (4/2007)
08/15/2013

1D - FORM I SV-1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-82-024

7

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17055

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17055-7

Sample wt/vol: 30.8 (g/mL) g Lab File ID: ULLCN13.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 44 Decanted: (Y/N) Date Received: 06/18/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/27/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/12/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 5.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
100-52-7	Benzaldehyde	1500	U
108-95-2	Phenol	1500	U
111-44-4	Bis(2-chloroethyl)ether	1500	U
95-57-8	2-Chlorophenol	1500	U
95-48-7	2-Methylphenol	1500	U
108-60-1	2,2'-Oxybis(1-chloropropane)	1500	U
98-86-2	Acetophenone	1500	U
106-44-5	4-Methylphenol	1500	U
621-64-7	N-Nitroso-di-n-propylamine	1500	U
67-72-1	Hexachloroethane	1500	U
98-95-3	Nitrobenzene	1500	U
78-59-1	Isophorone	1500	U
88-75-5	2-Nitrophenol	1500	U
105-67-9	2,4-Dimethylphenol	1500	U
111-91-1	Bis(2-chloroethoxy)methane	1500	U
120-83-2	2,4-Dichlorophenol	1500	U
91-20-3	Naphthalene	200	J
106-47-8	4-Chloroaniline	1500	U
87-68-3	Hexachlorobutadiene	1500	U
105-60-2	Caprolactam	1500	U
59-50-7	4-Chloro-3-methylphenol	1500	U
91-57-6	2-Methylnaphthalene	1500	U
77-47-4	Hexachlorocyclopentadiene	1500	U
88-06-2	2,4,6-Trichlorophenol	1500	U
95-95-4	2,4,5-Trichlorophenol	1500	U
92-52-4	1,1'-Biphenyl	1500	U
91-58-7	2-Chloronaphthalene	1500	U
88-74-4	2-Nitroaniline	2900	U
131-11-3	Dimethylphthalate	1500	U
606-20-2	2,6-Dinitrotoluene	1500	U
208-96-8	Acenaphthylene	56	J
99-09-2	3-Nitroaniline	2900	U
83-32-9	Acenaphthene	150	J

UJ
R
UJ
R
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UJ
J

NW 9/17/13

1E - FORM I SV-2
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-82-024

7

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17055

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17055-7

Sample wt/vol: 30.8 (g/mL) g Lab File ID: ULLCN13.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 44 Decanted: (Y/N) Date Received: 06/18/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/27/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/12/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 5.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
51-28-5	2,4-Dinitrophenol	2900	U	UJ
100-02-7	4-Nitrophenol	2900	U	UJ
132-64-9	Dibenzofuran	41	J	J
121-14-2	2,4-Dinitrotoluene	1500	U	UJ
84-66-2	Diethylphthalate	1500	U	UJ
86-73-7	Fluorene	230	J	J
7005-72-3	4-Chlorophenyl-phenylether	1500	U	UJ
100-01-6	4-Nitroaniline	2900	U	
534-52-1	4,6-Dinitro-2-methylphenol	2900	U	
86-30-6	N-Nitrosodiphenylamin [1]	1500	U	
95-94-3	1,2,4,5-Tetrachlorobenzene	1500	U	
101-55-3	4-Bromophenyl-phenylether	1500	U	
118-74-1	Hexachlorobenzene	1500	U	
1912-24-9	Atrazine	1500	U	
87-86-5	Pentachlorophenol	2900	U	
85-01-8	Phenanthrene	880	J	J
120-12-7	Anthracene	220	J	J
86-74-8	Carbazole	1500	U	UJ
84-74-2	Di-n-butylphthalate	1500	U	UJ
206-44-0	Fluoranthene	2100		J
129-00-0	Pyrene	1700		J
85-68-7	Butylbenzylphthalate	1500	U	UJ
91-94-1	3,3'-Dichlorobenzidine	1500	U	R
56-55-3	Benzo(a)anthracene	1100	J	J
218-01-9	Chrysene	1400	J	
117-81-7	Bis(2-ethylhexyl)phthalate	8000	B	
117-84-0	Di-n-octylphthalate	1500	U	UJ
205-99-2	Benzo(b)fluoranthene	1200	J	J
207-08-9	Benzo(k)fluoranthene	860	J	
50-32-8	Benzo(a)pyrene	1100	U	
193-39-5	Indeno(1,2,3-cd)pyrene	550	U	J
53-70-3	Dibenzo(a,h)anthracene	280	U	J
191-24-2	Benzo(g,h,i)perylene	580	U	J
58-90-2	2,3,4,6-Tetrachlorophenol	1500	U	UJ

[1] Cannot be separated from Diphenylamine

NW 9/17/13

1D - FORM I SV-1

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-82-072

9

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17055

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17055-9

Sample wt/vol: 29.7 (g/mL) g Lab File ID: ULLCN14.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 33 Decanted: (Y/N) Date Received: 06/18/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/27/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/12/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 2.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
100-52-7	Benzaldehyde	510	U
108-95-2	Phenol	510	U
111-44-4	Bis(2-chloroethyl)ether	510	U
95-57-8	2-Chlorophenol	510	U
95-48-7	2-Methylphenol	510	U
108-60-1	2,2'-Oxybis(1-chloropropane)	510	U
98-86-2	Acetophenone	510	U
106-44-5	4-Methylphenol	510	U
621-64-7	N-Nitroso-di-n-propylamine	510	U
67-72-1	Hexachloroethane	510	U
98-95-3	Nitrobenzene	510	U
78-59-1	Isophorone	510	U
88-75-5	2-Nitrophenol	510	U
105-67-9	2,4-Dimethylphenol	510	U
111-91-1	Bis(2-chloroethoxy)methane	510	U
120-83-2	2,4-Dichlorophenol	510	U
91-20-3	Naphthalene	79	J
106-47-8	4-Chloroaniline	510	U
87-68-3	Hexachlorobutadiene	510	U
105-60-2	Caprolactam	510	U
59-50-7	4-Chloro-3-methylphenol	510	U
91-57-6	2-Methylnaphthalene	69	J
77-47-4	Hexachlorocyclopentadiene	510	U
88-06-2	2,4,6-Trichlorophenol	510	U
95-95-4	2,4,5-Trichlorophenol	510	U
92-52-4	1,1'-Biphenyl	510	U
91-58-7	2-Chloronaphthalene	510	U
88-74-4	2-Nitroaniline	990	U
131-11-3	Dimethylphthalate	510	U
606-20-2	2,6-Dinitrotoluene	510	U
208-96-8	Acenaphthylene	98	J
99-09-2	3-Nitroaniline	990	U
83-32-9	Acenaphthene	430	J

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NW 9/17/13

1E - FORM I SV-2
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-82-072

9

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17055

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17055-9

Sample wt/vol: 29.7 (g/mL) g Lab File ID: ULLCN14.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 33 Decanted: (Y/N) Date Received: 06/18/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/27/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/12/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 2.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
51-28-5	2,4-Dinitrophenol	990	U	UJ
100-02-7	4-Nitrophenol	990	U	UJ
132-64-9	Dibenzofuran	100	J	J
121-14-2	2,4-Dinitrotoluene	510	U	UJ
84-66-2	Diethylphthalate	510	U	UJ
86-73-7	Fluorene	420	J	J
7005-72-3	4-Chlorophenyl-phenylether	510	U	UJ
100-01-6	4-Nitroaniline	990	U	
534-52-1	4,6-Dinitro-2-methylphenol	990	U	
86-30-6	N-Nitrosodiphenylamin [1]	510	U	
95-94-3	1,2,4,5-Tetrachlorobenzene	510	U	
101-55-3	4-Bromophenyl-phenylether	510	U	
118-74-1	Hexachlorobenzene	510	U	
1912-24-9	Atrazine	510	U	
87-86-5	Pentachlorophenol	990	U	
85-01-8	Phenanthrene	2500		J
120-12-7	Anthracene	630		J
86-74-8	Carbazole	510	U	UJ
84-74-2	Di-n-butylphthalate	510	U	UJ
206-44-0	Fluoranthene	2800		J
129-00-0	Pyrene	2600		J
85-68-7	Butylbenzylphthalate	510	U	UJ
91-94-1	3,3'-Dichlorobenzidine	510	U	UJ
56-55-3	Benzo(a)anthracene	1300		J
218-01-9	Chrysene	1200		J
117-81-7	Bis(2-ethylhexyl)phthalate	510 84	J B	UJ
117-84-0	Di-n-octylphthalate	510	U	UJ
205-99-2	Benzo(b)fluoranthene	970		J
207-08-9	Benzo(k)fluoranthene	940		J
50-32-8	Benzo(a)pyrene	1000		J
193-39-5	Indeno(1,2,3-cd)pyrene	420	U	UJ
53-70-3	Dibenzo(a,h)anthracene	180	U	UJ
191-24-2	Benzo(g,h,i)perylene	590		J
58-90-2	2,3,4,6-Tetrachlorophenol	510	U	UJ

[1] Cannot be separated from Diphenylamine

NW 9/17/13

1D - FORM I SV-1

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-03-012

14

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17055

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17055-14

Sample wt/vol: 30.1 (g/mL) g Lab File ID: ULLCN15.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 41 Decanted: (Y/N) Date Received: 06/18/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/27/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/12/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 2.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
100-52-7	Benzaldehyde	570	U
108-95-2	Phenol	570	U
111-44-4	Bis(2-chloroethyl)ether	570	U
95-57-8	2-Chlorophenol	570	U
95-48-7	2-Methylphenol	570	U
108-60-1	2,2'-Oxybis(1-chloropropane)	570	U
98-86-2	Acetophenone	570	U
106-44-5	4-Methylphenol	570	U
621-64-7	N-Nitroso-di-n-propylamine	570	U
67-72-1	Hexachloroethane	570	U
98-95-3	Nitrobenzene	570	U
78-59-1	Isophorone	570	U
88-75-5	2-Nitrophenol	570	U
105-67-9	2,4-Dimethylphenol	570	U
111-91-1	Bis(2-chloroethoxy)methane	570	U
120-83-2	2,4-Dichlorophenol	570	U
91-20-3	Naphthalene	130	J
106-47-8	4-Chloroaniline	570	U
87-68-3	Hexachlorobutadiene	570	U
105-60-2	Caprolactam	570	U
59-50-7	4-Chloro-3-methylphenol	570	U
91-57-6	2-Methylnaphthalene	52	J
77-47-4	Hexachlorocyclopentadiene	570	U
88-06-2	2,4,6-Trichlorophenol	570	U
95-95-4	2,4,5-Trichlorophenol	570	U
92-52-4	1,1'-Biphenyl	570	U
91-58-7	2-Chloronaphthalene	570	U
88-74-4	2-Nitroaniline	1100	U
131-11-3	Dimethylphthalate	570	U
606-20-2	2,6-Dinitrotoluene	570	U
208-96-8	Acenaphthylene	68	J
99-09-2	3-Nitroaniline	1100	U
83-32-9	Acenaphthene	75	J

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NW 9/17/13

1E - FORM I SV-2
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-03-012

14

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17055

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17055-14

Sample wt/vol: 30.1 (g/mL) g Lab File ID: ULLCN15.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 41 Decanted: (Y/N) Date Received: 06/18/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/27/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/12/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 2.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
51-28-5	2,4-Dinitrophenol	1100	UJ
100-02-7	4-Nitrophenol	1100	UJ
132-64-9	Dibenzofuran	37	J
121-14-2	2,4-Dinitrotoluene	570	UJ
84-66-2	Diethylphthalate	570	UJ
86-73-7	Fluorene	93	J
7005-72-3	4-Chlorophenyl-phenylether	570	UJ
100-01-6	4-Nitroaniline	1100	UJ
534-52-1	4,6-Dinitro-2-methylphenol	1100	UJ
86-30-6	N-Nitrosodiphenylamin [1]	570	UJ
95-94-3	1,2,4,5-Tetrachlorobenzene	570	UJ
101-55-3	4-Bromophenyl-phenylether	570	UJ
118-74-1	Hexachlorobenzene	570	UJ
1912-24-9	Atrazine	570	UJ
87-86-5	Pentachlorophenol	1100	UJ
85-01-8	Phenanthrene	430	J
120-12-7	Anthracene	170	J
86-74-8	Carbazole	570	UJ
84-74-2	Di-n-butylphthalate	570	UJ
206-44-0	Fluoranthene	1200	
129-00-0	Pyrene	1200	
85-68-7	Butylbenzylphthalate	570	UJ
91-94-1	3,3'-Dichlorobenzidine	570	UJ
56-55-3	Benzo(a)anthracene	910	
218-01-9	Chrysene	1100	
117-81-7	Bis(2-ethylhexyl)phthalate	700	B
117-84-0	Di-n-octylphthalate	570	UJ
205-99-2	Benzo(b)fluoranthene	990	
207-08-9	Benzo(k)fluoranthene	720	
50-32-8	Benzo(a)pyrene	940	
193-39-5	Indeno(1,2,3-cd)pyrene	480	J
53-70-3	Dibenzo(a,h)anthracene	200	J
191-24-2	Benzo(g,h,i)perylene	570	UJ
58-90-2	2,3,4,6-Tetrachlorophenol	570	UJ

[1] Cannot be separated from Diphenylamine

NW 9/17/13

1D - FORM I SV-1

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-03-024

15

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17055

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17055-15

Sample wt/vol: 29.6 (g/mL) g Lab File ID: ULLCN16.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 36 Decanted: (Y/N) Date Received: 06/18/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/27/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/12/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 2.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
100-52-7	Benzaldehyde	540	U
108-95-2	Phenol	540	U
111-44-4	Bis(2-chloroethyl)ether	540	U
95-57-8	2-Chlorophenol	540	U
95-48-7	2-Methylphenol	540	U
108-60-1	2,2'-Oxybis(1-chloropropane)	540	U
98-86-2	Acetophenone	540	U
106-44-5	4-Methylphenol	540	U
621-64-7	N-Nitroso-di-n-propylamine	540	U
67-72-1	Hexachloroethane	540	U
98-95-3	Nitrobenzene	540	U
78-59-1	Isophorone	540	U
88-75-5	2-Nitrophenol	540	U
105-67-9	2,4-Dimethylphenol	540	U
111-91-1	Bis(2-chloroethoxy)methane	540	U
120-83-2	2,4-Dichlorophenol	540	U
91-20-3	Naphthalene	78	J
106-47-8	4-Chloroaniline	540	U
87-68-3	Hexachlorobutadiene	540	U
105-60-2	Caprolactam	540	U
59-50-7	4-Chloro-3-methylphenol	540	U
91-57-6	2-Methylnaphthalene	46	J
77-47-4	Hexachlorocyclopentadiene	540	U
88-06-2	2,4,6-Trichlorophenol	540	U
95-95-4	2,4,5-Trichlorophenol	540	U
92-52-4	1,1'-Biphenyl	540	U
91-58-7	2-Chloronaphthalene	540	U
88-74-4	2-Nitroaniline	1000	U
131-11-3	Dimethylphthalate	540	U
606-20-2	2,6-Dinitrotoluene	540	U
208-96-8	Acenaphthylene	120	J
99-09-2	3-Nitroaniline	1000	U
83-32-9	Acenaphthene	480	J

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NW 9/17/13

1E - FORM I SV-2
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-03-024

15

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17055

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17055-15

Sample wt/vol: 29.6 (g/mL) g Lab File ID: ULLCN16.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 36 Decanted: (Y/N) Date Received: 06/18/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/27/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/12/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 2.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
51-28-5	2,4-Dinitrophenol	1000	U	UJ
100-02-7	4-Nitrophenol	1000	U	UJ
132-64-9	Dibenzofuran	49	J	J
121-14-2	2,4-Dinitrotoluene	540	U	UJ
84-66-2	Diethylphthalate	540	U	UJ
86-73-7	Fluorene	560		J
7005-72-3	4-Chlorophenyl-phenylether	540	U	UJ
100-01-6	4-Nitroaniline	1000	U	
534-52-1	4,6-Dinitro-2-methylphenol	1000	U	
86-30-6	N-Nitrosodiphenylamin [1]	540	U	
95-94-3	1,2,4,5-Tetrachlorobenzene	540	U	
101-55-3	4-Bromophenyl-phenylether	540	U	
118-74-1	Hexachlorobenzene	540	U	
1912-24-9	Atrazine	540	U	
87-86-5	Pentachlorophenol	1000	U	
85-01-8	Phenanthrene	2700		J
120-12-7	Anthracene	530	J	J
86-74-8	Carbazole	540	U	UJ
84-74-2	Di-n-butylphthalate	540	U	UJ
206-44-0	Fluoranthene	3000		J
129-00-0	Pyrene	3100		J
85-68-7	Butylbenzylphthalate	540	U	UJ
91-94-1	3,3'-Dichlorobenzidine	540	U	UJ
56-55-3	Benzo(a)anthracene	2000		J
218-01-9	Chrysene	1900		J
117-81-7	Bis(2-ethylhexyl)phthalate	540	U	UJ
117-84-0	Di-n-octylphthalate	540	U	UJ
205-99-2	Benzo(b)fluoranthene	1500		J
207-08-9	Benzo(k)fluoranthene	1000		J
50-32-8	Benzo(a)pyrene	1400		J
193-39-5	Indeno(1,2,3-cd)pyrene	720		J
53-70-3	Dibenzo(a,h)anthracene	310	J	J
191-24-2	Benzo(g,h,i)perylene	920		J
58-90-2	2,3,4,6-Tetrachlorophenol	540	U	UJ

[1] Cannot be separated from Diphenylamine

NW 9/17/13

1D - FORM I SV-1

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-03-048

16

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17055

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17055-16

Sample wt/vol: 29.9 (g/mL) g Lab File ID: ULLCN17.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 37 Decanted: (Y/N) Date Received: 06/18/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/27/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/12/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
100-52-7	Benzaldehyde	36	J
108-95-2	Phenol	270	U
111-44-4	Bis(2-chloroethyl)ether	270	U
95-57-8	2-Chlorophenol	270	U
95-48-7	2-Methylphenol	270	U
108-60-1	2,2'-Oxybis(1-chloropropane)	270	U
98-86-2	Acetophenone	26	J
106-44-5	4-Methylphenol	270	U
621-64-7	N-Nitroso-di-n-propylamine	270	U
67-72-1	Hexachloroethane	270	U
98-95-3	Nitrobenzene	270	U
78-59-1	Isophorone	270	U
88-75-5	2-Nitrophenol	270	U
105-67-9	2,4-Dimethylphenol	270	U
111-91-1	Bis(2-chloroethoxy)methane	270	U
120-83-2	2,4-Dichlorophenol	270	U
91-20-3	Naphthalene	59	J
106-47-8	4-Chloroaniline	270	U
87-68-3	Hexachlorobutadiene	270	U
105-60-2	Caprolactam	270	U
59-50-7	4-Chloro-3-methylphenol	270	U
91-57-6	2-Methylnaphthalene	48	J
77-47-4	Hexachlorocyclopentadiene	270	U
88-06-2	2,4,6-Trichlorophenol	270	U
95-95-4	2,4,5-Trichlorophenol	270	U
92-52-4	1,1'-Biphenyl	270	U
91-58-7	2-Chloronaphthalene	270	U
88-74-4	2-Nitroaniline	530	U
131-11-3	Dimethylphthalate	270	U
606-20-2	2,6-Dinitrotoluene	270	U
208-96-8	Acenaphthylene	80	J
99-09-2	3-Nitroaniline	530	U
83-32-9	Acenaphthene	440	

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NW 9/17/13

1E - FORM I SV-2
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-03-048

16

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17055

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17055-16

Sample wt/vol: 29.9 (g/mL) g Lab File ID: ULLCN17.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 37 Decanted: (Y/N) Date Received: 06/18/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/27/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/12/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
51-28-5	2,4-Dinitrophenol	530	U	UJ
100-02-7	4-Nitrophenol	530	U	UJ
132-64-9	Dibenzofuran	39	J	J
121-14-2	2,4-Dinitrotoluene	270	U	UJ
84-66-2	Diethylphthalate	270	U	UJ
86-73-7	Fluorene	530		J
7005-72-3	4-Chlorophenyl-phenylether	270	U	UJ
100-01-6	4-Nitroaniline	530	U	
534-52-1	4,6-Dinitro-2-methylphenol	530	U	
86-30-6	N-Nitrosodiphenylamin [1]	270	U	
95-94-3	1,2,4,5-Tetrachlorobenzene	270	U	
101-55-3	4-Bromophenyl-phenylether	270	U	
118-74-1	Hexachlorobenzene	270	U	
1912-24-9	Atrazine	270	U	
87-86-5	Pentachlorophenol	530	U	
85-01-8	Phenanthrene	2300		J
120-12-7	Anthracene	560		
86-74-8	Carbazole	12	J	
84-74-2	Di-n-butylphthalate	270 16	~~J B~~	UJ
206-44-0	Fluoranthene	2300		J
129-00-0	Pyrene	2600		J
85-68-7	Butylbenzylphthalate	270	U	UJ
91-94-1	3,3'-Dichlorobenzidine	270	U	UJ
56-55-3	Benzo(a)anthracene	1300		J
218-01-9	Chrysene	1100		J
117-81-7	Bis(2-ethylhexyl)phthalate	270 72	~~J B~~	UJ
117-84-0	Di-n-octylphthalate	270	U	UJ
205-99-2	Benzo(b)fluoranthene	840		J
207-08-9	Benzo(k)fluoranthene	980		J
50-32-8	Benzo(a)pyrene	870		
193-39-5	Indeno(1,2,3-cd)pyrene	500		J
53-70-3	Dibenzo(a,h)anthracene	220	J	J
191-24-2	Benzo(g,h,i)perylene	550		J
58-90-2	2,3,4,6-Tetrachlorophenol	270	U	UJ

[1] Cannot be separated from Diphenylamine

MW 9/17/13

1D - FORM I SV-1

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-03-072

17

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17055

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17055-17

Sample wt/vol: 29.5 (g/mL) g Lab File ID: ULLCN18.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 36 Decanted: (Y/N) Date Received: 06/18/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/27/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/12/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
100-52-7	Benzaldehyde	25	J
108-95-2	Phenol	270	U
111-44-4	Bis(2-chloroethyl)ether	270	U
95-57-8	2-Chlorophenol	270	U
95-48-7	2-Methylphenol	270	U
108-60-1	2,2'-Oxybis(1-chloropropane)	270	U
98-86-2	Acetophenone	13	J
106-44-5	4-Methylphenol	270	U
621-64-7	N-Nitroso-di-n-propylamine	270	U
67-72-1	Hexachloroethane	270	U
98-95-3	Nitrobenzene	270	U
78-59-1	Isophorone	270	U
88-75-5	2-Nitrophenol	270	U
105-67-9	2,4-Dimethylphenol	270	U
111-91-1	Bis(2-chloroethoxy)methane	270	U
120-83-2	2,4-Dichlorophenol	270	U
91-20-3	Naphthalene	17	J
106-47-8	4-Chloroaniline	270	U
87-68-3	Hexachlorobutadiene	270	U
105-60-2	Caprolactam	270	U
59-50-7	4-Chloro-3-methylphenol	270	U
91-57-6	2-Methylnaphthalene	270	U
77-47-4	Hexachlorocyclopentadiene	270	U
88-06-2	2,4,6-Trichlorophenol	270	U
95-95-4	2,4,5-Trichlorophenol	270	U
92-52-4	1,1'-Biphenyl	270	U
91-58-7	2-Chloronaphthalene	270	U
88-74-4	2-Nitroaniline	520	U
131-11-3	Dimethylphthalate	270	U
606-20-2	2,6-Dinitrotoluene	270	U
208-96-8	Acenaphthylene	34	J
99-09-2	3-Nitroaniline	520	U
83-32-9	Acenaphthene	110	J

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NW 9/17/13

1E - FORM I SV-2
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-03-072

17

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17055

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17055-17

Sample wt/vol: 29.5 (g/mL) g Lab File ID: ULLCN18.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 36 Decanted: (Y/N) Date Received: 06/18/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/27/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/12/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
51-28-5	2,4-Dinitrophenol	520	U	UJ
100-02-7	4-Nitrophenol	520	U	UJ
132-64-9	Dibenzofuran	26	J	J
121-14-2	2,4-Dinitrotoluene	270	U	UJ
84-66-2	Diethylphthalate	270	U	UJ
86-73-7	Fluorene	110	J	J
7005-72-3	4-Chlorophenyl-phenylether	270	U	UJ
100-01-6	4-Nitroaniline	520	U	
534-52-1	4,6-Dinitro-2-methylphenol	520	U	
86-30-6	N-Nitrosodiphenylamin [1]	270	U	
95-94-3	1,2,4,5-Tetrachlorobenzene	270	U	
101-55-3	4-Bromophenyl-phenylether	270	U	
118-74-1	Hexachlorobenzene	270	U	
1912-24-9	Atrazine	270	U	
87-86-5	Pentachlorophenol	520	U	
85-01-8	Phenanthrene	630		J
120-12-7	Anthracene	230	J	J
86-74-8	Carbazole	270	U	UJ
84-74-2	Di-n-butylphthalate	270 16	~~J B~~	UJ
206-44-0	Fluoranthene	850		J
129-00-0	Pyrene	1100		J
85-68-7	Butylbenzylphthalate	270 35	~~J B~~	UJ
91-94-1	3,3'-Dichlorobenzidine	270	~~U~~	UJ
56-55-3	Benzo(a)anthracene	470		J
218-01-9	Chrysene	490		J
117-81-7	Bis(2-ethylhexyl)phthalate	270 61	~~J B~~	UJ
117-84-0	Di-n-octylphthalate	270	~~U~~	UJ
205-99-2	Benzo(b)fluoranthene	310		J
207-08-9	Benzo(k)fluoranthene	350		J
50-32-8	Benzo(a)pyrene	420		J
193-39-5	Indeno(1,2,3-cd)pyrene	190	~~J~~	J
53-70-3	Dibenzo(a,h)anthracene	65	~~J~~	J
191-24-2	Benzo(g,h,i)perylene	200	~~J~~	J
58-90-2	2,3,4,6-Tetrachlorophenol	270	U	UJ

[1] Cannot be separated from Diphenylamine

MW 9/17/13

1D - FORM I SV-1

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-03-096

18

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17055

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17055-18

Sample wt/vol: 29.1 (g/mL) g Lab File ID: ULLCN19.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 29 Decanted: (Y/N) Date Received: 06/18/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/27/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/12/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
100-52-7	Benzaldehyde	20	J
108-95-2	Phenol	250	U
111-44-4	Bis(2-chloroethyl)ether	250	U
95-57-8	2-Chlorophenol	250	U
95-48-7	2-Methylphenol	250	U
108-60-1	2,2'-Oxybis(1-chloropropane)	250	U
98-86-2	Acetophenone	250	U
106-44-5	4-Methylphenol	250	U
621-64-7	N-Nitroso-di-n-propylamine	250	U
67-72-1	Hexachloroethane	250	U
98-95-3	Nitrobenzene	250	U
78-59-1	Isophorone	250	U
88-75-5	2-Nitrophenol	250	U
105-67-9	2,4-Dimethylphenol	250	U
111-91-1	Bis(2-chloroethoxy)methane	250	U
120-83-2	2,4-Dichlorophenol	250	U
91-20-3	Naphthalene	7.7	J
106-47-8	4-Chloroaniline	250	U
87-68-3	Hexachlorobutadiene	250	U
105-60-2	Caprolactam	250	U
59-50-7	4-Chloro-3-methylphenol	250	U
91-57-6	2-Methylnaphthalene	250	U
77-47-4	Hexachlorocyclopentadiene	250	UJ
88-06-2	2,4,6-Trichlorophenol	250	U
95-95-4	2,4,5-Trichlorophenol	250	U
92-52-4	1,1'-Biphenyl	250	U
91-58-7	2-Chloronaphthalene	250	U
88-74-4	2-Nitroaniline	480	U
131-11-3	Dimethylphthalate	250	U
606-20-2	2,6-Dinitrotoluene	250	U
208-96-8	Acenaphthylene	250	U
99-09-2	3-Nitroaniline	480	U
83-32-9	Acenaphthene	130	J

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NW 9/17/13

1E - FORM I SV-2
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-03-096

18

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17055

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17055-18

Sample wt/vol: 29.1 (g/mL) g Lab File ID: ULLCN19.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 29 Decanted: (Y/N) Date Received: 06/18/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/27/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/12/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
51-28-5	2,4-Dinitrophenol	480	U
100-02-7	4-Nitrophenol	480	U
132-64-9	Dibenzofuran	37	J
121-14-2	2,4-Dinitrotoluene	250	U
84-66-2	Diethylphthalate	250	U
86-73-7	Fluorene	91	J
7005-72-3	4-Chlorophenyl-phenylether	250	U
100-01-6	4-Nitroaniline	480	U
534-52-1	4,6-Dinitro-2-methylphenol	480	U
86-30-6	N-Nitrosodiphenylamin [1]	8.2	J
95-94-3	1,2,4,5-Tetrachlorobenzene	250	U
101-55-3	4-Bromophenyl-phenylether	250	U
118-74-1	Hexachlorobenzene	250	U
1912-24-9	Atrazine	250	U
87-86-5	Pentachlorophenol	480	U
85-01-8	Phenanthrene	270	
120-12-7	Anthracene	89	J
86-74-8	Carbazole	250	U
84-74-2	Di-n-butylphthalate	250 ~~14~~ ~~J B~~	
206-44-0	Fluoranthene	190	J
129-00-0	Pyrene	180	J
85-68-7	Butylbenzylphthalate	250 ~~30~~ ~~J~~ B	
91-94-1	3,3'-Dichlorobenzidine	250	U
56-55-3	Benzo(a)anthracene	71	J
218-01-9	Chrysene	92	J
117-81-7	Bis(2-ethylhexyl)phthalate	250 ~~57~~ ~~J B~~	
117-84-0	Di-n-octylphthalate	250	U
205-99-2	Benzo(b)fluoranthene	60	J
207-08-9	Benzo(k)fluoranthene	61	J
50-32-8	Benzo(a)pyrene	69	U
193-39-5	Indeno(1,2,3-cd)pyrene	23	J
53-70-3	Dibenzo(a,h)anthracene	8.9	J
191-24-2	Benzo(g,h,i)perylene	28	J
58-90-2	2,3,4,6-Tetrachlorophenol	250	U

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[1] Cannot be separated from Diphenylamine

MW 9/17/13

1D - FORM I SV-1

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-03-120

19

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17055

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17055-19

Sample wt/vol: 30.7 (g/mL) g Lab File ID: ULLCN20.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 33 Decanted: (Y/N) Date Received: 06/18/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/27/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/12/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
100-52-7	Benzaldehyde	13	UJ
108-95-2	Phenol	250	U
111-44-4	Bis(2-chloroethyl)ether	250	U
95-57-8	2-Chlorophenol	250	U
95-48-7	2-Methylphenol	250	U
108-60-1	2,2'-Oxybis(1-chloropropane)	250	U
98-86-2	Acetophenone	9.0	UJ
106-44-5	4-Methylphenol	250	U
621-64-7	N-Nitroso-di-n-propylamine	250	U
67-72-1	Hexachloroethane	250	U
98-95-3	Nitrobenzene	250	U
78-59-1	Isophorone	250	U
88-75-5	2-Nitrophenol	250	U
105-67-9	2,4-Dimethylphenol	250	U
111-91-1	Bis(2-chloroethoxy)methane	250	U
120-83-2	2,4-Dichlorophenol	250	U
91-20-3	Naphthalene	250	U
106-47-8	4-Chloroaniline	250	U
87-68-3	Hexachlorobutadiene	250	U
105-60-2	Caprolactam	250	U
59-50-7	4-Chloro-3-methylphenol	250	U
91-57-6	2-Methylnaphthalene	250	U
77-47-4	Hexachlorocyclopentadiene	250	UJ
88-06-2	2,4,6-Trichlorophenol	250	U
95-95-4	2,4,5-Trichlorophenol	250	U
92-52-4	1,1'-Biphenyl	250	U
91-58-7	2-Chloronaphthalene	250	U
88-74-4	2-Nitroaniline	480	U
131-11-3	Dimethylphthalate	250	U
606-20-2	2,6-Dinitrotoluene	250	U
208-96-8	Acenaphthylene	250	U
99-09-2	3-Nitroaniline	480	U
83-32-9	Acenaphthene	250	U

1E - FORM I SV-2
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-03-120

19

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17055

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17055-19

Sample wt/vol: 30.7 (g/mL) g Lab File ID: ULLCN20.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 33 Decanted: (Y/N) Date Received: 06/18/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/27/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/12/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
51-28-5	2,4-Dinitrophenol	480	U
100-02-7	4-Nitrophenol	480	U
132-64-9	Dibenzofuran	250	U
121-14-2	2,4-Dinitrotoluene	250	U
84-66-2	Diethylphthalate	250	U
86-73-7	Fluorene	9.5	J
7005-72-3	4-Chlorophenyl-phenylether	250	U
100-01-6	4-Nitroaniline	480	U
534-52-1	4,6-Dinitro-2-methylphenol	480	U
86-30-6	N-Nitrosodiphenylamin [1]	250	U
95-94-3	1,2,4,5-Tetrachlorobenzene	250	U
101-55-3	4-Bromophenyl-phenylether	250	U
118-74-1	Hexachlorobenzene	250	U
1912-24-9	Atrazine	250	U
87-86-5	Pentachlorophenol	480	U
85-01-8	Phenanthrene	24	J
120-12-7	Anthracene	9.6	J
86-74-8	Carbazole	250	U
84-74-2	Di-n-butylphthalate	250 ~~16~~ ~~J~~ ~~B~~	
206-44-0	Fluoranthene	23	J
129-00-0	Pyrene	19	J
85-68-7	Butylbenzylphthalate	250 ~~30~~ ~~J~~ ~~B~~	
91-94-1	3,3'-Dichlorobenzidine	250	U
56-55-3	Benzo(a)anthracene	12	J
218-01-9	Chrysene	17	J
117-81-7	Bis(2-ethylhexyl)phthalate	250 ~~53~~ ~~J~~ ~~B~~	
117-84-0	Di-n-octylphthalate	250	U
205-99-2	Benzo(b)fluoranthene	6.5	J
207-08-9	Benzo(k)fluoranthene	11	J
50-32-8	Benzo(a)pyrene	250	U
193-39-5	Indeno(1,2,3-cd)pyrene	250	U
53-70-3	Dibenzo(a,h)anthracene	250	U
191-24-2	Benzo(g,h,i)perylene	250	U
58-90-2	2,3,4,6-Tetrachlorophenol	250	U

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[1] Cannot be separated from Diphenylamine

NW 9/17/13

EPA SAMPLE NO.
LMR13-03-024FD

20

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17055

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17070-1

Sample wt/vol: 30.6 (g/mL) g Lab File ID: PJUWM16.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 37 Decanted: (Y/N) Date Received: 06/19/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/21/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/20/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 2.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
100-52-7	Benzaldehyde	530	U	
108-95-2	Phenol	530	U	
111-44-4	Bis(2-chloroethyl)ether	530	U	
95-57-8	2-Chlorophenol	530	U	
95-48-7	2-Methylphenol	530	U	
108-60-1	2,2'-Oxybis(1-chloropropane)	530	U	
98-86-2	Acetophenone	530	U	
106-44-5	4-Methylphenol	530	U	
621-64-7	N-Nitroso-di-n-propylamine	530	U	
67-72-1	Hexachloroethane	530	U	
98-95-3	Nitrobenzene	530	U	
78-59-1	Isophorone	530	U	
88-75-5	2-Nitrophenol	530	U	
105-67-9	2,4-Dimethylphenol	530	U	
111-91-1	Bis(2-chloroethoxy)methane	530	U	
120-83-2	2,4-Dichlorophenol	530	U	
91-20-3	Naphthalene	110	~~U~~ J	
106-47-8	4-Chloroaniline	530	~~U~~ R	
87-68-3	Hexachlorobutadiene	530	U	
105-60-2	Caprolactam	530	U	
59-50-7	4-Chloro-3-methylphenol	530	U	
91-57-6	2-Methylnaphthalene	530	U	
77-47-4	Hexachlorocyclopentadiene	530	~~U~~ R	
88-06-2	2,4,6-Trichlorophenol	530	U	
95-95-4	2,4,5-Trichlorophenol	530	U	
92-52-4	1,1'-Biphenyl	530	U	
91-58-7	2-Chloronaphthalene	530	U	
88-74-4	2-Nitroaniline	1000	U	
131-11-3	Dimethylphthalate	530	U	
606-20-2	2,6-Dinitrotoluene	530	U	
208-96-8	Acenaphthylene	320	~~U~~ J	
99-09-2	3-Nitroaniline	1000	U	
83-32-9	Acenaphthene	700		J

NW 9/17/13

EPA SAMPLE NO.
LMR13-03-024FD
20

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678
Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17055
Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17070-1
Sample wt/vol: 30.6 (g/mL) g Lab File ID: PJUWM16.D
Level: (LOW/MED) LOW Extraction: (Type) SONC
% Moisture: 37 Decanted: (Y/N) Date Received: 06/19/2013
Concentrated Extract Volume: 500 (uL) Date Extracted: 06/21/2013
Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/20/2013
GPC Cleanup: (Y/N) Y pH: Dilution Factor: 2.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
51-28-5	2,4-Dinitrophenol	1000	U	
100-02-7	4-Nitrophenol	1000	U	
132-64-9	Dibenzofuran	92	J	
121-14-2	2,4-Dinitrotoluene	530	U	
84-66-2	Diethylphthalate	530	U	
86-73-7	Fluorene	990		
7005-72-3	4-Chlorophenyl-phenylether	530	U	
100-01-6	4-Nitroaniline	1000	U	
534-52-1	4,6-Dinitro-2-methylphenol	1000	U	
86-30-6	N-Nitrosodiphenylamin [1]	530	U	
95-94-3	1,2,4,5-Tetrachlorobenzene	530	U	
101-55-3	4-Bromophenyl-phenylether	530	U	
118-74-1	Hexachlorobenzene	530	U	
1912-24-9	Atrazine	530	U	
87-86-5	Pentachlorophenol	1000	~~U~~	UJ
85-01-8	Phenanthrene	4300		
120-12-7	Anthracene	1000		
86-74-8	Carbazole	530	U	
84-74-2	Di-n-butylphthalate	530	U	
206-44-0	Fluoranthene	3800		
129-00-0	Pyrene	5200		
85-68-7	Butylbenzylphthalate	530 ~~100~~	~~J B~~	U
91-94-1	3,3'-Dichlorobenzidine	530	~~U~~	R
56-55-3	Benzo(a)anthracene	3200		
218-01-9	Chrysene	3700		
117-81-7	Bis(2-ethylhexyl)phthalate	530 ~~230~~	~~J B~~	U
117-84-0	Di-n-octylphthalate	530	U	
205-99-2	Benzo(b)fluoranthene	3000		
207-08-9	Benzo(k)fluoranthene	1800		
50-32-8	Benzo(a)pyrene	2700		
193-39-5	Indeno(1,2,3-cd)pyrene	950		
53-70-3	Dibenzo(a,h)anthracene	380	J	
191-24-2	Benzo(g,h,i)perylene	1000		
58-90-2	2,3,4,6-Tetrachlorophenol	530	U	

[1] Cannot be separated from Diphenylamine

NW 9/17/13

EPA SAMPLE NO.
LMR13-82-048

21

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17055

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17070-2

Sample wt/vol: 30.8 (g/mL) g Lab File ID: PJUWM17.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 39 Decanted: (Y/N) Date Received: 06/19/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/21/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/20/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
100-52-7	Benzaldehyde	33	J
108-95-2	Phenol	270	U
111-44-4	Bis(2-chloroethyl)ether	270	U
95-57-8	2-Chlorophenol	270	U
95-48-7	2-Methylphenol	270	U
108-60-1	2,2'-Oxybis(1-chloropropane)	270	U
98-86-2	Acetophenone	54	J
106-44-5	4-Methylphenol	270	U
621-64-7	N-Nitroso-di-n-propylamine	270	U
67-72-1	Hexachloroethane	270	U
98-95-3	Nitrobenzene	270	U
78-59-1	Isophorone	270	U
88-75-5	2-Nitrophenol	270	U
105-67-9	2,4-Dimethylphenol	270	U
111-91-1	Bis(2-chloroethoxy)methane	270	U
120-83-2	2,4-Dichlorophenol	270	U
91-20-3	Naphthalene	49	J
106-47-8	4-Chloroaniline	270	U
87-68-3	Hexachlorobutadiene	270	U
105-60-2	Caprolactam	270	U
59-50-7	4-Chloro-3-methylphenol	270	U
91-57-6	2-Methylnaphthalene	33	J
77-47-4	Hexachlorocyclopentadiene	270	U UJ
88-06-2	2,4,6-Trichlorophenol	270	U
95-95-4	2,4,5-Trichlorophenol	270	U
92-52-4	1,1'-Biphenyl	270	U
91-58-7	2-Chloronaphthalene	270	U
88-74-4	2-Nitroaniline	520	U
131-11-3	Dimethylphthalate	270	U
606-20-2	2,6-Dinitrotoluene	270	U
208-96-8	Acenaphthylene	73	J
99-09-2	3-Nitroaniline	520	U
83-32-9	Acenaphthene	160	J

NW 9/17/13

1E - FORM I SV-2
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-82-048

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678 2|

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17055

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17070-2

Sample wt/vol: 30.8 (g/mL) g Lab File ID: PJUWM17.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 39 Decanted: (Y/N) Date Received: 06/19/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/21/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/20/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
51-28-5	2,4-Dinitrophenol	520	U	
100-02-7	4-Nitrophenol	520	U	
132-64-9	Dibenzofuran	41	J	
121-14-2	2,4-Dinitrotoluene	270	U	
84-66-2	Diethylphthalate	270	U	
86-73-7	Fluorene	290		
7005-72-3	4-Chlorophenyl-phenylether	270	U	
100-01-6	4-Nitroaniline	520	U	
534-52-1	4,6-Dinitro-2-methylphenol	520	U	
86-30-6	N-Nitrosodiphenylamin [1]	270	U	
95-94-3	1,2,4,5-Tetrachlorobenzene	270	U	
101-55-3	4-Bromophenyl-phenylether	270	U	
118-74-1	Hexachlorobenzene	270	U	
1912-24-9	Atrazine	270	U	
87-86-5	Pentachlorophenol	520	~~U~~	UJ
85-01-8	Phenanthrene	1500		
120-12-7	Anthracene	330		
86-74-8	Carbazole	270	U	
84-74-2	Di-n-butylphthalate	270	U	
206-44-0	Fluoranthene	1200		
129-00-0	Pyrene	1800		
85-68-7	Butylbenzylphthalate	270 ~~110~~	~~J B~~	U
91-94-1	3,3'-Dichlorobenzidine	270	U	
56-55-3	Benzo(a)anthracene	1000		
218-01-9	Chrysene	1300		
117-81-7	Bis(2-ethylhexyl)phthalate	340	~~B~~	U
117-84-0	Di-n-octylphthalate	270	U	
205-99-2	Benzo(b)fluoranthene	740		
207-08-9	Benzo(k)fluoranthene	760		
50-32-8	Benzo(a)pyrene	770		
193-39-5	Indeno(1,2,3-cd)pyrene	260	J	
53-70-3	Dibenzo(a,h)anthracene	130	J	
191-24-2	Benzo(g,h,i)perylene	300		
58-90-2	2,3,4,6-Tetrachlorophenol	270	U	

[1] Cannot be separated from Diphenylamine

MW 9/17/13

1D - FORM I SV-1

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-82-096

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678 22

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17055

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17070-3

Sample wt/vol: 30.7 (g/mL) g Lab File ID: PJUWM18.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 37 Decanted: (Y/N) Date Received: 06/19/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/21/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/20/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
100-52-7	Benzaldehyde	49	J	
108-95-2	Phenol	260	U	
111-44-4	Bis(2-chloroethyl)ether	260	U	
95-57-8	2-Chlorophenol	260	U	
95-48-7	2-Methylphenol	260	U	
108-60-1	2,2'-Oxybis(1-chloropropane)	260	U	
98-86-2	Acetophenone	25	J	
106-44-5	4-Methylphenol	260	U	
621-64-7	N-Nitroso-di-n-propylamine	260	U	
67-72-1	Hexachloroethane	260	U	
98-95-3	Nitrobenzene	260	U	
78-59-1	Isophorone	260	U	
88-75-5	2-Nitrophenol	260	U	
105-67-9	2,4-Dimethylphenol	260	U	
111-91-1	Bis(2-chloroethoxy)methane	260	U	
120-83-2	2,4-Dichlorophenol	260	U	
91-20-3	Naphthalene	33	J	
106-47-8	4-Chloroaniline	260	U	R
87-68-3	Hexachlorobutadiene	260	U	
105-60-2	Caprolactam	260	U	
59-50-7	4-Chloro-3-methylphenol	260	U	
91-57-6	2-Methylnaphthalene	260	U	
77-47-4	Hexachlorocyclopentadiene	260	U	R
88-06-2	2,4,6-Trichlorophenol	260	U	
95-95-4	2,4,5-Trichlorophenol	260	U	
92-52-4	1,1'-Biphenyl	260	U	
91-58-7	2-Chloronaphthalene	260	U	
88-74-4	2-Nitroaniline	510	U	
131-11-3	Dimethylphthalate	260	U	
606-20-2	2,6-Dinitrotoluene	260	U	
208-96-8	Acenaphthylene	59	J	
99-09-2	3-Nitroaniline	510	U	
83-32-9	Acenaphthene	150	J	

NW 9/17/13

1E - FORM I SV-2
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-82-096

22

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17055

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17070-3

Sample wt/vol: 30.7 (g/mL) g Lab File ID: PJUWM18.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 37 Decanted: (Y/N) Date Received: 06/19/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/21/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/20/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
51-28-5	2,4-Dinitrophenol	510	U	
100-02-7	4-Nitrophenol	510	U	
132-64-9	Dibenzofuran	71	J	
121-14-2	2,4-Dinitrotoluene	260	U	
84-66-2	Diethylphthalate	260	U	
86-73-7	Fluorene	210	J	
7005-72-3	4-Chlorophenyl-phenylether	260	U	
100-01-6	4-Nitroaniline	510	U	
534-52-1	4,6-Dinitro-2-methylphenol	510	U	
86-30-6	N-Nitrosodiphenylamin [1]	260	U	
95-94-3	1,2,4,5-Tetrachlorobenzene	260	U	
101-55-3	4-Bromophenyl-phenylether	260	U	
118-74-1	Hexachlorobenzene	260	U	
1912-24-9	Atrazine	260	U	
87-86-5	Pentachlorophenol	510	~~U~~	UJ
85-01-8	Phenanthrene	1000		
120-12-7	Anthracene	340		
86-74-8	Carbazole	260	U	
84-74-2	Di-n-butylphthalate	14	J	
206-44-0	Fluoranthene	1200		J
129-00-0	Pyrene	1600		J
85-68-7	Butylbenzylphthalate	260 ~~87~~	~~J B~~	JUR
91-94-1	3,3'-Dichlorobenzidine	260	~~U~~	J
56-55-3	Benzo(a)anthracene	660		
218-01-9	Chrysene	780		
117-81-7	Bis(2-ethylhexyl)phthalate	260 ~~180~~	~~J B~~	JU
117-84-0	Di-n-octylphthalate	260	U	
205-99-2	Benzo(b)fluoranthene	550		J
207-08-9	Benzo(k)fluoranthene	520		
50-32-8	Benzo(a)pyrene	550		
193-39-5	Indeno(1,2,3-cd)pyrene	220	J	
53-70-3	Dibenzo(a,h)anthracene	79	J	
191-24-2	Benzo(g,h,i)perylene	260	J	
58-90-2	2,3,4,6-Tetrachlorophenol	260	U	

[1] Cannot be separated from Diphenylamine

MW 9/17/13

1D - FORM I SV-1

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-82-120

23

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17055

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17070-4

Sample wt/vol: 30.4 (g/mL) g Lab File ID: PJUWQ07.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 37 Decanted: (Y/N) Date Received: 06/19/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/21/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/21/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
100-52-7	Benzaldehyde	59	~~J~~	J
108-95-2	Phenol	270	U	
111-44-4	Bis(2-chloroethyl)ether	270	U	
95-57-8	2-Chlorophenol	270	U	
95-48-7	2-Methylphenol	270	U	
108-60-1	2,2'-Oxybis(1-chloropropane)	270	U	
98-86-2	Acetophenone	270	U	
106-44-5	4-Methylphenol	270	~~U~~	UJ
621-64-7	N-Nitroso-di-n-propylamine	270	~~U~~	UJ
67-72-1	Hexachloroethane	270	U	
98-95-3	Nitrobenzene	270	U	
78-59-1	Isophorone	270	U	
88-75-5	2-Nitrophenol	270	U	
105-67-9	2,4-Dimethylphenol	270	U	
111-91-1	Bis(2-chloroethoxy)methane	270	U	
120-83-2	2,4-Dichlorophenol	270	U	
91-20-3	Naphthalene	19	J	
106-47-8	4-Chloroaniline	270	~~U~~	R
87-68-3	Hexachlorobutadiene	270	U	
105-60-2	Caprolactam	270	U	
59-50-7	4-Chloro-3-methylphenol	270	U	
91-57-6	2-Methylnaphthalene	270	U	
77-47-4	Hexachlorocyclopentadiene	270	~~U~~	R
88-06-2	2,4,6-Trichlorophenol	270	U	
95-95-4	2,4,5-Trichlorophenol	270	U	
92-52-4	1,1'-Biphenyl	270	U	
91-58-7	2-Chloronaphthalene	270	U	
88-74-4	2-Nitroaniline	520	U	
131-11-3	Dimethylphthalate	270	U	
606-20-2	2,6-Dinitrotoluene	270	U	
208-96-8	Acenaphthylene	30	J	
99-09-2	3-Nitroaniline	520	U	
83-32-9	Acenaphthene	130	J	

NW 9/17/13

1E - FORM I SV-2

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-82-120

23

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17055

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17070-4

Sample wt/vol: 30.4 (g/mL) g Lab File ID: PJUWQ07.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 37 Decanted: (Y/N) Date Received: 06/19/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/21/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/21/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
51-28-5	2,4-Dinitrophenol	520	U	
100-02-7	4-Nitrophenol	520	U	
132-64-9	Dibenzofuran	46	J	
121-14-2	2,4-Dinitrotoluene	270	U	
84-66-2	Diethylphthalate	270	U	
86-73-7	Fluorene	150	J	
7005-72-3	4-Chlorophenyl-phenylether	270	U	
100-01-6	4-Nitroaniline	520	U	
534-52-1	4,6-Dinitro-2-methylphenol	520	U	
86-30-6	N-Nitrosodiphenylamin [1]	270	U	
95-94-3	1,2,4,5-Tetrachlorobenzene	270	U	
101-55-3	4-Bromophenyl-phenylether	270	U	
118-74-1	Hexachlorobenzene	270	U	
1912-24-9	Atrazine	270	U	
87-86-5	Pentachlorophenol	520	~~U~~	UJ
85-01-8	Phenanthrene	800		
120-12-7	Anthracene	230	J	
86-74-8	Carbazole	270	U	
84-74-2	Di-n-butylphthalate	270	U	
206-44-0	Fluoranthene	850		
129-00-0	Pyrene	1300		
85-68-7	Butylbenzylphthalate	270 ~~91~~	~~J B~~	U
91-94-1	3,3'-Dichlorobenzidine	270	~~U~~	R
56-55-3	Benzo(a)anthracene	460		
218-01-9	Chrysene	600		
117-81-7	Bis(2-ethylhexyl)phthalate	270 ~~190~~	~~J B~~	U
117-84-0	Di-n-octylphthalate	270	~~U~~	UJ
205-99-2	Benzo(b)fluoranthene	420		
207-08-9	Benzo(k)fluoranthene	310		
50-32-8	Benzo(a)pyrene	420		
193-39-5	Indeno(1,2,3-cd)pyrene	230	J	
53-70-3	Dibenzo(a,h)anthracene	82	J	
191-24-2	Benzo(g,h,i)perylene	300		
58-90-2	2,3,4,6-Tetrachlorophenol	270	U	

[1] Cannot be separated from Diphenylamine

MW 9/17/13

1D - FORM I SV-1

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-82-144

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678 24

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17055

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17070-5

Sample wt/vol: 30.6 (g/mL) g Lab File ID: PJUWQ10.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 36 Decanted: (Y/N) Date Received: 06/19/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/21/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/21/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
100-52-7	Benzaldehyde	57	J	
108-95-2	Phenol	260	U	
111-44-4	Bis(2-chloroethyl)ether	260	U	
95-57-8	2-Chlorophenol	260	U	
95-48-7	2-Methylphenol	260	U	
108-60-1	2,2'-Oxybis(1-chloropropane)	260	U	
98-86-2	Acetophenone	21	J	
106-44-5	4-Methylphenol	260	~~U~~	UJ
621-64-7	N-Nitroso-di-n-propylamine	260	~~U~~	UJ
67-72-1	Hexachloroethane	260	U	
98-95-3	Nitrobenzene	260	U	
78-59-1	Isophorone	260	U	
88-75-5	2-Nitrophenol	260	U	
105-67-9	2,4-Dimethylphenol	260	U	
111-91-1	Bis(2-chloroethoxy)methane	260	U	
120-83-2	2,4-Dichlorophenol	260	U	
91-20-3	Naphthalene	9.9	J	
106-47-8	4-Chloroaniline	260	~~U~~	R
87-68-3	Hexachlorobutadiene	260	U	
105-60-2	Caprolactam	260	U	
59-50-7	4-Chloro-3-methylphenol	260	U	
91-57-6	2-Methylnaphthalene	260	U	
77-47-4	Hexachlorocyclopentadiene	260	~~U~~	R
88-06-2	2,4,6-Trichlorophenol	260	U	
95-95-4	2,4,5-Trichlorophenol	260	U	
92-52-4	1,1'-Biphenyl	260	U	
91-58-7	2-Chloronaphthalene	260	U	
88-74-4	2-Nitroaniline	510	U	
131-11-3	Dimethylphthalate	260	U	
606-20-2	2,6-Dinitrotoluene	260	U	
208-96-8	Acenaphthylene	20	J	
99-09-2	3-Nitroaniline	510	U	
83-32-9	Acenaphthene	51	J	

EPA SAMPLE NO.
LMR13-82-144

24

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17055

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17070-5

Sample wt/vol: 30.6 (g/mL) g Lab File ID: PJUWQ10.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 36 Decanted: (Y/N) Date Received: 06/19/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/21/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/21/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
51-28-5	2,4-Dinitrophenol	510	U	
100-02-7	4-Nitrophenol	510	U	
132-64-9	Dibenzofuran	260	U	
121-14-2	2,4-Dinitrotoluene	260	U	
84-66-2	Diethylphthalate	260	U	
86-73-7	Fluorene	59	J	
7005-72-3	4-Chlorophenyl-phenylether	260	U	
100-01-6	4-Nitroaniline	510	U	
534-52-1	4,6-Dinitro-2-methylphenol	510	U	
86-30-6	N-Nitrosodiphenylamin [1]	260	U	
95-94-3	1,2,4,5-Tetrachlorobenzene	260	U	
101-55-3	4-Bromophenyl-phenylether	260	U	
118-74-1	Hexachlorobenzene	260	U	
1912-24-9	Atrazine	260	U	
87-86-5	Pentachlorophenol	510	~~U~~	UJ
85-01-8	Phenanthrene	270		
120-12-7	Anthracene	91	J	
86-74-8	Carbazole	260	U	
84-74-2	Di-n-butylphthalate	14	J	
206-44-0	Fluoranthene	410		
129-00-0	Pyrene	760		
85-68-7	Butylbenzylphthalate	260 ~~85~~ ~~J B~~	U	
91-94-1	3,3'-Dichlorobenzidine	260	~~U~~	R
56-55-3	Benzo(a)anthracene	260		
218-01-9	Chrysene	320		
117-81-7	Bis(2-ethylhexyl)phthalate	260 ~~200~~ ~~J B~~	U	
117-84-0	Di-n-octylphthalate	260	~~U~~	UJ
205-99-2	Benzo(b)fluoranthene	230	J	
207-08-9	Benzo(k)fluoranthene	180	J	
50-32-8	Benzo(a)pyrene	240	J	
193-39-5	Indeno(1,2,3-cd)pyrene	160	J	
53-70-3	Dibenzo(a,h)anthracene	59	J	
191-24-2	Benzo(g,h,i)perylene	200	J	
58-90-2	2,3,4,6-Tetrachlorophenol	260	U	

[1] Cannot be separated from Diphenylamine

MW 9/17/13

1F - FORM I SV-SIM

SEMIVOLATILE SIM ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-82-012

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678 6

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: 1734.2 SDG No.: 17055

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17055-6

Sample wt/vol: 29.7 (g/mL) g Lab File ID: SERHY06.D

Extraction: (Type) SONC

% Moisture: 46 Decanted: (Y/N) Date Received: 06/18/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/27/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/09/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 5.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
91-20-3	Naphthalene	84	~~B~~
90-12-0	1-Methylnaphthalene	16	J
91-57-6	2-Methylnaphthalene	34	
208-96-8	Acenaphthylene	43	
83-32-9	Acenaphthene	130	
86-73-7	Fluorene	170	
85-01-8	Phenanthrene	880	~~B~~ J
120-12-7	Anthracene	160	
206-44-0	Fluoranthene	1500	~~B~~ J
129-00-0	Pyrene	920	~~B~~
56-55-3	Benzo(a)anthracene	560	~~B~~
218-01-9	Chrysene	660	~~B~~
205-99-2	Benzo(b)fluoranthene	570	~~B~~
207-08-9	Benzo(k)fluoranthene	370	~~B~~
192-97-2	Benzo(e)pyrene	400	~~B~~
50-32-8	Benzo(a)pyrene	470	~~B~~
198-55-0	Perylene	280	
193-39-5	Indeno(1,2,3-cd)pyrene	360	~~B~~ J
53-70-3	Dibenzo(a,h)anthracene	140	
191-24-2	Benzo(g,h,i)perylene	390	~~B~~ J
C1NAPH	C1-Naphthalenes	35	J
C2NAPH	C2-Naphthalenes	150	J
C3NAPH	C3-Naphthalenes	470	J
C4NAPH	C4-Naphthalenes	550	J
C1FLUOR	C1 Fluorenes	58	J
C2FLUOR	C2 Fluorenes	100	J
C3FLUOR	C3 Fluorenes	280	J
C1PHAN	C1-Phenanthrenes/Anthracenes	750	J
C2PHAN	C2-Phenanthrenes/Anthracenes	740	J
C3PHAN	C3-Phenanthrenes/Anthracenes	580	J
C4PHAN	C4-Phenanthrenes/Anthracenes	480	J
C1FLPY	C1-Fluoranthenes/Pyrenes	660	J
C2FLPY	C2-Fluoranthenes/Pyrenes	470	J
C3FLPY	C3-Fluoranthenes/Pyrenes	320	J
C1CHRYS	C1 Chrysenes	530	J
C2CHRYS	C2 Chrysenes	370	J
C3CHRYS	C3 Chrysenes	220	J
C4CHRYS	C4 Chrysenes	89	J

NW 9/17/13

1F - FORM I SV-SIM
SEMIVOLATILE SIM ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-82-012

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678 6

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: 1734.2 SDG No.: 17055

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17055-6

Sample wt/vol: 29.7 (g/mL) g Lab File ID: SERHY06.D

Extraction: (Type) SONC

% Moisture: 46 Decanted: (Y/N) Date Received: 06/18/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/27/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/09/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 5.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
TPPAH	Total 16 PPAH	7400	~~B~~ J	
TPAH	Total PAH	15000	~~B~~ J	

MW 9/17/13

1F - FORM I SV-SIM

SEMIVOLATILE SIM ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-03-012

14

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: 1734.2 SDG No.: 17055

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17055-14

Sample wt/vol: 30.1 (g/mL) g Lab File ID: SERHY07.D

Extraction: (Type) SONC

% Moisture: 41 Decanted: (Y/N) Date Received: 06/18/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/27/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/09/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 2.5

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
91-20-3	Naphthalene	92	~~B~~
90-12-0	1-Methylnaphthalene	18	
91-57-6	2-Methylnaphthalene	38	
208-96-8	Acenaphthylene	65	
83-32-9	Acenaphthene	56	
86-73-7	Fluorene	64	
85-01-8	Phenanthrene	400	~~E~~ J
120-12-7	Anthracene	140	
206-44-0	Fluoranthene	930	~~E~~ J
129-00-0	Pyrene	750	~~E~~
56-55-3	Benzo(a)anthracene	600	~~E~~
218-01-9	Chrysene	690	~~E~~
205-99-2	Benzo(b)fluoranthene	610	~~E~~
207-08-9	Benzo(k)fluoranthene	350	~~E~~
192-97-2	Benzo(e)pyrene	480	~~E~~
50-32-8	Benzo(a)pyrene	510	~~E~~
198-55-0	Perylene	290	~~E~~
193-39-5	Indeno(1,2,3-cd)pyrene	350	~~E~~
53-70-3	Dibenzo(a,h)anthracene	160	~~E~~
191-24-2	Benzo(g,h,i)perylene	360	~~E~~
C1NAPH	C1-Naphthalenes	39	J
C2NAPH	C2-Naphthalenes	130	J
C3NAPH	C3-Naphthalenes	300	J
C4NAPH	C4-Naphthalenes	360	J
C1FLUOR	C1 Fluorenes	47	J
C2FLUOR	C2 Fluorenes	90	J
C3FLUOR	C3 Fluorenes	270	J
C1PHAN	C1-Phenanthrenes/Anthracenes	590	J
C2PHAN	C2-Phenanthrenes/Anthracenes	660	J
C3PHAN	C3-Phenanthrenes/Anthracenes	520	J
C4PHAN	C4-Phenanthrenes/Anthracenes	460	J
C1FLPY	C1-Fluoranthenes/Pyrenes	810	J
C2FLPY	C2-Fluoranthenes/Pyrenes	690	J
C3FLPY	C3-Fluoranthenes/Pyrenes	460	J
C1CHRYS	C1 Chrysenes	880	J
C2CHRYS	C2 Chrysenes	630	J
C3CHRYS	C3 Chrysenes	290	J
C4CHRYS	C4 Chrysenes	130	J

MW 9/17/13

1F - FORM I SV-SIM

SEMIVOLATILE SIM ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-03-012

14

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: 1734.2 SDG No.: 17055

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17055-14

Sample wt/vol: 30.1 (g/mL) g Lab File ID: SERHY07.D

Extraction: (Type) SONC

% Moisture: 41 Decanted: (Y/N) Date Received: 06/18/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/27/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/09/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 2.5

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
TPPAH	Total 16 PPAH	6100	~~B~~ J
TPAH	Total PAH	14000	~~B~~ J

NW 9/17/13

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-48-072

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17055

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17055-1

Sample wt/vol: 30.8 (g/mL) g Lab File ID: 0825AFBSOM19.D

% Moisture: 39 Decanted: (Y/N) Date Received: 06/18/2013

Extraction: (Type) SONC Date Extracted: 06/25/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 07/24/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 5.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	260	U
11104-28-2	Aroclor-1221	260	U
11141-16-5	Aroclor-1232	260	U
53469-21-9	Aroclor-1242	260	U
12672-29-6	Aroclor-1248	260	U
11097-69-1	Aroclor-1254	260	U
11096-82-5	Aroclor-1260	260	U
37324-23-5	Aroclor-1262	260	U
11100-14-4	Aroclor-1268	260	U

1H - FORM I ARO
AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-48-096

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678 2

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17055

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17055-2

Sample wt/vol: 30.2 (g/mL) g Lab File ID: 0825AFBSOM20.D

% Moisture: 38 Decanted: (Y/N) Date Received: 06/18/2013

Extraction: (Type) SONC Date Extracted: 06/25/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 07/24/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 5.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	260	U
11104-28-2	Aroclor-1221	260	U
11141-16-5	Aroclor-1232	260	U
53469-21-9	Aroclor-1242	260	U
12672-29-6	Aroclor-1248	260	U
11097-69-1	Aroclor-1254	260	U
11096-82-5	Aroclor-1260	260	U
37324-23-5	Aroclor-1262	260	U
11100-14-4	Aroclor-1268	260	U

NW 9/17/13

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-48-120

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678 3

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17055

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17055-3

Sample wt/vol: 29.7 (g/mL) g Lab File ID: 0825AFBSOM21.D

% Moisture: 38 Decanted: (Y/N) Date Received: 06/18/2013

Extraction: (Type) SONC Date Extracted: 06/25/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 07/24/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 5.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	270	U
11104-28-2	Aroclor-1221	270	U
11141-16-5	Aroclor-1232	270	U
53469-21-9	Aroclor-1242	270	U
12672-29-6	Aroclor-1248	270	U
11097-69-1	Aroclor-1254	270	U
11096-82-5	Aroclor-1260	270	U
37324-23-5	Aroclor-1262	270	U
11100-14-4	Aroclor-1268	270	U

NW 9/17/13

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-48-144

4

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17055

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17055-4

Sample wt/vol: 30.1 (g/mL) g Lab File ID: 0825AFBSOM22.D

% Moisture: 34 Decanted: (Y/N) Date Received: 06/18/2013

Extraction: (Type) SONC Date Extracted: 06/25/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 07/25/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 5.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	250	U
11104-28-2	Aroclor-1221	250	U
11141-16-5	Aroclor-1232	250	U
53469-21-9	Aroclor-1242	250	U
12672-29-6	Aroclor-1248	250	U
11097-69-1	Aroclor-1254	250	U
11096-82-5	Aroclor-1260	250	U
37324-23-5	Aroclor-1262	250	U
11100-14-4	Aroclor-1268	250	U

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1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-48-168

5

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17055

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17055-5

Sample wt/vol: 29.8 (g/mL) g Lab File ID: 0825AFBSOM23.D

% Moisture: 26 Decanted: (Y/N) Date Received: 06/18/2013

Extraction: (Type) SONC Date Extracted: 06/25/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 07/25/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 5.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	220	U
11104-28-2	Aroclor-1221	220	U
11141-16-5	Aroclor-1232	220	U
53469-21-9	Aroclor-1242	220	U
12672-29-6	Aroclor-1248	220	U
11097-69-1	Aroclor-1254	220	U
11096-82-5	Aroclor-1260	220	U
37324-23-5	Aroclor-1262	220	U
11100-14-4	Aroclor-1268	220	U

NW 9/17/13

1H - FORM I ARO
AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-82-012

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678 6

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17055

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17055-6

Sample wt/vol: 30.8 (g/mL) g Lab File ID: 0825AGBSOM06.D

% Moisture: 46 Decanted: (Y/N) Date Received: 06/18/2013

Extraction: (Type) SONC Date Extracted: 06/25/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 07/29/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 5.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	300	U
11104-28-2	Aroclor-1221	300	U
11141-16-5	Aroclor-1232	300	U
53469-21-9	Aroclor-1242	300	U
12672-29-6	Aroclor-1248	520	
11097-69-1	Aroclor-1254	420	
11096-82-5	Aroclor-1260	76	J
37324-23-5	Aroclor-1262	300	U
11100-14-4	Aroclor-1268	300	U

NW 9/17/13

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-82-024

7

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17055

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17055-7

Sample wt/vol: 30.0 (g/mL) g Lab File ID: 0825AGBSOM07.D

% Moisture: 44 Decanted: (Y/N) Date Received: 06/18/2013

Extraction: (Type) SONC Date Extracted: 06/25/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 07/29/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 5.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	290	U
11104-28-2	Aroclor-1221	290	U
11141-16-5	Aroclor-1232	290	U
53469-21-9	Aroclor-1242	290	U
12672-29-6	Aroclor-1248	750	
11097-69-1	Aroclor-1254	510	
11096-82-5	Aroclor-1260	92	J
37324-23-5	Aroclor-1262	290	U
11100-14-4	Aroclor-1268	290	U

NW 9/17/13

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-82-024FD

8

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17055

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17055-8

Sample wt/vol: 29.4 (g/mL) g Lab File ID: 0825AGBSOM08.D

% Moisture: 44 Decanted: (Y/N) Date Received: 06/18/2013

Extraction: (Type) SONC Date Extracted: 06/25/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 07/29/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 5.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	300	U
11104-28-2	Aroclor-1221	300	U
11141-16-5	Aroclor-1232	300	U
53469-21-9	Aroclor-1242	300	U
12672-29-6	Aroclor-1248	660	
11097-69-1	Aroclor-1254	460	
11096-82-5	Aroclor-1260	81	J
37324-23-5	Aroclor-1262	300	U
11100-14-4	Aroclor-1268	300	U

NW 9/17/13

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-82-072

9

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17055

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17055-9

Sample wt/vol: 30.2 (g/mL) g Lab File ID: 0825AGBSOM09.D

% Moisture: 33 Decanted: (Y/N) Date Received: 06/18/2013

Extraction: (Type) SONC Date Extracted: 06/25/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 07/29/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 5.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	240	U
11104-28-2	Aroclor-1221	240	U
11141-16-5	Aroclor-1232	240	U
53469-21-9	Aroclor-1242	240	U
12672-29-6	Aroclor-1248	240	U
11097-69-1	Aroclor-1254	240	U
11096-82-5	Aroclor-1260	240	U
37324-23-5	Aroclor-1262	240	U
11100-14-4	Aroclor-1268	240	U

NW 9/13/13

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-03-012

14

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17055

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17055-14

Sample wt/vol: 29.6 (g/mL) g Lab File ID: 0825AGBSOM10.D

% Moisture: 41 Decanted: (Y/N) Date Received: 06/18/2013

Extraction: (Type) SONC Date Extracted: 06/25/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 07/29/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 5.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	280	U
11104-28-2	Aroclor-1221	280	U
11141-16-5	Aroclor-1232	280	U
53469-21-9	Aroclor-1242	81	J
12672-29-6	Aroclor-1248	280	U
11097-69-1	Aroclor-1254	66	J
11096-82-5	Aroclor-1260	16	~~J P~~ J
37324-23-5	Aroclor-1262	280	U
11100-14-4	Aroclor-1268	280	U

MW 9/17/13

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-03-024

15

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17055

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17055-15

Sample wt/vol: 29.3 (g/mL) g Lab File ID: 0825AGBSOM11.D

% Moisture: 36 Decanted: (Y/N) Date Received: 06/18/2013

Extraction: (Type) SONC Date Extracted: 06/25/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 07/29/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 5.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	270	U
11104-28-2	Aroclor-1221	270	U
11141-16-5	Aroclor-1232	270	U
53469-21-9	Aroclor-1242	270	U
12672-29-6	Aroclor-1248	270	U
11097-69-1	Aroclor-1254	270	U
11096-82-5	Aroclor-1260	270	U
37324-23-5	Aroclor-1262	270	U
11100-14-4	Aroclor-1268	270	U

NW 9/17/13

1H - FORM I ARO
AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-03-048

16

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17055

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17055-16

Sample wt/vol: 29.5 (g/mL) g Lab File ID: 0825AGBSOM12.D

% Moisture: 37 Decanted: (Y/N) Date Received: 06/18/2013

Extraction: (Type) SONC Date Extracted: 06/25/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 07/29/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 5.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	270	U
11104-28-2	Aroclor-1221	270	U
11141-16-5	Aroclor-1232	270	U
53469-21-9	Aroclor-1242	270	U
12672-29-6	Aroclor-1248	270	U
11097-69-1	Aroclor-1254	270	U
11096-82-5	Aroclor-1260	270	U
37324-23-5	Aroclor-1262	270	U
11100-14-4	Aroclor-1268	270	U

NW 9/17/13

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-03-072

17

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17055

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17055-17

Sample wt/vol: 30.3 (g/mL) g Lab File ID: 0825AGBSOM13.D

% Moisture: 36 Decanted: (Y/N) Date Received: 06/18/2013

Extraction: (Type) SONC Date Extracted: 06/25/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 07/29/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 5.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	260	U
11104-28-2	Aroclor-1221	260	U
11141-16-5	Aroclor-1232	260	U
53469-21-9	Aroclor-1242	260	U
12672-29-6	Aroclor-1248	260	U
11097-69-1	Aroclor-1254	260	U
11096-82-5	Aroclor-1260	260	U
37324-23-5	Aroclor-1262	260	U
11100-14-4	Aroclor-1268	260	U

MW 9/17/13

1H - FORM I ARO
AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-03-096

18

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17055

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17055-18

Sample wt/vol: 30.0 (g/mL) g Lab File ID: 0825AGBSOM14.D

% Moisture: 29 Decanted: (Y/N) Date Received: 06/18/2013

Extraction: (Type) SONC Date Extracted: 06/25/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 07/29/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 5.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	230	U
11104-28-2	Aroclor-1221	230	U
11141-16-5	Aroclor-1232	230	U
53469-21-9	Aroclor-1242	230	U
12672-29-6	Aroclor-1248	230	U
11097-69-1	Aroclor-1254	230	U
11096-82-5	Aroclor-1260	230	U
37324-23-5	Aroclor-1262	230	U
11100-14-4	Aroclor-1268	230	U

MW 9/17/13

1H - FORM I ARO
AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-03-120

19

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17055

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17055-19

Sample wt/vol: 30.9 (g/mL) g Lab File ID: 0825AGBSOM15.D

% Moisture: 33 Decanted: (Y/N) Date Received: 06/18/2013

Extraction: (Type) SONC Date Extracted: 06/25/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 07/29/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 5.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	240	U
11104-28-2	Aroclor-1221	240	U
11141-16-5	Aroclor-1232	240	U
53469-21-9	Aroclor-1242	240	U
12672-29-6	Aroclor-1248	240	U
11097-69-1	Aroclor-1254	240	U
11096-82-5	Aroclor-1260	240	U
37324-23-5	Aroclor-1262	240	U
11100-14-4	Aroclor-1268	240	U

NW 9/17/13

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-82-048

21

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17055

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17070-2

Sample wt/vol: 30.3 (g/mL) g Lab File ID: 0825AGBSOM18.D

% Moisture: 39 Decanted: (Y/N) Date Received: 06/19/2013

Extraction: (Type) SONC Date Extracted: 06/26/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 07/29/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 5.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	270	U
11104-28-2	Aroclor-1221	270	U
11141-16-5	Aroclor-1232	270	U
53469-21-9	Aroclor-1242	270	U
12672-29-6	Aroclor-1248	270	U
11097-69-1	Aroclor-1254	270	U
11096-82-5	Aroclor-1260	8.2	~~J P~~ J
37324-23-5	Aroclor-1262	270	U
11100-14-4	Aroclor-1268	270	U

MW 9/17/13

1H - FORM I ARO
AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-82-096

22

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17055

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17070-3

Sample wt/vol: 30.0 (g/mL) g Lab File ID: 0825AGBSOM19.D

% Moisture: 37 Decanted: (Y/N) Date Received: 06/19/2013

Extraction: (Type) SONC Date Extracted: 06/26/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 07/29/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 5.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	260	U
11104-28-2	Aroclor-1221	260	U
11141-16-5	Aroclor-1232	260	U
53469-21-9	Aroclor-1242	260	U
12672-29-6	Aroclor-1248	260	U
11097-69-1	Aroclor-1254	260	U
11096-82-5	Aroclor-1260	260	U
37324-23-5	Aroclor-1262	260	U
11100-14-4	Aroclor-1268	260	U

MW 9/17/13

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-82-120

23

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17055

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17070-4

Sample wt/vol: 30.9 (g/mL) g Lab File ID: 0825AGBSOM22.D

% Moisture: 37 Decanted: (Y/N) Date Received: 06/19/2013

Extraction: (Type) SONC Date Extracted: 06/26/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 07/30/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 5.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	250	U
11104-28-2	Aroclor-1221	250	U
11141-16-5	Aroclor-1232	250	U
53469-21-9	Aroclor-1242	250	U
12672-29-6	Aroclor-1248	250	U
11097-69-1	Aroclor-1254	250	U
11096-82-5	Aroclor-1260	250	U
37324-23-5	Aroclor-1262	250	U
11100-14-4	Aroclor-1268	250	U

NW 9/17/13

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-82-144

24

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17055

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17070-5

Sample wt/vol: 30.3 (g/mL) g Lab File ID: 0825AGBSOM23.D

% Moisture: 36 Decanted: (Y/N) Date Received: 06/19/2013

Extraction: (Type) SONC Date Extracted: 06/26/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 07/30/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 5.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	260	U
11104-28-2	Aroclor-1221	260	U
11141-16-5	Aroclor-1232	260	U
53469-21-9	Aroclor-1242	260	U
12672-29-6	Aroclor-1248	260	U
11097-69-1	Aroclor-1254	260	U
11096-82-5	Aroclor-1260	260	U
37324-23-5	Aroclor-1262	260	U
11100-14-4	Aroclor-1268	260	U

NW 9/17/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-48-072

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17055

Matrix: SED Lab Sample Id: 200-17055-1

% Solids: 61.4 Date Received: 06/18/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	6.0			P
7440-43-9	Cadmium	0.77			P
7440-47-3	Chromium	23.2		J E	P
7440-50-8	Copper	24.0		E	P
7439-92-1	Lead	20.0		E	P
7440-02-0	Nickel	25.9		E	P
7440-66-6	Zinc	100		E	P

Color Before: BROWN Clarity Before: Texture: FINE

Color After: TAN Clarity After: CLOUDY Artifacts:

Comments:

MW 9/17/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-48-072

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17055

Matrix: SED Lab Sample Id: 200-17055-1

% Solids: 61.4 Date Received: 06/18/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.55		J N	CV

Color Before: GRAY Clarity Before: CLOUDY Texture: FINE

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

MW 9/17/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-48-096

2

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678
Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 17055
Matrix: SED | Lab Sample Id: 200-17055-2
% Solids: 62.4 | Date Received: 06/18/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	6.7			P
7440-43-9	Cadmium	1.2			P
7440-47-3	Chromium	28.9		J E	P
7440-50-8	Copper	28.5		E	P
7439-92-1	Lead	31.7		E	P
7440-02-0	Nickel	29.1		E	P
7440-66-6	Zinc	189		E	P

Color Before: BROWN | Clarity Before: | Texture: FINE
Color After: TAN | Clarity After: CLOUDY | Artifacts:
Comments:

NW 9/17/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-48-096

2

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17055

Matrix: SED Lab Sample Id: 200-17055-2

% Solids: 62.4 Date Received: 06/18/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.76		J N	CV

Color Before: GRAY Clarity Before: CLOUDY Texture: FINE

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

NW 9/17/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-48-120

3

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17055

Matrix: SED Lab Sample Id: 200-17055-3

% Solids: 62.2 Date Received: 06/18/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	13.0			P
7440-43-9	Cadmium	0.64			P
7440-47-3	Chromium	21.4		J E	P
7440-50-8	Copper	28.4		E	P
7439-92-1	Lead	72.2		E	P
7440-02-0	Nickel	26.8		E	P
7440-66-6	Zinc	137		E	P

Color Before: BROWN Clarity Before: Texture: FINE

Color After: TAN Clarity After: CLOUDY Artifacts:

Comments:

MW 9/17/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-48-120

3

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678
Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17055
Matrix: SED Lab Sample Id: 200-17055-3
% Solids: 62.2 Date Received: 06/18/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.43		J N	CV

Color Before: GRAY Clarity Before: CLOUDY Texture: FINE
Color After: COLORLESS Clarity After: CLEAR Artifacts:
Comments:

NW 9/17/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-48-144

4

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678

Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 17055

Matrix: SED | Lab Sample Id: 200-17055-4

% Solids: 66.1 | Date Received: 06/18/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	8.2			P
7440-43-9	Cadmium	0.50 ~~0.47~~	~~J~~	U	P
7440-47-3	Chromium	19.7		J E	P
7440-50-8	Copper	20.7		E	P
7439-92-1	Lead	48.4		E	P
7440-02-0	Nickel	24.4		E	P
7440-66-6	Zinc	89.1		E	P

Color Before: BROWN | Clarity Before: | Texture: FINE

Color After: TAN | Clarity After: CLOUDY | Artifacts:

Comments:

NW 9/17/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-48-144

4

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678
Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 17055
Matrix: SED | Lab Sample Id: 200-17055-4
% Solids: 66.1 | Date Received: 06/18/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.25		J ~~N~~	CV

Color Before: GRAY | Clarity Before: CLOUDY | Texture: FINE
Color After: COLORLESS | Clarity After: CLEAR | Artifacts:
Comments:

NW 9/17/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-48-168

5

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678
Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 17055
Matrix: SED | Lab Sample Id: 200-17055-5
% Solids: 74.4 | Date Received: 06/18/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	6.0			P
7440-43-9	Cadmium	0.52 ~~0.32~~	I	U J	P
7440-47-3	Chromium	14.0		E	P
7440-50-8	Copper	14.4		E	P
7439-92-1	Lead	29.4		E	P
7440-02-0	Nickel	18.7		E	P
7440-66-6	Zinc	53.8		E	P

Color Before: BROWN | Clarity Before: | Texture: FINE
Color After: TAN | Clarity After: CLOUDY | Artifacts:
Comments:

NW 9/17/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-48-168

5

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17055

Matrix: SED Lab Sample Id: 200-17055-5

% Solids: 74.4 Date Received: 06/18/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.16		J	CV

Color Before: GRAY Clarity Before: CLOUDY Texture: FINE

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

NW 9/17/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-82-012

6

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678
Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17055
Matrix: SED Lab Sample Id: 200-17055-6
% Solids: 53.6 Date Received: 06/18/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	9.7			P
7440-43-9	Cadmium	3.4			P
7440-47-3	Chromium	60.3		J E	P
7440-50-8	Copper	48.3		E	P
7439-92-1	Lead	64.9		E	P
7440-02-0	Nickel	35.7		E	P
7440-66-6	Zinc	170		E	P

Color Before: BROWN Clarity Before: Texture: FINE
Color After: TAN Clarity After: CLOUDY Artifacts:
Comments:

NW 9/17/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-82-012

6

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678
Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17055
Matrix: SED Lab Sample Id: 200-17055-6
% Solids: 53.6 Date Received: 06/18/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.25		J	CV

Color Before: GRAY Clarity Before: CLOUDY Texture: FINE
Color After: COLORLESS Clarity After: CLEAR Artifacts:
Comments:

NW 9/17/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-82-024

7

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678

Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 17055

Matrix: SED | Lab Sample Id: 200-17055-7

% Solids: 56.0 | Date Received: 06/18/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	10.4			P
7440-43-9	Cadmium	5.0			P
7440-47-3	Chromium	64.5		J E	P
7440-50-8	Copper	50.8		E	P
7439-92-1	Lead	96.1		E	P
7440-02-0	Nickel	34.0		E	P
7440-66-6	Zinc	239		E	P

Color Before: BROWN | Clarity Before: | Texture: FINE

Color After: TAN | Clarity After: CLOUDY | Artifacts:

Comments:

NW 9/17/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-82-024

7

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17055

Matrix: SED Lab Sample Id: 200-17055-7

% Solids: 56.0 Date Received: 06/18/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.52		J ~~N~~	CV

Color Before: GRAY Clarity Before: CLOUDY Texture: FINE

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

NW 9/17/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-82-024FD

8

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678
Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17055
Matrix: SED Lab Sample Id: 200-17055-8
% Solids: 56.1 Date Received: 06/18/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	11.5			P
7440-43-9	Cadmium	5.2			P
7440-47-3	Chromium	74.5		J	P
7440-50-8	Copper	57.9		J	P
7439-92-1	Lead	105		J	P
7440-02-0	Nickel	38.2		J	P
7440-66-6	Zinc	271		J	P

Color Before: BROWN Clarity Before: Texture: FINE
Color After: TAN Clarity After: CLOUDY Artifacts:
Comments:

NW 9/17/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-82-024FD

8

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17055

Matrix: SED Lab Sample Id: 200-17055-8

% Solids: 56.1 Date Received: 06/18/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.48		J ~~N~~	CV

Color Before: GRAY Clarity Before: CLOUDY Texture: FINE

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

NW 9/17/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-82-072

9

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678
Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17055
Matrix: SED Lab Sample Id: 200-17055-9
% Solids: 67.2 Date Received: 06/18/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	16.9			P
7440-43-9	Cadmium	0.71			P
7440-47-3	Chromium	21.0		J E	P
7440-50-8	Copper	31.9		E	P
7439-92-1	Lead	110		E	P
7440-02-0	Nickel	27.3		E	P
7440-66-6	Zinc	201		E	P

Color Before: BROWN Clarity Before: Texture: FINE
Color After: TAN Clarity After: CLOUDY Artifacts:
Comments:

NW 9/17/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-82-072

9

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678
Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17055
Matrix: SED Lab Sample Id: 200-17055-9
% Solids: 67.2 Date Received: 06/18/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.68		J N	CV

Color Before: GRAY Clarity Before: CLOUDY Texture: FINE
Color After: COLORLESS Clarity After: CLEAR Artifacts:
Comments:

NW 9/17/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-03-012

14

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678
Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 17055
Matrix: SED | Lab Sample Id: 200-17055-14
% Solids: 59.0 | Date Received: 06/18/2013

Concentration Units (**ug/L, ug,** or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	8.6			P
7440-43-9	Cadmium	1.6			P
7440-47-3	Chromium	28.8		J	P
7440-50-8	Copper	34.0		J	P
7439-92-1	Lead	64.4		J	P
7440-02-0	Nickel	30.2		J	P
7440-66-6	Zinc	144		J	P

Color Before: BROWN | Clarity Before: | Texture: FINE
Color After: TAN | Clarity After: CLOUDY | Artifacts:
Comments:

NW 9/17/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-03-012

14

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17055

Matrix: SED Lab Sample Id: 200-17055-14

% Solids: 59.0 Date Received: 06/18/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.30		J ~~N~~	CV

Color Before: GRAY Clarity Before: CLOUDY Texture: FINE

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

NW 9/17/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-03-024

15

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678

Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 17055

Matrix: SED | Lab Sample Id: 200-17055-15

% Solids: 63.7 | Date Received: 06/18/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	11.0			P
7440-43-9	Cadmium	1.2			P
7440-47-3	Chromium	23.2		J E	P
7440-50-8	Copper	32.5		E	P
7439-92-1	Lead	81.4		E	P
7440-02-0	Nickel	27.3		E	P
7440-66-6	Zinc	168		E	P

Color Before: BROWN | Clarity Before: | Texture: FINE

Color After: TAN | Clarity After: CLOUDY | Artifacts:

Comments:

NW 9/17/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-03-024

15

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17055

Matrix: SED Lab Sample Id: 200-17055-15

% Solids: 63.7 Date Received: 06/18/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.46		J N	CV

Color Before: GRAY Clarity Before: CLOUDY Texture: FINE

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

MW 9/17/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-03-048

16

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17055

Matrix: SED Lab Sample Id: 200-17055-16

% Solids: 62.8 Date Received: 06/18/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	9.8			P
7440-43-9	Cadmium	0.53 ~~0.53~~ ~~U~~		U J	P
7440-47-3	Chromium	19.9		J	P
7440-50-8	Copper	25.4		J	P
7439-92-1	Lead	57.3		J	P
7440-02-0	Nickel	26.3		J	P
7440-66-6	Zinc	125		J	P

Color Before: BROWN Clarity Before: Texture: FINE

Color After: TAN Clarity After: CLOUDY Artifacts:

Comments:

NW 9/17/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-03-048

16

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17055

Matrix: SED Lab Sample Id: 200-17055-16

% Solids: 62.8 Date Received: 06/18/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.46		J N	CV

Color Before: GRAY Clarity Before: CLOUDY Texture: FINE

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

MW 9/17/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-03-072

17

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678
Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 17055
Matrix: SED | Lab Sample Id: 200-17055-17
% Solids: 64.0 | Date Received: 06/18/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	6.1			P
7440-43-9	Cadmium	0.53 ~~0.43~~ J		U J	P
7440-47-3	Chromium	19.9		E	P
7440-50-8	Copper	19.8		E	P
7439-92-1	Lead	27.7		E	P
7440-02-0	Nickel	26.0		E	P
7440-66-6	Zinc	80.5		E	P

Color Before: BROWN | Clarity Before: | Texture: FINE
Color After: TAN | Clarity After: CLOUDY | Artifacts:
Comments:

NW 9/17/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-03-072

17

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17055

Matrix: SED Lab Sample Id: 200-17055-17

% Solids: 64.0 Date Received: 06/18/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.16		J ~~N~~	CV

Color Before: GRAY Clarity Before: CLOUDY Texture: FINE

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

NW 9/17/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-03-096

18

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678
Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 17055
Matrix: SED | Lab Sample Id: 200-17055-18
% Solids: 71.4 | Date Received: 06/18/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	5.4			P
7440-43-9	Cadmium	0.50 ~~0.37~~	~~J~~	U	P
7440-47-3	Chromium	13.0		J E	P
7440-50-8	Copper	13.0		E	P
7439-92-1	Lead	12.4		E	P
7440-02-0	Nickel	18.8		E	P
7440-66-6	Zinc	49.6		E	P

Color Before: BROWN | Clarity Before: | Texture: FINE
Color After: TAN | Clarity After: CLOUDY | Artifacts:
Comments:

MW 9/17/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-03-096

18

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17055

Matrix: SED Lab Sample Id: 200-17055-18

% Solids: 71.4 Date Received: 06/18/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.20		J	CV

Color Before: GRAY Clarity Before: CLOUDY Texture: FINE

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

NW 9/17/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-03-120

19

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678
Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 17055
Matrix: SED | Lab Sample Id: 200-17055-19
% Solids: 67.4 | Date Received: 06/18/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	4.2			P
7440-43-9	Cadmium	0.52 ~~0.42~~	U	J	P
7440-47-3	Chromium	12.9		E	P
7440-50-8	Copper	14.3		E	P
7439-92-1	Lead	12.3		E	P
7440-02-0	Nickel	19.1		E	P
7440-66-6	Zinc	58.6		E	P

Color Before: BROWN | Clarity Before: | Texture: FINE
Color After: TAN | Clarity After: CLOUDY | Artifacts:
Comments:

NW 9/17/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-03-120

19

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678
Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 17055
Matrix: SED | Lab Sample Id: 200-17055-19
% Solids: 67.4 | Date Received: 06/18/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.074		J N	CV

Color Before: GRAY | Clarity Before: CLOUDY | Texture: FINE
Color After: COLORLESS | Clarity After: CLEAR | Artifacts:
Comments:

NW 9/17/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-82-048

21

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17055

Matrix: SED Lab Sample Id: 200-17070-2

% Solids: 61.5 Date Received: 06/19/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	14.4			P
7440-43-9	Cadmium	2.5			P
7440-47-3	Chromium	38.2		J E	P
7440-50-8	Copper	44.4		E	P
7439-92-1	Lead	99.1		E	P
7440-02-0	Nickel	32.3		E	P
7440-66-6	Zinc	224		E	P

Color Before: BROWN Clarity Before: Texture: FINE

Color After: YELLOW Clarity After: CLOUDY Artifacts:

Comments:

NW 9/17/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-82-048

21

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17055

Matrix: SED Lab Sample Id: 200-17070-2

% Solids: 61.5 Date Received: 06/19/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.50		J ~~N~~	CV

Color Before: GRAY Clarity Before: CLOUDY Texture: FINE

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

NW 9/17/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-82-096

22

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17055

Matrix: SED Lab Sample Id: 200-17070-3

% Solids: 63.5 Date Received: 06/19/2013

Concentration Units (**ug/L, ug,** or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	16.4			P
7440-43-9	Cadmium	0.81			P
7440-47-3	Chromium	25.1		J E	P
7440-50-8	Copper	29.5		E	P
7439-92-1	Lead	74.7		E	P
7440-02-0	Nickel	28.4		E	P
7440-66-6	Zinc	162		E	P

Color Before: BROWN Clarity Before: Texture: FINE

Color After: YELLOW Clarity After: CLOUDY Artifacts:

Comments:

MW 9/17/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-82-096

22

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17055

Matrix: SED Lab Sample Id: 200-17070-3

% Solids: 63.5 Date Received: 06/19/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.33		J W	CV

Color Before: GRAY Clarity Before: CLOUDY Texture: FINE

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

MW 9/17/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-82-120

23

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17055

Matrix: SED Lab Sample Id: 200-17070-4

% Solids: 62.9 Date Received: 06/19/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	10.5			P
7440-43-9	Cadmium	0.57			P
7440-47-3	Chromium	21.6		J E	P
7440-50-8	Copper	23.0		E	P
7439-92-1	Lead	51.4		E	P
7440-02-0	Nickel	25.4		E	P
7440-66-6	Zinc	96.3		E	P

Color Before: BROWN Clarity Before: Texture: FINE

Color After: YELLOW Clarity After: CLOUDY Artifacts:

Comments:

MW 9/17/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-82-120

23

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17055

Matrix: SED Lab Sample Id: 200-17070-4

% Solids: 62.9 Date Received: 06/19/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.28		J N	CV

Color Before: GRAY Clarity Before: CLOUDY Texture: FINE

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

MW 9/17/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-82-144

24

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678
Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 17055
Matrix: SED | Lab Sample Id: 200-17070-5
% Solids: 63.7 | Date Received: 06/19/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	8.0			P
7440-43-9	Cadmium	0.56 ~~0.52~~	~~J~~	U J	P
7440-47-3	Chromium	26.4		E	P
7440-50-8	Copper	23.6		E	P
7439-92-1	Lead	65.5		E	P
7440-02-0	Nickel	29.4		E	P
7440-66-6	Zinc	92.5		E	P

Color Before: BROWN | Clarity Before: | Texture: FINE
Color After: YELLOW | Clarity After: CLOUDY | Artifacts:
Comments:

MW 9/17/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-82-144

24

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678

Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 17055

Matrix: SED | Lab Sample Id: 200-17070-5

% Solids: 63.7 | Date Received: 06/19/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.14		J	CV

Color Before: GRAY | Clarity Before: CLOUDY | Texture: FINE

Color After: COLORLESS | Clarity After: CLEAR | Artifacts:

Comments:

NW 9/17/13

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - SEM/AVS

Client Sample ID: LMR13-82-012
Lab Sample ID: 200-17055-6
Lab Name: TestAmerica Burlington
Job No.: 200-17055-1
SDG ID.: 17055
Matrix: Sediment
Date Sampled: 06/17/2013 14:50
Reporting Basis: DRY
Date Received: 06/18/2013 10:30
% Solids: 53.6

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-43-9	Cadmium SEM	1.4	2.1	0.34	mg/Kg	J		10	6010C
7440-43-9	Cadmium SEM	0.012	0.019	0.0030	umol/g	J		10	6010C
7440-50-8	Copper SEM	10.8	11.0	0.96	mg/Kg	J		10	6010C
7440-50-8	Copper SEM	0.17	0.17	0.015	umol/g	J		10	6010C
7439-92-1	Lead SEM	27.3	4.5	2.0	mg/Kg			10	6010C
7439-92-1	Lead SEM	0.13	0.021	0.0095	umol/g			10	6010C
7440-02-0	Nickel SEM	7.1	17.8	1.3	mg/Kg	J		10	6010C
7440-02-0	Nickel SEM	0.12	0.30	0.022	umol/g	J		10	6010C
7440-66-6	Zinc SEM	58.0	8.9	2.5	mg/Kg			10	6010C
7440-66-6	Zinc SEM	0.89	0.14	0.038	umol/g			10	6010C
7439-97-6	Mercury SEM	0.0089	0.0089	0.0029	mg/Kg	U		1	7470A
7439-97-6	Mercury SEM	0.000044	0.000044	0.000015	umol/g	U		1	7470A

NW 9/17/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY - SEM/AVS

Client Sample ID: LMR13-82-012
Lab Sample ID: 200-17055-6
6
Lab Name: TestAmerica Burlington
Job No.: 200-17055-1
SDG ID.: 17055
Matrix: Sediment
Date Sampled: 06/17/2013 14:50
Reporting Basis: DRY
Date Received: 06/18/2013 10:30
% Solids: 53.6

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
18496-25-8	Acid Volatile Sulfides (AVS)	264	28.5		mg/Kg			1	AVS
18496-25-8	Acid Volatile Sulfides (AVS)	8.2	0.89		umol/g			1	AVS

NW 9/17/13

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - SEM/AVS

Client Sample ID: LMR13-82-012 Lab Sample ID: 200-17055-6

Lab Name: TestAmerica Burlington Job No.: 200-17055-1

b

SDG ID.: 17055

Matrix: Sediment Date Sampled: 06/17/2013 14:50

Reporting Basis: WET Date Received: 06/18/2013 10:30

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	SEM/AVS Ratio	0.161	0.00100	0.00100	NONE			1	SEM

NW 9/17/13

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - SEM/AVS

Client Sample ID: LMR13-03-012
Lab Sample ID: 200-17055-14
Lab Name: TestAmerica Burlington
Job No.: 200-17055-1
SDG ID.: 17055
Matrix: Sediment
Date Sampled: 06/17/2013 16:15
Reporting Basis: DRY
Date Received: 06/18/2013 10:30
% Solids: 59.0

14

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-43-9	Cadmium SEM	0.97	2.0	0.32	mg/Kg	J		10	6010C
7440-43-9	Cadmium SEM	0.0086	0.018	0.0029	umol/g	J		10	6010C
7440-50-8	Copper SEM	7.0	10.5	0.91	mg/Kg	J		10	6010C
7440-50-8	Copper SEM	0.11	0.17	0.014	umol/g	J		10	6010C
7439-92-1	Lead SEM	30.9	4.2	1.9	mg/Kg			10	6010C
7439-92-1	Lead SEM	0.15	0.020	0.0090	umol/g			10	6010C
7440-02-0	Nickel SEM	6.0	16.9	1.2	mg/Kg	J		10	6010C
7440-02-0	Nickel SEM	0.10	0.29	0.021	umol/g	J		10	6010C
7440-66-6	Zinc SEM	59.1	8.5	2.4	mg/Kg			10	6010C
7440-66-6	Zinc SEM	0.90	0.13	0.036	umol/g			10	6010C
7439-97-6	Mercury SEM	0.0085	0.0085	0.0028	mg/Kg	U		1	7470A
7439-97-6	Mercury SEM	0.000042	0.000042	0.000014	umol/g	U		1	7470A

MW 9/17/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY - SEM/AVS

14

Client Sample ID: LMR13-03-012
Lab Sample ID: 200-17055-14
Lab Name: TestAmerica Burlington
Job No.: 200-17055-1
SDG ID.: 17055
Matrix: Sediment
Date Sampled: 06/17/2013 16:15
Reporting Basis: DRY
Date Received: 06/18/2013 10:30
% Solids: 59.0

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
18496-25-8	Acid Volatile Sulfides (AVS)	407	27.1		mg/Kg			1	AVS
18496-25-8	Acid Volatile Sulfides (AVS)	12.7	0.85		umol/g			1	AVS

NW 9/17/13

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - SEM/AVS

Client Sample ID: LMR13-03-012 | Lab Sample ID: 200-17055-14

Lab Name: TestAmerica Burlington | Job No.: 200-17055-1

SDG ID.: 17055

Matrix: Sediment | Date Sampled: 06/17/2013 16:15

Reporting Basis: WET | Date Received: 06/18/2013 10:30

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	SEM/AVS Ratio	0.101	0.00100	0.00100	NONE			1	SEM

NW 9/17/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: LMR13-48-072 | Lab Sample ID: 200-17055-1

Lab Name: TestAmerica Burlington | Job No.: 200-17055-1

SDG ID.: 17055

Matrix: Sediment | Date Sampled: 06/17/2013 11:50

Reporting Basis: WET | Date Received: 06/18/2013 10:30

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	29300	J 1000		mg/Kg		H	1	Lloyd Kahn

NW 9/17/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

2

Client Sample ID: LMR13-48-096 | Lab Sample ID: 200-17055-2

Lab Name: TestAmerica Burlington | Job No.: 200-17055-1

SDG ID.: 17055

Matrix: Sediment | Date Sampled: 06/17/2013 12:00

Reporting Basis: WET | Date Received: 06/18/2013 10:30

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	29400	J 1000		mg/Kg		F	1	Lloyd Kahn

NW 9/17/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: LMR13-48-120 Lab Sample ID: 200-17055-3 3

Lab Name: TestAmerica Burlington Job No.: 200-17055-1

SDG ID.: 17055

Matrix: Sediment Date Sampled: 06/17/2013 12:10

Reporting Basis: WET Date Received: 06/18/2013 10:30

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	23900	J 1000		mg/Kg			1	Lloyd Kahn

MW 9/17/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

4

Client Sample ID: LMR13-48-144 Lab Sample ID: 200-17055-4

Lab Name: TestAmerica Burlington Job No.: 200-17055-1

SDG ID.: 17055

Matrix: Sediment Date Sampled: 06/17/2013 12:20

Reporting Basis: WET Date Received: 06/18/2013 10:30

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	22500	J 1000		mg/Kg		H	1	Lloyd Kahn

NW 9/17/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

5

Client Sample ID: LMR13-48-168 Lab Sample ID: 200-17055-5

Lab Name: TestAmerica Burlington Job No.: 200-17055-1

SDG ID.: 17055

Matrix: Sediment Date Sampled: 06/17/2013 12:30

Reporting Basis: WET Date Received: 06/18/2013 10:30

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	20700	J 1000		mg/Kg		H	1	Lloyd Kahn

NW 9/17/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

6

Client Sample ID: LMR13-82-012 Lab Sample ID: 200-17055-6

Lab Name: TestAmerica Burlington Job No.: 200-17055-1

SDG ID.: 17055

Matrix: Sediment Date Sampled: 06/17/2013 14:50

Reporting Basis: WET Date Received: 06/18/2013 10:30

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	33200	J 1000		mg/Kg		H	1	Lloyd Kahn

NW 9/17/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: LMR13-82-024 Lab Sample ID: 200-17055-7 7

Lab Name: TestAmerica Burlington Job No.: 200-17055-1

SDG ID.: 17055

Matrix: Sediment Date Sampled: 06/17/2013 15:00

Reporting Basis: WET Date Received: 06/18/2013 10:30

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	33800	J 1000		mg/Kg		H	1	Lloyd Kahn

MW 9/17/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

8

Client Sample ID: LMR13-82-024FD
Lab Sample ID: 200-17055-8
Lab Name: TestAmerica Burlington
Job No.: 200-17055-1
SDG ID.: 17055
Matrix: Sediment
Date Sampled: 06/17/2013 15:00
Reporting Basis: WET
Date Received: 06/18/2013 10:30

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	35400	J 1000		mg/Kg		~~H~~ J	1	Lloyd Kahn

NW 9/17/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

9

Client Sample ID: LMR13-82-072 Lab Sample ID: 200-17055-9

Lab Name: TestAmerica Burlington Job No.: 200-17055-1

SDG ID.: 17055

Matrix: Sediment Date Sampled: 06/17/2013 15:20

Reporting Basis: WET Date Received: 06/18/2013 10:30

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	29800	J 1000		mg/Kg		H	1	Lloyd Kahn

NW 9/17/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

14

Client Sample ID: LMR13-03-012 | Lab Sample ID: 200-17055-14

Lab Name: TestAmerica Burlington | Job No.: 200-17055-1

SDG ID.: 17055

Matrix: Sediment | Date Sampled: 06/17/2013 16:15

Reporting Basis: WET | Date Received: 06/18/2013 10:30

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	28300	J 1000		mg/Kg		H	1	Lloyd Kahn

NW 9/17/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

15

Client Sample ID: LMR13-03-024 | Lab Sample ID: 200-17055-15

Lab Name: TestAmerica Burlington | Job No.: 200-17055-1

SDG ID.: 17055

Matrix: Sediment | Date Sampled: 06/17/2013 16:25

Reporting Basis: WET | Date Received: 06/18/2013 10:30

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	35300	J 1000		mg/Kg		J	1	Lloyd Kahn

NW 9/17/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

16

Client Sample ID: LMR13-03-048 | Lab Sample ID: 200-17055-16

Lab Name: TestAmerica Burlington | Job No.: 200-17055-1

SDG ID.: 17055

Matrix: Sediment | Date Sampled: 06/17/2013 16:35

Reporting Basis: WET | Date Received: 06/18/2013 10:30

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	32000	J 1000		mg/Kg		H	1	Lloyd Kahn

NW 9/17/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

17

Client Sample ID: LMR13-03-072 | Lab Sample ID: 200-17055-17

Lab Name: TestAmerica Burlington | Job No.: 200-17055-1

SDG ID.: 17055

Matrix: Sediment | Date Sampled: 06/17/2013 16:45

Reporting Basis: WET | Date Received: 06/18/2013 10:30

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	22400	J 1000		mg/Kg		H	1	Lloyd Kahn

NW 9/17/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

18

Client Sample ID: LMR13-03-096 Lab Sample ID: 200-17055-18

Lab Name: TestAmerica Burlington Job No.: 200-17055-1

SDG ID.: 17055

Matrix: Sediment Date Sampled: 06/17/2013 16:55

Reporting Basis: WET Date Received: 06/18/2013 10:30

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	23600	J 1000		mg/Kg		~~J~~	1	Lloyd Kahn

MW 9/17/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

19

Client Sample ID: LMR13-03-120 Lab Sample ID: 200-17055-19

Lab Name: TestAmerica Burlington Job No.: 200-17055-1

SDG ID.: 17055

Matrix: Sediment Date Sampled: 06/17/2013 17:00

Reporting Basis: WET Date Received: 06/18/2013 10:30

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	27800	J 1000		mg/Kg		~~U~~	1	Lloyd Kahn

NW 9/17/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

21

Client Sample ID: LMR13-82-048
Lab Sample ID: 200-17070-2
Lab Name: TestAmerica Burlington
Job No.: 200-17055-1
SDG ID.: 17055
Matrix: Sediment
Date Sampled: 06/17/2013 15:10
Reporting Basis: WET
Date Received: 06/19/2013 10:30
% Solids: 61.5

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	21700	1000		mg/Kg			1	Lloyd Kahn

NW 9/17/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

22

Client Sample ID: LMR13-82-096 Lab Sample ID: 200-17070-3

Lab Name: TestAmerica Burlington Job No.: 200-17055-1

SDG ID.: 17055

Matrix: Sediment Date Sampled: 06/17/2013 15:30

Reporting Basis: WET Date Received: 06/19/2013 10:30

% Solids: 63.5

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	20200	1000		mg/Kg			1	Lloyd Kahn

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1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

23

Client Sample ID: LMR13-82-120 Lab Sample ID: 200-17070-4

Lab Name: TestAmerica Burlington Job No.: 200-17055-1

SDG ID.: 17055

Matrix: Sediment Date Sampled: 06/17/2013 15:40

Reporting Basis: WET Date Received: 06/19/2013 10:30

% Solids: 62.9

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	22500	1000		mg/Kg			1	Lloyd Kahn

MW 9/17/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

24

Client Sample ID: LMR13-82-144 Lab Sample ID: 200-17070-5

Lab Name: TestAmerica Burlington Job No.: 200-17055-1

SDG ID.: 17055

Matrix: Sediment Date Sampled: 06/17/2013 15:50

Reporting Basis: WET Date Received: 06/19/2013 10:30

% Solids: 63.7

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	19000	1000		mg/Kg			1	Lloyd Kahn

MW 9/17/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: LMR13-48-072
Lab Sample ID: 200-17055-1
Lab Name: TestAmerica Canton
Job No.: 200-17055-1
SDG ID.: 17055
Matrix: Sediment
Date Sampled: 06/17/2013 11:50
Reporting Basis: DRY
Date Received: 06/18/2013 10:30
% Solids: 61.4

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	1900	322	142	mg/Kg			1	9071B

NW 9/17/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: LMR13-48-096
Lab Sample ID: 200-17055-2 2
Lab Name: TestAmerica Canton
Job No.: 200-17055-1
SDG ID.: 17055
Matrix: Sediment
Date Sampled: 06/17/2013 12:00
Reporting Basis: DRY
Date Received: 06/18/2013 10:30
% Solids: 62.4

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	2610	307	136	mg/Kg			1	9071B

NW 9/17/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

3

Client Sample ID: LMR13-48-120
Lab Sample ID: 200-17055-3
Lab Name: TestAmerica Canton
Job No.: 200-17055-1
SDG ID.: 17055
Matrix: Sediment
Date Sampled: 06/17/2013 12:10
Reporting Basis: DRY
Date Received: 06/18/2013 10:30
% Solids: 62.2

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	1030	308	136	mg/Kg			1	9071B

NW 9/17/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

4

Client Sample ID: LMR13-48-144
Lab Sample ID: 200-17055-4
Lab Name: TestAmerica Canton
Job No.: 200-17055-1
SDG ID.: 17055
Matrix: Sediment
Date Sampled: 06/17/2013 12:20
Reporting Basis: DRY
Date Received: 06/18/2013 10:30
% Solids: 66.1

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	721	294	130	mg/Kg			1	9071B

NW 9/17/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

5

Client Sample ID: LMR13-48-168
Lab Sample ID: 200-17055-5
Lab Name: TestAmerica Canton
Job No.: 200-17055-1
SDG ID.: 17055
Matrix: Sediment
Date Sampled: 06/17/2013 12:30
Reporting Basis: DRY
Date Received: 06/18/2013 10:30
% Solids: 74.4

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	590	268	118	mg/Kg			1	9071B

MW 9/17/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

6

Client Sample ID: LMR13-82-012
Lab Sample ID: 200-17055-6
Lab Name: TestAmerica Canton
Job No.: 200-17055-1
SDG ID.: 17055
Matrix: Sediment
Date Sampled: 06/17/2013 14:50
Reporting Basis: DRY
Date Received: 06/18/2013 10:30
% Solids: 53.6

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	1400	359	159	mg/Kg			1	9071B

MW 9/17/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

7

Client Sample ID: LMR13-82-024
Lab Sample ID: 200-17055-7
Lab Name: TestAmerica Canton
Job No.: 200-17055-1
SDG ID.: 17055
Matrix: Sediment
Date Sampled: 06/17/2013 15:00
Reporting Basis: DRY
Date Received: 06/18/2013 10:30
% Solids: 56.0

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	3930	343	152	mg/Kg			1	9071B

NW 9/17/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

9

Client Sample ID: LMR13-82-072
Lab Sample ID: 200-17055-9
Lab Name: TestAmerica Canton
Job No.: 200-17055-1
SDG ID.: 17055
Matrix: Sediment
Date Sampled: 06/17/2013 15:20
Reporting Basis: DRY
Date Received: 06/18/2013 10:30
% Solids: 67.2

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	1270	286	126	mg/Kg			1	9071B

NW 9/17/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

10

Client Sample ID: LMR13-82-048
Lab Sample ID: 200-17055-10
Lab Name: TestAmerica Canton
Job No.: 200-17055-1
SDG ID.: 17055
Matrix: Sediment
Date Sampled: 06/17/2013 15:10
Reporting Basis: DRY
Date Received: 06/18/2013 10:30
% Solids: 62.7

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	2640	307	136	mg/Kg			1	9071B

NW 9/17/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

11

Client Sample ID: LMR13-82-096 Lab Sample ID: 200-17055-11

Lab Name: TestAmerica Canton Job No.: 200-17055-1

SDG ID.: 17055

Matrix: Sediment Date Sampled: 06/17/2013 15:30

Reporting Basis: DRY Date Received: 06/18/2013 10:30

% Solids: 64.1

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	1380	299	132	mg/Kg			1	9071B

MW 9/17/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

12

Client Sample ID: LMR13-82-120 Lab Sample ID: 200-17055-12

Lab Name: TestAmerica Canton Job No.: 200-17055-1

SDG ID.: 17055

Matrix: Sediment Date Sampled: 06/17/2013 15:40

Reporting Basis: DRY Date Received: 06/18/2013 10:30

% Solids: 65.9

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	600	292	129	mg/Kg			1	9071B

NW 9/17/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

13

Client Sample ID: LMR13-82-144
Lab Sample ID: 200-17055-13
Lab Name: TestAmerica Canton
Job No.: 200-17055-1
SDG ID.: 17055
Matrix: Sediment
Date Sampled: 06/17/2013 15:50
Reporting Basis: DRY
Date Received: 06/18/2013 10:30
% Solids: 63.2

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	686	305	135	mg/Kg			1	9071B

MW 9/17/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

14

Client Sample ID: LMR13-03-012
Lab Sample ID: 200-17055-14
Lab Name: TestAmerica Canton
Job No.: 200-17055-1
SDG ID.: 17055
Matrix: Sediment
Date Sampled: 06/17/2013 16:15
Reporting Basis: DRY
Date Received: 06/18/2013 10:30
% Solids: 59.0

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	1570	338	149	mg/Kg			1	9071B

NW 9/17/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

15

Client Sample ID: LMR13-03-024
Lab Sample ID: 200-17055-15
Lab Name: TestAmerica Canton
Job No.: 200-17055-1
SDG ID.: 17055
Matrix: Sediment
Date Sampled: 06/17/2013 16:25
Reporting Basis: DRY
Date Received: 06/18/2013 10:30
% Solids: 63.7

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	2200	308	136	mg/Kg			1	9071B

MW 9/17/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

16

Client Sample ID: LMR13-03-048 Lab Sample ID: 200-17055-16

Lab Name: TestAmerica Canton Job No.: 200-17055-1

SDG ID.: 17055

Matrix: Sediment Date Sampled: 06/17/2013 16:35

Reporting Basis: DRY Date Received: 06/18/2013 10:30

% Solids: 62.8

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	939	318	141	mg/Kg		J	1	9071B

NW 9/17/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

17

Client Sample ID: LMR13-03-072 | Lab Sample ID: 200-17055-17

Lab Name: TestAmerica Canton | Job No.: 200-17055-1

SDG ID.: 17055

Matrix: Sediment | Date Sampled: 06/17/2013 16:45

Reporting Basis: DRY | Date Received: 06/18/2013 10:30

% Solids: 64.0

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	305 ~~228~~	U 305	135	mg/Kg			1	9071B

MW 9/17/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

18

Client Sample ID: LMR13-03-096
Lab Sample ID: 200-17055-18
Lab Name: TestAmerica Canton
Job No.: 200-17055-1
SDG ID.: 17055
Matrix: Sediment
Date Sampled: 06/17/2013 16:55
Reporting Basis: DRY
Date Received: 06/18/2013 10:30
% Solids: 71.4

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	280	280	124	mg/Kg	U		1	9071B

NW 9/17/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

19

Client Sample ID: LMR13-03-120
Lab Sample ID: 200-17055-19
Lab Name: TestAmerica Canton
Job No.: 200-17055-1
SDG ID.: 17055
Matrix: Sediment
Date Sampled: 06/17/2013 17:00
Reporting Basis: DRY
Date Received: 06/18/2013 10:30
% Solids: 67.4

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	298	298	132	mg/Kg	U		1	9071B

MW 9/17/13

ENVIRONMENTAL
Data Services, Inc.

DATA VALIDATION SUMMARY REPORT
LOWER MAUMEE RIVER, TOLEDO, OHIO

Client: EA Engineering, Science & Technology, Inc., Hunt Valley, Maryland
SDG: 200-17056
Laboratory: Test America Laboratories, Burlington, Vermont
Test America Laboratories, Canton, Ohio
Site: Lower Maumee River, Maumee Area of Concern, Toledo, Ohio
Date: September 17, 2013

SVOC			
EDS ID	Client Sample ID	Laboratory Sample ID	Matrix
2	LMR13-35-048	200-17056-2	Sediment
2MS	LMR13-35-048MS	200-17056-2MS	Sediment
2MSD	LMR13-35-048MSD	200-17056-2MSD	Sediment
4	LMR13-76-048	200-17056-4	Sediment
5	LMR13-76-072	200-17056-5	Sediment
6	LMR13-35-072	200-17056-6	Sediment
7	LMR13-35-096	200-17056-7	Sediment
8	LMR13-77-012	200-17056-8	Sediment
9	LMR13-77-024	200-17056-9	Sediment
10	LMR13-77-048	200-17056-10	Sediment
11	LMR13-77-072	200-17056-11	Sediment
12	LMR13-38-024	200-17056-12	Sediment
13	LMR13-38-024FD	200-17056-13	Sediment
14	LMR13-38-072	200-17056-14	Sediment
15	LMR13-77-024FD	200-17056-15	Sediment
16	LMR13-78-012	200-17056-16	Sediment
17	LMR13-78-024	200-17056-17	Sediment
18	LMR13-78-024FD	200-17056-18	Sediment
19	LMR13-40-012	200-17056-19	Sediment
20	LMR13-40-024	200-17056-20	Sediment
21	LMR13-40-024FD	200-17056-21	Sediment
22	LMR13-79-048	200-17056-22	Sediment

PAH 34			
EDS ID	Client Sample ID	Laboratory Sample ID	Matrix
16	LMR13-78-012	200-17056-16	Sediment

PCBs			
EDS ID	Client Sample ID	Laboratory Sample ID	Matrix
1	LMR13-35-024FD	200-17056-1	Sediment
2	LMR13-35-048	200-17056-2	Sediment
3	LMR13-76-024FD	200-17056-3	Sediment
4	LMR13-76-048	200-17056-4	Sediment
5	LMR13-76-072	200-17056-5	Sediment
6	LMR13-35-072	200-17056-6	Sediment

PCBs			
EDS ID	Client Sample ID	Laboratory Sample ID	Matrix
7	LMR13-35-096	200-17056-7	Sediment
8	LMR13-77-012	200-17056-8	Sediment
9	LMR13-77-024	200-17056-9	Sediment
10	LMR13-77-048	200-17056-10	Sediment
11	LMR13-77-072	200-17056-11	Sediment
12	LMR13-38-024	200-17056-12	Sediment
14	LMR13-38-072	200-17056-14	Sediment
16	LMR13-78-012	200-17056-16	Sediment
17	LMR13-78-024	200-17056-17	Sediment
18	LMR13-78-024FD	200-17056-18	Sediment
19	LMR13-40-012	200-17056-19	Sediment
20	LMR13-40-024	200-17056-20	Sediment
22	LMR13-79-048	200-17056-22	Sediment
23	LMR13-79-048FD	200-17056-23	Sediment

Metals/Mercury/TOC			
EDS ID	Client Sample ID	Laboratory Sample ID	Matrix
1	LMR13-35-024FD	200-17056-1	Sediment
1MS*	LMR13-35-024FDMS	200-17056-1MS	Sediment
1MSD*	LMR13-35-024FDMSD	200-17056-1MSD	Sediment
2	LMR13-35-048	200-17056-2	Sediment
3	LMR13-76-024FD	200-17056-3	Sediment
4	LMR13-76-048	200-17056-4	Sediment
5	LMR13-76-072	200-17056-5	Sediment
6	LMR13-35-072	200-17056-6	Sediment
7	LMR13-35-096	200-17056-7	Sediment
8	LMR13-77-012	200-17056-8	Sediment
9	LMR13-77-024	200-17056-9	Sediment
10	LMR13-77-048	200-17056-10	Sediment
11	LMR13-77-072	200-17056-11	Sediment
12	LMR13-38-024	200-17056-12	Sediment
14	LMR13-38-072	200-17056-14	Sediment
16	LMR13-78-012	200-17056-16	Sediment
17	LMR13-78-024	200-17056-17	Sediment
18	LMR13-78-024FD	200-17056-18	Sediment
19	LMR13-40-012	200-17056-19	Sediment
20	LMR13-40-024	200-17056-20	Sediment
22	LMR13-79-048	200-17056-22	Sediment
22MS†	LMR13-79-048MS	200-17056-22MS	Sediment
22MSD†	LMR13-79-048MSD	200-17056-22MSD	Sediment
23	LMR13-79-048FD	200-17056-23	Sediment

* - Mercury Only † - Metals Only

AVS/SEM			
EDS ID	Client Sample ID	Laboratory Sample ID	Matrix
16	LMR13-78-012	200-17056-16	Sediment

HEM			
EDS ID	Client Sample ID	Laboratory Sample ID	Matrix
2	LMR13-35-048	200-17056-2	Sediment
4	LMR13-76-048	200-17056-4	Sediment
4MS	LMR13-76-048MS	200-17056-4MS	Sediment
4MSD	LMR13-76-048MSD	200-17056-4MSD	Sediment
5	LMR13-76-072	200-17056-5	Sediment
6	LMR13-35-072	200-17056-6	Sediment
7	LMR13-35-096	200-17056-7	Sediment
8	LMR13-77-012	200-17056-8	Sediment
9	LMR13-77-024	200-17056-9	Sediment
10	LMR13-77-048	200-17056-10	Sediment
11	LMR13-77-072	200-17056-11	Sediment
12	LMR13-38-024	200-17056-12	Sediment
13	LMR13-38-024FD	200-17056-13	Sediment
14	LMR13-38-072	200-17056-14	Sediment
15	LMR13-77-024FD	200-17056-15	Sediment
16	LMR13-78-012	200-17056-16	Sediment
17	LMR13-78-024	200-17056-17	Sediment
18	LMR13-78-024FD	200-17056-18	Sediment
19	LMR13-40-012	200-17056-19	Sediment
20	LMR13-40-024	200-17056-20	Sediment
21	LMR13-40-024FD	200-17056-21	Sediment
22	LMR13-79-048	200-17056-22	Sediment

A full data validation was performed on the analytical data for twenty-three sediment samples collected on June 15, 2013 by EA Engineering at the Lower Maumee River site in Toledo, Ohio. The samples were analyzed under the Environmental Protection Agency (USEPA) Contract Laboratory Program (CLP) Multi-Media Multi-Concentration Organics Analysis SOM01.2 and Inorganic Analysis ILM05.4 and the Test Methods for the Evaluation of Solid Waste, USEPA SW-846, Third Edition, September 1986, with revisions.

Specific method references are as follows:

Analysis	*Method References*
SVOC	USEPA CLP SOM01.2
PAH 34	USEPA CLP SOM01.2
PCBs	USEPA CLP SOM01.2
Michigan Metals & Mercury	USEPA CLP ISM01.3
AVS/SEM	USEPA SW-846 Methods 6010C/7470A
TOC	Lloyd Kahn
Oil & Grease (HEM)	USEPA SW-846 Method 9071B

The data have been validated according to the protocols and quality control (QC) requirements of the analytical methods, the Great Lakes Legacy Act, March 2010, the Quality Assurance Project Plan for Phase 2 of the Lower Maumee River Site Characterization, May 2013, and the USEPA National Functional Guidelines for Organic Data Review as follows:

- The USEPA "Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review," June 2008;
- The USEPA "Contract Laboratory Program National Functional Guidelines for Inorganic Superfund Data Review," January 2010;
- and the reviewer's professional judgment.

The following items/criteria were reviewed for this report:

Organics

- Holding times and sample preservation
- Gas Chromatography/Mass Spectroscopy (GC/MS) Tuning
- Initial and continuing calibration summaries
- Method blank and field blank contamination
- Surrogate Spike recoveries
- Matrix Spike/Matrix Spike Duplicate (MS/MSD) recoveries
- Laboratory Control Sample (LCS) recoveries
- Internal standard area and retention time summary forms
- Target Compound Identification
- Compound Quantitation
- Tentatively Identified Compounds (TICs)
- Field Duplicate sample precision

Inorganics

- Holding times and sample preservation
- ICP/MS Tuning
- Initial and continuing calibration verifications
- Method blank and field blank contamination
- ICP Interference Check Sample
- Laboratory Control Sample (LCS) recoveries
- Matrix Spike Analysis
- Duplicate Sample Analysis
- ICP Serial Dilution
- Compound Quantitation
- Field Duplicate sample precision

Overall Usability Issues:

There were minor rejections of data. This data cannot be used in the decision-making process for this project.

- Three SVOC compounds were rejected in seven samples due to severely low surrogate recoveries.

Overall the remaining data is acceptable for the intended purposes as qualified for the deficiencies detailed in this report.

Please note that any results qualified (U) due to blank contamination may be then qualified (J) due to another action. Therefore, the results may be qualified (UJ) due to the culmination of the blank contaminations and actions from other exceedences of QC criteria.

Semivolatile Organic Compounds (SVOC)

Holding Times

- All samples were extracted within 14 days for sediment samples and analyzed within 40 days for all samples except the following.

Sample	Date Sampled	Date Extracted	# of Days	Qualifier
22	06/27/13	08/07/13	41	J/UJ

GC/MS Tuning

- All criteria were met.

Initial Calibration

- All %RSD and mean RRF criteria were met except the following.

ICAL Date	Compound	%RSD/RRF	Qualifier	Affected Samples
08/02/13	Benzo(b)fluoranthene	23.7%	J/UJ	All Samples
	Dibenzo(a,h)anthracene	20.6%		

Continuing Calibration

- All %D and RRF criteria were met except the following.

CCAL Date	Compound	%D/RRF	Qualifier	Affected Samples
08/06/13 (1001)	Hexachlorocyclopentadiene	60.7%	J/UJ	4, 5, 6
08/07/13 (0024)	Hexachlorocyclopentadiene	70.5%	J/UJ	7, 9, 10, 11, 14, 16-18, 20
08/07/13 (1451)	Indeno(1,2,3-cd)pyrene	25.6%	J/UJ	22
08/07/13 (2328)	Hexachlorocyclopentadiene	62.4%	J/UJ	22

Method Blank

- The method blanks exhibited the following contamination.

Blank ID	Compound	Conc. ug/kg	Qualifier	Affected Samples
SBLKN1	di-n-Butylphthalate	6.8	U	2, 4-9, 11-22
	Butylbenzylphthalate	10	U	2, 4-16, 18-22
	bis(2-Ethylhexyl)phthalate	21	U	2, 6-22

Field Blank

- Field QC samples were not analyzed.

Surrogate Spike Recoveries

- All samples exhibited acceptable surrogate %R values except the following.

Sample ID	Surrogate	%R	Qualifier
2	4-Chloroaniline-d4	0%	R – Associated Compounds
8	4-Chloroaniline-d4	0%	R – Associated Compounds
11	4-Methylphenol-d8	101%	None - All ND
12	4-Chloroaniline-d4	0%	R – Associated Compounds
13	4-Chloroaniline-d4	0%	R – Associated Compounds
15	4-Chloroaniline-d4	0%	R – Associated Compounds
17	Phenol-d5	104%	J - Positive Associated Results
	4-Methylphenol-d8	107%	None - All ND
18	4-Methylphenol-d8	107%	None - All ND
19	4-Methylphenol-d8	104%	None - All ND
	4-Chloroaniline-d4	0%	R – Associated Compounds
20	4-Methylphenol-d8	111%	None - All ND
	Acenaphthylene-d8	99%	J - Positive Associated Results
21	4-Methylphenol-d8	103%	None - All ND
	4-Chloroaniline-d4	0%	R – Associated Compounds
22	Phenol-d5	116%	None - All ND
	4-Methylphenol-d8	111%	None - All ND

Matrix Spike/Matrix Spike Duplicate (MS/MSD) Recoveries

- The MS/MSD sample exhibited acceptable %R and RPD values.

Laboratory Control Samples

- A LCS sample was not analyzed.

Internal Standard (IS) Area Performance

- All internal standards met response and retention time (RT) criteria.

Target Compound Identification

- All mass spectra and quantitation criteria were met.

Compound Quantitation

- Several samples were analyzed at various dilutions due to high concentrations of target compounds. No action was required.

Field Duplicate Sample Precision

- Field duplicate results are summarized below.

SVOC				
Compound	LMR13-77-024 ug/kg	LMR13-77-024FD ug/kg	RPD	Qualifier
Benzaldehyde	21	30	35%	None
Acetophenone	250U	19	NC	
Phenanthrene	250U	5.4	NC	
Fluoranthene	250U	5.6	NC	
Pyrene	250U	8.1	NC	
Chrysene	7.6	12	45%	

SVOC				
Compound	LMR13-38-024 ug/kg	LMR13-38-024FD ug/kg	RPD	Qualifier
Benzaldehyde	31	44	35%	None
Acetophenone	21	250U	NC	
Naphthalene	23	26	12%	
Acenaphthylene	45	29	43%	
Acenaphthene	130	150	14%	
Dibenzofuran	14	12	15%	
Fluorene	70	54	26%	
Phenanthrene	650	330	65%	
Anthracene	190	98	64%	
Fluoranthene	1000	490	68%	
Pyrene	1000	1000	0%	
Benzo(a)anthracene	650	540	18%	
Chrysene	540	580	7%	
Benzo(b)fluoranthene	400	500	22%	
Benzo(k)fluoranthene	410	410	0%	
Benzo(a)pyrene	540	520	4%	
Indeno(1,2,3-cd)pyrene	200	260	26%	
Dibenzo(a,h)anthracene	70	84	18%	
Benzo(g,h,i)perylene	270	310	14%	

SVOC				
Compound	LMR13-78-024 ug/kg	LMR13-78-024FD ug/kg	RPD	Qualifier
Benzaldehyde	19	22	15%	None
Acetophenone	14	16	13%	
Diethylphthalate	220U	8.0	NC	
Phenanthrene	4.1	3.5	16%	
Fluoranthene	220U	5.5	NC	
Pyrene	220U	6.7	NC	
Butylbenzylphthalate	220U	17	NC	
Chrysene	13	12	8%	

SVOC				
Compound	LMR13-40-024 ug/kg	LMR13-40-024FD ug/kg	RPD	Qualifier
Benzaldehyde	41	36	13%	None
Acetophenone	19	20	5%	
Naphthalene	15	12	22%	
Acenaphthylene	8.7	350U	NC	
Acenaphthene	30	21	35%	
Dibenzofuran	26	24	8%	
Fluorene	33	34	3%	
Phenanthrene	180	140	25%	
Anthracene	48	28	53%	
Fluoranthene	340	220	43%	
Pyrene	260	190	31%	
Benzo(a)anthracene	140	89	45%	
Chrysene	220	160	32%	
Benzo(b)fluoranthene	140	110	24%	
Benzo(k)fluoranthene	160	110	37%	
Benzo(a)pyrene	150	110	31%	
Indeno(1,2,3-cd)pyrene	89	67	28%	
Dibenzo(a,h)anthracene	27	24	12%	
Benzo(g,h,i)perylene	110	73	40%	

Polynuclear Aromatic Hydrocarbons (PAH 34)

Holding Times

- All samples were extracted within 14 days for sediment samples and analyzed within 40 days for all samples.

GC/MS Tuning

- All criteria were met.

Initial Calibration

- All %RSD and mean RRF criteria were met.

Continuing Calibration

- All %D and RRF criteria were met except the following.

CCAL Date	Compound	%D/RRF	Qualifier	Affected Samples
08/14/13	Benzo(g,h,i)perylene	26.6%	J/UJ	16

Method Blank

- The method blanks exhibited the following contamination.

Blank ID	Compound	Conc. ug/kg	Qualifier	Affected Samples
SBLKN1	Naphthalene	0.24	U	16
	Phenanthrene	0.095	U	
	Total 16 PPAH	0.34	J	
	Total PAH	0.34	J	

Field Blank

- Field QC samples were not analyzed.

Surrogate Spike Recoveries

- All samples exhibited acceptable surrogate %R values.

Matrix Spike/Matrix Spike Duplicate (MS/MSD) Recoveries

- A MS/MSD sample was not analyzed.

Laboratory Control Samples

- A LCS sample was not analyzed.

Internal Standard (IS) Area Performance

- All internal standards met response and retention time (RT) criteria.

Target Compound Identification

- All mass spectra and quantitation criteria were met.

Compound Quantitation

- EDS Sample ID # 16 exhibited a high concentration of perylene over the linear range of the instrument and was flagged (E) by the laboratory. These sample was not diluted and this result has been furthered qualified as estimated (J).
- Total 16 PPAH and Total PAH were estimated (J) in all samples due to blank contamination.

Field Duplicate Sample Precision

- Field duplicate samples were not analyzed.

Polychlorinated Biphenyls (PCBs)

Holding Times

- All samples were extracted within 14 days for sediment samples and analyzed within 40 days.

Initial Calibration

- All %RSD and/or correlation coefficient criteria were met.

Continuing Calibration

- All %D criteria were met.

Method Blank

- The method blanks were free of contamination.

Field Blank

- Field QC samples were not analyzed.

Surrogate Spike Recoveries

- All samples exhibited acceptable surrogate recoveries.

Matrix Spike/Matrix Spike Duplicate (MS/MSD) Recoveries

- A MS/MSD sample was not analyzed.

Laboratory Control Samples

- The LCS sample exhibited acceptable %R values.

Compound Quantitation

- All criteria were met.

Field Duplicate Sample Precision

- Field duplicate results are summarized below.

PCBs				
Compound	LMR13-79-048 ug/kg	LMR13-79-048FD ug/kg	RPD	Qualifier
None	NC	NC	-	-

GC Column Difference Results

- Several samples exhibited high %D values > 25% between columns and have been qualified as estimated (J) by the reviewer.

Metals & Mercury

Holding Times

- All samples were prepared and analyzed within 28 days for mercury and 180 days for all other metals.

ICP/MS Tuning

- Not applicable.

Initial Calibration Verification

- All initial calibration criteria were met.

Continuing Calibration Verification

- All continuing calibration criteria were met.

Method Blank

- The method blanks exhibited the following contamination.

Blank ID	Compound	Conc. mg/kg	Qualifier	Affected Samples
MB	Zinc	1.2	None	All >10X
	Mercury	0.028	U	1-7, 10-12, 14, 16, 18-20, 22, 23

Field Blank

- Field QC samples were not analyzed.

ICP Interference Check Sample

- The ICP interference check sample exhibited acceptable %R values.

Laboratory Control Samples

- The LCS sample exhibited acceptable recoveries.

Matrix Spike Analysis

- The matrix spike sample exhibited acceptable %R values.

Duplicate Sample Analysis

- The duplicate sample exhibited acceptable RPD values.

ICP Serial Dilution

- ICP serial dilution percent differences (%D) were within acceptance limits except the following.

ICP Sample ID	Compound	%D	Qualifier	Affected Samples
22	Chromium	15%	J	All Samples
	Zinc	14%	J	

Compound Quantitation

- All criteria were met.

Field Duplicate Sample Precision

- Field duplicate results are summarized below.

Metals				
Compound	LMR13-79-048 mg/kg	LMR13-79-048FD mg/kg	RPD	Qualifier
Arsenic	2.8	2.7	4%	None
Cadmium	0.22	0.24	9%	
Chromium	6.8	6.1	11%	
Copper	5.6	5.5	2%	
Lead	4.5	4.1	9%	
Nickel	9.1	8.5	7%	
Zinc	22.6	28.0	21%	

Oil & Grease, Total Organic Carbon, AVS/SEM (Metals & Hg)

Holding Times

- All samples were analyzed within the recommended holding time for each analysis.

Initial and Continuing Calibration

- All %R criteria were met.

Method Blank

- The method blanks were free of contamination.

Field Blank

- Field QC samples were not included in this data package.

Laboratory Control Samples

- The LCS samples exhibited acceptable %R values.

Matrix Spike/Duplicate (MS/DUP) Recoveries

- The MS/DUP samples exhibited acceptable %R and RPD values except the following.

MS/DUP ID	Compound	MS %R/MSD %R/RPD	Qualifier	Affected Samples
4	HEM	74%/61%/OK	J/UJ	All Samples

Compound Quantitation

- All criteria were met.

Field Duplicate Sample Precision

- Field duplicate results are summarized below.

HEM				
Compound	LMR13-77-024 mg/kg	LMR13-77-024FD mg/kg	RPD	Qualifier
HEM	87.5	51.9	51%	None

HEM				
Compound	LMR13-38-024 mg/kg	LMR13-38-024FD mg/kg	RPD	Qualifier
HEM	54.4	120	75%	None

HEM				
Compound	LMR13-78-024 mg/kg	LMR13-78-024FD mg/kg	RPD	Qualifier
HEM	47.8	30.6	44%	None

HEM				
Compound	LMR13-40-024 mg/kg	LMR13-40-024FD mg/kg	RPD	Qualifier
HEM	170	241	35%	None

TOC				
Compound	LMR13-79-048 mg/kg	LMR13-79-048FD mg/kg	RPD	Qualifier
TOC	12900	11900	8%	None

Please contact the undersigned at (757) 564-0090 if you have any questions or need further information.

Signed: Nancy Weaver Dated: 9/20/13

Nancy Weaver
Senior Chemist

Data Qualifiers

U = The analyte was analyzed for, but was not detected at a level greater than or equal to the level of the adjusted Contract Required Quantitation Limit (CRQL) for sample and method.

UJ = The analyte was not detected at a level greater than or equal to the adjusted CRQL. However, the reported adjusted CRQL is approximate and may be inaccurate or imprecise.

J = The analyte was positively identified and the associated numerical value is the approximate concentration of the analyte in the sample (due either to the quality of the data generated because certain quality control criteria were not met, or the concentration of the analyte was below the CRQL).

J+ = The result is an estimated quantity, but the result may be biased high.

J- = The result is an estimated quantity, but the result may be biased low.

R = The sample results are unusable due to the quality of the data generated because certain criteria were not met. The analyte may or may not be present in the sample.

NJ = The analysis indicates the presence of an analyte that has been "tentatively identified" and the associated numerical value represents its approximate concentration.

1D - FORM I SV-1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-35-048

2

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17056

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17056-2

Sample wt/vol: 30.3 (g/mL) g Lab File ID: ULLBU10.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 36 Decanted: (Y/N) Date Received: 06/18/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/27/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/06/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
100-52-7	Benzaldehyde	60	J	
108-95-2	Phenol	260	U	
111-44-4	Bis(2-chloroethyl)ether	260	U	
95-57-8	2-Chlorophenol	260	U	
95-48-7	2-Methylphenol	260	U	
108-60-1	2,2'-Oxybis(1-chloropropane)	260	U	
98-86-2	Acetophenone	52	J	
106-44-5	4-Methylphenol	260	U	
621-64-7	N-Nitroso-di-n-propylamine	260	U	
67-72-1	Hexachloroethane	260	U	
98-95-3	Nitrobenzene	260	U	
78-59-1	Isophorone	260	U	
88-75-5	2-Nitrophenol	260	U	
105-67-9	2,4-Dimethylphenol	260	U	
111-91-1	Bis(2-chloroethoxy)methane	260	U	
120-83-2	2,4-Dichlorophenol	260	U	
91-20-3	Naphthalene	24	J	
106-47-8	4-Chloroaniline	260	U	R
87-68-3	Hexachlorobutadiene	260	U	
105-60-2	Caprolactam	260	U	
59-50-7	4-Chloro-3-methylphenol	260	U	
91-57-6	2-Methylnaphthalene	15	J	
77-47-4	Hexachlorocyclopentadiene	260	U	R
88-06-2	2,4,6-Trichlorophenol	260	U	
95-95-4	2,4,5-Trichlorophenol	260	U	
92-52-4	1,1'-Biphenyl	260	U	
91-58-7	2-Chloronaphthalene	260	U	
88-74-4	2-Nitroaniline	510	U	
131-11-3	Dimethylphthalate	260	U	
606-20-2	2,6-Dinitrotoluene	260	U	
208-96-8	Acenaphthylene	37	J	
99-09-2	3-Nitroaniline	510	U	
83-32-9	Acenaphthene	160	J	

MW 9/16/13

EPA SAMPLE NO.
LMR13-35-048

2

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17056

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17056-2

Sample wt/vol: 30.3 (g/mL) g Lab File ID: ULLBU10.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 36 Decanted: (Y/N) Date Received: 06/18/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/27/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/06/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
51-28-5	2,4-Dinitrophenol	510	U	
100-02-7	4-Nitrophenol	510	U	
132-64-9	Dibenzofuran	11	J	
121-14-2	2,4-Dinitrotoluene	260	U	
84-66-2	Diethylphthalate	260	U	
86-73-7	Fluorene	35	J	
7005-72-3	4-Chlorophenyl-phenylether	260	U	
100-01-6	4-Nitroaniline	510	U	
534-52-1	4,6-Dinitro-2-methylphenol	510	U	
86-30-6	N-Nitrosodiphenylamin [1]	260	U	
95-94-3	1,2,4,5-Tetrachlorobenzene	260	U	
101-55-3	4-Bromophenyl-phenylether	260	U	
118-74-1	Hexachlorobenzene	260	U	
1912-24-9	Atrazine	260	U	
87-86-5	Pentachlorophenol	510	U	
85-01-8	Phenanthrene	510		
120-12-7	Anthracene	170	J	
86-74-8	Carbazole	8.3	J	
84-74-2	Di-n-butylphthalate	260 ~~10~~ ~~J B~~	U	
206-44-0	Fluoranthene	900		
129-00-0	Pyrene	1000		
85-68-7	Butylbenzylphthalate	260 ~~16~~ ~~J B~~	U	
91-94-1	3,3'-Dichlorobenzidine	260	U	R
56-55-3	Benzo(a)anthracene	480		
218-01-9	Chrysene	500		
117-81-7	Bis(2-ethylhexyl)phthalate	260 ~~73~~ ~~J B~~	U	
117-84-0	Di-n-octylphthalate	260	U	
205-99-2	Benzo(b)fluoranthene	410		J
207-08-9	Benzo(k)fluoranthene	320		
50-32-8	Benzo(a)pyrene	410		
193-39-5	Indeno(1,2,3-cd)pyrene	230	J	
53-70-3	Dibenzo(a,h)anthracene	71	J	J
191-24-2	Benzo(g,h,i)perylene	280		
58-90-2	2,3,4,6-Tetrachlorophenol	260	U	

[1] Cannot be separated from Diphenylamine

MW 9/16/13

1D - FORM I SV-1

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-76-048

4

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17056

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17056-4

Sample wt/vol: 30.3 (g/mL) g Lab File ID: ULLBU13.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 21 Decanted: (Y/N) Date Received: 06/18/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/27/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/06/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
100-52-7	Benzaldehyde	210	U
108-95-2	Phenol	210	U
111-44-4	Bis(2-chloroethyl)ether	210	U
95-57-8	2-Chlorophenol	210	U
95-48-7	2-Methylphenol	210	U
108-60-1	2,2'-Oxybis(1-chloropropane)	210	U
98-86-2	Acetophenone	21	J
106-44-5	4-Methylphenol	210	U
621-64-7	N-Nitroso-di-n-propylamine	210	U
67-72-1	Hexachloroethane	210	U
98-95-3	Nitrobenzene	210	U
78-59-1	Isophorone	210	U
88-75-5	2-Nitrophenol	210	U
105-67-9	2,4-Dimethylphenol	210	U
111-91-1	Bis(2-chloroethoxy)methane	210	U
120-83-2	2,4-Dichlorophenol	210	U
91-20-3	Naphthalene	29	J
106-47-8	4-Chloroaniline	210	U
87-68-3	Hexachlorobutadiene	210	U
105-60-2	Caprolactam	210	U
59-50-7	4-Chloro-3-methylphenol	210	U
91-57-6	2-Methylnaphthalene	15	J
77-47-4	Hexachlorocyclopentadiene	210	~~U~~ UJ
88-06-2	2,4,6-Trichlorophenol	210	U
95-95-4	2,4,5-Trichlorophenol	210	U
92-52-4	1,1'-Biphenyl	210	U
91-58-7	2-Chloronaphthalene	210	U
88-74-4	2-Nitroaniline	410	U
131-11-3	Dimethylphthalate	210	U
606-20-2	2,6-Dinitrotoluene	210	U
208-96-8	Acenaphthylene	15	J
99-09-2	3-Nitroaniline	410	U
83-32-9	Acenaphthene	160	J

MW 9/16/13

EPA SAMPLE NO.
LMR13-76-048

4

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17056

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17056-4

Sample wt/vol: 30.3 (g/mL) g Lab File ID: ULLBU13.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 21 Decanted: (Y/N) Date Received: 06/18/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/27/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/06/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
51-28-5	2,4-Dinitrophenol	410	U	
100-02-7	4-Nitrophenol	410	U	
132-64-9	Dibenzofuran	18	J	
121-14-2	2,4-Dinitrotoluene	210	U	
84-66-2	Diethylphthalate	210	U	
86-73-7	Fluorene	180	J	
7005-72-3	4-Chlorophenyl-phenylether	210	U	
100-01-6	4-Nitroaniline	410	U	
534-52-1	4,6-Dinitro-2-methylphenol	410	U	
86-30-6	N-Nitrosodiphenylamin [1]	210	U	
95-94-3	1,2,4,5-Tetrachlorobenzene	210	U	
101-55-3	4-Bromophenyl-phenylether	210	U	
118-74-1	Hexachlorobenzene	210	U	
1912-24-9	Atrazine	210	U	
87-86-5	Pentachlorophenol	410	U	
85-01-8	Phenanthrene	510		
120-12-7	Anthracene	98	J	
86-74-8	Carbazole	10	J	
84-74-2	Di-n-butylphthalate	210 ~~10~~ ~~J B~~	U	
206-44-0	Fluoranthene	910		
129-00-0	Pyrene	850		
85-68-7	Butylbenzylphthalate	210 ~~22~~ ~~J B~~	U	
91-94-1	3,3'-Dichlorobenzidine	210	U	
56-55-3	Benzo(a)anthracene	470		
218-01-9	Chrysene	500		
117-81-7	Bis(2-ethylhexyl)phthalate	430	~~B~~	
117-84-0	Di-n-octylphthalate	23	J	
205-99-2	Benzo(b)fluoranthene	400		J
207-08-9	Benzo(k)fluoranthene	290		
50-32-8	Benzo(a)pyrene	310		
193-39-5	Indeno(1,2,3-cd)pyrene	160	J	
53-70-3	Dibenzo(a,h)anthracene	65	~~J~~	J
191-24-2	Benzo(g,h,i)perylene	190	J	
58-90-2	2,3,4,6-Tetrachlorophenol	210	U	

[1] Cannot be separated from Diphenylamine

NW 9/16/13

1D - FORM I SV-1

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-76-072

5

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17056

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17056-5

Sample wt/vol: 29.5 (g/mL) g Lab File ID: ULLBU14.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 19 Decanted: (Y/N) Date Received: 06/18/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/27/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/06/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 2.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
100-52-7	Benzaldehyde	420	U
108-95-2	Phenol	420	U
111-44-4	Bis(2-chloroethyl)ether	420	U
95-57-8	2-Chlorophenol	420	U
95-48-7	2-Methylphenol	420	U
108-60-1	2,2'-Oxybis(1-chloropropane)	420	U
98-86-2	Acetophenone	27	J
106-44-5	4-Methylphenol	420	U
621-64-7	N-Nitroso-di-n-propylamine	420	U
67-72-1	Hexachloroethane	420	U
98-95-3	Nitrobenzene	420	U
78-59-1	Isophorone	420	U
88-75-5	2-Nitrophenol	420	U
105-67-9	2,4-Dimethylphenol	420	U
111-91-1	Bis(2-chloroethoxy)methane	420	U
120-83-2	2,4-Dichlorophenol	420	U
91-20-3	Naphthalene	50	J
106-47-8	4-Chloroaniline	420	U
87-68-3	Hexachlorobutadiene	420	U
105-60-2	Caprolactam	420	U
59-50-7	4-Chloro-3-methylphenol	420	U
91-57-6	2-Methylnaphthalene	30	J
77-47-4	Hexachlorocyclopentadiene	420	~~U~~ UJ
88-06-2	2,4,6-Trichlorophenol	420	U
95-95-4	2,4,5-Trichlorophenol	420	U
92-52-4	1,1'-Biphenyl	420	U
91-58-7	2-Chloronaphthalene	420	U
88-74-4	2-Nitroaniline	820	U
131-11-3	Dimethylphthalate	420	U
606-20-2	2,6-Dinitrotoluene	420	U
208-96-8	Acenaphthylene	38	J
99-09-2	3-Nitroaniline	820	U
83-32-9	Acenaphthene	710	

1E - FORM I SV-2
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-76-072

5

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17056

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17056-5

Sample wt/vol: 29.5 (g/mL) g Lab File ID: ULLBU14.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 19 Decanted: (Y/N) Date Received: 06/18/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/27/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/06/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 2.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
51-28-5	2,4-Dinitrophenol	820	U	
100-02-7	4-Nitrophenol	820	U	
132-64-9	Dibenzofuran	55	J	
121-14-2	2,4-Dinitrotoluene	420	U	
84-66-2	Diethylphthalate	420	U	
86-73-7	Fluorene	590		
7005-72-3	4-Chlorophenyl-phenylether	420	U	
100-01-6	4-Nitroaniline	820	U	
534-52-1	4,6-Dinitro-2-methylphenol	820	U	
86-30-6	N-Nitrosodiphenylamin [1]	420	U	
95-94-3	1,2,4,5-Tetrachlorobenzene	420	U	
101-55-3	4-Bromophenyl-phenylether	420	U	
118-74-1	Hexachlorobenzene	420	U	
1912-24-9	Atrazine	420	U	
87-86-5	Pentachlorophenol	820	U	
85-01-8	Phenanthrene	2400		
120-12-7	Anthracene	430		
86-74-8	Carbazole	72	J	
84-74-2	Di-n-butylphthalate	420 ~~21~~	~~J B~~	U
206-44-0	Fluoranthene	2700		
129-00-0	Pyrene	1800		
85-68-7	Butylbenzylphthalate	420 ~~17~~	~~J B~~	U
91-94-1	3,3'-Dichlorobenzidine	420	U	
56-55-3	Benzo(a)anthracene	930		
218-01-9	Chrysene	1100		
117-81-7	Bis(2-ethylhexyl)phthalate	490	~~B~~	
117-84-0	Di-n-octylphthalate	48	J	
205-99-2	Benzo(b)fluoranthene	820		J
207-08-9	Benzo(k)fluoranthene	690		
50-32-8	Benzo(a)pyrene	840		
193-39-5	Indeno(1,2,3-cd)pyrene	330	J	
53-70-3	Dibenzo(a,h)anthracene	130	~~J~~	J
191-24-2	Benzo(g,h,i)perylene	350	J	
58-90-2	2,3,4,6-Tetrachlorophenol	420	U	

[1] Cannot be separated from Diphenylamine

MW 9/16/13

1D - FORM I SV-1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-35-072

6

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17056

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17056-6

Sample wt/vol: 30.7 (g/mL) g Lab File ID: ULLBU15.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 20 Decanted: (Y/N) Date Received: 06/18/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/27/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/06/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
100-52-7	Benzaldehyde	10	J
108-95-2	Phenol	210	U
111-44-4	Bis(2-chloroethyl)ether	210	U
95-57-8	2-Chlorophenol	210	U
95-48-7	2-Methylphenol	210	U
108-60-1	2,2'-Oxybis(1-chloropropane)	210	U
98-86-2	Acetophenone	21	J
106-44-5	4-Methylphenol	210	U
621-64-7	N-Nitroso-di-n-propylamine	210	U
67-72-1	Hexachloroethane	210	U
98-95-3	Nitrobenzene	210	U
78-59-1	Isophorone	210	U
88-75-5	2-Nitrophenol	210	U
105-67-9	2,4-Dimethylphenol	210	U
111-91-1	Bis(2-chloroethoxy)methane	210	U
120-83-2	2,4-Dichlorophenol	210	U
91-20-3	Naphthalene	210	U
106-47-8	4-Chloroaniline	210	U
87-68-3	Hexachlorobutadiene	210	U
105-60-2	Caprolactam	210	U
59-50-7	4-Chloro-3-methylphenol	210	U
91-57-6	2-Methylnaphthalene	210	U
77-47-4	Hexachlorocyclopentadiene	210	~~U~~ UJ
88-06-2	2,4,6-Trichlorophenol	210	U
95-95-4	2,4,5-Trichlorophenol	210	U
92-52-4	1,1'-Biphenyl	210	U
91-58-7	2-Chloronaphthalene	210	U
88-74-4	2-Nitroaniline	400	U
131-11-3	Dimethylphthalate	210	U
606-20-2	2,6-Dinitrotoluene	210	U
208-96-8	Acenaphthylene	210	U
99-09-2	3-Nitroaniline	400	U
83-32-9	Acenaphthene	9.6	J

NW 9/16/13

1E - FORM I SV-2
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-35-072

6

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17056

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17056-6

Sample wt/vol: 30.7 (g/mL) g Lab File ID: ULLBU15.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 20 Decanted: (Y/N) Date Received: 06/18/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/27/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/06/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
51-28-5	2,4-Dinitrophenol	400	U
100-02-7	4-Nitrophenol	400	U
132-64-9	Dibenzofuran	4.0	J
121-14-2	2,4-Dinitrotoluene	210	U
84-66-2	Diethylphthalate	4.4	J
86-73-7	Fluorene	4.3	J
7005-72-3	4-Chlorophenyl-phenylether	210	U
100-01-6	4-Nitroaniline	400	U
534-52-1	4,6-Dinitro-2-methylphenol	400	U
86-30-6	N-Nitrosodiphenylamin [1]	210	U
95-94-3	1,2,4,5-Tetrachlorobenzene	210	U
101-55-3	4-Bromophenyl-phenylether	210	U
118-74-1	Hexachlorobenzene	210	U
1912-24-9	Atrazine	210	U
87-86-5	Pentachlorophenol	400	U
85-01-8	Phenanthrene	30	J
120-12-7	Anthracene	14	J
86-74-8	Carbazole	210	U
84-74-2	Di-n-butylphthalate	210 ~~9.2~~	~~J B~~ U
206-44-0	Fluoranthene	41	J
129-00-0	Pyrene	33	J
85-68-7	Butylbenzylphthalate	210 ~~14~~	~~J B~~ U
91-94-1	3,3'-Dichlorobenzidine	210	U
56-55-3	Benzo(a)anthracene	15	J
218-01-9	Chrysene	22	J
117-81-7	Bis(2-ethylhexyl)phthalate	210 ~~31~~	~~J B~~ U
117-84-0	Di-n-octylphthalate	210	U
205-99-2	Benzo(b)fluoranthene	6.9	~~J~~ J
207-08-9	Benzo(k)fluoranthene	13	J
50-32-8	Benzo(a)pyrene	14	J
193-39-5	Indeno(1,2,3-cd)pyrene	7.0	J
53-70-3	Dibenzo(a,h)anthracene	210	~~U~~ UJ
191-24-2	Benzo(g,h,i)perylene	9.4	J
58-90-2	2,3,4,6-Tetrachlorophenol	210	U

[1] Cannot be separated from Diphenylamine

NW 9/16/13

1D - FORM I SV-1

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-35-096

7

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17056

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17056-7

Sample wt/vol: 29.3 (g/mL) g Lab File ID: ULLBX03.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 20 Decanted: (Y/N) Date Received: 06/18/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/27/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/06/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
100-52-7	Benzaldehyde	14	J	
108-95-2	Phenol	220	U	
111-44-4	Bis(2-chloroethyl)ether	220	U	
95-57-8	2-Chlorophenol	220	U	
95-48-7	2-Methylphenol	220	U	
108-60-1	2,2'-Oxybis(1-chloropropane)	220	U	
98-86-2	Acetophenone	23	J	
106-44-5	4-Methylphenol	220	U	
621-64-7	N-Nitroso-di-n-propylamine	220	U	
67-72-1	Hexachloroethane	220	U	
98-95-3	Nitrobenzene	220	U	
78-59-1	Isophorone	220	U	
88-75-5	2-Nitrophenol	220	U	
105-67-9	2,4-Dimethylphenol	220	U	
111-91-1	Bis(2-chloroethoxy)methane	220	U	
120-83-2	2,4-Dichlorophenol	220	U	
91-20-3	Naphthalene	220	U	
106-47-8	4-Chloroaniline	220	U	
87-68-3	Hexachlorobutadiene	220	U	
105-60-2	Caprolactam	220	U	
59-50-7	4-Chloro-3-methylphenol	220	U	
91-57-6	2-Methylnaphthalene	220	U	
77-47-4	Hexachlorocyclopentadiene	220	U	UJ
88-06-2	2,4,6-Trichlorophenol	220	U	
95-95-4	2,4,5-Trichlorophenol	220	U	
92-52-4	1,1'-Biphenyl	220	U	
91-58-7	2-Chloronaphthalene	220	U	
88-74-4	2-Nitroaniline	420	U	
131-11-3	Dimethylphthalate	220	U	
606-20-2	2,6-Dinitrotoluene	220	U	
208-96-8	Acenaphthylene	220	U	
99-09-2	3-Nitroaniline	420	U	
83-32-9	Acenaphthene	220	U	

NW 9/16/13

EPA SAMPLE NO.
LMR13-35-096

7

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17056

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17056-7

Sample wt/vol: 29.3 (g/mL) g Lab File ID: ULLBX03.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 20 Decanted: (Y/N) Date Received: 06/18/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/27/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/06/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
51-28-5	2,4-Dinitrophenol	420	U	
100-02-7	4-Nitrophenol	420	U	
132-64-9	Dibenzofuran	220	U	
121-14-2	2,4-Dinitrotoluene	220	U	
84-66-2	Diethylphthalate	220	U	
86-73-7	Fluorene	220	U	
7005-72-3	4-Chlorophenyl-phenylether	220	U	
100-01-6	4-Nitroaniline	420	U	
534-52-1	4,6-Dinitro-2-methylphenol	420	U	
86-30-6	N-Nitrosodiphenylamin [1]	220	U	
95-94-3	1,2,4,5-Tetrachlorobenzene	220	U	
101-55-3	4-Bromophenyl-phenylether	220	U	
118-74-1	Hexachlorobenzene	220	U	
1912-24-9	Atrazine	220	U	
87-86-5	Pentachlorophenol	420	U	
85-01-8	Phenanthrene	4.2	J	
120-12-7	Anthracene	2.8	J	
86-74-8	Carbazole	220	U	
84-74-2	Di-n-butylphthalate	220 ~~12~~	~~J B~~	U
206-44-0	Fluoranthene	9.1	J	
129-00-0	Pyrene	9.1	J	
85-68-7	Butylbenzylphthalate	220 ~~14~~	~~J B~~	U
91-94-1	3,3'-Dichlorobenzidine	220	U	
56-55-3	Benzo(a)anthracene	220	U	
218-01-9	Chrysene	12	J	
117-81-7	Bis(2-ethylhexyl)phthalate	220 ~~31~~	~~J B~~	U
117-84-0	Di-n-octylphthalate	220	U	
205-99-2	Benzo(b)fluoranthene	220	~~U~~	UJ
207-08-9	Benzo(k)fluoranthene	220	U	
50-32-8	Benzo(a)pyrene	220	U	
193-39-5	Indeno(1,2,3-cd)pyrene	220	U	
53-70-3	Dibenzo(a,h)anthracene	220	~~U~~	UJ
191-24-2	Benzo(g,h,i)perylene	220	U	
58-90-2	2,3,4,6-Tetrachlorophenol	220	U	

[1] Cannot be separated from Diphenylamine

MW 9/16/13

1D - FORM I SV-1

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-77-012

8

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17056

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17056-8

Sample wt/vol: 29.7 (g/mL) g Lab File ID: ULLBX04.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 36 Decanted: (Y/N) Date Received: 06/18/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/27/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/06/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
100-52-7	Benzaldehyde	33	J	
108-95-2	Phenol	270	U	
111-44-4	Bis(2-chloroethyl)ether	270	U	
95-57-8	2-Chlorophenol	270	U	
95-48-7	2-Methylphenol	270	U	
108-60-1	2,2'-Oxybis(1-chloropropane)	270	U	
98-86-2	Acetophenone	270	U	
106-44-5	4-Methylphenol	270	U	
621-64-7	N-Nitroso-di-n-propylamine	270	U	
67-72-1	Hexachloroethane	270	U	
98-95-3	Nitrobenzene	270	U	
78-59-1	Isophorone	270	U	
88-75-5	2-Nitrophenol	270	U	
105-67-9	2,4-Dimethylphenol	270	U	
111-91-1	Bis(2-chloroethoxy)methane	270	U	
120-83-2	2,4-Dichlorophenol	270	U	
91-20-3	Naphthalene	270	U	
106-47-8	4-Chloroaniline	270	U	R
87-68-3	Hexachlorobutadiene	270	U	
105-60-2	Caprolactam	270	U	
59-50-7	4-Chloro-3-methylphenol	270	U	
91-57-6	2-Methylnaphthalene	270	U	
77-47-4	Hexachlorocyclopentadiene	270	U	R
88-06-2	2,4,6-Trichlorophenol	270	U	
95-95-4	2,4,5-Trichlorophenol	270	U	
92-52-4	1,1'-Biphenyl	270	U	
91-58-7	2-Chloronaphthalene	270	U	
88-74-4	2-Nitroaniline	520	U	
131-11-3	Dimethylphthalate	270	U	
606-20-2	2,6-Dinitrotoluene	270	U	
208-96-8	Acenaphthylene	270	U	
99-09-2	3-Nitroaniline	520	U	
83-32-9	Acenaphthene	270	U	

MW 9/16/13

1E - FORM I SV-2

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-77-012

8

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17056

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17056-8

Sample wt/vol: 29.7 (g/mL) g Lab File ID: ULLBX04.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 36 Decanted: (Y/N) Date Received: 06/18/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/27/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/06/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
51-28-5	2,4-Dinitrophenol	520	U	
100-02-7	4-Nitrophenol	520	U	
132-64-9	Dibenzofuran	270	U	
121-14-2	2,4-Dinitrotoluene	270	U	
84-66-2	Diethylphthalate	270	U	
86-73-7	Fluorene	270	U	
7005-72-3	4-Chlorophenyl-phenylether	270	U	
100-01-6	4-Nitroaniline	520	U	
534-52-1	4,6-Dinitro-2-methylphenol	520	U	
86-30-6	N-Nitrosodiphenylamin [1]	270	U	
95-94-3	1,2,4,5-Tetrachlorobenzene	270	U	
101-55-3	4-Bromophenyl-phenylether	270	U	
118-74-1	Hexachlorobenzene	270	U	
1912-24-9	Atrazine	270	U	
87-86-5	Pentachlorophenol	520	U	
85-01-8	Phenanthrene	270	U	
120-12-7	Anthracene	270	U	
86-74-8	Carbazole	270	U	
84-74-2	Di-n-butylphthalate	270 ~~12~~	~~J B~~	u
206-44-0	Fluoranthene	15	J	
129-00-0	Pyrene	20	J	
85-68-7	Butylbenzylphthalate	270 ~~19~~	~~J B~~	u
91-94-1	3,3'-Dichlorobenzidine	270	~~U~~	R
56-55-3	Benzo(a)anthracene	10	J	
218-01-9	Chrysene	16	J	
117-81-7	Bis(2-ethylhexyl)phthalate	270 ~~47~~	~~J B~~	u
117-84-0	Di-n-octylphthalate	270	U	
205-99-2	Benzo(b)fluoranthene	270	~~U~~	UJ
207-08-9	Benzo(k)fluoranthene	270	U	
50-32-8	Benzo(a)pyrene	270	U	
193-39-5	Indeno(1,2,3-cd)pyrene	270	U	
53-70-3	Dibenzo(a,h)anthracene	270	~~U~~	UJ
191-24-2	Benzo(g,h,i)perylene	270	U	
58-90-2	2,3,4,6-Tetrachlorophenol	270	U	

[1] Cannot be separated from Diphenylamine

MW 9/16/13

1D - FORM I SV-1

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-77-024

9

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17056

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17056-9

Sample wt/vol: 29.5 (g/mL) g Lab File ID: ULLBX05.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 32 Decanted: (Y/N) Date Received: 06/18/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/27/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/06/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
100-52-7	Benzaldehyde	21	J
108-95-2	Phenol	250	U
111-44-4	Bis(2-chloroethyl)ether	250	U
95-57-8	2-Chlorophenol	250	U
95-48-7	2-Methylphenol	250	U
108-60-1	2,2'-Oxybis(1-chloropropane)	250	U
98-86-2	Acetophenone	250	U
106-44-5	4-Methylphenol	250	U
621-64-7	N-Nitroso-di-n-propylamine	250	U
67-72-1	Hexachloroethane	250	U
98-95-3	Nitrobenzene	250	U
78-59-1	Isophorone	250	U
88-75-5	2-Nitrophenol	250	U
105-67-9	2,4-Dimethylphenol	250	U
111-91-1	Bis(2-chloroethoxy)methane	250	U
120-83-2	2,4-Dichlorophenol	250	U
91-20-3	Naphthalene	250	U
106-47-8	4-Chloroaniline	250	U
87-68-3	Hexachlorobutadiene	250	U
105-60-2	Caprolactam	250	U
59-50-7	4-Chloro-3-methylphenol	250	U
91-57-6	2-Methylnaphthalene	250	U
77-47-4	Hexachlorocyclopentadiene	250	U UJ
88-06-2	2,4,6-Trichlorophenol	250	U
95-95-4	2,4,5-Trichlorophenol	250	U
92-52-4	1,1'-Biphenyl	250	U
91-58-7	2-Chloronaphthalene	250	U
88-74-4	2-Nitroaniline	490	U
131-11-3	Dimethylphthalate	250	U
606-20-2	2,6-Dinitrotoluene	250	U
208-96-8	Acenaphthylene	250	U
99-09-2	3-Nitroaniline	490	U
83-32-9	Acenaphthene	250	U

NW 9/16/13

1E - FORM I SV-2
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-77-024

9

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17056

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17056-9

Sample wt/vol: 29.5 (g/mL) g Lab File ID: ULLBX05.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 32 Decanted: (Y/N) Date Received: 06/18/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/27/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/06/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
51-28-5	2,4-Dinitrophenol	490	U	
100-02-7	4-Nitrophenol	490	U	
132-64-9	Dibenzofuran	250	U	
121-14-2	2,4-Dinitrotoluene	250	U	
84-66-2	Diethylphthalate	250	U	
86-73-7	Fluorene	250	U	
7005-72-3	4-Chlorophenyl-phenylether	250	U	
100-01-6	4-Nitroaniline	490	U	
534-52-1	4,6-Dinitro-2-methylphenol	490	U	
86-30-6	N-Nitrosodiphenylamin [1]	250	U	
95-94-3	1,2,4,5-Tetrachlorobenzene	250	U	
101-55-3	4-Bromophenyl-phenylether	250	U	
118-74-1	Hexachlorobenzene	250	U	
1912-24-9	Atrazine	250	U	
87-86-5	Pentachlorophenol	490	U	
85-01-8	Phenanthrene	250	U	
120-12-7	Anthracene	250	U	
86-74-8	Carbazole	250	U	
84-74-2	Di-n-butylphthalate	250 ~~13~~	J ~~B~~	u
206-44-0	Fluoranthene	250	U	
129-00-0	Pyrene	250	U	
85-68-7	Butylbenzylphthalate	250 ~~17~~	~~J B~~	u
91-94-1	3,3'-Dichlorobenzidine	250	U	
56-55-3	Benzo(a)anthracene	250	U	
218-01-9	Chrysene	7.6	J	
117-81-7	Bis(2-ethylhexyl)phthalate	250 ~~40~~	~~J B~~	u
117-84-0	Di-n-octylphthalate	250	U	
205-99-2	Benzo(b)fluoranthene	250	~~U~~	UJ
207-08-9	Benzo(k)fluoranthene	250	U	
50-32-8	Benzo(a)pyrene	250	U	
193-39-5	Indeno(1,2,3-cd)pyrene	250	U	
53-70-3	Dibenzo(a,h)anthracene	250	~~U~~	UJ
191-24-2	Benzo(g,h,i)perylene	250	U	
58-90-2	2,3,4,6-Tetrachlorophenol	250	U	

[1] Cannot be separated from Diphenylamine

MW 9/16/13

1D - FORM I SV-1

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-77-048

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678 10

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17056

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17056-10

Sample wt/vol: 30.5 (g/mL) g Lab File ID: ULLBX06.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 28 Decanted: (Y/N) Date Received: 06/18/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/27/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/06/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
100-52-7	Benzaldehyde	25	J
108-95-2	Phenol	230	U
111-44-4	Bis(2-chloroethyl)ether	230	U
95-57-8	2-Chlorophenol	230	U
95-48-7	2-Methylphenol	230	U
108-60-1	2,2'-Oxybis(1-chloropropane)	230	U
98-86-2	Acetophenone	21	J
106-44-5	4-Methylphenol	230	U
621-64-7	N-Nitroso-di-n-propylamine	230	U
67-72-1	Hexachloroethane	230	U
98-95-3	Nitrobenzene	230	U
78-59-1	Isophorone	230	U
88-75-5	2-Nitrophenol	230	U
105-67-9	2,4-Dimethylphenol	230	U
111-91-1	Bis(2-chloroethoxy)methane	230	U
120-83-2	2,4-Dichlorophenol	230	U
91-20-3	Naphthalene	230	U
106-47-8	4-Chloroaniline	230	U
87-68-3	Hexachlorobutadiene	230	U
105-60-2	Caprolactam	230	U
59-50-7	4-Chloro-3-methylphenol	230	U
91-57-6	2-Methylnaphthalene	230	U
77-47-4	Hexachlorocyclopentadiene	230	U UJ
88-06-2	2,4,6-Trichlorophenol	230	U
95-95-4	2,4,5-Trichlorophenol	230	U
92-52-4	1,1'-Biphenyl	230	U
91-58-7	2-Chloronaphthalene	230	U
88-74-4	2-Nitroaniline	450	U
131-11-3	Dimethylphthalate	230	U
606-20-2	2,6-Dinitrotoluene	230	U
208-96-8	Acenaphthylene	230	U
99-09-2	3-Nitroaniline	450	U
83-32-9	Acenaphthene	230	U

NW 9/16/13

1E - FORM I SV-2
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-77-048

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678 10

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17056

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17056-10

Sample wt/vol: 30.5 (g/mL) g Lab File ID: ULLBX06.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 28 Decanted: (Y/N) Date Received: 06/18/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/27/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/06/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
51-28-5	2,4-Dinitrophenol	450	U	
100-02-7	4-Nitrophenol	450	U	
132-64-9	Dibenzofuran	230	U	
121-14-2	2,4-Dinitrotoluene	230	U	
84-66-2	Diethylphthalate	230	U	
86-73-7	Fluorene	230	U	
7005-72-3	4-Chlorophenyl-phenylether	230	U	
100-01-6	4-Nitroaniline	450	U	
534-52-1	4,6-Dinitro-2-methylphenol	450	U	
86-30-6	N-Nitrosodiphenylamin [1]	230	U	
95-94-3	1,2,4,5-Tetrachlorobenzene	230	U	
101-55-3	4-Bromophenyl-phenylether	230	U	
118-74-1	Hexachlorobenzene	230	U	
1912-24-9	Atrazine	230	U	
87-86-5	Pentachlorophenol	450	U	
85-01-8	Phenanthrene	230	U	
120-12-7	Anthracene	230	U	
86-74-8	Carbazole	230	U	
84-74-2	Di-n-butylphthalate	230	U	
206-44-0	Fluoranthene	230	U	
129-00-0	Pyrene	230	U	
85-68-7	Butylbenzylphthalate	230 ~~25~~	~~J B~~	U
91-94-1	3,3'-Dichlorobenzidine	230	U	
56-55-3	Benzo(a)anthracene	230	U	
218-01-9	Chrysene	9.8	J	
117-81-7	Bis(2-ethylhexyl)phthalate	230 ~~45~~	~~J B~~	U
117-84-0	Di-n-octylphthalate	230	U	
205-99-2	Benzo(b)fluoranthene	230	~~U~~	UJ
207-08-9	Benzo(k)fluoranthene	230	U	
50-32-8	Benzo(a)pyrene	230	U	
193-39-5	Indeno(1,2,3-cd)pyrene	230	U	
53-70-3	Dibenzo(a,h)anthracene	230	~~U~~	UJ
191-24-2	Benzo(g,h,i)perylene	230	U	
58-90-2	2,3,4,6-Tetrachlorophenol	230	U	

[1] Cannot be separated from Diphenylamine

NW 9/16/13

EPA SAMPLE NO.
LMR13-77-072

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17056

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17056-11

Sample wt/vol: 30.3 (g/mL) g Lab File ID: ULLBX07.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 28 Decanted: (Y/N) Date Received: 06/18/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/27/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/06/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
100-52-7	Benzaldehyde	24	J
108-95-2	Phenol	230	U
111-44-4	Bis(2-chloroethyl)ether	230	U
95-57-8	2-Chlorophenol	230	U
95-48-7	2-Methylphenol	230	U
108-60-1	2,2'-Oxybis(1-chloropropane)	230	U
98-86-2	Acetophenone	24	J
106-44-5	4-Methylphenol	230	U
621-64-7	N-Nitroso-di-n-propylamine	230	U
67-72-1	Hexachloroethane	230	U
98-95-3	Nitrobenzene	230	U
78-59-1	Isophorone	230	U
88-75-5	2-Nitrophenol	230	U
105-67-9	2,4-Dimethylphenol	230	U
111-91-1	Bis(2-chloroethoxy)methane	230	U
120-83-2	2,4-Dichlorophenol	230	U
91-20-3	Naphthalene	230	U
106-47-8	4-Chloroaniline	230	U
87-68-3	Hexachlorobutadiene	230	U
105-60-2	Caprolactam	230	U
59-50-7	4-Chloro-3-methylphenol	230	U
91-57-6	2-Methylnaphthalene	230	U
77-47-4	Hexachlorocyclopentadiene	230	U UJ
88-06-2	2,4,6-Trichlorophenol	230	U
95-95-4	2,4,5-Trichlorophenol	230	U
92-52-4	1,1'-Biphenyl	230	U
91-58-7	2-Chloronaphthalene	230	U
88-74-4	2-Nitroaniline	450	U
131-11-3	Dimethylphthalate	230	U
606-20-2	2,6-Dinitrotoluene	230	U
208-96-8	Acenaphthylene	230	U
99-09-2	3-Nitroaniline	450	U
83-32-9	Acenaphthene	230	U

MW 9/16/13

EPA SAMPLE NO.
LMR13-77-072

11

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17056

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17056-11

Sample wt/vol: 30.3 (g/mL) g Lab File ID: ULLBX07.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 28 Decanted: (Y/N) Date Received: 06/18/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/27/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/06/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
51-28-5	2,4-Dinitrophenol	450	U	
100-02-7	4-Nitrophenol	450	U	
132-64-9	Dibenzofuran	230	U	
121-14-2	2,4-Dinitrotoluene	230	U	
84-66-2	Diethylphthalate	230	U	
86-73-7	Fluorene	230	U	
7005-72-3	4-Chlorophenyl-phenylether	230	U	
100-01-6	4-Nitroaniline	450	U	
534-52-1	4,6-Dinitro-2-methylphenol	450	U	
86-30-6	N-Nitrosodiphenylamin [1]	230	U	
95-94-3	1,2,4,5-Tetrachlorobenzene	230	U	
101-55-3	4-Bromophenyl-phenylether	230	U	
118-74-1	Hexachlorobenzene	230	U	
1912-24-9	Atrazine	230	U	
87-86-5	Pentachlorophenol	450	U	
85-01-8	Phenanthrene	230	U	
120-12-7	Anthracene	230	U	
86-74-8	Carbazole	230	U	
84-74-2	Di-n-butylphthalate	230 ~~11~~ ~~J B~~	U	U
206-44-0	Fluoranthene	230	U	
129-00-0	Pyrene	230	U	
85-68-7	Butylbenzylphthalate	230 ~~26~~ ~~J B~~	U	U
91-94-1	3,3'-Dichlorobenzidine	230	U	
56-55-3	Benzo(a)anthracene	230	U	
218-01-9	Chrysene	8.9	J	
117-81-7	Bis(2-ethylhexyl)phthalate	230 ~~53~~ ~~J B~~	U	U
117-84-0	Di-n-octylphthalate	230	U	
205-99-2	Benzo(b)fluoranthene	230 ~~J~~	U	UJ
207-08-9	Benzo(k)fluoranthene	230	U	
50-32-8	Benzo(a)pyrene	230	U	
193-39-5	Indeno(1,2,3-cd)pyrene	230	U	
53-70-3	Dibenzo(a,h)anthracene	230 ~~J~~	U	UJ
191-24-2	Benzo(g,h,i)perylene	230	U	
58-90-2	2,3,4,6-Tetrachlorophenol	230	U	

[1] Cannot be separated from Diphenylamine

NW 9/16/13

1D - FORM I SV-1

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-38-024

12

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17056

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17056-12

Sample wt/vol: 29.7 (g/mL) g Lab File ID: ULLBX08.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 39 Decanted: (Y/N) Date Received: 06/18/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/27/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/06/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
100-52-7	Benzaldehyde	31	J	
108-95-2	Phenol	280	U	
111-44-4	Bis(2-chloroethyl)ether	280	U	
95-57-8	2-Chlorophenol	280	U	
95-48-7	2-Methylphenol	280	U	
108-60-1	2,2'-Oxybis(1-chloropropane)	280	U	
98-86-2	Acetophenone	21	J	
106-44-5	4-Methylphenol	280	U	
621-64-7	N-Nitroso-di-n-propylamine	280	U	
67-72-1	Hexachloroethane	280	U	
98-95-3	Nitrobenzene	280	U	
78-59-1	Isophorone	280	U	
88-75-5	2-Nitrophenol	280	U	
105-67-9	2,4-Dimethylphenol	280	U	
111-91-1	Bis(2-chloroethoxy)methane	280	U	
120-83-2	2,4-Dichlorophenol	280	U	
91-20-3	Naphthalene	23	J	
106-47-8	4-Chloroaniline	280	~~U~~	R
87-68-3	Hexachlorobutadiene	280	U	
105-60-2	Caprolactam	280	U	
59-50-7	4-Chloro-3-methylphenol	280	U	
91-57-6	2-Methylnaphthalene	280	U	
77-47-4	Hexachlorocyclopentadiene	280	~~U~~	R
88-06-2	2,4,6-Trichlorophenol	280	U	
95-95-4	2,4,5-Trichlorophenol	280	U	
92-52-4	1,1'-Biphenyl	280	U	
91-58-7	2-Chloronaphthalene	280	U	
88-74-4	2-Nitroaniline	540	U	
131-11-3	Dimethylphthalate	280	U	
606-20-2	2,6-Dinitrotoluene	280	U	
208-96-8	Acenaphthylene	45	J	
99-09-2	3-Nitroaniline	540	U	
83-32-9	Acenaphthene	130	J	

1E - FORM I SV-2
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-38-024

12

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17056

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17056-12

Sample wt/vol: 29.7 (g/mL) g Lab File ID: ULLBX08.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 39 Decanted: (Y/N) Date Received: 06/18/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/27/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/06/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
51-28-5	2,4-Dinitrophenol	540	U	
100-02-7	4-Nitrophenol	540	U	
132-64-9	Dibenzofuran	14	J	
121-14-2	2,4-Dinitrotoluene	280	U	
84-66-2	Diethylphthalate	280	U	
86-73-7	Fluorene	70	J	
7005-72-3	4-Chlorophenyl-phenylether	280	U	
100-01-6	4-Nitroaniline	540	U	
534-52-1	4,6-Dinitro-2-methylphenol	540	U	
86-30-6	N-Nitrosodiphenylamin [1]	280	U	
95-94-3	1,2,4,5-Tetrachlorobenzene	280	U	
101-55-3	4-Bromophenyl-phenylether	280	U	
118-74-1	Hexachlorobenzene	280	U	
1912-24-9	Atrazine	280	U	
87-86-5	Pentachlorophenol	540	U	
85-01-8	Phenanthrene	650		
120-12-7	Anthracene	190	J	
86-74-8	Carbazole	280	U	
84-74-2	Di-n-butylphthalate	280 ~~13~~	~~J B~~	U
206-44-0	Fluoranthene	1000		
129-00-0	Pyrene	1000		
85-68-7	Butylbenzylphthalate	280 ~~21~~	~~J B~~	U
91-94-1	3,3'-Dichlorobenzidine	280	~~U~~ /	R
56-55-3	Benzo(a)anthracene	650		
218-01-9	Chrysene	540		
117-81-7	Bis(2-ethylhexyl)phthalate	280 ~~47~~	~~J B~~	U
117-84-0	Di-n-octylphthalate	280	U	
205-99-2	Benzo(b)fluoranthene	400		J
207-08-9	Benzo(k)fluoranthene	410		
50-32-8	Benzo(a)pyrene	540		
193-39-5	Indeno(1,2,3-cd)pyrene	200	J	
53-70-3	Dibenzo(a,h)anthracene	70	~~J~~ /	J
191-24-2	Benzo(g,h,i)perylene	270	J	
58-90-2	2,3,4,6-Tetrachlorophenol	280	U	

[1] Cannot be separated from Diphenylamine

MW 9/16/13

1D - FORM I SV-1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-38-024FD

13

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17056

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17056-13

Sample wt/vol: 30.4 (g/mL) g Lab File ID: ULLBX09.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 34 Decanted: (Y/N) Date Received: 06/18/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/27/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/06/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
100-52-7	Benzaldehyde	44	J	
108-95-2	Phenol	250	U	
111-44-4	Bis(2-chloroethyl)ether	250	U	
95-57-8	2-Chlorophenol	250	U	
95-48-7	2-Methylphenol	250	U	
108-60-1	2,2'-Oxybis(1-chloropropane)	250	U	
98-86-2	Acetophenone	250	U	
106-44-5	4-Methylphenol	250	U	
621-64-7	N-Nitroso-di-n-propylamine	250	U	
67-72-1	Hexachloroethane	250	U	
98-95-3	Nitrobenzene	250	U	
78-59-1	Isophorone	250	U	
88-75-5	2-Nitrophenol	250	U	
105-67-9	2,4-Dimethylphenol	250	U	
111-91-1	Bis(2-chloroethoxy)methane	250	U	
120-83-2	2,4-Dichlorophenol	250	U	
91-20-3	Naphthalene	26	J	
106-47-8	4-Chloroaniline	250	U	R
87-68-3	Hexachlorobutadiene	250	U	
105-60-2	Caprolactam	250	U	
59-50-7	4-Chloro-3-methylphenol	250	U	
91-57-6	2-Methylnaphthalene	250	U	
77-47-4	Hexachlorocyclopentadiene	250	U	R
88-06-2	2,4,6-Trichlorophenol	250	U	
95-95-4	2,4,5-Trichlorophenol	250	U	
92-52-4	1,1'-Biphenyl	250	U	
91-58-7	2-Chloronaphthalene	250	U	
88-74-4	2-Nitroaniline	490	U	
131-11-3	Dimethylphthalate	250	U	
606-20-2	2,6-Dinitrotoluene	250	U	
208-96-8	Acenaphthylene	29	J	
99-09-2	3-Nitroaniline	490	U	
83-32-9	Acenaphthene	150	J	

MW 9/16/13

1E - FORM I SV-2
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-38-024FD

13

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17056

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17056-13

Sample wt/vol: 30.4 (g/mL) g Lab File ID: ULLBX09.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 34 Decanted: (Y/N) Date Received: 06/18/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/27/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/06/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
51-28-5	2,4-Dinitrophenol	490	U
100-02-7	4-Nitrophenol	490	U
132-64-9	Dibenzofuran	12	J
121-14-2	2,4-Dinitrotoluene	250	U
84-66-2	Diethylphthalate	250	U
86-73-7	Fluorene	54	J
7005-72-3	4-Chlorophenyl-phenylether	250	U
100-01-6	4-Nitroaniline	490	U
534-52-1	4,6-Dinitro-2-methylphenol	490	U
86-30-6	N-Nitrosodiphenylamin [1]	250	U
95-94-3	1,2,4,5-Tetrachlorobenzene	250	U
101-55-3	4-Bromophenyl-phenylether	250	U
118-74-1	Hexachlorobenzene	250	U
1912-24-9	Atrazine	250	U
87-86-5	Pentachlorophenol	490	U
85-01-8	Phenanthrene	330	
120-12-7	Anthracene	98	J
86-74-8	Carbazole	250	U
84-74-2	Di-n-butylphthalate	~~15~~ 250 ~~J B~~	~~J B~~ U
206-44-0	Fluoranthene	490	
129-00-0	Pyrene	1000	
85-68-7	Butylbenzylphthalate	~~21~~ 250 ~~J B~~	~~J B~~ U
91-94-1	3,3'-Dichlorobenzidine	250	~~U~~ R
56-55-3	Benzo(a)anthracene	540	
218-01-9	Chrysene	580	
117-81-7	Bis(2-ethylhexyl)phthalate	~~75~~ 250 ~~J B~~	~~J B~~ U
117-84-0	Di-n-octylphthalate	250	U
205-99-2	Benzo(b)fluoranthene	500	J
207-08-9	Benzo(k)fluoranthene	410	
50-32-8	Benzo(a)pyrene	520	
193-39-5	Indeno(1,2,3-cd)pyrene	260	
53-70-3	Dibenzo(a,h)anthracene	84	~~J~~ J
191-24-2	Benzo(g,h,i)perylene	310	
58-90-2	2,3,4,6-Tetrachlorophenol	250	U

[1] Cannot be separated from Diphenylamine

MW 9/16/13

1D - FORM I SV-1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-38-072

14

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17056

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17056-14

Sample wt/vol: 30.3 (g/mL) g Lab File ID: ULLBX10.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 24 Decanted: (Y/N) Date Received: 06/18/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/27/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/06/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
100-52-7	Benzaldehyde	12	J
108-95-2	Phenol	220	U
111-44-4	Bis(2-chloroethyl)ether	220	U
95-57-8	2-Chlorophenol	220	U
95-48-7	2-Methylphenol	220	U
108-60-1	2,2'-Oxybis(1-chloropropane)	220	U
98-86-2	Acetophenone	15	J
106-44-5	4-Methylphenol	220	U
621-64-7	N-Nitroso-di-n-propylamine	220	U
67-72-1	Hexachloroethane	220	U
98-95-3	Nitrobenzene	220	U
78-59-1	Isophorone	220	U
88-75-5	2-Nitrophenol	220	U
105-67-9	2,4-Dimethylphenol	220	U
111-91-1	Bis(2-chloroethoxy)methane	220	U
120-83-2	2,4-Dichlorophenol	220	U
91-20-3	Naphthalene	220	U
106-47-8	4-Chloroaniline	220	U
87-68-3	Hexachlorobutadiene	220	U
105-60-2	Caprolactam	220	U
59-50-7	4-Chloro-3-methylphenol	220	U
91-57-6	2-Methylnaphthalene	220	U
77-47-4	Hexachlorocyclopentadiene	220	U / UJ
88-06-2	2,4,6-Trichlorophenol	220	U
95-95-4	2,4,5-Trichlorophenol	220	U
92-52-4	1,1'-Biphenyl	220	U
91-58-7	2-Chloronaphthalene	220	U
88-74-4	2-Nitroaniline	430	U
131-11-3	Dimethylphthalate	220	U
606-20-2	2,6-Dinitrotoluene	220	U
208-96-8	Acenaphthylene	220	U
99-09-2	3-Nitroaniline	430	U
83-32-9	Acenaphthene	220	U

1E - FORM I SV-2
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-38-072

14

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17056

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17056-14

Sample wt/vol: 30.3 (g/mL) g Lab File ID: ULLBX10.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 24 Decanted: (Y/N) Date Received: 06/18/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/27/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/06/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
51-28-5	2,4-Dinitrophenol	430	U	
100-02-7	4-Nitrophenol	430	U	
132-64-9	Dibenzofuran	220	U	
121-14-2	2,4-Dinitrotoluene	220	U	
84-66-2	Diethylphthalate	8.1	J	
86-73-7	Fluorene	220	U	
7005-72-3	4-Chlorophenyl-phenylether	220	U	
100-01-6	4-Nitroaniline	430	U	
534-52-1	4,6-Dinitro-2-methylphenol	430	U	
86-30-6	N-Nitrosodiphenylamin [1]	220	U	
95-94-3	1,2,4,5-Tetrachlorobenzene	220	U	
101-55-3	4-Bromophenyl-phenylether	220	U	
118-74-1	Hexachlorobenzene	220	U	
1912-24-9	Atrazine	220	U	
87-86-5	Pentachlorophenol	430	U	
85-01-8	Phenanthrene	12	J	
120-12-7	Anthracene	3.5	J	
86-74-8	Carbazole	220	U	
84-74-2	Di-n-butylphthalate	220 ~~16~~ ~~J B~~		U
206-44-0	Fluoranthene	17	J	
129-00-0	Pyrene	18	J	
85-68-7	Butylbenzylphthalate	220 ~~22~~ ~~J B~~		U
91-94-1	3,3'-Dichlorobenzidine	220	U	
56-55-3	Benzo(a)anthracene	8.5	J	
218-01-9	Chrysene	15	J	
117-81-7	Bis(2-ethylhexyl)phthalate	220 ~~52~~ ~~J B~~		U
117-84-0	Di-n-octylphthalate	220	U	
205-99-2	Benzo(b)fluoranthene	220 ~~U~~		UJ
207-08-9	Benzo(k)fluoranthene	220	U	
50-32-8	Benzo(a)pyrene	220	U	
193-39-5	Indeno(1,2,3-cd)pyrene	220	U	
53-70-3	Dibenzo(a,h)anthracene	220 ~~U~~		UJ
191-24-2	Benzo(g,h,i)perylene	220	U	
58-90-2	2,3,4,6-Tetrachlorophenol	220	U	

[1] Cannot be separated from Diphenylamine

NW 9/16/13

1D - FORM I SV-1

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-77-024FD

15

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17056

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17056-15

Sample wt/vol: 29.3 (g/mL) g Lab File ID: ULLBX11.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 30 Decanted: (Y/N) Date Received: 06/18/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/27/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/06/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
100-52-7	Benzaldehyde	30	J	
108-95-2	Phenol	250	U	
111-44-4	Bis(2-chloroethyl)ether	250	U	
95-57-8	2-Chlorophenol	250	U	
95-48-7	2-Methylphenol	250	U	
108-60-1	2,2'-Oxybis(1-chloropropane)	250	U	
98-86-2	Acetophenone	19	J	
106-44-5	4-Methylphenol	250	U	
621-64-7	N-Nitroso-di-n-propylamine	250	U	
67-72-1	Hexachloroethane	250	U	
98-95-3	Nitrobenzene	250	U	
78-59-1	Isophorone	250	U	
88-75-5	2-Nitrophenol	250	U	
105-67-9	2,4-Dimethylphenol	250	U	
111-91-1	Bis(2-chloroethoxy)methane	250	U	
120-83-2	2,4-Dichlorophenol	250	U	
91-20-3	Naphthalene	250	U	
106-47-8	4-Chloroaniline	250	U	R
87-68-3	Hexachlorobutadiene	250	U	
105-60-2	Caprolactam	250	U	
59-50-7	4-Chloro-3-methylphenol	250	U	
91-57-6	2-Methylnaphthalene	250	U	
77-47-4	Hexachlorocyclopentadiene	250	U	R
88-06-2	2,4,6-Trichlorophenol	250	U	
95-95-4	2,4,5-Trichlorophenol	250	U	
92-52-4	1,1'-Biphenyl	250	U	
91-58-7	2-Chloronaphthalene	250	U	
88-74-4	2-Nitroaniline	480	U	
131-11-3	Dimethylphthalate	250	U	
606-20-2	2,6-Dinitrotoluene	250	U	
208-96-8	Acenaphthylene	250	U	
99-09-2	3-Nitroaniline	480	U	
83-32-9	Acenaphthene	250	U	

NW 9/16/13

1E - FORM I SV-2

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-77-024FD

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678 15

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17056

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17056-15

Sample wt/vol: 29.3 (g/mL) g Lab File ID: ULLBX11.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 30 Decanted: (Y/N) Date Received: 06/18/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/27/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/06/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
51-28-5	2,4-Dinitrophenol	480	U	
100-02-7	4-Nitrophenol	480	U	
132-64-9	Dibenzofuran	250	U	
121-14-2	2,4-Dinitrotoluene	250	U	
84-66-2	Diethylphthalate	250	U	
86-73-7	Fluorene	250	U	
7005-72-3	4-Chlorophenyl-phenylether	250	U	
100-01-6	4-Nitroaniline	480	U	
534-52-1	4,6-Dinitro-2-methylphenol	480	U	
86-30-6	N-Nitrosodiphenylamin [1]	250	U	
95-94-3	1,2,4,5-Tetrachlorobenzene	250	U	
101-55-3	4-Bromophenyl-phenylether	250	U	
118-74-1	Hexachlorobenzene	250	U	
1912-24-9	Atrazine	250	U	
87-86-5	Pentachlorophenol	480	U	
85-01-8	Phenanthrene	5.4	J	
120-12-7	Anthracene	250	U	
86-74-8	Carbazole	250	U	
84-74-2	Di-n-butylphthalate	250 ~~18~~ ~~J B~~		U
206-44-0	Fluoranthene	5.6	J	
129-00-0	Pyrene	8.1	J	
85-68-7	Butylbenzylphthalate	250 ~~26~~ ~~J B~~		U
91-94-1	3,3'-Dichlorobenzidine	250	~~U~~	R
56-55-3	Benzo(a)anthracene	250	U	
218-01-9	Chrysene	12	J	
117-81-7	Bis(2-ethylhexyl)phthalate	250 ~~63~~ ~~J B~~		U
117-84-0	Di-n-octylphthalate	250	U	
205-99-2	Benzo(b)fluoranthene	250	~~U~~	UJ
207-08-9	Benzo(k)fluoranthene	250	U	
50-32-8	Benzo(a)pyrene	250	U	
193-39-5	Indeno(1,2,3-cd)pyrene	250	U	
53-70-3	Dibenzo(a,h)anthracene	250	~~U~~	UJ
191-24-2	Benzo(g,h,i)perylene	250	U	
58-90-2	2,3,4,6-Tetrachlorophenol	250	U	

[1] Cannot be separated from Diphenylamine

MW 9/16/13

1D - FORM I SV-1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-78-012

16

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17056

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17056-16

Sample wt/vol: 29.3 (g/mL) g Lab File ID: ULLBX12.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 26 Decanted: (Y/N) Date Received: 06/18/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/27/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/06/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
100-52-7	Benzaldehyde	16	J
108-95-2	Phenol	230	U
111-44-4	Bis(2-chloroethyl)ether	230	U
95-57-8	2-Chlorophenol	230	U
95-48-7	2-Methylphenol	230	U
108-60-1	2,2'-Oxybis(1-chloropropane)	230	U
98-86-2	Acetophenone	18	J
106-44-5	4-Methylphenol	230	U
621-64-7	N-Nitroso-di-n-propylamine	230	U
67-72-1	Hexachloroethane	230	U
98-95-3	Nitrobenzene	230	U
78-59-1	Isophorone	230	U
88-75-5	2-Nitrophenol	230	U
105-67-9	2,4-Dimethylphenol	230	U
111-91-1	Bis(2-chloroethoxy)methane	230	U
120-83-2	2,4-Dichlorophenol	230	U
91-20-3	Naphthalene	230	U
106-47-8	4-Chloroaniline	230	U
87-68-3	Hexachlorobutadiene	230	U
105-60-2	Caprolactam	230	U
59-50-7	4-Chloro-3-methylphenol	230	U
91-57-6	2-Methylnaphthalene	230	U
77-47-4	Hexachlorocyclopentadiene	230	U/UJ
88-06-2	2,4,6-Trichlorophenol	230	U
95-95-4	2,4,5-Trichlorophenol	230	U
92-52-4	1,1'-Biphenyl	230	U
91-58-7	2-Chloronaphthalene	230	U
88-74-4	2-Nitroaniline	460	U
131-11-3	Dimethylphthalate	230	U
606-20-2	2,6-Dinitrotoluene	230	U
208-96-8	Acenaphthylene	230	U
99-09-2	3-Nitroaniline	460	U
83-32-9	Acenaphthene	230	U

MW 9/16/13

EPA SAMPLE NO.
LMR13-78-012

16

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17056

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17056-16

Sample wt/vol: 29.3 (g/mL) g Lab File ID: ULLBX12.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 26 Decanted: (Y/N) Date Received: 06/18/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/27/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/06/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
51-28-5	2,4-Dinitrophenol	460	U	
100-02-7	4-Nitrophenol	460	U	
132-64-9	Dibenzofuran	230	U	
121-14-2	2,4-Dinitrotoluene	230	U	
84-66-2	Diethylphthalate	7.7	J	
86-73-7	Fluorene	230	U	
7005-72-3	4-Chlorophenyl-phenylether	230	U	
100-01-6	4-Nitroaniline	460	U	
534-52-1	4,6-Dinitro-2-methylphenol	460	U	
86-30-6	N-Nitrosodiphenylamin [1]	230	U	
95-94-3	1,2,4,5-Tetrachlorobenzene	230	U	
101-55-3	4-Bromophenyl-phenylether	230	U	
118-74-1	Hexachlorobenzene	230	U	
1912-24-9	Atrazine	230	U	
87-86-5	Pentachlorophenol	460	U	
85-01-8	Phenanthrene	4.9	J	
120-12-7	Anthracene	230	U	
86-74-8	Carbazole	230	U	
84-74-2	Di-n-butylphthalate	230 ~~15~~ ~~J B~~	U	
206-44-0	Fluoranthene	7.3	J	
129-00-0	Pyrene	8.9	J	
85-68-7	Butylbenzylphthalate	230 ~~19~~ ~~J B~~	U	
91-94-1	3,3'-Dichlorobenzidine	230	U	
56-55-3	Benzo(a)anthracene	230	U	
218-01-9	Chrysene	9.9	J	
117-81-7	Bis(2-ethylhexyl)phthalate	230 ~~42~~ ~~J B~~	U	
117-84-0	Di-n-octylphthalate	230	U	
205-99-2	Benzo(b)fluoranthene	230 ~~J~~	UJ	
207-08-9	Benzo(k)fluoranthene	230	U	
50-32-8	Benzo(a)pyrene	230	U	
193-39-5	Indeno(1,2,3-cd)pyrene	230	U	
53-70-3	Dibenzo(a,h)anthracene	230 ~~J~~	UJ	
191-24-2	Benzo(g,h,i)perylene	230	U	
58-90-2	2,3,4,6-Tetrachlorophenol	230	U	

[1] Cannot be separated from Diphenylamine

MW 9/16/13

EPA SAMPLE NO.
LMR13-78-024

17

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17056

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17056-17

Sample wt/vol: 30.1 (g/mL) g Lab File ID: ULLBX13.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 23 Decanted: (Y/N) Date Received: 06/18/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/27/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/06/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
100-52-7	Benzaldehyde	19	~~J~~ J
108-95-2	Phenol	220	U
111-44-4	Bis(2-chloroethyl)ether	220	U
95-57-8	2-Chlorophenol	220	U
95-48-7	2-Methylphenol	220	U
108-60-1	2,2'-Oxybis(1-chloropropane)	220	U
98-86-2	Acetophenone	14	J
106-44-5	4-Methylphenol	220	U
621-64-7	N-Nitroso-di-n-propylamine	220	U
67-72-1	Hexachloroethane	220	U
98-95-3	Nitrobenzene	220	U
78-59-1	Isophorone	220	U
88-75-5	2-Nitrophenol	220	U
105-67-9	2,4-Dimethylphenol	220	U
111-91-1	Bis(2-chloroethoxy)methane	220	U
120-83-2	2,4-Dichlorophenol	220	U
91-20-3	Naphthalene	220	U
106-47-8	4-Chloroaniline	220	U
87-68-3	Hexachlorobutadiene	220	U
105-60-2	Caprolactam	220	U
59-50-7	4-Chloro-3-methylphenol	220	U
91-57-6	2-Methylnaphthalene	220	U
77-47-4	Hexachlorocyclopentadiene	220	~~U~~ UJ
88-06-2	2,4,6-Trichlorophenol	220	U
95-95-4	2,4,5-Trichlorophenol	220	U
92-52-4	1,1'-Biphenyl	220	U
91-58-7	2-Chloronaphthalene	220	U
88-74-4	2-Nitroaniline	430	U
131-11-3	Dimethylphthalate	220	U
606-20-2	2,6-Dinitrotoluene	220	U
208-96-8	Acenaphthylene	220	U
99-09-2	3-Nitroaniline	430	U
83-32-9	Acenaphthene	220	U

MW 9/16/13

1E - FORM I SV-2

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-78-024

17

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17056

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17056-17

Sample wt/vol: 30.1 (g/mL) g Lab File ID: ULLBX13.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 23 Decanted: (Y/N) Date Received: 06/18/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/27/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/06/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
51-28-5	2,4-Dinitrophenol	430	U	
100-02-7	4-Nitrophenol	430	U	
132-64-9	Dibenzofuran	220	U	
121-14-2	2,4-Dinitrotoluene	220	U	
84-66-2	Diethylphthalate	220	U	
86-73-7	Fluorene	220	U	
7005-72-3	4-Chlorophenyl-phenylether	220	U	
100-01-6	4-Nitroaniline	430	U	
534-52-1	4,6-Dinitro-2-methylphenol	430	U	
86-30-6	N-Nitrosodiphenylamin [1]	220	U	
95-94-3	1,2,4,5-Tetrachlorobenzene	220	U	
101-55-3	4-Bromophenyl-phenylether	220	U	
118-74-1	Hexachlorobenzene	220	U	
1912-24-9	Atrazine	220	U	
87-86-5	Pentachlorophenol	430	U	
85-01-8	Phenanthrene	4.1	J	
120-12-7	Anthracene	220	U	
86-74-8	Carbazole	220	U	
84-74-2	Di-n-butylphthalate	220 ~~17~~ ~~J B~~		U
206-44-0	Fluoranthene	220	U	
129-00-0	Pyrene	220	U	
85-68-7	Butylbenzylphthalate	220	U	
91-94-1	3,3'-Dichlorobenzidine	220	U	
56-55-3	Benzo(a)anthracene	220	U	
218-01-9	Chrysene	13	J	
117-81-7	Bis(2-ethylhexyl)phthalate	220 ~~33~~ ~~J B~~		U
117-84-0	Di-n-octylphthalate	220	U	
205-99-2	Benzo(b)fluoranthene	220 ~~U~~		UJ
207-08-9	Benzo(k)fluoranthene	220	U	
50-32-8	Benzo(a)pyrene	220	U	
193-39-5	Indeno(1,2,3-cd)pyrene	220	U	
53-70-3	Dibenzo(a,h)anthracene	220 ~~U~~		UJ
191-24-2	Benzo(g,h,i)perylene	220	U	
58-90-2	2,3,4,6-Tetrachlorophenol	220	U	

[1] Cannot be separated from Diphenylamine

NW 9/16/13

1D - FORM I SV-1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-78-024FD

18

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17056

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17056-18

Sample wt/vol: 30.2 (g/mL) g Lab File ID: ULLBX14.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 24 Decanted: (Y/N) Date Received: 06/18/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/27/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/06/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
100-52-7	Benzaldehyde	22	J
108-95-2	Phenol	220	U
111-44-4	Bis(2-chloroethyl)ether	220	U
95-57-8	2-Chlorophenol	220	U
95-48-7	2-Methylphenol	220	U
108-60-1	2,2'-Oxybis(1-chloropropane)	220	U
98-86-2	Acetophenone	16	J
106-44-5	4-Methylphenol	220	U
621-64-7	N-Nitroso-di-n-propylamine	220	U
67-72-1	Hexachloroethane	220	U
98-95-3	Nitrobenzene	220	U
78-59-1	Isophorone	220	U
88-75-5	2-Nitrophenol	220	U
105-67-9	2,4-Dimethylphenol	220	U
111-91-1	Bis(2-chloroethoxy)methane	220	U
120-83-2	2,4-Dichlorophenol	220	U
91-20-3	Naphthalene	220	U
106-47-8	4-Chloroaniline	220	U
87-68-3	Hexachlorobutadiene	220	U
105-60-2	Caprolactam	220	U
59-50-7	4-Chloro-3-methylphenol	220	U
91-57-6	2-Methylnaphthalene	220	U
77-47-4	Hexachlorocyclopentadiene	220	~~U~~ UJ
88-06-2	2,4,6-Trichlorophenol	220	U
95-95-4	2,4,5-Trichlorophenol	220	U
92-52-4	1,1'-Biphenyl	220	U
91-58-7	2-Chloronaphthalene	220	U
88-74-4	2-Nitroaniline	430	U
131-11-3	Dimethylphthalate	220	U
606-20-2	2,6-Dinitrotoluene	220	U
208-96-8	Acenaphthylene	220	U
99-09-2	3-Nitroaniline	430	U
83-32-9	Acenaphthene	220	U

NW 9/16/13

EPA SAMPLE NO.
LMR13-78-024FD

18

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17056

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17056-18

Sample wt/vol: 30.2 (g/mL) g Lab File ID: ULLBX14.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 24 Decanted: (Y/N) Date Received: 06/18/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/27/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/06/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
51-28-5	2,4-Dinitrophenol	430	U	
100-02-7	4-Nitrophenol	430	U	
132-64-9	Dibenzofuran	220	U	
121-14-2	2,4-Dinitrotoluene	220	U	
84-66-2	Diethylphthalate	8.0	J	
86-73-7	Fluorene	220	U	
7005-72-3	4-Chlorophenyl-phenylether	220	U	
100-01-6	4-Nitroaniline	430	U	
534-52-1	4,6-Dinitro-2-methylphenol	430	U	
86-30-6	N-Nitrosodiphenylamin [1]	220	U	
95-94-3	1,2,4,5-Tetrachlorobenzene	220	U	
101-55-3	4-Bromophenyl-phenylether	220	U	
118-74-1	Hexachlorobenzene	220	U	
1912-24-9	Atrazine	220	U	
87-86-5	Pentachlorophenol	430	U	
85-01-8	Phenanthrene	3.5	J	
120-12-7	Anthracene	220	U	
86-74-8	Carbazole	220	U	
84-74-2	Di-n-butylphthalate	220 ~~27~~	~~J B~~	U
206-44-0	Fluoranthene	5.5	J	
129-00-0	Pyrene	6.7	J	
85-68-7	Butylbenzylphthalate	220 ~~17~~	~~J B~~	U
91-94-1	3,3'-Dichlorobenzidine	220	U	
56-55-3	Benzo(a)anthracene	220	U	
218-01-9	Chrysene	12	J	
117-81-7	Bis(2-ethylhexyl)phthalate	220 ~~54~~	~~J B~~	U
117-84-0	Di-n-octylphthalate	220	U	
205-99-2	Benzo(b)fluoranthene	220	~~U~~	UJ
207-08-9	Benzo(k)fluoranthene	220	U	
50-32-8	Benzo(a)pyrene	220	U	
193-39-5	Indeno(1,2,3-cd)pyrene	220	U	
53-70-3	Dibenzo(a,h)anthracene	220	~~U~~	UJ
191-24-2	Benzo(g,h,i)perylene	220	U	
58-90-2	2,3,4,6-Tetrachlorophenol	220	U	

[1] Cannot be separated from Diphenylamine

NW 9/16/13

EPA SAMPLE NO.
LMR13-40-012

19

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17056

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17056-19

Sample wt/vol: 30.9 (g/mL) g Lab File ID: ULLBX15.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 53 Decanted: (Y/N) Date Received: 06/18/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/27/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/06/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
100-52-7	Benzaldehyde	51	J	
108-95-2	Phenol	350	U	
111-44-4	Bis(2-chloroethyl)ether	350	U	
95-57-8	2-Chlorophenol	350	U	
95-48-7	2-Methylphenol	350	U	
108-60-1	2,2'-Oxybis(1-chloropropane)	350	U	
98-86-2	Acetophenone	28	J	
106-44-5	4-Methylphenol	350	U	
621-64-7	N-Nitroso-di-n-propylamine	350	U	
67-72-1	Hexachloroethane	350	U	
98-95-3	Nitrobenzene	350	U	
78-59-1	Isophorone	350	U	
88-75-5	2-Nitrophenol	350	U	
105-67-9	2,4-Dimethylphenol	350	U	
111-91-1	Bis(2-chloroethoxy)methane	350	U	
120-83-2	2,4-Dichlorophenol	350	U	
91-20-3	Naphthalene	33	J	
106-47-8	4-Chloroaniline	350	~~U~~	R
87-68-3	Hexachlorobutadiene	350	U	
105-60-2	Caprolactam	350	U	
59-50-7	4-Chloro-3-methylphenol	350	U	
91-57-6	2-Methylnaphthalene	350	U	
77-47-4	Hexachlorocyclopentadiene	350	~~U~~	R
88-06-2	2,4,6-Trichlorophenol	350	U	
95-95-4	2,4,5-Trichlorophenol	350	U	
92-52-4	1,1'-Biphenyl	350	U	
91-58-7	2-Chloronaphthalene	350	U	
88-74-4	2-Nitroaniline	690	U	
131-11-3	Dimethylphthalate	350	U	
606-20-2	2,6-Dinitrotoluene	350	U	
208-96-8	Acenaphthylene	9.9	J	
99-09-2	3-Nitroaniline	690	U	
83-32-9	Acenaphthene	31	J	

MW 9/16/13

1E - FORM I SV-2

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-40-012

19

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17056

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17056-19

Sample wt/vol: 30.9 (g/mL) g Lab File ID: ULLBX15.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 53 Decanted: (Y/N) Date Received: 06/18/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/27/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/06/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
51-28-5	2,4-Dinitrophenol	690	U	
100-02-7	4-Nitrophenol	690	U	
132-64-9	Dibenzofuran	20	J	
121-14-2	2,4-Dinitrotoluene	350	U	
84-66-2	Diethylphthalate	350	U	
86-73-7	Fluorene	39	J	
7005-72-3	4-Chlorophenyl-phenylether	350	U	
100-01-6	4-Nitroaniline	690	U	
534-52-1	4,6-Dinitro-2-methylphenol	690	U	
86-30-6	N-Nitrosodiphenylamin [1]	350	U	
95-94-3	1,2,4,5-Tetrachlorobenzene	350	U	
101-55-3	4-Bromophenyl-phenylether	350	U	
118-74-1	Hexachlorobenzene	350	U	
1912-24-9	Atrazine	350	U	
87-86-5	Pentachlorophenol	690	U	
85-01-8	Phenanthrene	160	J	
120-12-7	Anthracene	39	J	
86-74-8	Carbazole	10	J	
84-74-2	Di-n-butylphthalate	350 ~~27~~	~~J B~~	U
206-44-0	Fluoranthene	330	J	
129-00-0	Pyrene	320	J	
85-68-7	Butylbenzylphthalate	350 ~~45~~	~~J B~~	U
91-94-1	3,3'-Dichlorobenzidine	350	~~J~~	R
56-55-3	Benzo(a)anthracene	190	J	
218-01-9	Chrysene	290	J	
117-81-7	Bis(2-ethylhexyl)phthalate	350 ~~220~~	~~J B~~	U
117-84-0	Di-n-octylphthalate	350	U	
205-99-2	Benzo(b)fluoranthene	180	~~J~~	J
207-08-9	Benzo(k)fluoranthene	200	J	
50-32-8	Benzo(a)pyrene	200	J	
193-39-5	Indeno(1,2,3-cd)pyrene	110	J	
53-70-3	Dibenzo(a,h)anthracene	51	~~J~~	J
191-24-2	Benzo(g,h,i)perylene	140	J	
58-90-2	2,3,4,6-Tetrachlorophenol	350	U	

[1] Cannot be separated from Diphenylamine

1D - FORM I SV-1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-40-024

20

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17056

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17056-20

Sample wt/vol: 30.6 (g/mL) g Lab File ID: ULLBX16.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 51 Decanted: (Y/N) Date Received: 06/18/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/27/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/06/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
100-52-7	Benzaldehyde	41	J	
108-95-2	Phenol	340	U	
111-44-4	Bis(2-chloroethyl)ether	340	U	
95-57-8	2-Chlorophenol	340	U	
95-48-7	2-Methylphenol	340	U	
108-60-1	2,2'-Oxybis(1-chloropropane)	340	U	
98-86-2	Acetophenone	19	J	
106-44-5	4-Methylphenol	340	U	
621-64-7	N-Nitroso-di-n-propylamine	340	U	
67-72-1	Hexachloroethane	340	U	
98-95-3	Nitrobenzene	340	U	
78-59-1	Isophorone	340	U	
88-75-5	2-Nitrophenol	340	U	
105-67-9	2,4-Dimethylphenol	340	U	
111-91-1	Bis(2-chloroethoxy)methane	340	U	
120-83-2	2,4-Dichlorophenol	340	U	
91-20-3	Naphthalene	15	~~J~~	J
106-47-8	4-Chloroaniline	340	U	
87-68-3	Hexachlorobutadiene	340	U	
105-60-2	Caprolactam	340	U	
59-50-7	4-Chloro-3-methylphenol	340	U	
91-57-6	2-Methylnaphthalene	340	U	
77-47-4	Hexachlorocyclopentadiene	340	~~U~~	UJ
88-06-2	2,4,6-Trichlorophenol	340	U	
95-95-4	2,4,5-Trichlorophenol	340	U	
92-52-4	1,1'-Biphenyl	340	U	
91-58-7	2-Chloronaphthalene	340	U	
88-74-4	2-Nitroaniline	660	U	
131-11-3	Dimethylphthalate	340	U	
606-20-2	2,6-Dinitrotoluene	340	U	
208-96-8	Acenaphthylene	8.7	~~J~~	J
99-09-2	3-Nitroaniline	660	U	
83-32-9	Acenaphthene	30	~~J~~	J

MW 9/16/13

1E - FORM I SV-2
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-40-024

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678 20

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17056

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17056-20

Sample wt/vol: 30.6 (g/mL) g Lab File ID: ULLBX16.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 51 Decanted: (Y/N) Date Received: 06/18/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/27/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/06/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
51-28-5	2,4-Dinitrophenol	660	U	
100-02-7	4-Nitrophenol	660	U	
132-64-9	Dibenzofuran	26	J	
121-14-2	2,4-Dinitrotoluene	340	U	
84-66-2	Diethylphthalate	340	U	
86-73-7	Fluorene	33	J	
7005-72-3	4-Chlorophenyl-phenylether	340	U	
100-01-6	4-Nitroaniline	660	U	
534-52-1	4,6-Dinitro-2-methylphenol	660	U	
86-30-6	N-Nitrosodiphenylamin [1]	340	U	
95-94-3	1,2,4,5-Tetrachlorobenzene	340	U	
101-55-3	4-Bromophenyl-phenylether	340	U	
118-74-1	Hexachlorobenzene	340	U	
1912-24-9	Atrazine	340	U	
87-86-5	Pentachlorophenol	660	U	
85-01-8	Phenanthrene	180	J	
120-12-7	Anthracene	48	J	
86-74-8	Carbazole	340	U	
84-74-2	Di-n-butylphthalate	340 ~~17~~	~~J B~~	U
206-44-0	Fluoranthene	340	J	
129-00-0	Pyrene	260	J	
85-68-7	Butylbenzylphthalate	340 ~~33~~	~~J B~~	U
91-94-1	3,3'-Dichlorobenzidine	340	U	
56-55-3	Benzo(a)anthracene	140	J	
218-01-9	Chrysene	220	J	
117-81-7	Bis(2-ethylhexyl)phthalate	340 ~~210~~	~~J B~~	U
117-84-0	Di-n-octylphthalate	340	U	
205-99-2	Benzo(b)fluoranthene	140	~~J~~	J
207-08-9	Benzo(k)fluoranthene	160	J	
50-32-8	Benzo(a)pyrene	150	J	
193-39-5	Indeno(1,2,3-cd)pyrene	89	J	
53-70-3	Dibenzo(a,h)anthracene	27	~~J~~	J
191-24-2	Benzo(g,h,i)perylene	110	J	
58-90-2	2,3,4,6-Tetrachlorophenol	340	U	

[1] Cannot be separated from Diphenylamine

MW 9/16/13

EPA SAMPLE NO.
LMR13-40-024FD

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678 21

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17056

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17056-21

Sample wt/vol: 29.5 (g/mL) g Lab File ID: ULLBX17.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 51 Decanted: (Y/N) Date Received: 06/18/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/27/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/06/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
100-52-7	Benzaldehyde	36	J	
108-95-2	Phenol	350	U	
111-44-4	Bis(2-chloroethyl)ether	350	U	
95-57-8	2-Chlorophenol	350	U	
95-48-7	2-Methylphenol	350	U	
108-60-1	2,2'-Oxybis(1-chloropropane)	350	U	
98-86-2	Acetophenone	20	J	
106-44-5	4-Methylphenol	350	U	
621-64-7	N-Nitroso-di-n-propylamine	350	U	
67-72-1	Hexachloroethane	350	U	
98-95-3	Nitrobenzene	350	U	
78-59-1	Isophorone	350	U	
88-75-5	2-Nitrophenol	350	U	
105-67-9	2,4-Dimethylphenol	350	U	
111-91-1	Bis(2-chloroethoxy)methane	350	U	
120-83-2	2,4-Dichlorophenol	350	U	
91-20-3	Naphthalene	12	J	
106-47-8	4-Chloroaniline	350	U	R
87-68-3	Hexachlorobutadiene	350	U	
105-60-2	Caprolactam	350	U	
59-50-7	4-Chloro-3-methylphenol	350	U	
91-57-6	2-Methylnaphthalene	350	U	
77-47-4	Hexachlorocyclopentadiene	350	U	R
88-06-2	2,4,6-Trichlorophenol	350	U	
95-95-4	2,4,5-Trichlorophenol	350	U	
92-52-4	1,1'-Biphenyl	350	U	
91-58-7	2-Chloronaphthalene	350	U	
88-74-4	2-Nitroaniline	680	U	
131-11-3	Dimethylphthalate	350	U	
606-20-2	2,6-Dinitrotoluene	350	U	
208-96-8	Acenaphthylene	350	U	
99-09-2	3-Nitroaniline	680	U	
83-32-9	Acenaphthene	21	J	

1E - FORM I SV-2

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-40-024FD

21

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17056

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17056-21

Sample wt/vol: 29.5 (g/mL) g Lab File ID: ULLBX17.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 51 Decanted: (Y/N) Date Received: 06/18/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/27/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/06/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
51-28-5	2,4-Dinitrophenol	680	U	
100-02-7	4-Nitrophenol	680	U	
132-64-9	Dibenzofuran	24	J	
121-14-2	2,4-Dinitrotoluene	350	U	
84-66-2	Diethylphthalate	350	U	
86-73-7	Fluorene	34	J	
7005-72-3	4-Chlorophenyl-phenylether	350	U	
100-01-6	4-Nitroaniline	680	U	
534-52-1	4,6-Dinitro-2-methylphenol	680	U	
86-30-6	N-Nitrosodiphenylamin [1]	350	U	
95-94-3	1,2,4,5-Tetrachlorobenzene	350	U	
101-55-3	4-Bromophenyl-phenylether	350	U	
118-74-1	Hexachlorobenzene	350	U	
1912-24-9	Atrazine	350	U	
87-86-5	Pentachlorophenol	680	U	
85-01-8	Phenanthrene	140	J	
120-12-7	Anthracene	28	J	
86-74-8	Carbazole	350	U	
84-74-2	Di-n-butylphthalate	350 ~~17~~ ~~J B~~	U	
206-44-0	Fluoranthene	220	J	
129-00-0	Pyrene	190	J	
85-68-7	Butylbenzylphthalate	350 ~~36~~ ~~J B~~	U	
91-94-1	3,3'-Dichlorobenzidine	350 ~~U~~	R	
56-55-3	Benzo(a)anthracene	89	J	
218-01-9	Chrysene	160	J	
117-81-7	Bis(2-ethylhexyl)phthalate	350 ~~190~~ ~~J B~~	U	
117-84-0	Di-n-octylphthalate	350	U	
205-99-2	Benzo(b)fluoranthene	110 ~~J~~	J	
207-08-9	Benzo(k)fluoranthene	110	J	
50-32-8	Benzo(a)pyrene	110	J	
193-39-5	Indeno(1,2,3-cd)pyrene	67	J	
53-70-3	Dibenzo(a,h)anthracene	24 ~~J~~	J	
191-24-2	Benzo(g,h,i)perylene	73	J	
58-90-2	2,3,4,6-Tetrachlorophenol	350	U	

[1] Cannot be separated from Diphenylamine

MW 9/16/13

1D - FORM I SV-1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-79-048

22

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17056

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17056-22

Sample wt/vol: 30.5 (g/mL) g Lab File ID: ULLCA07.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 19 Decanted: (Y/N) Date Received: 06/18/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/27/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/07/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
100-52-7	Benzaldehyde	11	J
108-95-2	Phenol	210	UJ
111-44-4	Bis(2-chloroethyl)ether	210	U
95-57-8	2-Chlorophenol	210	U
95-48-7	2-Methylphenol	210	U
108-60-1	2,2'-Oxybis(1-chloropropane)	210	U
98-86-2	Acetophenone	10	J
106-44-5	4-Methylphenol	210	UJ
621-64-7	N-Nitroso-di-n-propylamine	210	U
67-72-1	Hexachloroethane	210	U
98-95-3	Nitrobenzene	210	U
78-59-1	Isophorone	210	U
88-75-5	2-Nitrophenol	210	U
105-67-9	2,4-Dimethylphenol	210	U
111-91-1	Bis(2-chloroethoxy)methane	210	U
120-83-2	2,4-Dichlorophenol	210	U
91-20-3	Naphthalene	210	U
106-47-8	4-Chloroaniline	210	U
87-68-3	Hexachlorobutadiene	210	U
105-60-2	Caprolactam	210	U
59-50-7	4-Chloro-3-methylphenol	210	U
91-57-6	2-Methylnaphthalene	210	U
77-47-4	Hexachlorocyclopentadiene	210	UJ
88-06-2	2,4,6-Trichlorophenol	210	U
95-95-4	2,4,5-Trichlorophenol	210	U
92-52-4	1,1'-Biphenyl	210	U
91-58-7	2-Chloronaphthalene	210	U
88-74-4	2-Nitroaniline	400	U
131-11-3	Dimethylphthalate	210	U
606-20-2	2,6-Dinitrotoluene	210	U
208-96-8	Acenaphthylene	210	U
99-09-2	3-Nitroaniline	400	U
83-32-9	Acenaphthene	210	U

NW 9/16/13

EPA SAMPLE NO.
LMR13-79-048

22

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17056

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17056-22

Sample wt/vol: 30.5 (g/mL) g Lab File ID: ULLCA07.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 19 Decanted: (Y/N) Date Received: 06/18/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/27/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/07/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
51-28-5	2,4-Dinitrophenol	400	U
100-02-7	4-Nitrophenol	400	U
132-64-9	Dibenzofuran	210	U
121-14-2	2,4-Dinitrotoluene	210	U
84-66-2	Diethylphthalate	210	U
86-73-7	Fluorene	210	U
7005-72-3	4-Chlorophenyl-phenylether	210	U
100-01-6	4-Nitroaniline	400	U
534-52-1	4,6-Dinitro-2-methylphenol	400	U
86-30-6	N-Nitrosodiphenylamin [1]	210	U
95-94-3	1,2,4,5-Tetrachlorobenzene	210	U
101-55-3	4-Bromophenyl-phenylether	210	U
118-74-1	Hexachlorobenzene	210	U
1912-24-9	Atrazine	210	U
87-86-5	Pentachlorophenol	400	U
85-01-8	Phenanthrene	210	U
120-12-7	Anthracene	210	U
86-74-8	Carbazole	210	U
84-74-2	Di-n-butylphthalate	210 ~~11~~	~~J B~~ UJ
206-44-0	Fluoranthene	210	U J
129-00-0	Pyrene	6.7	J
85-68-7	Butylbenzylphthalate	210 ~~13~~	~~J B~~ UJ
91-94-1	3,3'-Dichlorobenzidine	210	U
56-55-3	Benzo(a)anthracene	210	U J
218-01-9	Chrysene	7.9	J
117-81-7	Bis(2-ethylhexyl)phthalate	210 ~~25~~	~~J B~~ UJ
117-84-0	Di-n-octylphthalate	210	U
205-99-2	Benzo(b)fluoranthene	210	U UJ
207-08-9	Benzo(k)fluoranthene	210	U
50-32-8	Benzo(a)pyrene	210	U UJ
193-39-5	Indeno(1,2,3-cd)pyrene	210	U
53-70-3	Dibenzo(a,h)anthracene	210	U UJ
191-24-2	Benzo(g,h,i)perylene	210	U
58-90-2	2,3,4,6-Tetrachlorophenol	210	U

[1] Cannot be separated from Diphenylamine

NW 9/16/13

1F - FORM I SV-SIM
SEMIVOLATILE SIM ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-78-012

16

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17056

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17056-16

Sample wt/vol: 29.3 (g/mL) g Lab File ID: SET19.D

Extraction: (Type) SONC

% Moisture: 26 Decanted: (Y/N) Date Received: 06/18/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/27/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/14/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
91-20-3	Naphthalene	4.6 ~~1.5~~	~~J B~~ U
90-12-0	1-Methylnaphthalene	0.45	J
91-57-6	2-Methylnaphthalene	0.44	J
208-96-8	Acenaphthylene	4.6	U
83-32-9	Acenaphthene	0.51	J
86-73-7	Fluorene	0.46	J
85-01-8	Phenanthrene	4.6 ~~2.7~~	~~J B~~ U
120-12-7	Anthracene	0.53	J
206-44-0	Fluoranthene	5.1	
129-00-0	Pyrene	4.8	
56-55-3	Benzo(a)anthracene	1.8	J
218-01-9	Chrysene	6.6	
205-99-2	Benzo(b)fluoranthene	3.6	J
207-08-9	Benzo(k)fluoranthene	1.7	J
192-97-2	Benzo(e)pyrene	3.6	J
50-32-8	Benzo(a)pyrene	4.6	U
198-55-0	Perylene	200	~~E~~ J
193-39-5	Indeno(1,2,3-cd)pyrene	1.7	J
53-70-3	Dibenzo(a,h)anthracene	0.56	J
191-24-2	Benzo(g,h,i)perylene	4.9	J
C1NAPH	C1-Naphthalenes	4.6	U
C2NAPH	C2-Naphthalenes	3.2	J
C3NAPH	C3-Naphthalenes	16	J
C4NAPH	C4-Naphthalenes	37	J
C1FLUOR	C1 Fluorenes	1.5	J
C2FLUOR	C2 Fluorenes	3.2	J
C3FLUOR	C3 Fluorenes	7.3	J
C1PHAN	C1-Phenanthrenes/Anthracenes	18	J
C2PHAN	C2-Phenanthrenes/Anthracenes	22	J
C3PHAN	C3-Phenanthrenes/Anthracenes	21	J
C4PHAN	C4-Phenanthrenes/Anthracenes	33	J
C1FLPY	C1-Fluoranthenes/Pyrenes	8.5	J
C2FLPY	C2-Fluoranthenes/Pyrenes	12	J
C3FLPY	C3-Fluoranthenes/Pyrenes	11	J
C1CHRYS	C1 Chrysenes	9.5	J
C2CHRYS	C2 Chrysenes	17	J
C3CHRYS	C3 Chrysenes	11	J
C4CHRYS	C4 Chrysenes	7.9	J

NW 9/16/13

1F - FORM I SV-SIM

SEMIVOLATILE SIM ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-78-012

16

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17056

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17056-16

Sample wt/vol: 29.3 (g/mL) g Lab File ID: SET19.D

Extraction: (Type) SONC

% Moisture: 26 Decanted: (Y/N) Date Received: 06/18/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/27/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/14/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
TPPAH	Total 16 PPAH	36	~~B~~ J
TPAH	Total PAH	470	~~B~~ J

MW 9/16/13

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-35-024FD

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17056

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17056-1

Sample wt/vol: 30.0 (g/mL) g Lab File ID: 5253BAASOM03.D

% Moisture: 37 Decanted: (Y/N) Date Received: 06/18/2013

Extraction: (Type) SONC Date Extracted: 06/24/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 07/25/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 5.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	260	U
11104-28-2	Aroclor-1221	260	U
11141-16-5	Aroclor-1232	260	U
53469-21-9	Aroclor-1242	480	
12672-29-6	Aroclor-1248	260	U
11097-69-1	Aroclor-1254	340	
11096-82-5	Aroclor-1260	66	~~J P~~ J
37324-23-5	Aroclor-1262	260	U
11100-14-4	Aroclor-1268	260	U

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1H - FORM I ARO
AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-35-048

2

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17056

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17056-2

Sample wt/vol: 30.3 (g/mL) g Lab File ID: 5253BAASOM04.D

% Moisture: 36 Decanted: (Y/N) Date Received: 06/18/2013

Extraction: (Type) SONC Date Extracted: 06/24/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 07/25/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 5.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	250	U
11104-28-2	Aroclor-1221	250	U
11141-16-5	Aroclor-1232	250	U
53469-21-9	Aroclor-1242	250	U
12672-29-6	Aroclor-1248	250	U
11097-69-1	Aroclor-1254	250	U
11096-82-5	Aroclor-1260	250	U
37324-23-5	Aroclor-1262	250	U
11100-14-4	Aroclor-1268	250	U

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1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-76-024FD

3

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17056

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17056-3

Sample wt/vol: 30.1 (g/mL) g Lab File ID: 5253BAASOM05.D

% Moisture: 23 Decanted: (Y/N) Date Received: 06/18/2013

Extraction: (Type) SONC Date Extracted: 06/24/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 07/25/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 5.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	210	U
11104-28-2	Aroclor-1221	210	U
11141-16-5	Aroclor-1232	210	U
53469-21-9	Aroclor-1242	110	J
12672-29-6	Aroclor-1248	210	U
11097-69-1	Aroclor-1254	65	J
11096-82-5	Aroclor-1260	210	U
37324-23-5	Aroclor-1262	210	U
11100-14-4	Aroclor-1268	210	U

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1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-76-048

4

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17056

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17056-4

Sample wt/vol: 30.2 (g/mL) g Lab File ID: 5253BAASOM06.D

% Moisture: 21 Decanted: (Y/N) Date Received: 06/18/2013

Extraction: (Type) SONC Date Extracted: 06/24/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 07/25/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 5.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	210	U
11104-28-2	Aroclor-1221	210	U
11141-16-5	Aroclor-1232	210	U
53469-21-9	Aroclor-1242	190	J
12672-29-6	Aroclor-1248	210	U
11097-69-1	Aroclor-1254	99	J
11096-82-5	Aroclor-1260	210	U
37324-23-5	Aroclor-1262	210	U
11100-14-4	Aroclor-1268	210	U

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1H - FORM I ARO
AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-76-072

5

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17056

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17056-5

Sample wt/vol: 30.0 (g/mL) g Lab File ID: 5253BAASOM07A.D

% Moisture: 19 Decanted: (Y/N) Date Received: 06/18/2013

Extraction: (Type) SONC Date Extracted: 06/24/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 07/25/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 5.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	200	U
11104-28-2	Aroclor-1221	200	U
11141-16-5	Aroclor-1232	200	U
53469-21-9	Aroclor-1242	330	
12672-29-6	Aroclor-1248	200	U
11097-69-1	Aroclor-1254	140	~~J P~~ J
11096-82-5	Aroclor-1260	200	U
37324-23-5	Aroclor-1262	200	U
11100-14-4	Aroclor-1268	200	U

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1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-35-072

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678 6

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17056

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17056-6

Sample wt/vol: 30.7 (g/mL) g Lab File ID: 5253BAASOM08.D

% Moisture: 20 Decanted: (Y/N) Date Received: 06/18/2013

Extraction: (Type) SONC Date Extracted: 06/24/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 07/25/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 5.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	200	U
11104-28-2	Aroclor-1221	200	U
11141-16-5	Aroclor-1232	200	U
53469-21-9	Aroclor-1242	200	U
12672-29-6	Aroclor-1248	200	U
11097-69-1	Aroclor-1254	200	U
11096-82-5	Aroclor-1260	200	U
37324-23-5	Aroclor-1262	200	U
11100-14-4	Aroclor-1268	200	U

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1H - FORM I ARO
AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-35-096

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678 7

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17056

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17056-7

Sample wt/vol: 30.6 (g/mL) g Lab File ID: 5253BAASOM09.D

% Moisture: 20 Decanted: (Y/N) Date Received: 06/18/2013

Extraction: (Type) SONC Date Extracted: 06/24/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 07/25/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 5.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	200	U
11104-28-2	Aroclor-1221	200	U
11141-16-5	Aroclor-1232	200	U
53469-21-9	Aroclor-1242	200	U
12672-29-6	Aroclor-1248	200	U
11097-69-1	Aroclor-1254	200	U
11096-82-5	Aroclor-1260	200	U
37324-23-5	Aroclor-1262	200	U
11100-14-4	Aroclor-1268	200	U

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1H - FORM I ARO
AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-77-012

8

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17056

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17056-8

Sample wt/vol: 30.1 (g/mL) g Lab File ID: 5253BAASOM10.D

% Moisture: 36 Decanted: (Y/N) Date Received: 06/18/2013

Extraction: (Type) SONC Date Extracted: 06/24/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 07/25/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 5.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	260	U
11104-28-2	Aroclor-1221	260	U
11141-16-5	Aroclor-1232	260	U
53469-21-9	Aroclor-1242	260	U
12672-29-6	Aroclor-1248	260	U
11097-69-1	Aroclor-1254	260	U
11096-82-5	Aroclor-1260	260	U
37324-23-5	Aroclor-1262	260	U
11100-14-4	Aroclor-1268	260	U

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1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-77-024

9

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17056

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17056-9

Sample wt/vol: 30.6 (g/mL) g Lab File ID: 5253BAASOM11.D

% Moisture: 32 Decanted: (Y/N) Date Received: 06/18/2013

Extraction: (Type) SONC Date Extracted: 06/24/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 07/25/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 5.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	240	U
11104-28-2	Aroclor-1221	240	U
11141-16-5	Aroclor-1232	240	U
53469-21-9	Aroclor-1242	240	U
12672-29-6	Aroclor-1248	240	U
11097-69-1	Aroclor-1254	240	U
11096-82-5	Aroclor-1260	240	U
37324-23-5	Aroclor-1262	240	U
11100-14-4	Aroclor-1268	240	U

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1H - FORM I ARO
AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-77-048

10

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17056

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17056-10

Sample wt/vol: 30.4 (g/mL) g Lab File ID: 5253BAASOM12.D

% Moisture: 28 Decanted: (Y/N) Date Received: 06/18/2013

Extraction: (Type) SONC Date Extracted: 06/24/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 07/25/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 5.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	230	U
11104-28-2	Aroclor-1221	230	U
11141-16-5	Aroclor-1232	230	U
53469-21-9	Aroclor-1242	230	U
12672-29-6	Aroclor-1248	230	U
11097-69-1	Aroclor-1254	230	U
11096-82-5	Aroclor-1260	230	U
37324-23-5	Aroclor-1262	230	U
11100-14-4	Aroclor-1268	230	U

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1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-77-072

11

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17056

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17056-11

Sample wt/vol: 30.3 (g/mL) g Lab File ID: 5253BAASOM13.D

% Moisture: 28 Decanted: (Y/N) Date Received: 06/18/2013

Extraction: (Type) SONC Date Extracted: 06/24/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 07/25/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 5.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	230	U
11104-28-2	Aroclor-1221	230	U
11141-16-5	Aroclor-1232	230	U
53469-21-9	Aroclor-1242	230	U
12672-29-6	Aroclor-1248	230	U
11097-69-1	Aroclor-1254	230	U
11096-82-5	Aroclor-1260	230	U
37324-23-5	Aroclor-1262	230	U
11100-14-4	Aroclor-1268	230	U

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1H - FORM I ARO
AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-38-024

12

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17056

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17056-12

Sample wt/vol: 30.6 (g/mL) g Lab File ID: 5253BAASOM14.D

% Moisture: 39 Decanted: (Y/N) Date Received: 06/18/2013

Extraction: (Type) SONC Date Extracted: 06/24/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 07/25/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 5.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	260	U
11104-28-2	Aroclor-1221	260	U
11141-16-5	Aroclor-1232	260	U
53469-21-9	Aroclor-1242	260	U
12672-29-6	Aroclor-1248	260	U
11097-69-1	Aroclor-1254	260	U
11096-82-5	Aroclor-1260	260	U
37324-23-5	Aroclor-1262	260	U
11100-14-4	Aroclor-1268	260	U

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1H - FORM I ARO
AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-38-072

14

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17056

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17056-14

Sample wt/vol: 30.7 (g/mL) g Lab File ID: 5253BAASOM15.D

% Moisture: 24 Decanted: (Y/N) Date Received: 06/18/2013

Extraction: (Type) SONC Date Extracted: 06/24/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 07/25/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 5.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	210	U
11104-28-2	Aroclor-1221	210	U
11141-16-5	Aroclor-1232	210	U
53469-21-9	Aroclor-1242	210	U
12672-29-6	Aroclor-1248	210	U
11097-69-1	Aroclor-1254	210	U
11096-82-5	Aroclor-1260	210	U
37324-23-5	Aroclor-1262	210	U
11100-14-4	Aroclor-1268	210	U

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1H - FORM I ARO
AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-78-012

16

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17056

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17056-16

Sample wt/vol: 30.3 (g/mL) g Lab File ID: 0825AHBSOM02.D

% Moisture: 26 Decanted: (Y/N) Date Received: 06/18/2013

Extraction: (Type) SONC Date Extracted: 06/24/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 08/01/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 5.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	220	U
11104-28-2	Aroclor-1221	220	U
11141-16-5	Aroclor-1232	220	U
53469-21-9	Aroclor-1242	220	U
12672-29-6	Aroclor-1248	220	U
11097-69-1	Aroclor-1254	220	U
11096-82-5	Aroclor-1260	220	U
37324-23-5	Aroclor-1262	220	U
11100-14-4	Aroclor-1268	220	U

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1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-78-024

17

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17056

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17056-17

Sample wt/vol: 30.5 (g/mL) g Lab File ID: 0825AHBSOM03.D

% Moisture: 23 Decanted: (Y/N) Date Received: 06/18/2013

Extraction: (Type) SONC Date Extracted: 06/24/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 08/01/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 5.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	210	U
11104-28-2	Aroclor-1221	210	U
11141-16-5	Aroclor-1232	210	U
53469-21-9	Aroclor-1242	210	U
12672-29-6	Aroclor-1248	210	U
11097-69-1	Aroclor-1254	210	U
11096-82-5	Aroclor-1260	210	U
37324-23-5	Aroclor-1262	210	U
11100-14-4	Aroclor-1268	210	U

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1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-78-024FD

18

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17056

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17056-18

Sample wt/vol: 30.6 (g/mL) g Lab File ID: 0825AHBSOM04.D

% Moisture: 24 Decanted: (Y/N) Date Received: 06/18/2013

Extraction: (Type) SONC Date Extracted: 06/24/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 08/01/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 5.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	210	U
11104-28-2	Aroclor-1221	210	U
11141-16-5	Aroclor-1232	210	U
53469-21-9	Aroclor-1242	210	U
12672-29-6	Aroclor-1248	210	U
11097-69-1	Aroclor-1254	210	U
11096-82-5	Aroclor-1260	210	U
37324-23-5	Aroclor-1262	210	U
11100-14-4	Aroclor-1268	210	U

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1H - FORM I ARO
AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-40-012

19

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17056

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17056-19

Sample wt/vol: 30.2 (g/mL) g Lab File ID: 0825AHBSOM05.D

% Moisture: 53 Decanted: (Y/N) Date Received: 06/18/2013

Extraction: (Type) SONC Date Extracted: 06/24/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 08/01/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 5.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	350	U
11104-28-2	Aroclor-1221	350	U
11141-16-5	Aroclor-1232	350	U
53469-21-9	Aroclor-1242	30	J
12672-29-6	Aroclor-1248	350	U
11097-69-1	Aroclor-1254	37	J
11096-82-5	Aroclor-1260	9.8	J
37324-23-5	Aroclor-1262	350	U
11100-14-4	Aroclor-1268	350	U

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1H - FORM I ARO
AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-40-024

20

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17056

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17056-20

Sample wt/vol: 30.6 (g/mL) g Lab File ID: 0825AHBSOM06.D

% Moisture: 51 Decanted: (Y/N) Date Received: 06/18/2013

Extraction: (Type) SONC Date Extracted: 06/24/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 08/01/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 5.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	330	U
11104-28-2	Aroclor-1221	330	U
11141-16-5	Aroclor-1232	330	U
53469-21-9	Aroclor-1242	20	J
12672-29-6	Aroclor-1248	330	U
11097-69-1	Aroclor-1254	26	J
11096-82-5	Aroclor-1260	7.5	J
37324-23-5	Aroclor-1262	330	U
11100-14-4	Aroclor-1268	330	U

MW 9/16/13

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-79-048

22

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17056

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17056-22

Sample wt/vol: 30.3 (g/mL) g Lab File ID: 0825AHBSOM07.D

% Moisture: 19 Decanted: (Y/N) Date Received: 06/18/2013

Extraction: (Type) SONC Date Extracted: 06/24/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 08/01/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 5.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	200	U
11104-28-2	Aroclor-1221	200	U
11141-16-5	Aroclor-1232	200	U
53469-21-9	Aroclor-1242	200	U
12672-29-6	Aroclor-1248	200	U
11097-69-1	Aroclor-1254	200	U
11096-82-5	Aroclor-1260	200	U
37324-23-5	Aroclor-1262	200	U
11100-14-4	Aroclor-1268	200	U

NW 9/16/13

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-79-048FD

23

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17056

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17056-23

Sample wt/vol: 30.6 (g/mL) g Lab File ID: 0825AHBSOM08.D

% Moisture: 20 Decanted: (Y/N) Date Received: 06/18/2013

Extraction: (Type) SONC Date Extracted: 06/24/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 08/01/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 5.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	200	U
11104-28-2	Aroclor-1221	200	U
11141-16-5	Aroclor-1232	200	U
53469-21-9	Aroclor-1242	200	U
12672-29-6	Aroclor-1248	200	U
11097-69-1	Aroclor-1254	200	U
11096-82-5	Aroclor-1260	200	U
37324-23-5	Aroclor-1262	200	U
11100-14-4	Aroclor-1268	200	U

MW 9/16/13

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - SEM/AVS

16

Client Sample ID: LMR13-78-012 | Lab Sample ID: 200-17056-16

Lab Name: TestAmerica Burlington | Job No.: 200-17056-1

SDG ID.: 17056

Matrix: Sediment | Date Sampled: 06/16/2013 10:25

Reporting Basis: DRY | Date Received: 06/18/2013 10:30

% Solids: 74.0

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-43-9	Cadmium SEM	1.6	1.6	0.26	mg/Kg	U		10	6010C
7440-43-9	Cadmium SEM	0.014	0.014	0.0023	umol/g	U		10	6010C
7440-50-8	Copper SEM	3.5	8.4	0.73	mg/Kg	J		10	6010C
7440-50-8	Copper SEM	0.056	0.13	0.011	umol/g	J		10	6010C
7439-92-1	Lead SEM	2.9	3.4	1.5	mg/Kg	J		10	6010C
7439-92-1	Lead SEM	0.014	0.016	0.0072	umol/g	J		10	6010C
7440-02-0	Nickel SEM	2.5	13.5	0.97	mg/Kg	J		10	6010C
7440-02-0	Nickel SEM	0.043	0.23	0.017	umol/g	J		10	6010C
7440-66-6	Zinc SEM	9.1	6.7	1.9	mg/Kg			10	6010C
7440-66-6	Zinc SEM	0.14	0.10	0.029	umol/g			10	6010C
7439-97-6	Mercury SEM	0.0067	0.0067	0.0022	mg/Kg	U		1	7470A
7439-97-6	Mercury SEM	0.000034	0.000034	0.000011	umol/g	U		1	7470A

MW 9/16/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY - SEM/AVS

16

Client Sample ID: LMR13-78-012
Lab Sample ID: 200-17056-16
Lab Name: TestAmerica Burlington
Job No.: 200-17056-1
SDG ID.: 17056
Matrix: Sediment
Date Sampled: 06/16/2013 10:25
Reporting Basis: DRY
Date Received: 06/18/2013 10:30
% Solids: 74.0

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
18496-25-8	Acid Volatile Sulfides (AVS)	21.6	21.6		mg/Kg	U		1	AVS
18496-25-8	Acid Volatile Sulfides (AVS)	0.67	0.67		umol/g	U		1	AVS

NW 9/16/13

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - SEM/AVS

16

Client Sample ID: LMR13-78-012 | Lab Sample ID: 200-17056-16

Lab Name: TestAmerica Burlington | Job No.: 200-17056-1

SDG ID.: 17056

Matrix: Sediment | Date Sampled: 06/16/2013 10:25

Reporting Basis: WET | Date Received: 06/18/2013 10:30

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	SEM/AVS Ratio	NC	0.00100	0.00100	NONE			1	SEM

MW 9/16/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-35-024FD

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678
Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 17056
Matrix: SED | Lab Sample Id: 200-17056-1
% Solids: 63.0 | Date Received: 06/18/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	9.9			P
7440-43-9	Cadmium	3.5			P
7440-47-3	Chromium	41.1		J ~~F~~	P
7440-50-8	Copper	55.4			P
7439-92-1	Lead	88.4			P
7440-02-0	Nickel	30.7			P
7440-66-6	Zinc	209		J ~~F~~	P

Color Before: GREY | Clarity Before: | Texture: FINE
Color After: TAN | Clarity After: CLOUDY | Artifacts:
Comments:

NW 9/16/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-35-024FD

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678
Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17056
Matrix: SED Lab Sample Id: 200-17056-1
% Solids: 63.0 Date Received: 06/18/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.25	U		CV

Color Before: GRAY Clarity Before: CLOUDY Texture: FINE
Color After: COLORLESS Clarity After: CLEAR Artifacts:
Comments:

NW 9/16/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-35-048

2

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678
Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17056
Matrix: SED Lab Sample Id: 200-17056-2
% Solids: 64.2 Date Received: 06/18/2013

Concentration Units (**ug/L, ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	6.8			P
7440-43-9	Cadmium	0.53	J		P
7440-47-3	Chromium	19.6		J ~~F~~	P
7440-50-8	Copper	23.9			P
7439-92-1	Lead	49.9			P
7440-02-0	Nickel	23.4			P
7440-66-6	Zinc	95.9		J ~~F~~	P

Color Before: GREY Clarity Before: Texture: FINE
Color After: TAN Clarity After: CLOUDY Artifacts:
Comments:

NW 9/16/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-35-048

2

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678
Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17056
Matrix: SED Lab Sample Id: 200-17056-2
% Solids: 64.2 Date Received: 06/18/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.21	U		CV

Color Before: GRAY Clarity Before: CLOUDY Texture: FINE
Color After: COLORLESS Clarity After: CLEAR Artifacts:
Comments:

NW 9/16/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-76-024FD

3

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17056

Matrix: SED Lab Sample Id: 200-17056-3

% Solids: 77.4 Date Received: 06/18/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	3.5			P
7440-43-9	Cadmium	0.41	J		P
7440-47-3	Chromium	10.7		J ~~F~~	P
7440-50-8	Copper	15.6			P
7439-92-1	Lead	20.8			P
7440-02-0	Nickel	12.5			P
7440-66-6	Zinc	56.4		J ~~*F~~	P

Color Before: GREY Clarity Before: Texture: MEDIUN

Color After: TAN Clarity After: CLOUDY Artifacts:

Comments:

MW 9/16/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-76-024FD

3

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17056

Matrix: SED Lab Sample Id: 200-17056-3

% Solids: 77.4 Date Received: 06/18/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.12 ~~0.033~~	~~J~~	U	CV

Color Before: GRAY Clarity Before: CLOUDY Texture: FINE

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

NW 9/16/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-76-048

4

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678
Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17056
Matrix: SED Lab Sample Id: 200-17056-4
% Solids: 79.4 Date Received: 06/18/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	4.4			P
7440-43-9	Cadmium	0.65			P
7440-47-3	Chromium	14.5		J F	P
7440-50-8	Copper	15.0			P
7439-92-1	Lead	34.3			P
7440-02-0	Nickel	15.7			P
7440-66-6	Zinc	73.3		J ~~F~~	P

Color Before: GREY Clarity Before: Texture: MEDIUM
Color After: TAN Clarity After: CLOUDY Artifacts:
Comments:

NW 9/16/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-76-048

4

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678
Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17056
Matrix: SED Lab Sample Id: 200-17056-4
% Solids: 79.4 Date Received: 06/18/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.11 ~~0.067~~	~~J~~	U	CV

Color Before: GRAY Clarity Before: CLOUDY Texture: FINE
Color After: COLORLESS Clarity After: CLEAR Artifacts:
Comments:

NW 9/16/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-76-072

S

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678
Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17056
Matrix: SED Lab Sample Id: 200-17056-5
% Solids: 81.4 Date Received: 06/18/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	3.5			P
7440-43-9	Cadmium	0.45			P
7440-47-3	Chromium	10.1		J ~~E~~	P
7440-50-8	Copper	27.1			P
7439-92-1	Lead	42.7			P
7440-02-0	Nickel	9.8			P
7440-66-6	Zinc	46.4		J ~~E~~	P

Color Before: GREY Clarity Before: Texture: MEDIUM
Color After: TAN Clarity After: CLOUDY Artifacts:

Comments:

NW 9/16/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-76-072

5

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678
Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 17056
Matrix: SED | Lab Sample Id: 200-17056-5
% Solids: 81.4 | Date Received: 06/18/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.11 ~~0.029~~	J	U	CV

Color Before: GRAY | Clarity Before: CLOUDY | Texture: FINE
Color After: COLORLESS | Clarity After: CLEAR | Artifacts:
Comments:

MWS 9/16/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-35-072

6

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17056

Matrix: SED Lab Sample Id: 200-17056-6

% Solids: 79.7 Date Received: 06/18/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	4.1			P
7440-43-9	Cadmium	0.19	J		P
7440-47-3	Chromium	6.0		J	P
7440-50-8	Copper	4.1			P
7439-92-1	Lead	3.9			P
7440-02-0	Nickel	8.1			P
7440-66-6	Zinc	22.5		J	P

Color Before: GREY Clarity Before: Texture: MEDIUM

Color After: TAN Clarity After: CLOUDY Artifacts:

Comments:

NW 9/16/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-35-072

6

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678
Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17056
Matrix: SED Lab Sample Id: 200-17056-6
% Solids: 79.7 Date Received: 06/18/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.12 ~~0.028~~	~~J~~	U	CV

Color Before: GRAY Clarity Before: CLOUDY Texture: FINE
Color After: COLORLESS Clarity After: CLEAR Artifacts:
Comments:

NW 9/16/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-35-096

7

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17056

Matrix: SED Lab Sample Id: 200-17056-7

% Solids: 80.0 Date Received: 06/18/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	2.4			P
7440-43-9	Cadmium	0.22	J		P
7440-47-3	Chromium	5.8		J	P
7440-50-8	Copper	4.5			P
7439-92-1	Lead	4.0			P
7440-02-0	Nickel	8.0			P
7440-66-6	Zinc	24.5		J *	P

Color Before: GREY Clarity Before: Texture: FINE

Color After: TAN Clarity After: CLOUDY Artifacts:

Comments:

NW 9/16/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-35-096

7

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17056

Matrix: SED Lab Sample Id: 200-17056-7

% Solids: 80.0 Date Received: 06/18/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.12 ~~0.049~~	J	u	CV

Color Before: GRAY Clarity Before: CLOUDY Texture: FINE

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

MW 9/16/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-77-012

8

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17056

Matrix: SED Lab Sample Id: 200-17056-8

% Solids: 63.6 Date Received: 06/18/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	3.7			P
7440-43-9	Cadmium	0.42	J		P
7440-47-3	Chromium	9.7		J ~~F~~	P
7440-50-8	Copper	12.3			P
7439-92-1	Lead	8.2			P
7440-02-0	Nickel	14.6			P
7440-66-6	Zinc	40.4		J ~~F~~	P

Color Before: GREY Clarity Before: Texture: FINE

Color After: TAN Clarity After: CLOUDY Artifacts:

Comments:

NW 9/16/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-77-012

8

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17056

Matrix: SED Lab Sample Id: 200-17056-8

% Solids: 63.6 Date Received: 06/18/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.14	U		CV

Color Before: GRAY Clarity Before: CLOUDY Texture: FINE

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

NW 9/16/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-77-024

9

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678
Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17056
Matrix: SED Lab Sample Id: 200-17056-9
% Solids: 68.5 Date Received: 06/18/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	2.8			P
7440-43-9	Cadmium	0.38	J		P
7440-47-3	Chromium	8.7		J ~~E~~	P
7440-50-8	Copper	9.6			P
7439-92-1	Lead	6.4			P
7440-02-0	Nickel	12.6			P
7440-66-6	Zinc	35.8		J ~~E~~	P

Color Before: GREY Clarity Before: Texture: FINE
Color After: TAN Clarity After: CLOUDY Artifacts:
Comments:

MW 9/16/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-77-024

9

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17056

Matrix: SED Lab Sample Id: 200-17056-9

% Solids: 68.5 Date Received: 06/18/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.14	U		CV

Color Before: GRAY Clarity Before: CLOUDY Texture: FINE

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

MW 9/16/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-77-048

10

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17056

Matrix: SED Lab Sample Id: 200-17056-10

% Solids: 72.0 Date Received: 06/18/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	3.1			P
7440-43-9	Cadmium	0.34	J		P
7440-47-3	Chromium	9.3		J ~~E~~	P
7440-50-8	Copper	10.6			P
7439-92-1	Lead	7.1			P
7440-02-0	Nickel	13.6			P
7440-66-6	Zinc	37.0		J ~~E~~	P

Color Before: GREY Clarity Before: Texture: FINE

Color After: TAN Clarity After: CLOUDY Artifacts:

Comments:

MW 9/16/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-77-048

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678 10
Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17056
Matrix: SED Lab Sample Id: 200-17056-10
% Solids: 72.0 Date Received: 06/18/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.12 ~~0.025~~	~~U~~	U	CV

Color Before: GRAY Clarity Before: CLOUDY Texture: FINE
Color After: COLORLESS Clarity After: CLEAR Artifacts:
Comments:

MW 9/16/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-77-072

11

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678
Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17056
Matrix: SED Lab Sample Id: 200-17056-11
% Solids: 72.3 Date Received: 06/18/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	2.9			P
7440-43-9	Cadmium	0.27	J		P
7440-47-3	Chromium	7.7		J ~~P~~	P
7440-50-8	Copper	7.6			P
7439-92-1	Lead	5.5			P
7440-02-0	Nickel	10.8			P
7440-66-6	Zinc	30.0		J ~~*~~E	P

Color Before: GREY Clarity Before: Texture: MEDIUM
Color After: TAN Clarity After: CLOUDY Artifacts:
Comments:

NW 9/16/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-77-072

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17056

Matrix: SED Lab Sample Id: 200-17056-11

% Solids: 72.3 Date Received: 06/18/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.13 ~~0.048~~	J	U	CV

Color Before: GRAY Clarity Before: CLOUDY Texture: FINE

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

NW 9/16/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-38-024

12

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678
Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17056
Matrix: SED Lab Sample Id: 200-17056-12
% Solids: 61.3 Date Received: 06/18/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	6.8			P
7440-43-9	Cadmium	0.49	J		P
7440-47-3	Chromium	23.3		J ~~E~~	P
7440-50-8	Copper	25.6			P
7439-92-1	Lead	54.5			P
7440-02-0	Nickel	28.4			P
7440-66-6	Zinc	99.1		J ~~*E~~	P

Color Before: GREY Clarity Before: Texture: FINE
Color After: TAN Clarity After: CLOUDY Artifacts:
Comments:

NW 9/16/13

USEPA - CLP
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INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-38-024

12

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17056

Matrix: SED Lab Sample Id: 200-17056-12

% Solids: 61.3 Date Received: 06/18/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.26		U	CV

Color Before: GRAY Clarity Before: CLOUDY Texture: FINE

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

MW 9/16/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO. 14
LMR13-38-072

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678
Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 17056
Matrix: SED | Lab Sample Id: 200-17056-14
% Solids: 76.5 | Date Received: 06/18/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	3.8			P
7440-43-9	Cadmium	0.25	J		P
7440-47-3	Chromium	7.7		J ~~F~~	P
7440-50-8	Copper	6.2			P
7439-92-1	Lead	5.0			P
7440-02-0	Nickel	10.6			P
7440-66-6	Zinc	26.3		J ~~F~~	P

Color Before: GREY | Clarity Before: | Texture: MEDIUM
Color After: TAN | Clarity After: CLOUDY | Artifacts:
Comments:

NW 9/16/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-38-072

14

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678
Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 17056
Matrix: SED | Lab Sample Id: 200-17056-14
% Solids: 76.5 | Date Received: 06/18/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.12 ~~0.030~~	U	U	CV

Color Before: GRAY | Clarity Before: CLOUDY | Texture: FINE
Color After: COLORLESS | Clarity After: CLEAR | Artifacts:
Comments:

NW 9/16/13

USEPA - CLP
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INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-78-012

16

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678
Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 17056
Matrix: SED | Lab Sample Id: 200-17056-16
% Solids: 74.0 | Date Received: 06/18/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	2.3			P
7440-43-9	Cadmium	0.25	J		P
7440-47-3	Chromium	6.7		J ~~E~~	P
7440-50-8	Copper	6.4			P
7439-92-1	Lead	4.6			P
7440-02-0	Nickel	9.0			P
7440-66-6	Zinc	27.2		J ~~E~~	P

Color Before: GREY | Clarity Before: | Texture: MEDIUM
Color After: TAN | Clarity After: CLOUDY | Artifacts:
Comments:

NW 9/16/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-78-012

16

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678
Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17056
Matrix: SED Lab Sample Id: 200-17056-16
% Solids: 74.0 Date Received: 06/18/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.12 ~~0.037~~	J	u	CV

Color Before: GRAY Clarity Before: CLOUDY Texture: FINE
Color After: COLORLESS Clarity After: CLEAR Artifacts:
Comments:

MS 9/16/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-78-024

17

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678
Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 17056
Matrix: SED | Lab Sample Id: 200-17056-17
% Solids: 76.7 | Date Received: 06/18/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	2.6			P
7440-43-9	Cadmium	0.29	J		P
7440-47-3	Chromium	7.2		J ~~F~~	P
7440-50-8	Copper	6.3			P
7439-92-1	Lead	5.3			P
7440-02-0	Nickel	9.9			P
7440-66-6	Zinc	27.3		J ~~F~~	P

Color Before: GREY | Clarity Before: | Texture: MEDIUM
Color After: TAN | Clarity After: CLOUDY | Artifacts:

Comments:

MW 9/16/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-78-024

17

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17056

Matrix: SED Lab Sample Id: 200-17056-17

% Solids: 76.7 Date Received: 06/18/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.12	U		CV

Color Before: GRAY Clarity Before: CLOUDY Texture: FINE

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

MW 9/16/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-78-024FD

18

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678
Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17056
Matrix: SED Lab Sample Id: 200-17056-18
% Solids: 76.0 Date Received: 06/18/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	2.9			P
7440-43-9	Cadmium	0.30	J		P
7440-47-3	Chromium	7.7		J ~~E~~	P
7440-50-8	Copper	7.7			P
7439-92-1	Lead	5.7			P
7440-02-0	Nickel	10.5			P
7440-66-6	Zinc	28.9		J ~~E~~	P

Color Before: GREY Clarity Before: Texture: MEDIUM
Color After: TAN Clarity After: CLOUDY Artifacts:
Comments:

NRS 9/16/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-78-024FD

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678 18

Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17056

Matrix: SED Lab Sample Id: 200-17056-18

% Solids: 76.0 Date Received: 06/18/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.13 ~~0.020~~	~~J~~	U	CV

Color Before: GRAY Clarity Before: CLOUDY Texture: FINE

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

MW 9/16/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-40-012

19

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678
Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17056
Matrix: SED Lab Sample Id: 200-17056-19
% Solids: 46.6 Date Received: 06/18/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	7.9			P
7440-43-9	Cadmium	0.89			P
7440-47-3	Chromium	31.6		J ~~E~~	P
7440-50-8	Copper	30.4			P
7439-92-1	Lead	27.5			P
7440-02-0	Nickel	33.5			P
7440-66-6	Zinc	125		J ~~E~~	P

Color Before: GREY Clarity Before: Texture: FINE
Color After: TAN Clarity After: CLOUDY Artifacts:
Comments:

AJW 9/16/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-40-012

19

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17056

Matrix: SED Lab Sample Id: 200-17056-19

% Solids: 46.6 Date Received: 06/18/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.21 ~~0.090~~	J	U	CV

Color Before: GRAY Clarity Before: CLOUDY Texture: FINE

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

NW 9/16/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-40-024

20

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678
Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17056
Matrix: SED Lab Sample Id: 200-17056-20
% Solids: 49.0 Date Received: 06/18/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	8.1			P
7440-43-9	Cadmium	0.96			P
7440-47-3	Chromium	35.0		J ~~Z~~	P
7440-50-8	Copper	33.3			P
7439-92-1	Lead	27.6			P
7440-02-0	Nickel	36.8			P
7440-66-6	Zinc	139		J ~~B~~	P

Color Before: GREY Clarity Before: Texture: FINE
Color After: TAN Clarity After: CLOUDY Artifacts:
Comments:

NW 9/16/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-40-024

20

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678
Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17056
Matrix: SED Lab Sample Id: 200-17056-20
% Solids: 49.0 Date Received: 06/18/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.19 ~~0.13~~	~~J~~	U	CV

Color Before: GRAY Clarity Before: CLOUDY Texture: FINE
Color After: COLORLESS Clarity After: CLEAR Artifacts:
Comments:

NW 9/16/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-79-048

22

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678

Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 17056

Matrix: SED | Lab Sample Id: 200-17056-22

% Solids: 81.3 | Date Received: 06/18/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	2.8			P
7440-43-9	Cadmium	0.22	J		P
7440-47-3	Chromium	6.8		J ~~F~~	P
7440-50-8	Copper	5.6			P
7439-92-1	Lead	4.5			P
7440-02-0	Nickel	9.1			P
7440-66-6	Zinc	22.6		J ~~F~~	P

Color Before: GREY | Clarity Before: | Texture: FINE

Color After: TAN | Clarity After: CLOUDY | Artifacts:

Comments:

NW 9/16/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-79-048

22

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17056

Matrix: SED Lab Sample Id: 200-17056-22

% Solids: 81.3 Date Received: 06/18/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.11 ~~0.024~~	J	U	CV

Color Before: GRAY Clarity Before: CLOUDY Texture: FINE

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

NW 9/16/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-79-048FD
23

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678
Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 17056
Matrix: SED | Lab Sample Id: 200-17056-23
% Solids: 80.4 | Date Received: 06/18/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	2.7			P
7440-43-9	Cadmium	0.24	J		P
7440-47-3	Chromium	6.1		J ~~B~~	P
7440-50-8	Copper	5.5			P
7439-92-1	Lead	4.1			P
7440-02-0	Nickel	8.5			P
7440-66-6	Zinc	28.0		J ~~B~~ *	P

Color Before: GREY | Clarity Before: | Texture: MEDIUM
Color After: TAN | Clarity After: CLOUDY | Artifacts:
Comments:

NW 9/16/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-79-048FD

23

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17056

Matrix: SED Lab Sample Id: 200-17056-23

% Solids: 80.4 Date Received: 06/18/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.12 ~~0.049~~	J	U	CV

Color Before: GRAY Clarity Before: CLOUDY Texture: FINE

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

NM 9/16/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: LMR13-35-024FD
Lab Sample ID: 200-17056-1
Lab Name: TestAmerica Burlington
Job No.: 200-17056-1
SDG ID.: 17056
Matrix: Sediment
Date Sampled: 06/15/2013 16:50
Reporting Basis: WET
Date Received: 06/18/2013 10:30
% Solids: 63.0

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	38600	1000		mg/Kg			1	Lloyd Kahn

NW 9/16/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

2

Client Sample ID: LMR13-35-048 | Lab Sample ID: 200-17056-2

Lab Name: TestAmerica Burlington | Job No.: 200-17056-1

SDG ID.: 17056

Matrix: Sediment | Date Sampled: 06/15/2013 17:00

Reporting Basis: WET | Date Received: 06/18/2013 10:30

% Solids: 64.2

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	26200	1000		mg/Kg			1	Lloyd Kahn

NW 9/16/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

3

Client Sample ID: LMR13-76-024FD
Lab Sample ID: 200-17056-3
Lab Name: TestAmerica Burlington
Job No.: 200-17056-1
SDG ID.: 17056
Matrix: Sediment
Date Sampled: 06/15/2013 16:15
Reporting Basis: WET
Date Received: 06/18/2013 10:30
% Solids: 77.4

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	10600	1000		mg/Kg			1	Lloyd Kahn

MW 9/16/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

4

Client Sample ID: LMR13-76-048
Lab Sample ID: 200-17056-4
Lab Name: TestAmerica Burlington
Job No.: 200-17056-1
SDG ID.: 17056
Matrix: Sediment
Date Sampled: 06/15/2013 16:25
Reporting Basis: WET
Date Received: 06/18/2013 10:30
% Solids: 79.4

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	18800	1000		mg/Kg			1	Lloyd Kahn

MW 9/16/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

5

Client Sample ID: LMR13-76-072
Lab Sample ID: 200-17056-5
Lab Name: TestAmerica Burlington
Job No.: 200-17056-1
SDG ID.: 17056
Matrix: Sediment
Date Sampled: 06/15/2013 16:35
Reporting Basis: WET
Date Received: 06/18/2013 10:30
% Solids: 81.4

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	11900	1000		mg/Kg			1	Lloyd Kahn

MW 9/16/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

6

Client Sample ID: LMR13-35-072 | Lab Sample ID: 200-17056-6

Lab Name: TestAmerica Burlington | Job No.: 200-17056-1

SDG ID.: 17056

Matrix: Sediment | Date Sampled: 06/15/2013 17:10

Reporting Basis: WET | Date Received: 06/18/2013 10:30

% Solids: 79.7

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	11300	1000		mg/Kg			1	Lloyd Kahn

NW 9/16/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

7

Client Sample ID: LMR13-35-096
Lab Sample ID: 200-17056-7
Lab Name: TestAmerica Burlington
Job No.: 200-17056-1
SDG ID.: 17056
Matrix: Sediment
Date Sampled: 06/15/2013 17:20
Reporting Basis: WET
Date Received: 06/18/2013 10:30
% Solids: 80.0

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	15500	1000		mg/Kg			1	Lloyd Kahn

MW 9/16/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

8

Client Sample ID: LMR13-77-012
Lab Sample ID: 200-17056-8
Lab Name: TestAmerica Burlington
Job No.: 200-17056-1
SDG ID.: 17056
Matrix: Sediment
Date Sampled: 06/15/2013 17:25
Reporting Basis: WET
Date Received: 06/18/2013 10:30
% Solids: 63.6

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	38500	1000		mg/Kg			1	Lloyd Kahn

MW 9/16/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

9

Client Sample ID: LMR13-77-024 Lab Sample ID: 200-17056-9

Lab Name: TestAmerica Burlington Job No.: 200-17056-1

SDG ID.: 17056

Matrix: Sediment Date Sampled: 06/15/2013 17:35

Reporting Basis: WET Date Received: 06/18/2013 10:30

% Solids: 68.5

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	28600	1000		mg/Kg			1	Lloyd Kahn

NW 9/16/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: LMR13-77-048 | Lab Sample ID: 200-17056-10 | 10

Lab Name: TestAmerica Burlington | Job No.: 200-17056-1

SDG ID.: 17056

Matrix: Sediment | Date Sampled: 06/15/2013 17:45

Reporting Basis: WET | Date Received: 06/18/2013 10:30

% Solids: 72.0

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	28300	1000		mg/Kg			1	Lloyd Kahn

MW 9/16/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: LMR13-77-072
Lab Sample ID: 200-17056-11
11
Lab Name: TestAmerica Burlington
Job No.: 200-17056-1
SDG ID.: 17056
Matrix: Sediment
Date Sampled: 06/15/2013 17:55
Reporting Basis: WET
Date Received: 06/18/2013 10:30
% Solids: 72.3

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	20700	1000		mg/Kg			1	Lloyd Kahn

NW 9/16/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

12

Client Sample ID: LMR13-38-024
Lab Sample ID: 200-17056-12
Lab Name: TestAmerica Burlington
Job No.: 200-17056-1
SDG ID.: 17056
Matrix: Sediment
Date Sampled: 06/16/2013 11:10
Reporting Basis: WET
Date Received: 06/18/2013 10:30
% Solids: 61.3

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	20000	1000		mg/Kg			1	Lloyd Kahn

MJ 9/16/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

14

Client Sample ID: LMR13-38-072 Lab Sample ID: 200-17056-14

Lab Name: TestAmerica Burlington Job No.: 200-17056-1

SDG ID.: 17056

Matrix: Sediment Date Sampled: 06/16/2013 11:30

Reporting Basis: WET Date Received: 06/18/2013 10:30

% Solids: 76.4

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	20000	1000		mg/Kg			1	Lloyd Kahn

MW 9/16/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

16

Client Sample ID: LMR13-78-012
Lab Sample ID: 200-17056-16
Lab Name: TestAmerica Burlington
Job No.: 200-17056-1
SDG ID.: 17056
Matrix: Sediment
Date Sampled: 06/16/2013 10:25
Reporting Basis: WET
Date Received: 06/18/2013 10:30
% Solids: 74.0

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	19700	1000		mg/Kg			1	Lloyd Kahn

MW 9/16/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

17

Client Sample ID: LMR13-78-024
Lab Sample ID: 200-17056-17
Lab Name: TestAmerica Burlington
Job No.: 200-17056-1
SDG ID.: 17056
Matrix: Sediment
Date Sampled: 06/16/2013 10:35
Reporting Basis: WET
Date Received: 06/18/2013 10:30
% Solids: 76.7

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	21700	1000		mg/Kg			1	Lloyd Kahn

MW 9/16/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

18

Client Sample ID: LMR13-78-024FD
Lab Sample ID: 200-17056-18
Lab Name: TestAmerica Burlington
Job No.: 200-17056-1
SDG ID.: 17056
Matrix: Sediment
Date Sampled: 06/16/2013 10:35
Reporting Basis: WET
Date Received: 06/18/2013 10:30
% Solids: 76.0

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	22400	1000		mg/Kg			1	Lloyd Kahn

MW 9/16/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

19

Client Sample ID: LMR13-40-012 Lab Sample ID: 200-17056-19

Lab Name: TestAmerica Burlington Job No.: 200-17056-1

SDG ID.: 17056

Matrix: Sediment Date Sampled: 06/16/2013 12:30

Reporting Basis: WET Date Received: 06/18/2013 10:30

% Solids: 46.6

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	26400	1000		mg/Kg			1	Lloyd Kahn

MW 9/16/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

20

Client Sample ID: LMR13-40-024 Lab Sample ID: 200-17056-20

Lab Name: TestAmerica Burlington Job No.: 200-17056-1

SDG ID.: 17056

Matrix: Sediment Date Sampled: 06/16/2013 12:40

Reporting Basis: WET Date Received: 06/18/2013 10:30

% Solids: 49.0

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	23300	1000		mg/Kg			1	Lloyd Kahn

MW 9/16/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

22

Client Sample ID: LMR13-79-048
Lab Sample ID: 200-17056-22
Lab Name: TestAmerica Burlington
Job No.: 200-17056-1
SDG ID.: 17056
Matrix: Sediment
Date Sampled: 06/16/2013 12:05
Reporting Basis: WET
Date Received: 06/18/2013 10:30
% Solids: 81.3

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	12900	1000		mg/Kg			1	Lloyd Kahn

MW 9/16/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

23

Client Sample ID: LMR13-79-048FD
Lab Sample ID: 200-17056-23
Lab Name: TestAmerica Burlington
Job No.: 200-17056-1
SDG ID.: 17056
Matrix: Sediment
Date Sampled: 06/16/2013 12:05
Reporting Basis: WET
Date Received: 06/18/2013 10:30
% Solids: 80.4

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	11900	1000		mg/Kg			1	Lloyd Kahn

MW 9/16/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

2

Client Sample ID: LMR13-35-048 | Lab Sample ID: 200-17056-2

Lab Name: TestAmerica Pittsburgh | Job No.: 200-17056-1

SDG ID.: 17056

Matrix: Sediment | Date Sampled: 06/15/2013 17:00

Reporting Basis: DRY | Date Received: 06/18/2013 10:30

% Solids: 64.2

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	238	J 259	35.9	mg/Kg			1	9071B

NW 9/16/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

4

Client Sample ID: LMR13-76-048
Lab Sample ID: 200-17056-4
Lab Name: TestAmerica Pittsburgh
Job No.: 200-17056-1
SDG ID.: 17056
Matrix: Sediment
Date Sampled: 06/15/2013 16:25
Reporting Basis: DRY
Date Received: 06/18/2013 10:30
% Solids: 79.4

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	445	J 210	29.1	mg/Kg			1	9071B

MW 9/16/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

5

Client Sample ID: LMR13-76-072 | Lab Sample ID: 200-17056-5

Lab Name: TestAmerica Pittsburgh | Job No.: 200-17056-1

SDG ID.: 17056

Matrix: Sediment | Date Sampled: 06/15/2013 16:35

Reporting Basis: DRY | Date Received: 06/18/2013 10:30

% Solids: 81.4

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	224	J 204	28.3	mg/Kg			1	9071B

NW 9/16/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: LMR13-35-072 Lab Sample ID: 200-17056-6 6

Lab Name: TestAmerica Pittsburgh Job No.: 200-17056-1

SDG ID.: 17056

Matrix: Sediment Date Sampled: 06/15/2013 17:10

Reporting Basis: DRY Date Received: 06/18/2013 10:30

% Solids: 79.7

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	41.5	J 208	28.8	mg/Kg	J		1	9071B

NW 9/16/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

7

Client Sample ID: LMR13-35-096 Lab Sample ID: 200-17056-7

Lab Name: TestAmerica Pittsburgh Job No.: 200-17056-1

SDG ID.: 17056

Matrix: Sediment Date Sampled: 06/15/2013 17:20

Reporting Basis: DRY Date Received: 06/18/2013 10:30

% Solids: 80.0

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	62.5	J 208	28.9	mg/Kg	J		1	9071B

NW 9/16/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

8

Client Sample ID: LMR13-77-012
Lab Sample ID: 200-17056-8
Lab Name: TestAmerica Pittsburgh
Job No.: 200-17056-1
SDG ID.: 17056
Matrix: Sediment
Date Sampled: 06/15/2013 17:25
Reporting Basis: DRY
Date Received: 06/18/2013 10:30
% Solids: 63.6

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	115	J 262	36.4	mg/Kg			1	9071B

MW 9/16/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

9

Client Sample ID: LMR13-77-024
Lab Sample ID: 200-17056-9
Lab Name: TestAmerica Pittsburgh
Job No.: 200-17056-1
SDG ID.: 17056
Matrix: Sediment
Date Sampled: 06/15/2013 17:35
Reporting Basis: DRY
Date Received: 06/18/2013 10:30
% Solids: 68.5

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	87.5	J 243	33.8	mg/Kg			1	9071B

NW 9/16/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

10

Client Sample ID: LMR13-77-048 Lab Sample ID: 200-17056-10

Lab Name: TestAmerica Pittsburgh Job No.: 200-17056-1

SDG ID.: 17056

Matrix: Sediment Date Sampled: 06/15/2013 17:45

Reporting Basis: DRY Date Received: 06/18/2013 10:30

% Solids: 72.0

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	60.0	J 231	32.0	mg/Kg	J		1	9071B

NW 9/16/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: LMR13-77-072 Lab Sample ID: 200-17056-11 11

Lab Name: TestAmerica Pittsburgh Job No.: 200-17056-1

SDG ID.: 17056

Matrix: Sediment Date Sampled: 06/15/2013 17:55

Reporting Basis: DRY Date Received: 06/18/2013 10:30

% Solids: 72.3

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	36.8	J 230	31.9	mg/Kg	J		1	9071B

NW 9/16/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: LMR13-38-024 Lab Sample ID: 200-17056-12 12

Lab Name: TestAmerica Pittsburgh Job No.: 200-17056-1

SDG ID.: 17056

Matrix: Sediment Date Sampled: 06/16/2013 11:10

Reporting Basis: DRY Date Received: 06/18/2013 10:30

% Solids: 61.3

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	54.4 J	272	37.8	mg/Kg	J		1	9071B

MW 9/16/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

13

Client Sample ID: LMR13-38-024FD
Lab Sample ID: 200-17056-13
Lab Name: TestAmerica Pittsburgh
Job No.: 200-17056-1
SDG ID.: 17056
Matrix: Sediment
Date Sampled: 06/16/2013 11:10
Reporting Basis: DRY
Date Received: 06/18/2013 10:30
% Solids: 66.5

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	120	J 250	34.7	mg/Kg	J		1	9071B

MW 9/16/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

14

Client Sample ID: LMR13-38-072
Lab Sample ID: 200-17056-14
Lab Name: TestAmerica Pittsburgh
Job No.: 200-17056-1
SDG ID.: 17056
Matrix: Sediment
Date Sampled: 06/16/2013 11:30
Reporting Basis: DRY
Date Received: 06/18/2013 10:30
% Solids: 76.4

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	217	UJ 217	30.2	mg/Kg			1	9071B

NW 9/16/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: LMR13-77-024FD
Lab Sample ID: 200-17056-15 15
Lab Name: TestAmerica Pittsburgh
Job No.: 200-17056-1
SDG ID.: 17056
Matrix: Sediment
Date Sampled: 06/15/2013 17:35
Reporting Basis: DRY
Date Received: 06/18/2013 10:30
% Solids: 70.5

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	51.9 J	236	32.7	mg/Kg	J		1	9071B

NW 9/16/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

16

Client Sample ID: LMR13-78-012
Lab Sample ID: 200-17056-16
Lab Name: TestAmerica Pittsburgh
Job No.: 200-17056-1
SDG ID.: 17056
Matrix: Sediment
Date Sampled: 06/16/2013 10:25
Reporting Basis: DRY
Date Received: 06/18/2013 10:30
% Solids: 74.0

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	49.4	J 224	31.2	mg/Kg			1	9071B

NW 9/16/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

17

Client Sample ID: LMR13-78-024
Lab Sample ID: 200-17056-17
Lab Name: TestAmerica Pittsburgh
Job No.: 200-17056-1
SDG ID.: 17056
Matrix: Sediment
Date Sampled: 06/16/2013 10:35
Reporting Basis: DRY
Date Received: 06/18/2013 10:30
% Solids: 76.7

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	47.8	J 217	30.2	mg/Kg			1	9071B

NW 9/16/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

18

Client Sample ID: LMR13-78-024FD
Lab Sample ID: 200-17056-18
Lab Name: TestAmerica Pittsburgh
Job No.: 200-17056-1
SDG ID.: 17056
Matrix: Sediment
Date Sampled: 06/16/2013 10:35
Reporting Basis: DRY
Date Received: 06/18/2013 10:30
% Solids: 76.0

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	30.6	J 219	30.4	mg/Kg			1	9071B

MW 9/16/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

19

Client Sample ID: LMR13-40-012
Lab Sample ID: 200-17056-19
Lab Name: TestAmerica Pittsburgh
Job No.: 200-17056-1
SDG ID.: 17056
Matrix: Sediment
Date Sampled: 06/16/2013 12:30
Reporting Basis: DRY
Date Received: 06/18/2013 10:30
% Solids: 46.6

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	26.1	J 33.5	4.7	mg/Kg			1	9071B

NW 9/16/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

20

Client Sample ID: LMR13-40-024 | Lab Sample ID: 200-17056-20

Lab Name: TestAmerica Pittsburgh | Job No.: 200-17056-1

SDG ID.: 17056

Matrix: Sediment | Date Sampled: 06/16/2013 12:40

Reporting Basis: DRY | Date Received: 06/18/2013 10:30

% Solids: 49.0

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	170	J 339	47.1	mg/Kg			1	9071B

MW 9/16/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

21

Client Sample ID: LMR13-40-024FD
Lab Sample ID: 200-17056-21
Lab Name: TestAmerica Pittsburgh
Job No.: 200-17056-1
SDG ID.: 17056
Matrix: Sediment
Date Sampled: 06/16/2013 12:40
Reporting Basis: DRY
Date Received: 06/18/2013 10:30
% Solids: 49.5

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	241	J 335	46.6	mg/Kg			1	9071B

NW 9/16/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: LMR13-79-048
Lab Sample ID: 200-17056-22 22
Lab Name: TestAmerica Pittsburgh
Job No.: 200-17056-1
SDG ID.: 17056
Matrix: Sediment
Date Sampled: 06/16/2013 12:05
Reporting Basis: DRY
Date Received: 06/18/2013 10:30
% Solids: 81.3

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	127	J 204	28.4	mg/Kg			1	9071B

MW 9/16/13

ENVIRONMENTAL
Data Services, Inc.

DATA VALIDATION SUMMARY REPORT
LOWER MAUMEE RIVER, TOLEDO, OHIO

Client: EA Engineering, Science & Technology, Inc., Hunt Valley, Maryland
SDG: 200-17061
Laboratory: Test America Laboratories, Burlington, Vermont
Test America Laboratories, Canton, Ohio
Site: Lower Maumee River, Maumee Area of Concern, Toledo, Ohio
Date: September 16, 2013

SVOC			
EDS ID	Client Sample ID	Laboratory Sample ID	Matrix
1	LMR13-79-072	200-17061-1	Sediment
2	LMR13-79-096	200-17061-2	Sediment
3	LMR13-38-012	200-17061-3	Sediment
4	LMR13-40-072	200-17061-4	Sediment
5	LMR13-40-096	200-17061-5	Sediment
6	LMR13-79-012	200-17061-6	Sediment
7	LMR13-79-024	200-17061-7	Sediment
8	LMR13-01-072	200-17061-8	Sediment
9	LMR13-38-048	200-17061-9	Sediment
10	LMR13-38-096	200-17061-10	Sediment
11	LMR13-40-048	200-17061-11	Sediment
11MS	LMR13-40-048MS	200-17061-11MS	Sediment
11MSD	LMR13-40-048MSD	200-17061-11MSD	Sediment
12	LMR13-01-012	200-17061-12	Sediment
13	LMR13-01-024	200-17061-13	Sediment
15	LMR13-01-048	200-17061-15	Sediment
16	LMR13-01-096	200-17061-16	Sediment
17	LMR13-01-120	200-17061-17	Sediment
18	LMR13-48-012	200-17061-18	Sediment
19	LMR13-48-024	200-17061-19	Sediment
20	LMR13-48-048	200-17061-20	Sediment
21	LMR13-48-024FD	200-17061-21	Sediment
22	LMR13-79-024FD	200-17061-22	Sediment

PAH 34			
EDS ID	Client Sample ID	Laboratory Sample ID	Matrix
12	LMR13-01-012	200-17061-12	Sediment

PCBs			
EDS ID	Client Sample ID	Laboratory Sample ID	Matrix
1	LMR13-79-072	200-17061-1	Sediment
2	LMR13-79-096	200-17061-2	Sediment
3	LMR13-38-012	200-17061-3	Sediment
4	LMR13-40-072	200-17061-4	Sediment
5	LMR13-40-096	200-17061-5	Sediment

PCBs			
EDS ID	Client Sample ID	Laboratory Sample ID	Matrix
6	LMR13-79-012	200-17061-6	Sediment
7	LMR13-79-024	200-17061-7	Sediment
8	LMR13-01-072	200-17061-8	Sediment
9	LMR13-38-048	200-17061-9	Sediment
9MS	LMR13-38-048MS	200-17061-9MS	Sediment
9MSD	LMR13-38-048MSD	200-17061-9MSD	Sediment
10	LMR13-38-096	200-17061-10	Sediment
11	LMR13-40-048	200-17061-11	Sediment
11MS	LMR13-40-048MS	200-17061-11MS	Sediment
11MSD	LMR13-40-048MSD	200-17061-11MSD	Sediment
12	LMR13-01-012	200-17061-12	Sediment
13	LMR13-01-024	200-17061-13	Sediment
14	LMR13-01-024FD	200-17061-14	Sediment
15	LMR13-01-048	200-17061-15	Sediment
16	LMR13-01-096	200-17061-16	Sediment
17	LMR13-01-120	200-17061-17	Sediment
18	LMR13-48-012	200-17061-18	Sediment
19	LMR13-48-024	200-17061-19	Sediment
20	LMR13-48-048	200-17061-20	Sediment

Metals/Mercury/TOC			
EDS ID	Client Sample ID	Laboratory Sample ID	Matrix
1	LMR13-79-072	200-17061-1	Sediment
2	LMR13-79-096	200-17061-2	Sediment
3	LMR13-38-012	200-17061-3	Sediment
4	LMR13-40-072	200-17061-4	Sediment
4MS	LMR13-40-072MS	200-17061-4MS	Sediment
4MSD	LMR13-40-072MSD	200-17061-4MSD	Sediment
5	LMR13-40-096	200-17061-5	Sediment
6	LMR13-79-012	200-17061-6	Sediment
7	LMR13-79-024	200-17061-7	Sediment
8	LMR13-01-072	200-17061-8	Sediment
9	LMR13-38-048	200-17061-9	Sediment
9MS	LMR13-38-048MS	200-17061-9MS	Sediment
9MSD	LMR13-38-048MSD	200-17061-9MSD	Sediment
10	LMR13-38-096	200-17061-10	Sediment
11	LMR13-40-048	200-17061-11	Sediment
12	LMR13-01-012	200-17061-12	Sediment
13	LMR13-01-024	200-17061-13	Sediment
14	LMR13-01-024FD	200-17061-14	Sediment
15	LMR13-01-048	200-17061-15	Sediment
16	LMR13-01-096	200-17061-16	Sediment
17	LMR13-01-120	200-17061-17	Sediment
18	LMR13-48-012	200-17061-18	Sediment
19	LMR13-48-024	200-17061-19	Sediment
20	LMR13-48-048	200-17061-20	Sediment

AVS/SEM			
EDS ID	Client Sample ID	Laboratory Sample ID	Matrix
12	LMR13-01-012	200-17061-12	Sediment

HEM			
EDS ID	Client Sample ID	Laboratory Sample ID	Matrix
1	LMR13-79-072	200-17061-1	Sediment
2	LMR13-79-096	200-17061-2	Sediment
3	LMR13-38-012	200-17061-3	Sediment
4	LMR13-40-072	200-17061-4	Sediment
4MS	LMR13-40-072MS	200-17061-4MS	Sediment
4MSD	LMR13-40-072MSD	200-17061-4MSD	Sediment
5	LMR13-40-096	200-17061-5	Sediment
6	LMR13-79-012	200-17061-6	Sediment
7	LMR13-79-024	200-17061-7	Sediment
8	LMR13-01-072	200-17061-8	Sediment
9	LMR13-38-048	200-17061-9	Sediment
9MS	LMR13-38-048MS	200-17061-9MS	Sediment
9MSD	LMR13-38-048MSD	200-17061-9MSD	Sediment
10	LMR13-38-096	200-17061-10	Sediment
11	LMR13-40-048	200-17061-11	Sediment
12	LMR13-01-012	200-17061-12	Sediment
13	LMR13-01-024	200-17061-13	Sediment
15	LMR13-01-048	200-17061-15	Sediment
16	LMR13-01-096	200-17061-16	Sediment
17	LMR13-01-120	200-17061-17	Sediment
18	LMR13-48-012	200-17061-18	Sediment
19	LMR13-48-024	200-17061-19	Sediment
20	LMR13-48-048	200-17061-20	Sediment
21	LMR13-48-024FD	200-17061-21	Sediment
22	LMR13-79-024FD	200-17061-22	Sediment

A full data validation was performed on the analytical data for twenty-two sediment samples collected on June 16-17, 2013 by EA Engineering at the Lower Maumee River site in Toledo, Ohio. The samples were analyzed under the Environmental Protection Agency (USEPA) Contract Laboratory Program (CLP) Multi-Media Multi-Concentration Organics Analysis SOM01.2 and Inorganic Analysis ILM05.4 and the Test Methods for the Evaluation of Solid Waste, USEPA SW-846, Third Edition, September 1986, with revisions.

Specific method references are as follows:

Analysis	*Method References*
SVOC	USEPA CLP SOM01.2
PAH 34	USEPA CLP SOM01.2
PCBs	USEPA CLP SOM01.2
Michigan Metals & Mercury	USEPA CLP ISM01.3
AVS/SEM	USEPA SW-846 Methods 6010C/7470A
TOC	Lloyd Kahn
Oil & Grease (HEM)	USEPA SW-846 Method 9071B

The data have been validated according to the protocols and quality control (QC) requirements of the analytical methods, the Great Lakes Legacy Act, March 2010, the Quality Assurance Project Plan

for Phase 2 of the Lower Maumee River Site Characterization, May 2013, and the USEPA National Functional Guidelines for Organic Data Review as follows:

- The USEPA "Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review," June 2008;
- The USEPA "Contract Laboratory Program National Functional Guidelines for Inorganic Superfund Data Review," January 2010;
- and the reviewer's professional judgment.

The following items/criteria were reviewed for this report:

Organics

- Holding times and sample preservation
- Gas Chromatography/Mass Spectroscopy (GC/MS) Tuning
- Initial and continuing calibration summaries
- Method blank and field blank contamination
- Surrogate Spike recoveries
- Matrix Spike/Matrix Spike Duplicate (MS/MSD) recoveries
- Laboratory Control Sample (LCS) recoveries
- Internal standard area and retention time summary forms
- Target Compound Identification
- Compound Quantitation
- Tentatively Identified Compounds (TICs)
- Field Duplicate sample precision

Inorganics

- Holding times and sample preservation
- ICP/MS Tuning
- Initial and continuing calibration verifications
- Method blank and field blank contamination
- ICP Interference Check Sample
- Laboratory Control Sample (LCS) recoveries
- Matrix Spike Analysis
- Duplicate Sample Analysis
- ICP Serial Dilution
- Compound Quantitation
- Field Duplicate sample precision

Overall Usability Issues:

There were minor rejections of data. This data cannot be used in the decision-making process for this project.

- Three SVOC compounds were rejected in three samples due to severely low surrogate recoveries.

Overall the remaining data is acceptable for the intended purposes as qualified for the deficiencies detailed in this report.

Please note that any results qualified (U) due to blank contamination may be then qualified (J) due to another action. Therefore, the results may be qualified (UJ) due to the culmination of the blank contaminations and actions from other exceedences of QC criteria.

Semivolatile Organic Compounds (SVOC)

Holding Times

- All samples were extracted within 14 days for sediment samples and analyzed within 40 days for all samples except the following.

Sample	Date Sampled	Date Extracted	# of Days	Qualifier
22	06/27/13	08/12/13	50	J/UJ

GC/MS Tuning

- All criteria were met.

Initial Calibration

- All %RSD and mean RRF criteria.

Continuing Calibration

- All %D and RRF criteria were met except the following.

CCAL Date	Compound	%D/RRF	Qualifier	Affected Samples
08/03/13 (2000)	Di-n-octylphthalate	50.2%	J/UJ	9, 10, 11, 16, 17
	Hexachlorocyclopentadiene	57.2%	J/UJ	9, 10, 16, 17
08/03/13 (2037)	2,4-Dinitrophenol	50.5%	J/UJ	9, 10, 11, 16, 17
08/04/13 (1849)	Di-n-octylphthalate	59.3%	J/UJ	12, 13, 15, 18-21
08/12/13 (2218)	Hexachlorocyclopentadiene	53.6%	J/UJ	22
	Di-n-octylphthalate	59.2%	J/UJ	22
08/12/13 (2254)	Benzo(k)fluoranthene	57.7%	J/UJ	22

Method Blank

- The method blanks exhibited the following contamination.

Blank ID	Compound	Conc. ug/kg	Qualifier	Affected Samples
SBLKM5	Benzaldehyde	5.2	U	1-11, 13, 15-17, 19-21
	Acetophenone	9.4	U	1-11, 15-17, 19-21
	Di-n-butylphthalate	4.8	U	1, 2, 5-11, 16, 17, 22
	Butylbenzylphthalate	7.7	U	1, 2, 3, 6-10, 16, 17, 22
SBLKM9	Di-n-butylphthalate	11	U	22
	Butylbenzylphthalate	13	U	22
	Bis(2-ethylhexyl)phthalate	24	U	22

Field Blank

- Field QC samples were not analyzed.

Surrogate Spike Recoveries

- All samples exhibited acceptable surrogate %R values except the following.

Sample ID	Surrogate	%R	Qualifier
3	4-Chloroaniline-d4	0%	R – Associated Compounds
8	4-Chloroaniline-d4	0%	R – Associated Compounds
11	4-Methylphenol-d8	104%	J – Associated Positive Results
	4-Chloroaniline-d4	0%	R – Associated Compounds
22	Phenol-d5	106%	None - All ND

Matrix Spike/Matrix Spike Duplicate (MS/MSD) Recoveries

- The MS/MSD sample exhibited acceptable %R and RPD values.

Laboratory Control Samples

- A LCS sample was not analyzed.

Internal Standard (IS) Area Performance

- All internal standards met response and retention time (RT) criteria.

Target Compound Identification

- All mass spectra and quantitation criteria were met.

Compound Quantitation

- Several samples were analyzed at various dilutions due to high concentrations of target compounds. No action was required.

Field Duplicate Sample Precision

- Field duplicate results are summarized below.

SVOC				
Compound	LMR13-48-024 ug/kg	LMR13-48-024FD ug/kg	RPD	Qualifier
4-Methylphenol	24	280U	NC	None
Naphthalene	150	130	14%	
2-Methylnaphthalene	71	59	18%	
Acenaphthylene	79	73	8%	
Acenaphthene	130	120	8%	
Dibenzofuran	62	61	2%	
Fluorene	190	240	23%	
Phenanthrene	780	830	6%	
Anthracene	230	300	26%	
Fluoranthene	1700	1800	6%	
Pyrene	2200	2200	0%	
Benzo(a)anthracene	1400	1500	7%	
Chrysene	1500	1400	7%	
Bis(2-ethylhexyl)phthalate	290U	110	NC	
Benzo(b)fluoranthene	1100	1300	17%	
Benzo(k)fluoranthene	800	700	13%	
Benzo(a)pyrene	1000	950	5%	
Indeno(1,2,3-cd)pyrene	550	400	32%	
Dibenzo(a,h)anthracene	260	240	8%	
Benzo(g,h,i)perylene	620	510	19%	

SVOC				
Compound	LMR13-79-024 ug/kg	LMR13-79-024FD ug/kg	RPD	Qualifier
Phenanthrene	5.3	5.3	0%	None
Anthracene	4.4	210U	NC	
Fluoranthene	13	15	14%	
Pyrene	15	13	14%	
Chrysene	12	210U	NC	
Bis(2-ethylhexyl)phthalate	32	210U	NC	

Polynuclear Aromatic Hydrocarbons (PAH 34)

Holding Times

- All samples were extracted within 14 days for sediment samples and analyzed within 40 days for all samples.

GC/MS Tuning

- All criteria were met.

Initial Calibration

- All %RSD and mean RRF criteria were met.

Continuing Calibration

- All %D and RRF criteria were met except the following.

CCAL Date	Compound	%D/RRF	Qualifier	Affected Samples
08/06/13	Pyrene	30.5%	None	See Compound Quantitation
	Benzo(e)pyrene	25.9%	None	

Method Blank

- The method blanks exhibited the following contamination.

Blank ID	Compound	Conc. ug/kg	Qualifier	Affected Samples
SBLKM5	Naphthalene	0.45	None	All >5X
	2-Methylnaphthalene	0.10	None	All >5X
	Total 16 PPAH	0.45	J	12
	Total PAH	0.45	J	

Field Blank

- Field QC samples were not analyzed.

Surrogate Spike Recoveries

- All samples exhibited acceptable surrogate %R values.

Matrix Spike/Matrix Spike Duplicate (MS/MSD) Recoveries

- A MS/MSD sample was not analyzed.

Laboratory Control Samples

- A LCS sample was not analyzed.

Internal Standard (IS) Area Performance

- All internal standards met response and retention time (RT) criteria.

Target Compound Identification

- All mass spectra and quantitation criteria were met.

Compound Quantitation

- EDS Sample ID #12 was analyzed at a 14.3X dilution due to high concentrations of target compounds. Several compound concentrations exceeded the linear range of the instrument and were flagged (E) by the laboratory and further qualified as estimated (J).
- Total 16 PPAH and Total PAH were estimated (J) in all samples due to blank contamination.

Field Duplicate Sample Precision

- Field duplicate samples were not analyzed.

Polychlorinated Biphenyls (PCBs)

Holding Times

- All samples were extracted within 14 days for sediment samples and analyzed within 40 days.

Initial Calibration

- All %RSD and/or correlation coefficient criteria were met.

Continuing Calibration

- All %D criteria were met.

Method Blank

- The method blanks were free of contamination.

Field Blank

- Field QC samples were not analyzed.

Surrogate Spike Recoveries

- All samples exhibited acceptable surrogate recoveries.

Matrix Spike/Matrix Spike Duplicate (MS/MSD) Recoveries

- The MS/MSD samples exhibited acceptable %R and RPD values.

Laboratory Control Samples

- The LCS sample exhibited acceptable %R values.

Compound Quantitation

- All criteria were met.

Field Duplicate Sample Precision

- Field duplicate results are summarized below.

PCBs				
Compound	LMR13-01-024 ug/kg	LMR13-01-024FD ug/kg	RPD	Qualifier
None	ND	ND	-	-

GC Column Difference Results

- Several samples exhibited high %D values > 25% between columns and have been qualified as estimated (J) by the reviewer.

Metals & Mercury

Holding Times

- All samples were prepared and analyzed within 28 days for mercury and 180 days for all other metals.

ICP/MS Tuning

- Not applicable.

Initial Calibration Verification

- All initial calibration criteria were met.

Continuing Calibration Verification

- All continuing calibration criteria were met.

Method Blank

- The method blanks exhibited the following contamination.

Blank ID	Compound	Conc. mg/kg	Qualifier	Affected Samples
MB	Zinc	0.30	None	All Associated >10X

Field Blank

- Field QC samples were not analyzed.

ICP Interference Check Sample

- The ICP interference check sample exhibited acceptable %R values.

Laboratory Control Samples

- The LCS sample exhibited acceptable recoveries.

Matrix Spike Analysis

- The matrix spike samples exhibited acceptable %R values except the following.

MS Sample ID	Compound	MS %R	Qualifier	Affected Samples
9	Mercury	128%	J	3-6, 8, 9, 11-16, 18-20

Duplicate Sample Analysis

- The duplicate samples exhibited acceptable RPD values.

ICP Serial Dilution

- ICP serial dilution percent differences (%D) were within acceptance limits except the following.

ICP Sample ID	Compound	%D	Qualifier	Affected Samples
4	Cadmium	23%	J	All Samples
	Chromium	20%	J	
	Copper	20%	J	
	Nickel	24%	J	
	Zinc	21%	J	
9	Chromium	20%	J	All Samples
	Nickel	23%	J	
	Zinc	19%	J	

Compound Quantitation

- All criteria were met.

Field Duplicate Sample Precision

- Field duplicate results are summarized below.

Metals				
Compound	LMR13-01-024 mg/kg	LMR13-01-024FD mg/kg	RPD	Qualifier
Arsenic	9.2	9.1	1%	None
Cadmium	0.40	0.39	3%	
Chromium	14.6	14.1	3%	
Copper	17.7	17.2	3%	
Lead	76.3	70.9	7%	
Nickel	20.3	20.1	1%	
Zinc	87.6	84.0	4%	
Mercury	0.12	0.14	15%	

Oil & Grease, Total Organic Carbon, AVS/SEM (Metals & Hg)

Holding Times

- All samples were analyzed within the recommended holding time for each analysis except the following.

TOC				
Sample ID	Date Collected	Date Analyzed	# of Days	Qualifier
All Samples	06/16/13-06/17/13	07/03/12	16-17	J/UJ

Initial and Continuing Calibration

- All %R criteria were met.

Method Blank

- The method blanks exhibited the following contamination.

Blank ID	Compound	Conc. mg/kg	Qualifier	Affected Samples
180-76255/1-A	HEM	30.00	U	9

Field Blank

- Field QC samples were not included in this data package.

Laboratory Control Samples

- The LCS samples exhibited acceptable %R values.

Matrix Spike/Duplicate (MS/DUP) Recoveries

- The MS/DUP samples exhibited acceptable %R and RPD values except the following.

MS/DUP ID	Compound	MS %R/MSD %R/RPD	Qualifier	Affected Samples
9	HEM	54%/46%/Ok	J/UJ	All Samples

Compound Quantitation

- All criteria were met.

Field Duplicate Sample Precision

- Field duplicate results are summarized below.

TOC				
Compound	LMR13-01-024 mg/kg	LMR13-01-024FD mg/kg	RPD	Qualifier
TOC	21900	23800	8%	None

HEM				
Compound	LMR13-48-024 mg/kg	LMR13-48-024FD mg/kg	RPD	Qualifier
HEM	132	700	137%	None - See MS/MSD

HEM				
Compound	LMR13-79-024 mg/kg	LMR13-79-024FD mg/kg	RPD	Qualifier
HEM	45.1	32.9	31%	None

Please contact the undersigned at (757) 564-0090 if you have any questions or need further information.

Signed: Nancy Weaver Dated: 9/20/13

Nancy Weaver
Senior Chemist

Data Qualifiers

U = The analyte was analyzed for, but was not detected at a level greater than or equal to the level of the adjusted Contract Required Quantitation Limit (CRQL) for sample and method.

UJ = The analyte was not detected at a level greater than or equal to the adjusted CRQL. However, the reported adjusted CRQL is approximate and may be inaccurate or imprecise.

J = The analyte was positively identified and the associated numerical value is the approximate concentration of the analyte in the sample (due either to the quality of the data generated because certain quality control criteria were not met, or the concentration of the analyte was below the CRQL).

J+ = The result is an estimated quantity, but the result may be biased high.

J- = The result is an estimated quantity, but the result may be biased low.

R = The sample results are unusable due to the quality of the data generated because certain criteria were not met. The analyte may or may not be present in the sample.

NJ = The analysis indicates the presence of an analyte that has been "tentatively identified" and the associated numerical value represents its approximate concentration.

1D - FORM I SV-1

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-79-072

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17061

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17061-1

Sample wt/vol: 30.3 (g/mL) g Lab File ID: ULL17.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 20 Decanted: (Y/N) Date Received: 06/18/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/25/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/02/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
100-52-7	Benzaldehyde	210 ~~44~~	~~J B~~	U
108-95-2	Phenol	210	U	
111-44-4	Bis(2-chloroethyl)ether	210	U	
95-57-8	2-Chlorophenol	210	U	
95-48-7	2-Methylphenol	210	U	
108-60-1	2,2'-Oxybis(1-chloropropane)	210	U	
98-86-2	Acetophenone	210 ~~67~~	~~J B~~	U
106-44-5	4-Methylphenol	210	U	
621-64-7	N-Nitroso-di-n-propylamine	210	U	
67-72-1	Hexachloroethane	210	U	
98-95-3	Nitrobenzene	210	U	
78-59-1	Isophorone	210	U	
88-75-5	2-Nitrophenol	210	U	
105-67-9	2,4-Dimethylphenol	210	U	
111-91-1	Bis(2-chloroethoxy)methane	210	U	
120-83-2	2,4-Dichlorophenol	210	U	
91-20-3	Naphthalene	210	U	
106-47-8	4-Chloroaniline	210	U	
87-68-3	Hexachlorobutadiene	210	U	
105-60-2	Caprolactam	210	U	
59-50-7	4-Chloro-3-methylphenol	210	U	
91-57-6	2-Methylnaphthalene	210	U	
77-47-4	Hexachlorocyclopentadiene	210	U	
88-06-2	2,4,6-Trichlorophenol	210	U	
95-95-4	2,4,5-Trichlorophenol	210	U	
92-52-4	1,1'-Biphenyl	210	U	
91-58-7	2-Chloronaphthalene	210	U	
88-74-4	2-Nitroaniline	410	U	
131-11-3	Dimethylphthalate	210	U	
606-20-2	2,6-Dinitrotoluene	210	U	
208-96-8	Acenaphthylene	210	U	
99-09-2	3-Nitroaniline	410	U	
83-32-9	Acenaphthene	210	U	

MW 9/16/13

EPA SAMPLE NO.
LMR13-79-072

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17061

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17061-1

Sample wt/vol: 30.3 (g/mL) g Lab File ID: ULL17.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 20 Decanted: (Y/N) Date Received: 06/18/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/25/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/02/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
51-28-5	2,4-Dinitrophenol	410	U
100-02-7	4-Nitrophenol	410	U
132-64-9	Dibenzofuran	210	U
121-14-2	2,4-Dinitrotoluene	210	U
84-66-2	Diethylphthalate	210	U
86-73-7	Fluorene	210	U
7005-72-3	4-Chlorophenyl-phenylether	210	U
100-01-6	4-Nitroaniline	410	U
534-52-1	4,6-Dinitro-2-methylphenol	410	U
86-30-6	N-Nitrosodiphenylamin [1]	210	U
95-94-3	1,2,4,5-Tetrachlorobenzene	210	U
101-55-3	4-Bromophenyl-phenylether	210	U
118-74-1	Hexachlorobenzene	210	U
1912-24-9	Atrazine	210	U
87-86-5	Pentachlorophenol	410	U
85-01-8	Phenanthrene	210	U
120-12-7	Anthracene	210	U
86-74-8	Carbazole	210	U
84-74-2	Di-n-butylphthalate	210 ~~8.3~~ ~~J B~~	U
206-44-0	Fluoranthene	210	U
129-00-0	Pyrene	210	U
85-68-7	Butylbenzylphthalate	210 ~~15~~ ~~J B~~	U
91-94-1	3,3'-Dichlorobenzidine	210	U
56-55-3	Benzo(a)anthracene	210	U
218-01-9	Chrysene	210	U
117-81-7	Bis(2-ethylhexyl)phthalate	42	J
117-84-0	Di-n-octylphthalate	210	U
205-99-2	Benzo(b)fluoranthene	210	U
207-08-9	Benzo(k)fluoranthene	210	U
50-32-8	Benzo(a)pyrene	210	U
193-39-5	Indeno(1,2,3-cd)pyrene	210	U
53-70-3	Dibenzo(a,h)anthracene	210	U
191-24-2	Benzo(g,h,i)perylene	210	U
58-90-2	2,3,4,6-Tetrachlorophenol	210	U

[1] Cannot be separated from Diphenylamine

9/16/13

1D - FORM I SV-1

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-79-096

2

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17061

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17061-2

Sample wt/vol: 29.6 (g/mL) g Lab File ID: ULL18.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 17 Decanted: (Y/N) Date Received: 06/18/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/25/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/02/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
100-52-7	Benzaldehyde	210 ~~20~~	~~J B~~ U
108-95-2	Phenol	210	U
111-44-4	Bis(2-chloroethyl)ether	210	U
95-57-8	2-Chlorophenol	210	U
95-48-7	2-Methylphenol	210	U
108-60-1	2,2'-Oxybis(1-chloropropane)	210	U
98-86-2	Acetophenone	210 ~~31~~	~~J B~~ U
106-44-5	4-Methylphenol	210	U
621-64-7	N-Nitroso-di-n-propylamine	210	U
67-72-1	Hexachloroethane	210	U
98-95-3	Nitrobenzene	210	U
78-59-1	Isophorone	210	U
88-75-5	2-Nitrophenol	210	U
105-67-9	2,4-Dimethylphenol	210	U
111-91-1	Bis(2-chloroethoxy)methane	210	U
120-83-2	2,4-Dichlorophenol	210	U
91-20-3	Naphthalene	210	U
106-47-8	4-Chloroaniline	210	U
87-68-3	Hexachlorobutadiene	210	U
105-60-2	Caprolactam	210	U
59-50-7	4-Chloro-3-methylphenol	210	U
91-57-6	2-Methylnaphthalene	210	U
77-47-4	Hexachlorocyclopentadiene	210	U
88-06-2	2,4,6-Trichlorophenol	210	U
95-95-4	2,4,5-Trichlorophenol	210	U
92-52-4	1,1'-Biphenyl	210	U
91-58-7	2-Chloronaphthalene	210	U
88-74-4	2-Nitroaniline	400	U
131-11-3	Dimethylphthalate	210	U
606-20-2	2,6-Dinitrotoluene	210	U
208-96-8	Acenaphthylene	210	U
99-09-2	3-Nitroaniline	400	U
83-32-9	Acenaphthene	210	U

MW 9/16/13

EPA SAMPLE NO.
LMR13-79-096

2

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17061

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17061-2

Sample wt/vol: 29.6 (g/mL) g Lab File ID: ULL18.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 17 Decanted: (Y/N) Date Received: 06/18/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/25/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/02/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
51-28-5	2,4-Dinitrophenol	400	U
100-02-7	4-Nitrophenol	400	U
132-64-9	Dibenzofuran	210	U
121-14-2	2,4-Dinitrotoluene	210	U
84-66-2	Diethylphthalate	210	U
86-73-7	Fluorene	210	U
7005-72-3	4-Chlorophenyl-phenylether	210	U
100-01-6	4-Nitroaniline	400	U
534-52-1	4,6-Dinitro-2-methylphenol	400	U
86-30-6	N-Nitrosodiphenylamin [1]	210	U
95-94-3	1,2,4,5-Tetrachlorobenzene	210	U
101-55-3	4-Bromophenyl-phenylether	210	U
118-74-1	Hexachlorobenzene	210	U
1912-24-9	Atrazine	210	U
87-86-5	Pentachlorophenol	400	U
85-01-8	Phenanthrene	210	U
120-12-7	Anthracene	210	U
86-74-8	Carbazole	210	U
84-74-2	Di-n-butylphthalate	210 ~~6.8~~	~~J B~~ U
206-44-0	Fluoranthene	210	U
129-00-0	Pyrene	210	U
85-68-7	Butylbenzylphthalate	210 ~~11~~	~~J B~~ U
91-94-1	3,3'-Dichlorobenzidine	210	U
56-55-3	Benzo(a)anthracene	210	U
218-01-9	Chrysene	210	U
117-81-7	Bis(2-ethylhexyl)phthalate	28	J
117-84-0	Di-n-octylphthalate	210	U
205-99-2	Benzo(b)fluoranthene	210	U
207-08-9	Benzo(k)fluoranthene	210	U
50-32-8	Benzo(a)pyrene	210	U
193-39-5	Indeno(1,2,3-cd)pyrene	210	U
53-70-3	Dibenzo(a,h)anthracene	210	U
191-24-2	Benzo(g,h,i)perylene	210	U
58-90-2	2,3,4,6-Tetrachlorophenol	210	U

[1] Cannot be separated from Diphenylamine

NW 9/16/13

1D - FORM I SV-1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-38-012

3

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17061

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17061-3

Sample wt/vol: 29.5 (g/mL) g Lab File ID: ULL19.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 31 Decanted: (Y/N) Date Received: 06/18/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/25/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/02/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
100-52-7	Benzaldehyde	250 ~~95~~ ~~J B~~	U	U
108-95-2	Phenol	250	U	
111-44-4	Bis(2-chloroethyl)ether	250	U	
95-57-8	2-Chlorophenol	250	U	
95-48-7	2-Methylphenol	250	U	
108-60-1	2,2'-Oxybis(1-chloropropane)	250	U	
98-86-2	Acetophenone	250 ~~96~~ ~~J B~~	U	U
106-44-5	4-Methylphenol	250	U	
621-64-7	N-Nitroso-di-n-propylamine	250	U	
67-72-1	Hexachloroethane	250	U	
98-95-3	Nitrobenzene	250	U	
78-59-1	Isophorone	250	U	
88-75-5	2-Nitrophenol	250	U	
105-67-9	2,4-Dimethylphenol	250	U	
111-91-1	Bis(2-chloroethoxy)methane	250	U	
120-83-2	2,4-Dichlorophenol	250	U	
91-20-3	Naphthalene	31	J	
106-47-8	4-Chloroaniline	250	~~U~~	R
87-68-3	Hexachlorobutadiene	250	U	
105-60-2	Caprolactam	250	U	
59-50-7	4-Chloro-3-methylphenol	250	U	
91-57-6	2-Methylnaphthalene	14	J	
77-47-4	Hexachlorocyclopentadiene	250	~~U~~	R
88-06-2	2,4,6-Trichlorophenol	250	U	
95-95-4	2,4,5-Trichlorophenol	250	U	
92-52-4	1,1'-Biphenyl	250	U	
91-58-7	2-Chloronaphthalene	250	U	
88-74-4	2-Nitroaniline	490	U	
131-11-3	Dimethylphthalate	250	U	
606-20-2	2,6-Dinitrotoluene	250	U	
208-96-8	Acenaphthylene	37	J	
99-09-2	3-Nitroaniline	490	U	
83-32-9	Acenaphthene	93	J	

MW 9/16/13

1E - FORM I SV-2
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-38-012

3

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17061

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17061-3

Sample wt/vol: 29.5 (g/mL) g Lab File ID: ULL19.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 31 Decanted: (Y/N) Date Received: 06/18/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/25/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/02/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
51-28-5	2,4-Dinitrophenol	490	U
100-02-7	4-Nitrophenol	490	U
132-64-9	Dibenzofuran	250	U
121-14-2	2,4-Dinitrotoluene	250	U
84-66-2	Diethylphthalate	250	U
86-73-7	Fluorene	42	J
7005-72-3	4-Chlorophenyl-phenylether	250	U
100-01-6	4-Nitroaniline	490	U
534-52-1	4,6-Dinitro-2-methylphenol	490	U
86-30-6	N-Nitrosodiphenylamin [1]	250	U
95-94-3	1,2,4,5-Tetrachlorobenzene	250	U
101-55-3	4-Bromophenyl-phenylether	250	U
118-74-1	Hexachlorobenzene	250	U
1912-24-9	Atrazine	250	U
87-86-5	Pentachlorophenol	490	U
85-01-8	Phenanthrene	460	
120-12-7	Anthracene	160	J
86-74-8	Carbazole	250	U
84-74-2	Di-n-butylphthalate	250	U
206-44-0	Fluoranthene	1100	
129-00-0	Pyrene	1300	
85-68-7	Butylbenzylphthalate	250 ~~29~~ ~~J B~~	UR
91-94-1	3,3'-Dichlorobenzidine	250 ~~U~~	
56-55-3	Benzo(a)anthracene	750	
218-01-9	Chrysene	830	
117-81-7	Bis(2-ethylhexyl)phthalate	320	
117-84-0	Di-n-octylphthalate	250	U
205-99-2	Benzo(b)fluoranthene	590	
207-08-9	Benzo(k)fluoranthene	430	
50-32-8	Benzo(a)pyrene	560	
193-39-5	Indeno(1,2,3-cd)pyrene	260	
53-70-3	Dibenzo(a,h)anthracene	99	J
191-24-2	Benzo(g,h,i)perylene	370	
58-90-2	2,3,4,6-Tetrachlorophenol	250	U

[1] Cannot be separated from Diphenylamine

MW 9/16/13

EPA SAMPLE NO.
LMR13-40-072

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678 4

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17061

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17061-4

Sample wt/vol: 30.6 (g/mL) g Lab File ID: ULL20.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 44 Decanted: (Y/N) Date Received: 06/18/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/25/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/02/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
100-52-7	Benzaldehyde	300 ~~51~~ ~~J B~~	U
108-95-2	Phenol	300	U
111-44-4	Bis(2-chloroethyl)ether	300	U
95-57-8	2-Chlorophenol	300	U
95-48-7	2-Methylphenol	300	U
108-60-1	2,2'-Oxybis(1-chloropropane)	300	U
98-86-2	Acetophenone	300 ~~57~~ ~~J B~~	U
106-44-5	4-Methylphenol	30	J
621-64-7	N-Nitroso-di-n-propylamine	300	U
67-72-1	Hexachloroethane	300	U
98-95-3	Nitrobenzene	300	U
78-59-1	Isophorone	300	U
88-75-5	2-Nitrophenol	300	U
105-67-9	2,4-Dimethylphenol	300	U
111-91-1	Bis(2-chloroethoxy)methane	300	U
120-83-2	2,4-Dichlorophenol	300	U
91-20-3	Naphthalene	250	J
106-47-8	4-Chloroaniline	300	U
87-68-3	Hexachlorobutadiene	300	U
105-60-2	Caprolactam	300	U
59-50-7	4-Chloro-3-methylphenol	300	U
91-57-6	2-Methylnaphthalene	49	J
77-47-4	Hexachlorocyclopentadiene	300	U
88-06-2	2,4,6-Trichlorophenol	300	U
95-95-4	2,4,5-Trichlorophenol	300	U
92-52-4	1,1'-Biphenyl	11	J
91-58-7	2-Chloronaphthalene	300	U
88-74-4	2-Nitroaniline	570	U
131-11-3	Dimethylphthalate	300	U
606-20-2	2,6-Dinitrotoluene	300	U
208-96-8	Acenaphthylene	62	J
99-09-2	3-Nitroaniline	570	U
83-32-9	Acenaphthene	120	J

MW 9/16/13

EPA SAMPLE NO.
LMR13-40-072

4

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17061

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17061-4

Sample wt/vol: 30.6 (g/mL) g Lab File ID: ULL20.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 44 Decanted: (Y/N) Date Received: 06/18/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/25/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/02/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
51-28-5	2,4-Dinitrophenol	570	U
100-02-7	4-Nitrophenol	570	U
132-64-9	Dibenzofuran	54	J
121-14-2	2,4-Dinitrotoluene	300	U
84-66-2	Diethylphthalate	300	U
86-73-7	Fluorene	200	J
7005-72-3	4-Chlorophenyl-phenylether	300	U
100-01-6	4-Nitroaniline	570	U
534-52-1	4,6-Dinitro-2-methylphenol	570	U
86-30-6	N-Nitrosodiphenylamin [1]	300	U
95-94-3	1,2,4,5-Tetrachlorobenzene	300	U
101-55-3	4-Bromophenyl-phenylether	300	U
118-74-1	Hexachlorobenzene	300	U
1912-24-9	Atrazine	300	U
87-86-5	Pentachlorophenol	570	U
85-01-8	Phenanthrene	710	
120-12-7	Anthracene	200	J
86-74-8	Carbazole	19	J
84-74-2	Di-n-butylphthalate	300	U
206-44-0	Fluoranthene	1200	
129-00-0	Pyrene	1200	
85-68-7	Butylbenzylphthalate	300	U
91-94-1	3,3'-Dichlorobenzidine	300	U
56-55-3	Benzo(a)anthracene	700	
218-01-9	Chrysene	790	
117-81-7	Bis(2-ethylhexyl)phthalate	1700	
117-84-0	Di-n-octylphthalate	300	U
205-99-2	Benzo(b)fluoranthene	720	
207-08-9	Benzo(k)fluoranthene	580	
50-32-8	Benzo(a)pyrene	610	
193-39-5	Indeno(1,2,3-cd)pyrene	440	
53-70-3	Dibenzo(a,h)anthracene	160	J
191-24-2	Benzo(g,h,i)perylene	540	
58-90-2	2,3,4,6-Tetrachlorophenol	300	U

[1] Cannot be separated from Diphenylamine

MW 9/16/13

1D - FORM I SV-1

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-40-096

5

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17061

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17061-5

Sample wt/vol: 30.7 (g/mL) g Lab File ID: ULL21.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 44 Decanted: (Y/N) Date Received: 06/18/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/25/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/02/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
100-52-7	Benzaldehyde	300 ~~55~~	~~J B~~ U
108-95-2	Phenol	300	U
111-44-4	Bis(2-chloroethyl)ether	300	U
95-57-8	2-Chlorophenol	300	U
95-48-7	2-Methylphenol	300	U
108-60-1	2,2'-Oxybis(1-chloropropane)	300	U
98-86-2	Acetophenone	300 ~~65~~	~~J B~~ U
106-44-5	4-Methylphenol	22	J
621-64-7	N-Nitroso-di-n-propylamine	300	U
67-72-1	Hexachloroethane	300	U
98-95-3	Nitrobenzene	300	U
78-59-1	Isophorone	300	U
88-75-5	2-Nitrophenol	300	U
105-67-9	2,4-Dimethylphenol	300	U
111-91-1	Bis(2-chloroethoxy)methane	300	U
120-83-2	2,4-Dichlorophenol	300	U
91-20-3	Naphthalene	170	J
106-47-8	4-Chloroaniline	300	U
87-68-3	Hexachlorobutadiene	300	U
105-60-2	Caprolactam	300	U
59-50-7	4-Chloro-3-methylphenol	300	U
91-57-6	2-Methylnaphthalene	26	J
77-47-4	Hexachlorocyclopentadiene	300	U
88-06-2	2,4,6-Trichlorophenol	300	U
95-95-4	2,4,5-Trichlorophenol	300	U
92-52-4	1,1'-Biphenyl	300	U
91-58-7	2-Chloronaphthalene	300	U
88-74-4	2-Nitroaniline	570	U
131-11-3	Dimethylphthalate	300	U
606-20-2	2,6-Dinitrotoluene	300	U
208-96-8	Acenaphthylene	29	J
99-09-2	3-Nitroaniline	570	U
83-32-9	Acenaphthene	52	J

MW 9/16/13

EPA SAMPLE NO.
LMR13-40-096

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678 5

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17061

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17061-5

Sample wt/vol: 30.7 (g/mL) g Lab File ID: ULL21.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 44 Decanted: (Y/N) Date Received: 06/18/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/25/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/02/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
51-28-5	2,4-Dinitrophenol	570	U
100-02-7	4-Nitrophenol	570	U
132-64-9	Dibenzofuran	300	U
121-14-2	2,4-Dinitrotoluene	300	U
84-66-2	Diethylphthalate	300	U
86-73-7	Fluorene	81	J
7005-72-3	4-Chlorophenyl-phenylether	300	U
100-01-6	4-Nitroaniline	570	U
534-52-1	4,6-Dinitro-2-methylphenol	570	U
86-30-6	N-Nitrosodiphenylamin [1]	440	
95-94-3	1,2,4,5-Tetrachlorobenzene	300	U
101-55-3	4-Bromophenyl-phenylether	300	U
118-74-1	Hexachlorobenzene	300	U
1912-24-9	Atrazine	300	U
87-86-5	Pentachlorophenol	570	U
85-01-8	Phenanthrene	400	
120-12-7	Anthracene	85	J
86-74-8	Carbazole	300	U
84-74-2	Di-n-butylphthalate	300 ~~33~~	J B U
206-44-0	Fluoranthene	780	
129-00-0	Pyrene	790	
85-68-7	Butylbenzylphthalate	300	U
91-94-1	3,3'-Dichlorobenzidine	300	U
56-55-3	Benzo(a)anthracene	380	
218-01-9	Chrysene	480	
117-81-7	Bis(2-ethylhexyl)phthalate	1400	
117-84-0	Di-n-octylphthalate	300	U
205-99-2	Benzo(b)fluoranthene	360	
207-08-9	Benzo(k)fluoranthene	300	
50-32-8	Benzo(a)pyrene	330	
193-39-5	Indeno(1,2,3-cd)pyrene	210	J
53-70-3	Dibenzo(a,h)anthracene	84	J
191-24-2	Benzo(g,h,i)perylene	270	J
58-90-2	2,3,4,6-Tetrachlorophenol	300	U

[1] Cannot be separated from Diphenylamine

NW 9/16/13

1D - FORM I SV-1

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-79-012

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678 6

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17061

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17061-6

Sample wt/vol: 30.5 (g/mL) g Lab File ID: ULL22.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 34 Decanted: (Y/N) Date Received: 06/18/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/25/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/02/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
100-52-7	Benzaldehyde	250 ~~72~~	~~J B~~ U
108-95-2	Phenol	250	U
111-44-4	Bis(2-chloroethyl)ether	250	U
95-57-8	2-Chlorophenol	250	U
95-48-7	2-Methylphenol	250	U
108-60-1	2,2'-Oxybis(1-chloropropane)	250	U
98-86-2	Acetophenone	250 ~~77~~	~~J B~~ U
106-44-5	4-Methylphenol	250	U
621-64-7	N-Nitroso-di-n-propylamine	250	U
67-72-1	Hexachloroethane	250	U
98-95-3	Nitrobenzene	250	U
78-59-1	Isophorone	250	U
88-75-5	2-Nitrophenol	250	U
105-67-9	2,4-Dimethylphenol	250	U
111-91-1	Bis(2-chloroethoxy)methane	250	U
120-83-2	2,4-Dichlorophenol	250	U
91-20-3	Naphthalene	22	J
106-47-8	4-Chloroaniline	250	U
87-68-3	Hexachlorobutadiene	250	U
105-60-2	Caprolactam	250	U
59-50-7	4-Chloro-3-methylphenol	250	U
91-57-6	2-Methylnaphthalene	250	U
77-47-4	Hexachlorocyclopentadiene	250	U
88-06-2	2,4,6-Trichlorophenol	250	U
95-95-4	2,4,5-Trichlorophenol	250	U
92-52-4	1,1'-Biphenyl	250	U
91-58-7	2-Chloronaphthalene	250	U
88-74-4	2-Nitroaniline	490	U
131-11-3	Dimethylphthalate	250	U
606-20-2	2,6-Dinitrotoluene	250	U
208-96-8	Acenaphthylene	26	J
99-09-2	3-Nitroaniline	490	U
83-32-9	Acenaphthene	77	J

MW 9/16/13

EPA SAMPLE NO.
LMR13-79-012

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678 6

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17061

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17061-6

Sample wt/vol: 30.5 (g/mL) g Lab File ID: ULL22.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 34 Decanted: (Y/N) Date Received: 06/18/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/25/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/02/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
51-28-5	2,4-Dinitrophenol	490	U	
100-02-7	4-Nitrophenol	490	U	
132-64-9	Dibenzofuran	19	J	
121-14-2	2,4-Dinitrotoluene	250	U	
84-66-2	Diethylphthalate	250	U	
86-73-7	Fluorene	36	J	
7005-72-3	4-Chlorophenyl-phenylether	250	U	
100-01-6	4-Nitroaniline	490	U	
534-52-1	4,6-Dinitro-2-methylphenol	490	U	
86-30-6	N-Nitrosodiphenylamin [1]	250	U	
95-94-3	1,2,4,5-Tetrachlorobenzene	250	U	
101-55-3	4-Bromophenyl-phenylether	250	U	
118-74-1	Hexachlorobenzene	250	U	
1912-24-9	Atrazine	250	U	
87-86-5	Pentachlorophenol	490	U	
85-01-8	Phenanthrene	260		
120-12-7	Anthracene	200	J	
86-74-8	Carbazole	8.1	J	
84-74-2	Di-n-butylphthalate	250 ~~11~~ ~~J B~~	U	
206-44-0	Fluoranthene	1200		
129-00-0	Pyrene	950		
85-68-7	Butylbenzylphthalate	250 ~~17~~ ~~J B~~	U	
91-94-1	3,3'-Dichlorobenzidine	250	U	
56-55-3	Benzo(a)anthracene	630		
218-01-9	Chrysene	630		
117-81-7	Bis(2-ethylhexyl)phthalate	130	J	
117-84-0	Di-n-octylphthalate	250	U	
205-99-2	Benzo(b)fluoranthene	450		
207-08-9	Benzo(k)fluoranthene	640		
50-32-8	Benzo(a)pyrene	620		
193-39-5	Indeno(1,2,3-cd)pyrene	230	J	
53-70-3	Dibenzo(a,h)anthracene	86	J	
191-24-2	Benzo(g,h,i)perylene	270		
58-90-2	2,3,4,6-Tetrachlorophenol	250	U	

[1] Cannot be separated from Diphenylamine

MW 9/16/13

EPA SAMPLE NO.
LMR13-79-024

7

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17061

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17061-7

Sample wt/vol: 30.1 (g/mL) g Lab File ID: ULL23.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 19 Decanted: (Y/N) Date Received: 06/18/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/25/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/02/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
100-52-7	Benzaldehyde	210 ~~27~~ ~~J B~~	U
108-95-2	Phenol	210	U
111-44-4	Bis(2-chloroethyl)ether	210	U
95-57-8	2-Chlorophenol	210	U
95-48-7	2-Methylphenol	210	U
108-60-1	2,2'-Oxybis(1-chloropropane)	210	U
98-86-2	Acetophenone	210 ~~36~~ ~~J B~~	U
106-44-5	4-Methylphenol	210	U
621-64-7	N-Nitroso-di-n-propylamine	210	U
67-72-1	Hexachloroethane	210	U
98-95-3	Nitrobenzene	210	U
78-59-1	Isophorone	210	U
88-75-5	2-Nitrophenol	210	U
105-67-9	2,4-Dimethylphenol	210	U
111-91-1	Bis(2-chloroethoxy)methane	210	U
120-83-2	2,4-Dichlorophenol	210	U
91-20-3	Naphthalene	210	U
106-47-8	4-Chloroaniline	210	U
87-68-3	Hexachlorobutadiene	210	U
105-60-2	Caprolactam	210	U
59-50-7	4-Chloro-3-methylphenol	210	U
91-57-6	2-Methylnaphthalene	210	U
77-47-4	Hexachlorocyclopentadiene	210	U
88-06-2	2,4,6-Trichlorophenol	210	U
95-95-4	2,4,5-Trichlorophenol	210	U
92-52-4	1,1'-Biphenyl	210	U
91-58-7	2-Chloronaphthalene	210	U
88-74-4	2-Nitroaniline	410	U
131-11-3	Dimethylphthalate	210	U
606-20-2	2,6-Dinitrotoluene	210	U
208-96-8	Acenaphthylene	210	U
99-09-2	3-Nitroaniline	410	U
83-32-9	Acenaphthene	210	U

MW 9/16/13

1E - FORM I SV-2

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-79-024

7

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17061

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17061-7

Sample wt/vol: 30.1 (g/mL) g Lab File ID: ULL23.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 19 Decanted: (Y/N) Date Received: 06/18/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/25/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/02/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
51-28-5	2,4-Dinitrophenol	410	U
100-02-7	4-Nitrophenol	410	U
132-64-9	Dibenzofuran	210	U
121-14-2	2,4-Dinitrotoluene	210	U
84-66-2	Diethylphthalate	210	U
86-73-7	Fluorene	210	U
7005-72-3	4-Chlorophenyl-phenylether	210	U
100-01-6	4-Nitroaniline	410	U
534-52-1	4,6-Dinitro-2-methylphenol	410	U
86-30-6	N-Nitrosodiphenylamin [1]	210	U
95-94-3	1,2,4,5-Tetrachlorobenzene	210	U
101-55-3	4-Bromophenyl-phenylether	210	U
118-74-1	Hexachlorobenzene	210	U
1912-24-9	Atrazine	210	U
87-86-5	Pentachlorophenol	410	U
85-01-8	Phenanthrene	5.3	J
120-12-7	Anthracene	4.4	J
86-74-8	Carbazole	210	U
84-74-2	Di-n-butylphthalate	210 ~~8.7~~ ~~J B~~	U
206-44-0	Fluoranthene	13	J
129-00-0	Pyrene	15	J
85-68-7	Butylbenzylphthalate	210 ~~13~~ ~~J B~~	U
91-94-1	3,3'-Dichlorobenzidine	210	U
56-55-3	Benzo(a)anthracene	210	U
218-01-9	Chrysene	12	J
117-81-7	Bis(2-ethylhexyl)phthalate	32	J
117-84-0	Di-n-octylphthalate	210	U
205-99-2	Benzo(b)fluoranthene	210	U
207-08-9	Benzo(k)fluoranthene	210	U
50-32-8	Benzo(a)pyrene	210	U
193-39-5	Indeno(1,2,3-cd)pyrene	210	U
53-70-3	Dibenzo(a,h)anthracene	210	U
191-24-2	Benzo(g,h,i)perylene	210	U
58-90-2	2,3,4,6-Tetrachlorophenol	210	U

[1] Cannot be separated from Diphenylamine

MW 9/16/13

1D - FORM I SV-1

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-01-072

B

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17061

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17061-8

Sample wt/vol: 29.7 (g/mL) g Lab File ID: ULLBK09.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 28 Decanted: (Y/N) Date Received: 06/18/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/25/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/03/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
100-52-7	Benzaldehyde	240 ~~92~~	~~J B~~	U
108-95-2	Phenol	25	J	
111-44-4	Bis(2-chloroethyl)ether	1.8	J	
95-57-8	2-Chlorophenol	240	U	
95-48-7	2-Methylphenol	240	U	
108-60-1	2,2'-Oxybis(1-chloropropane)	2.1	J	
98-86-2	Acetophenone	240 ~~60~~	~~J B~~	U
106-44-5	4-Methylphenol	240	U	
621-64-7	N-Nitroso-di-n-propylamine	29	J	
67-72-1	Hexachloroethane	240	U	
98-95-3	Nitrobenzene	4.8	J	
78-59-1	Isophorone	680		
88-75-5	2-Nitrophenol	1.9	J	
105-67-9	2,4-Dimethylphenol	240	U	
111-91-1	Bis(2-chloroethoxy)methane	0.88	J	
120-83-2	2,4-Dichlorophenol	240	U	
91-20-3	Naphthalene	23	J	
106-47-8	4-Chloroaniline	11	~~J~~	J
87-68-3	Hexachlorobutadiene	240	U	
105-60-2	Caprolactam	8.1	J	
59-50-7	4-Chloro-3-methylphenol	1.3	J	
91-57-6	2-Methylnaphthalene	240	U	
77-47-4	Hexachlorocyclopentadiene	240	~~U~~	R
88-06-2	2,4,6-Trichlorophenol	3.3	J	
95-95-4	2,4,5-Trichlorophenol	3.3	J	
92-52-4	1,1'-Biphenyl	15	J	
91-58-7	2-Chloronaphthalene	730		
88-74-4	2-Nitroaniline	3.1	J	
131-11-3	Dimethylphthalate	130	J	
606-20-2	2,6-Dinitrotoluene	240	U	
208-96-8	Acenaphthylene	240	U	
99-09-2	3-Nitroaniline	230	J	
83-32-9	Acenaphthene	93	J	

MW 9/16/13

EPA SAMPLE NO.
LMR13-01-072

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17061 8

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17061-8

Sample wt/vol: 29.7 (g/mL) g Lab File ID: ULLBK09.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 28 Decanted: (Y/N) Date Received: 06/18/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/25/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/03/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
51-28-5	2,4-Dinitrophenol	9.2	J	
100-02-7	4-Nitrophenol	8.5	J	
132-64-9	Dibenzofuran	11	J	
121-14-2	2,4-Dinitrotoluene	340		
84-66-2	Diethylphthalate	3.7	J	
86-73-7	Fluorene	76	J	
7005-72-3	4-Chlorophenyl-phenylether	8.5	J	
100-01-6	4-Nitroaniline	4.5	J	
534-52-1	4,6-Dinitro-2-methylphenol	9.3	J	
86-30-6	N-Nitrosodiphenylamin [1]	16	J	
95-94-3	1,2,4,5-Tetrachlorobenzene	240	U	
101-55-3	4-Bromophenyl-phenylether	240	U	
118-74-1	Hexachlorobenzene	240	U	
1912-24-9	Atrazine	240	U	
87-86-5	Pentachlorophenol	460	U	
85-01-8	Phenanthrene	340		
120-12-7	Anthracene	89	J	
86-74-8	Carbazole	2.9	J	
84-74-2	Di-n-butylphthalate	240 ~~7.8~~ ~~J B~~	U	
206-44-0	Fluoranthene	270		
129-00-0	Pyrene	190	J	
85-68-7	Butylbenzylphthalate	240 ~~12~~ ~~J B~~	U	
91-94-1	3,3'-Dichlorobenzidine	1.2 ~~J~~	J	
56-55-3	Benzo(a)anthracene	96	J	
218-01-9	Chrysene	110	J	
117-81-7	Bis(2-ethylhexyl)phthalate	30	J	
117-84-0	Di-n-octylphthalate	1.3	J	
205-99-2	Benzo(b)fluoranthene	120	J	
207-08-9	Benzo(k)fluoranthene	130	J	
50-32-8	Benzo(a)pyrene	91	J	
193-39-5	Indeno(1,2,3-cd)pyrene	34	J	
53-70-3	Dibenzo(a,h)anthracene	24	J	
191-24-2	Benzo(g,h,i)perylene	41	J	
58-90-2	2,3,4,6-Tetrachlorophenol	240	U	

[1] Cannot be separated from Diphenylamine

MW 9/16/13

EPA SAMPLE NO.
LMR13-38-048

9

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17061

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17061-9

Sample wt/vol: 30.5 (g/mL) g Lab File ID: ULLBK10.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 32 Decanted: (Y/N) Date Received: 06/18/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/25/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/03/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
100-52-7	Benzaldehyde	240 ~~75~~ ~~J B~~	U	U
108-95-2	Phenol	240	U	
111-44-4	Bis(2-chloroethyl)ether	240	U	
95-57-8	2-Chlorophenol	240	U	
95-48-7	2-Methylphenol	240	U	
108-60-1	2,2'-Oxybis(1-chloropropane)	240	U	
98-86-2	Acetophenone	240 ~~57~~ ~~J B~~	U	U
106-44-5	4-Methylphenol	240	U	
621-64-7	N-Nitroso-di-n-propylamine	240	U	
67-72-1	Hexachloroethane	240	U	
98-95-3	Nitrobenzene	240	U	
78-59-1	Isophorone	240	U	
88-75-5	2-Nitrophenol	240	U	
105-67-9	2,4-Dimethylphenol	240	U	
111-91-1	Bis(2-chloroethoxy)methane	240	U	
120-83-2	2,4-Dichlorophenol	240	U	
91-20-3	Naphthalene	11	J	
106-47-8	4-Chloroaniline	240	U	
87-68-3	Hexachlorobutadiene	240	U	
105-60-2	Caprolactam	240	U	
59-50-7	4-Chloro-3-methylphenol	240	U	
91-57-6	2-Methylnaphthalene	240	U	
77-47-4	Hexachlorocyclopentadiene	240	~~U~~	UJ
88-06-2	2,4,6-Trichlorophenol	240	U	
95-95-4	2,4,5-Trichlorophenol	240	U	
92-52-4	1,1'-Biphenyl	240	U	
91-58-7	2-Chloronaphthalene	240	U	
88-74-4	2-Nitroaniline	480	U	
131-11-3	Dimethylphthalate	240	U	
606-20-2	2,6-Dinitrotoluene	240	U	
208-96-8	Acenaphthylene	18	J	
99-09-2	3-Nitroaniline	480	U	
83-32-9	Acenaphthene	39	J	

MW 9/16/13

1E - FORM I SV-2

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-38-048

9

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17061

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17061-9

Sample wt/vol: 30.5 (g/mL) g Lab File ID: ULLBK10.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 32 Decanted: (Y/N) Date Received: 06/18/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/25/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/03/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
51-28-5	2,4-Dinitrophenol	480	~~U~~	UJ
100-02-7	4-Nitrophenol	480	U	
132-64-9	Dibenzofuran	23	J	
121-14-2	2,4-Dinitrotoluene	240	U	
84-66-2	Diethylphthalate	240	U	
86-73-7	Fluorene	47	J	
7005-72-3	4-Chlorophenyl-phenylether	240	U	
100-01-6	4-Nitroaniline	480	U	
534-52-1	4,6-Dinitro-2-methylphenol	480	U	
86-30-6	N-Nitrosodiphenylamin [1]	240	U	
95-94-3	1,2,4,5-Tetrachlorobenzene	240	U	
101-55-3	4-Bromophenyl-phenylether	240	U	
118-74-1	Hexachlorobenzene	240	U	
1912-24-9	Atrazine	240	U	
87-86-5	Pentachlorophenol	480	U	
85-01-8	Phenanthrene	470		
120-12-7	Anthracene	210	J	
86-74-8	Carbazole	240	U	
84-74-2	Di-n-butylphthalate	240 ~~11~~	~~J B~~	U
206-44-0	Fluoranthene	910		
129-00-0	Pyrene	690		
85-68-7	Butylbenzylphthalate	240 ~~18~~	~~J B~~	U
91-94-1	3,3'-Dichlorobenzidine	240	U	
56-55-3	Benzo(a)anthracene	420		
218-01-9	Chrysene	360		
117-81-7	Bis(2-ethylhexyl)phthalate	120	J	
117-84-0	Di-n-octylphthalate	240	~~U~~	UJ
205-99-2	Benzo(b)fluoranthene	310		
207-08-9	Benzo(k)fluoranthene	270		
50-32-8	Benzo(a)pyrene	330		
193-39-5	Indeno(1,2,3-cd)pyrene	130	J	
53-70-3	Dibenzo(a,h)anthracene	41	J	
191-24-2	Benzo(g,h,i)perylene	160	J	
58-90-2	2,3,4,6-Tetrachlorophenol	240	U	

[1] Cannot be separated from Diphenylamine

MW 9/16/13

1D - FORM I SV-1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-38-096

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678 10

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17061

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17061-10

Sample wt/vol: 30.1 (g/mL) g Lab File ID: ULLBK11.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 23 Decanted: (Y/N) Date Received: 06/18/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/25/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/03/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
100-52-7	Benzaldehyde	220 ~~43~~	~~J B~~	U
108-95-2	Phenol	220	U	
111-44-4	Bis(2-chloroethyl)ether	220	U	
95-57-8	2-Chlorophenol	220	U	
95-48-7	2-Methylphenol	220	U	
108-60-1	2,2'-Oxybis(1-chloropropane)	220	U	
98-86-2	Acetophenone	220 ~~34~~	~~J B~~	U
106-44-5	4-Methylphenol	220	U	
621-64-7	N-Nitroso-di-n-propylamine	220	U	
67-72-1	Hexachloroethane	220	U	
98-95-3	Nitrobenzene	220	U	
78-59-1	Isophorone	220	U	
88-75-5	2-Nitrophenol	220	U	
105-67-9	2,4-Dimethylphenol	220	U	
111-91-1	Bis(2-chloroethoxy)methane	220	U	
120-83-2	2,4-Dichlorophenol	220	U	
91-20-3	Naphthalene	220	U	
106-47-8	4-Chloroaniline	220	U	
87-68-3	Hexachlorobutadiene	220	U	
105-60-2	Caprolactam	220	U	
59-50-7	4-Chloro-3-methylphenol	220	U	
91-57-6	2-Methylnaphthalene	220	U	
77-47-4	Hexachlorocyclopentadiene	220	~~U~~	UJ
88-06-2	2,4,6-Trichlorophenol	220	U	
95-95-4	2,4,5-Trichlorophenol	220	U	
92-52-4	1,1'-Biphenyl	220	U	
91-58-7	2-Chloronaphthalene	220	U	
88-74-4	2-Nitroaniline	430	U	
131-11-3	Dimethylphthalate	220	U	
606-20-2	2,6-Dinitrotoluene	220	U	
208-96-8	Acenaphthylene	220	U	
99-09-2	3-Nitroaniline	430	U	
83-32-9	Acenaphthene	220	U	

MW 9/16/13

EPA SAMPLE NO.
LMR13-38-096

10

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17061

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17061-10

Sample wt/vol: 30.1 (g/mL) g Lab File ID: ULLBK11.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 23 Decanted: (Y/N) Date Received: 06/18/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/25/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/03/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
51-28-5	2,4-Dinitrophenol	430	~~U~~	UJ
100-02-7	4-Nitrophenol	430	U	
132-64-9	Dibenzofuran	220	U	
121-14-2	2,4-Dinitrotoluene	220	U	
84-66-2	Diethylphthalate	5.3	J	
86-73-7	Fluorene	220	U	
7005-72-3	4-Chlorophenyl-phenylether	220	U	
100-01-6	4-Nitroaniline	430	U	
534-52-1	4,6-Dinitro-2-methylphenol	430	U	
86-30-6	N-Nitrosodiphenylamin [1]	220	U	
95-94-3	1,2,4,5-Tetrachlorobenzene	220	U	
101-55-3	4-Bromophenyl-phenylether	220	U	
118-74-1	Hexachlorobenzene	220	U	
1912-24-9	Atrazine	220	U	
87-86-5	Pentachlorophenol	430	U	
85-01-8	Phenanthrene	5.4	J	
120-12-7	Anthracene	220	U	
86-74-8	Carbazole	220	U	
84-74-2	Di-n-butylphthalate	220 ~~9.7~~	~~J B~~	U
206-44-0	Fluoranthene	6.9	J	
129-00-0	Pyrene	9.7	J	
85-68-7	Butylbenzylphthalate	220 ~~16~~	~~J B~~	U
91-94-1	3,3'-Dichlorobenzidine	220	U	
56-55-3	Benzo(a)anthracene	220	U	
218-01-9	Chrysene	14	J	
117-81-7	Bis(2-ethylhexyl)phthalate	35	J	
117-84-0	Di-n-octylphthalate	220	~~U~~	UJ
205-99-2	Benzo(b)fluoranthene	220	U	
207-08-9	Benzo(k)fluoranthene	220	U	
50-32-8	Benzo(a)pyrene	220	U	
193-39-5	Indeno(1,2,3-cd)pyrene	220	U	
53-70-3	Dibenzo(a,h)anthracene	220	U	
191-24-2	Benzo(g,h,i)perylene	220	U	
58-90-2	2,3,4,6-Tetrachlorophenol	220	U	

[1] Cannot be separated from Diphenylamine

MW 9/16/13

EPA SAMPLE NO.
LMR13-40-048

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678 11

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17061

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17061-11

Sample wt/vol: 30.3 (g/mL) g Lab File ID: ULLBK12.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 45 Decanted: (Y/N) Date Received: 06/18/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/25/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/03/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
100-52-7	Benzaldehyde	310 ~~78~~	~~J B~~	U
108-95-2	Phenol	310	U	
111-44-4	Bis(2-chloroethyl)ether	310	U	
95-57-8	2-Chlorophenol	310	U	
95-48-7	2-Methylphenol	310	U	
108-60-1	2,2'-Oxybis(1-chloropropane)	310	U	
98-86-2	Acetophenone	310 ~~60~~	~~J B~~	U
106-44-5	4-Methylphenol	9.5	~~J~~	J
621-64-7	N-Nitroso-di-n-propylamine	310	U	
67-72-1	Hexachloroethane	310	U	
98-95-3	Nitrobenzene	310	U	
78-59-1	Isophorone	310	U	
88-75-5	2-Nitrophenol	310	U	
105-67-9	2,4-Dimethylphenol	310	U	
111-91-1	Bis(2-chloroethoxy)methane	310	U	
120-83-2	2,4-Dichlorophenol	310	U	
91-20-3	Naphthalene	140	J	
106-47-8	4-Chloroaniline	310	~~J~~	R
87-68-3	Hexachlorobutadiene	310	U	
105-60-2	Caprolactam	310	U	
59-50-7	4-Chloro-3-methylphenol	310	U	
91-57-6	2-Methylnaphthalene	310	U	
77-47-4	Hexachlorocyclopentadiene	310	~~J~~	R
88-06-2	2,4,6-Trichlorophenol	310	U	
95-95-4	2,4,5-Trichlorophenol	310	U	
92-52-4	1,1'-Biphenyl	310	U	
91-58-7	2-Chloronaphthalene	310	U	
88-74-4	2-Nitroaniline	600	U	
131-11-3	Dimethylphthalate	310	U	
606-20-2	2,6-Dinitrotoluene	310	U	
208-96-8	Acenaphthylene	15	J	
99-09-2	3-Nitroaniline	600	U	
83-32-9	Acenaphthene	45	J	

NW 9/4/13

1E - FORM I SV-2

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-40-048

11

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17061

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17061-11

Sample wt/vol: 30.3 (g/mL) g Lab File ID: ULLBK12.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 45 Decanted: (Y/N) Date Received: 06/18/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/25/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/03/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
51-28-5	2,4-Dinitrophenol	600	~~U~~	UJ
100-02-7	4-Nitrophenol	600	U	
132-64-9	Dibenzofuran	28	J	
121-14-2	2,4-Dinitrotoluene	310	U	
84-66-2	Diethylphthalate	310	U	
86-73-7	Fluorene	39	J	
7005-72-3	4-Chlorophenyl-phenylether	310	U	
100-01-6	4-Nitroaniline	600	U	
534-52-1	4,6-Dinitro-2-methylphenol	600	U	
86-30-6	N-Nitrosodiphenylamin [1]	310	U	
95-94-3	1,2,4,5-Tetrachlorobenzene	310	U	
101-55-3	4-Bromophenyl-phenylether	310	U	
118-74-1	Hexachlorobenzene	310	U	
1912-24-9	Atrazine	310	U	
87-86-5	Pentachlorophenol	600	U	
85-01-8	Phenanthrene	210	J	
120-12-7	Anthracene	58	J	
86-74-8	Carbazole	6.1	J	
84-74-2	Di-n-butylphthalate	310 ~~13~~	~~J B~~	U
206-44-0	Fluoranthene	380		
129-00-0	Pyrene	390		
85-68-7	Butylbenzylphthalate	310	U	
91-94-1	3,3'-Dichlorobenzidine	310	~~U~~	R
56-55-3	Benzo(a)anthracene	240	J	
218-01-9	Chrysene	270	J	
117-81-7	Bis(2-ethylhexyl)phthalate	320		
117-84-0	Di-n-octylphthalate	310	~~U~~	UJ
205-99-2	Benzo(b)fluoranthene	240	J	
207-08-9	Benzo(k)fluoranthene	170	J	
50-32-8	Benzo(a)pyrene	200	J	
193-39-5	Indeno(1,2,3-cd)pyrene	120	J	
53-70-3	Dibenzo(a,h)anthracene	41	J	
191-24-2	Benzo(g,h,i)perylene	150	J	
58-90-2	2,3,4,6-Tetrachlorophenol	310	U	

[1] Cannot be separated from Diphenylamine

MW 9/16/13

EPA SAMPLE NO.
LMR13-01-012

12

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17061

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17061-12

Sample wt/vol: 30.2 (g/mL) g Lab File ID: ULLBN05.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 30 Decanted: (Y/N) Date Received: 06/18/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/25/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/04/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 4.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
100-52-7	Benzaldehyde	960	U
108-95-2	Phenol	960	U
111-44-4	Bis(2-chloroethyl)ether	960	U
95-57-8	2-Chlorophenol	960	U
95-48-7	2-Methylphenol	960	U
108-60-1	2,2'-Oxybis(1-chloropropane)	960	U
98-86-2	Acetophenone	960	U
106-44-5	4-Methylphenol	960	U
621-64-7	N-Nitroso-di-n-propylamine	960	U
67-72-1	Hexachloroethane	960	U
98-95-3	Nitrobenzene	960	U
78-59-1	Isophorone	960	U
88-75-5	2-Nitrophenol	960	U
105-67-9	2,4-Dimethylphenol	960	U
111-91-1	Bis(2-chloroethoxy)methane	960	U
120-83-2	2,4-Dichlorophenol	960	U
91-20-3	Naphthalene	180	J
106-47-8	4-Chloroaniline	960	U
87-68-3	Hexachlorobutadiene	960	U
105-60-2	Caprolactam	960	U
59-50-7	4-Chloro-3-methylphenol	960	U
91-57-6	2-Methylnaphthalene	86	J
77-47-4	Hexachlorocyclopentadiene	960	U
88-06-2	2,4,6-Trichlorophenol	960	U
95-95-4	2,4,5-Trichlorophenol	960	U
92-52-4	1,1'-Biphenyl	960	U
91-58-7	2-Chloronaphthalene	960	U
88-74-4	2-Nitroaniline	1900	U
131-11-3	Dimethylphthalate	960	U
606-20-2	2,6-Dinitrotoluene	960	U
208-96-8	Acenaphthylene	72	J
99-09-2	3-Nitroaniline	1900	U
83-32-9	Acenaphthene	1000	

NW 9/16/13

EPA SAMPLE NO.
LMR13-01-012

12

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17061

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17061-12

Sample wt/vol: 30.2 (g/mL) g Lab File ID: ULLBN05.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 30 Decanted: (Y/N) Date Received: 06/18/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/25/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/04/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 4.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
51-28-5	2,4-Dinitrophenol	1900	U
100-02-7	4-Nitrophenol	1900	U
132-64-9	Dibenzofuran	77	J
121-14-2	2,4-Dinitrotoluene	960	U
84-66-2	Diethylphthalate	960	U
86-73-7	Fluorene	1100	
7005-72-3	4-Chlorophenyl-phenylether	960	U
100-01-6	4-Nitroaniline	1900	U
534-52-1	4,6-Dinitro-2-methylphenol	1900	U
86-30-6	N-Nitrosodiphenylamin [1]	960	U
95-94-3	1,2,4,5-Tetrachlorobenzene	960	U
101-55-3	4-Bromophenyl-phenylether	960	U
118-74-1	Hexachlorobenzene	960	U
1912-24-9	Atrazine	960	U
87-86-5	Pentachlorophenol	1900	U
85-01-8	Phenanthrene	6000	
120-12-7	Anthracene	1200	
86-74-8	Carbazole	960	U
84-74-2	Di-n-butylphthalate	960	U
206-44-0	Fluoranthene	4000	
129-00-0	Pyrene	3000	
85-68-7	Butylbenzylphthalate	960	U
91-94-1	3,3'-Dichlorobenzidine	960	U
56-55-3	Benzo(a)anthracene	1500	
218-01-9	Chrysene	2000	
117-81-7	Bis(2-ethylhexyl)phthalate	960	U
117-84-0	Di-n-octylphthalate	960	~~U~~ UJ
205-99-2	Benzo(b)fluoranthene	960	
207-08-9	Benzo(k)fluoranthene	1100	
50-32-8	Benzo(a)pyrene	1100	
193-39-5	Indeno(1,2,3-cd)pyrene	440	J
53-70-3	Dibenzo(a,h)anthracene	150	J
191-24-2	Benzo(g,h,i)perylene	490	J
58-90-2	2,3,4,6-Tetrachlorophenol	960	U

[1] Cannot be separated from Diphenylamine

NW 9/16/13

EPA SAMPLE NO.
LMR13-01-024

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678 13

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17061

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17061-13

Sample wt/vol: 30.9 (g/mL) g Lab File ID: ULLBN06.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 28 Decanted: (Y/N) Date Received: 06/18/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/25/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/04/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 2.9

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
100-52-7	Benzaldehyde	660 45 ~~J B~~	U
108-95-2	Phenol	660	U
111-44-4	Bis(2-chloroethyl)ether	660	U
95-57-8	2-Chlorophenol	660	U
95-48-7	2-Methylphenol	660	U
108-60-1	2,2'-Oxybis(1-chloropropane)	660	U
98-86-2	Acetophenone	660	U
106-44-5	4-Methylphenol	660	U
621-64-7	N-Nitroso-di-n-propylamine	660	U
67-72-1	Hexachloroethane	660	U
98-95-3	Nitrobenzene	660	U
78-59-1	Isophorone	660	U
88-75-5	2-Nitrophenol	660	U
105-67-9	2,4-Dimethylphenol	660	U
111-91-1	Bis(2-chloroethoxy)methane	660	U
120-83-2	2,4-Dichlorophenol	660	U
91-20-3	Naphthalene	340	J
106-47-8	4-Chloroaniline	660	U
87-68-3	Hexachlorobutadiene	660	U
105-60-2	Caprolactam	660	U
59-50-7	4-Chloro-3-methylphenol	660	U
91-57-6	2-Methylnaphthalene	120	J
77-47-4	Hexachlorocyclopentadiene	660	U
88-06-2	2,4,6-Trichlorophenol	660	U
95-95-4	2,4,5-Trichlorophenol	660	U
92-52-4	1,1'-Biphenyl	660	U
91-58-7	2-Chloronaphthalene	660	U
88-74-4	2-Nitroaniline	1300	U
131-11-3	Dimethylphthalate	660	U
606-20-2	2,6-Dinitrotoluene	660	U
208-96-8	Acenaphthylene	96	J
99-09-2	3-Nitroaniline	1300	U
83-32-9	Acenaphthene	2100	

MW 9/16/13

1E - FORM I SV-2
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-01-024

13

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17061

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17061-13

Sample wt/vol: 30.9 (g/mL) g Lab File ID: ULLBN06.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 28 Decanted: (Y/N) Date Received: 06/18/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/25/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/04/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 2.9

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
51-28-5	2,4-Dinitrophenol	1300	U
100-02-7	4-Nitrophenol	1300	U
132-64-9	Dibenzofuran	110	J
121-14-2	2,4-Dinitrotoluene	660	U
84-66-2	Diethylphthalate	660	U
86-73-7	Fluorene	2200	
7005-72-3	4-Chlorophenyl-phenylether	660	U
100-01-6	4-Nitroaniline	1300	U
534-52-1	4,6-Dinitro-2-methylphenol	1300	U
86-30-6	N-Nitrosodiphenylamin [1]	660	U
95-94-3	1,2,4,5-Tetrachlorobenzene	660	U
101-55-3	4-Bromophenyl-phenylether	660	U
118-74-1	Hexachlorobenzene	660	U
1912-24-9	Atrazine	660	U
87-86-5	Pentachlorophenol	1300	U
85-01-8	Phenanthrene	7400	
120-12-7	Anthracene	1800	
86-74-8	Carbazole	660	U
84-74-2	Di-n-butylphthalate	660	U
206-44-0	Fluoranthene	5600	
129-00-0	Pyrene	3500	
85-68-7	Butylbenzylphthalate	660	U
91-94-1	3,3'-Dichlorobenzidine	660	U
56-55-3	Benzo(a)anthracene	1900	
218-01-9	Chrysene	1900	
117-81-7	Bis(2-ethylhexyl)phthalate	39	J
117-84-0	Di-n-octylphthalate	660	~~U~~ UJ
205-99-2	Benzo(b)fluoranthene	1500	
207-08-9	Benzo(k)fluoranthene	1300	
50-32-8	Benzo(a)pyrene	1500	
193-39-5	Indeno(1,2,3-cd)pyrene	610	J
53-70-3	Dibenzo(a,h)anthracene	230	J
191-24-2	Benzo(g,h,i)perylene	690	
58-90-2	2,3,4,6-Tetrachlorophenol	660	U

[1] Cannot be separated from Diphenylamine

NW 9/16/13

EPA SAMPLE NO.
LMR13-01-048

15

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17061

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17061-15

Sample wt/vol: 30.0 (g/mL) g Lab File ID: ULLBN07.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 28 Decanted: (Y/N) Date Received: 06/18/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/25/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/04/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 2.5

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
100-52-7	Benzaldehyde	590 ~~49~~	~~J B~~ U
108-95-2	Phenol	590	U
111-44-4	Bis(2-chloroethyl)ether	590	U
95-57-8	2-Chlorophenol	590	U
95-48-7	2-Methylphenol	590	U
108-60-1	2,2'-Oxybis(1-chloropropane)	590	U
98-86-2	Acetophenone	590 ~~59~~	~~J B~~ U
106-44-5	4-Methylphenol	590	U
621-64-7	N-Nitroso-di-n-propylamine	590	U
67-72-1	Hexachloroethane	590	U
98-95-3	Nitrobenzene	590	U
78-59-1	Isophorone	590	U
88-75-5	2-Nitrophenol	590	U
105-67-9	2,4-Dimethylphenol	590	U
111-91-1	Bis(2-chloroethoxy)methane	590	U
120-83-2	2,4-Dichlorophenol	590	U
91-20-3	Naphthalene	220	J
106-47-8	4-Chloroaniline	590	U
87-68-3	Hexachlorobutadiene	590	U
105-60-2	Caprolactam	590	U
59-50-7	4-Chloro-3-methylphenol	590	U
91-57-6	2-Methylnaphthalene	98	J
77-47-4	Hexachlorocyclopentadiene	590	U
88-06-2	2,4,6-Trichlorophenol	590	U
95-95-4	2,4,5-Trichlorophenol	590	U
92-52-4	1,1'-Biphenyl	590	U
91-58-7	2-Chloronaphthalene	590	U
88-74-4	2-Nitroaniline	1100	U
131-11-3	Dimethylphthalate	590	U
606-20-2	2,6-Dinitrotoluene	590	U
208-96-8	Acenaphthylene	90	J
99-09-2	3-Nitroaniline	1100	U
83-32-9	Acenaphthene	1400	

MW 9/16/13

EPA SAMPLE NO.
LMR13-01-048

15

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17061

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17061-15

Sample wt/vol: 30.0 (g/mL) g Lab File ID: ULLBN07.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 28 Decanted: (Y/N) Date Received: 06/18/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/25/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/04/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 2.5

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
51-28-5	2,4-Dinitrophenol	1100	U
100-02-7	4-Nitrophenol	1100	U
132-64-9	Dibenzofuran	230	J
121-14-2	2,4-Dinitrotoluene	590	U
84-66-2	Diethylphthalate	590	U
86-73-7	Fluorene	1300	
7005-72-3	4-Chlorophenyl-phenylether	590	U
100-01-6	4-Nitroaniline	1100	U
534-52-1	4,6-Dinitro-2-methylphenol	1100	U
86-30-6	N-Nitrosodiphenylamin [1]	590	U
95-94-3	1,2,4,5-Tetrachlorobenzene	590	U
101-55-3	4-Bromophenyl-phenylether	590	U
118-74-1	Hexachlorobenzene	590	U
1912-24-9	Atrazine	590	U
87-86-5	Pentachlorophenol	1100	U
85-01-8	Phenanthrene	5000	
120-12-7	Anthracene	1400	
86-74-8	Carbazole	24	J
84-74-2	Di-n-butylphthalate	590	U
206-44-0	Fluoranthene	4400	
129-00-0	Pyrene	3300	
85-68-7	Butylbenzylphthalate	590	U
91-94-1	3,3'-Dichlorobenzidine	590	U
56-55-3	Benzo(a)anthracene	1900	
218-01-9	Chrysene	1900	
117-81-7	Bis(2-ethylhexyl)phthalate	590	U
117-84-0	Di-n-octylphthalate	590	~~U~~ UJ
205-99-2	Benzo(b)fluoranthene	1400	
207-08-9	Benzo(k)fluoranthene	1400	
50-32-8	Benzo(a)pyrene	1700	
193-39-5	Indeno(1,2,3-cd)pyrene	690	
53-70-3	Dibenzo(a,h)anthracene	240	J
191-24-2	Benzo(g,h,i)perylene	800	
58-90-2	2,3,4,6-Tetrachlorophenol	590	U

[1] Cannot be separated from Diphenylamine

MW 9/16/13

EPA SAMPLE NO.
LMR13-01-096

16

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17061

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17061-16

Sample wt/vol: 30.6 (g/mL) g Lab File ID: ULLBK15.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 31 Decanted: (Y/N) Date Received: 06/18/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/25/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/03/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
100-52-7	Benzaldehyde	240 ~~71~~	~~J B~~	U
108-95-2	Phenol	16	J	
111-44-4	Bis(2-chloroethyl)ether	240	U	
95-57-8	2-Chlorophenol	240	U	
95-48-7	2-Methylphenol	240	U	
108-60-1	2,2'-Oxybis(1-chloropropane)	240	U	
98-86-2	Acetophenone	240 ~~47~~	~~J B~~	U
106-44-5	4-Methylphenol	240	U	
621-64-7	N-Nitroso-di-n-propylamine	240	U	
67-72-1	Hexachloroethane	240	U	
98-95-3	Nitrobenzene	240	U	
78-59-1	Isophorone	240	U	
88-75-5	2-Nitrophenol	240	U	
105-67-9	2,4-Dimethylphenol	240	U	
111-91-1	Bis(2-chloroethoxy)methane	240	U	
120-83-2	2,4-Dichlorophenol	240	U	
91-20-3	Naphthalene	240	U	
106-47-8	4-Chloroaniline	240	U	
87-68-3	Hexachlorobutadiene	240	U	
105-60-2	Caprolactam	240	U	
59-50-7	4-Chloro-3-methylphenol	240	U	
91-57-6	2-Methylnaphthalene	240	U	
77-47-4	Hexachlorocyclopentadiene	240	~~U~~	UJ
88-06-2	2,4,6-Trichlorophenol	240	U	
95-95-4	2,4,5-Trichlorophenol	240	U	
92-52-4	1,1'-Biphenyl	240	U	
91-58-7	2-Chloronaphthalene	240	U	
88-74-4	2-Nitroaniline	470	U	
131-11-3	Dimethylphthalate	240	U	
606-20-2	2,6-Dinitrotoluene	240	U	
208-96-8	Acenaphthylene	240	U	
99-09-2	3-Nitroaniline	470	U	
83-32-9	Acenaphthene	6.2	J	

NW 9/16/13

EPA SAMPLE NO.
LMR13-01-096

16

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678
Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17061
Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17061-16
Sample wt/vol: 30.6 (g/mL) g Lab File ID: ULLBK15.D
Level: (LOW/MED) LOW Extraction: (Type) SONC
% Moisture: 31 Decanted: (Y/N) Date Received: 06/18/2013
Concentrated Extract Volume: 500 (uL) Date Extracted: 06/25/2013
Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/03/2013
GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
51-28-5	2,4-Dinitrophenol	470	~~U~~	UJ
100-02-7	4-Nitrophenol	470	U	
132-64-9	Dibenzofuran	240	U	
121-14-2	2,4-Dinitrotoluene	240	U	
84-66-2	Diethylphthalate	5.4	J	
86-73-7	Fluorene	4.9	J	
7005-72-3	4-Chlorophenyl-phenylether	240	U	
100-01-6	4-Nitroaniline	470	U	
534-52-1	4,6-Dinitro-2-methylphenol	470	U	
86-30-6	N-Nitrosodiphenylamin [1]	240	U	
95-94-3	1,2,4,5-Tetrachlorobenzene	240	U	
101-55-3	4-Bromophenyl-phenylether	240	U	
118-74-1	Hexachlorobenzene	240	U	
1912-24-9	Atrazine	240	U	
87-86-5	Pentachlorophenol	470	U	
85-01-8	Phenanthrene	18	J	
120-12-7	Anthracene	6.3	J	
86-74-8	Carbazole	240	U	
84-74-2	Di-n-butylphthalate	240 ~~9.7~~	~~J B~~	U
206-44-0	Fluoranthene	17	J	
129-00-0	Pyrene	19	J	
85-68-7	Butylbenzylphthalate	240 ~~13~~	~~J B~~	U
91-94-1	3,3'-Dichlorobenzidine	240	U	
56-55-3	Benzo(a)anthracene	13	J	
218-01-9	Chrysene	21	J	
117-81-7	Bis(2-ethylhexyl)phthalate	27	J	
117-84-0	Di-n-octylphthalate	240	~~U~~	UJ
205-99-2	Benzo(b)fluoranthene	8.8	J	
207-08-9	Benzo(k)fluoranthene	9.5	J	
50-32-8	Benzo(a)pyrene	13	J	
193-39-5	Indeno(1,2,3-cd)pyrene	240	U	
53-70-3	Dibenzo(a,h)anthracene	240	U	
191-24-2	Benzo(g,h,i)perylene	240	U	
58-90-2	2,3,4,6-Tetrachlorophenol	240	U	

[1] Cannot be separated from Diphenylamine

NW 9/16/13

1D - FORM I SV-1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-01-120

17

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17061

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17061-17

Sample wt/vol: 30.4 (g/mL) g Lab File ID: ULLBK16.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 35 Decanted: (Y/N) Date Received: 06/18/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/25/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/03/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
100-52-7	Benzaldehyde	260 ~~41~~ ~~J B~~	U	U
108-95-2	Phenol	260	U	
111-44-4	Bis(2-chloroethyl)ether	260	U	
95-57-8	2-Chlorophenol	260	U	
95-48-7	2-Methylphenol	260	U	
108-60-1	2,2'-Oxybis(1-chloropropane)	260	U	
98-86-2	Acetophenone	260 ~~31~~ ~~J B~~	U	U
106-44-5	4-Methylphenol	260	U	
621-64-7	N-Nitroso-di-n-propylamine	260	U	
67-72-1	Hexachloroethane	260	U	
98-95-3	Nitrobenzene	260	U	
78-59-1	Isophorone	260	U	
88-75-5	2-Nitrophenol	260	U	
105-67-9	2,4-Dimethylphenol	260	U	
111-91-1	Bis(2-chloroethoxy)methane	260	U	
120-83-2	2,4-Dichlorophenol	260	U	
91-20-3	Naphthalene	260	U	
106-47-8	4-Chloroaniline	260	U	
87-68-3	Hexachlorobutadiene	260	U	
105-60-2	Caprolactam	260	U	
59-50-7	4-Chloro-3-methylphenol	260	U	
91-57-6	2-Methylnaphthalene	260	U	
77-47-4	Hexachlorocyclopentadiene	260	~~U~~	UJ
88-06-2	2,4,6-Trichlorophenol	260	U	
95-95-4	2,4,5-Trichlorophenol	260	U	
92-52-4	1,1'-Biphenyl	260	U	
91-58-7	2-Chloronaphthalene	260	U	
88-74-4	2-Nitroaniline	500	U	
131-11-3	Dimethylphthalate	260	U	
606-20-2	2,6-Dinitrotoluene	260	U	
208-96-8	Acenaphthylene	260	U	
99-09-2	3-Nitroaniline	500	U	
83-32-9	Acenaphthene	260	U	

MW 9/16/13

EPA SAMPLE NO.
LMR13-01-120

17

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17061

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17061-17

Sample wt/vol: 30.4 (g/mL) g Lab File ID: ULLBK16.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 35 Decanted: (Y/N) Date Received: 06/18/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/25/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/03/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
51-28-5	2,4-Dinitrophenol	500	~~U~~	UJ
100-02-7	4-Nitrophenol	500	U	
132-64-9	Dibenzofuran	260	U	
121-14-2	2,4-Dinitrotoluene	260	U	
84-66-2	Diethylphthalate	5.2	J	
86-73-7	Fluorene	260	U	
7005-72-3	4-Chlorophenyl-phenylether	260	U	
100-01-6	4-Nitroaniline	500	U	
534-52-1	4,6-Dinitro-2-methylphenol	500	U	
86-30-6	N-Nitrosodiphenylamin [1]	260	U	
95-94-3	1,2,4,5-Tetrachlorobenzene	260	U	
101-55-3	4-Bromophenyl-phenylether	260	U	
118-74-1	Hexachlorobenzene	260	U	
1912-24-9	Atrazine	260	U	
87-86-5	Pentachlorophenol	500	U	
85-01-8	Phenanthrene	9.8	J	
120-12-7	Anthracene	260	U	
86-74-8	Carbazole	260	U	
84-74-2	Di-n-butylphthalate	260 ~~10~~	~~J B~~	U
206-44-0	Fluoranthene	6.9	J	
129-00-0	Pyrene	9.6	J	
85-68-7	Butylbenzylphthalate	260 ~~16~~	~~J B~~	U
91-94-1	3,3'-Dichlorobenzidine	260	U	
56-55-3	Benzo(a)anthracene	260	U	
218-01-9	Chrysene	260	U	
117-81-7	Bis(2-ethylhexyl)phthalate	29	J	
117-84-0	Di-n-octylphthalate	260	~~U~~	UJ
205-99-2	Benzo(b)fluoranthene	260	U	
207-08-9	Benzo(k)fluoranthene	260	U	
50-32-8	Benzo(a)pyrene	260	U	
193-39-5	Indeno(1,2,3-cd)pyrene	260	U	
53-70-3	Dibenzo(a,h)anthracene	260	U	
191-24-2	Benzo(g,h,i)perylene	260	U	
58-90-2	2,3,4,6-Tetrachlorophenol	260	U	

[1] Cannot be separated from Diphenylamine

MW 9/16/13

EPA SAMPLE NO.
LMR13-48-012

18

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17061

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17061-18

Sample wt/vol: 30.8 (g/mL) g Lab File ID: ULLBN08.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 44 Decanted: (Y/N) Date Received: 06/18/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/25/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/04/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
100-52-7	Benzaldehyde	300	U
108-95-2	Phenol	300	U
111-44-4	Bis(2-chloroethyl)ether	300	U
95-57-8	2-Chlorophenol	300	U
95-48-7	2-Methylphenol	300	U
108-60-1	2,2'-Oxybis(1-chloropropane)	300	U
98-86-2	Acetophenone	300	U
106-44-5	4-Methylphenol	300	U
621-64-7	N-Nitroso-di-n-propylamine	300	U
67-72-1	Hexachloroethane	300	U
98-95-3	Nitrobenzene	300	U
78-59-1	Isophorone	300	U
88-75-5	2-Nitrophenol	300	U
105-67-9	2,4-Dimethylphenol	300	U
111-91-1	Bis(2-chloroethoxy)methane	300	U
120-83-2	2,4-Dichlorophenol	300	U
91-20-3	Naphthalene	120	J
106-47-8	4-Chloroaniline	300	U
87-68-3	Hexachlorobutadiene	300	U
105-60-2	Caprolactam	300	U
59-50-7	4-Chloro-3-methylphenol	300	U
91-57-6	2-Methylnaphthalene	34	J
77-47-4	Hexachlorocyclopentadiene	300	U
88-06-2	2,4,6-Trichlorophenol	300	U
95-95-4	2,4,5-Trichlorophenol	300	U
92-52-4	1,1'-Biphenyl	300	U
91-58-7	2-Chloronaphthalene	300	U
88-74-4	2-Nitroaniline	580	U
131-11-3	Dimethylphthalate	300	U
606-20-2	2,6-Dinitrotoluene	300	U
208-96-8	Acenaphthylene	44	J
99-09-2	3-Nitroaniline	580	U
83-32-9	Acenaphthene	76	J

MW 9/16/13

EPA SAMPLE NO.
LMR13-48-012

18

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17061

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17061-18

Sample wt/vol: 30.8 (g/mL) g Lab File ID: ULLBN08.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 44 Decanted: (Y/N) Date Received: 06/18/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/25/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/04/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
51-28-5	2,4-Dinitrophenol	580	U
100-02-7	4-Nitrophenol	580	U
132-64-9	Dibenzofuran	26	J
121-14-2	2,4-Dinitrotoluene	300	U
84-66-2	Diethylphthalate	300	U
86-73-7	Fluorene	81	J
7005-72-3	4-Chlorophenyl-phenylether	300	U
100-01-6	4-Nitroaniline	580	U
534-52-1	4,6-Dinitro-2-methylphenol	580	U
86-30-6	N-Nitrosodiphenylamin [1]	300	U
95-94-3	1,2,4,5-Tetrachlorobenzene	300	U
101-55-3	4-Bromophenyl-phenylether	300	U
118-74-1	Hexachlorobenzene	300	U
1912-24-9	Atrazine	300	U
87-86-5	Pentachlorophenol	580	U
85-01-8	Phenanthrene	310	
120-12-7	Anthracene	92	J
86-74-8	Carbazole	300	U
84-74-2	Di-n-butylphthalate	300	U
206-44-0	Fluoranthene	830	
129-00-0	Pyrene	1400	
85-68-7	Butylbenzylphthalate	300	U
91-94-1	3,3'-Dichlorobenzidine	300	U
56-55-3	Benzo(a)anthracene	980	
218-01-9	Chrysene	930	
117-81-7	Bis(2-ethylhexyl)phthalate	180	J
117-84-0	Di-n-octylphthalate	300	U ✓ UJ
205-99-2	Benzo(b)fluoranthene	720	
207-08-9	Benzo(k)fluoranthene	560	
50-32-8	Benzo(a)pyrene	690	
193-39-5	Indeno(1,2,3-cd)pyrene	390	
53-70-3	Dibenzo(a,h)anthracene	190	J
191-24-2	Benzo(g,h,i)perylene	440	
58-90-2	2,3,4,6-Tetrachlorophenol	300	U

[1] Cannot be separated from Diphenylamine

MW 9/16/13

EPA SAMPLE NO.
LMR13-48-024

19

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17061

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17061-19

Sample wt/vol: 30.0 (g/mL) g Lab File ID: ULLBN09.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 42 Decanted: (Y/N) Date Received: 06/18/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/25/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/04/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
100-52-7	Benzaldehyde	290 ~~46~~ ~~J B~~	U
108-95-2	Phenol	290	U
111-44-4	Bis(2-chloroethyl)ether	290	U
95-57-8	2-Chlorophenol	290	U
95-48-7	2-Methylphenol	290	U
108-60-1	2,2'-Oxybis(1-chloropropane)	290	U
98-86-2	Acetophenone	290 ~~63~~ ~~J B~~	U
106-44-5	4-Methylphenol	24	J
621-64-7	N-Nitroso-di-n-propylamine	290	U
67-72-1	Hexachloroethane	290	U
98-95-3	Nitrobenzene	290	U
78-59-1	Isophorone	290	U
88-75-5	2-Nitrophenol	290	U
105-67-9	2,4-Dimethylphenol	290	U
111-91-1	Bis(2-chloroethoxy)methane	290	U
120-83-2	2,4-Dichlorophenol	290	U
91-20-3	Naphthalene	150	J
106-47-8	4-Chloroaniline	290	U
87-68-3	Hexachlorobutadiene	290	U
105-60-2	Caprolactam	290	U
59-50-7	4-Chloro-3-methylphenol	290	U
91-57-6	2-Methylnaphthalene	71	J
77-47-4	Hexachlorocyclopentadiene	290	U
88-06-2	2,4,6-Trichlorophenol	290	U
95-95-4	2,4,5-Trichlorophenol	290	U
92-52-4	1,1'-Biphenyl	290	U
91-58-7	2-Chloronaphthalene	290	U
88-74-4	2-Nitroaniline	570	U
131-11-3	Dimethylphthalate	290	U
606-20-2	2,6-Dinitrotoluene	290	U
208-96-8	Acenaphthylene	79	J
99-09-2	3-Nitroaniline	570	U
83-32-9	Acenaphthene	130	J

MW 9/16/13

EPA SAMPLE NO.
LMR13-48-024

19

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17061

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17061-19

Sample wt/vol: 30.0 (g/mL) g Lab File ID: ULLBN09.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 42 Decanted: (Y/N) Date Received: 06/18/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/25/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/04/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
51-28-5	2,4-Dinitrophenol	570	U
100-02-7	4-Nitrophenol	570	U
132-64-9	Dibenzofuran	62	J
121-14-2	2,4-Dinitrotoluene	290	U
84-66-2	Diethylphthalate	290	U
86-73-7	Fluorene	190	J
7005-72-3	4-Chlorophenyl-phenylether	290	U
100-01-6	4-Nitroaniline	570	U
534-52-1	4,6-Dinitro-2-methylphenol	570	U
86-30-6	N-Nitrosodiphenylamin [1]	290	U
95-94-3	1,2,4,5-Tetrachlorobenzene	290	U
101-55-3	4-Bromophenyl-phenylether	290	U
118-74-1	Hexachlorobenzene	290	U
1912-24-9	Atrazine	290	U
87-86-5	Pentachlorophenol	570	U
85-01-8	Phenanthrene	780	
120-12-7	Anthracene	230	J
86-74-8	Carbazole	290	U
84-74-2	Di-n-butylphthalate	290	U
206-44-0	Fluoranthene	1700	
129-00-0	Pyrene	2200	
85-68-7	Butylbenzylphthalate	290	U
91-94-1	3,3'-Dichlorobenzidine	290	U
56-55-3	Benzo(a)anthracene	1400	
218-01-9	Chrysene	1500	
117-81-7	Bis(2-ethylhexyl)phthalate	290	U
117-84-0	Di-n-octylphthalate	290	~~U~~ UJ
205-99-2	Benzo(b)fluoranthene	1100	
207-08-9	Benzo(k)fluoranthene	800	
50-32-8	Benzo(a)pyrene	1000	
193-39-5	Indeno(1,2,3-cd)pyrene	550	
53-70-3	Dibenzo(a,h)anthracene	260	J
191-24-2	Benzo(g,h,i)perylene	620	
58-90-2	2,3,4,6-Tetrachlorophenol	290	U

[1] Cannot be separated from Diphenylamine

MW 9/16/13

EPA SAMPLE NO.
LMR13-48-048

20

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17061

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17061-20

Sample wt/vol: 30.1 (g/mL) g Lab File ID: ULLBN10.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 38 Decanted: (Y/N) Date Received: 06/18/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/25/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/04/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
100-52-7	Benzaldehyde	270 ~~51 J B~~	U
108-95-2	Phenol	270	U
111-44-4	Bis(2-chloroethyl)ether	270	U
95-57-8	2-Chlorophenol	270	U
95-48-7	2-Methylphenol	270	U
108-60-1	2,2'-Oxybis(1-chloropropane)	270	U
98-86-2	Acetophenone	270 ~~51 J B~~	U
106-44-5	4-Methylphenol	24	J
621-64-7	N-Nitroso-di-n-propylamine	270	U
67-72-1	Hexachloroethane	270	U
98-95-3	Nitrobenzene	270	U
78-59-1	Isophorone	270	U
88-75-5	2-Nitrophenol	270	U
105-67-9	2,4-Dimethylphenol	270	U
111-91-1	Bis(2-chloroethoxy)methane	270	U
120-83-2	2,4-Dichlorophenol	270	U
91-20-3	Naphthalene	100	J
106-47-8	4-Chloroaniline	270	U
87-68-3	Hexachlorobutadiene	270	U
105-60-2	Caprolactam	270	U
59-50-7	4-Chloro-3-methylphenol	270	U
91-57-6	2-Methylnaphthalene	53	J
77-47-4	Hexachlorocyclopentadiene	270	U
88-06-2	2,4,6-Trichlorophenol	270	U
95-95-4	2,4,5-Trichlorophenol	270	U
92-52-4	1,1'-Biphenyl	12	J
91-58-7	2-Chloronaphthalene	270	U
88-74-4	2-Nitroaniline	530	U
131-11-3	Dimethylphthalate	270	U
606-20-2	2,6-Dinitrotoluene	270	U
208-96-8	Acenaphthylene	76	J
99-09-2	3-Nitroaniline	530	U
83-32-9	Acenaphthene	160	J

NW 9/16/13

EPA SAMPLE NO.
LMR13-48-048

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678 20

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17061

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17061-20

Sample wt/vol: 30.1 (g/mL) g Lab File ID: ULLBN10.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 38 Decanted: (Y/N) Date Received: 06/18/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/25/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/04/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
51-28-5	2,4-Dinitrophenol	530	U
100-02-7	4-Nitrophenol	530	U
132-64-9	Dibenzofuran	37	J
121-14-2	2,4-Dinitrotoluene	270	U
84-66-2	Diethylphthalate	270	U
86-73-7	Fluorene	240	J
7005-72-3	4-Chlorophenyl-phenylether	270	U
100-01-6	4-Nitroaniline	530	U
534-52-1	4,6-Dinitro-2-methylphenol	530	U
86-30-6	N-Nitrosodiphenylamin [1]	270	U
95-94-3	1,2,4,5-Tetrachlorobenzene	270	U
101-55-3	4-Bromophenyl-phenylether	270	U
118-74-1	Hexachlorobenzene	270	U
1912-24-9	Atrazine	270	U
87-86-5	Pentachlorophenol	530	U
85-01-8	Phenanthrene	670	
120-12-7	Anthracene	180	J
86-74-8	Carbazole	270	U
84-74-2	Di-n-butylphthalate	270	U
206-44-0	Fluoranthene	1100	
129-00-0	Pyrene	1700	
85-68-7	Butylbenzylphthalate	270	U
91-94-1	3,3'-Dichlorobenzidine	270	U
56-55-3	Benzo(a)anthracene	1000	
218-01-9	Chrysene	1000	
117-81-7	Bis(2-ethylhexyl)phthalate	74	J
117-84-0	Di-n-octylphthalate	270	~~U~~ UJ
205-99-2	Benzo(b)fluoranthene	810	
207-08-9	Benzo(k)fluoranthene	560	
50-32-8	Benzo(a)pyrene	710	
193-39-5	Indeno(1,2,3-cd)pyrene	420	
53-70-3	Dibenzo(a,h)anthracene	210	J
191-24-2	Benzo(g,h,i)perylene	420	
58-90-2	2,3,4,6-Tetrachlorophenol	270	U

[1] Cannot be separated from Diphenylamine

MW 9/16/13

1D - FORM I SV-1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-48-024FD

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678 24

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17061

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17061-21

Sample wt/vol: 30.9 (g/mL) g Lab File ID: ULLBN11.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 41 Decanted: (Y/N) Date Received: 06/18/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/25/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/04/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
100-52-7	Benzaldehyde	280 ~~53~~	~~J B~~ U
108-95-2	Phenol	280	U
111-44-4	Bis(2-chloroethyl)ether	280	U
95-57-8	2-Chlorophenol	280	U
95-48-7	2-Methylphenol	280	U
108-60-1	2,2'-Oxybis(1-chloropropane)	280	U
98-86-2	Acetophenone	280 ~~58~~	~~J B~~ U
106-44-5	4-Methylphenol	280	U
621-64-7	N-Nitroso-di-n-propylamine	280	U
67-72-1	Hexachloroethane	280	U
98-95-3	Nitrobenzene	280	U
78-59-1	Isophorone	280	U
88-75-5	2-Nitrophenol	280	U
105-67-9	2,4-Dimethylphenol	280	U
111-91-1	Bis(2-chloroethoxy)methane	280	U
120-83-2	2,4-Dichlorophenol	280	U
91-20-3	Naphthalene	130	J
106-47-8	4-Chloroaniline	280	U
87-68-3	Hexachlorobutadiene	280	U
105-60-2	Caprolactam	280	U
59-50-7	4-Chloro-3-methylphenol	280	U
91-57-6	2-Methylnaphthalene	59	J
77-47-4	Hexachlorocyclopentadiene	280	U
88-06-2	2,4,6-Trichlorophenol	280	U
95-95-4	2,4,5-Trichlorophenol	280	U
92-52-4	1,1'-Biphenyl	280	U
91-58-7	2-Chloronaphthalene	280	U
88-74-4	2-Nitroaniline	540	U
131-11-3	Dimethylphthalate	280	U
606-20-2	2,6-Dinitrotoluene	280	U
208-96-8	Acenaphthylene	73	J
99-09-2	3-Nitroaniline	540	U
83-32-9	Acenaphthene	120	J

MW 9/16/13

1E - FORM I SV-2
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-48-024FD

21

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17061

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17061-21

Sample wt/vol: 30.9 (g/mL) g Lab File ID: ULLBN11.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 41 Decanted: (Y/N) Date Received: 06/18/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/25/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/04/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
51-28-5	2,4-Dinitrophenol	540	U
100-02-7	4-Nitrophenol	540	U
132-64-9	Dibenzofuran	61	J
121-14-2	2,4-Dinitrotoluene	280	U
84-66-2	Diethylphthalate	280	U
86-73-7	Fluorene	240	J
7005-72-3	4-Chlorophenyl-phenylether	280	U
100-01-6	4-Nitroaniline	540	U
534-52-1	4,6-Dinitro-2-methylphenol	540	U
86-30-6	N-Nitrosodiphenylamin [1]	280	U
95-94-3	1,2,4,5-Tetrachlorobenzene	280	U
101-55-3	4-Bromophenyl-phenylether	280	U
118-74-1	Hexachlorobenzene	280	U
1912-24-9	Atrazine	280	U
87-86-5	Pentachlorophenol	540	U
85-01-8	Phenanthrene	830	
120-12-7	Anthracene	300	
86-74-8	Carbazole	280	U
84-74-2	Di-n-butylphthalate	280	U
206-44-0	Fluoranthene	1800	
129-00-0	Pyrene	2200	
85-68-7	Butylbenzylphthalate	280	U
91-94-1	3,3'-Dichlorobenzidine	280	U
56-55-3	Benzo(a)anthracene	1500	
218-01-9	Chrysene	1400	
117-81-7	Bis(2-ethylhexyl)phthalate	110	J
117-84-0	Di-n-octylphthalate	280	~~U~~ UJ
205-99-2	Benzo(b)fluoranthene	1300	
207-08-9	Benzo(k)fluoranthene	700	
50-32-8	Benzo(a)pyrene	950	
193-39-5	Indeno(1,2,3-cd)pyrene	400	
53-70-3	Dibenzo(a,h)anthracene	240	J
191-24-2	Benzo(g,h,i)perylene	510	
58-90-2	2,3,4,6-Tetrachlorophenol	280	U

[1] Cannot be separated from Diphenylamine

MW 9/16/13

EPA SAMPLE NO.
LMR13-79-024FD

22

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17061

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17061-22

Sample wt/vol: 30.4 (g/mL) g Lab File ID: ULLCN06.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 19 Decanted: (Y/N) Date Received: 06/18/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/27/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/12/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
100-52-7	Benzaldehyde	210	U
108-95-2	Phenol	210	U
111-44-4	Bis(2-chloroethyl)ether	210	U
95-57-8	2-Chlorophenol	210	U
95-48-7	2-Methylphenol	210	U
108-60-1	2,2'-Oxybis(1-chloropropane)	210	U
98-86-2	Acetophenone	210	U
106-44-5	4-Methylphenol	210	U
621-64-7	N-Nitroso-di-n-propylamine	210	U
67-72-1	Hexachloroethane	210	U
98-95-3	Nitrobenzene	210	U
78-59-1	Isophorone	210	U
88-75-5	2-Nitrophenol	210	U
105-67-9	2,4-Dimethylphenol	210	U
111-91-1	Bis(2-chloroethoxy)methane	210	U
120-83-2	2,4-Dichlorophenol	210	U
91-20-3	Naphthalene	210	U
106-47-8	4-Chloroaniline	210	U
87-68-3	Hexachlorobutadiene	210	U
105-60-2	Caprolactam	210	U
59-50-7	4-Chloro-3-methylphenol	210	U
91-57-6	2-Methylnaphthalene	210	U
77-47-4	Hexachlorocyclopentadiene	210	U
88-06-2	2,4,6-Trichlorophenol	210	U
95-95-4	2,4,5-Trichlorophenol	210	U
92-52-4	1,1'-Biphenyl	210	U
91-58-7	2-Chloronaphthalene	210	U
88-74-4	2-Nitroaniline	400	U
131-11-3	Dimethylphthalate	210	U
606-20-2	2,6-Dinitrotoluene	210	U
208-96-8	Acenaphthylene	210	U
99-09-2	3-Nitroaniline	400	U
83-32-9	Acenaphthene	210	U

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UJ

MW 9/16/13

1E - FORM I SV-2
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-79-024FD

22

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17061

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17061-22

Sample wt/vol: 30.4 (g/mL) g Lab File ID: ULLCN06.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 19 Decanted: (Y/N) Date Received: 06/18/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/27/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/12/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
51-28-5	2,4-Dinitrophenol	400	UJ
100-02-7	4-Nitrophenol	400	UJ
132-64-9	Dibenzofuran	210	UJ
121-14-2	2,4-Dinitrotoluene	210	UJ
84-66-2	Diethylphthalate	210	UJ
86-73-7	Fluorene	210	UJ
7005-72-3	4-Chlorophenyl-phenylether	210	UJ
100-01-6	4-Nitroaniline	400	UJ
534-52-1	4,6-Dinitro-2-methylphenol	400	UJ
86-30-6	N-Nitrosodiphenylamin [1]	210	UJ
95-94-3	1,2,4,5-Tetrachlorobenzene	210	UJ
101-55-3	4-Bromophenyl-phenylether	210	UJ
118-74-1	Hexachlorobenzene	210	UJ
1912-24-9	Atrazine	210	UJ
87-86-5	Pentachlorophenol	400	UJ
85-01-8	Phenanthrene	5.3	J
120-12-7	Anthracene	210	UJ
86-74-8	Carbazole	210	UJ
84-74-2	Di-n-butylphthalate	210 ~~10~~ ~~J B~~	UJ
206-44-0	Fluoranthene	15	J
129-00-0	Pyrene	13	J
85-68-7	Butylbenzylphthalate	210 ~~12~~ ~~J B~~	UJ
91-94-1	3,3'-Dichlorobenzidine	210	UJ
56-55-3	Benzo(a)anthracene	210	UJ
218-01-9	Chrysene	210	UJ
117-81-7	Bis(2-ethylhexyl)phthalate	210 ~~33~~ ~~J B~~	UJ
117-84-0	Di-n-octylphthalate	210	UJ
205-99-2	Benzo(b)fluoranthene	210	UJ
207-08-9	Benzo(k)fluoranthene	210	UJ
50-32-8	Benzo(a)pyrene	210	UJ
193-39-5	Indeno(1,2,3-cd)pyrene	210	UJ
53-70-3	Dibenzo(a,h)anthracene	210	UJ
191-24-2	Benzo(g,h,i)perylene	210	UJ
58-90-2	2,3,4,6-Tetrachlorophenol	210	UJ

[1] Cannot be separated from Diphenylamine

MW 9/16/13

1F - FORM I SV-SIM

SEMIVOLATILE SIM ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-01-012

12

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: 1734.2 SDG No.: 17061

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17061-12

Sample wt/vol: 30.2 (g/mL) g Lab File ID: HQIST04.D

Extraction: (Type) SONC

% Moisture: 30 Decanted: (Y/N) Date Received: 06/18/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/25/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/06/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 14.3

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
91-20-3	Naphthalene	170	
90-12-0	1-Methylnaphthalene	62	J
91-57-6	2-Methylnaphthalene	92	
208-96-8	Acenaphthylene	68	
83-32-9	Acenaphthene	900	E
86-73-7	Fluorene	1200	E
85-01-8	Phenanthrene	5000	E
120-12-7	Anthracene	1100	E
206-44-0	Fluoranthene	2600	E
129-00-0	Pyrene	2700	E
56-55-3	Benzo(a)anthracene	1400	E
218-01-9	Chrysene	1600	E
205-99-2	Benzo(b)fluoranthene	710	E
207-08-9	Benzo(k)fluoranthene	780	E
192-97-2	Benzo(e)pyrene	620	
50-32-8	Benzo(a)pyrene	980	E
198-55-0	Perylene	380	
193-39-5	Indeno(1,2,3-cd)pyrene	480	
53-70-3	Dibenzo(a,h)anthracene	190	
191-24-2	Benzo(g,h,i)perylene	470	
C1NAPH	C1-Naphthalenes	100	J
C2NAPH	C2-Naphthalenes	460	J
C3NAPH	C3-Naphthalenes	2300	J
C4NAPH	C4-Naphthalenes	1200	J
C1FLUOR	C1 Fluorenes	350	J
C2FLUOR	C2 Fluorenes	460	J
C3FLUOR	C3 Fluorenes	580	J
C1PHAN	C1-Phenanthrenes/Anthracenes	4900	J
C2PHAN	C2-Phenanthrenes/Anthracenes	2100	J
C3PHAN	C3-Phenanthrenes/Anthracenes	1500	J
C4PHAN	C4-Phenanthrenes/Anthracenes	720	J
C1FLPY	C1-Fluoranthenes/Pyrenes	2500	J
C2FLPY	C2-Fluoranthenes/Pyrenes	1300	J
C3FLPY	C3-Fluoranthenes/Pyrenes	680	J
C1CHRYS	C1 Chrysenes	1500	J
C2CHRYS	C2 Chrysenes	1100	J
C3CHRYS	C3 Chrysenes	510	J
C4CHRYS	C4 Chrysenes	200	J

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NW 9/16/13

1F - FORM I SV-SIM
SEMIVOLATILE SIM ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-01-012

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678 12

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: 1734.2 SDG No.: 17061

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17061-12

Sample wt/vol: 30.2 (g/mL) g Lab File ID: HQIST04.D

Extraction: (Type) SONC

% Moisture: 30 Decanted: (Y/N) Date Received: 06/18/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/25/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/06/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 14.3

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
TPPAH	Total 16 PPAH	20000	
TPAH	Total PAH	44000	

JJ

MW 9/16/13

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-79-072

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17061

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17061-1

Sample wt/vol: 29.4 (g/mL) g Lab File ID: 5253AYASOM20.D

% Moisture: 20 Decanted: (Y/N) Date Received: 06/18/2013

Extraction: (Type) SONC Date Extracted: 06/25/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 07/18/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	42	U
11104-28-2	Aroclor-1221	42	U
11141-16-5	Aroclor-1232	42	U
53469-21-9	Aroclor-1242	42	U
12672-29-6	Aroclor-1248	42	U
11097-69-1	Aroclor-1254	42	U
11096-82-5	Aroclor-1260	42	U
37324-23-5	Aroclor-1262	42	U
11100-14-4	Aroclor-1268	42	U

MW 9/16/13

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-79-096

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678 2

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17061

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17061-2

Sample wt/vol: 30.6 (g/mL) g Lab File ID: 5253AYASOM21.D

% Moisture: 17 Decanted: (Y/N) Date Received: 06/18/2013

Extraction: (Type) SONC Date Extracted: 06/25/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 07/18/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	39	U
11104-28-2	Aroclor-1221	39	U
11141-16-5	Aroclor-1232	39	U
53469-21-9	Aroclor-1242	39	U
12672-29-6	Aroclor-1248	39	U
11097-69-1	Aroclor-1254	39	U
11096-82-5	Aroclor-1260	39	U
37324-23-5	Aroclor-1262	39	U
11100-14-4	Aroclor-1268	39	U

MW 9/16/13

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-38-012

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17061

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17061-3

Sample wt/vol: 29.6 (g/mL) g Lab File ID: 5253AYASOM22.D

% Moisture: 31 Decanted: (Y/N) Date Received: 06/18/2013

Extraction: (Type) SONC Date Extracted: 06/25/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 07/18/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	48	U
11104-28-2	Aroclor-1221	48	U
11141-16-5	Aroclor-1232	48	U
53469-21-9	Aroclor-1242	22	J
12672-29-6	Aroclor-1248	48	U
11097-69-1	Aroclor-1254	15	~~J P~~ J
11096-82-5	Aroclor-1260	48	U
37324-23-5	Aroclor-1262	48	U
11100-14-4	Aroclor-1268	48	U

MW 9/16/13

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-40-072

4

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17061

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17061-4

Sample wt/vol: 29.5 (g/mL) g Lab File ID: 5253AYASOM23.D

% Moisture: 44 Decanted: (Y/N) Date Received: 06/18/2013

Extraction: (Type) SONC Date Extracted: 06/25/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 07/18/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
12674-11-2	Aroclor-1016	59	U	
11104-28-2	Aroclor-1221	59	U	
11141-16-5	Aroclor-1232	59	U	
53469-21-9	Aroclor-1242	140	~~P~~	J
12672-29-6	Aroclor-1248	59	U	
11097-69-1	Aroclor-1254	120		
11096-82-5	Aroclor-1260	34	~~J~~ P	J
37324-23-5	Aroclor-1262	59	U	
11100-14-4	Aroclor-1268	59	U	

MM 9/16/13

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-40-096

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678 5

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17061

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17061-5

Sample wt/vol: 30.0 (g/mL) g Lab File ID: 5253AYASOM24.D

% Moisture: 44 Decanted: (Y/N) Date Received: 06/18/2013

Extraction: (Type) SONC Date Extracted: 06/25/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 07/19/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
12674-11-2	Aroclor-1016	59	U	
11104-28-2	Aroclor-1221	59	U	
11141-16-5	Aroclor-1232	59	U	
53469-21-9	Aroclor-1242	150	~~P~~	J
12672-29-6	Aroclor-1248	59	U	
11097-69-1	Aroclor-1254	130		
11096-82-5	Aroclor-1260	29	~~J P~~	J
37324-23-5	Aroclor-1262	59	U	
11100-14-4	Aroclor-1268	59	U	

JW 9/16/13

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-79-012

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17061

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17061-6

Sample wt/vol: 29.7 (g/mL) g Lab File ID: 5253AYASOM25.D

% Moisture: 34 Decanted: (Y/N) Date Received: 06/18/2013

Extraction: (Type) SONC Date Extracted: 06/25/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 07/19/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	51	U
11104-28-2	Aroclor-1221	51	U
11141-16-5	Aroclor-1232	51	U
53469-21-9	Aroclor-1242	24	J
12672-29-6	Aroclor-1248	51	U
11097-69-1	Aroclor-1254	28	J
11096-82-5	Aroclor-1260	51	U
37324-23-5	Aroclor-1262	51	U
11100-14-4	Aroclor-1268	51	U

MW 9/16/13

1H - FORM I ARO
AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-79-024

7

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17061

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17061-7

Sample wt/vol: 29.9 (g/mL) g Lab File ID: 5253AYASOM26.D

% Moisture: 19 Decanted: (Y/N) Date Received: 06/18/2013

Extraction: (Type) SONC Date Extracted: 06/25/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 07/19/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	41	U
11104-28-2	Aroclor-1221	41	U
11141-16-5	Aroclor-1232	41	U
53469-21-9	Aroclor-1242	41	U
12672-29-6	Aroclor-1248	41	U
11097-69-1	Aroclor-1254	41	U
11096-82-5	Aroclor-1260	41	U
37324-23-5	Aroclor-1262	41	U
11100-14-4	Aroclor-1268	41	U

MW 9/16/13

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-01-072

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17061

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17061-8

Sample wt/vol: 30.6 (g/mL) g Lab File ID: 5253AYASOM27.D

% Moisture: 28 Decanted: (Y/N) Date Received: 06/18/2013

Extraction: (Type) SONC Date Extracted: 06/25/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 07/19/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	45	U
11104-28-2	Aroclor-1221	45	U
11141-16-5	Aroclor-1232	45	U
53469-21-9	Aroclor-1242	45	U
12672-29-6	Aroclor-1248	45	U
11097-69-1	Aroclor-1254	45	U
11096-82-5	Aroclor-1260	45	U
37324-23-5	Aroclor-1262	45	U
11100-14-4	Aroclor-1268	45	U

MW 9/16/13

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-38-048

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678 9

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17061

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17061-9

Sample wt/vol: 29.9 (g/mL) g Lab File ID: 5253AYASOM28.D

% Moisture: 32 Decanted: (Y/N) Date Received: 06/18/2013

Extraction: (Type) SONC Date Extracted: 06/25/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 07/19/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	48	U
11104-28-2	Aroclor-1221	48	U
11141-16-5	Aroclor-1232	48	U
53469-21-9	Aroclor-1242	48	U
12672-29-6	Aroclor-1248	48	U
11097-69-1	Aroclor-1254	48	U
11096-82-5	Aroclor-1260	48	U
37324-23-5	Aroclor-1262	48	U
11100-14-4	Aroclor-1268	48	U

MW 9/16/13

1H - FORM I ARO
AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-38-096

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678 10

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17061

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17061-10

Sample wt/vol: 30.3 (g/mL) g Lab File ID: 5253AYASOM31.D

% Moisture: 23 Decanted: (Y/N) Date Received: 06/18/2013

Extraction: (Type) SONC Date Extracted: 06/25/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 07/19/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	42	U
11104-28-2	Aroclor-1221	42	U
11141-16-5	Aroclor-1232	42	U
53469-21-9	Aroclor-1242	42	U
12672-29-6	Aroclor-1248	42	U
11097-69-1	Aroclor-1254	42	U
11096-82-5	Aroclor-1260	42	U
37324-23-5	Aroclor-1262	42	U
11100-14-4	Aroclor-1268	42	U

MW 9/16/13

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-40-048

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17061

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17061-11

Sample wt/vol: 30.7 (g/mL) g Lab File ID: 5253AYASOM32.D

% Moisture: 45 Decanted: (Y/N) Date Received: 06/18/2013

Extraction: (Type) SONC Date Extracted: 06/25/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 07/19/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	59	U
11104-28-2	Aroclor-1221	59	U
11141-16-5	Aroclor-1232	59	U
53469-21-9	Aroclor-1242	29	J
12672-29-6	Aroclor-1248	59	U
11097-69-1	Aroclor-1254	27	~~J P~~ J
11096-82-5	Aroclor-1260	9.3	~~J P~~ J
37324-23-5	Aroclor-1262	59	U
11100-14-4	Aroclor-1268	59	U

MW 9/16/13

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-01-012

12

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17061

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17061-12

Sample wt/vol: 30.5 (g/mL) g Lab File ID: 5253AYBSOM03.D

% Moisture: 30 Decanted: (Y/N) Date Received: 06/18/2013

Extraction: (Type) SONC Date Extracted: 06/25/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 07/19/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	46	U
11104-28-2	Aroclor-1221	46	U
11141-16-5	Aroclor-1232	46	U
53469-21-9	Aroclor-1242	6.7	~~J~~ J
12672-29-6	Aroclor-1248	46	U
11097-69-1	Aroclor-1254	46	U
11096-82-5	Aroclor-1260	46	U
37324-23-5	Aroclor-1262	46	U
11100-14-4	Aroclor-1268	46	U

MW 9/16/13

1H - FORM I ARO
AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-01-024

13

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17061

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17061-13

Sample wt/vol: 30.3 (g/mL) g Lab File ID: 5253AYBSOM04.D

% Moisture: 28 Decanted: (Y/N) Date Received: 06/18/2013

Extraction: (Type) SONC Date Extracted: 06/25/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 07/19/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	45	U
11104-28-2	Aroclor-1221	45	U
11141-16-5	Aroclor-1232	45	U
53469-21-9	Aroclor-1242	45	U
12672-29-6	Aroclor-1248	45	U
11097-69-1	Aroclor-1254	45	U
11096-82-5	Aroclor-1260	45	U
37324-23-5	Aroclor-1262	45	U
11100-14-4	Aroclor-1268	45	U

MW 911613

1H - FORM I ARO
AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-01-024FD

14

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17061

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17061-14

Sample wt/vol: 30.2 (g/mL) g Lab File ID: 5253AYBSOM05.D

% Moisture: 28 Decanted: (Y/N) Date Received: 06/18/2013

Extraction: (Type) SONC Date Extracted: 06/25/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 07/19/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	45	U
11104-28-2	Aroclor-1221	45	U
11141-16-5	Aroclor-1232	45	U
53469-21-9	Aroclor-1242	45	U
12672-29-6	Aroclor-1248	45	U
11097-69-1	Aroclor-1254	45	U
11096-82-5	Aroclor-1260	45	U
37324-23-5	Aroclor-1262	45	U
11100-14-4	Aroclor-1268	45	U

MW 9/16/13

1H - FORM I ARO
AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-01-048

15

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17061

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17061-15

Sample wt/vol: 30.1 (g/mL) g Lab File ID: 5253AYBSOM06.D

% Moisture: 28 Decanted: (Y/N) Date Received: 06/18/2013

Extraction: (Type) SONC Date Extracted: 06/25/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 07/19/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	46	U
11104-28-2	Aroclor-1221	46	U
11141-16-5	Aroclor-1232	46	U
53469-21-9	Aroclor-1242	46	U
12672-29-6	Aroclor-1248	46	U
11097-69-1	Aroclor-1254	46	U
11096-82-5	Aroclor-1260	46	U
37324-23-5	Aroclor-1262	46	U
11100-14-4	Aroclor-1268	46	U

MW 9/16/13

1H - FORM I ARO
AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-01-096

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678 16

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17061

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17061-16

Sample wt/vol: 30.2 (g/mL) g Lab File ID: 5253AYBSOM07.D

% Moisture: 31 Decanted: (Y/N) Date Received: 06/18/2013

Extraction: (Type) SONC Date Extracted: 06/25/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 07/19/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	47	U
11104-28-2	Aroclor-1221	47	U
11141-16-5	Aroclor-1232	47	U
53469-21-9	Aroclor-1242	47	U
12672-29-6	Aroclor-1248	47	U
11097-69-1	Aroclor-1254	47	U
11096-82-5	Aroclor-1260	47	U
37324-23-5	Aroclor-1262	47	U
11100-14-4	Aroclor-1268	47	U

MW 9/16/13

1H - FORM I ARO
AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-01-120

17

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17061

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17061-17

Sample wt/vol: 30.0 (g/mL) g Lab File ID: 5253AYBSOM08.D

% Moisture: 35 Decanted: (Y/N) Date Received: 06/18/2013

Extraction: (Type) SONC Date Extracted: 06/25/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 07/19/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	51	U
11104-28-2	Aroclor-1221	51	U
11141-16-5	Aroclor-1232	51	U
53469-21-9	Aroclor-1242	51	U
12672-29-6	Aroclor-1248	51	U
11097-69-1	Aroclor-1254	51	U
11096-82-5	Aroclor-1260	51	U
37324-23-5	Aroclor-1262	51	U
11100-14-4	Aroclor-1268	51	U

MW 9/16/13

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-48-012

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17061

18

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17061-18

Sample wt/vol: 30.2 (g/mL) g Lab File ID: 5253AYBSOM09.D

% Moisture: 44 Decanted: (Y/N) Date Received: 06/18/2013

Extraction: (Type) SONC Date Extracted: 06/25/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 07/19/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	59	U
11104-28-2	Aroclor-1221	59	U
11141-16-5	Aroclor-1232	59	U
53469-21-9	Aroclor-1242	22	J
12672-29-6	Aroclor-1248	59	U
11097-69-1	Aroclor-1254	25	J
11096-82-5	Aroclor-1260	9.1	~~J P~~ J
37324-23-5	Aroclor-1262	59	U
11100-14-4	Aroclor-1268	59	U

MW 9/16/13

1H - FORM I ARO
AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-48-024

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678 19

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17061

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17061-19

Sample wt/vol: 30.8 (g/mL) g Lab File ID: 5253AYBSOM10.D

% Moisture: 42 Decanted: (Y/N) Date Received: 06/18/2013

Extraction: (Type) SONC Date Extracted: 06/25/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 07/19/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	55	U
11104-28-2	Aroclor-1221	55	U
11141-16-5	Aroclor-1232	55	U
53469-21-9	Aroclor-1242	7.3	J
12672-29-6	Aroclor-1248	55	U
11097-69-1	Aroclor-1254	13	J
11096-82-5	Aroclor-1260	5.4	~~J P~~ J
37324-23-5	Aroclor-1262	55	U
11100-14-4	Aroclor-1268	55	U

MW 9/16/13

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-48-048

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678 20

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17061

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17061-20

Sample wt/vol: 30.3 (g/mL) g Lab File ID: 5253AYBSOM11.D

% Moisture: 38 Decanted: (Y/N) Date Received: 06/18/2013

Extraction: (Type) SONC Date Extracted: 06/25/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 07/19/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	53	U
11104-28-2	Aroclor-1221	53	U
11141-16-5	Aroclor-1232	53	U
53469-21-9	Aroclor-1242	53	U
12672-29-6	Aroclor-1248	53	U
11097-69-1	Aroclor-1254	53	U
11096-82-5	Aroclor-1260	53	U
37324-23-5	Aroclor-1262	53	U
11100-14-4	Aroclor-1268	53	U

AW 9/16/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-79-072

1

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678

Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 17061

Matrix: SED | Lab Sample Id: 200-17061-1

% Solids: 80.2 | Date Received: 06/18/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	3.0			P
7440-43-9	Cadmium	0.24	J		P
7440-47-3	Chromium	6.5	J		P
7440-50-8	Copper	6.5	J		P
7439-92-1	Lead	4.8			P
7440-02-0	Nickel	9.6	J		P
7440-66-6	Zinc	24.6	J		P

Color Before: GREY | Clarity Before: | Texture: MEDIUM

Color After: TAN | Clarity After: CLOUDY | Artifacts:

Comments:

NW 9/16/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-79-072

1

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678

Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 17061

Matrix: SED | Lab Sample Id: 200-17061-1

% Solids: 80.2 | Date Received: 06/18/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.11	U		CV

Color Before: GRAY | Clarity Before: CLOUDY | Texture: FINE

Color After: COLORLESS | Clarity After: CLEAR | Artifacts:

Comments:

NW 9/16/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-79-096

2

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678
Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17061
Matrix: SED Lab Sample Id: 200-17061-2
% Solids: 83.4 Date Received: 06/18/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	3.0			P
7440-43-9	Cadmium	0.19	J J	~~F~~	P
7440-47-3	Chromium	5.5	↓	~~F~~	P
7440-50-8	Copper	5.1		~~F~~	P
7439-92-1	Lead	3.4			P
7440-02-0	Nickel	7.8	J	~~F~~	P
7440-66-6	Zinc	21.8	J	~~F~~	P

Color Before: GREY Clarity Before: Texture: MEDIUM
Color After: TAN Clarity After: CLOUDY Artifacts:
Comments:

NW 9/16/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-79-096

2

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678

Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 17061

Matrix: SED | Lab Sample Id: 200-17061-2

% Solids: 83.4 | Date Received: 06/18/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.11	U		CV

Color Before: GRAY | Clarity Before: CLOUDY | Texture: FINE

Color After: COLORLESS | Clarity After: CLEAR | Artifacts:

Comments:

MW 9/16/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-38-012

3

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678
Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17061
Matrix: SED Lab Sample Id: 200-17061-3
% Solids: 69.2 Date Received: 06/18/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	7.4			P
7440-43-9	Cadmium	1.1	J	E	P
7440-47-3	Chromium	19.1	↓	E	P
7440-50-8	Copper	24.8	↓	E	P
7439-92-1	Lead	58.7			P
7440-02-0	Nickel	19.5	J	E	P
7440-66-6	Zinc	118	J	E	P

Color Before: GREY Clarity Before: Texture: FINE
Color After: TAN Clarity After: CLOUDY Artifacts:
Comments:

NW 9/16/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-38-012

3

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678
Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17061
Matrix: SED Lab Sample Id: 200-17061-3
% Solids: 69.2 Date Received: 06/18/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.16	J	~~N~~	CV

Color Before: GRAY Clarity Before: CLOUDY Texture: FINE
Color After: COLORLESS Clarity After: CLEAR Artifacts:
Comments:

MW 9/16/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-40-072

4

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678
Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 17061
Matrix: SED | Lab Sample Id: 200-17061-4
% Solids: 56.5 | Date Received: 06/18/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	9.1			P
7440-43-9	Cadmium	2.5	J	E	P
7440-47-3	Chromium	41.3	↓	E	P
7440-50-8	Copper	39.4	↓	E	P
7439-92-1	Lead	55.0			P
7440-02-0	Nickel	38.1	J	E	P
7440-66-6	Zinc	166	J	E	P

Color Before: GREY | Clarity Before: | Texture: FINE
Color After: TAN | Clarity After: CLOUDY | Artifacts:
Comments:

NW 9/16/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-40-072

4

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678
Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17061
Matrix: SED Lab Sample Id: 200-17061-4
% Solids: 56.5 Date Received: 06/18/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.17	J	~~N~~	CV

Color Before: GRAY Clarity Before: CLOUDY Texture: FINE
Color After: COLORLESS Clarity After: CLEAR Artifacts:
Comments:

NRV 9/16/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-40-096

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678 5
Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17061
Matrix: SED Lab Sample Id: 200-17061-5
% Solids: 56.3 Date Received: 06/18/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	8.9			P
7440-43-9	Cadmium	3.7	J	~~E~~	P
7440-47-3	Chromium	52.2	↓	~~E~~	P
7440-50-8	Copper	41.1	↓	~~E~~	P
7439-92-1	Lead	54.4			P
7440-02-0	Nickel	44.3	J	~~E~~	P
7440-66-6	Zinc	180	J	~~E~~	P

Color Before: GREY Clarity Before: Texture: FINE
Color After: TAN Clarity After: CLOUDY Artifacts:
Comments:

NW 9/16/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-40-096

5

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678
Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 17061
Matrix: SED | Lab Sample Id: 200-17061-5
% Solids: 56.3 | Date Received: 06/18/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.15	J		CV

Color Before: GRAY | Clarity Before: CLOUDY | Texture: FINE
Color After: COLORLESS | Clarity After: CLEAR | Artifacts:
Comments:

MW 9/16/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-79-012

6

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678

Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 17061

Matrix: SED | Lab Sample Id: 200-17061-6

% Solids: 65.7 | Date Received: 06/18/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	3.8			P
7440-43-9	Cadmium	0.39	J		P
7440-47-3	Chromium	14.3			P
7440-50-8	Copper	14.1			P
7439-92-1	Lead	14.1			P
7440-02-0	Nickel	17.0	J		P
7440-66-6	Zinc	55.6	J		P

Color Before: GREY | Clarity Before: | Texture: FINE

Color After: TAN | Clarity After: CLOUDY | Artifacts:

Comments:

NW 9/16/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-79-012

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678 6

Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17061

Matrix: SED Lab Sample Id: 200-17061-6

% Solids: 65.7 Date Received: 06/18/2013

Concentration Units (**ug/L, ug,** or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.094	J		CV

Color Before: GRAY Clarity Before: CLOUDY Texture: FINE

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

NW 9/16/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-79-024

7

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678

Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 17061

Matrix: SED | Lab Sample Id: 200-17061-7

% Solids: 80.8 | Date Received: 06/18/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	3.8			P
7440-43-9	Cadmium	0.22	J		P
7440-47-3	Chromium	5.4			P
7440-50-8	Copper	3.4			P
7439-92-1	Lead	3.2			P
7440-02-0	Nickel	7.2	J		P
7440-66-6	Zinc	20.5	J		P

Color Before: GREY | Clarity Before: | Texture: MEDIUM

Color After: TAN | Clarity After: CLOUDY | Artifacts:

Comments:

NW 9/16/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-79-024

7

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678

Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 17061

Matrix: SED | Lab Sample Id: 200-17061-7

% Solids: 80.8 | Date Received: 06/18/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.11	U		CV

Color Before: GRAY | Clarity Before: CLOUDY | Texture: FINE

Color After: COLORLESS | Clarity After: CLEAR | Artifacts:

Comments:

MV 9/16/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-01-072

8

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678
Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 17061
Matrix: SED | Lab Sample Id: 200-17061-8
% Solids: 72.2 | Date Received: 06/18/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	3.3			P
7440-43-9	Cadmium	0.32	J		P
7440-47-3	Chromium	8.1			P
7440-50-8	Copper	9.0			P
7439-92-1	Lead	9.9			P
7440-02-0	Nickel	12.3	J		P
7440-66-6	Zinc	34.2	J		P

Color Before: GREY | Clarity Before: | Texture: FINE
Color After: TAN | Clarity After: CLOUDY | Artifacts:
Comments:

NW 9/16/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-01-072

8

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17061

Matrix: SED Lab Sample Id: 200-17061-8

% Solids: 72.2 Date Received: 06/18/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.059	J	~~N~~	CV

Color Before: GRAY Clarity Before: CLOUDY Texture: FINE

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

MW 9/16/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-38-048

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17061

Matrix: SED Lab Sample Id: 200-17061-9

% Solids: 68.4 Date Received: 06/18/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	4.8			P
7440-43-9	Cadmium	0.39	J	E	P
7440-47-3	Chromium	16.4	↓	↓	P
7440-50-8	Copper	16.8			P
7439-92-1	Lead	24.7			P
7440-02-0	Nickel	20.7	J	E	P
7440-66-6	Zinc	64.6	J	E	P

Color Before: GREY Clarity Before: Texture: FINE

Color After: TAN Clarity After: CLOUDY Artifacts:

Comments:

MW 9/16/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-38-048

9

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678

Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 17061

Matrix: SED | Lab Sample Id: 200-17061-9

% Solids: 68.4 | Date Received: 06/18/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.080	J		CV

Color Before: GRAY | Clarity Before: CLOUDY | Texture: FINE

Color After: COLORLESS | Clarity After: CLEAR | Artifacts:

Comments:

NW 9/16/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-38-096

10

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17061

Matrix: SED Lab Sample Id: 200-17061-10

% Solids: 77.0 Date Received: 06/18/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	3.2			P
7440-43-9	Cadmium	0.30	J	E	P
7440-47-3	Chromium	8.3	↓	E	P
7440-50-8	Copper	7.5	↓	E	P
7439-92-1	Lead	5.6			P
7440-02-0	Nickel	12.2	J	E	P
7440-66-6	Zinc	34.4	J	E	P

Color Before: GREY Clarity Before: Texture: FINE

Color After: TAN Clarity After: CLOUDY Artifacts:

Comments:

NW 9/16/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-38-096

10

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678

Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 17061

Matrix: SED | Lab Sample Id: 200-17061-10

% Solids: 77.0 | Date Received: 06/18/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.12	U		CV

Color Before: GRAY | Clarity Before: CLOUDY | Texture: FINE

Color After: COLORLESS | Clarity After: CLEAR | Artifacts:

Comments:

NW 9/16/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-40-048

11

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678
Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 17061
Matrix: SED | Lab Sample Id: 200-17061-11
% Solids: 54.7 | Date Received: 06/18/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	8.3			P
7440-43-9	Cadmium	1.9	J	~~E~~	P
7440-47-3	Chromium	36.4	↓	~~E~~	P
7440-50-8	Copper	34.9	↓	~~E~~	P
7439-92-1	Lead	41.4			P
7440-02-0	Nickel	34.9	J	~~E~~	P
7440-66-6	Zinc	146	J	~~E~~	P

Color Before: GREY | Clarity Before: | Texture: FINE
Color After: TAN | Clarity After: CLOUDY | Artifacts:
Comments:

MW 9/16/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-40-048

11

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17061

Matrix: SED Lab Sample Id: 200-17061-11

% Solids: 54.7 Date Received: 06/18/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.13	J		CV

Color Before: GRAY Clarity Before: CLOUDY Texture: FINE

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

MW 9/16/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-01-012

12

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678
Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 17061
Matrix: SED | Lab Sample Id: 200-17061-12
% Solids: 70.3 | Date Received: 06/18/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	8.5			P
7440-43-9	Cadmium	0.43	J		P
7440-47-3	Chromium	15.2			P
7440-50-8	Copper	19.2			P
7439-92-1	Lead	65.0			P
7440-02-0	Nickel	21.1	J		P
7440-66-6	Zinc	85.2	J		P

Color Before: GREY | Clarity Before: | Texture: FINE
Color After: TAN | Clarity After: CLOUDY | Artifacts:
Comments:

NW 9/16/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-01-012

12

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17061

Matrix: SED Lab Sample Id: 200-17061-12

% Solids: 70.3 Date Received: 06/18/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.12	J		CV

Color Before: GRAY Clarity Before: CLOUDY Texture: FINE

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

NW 9/16/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-01-024

13

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678
Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 17061
Matrix: SED | Lab Sample Id: 200-17061-13
% Solids: 72.4 | Date Received: 06/18/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	9.2			P
7440-43-9	Cadmium	0.40	J	E	P
7440-47-3	Chromium	14.6	↓	E	P
7440-50-8	Copper	17.7	↓	E	P
7439-92-1	Lead	76.3			P
7440-02-0	Nickel	20.3	J	E	P
7440-66-6	Zinc	87.6	J	E	P

Color Before: GREY | Clarity Before: | Texture: FINE
Color After: TAN | Clarity After: CLOUDY | Artifacts:
Comments:

MW 9/16/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-01-024

13

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17061

Matrix: SED Lab Sample Id: 200-17061-13

% Solids: 72.4 Date Received: 06/18/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.12	J	~~N~~	CV

Color Before: GRAY Clarity Before: CLOUDY Texture: FINE

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

MW 9/16/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-01-024FD

14

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678

Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 17061

Matrix: SED | Lab Sample Id: 200-17061-14

% Solids: 72.4 | Date Received: 06/18/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	9.1			P
7440-43-9	Cadmium	0.39	J	E	P
7440-47-3	Chromium	14.1		E	P
7440-50-8	Copper	17.2	↓	E	P
7439-92-1	Lead	70.9			P
7440-02-0	Nickel	20.1	J	E	P
7440-66-6	Zinc	84.0	J	E	P

Color Before: GREY | Clarity Before: | Texture: FINE

Color After: TAN | Clarity After: CLOUDY | Artifacts:

Comments:

MW 9/16/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-01-024FD

14

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678
Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17061
Matrix: SED Lab Sample Id: 200-17061-14
% Solids: 72.4 Date Received: 06/18/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.14	J	~~N~~	CV

Color Before: GRAY Clarity Before: CLOUDY Texture: FINE
Color After: COLORLESS Clarity After: CLEAR Artifacts:
Comments:

MW 9/16/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-01-048

15

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678
Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 17061
Matrix: SED | Lab Sample Id: 200-17061-15
% Solids: 71.7 | Date Received: 06/18/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	9.4			P
7440-43-9	Cadmium	0.51	J	E	P
7440-47-3	Chromium	17.3	↓	E	P
7440-50-8	Copper	22.5		E	P
7439-92-1	Lead	76.4			P
7440-02-0	Nickel	22.5	J	E	P
7440-66-6	Zinc	126	J	E	P

Color Before: GREY | Clarity Before: | Texture: FINE
Color After: TAN | Clarity After: CLOUDY | Artifacts:
Comments:

MW 9/16/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-01-048

15

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17061

Matrix: SED Lab Sample Id: 200-17061-15

% Solids: 71.7 Date Received: 06/18/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.27	J	~~N~~	CV

Color Before: GRAY Clarity Before: CLOUDY Texture: FINE

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

MW 9/16/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-01-096

16

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17061

Matrix: SED Lab Sample Id: 200-17061-16

% Solids: 69.1 Date Received: 06/18/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	3.0			P
7440-43-9	Cadmium	0.34	J		P
7440-47-3	Chromium	10.3	↓		P
7440-50-8	Copper	11.5	↓		P
7439-92-1	Lead	7.9			P
7440-02-0	Nickel	15.1	J		P
7440-66-6	Zinc	38.3	J		P

Color Before: GREY Clarity Before: Texture: FINE

Color After: TAN Clarity After: CLOUDY Artifacts:

Comments:

MW 9/16/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-01-096

16

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17061

Matrix: SED Lab Sample Id: 200-17061-16

% Solids: 69.1 Date Received: 06/18/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.051	J		CV

Color Before: GRAY Clarity Before: CLOUDY Texture: FINE

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

MW 9/16/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-01-120

17

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678
Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 17061
Matrix: SED | Lab Sample Id: 200-17061-17
% Solids: 64.8 | Date Received: 06/18/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	3.2			P
7440-43-9	Cadmium	0.32	J	E	P
7440-47-3	Chromium	9.4	↓	E	P
7440-50-8	Copper	11.2	↓	E	P
7439-92-1	Lead	7.0			P
7440-02-0	Nickel	13.8	J	E	P
7440-66-6	Zinc	35.4	J	E	P

Color Before: GREY | Clarity Before: | Texture: FINE
Color After: TAN | Clarity After: CLOUDY | Artifacts:
Comments:

MW 9/16/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-01-120

17

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17061

Matrix: SED Lab Sample Id: 200-17061-17

% Solids: 64.8 Date Received: 06/18/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.15	U	M	CV

Color Before: GRAY Clarity Before: CLOUDY Texture: FINE

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

NW 9/16/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-48-012

18

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17061

Matrix: SED Lab Sample Id: 200-17061-18

% Solids: 55.8 Date Received: 06/18/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	11.0			P
7440-43-9	Cadmium	4.9	J	B	P
7440-47-3	Chromium	53.2	↓	↓	P
7440-50-8	Copper	51.4			P
7439-92-1	Lead	115			P
7440-02-0	Nickel	30.7	J	B	P
7440-66-6	Zinc	280	J	B	P

Color Before: GREY Clarity Before: Texture: FINE

Color After: TAN Clarity After: CLOUDY Artifacts:

Comments:

MW 9/16/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-48-012

18

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678
Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17061
Matrix: SED Lab Sample Id: 200-17061-18
% Solids: 55.8 Date Received: 06/18/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.41	J	N	CV

Color Before: GRAY Clarity Before: CLOUDY Texture: FINE
Color After: COLORLESS Clarity After: CLEAR Artifacts:
Comments:

NW 9/16/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-48-024

19

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678
Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17061
Matrix: SED Lab Sample Id: 200-17061-19
% Solids: 58.2 Date Received: 06/18/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	11.5			P
7440-43-9	Cadmium	2.5	J	E	P
7440-47-3	Chromium	39.0	J	E	P
7440-50-8	Copper	42.9	J	E	P
7439-92-1	Lead	113			P
7440-02-0	Nickel	31.5	J	E	P
7440-66-6	Zinc	202	J	E	P

Color Before: GREY Clarity Before: Texture: FINE
Color After: TAN Clarity After: CLOUDY Artifacts:
Comments:

MW 9/16/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-48-024

19

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17061

Matrix: SED Lab Sample Id: 200-17061-19

% Solids: 58.2 Date Received: 06/18/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.38	J	N	CV

Color Before: GRAY Clarity Before: CLOUDY Texture: FINE

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

NW 9/16/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-48-048

20

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678

Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 17061

Matrix: SED | Lab Sample Id: 200-17061-20

% Solids: 62.1 | Date Received: 06/18/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	13.4			P
7440-43-9	Cadmium	1.6	J	E	P
7440-47-3	Chromium	28.8	↓	E	P
7440-50-8	Copper	31.9	↓	E	P
7439-92-1	Lead	69.9			P
7440-02-0	Nickel	26.9	J	E	P
7440-66-6	Zinc	143	J	E	P

Color Before: GREY | Clarity Before: | Texture: FINE

Color After: TAN | Clarity After: CLOUDY | Artifacts:

Comments:

MW 9/16/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-48-048

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678 20

Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17061

Matrix: SED Lab Sample Id: 200-17061-20

% Solids: 62.1 Date Received: 06/18/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.31	J	~~N~~	CV

Color Before: GRAY Clarity Before: CLOUDY Texture: FINE

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

NW 9/16/13

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - SEM/AVS

12

Client Sample ID: LMR13-01-012 Lab Sample ID: 200-17061-12

Lab Name: TestAmerica Burlington Job No.: 200-17061-1

SDG ID.: 17061

Matrix: Sediment Date Sampled: 06/17/2013 10:20

Reporting Basis: DRY Date Received: 06/18/2013 10:30

% Solids: 70.3

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-43-9	Cadmium SEM	1.6	1.6	0.26	mg/Kg	U		10	6010C
7440-43-9	Cadmium SEM	0.015	0.015	0.0023	umol/g	U		10	6010C
7440-50-8	Copper SEM	5.1	8.4	0.73	mg/Kg	J		10	6010C
7440-50-8	Copper SEM	0.080	0.13	0.012	umol/g	J		10	6010C
7439-92-1	Lead SEM	21.4	3.4	1.5	mg/Kg			10	6010C
7439-92-1	Lead SEM	0.10	0.016	0.0072	umol/g			10	6010C
7440-02-0	Nickel SEM	4.0	13.6	0.98	mg/Kg	J		10	6010C
7440-02-0	Nickel SEM	0.068	0.23	0.017	umol/g	J		10	6010C
7440-66-6	Zinc SEM	28.7	6.8	1.9	mg/Kg			10	6010C
7440-66-6	Zinc SEM	0.44	0.10	0.029	umol/g			10	6010C
7439-97-6	Mercury SEM	0.0068	0.0068	0.0022	mg/Kg	U		1	7470A
7439-97-6	Mercury SEM	0.000034	0.000034	0.000011	umol/g	U		1	7470A

NW 9/16/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY - SEM/AVS

12

Client Sample ID: LMR13-01-012
Lab Sample ID: 200-17061-12
Lab Name: TestAmerica Burlington
Job No.: 200-17061-1
SDG ID.: 17061
Matrix: Sediment
Date Sampled: 06/17/2013 10:20
Reporting Basis: DRY
Date Received: 06/18/2013 10:30
% Solids: 70.3

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
18496-25-8	Acid Volatile Sulfides (AVS)	343	21.8		mg/Kg			1	AVS
18496-25-8	Acid Volatile Sulfides (AVS)	10.7	0.68		umol/g			1	AVS

NW 9/16/13

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - SEM/AVS

12

Client Sample ID: LMR13-01-012 Lab Sample ID: 200-17061-12

Lab Name: TestAmerica Burlington Job No.: 200-17061-1

SDG ID.: 17061

Matrix: Sediment Date Sampled: 06/17/2013 10:20

Reporting Basis: WET Date Received: 06/18/2013 10:30

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	SEM/AVS Ratio	0.0645	0.00100	0.00100	NONE			1	SEM

MW 9/16/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: LMR13-79-072 | Lab Sample ID: 200-17061-1

Lab Name: TestAmerica Burlington | Job No.: 200-17061-1

SDG ID.: 17061

Matrix: Sediment | Date Sampled: 06/16/2013 12:15

Reporting Basis: WET | Date Received: 06/18/2013 10:30

% Solids: 80.2

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	15300	J 1000		mg/Kg		F	1	Lloyd Kahn

NW 9/16/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: LMR13-79-096
Lab Sample ID: 200-17061-2
Lab Name: TestAmerica Burlington
Job No.: 200-17061-1
SDG ID.: 17061
Matrix: Sediment
Date Sampled: 06/16/2013 12:25
Reporting Basis: WET
Date Received: 06/18/2013 10:30
% Solids: 83.4

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	14100	J 1000		mg/Kg			1	Lloyd Kahn

NW 9/16/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: LMR13-38-012
Lab Sample ID: 200-17061-3
3
Lab Name: TestAmerica Burlington
Job No.: 200-17061-1
SDG ID.: 17061
Matrix: Sediment
Date Sampled: 06/16/2013 11:00
Reporting Basis: WET
Date Received: 06/18/2013 10:30
% Solids: 69.2

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	21400	J 1000		mg/Kg		J	1	Lloyd Kahn

MW 9/16/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: LMR13-40-072
Lab Sample ID: 200-17061-4
4
Lab Name: TestAmerica Burlington
Job No.: 200-17061-1
SDG ID.: 17061
Matrix: Sediment
Date Sampled: 06/16/2013 13:00
Reporting Basis: WET
Date Received: 06/18/2013 10:30
% Solids: 56.5

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	30600	J 1000		mg/Kg		J	1	Lloyd Kahn

NW 9/16/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: LMR13-40-096
Lab Sample ID: 200-17061-5
5
Lab Name: TestAmerica Burlington
Job No.: 200-17061-1
SDG ID.: 17061
Matrix: Sediment
Date Sampled: 06/16/2013 13:10
Reporting Basis: WET
Date Received: 06/18/2013 10:30
% Solids: 56.2

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	34200	J 1000		mg/Kg		J	1	Lloyd Kahn

MW 9/16/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: LMR13-79-012
Lab Sample ID: 200-17061-6
Lab Name: TestAmerica Burlington
Job No.: 200-17061-1
SDG ID.: 17061
Matrix: Sediment
Date Sampled: 06/16/2013 11:45
Reporting Basis: WET
Date Received: 06/18/2013 10:30
% Solids: 65.7

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	13000	J 1000		mg/Kg		~~H~~	1	Lloyd Kahn

MW 9/16/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

7

Client Sample ID: LMR13-79-024 Lab Sample ID: 200-17061-7

Lab Name: TestAmerica Burlington Job No.: 200-17061-1

SDG ID.: 17061

Matrix: Sediment Date Sampled: 06/16/2013 11:55

Reporting Basis: WET Date Received: 06/18/2013 10:30

% Solids: 80.8

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	7480	J 1000		mg/Kg		✓	1	Lloyd Kahn

NW 9/16/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

8

Client Sample ID: LMR13-01-072
Lab Sample ID: 200-17061-8
Lab Name: TestAmerica Burlington
Job No.: 200-17061-1
SDG ID.: 17061
Matrix: Sediment
Date Sampled: 06/17/2013 10:50
Reporting Basis: WET
Date Received: 06/18/2013 10:30
% Solids: 72.2

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	26400	J 1000		mg/Kg		F	1	Lloyd Kahn

MW 9/16/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

9

Client Sample ID: LMR13-38-048
Lab Sample ID: 200-17061-9
Lab Name: TestAmerica Burlington
Job No.: 200-17061-1
SDG ID.: 17061
Matrix: Sediment
Date Sampled: 06/16/2013 11:20
Reporting Basis: WET
Date Received: 06/18/2013 10:30
% Solids: 68.4

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	17600	J 1000		mg/Kg		J	1	Lloyd Kahn

MW 9/16/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

10

Client Sample ID: LMR13-38-096
Lab Sample ID: 200-17061-10
Lab Name: TestAmerica Burlington
Job No.: 200-17061-1
SDG ID.: 17061
Matrix: Sediment
Date Sampled: 06/16/2013 11:40
Reporting Basis: WET
Date Received: 06/18/2013 10:30
% Solids: 77.0

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	19800	J 1000		mg/Kg		J	1	Lloyd Kahn

MW 9/16/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

11

Client Sample ID: LMR13-40-048
Lab Sample ID: 200-17061-11
Lab Name: TestAmerica Burlington
Job No.: 200-17061-1
SDG ID.: 17061
Matrix: Sediment
Date Sampled: 06/16/2013 12:50
Reporting Basis: WET
Date Received: 06/18/2013 10:30
% Solids: 54.7

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	24200	J 1000		mg/Kg		H	1	Lloyd Kahn

MW 9/16/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: LMR13-01-012
Lab Sample ID: 200-17061-12
12
Lab Name: TestAmerica Burlington
Job No.: 200-17061-1
SDG ID.: 17061
Matrix: Sediment
Date Sampled: 06/17/2013 10:20
Reporting Basis: WET
Date Received: 06/18/2013 10:30
% Solids: 70.3

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	25700	J 1000		mg/Kg		H	1	Lloyd Kahn

MW 9/16/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

13

Client Sample ID: LMR13-01-024
Lab Sample ID: 200-17061-13
Lab Name: TestAmerica Burlington
Job No.: 200-17061-1
SDG ID.: 17061
Matrix: Sediment
Date Sampled: 06/17/2013 10:30
Reporting Basis: WET
Date Received: 06/18/2013 10:30
% Solids: 72.4

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	21900	J 1000		mg/Kg		J	1	Lloyd Kahn

MW 9/16/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: LMR13-01-024FD
Lab Sample ID: 200-17061-14
14
Lab Name: TestAmerica Burlington
Job No.: 200-17061-1
SDG ID.: 17061
Matrix: Sediment
Date Sampled: 06/17/2013 10:30
Reporting Basis: WET
Date Received: 06/18/2013 10:30
% Solids: 72.4

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	23800	J 1000		mg/Kg		~~F~~	1	Lloyd Kahn

NW 9/16/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: LMR13-01-048
Lab Sample ID: 200-17061-15
15
Lab Name: TestAmerica Burlington
Job No.: 200-17061-1
SDG ID.: 17061
Matrix: Sediment
Date Sampled: 06/17/2013 10:40
Reporting Basis: WET
Date Received: 06/18/2013 10:30
% Solids: 71.7

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	25000	J 1000		mg/Kg		~~V~~	1	Lloyd Kahn

MW 9/16/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

16

Client Sample ID: LMR13-01-096
Lab Sample ID: 200-17061-16
Lab Name: TestAmerica Burlington
Job No.: 200-17061-1
SDG ID.: 17061
Matrix: Sediment
Date Sampled: 06/17/2013 11:00
Reporting Basis: WET
Date Received: 06/18/2013 10:30
% Solids: 69.1

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	28600	J 1000		mg/Kg		~~F~~	1	Lloyd Kahn

NW 9/16/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

17

Client Sample ID: LMR13-01-120
Lab Sample ID: 200-17061-17
Lab Name: TestAmerica Burlington
Job No.: 200-17061-1
SDG ID.: 17061
Matrix: Sediment
Date Sampled: 06/17/2013 11:10
Reporting Basis: WET
Date Received: 06/18/2013 10:30
% Solids: 64.8

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	29900	J 1000		mg/Kg		~~J~~	1	Lloyd Kahn

MW 9/16/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

18

Client Sample ID: LMR13-48-012
Lab Sample ID: 200-17061-18
Lab Name: TestAmerica Burlington
Job No.: 200-17061-1
SDG ID.: 17061
Matrix: Sediment
Date Sampled: 06/17/2013 11:20
Reporting Basis: WET
Date Received: 06/18/2013 10:30
% Solids: 55.8

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	31300	J 1000		mg/Kg		J	1	Lloyd Kahn

NW 9/16/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

19

Client Sample ID: LMR13-48-024
Lab Sample ID: 200-17061-19
Lab Name: TestAmerica Burlington
Job No.: 200-17061-1
SDG ID.: 17061
Matrix: Sediment
Date Sampled: 06/17/2013 11:30
Reporting Basis: WET
Date Received: 06/18/2013 10:30
% Solids: 58.2

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	27900	J 1000		mg/Kg			1	Lloyd Kahn

NW 9/16/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: LMR13-48-048
Lab Sample ID: 200-17061-20 20
Lab Name: TestAmerica Burlington
Job No.: 200-17061-1
SDG ID.: 17061
Matrix: Sediment
Date Sampled: 06/17/2013 11:40
Reporting Basis: WET
Date Received: 06/18/2013 10:30
% Solids: 62.1

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	38600	J 1000		mg/Kg		✓	1	Lloyd Kahn

NW 9/16/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: LMR13-79-072
Lab Sample ID: 200-17061-1
Lab Name: TestAmerica Pittsburgh
Job No.: 200-17061-1
SDG ID.: 17061
Matrix: Sediment
Date Sampled: 06/16/2013 12:15
Reporting Basis: DRY
Date Received: 06/18/2013 10:30
% Solids: 80.2

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	62.2	J 207	28.8	mg/Kg			1	9071B

MW 9/16/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

2

Client Sample ID: LMR13-79-096
Lab Sample ID: 200-17061-2
Lab Name: TestAmerica Pittsburgh
Job No.: 200-17061-1
SDG ID.: 17061
Matrix: Sediment
Date Sampled: 06/16/2013 12:25
Reporting Basis: DRY
Date Received: 06/18/2013 10:30
% Solids: 83.4

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	59.8	J 199	27.7	mg/Kg			1	9071B

NW 9/16/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: LMR13-38-012
Lab Sample ID: 200-17061-3 3
Lab Name: TestAmerica Pittsburgh
Job No.: 200-17061-1
SDG ID.: 17061
Matrix: Sediment
Date Sampled: 06/16/2013 11:00
Reporting Basis: DRY
Date Received: 06/18/2013 10:30
% Solids: 69.2

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	477	J 241	33.5	mg/Kg			1	9071B

NW 9/16/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: LMR13-40-072
Lab Sample ID: 200-17061-4
4
Lab Name: TestAmerica Pittsburgh
Job No.: 200-17061-1
SDG ID.: 17061
Matrix: Sediment
Date Sampled: 06/16/2013 13:00
Reporting Basis: DRY
Date Received: 06/18/2013 10:30
% Solids: 56.5

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	383	J 294	40.9	mg/Kg			1	9071B

NW 9/16/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: LMR13-40-096 | Lab Sample ID: 200-17061-5 | 5

Lab Name: TestAmerica Pittsburgh | Job No.: 200-17061-1

SDG ID.: 17061

Matrix: Sediment | Date Sampled: 06/16/2013 13:10

Reporting Basis: DRY | Date Received: 06/18/2013 10:30

% Solids: 56.2

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	296	UJ 296	41.2	mg/Kg	U		1	9071B

MW 9/16/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: LMR13-79-012
Lab Sample ID: 200-17061-6 6
Lab Name: TestAmerica Pittsburgh
Job No.: 200-17061-1
SDG ID.: 17061
Matrix: Sediment
Date Sampled: 06/16/2013 11:45
Reporting Basis: DRY
Date Received: 06/18/2013 10:30
% Solids: 65.7

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	86.0 J	253	35.1	mg/Kg	J		1	9071B

NW 9/16/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

7

Client Sample ID: LMR13-79-024 | Lab Sample ID: 200-17061-7

Lab Name: TestAmerica Pittsburgh | Job No.: 200-17061-1

SDG ID.: 17061

Matrix: Sediment | Date Sampled: 06/16/2013 11:55

Reporting Basis: DRY | Date Received: 06/18/2013 10:30

% Solids: 80.8

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	45.1	J 205	28.5	mg/Kg			1	9071B

NW 9/16/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

8

Client Sample ID: LMR13-01-072
Lab Sample ID: 200-17061-8
Lab Name: TestAmerica Pittsburgh
Job No.: 200-17061-1
SDG ID.: 17061
Matrix: Sediment
Date Sampled: 06/17/2013 10:50
Reporting Basis: DRY
Date Received: 06/18/2013 10:30
% Solids: 72.2

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	55.0	J 229	31.8	mg/Kg			1	9071B

MW 9/16/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

9

Client Sample ID: LMR13-38-048
Lab Sample ID: 200-17061-9
Lab Name: TestAmerica Pittsburgh
Job No.: 200-17061-1
SDG ID.: 17061
Matrix: Sediment
Date Sampled: 06/16/2013 11:20
Reporting Basis: DRY
Date Received: 06/18/2013 10:30
% Solids: 68.4

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	244 ~~68.4~~	UJ 244	33.9	mg/Kg			1	9071B

MW 9/16/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: LMR13-38-096 Lab Sample ID: 200-17061-10 10

Lab Name: TestAmerica Pittsburgh Job No.: 200-17061-1

SDG ID.: 17061

Matrix: Sediment Date Sampled: 06/16/2013 11:40

Reporting Basis: DRY Date Received: 06/18/2013 10:30

% Solids: 77.0

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	34.5	J 216	30.0	mg/Kg	J		1	9071B

MW 9/16/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: LMR13-40-048
Lab Sample ID: 200-17061-11 11
Lab Name: TestAmerica Pittsburgh
Job No.: 200-17061-1
SDG ID.: 17061
Matrix: Sediment
Date Sampled: 06/16/2013 12:50
Reporting Basis: DRY
Date Received: 06/18/2013 10:30
% Solids: 54.7

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	305	UJ 305	42.3	mg/Kg			1	9071B

MW 9/16/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: LMR13-01-012 | Lab Sample ID: 200-17061-12 | 12

Lab Name: TestAmerica Pittsburgh | Job No.: 200-17061-1

SDG ID.: 17061

Matrix: Sediment | Date Sampled: 06/17/2013 10:20

Reporting Basis: DRY | Date Received: 06/18/2013 10:30

% Solids: 70.3

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	379	J 237	32.9	mg/Kg			1	9071B

NW 9/16/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

13

Client Sample ID: LMR13-01-024
Lab Sample ID: 200-17061-13
Lab Name: TestAmerica Pittsburgh
Job No.: 200-17061-1
SDG ID.: 17061
Matrix: Sediment
Date Sampled: 06/17/2013 10:30
Reporting Basis: DRY
Date Received: 06/18/2013 10:30
% Solids: 72.4

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	414	J 230	32.0	mg/Kg			1	9071B

NW 9/16/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

15

Client Sample ID: LMR13-01-048 Lab Sample ID: 200-17061-15

Lab Name: TestAmerica Pittsburgh Job No.: 200-17061-1

SDG ID.: 17061

Matrix: Sediment Date Sampled: 06/17/2013 10:40

Reporting Basis: DRY Date Received: 06/18/2013 10:30

% Solids: 71.7

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	250	J 232	32.2	mg/Kg			1	9071B

NW 9/16/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

16

Client Sample ID: LMR13-01-096
Lab Sample ID: 200-17061-16
Lab Name: TestAmerica Pittsburgh
Job No.: 200-17061-1
SDG ID.: 17061
Matrix: Sediment
Date Sampled: 06/17/2013 11:00
Reporting Basis: DRY
Date Received: 06/18/2013 10:30
% Solids: 69.1

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	240	UJ 240	33.4	mg/Kg			1	9071B

NW 9/16/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

17

Client Sample ID: LMR13-01-120
Lab Sample ID: 200-17061-17
Lab Name: TestAmerica Pittsburgh
Job No.: 200-17061-1
SDG ID.: 17061
Matrix: Sediment
Date Sampled: 06/17/2013 11:10
Reporting Basis: DRY
Date Received: 06/18/2013 10:30
% Solids: 64.8

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	257	UJ 257	35.7	mg/Kg			1	9071B

MW 9/16/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

18

Client Sample ID: LMR13-48-012
Lab Sample ID: 200-17061-18
Lab Name: TestAmerica Pittsburgh
Job No.: 200-17061-1
SDG ID.: 17061
Matrix: Sediment
Date Sampled: 06/17/2013 11:20
Reporting Basis: DRY
Date Received: 06/18/2013 10:30
% Solids: 55.8

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	428	J 298	41.3	mg/Kg			1	9071B

NW 9/16/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: LMR13-48-024
Lab Sample ID: 200-17061-19
19
Lab Name: TestAmerica Pittsburgh
Job No.: 200-17061-1
SDG ID.: 17061
Matrix: Sediment
Date Sampled: 06/17/2013 11:30
Reporting Basis: DRY
Date Received: 06/18/2013 10:30
% Solids: 58.2

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	132	J 287	39.8	mg/Kg			1	9071B

NW 9/16/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

20

Client Sample ID: LMR13-48-048 | Lab Sample ID: 200-17061-20

Lab Name: TestAmerica Pittsburgh | Job No.: 200-17061-1

SDG ID.: 17061

Matrix: Sediment | Date Sampled: 06/17/2013 11:40

Reporting Basis: DRY | Date Received: 06/18/2013 10:30

% Solids: 62.1

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	198	J 268	37.2	mg/Kg	✓		1	9071B

NW 9/16/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: LMR13-48-024FD
Lab Sample ID: 200-17061-21
Lab Name: TestAmerica Pittsburgh
Job No.: 200-17061-1
SDG ID.: 17061
Matrix: Sediment
Date Sampled: 06/17/2013 11:30
Reporting Basis: DRY
Date Received: 06/18/2013 10:30
% Solids: 58.8

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	700	J 282	39.2	mg/Kg			1	9071B

NW 9/16/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

22

Client Sample ID: LMR13-79-024FD
Lab Sample ID: 200-17061-22
Lab Name: TestAmerica Pittsburgh
Job No.: 200-17061-1
SDG ID.: 17061
Matrix: Sediment
Date Sampled: 06/17/2013 11:55
Reporting Basis: DRY
Date Received: 06/18/2013 10:30
% Solids: 81.1

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	32.9	J 206	28.5	mg/Kg			1	9071B

NW 9/16/13

ENVIRONMENTAL
Data Services, Inc.

DATA VALIDATION SUMMARY REPORT
LOWER MAUMEE RIVER, TOLEDO, OHIO

Client: EA Engineering, Science & Technology, Inc., Hunt Valley, Maryland
SDG: 200-17071
Laboratory: Test America Laboratories, Burlington, Vermont
Test America Laboratories, North Canton, Ohio
Site: Lower Maumee River, Maumee Area of Concern, Toledo, Ohio
Date: September 17, 2013

SVOC			
EDS ID	Client Sample ID	Laboratory Sample ID	Matrix
6	LMR13-08-048	200-17071-6	Sediment
7	LMR13-08-072	200-17071-7	Sediment
8	LMR13-13-012	200-17071-8	Sediment
9	LMR13-13-024	200-17071-9	Sediment
10	LMR13-14-120	200-17071-10	Sediment
12	LMR13-13-072	200-17071-12	Sediment
13	LMR13-13-120	200-17071-13	Sediment
14	LMR13-14-096	200-17071-14	Sediment
15	LMR13-25-012	200-17071-15	Sediment
16	LMR13-25-024	200-17071-16	Sediment
17	LMR13-08-024	200-17071-17	Sediment
18	LMR13-13-096	200-17071-18	Sediment
18MS	LMR13-13-096MS	200-17071-18MS	Sediment
18MSD	LMR13-13-096MSD	200-17071-18MSD	Sediment
19	LMR13-25-048	200-17071-19	Sediment
20	LMR13-25-072	200-17071-20	Sediment
22	LMR13-08-024FD	200-17071-22	Sediment
23	LMR13-08-012	200-17120-1	Sediment
23MS	LMR13-08-012MS	200-17120-1MS	Sediment
23MSD	LMR13-08-012MSD	200-17120-1MSD	Sediment
24	LMR13-14-012	200-17120-2	Sediment
25	LMR13-14-048	200-17120-3	Sediment
26	LMR13-14-072	200-17120-4	Sediment

PAH 34			
EDS ID	Client Sample ID	Laboratory Sample ID	Matrix
8	LMR13-13-012	200-17071-8	Sediment
15	LMR13-25-012	200-17071-15	Sediment
23	LMR13-08-012	200-17120-1	Sediment
23MS	LMR13-08-012MS	200-17120-1MS	Sediment
23MSD	LMR13-08-012MSD	200-17120-1MSD	Sediment
24	LMR13-14-012	200-17120-2	Sediment

PCB/Metals/Mercury/TOC			
EDS ID	Client Sample ID	Laboratory Sample ID	Matrix
5	LMR13-13-024FD	200-17071-5	Sediment
6	LMR13-08-048	200-17071-6	Sediment
7	LMR13-08-072	200-17071-7	Sediment
8	LMR13-13-012	200-17071-8	Sediment
9	LMR13-13-024	200-17071-9	Sediment
10	LMR13-14-120	200-17071-10	Sediment
11	LMR13-25-024FD	200-17071-11	Sediment
12	LMR13-13-072	200-17071-12	Sediment
13	LMR13-13-120	200-17071-13	Sediment
14	LMR13-14-096	200-17071-14	Sediment
15	LMR13-25-012	200-17071-15	Sediment
16	LMR13-25-024	200-17071-16	Sediment
17	LMR13-08-024	200-17071-17	Sediment
18	LMR13-13-096	200-17071-18	Sediment
18MS*	LMR13-13-096MS	200-17071-18MS	Sediment
18MSD*	LMR13-13-096MSD	200-17071-18MSD	Sediment
19	LMR13-25-048	200-17071-19	Sediment
20	LMR13-25-072	200-17071-20	Sediment
23	LMR13-08-012	200-17120-1	Sediment
24	LMR13-14-012	200-17120-2	Sediment
25	LMR13-14-048	200-17120-3	Sediment
26	LMR13-14-072	200-17120-4	Sediment

* - Analyzed for PCBs and Metals only

AVS/SEM			
EDS ID	Client Sample ID	Laboratory Sample ID	Matrix
8	LMR13-13-012	200-17071-8	Sediment
15	LMR13-25-012	200-17071-15	Sediment
21	LMR13-25-012FD	200-17071-21	Sediment
23	LMR13-08-012	200-17120-1	Sediment
24	LMR13-14-012	200-17120-2	Sediment

HEM			
EDS ID	Client Sample ID	Laboratory Sample ID	Matrix
1	LMR13-08-012	200-17071-1	Sediment
2	LMR13-14-012	200-17071-2	Sediment
3	LMR13-14-048	200-17071-3	Sediment
4	LMR13-14-072	200-17071-4	Sediment
6	LMR13-08-048	200-17071-6	Sediment
7	LMR13-08-072	200-17071-7	Sediment
8	LMR13-13-012	200-17071-8	Sediment
9	LMR13-13-024	200-17071-9	Sediment
10	LMR13-14-120	200-17071-10	Sediment
12	LMR13-13-072	200-17071-12	Sediment
13	LMR13-13-120	200-17071-13	Sediment
14	LMR13-14-096	200-17071-14	Sediment
15	LMR13-25-012	200-17071-15	Sediment
16	LMR13-25-024	200-17071-16	Sediment
17	LMR13-08-024	200-17071-17	Sediment

HEM			
EDS ID	Client Sample ID	Laboratory Sample ID	Matrix
18	LMR13-13-096	200-17071-18	Sediment
19	LMR13-25-048	200-17071-19	Sediment
20	LMR13-25-072	200-17071-20	Sediment
22	LMR13-08-024FD	200-17071-22	Sediment
27	LMR13-03-024FD	200-17120-5	Sediment

A full data validation was performed on the analytical data for twenty-seven sediment samples collected on June 17, 2013 by EA Engineering at the Lower Maumee River site in Toledo, Ohio. The samples were analyzed under the Environmental Protection Agency (USEPA) Contract Laboratory Program (CLP) Multi-Media Multi-Concentration Organics Analysis SOM01.2 and Inorganic Analysis ILM05.4 and the Test Methods for the Evaluation of Solid Waste, USEPA SW-846, Third Edition, September 1986, with revisions.

Specific method references are as follows:

Analysis	*Method References*
SVOCs	USEPA CLP SOM01.2
PAH 34	USEPA CLP SOM01.2
PCBs	USEPA CLP SOM01.2
Michigan Metals & Mercury	USEPA CLP ISM01.3
AVS/SEM	USEPA SW-846 Methods 6010C/7470A
TOC	Lloyd Kahn
Oil & Grease (HEM)	USEPA SW-846 Method 9071B

The data have been validated according to the protocols and quality control (QC) requirements of the analytical methods, the Great Lakes Legacy Act, March 2010, the Quality Assurance Project Plan for Phase 2 of the Lower Maumee River Site Characterization, May 2013, and the USEPA National Functional Guidelines for Organic Data Review as follows:

- The USEPA "Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review," June 2008;
- The USEPA "Contract Laboratory Program National Functional Guidelines for Inorganic Superfund Data Review," January 2010;
- and the reviewer's professional judgment.

The following items/criteria were reviewed for this report:

Organics

- Holding times and sample preservation
- Gas Chromatography/Mass Spectroscopy (GC/MS) Tuning
- Initial and continuing calibration summaries
- Method blank and field blank contamination
- Surrogate Spike recoveries
- Matrix Spike/Matrix Spike Duplicate (MS/MSD) recoveries
- Laboratory Control Sample (LCS) recoveries
- Internal standard area and retention time summary forms
- Target Compound Identification

- Compound Quantitation
- Tentatively Identified Compounds (TICs)
- Field Duplicate sample precision

Inorganics

- Holding times and sample preservation
- ICP/MS Tuning
- Initial and continuing calibration verifications
- Method blank and field blank contamination
- ICP Interference Check Sample
- Laboratory Control Sample (LCS) recoveries
- Matrix Spike Analysis
- Duplicate Sample Analysis
- ICP Serial Dilution
- Compound Quantitation
- Field Duplicate sample precision

Overall Usability Issues:

There were minor rejections of data. This data cannot be used in the decision-making process for this project.

- Three SVOC compounds were rejected in eleven samples due to severely low surrogate recoveries.

Overall the remaining data is acceptable for the intended purposes as qualified for the deficiencies detailed in this report.

Please note that any results qualified (U) due to blank contamination may be then qualified (J) due to another action. Therefore, the results may be qualified (UJ) due to the culmination of the blank contaminations and actions from other exceedences of QC criteria.

Semivolatile Organic Compounds (SVOCs)

Holding Times

- All samples were extracted within 14 days for sediment samples and analyzed within 40 days for all samples with the exception of the following.

Sample	Date Extracted	Date Analyzed	# of Days	Qualifier
20	06/27/13	08/07/13	41	J/UJ
22	06/27/13	08/07/13	41	J/UJ
25	06/29/13	08/13/13	46	J/UJ

GC/MS Tuning

- All criteria were met.

Initial Calibration

- All %RSD and mean RRF criteria were met except the following.

ICAL Date	Compound	%RSD/RRF	Qualifier	Affected Samples
07/29/13	Pentachlorophenol	21.2%	J/UJ	6-10, 12-20, 22-24, 26
	Pyrene	22.6%	J/UJ	

Continuing Calibration

- All %D and RRF criteria were met except the following.

CCAL Date	Compound	%D/RRF	Qualifier	Affected Samples
08/02/13 (0617)	Dibenzo(a,h)anthracene	25.1%	None	See IS
08/02/13 (1349)	Hexachlorocyclopentadiene	55.2%	None	See Surrogates
08/05/13 (0833)	Indeno(1,2,3-cd)pyrene	29.3%	J/UJ	10, 14, 17, 19
	Dibenzo(a,h)anthracene	31.2%	J/UJ	
	Benzo(g,h,i)perylene	34.2%	J/UJ	
08/05/13 (1645)	Hexachlorocyclopentadiene	54.2%	J/UJ	18, 19
08/07/13 (0729)	Pyrene	38.2%	None	See ICAL
	Benzo(g,h,i)perylene	25.3%	None	See HT
08/07/13 (1212)	Hexachlorocyclopentadiene	56.5%	None	See Surrogates
08/08/13 (1254)	Pyrene	31.3%	None	See ICAL
	Indeno(1,2,3-cd)pyrene	37.8%	J/UJ	23, 24, 26
	Dibenzo(a,h)anthracene	38.9%	J/UJ	
08/08/13 (2252, 2332)	Hexachlorocyclopentadiene	71.5%	J/UJ	26
	Benzo(g,h,i)perylene	34.6%	J/UJ	23, 24, 26
08/14/13 (0115)	Caprolactam	62.5%	None	See HT
	Hexachlorocyclopentadiene	59.1%	None	

Method Blank

- The method blanks exhibited the following contamination.

Blank ID	Compound	Conc. ug/kg	Qualifier	Affected Samples
SBLKN2	Butylbenzylphthalate	13	U	10
	bis(2-Ethylhexyl)phthalate	19	U	10, 14-16, 18-20
SBLKN7	di-n-Butylphthalate	9.6	U	23
	Butylbenzylphthalate	27	U	22, 23
	bis(2-Ethylhexyl)phthalate	42	U	22, 23

Field Blank

- Field QC samples were not analyzed.

Surrogate Spike Recoveries

- All samples exhibited acceptable surrogate %R values except the following.

Sample ID	Surrogate	%R	Qualifier
6	4-Chloroaniline-d4	0%D	R - Associated Compounds
	Pyrene-d10	50%	J/UJ - Associated Compounds
8	4-Chloroaniline-d4	0%D	R - Associated Compounds
9	4-Chloroaniline-d4	0%	R - Associated Compounds
10	4-Methylphenol-d8	109%	None - ND
	4-Chloroaniline-d4	0%	R - Associated Compounds
13	4-Methylphenol-d8	101%D	None - ND
	4-Chloroaniline-d4	0%	R - Associated Compounds
14	4-Chloroaniline-d4	0%	R - Associated Compounds
16	4-Methylphenol-d8	107%D	None - ND
17	4-Methylphenol-d8	105%D	None - ND
	4-Chloroaniline-d4	0%	R - Associated Compounds
18	Pyrene-d10	50%	J/UJ - Associated Compounds
20	4-Methylphenol-d8	108%	None - ND
	4-Chloroaniline-d4	0%	R - Associated Compounds
22	4-Methylphenol-d8	119%	None - ND
	4-Chloroaniline-d4	0%	R - Associated Compounds
23	4-Methylphenol-d8	108%	None - ND
	4-Chloroaniline-d4	0%	R - Associated Compounds
24	4-Methylphenol-d8	105%	None - ND
	4-Chloroaniline-d4	0%	R - Associated Compounds
25	4-Methylphenol-d8	108%	None - ND
26	4-Methylphenol-d8	108%	None - ND

Matrix Spike/Matrix Spike Duplicate (MS/MSD) Recoveries

- The MS/MSD sample exhibited acceptable %R and RPD values except the following.

MS/MSD Sample ID	Compound	MS %R/MSD %R/ RPD	Qualifier
18	4-Chloro-3-methylphenol	OK/105%/OK	None - ND

Laboratory Control Samples

- A LCS sample was not analyzed.

Internal Standard (IS) Area Performance

- All internal standards met response and retention time (RT) criteria except the following.

Sample ID	Internal Standard	Area Count	Qualifier
9	IS6=Perylene-d12	Low	J/UJ - Associated Compounds
18	IS6=Perylene-d12	Low	J/UJ - Associated Compounds

Target Compound Identification

- All mass spectra and quantitation criteria were met.

Compound Quantitation

- Several samples were analyzed at a dilution due to high concentrations of target compounds. No action was required.

Field Duplicate Sample Precision

- Field duplicate results are summarized below.

SVOC				
Compound	LMR13-08-024 ug/kg	LMR13-08-024FD ug/kg	RPD	Qualifier
Benzaldehyde	500U	38	NC	None
Naphthalene	43	25	53%	
2-Methylnaphthalene	17	270U	NC	
Acenaphthene	32	28	13%	
Dibenzofuran	25	22	13%	
Fluorene	50	40	22%	
Phenanthrene	250	230	8%	
Anthracene	62	66	6%	
di-n-Butylphthalate	500U	20	NC	
Fluoranthene	400	590	38%	
Pyrene	390	460	16%	
Benzo(a)anthracene	240	220	9%	
Chrysene	350	350	0%	
bis(2-Ethylhexyl)phthalate	520	400	26%	
Benzo(b)fluoranthene	360	310	15%	
Benzo(k)fluoranthene	260	270	4%	
Benzo(a)pyrene	350	250	33%	
Indeno(1,2,3-cd)pyrene	140	120	15%	
Dibenzo(a,h)anthracene	42	57	30%	
Benzo(g,h,i)perylene	200	150	29%	

Polynuclear Aromatic Hydrocarbons (PAH 34)

Holding Times

- All samples were extracted within 14 days for sediment samples and analyzed within 40 days for all samples with the exception of the following.

Sample	Date Extracted	Date Analyzed	# of Days	Qualifier
8	06/27/13	08/14/13	48	J/UJ
15	06/27/13	08/14/13	48	J/UJ

GC/MS Tuning

- All criteria were met.

Initial Calibration

- All %RSD and mean RRF criteria were met.

Continuing Calibration

- All %D and RRF criteria were met.

Method Blank

- The method blanks exhibited the following contamination.

Blank ID	Compound	Conc. ug/kg	Qualifier	Affected Samples
SBLKN2	Naphthalene	0.37	U	8, 15
	Phenanthrene	0.12	None	All >5X
	Fluoranthene	0.16	None	
	Benzo(a)anthracene	0.21	None	
	Chrysene	0.20	None	
	Benzo(b)fluoranthene	0.23	None	
	Benzo(k)fluoranthene	0.34	None	
	Benzo(e)pyrene	0.21	None	
	Indeno(1,2,3-cd)pyrene	0.16	U	8, 15
	Benzo(g,h,i)perylene	0.17	U	
	Total 16 PPAH	2.0	J	
	Total PAH	2.2	J	
SBLKN7	Naphthalene	0.25	U	24
	Phenanthrene	0.11	None	All >5X
	Fluoranthene	0.16	None	
	Benzo(a)anthracene	0.13	None	

Blank ID	Compound	Conc. ug/kg	Qualifier	Affected Samples
SBLKN7 (cont)	Chrysene	0.13	None	All >5X
	Perylene	0.36	None	
	Total 16 PPAH	0.91	J	24
	Total PAH	1.3	J	

Field Blank

- Field QC samples were not analyzed.

Surrogate Spike Recoveries

- All samples exhibited acceptable surrogate %R values.

Matrix Spike/Matrix Spike Duplicate (MS/MSD) Recoveries

- The MS/MSD sample exhibited acceptable %R and RPD values except the following.

MS/MSD Sample ID	Compound	MS %R/MSD %R/ RPD	Qualifier
23	Pyrene	OK/-31%/400	None - 4X Rule Applies

Laboratory Control Samples

- A LCS sample was not analyzed.

Internal Standard (IS) Area Performance

- All internal standards met response and retention time (RT) criteria.

Target Compound Identification

- All mass spectra and quantitation criteria were met.

Compound Quantitation

- EDS Sample ID #s 23 and 24 exhibited high concentrations of several target compounds and were flagged (E) by the laboratory. These samples were not reanalyzed and these results were qualified as estimated (J).
- Total 16 PPAH and Total PAH were estimated (J) in all samples due to blank contamination.

Field Duplicate Sample Precision

- Field duplicate samples were not analyzed.

Polychlorinated Biphenyls (PCBs)

Holding Times

- All samples were extracted within 14 days for sediment samples and analyzed within 40 days.

Initial Calibration

- All %RSD and/or correlation coefficient criteria were met.

Continuing Calibration

- All %D criteria were met.

Method Blank

- The method blanks were free of contamination.

Field Blank

- Field QC samples were not analyzed.

Surrogate Spike Recoveries

- All samples exhibited acceptable surrogate recoveries.

Matrix Spike/Matrix Spike Duplicate (MS/MSD) Recoveries

- The MS/MSD sample exhibited acceptable %R and RPD values.

Laboratory Control Samples

- The LCS sample exhibited acceptable %R values.

Compound Quantitation

- All criteria were met.

Field Duplicate Sample Precision

- Field duplicate results are summarized below.

PCBs				
Compound	LMR13-13-024 ug/kg	LMR13-13-024FD ug/kg	RPD	Qualifier
Aroclor-1242	1000	850	16%	None
Aroclor-1254	650	560	15%	
Aroclor-1260	130	110	17%	

PCBs				
Compound	LMR13-25-024 ug/kg	LMR13-25-024FD ug/kg	RPD	Qualifier
Aroclor-1248	120	13	161%	J
Aroclor-1254	120	51	81%	None
Aroclor-1260	24	12	67%	

GC Column Difference Results

- Several samples exhibited high %D values > 25% between columns and have been qualified as estimated (J) by the reviewer.

Metals & Mercury

Holding Times

- All samples were prepared and analyzed within 28 days for mercury and 180 days for all other metals.

ICP/MS Tuning

- Not applicable.

Initial Calibration Verification

- All initial calibration criteria were met.

Continuing Calibration Verification

- All continuing calibration criteria were met.

Method Blank

- The method blanks exhibited the following contamination.

Blank ID	Compound	Conc. mg/kg	Qualifier	Affected Samples
PBS	Chromium	0.058	None	All >10X
	Zinc	0.93	None	

Field Blank

- Field QC samples were not analyzed.

ICP Interference Check Sample

- The ICP interference check sample exhibited acceptable %R values.

Laboratory Control Samples

- The LCS sample exhibited acceptable recoveries.

Matrix Spike/Duplicate (MS/DUP) Analysis

- The MS/DUP samples exhibited acceptable %R and RPD values.

ICP Serial Dilution

- ICP serial dilution percent differences (%D) were within acceptance limits except the following.

ICP Sample ID	Compound	%D	Qualifier	Affected Samples
18	Chromium	18%	J	All Samples
	Copper	15%	J	
	Nickel	22%	J	
	Zinc	17%	J	

Compound Quantitation

- All criteria were met.

Field Duplicate Sample Precision

- Field duplicate results are summarized below.

Metals & Mercury				
Compound	LMR13-13-024 mg/kg	LMR13-13-024FD mg/kg	RPD	Qualifier
Arsenic	9.0	9.4	4%	None
Cadmium	3.4	3.7	8%	
Chromium	65.4	69.4	6%	
Copper	50.9	53.1	4%	
Lead	57.8	61.0	5%	
Nickel	45.7	46.3	1%	
Zinc	193	201	4%	
Mercury	0.24	0.29	19%	

Metals & Mercury				
Compound	LMR13-25-024 mg/kg	LMR13-25-024FD m/kg	RPD	Qualifier
Arsenic	6.9	7.5	8%	None
Cadmium	1.3	1.5	14%	
Chromium	20.2	23.8	16%	
Copper	22.3	31.5	34%	
Lead	39.5	42.9	8%	
Nickel	18.4	20.4	10%	
Zinc	109	121	10%	
Mercury	0.11	0.10	10%	

Oil & Grease, Total Organic Carbon, AVS/SEM (Metals & Hg)

Holding Times

- All samples were analyzed within the recommended holding time for each analysis except the following.

TOC				
Sample ID	Date Sampled	Date Analyzed	# of Days	Qualifier
6	06/17/13	07/02/13	15	J
7	06/17/13	07/02/13	15	J
10	06/17/13	07/02/13	15	J
14	06/17/13	07/02/13	15	J
17	06/17/13	07/02/13	15	J
23	06/17/13	07/02/13	15	J
24	06/17/13	07/02/13	15	J
25	06/17/13	07/02/13	15	J
26	06/17/13	07/02/13	15	J

Initial and Continuing Calibration

- All %R criteria were met.

Method Blank

- The method blanks exhibited the following contamination.

Blank ID	Compound	Conc. mg/kg	Qualifier	Affected Samples
MB 240-92349/1-A	HEM	170.7	U	10, 14, 15, 17-19, 22
MB 240-92537/1-A	HEM	148.8	None	All >5X

Field Blank

- Field QC samples were not included in this data package.

Laboratory Control Samples

- The LCS samples exhibited acceptable %R values.

Matrix Spike/Matrix Spike Duplicate (MS/MSD) Recoveries

- The MS/MSD sample exhibited acceptable %R and RPD values except the following.

MS/DUP Sample ID	Compound	MS %R/MSD %R/RPD	Qualifier	Affected Samples
23	Mercury SEM	135%/OK/OK	J	21

Compound Quantitation

- Several samples were analyzed at a dilution due to high concentrations of target compounds.

Field Duplicate Sample Precision

- Field duplicate results are summarized below.

TOC				
Compound	LMR13-13-024 mg/kg	LMR13-13-024FD mg/kg	RPD	Qualifier
TOC	29200	28600	2%	None

HEM				
Compound	LMR13-08-024 mg/kg	LMR13-08-024FD mg/kg	RPD	Qualifier
HEM	ND	ND	-	-

TOC				
Compound	LMR13-25-024 mg/kg	LMR13-25-024FD mg/kg	RPD	Qualifier
TOC	24300	21300	13%	None

HEM				
Compound	LMR13-03-024 (SDG 200-17055) mg/kg	LMR13-03-024FD mg/kg	RPD	Qualifier
HEM	2200	2120	4%	None

Please contact the undersigned at (757) 564-0090 if you have any questions or need further information.

Signed: Nancy Weaver Dated: 9/23/13

Nancy Weaver
Senior Chemist

Data Qualifiers

U = The analyte was analyzed for, but was not detected at a level greater than or equal to the level of the adjusted Contract Required Quantitation Limit (CRQL) for sample and method.

UJ = The analyte was not detected at a level greater than or equal to the adjusted CRQL. However, the reported adjusted CRQL is approximate and may be inaccurate or imprecise.

J = The analyte was positively identified and the associated numerical value is the approximate concentration of the analyte in the sample (due either to the quality of the data generated because certain quality control criteria were not met, or the concentration of the analyte was below the CRQL).

J+ = The result is an estimated quantity, but the result may be biased high.

J- = The result is an estimated quantity, but the result may be biased low.

R = The sample results are unusable due to the quality of the data generated because certain criteria were not met. The analyte may or may not be present in the sample.

NJ = The analysis indicates the presence of an analyte that has been "tentatively identified" and the associated numerical value represents its approximate concentration.

1D - FORM I SV-1

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-08-048

6

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17071

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17071-6

Sample wt/vol: 30.6 (g/mL) g Lab File ID: RKXYD09.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 43 Decanted: (Y/N) Date Received: 06/19/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/27/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/04/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 3.3

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
100-52-7	Benzaldehyde	960	U	
108-95-2	Phenol	960	U	
111-44-4	Bis(2-chloroethyl)ether	960	U	
95-57-8	2-Chlorophenol	960	U	
95-48-7	2-Methylphenol	960	U	
108-60-1	2,2'-Oxybis(1-chloropropane)	960	U	
98-86-2	Acetophenone	140	J	
106-44-5	4-Methylphenol	960	U	
621-64-7	N-Nitroso-di-n-propylamine	960	U	
67-72-1	Hexachloroethane	960	U	
98-95-3	Nitrobenzene	960	U	
78-59-1	Isophorone	960	U	
88-75-5	2-Nitrophenol	960	U	
105-67-9	2,4-Dimethylphenol	960	U	
111-91-1	Bis(2-chloroethoxy)methane	960	U	
120-83-2	2,4-Dichlorophenol	960	U	
91-20-3	Naphthalene	61	J	
106-47-8	4-Chloroaniline	960	U	R
87-68-3	Hexachlorobutadiene	960	U	
105-60-2	Caprolactam	960	U	
59-50-7	4-Chloro-3-methylphenol	960	U	
91-57-6	2-Methylnaphthalene	960	U	
77-47-4	Hexachlorocyclopentadiene	960	U	R
88-06-2	2,4,6-Trichlorophenol	960	U	
95-95-4	2,4,5-Trichlorophenol	960	U	
92-52-4	1,1'-Biphenyl	960	U	
91-58-7	2-Chloronaphthalene	960	U	
88-74-4	2-Nitroaniline	1900	U	
131-11-3	Dimethylphthalate	960	U	
606-20-2	2,6-Dinitrotoluene	960	U	
208-96-8	Acenaphthylene	960	U	
99-09-2	3-Nitroaniline	1900	U	
83-32-9	Acenaphthene	190	J	

NW 9/17/13

1E - FORM I SV-2
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-08-048

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678 6

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17071

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17071-6

Sample wt/vol: 30.6 (g/mL) g Lab File ID: RKXYD09.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 43 Decanted: (Y/N) Date Received: 06/19/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/27/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/04/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 3.3

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
51-28-5	2,4-Dinitrophenol	1900	U	
100-02-7	4-Nitrophenol	1900	U	
132-64-9	Dibenzofuran	960	U	
121-14-2	2,4-Dinitrotoluene	960	U	
84-66-2	Diethylphthalate	960	U	
86-73-7	Fluorene	300	J	
7005-72-3	4-Chlorophenyl-phenylether	960	U	
100-01-6	4-Nitroaniline	1900	U	
534-52-1	4,6-Dinitro-2-methylphenol	1900	U	
86-30-6	N-Nitrosodiphenylamin [1]	960	U	
95-94-3	1,2,4,5-Tetrachlorobenzene	960	U	
101-55-3	4-Bromophenyl-phenylether	960	U	
118-74-1	Hexachlorobenzene	960	U	
1912-24-9	Atrazine	960	U	
87-86-5	Pentachlorophenol	1900	~~U~~	UJ
85-01-8	Phenanthrene	2100		
120-12-7	Anthracene	280	J	
86-74-8	Carbazole	960	U	
84-74-2	Di-n-butylphthalate	960	U	
206-44-0	Fluoranthene	2400		JJ
129-00-0	Pyrene	1600		
85-68-7	Butylbenzylphthalate	960	U	
91-94-1	3,3'-Dichlorobenzidine	960	~~U~~	R
56-55-3	Benzo(a)anthracene	1100		JJ
218-01-9	Chrysene	1500		
117-81-7	Bis(2-ethylhexyl)phthalate	960	U	
117-84-0	Di-n-octylphthalate	960	U	
205-99-2	Benzo(b)fluoranthene	1000		
207-08-9	Benzo(k)fluoranthene	960		
50-32-8	Benzo(a)pyrene	900	J	
193-39-5	Indeno(1,2,3-cd)pyrene	410	J	
53-70-3	Dibenzo(a,h)anthracene	130	J	
191-24-2	Benzo(g,h,i)perylene	450	J	
58-90-2	2,3,4,6-Tetrachlorophenol	960	U	

[1] Cannot be separated from Diphenylamine

MW 9/17/13

1D - FORM I SV-1

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-08-072

7

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17071

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17071-7

Sample wt/vol: 30.3 (g/mL) g Lab File ID: RKXYD10.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 29 Decanted: (Y/N) Date Received: 06/19/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/27/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/04/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 3.3

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
100-52-7	Benzaldehyde	780	U
108-95-2	Phenol	780	U
111-44-4	Bis(2-chloroethyl)ether	780	U
95-57-8	2-Chlorophenol	780	U
95-48-7	2-Methylphenol	780	U
108-60-1	2,2'-Oxybis(1-chloropropane)	780	U
98-86-2	Acetophenone	780	U
106-44-5	4-Methylphenol	780	U
621-64-7	N-Nitroso-di-n-propylamine	780	U
67-72-1	Hexachloroethane	780	U
98-95-3	Nitrobenzene	780	U
78-59-1	Isophorone	780	U
88-75-5	2-Nitrophenol	780	U
105-67-9	2,4-Dimethylphenol	780	U
111-91-1	Bis(2-chloroethoxy)methane	780	U
120-83-2	2,4-Dichlorophenol	780	U
91-20-3	Naphthalene	780	U
106-47-8	4-Chloroaniline	780	U
87-68-3	Hexachlorobutadiene	780	U
105-60-2	Caprolactam	780	U
59-50-7	4-Chloro-3-methylphenol	780	U
91-57-6	2-Methylnaphthalene	780	U
77-47-4	Hexachlorocyclopentadiene	780	U
88-06-2	2,4,6-Trichlorophenol	780	U
95-95-4	2,4,5-Trichlorophenol	780	U
92-52-4	1,1'-Biphenyl	780	U
91-58-7	2-Chloronaphthalene	780	U
88-74-4	2-Nitroaniline	1500	U
131-11-3	Dimethylphthalate	780	U
606-20-2	2,6-Dinitrotoluene	780	U
208-96-8	Acenaphthylene	780	U
99-09-2	3-Nitroaniline	1500	U
83-32-9	Acenaphthene	79	J

MW 9/17/13

1E - FORM I SV-2
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-08-072

7

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17071

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17071-7

Sample wt/vol: 30.3 (g/mL) g Lab File ID: RKXYD10.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 29 Decanted: (Y/N) Date Received: 06/19/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/27/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/04/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 3.3

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
51-28-5	2,4-Dinitrophenol	1500	U	
100-02-7	4-Nitrophenol	1500	U	
132-64-9	Dibenzofuran	780	U	
121-14-2	2,4-Dinitrotoluene	780	U	
84-66-2	Diethylphthalate	780	U	
86-73-7	Fluorene	94	J	
7005-72-3	4-Chlorophenyl-phenylether	780	U	
100-01-6	4-Nitroaniline	1500	U	
534-52-1	4,6-Dinitro-2-methylphenol	1500	U	
86-30-6	N-Nitrosodiphenylamin [1]	780	U	
95-94-3	1,2,4,5-Tetrachlorobenzene	780	U	
101-55-3	4-Bromophenyl-phenylether	780	U	
118-74-1	Hexachlorobenzene	780	U	
1912-24-9	Atrazine	780	U	
87-86-5	Pentachlorophenol	1500	~~U~~	UJ
85-01-8	Phenanthrene	620	J	
120-12-7	Anthracene	93	J	
86-74-8	Carbazole	780	U	
84-74-2	Di-n-butylphthalate	780	U	
206-44-0	Fluoranthene	720	J	
129-00-0	Pyrene	750	~~J~~	J
85-68-7	Butylbenzylphthalate	780	U	
91-94-1	3,3'-Dichlorobenzidine	780	U	
56-55-3	Benzo(a)anthracene	380	J	
218-01-9	Chrysene	510	J	
117-81-7	Bis(2-ethylhexyl)phthalate	780	U	
117-84-0	Di-n-octylphthalate	780	U	
205-99-2	Benzo(b)fluoranthene	300	J	
207-08-9	Benzo(k)fluoranthene	290	J	
50-32-8	Benzo(a)pyrene	320	J	
193-39-5	Indeno(1,2,3-cd)pyrene	160	J	
53-70-3	Dibenzo(a,h)anthracene	45	J	
191-24-2	Benzo(g,h,i)perylene	180	J	
58-90-2	2,3,4,6-Tetrachlorophenol	780	U	

[1] Cannot be separated from Diphenylamine

MW 9/17/13

1D - FORM I SV-1

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-13-012

8

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17071

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17071-8

Sample wt/vol: 30.6 (g/mL) g Lab File ID: RKXYD11.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 52 Decanted: (Y/N) Date Received: 06/19/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/27/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/04/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 3.3

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
100-52-7	Benzaldehyde	1200	U	
108-95-2	Phenol	1200	U	
111-44-4	Bis(2-chloroethyl)ether	1200	U	
95-57-8	2-Chlorophenol	1200	U	
95-48-7	2-Methylphenol	1200	U	
108-60-1	2,2'-Oxybis(1-chloropropane)	1200	U	
98-86-2	Acetophenone	1200	U	
106-44-5	4-Methylphenol	1200	U	
621-64-7	N-Nitroso-di-n-propylamine	1200	U	
67-72-1	Hexachloroethane	1200	U	
98-95-3	Nitrobenzene	1200	U	
78-59-1	Isophorone	1200	U	
88-75-5	2-Nitrophenol	1200	U	
105-67-9	2,4-Dimethylphenol	1200	U	
111-91-1	Bis(2-chloroethoxy)methane	1200	U	
120-83-2	2,4-Dichlorophenol	1200	U	
91-20-3	Naphthalene	1200	U	
106-47-8	4-Chloroaniline	1200	U	R
87-68-3	Hexachlorobutadiene	1200	U	
105-60-2	Caprolactam	1200	U	
59-50-7	4-Chloro-3-methylphenol	1200	U	
91-57-6	2-Methylnaphthalene	1200	U	
77-47-4	Hexachlorocyclopentadiene	1200	U	R
88-06-2	2,4,6-Trichlorophenol	1200	U	
95-95-4	2,4,5-Trichlorophenol	1200	U	
92-52-4	1,1'-Biphenyl	1200	U	
91-58-7	2-Chloronaphthalene	1200	U	
88-74-4	2-Nitroaniline	2200	U	
131-11-3	Dimethylphthalate	1200	U	
606-20-2	2,6-Dinitrotoluene	1200	U	
208-96-8	Acenaphthylene	1200	U	
99-09-2	3-Nitroaniline	2200	U	
83-32-9	Acenaphthene	1200	U	

1E - FORM I SV-2
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-13-012

8

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17071

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17071-8

Sample wt/vol: 30.6 (g/mL) g Lab File ID: RKXYD11.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 52 Decanted: (Y/N) Date Received: 06/19/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/27/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/04/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 3.3

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
51-28-5	2,4-Dinitrophenol	2200	U	
100-02-7	4-Nitrophenol	2200	U	
132-64-9	Dibenzofuran	1200	U	
121-14-2	2,4-Dinitrotoluene	1200	U	
84-66-2	Diethylphthalate	1200	U	
86-73-7	Fluorene	48	J	
7005-72-3	4-Chlorophenyl-phenylether	1200	U	
100-01-6	4-Nitroaniline	2200	U	
534-52-1	4,6-Dinitro-2-methylphenol	2200	U	
86-30-6	N-Nitrosodiphenylamin [1]	1200	U	
95-94-3	1,2,4,5-Tetrachlorobenzene	1200	U	
101-55-3	4-Bromophenyl-phenylether	1200	U	
118-74-1	Hexachlorobenzene	1200	U	
1912-24-9	Atrazine	1200	U	
87-86-5	Pentachlorophenol	2200	~~U~~	UJ
85-01-8	Phenanthrene	170	J	
120-12-7	Anthracene	75	J	
86-74-8	Carbazole	1200	U	
84-74-2	Di-n-butylphthalate	1200	U	
206-44-0	Fluoranthene	410	J	
129-00-0	Pyrene	390	~~J~~	J
85-68-7	Butylbenzylphthalate	1200	U	
91-94-1	3,3'-Dichlorobenzidine	1200	~~U~~	R
56-55-3	Benzo(a)anthracene	260	J	
218-01-9	Chrysene	390	J	
117-81-7	Bis(2-ethylhexyl)phthalate	1300	~~B~~	
117-84-0	Di-n-octylphthalate	1200	U	
205-99-2	Benzo(b)fluoranthene	250	J	
207-08-9	Benzo(k)fluoranthene	300	J	
50-32-8	Benzo(a)pyrene	260	J	
193-39-5	Indeno(1,2,3-cd)pyrene	160	J	
53-70-3	Dibenzo(a,h)anthracene	1200	U	
191-24-2	Benzo(g,h,i)perylene	160	J	
58-90-2	2,3,4,6-Tetrachlorophenol	1200	U	

[1] Cannot be separated from Diphenylamine

MW 9/17/13

1D - FORM I SV-1

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-13-024

9

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17071

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17071-9

Sample wt/vol: 30.7 (g/mL) g Lab File ID: RKXYA07.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 47 Decanted: (Y/N) Date Received: 06/19/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/27/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/02/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 3.3

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
100-52-7	Benzaldehyde	1000	U	
108-95-2	Phenol	1000	U	
111-44-4	Bis(2-chloroethyl)ether	1000	U	
95-57-8	2-Chlorophenol	1000	U	
95-48-7	2-Methylphenol	1000	U	
108-60-1	2,2'-Oxybis(1-chloropropane)	1000	U	
98-86-2	Acetophenone	1000	U	
106-44-5	4-Methylphenol	1000	U	
621-64-7	N-Nitroso-di-n-propylamine	1000	U	
67-72-1	Hexachloroethane	1000	U	
98-95-3	Nitrobenzene	1000	U	
78-59-1	Isophorone	1000	U	
88-75-5	2-Nitrophenol	1000	U	
105-67-9	2,4-Dimethylphenol	1000	U	
111-91-1	Bis(2-chloroethoxy)methane	1000	U	
120-83-2	2,4-Dichlorophenol	1000	U	
91-20-3	Naphthalene	97	J	
106-47-8	4-Chloroaniline	1000	U	R
87-68-3	Hexachlorobutadiene	1000	U	
105-60-2	Caprolactam	1000	U	
59-50-7	4-Chloro-3-methylphenol	1000	U	
91-57-6	2-Methylnaphthalene	33	J	
77-47-4	Hexachlorocyclopentadiene	1000	U	R
88-06-2	2,4,6-Trichlorophenol	1000	U	
95-95-4	2,4,5-Trichlorophenol	1000	U	
92-52-4	1,1'-Biphenyl	1000	U	
91-58-7	2-Chloronaphthalene	1000	U	
88-74-4	2-Nitroaniline	2000	U	
131-11-3	Dimethylphthalate	1000	U	
606-20-2	2,6-Dinitrotoluene	1000	U	
208-96-8	Acenaphthylene	1000	U	
99-09-2	3-Nitroaniline	2000	U	
83-32-9	Acenaphthene	44	J	

EPA SAMPLE NO.
LMR13-13-024

9

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17071

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17071-9

Sample wt/vol: 30.7 (g/mL) g Lab File ID: RKXYA07.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 47 Decanted: (Y/N) Date Received: 06/19/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/27/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/02/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 3.3

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
51-28-5	2,4-Dinitrophenol	2000	U	
100-02-7	4-Nitrophenol	2000	U	
132-64-9	Dibenzofuran	1000	U	
121-14-2	2,4-Dinitrotoluene	1000	U	
84-66-2	Diethylphthalate	1000	U	
86-73-7	Fluorene	140	J	
7005-72-3	4-Chlorophenyl-phenylether	1000	U	
100-01-6	4-Nitroaniline	2000	U	
534-52-1	4,6-Dinitro-2-methylphenol	2000	U	
86-30-6	N-Nitrosodiphenylamin [1]	1000	U	
95-94-3	1,2,4,5-Tetrachlorobenzene	1000	U	
101-55-3	4-Bromophenyl-phenylether	1000	U	
118-74-1	Hexachlorobenzene	1000	U	
1912-24-9	Atrazine	1000	U	
87-86-5	Pentachlorophenol	2000	~~U~~	UJ
85-01-8	Phenanthrene	370	J	
120-12-7	Anthracene	110	J	
86-74-8	Carbazole	1000	U	
84-74-2	Di-n-butylphthalate	1000	U	
206-44-0	Fluoranthene	840	J	
129-00-0	Pyrene	870	~~J~~	J
85-68-7	Butylbenzylphthalate	1000	U	
91-94-1	3,3'-Dichlorobenzidine	1000	~~U~~	R
56-55-3	Benzo(a)anthracene	520	J	
218-01-9	Chrysene	1100		
117-81-7	Bis(2-ethylhexyl)phthalate	8100	~~B~~	
117-84-0	Di-n-octylphthalate	1000	~~U~~	UJ
205-99-2	Benzo(b)fluoranthene	670	~~J~~	J
207-08-9	Benzo(k)fluoranthene	760	~~J~~	↓
50-32-8	Benzo(a)pyrene	700	~~J~~	↓
193-39-5	Indeno(1,2,3-cd)pyrene	310	~~J~~	↓
53-70-3	Dibenzo(a,h)anthracene	190	~~J~~	J
191-24-2	Benzo(g,h,i)perylene	420	~~J~~	J
58-90-2	2,3,4,6-Tetrachlorophenol	1000	~~U~~	UJ

[1] Cannot be separated from Diphenylamine

NW 9/17/13

1D - FORM I SV-1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-14-120

10

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17071

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17071-10

Sample wt/vol: 30.1 (g/mL) g Lab File ID: RKXYG03.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 24 Decanted: (Y/N) Date Received: 06/19/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/27/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/05/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
100-52-7	Benzaldehyde	35	J	
108-95-2	Phenol	220	U	
111-44-4	Bis(2-chloroethyl)ether	220	U	
95-57-8	2-Chlorophenol	220	U	
95-48-7	2-Methylphenol	220	U	
108-60-1	2,2'-Oxybis(1-chloropropane)	220	U	
98-86-2	Acetophenone	220	U	
106-44-5	4-Methylphenol	220	U	
621-64-7	N-Nitroso-di-n-propylamine	220	U	
67-72-1	Hexachloroethane	220	U	
98-95-3	Nitrobenzene	220	U	
78-59-1	Isophorone	220	U	
88-75-5	2-Nitrophenol	220	U	
105-67-9	2,4-Dimethylphenol	220	U	
111-91-1	Bis(2-chloroethoxy)methane	220	U	
120-83-2	2,4-Dichlorophenol	220	U	
91-20-3	Naphthalene	220	U	
106-47-8	4-Chloroaniline	220	~~U~~	R
87-68-3	Hexachlorobutadiene	220	U	
105-60-2	Caprolactam	220	U	
59-50-7	4-Chloro-3-methylphenol	220	U	
91-57-6	2-Methylnaphthalene	220	U	
77-47-4	Hexachlorocyclopentadiene	220	~~U~~	R
88-06-2	2,4,6-Trichlorophenol	220	U	
95-95-4	2,4,5-Trichlorophenol	220	U	
92-52-4	1,1'-Biphenyl	220	U	
91-58-7	2-Chloronaphthalene	220	U	
88-74-4	2-Nitroaniline	430	U	
131-11-3	Dimethylphthalate	220	U	
606-20-2	2,6-Dinitrotoluene	220	U	
208-96-8	Acenaphthylene	220	U	
99-09-2	3-Nitroaniline	430	U	
83-32-9	Acenaphthene	220	U	

NW 9/17/13

1E - FORM I SV-2
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-14-120

10

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17071

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17071-10

Sample wt/vol: 30.1 (g/mL) g Lab File ID: RKXYG03.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 24 Decanted: (Y/N) Date Received: 06/19/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/27/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/05/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
51-28-5	2,4-Dinitrophenol	430	U	
100-02-7	4-Nitrophenol	430	U	
132-64-9	Dibenzofuran	220	U	
121-14-2	2,4-Dinitrotoluene	220	U	
84-66-2	Diethylphthalate	220	U	
86-73-7	Fluorene	220	U	
7005-72-3	4-Chlorophenyl-phenylether	220	U	
100-01-6	4-Nitroaniline	430	U	
534-52-1	4,6-Dinitro-2-methylphenol	430	U	
86-30-6	N-Nitrosodiphenylamin [1]	220	U	
95-94-3	1,2,4,5-Tetrachlorobenzene	220	U	
101-55-3	4-Bromophenyl-phenylether	220	U	
118-74-1	Hexachlorobenzene	220	U	
1912-24-9	Atrazine	220	U	
87-86-5	Pentachlorophenol	430	~~U~~	UJ
85-01-8	Phenanthrene	4.9	J	
120-12-7	Anthracene	220	U	
86-74-8	Carbazole	220	U	
84-74-2	Di-n-butylphthalate	8.7	J	
206-44-0	Fluoranthene	220	U	
129-00-0	Pyrene	220	~~U~~	UJ
85-68-7	Butylbenzylphthalate	220 ~~23~~	~~J B~~	U
91-94-1	3,3'-Dichlorobenzidine	220	~~U~~	R
56-55-3	Benzo(a)anthracene	220	U	
218-01-9	Chrysene	220	U	
117-81-7	Bis(2-ethylhexyl)phthalate	220 ~~42~~	~~J B~~	U
117-84-0	Di-n-octylphthalate	220	U	
205-99-2	Benzo(b)fluoranthene	220	U	
207-08-9	Benzo(k)fluoranthene	220	U	
50-32-8	Benzo(a)pyrene	220	U	
193-39-5	Indeno(1,2,3-cd)pyrene	220	~~U~~	UJ
53-70-3	Dibenzo(a,h)anthracene	220	~~U~~	
191-24-2	Benzo(g,h,i)perylene	220	~~U~~	
58-90-2	2,3,4,6-Tetrachlorophenol	220	U	

[1] Cannot be separated from Diphenylamine

NW 9/17/13

EPA SAMPLE NO.
LMR13-13-072

12

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17071

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17071-12

Sample wt/vol: 30.9 (g/mL) g Lab File ID: RKXYD14.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 42 Decanted: (Y/N) Date Received: 06/19/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/27/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/04/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 3.3

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
100-52-7	Benzaldehyde	930	U
108-95-2	Phenol	930	U
111-44-4	Bis(2-chloroethyl)ether	930	U
95-57-8	2-Chlorophenol	930	U
95-48-7	2-Methylphenol	930	U
108-60-1	2,2'-Oxybis(1-chloropropane)	930	U
98-86-2	Acetophenone	930	U
106-44-5	4-Methylphenol	930	U
621-64-7	N-Nitroso-di-n-propylamine	930	U
67-72-1	Hexachloroethane	930	U
98-95-3	Nitrobenzene	930	U
78-59-1	Isophorone	930	U
88-75-5	2-Nitrophenol	930	U
105-67-9	2,4-Dimethylphenol	930	U
111-91-1	Bis(2-chloroethoxy)methane	930	U
120-83-2	2,4-Dichlorophenol	930	U
91-20-3	Naphthalene	130	J
106-47-8	4-Chloroaniline	930	U
87-68-3	Hexachlorobutadiene	930	U
105-60-2	Caprolactam	930	U
59-50-7	4-Chloro-3-methylphenol	930	U
91-57-6	2-Methylnaphthalene	930	U
77-47-4	Hexachlorocyclopentadiene	930	U
88-06-2	2,4,6-Trichlorophenol	930	U
95-95-4	2,4,5-Trichlorophenol	930	U
92-52-4	1,1'-Biphenyl	930	U
91-58-7	2-Chloronaphthalene	930	U
88-74-4	2-Nitroaniline	1800	U
131-11-3	Dimethylphthalate	930	U
606-20-2	2,6-Dinitrotoluene	930	U
208-96-8	Acenaphthylene	930	U
99-09-2	3-Nitroaniline	1800	U
83-32-9	Acenaphthene	240	J

NW 9/17/13

EPA SAMPLE NO.
LMR13-13-072

12

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17071

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17071-12

Sample wt/vol: 30.9 (g/mL) g Lab File ID: RKXYD14.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 42 Decanted: (Y/N) Date Received: 06/19/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/27/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/04/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 3.3

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
51-28-5	2,4-Dinitrophenol	1800	U	
100-02-7	4-Nitrophenol	1800	U	
132-64-9	Dibenzofuran	52	J	
121-14-2	2,4-Dinitrotoluene	930	U	
84-66-2	Diethylphthalate	930	U	
86-73-7	Fluorene	400	J	
7005-72-3	4-Chlorophenyl-phenylether	930	U	
100-01-6	4-Nitroaniline	1800	U	
534-52-1	4,6-Dinitro-2-methylphenol	1800	U	
86-30-6	N-Nitrosodiphenylamin [1]	930	U	
95-94-3	1,2,4,5-Tetrachlorobenzene	930	U	
101-55-3	4-Bromophenyl-phenylether	930	U	
118-74-1	Hexachlorobenzene	930	U	
1912-24-9	Atrazine	930	U	
87-86-5	Pentachlorophenol	1800	~~U~~	UJ
85-01-8	Phenanthrene	2100		
120-12-7	Anthracene	520	J	
86-74-8	Carbazole	930	U	
84-74-2	Di-n-butylphthalate	930	U	
206-44-0	Fluoranthene	2800		
129-00-0	Pyrene	1700		J
85-68-7	Butylbenzylphthalate	930	U	
91-94-1	3,3'-Dichlorobenzidine	930	U	
56-55-3	Benzo(a)anthracene	1000		
218-01-9	Chrysene	1300		
117-81-7	Bis(2-ethylhexyl)phthalate	4700	~~B~~	
117-84-0	Di-n-octylphthalate	930	U	
205-99-2	Benzo(b)fluoranthene	1100		
207-08-9	Benzo(k)fluoranthene	900	J	
50-32-8	Benzo(a)pyrene	1000		
193-39-5	Indeno(1,2,3-cd)pyrene	310	J	
53-70-3	Dibenzo(a,h)anthracene	96	J	
191-24-2	Benzo(g,h,i)perylene	480	J	
58-90-2	2,3,4,6-Tetrachlorophenol	930	U	

[1] Cannot be separated from Diphenylamine

MW 9/17/13

1D - FORM I SV-1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-13-120

13

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17071

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17071-13

Sample wt/vol: 30.3 (g/mL) g Lab File ID: RKXYD15.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 28 Decanted: (Y/N) Date Received: 06/19/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/27/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/04/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 3.3

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
100-52-7	Benzaldehyde	770	U	
108-95-2	Phenol	770	U	
111-44-4	Bis(2-chloroethyl)ether	770	U	
95-57-8	2-Chlorophenol	770	U	
95-48-7	2-Methylphenol	770	U	
108-60-1	2,2'-Oxybis(1-chloropropane)	770	U	
98-86-2	Acetophenone	770	U	
106-44-5	4-Methylphenol	770	U	
621-64-7	N-Nitroso-di-n-propylamine	770	U	
67-72-1	Hexachloroethane	770	U	
98-95-3	Nitrobenzene	770	U	
78-59-1	Isophorone	770	U	
88-75-5	2-Nitrophenol	770	U	
105-67-9	2,4-Dimethylphenol	770	U	
111-91-1	Bis(2-chloroethoxy)methane	770	U	
120-83-2	2,4-Dichlorophenol	770	U	
91-20-3	Naphthalene	100	J	
106-47-8	4-Chloroaniline	770	~~U~~	R
87-68-3	Hexachlorobutadiene	770	U	
105-60-2	Caprolactam	770	U	
59-50-7	4-Chloro-3-methylphenol	770	U	
91-57-6	2-Methylnaphthalene	45	J	
77-47-4	Hexachlorocyclopentadiene	770	~~U~~	R
88-06-2	2,4,6-Trichlorophenol	770	U	
95-95-4	2,4,5-Trichlorophenol	770	U	
92-52-4	1,1'-Biphenyl	770	U	
91-58-7	2-Chloronaphthalene	770	U	
88-74-4	2-Nitroaniline	1500	U	
131-11-3	Dimethylphthalate	770	U	
606-20-2	2,6-Dinitrotoluene	770	U	
208-96-8	Acenaphthylene	770	U	
99-09-2	3-Nitroaniline	1500	U	
83-32-9	Acenaphthene	1100		

NW 9/17/13

1E - FORM I SV-2
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-13-120

13

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17071

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17071-13

Sample wt/vol: 30.3 (g/mL) g Lab File ID: RKXYD15.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 28 Decanted: (Y/N) Date Received: 06/19/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/27/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/04/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 3.3

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
51-28-5	2,4-Dinitrophenol	1500	U	
100-02-7	4-Nitrophenol	1500	U	
132-64-9	Dibenzofuran	33	J	
121-14-2	2,4-Dinitrotoluene	770	U	
84-66-2	Diethylphthalate	770	U	
86-73-7	Fluorene	450	J	
7005-72-3	4-Chlorophenyl-phenylether	770	U	
100-01-6	4-Nitroaniline	1500	U	
534-52-1	4,6-Dinitro-2-methylphenol	1500	U	
86-30-6	N-Nitrosodiphenylamin [1]	770	U	
95-94-3	1,2,4,5-Tetrachlorobenzene	770	U	
101-55-3	4-Bromophenyl-phenylether	770	U	
118-74-1	Hexachlorobenzene	770	U	
1912-24-9	Atrazine	770	U	
87-86-5	Pentachlorophenol	1500	~~U~~	UJ
85-01-8	Phenanthrene	2300		
120-12-7	Anthracene	560	J	
86-74-8	Carbazole	770	U	
84-74-2	Di-n-butylphthalate	50	J	
206-44-0	Fluoranthene	1300		
129-00-0	Pyrene	1800		J
85-68-7	Butylbenzylphthalate	770	U	
91-94-1	3,3'-Dichlorobenzidine	770	~~U~~	R
56-55-3	Benzo(a)anthracene	640	J	
218-01-9	Chrysene	670	J	
117-81-7	Bis(2-ethylhexyl)phthalate	770	U	
117-84-0	Di-n-octylphthalate	770	U	
205-99-2	Benzo(b)fluoranthene	390	J	
207-08-9	Benzo(k)fluoranthene	430	J	
50-32-8	Benzo(a)pyrene	590	J	
193-39-5	Indeno(1,2,3-cd)pyrene	300	J	
53-70-3	Dibenzo(a,h)anthracene	130	J	
191-24-2	Benzo(g,h,i)perylene	370	J	
58-90-2	2,3,4,6-Tetrachlorophenol	770	U	

[1] Cannot be separated from Diphenylamine

MW 9/17/13

1D - FORM I SV-1

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-14-096

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678 14

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17071

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17071-14

Sample wt/vol: 30.5 (g/mL) g Lab File ID: RKXYG05.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 28 Decanted: (Y/N) Date Received: 06/19/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/27/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/05/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
100-52-7	Benzaldehyde	39	J	
108-95-2	Phenol	230	U	
111-44-4	Bis(2-chloroethyl)ether	230	U	
95-57-8	2-Chlorophenol	230	U	
95-48-7	2-Methylphenol	230	U	
108-60-1	2,2'-Oxybis(1-chloropropane)	230	U	
98-86-2	Acetophenone	230	U	
106-44-5	4-Methylphenol	230	U	
621-64-7	N-Nitroso-di-n-propylamine	230	U	
67-72-1	Hexachloroethane	230	U	
98-95-3	Nitrobenzene	230	U	
78-59-1	Isophorone	230	U	
88-75-5	2-Nitrophenol	230	U	
105-67-9	2,4-Dimethylphenol	230	U	
111-91-1	Bis(2-chloroethoxy)methane	230	U	
120-83-2	2,4-Dichlorophenol	230	U	
91-20-3	Naphthalene	230	U	
106-47-8	4-Chloroaniline	230	~~U~~	R
87-68-3	Hexachlorobutadiene	230	U	
105-60-2	Caprolactam	230	U	
59-50-7	4-Chloro-3-methylphenol	230	U	
91-57-6	2-Methylnaphthalene	230	U	
77-47-4	Hexachlorocyclopentadiene	230	~~U~~	R
88-06-2	2,4,6-Trichlorophenol	230	U	
95-95-4	2,4,5-Trichlorophenol	230	U	
92-52-4	1,1'-Biphenyl	230	U	
91-58-7	2-Chloronaphthalene	230	U	
88-74-4	2-Nitroaniline	450	U	
131-11-3	Dimethylphthalate	230	U	
606-20-2	2,6-Dinitrotoluene	230	U	
208-96-8	Acenaphthylene	230	U	
99-09-2	3-Nitroaniline	450	U	
83-32-9	Acenaphthene	230	U	

NW 9/17/13

EPA SAMPLE NO.
LMR13-14-096

14

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17071

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17071-14

Sample wt/vol: 30.5 (g/mL) g Lab File ID: RKXYG05.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 28 Decanted: (Y/N) Date Received: 06/19/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/27/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/05/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
51-28-5	2,4-Dinitrophenol	450	U	
100-02-7	4-Nitrophenol	450	U	
132-64-9	Dibenzofuran	230	U	
121-14-2	2,4-Dinitrotoluene	230	U	
84-66-2	Diethylphthalate	230	U	
86-73-7	Fluorene	230	U	
7005-72-3	4-Chlorophenyl-phenylether	230	U	
100-01-6	4-Nitroaniline	450	U	
534-52-1	4,6-Dinitro-2-methylphenol	450	U	
86-30-6	N-Nitrosodiphenylamin [1]	230	U	
95-94-3	1,2,4,5-Tetrachlorobenzene	230	U	
101-55-3	4-Bromophenyl-phenylether	230	U	
118-74-1	Hexachlorobenzene	230	U	
1912-24-9	Atrazine	230	U	
87-86-5	Pentachlorophenol	450	~~U~~	UJ
85-01-8	Phenanthrene	25	J	
120-12-7	Anthracene	6.4	J	
86-74-8	Carbazole	230	U	
84-74-2	Di-n-butylphthalate	8.6	J	
206-44-0	Fluoranthene	26	J	
129-00-0	Pyrene	34	~~J~~	J
85-68-7	Butylbenzylphthalate	230	U	
91-94-1	3,3'-Dichlorobenzidine	230	~~U~~	R
56-55-3	Benzo(a)anthracene	20	J	
218-01-9	Chrysene	35	J	
117-81-7	Bis(2-ethylhexyl)phthalate	230 ~~64~~	~~J B~~	U
117-84-0	Di-n-octylphthalate	230	U	
205-99-2	Benzo(b)fluoranthene	230	U	
207-08-9	Benzo(k)fluoranthene	230	U	
50-32-8	Benzo(a)pyrene	19	J	
193-39-5	Indeno(1,2,3-cd)pyrene	230	U	UJ
53-70-3	Dibenzo(a,h)anthracene	230	U	
191-24-2	Benzo(g,h,i)perylene	230	U	
58-90-2	2,3,4,6-Tetrachlorophenol	230	U	

[1] Cannot be separated from Diphenylamine

NW 9/17/13

EPA SAMPLE NO.
LMR13-25-012

15

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17071

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17071-15

Sample wt/vol: 30.5 (g/mL) g Lab File ID: RKXYD17.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 23 Decanted: (Y/N) Date Received: 06/19/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/27/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/04/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 3.3

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
100-52-7	Benzaldehyde	710	U
108-95-2	Phenol	710	U
111-44-4	Bis(2-chloroethyl)ether	710	U
95-57-8	2-Chlorophenol	710	U
95-48-7	2-Methylphenol	710	U
108-60-1	2,2'-Oxybis(1-chloropropane)	710	U
98-86-2	Acetophenone	710	U
106-44-5	4-Methylphenol	710	U
621-64-7	N-Nitroso-di-n-propylamine	710	U
67-72-1	Hexachloroethane	710	U
98-95-3	Nitrobenzene	710	U
78-59-1	Isophorone	710	U
88-75-5	2-Nitrophenol	710	U
105-67-9	2,4-Dimethylphenol	710	U
111-91-1	Bis(2-chloroethoxy)methane	710	U
120-83-2	2,4-Dichlorophenol	710	U
91-20-3	Naphthalene	72	J
106-47-8	4-Chloroaniline	710	U
87-68-3	Hexachlorobutadiene	710	U
105-60-2	Caprolactam	710	U
59-50-7	4-Chloro-3-methylphenol	710	U
91-57-6	2-Methylnaphthalene	710	U
77-47-4	Hexachlorocyclopentadiene	710	U
88-06-2	2,4,6-Trichlorophenol	710	U
95-95-4	2,4,5-Trichlorophenol	710	U
92-52-4	1,1'-Biphenyl	710	U
91-58-7	2-Chloronaphthalene	710	U
88-74-4	2-Nitroaniline	1400	U
131-11-3	Dimethylphthalate	710	U
606-20-2	2,6-Dinitrotoluene	710	U
208-96-8	Acenaphthylene	710	U
99-09-2	3-Nitroaniline	1400	U
83-32-9	Acenaphthene	38	J

MW 9/17/13

EPA SAMPLE NO.
LMR13-25-012

15

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17071

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17071-15

Sample wt/vol: 30.5 (g/mL) g Lab File ID: RKXYD17.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 23 Decanted: (Y/N) Date Received: 06/19/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/27/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/04/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 3.3

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
51-28-5	2,4-Dinitrophenol	1400	U	
100-02-7	4-Nitrophenol	1400	U	
132-64-9	Dibenzofuran	710	U	
121-14-2	2,4-Dinitrotoluene	710	U	
84-66-2	Diethylphthalate	710	U	
86-73-7	Fluorene	54	J	
7005-72-3	4-Chlorophenyl-phenylether	710	U	
100-01-6	4-Nitroaniline	1400	U	
534-52-1	4,6-Dinitro-2-methylphenol	1400	U	
86-30-6	N-Nitrosodiphenylamin [1]	710	U	
95-94-3	1,2,4,5-Tetrachlorobenzene	710	U	
101-55-3	4-Bromophenyl-phenylether	710	U	
118-74-1	Hexachlorobenzene	710	U	
1912-24-9	Atrazine	710	U	
87-86-5	Pentachlorophenol	1400	~~U~~	UJ
85-01-8	Phenanthrene	260	J	
120-12-7	Anthracene	84	J	
86-74-8	Carbazole	710	U	
84-74-2	Di-n-butylphthalate	710	U	
206-44-0	Fluoranthene	380	J	
129-00-0	Pyrene	380	~~J~~	J
85-68-7	Butylbenzylphthalate	710	U	
91-94-1	3,3'-Dichlorobenzidine	710	U	
56-55-3	Benzo(a)anthracene	290	J	
218-01-9	Chrysene	430	J	
117-81-7	Bis(2-ethylhexyl)phthalate	710 ~~520~~	~~J B~~	U
117-84-0	Di-n-octylphthalate	710	U	
205-99-2	Benzo(b)fluoranthene	260	J	
207-08-9	Benzo(k)fluoranthene	260	J	
50-32-8	Benzo(a)pyrene	300	J	
193-39-5	Indeno(1,2,3-cd)pyrene	110	J	
53-70-3	Dibenzo(a,h)anthracene	75	J	
191-24-2	Benzo(g,h,i)perylene	170	J	
58-90-2	2,3,4,6-Tetrachlorophenol	710	U	

[1] Cannot be separated from Diphenylamine

NW 9/17/13

1D - FORM I SV-1

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-25-024

16

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17071

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17071-16

Sample wt/vol: 30.4 (g/mL) g Lab File ID: RKXYD18.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 29 Decanted: (Y/N) Date Received: 06/19/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/27/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/04/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 3.3

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
100-52-7	Benzaldehyde	780	U
108-95-2	Phenol	780	U
111-44-4	Bis(2-chloroethyl)ether	780	U
95-57-8	2-Chlorophenol	780	U
95-48-7	2-Methylphenol	780	U
108-60-1	2,2'-Oxybis(1-chloropropane)	780	U
98-86-2	Acetophenone	780	U
106-44-5	4-Methylphenol	780	U
621-64-7	N-Nitroso-di-n-propylamine	780	U
67-72-1	Hexachloroethane	780	U
98-95-3	Nitrobenzene	780	U
78-59-1	Isophorone	780	U
88-75-5	2-Nitrophenol	780	U
105-67-9	2,4-Dimethylphenol	780	U
111-91-1	Bis(2-chloroethoxy)methane	780	U
120-83-2	2,4-Dichlorophenol	780	U
91-20-3	Naphthalene	120	J
106-47-8	4-Chloroaniline	780	U
87-68-3	Hexachlorobutadiene	780	U
105-60-2	Caprolactam	780	U
59-50-7	4-Chloro-3-methylphenol	780	U
91-57-6	2-Methylnaphthalene	37	J
77-47-4	Hexachlorocyclopentadiene	780	U
88-06-2	2,4,6-Trichlorophenol	780	U
95-95-4	2,4,5-Trichlorophenol	780	U
92-52-4	1,1'-Biphenyl	780	U
91-58-7	2-Chloronaphthalene	780	U
88-74-4	2-Nitroaniline	1500	U
131-11-3	Dimethylphthalate	780	U
606-20-2	2,6-Dinitrotoluene	780	U
208-96-8	Acenaphthylene	780	U
99-09-2	3-Nitroaniline	1500	U
83-32-9	Acenaphthene	100	J

NW 9/17/13

1E - FORM I SV-2
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-25-024

16

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17071

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17071-16

Sample wt/vol: 30.4 (g/mL) g Lab File ID: RKXYD18.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 29 Decanted: (Y/N) Date Received: 06/19/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/27/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/04/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 3.3

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
51-28-5	2,4-Dinitrophenol	1500	U	
100-02-7	4-Nitrophenol	1500	U	
132-64-9	Dibenzofuran	780	U	
121-14-2	2,4-Dinitrotoluene	780	U	
84-66-2	Diethylphthalate	780	U	
86-73-7	Fluorene	120	J	
7005-72-3	4-Chlorophenyl-phenylether	780	U	
100-01-6	4-Nitroaniline	1500	U	
534-52-1	4,6-Dinitro-2-methylphenol	1500	U	
86-30-6	N-Nitrosodiphenylamin [1]	780	U	
95-94-3	1,2,4,5-Tetrachlorobenzene	780	U	
101-55-3	4-Bromophenyl-phenylether	780	U	
118-74-1	Hexachlorobenzene	780	U	
1912-24-9	Atrazine	780	U	
87-86-5	Pentachlorophenol	1500	~~U~~ ✓	UJ
85-01-8	Phenanthrene	430	J	
120-12-7	Anthracene	230	J	
86-74-8	Carbazole	780	U	
84-74-2	Di-n-butylphthalate	780	U	
206-44-0	Fluoranthene	2100		
129-00-0	Pyrene	1300		J
85-68-7	Butylbenzylphthalate	780	U	
91-94-1	3,3'-Dichlorobenzidine	780	U	
56-55-3	Benzo(a)anthracene	860		
218-01-9	Chrysene	1100		
117-81-7	Bis(2-ethylhexyl)phthalate	780 ~~190~~ ~~J B~~		U
117-84-0	Di-n-octylphthalate	780	U	
205-99-2	Benzo(b)fluoranthene	710	J	
207-08-9	Benzo(k)fluoranthene	820		
50-32-8	Benzo(a)pyrene	860		
193-39-5	Indeno(1,2,3-cd)pyrene	300	J	
53-70-3	Dibenzo(a,h)anthracene	160	J	
191-24-2	Benzo(g,h,i)perylene	450	J	
58-90-2	2,3,4,6-Tetrachlorophenol	780	U	

[1] Cannot be separated from Diphenylamine

NW 9/17/13

1D - FORM I SV-1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-08-024

17

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17071

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17071-17

Sample wt/vol: 30.9 (g/mL) g Lab File ID: RKXYG07.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 44 Decanted: (Y/N) Date Received: 06/19/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/27/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/05/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.7

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
100-52-7	Benzaldehyde	500	U	
108-95-2	Phenol	500	U	
111-44-4	Bis(2-chloroethyl)ether	500	U	
95-57-8	2-Chlorophenol	500	U	
95-48-7	2-Methylphenol	500	U	
108-60-1	2,2'-Oxybis(1-chloropropane)	500	U	
98-86-2	Acetophenone	500	U	
106-44-5	4-Methylphenol	500	U	
621-64-7	N-Nitroso-di-n-propylamine	500	U	
67-72-1	Hexachloroethane	500	U	
98-95-3	Nitrobenzene	500	U	
78-59-1	Isophorone	500	U	
88-75-5	2-Nitrophenol	500	U	
105-67-9	2,4-Dimethylphenol	500	U	
111-91-1	Bis(2-chloroethoxy)methane	500	U	
120-83-2	2,4-Dichlorophenol	500	U	
91-20-3	Naphthalene	43	J	
106-47-8	4-Chloroaniline	500	~~U~~	R
87-68-3	Hexachlorobutadiene	500	U	
105-60-2	Caprolactam	500	U	
59-50-7	4-Chloro-3-methylphenol	500	U	
91-57-6	2-Methylnaphthalene	17	J	
77-47-4	Hexachlorocyclopentadiene	500	~~U~~	R
88-06-2	2,4,6-Trichlorophenol	500	U	
95-95-4	2,4,5-Trichlorophenol	500	U	
92-52-4	1,1'-Biphenyl	500	U	
91-58-7	2-Chloronaphthalene	500	U	
88-74-4	2-Nitroaniline	970	U	
131-11-3	Dimethylphthalate	500	U	
606-20-2	2,6-Dinitrotoluene	500	U	
208-96-8	Acenaphthylene	500	U	
99-09-2	3-Nitroaniline	970	U	
83-32-9	Acenaphthene	32	J	

NW 9/17/13

1E - FORM I SV-2
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-08-024

17

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17071

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17071-17

Sample wt/vol: 30.9 (g/mL) g Lab File ID: RKXYG07.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 44 Decanted: (Y/N) Date Received: 06/19/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/27/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/05/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.7

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
51-28-5	2,4-Dinitrophenol	970	U	
100-02-7	4-Nitrophenol	970	U	
132-64-9	Dibenzofuran	25	J	
121-14-2	2,4-Dinitrotoluene	500	U	
84-66-2	Diethylphthalate	500	U	
86-73-7	Fluorene	50	J	
7005-72-3	4-Chlorophenyl-phenylether	500	U	
100-01-6	4-Nitroaniline	970	U	
534-52-1	4,6-Dinitro-2-methylphenol	970	U	
86-30-6	N-Nitrosodiphenylamin [1]	500	U	
95-94-3	1,2,4,5-Tetrachlorobenzene	500	U	
101-55-3	4-Bromophenyl-phenylether	500	U	
118-74-1	Hexachlorobenzene	500	U	
1912-24-9	Atrazine	500	U	
87-86-5	Pentachlorophenol	970	~~U~~	UJ
85-01-8	Phenanthrene	250	J	
120-12-7	Anthracene	62	J	
86-74-8	Carbazole	500	U	
84-74-2	Di-n-butylphthalate	500	U	
206-44-0	Fluoranthene	400	J	
129-00-0	Pyrene	390	~~J~~	J
85-68-7	Butylbenzylphthalate	500	U	
91-94-1	3,3'-Dichlorobenzidine	500	~~U~~	R
56-55-3	Benzo(a)anthracene	240	J	
218-01-9	Chrysene	350	J	
117-81-7	Bis(2-ethylhexyl)phthalate	520	~~B~~	
117-84-0	Di-n-octylphthalate	500	U	
205-99-2	Benzo(b)fluoranthene	360	J	
207-08-9	Benzo(k)fluoranthene	260	J	
50-32-8	Benzo(a)pyrene	250	J	
193-39-5	Indeno(1,2,3-cd)pyrene	140	J	J
53-70-3	Dibenzo(a,h)anthracene	42	J	↓
191-24-2	Benzo(g,h,i)perylene	200	J	
58-90-2	2,3,4,6-Tetrachlorophenol	500	U	

[1] Cannot be separated from Diphenylamine

MW 9/17/13

1D - FORM I SV-1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-13-096

18

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17071

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17071-18

Sample wt/vol: 30.1 (g/mL) g Lab File ID: RKXYG08.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 33 Decanted: (Y/N) Date Received: 06/19/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/27/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/05/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.7

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
100-52-7	Benzaldehyde	49	J
108-95-2	Phenol	430	U
111-44-4	Bis(2-chloroethyl)ether	430	U
95-57-8	2-Chlorophenol	430	U
95-48-7	2-Methylphenol	430	U
108-60-1	2,2'-Oxybis(1-chloropropane)	430	U
98-86-2	Acetophenone	430	U
106-44-5	4-Methylphenol	430	U
621-64-7	N-Nitroso-di-n-propylamine	430	U
67-72-1	Hexachloroethane	430	U
98-95-3	Nitrobenzene	430	U
78-59-1	Isophorone	430	U
88-75-5	2-Nitrophenol	430	U
105-67-9	2,4-Dimethylphenol	430	U
111-91-1	Bis(2-chloroethoxy)methane	430	U
120-83-2	2,4-Dichlorophenol	430	U
91-20-3	Naphthalene	55	J
106-47-8	4-Chloroaniline	430	U
87-68-3	Hexachlorobutadiene	430	U
105-60-2	Caprolactam	430	U
59-50-7	4-Chloro-3-methylphenol	430	U
91-57-6	2-Methylnaphthalene	30	J
77-47-4	Hexachlorocyclopentadiene	430	~~U~~ UJ
88-06-2	2,4,6-Trichlorophenol	430	U
95-95-4	2,4,5-Trichlorophenol	430	U
92-52-4	1,1'-Biphenyl	430	U
91-58-7	2-Chloronaphthalene	430	U
88-74-4	2-Nitroaniline	830	U
131-11-3	Dimethylphthalate	430	U
606-20-2	2,6-Dinitrotoluene	430	U
208-96-8	Acenaphthylene	430	U
99-09-2	3-Nitroaniline	830	U
83-32-9	Acenaphthene	440	

NW 9/17/13

1E - FORM I SV-2
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-13-096

18

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17071

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17071-18

Sample wt/vol: 30.1 (g/mL) g Lab File ID: RKXYG08.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 33 Decanted: (Y/N) Date Received: 06/19/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/27/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/05/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.7

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
51-28-5	2,4-Dinitrophenol	830	U	
100-02-7	4-Nitrophenol	830	U	
132-64-9	Dibenzofuran	30	J	
121-14-2	2,4-Dinitrotoluene	430	U	
84-66-2	Diethylphthalate	430	U	
86-73-7	Fluorene	230	J	
7005-72-3	4-Chlorophenyl-phenylether	430	U	
100-01-6	4-Nitroaniline	830	U	
534-52-1	4,6-Dinitro-2-methylphenol	830	U	
86-30-6	N-Nitrosodiphenylamin [1]	430	U	
95-94-3	1,2,4,5-Tetrachlorobenzene	430	U	
101-55-3	4-Bromophenyl-phenylether	430	U	
118-74-1	Hexachlorobenzene	430	U	
1912-24-9	Atrazine	430	U	
87-86-5	Pentachlorophenol	830	~~U~~	UJ
85-01-8	Phenanthrene	1900		
120-12-7	Anthracene	490		
86-74-8	Carbazole	430	U	
84-74-2	Di-n-butylphthalate	430	U	
206-44-0	Fluoranthene	1600		J
129-00-0	Pyrene	1300		J
85-68-7	Butylbenzylphthalate	430	U	
91-94-1	3,3'-Dichlorobenzidine	430	U	
56-55-3	Benzo(a)anthracene	640		J
218-01-9	Chrysene	740		J
117-81-7	Bis(2-ethylhexyl)phthalate	430 ~~84~~	~~J B~~	U
117-84-0	Di-n-octylphthalate	430	~~U~~	UJ
205-99-2	Benzo(b)fluoranthene	500		J
207-08-9	Benzo(k)fluoranthene	630		J
50-32-8	Benzo(a)pyrene	580		J
193-39-5	Indeno(1,2,3-cd)pyrene	210	J	J
53-70-3	Dibenzo(a,h)anthracene	76	J	J
191-24-2	Benzo(g,h,i)perylene	270	J	J
58-90-2	2,3,4,6-Tetrachlorophenol	430	~~U~~	UJ

[1] Cannot be separated from Diphenylamine

MW 9/17/13

EPA SAMPLE NO.
LMR13-25-048

19

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17071

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17071-19

Sample wt/vol: 30.8 (g/mL) g Lab File ID: RKXYG11.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 26 Decanted: (Y/N) Date Received: 06/19/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/27/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/05/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
100-52-7	Benzaldehyde	53	J
108-95-2	Phenol	220	U
111-44-4	Bis(2-chloroethyl)ether	220	U
95-57-8	2-Chlorophenol	220	U
95-48-7	2-Methylphenol	220	U
108-60-1	2,2'-Oxybis(1-chloropropane)	220	U
98-86-2	Acetophenone	220	U
106-44-5	4-Methylphenol	220	U
621-64-7	N-Nitroso-di-n-propylamine	220	U
67-72-1	Hexachloroethane	220	U
98-95-3	Nitrobenzene	220	U
78-59-1	Isophorone	220	U
88-75-5	2-Nitrophenol	220	U
105-67-9	2,4-Dimethylphenol	220	U
111-91-1	Bis(2-chloroethoxy)methane	220	U
120-83-2	2,4-Dichlorophenol	220	U
91-20-3	Naphthalene	17	J
106-47-8	4-Chloroaniline	220	U
87-68-3	Hexachlorobutadiene	220	U
105-60-2	Caprolactam	220	U
59-50-7	4-Chloro-3-methylphenol	220	U
91-57-6	2-Methylnaphthalene	220	U
77-47-4	Hexachlorocyclopentadiene	220	U UJ
88-06-2	2,4,6-Trichlorophenol	220	U
95-95-4	2,4,5-Trichlorophenol	220	U
92-52-4	1,1'-Biphenyl	220	U
91-58-7	2-Chloronaphthalene	220	U
88-74-4	2-Nitroaniline	430	U
131-11-3	Dimethylphthalate	220	U
606-20-2	2,6-Dinitrotoluene	220	U
208-96-8	Acenaphthylene	220	U
99-09-2	3-Nitroaniline	430	U
83-32-9	Acenaphthene	46	J

NW 9/17/13

1E - FORM I SV-2
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-25-048

19

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17071

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17071-19

Sample wt/vol: 30.8 (g/mL) g Lab File ID: RKXYG11.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 26 Decanted: (Y/N) Date Received: 06/19/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/27/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/05/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
51-28-5	2,4-Dinitrophenol	430	U	
100-02-7	4-Nitrophenol	430	U	
132-64-9	Dibenzofuran	8.0	J	
121-14-2	2,4-Dinitrotoluene	220	U	
84-66-2	Diethylphthalate	220	U	
86-73-7	Fluorene	17	J	
7005-72-3	4-Chlorophenyl-phenylether	220	U	
100-01-6	4-Nitroaniline	430	U	
534-52-1	4,6-Dinitro-2-methylphenol	430	U	
86-30-6	N-Nitrosodiphenylamin [1]	220	U	
95-94-3	1,2,4,5-Tetrachlorobenzene	220	U	
101-55-3	4-Bromophenyl-phenylether	220	U	
118-74-1	Hexachlorobenzene	220	U	
1912-24-9	Atrazine	220	U	
87-86-5	Pentachlorophenol	430	~~U~~	UJ
85-01-8	Phenanthrene	290		
120-12-7	Anthracene	100	J	
86-74-8	Carbazole	220	U	
84-74-2	Di-n-butylphthalate	11	J	
206-44-0	Fluoranthene	360		
129-00-0	Pyrene	430		J
85-68-7	Butylbenzylphthalate	220	U	
91-94-1	3,3'-Dichlorobenzidine	220	U	
56-55-3	Benzo(a)anthracene	180	J	
218-01-9	Chrysene	200	J	
117-81-7	Bis(2-ethylhexyl)phthalate	220 ~~54~~	~~J B~~	U
117-84-0	Di-n-octylphthalate	220	U	
205-99-2	Benzo(b)fluoranthene	140	J	
207-08-9	Benzo(k)fluoranthene	150	J	
50-32-8	Benzo(a)pyrene	180	J	
193-39-5	Indeno(1,2,3-cd)pyrene	69	J	J
53-70-3	Dibenzo(a,h)anthracene	24	J	↓
191-24-2	Benzo(g,h,i)perylene	89	J	
58-90-2	2,3,4,6-Tetrachlorophenol	220	U	

[1] Cannot be separated from Diphenylamine

MW 9/17/13

EPA SAMPLE NO.
LMR13-25-072

20

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17071

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17071-20

Sample wt/vol: 30.8 (g/mL) g Lab File ID: RKXYM04.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 22 Decanted: (Y/N) Date Received: 06/19/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/27/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/07/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
100-52-7	Benzaldehyde	41	J
108-95-2	Phenol	31	J
111-44-4	Bis(2-chloroethyl)ether	210	UJ
95-57-8	2-Chlorophenol	210	U
95-48-7	2-Methylphenol	210	U
108-60-1	2,2'-Oxybis(1-chloropropane)	210	U
98-86-2	Acetophenone	32	J
106-44-5	4-Methylphenol	210	UJ
621-64-7	N-Nitroso-di-n-propylamine	210	U
67-72-1	Hexachloroethane	210	U
98-95-3	Nitrobenzene	210	U
78-59-1	Isophorone	210	U
88-75-5	2-Nitrophenol	210	U
105-67-9	2,4-Dimethylphenol	210	U
111-91-1	Bis(2-chloroethoxy)methane	210	U
120-83-2	2,4-Dichlorophenol	210	U
91-20-3	Naphthalene	210	U
106-47-8	4-Chloroaniline	210	U
87-68-3	Hexachlorobutadiene	210	U
105-60-2	Caprolactam	210	U
59-50-7	4-Chloro-3-methylphenol	210	U
91-57-6	2-Methylnaphthalene	210	U
77-47-4	Hexachlorocyclopentadiene	210	U
88-06-2	2,4,6-Trichlorophenol	210	UJ
95-95-4	2,4,5-Trichlorophenol	210	U
92-52-4	1,1'-Biphenyl	210	U
91-58-7	2-Chloronaphthalene	210	U
88-74-4	2-Nitroaniline	410	U
131-11-3	Dimethylphthalate	210	U
606-20-2	2,6-Dinitrotoluene	210	U
208-96-8	Acenaphthylene	210	U
99-09-2	3-Nitroaniline	410	U
83-32-9	Acenaphthene	210	U

MW 9/17/13

EPA SAMPLE NO.
LMR13-25-072

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678 20

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17071

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17071-20

Sample wt/vol: 30.8 (g/mL) g Lab File ID: RKXYM04.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 22 Decanted: (Y/N) Date Received: 06/19/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/27/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/07/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
51-28-5	2,4-Dinitrophenol	410	U UJ
100-02-7	4-Nitrophenol	410	U
132-64-9	Dibenzofuran	210	U
121-14-2	2,4-Dinitrotoluene	210	U
84-66-2	Diethylphthalate	210	U
86-73-7	Fluorene	210	U
7005-72-3	4-Chlorophenyl-phenylether	210	U
100-01-6	4-Nitroaniline	410	U
534-52-1	4,6-Dinitro-2-methylphenol	410	U
86-30-6	N-Nitrosodiphenylamin [1]	210	U
95-94-3	1,2,4,5-Tetrachlorobenzene	210	U
101-55-3	4-Bromophenyl-phenylether	210	U
118-74-1	Hexachlorobenzene	210	U
1912-24-9	Atrazine	210	U
87-86-5	Pentachlorophenol	410	U
85-01-8	Phenanthrene	210	U
120-12-7	Anthracene	210	U
86-74-8	Carbazole	210	U
84-74-2	Di-n-butylphthalate	7.8	J J
206-44-0	Fluoranthene	210	U UJ
129-00-0	Pyrene	210	U
85-68-7	Butylbenzylphthalate	210	U R
91-94-1	3,3'-Dichlorobenzidine	210	U UJ
56-55-3	Benzo(a)anthracene	210	U
218-01-9	Chrysene	210	U
117-81-7	Bis(2-ethylhexyl)phthalate	210 ~~36~~ ~~J B~~	UJ
117-84-0	Di-n-octylphthalate	210	U
205-99-2	Benzo(b)fluoranthene	210	U
207-08-9	Benzo(k)fluoranthene	210	U
50-32-8	Benzo(a)pyrene	210	U
193-39-5	Indeno(1,2,3-cd)pyrene	210	U
53-70-3	Dibenzo(a,h)anthracene	210	U
191-24-2	Benzo(g,h,i)perylene	210	U
58-90-2	2,3,4,6-Tetrachlorophenol	210	U

[1] Cannot be separated from Diphenylamine

NW 9/17/13

1D - FORM I SV-1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-08-024FD

22

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17071

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17071-22

Sample wt/vol: 30.9 (g/mL) g Lab File ID: RKXYM05.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 40 Decanted: (Y/N) Date Received: 06/19/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/27/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/07/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
100-52-7	Benzaldehyde	38	~~J~~	J
108-95-2	Phenol	270	U	UJ
111-44-4	Bis(2-chloroethyl)ether	270	U	
95-57-8	2-Chlorophenol	270	U	
95-48-7	2-Methylphenol	270	U	
108-60-1	2,2'-Oxybis(1-chloropropane)	270	U	
98-86-2	Acetophenone	270	U	
106-44-5	4-Methylphenol	270	U	
621-64-7	N-Nitroso-di-n-propylamine	270	U	
67-72-1	Hexachloroethane	270	U	
98-95-3	Nitrobenzene	270	U	
78-59-1	Isophorone	270	U	
88-75-5	2-Nitrophenol	270	U	
105-67-9	2,4-Dimethylphenol	270	U	
111-91-1	Bis(2-chloroethoxy)methane	270	U	
120-83-2	2,4-Dichlorophenol	270	U	
91-20-3	Naphthalene	25	J	J
106-47-8	4-Chloroaniline	270	U	R
87-68-3	Hexachlorobutadiene	270	U	UJ
105-60-2	Caprolactam	270	U	
59-50-7	4-Chloro-3-methylphenol	270	U	
91-57-6	2-Methylnaphthalene	270	U	
77-47-4	Hexachlorocyclopentadiene	270	U	R
88-06-2	2,4,6-Trichlorophenol	270	U	UJ
95-95-4	2,4,5-Trichlorophenol	270	U	
92-52-4	1,1'-Biphenyl	270	U	
91-58-7	2-Chloronaphthalene	270	U	
88-74-4	2-Nitroaniline	530	U	
131-11-3	Dimethylphthalate	270	U	
606-20-2	2,6-Dinitrotoluene	270	U	
208-96-8	Acenaphthylene	270	U	
99-09-2	3-Nitroaniline	530	U	
83-32-9	Acenaphthene	28	J	J

MW 9/17/13

EPA SAMPLE NO.
LMR13-08-024FD

22

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17071

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17071-22

Sample wt/vol: 30.9 (g/mL) g Lab File ID: RKXYM05.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 40 Decanted: (Y/N) Date Received: 06/19/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/27/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/07/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
51-28-5	2,4-Dinitrophenol	530	U UJ
100-02-7	4-Nitrophenol	530	U ↓
132-64-9	Dibenzofuran	22	J J
121-14-2	2,4-Dinitrotoluene	270	U UJ
84-66-2	Diethylphthalate	270	U UJ
86-73-7	Fluorene	40	J J
7005-72-3	4-Chlorophenyl-phenylether	270	U UJ
100-01-6	4-Nitroaniline	530	U
534-52-1	4,6-Dinitro-2-methylphenol	530	U
86-30-6	N-Nitrosodiphenylamin [1]	270	U
95-94-3	1,2,4,5-Tetrachlorobenzene	270	U
101-55-3	4-Bromophenyl-phenylether	270	U
118-74-1	Hexachlorobenzene	270	U
1912-24-9	Atrazine	270	U
87-86-5	Pentachlorophenol	530	U ↓
85-01-8	Phenanthrene	230	J J
120-12-7	Anthracene	66	J J
86-74-8	Carbazole	270	U UJ
84-74-2	Di-n-butylphthalate	20	J J
206-44-0	Fluoranthene	590	↓
129-00-0	Pyrene	460	
85-68-7	Butylbenzylphthalate	270 ~~44~~ ~~J B~~	UJ
91-94-1	3,3'-Dichlorobenzidine	270	U R
56-55-3	Benzo(a)anthracene	220	J J
218-01-9	Chrysene	350	
117-81-7	Bis(2-ethylhexyl)phthalate	400	~~B~~ ↓
117-84-0	Di-n-octylphthalate	270	U UJ
205-99-2	Benzo(b)fluoranthene	310	J
207-08-9	Benzo(k)fluoranthene	270	J ↓
50-32-8	Benzo(a)pyrene	250	J
193-39-5	Indeno(1,2,3-cd)pyrene	120	J
53-70-3	Dibenzo(a,h)anthracene	57	J
191-24-2	Benzo(g,h,i)perylene	150	J
58-90-2	2,3,4,6-Tetrachlorophenol	270	U UJ

[1] Cannot be separated from Diphenylamine

1D - FORM I SV-1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-08-012

23

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17071

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17120-1

Sample wt/vol: 30.7 (g/mL) g Lab File ID: RKXYV09.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 53 Decanted: (Y/N) Date Received: 06/20/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/29/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/08/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
100-52-7	Benzaldehyde	69	J	
108-95-2	Phenol	360	U	
111-44-4	Bis(2-chloroethyl)ether	360	U	
95-57-8	2-Chlorophenol	360	U	
95-48-7	2-Methylphenol	360	U	
108-60-1	2,2'-Oxybis(1-chloropropane)	360	U	
98-86-2	Acetophenone	360	U	
106-44-5	4-Methylphenol	360	U	
621-64-7	N-Nitroso-di-n-propylamine	360	U	
67-72-1	Hexachloroethane	360	U	
98-95-3	Nitrobenzene	360	U	
78-59-1	Isophorone	360	U	
88-75-5	2-Nitrophenol	360	U	
105-67-9	2,4-Dimethylphenol	360	U	
111-91-1	Bis(2-chloroethoxy)methane	360	U	
120-83-2	2,4-Dichlorophenol	360	U	
91-20-3	Naphthalene	26	J	
106-47-8	4-Chloroaniline	360	U	R
87-68-3	Hexachlorobutadiene	360	U	
105-60-2	Caprolactam	360	U	
59-50-7	4-Chloro-3-methylphenol	360	U	
91-57-6	2-Methylnaphthalene	360	U	
77-47-4	Hexachlorocyclopentadiene	360	U	R
88-06-2	2,4,6-Trichlorophenol	360	U	
95-95-4	2,4,5-Trichlorophenol	360	U	
92-52-4	1,1'-Biphenyl	360	U	
91-58-7	2-Chloronaphthalene	360	U	
88-74-4	2-Nitroaniline	690	U	
131-11-3	Dimethylphthalate	360	U	
606-20-2	2,6-Dinitrotoluene	360	U	
208-96-8	Acenaphthylene	360	U	
99-09-2	3-Nitroaniline	690	U	
83-32-9	Acenaphthene	19	J	

NW 9/17/13

1E - FORM I SV-2
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-08-012

23

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17071

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17120-1

Sample wt/vol: 30.7 (g/mL) g Lab File ID: RKXYV09.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 53 Decanted: (Y/N) Date Received: 06/20/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/29/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/08/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
51-28-5	2,4-Dinitrophenol	690	U
100-02-7	4-Nitrophenol	690	U
132-64-9	Dibenzofuran	15	J
121-14-2	2,4-Dinitrotoluene	360	U
84-66-2	Diethylphthalate	16	J
86-73-7	Fluorene	30	J
7005-72-3	4-Chlorophenyl-phenylether	360	U
100-01-6	4-Nitroaniline	690	U
534-52-1	4,6-Dinitro-2-methylphenol	690	U
86-30-6	N-Nitrosodiphenylamin [1]	360	U
95-94-3	1,2,4,5-Tetrachlorobenzene	360	U
101-55-3	4-Bromophenyl-phenylether	360	U
118-74-1	Hexachlorobenzene	360	U
1912-24-9	Atrazine	360	U
87-86-5	Pentachlorophenol	690	~~U~~ UJ
85-01-8	Phenanthrene	160	J
120-12-7	Anthracene	39	J
86-74-8	Carbazole	360	U
84-74-2	Di-n-butylphthalate	360 ~~24~~ ~~J B~~	U
206-44-0	Fluoranthene	410	
129-00-0	Pyrene	320	~~J~~ J
85-68-7	Butylbenzylphthalate	360 ~~60~~ ~~J B~~	U
91-94-1	3,3'-Dichlorobenzidine	360	~~U~~ R
56-55-3	Benzo(a)anthracene	160	J
218-01-9	Chrysene	280	J
117-81-7	Bis(2-ethylhexyl)phthalate	360 ~~340~~ ~~J B~~	U
117-84-0	Di-n-octylphthalate	360	U
205-99-2	Benzo(b)fluoranthene	260	J
207-08-9	Benzo(k)fluoranthene	270	J
50-32-8	Benzo(a)pyrene	190	J
193-39-5	Indeno(1,2,3-cd)pyrene	120	~~J~~ J
53-70-3	Dibenzo(a,h)anthracene	37	~~J~~ J
191-24-2	Benzo(g,h,i)perylene	170	~~J~~ J
58-90-2	2,3,4,6-Tetrachlorophenol	360	U

[1] Cannot be separated from Diphenylamine

NW 9/17/13

1D - FORM I SV-1

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-14-012

24

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17071

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17120-2

Sample wt/vol: 30.7 (g/mL) g Lab File ID: RKXYV10.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 50 Decanted: (Y/N) Date Received: 06/20/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/29/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/08/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
100-52-7	Benzaldehyde	41	J	
108-95-2	Phenol	330	U	
111-44-4	Bis(2-chloroethyl)ether	330	U	
95-57-8	2-Chlorophenol	330	U	
95-48-7	2-Methylphenol	330	U	
108-60-1	2,2'-Oxybis(1-chloropropane)	330	U	
98-86-2	Acetophenone	330	U	
106-44-5	4-Methylphenol	330	U	
621-64-7	N-Nitroso-di-n-propylamine	330	U	
67-72-1	Hexachloroethane	330	U	
98-95-3	Nitrobenzene	330	U	
78-59-1	Isophorone	330	U	
88-75-5	2-Nitrophenol	330	U	
105-67-9	2,4-Dimethylphenol	330	U	
111-91-1	Bis(2-chloroethoxy)methane	330	U	
120-83-2	2,4-Dichlorophenol	330	U	
91-20-3	Naphthalene	27	J	
106-47-8	4-Chloroaniline	330	~~U~~	R
87-68-3	Hexachlorobutadiene	330	U	
105-60-2	Caprolactam	330	U	
59-50-7	4-Chloro-3-methylphenol	330	U	
91-57-6	2-Methylnaphthalene	330	U	
77-47-4	Hexachlorocyclopentadiene	330	~~U~~	R
88-06-2	2,4,6-Trichlorophenol	330	U	
95-95-4	2,4,5-Trichlorophenol	330	U	
92-52-4	1,1'-Biphenyl	330	U	
91-58-7	2-Chloronaphthalene	330	U	
88-74-4	2-Nitroaniline	650	U	
131-11-3	Dimethylphthalate	330	U	
606-20-2	2,6-Dinitrotoluene	330	U	
208-96-8	Acenaphthylene	330	U	
99-09-2	3-Nitroaniline	650	U	
83-32-9	Acenaphthene	33	J	

MW 9/17/13

EPA SAMPLE NO.
LMR13-14-012

24

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17071

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17120-2

Sample wt/vol: 30.7 (g/mL) g Lab File ID: RKXYV10.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 50 Decanted: (Y/N) Date Received: 06/20/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/29/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/08/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
51-28-5	2,4-Dinitrophenol	650	U	
100-02-7	4-Nitrophenol	650	U	
132-64-9	Dibenzofuran	14	J	
121-14-2	2,4-Dinitrotoluene	330	U	
84-66-2	Diethylphthalate	330	U	
86-73-7	Fluorene	48	J	
7005-72-3	4-Chlorophenyl-phenylether	330	U	
100-01-6	4-Nitroaniline	650	U	
534-52-1	4,6-Dinitro-2-methylphenol	650	U	
86-30-6	N-Nitrosodiphenylamin [1]	330	U	
95-94-3	1,2,4,5-Tetrachlorobenzene	330	U	
101-55-3	4-Bromophenyl-phenylether	330	U	
118-74-1	Hexachlorobenzene	330	U	
1912-24-9	Atrazine	330	U	
87-86-5	Pentachlorophenol	650	~~U~~	UJ
85-01-8	Phenanthrene	230	J	
120-12-7	Anthracene	74	J	
86-74-8	Carbazole	330	U	
84-74-2	Di-n-butylphthalate	330	U	
206-44-0	Fluoranthene	640		
129-00-0	Pyrene	560		J
85-68-7	Butylbenzylphthalate	330	U	
91-94-1	3,3'-Dichlorobenzidine	330	~~U~~	R
56-55-3	Benzo(a)anthracene	260	J	
218-01-9	Chrysene	410		
117-81-7	Bis(2-ethylhexyl)phthalate	850	~~J~~	
117-84-0	Di-n-octylphthalate	330	U	
205-99-2	Benzo(b)fluoranthene	330	J	
207-08-9	Benzo(k)fluoranthene	370		
50-32-8	Benzo(a)pyrene	300	J	
193-39-5	Indeno(1,2,3-cd)pyrene	150	~~J~~	J
53-70-3	Dibenzo(a,h)anthracene	59	~~J~~	J
191-24-2	Benzo(g,h,i)perylene	170	~~J~~	J
58-90-2	2,3,4,6-Tetrachlorophenol	330	U	

[1] Cannot be separated from Diphenylamine

MW 9/17/13

1D - FORM I SV-1

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-14-048

25

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17071

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17120-3

Sample wt/vol: 31.0 (g/mL) g Lab File ID: RLA10.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 41 Decanted: (Y/N) Date Received: 06/20/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/29/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/13/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 2.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
100-52-7	Benzaldehyde	560	U UJ
108-95-2	Phenol	560	U
111-44-4	Bis(2-chloroethyl)ether	560	U
95-57-8	2-Chlorophenol	560	U
95-48-7	2-Methylphenol	560	U
108-60-1	2,2'-Oxybis(1-chloropropane)	560	U
98-86-2	Acetophenone	560	U
106-44-5	4-Methylphenol	560	U
621-64-7	N-Nitroso-di-n-propylamine	560	U
67-72-1	Hexachloroethane	560	U
98-95-3	Nitrobenzene	560	U
78-59-1	Isophorone	560	U
88-75-5	2-Nitrophenol	560	U
105-67-9	2,4-Dimethylphenol	560	U
111-91-1	Bis(2-chloroethoxy)methane	560	U
120-83-2	2,4-Dichlorophenol	560	U
91-20-3	Naphthalene	120	J J
106-47-8	4-Chloroaniline	560	U UJ
87-68-3	Hexachlorobutadiene	560	U
105-60-2	Caprolactam	560	U
59-50-7	4-Chloro-3-methylphenol	560	U
91-57-6	2-Methylnaphthalene	50	J J
77-47-4	Hexachlorocyclopentadiene	560	U UJ
88-06-2	2,4,6-Trichlorophenol	560	U
95-95-4	2,4,5-Trichlorophenol	560	U
92-52-4	1,1'-Biphenyl	560	U
91-58-7	2-Chloronaphthalene	560	U
88-74-4	2-Nitroaniline	1100	U
131-11-3	Dimethylphthalate	560	U
606-20-2	2,6-Dinitrotoluene	560	U
208-96-8	Acenaphthylene	560	U
99-09-2	3-Nitroaniline	1100	U
83-32-9	Acenaphthene	110	U J

MW 9/17/13

1E - FORM I SV-2
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-14-048

25

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17071

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17120-3

Sample wt/vol: 31.0 (g/mL) g Lab File ID: RLA10.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 41 Decanted: (Y/N) Date Received: 06/20/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/29/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/13/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 2.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
51-28-5	2,4-Dinitrophenol	1100	U UJ
100-02-7	4-Nitrophenol	1100	U
132-64-9	Dibenzofuran	560	U
121-14-2	2,4-Dinitrotoluene	560	U
84-66-2	Diethylphthalate	560	U
86-73-7	Fluorene	240	J J
7005-72-3	4-Chlorophenyl-phenylether	560	U UJ
100-01-6	4-Nitroaniline	1100	U
534-52-1	4,6-Dinitro-2-methylphenol	1100	U
86-30-6	N-Nitrosodiphenylamin [1]	560	U
95-94-3	1,2,4,5-Tetrachlorobenzene	560	U
101-55-3	4-Bromophenyl-phenylether	560	U
118-74-1	Hexachlorobenzene	560	U
1912-24-9	Atrazine	560	U
87-86-5	Pentachlorophenol	1100	U J
85-01-8	Phenanthrene	870	J
120-12-7	Anthracene	300	J J
86-74-8	Carbazole	560	U UJ
84-74-2	Di-n-butylphthalate	560	U UJ
206-44-0	Fluoranthene	1400	J
129-00-0	Pyrene	1400	J
85-68-7	Butylbenzylphthalate	560	U UJ
91-94-1	3,3'-Dichlorobenzidine	560	U UJ
56-55-3	Benzo(a)anthracene	720	J
218-01-9	Chrysene	1000	
117-81-7	Bis(2-ethylhexyl)phthalate	3600	B
117-84-0	Di-n-octylphthalate	560	U UJ
205-99-2	Benzo(b)fluoranthene	590	J
207-08-9	Benzo(k)fluoranthene	800	
50-32-8	Benzo(a)pyrene	770	
193-39-5	Indeno(1,2,3-cd)pyrene	300	J
53-70-3	Dibenzo(a,h)anthracene	150	J
191-24-2	Benzo(g,h,i)perylene	380	J
58-90-2	2,3,4,6-Tetrachlorophenol	560	U UJ

[1] Cannot be separated from Diphenylamine

NW 9/17/13

1D - FORM I SV-1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-14-072

26

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17071

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17120-4

Sample wt/vol: 30.2 (g/mL) g Lab File ID: RKXYV12.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 33 Decanted: (Y/N) Date Received: 06/20/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/29/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/08/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
100-52-7	Benzaldehyde	250	U
108-95-2	Phenol	250	U
111-44-4	Bis(2-chloroethyl)ether	250	U
95-57-8	2-Chlorophenol	250	U
95-48-7	2-Methylphenol	250	U
108-60-1	2,2'-Oxybis(1-chloropropane)	250	U
98-86-2	Acetophenone	250	U
106-44-5	4-Methylphenol	250	U
621-64-7	N-Nitroso-di-n-propylamine	250	U
67-72-1	Hexachloroethane	250	U
98-95-3	Nitrobenzene	250	U
78-59-1	Isophorone	250	U
88-75-5	2-Nitrophenol	250	U
105-67-9	2,4-Dimethylphenol	250	U
111-91-1	Bis(2-chloroethoxy)methane	250	U
120-83-2	2,4-Dichlorophenol	250	U
91-20-3	Naphthalene	70	J
106-47-8	4-Chloroaniline	250	U
87-68-3	Hexachlorobutadiene	250	U
105-60-2	Caprolactam	250	U
59-50-7	4-Chloro-3-methylphenol	250	U
91-57-6	2-Methylnaphthalene	24	J
77-47-4	Hexachlorocyclopentadiene	250	~~U~~ UJ
88-06-2	2,4,6-Trichlorophenol	250	U
95-95-4	2,4,5-Trichlorophenol	250	U
92-52-4	1,1'-Biphenyl	250	U
91-58-7	2-Chloronaphthalene	250	U
88-74-4	2-Nitroaniline	490	U
131-11-3	Dimethylphthalate	250	U
606-20-2	2,6-Dinitrotoluene	250	U
208-96-8	Acenaphthylene	250	U
99-09-2	3-Nitroaniline	490	U
83-32-9	Acenaphthene	51	J

NW 9/17/13

EPA SAMPLE NO.
LMR13-14-072

26

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17071

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17120-4

Sample wt/vol: 30.2 (g/mL) g Lab File ID: RKXYV12.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 33 Decanted: (Y/N) Date Received: 06/20/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/29/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/08/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
51-28-5	2,4-Dinitrophenol	490	U	
100-02-7	4-Nitrophenol	490	U	
132-64-9	Dibenzofuran	21	J	
121-14-2	2,4-Dinitrotoluene	250	U	
84-66-2	Diethylphthalate	250	U	
86-73-7	Fluorene	82	J	
7005-72-3	4-Chlorophenyl-phenylether	250	U	
100-01-6	4-Nitroaniline	490	U	
534-52-1	4,6-Dinitro-2-methylphenol	490	U	
86-30-6	N-Nitrosodiphenylamin [1]	250	U	
95-94-3	1,2,4,5-Tetrachlorobenzene	250	U	
101-55-3	4-Bromophenyl-phenylether	250	U	
118-74-1	Hexachlorobenzene	250	U	
1912-24-9	Atrazine	250	U	
87-86-5	Pentachlorophenol	490	~~U~~	UJ
85-01-8	Phenanthrene	390		
120-12-7	Anthracene	120	J	
86-74-8	Carbazole	250	U	
84-74-2	Di-n-butylphthalate	250	U	
206-44-0	Fluoranthene	890		
129-00-0	Pyrene	810		J
85-68-7	Butylbenzylphthalate	250	U	
91-94-1	3,3'-Dichlorobenzidine	250	U	
56-55-3	Benzo(a)anthracene	520		
218-01-9	Chrysene	720		
117-81-7	Bis(2-ethylhexyl)phthalate	1500	~~B~~	
117-84-0	Di-n-octylphthalate	250	U	
205-99-2	Benzo(b)fluoranthene	530		
207-08-9	Benzo(k)fluoranthene	410		
50-32-8	Benzo(a)pyrene	480		
193-39-5	Indeno(1,2,3-cd)pyrene	220	J	J
53-70-3	Dibenzo(a,h)anthracene	93	J	↓
191-24-2	Benzo(g,h,i)perylene	240	J	
58-90-2	2,3,4,6-Tetrachlorophenol	250	U	

[1] Cannot be separated from Diphenylamine

NW 9/17/13

1F - FORM I SV-SIM
SEMIVOLATILE SIM ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-13-012

8

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: 1734.2] SDG No.: 17071

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17071-8

Sample wt/vol: 30.6 (g/mL) g Lab File ID: HQP14.D

Extraction: (Type) SONC

% Moisture: 52 Decanted: (Y/N) Date Received: 06/19/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/27/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/14/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 25.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
91-20-3	Naphthalene	170 ~~33~~	~~J B~~
90-12-0	1-Methylnaphthalene	11	J
91-57-6	2-Methylnaphthalene	19	J
208-96-8	Acenaphthylene	15	J
83-32-9	Acenaphthene	28	J
86-73-7	Fluorene	55	J
85-01-8	Phenanthrene	200	~~B~~
120-12-7	Anthracene	71	J
206-44-0	Fluoranthene	520	~~B~~
129-00-0	Pyrene	520	
56-55-3	Benzo(a)anthracene	280	~~B~~
218-01-9	Chrysene	400	~~B~~
205-99-2	Benzo(b)fluoranthene	320	~~B~~
207-08-9	Benzo(k)fluoranthene	300	~~B~~
192-97-2	Benzo(e)pyrene	250	~~B~~
50-32-8	Benzo(a)pyrene	270	
198-55-0	Perylene	740	
193-39-5	Indeno(1,2,3-cd)pyrene	170 ~~150~~	J ~~B~~
53-70-3	Dibenzo(a,h)anthracene	52	~~J~~
191-24-2	Benzo(g,h,i)perylene	170 ~~170~~	~~J B~~
C1NAPH	C1-Naphthalenes	19	J
C2NAPH	C2-Naphthalenes	100	J
C3NAPH	C3-Naphthalenes	150	J
C4NAPH	C4-Naphthalenes	120	J
C1FLUOR	C1 Fluorenes	19	J
C2FLUOR	C2 Fluorenes	41	J
C3FLUOR	C3 Fluorenes	81	J
C1PHAN	C1-Phenanthrenes/Anthracenes	200	J
C2PHAN	C2-Phenanthrenes/Anthracenes	210	J
C3PHAN	C3-Phenanthrenes/Anthracenes	290	J
C4PHAN	C4-Phenanthrenes/Anthracenes	230	J
C1FLPY	C1-Fluoranthenes/Pyrenes	440	J
C2FLPY	C2-Fluoranthenes/Pyrenes	360	J
C3FLPY	C3-Fluoranthenes/Pyrenes	230	J
C1CHRYS	C1 Chrysenes	310	J
C2CHRYS	C2 Chrysenes	280	J
C3CHRYS	C3 Chrysenes	110	J
C4CHRYS	C4 Chrysenes	41	J

NW 9/17/13

1F - FORM I SV-SIM

SEMIVOLATILE SIM ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-13-012

8

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: 1734.2] SDG No.: 17071

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17071-8

Sample wt/vol: 30.6 (g/mL) g Lab File ID: HQP14.D

Extraction: (Type) SONC

% Moisture: 52 Decanted: (Y/N) Date Received: 06/19/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/27/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/14/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 25.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
TPPAH	Total 16 PPAH	3400	~~B~~ J	
TPAH	Total PAH	7600	~~B~~ J	

MW 9/17/13

1F - FORM I SV-SIM

SEMIVOLATILE SIM ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-25-012

15

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: 1734.2] SDG No.: 17071

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17071-15

Sample wt/vol: 30.5 (g/mL) g Lab File ID: HQP15.D

Extraction: (Type) SONC

% Moisture: 23 Decanted: (Y/N) Date Received: 06/19/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/27/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/14/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 50.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
91-20-3	Naphthalene	210 ~~84~~	~~J B~~ UJ
90-12-0	1-Methylnaphthalene	19	J
91-57-6	2-Methylnaphthalene	39	J
208-96-8	Acenaphthylene	18	J
83-32-9	Acenaphthene	44	J
86-73-7	Fluorene	70	J
85-01-8	Phenanthrene	320	~~B~~
120-12-7	Anthracene	110	J
206-44-0	Fluoranthene	490	~~B~~
129-00-0	Pyrene	580	
56-55-3	Benzo(a)anthracene	370	~~B~~
218-01-9	Chrysene	520	~~B~~
205-99-2	Benzo(b)fluoranthene	290	~~B~~
207-08-9	Benzo(k)fluoranthene	230	~~B~~
192-97-2	Benzo(e)pyrene	330	~~B~~
50-32-8	Benzo(a)pyrene	320	
198-55-0	Perylene	230	
193-39-5	Indeno(1,2,3-cd)pyrene	210 ~~130~~	~~J B~~ UJ
53-70-3	Dibenzo(a,h)anthracene	79	J
191-24-2	Benzo(g,h,i)perylene	210 ~~180~~	~~J B~~ UJ
C1NAPH	C1-Naphthalenes	39	J
C2NAPH	C2-Naphthalenes	280	J
C3NAPH	C3-Naphthalenes	1100	J
C4NAPH	C4-Naphthalenes	870	J
C1FLUOR	C1 Fluorenes	76	J
C2FLUOR	C2 Fluorenes	160	J
C3FLUOR	C3 Fluorenes	290	J
C1PHAN	C1-Phenanthrenes/Anthracenes	770	J
C2PHAN	C2-Phenanthrenes/Anthracenes	840	J
C3PHAN	C3-Phenanthrenes/Anthracenes	910	J
C4PHAN	C4-Phenanthrenes/Anthracenes	530	J
C1FLPY	C1-Fluoranthenes/Pyrenes	780	J
C2FLPY	C2-Fluoranthenes/Pyrenes	750	J
C3FLPY	C3-Fluoranthenes/Pyrenes	570	J
C1CHRYS	C1 Chrysenes	790	J
C2CHRYS	C2 Chrysenes	850	J
C3CHRYS	C3 Chrysenes	430	J
C4CHRYS	C4 Chrysenes	140	J

MW 9/17/13

1F - FORM I SV-SIM
SEMIVOLATILE SIM ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-25-012

15

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: 1734.2] SDG No.: 17071

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17071-15

Sample wt/vol: 30.5 (g/mL) g Lab File ID: HQP15.D

Extraction: (Type) SONC

% Moisture: 23 Decanted: (Y/N) Date Received: 06/19/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/27/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/14/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 50.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
TPPAH	Total 16 PPAH	3800	~~B~~ J
TPAH	Total PAH	15000	~~B~~ J

44

NW 9/17/13

1F - FORM I SV-SIM
SEMIVOLATILE SIM ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-08-012

23

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: 1734.2] SDG No.: 17071

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17120-1

Sample wt/vol: 30.7 (g/mL) g Lab File ID: SERHT15.D

Extraction: (Type) SONC

% Moisture: 53 Decanted: (Y/N) Date Received: 06/20/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/29/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/08/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
91-20-3	Naphthalene	19	~~E~~
90-12-0	1-Methylnaphthalene	6.1	J
91-57-6	2-Methylnaphthalene	9.8	
208-96-8	Acenaphthylene	6.6	J
83-32-9	Acenaphthene	17	
86-73-7	Fluorene	21	
85-01-8	Phenanthrene	160	~~E~~ ~~B~~ J
120-12-7	Anthracene	33	
206-44-0	Fluoranthene	340	E B J
129-00-0	Pyrene	250	E B
56-55-3	Benzo(a)anthracene	130	E B
218-01-9	Chrysene	180	E B
205-99-2	Benzo(b)fluoranthene	200	E
207-08-9	Benzo(k)fluoranthene	110	E
192-97-2	Benzo(e)pyrene	120	E
50-32-8	Benzo(a)pyrene	120	E
198-55-0	Perylene	380	E ~~B~~
193-39-5	Indeno(1,2,3-cd)pyrene	120	~~B~~
53-70-3	Dibenzo(a,h)anthracene	40	
191-24-2	Benzo(g,h,i)perylene	130	~~E~~ J
C1NAPH	C1-Naphthalenes	11	J
C2NAPH	C2-Naphthalenes	44	J
C3NAPH	C3-Naphthalenes	60	J
C4NAPH	C4-Naphthalenes	77	J
C1FLUOR	C1 Fluorenes	7.4	J
C2FLUOR	C2 Fluorenes	9.2	J
C3FLUOR	C3 Fluorenes	6.9	U
C1PHAN	C1-Phenanthrenes/Anthracenes	110	J
C2PHAN	C2-Phenanthrenes/Anthracenes	92	J
C3PHAN	C3-Phenanthrenes/Anthracenes	75	J
C4PHAN	C4-Phenanthrenes/Anthracenes	52	J
C1FLPY	C1-Fluoranthenes/Pyrenes	140	J
C2FLPY	C2-Fluoranthenes/Pyrenes	100	J
C3FLPY	C3-Fluoranthenes/Pyrenes	58	J
C1CHRYS	C1 Chrysenes	110	J
C2CHRYS	C2 Chrysenes	73	J
C3CHRYS	C3 Chrysenes	50	J
C4CHRYS	C4 Chrysenes	19	J

NW 9/17/13

1F - FORM I SV-SIM
SEMIVOLATILE SIM ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-08-012

23

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: 1734.2] SDG No.: 17071

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17120-1

Sample wt/vol: 30.7 (g/mL) g Lab File ID: SERHT15.D

Extraction: (Type) SONC

% Moisture: 53 Decanted: (Y/N) Date Received: 06/20/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/29/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/08/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
TPPAH	Total 16 PPAH	1900	~~B~~ J
TPAH	Total PAH	3500	~~B~~ J

NW 9/17/13

1F - FORM I SV-SIM
SEMIVOLATILE SIM ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-14-012

24

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: 1734.2] SDG No.: 17071

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17120-2

Sample wt/vol: 30.7 (g/mL) g Lab File ID: SERHT16.D

Extraction: (Type) SONC

% Moisture: 50 Decanted: (Y/N) Date Received: 06/20/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/29/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/08/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 5.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
91-20-3	Naphthalene	32 20	~~J B~~ U
90-12-0	1-Methylnaphthalene	7.1	J
91-57-6	2-Methylnaphthalene	12	J
208-96-8	Acenaphthylene	17	J
83-32-9	Acenaphthene	24	J
86-73-7	Fluorene	35	
85-01-8	Phenanthrene	210	~~B~~
120-12-7	Anthracene	64	
206-44-0	Fluoranthene	450	~~E B~~ J
129-00-0	Pyrene	350	~~E B~~ J
56-55-3	Benzo(a)anthracene	180	~~B~~
218-01-9	Chrysene	230	~~B~~
205-99-2	Benzo(b)fluoranthene	220	
207-08-9	Benzo(k)fluoranthene	130	
192-97-2	Benzo(e)pyrene	140	
50-32-8	Benzo(a)pyrene	170	
198-55-0	Perylene	510	~~E B~~ J
193-39-5	Indeno(1,2,3-cd)pyrene	150	
53-70-3	Dibenzo(a,h)anthracene	53	
191-24-2	Benzo(g,h,i)perylene	170	
C1NAPH	C1-Naphthalenes	13	J
C2NAPH	C2-Naphthalenes	72	J
C3NAPH	C3-Naphthalenes	150	J
C4NAPH	C4-Naphthalenes	180	J
C1FLUOR	C1 Fluorenes	18	J
C2FLUOR	C2 Fluorenes	26	J
C3FLUOR	C3 Fluorenes	76	J
C1PHAN	C1-Phenanthrenes/Anthracenes	210	J
C2PHAN	C2-Phenanthrenes/Anthracenes	200	J
C3PHAN	C3-Phenanthrenes/Anthracenes	150	J
C4PHAN	C4-Phenanthrenes/Anthracenes	120	J
C1FLPY	C1-Fluoranthenes/Pyrenes	230	J
C2FLPY	C2-Fluoranthenes/Pyrenes	170	J
C3FLPY	C3-Fluoranthenes/Pyrenes	100	J
C1CHRYS	C1 Chrysenes	170	J
C2CHRYS	C2 Chrysenes	120	J
C3CHRYS	C3 Chrysenes	83	J
C4CHRYS	C4 Chrysenes	36	J

MW 9/17/13

1F - FORM I SV-SIM
SEMIVOLATILE SIM ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-14-012

24

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: 1734.2] SDG No.: 17071

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17120-2

Sample wt/vol: 30.7 (g/mL) g Lab File ID: SERHT16.D

Extraction: (Type) SONC

% Moisture: 50 Decanted: (Y/N) Date Received: 06/20/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/29/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/08/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 5.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
TPPAH	Total 16 PPAH	2500	J
TPAH	Total PAH	5200	J

NW 9/17/13

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-13-024FD

5

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17071

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17071-5

Sample wt/vol: 30.1 (g/mL) g Lab File ID: 0825AHBSOM11.D

% Moisture: 46 Decanted: (Y/N) Date Received: 06/19/2013

Extraction: (Type) SONC Date Extracted: 06/26/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 08/01/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 5.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	310	U
11104-28-2	Aroclor-1221	310	U
11141-16-5	Aroclor-1232	310	U
53469-21-9	Aroclor-1242	850	
12672-29-6	Aroclor-1248	310	U
11097-69-1	Aroclor-1254	560	
11096-82-5	Aroclor-1260	110	~~J~~ J
37324-23-5	Aroclor-1262	310	U
11100-14-4	Aroclor-1268	310	U

MW 9/17/13

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-08-048

6

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17071

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17071-6

Sample wt/vol: 30.5 (g/mL) g Lab File ID: 0825AHBSOM12.D

% Moisture: 43 Decanted: (Y/N) Date Received: 06/19/2013

Extraction: (Type) SONC Date Extracted: 06/26/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 08/01/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 5.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	280	U
11104-28-2	Aroclor-1221	280	U
11141-16-5	Aroclor-1232	280	U
53469-21-9	Aroclor-1242	29	J
12672-29-6	Aroclor-1248	280	U
11097-69-1	Aroclor-1254	20	J
11096-82-5	Aroclor-1260	4.7	~~J~~ P J
37324-23-5	Aroclor-1262	280	U
11100-14-4	Aroclor-1268	280	U

MW 9/17/13

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-08-072

7

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17071

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17071-7

Sample wt/vol: 30.6 (g/mL) g Lab File ID: 0825AHBSOM13.D

% Moisture: 29 Decanted: (Y/N) Date Received: 06/19/2013

Extraction: (Type) SONC Date Extracted: 06/26/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 08/01/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 5.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	230	U
11104-28-2	Aroclor-1221	230	U
11141-16-5	Aroclor-1232	230	U
53469-21-9	Aroclor-1242	230	U
12672-29-6	Aroclor-1248	230	U
11097-69-1	Aroclor-1254	230	U
11096-82-5	Aroclor-1260	230	U
37324-23-5	Aroclor-1262	230	U
11100-14-4	Aroclor-1268	230	U

NW 9/17/13

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-13-012

8

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17071

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17071-8

Sample wt/vol: 30.5 (g/mL) g Lab File ID: 0825AHBSOM14.D

% Moisture: 52 Decanted: (Y/N) Date Received: 06/19/2013

Extraction: (Type) SONC Date Extracted: 06/26/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 08/01/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 5.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	340	U
11104-28-2	Aroclor-1221	340	U
11141-16-5	Aroclor-1232	340	U
53469-21-9	Aroclor-1242	96	J
12672-29-6	Aroclor-1248	340	U
11097-69-1	Aroclor-1254	87	J
11096-82-5	Aroclor-1260	25	~~J P~~ J
37324-23-5	Aroclor-1262	340	U
11100-14-4	Aroclor-1268	340	U

NW 9/17/13

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-13-024

9

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17071

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17071-9

Sample wt/vol: 30.9 (g/mL) g Lab File ID: 0825AHBSOM15.D

% Moisture: 47 Decanted: (Y/N) Date Received: 06/19/2013

Extraction: (Type) SONC Date Extracted: 06/26/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 08/01/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 5.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	300	U
11104-28-2	Aroclor-1221	300	U
11141-16-5	Aroclor-1232	300	U
53469-21-9	Aroclor-1242	1000	
12672-29-6	Aroclor-1248	300	U
11097-69-1	Aroclor-1254	650	
11096-82-5	Aroclor-1260	130	~~J P~~ J
37324-23-5	Aroclor-1262	300	U
11100-14-4	Aroclor-1268	300	U

MW 9/17/13

1H - FORM I ARO
AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-14-120

10

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17071

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17071-10

Sample wt/vol: 30.5 (g/mL) g Lab File ID: 0825AHBSOM16.D

% Moisture: 24 Decanted: (Y/N) Date Received: 06/19/2013

Extraction: (Type) SONC Date Extracted: 06/26/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 08/01/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 5.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	210	U
11104-28-2	Aroclor-1221	210	U
11141-16-5	Aroclor-1232	210	U
53469-21-9	Aroclor-1242	210	U
12672-29-6	Aroclor-1248	210	U
11097-69-1	Aroclor-1254	210	U
11096-82-5	Aroclor-1260	210	U
37324-23-5	Aroclor-1262	210	U
11100-14-4	Aroclor-1268	210	U

MW 9/17/13

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-25-024FD

11

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17071

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17071-11

Sample wt/vol: 30.6 (g/mL) g Lab File ID: 0825AHBSOM17.D

% Moisture: 29 Decanted: (Y/N) Date Received: 06/19/2013

Extraction: (Type) SONC Date Extracted: 06/26/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 08/01/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 5.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	230	U
11104-28-2	Aroclor-1221	230	U
11141-16-5	Aroclor-1232	230	U
53469-21-9	Aroclor-1242	230	U
12672-29-6	Aroclor-1248	13	~~J P~~ J
11097-69-1	Aroclor-1254	51	J
11096-82-5	Aroclor-1260	12	J
37324-23-5	Aroclor-1262	230	U
11100-14-4	Aroclor-1268	230	U

NW 9/17/13

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-13-072

12

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17071

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17071-12

Sample wt/vol: 30.1 (g/mL) g Lab File ID: 0825AHBSOM18.D

% Moisture: 42 Decanted: (Y/N) Date Received: 06/19/2013

Extraction: (Type) SONC Date Extracted: 06/26/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 08/02/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 5.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	280	U
11104-28-2	Aroclor-1221	280	U
11141-16-5	Aroclor-1232	280	U
53469-21-9	Aroclor-1242	280	U
12672-29-6	Aroclor-1248	220	J
11097-69-1	Aroclor-1254	250	J
11096-82-5	Aroclor-1260	71	J
37324-23-5	Aroclor-1262	280	U
11100-14-4	Aroclor-1268	280	U

MW 9/17/13

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-13-120

13

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17071

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17071-13

Sample wt/vol: 30.7 (g/mL) g Lab File ID: 0825AHDSOM09.D

% Moisture: 28 Decanted: (Y/N) Date Received: 06/19/2013

Extraction: (Type) SONC Date Extracted: 06/26/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 08/02/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 5.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	220	U
11104-28-2	Aroclor-1221	220	U
11141-16-5	Aroclor-1232	220	U
53469-21-9	Aroclor-1242	220	U
12672-29-6	Aroclor-1248	220	U
11097-69-1	Aroclor-1254	220	U
11096-82-5	Aroclor-1260	220	U
37324-23-5	Aroclor-1262	220	U
11100-14-4	Aroclor-1268	220	U

NW 9/17/13

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-14-096

14

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17071

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17071-14

Sample wt/vol: 30.4 (g/mL) g Lab File ID: 0825AHDSOM10.D

% Moisture: 28 Decanted: (Y/N) Date Received: 06/19/2013

Extraction: (Type) SONC Date Extracted: 06/26/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 08/02/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 5.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	230	U
11104-28-2	Aroclor-1221	230	U
11141-16-5	Aroclor-1232	230	U
53469-21-9	Aroclor-1242	230	U
12672-29-6	Aroclor-1248	230	U
11097-69-1	Aroclor-1254	13	J
11096-82-5	Aroclor-1260	230	U
37324-23-5	Aroclor-1262	230	U
11100-14-4	Aroclor-1268	230	U

NW 9/17/13

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-25-012

15

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17071

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17071-15

Sample wt/vol: 30.3 (g/mL) g Lab File ID: 0825AHDSOM11.D

% Moisture: 23 Decanted: (Y/N) Date Received: 06/19/2013

Extraction: (Type) SONC Date Extracted: 06/26/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 08/02/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 5.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	210	U
11104-28-2	Aroclor-1221	210	U
11141-16-5	Aroclor-1232	210	U
53469-21-9	Aroclor-1242	210	U
12672-29-6	Aroclor-1248	210	U
11097-69-1	Aroclor-1254	34	~~J~~ J
11096-82-5	Aroclor-1260	8.8	J
37324-23-5	Aroclor-1262	210	U
11100-14-4	Aroclor-1268	210	U

MW 9/17/13

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-25-024

16

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17071

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17071-16

Sample wt/vol: 30.1 (g/mL) g Lab File ID: 0825AHDSOM12.D

% Moisture: 29 Decanted: (Y/N) Date Received: 06/19/2013

Extraction: (Type) SONC Date Extracted: 06/26/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 08/02/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 5.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	230	U
11104-28-2	Aroclor-1221	230	U
11141-16-5	Aroclor-1232	230	U
53469-21-9	Aroclor-1242	230	U
12672-29-6	Aroclor-1248	120	~~J~~ J
11097-69-1	Aroclor-1254	120	J
11096-82-5	Aroclor-1260	24	J
37324-23-5	Aroclor-1262	230	U
11100-14-4	Aroclor-1268	230	U

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1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-08-024

17

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17071

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17071-17

Sample wt/vol: 30.8 (g/mL) g Lab File ID: 0825AHDSOM13.D

% Moisture: 44 Decanted: (Y/N) Date Received: 06/19/2013

Extraction: (Type) SONC Date Extracted: 06/26/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 08/02/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 5.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	290	U
11104-28-2	Aroclor-1221	290	U
11141-16-5	Aroclor-1232	290	U
53469-21-9	Aroclor-1242	68	J
12672-29-6	Aroclor-1248	290	U
11097-69-1	Aroclor-1254	63	J
11096-82-5	Aroclor-1260	14	J
37324-23-5	Aroclor-1262	290	U
11100-14-4	Aroclor-1268	290	U

NW 9/17/13

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-13-096

18

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17071

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17071-18

Sample wt/vol: 30.6 (g/mL) g Lab File ID: 0825AHDSOM14.D

% Moisture: 33 Decanted: (Y/N) Date Received: 06/19/2013

Extraction: (Type) SONC Date Extracted: 06/26/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 08/02/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 5.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	240	U
11104-28-2	Aroclor-1221	240	U
11141-16-5	Aroclor-1232	240	U
53469-21-9	Aroclor-1242	240	U
12672-29-6	Aroclor-1248	240	U
11097-69-1	Aroclor-1254	16	J
11096-82-5	Aroclor-1260	240	U
37324-23-5	Aroclor-1262	240	U
11100-14-4	Aroclor-1268	240	U

NW 9/17/13

1H - FORM I ARO
AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-025-048

19

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17071

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17071-19

Sample wt/vol: 30.4 (g/mL) g Lab File ID: 0825AHDSOM17.D

% Moisture: 26 Decanted: (Y/N) Date Received: 06/19/2013

Extraction: (Type) SONC Date Extracted: 06/26/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 08/02/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 5.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	220	U
11104-28-2	Aroclor-1221	220	U
11141-16-5	Aroclor-1232	220	U
53469-21-9	Aroclor-1242	220	U
12672-29-6	Aroclor-1248	220	U
11097-69-1	Aroclor-1254	220	U
11096-82-5	Aroclor-1260	220	U
37324-23-5	Aroclor-1262	220	U
11100-14-4	Aroclor-1268	220	U

MW 9/17/13

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-25-072

20

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17071

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17071-20

Sample wt/vol: 30.8 (g/mL) g Lab File ID: 0825AHDSOM18.D

% Moisture: 22 Decanted: (Y/N) Date Received: 06/19/2013

Extraction: (Type) SONC Date Extracted: 06/26/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 08/02/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 5.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	210	U
11104-28-2	Aroclor-1221	210	U
11141-16-5	Aroclor-1232	210	U
53469-21-9	Aroclor-1242	210	U
12672-29-6	Aroclor-1248	210	U
11097-69-1	Aroclor-1254	210	U
11096-82-5	Aroclor-1260	210	U
37324-23-5	Aroclor-1262	210	U
11100-14-4	Aroclor-1268	210	U

MW 9/17/13

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-08-012

23

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17071

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17120-1

Sample wt/vol: 29.7 (g/mL) g Lab File ID: 0825AHCSOM08.D

% Moisture: 53 Decanted: (Y/N) Date Received: 06/20/2013

Extraction: (Type) SONC Date Extracted: 06/27/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 08/02/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 5.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	360	U
11104-28-2	Aroclor-1221	360	U
11141-16-5	Aroclor-1232	360	U
53469-21-9	Aroclor-1242	41	J
12672-29-6	Aroclor-1248	360	U
11097-69-1	Aroclor-1254	39	~~J P~~ J
11096-82-5	Aroclor-1260	11	J
37324-23-5	Aroclor-1262	360	U
11100-14-4	Aroclor-1268	360	U

NW 9/17/13

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-14-012

24

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17071

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17120-2

Sample wt/vol: 29.6 (g/mL) g Lab File ID: 0825AHCSOM09.D

% Moisture: 50 Decanted: (Y/N) Date Received: 06/20/2013

Extraction: (Type) SONC Date Extracted: 06/27/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 08/02/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 5.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	340	U
11104-28-2	Aroclor-1221	340	U
11141-16-5	Aroclor-1232	340	U
53469-21-9	Aroclor-1242	73	J
12672-29-6	Aroclor-1248	340	U
11097-69-1	Aroclor-1254	75	J
11096-82-5	Aroclor-1260	18	J
37324-23-5	Aroclor-1262	340	U
11100-14-4	Aroclor-1268	340	U

NW 9/17/13

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-14-048

25

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17071

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17120-3

Sample wt/vol: 29.8 (g/mL) g Lab File ID: 0825AHCSOM10.D

% Moisture: 41 Decanted: (Y/N) Date Received: 06/20/2013

Extraction: (Type) SONC Date Extracted: 06/27/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 08/02/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 5.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	280	U
11104-28-2	Aroclor-1221	280	U
11141-16-5	Aroclor-1232	280	U
53469-21-9	Aroclor-1242	280	U
12672-29-6	Aroclor-1248	900	
11097-69-1	Aroclor-1254	450	
11096-82-5	Aroclor-1260	67	J
37324-23-5	Aroclor-1262	280	U
11100-14-4	Aroclor-1268	280	U

MW 9/17/13

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-14-072

26

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17071

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17120-4

Sample wt/vol: 29.4 (g/mL) g Lab File ID: 0825AHCSOM11.D

% Moisture: 33 Decanted: (Y/N) Date Received: 06/20/2013

Extraction: (Type) SONC Date Extracted: 06/27/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 08/02/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 5.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	250	U
11104-28-2	Aroclor-1221	250	U
11141-16-5	Aroclor-1232	250	U
53469-21-9	Aroclor-1242	250	U
12672-29-6	Aroclor-1248	130	J
11097-69-1	Aroclor-1254	170	J
11096-82-5	Aroclor-1260	48	J
37324-23-5	Aroclor-1262	250	U
11100-14-4	Aroclor-1268	250	U

NW 9/17/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-13-024FD

5

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678

Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 17071

Matrix: SED | Lab Sample Id: 200-17071-5

% Solids: 53.8 | Date Received: 06/19/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	9.4			P
7440-43-9	Cadmium	3.7			P
7440-47-3	Chromium	69.4		J ~~E~~	P
7440-50-8	Copper	53.1		J ~~E~~	P
7439-92-1	Lead	61.0			P
7440-02-0	Nickel	46.3		J ~~E~~	P
7440-66-6	Zinc	201		J ~~E~~	P

Color Before: GREY | Clarity Before: | Texture: FINE

Color After: TAN | Clarity After: CLOUDY | Artifacts:

Comments:

MW 9/17/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-13-024FD

5

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17071

Matrix: SED Lab Sample Id: 200-17071-5

% Solids: 53.8 Date Received: 06/19/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.29			CV

Color Before: GRAY Clarity Before: CLOUDY Texture: FINE

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

NW 9/17/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-08-048

6

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678
Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 17071
Matrix: SED | Lab Sample Id: 200-17071-6
% Solids: 57.5 | Date Received: 06/19/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	13.9			P
7440-43-9	Cadmium	1.5			P
7440-47-3	Chromium	30.5		J ~~E~~	P
7440-50-8	Copper	40.1		J ~~D~~	P
7439-92-1	Lead	87.2			P
7440-02-0	Nickel	34.4		J ~~E~~	P
7440-66-6	Zinc	220		J ~~E~~	P

Color Before: GREY | Clarity Before: | Texture: FINE
Color After: TAN | Clarity After: CLOUDY | Artifacts:
Comments:

MW 9/17/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-08-048

6

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17071

Matrix: SED Lab Sample Id: 200-17071-6

% Solids: 57.5 Date Received: 06/19/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.37			CV

Color Before: GRAY Clarity Before: CLOUDY Texture: FINE

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

MW 9/17/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-08-072

7

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678
Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 17071
Matrix: SED | Lab Sample Id: 200-17071-7
% Solids: 71.4 | Date Received: 06/19/2013

Concentration Units (**ug/L, ug,** or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	7.7			P
7440-43-9	Cadmium	0.48			P
7440-47-3	Chromium	12.9		J ~~B~~	P
7440-50-8	Copper	13.6		J ~~B~~	P
7439-92-1	Lead	33.4			P
7440-02-0	Nickel	17.3		J ~~B~~	P
7440-66-6	Zinc	76.9		J ~~B~~	P

Color Before: GREY | Clarity Before: | Texture: FINE
Color After: TAN | Clarity After: CLOUDY | Artifacts:
Comments:

NW 9/17/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-08-072

7

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17071

Matrix: SED Lab Sample Id: 200-17071-7

% Solids: 71.4 Date Received: 06/19/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.14			CV

Color Before: GRAY Clarity Before: CLOUDY Texture: FINE

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

MW 9/17/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-13-012

8

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678

Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 17071

Matrix: SED | Lab Sample Id: 200-17071-8

% Solids: 47.9 | Date Received: 06/19/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	7.2			P
7440-43-9	Cadmium	1.4			P
7440-47-3	Chromium	36.9		J ~~E~~	P
7440-50-8	Copper	33.7		J ~~E~~	P
7439-92-1	Lead	32.9			P
7440-02-0	Nickel	34.5		J ~~E~~	P
7440-66-6	Zinc	163		J ~~E~~	P

Color Before: GREY | Clarity Before: | Texture: FINE

Color After: TAN | Clarity After: CLOUDY | Artifacts:

Comments:

MW 9/17/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-13-012

8

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17071

Matrix: SED Lab Sample Id: 200-17071-8

% Solids: 47.9 Date Received: 06/19/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.16	J		CV

Color Before: GRAY Clarity Before: CLOUDY Texture: FINE

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

MW 9/17/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-13-024

9

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678
Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 17071
Matrix: SED | Lab Sample Id: 200-17071-9
% Solids: 53.1 | Date Received: 06/19/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	9.0			P
7440-43-9	Cadmium	3.4			P
7440-47-3	Chromium	65.4		J ~~B~~	P
7440-50-8	Copper	50.9		J ~~B~~	P
7439-92-1	Lead	57.8			P
7440-02-0	Nickel	45.7		J ~~B~~	P
7440-66-6	Zinc	193		J ~~B~~	P

Color Before: GREY | Clarity Before: | Texture: FINE
Color After: TAN | Clarity After: CLOUDY | Artifacts:
Comments:

NW 9/17/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-13-024

9

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17071

Matrix: SED Lab Sample Id: 200-17071-9

% Solids: 53.1 Date Received: 06/19/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.24			CV

Color Before: GRAY Clarity Before: CLOUDY Texture: FINE

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

MW 9/17/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-14-120

10

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678
Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 17071
Matrix: SED | Lab Sample Id: 200-17071-10
% Solids: 75.8 | Date Received: 06/19/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	3.5			P
7440-43-9	Cadmium	0.31	J		P
7440-47-3	Chromium	9.6		J E	P
7440-50-8	Copper	8.8		J E	P
7439-92-1	Lead	7.2			P
7440-02-0	Nickel	13.4		J E	P
7440-66-6	Zinc	32.8		J E	P

Color Before: GREY | Clarity Before: | Texture: MEDIUM
Color After: TAN | Clarity After: CLOUDY | Artifacts:
Comments:

MW 9/17/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-14-120

10

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17071

Matrix: SED Lab Sample Id: 200-17071-10

% Solids: 75.8 Date Received: 06/19/2013

Concentration Units (**ug/L, ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.12	U		CV

Color Before: GRAY Clarity Before: CLOUDY Texture: FINE

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

MW 9/17/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-25-024FD

11

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678
Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 17071
Matrix: SED | Lab Sample Id: 200-17071-11
% Solids: 71.3 | Date Received: 06/19/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	7.5			P
7440-43-9	Cadmium	1.5			P
7440-47-3	Chromium	23.8		J ~~B~~	P
7440-50-8	Copper	31.5		J ~~B~~	P
7439-92-1	Lead	42.9			P
7440-02-0	Nickel	20.4		J ~~B~~	P
7440-66-6	Zinc	121		J ~~E~~	P

Color Before: GREY | Clarity Before: | Texture: FINE
Color After: TAN | Clarity After: CLOUDY | Artifacts:
Comments:

MW 9/17/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-25-024FD

11

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678
Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17071
Matrix: SED Lab Sample Id: 200-17071-11
% Solids: 71.3 Date Received: 06/19/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.10	J		CV

Color Before: GRAY Clarity Before: CLOUDY Texture: FINE
Color After: COLORLESS Clarity After: CLEAR Artifacts:
Comments:

MW 9/17/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-13-072

12

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17071

Matrix: SED Lab Sample Id: 200-17071-12

% Solids: 58.4 Date Received: 06/19/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	12.1			P
7440-43-9	Cadmium	2.7			P
7440-47-3	Chromium	47.8		J ~~E~~	P
7440-50-8	Copper	44.3		J ~~E~~	P
7439-92-1	Lead	71.5			P
7440-02-0	Nickel	31.9		J ~~E~~	P
7440-66-6	Zinc	179		J ~~E~~	P

Color Before: GREY Clarity Before: Texture: FINE

Color After: TAN Clarity After: CLOUDY Artifacts:

Comments:

MW 9/17/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-13-072

12

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678
Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17071
Matrix: SED Lab Sample Id: 200-17071-12
% Solids: 58.4 Date Received: 06/19/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.31			CV

Color Before: GRAY Clarity Before: CLOUDY Texture: FINE
Color After: COLORLESS Clarity After: CLEAR Artifacts:
Comments:

MW 9/17/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-13-120

13

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17071

Matrix: SED Lab Sample Id: 200-17071-13

% Solids: 71.8 Date Received: 06/19/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	5.7			P
7440-43-9	Cadmium	0.37	J		P
7440-47-3	Chromium	13.1		J E	P
7440-50-8	Copper	15.4		J E	P
7439-92-1	Lead	29.1			P
7440-02-0	Nickel	16.7		J E	P
7440-66-6	Zinc	60.2		J E	P

Color Before: GREY Clarity Before: Texture: FINE

Color After: TAN Clarity After: CLOUDY Artifacts:

Comments:

MW 9/17/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-13-120

13

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17071

Matrix: SED Lab Sample Id: 200-17071-13

% Solids: 71.8 Date Received: 06/19/2013

Concentration Units (**ug/L, ug,** or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.20			CV

Color Before: GRAY Clarity Before: CLOUDY Texture: FINE

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

MW 9/25/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-14-096

14

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17071

Matrix: SED Lab Sample Id: 200-17071-14

% Solids: 71.8 Date Received: 06/19/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	3.5			P
7440-43-9	Cadmium	0.39	J		P
7440-47-3	Chromium	12.1		J E	P
7440-50-8	Copper	12.4		J E	P
7439-92-1	Lead	11.6			P
7440-02-0	Nickel	17.0		J E	P
7440-66-6	Zinc	41.7		J E	P

Color Before: GREY Clarity Before: Texture: FINE

Color After: TAN Clarity After: CLOUDY Artifacts:

Comments:

MW 9/17/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-14-096

14

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678
Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17071
Matrix: SED Lab Sample Id: 200-17071-14
% Solids: 71.8 Date Received: 06/19/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.14	U		CV

Color Before: GRAY Clarity Before: CLOUDY Texture: FINE
Color After: COLORLESS Clarity After: CLEAR Artifacts:
Comments:

MW 9/17/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-25-012

15

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678
Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 17071
Matrix: SED | Lab Sample Id: 200-17071-15
% Solids: 77.1 | Date Received: 06/19/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	6.9			P
7440-43-9	Cadmium	0.79			P
7440-47-3	Chromium	18.2		J ~~B~~	P
7440-50-8	Copper	21.0		J ~~B~~	P
7439-92-1	Lead	21.8			P
7440-02-0	Nickel	19.0		J ~~B~~	P
7440-66-6	Zinc	73.7		J ~~B~~	P

Color Before: GREY | Clarity Before: | Texture: FINE
Color After: TAN | Clarity After: CLOUDY | Artifacts:
Comments:

MW 9/17/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-25-012

15

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17071

Matrix: SED Lab Sample Id: 200-17071-15

% Solids: 77.1 Date Received: 06/19/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.054	J		CV

Color Before: GRAY Clarity Before: CLOUDY Texture: FINE

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

MW 9/17/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-25-024

16

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678
Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17071
Matrix: SED Lab Sample Id: 200-17071-16
% Solids: 71.2 Date Received: 06/19/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	6.9			P
7440-43-9	Cadmium	1.3			P
7440-47-3	Chromium	20.2		J E	P
7440-50-8	Copper	22.3		J E	P
7439-92-1	Lead	39.5			P
7440-02-0	Nickel	18.4		J E	P
7440-66-6	Zinc	109		J E	P

Color Before: GREY Clarity Before: Texture: FINE
Color After: TAN Clarity After: CLOUDY Artifacts:
Comments:

NW 9/17/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-25-024

16

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17071

Matrix: SED Lab Sample Id: 200-17071-16

% Solids: 71.2 Date Received: 06/19/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.11	J		CV

Color Before: GRAY Clarity Before: CLOUDY Texture: FINE

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

NW 9/17/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-08-024

17

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678

Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 17071

Matrix: SED | Lab Sample Id: 200-17071-17

% Solids: 56.2 | Date Received: 06/19/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	7.6			P
7440-43-9	Cadmium	1.3			P
7440-47-3	Chromium	30.4		J E	P
7440-50-8	Copper	36.8		J E	P
7439-92-1	Lead	32.5			P
7440-02-0	Nickel	32.8		J E	P
7440-66-6	Zinc	168		J E	P

Color Before: GREY | Clarity Before: | Texture: FINE

Color After: TAN | Clarity After: CLOUDY | Artifacts:

Comments:

NW 9/17/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-08-024

17

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17071

Matrix: SED Lab Sample Id: 200-17071-17

% Solids: 56.2 Date Received: 06/19/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.086	J		CV

Color Before: GRAY Clarity Before: CLOUDY Texture: FINE

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

MW 9/17/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-13-096

19

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678
Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 17071
Matrix: SED | Lab Sample Id: 200-17071-18
% Solids: 67.4 | Date Received: 06/19/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	9.7			P
7440-43-9	Cadmium	0.53			P
7440-47-3	Chromium	18.4		J ~~E~~	P
7440-50-8	Copper	20.2		J ~~E~~	P
7439-92-1	Lead	40.8			P
7440-02-0	Nickel	22.1		J ~~E~~	P
7440-66-6	Zinc	99.5		J ~~E~~	P

Color Before: GREY | Clarity Before: | Texture: FINE
Color After: TAN | Clarity After: CLOUDY | Artifacts:
Comments:

MW 9/17/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-13-096

18

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17071

Matrix: SED Lab Sample Id: 200-17071-18

% Solids: 67.4 Date Received: 06/19/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.18			CV

Color Before: GRAY Clarity Before: CLOUDY Texture: FINE

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

MW 9/17/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-25-048

19

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678
Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 17071
Matrix: SED | Lab Sample Id: 200-17071-19
% Solids: 74.4 | Date Received: 06/19/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	5.0			P
7440-43-9	Cadmium	0.38	J		P
7440-47-3	Chromium	11.6		J ~~E~~	P
7440-50-8	Copper	13.4		J ~~E~~	P
7439-92-1	Lead	14.1			P
7440-02-0	Nickel	15.7		J ~~E~~	P
7440-66-6	Zinc	51.7		J ~~E~~	P

Color Before: GREY | Clarity Before: | Texture: FINE
Color After: TAN | Clarity After: CLOUDY | Artifacts:
Comments:

MW 9/17/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-25-048

19

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17071

Matrix: SED Lab Sample Id: 200-17071-19

% Solids: 74.4 Date Received: 06/19/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.042	J		CV

Color Before: GRAY Clarity Before: CLOUDY Texture: FINE

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

MW 9/17/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-25-072

20

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17071

Matrix: SED Lab Sample Id: 200-17071-20

% Solids: 78.1 Date Received: 06/19/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	3.7			P
7440-43-9	Cadmium	0.29	J		P
7440-47-3	Chromium	8.1		J ~~Z~~	P
7440-50-8	Copper	7.8		J ~~Z~~	P
7439-92-1	Lead	6.7			P
7440-02-0	Nickel	11.9		J ~~Z~~	P
7440-66-6	Zinc	30.4		J ~~Z~~	P

Color Before: GREY Clarity Before: Texture: FINE

Color After: TAN Clarity After: CLOUDY Artifacts:

Comments:

MW 9/17/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-25-072

20

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678
Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 17071
Matrix: SED | Lab Sample Id: 200-17071-20
% Solids: 78.1 | Date Received: 06/19/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.12	U		CV

Color Before: GRAY | Clarity Before: CLOUDY | Texture: FINE
Color After: COLORLESS | Clarity After: CLEAR | Artifacts:
Comments:

MW 9/17/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-08-012

23

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17071

Matrix: SED Lab Sample Id: 200-17120-1

% Solids: 46.7 Date Received: 06/20/2013

Concentration Units (**ug/L, ug,** or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	7.3			P
7440-43-9	Cadmium	0.97			P
7440-47-3	Chromium	28.2		J ~~E~~	P
7440-50-8	Copper	31.6		J ~~E~~	P
7439-92-1	Lead	26.0			P
7440-02-0	Nickel	32.3		J ~~E~~	P
7440-66-6	Zinc	131		J ~~E~~	P

Color Before: GRAY Clarity Before: Texture: FINE

Color After: LIGHT YELLOW Clarity After: CLOUDY Artifacts:

Comments:

NW 9/17/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-08-012

23

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17071

Matrix: SED Lab Sample Id: 200-17120-1

% Solids: 46.7 Date Received: 06/20/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.21	U		CV

Color Before: GRAY Clarity Before: CLOUDY Texture: FINE

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

NW 9/17/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-14-012

24

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678
Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17071
Matrix: SED Lab Sample Id: 200-17120-2
% Solids: 49.9 Date Received: 06/20/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	7.9			P
7440-43-9	Cadmium	1.3			P
7440-47-3	Chromium	33.6		J E	P
7440-50-8	Copper	34.4		J E	P
7439-92-1	Lead	36.3			P
7440-02-0	Nickel	35.2		J E	P
7440-66-6	Zinc	223		J E	P

Color Before: GRAY Clarity Before: Texture: FINE
Color After: LIGHT YELLOW Clarity After: CLOUDY Artifacts:
Comments:

MW 9/17/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-14-012

24

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17071

Matrix: SED Lab Sample Id: 200-17120-2

% Solids: 49.9 Date Received: 06/20/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.23			CV

Color Before: GRAY Clarity Before: CLOUDY Texture: FINE

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

MW 9/17/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-14-048

25

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17071

Matrix: SED Lab Sample Id: 200-17120-3

% Solids: 58.7 Date Received: 06/20/2013

Concentration Units (**ug/L, ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	10.5			P
7440-43-9	Cadmium	2.4			P
7440-47-3	Chromium	48.1		J E	P
7440-50-8	Copper	45.0		J E	P
7439-92-1	Lead	63.8			P
7440-02-0	Nickel	34.1		J E	P
7440-66-6	Zinc	159		J E	P

Color Before: GRAY Clarity Before: Texture: FINE

Color After: LIGHT YELLOW Clarity After: CLOUDY Artifacts:

Comments:

MW 9/17/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-14-048

25

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17071

Matrix: SED Lab Sample Id: 200-17120-3

% Solids: 58.7 Date Received: 06/20/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.24			CV

Color Before: GRAY Clarity Before: CLOUDY Texture: FINE

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

MW 9/17/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-14-072
26

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678
Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17071
Matrix: SED Lab Sample Id: 200-17120-4
% Solids: 66.9 Date Received: 06/20/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	8.9			P
7440-43-9	Cadmium	2.2			P
7440-47-3	Chromium	34.5		J ~~E~~	P
7440-50-8	Copper	42.6		J ~~E~~	P
7439-92-1	Lead	62.6			P
7440-02-0	Nickel	24.9		J ~~E~~	P
7440-66-6	Zinc	146		J ~~E~~	P

Color Before: GRAY Clarity Before: Texture: FINE
Color After: LIGHT YELLOW Clarity After: CLOUDY Artifacts:
Comments:

MW 9/17/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-14-072

26

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17071

Matrix: SED Lab Sample Id: 200-17120-4

% Solids: 66.9 Date Received: 06/20/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.17			CV

Color Before: GRAY Clarity Before: CLOUDY Texture: FINE

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

MW 9/17/13

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - SEM/AVS

8

Client Sample ID: LMR13-13-012 Lab Sample ID: 200-17071-8

Lab Name: TestAmerica Burlington Job No.: 200-17071-1

SDG ID.: 17071

Matrix: Sediment Date Sampled: 06/18/2013 07:40

Reporting Basis: DRY Date Received: 06/19/2013 10:30

% Solids: 47.9

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-43-9	Cadmium SEM	1.0	2.5	0.39	mg/Kg	J		10	6010C
7440-43-9	Cadmium SEM	0.0092	0.022	0.0035	umol/g	J		10	6010C
7440-50-8	Copper SEM	8.8	12.7	1.1	mg/Kg	J		10	6010C
7440-50-8	Copper SEM	0.14	0.20	0.017	umol/g	J		10	6010C
7439-92-1	Lead SEM	22.2	5.1	2.3	mg/Kg			10	6010C
7439-92-1	Lead SEM	0.11	0.025	0.011	umol/g			10	6010C
7440-02-0	Nickel SEM	11.5	20.5	1.5	mg/Kg	J		10	6010C
7440-02-0	Nickel SEM	0.20	0.35	0.025	umol/g	J		10	6010C
7440-66-6	Zinc SEM	91.7	10.3	2.9	mg/Kg			10	6010C
7440-66-6	Zinc SEM	1.4	0.16	0.044	umol/g			10	6010C
7439-97-6	Mercury SEM	0.010	0.010	0.0034	mg/Kg	U		1	7470A
7439-97-6	Mercury SEM	0.000051	0.000051	0.000017	umol/g	U		1	7470A

MW 9/17/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY - SEM/AVS

8

Client Sample ID: LMR13-13-012 | Lab Sample ID: 200-17071-8

Lab Name: TestAmerica Burlington | Job No.: 200-17071-1

SDG ID.: 17071

Matrix: Sediment | Date Sampled: 06/18/2013 07:40

Reporting Basis: DRY | Date Received: 06/19/2013 10:30

% Solids: 47.9

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
18496-25-8	Acid Volatile Sulfides (AVS)	525	32.8		mg/Kg			1	AVS
18496-25-8	Acid Volatile Sulfides (AVS)	16.4	1.0		umol/g			1	AVS

NW 9/17/13

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - SEM/AVS

8

Client Sample ID: LMR13-13-012 Lab Sample ID: 200-17071-8

Lab Name: TestAmerica Burlington Job No.: 200-17071-1

SDG ID.: 17071

Matrix: Sediment Date Sampled: 06/18/2013 07:40

Reporting Basis: WET Date Received: 06/19/2013 10:30

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	SEM/AVS Ratio	0.113	0.00100	0.00100	NONE			1	SEM

MW 9/17/13

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - SEM/AVS

15

Client Sample ID: LMR13-25-012 Lab Sample ID: 200-17071-15

Lab Name: TestAmerica Burlington Job No.: 200-17071-1

SDG ID.: 17071

Matrix: Sediment Date Sampled: 06/18/2013 09:10

Reporting Basis: DRY Date Received: 06/19/2013 10:30

% Solids: 77.1

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-43-9	Cadmium SEM	0.37	1.5	0.24	mg/Kg	J		10	6010C
7440-43-9	Cadmium SEM	0.0033	0.013	0.0021	umol/g	J		10	6010C
7440-50-8	Copper SEM	3.6	7.8	0.68	mg/Kg	J		10	6010C
7440-50-8	Copper SEM	0.056	0.12	0.011	umol/g	J		10	6010C
7439-92-1	Lead SEM	8.4	3.1	1.4	mg/Kg			10	6010C
7439-92-1	Lead SEM	0.041	0.015	0.0066	umol/g			10	6010C
7440-02-0	Nickel SEM	2.9	12.5	0.90	mg/Kg	J		10	6010C
7440-02-0	Nickel SEM	0.049	0.21	0.015	umol/g	J		10	6010C
7440-66-6	Zinc SEM	18.5	6.3	1.8	mg/Kg			10	6010C
7440-66-6	Zinc SEM	0.28	0.096	0.027	umol/g			10	6010C
7439-97-6	Mercury SEM	0.0063	0.0063	0.0021	mg/Kg	U		1	7470A
7439-97-6	Mercury SEM	0.000031	0.000031	0.000010	umol/g	U		1	7470A

MW 9/17/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY - SEM/AVS

15

Client Sample ID: LMR13-25-012 Lab Sample ID: 200-17071-15

Lab Name: TestAmerica Burlington Job No.: 200-17071-1

SDG ID.: 17071

Matrix: Sediment Date Sampled: 06/18/2013 09:10

Reporting Basis: DRY Date Received: 06/19/2013 10:30

% Solids: 77.1

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
18496-25-8	Acid Volatile Sulfides (AVS)	650	20.0		mg/Kg			1	AVS
18496-25-8	Acid Volatile Sulfides (AVS)	20.3	0.62		umol/g			1	AVS

NW 9/17/13

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - SEM/AVS

15

Client Sample ID: LMR13-25-012 Lab Sample ID: 200-17071-15

Lab Name: TestAmerica Burlington Job No.: 200-17071-1

SDG ID.: 17071

Matrix: Sediment Date Sampled: 06/18/2013 09:10

Reporting Basis: WET Date Received: 06/19/2013 10:30

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	SEM/AVS Ratio	0.0213	0.00100	0.00100	NONE			1	SEM

MW 9/17/13

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - SEM/AVS

21

Client Sample ID: LMR13-25-012FD
Lab Sample ID: 200-17071-21
Lab Name: TestAmerica Burlington
Job No.: 200-17071-1
SDG ID.: 17071
Matrix: Sediment
Date Sampled: 06/18/2013 09:10
Reporting Basis: DRY
Date Received: 06/19/2013 10:30
% Solids: 73.0

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-43-9	Cadmium SEM	0.49	1.6	0.25	mg/Kg	J		10	6010C
7440-43-9	Cadmium SEM	0.0044	0.014	0.0022	umol/g	J		10	6010C
7440-50-8	Copper SEM	4.6	8.1	0.71	mg/Kg	J		10	6010C
7440-50-8	Copper SEM	0.072	0.13	0.011	umol/g	J		10	6010C
7439-92-1	Lead SEM	10.2	3.3	1.4	mg/Kg			10	6010C
7439-92-1	Lead SEM	0.049	0.016	0.0069	umol/g			10	6010C
7440-02-0	Nickel SEM	3.3	13.1	0.94	mg/Kg	J		10	6010C
7440-02-0	Nickel SEM	0.055	0.22	0.016	umol/g	J		10	6010C
7440-66-6	Zinc SEM	21.6	6.5	1.8	mg/Kg			10	6010C
7440-66-6	Zinc SEM	0.33	0.10	0.028	umol/g			10	6010C
7439-97-6	Mercury SEM	0.0052	0.0065	0.0022	mg/Kg	J		1	7470A
7439-97-6	Mercury SEM	0.000026 J	0.000033	0.000011	umol/g	J		1	7470A

MW 9/17/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY - SEM/AVS

21

Client Sample ID: LMR13-25-012FD
Lab Sample ID: 200-17071-21
Lab Name: TestAmerica Burlington
Job No.: 200-17071-1
SDG ID.: 17071
Matrix: Sediment
Date Sampled: 06/18/2013 09:10
Reporting Basis: DRY
Date Received: 06/19/2013 10:30
% Solids: 73.0

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
18496-25-8	Acid Volatile Sulfides (AVS)	36.6	20.9		mg/Kg			1	AVS
18496-25-8	Acid Volatile Sulfides (AVS)	1.1	0.65		umol/g			1	AVS

NW 9/17/13

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - SEM/AVS

21

Client Sample ID: LMR13-25-012FD
Lab Sample ID: 200-17071-21
Lab Name: TestAmerica Burlington
Job No.: 200-17071-1
SDG ID.: 17071
Matrix: Sediment
Date Sampled: 06/18/2013 09:10
Reporting Basis: WET
Date Received: 06/19/2013 10:30

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	SEM/AVS Ratio	0.448 J	0.00100	0.00100	NONE			1	SEM

NW 9/17/13

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - SEM/AVS

23

Client Sample ID: LMR13-08-012
Lab Sample ID: 200-17120-1
Lab Name: TestAmerica Burlington
Job No.: 200-17071-1
SDG ID.: 17071
Matrix: Sediment
Date Sampled: 06/17/2013 17:15
Reporting Basis: DRY
Date Received: 06/20/2013 10:30
% Solids: 46.7

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-43-9	Cadmium SEM	0.64	2.5	0.40	mg/Kg	J		10	6010C
7440-43-9	Cadmium SEM	0.0057	0.023	0.0036	umol/g	J		10	6010C
7440-50-8	Copper SEM	8.4	13.1	1.1	mg/Kg	J		10	6010C
7440-50-8	Copper SEM	0.13	0.21	0.018	umol/g	J		10	6010C
7439-92-1	Lead SEM	13.0	5.3	2.3	mg/Kg			10	6010C
7439-92-1	Lead SEM	0.063	0.025	0.011	umol/g			10	6010C
7440-02-0	Nickel SEM	6.5	21.1	1.5	mg/Kg	J		10	6010C
7440-02-0	Nickel SEM	0.11	0.36	0.026	umol/g	J		10	6010C
7440-66-6	Zinc SEM	38.9	10.5	3.0	mg/Kg			10	6010C
7440-66-6	Zinc SEM	0.60	0.16	0.045	umol/g			10	6010C
7439-97-6	Mercury SEM	0.011	0.011	0.0035	mg/Kg	U		1	7470A
7439-97-6	Mercury SEM	0.000053	0.000053	0.000017	umol/g	U		1	7470A

NW 9/17/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY - SEM/AVS

23

Client Sample ID: LMR13-08-012 Lab Sample ID: 200-17120-1

Lab Name: TestAmerica Burlington Job No.: 200-17071-1

SDG ID.: 17071

Matrix: Sediment Date Sampled: 06/17/2013 17:15

Reporting Basis: DRY Date Received: 06/20/2013 10:30

% Solids: 46.7

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
18496-25-8	Acid Volatile Sulfides (AVS)	337	33.7		mg/Kg			1	AVS
18496-25-8	Acid Volatile Sulfides (AVS)	10.5	1.1		umol/g			1	AVS

NW 9/17/13

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - SEM/AVS

23

Client Sample ID: LMR13-08-012 Lab Sample ID: 200-17120-1

Lab Name: TestAmerica Burlington Job No.: 200-17071-1

SDG ID.: 17071

Matrix: Sediment Date Sampled: 06/17/2013 17:15

Reporting Basis: WET Date Received: 06/20/2013 10:30

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	SEM/AVS Ratio	0.0861	0.00100	0.00100	NONE			1	SEM

NW 9/17/13

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - SEM/AVS

24

Client Sample ID: LMR13-14-012
Lab Sample ID: 200-17120-2
Lab Name: TestAmerica Burlington
Job No.: 200-17071-1
SDG ID.: 17071
Matrix: Sediment
Date Sampled: 06/17/2013 18:05
Reporting Basis: DRY
Date Received: 06/20/2013 10:30
% Solids: 49.9

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-43-9	Cadmium SEM	1.1	2.4	0.37	mg/Kg	J		10	6010C
7440-43-9	Cadmium SEM	0.0094	0.021	0.0033	umol/g	J		10	6010C
7440-50-8	Copper SEM	8.0	12.2	1.1	mg/Kg	J		10	6010C
7440-50-8	Copper SEM	0.13	0.19	0.017	umol/g	J		10	6010C
7439-92-1	Lead SEM	19.4	4.9	2.2	mg/Kg			10	6010C
7439-92-1	Lead SEM	0.094	0.024	0.010	umol/g			10	6010C
7440-02-0	Nickel SEM	8.3	19.7	1.4	mg/Kg	J		10	6010C
7440-02-0	Nickel SEM	0.14	0.33	0.024	umol/g	J		10	6010C
7440-66-6	Zinc SEM	108	9.8	2.8	mg/Kg			10	6010C
7440-66-6	Zinc SEM	1.6	0.15	0.042	umol/g			10	6010C
7439-97-6	Mercury SEM	0.0098	0.0098	0.0032	mg/Kg	U		1	7470A
7439-97-6	Mercury SEM	0.000049	0.000049	0.000016	umol/g	U		1	7470A

MW 9/17/13

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - SEM/AVS

24

Client Sample ID: LMR13-14-012 Lab Sample ID: 200-17120-2

Lab Name: TestAmerica Burlington Job No.: 200-17071-1

SDG ID.: 17071

Matrix: Sediment Date Sampled: 06/17/2013 18:05

Reporting Basis: WET Date Received: 06/20/2013 10:30

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	SEM/AVS Ratio	0.206	0.00100	0.00100	NONE			1	SEM

NW 9/17/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY - SEM/AVS

24

Client Sample ID: LMR13-14-012 Lab Sample ID: 200-17120-2

Lab Name: TestAmerica Burlington Job No.: 200-17071-1

SDG ID.: 17071

Matrix: Sediment Date Sampled: 06/17/2013 18:05

Reporting Basis: DRY Date Received: 06/20/2013 10:30

% Solids: 49.9

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
18496-25-8	Acid Volatile Sulfides (AVS)	314	31.4		mg/Kg			1	AVS
18496-25-8	Acid Volatile Sulfides (AVS)	9.8	0.98		umol/g			1	AVS

NW 9/17/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: LMR13-13-024FD
Lab Sample ID: 200-17071-5
5
Lab Name: TestAmerica Burlington
Job No.: 200-17071-1
SDG ID.: 17071
Matrix: Sediment
Date Sampled: 06/18/2013 07:50
Reporting Basis: WET
Date Received: 06/19/2013 10:30
% Solids: 53.8

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	28600	1000		mg/Kg			1	Lloyd Kahn

NW 9/17/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: LMR13-08-048
Lab Sample ID: 200-17071-6 6
Lab Name: TestAmerica Burlington
Job No.: 200-17071-1
SDG ID.: 17071
Matrix: Sediment
Date Sampled: 06/17/2013 17:35
Reporting Basis: WET
Date Received: 06/19/2013 10:30
% Solids: 57.5

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	24000	J 1000		mg/Kg		J	1	Lloyd Kahn

MW 9/17/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

7

Client Sample ID: LMR13-08-072 | Lab Sample ID: 200-17071-7

Lab Name: TestAmerica Burlington | Job No.: 200-17071-1

SDG ID.: 17071

Matrix: Sediment | Date Sampled: 06/17/2013 17:45

Reporting Basis: WET | Date Received: 06/19/2013 10:30

% Solids: 71.4

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	12800	J 1000		mg/Kg		H	1	Lloyd Kahn

MW 9/17/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

8

Client Sample ID: LMR13-13-012 | Lab Sample ID: 200-17071-8

Lab Name: TestAmerica Burlington | Job No.: 200-17071-1

SDG ID.: 17071

Matrix: Sediment | Date Sampled: 06/18/2013 07:40

Reporting Basis: WET | Date Received: 06/19/2013 10:30

% Solids: 47.9

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	25200	1000		mg/Kg			1	Lloyd Kahn

MW 9/17/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

9

Client Sample ID: LMR13-13-024 Lab Sample ID: 200-17071-9

Lab Name: TestAmerica Burlington Job No.: 200-17071-1

SDG ID.: 17071

Matrix: Sediment Date Sampled: 06/18/2013 07:50

Reporting Basis: WET Date Received: 06/19/2013 10:30

% Solids: 53.1

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	29200	1000		mg/Kg			1	Lloyd Kahn

MW 9/17/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: LMR13-14-120 | Lab Sample ID: 200-17071-10 | 10

Lab Name: TestAmerica Burlington | Job No.: 200-17071-1

SDG ID.: 17071

Matrix: Sediment | Date Sampled: 06/17/2013 18:55

Reporting Basis: WET | Date Received: 06/19/2013 10:30

% Solids: 75.8

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	16800	J 1000		mg/Kg		H	1	Lloyd Kahn

NW 9/17/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

11

Client Sample ID: LMR13-25-024FD
Lab Sample ID: 200-17071-11
Lab Name: TestAmerica Burlington
Job No.: 200-17071-1
SDG ID.: 17071
Matrix: Sediment
Date Sampled: 06/18/2013 09:20
Reporting Basis: WET
Date Received: 06/19/2013 10:30
% Solids: 71.3

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	21300	1000		mg/Kg			1	Lloyd Kahn

MW 9/17/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

12

Client Sample ID: LMR13-13-072 Lab Sample ID: 200-17071-12

Lab Name: TestAmerica Burlington Job No.: 200-17071-1

SDG ID.: 17071

Matrix: Sediment Date Sampled: 06/18/2013 08:10

Reporting Basis: WET Date Received: 06/19/2013 10:30

% Solids: 58.4

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	25200	1000		mg/Kg			1	Lloyd Kahn

MW 9/17/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

13

Client Sample ID: LMR13-13-120 Lab Sample ID: 200-17071-13

Lab Name: TestAmerica Burlington Job No.: 200-17071-1

SDG ID.: 17071

Matrix: Sediment Date Sampled: 06/18/2013 08:30

Reporting Basis: WET Date Received: 06/19/2013 10:30

% Solids: 71.8

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	17200	1000		mg/Kg			1	Lloyd Kahn

NW 9/17/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

14

Client Sample ID: LMR13-14-096
Lab Sample ID: 200-17071-14
Lab Name: TestAmerica Burlington
Job No.: 200-17071-1
SDG ID.: 17071
Matrix: Sediment
Date Sampled: 06/17/2013 18:45
Reporting Basis: WET
Date Received: 06/19/2013 10:30
% Solids: 71.8

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	16200	J 1000		mg/Kg		✓	1	Lloyd Kahn

MW 9/17/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

15

Client Sample ID: LMR13-25-012
Lab Sample ID: 200-17071-15
Lab Name: TestAmerica Burlington
Job No.: 200-17071-1
SDG ID.: 17071
Matrix: Sediment
Date Sampled: 06/18/2013 09:10
Reporting Basis: WET
Date Received: 06/19/2013 10:30
% Solids: 77.1

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	25400	1000		mg/Kg			1	Lloyd Kahn

MW 9/17/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

16

Client Sample ID: LMR13-25-024
Lab Sample ID: 200-17071-16
Lab Name: TestAmerica Burlington
Job No.: 200-17071-1
SDG ID.: 17071
Matrix: Sediment
Date Sampled: 06/18/2013 09:20
Reporting Basis: WET
Date Received: 06/19/2013 10:30
% Solids: 71.2

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	24300	1000		mg/Kg			1	Lloyd Kahn

MW 9/17/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

17

Client Sample ID: LMR13-08-024 | Lab Sample ID: 200-17071-17

Lab Name: TestAmerica Burlington | Job No.: 200-17071-1

SDG ID.: 17071

Matrix: Sediment | Date Sampled: 06/17/2013 17:25

Reporting Basis: WET | Date Received: 06/19/2013 10:30

% Solids: 56.2

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	24200	J 1000		mg/Kg		H	1	Lloyd Kahn

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1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: LMR13-13-096 Lab Sample ID: 200-17071-18 18

Lab Name: TestAmerica Burlington Job No.: 200-17071-1

SDG ID.: 17071

Matrix: Sediment Date Sampled: 06/18/2013 08:20

Reporting Basis: WET Date Received: 06/19/2013 10:30

% Solids: 67.4

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	17600	1000		mg/Kg			1	Lloyd Kahn

MW 9/17/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

19

Client Sample ID: LMR13-25-048
Lab Sample ID: 200-17071-19
Lab Name: TestAmerica Burlington
Job No.: 200-17071-1
SDG ID.: 17071
Matrix: Sediment
Date Sampled: 06/18/2013 09:30
Reporting Basis: WET
Date Received: 06/19/2013 10:30
% Solids: 74.4

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	19100	1000		mg/Kg			1	Lloyd Kahn

MW 9/17/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: LMR13-25-072 Lab Sample ID: 200-17071-20 20

Lab Name: TestAmerica Burlington Job No.: 200-17071-1

SDG ID.: 17071

Matrix: Sediment Date Sampled: 06/18/2013 09:40

Reporting Basis: WET Date Received: 06/19/2013 10:30

% Solids: 78.1

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	18000	1000		mg/Kg			1	Lloyd Kahn

NW 9/17/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

23

Client Sample ID: LMR13-08-012 Lab Sample ID: 200-17120-1

Lab Name: TestAmerica Burlington Job No.: 200-17071-1

SDG ID.: 17071

Matrix: Sediment Date Sampled: 06/17/2013 17:15

Reporting Basis: WET Date Received: 06/20/2013 10:30

% Solids: 46.7

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	23400	J 1000		mg/Kg		H	1	Lloyd Kahn

NW 9/17/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

24

Client Sample ID: LMR13-14-012 | Lab Sample ID: 200-17120-2

Lab Name: TestAmerica Burlington | Job No.: 200-17071-1

SDG ID.: 17071

Matrix: Sediment | Date Sampled: 06/17/2013 18:05

Reporting Basis: WET | Date Received: 06/20/2013 10:30

% Solids: 49.9

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	23000	J 1000		mg/Kg		✓	1	Lloyd Kahn

NW 9/17/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

25

Client Sample ID: LMR13-14-048
Lab Sample ID: 200-17120-3
Lab Name: TestAmerica Burlington
Job No.: 200-17071-1
SDG ID.: 17071
Matrix: Sediment
Date Sampled: 06/17/2013 18:25
Reporting Basis: WET
Date Received: 06/20/2013 10:30
% Solids: 58.7

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	29900	J 1000		mg/Kg		H	1	Lloyd Kahn

MW 9/17/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

26

Client Sample ID: LMR13-14-072
Lab Sample ID: 200-17120-4
Lab Name: TestAmerica Burlington
Job No.: 200-17071-1
SDG ID.: 17071
Matrix: Sediment
Date Sampled: 06/17/2013 18:35
Reporting Basis: WET
Date Received: 06/20/2013 10:30
% Solids: 66.9

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	22500	J 1000		mg/Kg		H	1	Lloyd Kahn

MW 9/17/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: LMR13-08-012
Lab Sample ID: 200-17071-1
Lab Name: TestAmerica Canton
Job No.: 200-17071-1
SDG ID.: 17071
Matrix: Sediment
Date Sampled: 06/17/2013 17:15
Reporting Basis: DRY
Date Received: 06/19/2013 10:30
% Solids: 46.8

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	1050	419	185	mg/Kg		B	1	9071B

MW 9/17/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

2

Client Sample ID: LMR13-14-012
Lab Sample ID: 200-17071-2
Lab Name: TestAmerica Canton
Job No.: 200-17071-1
SDG ID.: 17071
Matrix: Sediment
Date Sampled: 06/17/2013 18:05
Reporting Basis: DRY
Date Received: 06/19/2013 10:30
% Solids: 55.3

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	1470	351	155	mg/Kg		B	1	9071B

NW 9/17/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

3

Client Sample ID: LMR13-14-048
Lab Sample ID: 200-17071-3
Lab Name: TestAmerica Canton
Job No.: 200-17071-1
SDG ID.: 17071
Matrix: Sediment
Date Sampled: 06/17/2013 18:25
Reporting Basis: DRY
Date Received: 06/19/2013 10:30
% Solids: 60.4

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	1860	318	140	mg/Kg		J	1	9071B

MW 9/17/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

4

Client Sample ID: LMR13-14-072 Lab Sample ID: 200-17071-4

Lab Name: TestAmerica Canton Job No.: 200-17071-1

SDG ID.: 17071

Matrix: Sediment Date Sampled: 06/17/2013 18:35

Reporting Basis: DRY Date Received: 06/19/2013 10:30

% Solids: 67.8

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	1350	291	129	mg/Kg		B	1	9071B

MW 9/17/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

6

Client Sample ID: LMR13-08-048
Lab Sample ID: 200-17071-6
Lab Name: TestAmerica Canton
Job No.: 200-17071-1
SDG ID.: 17071
Matrix: Sediment
Date Sampled: 06/17/2013 17:35
Reporting Basis: DRY
Date Received: 06/19/2013 10:30
% Solids: 57.5

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	2480	340	150	mg/Kg		U	1	9071B

MW 9/17/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

7

Client Sample ID: LMR13-08-072
Lab Sample ID: 200-17071-7
Lab Name: TestAmerica Canton
Job No.: 200-17071-1
SDG ID.: 17071
Matrix: Sediment
Date Sampled: 06/17/2013 17:45
Reporting Basis: DRY
Date Received: 06/19/2013 10:30
% Solids: 71.4

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	1190	273	120	mg/Kg		B	1	9071B

NW 9/17/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

8

Client Sample ID: LMR13-13-012
Lab Sample ID: 200-17071-8
Lab Name: TestAmerica Canton
Job No.: 200-17071-1
SDG ID.: 17071
Matrix: Sediment
Date Sampled: 06/18/2013 07:40
Reporting Basis: DRY
Date Received: 06/19/2013 10:30
% Solids: 47.9

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	771	417	184	mg/Kg			1	9071B

NW 9/17/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

9

Client Sample ID: LMR13-13-024
Lab Sample ID: 200-17071-9
Lab Name: TestAmerica Canton
Job No.: 200-17071-1
SDG ID.: 17071
Matrix: Sediment
Date Sampled: 06/18/2013 07:50
Reporting Basis: DRY
Date Received: 06/19/2013 10:30
% Solids: 53.1

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	1600	377	167	mg/Kg			1	9071B

NW 9/17/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

10

Client Sample ID: LMR13-14-120
Lab Sample ID: 200-17071-10
Lab Name: TestAmerica Canton
Job No.: 200-17071-1
SDG ID.: 17071
Matrix: Sediment
Date Sampled: 06/17/2013 18:55
Reporting Basis: DRY
Date Received: 06/19/2013 10:30
% Solids: 75.8

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	259 U ~~191~~	259	114	mg/Kg	~~J~~	~~B~~	1	9071B

JW 9/17/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

12

Client Sample ID: LMR13-13-072 | Lab Sample ID: 200-17071-12

Lab Name: TestAmerica Canton | Job No.: 200-17071-1

SDG ID.: 17071

Matrix: Sediment | Date Sampled: 06/18/2013 08:10

Reporting Basis: DRY | Date Received: 06/19/2013 10:30

% Solids: 58.4

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	1170	343	152	mg/Kg			1	9071B

MW 9/17/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

13

Client Sample ID: LMR13-13-120 Lab Sample ID: 200-17071-13

Lab Name: TestAmerica Canton Job No.: 200-17071-1

SDG ID.: 17071

Matrix: Sediment Date Sampled: 06/18/2013 08:30

Reporting Basis: DRY Date Received: 06/19/2013 10:30

% Solids: 71.8

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	405	279	123	mg/Kg			1	9071B

MW 9/17/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

14

Client Sample ID: LMR13-14-096
Lab Sample ID: 200-17071-14
Lab Name: TestAmerica Canton
Job No.: 200-17071-1
SDG ID.: 17071
Matrix: Sediment
Date Sampled: 06/17/2013 18:45
Reporting Basis: DRY
Date Received: 06/19/2013 10:30
% Solids: 71.8

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	279 ~~195~~	U 279	123	mg/Kg	~~J~~	~~B~~	1	9071B

NW 9/17/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

15

Client Sample ID: LMR13-25-012
Lab Sample ID: 200-17071-15
Lab Name: TestAmerica Canton
Job No.: 200-17071-1
SDG ID.: 17071
Matrix: Sediment
Date Sampled: 06/18/2013 09:10
Reporting Basis: DRY
Date Received: 06/19/2013 10:30
% Solids: 77.1

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	521	U 261	115	mg/Kg			1	9071B

NW 9/17/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: LMR13-25-024 | Lab Sample ID: 200-17071-16 | 16

Lab Name: TestAmerica Canton | Job No.: 200-17071-1

SDG ID.: 17071

Matrix: Sediment | Date Sampled: 06/18/2013 09:20

Reporting Basis: DRY | Date Received: 06/19/2013 10:30

% Solids: 71.2

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	1190	279	123	mg/Kg		B	1	9071B

NW 9/17/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

17

Client Sample ID: LMR13-08-024 | Lab Sample ID: 200-17071-17

Lab Name: TestAmerica Canton | Job No.: 200-17071-1

SDG ID.: 17071

Matrix: Sediment | Date Sampled: 06/17/2013 17:25

Reporting Basis: DRY | Date Received: 06/19/2013 10:30

% Solids: 56.2

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	671	U 353	156	mg/Kg		U	1	9071B

NW 9/17/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

18

Client Sample ID: LMR13-13-096
Lab Sample ID: 200-17071-18
Lab Name: TestAmerica Canton
Job No.: 200-17071-1
SDG ID.: 17071
Matrix: Sediment
Date Sampled: 06/18/2013 08:20
Reporting Basis: DRY
Date Received: 06/19/2013 10:30
% Solids: 67.4

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	710	U 296	131	mg/Kg		B	1	9071B

NW 9/17/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: LMR13-25-048
Lab Sample ID: 200-17071-19 19
Lab Name: TestAmerica Canton
Job No.: 200-17071-1
SDG ID.: 17071
Matrix: Sediment
Date Sampled: 06/18/2013 09:30
Reporting Basis: DRY
Date Received: 06/19/2013 10:30
% Solids: 74.4

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	265	U 265	117	mg/Kg			1	9071B

NW 9/17/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

20

Client Sample ID: LMR13-25-072
Lab Sample ID: 200-17071-20
Lab Name: TestAmerica Canton
Job No.: 200-17071-1
SDG ID.: 17071
Matrix: Sediment
Date Sampled: 06/18/2013 09:40
Reporting Basis: DRY
Date Received: 06/19/2013 10:30
% Solids: 78.1

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	252	252	112	mg/Kg	U		1	9071B

NW 9/17/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: LMR13-08-024FD
Lab Sample ID: 200-17071-22 J2
Lab Name: TestAmerica Canton
Job No.: 200-17071-1
SDG ID.: 17071
Matrix: Sediment
Date Sampled: 06/18/2013 17:25
Reporting Basis: DRY
Date Received: 06/19/2013 10:30
% Solids: 60.3

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	538	U 326	144	mg/Kg		B	1	9071B

NW 9/17/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

27

Client Sample ID: LMR13-03-024FD
Lab Sample ID: 200-17120-5
Lab Name: TestAmerica Canton
Job No.: 200-17071-1
SDG ID.: 17071
Matrix: Sediment
Date Sampled: 06/17/2013 16:25
Reporting Basis: DRY
Date Received: 06/20/2013 10:30
% Solids: 63.3

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	2120	309	137	mg/Kg		B	1	9071B

NW 9/17/13

ENVIRONMENTAL
Data Services, Inc.

DATA VALIDATION SUMMARY REPORT
LOWER MAUMEE RIVER, TOLEDO, OHIO

Client: EA Engineering, Science & Technology, Inc., Hunt Valley, Maryland
SDG: 200-17078
Laboratory: Test America Laboratories, Burlington, Vermont
Test America Laboratories, North Canton, Ohio
Site: Lower Maumee River, Maumee Area of Concern, Toledo, Ohio
Date: September 20, 2013

SVOC			
EDS ID	Client Sample ID	Laboratory Sample ID	Matrix
1	LMR13-25-096	200-17078-1	Sediment
2	LMR13-13-048	200-17078-2	Sediment
2RE	LMR13-13-048RE	200-17078-2RE	Sediment
3	LMR13-14-024	200-17078-3	Sediment
4	LMR13-71-012	200-17078-4	Sediment
5	LMR13-71-024	200-17078-4	Sediment
6	LMR13-71-048	200-17078-6	Sediment
7	LMR13-71-072	200-17078-7	Sediment
9	LMR13-71-024FD	200-17078-9	Sediment
10	LMR13-07-012	200-17078-10	Sediment
11	LMR13-07-024	200-17078-11	Sediment
12	LMR13-07-048	200-17078-12	Sediment
13	LMR13-07-072	200-17078-13	Sediment
14	LMR13-21-048	200-17078-14	Sediment
16	LMR13-15-024	200-17078-16	Sediment
17	LMR13-21-012	200-17078-17	Sediment
18	LMR13-21-024	200-17078-18	Sediment
19	LMR13-21-072	200-17078-19	Sediment
20	LMR13-15-012	200-17078-20	Sediment
21	LMR13-13-048FD	200-17078-21	Sediment
22	LMR13-14-024FD	200-17078-22	Sediment
23	LMR13-21-024FD	200-17078-23	Sediment
24	LMR13-21-012FD	200-17078-24	Sediment

PAH 34			
EDS ID	Client Sample ID	Laboratory Sample ID	Matrix
17	LMR13-21-012	200-17078-17	Sediment
20	LMR13-15-012	200-17078-20	Sediment
24	LMR13-21-012FD	200-17078-24	Sediment

PCB/Metals/Mercury/TOC			
EDS ID	Client Sample ID	Laboratory Sample ID	Matrix
1	LMR13-25-096	200-17078-1	Sediment
1MS*	LMR13-25-096MS	200-17078-1MS	Sediment
1MSD*	LMR13-25-096MSD	200-17078-1MSD	Sediment

PCB/Metals/Mercury/TOC			
EDS ID	Client Sample ID	Laboratory Sample ID	Matrix
2	LMR13-13-048	200-17078-2	Sediment
3	LMR13-14-024	200-17078-3	Sediment
4	LMR13-71-012	200-17078-4	Sediment
5	LMR13-71-024	200-17078-4	Sediment
6	LMR13-71-048	200-17078-6	Sediment
7	LMR13-71-072	200-17078-7	Sediment
8	LMR13-07-024FD	200-17078-8	Sediment
9	LMR13-71-024FD	200-17078-9	Sediment
10	LMR13-07-012	200-17078-10	Sediment
11	LMR13-07-024	200-17078-11	Sediment
12	LMR13-07-048	200-17078-12	Sediment
13	LMR13-07-072	200-17078-13	Sediment
14	LMR13-21-048	200-17078-14	Sediment
15	LMR13-15-024FD	200-17078-15	Sediment
16	LMR13-15-024	200-17078-16	Sediment
17	LMR13-21-012	200-17078-17	Sediment
18	LMR13-21-024	200-17078-18	Sediment
19	LMR13-21-072	200-17078-19	Sediment
20	LMR13-15-012	200-17078-20	Sediment
20MS†	LMR13-15-012MS	200-17078-20MS	Sediment
20MSD†	LMR13-15-012MSD	200-17078-20MSD	Sediment

* - Mercury only † - PCBs and Metals only

AVS/SEM			
EDS ID	Client Sample ID	Laboratory Sample ID	Matrix
17	LMR13-21-012	200-17078-17	Sediment
20	LMR13-15-012	200-17078-20	Sediment

HEM			
EDS ID	Client Sample ID	Laboratory Sample ID	Matrix
1	LMR13-25-096	200-17078-1	Sediment
2	LMR13-13-048	200-17078-2	Sediment
3	LMR13-14-024	200-17078-3	Sediment
4	LMR13-71-012	200-17078-4	Sediment
5	LMR13-71-024	200-17078-4	Sediment
6	LMR13-71-048	200-17078-6	Sediment
7	LMR13-71-072	200-17078-7	Sediment
8	LMR13-07-024FD	200-17078-8	Sediment
9	LMR13-71-024FD	200-17078-9	Sediment
10	LMR13-07-012	200-17078-10	Sediment
11	LMR13-07-024	200-17078-11	Sediment
12	LMR13-07-048	200-17078-12	Sediment
13	LMR13-07-072	200-17078-13	Sediment
14	LMR13-21-048	200-17078-14	Sediment
15	LMR13-15-024FD	200-17078-15	Sediment
16	LMR13-15-024	200-17078-16	Sediment
17	LMR13-21-012	200-17078-17	Sediment
18	LMR13-21-024	200-17078-18	Sediment
19	LMR13-21-072	200-17078-19	Sediment

HEM			
EDS ID	Client Sample ID	Laboratory Sample ID	Matrix
20	LMR13-15-012	200-17078-20	Sediment
21	LMR13-13-048FD	200-17078-21	Sediment
22	LMR13-14-024FD	200-17078-22	Sediment
22MS	LMR13-14-024FDMS	200-17078-22MS	Sediment
22MSD	LMR13-14-024FDMSD	200-17078-22MSD	Sediment
23	LMR13-21-024FD	200-17078-23	Sediment

A full data validation was performed on the analytical data for twenty-four sediment samples collected on June 17-18, 2013 by EA Engineering at the Lower Maumee River site in Toledo, Ohio. The samples were analyzed under the Environmental Protection Agency (USEPA) Contract Laboratory Program (CLP) Multi-Media Multi-Concentration Organics Analysis SOM01.2 and Inorganic Analysis ILM05.4 and the Test Methods for the Evaluation of Solid Waste, USEPA SW-846, Third Edition, September 1986, with revisions.

Specific method references are as follows:

Analysis	*Method References*
SVOCs	USEPA CLP SOM01.2
PAH 34	USEPA CLP SOM01.2
PCBs	USEPA CLP SOM01.2
Michigan Metals & Mercury	USEPA CLP ISM01.3
AVS/SEM	USEPA SW-846 Methods 6010C/7470A
TOC	Lloyd Kahn
Oil & Grease (HEM)	USEPA SW-846 Method 9071B

The data have been validated according to the protocols and quality control (QC) requirements of the analytical methods, the Great Lakes Legacy Act, March 2010, the Quality Assurance Project Plan for Phase 2 of the Lower Maumee River Site Characterization, May 2013, and the USEPA National Functional Guidelines for Organic Data Review as follows:

- The USEPA "Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review," June 2008;
- The USEPA "Contract Laboratory Program National Functional Guidelines for Inorganic Superfund Data Review," January 2010;
- and the reviewer's professional judgment.

The following items/criteria were reviewed for this report:

Organics

- Holding times and sample preservation
- Gas Chromatography/Mass Spectroscopy (GC/MS) Tuning
- Initial and continuing calibration summaries
- Method blank and field blank contamination
- Surrogate Spike recoveries
- Matrix Spike/Matrix Spike Duplicate (MS/MSD) recoveries
- Laboratory Control Sample (LCS) recoveries
- Internal standard area and retention time summary forms

- Target Compound Identification
- Compound Quantitation
- Tentatively Identified Compounds (TICs)
- Field Duplicate sample precision

Inorganics

- Holding times and sample preservation
- ICP/MS Tuning
- Initial and continuing calibration verifications
- Method blank and field blank contamination
- ICP Interference Check Sample
- Laboratory Control Sample (LCS) recoveries
- Matrix Spike Analysis
- Duplicate Sample Analysis
- ICP Serial Dilution
- Compound Quantitation
- Field Duplicate sample precision

Overall Usability Issues:

There were minor rejections of data. This data cannot be used in the decision-making process for this project.

- Three SVOC compounds were rejected in three samples due to severely low surrogate recoveries.

Overall the remaining data is acceptable for the intended purposes as qualified for the deficiencies detailed in this report.

Please note that any results qualified (U) due to blank contamination may be then qualified (J) due to another action. Therefore, the results may be qualified (UJ) due to the culmination of the blank contaminations and actions from other exceedences of QC criteria.

Semivolatile Organic Compounds (SVOCs)

Holding Times

- All samples were extracted within 14 days for sediment samples and analyzed within 40 days for all samples except the following.

Sample	Date Sampled	Date Extracted	# of Days	Qualifier
1	06/27/13	08/07/13	41	J/UJ
2	06/27/13	08/07/13	41	J/UJ
2RE	06/27/13	08/07/13	41	J/UJ

GC/MS Tuning

- All criteria were met.

Initial Calibration

- All %RSD and mean RRF criteria were met except the following.

ICAL Date	Compound	%RSD/RRF	Qualifier	Affected Samples
07/29/13	Pentachlorophenol	21.2%	J/UJ	1, 2, 2RE
	Pyrene	22.6%	J/UJ	
08/02/13	Benzo(b)fluoranthene	23.7%	J/UJ	3-7, 9-14, 16-24
	Dibenzo(a,h)anthracene	20.6%	J/UJ	

Continuing Calibration

- All %D and RRF criteria were met except the following.

CCAL Date	Compound	%D/RRF	Qualifier	Affected Samples
08/04/13 (1849)	Di-n-octylphthalate	59.3%	J/UJ	3-6
08/05/13 (1914)	Hexachlorocyclopentadiene	94.0%	J/UJ	7, 10, 12, 13, 14, 16-19
08/06/13 (1001)	Hexachlorocyclopentadiene	60.7%	J/UJ	11, 21-24
08/07/13 (0729)	Pyrene	38.2%	None	See ICAL
	Fluoranthene	27.5%	J/UJ	1, 2, 2RE
	benzo(g,h,i)perylene	25.3%	J/UJ	
08/07/13 (1212)	Hexachlorocyclopentadiene	56.5%	J/UJ	1, 2, 2RE

Method Blank

- The method blanks exhibited the following contamination.

Blank ID	Compound	Conc. ug/kg	Qualifier	Affected Samples
SBLKN2	Butylbenzylphthalate	13	None	All ND
	bis(2-Ethylhexyl)phthalate	19	U	1
SBLKN3	Acetophenone	12	U	4-7, 9-14, 16-20, 23
	di-n-Butylphthalate	6.0	U	4-7, 9, 14, 19, 23, 24
	Butylbenzylphthalate	15	U	4-7, 9, 10, 13, 14, 16, 17, 19, 20, 23, 24

Field Blank

- Field QC samples were not analyzed.

Surrogate Spike Recoveries

- All samples exhibited acceptable surrogate %R values except the following.

Sample ID	Surrogate	%R	Qualifier
2	4-Methylphenol-d8	113%D	None - All ND
2RE	4-Methylphenol-d8	114%D	None - All ND
5	4-Methylphenol-d8	103%	None - All ND
	4-Chloroaniline-d4	0%	R - Associated Compounds
9	4-Methylphenol-d8	104%	None - All ND
	4-Chloroaniline-d4	0%	R - Associated Compounds
10	4-Methylphenol-d8	103%	None - All ND
12	Phenol-d5	108%	J - Positive Associated Compounds
	4-Methylphenol-d8	105%	None - All ND
13	4-Methylphenol-d8	119%	None - All ND
14	4-Methylphenol-d8	108%	None - All ND
16	4-Methylphenol-d8	111%	None - All ND
17	4-Methylphenol-d8	110%	None - All ND
18	4-Methylphenol-d8	107%	None - All ND
20	4-Methylphenol-d8	109%	None - All ND
	4-Chloroaniline-d4	0%	R - Associated Compounds
22	4-Methylphenol-d8	110%D	None - All ND
23	4-Methylphenol-d8	103%	None - All ND
24	Phenol-d5	106%	None - All ND
	4-Methylphenol-d8	109%	None - All ND

Matrix Spike/Matrix Spike Duplicate (MS/MSD) Recoveries

- A MS/MSD sample was not analyzed.

Laboratory Control Samples

- A LCS sample was not analyzed.

Internal Standard (IS) Area Performance

- All internal standards met response and retention time (RT) criteria except the following.

Sample ID	Internal Standard	Area Count	Qualifier
2	IS4-Phenanthrene	Low	J/UJ - Associated Compounds
2RE	IS4-Phenanthrene	Low	J/UJ - Associated Compounds

Target Compound Identification

- All mass spectra and quantitation criteria were met.

Compound Quantitation

- Several samples were analyzed at a dilution due to high concentrations of target compounds. No action was required.
- EDS Sample ID #2 exhibited a low internal standard recovery and was reanalyzed. The reanalysis exhibited similar results. The original analysis results should be used for reporting purposes.

Field Duplicate Sample Precision

- Field duplicate results are summarized below.

SVOC				
Compound	LMR13-71-024 ug/kg	LMR13-71-024FD ug/kg	RPD	Qualifier
Benzaldehyde	120	68	55%	None
Phenanthrene	21	240U	NC	
Anthracene	13	240U	NC	
Fluoranthene	54	50	8%	
Pyrene	42	53	23%	
Benzo(a)anthracene	25	35	33%	
Chrysene	31	41	28%	
bis(2-Ethylhexyl)phthalate	72	46	44%	
Benzo(b)fluoranthene	15	24	46%	
Benzo(k)fluoranthene	23	22	4%	
Benzo(a)pyrene	20	34	52%	
Indeno(1,2,3-cd)pyrene	9.5	8.3	13%	
Benzo(g,h,i)perylene	12	13	8%	

SVOC				
Compound	LMR13-13-048 ug/kg	LMR13-13-048FD ug/kg	RPD	Qualifier
Naphthalene	170	150	13%	None
2-Methylnaphthalene	65	61	6%	
Acenaphthylene	1000U	47	NC	
Acenaphthene	95	72	28%	
Dibenzofuran	37	30	21%	
Fluorene	230	79	98%	
Phenanthrene	670	260	88%	
Anthracene	210	110	63%	
Fluoranthene	1200	690	54%	
Pyrene	840	970	14%	
Benzo(a)anthracene	760	610	22%	
Chrysene	1100	720	42%	
bis(2-Ethylhexyl)phthalate	9600	7200	29%	
Benzo(b)fluoranthene	1100	560	65%	
Benzo(k)fluoranthene	730	420	54%	
Benzo(a)pyrene	730	480	41%	
Indeno(1,2,3-cd)pyrene	350	250	33%	
Dibenzo(a,h)anthracene	230	150	42%	

Benzo(g,h,i)perylene	470	330	35%	None

SVOC				
Compound	LMR13-14-024 ug/kg	LMR13-14-024FD ug/kg	RPD	Qualifier
Benzaldehyde	250	620U	NC	None
Phenol	120	620U	NC	
Acetophenone	500	620U	NC	
Naphthalene	140	160	13%	
2-Methylnaphthalene	65	66	2%	
Acenaphthylene	49	51	4%	
Acenaphthene	70	79	12%	
Dibenzofuran	310U	29	NC	
Fluorene	110	120	9%	
Phenanthrene	490	600	20%	
Anthracene	90	140	43%	
Fluoranthene	770	1200	44%	
Pyrene	1600	1400	13%	
Benzo(a)anthracene	680	1100	47%	
Chrysene	1300	1200	8%	
bis(2-Ethylhexyl)phthalate	3800	3900	3%	
Benzo(b)fluoranthene	740	950	25%	
Benzo(k)fluoranthene	650	530	20%	
Benzo(a)pyrene	770	760	1%	
Indeno(1,2,3-cd)pyrene	310	420	30%	
Dibenzo(a,h)anthracene	220	270	20%	
Benzo(g,h,i)perylene	440	510	15%	

SVOC				
Compound	LMR13-21-024 ug/kg	LMR13-21-024FD ug/kg	RPD	Qualifier
Benzaldehyde	38	29	27%	None
Naphthalene	120	69	54%	
2-Methylnaphthalene	36	24	40%	
Acenaphthylene	40	25	46%	
Acenaphthene	64	43	39%	
Dibenzofuran	260U	14	NC	
Fluorene	84	29	97%	
Phenanthrene	370	150	85%	
Anthracene	140	81	53%	
Fluoranthene	900	610	38%	
Pyrene	1400	740	62%	
Benzo(a)anthracene	980	540	58%	
Chrysene	960	560	53%	
bis(2-Ethylhexyl)phthalate	180	130	32%	
Benzo(b)fluoranthene	580	430	30%	
Benzo(k)fluoranthene	690	270	88%	
Benzo(a)pyrene	630	350	57%	
Indeno(1,2,3-cd)pyrene	240	190	23%	
Dibenzo(a,h)anthracene	190	130	38%	
Benzo(g,h,i)perylene	300	260	14%	

SVOC				
Compound	LMR13-21-012 ug/kg	LMR13-21-012FD ug/kg	RPD	Qualifier
Benzaldehyde	28	220U	NC	None
Naphthalene	49	35	33%	
2-Methylnaphthalene	17	14	19%	
Acenaphthylene	9.2	5.6	49%	
Acenaphthene	18	16	12%	
Dibenzofuran	240U	7.3	NC	
Fluorene	240U	9.9	NC	
Phenanthrene	93	92	1%	
Anthracene	35	30	15%	
Fluoranthene	180	170	6%	
Pyrene	260	220	17%	
Benzo(a)anthracene	190	170	11%	
Chrysene	270	220	20%	
bis(2-Ethylhexyl)phthalate	520	430	19%	
Benzo(b)fluoranthene	130	140	7%	
Benzo(k)fluoranthene	110	110	0%	
Benzo(a)pyrene	150	140	7%	
Indeno(1,2,3-cd)pyrene	73	71	3%	
Dibenzo(a,h)anthracene	49	50	2%	
Benzo(g,h,i)perylene	96	100	4%	

Polynuclear Aromatic Hydrocarbons (PAH 34)

Holding Times

- All samples were extracted within 14 days for sediment samples and analyzed within 40 days for all samples.

GC/MS Tuning

- All criteria were met.

Initial Calibration

- All %RSD and mean RRF criteria were met.

Continuing Calibration

- All %D and RRF criteria were met.

Method Blank

- The method blanks exhibited the following contamination.

Blank ID	Compound	Conc. ug/kg	Qualifier	Affected Samples
SBLKN3	Naphthalene	0.18	U	20
	Total 16 PPAH	2.0	J	All Samples
	Total PAH	2.2	J	

Field Blank

- Field QC samples were not analyzed.

Surrogate Spike Recoveries

- All samples exhibited acceptable surrogate %R values.

Matrix Spike/Matrix Spike Duplicate (MS/MSD) Recoveries

- A MS/MSD sample was not analyzed.

Laboratory Control Samples

- A LCS sample was not analyzed.

Internal Standard (IS) Area Performance

- All internal standards met response and retention time (RT) criteria.

Target Compound Identification

- All mass spectra and quantitation criteria were met.

Compound Quantitation

- All samples were analyzed at various dilutions due to high concentrations of target compounds.
- Total 16 PPAH and Total PAH were estimated (J) in all samples due to blank contamination.

Field Duplicate Sample Precision

- Field duplicate samples were not analyzed.

Polychlorinated Biphenyls (PCBs)

Holding Times

- All samples were extracted within 14 days for sediment samples and analyzed within 40 days.

Initial Calibration

- All %RSD and/or correlation coefficient criteria were met.

Continuing Calibration

- All %D criteria were met.

Method Blank

- The method blanks were free of contamination.

Field Blank

- Field QC samples were not analyzed.

Surrogate Spike Recoveries

- All samples exhibited acceptable surrogate recoveries.

Matrix Spike/Matrix Spike Duplicate (MS/MSD) Recoveries

- The MS/MSD sample exhibited acceptable %R and RPD values.

Laboratory Control Samples

- The LCS sample exhibited acceptable %R values.

Compound Quantitation

- All criteria were met.

Field Duplicate Sample Precision

- Field duplicate results are summarized below.

PCBs				
Compound	LMR13-07-024 ug/kg	LMR13-07-024FD ug/kg	RPD	Qualifier
Aroclor-1254	24	21	13%	None
Aroclor-1260	13	15	14%	

PCBs				
Compound	LMR13-71-024 ug/kg	LMR13-71-024FD ug/kg	RPD	Qualifier
None	ND	ND	-	-

PCBs				
Compound	LMR13-15-024 ug/kg	LMR13-15-024FD ug/kg	RPD	Qualifier
None	ND	ND	-	-

GC Column Difference Results

- Several samples exhibited high %D values > 25% between columns and have been qualified as estimated (J) by the reviewer.

Metals & Mercury

Holding Times

- All samples were prepared and analyzed within 28 days for mercury and 180 days for all other metals.

ICP/MS Tuning

- Not applicable.

Initial Calibration Verification

- All initial calibration criteria were met.

Continuing Calibration Verification

- All continuing calibration criteria were met.

Method Blank

- The method blanks exhibited the following contamination.

Blank ID	Compound	Conc. mg/kg	Qualifier	Affected Samples
PBS	Zinc	0.46	None	All >10X

Field Blank

- Field QC samples were not analyzed.

ICP Interference Check Sample

- The ICP interference check sample exhibited acceptable %R values.

Laboratory Control Samples

- The LCS sample exhibited acceptable recoveries.

Matrix Spike/Duplicate (MS/DUP) Analysis

- The MS/DUP samples exhibited acceptable %R and RPD values.

ICP Serial Dilution

- ICP serial dilution percent differences (%D) were within acceptance limits except the following.

ICP Sample ID	Compound	%D	Qualifier	Affected Samples
20	Chromium	15%	J	All Samples
	Copper	13%	J	
	Nickel	18%	J	
	Zinc	15%	J	

Compound Quantitation

- All criteria were met.

Field Duplicate Sample Precision

- Field duplicate results are summarized below.

Metals & Mercury				
Compound	LMR13-07-024 mg/kg	LMR13-07-024FD mg/kg	RPD	Qualifier
Arsenic	10.7	9.2	15%	None
Cadmium	3.8	3.8	0%	
Chromium	40.8	44.0	8%	
Copper	51.2	49.6	3%	
Lead	106	89.4	17%	
Nickel	33.0	34.5	4%	
Zinc	227	226	0%	
Mercury	0.30	0.11	93%	

Metals & Mercury				
Compound	LMR13-71-024 mg/kg	LMR13-71-024FD mg/kg	RPD	Qualifier
Arsenic	3.2	3.6	12%	None
Cadmium	0.33	0.32	3%	
Chromium	11.1	11.2	1%	
Copper	9.6	11.6	19%	
Lead	8.4	9.0	7%	
Nickel	14.5	15.6	7%	
Zinc	37.3	39.5	6%	

Metals & Mercury				
Compound	LMR13-15-024 mg/kg	LMR13-15-024FD mg/kg	RPD	Qualifier
Arsenic	8.0	8.5	6%	None
Cadmium	0.82	0.90	9%	
Chromium	23.4	24.9	6%	
Copper	23.0	24.0	4%	
Lead	36.5	41.8	14%	
Nickel	23.0	22.7	1%	
Zinc	101	105	4%	
Mercury	0.14	0.15	7%	

Oil & Grease, Total Organic Carbon, AVS/SEM (Metals & Hg)

Holding Times

- All samples were analyzed within the recommended holding time for each analysis except the following.

TOC				
Sample ID	Date Sampled	Date Analyzed	# of Days	Qualifier
All Samples	06/17/13-06/18/13	07/15/13-07/23/13	27-36	J

Initial and Continuing Calibration

- All %R criteria were met.

Method Blank

- The method blanks exhibited the following contamination.

Blank ID	Compound	Conc. mg/kg	Qualifier	Affected Samples
MB 180-76255/1-A	HEM	30.00	U	1, 4, 7, 9, 14, 19, 20
MB 180-76257/1-A	HEM	30.00	None	All ND

Field Blank

- Field QC samples were not included in this data package.

Laboratory Control Samples

- The LCS samples exhibited acceptable %R values.

Matrix Spike/Matrix Spike Duplicate (MS/MSD) Recoveries

- The MS/MSD sample exhibited acceptable %R and RPD values except the following.

MS/DUP Sample ID	Compound	MS %R/MSD %R/RPD	Qualifier	Affected Samples
22	HEM	71%/57%/OK	J/UJ	All Samples

Compound Quantitation

- Several samples were analyzed at a dilution due to high concentrations of target compounds.

Field Duplicate Sample Precision

- Field duplicate results are summarized below.

TOC				
Compound	LMR13-07-024 mg/kg	LMR13-07-024FD mg/kg	RPD	Qualifier
TOC	30800	29200	5%	None

HEM				
Compound	LMR13-71-024 mg/kg	LMR13-71-024FD mg/kg	RPD	Qualifier
HEM	ND	ND	-	-

TOC				
Compound	LMR13-71-024 mg/kg	LMR13-71-024FD mg/kg	RPD	Qualifier
TOC	22200	16900	27%	None

HEM				
Compound	LMR13-13-048 mg/kg	LMR13-13-048FD mg/kg	RPD	Qualifier
HEM	621	793	24%	None

TOC				
Compound	LMR13-15-024 mg/kg	LMR13-15-024FD mg/kg	RPD	Qualifier
TOC	22300	22200	0%	None

HEM				
Compound	LMR13-14-024 mg/kg	LMR13-14-024FD mg/kg	RPD	Qualifier
HEM	1090	1100	1%	None

HEM				
Compound	LMR13-21-024 mg/kg	LMR13-21-024FD mg/kg	RPD	Qualifier
HEM	807	859	6%	None

Please contact the undersigned at (757) 564-0090 if you have any questions or need further information.

Signed: Nancy Weaver Dated: 9/23/13

Nancy Weaver
Senior Chemist

Data Qualifiers

U	=	The analyte was analyzed for, but was not detected at a level greater than or equal to the level of the adjusted Contract Required Quantitation Limit (CRQL) for sample and method.
UJ	=	The analyte was not detected at a level greater than or equal to the adjusted CRQL. However, the reported adjusted CRQL is approximate and may be inaccurate or imprecise.
J	=	The analyte was positively identified and the associated numerical value is the approximate concentration of the analyte in the sample (due either to the quality of the data generated because certain quality control criteria were not met, or the concentration of the analyte was below the CRQL).
J+	=	The result is an estimated quantity, but the result may be biased high.
J-	=	The result is an estimated quantity, but the result may be biased low.
R	=	The sample results are unusable due to the quality of the data generated because certain criteria were not met. The analyte may or may not be present in the sample.
NJ	=	The analysis indicates the presence of an analyte that has been "tentatively identified" and the associated numerical value represents its approximate concentration.

EPA SAMPLE NO.
LMR13-25-096

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17078

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17078-1

Sample wt/vol: 30.8 (g/mL) g Lab File ID: RKXYM06.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 21 Decanted: (Y/N) Date Received: 06/19/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/27/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/07/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
100-52-7	Benzaldehyde	29	J
108-95-2	Phenol	210	UJ
111-44-4	Bis(2-chloroethyl)ether	210	U
95-57-8	2-Chlorophenol	210	U
95-48-7	2-Methylphenol	210	U
108-60-1	2,2'-Oxybis(1-chloropropane)	210	U
98-86-2	Acetophenone	13	J
106-44-5	4-Methylphenol	210	UJ
621-64-7	N-Nitroso-di-n-propylamine	210	U
67-72-1	Hexachloroethane	210	U
98-95-3	Nitrobenzene	210	U
78-59-1	Isophorone	210	U
88-75-5	2-Nitrophenol	210	U
105-67-9	2,4-Dimethylphenol	210	U
111-91-1	Bis(2-chloroethoxy)methane	210	U
120-83-2	2,4-Dichlorophenol	210	U
91-20-3	Naphthalene	210	U
106-47-8	4-Chloroaniline	210	U
87-68-3	Hexachlorobutadiene	210	U
105-60-2	Caprolactam	210	U
59-50-7	4-Chloro-3-methylphenol	210	U
91-57-6	2-Methylnaphthalene	210	U
77-47-4	Hexachlorocyclopentadiene	210	UJ
88-06-2	2,4,6-Trichlorophenol	210	U
95-95-4	2,4,5-Trichlorophenol	210	U
92-52-4	1,1'-Biphenyl	210	U
91-58-7	2-Chloronaphthalene	210	U
88-74-4	2-Nitroaniline	410	U
131-11-3	Dimethylphthalate	210	U
606-20-2	2,6-Dinitrotoluene	210	U
208-96-8	Acenaphthylene	210	U
99-09-2	3-Nitroaniline	410	U
83-32-9	Acenaphthene	210	U

MW 9/17/13

EPA SAMPLE NO.
LMR13-25-096

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678
Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17078
Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17078-1
Sample wt/vol: 30.8 (g/mL) g Lab File ID: RKXYM06.D
Level: (LOW/MED) LOW Extraction: (Type) SONC
% Moisture: 21 Decanted: (Y/N) Date Received: 06/19/2013
Concentrated Extract Volume: 500 (uL) Date Extracted: 06/27/2013
Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/07/2013
GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
51-28-5	2,4-Dinitrophenol	410	U
100-02-7	4-Nitrophenol	410	U
132-64-9	Dibenzofuran	210	U
121-14-2	2,4-Dinitrotoluene	210	U
84-66-2	Diethylphthalate	210	U
86-73-7	Fluorene	210	U
7005-72-3	4-Chlorophenyl-phenylether	210	U
100-01-6	4-Nitroaniline	410	U
534-52-1	4,6-Dinitro-2-methylphenol	410	U
86-30-6	N-Nitrosodiphenylamin [1]	210	U
95-94-3	1,2,4,5-Tetrachlorobenzene	210	U
101-55-3	4-Bromophenyl-phenylether	210	U
118-74-1	Hexachlorobenzene	210	U
1912-24-9	Atrazine	210	U
87-86-5	Pentachlorophenol	410	U
85-01-8	Phenanthrene	210	U
120-12-7	Anthracene	210	U
86-74-8	Carbazole	210	U
84-74-2	Di-n-butylphthalate	6.8	J
206-44-0	Fluoranthene	210	U
129-00-0	Pyrene	210	U
85-68-7	Butylbenzylphthalate	210	U
91-94-1	3,3'-Dichlorobenzidine	210	U
56-55-3	Benzo(a)anthracene	210	U
218-01-9	Chrysene	210	U
117-81-7	Bis(2-ethylhexyl)phthalate	210 ~~33~~	~~J~~ B
117-84-0	Di-n-octylphthalate	210	U
205-99-2	Benzo(b)fluoranthene	210	U
207-08-9	Benzo(k)fluoranthene	210	U
50-32-8	Benzo(a)pyrene	210	U
193-39-5	Indeno(1,2,3-cd)pyrene	210	U
53-70-3	Dibenzo(a,h)anthracene	210	U
191-24-2	Benzo(g,h,i)perylene	210	U
58-90-2	2,3,4,6-Tetrachlorophenol	210	U

UJ
UJ
J
UJ
UJ
UJ
UJ

[1] Cannot be separated from Diphenylamine

MW 9/17/13

1D - FORM I SV-1

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-13-048

2

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17078

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17078-2

Sample wt/vol: 30.3 (g/mL) g Lab File ID: RKXYM08.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 46 Decanted: (Y/N) Date Received: 06/19/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/27/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/07/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 3.3

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
100-52-7	Benzaldehyde	1000	U
108-95-2	Phenol	1000	U
111-44-4	Bis(2-chloroethyl)ether	1000	U
95-57-8	2-Chlorophenol	1000	U
95-48-7	2-Methylphenol	1000	U
108-60-1	2,2'-Oxybis(1-chloropropane)	1000	U
98-86-2	Acetophenone	1000	U
106-44-5	4-Methylphenol	1000	U
621-64-7	N-Nitroso-di-n-propylamine	1000	U
67-72-1	Hexachloroethane	1000	U
98-95-3	Nitrobenzene	1000	U
78-59-1	Isophorone	1000	U
88-75-5	2-Nitrophenol	1000	U
105-67-9	2,4-Dimethylphenol	1000	U
111-91-1	Bis(2-chloroethoxy)methane	1000	U
120-83-2	2,4-Dichlorophenol	1000	U
91-20-3	Naphthalene	170	J
106-47-8	4-Chloroaniline	1000	U
87-68-3	Hexachlorobutadiene	1000	U
105-60-2	Caprolactam	1000	U
59-50-7	4-Chloro-3-methylphenol	1000	U
91-57-6	2-Methylnaphthalene	65	J
77-47-4	Hexachlorocyclopentadiene	1000	U
88-06-2	2,4,6-Trichlorophenol	1000	U
95-95-4	2,4,5-Trichlorophenol	1000	U
92-52-4	1,1'-Biphenyl	1000	U
91-58-7	2-Chloronaphthalene	1000	U
88-74-4	2-Nitroaniline	2000	U
131-11-3	Dimethylphthalate	1000	U
606-20-2	2,6-Dinitrotoluene	1000	U
208-96-8	Acenaphthylene	1000	U
99-09-2	3-Nitroaniline	2000	U
83-32-9	Acenaphthene	95	J

UJ J UJ J UJ J

NW 9/17/13

1E - FORM I SV-2

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-13-048

2

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17078

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17078-2

Sample wt/vol: 30.3 (g/mL) g Lab File ID: RKXYM08.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 46 Decanted: (Y/N) Date Received: 06/19/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/27/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/07/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 3.3

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
51-28-5	2,4-Dinitrophenol	2000	U	UJ
100-02-7	4-Nitrophenol	2000	U	UJ
132-64-9	Dibenzofuran	37	J	J
121-14-2	2,4-Dinitrotoluene	1000	U	UJ
84-66-2	Diethylphthalate	1000	U	J
86-73-7	Fluorene	230	J	UJ
7005-72-3	4-Chlorophenyl-phenylether	1000	U	UJ
100-01-6	4-Nitroaniline	2000	U	
534-52-1	4,6-Dinitro-2-methylphenol	2000	U	
86-30-6	N-Nitrosodiphenylamin [1]	1000	U	
95-94-3	1,2,4,5-Tetrachlorobenzene	1000	U	
101-55-3	4-Bromophenyl-phenylether	1000	U	
118-74-1	Hexachlorobenzene	1000	U	
1912-24-9	Atrazine	1000	U	
87-86-5	Pentachlorophenol	2000	U	
85-01-8	Phenanthrene	670	J	J
120-12-7	Anthracene	210	J	J
86-74-8	Carbazole	1000	U	UJ
84-74-2	Di-n-butylphthalate	1000	U	UJ
206-44-0	Fluoranthene	1200		J
129-00-0	Pyrene	840	J	J
85-68-7	Butylbenzylphthalate	1000	U	UJ
91-94-1	3,3'-Dichlorobenzidine	1000	U	UJ
56-55-3	Benzo(a)anthracene	760	J	J
218-01-9	Chrysene	1100		J
117-81-7	Bis(2-ethylhexyl)phthalate	9600	B	J
117-84-0	Di-n-octylphthalate	1000	U	UJ
205-99-2	Benzo(b)fluoranthene	1100		J
207-08-9	Benzo(k)fluoranthene	730	J	
50-32-8	Benzo(a)pyrene	730	J	
193-39-5	Indeno(1,2,3-cd)pyrene	350	J	
53-70-3	Dibenzo(a,h)anthracene	230	J	
191-24-2	Benzo(g,h,i)perylene	470	J	J
58-90-2	2,3,4,6-Tetrachlorophenol	1000	U	UJ

[1] Cannot be separated from Diphenylamine

NW 1/17/13

1D - FORM I SV-1

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-13-048RE

2RE

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17078

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17078-2

Sample wt/vol: 30.3 (g/mL) g Lab File ID: RKXYM09.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 46 Decanted: (Y/N) Date Received: 06/19/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/27/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/07/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 3.3

Use original results

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
100-52-7	Benzaldehyde	1000	U
108-95-2	Phenol	1000	U
111-44-4	Bis(2-chloroethyl)ether	1000	U
95-57-8	2-Chlorophenol	1000	U
95-48-7	2-Methylphenol	1000	U
108-60-1	2,2'-Oxybis(1-chloropropane)	1000	U
98-86-2	Acetophenone	1000	U
106-44-5	4-Methylphenol	1000	U
621-64-7	N-Nitroso-di-n-propylamine	1000	U
67-72-1	Hexachloroethane	1000	U
98-95-3	Nitrobenzene	1000	U
78-59-1	Isophorone	1000	U
88-75-5	2-Nitrophenol	1000	U
105-67-9	2,4-Dimethylphenol	1000	U
111-91-1	Bis(2-chloroethoxy)methane	1000	U
120-83-2	2,4-Dichlorophenol	1000	U
91-20-3	Naphthalene	170	J
106-47-8	4-Chloroaniline	1000	U
87-68-3	Hexachlorobutadiene	1000	U
105-60-2	Caprolactam	1000	U
59-50-7	4-Chloro-3-methylphenol	1000	U
91-57-6	2-Methylnaphthalene	1000	U
77-47-4	Hexachlorocyclopentadiene	1000	U
88-06-2	2,4,6-Trichlorophenol	1000	U
95-95-4	2,4,5-Trichlorophenol	1000	U
92-52-4	1,1'-Biphenyl	1000	U
91-58-7	2-Chloronaphthalene	1000	U
88-74-4	2-Nitroaniline	2000	U
131-11-3	Dimethylphthalate	1000	U
606-20-2	2,6-Dinitrotoluene	1000	U
208-96-8	Acenaphthylene	1000	U
99-09-2	3-Nitroaniline	2000	U
83-32-9	Acenaphthene	97	J

UJ

J

UJ

UJ

J

MW 9/17/13

1E - FORM I SV-2

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-13-048RE 2RE

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17078

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17078-2

Sample wt/vol: 30.3 (g/mL) g Lab File ID: RKXYM09.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 46 Decanted: (Y/N) Date Received: 06/19/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/27/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/07/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 3.3

Use original results

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
51-28-5	2,4-Dinitrophenol	2000	U	UJ
100-02-7	4-Nitrophenol	2000	U	UJ
132-64-9	Dibenzofuran	38	J	J
121-14-2	2,4-Dinitrotoluene	1000	U	UJ
84-66-2	Diethylphthalate	1000	U	UJ
86-73-7	Fluorene	210	J	J
7005-72-3	4-Chlorophenyl-phenylether	1000	U	UJ
100-01-6	4-Nitroaniline	2000	U	UJ
534-52-1	4,6-Dinitro-2-methylphenol	2000	U	UJ
86-30-6	N-Nitrosodiphenylamin [1]	1000	U	
95-94-3	1,2,4,5-Tetrachlorobenzene	1000	U	
101-55-3	4-Bromophenyl-phenylether	1000	U	
118-74-1	Hexachlorobenzene	1000	U	
1912-24-9	Atrazine	1000	U	
87-86-5	Pentachlorophenol	2000	U	
85-01-8	Phenanthrene	660	J	J
120-12-7	Anthracene	180	J	J
86-74-8	Carbazole	1000	U	UJ
84-74-2	Di-n-butylphthalate	1000	U	UJ
206-44-0	Fluoranthene	1100		J
129-00-0	Pyrene	740	J	J
85-68-7	Butylbenzylphthalate	1000	U	UJ
91-94-1	3,3'-Dichlorobenzidine	1000	U	UJ
56-55-3	Benzo(a)anthracene	750	J	J
218-01-9	Chrysene	1100		J
117-81-7	Bis(2-ethylhexyl)phthalate	11000	B	J
117-84-0	Di-n-octylphthalate	1000	U	UJ
205-99-2	Benzo(b)fluoranthene	820	J	J
207-08-9	Benzo(k)fluoranthene	1000		J
50-32-8	Benzo(a)pyrene	970	J	J
193-39-5	Indeno(1,2,3-cd)pyrene	320	J	J
53-70-3	Dibenzo(a,h)anthracene	210	J	J
191-24-2	Benzo(g,h,i)perylene	490	J	J
58-90-2	2,3,4,6-Tetrachlorophenol	1000	U	UJ

[1] Cannot be separated from Diphenylamine

NW 9/17/13

EPA SAMPLE NO.
LMR13-14-024

3

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17078

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17078-3

Sample wt/vol: 30.3 (g/mL) g Lab File ID: ULLBN13.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 45 Decanted: (Y/N) Date Received: 06/19/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/27/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/04/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
100-52-7	Benzaldehyde	250	J
108-95-2	Phenol	120	J
111-44-4	Bis(2-chloroethyl)ether	310	U
95-57-8	2-Chlorophenol	310	U
95-48-7	2-Methylphenol	310	U
108-60-1	2,2'-Oxybis(1-chloropropane)	310	U
98-86-2	Acetophenone	500	U
106-44-5	4-Methylphenol	310	U
621-64-7	N-Nitroso-di-n-propylamine	310	U
67-72-1	Hexachloroethane	310	U
98-95-3	Nitrobenzene	310	U
78-59-1	Isophorone	310	U
88-75-5	2-Nitrophenol	310	U
105-67-9	2,4-Dimethylphenol	310	U
111-91-1	Bis(2-chloroethoxy)methane	310	U
120-83-2	2,4-Dichlorophenol	310	U
91-20-3	Naphthalene	140	J
106-47-8	4-Chloroaniline	310	U
87-68-3	Hexachlorobutadiene	310	U
105-60-2	Caprolactam	310	U
59-50-7	4-Chloro-3-methylphenol	310	U
91-57-6	2-Methylnaphthalene	65	J
77-47-4	Hexachlorocyclopentadiene	310	U
88-06-2	2,4,6-Trichlorophenol	310	U
95-95-4	2,4,5-Trichlorophenol	310	U
92-52-4	1,1'-Biphenyl	310	U
91-58-7	2-Chloronaphthalene	310	U
88-74-4	2-Nitroaniline	600	U
131-11-3	Dimethylphthalate	310	U
606-20-2	2,6-Dinitrotoluene	310	U
208-96-8	Acenaphthylene	49	J
99-09-2	3-Nitroaniline	600	U
83-32-9	Acenaphthene	70	J

MW 9/17/13

1E - FORM I SV-2
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-14-024

3

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17078

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17078-3

Sample wt/vol: 30.3 (g/mL) g Lab File ID: ULLBN13.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 45 Decanted: (Y/N) Date Received: 06/19/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/27/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/04/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
51-28-5	2,4-Dinitrophenol	600	U	
100-02-7	4-Nitrophenol	600	U	
132-64-9	Dibenzofuran	310	U	
121-14-2	2,4-Dinitrotoluene	310	U	
84-66-2	Diethylphthalate	310	U	
86-73-7	Fluorene	110	J	
7005-72-3	4-Chlorophenyl-phenylether	310	U	
100-01-6	4-Nitroaniline	600	U	
534-52-1	4,6-Dinitro-2-methylphenol	600	U	
86-30-6	N-Nitrosodiphenylamin [1]	310	U	
95-94-3	1,2,4,5-Tetrachlorobenzene	310	U	
101-55-3	4-Bromophenyl-phenylether	310	U	
118-74-1	Hexachlorobenzene	310	U	
1912-24-9	Atrazine	310	U	
87-86-5	Pentachlorophenol	600	U	
85-01-8	Phenanthrene	490		
120-12-7	Anthracene	90	J	
86-74-8	Carbazole	310	U	
84-74-2	Di-n-butylphthalate	310	U	
206-44-0	Fluoranthene	770		
129-00-0	Pyrene	1600		
85-68-7	Butylbenzylphthalate	310	U	
91-94-1	3,3'-Dichlorobenzidine	310	U	
56-55-3	Benzo(a)anthracene	680		
218-01-9	Chrysene	1300		
117-81-7	Bis(2-ethylhexyl)phthalate	3800		
117-84-0	Di-n-octylphthalate	310	~~U~~	UJ
205-99-2	Benzo(b)fluoranthene	740		J
207-08-9	Benzo(k)fluoranthene	650		
50-32-8	Benzo(a)pyrene	770		
193-39-5	Indeno(1,2,3-cd)pyrene	310		
53-70-3	Dibenzo(a,h)anthracene	220	~~J~~	J
191-24-2	Benzo(g,h,i)perylene	440		
58-90-2	2,3,4,6-Tetrachlorophenol	310	U	

[1] Cannot be separated from Diphenylamine

9/17/13

EPA SAMPLE NO.
LMR13-71-012

4

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17078

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17078-4

Sample wt/vol: 30.4 (g/mL) g Lab File ID: ULLBN14.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 23 Decanted: (Y/N) Date Received: 06/19/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/27/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/04/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
100-52-7	Benzaldehyde	33	J
108-95-2	Phenol	220	U
111-44-4	Bis(2-chloroethyl)ether	220	U
95-57-8	2-Chlorophenol	220	U
95-48-7	2-Methylphenol	220	U
108-60-1	2,2'-Oxybis(1-chloropropane)	220	U
98-86-2	Acetophenone	220 ~~39~~ ~~J B~~	U
106-44-5	4-Methylphenol	220	U
621-64-7	N-Nitroso-di-n-propylamine	220	U
67-72-1	Hexachloroethane	220	U
98-95-3	Nitrobenzene	220	U
78-59-1	Isophorone	220	U
88-75-5	2-Nitrophenol	220	U
105-67-9	2,4-Dimethylphenol	220	U
111-91-1	Bis(2-chloroethoxy)methane	220	U
120-83-2	2,4-Dichlorophenol	220	U
91-20-3	Naphthalene	7.7	J
106-47-8	4-Chloroaniline	220	U
87-68-3	Hexachlorobutadiene	220	U
105-60-2	Caprolactam	220	U
59-50-7	4-Chloro-3-methylphenol	220	U
91-57-6	2-Methylnaphthalene	220	U
77-47-4	Hexachlorocyclopentadiene	220	U
88-06-2	2,4,6-Trichlorophenol	220	U
95-95-4	2,4,5-Trichlorophenol	220	U
92-52-4	1,1'-Biphenyl	220	U
91-58-7	2-Chloronaphthalene	220	U
88-74-4	2-Nitroaniline	420	U
131-11-3	Dimethylphthalate	220	U
606-20-2	2,6-Dinitrotoluene	220	U
208-96-8	Acenaphthylene	8.2	J
99-09-2	3-Nitroaniline	420	U
83-32-9	Acenaphthene	21	J

MW 9/17/13

EPA SAMPLE NO.
LMR13-71-012

4

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17078

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17078-4

Sample wt/vol: 30.4 (g/mL) g Lab File ID: ULLBN14.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 23 Decanted: (Y/N) Date Received: 06/19/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/27/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/04/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
51-28-5	2,4-Dinitrophenol	420	U	
100-02-7	4-Nitrophenol	420	U	
132-64-9	Dibenzofuran	9.2	J	
121-14-2	2,4-Dinitrotoluene	220	U	
84-66-2	Diethylphthalate	220	U	
86-73-7	Fluorene	13	J	
7005-72-3	4-Chlorophenyl-phenylether	220	U	
100-01-6	4-Nitroaniline	420	U	
534-52-1	4,6-Dinitro-2-methylphenol	420	U	
86-30-6	N-Nitrosodiphenylamin [1]	220	U	
95-94-3	1,2,4,5-Tetrachlorobenzene	220	U	
101-55-3	4-Bromophenyl-phenylether	220	U	
118-74-1	Hexachlorobenzene	220	U	
1912-24-9	Atrazine	220	U	
87-86-5	Pentachlorophenol	420	U	
85-01-8	Phenanthrene	100	J	
120-12-7	Anthracene	56	J	
86-74-8	Carbazole	220	U	
84-74-2	Di-n-butylphthalate	220 ~~9.8~~	~~J B~~	U
206-44-0	Fluoranthene	310		
129-00-0	Pyrene	300		
85-68-7	Butylbenzylphthalate	220 ~~17~~	~~J B~~	U
91-94-1	3,3'-Dichlorobenzidine	220	U	
56-55-3	Benzo(a)anthracene	130	J	
218-01-9	Chrysene	160	J	
117-81-7	Bis(2-ethylhexyl)phthalate	45	J	
117-84-0	Di-n-octylphthalate	220	~~U~~	UJ
205-99-2	Benzo(b)fluoranthene	100	~~J~~	J
207-08-9	Benzo(k)fluoranthene	94	J	
50-32-8	Benzo(a)pyrene	130	J	
193-39-5	Indeno(1,2,3-cd)pyrene	46	J	
53-70-3	Dibenzo(a,h)anthracene	18	~~J~~	J
191-24-2	Benzo(g,h,i)perylene	61	J	
58-90-2	2,3,4,6-Tetrachlorophenol	220	U	

[1] Cannot be separated from Diphenylamine

NW 9/17/13

1D - FORM I SV-1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-71-024

5

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678
Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17078
Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17078-5
Sample wt/vol: 30.5 (g/mL) g Lab File ID: ULLBN15.D
Level: (LOW/MED) LOW Extraction: (Type) SONC
% Moisture: 24 Decanted: (Y/N) Date Received: 06/19/2013
Concentrated Extract Volume: 500 (uL) Date Extracted: 06/27/2013
Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/04/2013
GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
100-52-7	Benzaldehyde	120	J	
108-95-2	Phenol	220	U	
111-44-4	Bis(2-chloroethyl)ether	220	U	
95-57-8	2-Chlorophenol	220	U	
95-48-7	2-Methylphenol	220	U	
108-60-1	2,2'-Oxybis(1-chloropropane)	220	U	
98-86-2	Acetophenone	220 ~~110~~ ~~J B~~	U	
106-44-5	4-Methylphenol	220	U	
621-64-7	N-Nitroso-di-n-propylamine	220	U	
67-72-1	Hexachloroethane	220	U	
98-95-3	Nitrobenzene	220	U	
78-59-1	Isophorone	220	U	
88-75-5	2-Nitrophenol	220	U	
105-67-9	2,4-Dimethylphenol	220	U	
111-91-1	Bis(2-chloroethoxy)methane	220	U	
120-83-2	2,4-Dichlorophenol	220	U	
91-20-3	Naphthalene	220	U	
106-47-8	4-Chloroaniline	220	~~U~~	R
87-68-3	Hexachlorobutadiene	220	U	
105-60-2	Caprolactam	220	U	
59-50-7	4-Chloro-3-methylphenol	220	U	
91-57-6	2-Methylnaphthalene	220	U	
77-47-4	Hexachlorocyclopentadiene	220	~~U~~	R
88-06-2	2,4,6-Trichlorophenol	220	U	
95-95-4	2,4,5-Trichlorophenol	220	U	
92-52-4	1,1'-Biphenyl	220	U	
91-58-7	2-Chloronaphthalene	220	U	
88-74-4	2-Nitroaniline	430	U	
131-11-3	Dimethylphthalate	220	U	
606-20-2	2,6-Dinitrotoluene	220	U	
208-96-8	Acenaphthylene	220	U	
99-09-2	3-Nitroaniline	430	U	
83-32-9	Acenaphthene	220	U	

NW 9/17/13

1E - FORM I SV-2
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-71-024

5

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17078

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17078-5

Sample wt/vol: 30.5 (g/mL) g Lab File ID: ULLBN15.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 24 Decanted: (Y/N) Date Received: 06/19/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/27/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/04/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
51-28-5	2,4-Dinitrophenol	430	U	
100-02-7	4-Nitrophenol	430	U	
132-64-9	Dibenzofuran	220	U	
121-14-2	2,4-Dinitrotoluene	220	U	
84-66-2	Diethylphthalate	220	U	
86-73-7	Fluorene	220	U	
7005-72-3	4-Chlorophenyl-phenylether	220	U	
100-01-6	4-Nitroaniline	430	U	
534-52-1	4,6-Dinitro-2-methylphenol	430	U	
86-30-6	N-Nitrosodiphenylamin [1]	220	U	
95-94-3	1,2,4,5-Tetrachlorobenzene	220	U	
101-55-3	4-Bromophenyl-phenylether	220	U	
118-74-1	Hexachlorobenzene	220	U	
1912-24-9	Atrazine	220	U	
87-86-5	Pentachlorophenol	430	U	
85-01-8	Phenanthrene	21	J	
120-12-7	Anthracene	13	J	
86-74-8	Carbazole	220	U	
84-74-2	Di-n-butylphthalate	220 ~~12~~ ~~J B~~	U	
206-44-0	Fluoranthene	54	J	
129-00-0	Pyrene	42	J	
85-68-7	Butylbenzylphthalate	220 ~~34~~ ~~J B~~	U	
91-94-1	3,3'-Dichlorobenzidine	220 ~~U~~	R	
56-55-3	Benzo(a)anthracene	25	J	
218-01-9	Chrysene	31	J	
117-81-7	Bis(2-ethylhexyl)phthalate	72	J	
117-84-0	Di-n-octylphthalate	220 ~~U~~	UJ	
205-99-2	Benzo(b)fluoranthene	15 ~~J~~	J	
207-08-9	Benzo(k)fluoranthene	23	J	
50-32-8	Benzo(a)pyrene	20	J	
193-39-5	Indeno(1,2,3-cd)pyrene	9.5	J	
53-70-3	Dibenzo(a,h)anthracene	220 ~~U~~	UJ	
191-24-2	Benzo(g,h,i)perylene	12	J	
58-90-2	2,3,4,6-Tetrachlorophenol	220	U	

[1] Cannot be separated from Diphenylamine

NW 9/17/13

1D - FORM I SV-1

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-71-048

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678 6

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17078

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17078-6

Sample wt/vol: 30.4 (g/mL) g Lab File ID: ULLBN16.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 23 Decanted: (Y/N) Date Received: 06/19/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/27/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/04/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
100-52-7	Benzaldehyde	20	J
108-95-2	Phenol	11	J
111-44-4	Bis(2-chloroethyl)ether	220	U
95-57-8	2-Chlorophenol	220	U
95-48-7	2-Methylphenol	220	U
108-60-1	2,2'-Oxybis(1-chloropropane)	220	U
98-86-2	Acetophenone	220 ~~36 J B~~	U
106-44-5	4-Methylphenol	220	U
621-64-7	N-Nitroso-di-n-propylamine	220	U
67-72-1	Hexachloroethane	220	U
98-95-3	Nitrobenzene	220	U
78-59-1	Isophorone	220	U
88-75-5	2-Nitrophenol	220	U
105-67-9	2,4-Dimethylphenol	220	U
111-91-1	Bis(2-chloroethoxy)methane	220	U
120-83-2	2,4-Dichlorophenol	220	U
91-20-3	Naphthalene	220	U
106-47-8	4-Chloroaniline	220	U
87-68-3	Hexachlorobutadiene	220	U
105-60-2	Caprolactam	220	U
59-50-7	4-Chloro-3-methylphenol	220	U
91-57-6	2-Methylnaphthalene	220	U
77-47-4	Hexachlorocyclopentadiene	220	U
88-06-2	2,4,6-Trichlorophenol	220	U
95-95-4	2,4,5-Trichlorophenol	220	U
92-52-4	1,1'-Biphenyl	220	U
91-58-7	2-Chloronaphthalene	220	U
88-74-4	2-Nitroaniline	420	U
131-11-3	Dimethylphthalate	220	U
606-20-2	2,6-Dinitrotoluene	220	U
208-96-8	Acenaphthylene	220	U
99-09-2	3-Nitroaniline	420	U
83-32-9	Acenaphthene	220	U

MW 9/17/13

1E - FORM I SV-2
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-71-048

6

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17078

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17078-6

Sample wt/vol: 30.4 (g/mL) g Lab File ID: ULLBN16.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 23 Decanted: (Y/N) Date Received: 06/19/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/27/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/04/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
51-28-5	2,4-Dinitrophenol	420	U	
100-02-7	4-Nitrophenol	420	U	
132-64-9	Dibenzofuran	220	U	
121-14-2	2,4-Dinitrotoluene	220	U	
84-66-2	Diethylphthalate	220	U	
86-73-7	Fluorene	220	U	
7005-72-3	4-Chlorophenyl-phenylether	220	U	
100-01-6	4-Nitroaniline	420	U	
534-52-1	4,6-Dinitro-2-methylphenol	420	U	
86-30-6	N-Nitrosodiphenylamin [1]	220	U	
95-94-3	1,2,4,5-Tetrachlorobenzene	220	U	
101-55-3	4-Bromophenyl-phenylether	220	U	
118-74-1	Hexachlorobenzene	220	U	
1912-24-9	Atrazine	220	U	
87-86-5	Pentachlorophenol	420	U	
85-01-8	Phenanthrene	220	U	
120-12-7	Anthracene	220	U	
86-74-8	Carbazole	220	U	
84-74-2	Di-n-butylphthalate	220 ~~7.8~~	~~J B~~	U
206-44-0	Fluoranthene	9.6	J	
129-00-0	Pyrene	12	J	
85-68-7	Butylbenzylphthalate	220 ~~16~~	~~J B~~	U
91-94-1	3,3'-Dichlorobenzidine	220	U	
56-55-3	Benzo(a)anthracene	6.4	J	
218-01-9	Chrysene	11	J	
117-81-7	Bis(2-ethylhexyl)phthalate	43	J	
117-84-0	Di-n-octylphthalate	220	~~U~~	UJ
205-99-2	Benzo(b)fluoranthene	220	~~U~~	UJ
207-08-9	Benzo(k)fluoranthene	220	U	
50-32-8	Benzo(a)pyrene	220	U	
193-39-5	Indeno(1,2,3-cd)pyrene	220	U	
53-70-3	Dibenzo(a,h)anthracene	220	~~U~~	UJ
191-24-2	Benzo(g,h,i)perylene	220	U	
58-90-2	2,3,4,6-Tetrachlorophenol	220	U	

[1] Cannot be separated from Diphenylamine

NW 9/17/13

1D - FORM I SV-1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-71-072

7

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17078

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17078-7

Sample wt/vol: 30.3 (g/mL) g Lab File ID: ULLBR05.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 20 Decanted: (Y/N) Date Received: 06/19/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/27/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/05/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
100-52-7	Benzaldehyde	91	J
108-95-2	Phenol	53	J
111-44-4	Bis(2-chloroethyl)ether	210	U
95-57-8	2-Chlorophenol	210	U
95-48-7	2-Methylphenol	210	U
108-60-1	2,2'-Oxybis(1-chloropropane)	210	U
98-86-2	Acetophenone	210 ~~87~~	~~J B~~ U
106-44-5	4-Methylphenol	210	U
621-64-7	N-Nitroso-di-n-propylamine	210	U
67-72-1	Hexachloroethane	210	U
98-95-3	Nitrobenzene	210	U
78-59-1	Isophorone	210	U
88-75-5	2-Nitrophenol	210	U
105-67-9	2,4-Dimethylphenol	210	U
111-91-1	Bis(2-chloroethoxy)methane	210	U
120-83-2	2,4-Dichlorophenol	210	U
91-20-3	Naphthalene	210	U
106-47-8	4-Chloroaniline	210	U
87-68-3	Hexachlorobutadiene	210	U
105-60-2	Caprolactam	210	U
59-50-7	4-Chloro-3-methylphenol	210	U
91-57-6	2-Methylnaphthalene	210	U
77-47-4	Hexachlorocyclopentadiene	210	U UJ
88-06-2	2,4,6-Trichlorophenol	210	U
95-95-4	2,4,5-Trichlorophenol	210	U
92-52-4	1,1'-Biphenyl	210	U
91-58-7	2-Chloronaphthalene	210	U
88-74-4	2-Nitroaniline	410	U
131-11-3	Dimethylphthalate	210	U
606-20-2	2,6-Dinitrotoluene	210	U
208-96-8	Acenaphthylene	210	U
99-09-2	3-Nitroaniline	410	U
83-32-9	Acenaphthene	210	U

NW 9/17/13

EPA SAMPLE NO.
LMR13-71-072

7

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17078

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17078-7

Sample wt/vol: 30.3 (g/mL) g Lab File ID: ULLBR05.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 20 Decanted: (Y/N) Date Received: 06/19/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/27/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/05/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
51-28-5	2,4-Dinitrophenol	410	U	
100-02-7	4-Nitrophenol	410	U	
132-64-9	Dibenzofuran	210	U	
121-14-2	2,4-Dinitrotoluene	210	U	
84-66-2	Diethylphthalate	210	U	
86-73-7	Fluorene	210	U	
7005-72-3	4-Chlorophenyl-phenylether	210	U	
100-01-6	4-Nitroaniline	410	U	
534-52-1	4,6-Dinitro-2-methylphenol	410	U	
86-30-6	N-Nitrosodiphenylamin [1]	210	U	
95-94-3	1,2,4,5-Tetrachlorobenzene	210	U	
101-55-3	4-Bromophenyl-phenylether	210	U	
118-74-1	Hexachlorobenzene	210	U	
1912-24-9	Atrazine	210	U	
87-86-5	Pentachlorophenol	410	U	
85-01-8	Phenanthrene	210	U	
120-12-7	Anthracene	210	U	
86-74-8	Carbazole	210	U	
84-74-2	Di-n-butylphthalate	210 ~~12~~	~~J B~~	U
206-44-0	Fluoranthene	210	U	
129-00-0	Pyrene	210	U	
85-68-7	Butylbenzylphthalate	210 ~~16~~	~~J B~~	U
91-94-1	3,3'-Dichlorobenzidine	210	U	
56-55-3	Benzo(a)anthracene	210	U	
218-01-9	Chrysene	210	U	
117-81-7	Bis(2-ethylhexyl)phthalate	40	J	
117-84-0	Di-n-octylphthalate	210	U	
205-99-2	Benzo(b)fluoranthene	210	~~U~~	UJ
207-08-9	Benzo(k)fluoranthene	210	U	
50-32-8	Benzo(a)pyrene	210	U	
193-39-5	Indeno(1,2,3-cd)pyrene	210	U	
53-70-3	Dibenzo(a,h)anthracene	210	~~U~~	UJ
191-24-2	Benzo(g,h,i)perylene	210	U	
58-90-2	2,3,4,6-Tetrachlorophenol	210	U	

[1] Cannot be separated from Diphenylamine

MW 9/17/13

1D - FORM I SV-1

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-71-024FD

9

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17078

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17078-9

Sample wt/vol: 30.4 (g/mL) g Lab File ID: ULLBR06.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 30 Decanted: (Y/N) Date Received: 06/19/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/27/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/05/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
100-52-7	Benzaldehyde	68	J	
108-95-2	Phenol	240	U	
111-44-4	Bis(2-chloroethyl)ether	240	U	
95-57-8	2-Chlorophenol	240	U	
95-48-7	2-Methylphenol	240	U	
108-60-1	2,2'-Oxybis(1-chloropropane)	240	U	
98-86-2	Acetophenone	240 ~~64~~	~~J B~~	U
106-44-5	4-Methylphenol	240	U	
621-64-7	N-Nitroso-di-n-propylamine	240	U	
67-72-1	Hexachloroethane	240	U	
98-95-3	Nitrobenzene	240	U	
78-59-1	Isophorone	240	U	
88-75-5	2-Nitrophenol	240	U	
105-67-9	2,4-Dimethylphenol	240	U	
111-91-1	Bis(2-chloroethoxy)methane	240	U	
120-83-2	2,4-Dichlorophenol	240	U	
91-20-3	Naphthalene	240	U	
106-47-8	4-Chloroaniline	240	~~U~~	R
87-68-3	Hexachlorobutadiene	240	U	
105-60-2	Caprolactam	240	U	
59-50-7	4-Chloro-3-methylphenol	240	U	
91-57-6	2-Methylnaphthalene	240	U	
77-47-4	Hexachlorocyclopentadiene	240	~~U~~	R
88-06-2	2,4,6-Trichlorophenol	240	U	
95-95-4	2,4,5-Trichlorophenol	240	U	
92-52-4	1,1'-Biphenyl	240	U	
91-58-7	2-Chloronaphthalene	240	U	
88-74-4	2-Nitroaniline	470	U	
131-11-3	Dimethylphthalate	240	U	
606-20-2	2,6-Dinitrotoluene	240	U	
208-96-8	Acenaphthylene	240	U	
99-09-2	3-Nitroaniline	470	U	
83-32-9	Acenaphthene	240	U	

NW 9/17/13

1E - FORM I SV-2
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-71-024FD

9

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17078

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17078-9

Sample wt/vol: 30.4 (g/mL) g Lab File ID: ULLBR06.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 30 Decanted: (Y/N) Date Received: 06/19/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/27/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/05/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
51-28-5	2,4-Dinitrophenol	470	U
100-02-7	4-Nitrophenol	470	U
132-64-9	Dibenzofuran	240	U
121-14-2	2,4-Dinitrotoluene	240	U
84-66-2	Diethylphthalate	240	U
86-73-7	Fluorene	240	U
7005-72-3	4-Chlorophenyl-phenylether	240	U
100-01-6	4-Nitroaniline	470	U
534-52-1	4,6-Dinitro-2-methylphenol	470	U
86-30-6	N-Nitrosodiphenylamin [1]	240	U
95-94-3	1,2,4,5-Tetrachlorobenzene	240	U
101-55-3	4-Bromophenyl-phenylether	240	U
118-74-1	Hexachlorobenzene	240	U
1912-24-9	Atrazine	240	U
87-86-5	Pentachlorophenol	470	U
85-01-8	Phenanthrene	240	U
120-12-7	Anthracene	240	U
86-74-8	Carbazole	240	U
84-74-2	Di-n-butylphthalate	240 ~~63~~ ~~J B~~	U
206-44-0	Fluoranthene	50	J
129-00-0	Pyrene	53	J
85-68-7	Butylbenzylphthalate	240 ~~20~~ ~~J B~~	U
91-94-1	3,3'-Dichlorobenzidine	240 ~~J~~	R
56-55-3	Benzo(a)anthracene	35	J
218-01-9	Chrysene	41	J
117-81-7	Bis(2-ethylhexyl)phthalate	46	J
117-84-0	Di-n-octylphthalate	240	U
205-99-2	Benzo(b)fluoranthene	24 ~~J~~	J
207-08-9	Benzo(k)fluoranthene	22	J
50-32-8	Benzo(a)pyrene	34	J
193-39-5	Indeno(1,2,3-cd)pyrene	8.3	J
53-70-3	Dibenzo(a,h)anthracene	240 ~~J~~	UJ
191-24-2	Benzo(g,h,i)perylene	13	J
58-90-2	2,3,4,6-Tetrachlorophenol	240	U

[1] Cannot be separated from Diphenylamine

MW 9/17/13

1D - FORM I SV-1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-07-012

10

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17078

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17078-10

Sample wt/vol: 30.1 (g/mL) g Lab File ID: ULLBR07.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 49 Decanted: (Y/N) Date Received: 06/19/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/27/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/05/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
100-52-7	Benzaldehyde	57	J
108-95-2	Phenol	330	U
111-44-4	Bis(2-chloroethyl)ether	330	U
95-57-8	2-Chlorophenol	330	U
95-48-7	2-Methylphenol	330	U
108-60-1	2,2'-Oxybis(1-chloropropane)	330	U
98-86-2	Acetophenone	330 ~~55~~	~~J B~~ U
106-44-5	4-Methylphenol	330	U
621-64-7	N-Nitroso-di-n-propylamine	330	U
67-72-1	Hexachloroethane	330	U
98-95-3	Nitrobenzene	330	U
78-59-1	Isophorone	330	U
88-75-5	2-Nitrophenol	330	U
105-67-9	2,4-Dimethylphenol	330	U
111-91-1	Bis(2-chloroethoxy)methane	330	U
120-83-2	2,4-Dichlorophenol	330	U
91-20-3	Naphthalene	180	J
106-47-8	4-Chloroaniline	330	U
87-68-3	Hexachlorobutadiene	330	U
105-60-2	Caprolactam	330	U
59-50-7	4-Chloro-3-methylphenol	330	U
91-57-6	2-Methylnaphthalene	43	J
77-47-4	Hexachlorocyclopentadiene	330 ~~U~~	UJ
88-06-2	2,4,6-Trichlorophenol	330	U
95-95-4	2,4,5-Trichlorophenol	330	U
92-52-4	1,1'-Biphenyl	330	U
91-58-7	2-Chloronaphthalene	330	U
88-74-4	2-Nitroaniline	640	U
131-11-3	Dimethylphthalate	330	U
606-20-2	2,6-Dinitrotoluene	330	U
208-96-8	Acenaphthylene	52	J
99-09-2	3-Nitroaniline	640	U
83-32-9	Acenaphthene	33	J

NW 9/17/13

EPA SAMPLE NO.
LMR13-07-012

10

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17078

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17078-10

Sample wt/vol: 30.1 (g/mL) g Lab File ID: ULLBR07.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 49 Decanted: (Y/N) Date Received: 06/19/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/27/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/05/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
51-28-5	2,4-Dinitrophenol	640	U	
100-02-7	4-Nitrophenol	640	U	
132-64-9	Dibenzofuran	33	J	
121-14-2	2,4-Dinitrotoluene	330	U	
84-66-2	Diethylphthalate	330	U	
86-73-7	Fluorene	75	J	
7005-72-3	4-Chlorophenyl-phenylether	330	U	
100-01-6	4-Nitroaniline	640	U	
534-52-1	4,6-Dinitro-2-methylphenol	640	U	
86-30-6	N-Nitrosodiphenylamin [1]	330	U	
95-94-3	1,2,4,5-Tetrachlorobenzene	330	U	
101-55-3	4-Bromophenyl-phenylether	330	U	
118-74-1	Hexachlorobenzene	330	U	
1912-24-9	Atrazine	330	U	
87-86-5	Pentachlorophenol	640	U	
85-01-8	Phenanthrene	330	U	
120-12-7	Anthracene	85	J	
86-74-8	Carbazole	330	U	
84-74-2	Di-n-butylphthalate	330	U	
206-44-0	Fluoranthene	330	U	
129-00-0	Pyrene	1200		
85-68-7	Butylbenzylphthalate	330 ~~40~~ ~~J~~ ~~B~~		u
91-94-1	3,3'-Dichlorobenzidine	330	U	
56-55-3	Benzo(a)anthracene	760		
218-01-9	Chrysene	700		
117-81-7	Bis(2-ethylhexyl)phthalate	970		
117-84-0	Di-n-octylphthalate	330	U	
205-99-2	Benzo(b)fluoranthene	690		J
207-08-9	Benzo(k)fluoranthene	550		
50-32-8	Benzo(a)pyrene	630		
193-39-5	Indeno(1,2,3-cd)pyrene	360		
53-70-3	Dibenzo(a,h)anthracene	200 ~~J~~		J
191-24-2	Benzo(g,h,i)perylene	410		
58-90-2	2,3,4,6-Tetrachlorophenol	330	U	

[1] Cannot be separated from Diphenylamine

NW 9/17/13

1D - FORM I SV-1

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-07-024

11

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17078

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17078-11

Sample wt/vol: 30.1 (g/mL) g Lab File ID: ULLBU16.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 44 Decanted: (Y/N) Date Received: 06/19/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/27/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/06/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 2.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
100-52-7	Benzaldehyde	62	J	
108-95-2	Phenol	600	U	
111-44-4	Bis(2-chloroethyl)ether	600	U	
95-57-8	2-Chlorophenol	600	U	
95-48-7	2-Methylphenol	600	U	
108-60-1	2,2'-Oxybis(1-chloropropane)	600	U	
98-86-2	Acetophenone	600 ~~63~~	~~J B~~	U
106-44-5	4-Methylphenol	600	U	
621-64-7	N-Nitroso-di-n-propylamine	600	U	
67-72-1	Hexachloroethane	600	U	
98-95-3	Nitrobenzene	600	U	
78-59-1	Isophorone	600	U	
88-75-5	2-Nitrophenol	600	U	
105-67-9	2,4-Dimethylphenol	600	U	
111-91-1	Bis(2-chloroethoxy)methane	600	U	
120-83-2	2,4-Dichlorophenol	600	U	
91-20-3	Naphthalene	88	J	
106-47-8	4-Chloroaniline	600	U	
87-68-3	Hexachlorobutadiene	600	U	
105-60-2	Caprolactam	600	U	
59-50-7	4-Chloro-3-methylphenol	600	U	
91-57-6	2-Methylnaphthalene	38	J	
77-47-4	Hexachlorocyclopentadiene	600	~~U~~	UJ
88-06-2	2,4,6-Trichlorophenol	600	U	
95-95-4	2,4,5-Trichlorophenol	600	U	
92-52-4	1,1'-Biphenyl	600	U	
91-58-7	2-Chloronaphthalene	600	U	
88-74-4	2-Nitroaniline	1200	U	
131-11-3	Dimethylphthalate	600	U	
606-20-2	2,6-Dinitrotoluene	600	U	
208-96-8	Acenaphthylene	57	J	
99-09-2	3-Nitroaniline	1200	U	
83-32-9	Acenaphthene	61	J	

MW 9/17/13

EPA SAMPLE NO.
LMR13-07-024

11

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17078

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17078-11

Sample wt/vol: 30.1 (g/mL) g Lab File ID: ULLBU16.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 44 Decanted: (Y/N) Date Received: 06/19/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/27/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/06/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 2.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
51-28-5	2,4-Dinitrophenol	1200	U	
100-02-7	4-Nitrophenol	1200	U	
132-64-9	Dibenzofuran	23	J	
121-14-2	2,4-Dinitrotoluene	600	U	
84-66-2	Diethylphthalate	600	U	
86-73-7	Fluorene	51	J	
7005-72-3	4-Chlorophenyl-phenylether	600	U	
100-01-6	4-Nitroaniline	1200	U	
534-52-1	4,6-Dinitro-2-methylphenol	1200	U	
86-30-6	N-Nitrosodiphenylamin [1]	600	U	
95-94-3	1,2,4,5-Tetrachlorobenzene	600	U	
101-55-3	4-Bromophenyl-phenylether	600	U	
118-74-1	Hexachlorobenzene	600	U	
1912-24-9	Atrazine	600	U	
87-86-5	Pentachlorophenol	1200	U	
85-01-8	Phenanthrene	450	J	
120-12-7	Anthracene	160	J	
86-74-8	Carbazole	600	U	
84-74-2	Di-n-butylphthalate	600	U	
206-44-0	Fluoranthene	1100		
129-00-0	Pyrene	1300		
85-68-7	Butylbenzylphthalate	600	U	
91-94-1	3,3'-Dichlorobenzidine	600	U	
56-55-3	Benzo(a)anthracene	910		
218-01-9	Chrysene	1000		
117-81-7	Bis(2-ethylhexyl)phthalate	83	J	
117-84-0	Di-n-octylphthalate	600	U	
205-99-2	Benzo(b)fluoranthene	620		J
207-08-9	Benzo(k)fluoranthene	510	J	
50-32-8	Benzo(a)pyrene	550	J	
193-39-5	Indeno(1,2,3-cd)pyrene	300	J	
53-70-3	Dibenzo(a,h)anthracene	190	J	J
191-24-2	Benzo(g,h,i)perylene	380	J	
58-90-2	2,3,4,6-Tetrachlorophenol	600	U	

[1] Cannot be separated from Diphenylamine

MW 9/17/13

1D - FORM I SV-1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-07-048

12

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17078

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17078-12

Sample wt/vol: 30.9 (g/mL) g Lab File ID: ULLBR09.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 40 Decanted: (Y/N) Date Received: 06/19/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/27/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/05/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 2.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
100-52-7	Benzaldehyde	69	~~J~~ J
108-95-2	Phenol	550	U
111-44-4	Bis(2-chloroethyl)ether	550	U
95-57-8	2-Chlorophenol	550	U
95-48-7	2-Methylphenol	550	U
108-60-1	2,2'-Oxybis(1-chloropropane)	550	U
98-86-2	Acetophenone	550 ~~63~~	~~J B~~ U
106-44-5	4-Methylphenol	550	U
621-64-7	N-Nitroso-di-n-propylamine	550	U
67-72-1	Hexachloroethane	550	U
98-95-3	Nitrobenzene	550	U
78-59-1	Isophorone	550	U
88-75-5	2-Nitrophenol	550	U
105-67-9	2,4-Dimethylphenol	550	U
111-91-1	Bis(2-chloroethoxy)methane	550	U
120-83-2	2,4-Dichlorophenol	550	U
91-20-3	Naphthalene	150	J
106-47-8	4-Chloroaniline	550	U
87-68-3	Hexachlorobutadiene	550	U
105-60-2	Caprolactam	550	U
59-50-7	4-Chloro-3-methylphenol	550	U
91-57-6	2-Methylnaphthalene	95	J
77-47-4	Hexachlorocyclopentadiene	550	~~U~~ UJ
88-06-2	2,4,6-Trichlorophenol	550	U
95-95-4	2,4,5-Trichlorophenol	550	U
92-52-4	1,1'-Biphenyl	550	U
91-58-7	2-Chloronaphthalene	550	U
88-74-4	2-Nitroaniline	1100	U
131-11-3	Dimethylphthalate	550	U
606-20-2	2,6-Dinitrotoluene	550	U
208-96-8	Acenaphthylene	220	J
99-09-2	3-Nitroaniline	1100	U
83-32-9	Acenaphthene	1000	

NW 9/17/13

1E - FORM I SV-2
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-07-048

12

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17078

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17078-12

Sample wt/vol: 30.9 (g/mL) g Lab File ID: ULLBR09.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 40 Decanted: (Y/N) Date Received: 06/19/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/27/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/05/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 2.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
51-28-5	2,4-Dinitrophenol	1100	U	
100-02-7	4-Nitrophenol	1100	U	
132-64-9	Dibenzofuran	94	J	
121-14-2	2,4-Dinitrotoluene	550	U	
84-66-2	Diethylphthalate	550	U	
86-73-7	Fluorene	920		
7005-72-3	4-Chlorophenyl-phenylether	550	U	
100-01-6	4-Nitroaniline	1100	U	
534-52-1	4,6-Dinitro-2-methylphenol	1100	U	
86-30-6	N-Nitrosodiphenylamin [1]	550	U	
95-94-3	1,2,4,5-Tetrachlorobenzene	550	U	
101-55-3	4-Bromophenyl-phenylether	550	U	
118-74-1	Hexachlorobenzene	550	U	
1912-24-9	Atrazine	550	U	
87-86-5	Pentachlorophenol	1100	U	
85-01-8	Phenanthrene	3600		
120-12-7	Anthracene	540	J	
86-74-8	Carbazole	28	J	
84-74-2	Di-n-butylphthalate	550	U	
206-44-0	Fluoranthene	4200		
129-00-0	Pyrene	5000		
85-68-7	Butylbenzylphthalate	550	U	
91-94-1	3,3'-Dichlorobenzidine	550	U	
56-55-3	Benzo(a)anthracene	2700		
218-01-9	Chrysene	2500		
117-81-7	Bis(2-ethylhexyl)phthalate	100	J	
117-84-0	Di-n-octylphthalate	550	U	
205-99-2	Benzo(b)fluoranthene	2000		J
207-08-9	Benzo(k)fluoranthene	1500		
50-32-8	Benzo(a)pyrene	1700		
193-39-5	Indeno(1,2,3-cd)pyrene	850		
53-70-3	Dibenzo(a,h)anthracene	390	J	J
191-24-2	Benzo(g,h,i)perylene	910		
58-90-2	2,3,4,6-Tetrachlorophenol	550	U	

[1] Cannot be separated from Diphenylamine

NW 9/17/13

1D - FORM I SV-1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-07-072

13

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17078

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17078-13

Sample wt/vol: 30.4 (g/mL) g Lab File ID: ULLBR10.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 31 Decanted: (Y/N) Date Received: 06/19/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/27/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/05/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
100-52-7	Benzaldehyde	39	J	
108-95-2	Phenol	240	U	
111-44-4	Bis(2-chloroethyl)ether	240	U	
95-57-8	2-Chlorophenol	240	U	
95-48-7	2-Methylphenol	240	U	
108-60-1	2,2'-Oxybis(1-chloropropane)	240	U	
98-86-2	Acetophenone	240 ~~49~~	~~J B~~	U
106-44-5	4-Methylphenol	240	U	
621-64-7	N-Nitroso-di-n-propylamine	240	U	
67-72-1	Hexachloroethane	240	U	
98-95-3	Nitrobenzene	240	U	
78-59-1	Isophorone	240	U	
88-75-5	2-Nitrophenol	240	U	
105-67-9	2,4-Dimethylphenol	240	U	
111-91-1	Bis(2-chloroethoxy)methane	240	U	
120-83-2	2,4-Dichlorophenol	240	U	
91-20-3	Naphthalene	62	J	
106-47-8	4-Chloroaniline	240	U	
87-68-3	Hexachlorobutadiene	240	U	
105-60-2	Caprolactam	240	U	
59-50-7	4-Chloro-3-methylphenol	240	U	
91-57-6	2-Methylnaphthalene	38	J	
77-47-4	Hexachlorocyclopentadiene	240	~~U~~	UJ
88-06-2	2,4,6-Trichlorophenol	240	U	
95-95-4	2,4,5-Trichlorophenol	240	U	
92-52-4	1,1'-Biphenyl	240	U	
91-58-7	2-Chloronaphthalene	240	U	
88-74-4	2-Nitroaniline	470	U	
131-11-3	Dimethylphthalate	240	U	
606-20-2	2,6-Dinitrotoluene	240	U	
208-96-8	Acenaphthylene	38	J	
99-09-2	3-Nitroaniline	470	U	
83-32-9	Acenaphthene	130	J	

NW 9/17/13

1E - FORM I SV-2
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-07-072

13

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17078

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17078-13

Sample wt/vol: 30.4 (g/mL) g Lab File ID: ULLBR10.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 31 Decanted: (Y/N) Date Received: 06/19/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/27/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/05/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
51-28-5	2,4-Dinitrophenol	470	U	
100-02-7	4-Nitrophenol	470	U	
132-64-9	Dibenzofuran	37	J	
121-14-2	2,4-Dinitrotoluene	240	U	
84-66-2	Diethylphthalate	240	U	
86-73-7	Fluorene	87	J	
7005-72-3	4-Chlorophenyl-phenylether	240	U	
100-01-6	4-Nitroaniline	470	U	
534-52-1	4,6-Dinitro-2-methylphenol	470	U	
86-30-6	N-Nitrosodiphenylamin [1]	240	U	
95-94-3	1,2,4,5-Tetrachlorobenzene	240	U	
101-55-3	4-Bromophenyl-phenylether	240	U	
118-74-1	Hexachlorobenzene	240	U	
1912-24-9	Atrazine	240	U	
87-86-5	Pentachlorophenol	470	U	
85-01-8	Phenanthrene	860		
120-12-7	Anthracene	220	J	
86-74-8	Carbazole	240	U	
84-74-2	Di-n-butylphthalate	240	U	
206-44-0	Fluoranthene	1200		
129-00-0	Pyrene	1300		
85-68-7	Butylbenzylphthalate	240 ~~44~~	~~J B~~	U
91-94-1	3,3'-Dichlorobenzidine	240	U	
56-55-3	Benzo(a)anthracene	560		
218-01-9	Chrysene	680		
117-81-7	Bis(2-ethylhexyl)phthalate	79	J	
117-84-0	Di-n-octylphthalate	240	U	
205-99-2	Benzo(b)fluoranthene	370		J
207-08-9	Benzo(k)fluoranthene	410		
50-32-8	Benzo(a)pyrene	440		
193-39-5	Indeno(1,2,3-cd)pyrene	240	J	
53-70-3	Dibenzo(a,h)anthracene	100	J	J
191-24-2	Benzo(g,h,i)perylene	270		
58-90-2	2,3,4,6-Tetrachlorophenol	240	U	

[1] Cannot be separated from Diphenylamine

MW 9/17/13

1D - FORM I SV-1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-21-048

14

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17078

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17078-14

Sample wt/vol: 30.9 (g/mL) g Lab File ID: ULLBR11.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 27 Decanted: (Y/N) Date Received: 06/19/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/27/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/05/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
100-52-7	Benzaldehyde	32	J
108-95-2	Phenol	230	U
111-44-4	Bis(2-chloroethyl)ether	230	U
95-57-8	2-Chlorophenol	230	U
95-48-7	2-Methylphenol	230	U
108-60-1	2,2'-Oxybis(1-chloropropane)	230	U
98-86-2	Acetophenone	230 ~~47~~	~~J B~~ U
106-44-5	4-Methylphenol	230	U
621-64-7	N-Nitroso-di-n-propylamine	230	U
67-72-1	Hexachloroethane	230	U
98-95-3	Nitrobenzene	230	U
78-59-1	Isophorone	230	U
88-75-5	2-Nitrophenol	230	U
105-67-9	2,4-Dimethylphenol	230	U
111-91-1	Bis(2-chloroethoxy)methane	230	U
120-83-2	2,4-Dichlorophenol	230	U
91-20-3	Naphthalene	11	J
106-47-8	4-Chloroaniline	230	U
87-68-3	Hexachlorobutadiene	230	U
105-60-2	Caprolactam	230	U
59-50-7	4-Chloro-3-methylphenol	230	U
91-57-6	2-Methylnaphthalene	230	U
77-47-4	Hexachlorocyclopentadiene	230	~~U~~ UJ
88-06-2	2,4,6-Trichlorophenol	230	U
95-95-4	2,4,5-Trichlorophenol	230	U
92-52-4	1,1'-Biphenyl	230	U
91-58-7	2-Chloronaphthalene	230	U
88-74-4	2-Nitroaniline	440	U
131-11-3	Dimethylphthalate	230	U
606-20-2	2,6-Dinitrotoluene	230	U
208-96-8	Acenaphthylene	16	J
99-09-2	3-Nitroaniline	440	U
83-32-9	Acenaphthene	50	J

MW 9/17/13

1E - FORM I SV-2
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-21-048

14

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17078

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17078-14

Sample wt/vol: 30.9 (g/mL) g Lab File ID: ULLBR11.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 27 Decanted: (Y/N) Date Received: 06/19/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/27/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/05/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
51-28-5	2,4-Dinitrophenol	440	U	
100-02-7	4-Nitrophenol	440	U	
132-64-9	Dibenzofuran	230	U	
121-14-2	2,4-Dinitrotoluene	230	U	
84-66-2	Diethylphthalate	230	U	
86-73-7	Fluorene	14	J	
7005-72-3	4-Chlorophenyl-phenylether	230	U	
100-01-6	4-Nitroaniline	440	U	
534-52-1	4,6-Dinitro-2-methylphenol	440	U	
86-30-6	N-Nitrosodiphenylamin [1]	230	U	
95-94-3	1,2,4,5-Tetrachlorobenzene	230	U	
101-55-3	4-Bromophenyl-phenylether	230	U	
118-74-1	Hexachlorobenzene	230	U	
1912-24-9	Atrazine	230	U	
87-86-5	Pentachlorophenol	440	U	
85-01-8	Phenanthrene	250		
120-12-7	Anthracene	90	J	
86-74-8	Carbazole	230	U	
84-74-2	Di-n-butylphthalate	230 ~~13~~ ~~J B~~		U
206-44-0	Fluoranthene	460		
129-00-0	Pyrene	490		
85-68-7	Butylbenzylphthalate	230 ~~28~~ ~~J B~~		U
91-94-1	3,3'-Dichlorobenzidine	230	U	
56-55-3	Benzo(a)anthracene	240		
218-01-9	Chrysene	270		
117-81-7	Bis(2-ethylhexyl)phthalate	64	J	
117-84-0	Di-n-octylphthalate	230	U	
205-99-2	Benzo(b)fluoranthene	150	~~J~~	J
207-08-9	Benzo(k)fluoranthene	200	J	
50-32-8	Benzo(a)pyrene	210	J	
193-39-5	Indeno(1,2,3-cd)pyrene	99	J	
53-70-3	Dibenzo(a,h)anthracene	32	~~J~~	J
191-24-2	Benzo(g,h,i)perylene	130	J	
58-90-2	2,3,4,6-Tetrachlorophenol	230	U	

[1] Cannot be separated from Diphenylamine

MW 9/17/13

EPA SAMPLE NO.
LMR13-15-024

16

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17078

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17078-16

Sample wt/vol: 30.6 (g/mL) g Lab File ID: ULLBR12.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 33 Decanted: (Y/N) Date Received: 06/19/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/27/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/05/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
100-52-7	Benzaldehyde	53	J
108-95-2	Phenol	250	U
111-44-4	Bis(2-chloroethyl)ether	250	U
95-57-8	2-Chlorophenol	250	U
95-48-7	2-Methylphenol	250	U
108-60-1	2,2'-Oxybis(1-chloropropane)	250	U
98-86-2	Acetophenone	250 ~~59~~	~~J B~~ U
106-44-5	4-Methylphenol	250	U
621-64-7	N-Nitroso-di-n-propylamine	250	U
67-72-1	Hexachloroethane	250	U
98-95-3	Nitrobenzene	250	U
78-59-1	Isophorone	250	U
88-75-5	2-Nitrophenol	250	U
105-67-9	2,4-Dimethylphenol	250	U
111-91-1	Bis(2-chloroethoxy)methane	250	U
120-83-2	2,4-Dichlorophenol	250	U
91-20-3	Naphthalene	65	J
106-47-8	4-Chloroaniline	250	U
87-68-3	Hexachlorobutadiene	250	U
105-60-2	Caprolactam	250	U
59-50-7	4-Chloro-3-methylphenol	250	U
91-57-6	2-Methylnaphthalene	250	U
77-47-4	Hexachlorocyclopentadiene	250	~~U~~ UJ
88-06-2	2,4,6-Trichlorophenol	250	U
95-95-4	2,4,5-Trichlorophenol	250	U
92-52-4	1,1'-Biphenyl	250	U
91-58-7	2-Chloronaphthalene	250	U
88-74-4	2-Nitroaniline	480	U
131-11-3	Dimethylphthalate	250	U
606-20-2	2,6-Dinitrotoluene	250	U
208-96-8	Acenaphthylene	48	J
99-09-2	3-Nitroaniline	480	U
83-32-9	Acenaphthene	150	J

MW 9/17/13

1E - FORM I SV-2
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-15-024

16

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17078

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17078-16

Sample wt/vol: 30.6 (g/mL) g Lab File ID: ULLBR12.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 33 Decanted: (Y/N) Date Received: 06/19/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/27/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/05/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
51-28-5	2,4-Dinitrophenol	480	U	
100-02-7	4-Nitrophenol	480	U	
132-64-9	Dibenzofuran	31	J	
121-14-2	2,4-Dinitrotoluene	250	U	
84-66-2	Diethylphthalate	250	U	
86-73-7	Fluorene	75	J	
7005-72-3	4-Chlorophenyl-phenylether	250	U	
100-01-6	4-Nitroaniline	480	U	
534-52-1	4,6-Dinitro-2-methylphenol	480	U	
86-30-6	N-Nitrosodiphenylamin [1]	250	U	
95-94-3	1,2,4,5-Tetrachlorobenzene	250	U	
101-55-3	4-Bromophenyl-phenylether	250	U	
118-74-1	Hexachlorobenzene	250	U	
1912-24-9	Atrazine	250	U	
87-86-5	Pentachlorophenol	480	U	
85-01-8	Phenanthrene	920		
120-12-7	Anthracene	290		
86-74-8	Carbazole	250	U	
84-74-2	Di-n-butylphthalate	250	U	
206-44-0	Fluoranthene	1300		
129-00-0	Pyrene	1300		
85-68-7	Butylbenzylphthalate	250 ~~39~~ ~~J B~~	U	
91-94-1	3,3'-Dichlorobenzidine	250	U	
56-55-3	Benzo(a)anthracene	690		
218-01-9	Chrysene	660		
117-81-7	Bis(2-ethylhexyl)phthalate	55	J	
117-84-0	Di-n-octylphthalate	250	U	
205-99-2	Benzo(b)fluoranthene	380		J
207-08-9	Benzo(k)fluoranthene	520		
50-32-8	Benzo(a)pyrene	420		
193-39-5	Indeno(1,2,3-cd)pyrene	250	J	
53-70-3	Dibenzo(a,h)anthracene	140	~~J~~	J
191-24-2	Benzo(g,h,i)perylene	260		
58-90-2	2,3,4,6-Tetrachlorophenol	250	U	

[1] Cannot be separated from Diphenylamine

NW 9/17/13

1D - FORM I SV-1

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-21-012

17

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17078

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17078-17

Sample wt/vol: 30.3 (g/mL) g Lab File ID: ULLBR13.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 29 Decanted: (Y/N) Date Received: 06/19/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/27/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/05/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
100-52-7	Benzaldehyde	28	J
108-95-2	Phenol	240	U
111-44-4	Bis(2-chloroethyl)ether	240	U
95-57-8	2-Chlorophenol	240	U
95-48-7	2-Methylphenol	240	U
108-60-1	2,2'-Oxybis(1-chloropropane)	240	U
98-86-2	Acetophenone	240 ~~61~~	~~J B~~ U
106-44-5	4-Methylphenol	240	U
621-64-7	N-Nitroso-di-n-propylamine	240	U
67-72-1	Hexachloroethane	240	U
98-95-3	Nitrobenzene	240	U
78-59-1	Isophorone	240	U
88-75-5	2-Nitrophenol	240	U
105-67-9	2,4-Dimethylphenol	240	U
111-91-1	Bis(2-chloroethoxy)methane	240	U
120-83-2	2,4-Dichlorophenol	240	U
91-20-3	Naphthalene	49	J
106-47-8	4-Chloroaniline	240	U
87-68-3	Hexachlorobutadiene	240	U
105-60-2	Caprolactam	240	U
59-50-7	4-Chloro-3-methylphenol	240	U
91-57-6	2-Methylnaphthalene	17	J
77-47-4	Hexachlorocyclopentadiene	240	~~U~~ UJ
88-06-2	2,4,6-Trichlorophenol	240	U
95-95-4	2,4,5-Trichlorophenol	240	U
92-52-4	1,1'-Biphenyl	240	U
91-58-7	2-Chloronaphthalene	240	U
88-74-4	2-Nitroaniline	460	U
131-11-3	Dimethylphthalate	240	U
606-20-2	2,6-Dinitrotoluene	240	U
208-96-8	Acenaphthylene	9.2	J
99-09-2	3-Nitroaniline	460	U
83-32-9	Acenaphthene	18	J

MW 9/17/13

EPA SAMPLE NO.
LMR13-21-012

17

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17078

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17078-17

Sample wt/vol: 30.3 (g/mL) g Lab File ID: ULLBR13.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 29 Decanted: (Y/N) Date Received: 06/19/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/27/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/05/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
51-28-5	2,4-Dinitrophenol	460	U
100-02-7	4-Nitrophenol	460	U
132-64-9	Dibenzofuran	240	U
121-14-2	2,4-Dinitrotoluene	240	U
84-66-2	Diethylphthalate	240	U
86-73-7	Fluorene	240	U
7005-72-3	4-Chlorophenyl-phenylether	240	U
100-01-6	4-Nitroaniline	460	U
534-52-1	4,6-Dinitro-2-methylphenol	460	U
86-30-6	N-Nitrosodiphenylamin [1]	240	U
95-94-3	1,2,4,5-Tetrachlorobenzene	240	U
101-55-3	4-Bromophenyl-phenylether	240	U
118-74-1	Hexachlorobenzene	240	U
1912-24-9	Atrazine	240	U
87-86-5	Pentachlorophenol	460	U
85-01-8	Phenanthrene	93	J
120-12-7	Anthracene	35	J
86-74-8	Carbazole	240	U
84-74-2	Di-n-butylphthalate	240	U
206-44-0	Fluoranthene	180	J
129-00-0	Pyrene	260	
85-68-7	Butylbenzylphthalate	240 ~~28~~ ~~J~~ ~~B~~	U
91-94-1	3,3'-Dichlorobenzidine	240	U
56-55-3	Benzo(a)anthracene	190	J
218-01-9	Chrysene	270	
117-81-7	Bis(2-ethylhexyl)phthalate	520	
117-84-0	Di-n-octylphthalate	240	U
205-99-2	Benzo(b)fluoranthene	130 ~~J~~	J
207-08-9	Benzo(k)fluoranthene	110	J
50-32-8	Benzo(a)pyrene	150	J
193-39-5	Indeno(1,2,3-cd)pyrene	73	J
53-70-3	Dibenzo(a,h)anthracene	49 ~~J~~	J
191-24-2	Benzo(g,h,i)perylene	96	J
58-90-2	2,3,4,6-Tetrachlorophenol	240	U

[1] Cannot be separated from Diphenylamine

MW 9/17/13

1D - FORM I SV-1

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-21-024

18

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17078

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17078-18

Sample wt/vol: 30.3 (g/mL) g Lab File ID: ULLBR14.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 35 Decanted: (Y/N) Date Received: 06/19/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/27/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/05/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
100-52-7	Benzaldehyde	38	J	
108-95-2	Phenol	260	U	
111-44-4	Bis(2-chloroethyl)ether	260	U	
95-57-8	2-Chlorophenol	260	U	
95-48-7	2-Methylphenol	260	U	
108-60-1	2,2'-Oxybis(1-chloropropane)	260	U	
98-86-2	Acetophenone	260 ~~39~~	~~J B~~	u
106-44-5	4-Methylphenol	260	U	
621-64-7	N-Nitroso-di-n-propylamine	260	U	
67-72-1	Hexachloroethane	260	U	
98-95-3	Nitrobenzene	260	U	
78-59-1	Isophorone	260	U	
88-75-5	2-Nitrophenol	260	U	
105-67-9	2,4-Dimethylphenol	260	U	
111-91-1	Bis(2-chloroethoxy)methane	260	U	
120-83-2	2,4-Dichlorophenol	260	U	
91-20-3	Naphthalene	120	J	
106-47-8	4-Chloroaniline	260	U	
87-68-3	Hexachlorobutadiene	260	U	
105-60-2	Caprolactam	260	U	
59-50-7	4-Chloro-3-methylphenol	260	U	
91-57-6	2-Methylnaphthalene	36	J	
77-47-4	Hexachlorocyclopentadiene	260	~~U~~	uJ
88-06-2	2,4,6-Trichlorophenol	260	U	
95-95-4	2,4,5-Trichlorophenol	260	U	
92-52-4	1,1'-Biphenyl	260	U	
91-58-7	2-Chloronaphthalene	260	U	
88-74-4	2-Nitroaniline	500	U	
131-11-3	Dimethylphthalate	260	U	
606-20-2	2,6-Dinitrotoluene	260	U	
208-96-8	Acenaphthylene	40	J	
99-09-2	3-Nitroaniline	500	U	
83-32-9	Acenaphthene	64	J	

MW 9/17/13

EPA SAMPLE NO.
LMR13-21-024

18

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17078

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17078-18

Sample wt/vol: 30.3 (g/mL) g Lab File ID: ULLBR14.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 35 Decanted: (Y/N) Date Received: 06/19/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/27/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/05/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
51-28-5	2,4-Dinitrophenol	500	U	
100-02-7	4-Nitrophenol	500	U	
132-64-9	Dibenzofuran	260	U	
121-14-2	2,4-Dinitrotoluene	260	U	
84-66-2	Diethylphthalate	260	U	
86-73-7	Fluorene	84	J	
7005-72-3	4-Chlorophenyl-phenylether	260	U	
100-01-6	4-Nitroaniline	500	U	
534-52-1	4,6-Dinitro-2-methylphenol	500	U	
86-30-6	N-Nitrosodiphenylamin [1]	260	U	
95-94-3	1,2,4,5-Tetrachlorobenzene	260	U	
101-55-3	4-Bromophenyl-phenylether	260	U	
118-74-1	Hexachlorobenzene	260	U	
1912-24-9	Atrazine	260	U	
87-86-5	Pentachlorophenol	500	U	
85-01-8	Phenanthrene	370		
120-12-7	Anthracene	140	J	
86-74-8	Carbazole	260	U	
84-74-2	Di-n-butylphthalate	260	U	
206-44-0	Fluoranthene	900		
129-00-0	Pyrene	1400		
85-68-7	Butylbenzylphthalate	260	U	
91-94-1	3,3'-Dichlorobenzidine	260	U	
56-55-3	Benzo(a)anthracene	980		
218-01-9	Chrysene	960		
117-81-7	Bis(2-ethylhexyl)phthalate	180	J	
117-84-0	Di-n-octylphthalate	260	U	
205-99-2	Benzo(b)fluoranthene	580		J
207-08-9	Benzo(k)fluoranthene	690		
50-32-8	Benzo(a)pyrene	630		
193-39-5	Indeno(1,2,3-cd)pyrene	240	J	
53-70-3	Dibenzo(a,h)anthracene	190	J	J
191-24-2	Benzo(g,h,i)perylene	300		
58-90-2	2,3,4,6-Tetrachlorophenol	260	U	

[1] Cannot be separated from Diphenylamine

MW 9/17/13

EPA SAMPLE NO.
LMR13-21-072

19

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17078

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17078-19

Sample wt/vol: 30.3 (g/mL) g Lab File ID: ULLBR15.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 21 Decanted: (Y/N) Date Received: 06/19/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/27/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/05/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
100-52-7	Benzaldehyde	210	U
108-95-2	Phenol	210	U
111-44-4	Bis(2-chloroethyl)ether	210	U
95-57-8	2-Chlorophenol	210	U
95-48-7	2-Methylphenol	210	U
108-60-1	2,2'-Oxybis(1-chloropropane)	210	U
98-86-2	Acetophenone	210 ~~15~~	~~J B~~ U
106-44-5	4-Methylphenol	210	U
621-64-7	N-Nitroso-di-n-propylamine	210	U
67-72-1	Hexachloroethane	210	U
98-95-3	Nitrobenzene	210	U
78-59-1	Isophorone	210	U
88-75-5	2-Nitrophenol	210	U
105-67-9	2,4-Dimethylphenol	210	U
111-91-1	Bis(2-chloroethoxy)methane	210	U
120-83-2	2,4-Dichlorophenol	210	U
91-20-3	Naphthalene	210	U
106-47-8	4-Chloroaniline	210	U
87-68-3	Hexachlorobutadiene	210	U
105-60-2	Caprolactam	210	U
59-50-7	4-Chloro-3-methylphenol	210	U
91-57-6	2-Methylnaphthalene	210	U
77-47-4	Hexachlorocyclopentadiene	210	~~U~~ UJ
88-06-2	2,4,6-Trichlorophenol	210	U
95-95-4	2,4,5-Trichlorophenol	210	U
92-52-4	1,1'-Biphenyl	210	U
91-58-7	2-Chloronaphthalene	210	U
88-74-4	2-Nitroaniline	410	U
131-11-3	Dimethylphthalate	210	U
606-20-2	2,6-Dinitrotoluene	210	U
208-96-8	Acenaphthylene	210	U
99-09-2	3-Nitroaniline	410	U
83-32-9	Acenaphthene	210	U

NW 9/17/13

1E - FORM I SV-2
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-21-072

19

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17078

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17078-19

Sample wt/vol: 30.3 (g/mL) g Lab File ID: ULLBR15.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 21 Decanted: (Y/N) Date Received: 06/19/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/27/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/05/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
51-28-5	2,4-Dinitrophenol	410	U	
100-02-7	4-Nitrophenol	410	U	
132-64-9	Dibenzofuran	210	U	
121-14-2	2,4-Dinitrotoluene	210	U	
84-66-2	Diethylphthalate	210	U	
86-73-7	Fluorene	210	U	
7005-72-3	4-Chlorophenyl-phenylether	210	U	
100-01-6	4-Nitroaniline	410	U	
534-52-1	4,6-Dinitro-2-methylphenol	410	U	
86-30-6	N-Nitrosodiphenylamin [1]	210	U	
95-94-3	1,2,4,5-Tetrachlorobenzene	210	U	
101-55-3	4-Bromophenyl-phenylether	210	U	
118-74-1	Hexachlorobenzene	210	U	
1912-24-9	Atrazine	210	U	
87-86-5	Pentachlorophenol	410	U	
85-01-8	Phenanthrene	210	U	
120-12-7	Anthracene	210	U	
86-74-8	Carbazole	210	U	
84-74-2	Di-n-butylphthalate	210 ~~23~~	~~J B~~	U
206-44-0	Fluoranthene	7.0	J	
129-00-0	Pyrene	10	J	
85-68-7	Butylbenzylphthalate	210 ~~18~~	~~J B~~	U
91-94-1	3,3'-Dichlorobenzidine	210	U	
56-55-3	Benzo(a)anthracene	210	U	
218-01-9	Chrysene	13	J	
117-81-7	Bis(2-ethylhexyl)phthalate	48	J	
117-84-0	Di-n-octylphthalate	210	U	
205-99-2	Benzo(b)fluoranthene	210	~~U~~	UJ
207-08-9	Benzo(k)fluoranthene	210	U	
50-32-8	Benzo(a)pyrene	210	U	
193-39-5	Indeno(1,2,3-cd)pyrene	210	U	
53-70-3	Dibenzo(a,h)anthracene	210	~~U~~	UJ
191-24-2	Benzo(g,h,i)perylene	210	U	
58-90-2	2,3,4,6-Tetrachlorophenol	210	U	

[1] Cannot be separated from Diphenylamine

NW 9/17/13

1D - FORM I SV-1

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-15-012

20

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17078

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17078-20

Sample wt/vol: 30.2 (g/mL) g Lab File ID: ULLBR16.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 48 Decanted: (Y/N) Date Received: 06/19/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/27/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/05/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
100-52-7	Benzaldehyde	54	J	
108-95-2	Phenol	320	U	
111-44-4	Bis(2-chloroethyl)ether	320	U	
95-57-8	2-Chlorophenol	320	U	
95-48-7	2-Methylphenol	320	U	
108-60-1	2,2'-Oxybis(1-chloropropane)	320	U	
98-86-2	Acetophenone	320 ~~46~~	~~J B~~	U
106-44-5	4-Methylphenol	320	U	
621-64-7	N-Nitroso-di-n-propylamine	320	U	
67-72-1	Hexachloroethane	320	U	
98-95-3	Nitrobenzene	320	U	
78-59-1	Isophorone	320	U	
88-75-5	2-Nitrophenol	320	U	
105-67-9	2,4-Dimethylphenol	320	U	
111-91-1	Bis(2-chloroethoxy)methane	320	U	
120-83-2	2,4-Dichlorophenol	320	U	
91-20-3	Naphthalene	27	J	
106-47-8	4-Chloroaniline	320	~~U~~	R
87-68-3	Hexachlorobutadiene	320	U	
105-60-2	Caprolactam	320	U	
59-50-7	4-Chloro-3-methylphenol	320	U	
91-57-6	2-Methylnaphthalene	15	J	
77-47-4	Hexachlorocyclopentadiene	320	~~U~~	R
88-06-2	2,4,6-Trichlorophenol	320	U	
95-95-4	2,4,5-Trichlorophenol	320	U	
92-52-4	1,1'-Biphenyl	320	U	
91-58-7	2-Chloronaphthalene	320	U	
88-74-4	2-Nitroaniline	620	U	
131-11-3	Dimethylphthalate	320	U	
606-20-2	2,6-Dinitrotoluene	320	U	
208-96-8	Acenaphthylene	10	J	
99-09-2	3-Nitroaniline	620	U	
83-32-9	Acenaphthene	26	J	

NW 9/17/13

1E - FORM I SV-2
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-15-012

20

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17078

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17078-20

Sample wt/vol: 30.2 (g/mL) g Lab File ID: ULLBR16.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 48 Decanted: (Y/N) Date Received: 06/19/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/27/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/05/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
51-28-5	2,4-Dinitrophenol	620	U	
100-02-7	4-Nitrophenol	620	U	
132-64-9	Dibenzofuran	17	J	
121-14-2	2,4-Dinitrotoluene	320	U	
84-66-2	Diethylphthalate	320	U	
86-73-7	Fluorene	26	J	
7005-72-3	4-Chlorophenyl-phenylether	320	U	
100-01-6	4-Nitroaniline	620	U	
534-52-1	4,6-Dinitro-2-methylphenol	620	U	
86-30-6	N-Nitrosodiphenylamin [1]	320	U	
95-94-3	1,2,4,5-Tetrachlorobenzene	320	U	
101-55-3	4-Bromophenyl-phenylether	320	U	
118-74-1	Hexachlorobenzene	320	U	
1912-24-9	Atrazine	320	U	
87-86-5	Pentachlorophenol	620	U	
85-01-8	Phenanthrene	150	J	
120-12-7	Anthracene	47	J	
86-74-8	Carbazole	320	U	
84-74-2	Di-n-butylphthalate	320	U	
206-44-0	Fluoranthene	350		
129-00-0	Pyrene	410		
85-68-7	Butylbenzylphthalate	~~24~~ 320	~~J B~~	R U
91-94-1	3,3'-Dichlorobenzidine	320	~~J~~	R
56-55-3	Benzo(a)anthracene	210	J	
218-01-9	Chrysene	330		
117-81-7	Bis(2-ethylhexyl)phthalate	200	J	
117-84-0	Di-n-octylphthalate	320	U	
205-99-2	Benzo(b)fluoranthene	230	~~J~~	J
207-08-9	Benzo(k)fluoranthene	210	J	
50-32-8	Benzo(a)pyrene	210	J	
193-39-5	Indeno(1,2,3-cd)pyrene	110	J	
53-70-3	Dibenzo(a,h)anthracene	50	~~J~~	J
191-24-2	Benzo(g,h,i)perylene	130	J	
58-90-2	2,3,4,6-Tetrachlorophenol	320	U	

[1] Cannot be separated from Diphenylamine

NW 9/17/13

1D - FORM I SV-1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-13-048FD

21

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17078

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17078-21

Sample wt/vol: 29.7 (g/mL) g Lab File ID: ULLBU17.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 46 Decanted: (Y/N) Date Received: 06/19/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/27/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/06/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 2.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
100-52-7	Benzaldehyde	640	U
108-95-2	Phenol	640	U
111-44-4	Bis(2-chloroethyl)ether	640	U
95-57-8	2-Chlorophenol	640	U
95-48-7	2-Methylphenol	640	U
108-60-1	2,2'-Oxybis(1-chloropropane)	640	U
98-86-2	Acetophenone	640	U
106-44-5	4-Methylphenol	640	U
621-64-7	N-Nitroso-di-n-propylamine	640	U
67-72-1	Hexachloroethane	640	U
98-95-3	Nitrobenzene	640	U
78-59-1	Isophorone	640	U
88-75-5	2-Nitrophenol	640	U
105-67-9	2,4-Dimethylphenol	640	U
111-91-1	Bis(2-chloroethoxy)methane	640	U
120-83-2	2,4-Dichlorophenol	640	U
91-20-3	Naphthalene	150	J
106-47-8	4-Chloroaniline	640	U
87-68-3	Hexachlorobutadiene	640	U
105-60-2	Caprolactam	640	U
59-50-7	4-Chloro-3-methylphenol	640	U
91-57-6	2-Methylnaphthalene	61	J
77-47-4	Hexachlorocyclopentadiene	640	~~U~~ UJ
88-06-2	2,4,6-Trichlorophenol	640	U
95-95-4	2,4,5-Trichlorophenol	640	U
92-52-4	1,1'-Biphenyl	640	U
91-58-7	2-Chloronaphthalene	640	U
88-74-4	2-Nitroaniline	1200	U
131-11-3	Dimethylphthalate	640	U
606-20-2	2,6-Dinitrotoluene	640	U
208-96-8	Acenaphthylene	47	J
99-09-2	3-Nitroaniline	1200	U
83-32-9	Acenaphthene	72	J

NW 9/17/13

1E - FORM I SV-2
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-13-048FD

21

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17078

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17078-21

Sample wt/vol: 29.7 (g/mL) g Lab File ID: ULLBU17.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 46 Decanted: (Y/N) Date Received: 06/19/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/27/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/06/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 2.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
51-28-5	2,4-Dinitrophenol	1200	U	
100-02-7	4-Nitrophenol	1200	U	
132-64-9	Dibenzofuran	30	J	
121-14-2	2,4-Dinitrotoluene	640	U	
84-66-2	Diethylphthalate	640	U	
86-73-7	Fluorene	79	J	
7005-72-3	4-Chlorophenyl-phenylether	640	U	
100-01-6	4-Nitroaniline	1200	U	
534-52-1	4,6-Dinitro-2-methylphenol	1200	U	
86-30-6	N-Nitrosodiphenylamin [1]	640	U	
95-94-3	1,2,4,5-Tetrachlorobenzene	640	U	
101-55-3	4-Bromophenyl-phenylether	640	U	
118-74-1	Hexachlorobenzene	640	U	
1912-24-9	Atrazine	640	U	
87-86-5	Pentachlorophenol	1200	U	
85-01-8	Phenanthrene	260	J	
120-12-7	Anthracene	110	J	
86-74-8	Carbazole	640	U	
84-74-2	Di-n-butylphthalate	640	U	
206-44-0	Fluoranthene	690		
129-00-0	Pyrene	970		
85-68-7	Butylbenzylphthalate	640	U	
91-94-1	3,3'-Dichlorobenzidine	640	U	
56-55-3	Benzo(a)anthracene	610	J	
218-01-9	Chrysene	720		
117-81-7	Bis(2-ethylhexyl)phthalate	7200		
117-84-0	Di-n-octylphthalate	640	U	
205-99-2	Benzo(b)fluoranthene	560	~~J~~	J
207-08-9	Benzo(k)fluoranthene	420	J	
50-32-8	Benzo(a)pyrene	480	J	
193-39-5	Indeno(1,2,3-cd)pyrene	250	J	
53-70-3	Dibenzo(a,h)anthracene	150	~~J~~	J
191-24-2	Benzo(g,h,i)perylene	330	J	
58-90-2	2,3,4,6-Tetrachlorophenol	640	U	

[1] Cannot be separated from Diphenylamine

NW 9/17/13

1D - FORM I SV-1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-14-024FD

22

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17078

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17078-22

Sample wt/vol: 29.9 (g/mL) g Lab File ID: ULLBU19.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 45 Decanted: (Y/N) Date Received: 06/19/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/27/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/06/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 2.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
100-52-7	Benzaldehyde	620	U
108-95-2	Phenol	620	U
111-44-4	Bis(2-chloroethyl)ether	620	U
95-57-8	2-Chlorophenol	620	U
95-48-7	2-Methylphenol	620	U
108-60-1	2,2'-Oxybis(1-chloropropane)	620	U
98-86-2	Acetophenone	620	U
106-44-5	4-Methylphenol	620	U
621-64-7	N-Nitroso-di-n-propylamine	620	U
67-72-1	Hexachloroethane	620	U
98-95-3	Nitrobenzene	620	U
78-59-1	Isophorone	620	U
88-75-5	2-Nitrophenol	620	U
105-67-9	2,4-Dimethylphenol	620	U
111-91-1	Bis(2-chloroethoxy)methane	620	U
120-83-2	2,4-Dichlorophenol	620	U
91-20-3	Naphthalene	160	J
106-47-8	4-Chloroaniline	620	U
87-68-3	Hexachlorobutadiene	620	U
105-60-2	Caprolactam	620	U
59-50-7	4-Chloro-3-methylphenol	620	U
91-57-6	2-Methylnaphthalene	66	J
77-47-4	Hexachlorocyclopentadiene	620	~~U~~ UJ
88-06-2	2,4,6-Trichlorophenol	620	U
95-95-4	2,4,5-Trichlorophenol	620	U
92-52-4	1,1'-Biphenyl	620	U
91-58-7	2-Chloronaphthalene	620	U
88-74-4	2-Nitroaniline	1200	U
131-11-3	Dimethylphthalate	620	U
606-20-2	2,6-Dinitrotoluene	620	U
208-96-8	Acenaphthylene	51	J
99-09-2	3-Nitroaniline	1200	U
83-32-9	Acenaphthene	79	J

MW 9/17/13

1E - FORM I SV-2
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-14-024FD

22

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17078

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17078-22

Sample wt/vol: 29.9 (g/mL) g Lab File ID: ULLBU19.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 45 Decanted: (Y/N) Date Received: 06/19/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/27/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/06/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 2.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
51-28-5	2,4-Dinitrophenol	1200	U	
100-02-7	4-Nitrophenol	1200	U	
132-64-9	Dibenzofuran	29	J	
121-14-2	2,4-Dinitrotoluene	620	U	
84-66-2	Diethylphthalate	620	U	
86-73-7	Fluorene	120	J	
7005-72-3	4-Chlorophenyl-phenylether	620	U	
100-01-6	4-Nitroaniline	1200	U	
534-52-1	4,6-Dinitro-2-methylphenol	1200	U	
86-30-6	N-Nitrosodiphenylamin [1]	620	U	
95-94-3	1,2,4,5-Tetrachlorobenzene	620	U	
101-55-3	4-Bromophenyl-phenylether	620	U	
118-74-1	Hexachlorobenzene	620	U	
1912-24-9	Atrazine	620	U	
87-86-5	Pentachlorophenol	1200	U	
85-01-8	Phenanthrene	600	J	
120-12-7	Anthracene	140	J	
86-74-8	Carbazole	620	U	
84-74-2	Di-n-butylphthalate	620	U	
206-44-0	Fluoranthene	1200		
129-00-0	Pyrene	1400		
85-68-7	Butylbenzylphthalate	620	U	
91-94-1	3,3'-Dichlorobenzidine	620	U	
56-55-3	Benzo(a)anthracene	1100		
218-01-9	Chrysene	1200		
117-81-7	Bis(2-ethylhexyl)phthalate	3900		
117-84-0	Di-n-octylphthalate	620	U	
205-99-2	Benzo(b)fluoranthene	950		J
207-08-9	Benzo(k)fluoranthene	530	J	
50-32-8	Benzo(a)pyrene	760		
193-39-5	Indeno(1,2,3-cd)pyrene	420	J	
53-70-3	Dibenzo(a,h)anthracene	270	~~J~~	J
191-24-2	Benzo(g,h,i)perylene	510	J	
58-90-2	2,3,4,6-Tetrachlorophenol	620	U	

[1] Cannot be separated from Diphenylamine

NW 9/17/13

1D - FORM I SV-1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-21-024FD

23

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17078

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17078-23

Sample wt/vol: 30.1 (g/mL) g Lab File ID: ULLBU07.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 35 Decanted: (Y/N) Date Received: 06/19/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/27/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/06/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
100-52-7	Benzaldehyde	29	J
108-95-2	Phenol	260	U
111-44-4	Bis(2-chloroethyl)ether	260	U
95-57-8	2-Chlorophenol	260	U
95-48-7	2-Methylphenol	260	U
108-60-1	2,2'-Oxybis(1-chloropropane)	260	U
98-86-2	Acetophenone	260 ~~24~~	~~J B~~ U
106-44-5	4-Methylphenol	260	U
621-64-7	N-Nitroso-di-n-propylamine	260	U
67-72-1	Hexachloroethane	260	U
98-95-3	Nitrobenzene	260	U
78-59-1	Isophorone	260	U
88-75-5	2-Nitrophenol	260	U
105-67-9	2,4-Dimethylphenol	260	U
111-91-1	Bis(2-chloroethoxy)methane	260	U
120-83-2	2,4-Dichlorophenol	260	U
91-20-3	Naphthalene	69	J
106-47-8	4-Chloroaniline	260	U
87-68-3	Hexachlorobutadiene	260	U
105-60-2	Caprolactam	260	U
59-50-7	4-Chloro-3-methylphenol	260	U
91-57-6	2-Methylnaphthalene	24	J
77-47-4	Hexachlorocyclopentadiene	260	~~U~~ UJ
88-06-2	2,4,6-Trichlorophenol	260	U
95-95-4	2,4,5-Trichlorophenol	260	U
92-52-4	1,1'-Biphenyl	260	U
91-58-7	2-Chloronaphthalene	260	U
88-74-4	2-Nitroaniline	510	U
131-11-3	Dimethylphthalate	260	U
606-20-2	2,6-Dinitrotoluene	260	U
208-96-8	Acenaphthylene	25	J
99-09-2	3-Nitroaniline	510	U
83-32-9	Acenaphthene	43	J

NW 9/17/13

1E - FORM I SV-2
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-21-024FD

23

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17078

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17078-23

Sample wt/vol: 30.1 (g/mL) g Lab File ID: ULLBU07.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 35 Decanted: (Y/N) Date Received: 06/19/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/27/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/06/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
51-28-5	2,4-Dinitrophenol	510	U	
100-02-7	4-Nitrophenol	510	U	
132-64-9	Dibenzofuran	14	J	
121-14-2	2,4-Dinitrotoluene	260	U	
84-66-2	Diethylphthalate	260	U	
86-73-7	Fluorene	29	J	
7005-72-3	4-Chlorophenyl-phenylether	260	U	
100-01-6	4-Nitroaniline	510	U	
534-52-1	4,6-Dinitro-2-methylphenol	510	U	
86-30-6	N-Nitrosodiphenylamin [1]	260	U	
95-94-3	1,2,4,5-Tetrachlorobenzene	260	U	
101-55-3	4-Bromophenyl-phenylether	260	U	
118-74-1	Hexachlorobenzene	260	U	
1912-24-9	Atrazine	260	U	
87-86-5	Pentachlorophenol	510	U	
85-01-8	Phenanthrene	150	J	
120-12-7	Anthracene	81	J	
86-74-8	Carbazole	260	U	
84-74-2	Di-n-butylphthalate	260 ~~23~~ ~~J B~~		U
206-44-0	Fluoranthene	610		
129-00-0	Pyrene	740		
85-68-7	Butylbenzylphthalate	260 ~~37~~ ~~J B~~		U
91-94-1	3,3'-Dichlorobenzidine	260	U	
56-55-3	Benzo(a)anthracene	540		
218-01-9	Chrysene	560		
117-81-7	Bis(2-ethylhexyl)phthalate	130	J	
117-84-0	Di-n-octylphthalate	260	U	
205-99-2	Benzo(b)fluoranthene	430		J
207-08-9	Benzo(k)fluoranthene	270		
50-32-8	Benzo(a)pyrene	350		
193-39-5	Indeno(1,2,3-cd)pyrene	190	J	
53-70-3	Dibenzo(a,h)anthracene	130	~~J~~	J
191-24-2	Benzo(g,h,i)perylene	260		
58-90-2	2,3,4,6-Tetrachlorophenol	260	U	

[1] Cannot be separated from Diphenylamine

NW 9/17/13

1D - FORM I SV-1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-21-012FD

24

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17078

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17078-24

Sample wt/vol: 30.3 (g/mL) g Lab File ID: ULLBU08.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 23 Decanted: (Y/N) Date Received: 06/19/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/27/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/06/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
100-52-7	Benzaldehyde	220	U
108-95-2	Phenol	220	U
111-44-4	Bis(2-chloroethyl)ether	220	U
95-57-8	2-Chlorophenol	220	U
95-48-7	2-Methylphenol	220	U
108-60-1	2,2'-Oxybis(1-chloropropane)	220	U
98-86-2	Acetophenone	220	U
106-44-5	4-Methylphenol	220	U
621-64-7	N-Nitroso-di-n-propylamine	220	U
67-72-1	Hexachloroethane	220	U
98-95-3	Nitrobenzene	220	U
78-59-1	Isophorone	220	U
88-75-5	2-Nitrophenol	220	U
105-67-9	2,4-Dimethylphenol	220	U
111-91-1	Bis(2-chloroethoxy)methane	220	U
120-83-2	2,4-Dichlorophenol	220	U
91-20-3	Naphthalene	35	J
106-47-8	4-Chloroaniline	220	U
87-68-3	Hexachlorobutadiene	220	U
105-60-2	Caprolactam	220	U
59-50-7	4-Chloro-3-methylphenol	220	U
91-57-6	2-Methylnaphthalene	14	J
77-47-4	Hexachlorocyclopentadiene	220	U UJ
88-06-2	2,4,6-Trichlorophenol	220	U
95-95-4	2,4,5-Trichlorophenol	220	U
92-52-4	1,1'-Biphenyl	220	U
91-58-7	2-Chloronaphthalene	220	U
88-74-4	2-Nitroaniline	430	U
131-11-3	Dimethylphthalate	220	U
606-20-2	2,6-Dinitrotoluene	220	U
208-96-8	Acenaphthylene	5.6	J
99-09-2	3-Nitroaniline	430	U
83-32-9	Acenaphthene	16	J

NW 9/17/13

1E - FORM I SV-2
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-21-012FD

24

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17078

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17078-24

Sample wt/vol: 30.3 (g/mL) g Lab File ID: ULLBU08.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 23 Decanted: (Y/N) Date Received: 06/19/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/27/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/06/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
51-28-5	2,4-Dinitrophenol	430	U	
100-02-7	4-Nitrophenol	430	U	
132-64-9	Dibenzofuran	7.3	J	
121-14-2	2,4-Dinitrotoluene	220	U	
84-66-2	Diethylphthalate	220	U	
86-73-7	Fluorene	9.9	J	
7005-72-3	4-Chlorophenyl-phenylether	220	U	
100-01-6	4-Nitroaniline	430	U	
534-52-1	4,6-Dinitro-2-methylphenol	430	U	
86-30-6	N-Nitrosodiphenylamin [1]	220	U	
95-94-3	1,2,4,5-Tetrachlorobenzene	220	U	
101-55-3	4-Bromophenyl-phenylether	220	U	
118-74-1	Hexachlorobenzene	220	U	
1912-24-9	Atrazine	220	U	
87-86-5	Pentachlorophenol	430	U	
85-01-8	Phenanthrene	92	J	
120-12-7	Anthracene	30	J	
86-74-8	Carbazole	220	U	
84-74-2	Di-n-butylphthalate	220 ~~16~~	~~J B~~	U
206-44-0	Fluoranthene	170	J	
129-00-0	Pyrene	220	J	
85-68-7	Butylbenzylphthalate	220 ~~20~~	~~J B~~	U
91-94-1	3,3'-Dichlorobenzidine	220	U	
56-55-3	Benzo(a)anthracene	170	J	
218-01-9	Chrysene	220		
117-81-7	Bis(2-ethylhexyl)phthalate	430		
117-84-0	Di-n-octylphthalate	220	U	
205-99-2	Benzo(b)fluoranthene	140	~~J~~	J
207-08-9	Benzo(k)fluoranthene	110	J	
50-32-8	Benzo(a)pyrene	140	J	
193-39-5	Indeno(1,2,3-cd)pyrene	71	J	
53-70-3	Dibenzo(a,h)anthracene	50	~~J~~	J
191-24-2	Benzo(g,h,i)perylene	100	J	
58-90-2	2,3,4,6-Tetrachlorophenol	220	U	

[1] Cannot be separated from Diphenylamine

MW 9/17/13

1F - FORM I SV-SIM

SEMIVOLATILE SIM ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-21-012

17

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: 1734.2 SDG No.: 17078

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17078-17

Sample wt/vol: 30.3 (g/mL) g Lab File ID: HQIST08.D

Extraction: (Type) SONC

% Moisture: 29 Decanted: (Y/N) Date Received: 06/19/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/27/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/06/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 5.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
91-20-3	Naphthalene	42	B
90-12-0	1-Methylnaphthalene	7.7	J
91-57-6	2-Methylnaphthalene	17	J
208-96-8	Acenaphthylene	6.6	J
83-32-9	Acenaphthene	18	J
86-73-7	Fluorene	31	
85-01-8	Phenanthrene	95	
120-12-7	Anthracene	38	
206-44-0	Fluoranthene	130	
129-00-0	Pyrene	210	
56-55-3	Benzo(a)anthracene	160	
218-01-9	Chrysene	210	
205-99-2	Benzo(b)fluoranthene	110	
207-08-9	Benzo(k)fluoranthene	80	
192-97-2	Benzo(e)pyrene	130	
50-32-8	Benzo(a)pyrene	150	
198-55-0	Perylene	150	
193-39-5	Indeno(1,2,3-cd)pyrene	64	
53-70-3	Dibenzo(a,h)anthracene	44	
191-24-2	Benzo(g,h,i)perylene	80	
C1NAPH	C1-Naphthalenes	16	J
C2NAPH	C2-Naphthalenes	120	J
C3NAPH	C3-Naphthalenes	370	J
C4NAPH	C4-Naphthalenes	380	J
C1FLUOR	C1 Fluorenes	27	J
C2FLUOR	C2 Fluorenes	57	J
C3FLUOR	C3 Fluorenes	99	J
C1PHAN	C1-Phenanthrenes/Anthracenes	250	J
C2PHAN	C2-Phenanthrenes/Anthracenes	260	J
C3PHAN	C3-Phenanthrenes/Anthracenes	400	J
C4PHAN	C4-Phenanthrenes/Anthracenes	230	J
C1FLPY	C1-Fluoranthenes/Pyrenes	300	J
C2FLPY	C2-Fluoranthenes/Pyrenes	310	J
C3FLPY	C3-Fluoranthenes/Pyrenes	230	J
C1CHRYS	C1 Chrysenes	380	J
C2CHRYS	C2 Chrysenes	370	J
C3CHRYS	C3 Chrysenes	160	J
C4CHRYS	C4 Chrysenes	71	J

NW 9/17/13

1F - FORM I SV-SIM

SEMIVOLATILE SIM ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-21-012

17

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: 1734.2 SDG No.: 17078

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17078-17

Sample wt/vol: 30.3 (g/mL) g Lab File ID: HQIST08.D

Extraction: (Type) SONC

% Moisture: 29 Decanted: (Y/N) Date Received: 06/19/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/27/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/06/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 5.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
TPPAH	Total 16 PPAH	1500	~~J B~~ J
TPAH	Total PAH	5800	~~J B~~ J

NW 9/17/13

1F - FORM I SV-SIM
SEMIVOLATILE SIM ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-15-012

20

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: 1734.2 SDG No.: 17078

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17078-20

Sample wt/vol: 30.2 (g/mL) g Lab File ID: HQIST09.D

Extraction: (Type) SONC

% Moisture: 48 Decanted: (Y/N) Date Received: 06/19/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/27/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/06/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 50.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
91-20-3	Naphthalene	310 ~~26~~ ~~J B~~	U
90-12-0	1-Methylnaphthalene	8.5	J
91-57-6	2-Methylnaphthalene	14	J
208-96-8	Acenaphthylene	8.6	J
83-32-9	Acenaphthene	26	J
86-73-7	Fluorene	36	J
85-01-8	Phenanthrene	180	J
120-12-7	Anthracene	57	J
206-44-0	Fluoranthene	380	
129-00-0	Pyrene	360	
56-55-3	Benzo(a)anthracene	210	J
218-01-9	Chrysene	280	J
205-99-2	Benzo(b)fluoranthene	210	J
207-08-9	Benzo(k)fluoranthene	200	J
192-97-2	Benzo(e)pyrene	200	J
50-32-8	Benzo(a)pyrene	220	J
198-55-0	Perylene	370	
193-39-5	Indeno(1,2,3-cd)pyrene	140	J
53-70-3	Dibenzo(a,h)anthracene	58	J
191-24-2	Benzo(g,h,i)perylene	150	J
C1NAPH	C1-Naphthalenes	310	U
C2NAPH	C2-Naphthalenes	69	J
C3NAPH	C3-Naphthalenes	140	J
C4NAPH	C4-Naphthalenes	120	J
C1FLUOR	C1 Fluorenes	310	U
C2FLUOR	C2 Fluorenes	310	U
C3FLUOR	C3 Fluorenes	52	J
C1PHAN	C1-Phenanthrenes/Anthracenes	190	J
C2PHAN	C2-Phenanthrenes/Anthracenes	160	J
C3PHAN	C3-Phenanthrenes/Anthracenes	180	J
C4PHAN	C4-Phenanthrenes/Anthracenes	110	J
C1FLPY	C1-Fluoranthenes/Pyrenes	300	J
C2FLPY	C2-Fluoranthenes/Pyrenes	240	J
C3FLPY	C3-Fluoranthenes/Pyrenes	140	J
C1CHRYS	C1 Chrysenes	270	J
C2CHRYS	C2 Chrysenes	240	J
C3CHRYS	C3 Chrysenes	87	J
C4CHRYS	C4 Chrysenes	44	J

NW 9/17/13

1F - FORM I SV-SIM

SEMIVOLATILE SIM ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-15-012

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678 20

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: 1734.2 SDG No.: 17078

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17078-20

Sample wt/vol: 30.2 (g/mL) g Lab File ID: HQIST09.D

Extraction: (Type) SONC

% Moisture: 48 Decanted: (Y/N) Date Received: 06/19/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/27/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/06/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 50.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
TPPAH	Total 16 PPAH	2500	~~B~~ J
TPAH	Total PAH	5500	~~B~~ J

NW 9/17/13

1F - FORM I SV-SIM

SEMIVOLATILE SIM ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-21-012FD

24

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: 1734.2 SDG No.: 17078

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17078-24

Sample wt/vol: 30.3 (g/mL) g Lab File ID: HQIST10.D

Extraction: (Type) SONC

% Moisture: 23 Decanted: (Y/N) Date Received: 06/19/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/27/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/06/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 6.7

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
91-20-3	Naphthalene	29	B
90-12-0	1-Methylnaphthalene	6.1	J
91-57-6	2-Methylnaphthalene	13	J
208-96-8	Acenaphthylene	6.5	J
83-32-9	Acenaphthene	18	J
86-73-7	Fluorene	31	
85-01-8	Phenanthrene	89	
120-12-7	Anthracene	35	
206-44-0	Fluoranthene	130	
129-00-0	Pyrene	210	
56-55-3	Benzo(a)anthracene	150	
218-01-9	Chrysene	200	
205-99-2	Benzo(b)fluoranthene	120	
207-08-9	Benzo(k)fluoranthene	90	
192-97-2	Benzo(e)pyrene	140	
50-32-8	Benzo(a)pyrene	160	
198-55-0	Perylene	160	
193-39-5	Indeno(1,2,3-cd)pyrene	84	
53-70-3	Dibenzo(a,h)anthracene	55	
191-24-2	Benzo(g,h,i)perylene	100	
C1NAPH	C1-Naphthalenes	12	J
C2NAPH	C2-Naphthalenes	100	J
C3NAPH	C3-Naphthalenes	350	J
C4NAPH	C4-Naphthalenes	330	J
C1FLUOR	C1 Fluorenes	26	J
C2FLUOR	C2 Fluorenes	56	J
C3FLUOR	C3 Fluorenes	91	J
C1PHAN	C1-Phenanthrenes/Anthracenes	250	J
C2PHAN	C2-Phenanthrenes/Anthracenes	250	J
C3PHAN	C3-Phenanthrenes/Anthracenes	390	J
C4PHAN	C4-Phenanthrenes/Anthracenes	220	J
C1FLPY	C1-Fluoranthenes/Pyrenes	310	J
C2FLPY	C2-Fluoranthenes/Pyrenes	290	J
C3FLPY	C3-Fluoranthenes/Pyrenes	220	J
C1CHRYS	C1 Chrysenes	360	J
C2CHRYS	C2 Chrysenes	390	J
C3CHRYS	C3 Chrysenes	160	J
C4CHRYS	C4 Chrysenes	70	J

NW 9/17/13

1F - FORM I SV-SIM

SEMIVOLATILE SIM ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-21-012FD

24

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: 1734.2 SDG No.: 17078

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17078-24

Sample wt/vol: 30.3 (g/mL) g Lab File ID: HQIST10.D

Extraction: (Type) SONC

% Moisture: 23 Decanted: (Y/N) Date Received: 06/19/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/27/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/06/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 6.7

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
TPPAH	Total 16 PPAH	1500	~~B~~ J	
TPAH	Total PAH	5700	~~B~~ J	

NW 9/17/13

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-25-096

1

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17078

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17078-1

Sample wt/vol: 30.6 (g/mL) g Lab File ID: 0825AHASOM03.D

% Moisture: 21 Decanted: (Y/N) Date Received: 06/19/2013

Extraction: (Type) SONC Date Extracted: 06/26/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 08/01/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 5.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	210	U
11104-28-2	Aroclor-1221	210	U
11141-16-5	Aroclor-1232	210	U
53469-21-9	Aroclor-1242	210	U
12672-29-6	Aroclor-1248	210	U
11097-69-1	Aroclor-1254	210	U
11096-82-5	Aroclor-1260	210	U
37324-23-5	Aroclor-1262	210	U
11100-14-4	Aroclor-1268	210	U

MW 9/4/13

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-13-048

2

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17078

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17078-2

Sample wt/vol: 30.9 (g/mL) g Lab File ID: 0825AHASOM04.D

% Moisture: 46 Decanted: (Y/N) Date Received: 06/19/2013

Extraction: (Type) SONC Date Extracted: 06/26/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 08/01/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 5.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	300	U
11104-28-2	Aroclor-1221	300	U
11141-16-5	Aroclor-1232	300	U
53469-21-9	Aroclor-1242	300	U
12672-29-6	Aroclor-1248	1300	
11097-69-1	Aroclor-1254	660	
11096-82-5	Aroclor-1260	100	J
37324-23-5	Aroclor-1262	300	U
11100-14-4	Aroclor-1268	300	U

NW 9/17/13

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-14-024

3

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17078

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17078-3

Sample wt/vol: 31.0 (g/mL) g Lab File ID: 0825AHASOM05.D

% Moisture: 45 Decanted: (Y/N) Date Received: 06/19/2013

Extraction: (Type) SONC Date Extracted: 06/26/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 08/01/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 5.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	290	U
11104-28-2	Aroclor-1221	290	U
11141-16-5	Aroclor-1232	290	U
53469-21-9	Aroclor-1242	290	U
12672-29-6	Aroclor-1248	580	
11097-69-1	Aroclor-1254	420	
11096-82-5	Aroclor-1260	77	J
37324-23-5	Aroclor-1262	290	U
11100-14-4	Aroclor-1268	290	U

MW 9/17/13

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-71-012

4

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17078

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17078-4

Sample wt/vol: 30.9 (g/mL) g Lab File ID: 0825AHASOM06.D

% Moisture: 23 Decanted: (Y/N) Date Received: 06/19/2013

Extraction: (Type) SONC Date Extracted: 06/26/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 08/01/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 5.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	210	U
11104-28-2	Aroclor-1221	210	U
11141-16-5	Aroclor-1232	210	U
53469-21-9	Aroclor-1242	210	U
12672-29-6	Aroclor-1248	210	U
11097-69-1	Aroclor-1254	210	U
11096-82-5	Aroclor-1260	210	U
37324-23-5	Aroclor-1262	210	U
11100-14-4	Aroclor-1268	210	U

MW 9/17/13

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-71-024

5

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17078

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17078-5

Sample wt/vol: 30.3 (g/mL) g Lab File ID: 0825AHASOM07.D

% Moisture: 24 Decanted: (Y/N) Date Received: 06/19/2013

Extraction: (Type) SONC Date Extracted: 06/26/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 08/01/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 5.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	210	U
11104-28-2	Aroclor-1221	210	U
11141-16-5	Aroclor-1232	210	U
53469-21-9	Aroclor-1242	210	U
12672-29-6	Aroclor-1248	210	U
11097-69-1	Aroclor-1254	210	U
11096-82-5	Aroclor-1260	210	U
37324-23-5	Aroclor-1262	210	U
11100-14-4	Aroclor-1268	210	U

NW 9/17/13

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-71-048

6

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17078

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17078-6

Sample wt/vol: 30.4 (g/mL) g Lab File ID: 0825AHASOM08.D

% Moisture: 23 Decanted: (Y/N) Date Received: 06/19/2013

Extraction: (Type) SONC Date Extracted: 06/26/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 08/01/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 5.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	210	U
11104-28-2	Aroclor-1221	210	U
11141-16-5	Aroclor-1232	210	U
53469-21-9	Aroclor-1242	210	U
12672-29-6	Aroclor-1248	210	U
11097-69-1	Aroclor-1254	210	U
11096-82-5	Aroclor-1260	210	U
37324-23-5	Aroclor-1262	210	U
11100-14-4	Aroclor-1268	210	U

NW 9/17/13

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-71-072

7

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17078

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17078-7

Sample wt/vol: 31.0 (g/mL) g Lab File ID: 0825AHASOM09.D

% Moisture: 20 Decanted: (Y/N) Date Received: 06/19/2013

Extraction: (Type) SONC Date Extracted: 06/26/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 08/01/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 5.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	200	U
11104-28-2	Aroclor-1221	200	U
11141-16-5	Aroclor-1232	200	U
53469-21-9	Aroclor-1242	200	U
12672-29-6	Aroclor-1248	200	U
11097-69-1	Aroclor-1254	200	U
11096-82-5	Aroclor-1260	200	U
37324-23-5	Aroclor-1262	200	U
11100-14-4	Aroclor-1268	200	U

NW 9/17/13

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-07-024FD

8

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17078

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17078-8

Sample wt/vol: 30.2 (g/mL) g Lab File ID: 0825AHASOM10.D

% Moisture: 45 Decanted: (Y/N) Date Received: 06/19/2013

Extraction: (Type) SONC Date Extracted: 06/26/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 08/01/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 5.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	300	U
11104-28-2	Aroclor-1221	300	U
11141-16-5	Aroclor-1232	300	U
53469-21-9	Aroclor-1242	300	U
12672-29-6	Aroclor-1248	300	U
11097-69-1	Aroclor-1254	21	~~J P~~
11096-82-5	Aroclor-1260	15	~~J P~~
37324-23-5	Aroclor-1262	300	U
11100-14-4	Aroclor-1268	300	U

JJ

MW 9/17/13

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-71-024FD

9

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17078

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17078-9

Sample wt/vol: 30.9 (g/mL) g Lab File ID: 0825AHASOM11.D

% Moisture: 30 Decanted: (Y/N) Date Received: 06/19/2013

Extraction: (Type) SONC Date Extracted: 06/26/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 08/01/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 5.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	230	U
11104-28-2	Aroclor-1221	230	U
11141-16-5	Aroclor-1232	230	U
53469-21-9	Aroclor-1242	230	U
12672-29-6	Aroclor-1248	230	U
11097-69-1	Aroclor-1254	230	U
11096-82-5	Aroclor-1260	230	U
37324-23-5	Aroclor-1262	230	U
11100-14-4	Aroclor-1268	230	U

NW 9/17/13

1H - FORM I ARO
AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-07-012

10

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17078

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17078-10

Sample wt/vol: 30.0 (g/mL) g Lab File ID: 0825AHASOM12.D

% Moisture: 49 Decanted: (Y/N) Date Received: 06/19/2013

Extraction: (Type) SONC Date Extracted: 06/26/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 08/01/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 5.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	320	U
11104-28-2	Aroclor-1221	320	U
11141-16-5	Aroclor-1232	320	U
53469-21-9	Aroclor-1242	320	U
12672-29-6	Aroclor-1248	140	J
11097-69-1	Aroclor-1254	130	J
11096-82-5	Aroclor-1260	33	~~J P~~ J
37324-23-5	Aroclor-1262	320	U
11100-14-4	Aroclor-1268	320	U

MW 9/17/13

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-07-024

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17078

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17078-11

Sample wt/vol: 30.1 (g/mL) g Lab File ID: 0825AHASOM13.D

% Moisture: 44 Decanted: (Y/N) Date Received: 06/19/2013

Extraction: (Type) SONC Date Extracted: 06/26/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 08/01/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 5.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	290	U
11104-28-2	Aroclor-1221	290	U
11141-16-5	Aroclor-1232	290	U
53469-21-9	Aroclor-1242	290	U
12672-29-6	Aroclor-1248	290	U
11097-69-1	Aroclor-1254	24	~~J P~~
11096-82-5	Aroclor-1260	13	~~J P~~
37324-23-5	Aroclor-1262	290	U
11100-14-4	Aroclor-1268	290	U

NW 9/17/13

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-07-048

12

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17078

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17078-12

Sample wt/vol: 30.1 (g/mL) g Lab File ID: 0825AHASOM14.D

% Moisture: 40 Decanted: (Y/N) Date Received: 06/19/2013

Extraction: (Type) SONC Date Extracted: 06/26/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 08/01/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 5.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	280	U
11104-28-2	Aroclor-1221	280	U
11141-16-5	Aroclor-1232	280	U
53469-21-9	Aroclor-1242	280	U
12672-29-6	Aroclor-1248	280	U
11097-69-1	Aroclor-1254	280	U
11096-82-5	Aroclor-1260	280	U
37324-23-5	Aroclor-1262	280	U
11100-14-4	Aroclor-1268	280	U

MW 9/17/13

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-07-072

13

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17078

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17078-13

Sample wt/vol: 30.8 (g/mL) g Lab File ID: 0825AHASOM15.D

% Moisture: 31 Decanted: (Y/N) Date Received: 06/19/2013

Extraction: (Type) SONC Date Extracted: 06/26/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 08/01/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 5.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	230	U
11104-28-2	Aroclor-1221	230	U
11141-16-5	Aroclor-1232	230	U
53469-21-9	Aroclor-1242	230	U
12672-29-6	Aroclor-1248	230	U
11097-69-1	Aroclor-1254	230	U
11096-82-5	Aroclor-1260	230	U
37324-23-5	Aroclor-1262	230	U
11100-14-4	Aroclor-1268	230	U

MW 9/17/13

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-21-048

14

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17078

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17078-14

Sample wt/vol: 30.4 (g/mL) g Lab File ID: 0825AHASOM16.D

% Moisture: 27 Decanted: (Y/N) Date Received: 06/19/2013

Extraction: (Type) SONC Date Extracted: 06/26/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 08/01/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 5.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	220	U
11104-28-2	Aroclor-1221	220	U
11141-16-5	Aroclor-1232	220	U
53469-21-9	Aroclor-1242	220	U
12672-29-6	Aroclor-1248	220	U
11097-69-1	Aroclor-1254	220	U
11096-82-5	Aroclor-1260	220	U
37324-23-5	Aroclor-1262	220	U
11100-14-4	Aroclor-1268	220	U

MW 9/17/13

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-15-024FD

15

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17078

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17078-15

Sample wt/vol: 30.7 (g/mL) g Lab File ID: 0825AHASOM17.D

% Moisture: 33 Decanted: (Y/N) Date Received: 06/19/2013

Extraction: (Type) SONC Date Extracted: 06/26/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 08/01/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 5.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	240	U
11104-28-2	Aroclor-1221	240	U
11141-16-5	Aroclor-1232	240	U
53469-21-9	Aroclor-1242	240	U
12672-29-6	Aroclor-1248	240	U
11097-69-1	Aroclor-1254	240	U
11096-82-5	Aroclor-1260	240	U
37324-23-5	Aroclor-1262	240	U
11100-14-4	Aroclor-1268	240	U

MW 9/1 7/13

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-15-024

16

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17078

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17078-16

Sample wt/vol: 31.0 (g/mL) g Lab File ID: 0825AHDSOM01.D

% Moisture: 33 Decanted: (Y/N) Date Received: 06/19/2013

Extraction: (Type) SONC Date Extracted: 06/26/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 08/02/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 5.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	240	U
11104-28-2	Aroclor-1221	240	U
11141-16-5	Aroclor-1232	240	U
53469-21-9	Aroclor-1242	240	U
12672-29-6	Aroclor-1248	240	U
11097-69-1	Aroclor-1254	240	U
11096-82-5	Aroclor-1260	240	U
37324-23-5	Aroclor-1262	240	U
11100-14-4	Aroclor-1268	240	U

MW 9/17/13

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-21-012

17

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17078

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17078-17

Sample wt/vol: 30.8 (g/mL) g Lab File ID: 0825AHDSOM02.D

% Moisture: 29 Decanted: (Y/N) Date Received: 06/19/2013

Extraction: (Type) SONC Date Extracted: 06/26/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 08/02/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 5.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	230	U
11104-28-2	Aroclor-1221	230	U
11141-16-5	Aroclor-1232	230	U
53469-21-9	Aroclor-1242	230	U
12672-29-6	Aroclor-1248	40	~~J P~~ J
11097-69-1	Aroclor-1254	74	J
11096-82-5	Aroclor-1260	14	J
37324-23-5	Aroclor-1262	230	U
11100-14-4	Aroclor-1268	230	U

MW 9/17/13

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-21-024

18

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17078

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17078-18

Sample wt/vol: 30.7 (g/mL) g Lab File ID: 0825AHDSOM03.D

% Moisture: 35 Decanted: (Y/N) Date Received: 06/19/2013

Extraction: (Type) SONC Date Extracted: 06/26/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 08/02/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 5.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	250	U
11104-28-2	Aroclor-1221	250	U
11141-16-5	Aroclor-1232	250	U
53469-21-9	Aroclor-1242	250	U
12672-29-6	Aroclor-1248	13	~~J P~~ J
11097-69-1	Aroclor-1254	50	J
11096-82-5	Aroclor-1260	15	J
37324-23-5	Aroclor-1262	250	U
11100-14-4	Aroclor-1268	250	U

MW 9/11/13

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-21-072

19

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17078

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17078-19

Sample wt/vol: 30.8 (g/mL) g Lab File ID: 0825AHDSOM04.D

% Moisture: 21 Decanted: (Y/N) Date Received: 06/19/2013

Extraction: (Type) SONC Date Extracted: 06/26/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 08/02/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 5.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	200	U
11104-28-2	Aroclor-1221	200	U
11141-16-5	Aroclor-1232	200	U
53469-21-9	Aroclor-1242	200	U
12672-29-6	Aroclor-1248	200	U
11097-69-1	Aroclor-1254	200	U
11096-82-5	Aroclor-1260	200	U
37324-23-5	Aroclor-1262	200	U
11100-14-4	Aroclor-1268	200	U

MW 9/17/13

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-15-012

20

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17078

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17078-20

Sample wt/vol: 30.4 (g/mL) g Lab File ID: 0825AHDSOM05.D

% Moisture: 48 Decanted: (Y/N) Date Received: 06/19/2013

Extraction: (Type) SONC Date Extracted: 06/26/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 08/02/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 5.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	310	U
11104-28-2	Aroclor-1221	310	U
11141-16-5	Aroclor-1232	310	U
53469-21-9	Aroclor-1242	36	J
12672-29-6	Aroclor-1248	310	U
11097-69-1	Aroclor-1254	41	J
11096-82-5	Aroclor-1260	38	~~J~~ J
37324-23-5	Aroclor-1262	310	U
11100-14-4	Aroclor-1268	310	U

NW 9/17/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-25-096

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678
Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 17078
Matrix: SED | Lab Sample Id: 200-17078-1
% Solids: 78.9 | Date Received: 06/19/2013

Concentration Units (**ug/L, ug,** or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	5.1			P
7440-43-9	Cadmium	0.30	J		P
7440-47-3	Chromium	8.4		J ~~E~~	P
7440-50-8	Copper	9.9		J ~~E~~	P
7439-92-1	Lead	7.0			P
7440-02-0	Nickel	13.1		J ~~E~~	P
7440-66-6	Zinc	31.7		J ~~E~~	P

Color Before: DARK BROWN | Clarity Before: | Texture: FINE
Color After: TAN | Clarity After: CLOUDY | Artifacts:
Comments:

MW 9/17/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-25-096

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17078

Matrix: SED Lab Sample Id: 200-17078-1

% Solids: 78.9 Date Received: 06/19/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.032	J		CV

Color Before: GRAY Clarity Before: CLOUDY Texture: FINE

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

MW 9/17/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-13-048

2

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678

Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 17078

Matrix: SED | Lab Sample Id: 200-17078-2

% Solids: 54.1 | Date Received: 06/19/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	10.8			P
7440-43-9	Cadmium	4.2			P
7440-47-3	Chromium	82.0		J ~~E~~	P
7440-50-8	Copper	57.6		J ~~E~~	P
7439-92-1	Lead	68.7			P
7440-02-0	Nickel	44.9		J ~~E~~	P
7440-66-6	Zinc	203		J ~~E~~	P

Color Before: BROWN | Clarity Before: | Texture: FINE

Color After: TAN | Clarity After: CLOUDY | Artifacts:

Comments:

NW 9/17/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-13-048

2

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678
Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17078
Matrix: SED Lab Sample Id: 200-17078-2
% Solids: 54.1 Date Received: 06/19/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.43			CV

Color Before: GRAY Clarity Before: CLOUDY Texture: FINE
Color After: COLORLESS Clarity After: CLEAR Artifacts:
Comments:

MW 9/17/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-14-024

3

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678
Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 17078
Matrix: SED | Lab Sample Id: 200-17078-3
% Solids: 54.8 | Date Received: 06/19/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	9.8			P
7440-43-9	Cadmium	3.3			P
7440-47-3	Chromium	63.9		J ~~E~~	P
7440-50-8	Copper	48.9		J ~~E~~	P
7439-92-1	Lead	58.8			P
7440-02-0	Nickel	44.9		J ~~E~~	P
7440-66-6	Zinc	177		J ~~E~~	P

Color Before: GREY | Clarity Before: | Texture: FINE
Color After: TAN | Clarity After: CLOUDY | Artifacts:
Comments:

MW 9/17/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-14-024

3

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678
Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17078
Matrix: SED Lab Sample Id: 200-17078-3
% Solids: 54.8 Date Received: 06/19/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.30			CV

Color Before: GRAY Clarity Before: CLOUDY Texture: FINE
Color After: COLORLESS Clarity After: CLEAR Artifacts:
Comments:

MW 9/17/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-71-012

4

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678

Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 17078

Matrix: SED | Lab Sample Id: 200-17078-4

% Solids: 76.9 | Date Received: 06/19/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	4.6			P
7440-43-9	Cadmium	0.33	J		P
7440-47-3	Chromium	11.5		J ~~E~~	P
7440-50-8	Copper	12.2		J ~~E~~	P
7439-92-1	Lead	14.4			P
7440-02-0	Nickel	15.3		J ~~E~~	P
7440-66-6	Zinc	43.8		J ~~E~~	P

Color Before: GREY | Clarity Before: | Texture: FINE

Color After: TAN | Clarity After: CLOUDY | Artifacts:

Comments:

NW 9/17/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-71-012

4

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17078

Matrix: SED Lab Sample Id: 200-17078-4

% Solids: 76.9 Date Received: 06/19/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.044	J		CV

Color Before: GRAY Clarity Before: CLOUDY Texture: FINE

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

NW 9/17/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-71-024

5

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678
Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17078
Matrix: SED Lab Sample Id: 200-17078-5
% Solids: 76.4 Date Received: 06/19/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	3.2			P
7440-43-9	Cadmium	0.33	J		P
7440-47-3	Chromium	11.1		J ~~E~~	P
7440-50-8	Copper	9.6		J ~~E~~	P
7439-92-1	Lead	8.4			P
7440-02-0	Nickel	14.5		J ~~E~~	P
7440-66-6	Zinc	37.3		J ~~E~~	P

Color Before: BROWN Clarity Before: Texture: MEDIUM
Color After: TAN Clarity After: CLOUDY Artifacts:
Comments:

NW 9/17/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-71-024

5

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678
Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17078
Matrix: SED Lab Sample Id: 200-17078-5
% Solids: 76.4 Date Received: 06/19/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.12	U		CV

Color Before: GRAY Clarity Before: CLOUDY Texture: FINE
Color After: COLORLESS Clarity After: CLEAR Artifacts:
Comments:

MW 9/17/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-71-048

6

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678

Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 17078

Matrix: SED | Lab Sample Id: 200-17078-6

% Solids: 77.2 | Date Received: 06/19/2013

Concentration Units (**ug/L, ug,** or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	4.7			P
7440-43-9	Cadmium	0.30	J		P
7440-47-3	Chromium	8.4		J ~~B~~	P
7440-50-8	Copper	8.8		J ~~B~~	P
7439-92-1	Lead	5.9			P
7440-02-0	Nickel	12.0		J ~~B~~	P
7440-66-6	Zinc	29.3		J ~~B~~	P

Color Before: BROWN | Clarity Before: | Texture: FINE

Color After: TAN | Clarity After: CLOUDY | Artifacts:

Comments:

NW 9/17/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-71-048

6

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678
Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17078
Matrix: SED Lab Sample Id: 200-17078-6
% Solids: 77.2 Date Received: 06/19/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.12	U		CV

Color Before: GRAY Clarity Before: CLOUDY Texture: FINE
Color After: COLORLESS Clarity After: CLEAR Artifacts:
Comments:

MW 9/17/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-71-072

7

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678
Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 17078
Matrix: SED | Lab Sample Id: 200-17078-7
% Solids: 80.4 | Date Received: 06/19/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	6.0			P
7440-43-9	Cadmium	0.33	J		P
7440-47-3	Chromium	8.9		J ~~E~~	P
7440-50-8	Copper	10.4		J ~~E~~	P
7439-92-1	Lead	7.3			P
7440-02-0	Nickel	13.8		J ~~E~~	P
7440-66-6	Zinc	34.3		J ~~E~~	P

Color Before: BROWN | Clarity Before: | Texture: FINE
Color After: TAN | Clarity After: CLOUDY | Artifacts:
Comments:

MW 9/17/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-71-072

7

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17078

Matrix: SED Lab Sample Id: 200-17078-7

% Solids: 80.4 Date Received: 06/19/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.12	U		CV

Color Before: GRAY Clarity Before: CLOUDY Texture: FINE

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

MW 9/17/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-07-024FD
8

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678
Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 17078
Matrix: SED | Lab Sample Id: 200-17078-8
% Solids: 55.1 | Date Received: 06/19/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	9.2			P
7440-43-9	Cadmium	3.8			P
7440-47-3	Chromium	44.0		J ~~E~~	P
7440-50-8	Copper	49.6		J ~~E~~	P
7439-92-1	Lead	89.4			P
7440-02-0	Nickel	34.5		J ~~E~~	P
7440-66-6	Zinc	226		J ~~E~~	P

Color Before: BROWN | Clarity Before: | Texture: FINE
Color After: TAN | Clarity After: CLOUDY | Artifacts:
Comments:

NW 9/17/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-07-024FD

8

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17078

Matrix: SED Lab Sample Id: 200-17078-8

% Solids: 55.1 Date Received: 06/19/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.11	J		CV

Color Before: GRAY Clarity Before: CLOUDY Texture: FINE

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

NW 9/17/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-71-024FD

9

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17078

Matrix: SED Lab Sample Id: 200-17078-9

% Solids: 69.8 Date Received: 06/19/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	3.6			P
7440-43-9	Cadmium	0.32	J		P
7440-47-3	Chromium	11.2		J F	P
7440-50-8	Copper	11.6		J F	P
7439-92-1	Lead	9.0			P
7440-02-0	Nickel	15.6		J F	P
7440-66-6	Zinc	39.5		J F	P

Color Before: BROWN Clarity Before: Texture: FINE

Color After: TAN Clarity After: CLOUDY Artifacts:

Comments:

NW 9/17/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-71-024FD

9

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17078

Matrix: SED Lab Sample Id: 200-17078-9

% Solids: 69.8 Date Received: 06/19/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.12	U		CV

Color Before: GRAY Clarity Before: CLOUDY Texture: FINE

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

MW 9/17/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-07-012

10

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17078

Matrix: SED Lab Sample Id: 200-17078-10

% Solids: 51.2 Date Received: 06/19/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	8.6			P
7440-43-9	Cadmium	2.1			P
7440-47-3	Chromium	38.6		J ~~E~~	P
7440-50-8	Copper	48.3		J ~~E~~	P
7439-92-1	Lead	51.7			P
7440-02-0	Nickel	35.0		J ~~E~~	P
7440-66-6	Zinc	176		J ~~E~~	P

Color Before: BROWN Clarity Before: Texture: FINE

Color After: TAN Clarity After: CLOUDY Artifacts:

Comments:

MW 9/17/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-07-012

10

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678
Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17078
Matrix: SED Lab Sample Id: 200-17078-10
% Solids: 51.2 Date Received: 06/19/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.20			CV

Color Before: GRAY Clarity Before: CLOUDY Texture: FINE
Color After: COLORLESS Clarity After: CLEAR Artifacts:
Comments:

NW 9/17/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-07-024

11

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678
Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 17078
Matrix: SED | Lab Sample Id: 200-17078-11
% Solids: 56.4 | Date Received: 06/19/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	10.7			P
7440-43-9	Cadmium	3.8			P
7440-47-3	Chromium	40.8		J ~~E~~	P
7440-50-8	Copper	51.2		J ~~E~~	P
7439-92-1	Lead	106			P
7440-02-0	Nickel	33.0		J ~~E~~	P
7440-66-6	Zinc	227		J ~~E~~	P

Color Before: BROWN | Clarity Before: | Texture: FINE
Color After: TAN | Clarity After: CLOUDY | Artifacts:
Comments:

MW 9/17/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-07-024

11

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17078

Matrix: SED Lab Sample Id: 200-17078-11

% Solids: 56.4 Date Received: 06/19/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.30			CV

Color Before: GRAY Clarity Before: CLOUDY Texture: FINE

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

MW 9/17/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-07-048

12

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17078

Matrix: SED Lab Sample Id: 200-17078-12

% Solids: 59.6 Date Received: 06/19/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	14.9			P
7440-43-9	Cadmium	1.4			P
7440-47-3	Chromium	25.2		J ~~B~~	P
7440-50-8	Copper	39.2		J ~~B~~	P
7439-92-1	Lead	101			P
7440-02-0	Nickel	32.5		J ~~B~~	P
7440-66-6	Zinc	216		J ~~B~~	P

Color Before: GREY Clarity Before: Texture: FINE

Color After: TAN Clarity After: CLOUDY Artifacts:

Comments:

MW 9/17/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-07-048

12

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17078

Matrix: SED Lab Sample Id: 200-17078-12

% Solids: 59.6 Date Received: 06/19/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.65			CV

Color Before: GRAY Clarity Before: CLOUDY Texture: FINE

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

MW 9/17/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-07-072

13

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678

Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 17078

Matrix: SED | Lab Sample Id: 200-17078-13

% Solids: 68.6 | Date Received: 06/19/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	10.1			P
7440-43-9	Cadmium	0.56			P
7440-47-3	Chromium	17.6		J ~~E~~	P
7440-50-8	Copper	19.7		J ~~E~~	P
7439-92-1	Lead	34.8			P
7440-02-0	Nickel	21.5		J ~~E~~	P
7440-66-6	Zinc	102		J ~~E~~	P

Color Before: GREY | Clarity Before: | Texture: FINE

Color After: TAN | Clarity After: CLOUDY | Artifacts: STONE

Comments:

MW 9/17/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-07-072

13

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17078

Matrix: SED Lab Sample Id: 200-17078-13

% Solids: 68.6 Date Received: 06/19/2013

Concentration Units (**ug/L, ug,** or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.17			CV

Color Before: GRAY Clarity Before: CLOUDY Texture: FINE

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

WW 9/17/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-21-048

14

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17078

Matrix: SED Lab Sample Id: 200-17078-14

% Solids: 72.8 Date Received: 06/19/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	3.9			P
7440-43-9	Cadmium	0.35	J		P
7440-47-3	Chromium	13.0		J ~~E~~	P
7440-50-8	Copper	12.4		J ~~E~~	P
7439-92-1	Lead	13.2			P
7440-02-0	Nickel	16.9		J ~~E~~	P
7440-66-6	Zinc	43.5		J ~~E~~	P

Color Before: GREY Clarity Before: Texture: MEDIUM

Color After: TAN Clarity After: CLOUDY Artifacts:

Comments:

9/17/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-21-048

14

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17078

Matrix: SED Lab Sample Id: 200-17078-14

% Solids: 72.8 Date Received: 06/19/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.058	J		CV

Color Before: GRAY Clarity Before: CLOUDY Texture: FINE

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

Dw 9/17/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-15-024FD

15

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17078

Matrix: SED Lab Sample Id: 200-17078-15

% Solids: 66.9 Date Received: 06/19/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	8.5			P
7440-43-9	Cadmium	0.90			P
7440-47-3	Chromium	24.9		J ~~F~~	P
7440-50-8	Copper	24.0		J ~~F~~	P
7439-92-1	Lead	41.8			P
7440-02-0	Nickel	22.7		J ~~F~~	P
7440-66-6	Zinc	105		J ~~F~~	P

Color Before: GREY Clarity Before: Texture: FINE

Color After: TAN Clarity After: CLOUDY Artifacts:

Comments:

MW 9/17/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-15-024FD

15

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17078

Matrix: SED Lab Sample Id: 200-17078-15

% Solids: 66.9 Date Received: 06/19/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.15			CV

Color Before: GRAY Clarity Before: CLOUDY Texture: FINE

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

MW 9/17/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-15-024

16

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678

Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 17078

Matrix: SED | Lab Sample Id: 200-17078-16

% Solids: 67.0 | Date Received: 06/19/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	8.0			P
7440-43-9	Cadmium	0.82			P
7440-47-3	Chromium	23.4		J E	P
7440-50-8	Copper	23.0		J E	P
7439-92-1	Lead	36.5			P
7440-02-0	Nickel	23.0		J E	P
7440-66-6	Zinc	101		J E	P

Color Before: GREY | Clarity Before: | Texture: FINE

Color After: TAN | Clarity After: CLOUDY | Artifacts:

Comments:

MW 9/17/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-15-024

16

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17078

Matrix: SED Lab Sample Id: 200-17078-16

% Solids: 67.0 Date Received: 06/19/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.14			CV

Color Before: GRAY Clarity Before: CLOUDY Texture: FINE

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

MW 9/17/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-21-012

17

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17078

Matrix: SED Lab Sample Id: 200-17078-17

% Solids: 71.1 Date Received: 06/19/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	7.9			P
7440-43-9	Cadmium	0.81			P
7440-47-3	Chromium	19.7		J ~~F~~	P
7440-50-8	Copper	25.7		J ~~E~~	P
7439-92-1	Lead	20.1			P
7440-02-0	Nickel	22.9		J ~~F~~	P
7440-66-6	Zinc	75.8		J ~~F~~	P

Color Before: BROWN Clarity Before: Texture: FINE

Color After: TAN Clarity After: CLOUDY Artifacts:

Comments:

MW 9/17/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-21-012

17

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678
Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17078
Matrix: SED Lab Sample Id: 200-17078-17
% Solids: 71.1 Date Received: 06/19/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.031	J		CV

Color Before: GRAY Clarity Before: CLOUDY Texture: FINE
Color After: COLORLESS Clarity After: CLEAR Artifacts:
Comments:

MW 9/19/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-21-024

18

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17078

Matrix: SED Lab Sample Id: 200-17078-18

% Solids: 65.3 Date Received: 06/19/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	8.7			P
7440-43-9	Cadmium	1.7			P
7440-47-3	Chromium	25.7		J ~~E~~	P
7440-50-8	Copper	31.7		J ~~E~~	P
7439-92-1	Lead	60.6			P
7440-02-0	Nickel	23.5		J ~~E~~	P
7440-66-6	Zinc	140		J ~~E~~	P

Color Before: GREY Clarity Before: Texture: FINE

Color After: TAN Clarity After: CLOUDY Artifacts:

Comments:

MW 9/17/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-21-024

18

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17078

Matrix: SED Lab Sample Id: 200-17078-18

% Solids: 65.3 Date Received: 06/19/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.15			CV

Color Before: GRAY Clarity Before: CLOUDY Texture: FINE

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

MW 9/17/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-21-072

19

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678
Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 17078
Matrix: SED | Lab Sample Id: 200-17078-19
% Solids: 79.0 | Date Received: 06/19/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	6.6			P
7440-43-9	Cadmium	0.29	J		P
7440-47-3	Chromium	8.0		J ~~E~~	P
7440-50-8	Copper	6.8		J ~~E~~	P
7439-92-1	Lead	5.6			P
7440-02-0	Nickel	11.1		J ~~E~~	P
7440-66-6	Zinc	28.8		J ~~E~~	P

Color Before: GREY | Clarity Before: | Texture: MEDIUM
Color After: TAN | Clarity After: CLOUDY | Artifacts:
Comments:

MW 9/17/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-21-072

19

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17078

Matrix: SED Lab Sample Id: 200-17078-19

% Solids: 79.0 Date Received: 06/19/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.040	J		CV

Color Before: GRAY Clarity Before: CLOUDY Texture: FINE

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

MWG 7/17/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-15-012

20

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678
Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17078
Matrix: SED Lab Sample Id: 200-17078-20
% Solids: 52.5 Date Received: 06/19/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	6.7			P
7440-43-9	Cadmium	0.92			P
7440-47-3	Chromium	22.7		J ~~B~~	P
7440-50-8	Copper	26.9		J ~~B~~	P
7439-92-1	Lead	26.0			P
7440-02-0	Nickel	26.8		J ~~B~~	P
7440-66-6	Zinc	109		J ~~B~~	P

Color Before: GREY Clarity Before: Texture: FINE
Color After: TAN Clarity After: CLOUDY Artifacts:
Comments:

MW 9/17/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-15-012

20

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678
Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17078
Matrix: SED Lab Sample Id: 200-17078-20
% Solids: 52.5 Date Received: 06/19/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.11	J		CV

Color Before: GRAY Clarity Before: CLOUDY Texture: FINE
Color After: COLORLESS Clarity After: CLEAR Artifacts:
Comments:

MW 9/17/13

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - SEM/AVS

17

Client Sample ID: LMR13-21-012 | Lab Sample ID: 200-17078-17

Lab Name: TestAmerica Burlington | Job No.: 200-17078-1

SDG ID.: 17078

Matrix: Sediment | Date Sampled: 06/18/2013 12:55

Reporting Basis: DRY | Date Received: 06/19/2013 10:30

% Solids: 71.1

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-43-9	Cadmium SEM	1.4	1.7	0.26	mg/Kg	J		10	6010C
7440-43-9	Cadmium SEM	0.012	0.015	0.0023	umol/g	J		10	6010C
7440-50-8	Copper SEM	9.1	8.6	0.75	mg/Kg			10	6010C
7440-50-8	Copper SEM	0.14	0.14	0.012	umol/g			10	6010C
7439-92-1	Lead SEM	13.7	3.5	1.5	mg/Kg			10	6010C
7439-92-1	Lead SEM	0.066	0.017	0.0074	umol/g			10	6010C
7440-02-0	Nickel SEM	9.0	13.9	1.0	mg/Kg	J		10	6010C
7440-02-0	Nickel SEM	0.15	0.24	0.017	umol/g	J		10	6010C
7440-66-6	Zinc SEM	38.1	6.9	1.9	mg/Kg			10	6010C
7440-66-6	Zinc SEM	0.58	0.11	0.030	umol/g			10	6010C
7439-97-6	Mercury SEM	0.0069	0.0069	0.0023	mg/Kg	U		1	7470A
7439-97-6	Mercury SEM	0.000035	0.000035	0.000011	umol/g	U		1	7470A

MW 9/17/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY - SEM/AVS

17

Client Sample ID: LMR13-21-012 Lab Sample ID: 200-17078-17

Lab Name: TestAmerica Burlington Job No.: 200-17078-1

SDG ID.: 17078

Matrix: Sediment Date Sampled: 06/18/2013 12:55

Reporting Basis: DRY Date Received: 06/19/2013 10:30

% Solids: 71.1

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
18496-25-8	Acid Volatile Sulfides (AVS)	22.2	22.2		mg/Kg	U		1	AVS
18496-25-8	Acid Volatile Sulfides (AVS)	0.69	0.69		umol/g	U		1	AVS

NW 9/17/13

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - SEM/AVS

17

Client Sample ID: LMR13-21-012 Lab Sample ID: 200-17078-17

Lab Name: TestAmerica Burlington Job No.: 200-17078-1

SDG ID.: 17078

Matrix: Sediment Date Sampled: 06/18/2013 12:55

Reporting Basis: WET Date Received: 06/19/2013 10:30

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	SEM/AVS Ratio	NC	0.00100	0.00100	NONE			1	SEM

MW 9/17/13

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - SEM/AVS

20

Client Sample ID: LMR13-15-012
Lab Sample ID: 200-17078-20
Lab Name: TestAmerica Burlington
Job No.: 200-17078-1
SDG ID.: 17078
Matrix: Sediment
Date Sampled: 06/18/2013 13:35
Reporting Basis: DRY
Date Received: 06/19/2013 10:30
% Solids: 52.5

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-43-9	Cadmium SEM	0.54	2.2	0.35	mg/Kg	J		10	6010C
7440-43-9	Cadmium SEM	0.0048	0.020	0.0031	umol/g	J		10	6010C
7440-50-8	Copper SEM	7.5	11.3	0.99	mg/Kg	J		10	6010C
7440-50-8	Copper SEM	0.12	0.18	0.016	umol/g	J		10	6010C
7439-92-1	Lead SEM	14.5	4.6	2.0	mg/Kg			10	6010C
7439-92-1	Lead SEM	0.070	0.022	0.0097	umol/g			10	6010C
7440-02-0	Nickel SEM	7.4	18.3	1.3	mg/Kg	J		10	6010C
7440-02-0	Nickel SEM	0.13	0.31	0.022	umol/g	J		10	6010C
7440-66-6	Zinc SEM	43.0	9.1	2.6	mg/Kg			10	6010C
7440-66-6	Zinc SEM	0.66	0.14	0.039	umol/g			10	6010C
7439-97-6	Mercury SEM	0.0071	0.0091	0.0030	mg/Kg	J		1	7470A
7439-97-6	Mercury SEM	0.000036	0.000046	0.000015	umol/g	J		1	7470A

MW 9/17/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY - SEM/AVS

20

Client Sample ID: LMR13-15-012 Lab Sample ID: 200-17078-20

Lab Name: TestAmerica Burlington Job No.: 200-17078-1

SDG ID.: 17078

Matrix: Sediment Date Sampled: 06/18/2013 13:35

Reporting Basis: DRY Date Received: 06/19/2013 10:30

% Solids: 52.5

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
18496-25-8	Acid Volatile Sulfides (AVS)	29.3	29.3		mg/Kg	U		1	AVS
18496-25-8	Acid Volatile Sulfides (AVS)	0.91	0.91		umol/g	U		1	AVS

MW 9/17/13

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - SEM/AVS

20

Client Sample ID: LMR13-15-012 Lab Sample ID: 200-17078-20

Lab Name: TestAmerica Burlington Job No.: 200-17078-1

SDG ID.: 17078

Matrix: Sediment Date Sampled: 06/18/2013 13:35

Reporting Basis: WET Date Received: 06/19/2013 10:30

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	SEM/AVS Ratio	NC	0.00100	0.00100	NONE			1	SEM

MW 9/17/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: LMR13-25-096
Lab Sample ID: 200-17078-1
Lab Name: TestAmerica Burlington
Job No.: 200-17078-1
SDG ID.: 17078
Matrix: Sediment
Date Sampled: 06/18/2013 09:50
Reporting Basis: WET
Date Received: 06/19/2013 10:30
% Solids: 78.9

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	28800	J 1000		mg/Kg		U	1	Lloyd Kahn

MW 9/17/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

2

Client Sample ID: LMR13-13-048
Lab Sample ID: 200-17078-2
Lab Name: TestAmerica Burlington
Job No.: 200-17078-1
SDG ID.: 17078
Matrix: Sediment
Date Sampled: 06/18/2013 08:00
Reporting Basis: WET
Date Received: 06/19/2013 10:30
% Solids: 54.1

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	38900	J 1000		mg/Kg		H	1	Lloyd Kahn

MW 9/17/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

3

Client Sample ID: LMR13-14-024
Lab Sample ID: 200-17078-3
Lab Name: TestAmerica Burlington
Job No.: 200-17078-1
SDG ID.: 17078
Matrix: Sediment
Date Sampled: 06/17/2013 18:15
Reporting Basis: WET
Date Received: 06/19/2013 10:30
% Solids: 54.8

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	36300	J 1000		mg/Kg		H	1	Lloyd Kahn

NW 9/17/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

4

Client Sample ID: LMR13-71-012
Lab Sample ID: 200-17078-4
Lab Name: TestAmerica Burlington
Job No.: 200-17078-1
SDG ID.: 17078
Matrix: Sediment
Date Sampled: 06/18/2013 10:00
Reporting Basis: WET
Date Received: 06/19/2013 10:30
% Solids: 76.9

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	31200	J 1000		mg/Kg		~~H~~	1	Lloyd Kahn

MW 9/17/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

5

Client Sample ID: LMR13-71-024
Lab Sample ID: 200-17078-5
Lab Name: TestAmerica Burlington
Job No.: 200-17078-1
SDG ID.: 17078
Matrix: Sediment
Date Sampled: 06/18/2013 10:10
Reporting Basis: WET
Date Received: 06/19/2013 10:30
% Solids: 76.4

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	22200	J 1000		mg/Kg		H	1	Lloyd Kahn

MW 9/17/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

6

Client Sample ID: LMR13-71-048
Lab Sample ID: 200-17078-6
Lab Name: TestAmerica Burlington
Job No.: 200-17078-1
SDG ID.: 17078
Matrix: Sediment
Date Sampled: 06/18/2013 10:20
Reporting Basis: WET
Date Received: 06/19/2013 10:30
% Solids: 77.2

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	14300	J 1000		mg/Kg		~~H~~	1	Lloyd Kahn

MW 9/17/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

7

Client Sample ID: LMR13-71-072
Lab Sample ID: 200-17078-7
Lab Name: TestAmerica Burlington
Job No.: 200-17078-1
SDG ID.: 17078
Matrix: Sediment
Date Sampled: 06/18/2013 10:30
Reporting Basis: WET
Date Received: 06/19/2013 10:30
% Solids: 80.4

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	20700	J 1000		mg/Kg		H	1	Lloyd Kahn

MW 9/17/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

8

Client Sample ID: LMR13-07-024FD
Lab Sample ID: 200-17078-8
Lab Name: TestAmerica Burlington
Job No.: 200-17078-1
SDG ID.: 17078
Matrix: Sediment
Date Sampled: 06/18/2013 11:10
Reporting Basis: WET
Date Received: 06/19/2013 10:30
% Solids: 55.1

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	29200	J 1000		mg/Kg		~~H~~	1	Lloyd Kahn

MW 9/17/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

9

Client Sample ID: LMR13-71-024FD
Lab Sample ID: 200-17078-9
Lab Name: TestAmerica Burlington
Job No.: 200-17078-1
SDG ID.: 17078
Matrix: Sediment
Date Sampled: 06/18/2013 10:10
Reporting Basis: WET
Date Received: 06/19/2013 10:30
% Solids: 69.8

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	16900	J 1000		mg/Kg		H	1	Lloyd Kahn

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1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

10

Client Sample ID: LMR13-07-012
Lab Sample ID: 200-17078-10
Lab Name: TestAmerica Burlington
Job No.: 200-17078-1
SDG ID.: 17078
Matrix: Sediment
Date Sampled: 06/18/2013 11:00
Reporting Basis: WET
Date Received: 06/19/2013 10:30
% Solids: 51.2

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	30500	J 1000		mg/Kg			1	Lloyd Kahn

MW 9/17/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

11

Client Sample ID: LMR13-07-024 | Lab Sample ID: 200-17078-11

Lab Name: TestAmerica Burlington | Job No.: 200-17078-1

SDG ID.: 17078

Matrix: Sediment | Date Sampled: 06/18/2013 11:10

Reporting Basis: WET | Date Received: 06/19/2013 10:30

% Solids: 56.4

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	30800	J 1000		mg/Kg		~~U~~	1	Lloyd Kahn

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1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

12

Client Sample ID: LMR13-07-048
Lab Sample ID: 200-17078-12
Lab Name: TestAmerica Burlington
Job No.: 200-17078-1
SDG ID.: 17078
Matrix: Sediment
Date Sampled: 06/18/2013 11:20
Reporting Basis: WET
Date Received: 06/19/2013 10:30
% Solids: 59.6

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	29900	J 1000		mg/Kg		~~H~~	1	Lloyd Kahn

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1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

13

Client Sample ID: LMR13-07-072
Lab Sample ID: 200-17078-13
Lab Name: TestAmerica Burlington
Job No.: 200-17078-1
SDG ID.: 17078
Matrix: Sediment
Date Sampled: 06/18/2013 11:30
Reporting Basis: WET
Date Received: 06/19/2013 10:30
% Solids: 68.6

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	22900	J 1000		mg/Kg		H	1	Lloyd Kahn

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1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

14

Client Sample ID: LMR13-21-048
Lab Sample ID: 200-17078-14
Lab Name: TestAmerica Burlington
Job No.: 200-17078-1
SDG ID.: 17078
Matrix: Sediment
Date Sampled: 06/18/2013 13:15
Reporting Basis: WET
Date Received: 06/19/2013 10:30
% Solids: 72.8

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	16100	J 1000		mg/Kg		~~P~~	1	Lloyd Kahn

NW 9/17/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

15

Client Sample ID: LMR13-15-024FD
Lab Sample ID: 200-17078-15
Lab Name: TestAmerica Burlington
Job No.: 200-17078-1
SDG ID.: 17078
Matrix: Sediment
Date Sampled: 06/18/2013 13:45
Reporting Basis: WET
Date Received: 06/19/2013 10:30
% Solids: 66.9

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	22200	J 1000		mg/Kg		F	1	Lloyd Kahn

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1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

16

Client Sample ID: LMR13-15-024 | Lab Sample ID: 200-17078-16

Lab Name: TestAmerica Burlington | Job No.: 200-17078-1

SDG ID.: 17078

Matrix: Sediment | Date Sampled: 06/18/2013 13:45

Reporting Basis: WET | Date Received: 06/19/2013 10:30

% Solids: 67.0

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	22300	J 1000		mg/Kg		H	1	Lloyd Kahn

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1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

17

Client Sample ID: LMR13-21-012 | Lab Sample ID: 200-17078-17

Lab Name: TestAmerica Burlington | Job No.: 200-17078-1

SDG ID.: 17078

Matrix: Sediment | Date Sampled: 06/18/2013 12:55

Reporting Basis: WET | Date Received: 06/19/2013 10:30

% Solids: 71.1

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	23400	J 1000		mg/Kg		~~U~~	1	Lloyd Kahn

MW 9/17/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

18

Client Sample ID: LMR13-21-024 | Lab Sample ID: 200-17078-18

Lab Name: TestAmerica Burlington | Job No.: 200-17078-1

SDG ID.: 17078

Matrix: Sediment | Date Sampled: 06/18/2013 13:05

Reporting Basis: WET | Date Received: 06/19/2013 10:30

% Solids: 65.3

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	26400	J 1000		mg/Kg		~~U~~	1	Lloyd Kahn

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1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

19

Client Sample ID: LMR13-21-072 | Lab Sample ID: 200-17078-19

Lab Name: TestAmerica Burlington | Job No.: 200-17078-1

SDG ID.: 17078

Matrix: Sediment | Date Sampled: 06/18/2013 13:25

Reporting Basis: WET | Date Received: 06/19/2013 10:30

% Solids: 79.0

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	12200	J 1000		mg/Kg		H	1	Lloyd Kahn

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1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

20

Client Sample ID: LMR13-15-012 | Lab Sample ID: 200-17078-20

Lab Name: TestAmerica Burlington | Job No.: 200-17078-1

SDG ID.: 17078

Matrix: Sediment | Date Sampled: 06/18/2013 13:35

Reporting Basis: WET | Date Received: 06/19/2013 10:30

% Solids: 52.5

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	31500	J 1000		mg/Kg		H	1	Lloyd Kahn

MW 9/17/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

1

Client Sample ID: LMR13-25-096
Lab Sample ID: 200-17078-1
Lab Name: TestAmerica Pittsburgh
Job No.: 200-17078-1
SDG ID.: 17078
Matrix: Sediment
Date Sampled: 06/18/2013 09:50
Reporting Basis: DRY
Date Received: 06/19/2013 10:30
% Solids: 78.9

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	211 ~~33.6~~	UJ 211	29.3	mg/Kg			1	9071B

MW 9/17/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

2

Client Sample ID: LMR13-13-048
Lab Sample ID: 200-17078-2
Lab Name: TestAmerica Pittsburgh
Job No.: 200-17078-1
SDG ID.: 17078
Matrix: Sediment
Date Sampled: 06/18/2013 08:00
Reporting Basis: DRY
Date Received: 06/19/2013 10:30
% Solids: 54.1

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	621	J 307	42.7	mg/Kg		~~B~~	1	9071B

MW 9/17/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

3

Client Sample ID: LMR13-14-024
Lab Sample ID: 200-17078-3
Lab Name: TestAmerica Pittsburgh
Job No.: 200-17078-1
SDG ID.: 17078
Matrix: Sediment
Date Sampled: 06/17/2013 18:15
Reporting Basis: DRY
Date Received: 06/19/2013 10:30
% Solids: 54.8

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	1090	J 303	42.1	mg/Kg		P	1	9071B

MW 9/17/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

4

Client Sample ID: LMR13-71-012 | Lab Sample ID: 200-17078-4

Lab Name: TestAmerica Pittsburgh | Job No.: 200-17078-1

SDG ID.: 17078

Matrix: Sediment | Date Sampled: 06/18/2013 10:00

Reporting Basis: DRY | Date Received: 06/19/2013 10:30

% Solids: 76.9

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	217 ~~52.0~~	UJ 217	30.1	mg/Kg	~~J~~	~~U~~	1	9071B

MW 9/17/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

5

Client Sample ID: LMR13-71-024 | Lab Sample ID: 200-17078-5

Lab Name: TestAmerica Pittsburgh | Job No.: 200-17078-1

SDG ID.: 17078

Matrix: Sediment | Date Sampled: 06/18/2013 10:10

Reporting Basis: DRY | Date Received: 06/19/2013 10:30

% Solids: 76.4

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	218 UJ	218	30.3	mg/Kg			1	9071B

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1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

6

Client Sample ID: LMR13-71-048
Lab Sample ID: 200-17078-6
Lab Name: TestAmerica Pittsburgh
Job No.: 200-17078-1
SDG ID.: 17078
Matrix: Sediment
Date Sampled: 06/18/2013 10:20
Reporting Basis: DRY
Date Received: 06/19/2013 10:30
% Solids: 77.2

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	215	U 215	29.9	mg/Kg			1	9071B

MW 9/17/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

7

Client Sample ID: LMR13-71-072 | Lab Sample ID: 200-17078-7

Lab Name: TestAmerica Pittsburgh | Job No.: 200-17078-1

SDG ID.: 17078

Matrix: Sediment | Date Sampled: 06/18/2013 10:30

Reporting Basis: DRY | Date Received: 06/19/2013 10:30

% Solids: 80.4

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	207 ~~29.0~~	UJ 207	28.8	mg/Kg			1	9071B

MW 9/17/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

9

Client Sample ID: LMR13-71-024FD
Lab Sample ID: 200-17078-9
Lab Name: TestAmerica Pittsburgh
Job No.: 200-17078-1
SDG ID.: 17078
Matrix: Sediment
Date Sampled: 06/18/2013 10:10
Reporting Basis: DRY
Date Received: 06/19/2013 10:30
% Solids: 69.8

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	239 ~~30.2~~	UJ 239	33.2	mg/Kg	~~F~~	~~B~~	1	9071B

NW 9/17/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

10

Client Sample ID: LMR13-07-012 | Lab Sample ID: 200-17078-10

Lab Name: TestAmerica Pittsburgh | Job No.: 200-17078-1

SDG ID.: 17078

Matrix: Sediment | Date Sampled: 06/18/2013 11:00

Reporting Basis: DRY | Date Received: 06/19/2013 10:30

% Solids: 51.2

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	345	J 325	45.2	mg/Kg		P	1	9071B

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1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

11

Client Sample ID: LMR13-07-024
Lab Sample ID: 200-17078-11
Lab Name: TestAmerica Pittsburgh
Job No.: 200-17078-1
SDG ID.: 17078
Matrix: Sediment
Date Sampled: 06/18/2013 11:10
Reporting Basis: DRY
Date Received: 06/19/2013 10:30
% Solids: 56.4

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	749	J 295	40.9	mg/Kg		~~B~~	1	9071B

MW 9/17/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

12

Client Sample ID: LMR13-07-048
Lab Sample ID: 200-17078-12
Lab Name: TestAmerica Pittsburgh
Job No.: 200-17078-1
SDG ID.: 17078
Matrix: Sediment
Date Sampled: 06/18/2013 11:20
Reporting Basis: DRY
Date Received: 06/19/2013 10:30
% Solids: 59.6

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	858	J 279	38.7	mg/Kg		P	1	9071B

MW 9/17/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

13

Client Sample ID: LMR13-07-072 | Lab Sample ID: 200-17078-13

Lab Name: TestAmerica Pittsburgh | Job No.: 200-17078-1

SDG ID.: 17078

Matrix: Sediment | Date Sampled: 06/18/2013 11:30

Reporting Basis: DRY | Date Received: 06/19/2013 10:30

% Solids: 68.6

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	262	J 243	33.7	mg/Kg		J	1	9071B

NW 9/17/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

14

Client Sample ID: LMR13-21-048
Lab Sample ID: 200-17078-14
Lab Name: TestAmerica Pittsburgh
Job No.: 200-17078-1
SDG ID.: 17078
Matrix: Sediment
Date Sampled: 06/18/2013 13:15
Reporting Basis: DRY
Date Received: 06/19/2013 10:30
% Solids: 72.8

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	228 ~~60.5~~	UJ 228	31.7	mg/Kg			1	9071B

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1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

16

Client Sample ID: LMR13-15-024
Lab Sample ID: 200-17078-16
Lab Name: TestAmerica Pittsburgh
Job No.: 200-17078-1
SDG ID.: 17078
Matrix: Sediment
Date Sampled: 06/18/2013 13:45
Reporting Basis: DRY
Date Received: 06/19/2013 10:30
% Solids: 67.0

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	304	J 249	34.6	mg/Kg		J	1	9071B

MW 9/17/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

17

Client Sample ID: LMR13-21-012
Lab Sample ID: 200-17078-17
Lab Name: TestAmerica Pittsburgh
Job No.: 200-17078-1
SDG ID.: 17078
Matrix: Sediment
Date Sampled: 06/18/2013 12:55
Reporting Basis: DRY
Date Received: 06/19/2013 10:30
% Solids: 71.1

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	205 J	234	32.4	mg/Kg			1	9071B

MW 9/17/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

18

Client Sample ID: LMR13-21-024 | Lab Sample ID: 200-17078-18

Lab Name: TestAmerica Pittsburgh | Job No.: 200-17078-1

SDG ID.: 17078

Matrix: Sediment | Date Sampled: 06/18/2013 13:05

Reporting Basis: DRY | Date Received: 06/19/2013 10:30

% Solids: 65.3

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	807	J 255	35.5	mg/Kg		J	1	9071B

MW 9/17/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

19

Client Sample ID: LMR13-21-072 | Lab Sample ID: 200-17078-19

Lab Name: TestAmerica Pittsburgh | Job No.: 200-17078-1

SDG ID.: 17078

Matrix: Sediment | Date Sampled: 06/18/2013 13:25

Reporting Basis: DRY | Date Received: 06/19/2013 10:30

% Solids: 79.0

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	211 ~~30.0~~	UJ 211	29.3	mg/Kg			1	9071B

MWG 11/7/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

20

Client Sample ID: LMR13-15-012 | Lab Sample ID: 200-17078-20

Lab Name: TestAmerica Pittsburgh | Job No.: 200-17078-1

SDG ID.: 17078

Matrix: Sediment | Date Sampled: 06/18/2013 13:35

Reporting Basis: DRY | Date Received: 06/19/2013 10:30

% Solids: 52.5

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	317 ~~146~~	UJ 317	44.1	mg/Kg	~~J~~	~~B~~	1	9071B

NW 9/17/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

21

Client Sample ID: LMR13-13-048FD
Lab Sample ID: 200-17078-21
Lab Name: TestAmerica Pittsburgh
Job No.: 200-17078-1
SDG ID.: 17078
Matrix: Sediment
Date Sampled: 06/18/2013 08:00
Reporting Basis: DRY
Date Received: 06/19/2013 10:30
% Solids: 53.8

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	793	J 310	43.0	mg/Kg		B	1	9071B

JW 9/17/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

22

Client Sample ID: LMR13-14-024FD
Lab Sample ID: 200-17078-22

Lab Name: TestAmerica Pittsburgh
Job No.: 200-17078-1

SDG ID.: 17078

Matrix: Sediment
Date Sampled: 06/18/2013 18:15

Reporting Basis: DRY
Date Received: 06/19/2013 10:30

% Solids: 55.2

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	1100	J 302	41.9	mg/Kg		B	1	9071B

MW 9/17/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

23

Client Sample ID: LMR13-21-024FD
Lab Sample ID: 200-17078-23
Lab Name: TestAmerica Pittsburgh
Job No.: 200-17078-1
SDG ID.: 17078
Matrix: Sediment
Date Sampled: 06/18/2013 13:05
Reporting Basis: DRY
Date Received: 06/19/2013 10:30
% Solids: 64.6

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	859	J 257	35.7	mg/Kg		F	1	9071B

MW 9/17/13

ENVIRONMENTAL
Data Services, Inc.

DATA VALIDATION SUMMARY REPORT
LOWER MAUMEE RIVER, TOLEDO, OHIO

Client: EA Engineering, Science & Technology, Inc., Hunt Valley, Maryland
SDG: 200-17083
Laboratory: Test America Laboratories, Burlington, Vermont
Test America Laboratories, North Canton, Ohio
Site: Lower Maumee River, Maumee Area of Concern, Toledo, Ohio
Date: September 23, 2013

SVOC			
EDS ID	Client Sample ID	Laboratory Sample ID	Matrix
1	LMR13-87-012	200-17083-1	Sediment
2	LMR13-87-024	200-17083-2	Sediment
3	LMR13-87-072	200-17083-3	Sediment
4	LMR13-87-096	200-17083-4	Sediment
6	LMR13-86-012	200-17083-6	Sediment
7	LMR13-86-024	200-17083-7	Sediment
8	LMR13-87-048	200-17083-8	Sediment
9	LMR13-87-120	200-17083-9	Sediment
9MS	LMR13-87-120MS	200-17083-9MS	Sediment
9MSD	LMR13-87-120MSD	200-17083-9MSD	Sediment
11	LMR13-87-024FD	200-17083-11	Sediment
13	LMR13-84-012	200-17103-2	Sediment
14	LMR13-84-024	200-17103-3	Sediment
15	LMR13-84-048	200-17103-4	Sediment
16	LMR13-84-072	200-17103-5	Sediment
17	LMR13-86-048	200-17103-6	Sediment
18	LMR13-86-096	200-17103-7	Sediment
19	LMR13-30-012	200-17103-8	Sediment
20	LMR13-30-024	200-17103-9	Sediment
21	LMR13-30-048	200-17103-10	Sediment
22	LMR13-30-012FD	200-17103-11	Sediment
23	LMR13-30-024FD	200-17103-12	Sediment

PAH 34			
EDS ID	Client Sample ID	Laboratory Sample ID	Matrix
6	LMR13-86-012	200-17083-6	Sediment
19	LMR13-30-012	200-17103-8	Sediment
22	LMR13-30-012FD	200-17103-11	Sediment

PCB/Metals/Mercury/TOC			
EDS ID	Client Sample ID	Laboratory Sample ID	Matrix
1	LMR13-87-012	200-17083-1	Sediment
2	LMR13-87-024	200-17083-2	Sediment
3	LMR13-87-072	200-17083-3	Sediment
4	LMR13-87-096	200-17083-4	Sediment

PCB/Metals/Mercury/TOC			
EDS ID	Client Sample ID	Laboratory Sample ID	Matrix
5	LMR13-86-024FD	200-17083-5	Sediment
6	LMR13-86-012	200-17083-6	Sediment
7	LMR13-86-024	200-17083-7	Sediment
8	LMR13-87-048	200-17083-8	Sediment
9	LMR13-87-120	200-17083-9	Sediment
9MS†	LMR13-87-120MS	200-17083-9MS	Sediment
9MSD†	LMR13-87-120MSD	200-17083-9MSD	Sediment
12	LMR13-84-024FD	200-17103-1	Sediment
12MS*	LMR13-84-024FDMS	200-17103-1MS	Sediment
12MSD*	LMR13-84-024FDMSD	200-17103-1MSD	Sediment
13	LMR13-84-012	200-17103-2	Sediment
14	LMR13-84-024	200-17103-3	Sediment
15	LMR13-84-048	200-17103-4	Sediment
16	LMR13-84-072	200-17103-5	Sediment
17	LMR13-86-048	200-17103-6	Sediment
18	LMR13-86-096	200-17103-7	Sediment
19	LMR13-30-012	200-17103-8	Sediment
20	LMR13-30-024	200-17103-9	Sediment
21	LMR13-30-048	200-17103-10	Sediment

* - Mercury only † - Metals/Hg/TOC only

AVS/SEM			
EDS ID	Client Sample ID	Laboratory Sample ID	Matrix
6	LMR13-86-012	200-17083-6	Sediment
10	LMR13-86-012FD	200-17083-10	Sediment
19	LMR13-30-012	200-17103-8	Sediment

HEM			
EDS ID	Client Sample ID	Laboratory Sample ID	Matrix
1	LMR13-87-012	200-17083-1	Sediment
2	LMR13-87-024	200-17083-2	Sediment
3	LMR13-87-072	200-17083-3	Sediment
4	LMR13-87-096	200-17083-4	Sediment
6	LMR13-86-012	200-17083-6	Sediment
7	LMR13-86-024	200-17083-7	Sediment
8	LMR13-87-048	200-17083-8	Sediment
9	LMR13-87-120	200-17083-9	Sediment
9MS	LMR13-87-120MS	200-17083-9MS	Sediment
9MSD	LMR13-87-120MSD	200-17083-9MSD	Sediment
11	LMR13-87-024FD	200-17083-11	Sediment
13	LMR13-84-012	200-17103-2	Sediment
14	LMR13-84-024	200-17103-3	Sediment
15	LMR13-84-048	200-17103-4	Sediment
16	LMR13-84-072	200-17103-5	Sediment
17	LMR13-86-048	200-17103-6	Sediment
18	LMR13-86-096	200-17103-7	Sediment
19	LMR13-30-012	200-17103-8	Sediment
20	LMR13-30-024	200-17103-9	Sediment
21	LMR13-30-048	200-17103-10	Sediment

HEM			
EDS ID	Client Sample ID	Laboratory Sample ID	Matrix
23	LMR13-30-024FD	200-17103-12	Sediment

A full data validation was performed on the analytical data for twenty-three sediment samples collected on June 18-19, 2013 by EA Engineering at the Lower Maumee River site in Toledo, Ohio. The samples were analyzed under the Environmental Protection Agency (USEPA) Contract Laboratory Program (CLP) Multi-Media Multi-Concentration Organics Analysis SOM01.2 and Inorganic Analysis ILM05.4 and the Test Methods for the Evaluation of Solid Waste, USEPA SW-846, Third Edition, September 1986, with revisions.

Specific method references are as follows:

Analysis	*Method References*
SVOCs	USEPA CLP SOM01.2
PAH 34	USEPA CLP SOM01.2
PCBs	USEPA CLP SOM01.2
Michigan Metals & Mercury	USEPA CLP ISM01.3
AVS/SEM	USEPA SW-846 Methods 6010C/7470A
TOC	Lloyd Kahn
Oil & Grease (HEM)	USEPA SW-846 Method 9071B

The data have been validated according to the protocols and quality control (QC) requirements of the analytical methods, the Great Lakes Legacy Act, March 2010, the Quality Assurance Project Plan for Phase 2 of the Lower Maumee River Site Characterization, May 2013, and the USEPA National Functional Guidelines for Organic Data Review as follows:

- The USEPA "Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review," June 2008;
- The USEPA "Contract Laboratory Program National Functional Guidelines for Inorganic Superfund Data Review," January 2010;
- and the reviewer's professional judgment.

The following items/criteria were reviewed for this report:

Organics

- Holding times and sample preservation
- Gas Chromatography/Mass Spectroscopy (GC/MS) Tuning
- Initial and continuing calibration summaries
- Method blank and field blank contamination
- Surrogate Spike recoveries
- Matrix Spike/Matrix Spike Duplicate (MS/MSD) recoveries
- Laboratory Control Sample (LCS) recoveries
- Internal standard area and retention time summary forms
- Target Compound Identification
- Compound Quantitation
- Tentatively Identified Compounds (TICs)
- Field Duplicate sample precision

Inorganics

- Holding times and sample preservation
- ICP/MS Tuning
- Initial and continuing calibration verifications
- Method blank and field blank contamination
- ICP Interference Check Sample
- Laboratory Control Sample (LCS) recoveries
- Matrix Spike Analysis
- Duplicate Sample Analysis
- ICP Serial Dilution
- Compound Quantitation
- Field Duplicate sample precision

Overall Usability Issues:

There were minor rejections of data. This data cannot be used in the decision-making process for this project.

- Three SVOC compounds were rejected in seven samples due to severely low surrogate recoveries.

Overall the remaining data is acceptable for the intended purposes as qualified for the deficiencies detailed in this report.

Please note that any results qualified (U) due to blank contamination may be then qualified (J) due to another action. Therefore, the results may be qualified (UJ) due to the culmination of the blank contaminations and actions from other exceedences of QC criteria.

Semivolatile Organic Compounds (SVOCs)

Holding Times

- All samples were extracted within 14 days for sediment samples and analyzed within 40 days for all samples except the following.

Sample	Date Extracted	Date Analyzed	# of Days	Qualifier
19	06/29/13	08/10/13	42	J/UJ
22	06/29/13	08/10/13	42	J/UJ

GC/MS Tuning

- All criteria were met.

Initial Calibration

- All %RSD and mean RRF criteria were met except the following.

ICAL Date	Compound	%RSD/RRF	Qualifier	Affected Samples
07/20/13	Pentachlorophenol	23.1%	J/UJ	1, 6, 7, 8, 11
	Benzo(b)fluoranthene	35.7%	J/UJ	
	Dibenzo(a,h)anthracene	23.2%	J/UJ	
07/29/13	Pentachlorophenol	21.2%	J/UJ	13-18, 20, 21, 23
	Pyrene	22.6%	J/UJ	
08/02/13	Benzo(b)fluoranthene	23.7%	J/UJ	2, 3, 4, 9
	Dibenzo(a,h)anthracene	20.6%	J/UJ	

Continuing Calibration

- All %D and RRF criteria were met except the following.

CCAL Date	Compound	%D/RRF	Qualifier	Affected Samples
07/30/13 (0702)	Indeno(1,2,3-cd)pyrene	28.2%	J/UJ	1, 6, 7, 8, 11
	Dibenzo(a,h)anthracene	26.8%	None	See ICAL
	Benzo(g,h,i)perylene	35.6%	J/UJ	1, 6, 7, 8, 11
07/30/13 (1700)	Hexachlorocyclopentadiene	69.6%	J/UJ	6, 7, 11
	di-n-Octylphthalate	51.1%	J/UJ	1, 6, 7, 8, 11
08/03/13 (2000, 2037)	Hexachlorocyclopentadiene	57.2%	J/UJ	2, 4, 9
	di-n-Octylphthalate	50.2%	J/UJ	
	2,4-Dinitrophenol	50.5%	J/UJ	
08/04/13 (1849, 1926)	Hexachlorocyclopentadiene	59.3%	None	See Surrogates
	di-n-Octylphthalate	53.7%	J/UJ	3
08/07/13 (1731)	Indeno(1,2,3-cd)pyrene	27.0%	J/UJ	13-18, 20, 21, 23
	Dibenzo(a,h)anthracene	29.0%	J/UJ	
	Benzo(g,h,i)perylene	30.5%	J/UJ	
08/08/13 (1042, 1117)	Hexachlorocyclopentadiene	83.7%	J/UJ	17, 18, 20, 21, 23
	4-Nitroaniline	53.2%	J/UJ	13-18, 20, 21, 23
08/11/13 (0325)	Hexachlorocyclopentadiene	57.3%	None	See HT

Method Blank

- The method blanks exhibited the following contamination.

Blank ID	Compound	Conc. ug/kg	Qualifier	Affected Samples
SBLKN4	Acetophenone	15	U	1, 6, 7, 8
	Naphthalene	4.1	U	1, 6, 7, 11
	di-n-Butylphthalate	6.5	U	6, 9
	Butylbenzylphthalate	14	U	6
	bis(2-Ethylhexyl)phthalate	36	U	2, 8, 11
SBLK7N	Butylbenzylphthalate	23	None	All ND
	bis(2-Ethylhexyl)phthalate	54	None	All ND
SBLKN7	di-n-Butylphthalate	9.6	U	13-17
	Butylbenzylphthalate	27	U	

Blank ID	Compound	Conc. ug/kg	Qualifier	Affected Samples
SBLKN7 (cont)	bis(2-Ethylhexyl)phthalate	42	U	13-16

Field Blank

- Field QC samples were not analyzed.

Surrogate Spike Recoveries

- All samples exhibited acceptable surrogate %R values except the following.

Sample ID	Surrogate	%R	Qualifier
1	4-Chloroaniline-d4	0%	R - Associated Compounds
2	4-Chloroaniline-d4	0%	None - 20X Dilution, Results Not Valid
	4-Nitrophenol-d4	0%	
	4,6-Dinitro-2-methylphenol-d2	0%	
3	4-Chloroaniline-d4	0%	R - Associated Compounds
4	2,4-Dichlorophenol-d3	0%	None - 100X Dilution, Results Not Valid
	4-Chloroaniline-d4	0%	
	4-Nitrophenol-d4	0%	
	4,6-Dinitro-2-methylphenol-d2	0%	
7	4-Methylphenol-d8	101%	None - ND
8	4-Methylphenol-d8	111%	None - ND
	4-Chloroaniline-d4	0%	R - Associated Compounds
	4,6-Dinitro-2-methylphenol-d2	0%	
	Anthracene-d10	102%	J - Associated Compounds
9	Phenol-d5	0%	None - 400X Dilution, Results Not Valid
	bis(2-Chloroethyl)ether-d8	0%	
	2-Chlorophenol-d4	0%	
	4-Methylphenol-d8	0%	
	Nitrobenzene-d5	0%	
	2-Nitrophenol-d4	0%	
	2,4-Dichlorophenol-d3	0%	
	4-Chloroaniline-d4	0%	
	4-Nitrophenol-d4	0%	
	Fluorene-d10	143%D	
	4,6-Dinitro-2-methylphenol-d2	0%	
11	4-Chloroaniline-d4	0%	None - 50X Dilution, Results Not Valid
	4-Nitrophenol-d4	0%	
	Fluorene-d10	112%	
	4,6-Dinitro-2-methylphenol-d2	0%	
13	4-Methylphenol-d8	116%	None - ND
	4-Chloroaniline-d4	0%	R - Associated Compounds
14	4-Chloroaniline-d4	0%	R - Associated Compounds
15	4-Chloroaniline-d4	0%	R - Associated Compounds
16	4-Chloroaniline-d4	0%	R - Associated Compounds
18	Pyrene-d10	48%	J/UJ - Associated Compounds
21	Pyrene-d10	45%	J/UJ - Associated Compounds
23	4-Methylphenol-d8	105%	None - ND

Matrix Spike/Matrix Spike Duplicate (MS/MSD) Recoveries

- The MS/MSD sample exhibited acceptable %R and RPD values except the following.

MS/MSD Sample ID	Compound	MS %R/MSD %R/ RPD	Qualifier
9	Several	Low	None - 400X Dilution, Results Not Valid

Laboratory Control Samples

- A LCS sample was not analyzed.

Internal Standard (IS) Area Performance

- All internal standards met response and retention time (RT) criteria.

Target Compound Identification

- All mass spectra and quantitation criteria were met.

Compound Quantitation

- Several samples were analyzed at a dilution due to high concentrations of target compounds. No action was required.

Field Duplicate Sample Precision

- Field duplicate results are summarized below.

SVOC				
Compound	LMR13-87-024 ug/kg	LMR13-87-024FD ug/kg	RPD	Qualifier
Naphthalene	11000	15000U	NC	None
2-Methylnahthalene	16000	34000	72%	
1,1'-Biphenyl	2000	3800	62%	
Acenaphthylene	5000	11000	75%	
Acenaphthene	12000	20000	50%	
Dibenzofuran	10000	22000	75%	
Fluorene	27000	42000	43%	
Phenanthrene	71000	120000	51%	
Anthracene	20000	40000	67%	
Carbazole	1800	3300	59%	
Fluoranthene	55000	110000	67%	
Pyrene	33000	67000	68%	
Benzo(a)anthracene	20000	38000	62%	
Chrysene	17000	40000	81%	

SVOC				
Compound	LMR13-87-024 ug/kg	LMR13-87-024FD ug/kg	RPD	Qualifier
Benzo(b)fluoranthene	17000	20000	16%	None
Benzo(k)fluoranthene	14000	34000	83%	
Benzo(a)pyrene	15000	30000	67%	
Indeno(1,2,3-cd)pyrene	5600	15000	91%	
Dibenzo(a,h)anthracene	2000	4700	81%	
Benzo(g,h,i)perylene	5900	18000	101%	J

SVOC				
Compound	LMR13-30-012 ug/kg	LMR13-30-012FD ug/kg	RPD	Qualifier
Benzaldehyde	640U	63	NC	None
Acetophenone	27	640U	NC	
Naphthalene	160	220	32%	
2-Methylnahthalene	63	85	30%	
Acenaphthylene	36	47	27%	
Acenaphthene	190	210	10%	
Dibenzofuran	68	84	21%	
Fluorene	330	390	17%	
Phenanthrene	1200	1600	29%	
Anthracene	310	400	25%	
Fluoranthene	1600	2100	27%	
Pyrene	3500	3600	3%	
Benzo(a)anthracene	2000	2100	5%	
Chrysene	1800	1800	0%	
Benzo(b)fluoranthene	1200	1500	22%	
Benzo(k)fluoranthene	700	830	17%	
Benzo(a)pyrene	1000	1300	26%	
Indeno(1,2,3-cd)pyrene	630	700	11%	
Dibenzo(a,h)anthracene	420	340	21%	
Benzo(g,h,i)perylene	770	930	19%	

SVOC				
Compound	LMR13-30-024 ug/kg	LMR13-30-024FD ug/kg	RPD	Qualifier
Benzaldehyde	54	600U	NC	None
Naphthalene	180	190	5%	
2-Methylnahthalene	78	84	7%	
Acenaphthylene	52	41	24%	
Acenaphthene	260	260	0%	
Dibenzofuran	82	89	8%	
Fluorene	430	450	5%	
Phenanthrene	3300	3200	3%	
Anthracene	470	510	8%	
Fluoranthene	6700	5600	18%	
Pyrene	4200	2900	37%	
Benzo(a)anthracene	2300	2200	4%	
Chrysene	2500	2600	4%	
Benzo(b)fluoranthene	1900	2000	5%	
Benzo(k)fluoranthene	2000	2200	10%	
Benzo(a)pyrene	1800	2000	11%	
Indeno(1,2,3-cd)pyrene	750	800	6%	

SVOC				
Compound	LMR13-30-024 ug/kg	LMR13-30-024FD ug/kg	RPD	Qualifier
Dibenzo(a,h)anthracene	330	330	0%	None
Benzo(g,h,i)perylene	880	840	5%	

Polynuclear Aromatic Hydrocarbons (PAH 34)

Holding Times

- All samples were extracted within 14 days for sediment samples and analyzed within 40 days for all samples.

GC/MS Tuning

- All criteria were met.

Initial Calibration

- All %RSD and mean RRF criteria were met.

Continuing Calibration

- All %D and RRF criteria were met except the following.

CCAL Date	Compound	%D/RRF	Qualifier	Affected Samples
08/06/13 (1338)	Pyrene	30.5%	None	See Compound Quantitation
	Benzo(e)pyrene	25.9%	None	

Method Blank

- The method blanks exhibited the following contamination.

Blank ID	Compound	Conc. ug/kg	Qualifier	Affected Samples
SBLKN4	1-Methylnaphthalene	0.35	U	6
	Several Compounds	Various	None	All ND
	Total 16 PPAH	13	J	6
	Total PAH	16	J	6
SBLKN7	Naphthalene	0.25	None	All >5X
	Phenanthrene	0.11	None	
	Fluoranthene	0.16	None	
	Pyrene	0.13	None	
	Benzo(a)anthracene	0.13	None	
	Chrysene	0.13	None	
	Perylene	0.36	None	
	Total 16 PPAH	0.91	J	19, 22
	Total PAH	1.3	J	

Field Blank

- Field QC samples were not analyzed.

Surrogate Spike Recoveries

- All samples exhibited acceptable surrogate %R values.

Matrix Spike/Matrix Spike Duplicate (MS/MSD) Recoveries

- A MS/MSD sample was not analyzed.

Laboratory Control Samples

- A LCS sample was not analyzed.

Internal Standard (IS) Area Performance

- All internal standards met response and retention time (RT) criteria.

Target Compound Identification

- All mass spectra and quantitation criteria were met.

Compound Quantitation

- EDS Sample ID #s 6, 19, and 22 exhibited high concentrations of several target compounds and were flagged (E) by the laboratory. These samples were not reanalyzed and these results were qualified as estimated (J).
- Total 16 PPAH and Total PAH were estimated (J) in all samples due to blank contamination.

Field Duplicate Sample Precision

- Field duplicate results are summarized below.

PAH 34				
Compound	LMR13-30-012 ug/kg	LMR13-30-012FD ug/kg	RPD	Qualifier
1-Methylnaphthalene	42	46	9%	None
2-Methylnaphthalene	86	96	11%	

PAH 34				
Compound	LMR13-30-012 ug/kg	LMR13-30-012FD ug/kg	RPD	Qualifier
Acenaphthene	200	210	5%	None
Acenaphthylene	120	140	15%	
Anthracene	400	420	5%	
Benzo(a)anthracene	1900	2100	10%	
Benzo(a)pyrene	1300	1400	7%	
Benzo(b)fluoranthene	1500	1400	7%	
Benzo(e)pyrene	1100	1100	0%	
Benzo(g,h,i)perylene	1000	1100	10%	
Benzo(k)fluoranthene	950	1200	23%	
C1 Chrysenes	1900	2000	5%	
C1 Fluorenes	160	160	0%	
C1-Fluoranthenes/Pyrenes	2700	2800	4%	
C1-Naphthalenes	87	96	10%	
C1-Phenanthrenes/Anthracenes	2200	2300	4%	
C2 Chrysenes	1100	1200	9%	
C2 Fluorenes	230	240	4%	
C2-Fluoranthenes/Pyrenes	1700	1800	6%	
C2-Naphthalenes	340	360	6%	
C2-Phenanthrenes/Anthracenes	1700	1700	0%	
C3 Chrysenes	610	670	9%	
C3 Fluorenes	490	530	8%	
C3-Fluoranthenes/Pyrenes	970	960	1%	
C3-Naphthalenes	890	930	4%	
C3-Phenanthrenes/Anthracenes	1400	1600	13%	
C4 Chrysenes	250	250	0%	
C4-Naphthalenes	830	800	4%	
C4-Phenanthrenes/Anthracenes	1100	1100	0%	
Chrysene	1900	2000	5%	
Dibenzo(a,h)anthracene	420	430	2%	
Fluoranthene	2900	3100	7%	
Fluorene	470	480	2%	
Indeno(1,2,3-cd)pyrene	930	950	2%	
Naphthalene	190	220	15%	
Perylene	670	750	11%	
Phenanthrene	1700	1900	11%	
Pyrene	2700	2900	7%	
Total 16 PPAH	19000	20000	5%	
Total PAH	39000	41000	5%	

Polychlorinated Biphenyls (PCBs)

Holding Times

- All samples were extracted within 14 days for sediment samples and analyzed within 40 days.

Initial Calibration

- All %RSD and/or correlation coefficient criteria were met.

Continuing Calibration

- All %D criteria were met.

Method Blank

- The method blanks were free of contamination.

Field Blank

- Field QC samples were not analyzed.

Surrogate Spike Recoveries

- All samples exhibited acceptable surrogate recoveries.

Matrix Spike/Matrix Spike Duplicate (MS/MSD) Recoveries

- A MS/MSD sample was not analyzed.

Laboratory Control Samples

- The LCS sample exhibited acceptable %R values.

Compound Quantitation

- All criteria were met.

Field Duplicate Sample Precision

- Field duplicate results are summarized below.

PCBs				
Compound	LMR13-86-024 ug/kg	LMR13-86-024FD ug/kg	RPD	Qualifier
Aroclor-1248	470	380	21%	None
Aroclor-1254	270	220	20%	
Aroclor-1260	61	53	14%	

PCBs				
Compound	LMR13-84-024 ug/kg	LMR13-84-024FD ug/kg	RPD	Qualifier
None	ND	ND	-	-

GC Column Difference Results

- Several samples exhibited high %D values > 25% between columns and have been qualified as estimated (J) by the reviewer.

Metals & Mercury

Holding Times

- All samples were prepared and analyzed within 28 days for mercury and 180 days for all other metals.

ICP/MS Tuning

- Not applicable.

Initial Calibration Verification

- All initial calibration criteria were met.

Continuing Calibration Verification

- All continuing calibration criteria were met.

Method Blank

- The method blanks exhibited the following contamination.

Blank ID	Compound	Conc. mg/kg	Qualifier	Affected Samples
PBS	Zinc	0.83	None	All >10X
	Mercury	0.024	U	3-9, 14, 15, 17

Field Blank

- Field QC samples were not analyzed.

ICP Interference Check Sample

- The ICP interference check sample exhibited acceptable %R values.

Laboratory Control Samples

- The LCS sample exhibited acceptable recoveries.

Matrix Spike/Duplicate (MS/DUP) Analysis

- The MS/DUP samples exhibited acceptable %R and RPD values except the following.

MS/DUP Sample ID	Compound	MS %R/RPD	Qualifier	Affected Samples
9	Arsenic	65%/OK	J/UJ	All Samples
	Cadmium	71%/OK	J/UJ	

ICP Serial Dilution

- ICP serial dilution percent differences (%D) were within acceptance limits except the following.

ICP Sample ID	Compound	%D	Qualifier	Affected Samples
9	Cadmium	15%	None	See MS/MSD
	Chromium	17%	J	All Samples
	Copper	11%	J	
	Lead	43%	J	
	Nickel	26%	J	
	Zinc	21%	J	

Compound Quantitation

- All criteria were met.

Field Duplicate Sample Precision

- Field duplicate results are summarized below.

Metals & Mercury				
Compound	LMR13-86-024 mg/kg	LMR13-86-024FD mg/kg	RPD	Qualifier
Arsenic	10.8	10.0	8%	None
Cadmium	3.2	3.0	6%	
Chromium	46.4	43.3	7%	
Copper	42.2	40.6	4%	
Lead	62.6	67.9	8%	
Nickel	42.0	40.2	4%	
Zinc	180	183	2%	

Metals & Mercury				
Compound	LMR13-84-024 mg/kg	LMR13-84-024FD mg/kg	RPD	Qualifier
Arsenic	6.3	6.9	9%	None
Cadmium	0.51	0.49	4%	
Chromium	21.4	21.4	0%	
Copper	24.8	24.4	2%	
Lead	40.0	39.5	1%	

Metals & Mercury				
Compound	LMR13-84-024 mg/kg	LMR13-84-024FD mg/kg	RPD	Qualifier
Nickel	28.0	27.4	2%	None
Zinc	101	97.5	4%	
Mercury	0.23U	0.26	NC	

Oil & Grease, Total Organic Carbon, AVS/SEM (Metals & Hg)

Holding Times

- All samples were analyzed within the recommended holding time for each analysis except the following.

TOC				
Sample ID	Date Sampled	Date Analyzed	# of Days	Qualifier
1	06/18/13	08/08/13	51	J
2	06/18/13	08/08/13	51	J
3	06/18/13	08/08/13	51	J
4	06/18/13	08/08/13	51	J
5	06/18/13	08/08/13	51	J
6	06/18/13	07/23/13	35	J
7	06/18/13	07/23/13	35	J
8	06/18/13	07/23/13	35	J
9	06/18/13	07/23/13	35	J
12	06/18/13	07/15/13	27	J
13	06/18/13	07/15/13	27	J
14	06/18/13	07/15/13	27	J
15	06/18/13	07/15/13	27	J
16	06/18/13	07/15/13	27	J
17	06/18/13	07/15/13	27	J
18	06/18/13	07/15/13	27	J
19	06/19/13	07/15/13	26	J
20	06/19/13	07/15/13	26	J
21	06/19/13	07/15/13	26	J

Initial and Continuing Calibration

- All %R criteria were met.

Method Blank

- The method blanks exhibited the following contamination.

Blank ID	Compound	Conc. mg/kg	Qualifier	Affected Samples
240-92537/1-A	HEM	148.8	U	13, 15, 16
240-93031/1-A	HEM	118.7	None	All >5X

Field Blank

- Field QC samples were not included in this data package.

Laboratory Control Samples

- The LCS samples exhibited acceptable %R values.

Matrix Spike/Matrix Spike Duplicate (MS/MSD) Recoveries

- The MS/MSD sample exhibited acceptable %R and RPD values except the following.

MS/DUP Sample ID	Compound	MS %R/MSD %R/RPD	Qualifier	Affected Samples
9	HEM	OK/-122%/46	None	4X Rule Applies

Compound Quantitation

- Several samples were analyzed at a dilution due to high concentrations of target compounds.

Field Duplicate Sample Precision

- Field duplicate results are summarized below.

AVS/SEM				
Compound	LMR13-86-012 mg/kg	LMR13-86-012FD mg/kg	RPD	Qualifier
Cadmium SEM	0.79	0.92	15%	None
Copper SEM	8.7	9.8	12%	
Lead SEM	15.7	23.2	39%	
Nickel SEM	7.1	9.4	28%	
Zinc SEM	44.5	56.5	24%	
Mercury SEM	0.0098	0.010	2%	
Acid Volatile Sulfides	32.6	48.3	39%	

TOC				
Compound	LMR13-86-024 mg/kg	LMR13-86-024FD mg/kg	RPD	Qualifier
TOC	33200	39400	17%	None

TOC				
Compound	LMR13-84-024 mg/kg	LMR13-84-024FD mg/kg	RPD	Qualifier
TOC	22700	19900	13%	None

HEM				
Compound	LMR13-87-024 mg/kg	LMR13-87-024FD mg/kg	RPD	Qualifier
HEM	7280	7040	3%	None

HEM				
Compound	LMR13-30-024 mg/kg	LMR13-30-024FD mg/kg	RPD	Qualifier
HEM	1450	1560	7%	None

Please contact the undersigned at (757) 564-0090 if you have any questions or need further information.

Signed: Nancy Weaver Dated: 9/24/13

Nancy Weaver
Senior Chemist

Data Qualifiers

U = The analyte was analyzed for, but was not detected at a level greater than or equal to the level of the adjusted Contract Required Quantitation Limit (CRQL) for sample and method.

UJ = The analyte was not detected at a level greater than or equal to the adjusted CRQL. However, the reported adjusted CRQL is approximate and may be inaccurate or imprecise.

J = The analyte was positively identified and the associated numerical value is the approximate concentration of the analyte in the sample (due either to the quality of the data generated because certain quality control criteria were not met, or the concentration of the analyte was below the CRQL).

J+ = The result is an estimated quantity, but the result may be biased high.

J- = The result is an estimated quantity, but the result may be biased low.

R = The sample results are unusable due to the quality of the data generated because certain criteria were not met. The analyte may or may not be present in the sample.

NJ = The analysis indicates the presence of an analyte that has been "tentatively identified" and the associated numerical value represents its approximate concentration.

1D - FORM I SV-1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-87-012

1

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17083

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17083-1

Sample wt/vol: 30.7 (g/mL) g Lab File ID: ULKAX08.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 48 Decanted: (Y/N) Date Received: 06/19/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/28/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/30/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 5.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
100-52-7	Benzaldehyde	190	J
108-95-2	Phenol	110	J
111-44-4	Bis(2-chloroethyl)ether	1600	U
95-57-8	2-Chlorophenol	1600	U
95-48-7	2-Methylphenol	1600	U
108-60-1	2,2'-Oxybis(1-chloropropane)	1600	U
98-86-2	Acetophenone	1600 ~~350~~	~~J B~~ U
106-44-5	4-Methylphenol	1600	U
621-64-7	N-Nitroso-di-n-propylamine	1600	U
67-72-1	Hexachloroethane	1600	U
98-95-3	Nitrobenzene	1600	U
78-59-1	Isophorone	1600	U
88-75-5	2-Nitrophenol	1600	U
105-67-9	2,4-Dimethylphenol	1600	U
111-91-1	Bis(2-chloroethoxy)methane	1600	U
120-83-2	2,4-Dichlorophenol	1600	U
91-20-3	Naphthalene	1600 ~~1500~~	~~J B~~ U
106-47-8	4-Chloroaniline	1600	~~U~~ R
87-68-3	Hexachlorobutadiene	1600	U
105-60-2	Caprolactam	1600	U
59-50-7	4-Chloro-3-methylphenol	1600	U
91-57-6	2-Methylnaphthalene	610	J
77-47-4	Hexachlorocyclopentadiene	1600	~~U~~ R
88-06-2	2,4,6-Trichlorophenol	1600	U
95-95-4	2,4,5-Trichlorophenol	1600	U
92-52-4	1,1'-Biphenyl	1600	U
91-58-7	2-Chloronaphthalene	1600	U
88-74-4	2-Nitroaniline	3100	U
131-11-3	Dimethylphthalate	1600	U
606-20-2	2,6-Dinitrotoluene	1600	U
208-96-8	Acenaphthylene	450	J
99-09-2	3-Nitroaniline	3100	U
83-32-9	Acenaphthene	3500	

9/18/13

1E - FORM I SV-2
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-87-012

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678 1

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17083

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17083-1

Sample wt/vol: 30.7 (g/mL) g Lab File ID: ULKAX08.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 48 Decanted: (Y/N) Date Received: 06/19/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/28/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/30/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 5.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
51-28-5	2,4-Dinitrophenol	3100	U	
100-02-7	4-Nitrophenol	3100	U	
132-64-9	Dibenzofuran	940	J	
121-14-2	2,4-Dinitrotoluene	1600	U	
84-66-2	Diethylphthalate	1600	U	
86-73-7	Fluorene	5500		
7005-72-3	4-Chlorophenyl-phenylether	1600	U	
100-01-6	4-Nitroaniline	3100	U	
534-52-1	4,6-Dinitro-2-methylphenol	3100	U	
86-30-6	N-Nitrosodiphenylamin [1]	1600	U	
95-94-3	1,2,4,5-Tetrachlorobenzene	1600	U	
101-55-3	4-Bromophenyl-phenylether	1600	U	
118-74-1	Hexachlorobenzene	1600	U	
1912-24-9	Atrazine	1600	U	
87-86-5	Pentachlorophenol	3100	~~U~~	UJ
85-01-8	Phenanthrene	19000		
120-12-7	Anthracene	5200		
86-74-8	Carbazole	200	J	
84-74-2	Di-n-butylphthalate	1600	U	
206-44-0	Fluoranthene	20000		
129-00-0	Pyrene	12000		
85-68-7	Butylbenzylphthalate	1600	U	
91-94-1	3,3'-Dichlorobenzidine	1600	~~U~~	R
56-55-3	Benzo(a)anthracene	7900		
218-01-9	Chrysene	7200		
117-81-7	Bis(2-ethylhexyl)phthalate	3300	~~U~~	
117-84-0	Di-n-octylphthalate	1600	~~U~~	UJ
205-99-2	Benzo(b)fluoranthene	5800		J
207-08-9	Benzo(k)fluoranthene	5600		
50-32-8	Benzo(a)pyrene	5700		
193-39-5	Indeno(1,2,3-cd)pyrene	3400		J+
53-70-3	Dibenzo(a,h)anthracene	1300	~~J~~	
191-24-2	Benzo(g,h,i)perylene	3600		
58-90-2	2,3,4,6-Tetrachlorophenol	1600	U	

[1] Cannot be separated from Diphenylamine

LW 9/18/13

1D - FORM I SV-1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-87-024

2

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678
Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17083
Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17083-2
Sample wt/vol: 30.1 (g/mL) g Lab File ID: ULLBK03.D
Level: (LOW/MED) LOW Extraction: (Type) SONC
% Moisture: 46 Decanted: (Y/N) Date Received: 06/19/2013
Concentrated Extract Volume: 500 (uL) Date Extracted: 06/28/2013
Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/03/2013
GPC Cleanup: (Y/N) Y pH: Dilution Factor: 20.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
100-52-7	Benzaldehyde	6200	U
108-95-2	Phenol	6200	U
111-44-4	Bis(2-chloroethyl)ether	6200	U
95-57-8	2-Chlorophenol	6200	U
95-48-7	2-Methylphenol	6200	U
108-60-1	2,2'-Oxybis(1-chloropropane)	6200	U
98-86-2	Acetophenone	6200	U
106-44-5	4-Methylphenol	6200	U
621-64-7	N-Nitroso-di-n-propylamine	6200	U
67-72-1	Hexachloroethane	6200	U
98-95-3	Nitrobenzene	6200	U
78-59-1	Isophorone	6200	U
88-75-5	2-Nitrophenol	6200	U
105-67-9	2,4-Dimethylphenol	6200	U
111-91-1	Bis(2-chloroethoxy)methane	6200	U
120-83-2	2,4-Dichlorophenol	6200	U
91-20-3	Naphthalene	11000	~~U~~
106-47-8	4-Chloroaniline	6200	U
87-68-3	Hexachlorobutadiene	6200	U
105-60-2	Caprolactam	6200	U
59-50-7	4-Chloro-3-methylphenol	6200	U
91-57-6	2-Methylnaphthalene	16000	
77-47-4	Hexachlorocyclopentadiene	6200	~~U~~ UJ
88-06-2	2,4,6-Trichlorophenol	6200	U
95-95-4	2,4,5-Trichlorophenol	6200	U
92-52-4	1,1'-Biphenyl	2000	J
91-58-7	2-Chloronaphthalene	6200	U
88-74-4	2-Nitroaniline	12000	U
131-11-3	Dimethylphthalate	6200	U
606-20-2	2,6-Dinitrotoluene	6200	U
208-96-8	Acenaphthylene	5000	J
99-09-2	3-Nitroaniline	12000	U
83-32-9	Acenaphthene	12000	

NW 9/18/13

1E - FORM I SV-2
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-87-024

2

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17083

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17083-2

Sample wt/vol: 30.1 (g/mL) g Lab File ID: ULLBK03.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 46 Decanted: (Y/N) Date Received: 06/19/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/28/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/03/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 20.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
51-28-5	2,4-Dinitrophenol	12000	~~U~~ UJ
100-02-7	4-Nitrophenol	12000	U
132-64-9	Dibenzofuran	10000	
121-14-2	2,4-Dinitrotoluene	6200	U
84-66-2	Diethylphthalate	6200	U
86-73-7	Fluorene	27000	
7005-72-3	4-Chlorophenyl-phenylether	6200	U
100-01-6	4-Nitroaniline	12000	U
534-52-1	4,6-Dinitro-2-methylphenol	12000	U
86-30-6	N-Nitrosodiphenylamin [1]	6200	U
95-94-3	1,2,4,5-Tetrachlorobenzene	6200	U
101-55-3	4-Bromophenyl-phenylether	6200	U
118-74-1	Hexachlorobenzene	6200	U
1912-24-9	Atrazine	6200	U
87-86-5	Pentachlorophenol	12000	U
85-01-8	Phenanthrene	71000	
120-12-7	Anthracene	20000	
86-74-8	Carbazole	1800	J
84-74-2	Di-n-butylphthalate	6200	U
206-44-0	Fluoranthene	55000	
129-00-0	Pyrene	33000	
85-68-7	Butylbenzylphthalate	6200	U
91-94-1	3,3'-Dichlorobenzidine	6200	U
56-55-3	Benzo(a)anthracene	20000	
218-01-9	Chrysene	17000	
117-81-7	Bis(2-ethylhexyl)phthalate	6200 ~~1200~~	~~J B~~ U
117-84-0	Di-n-octylphthalate	6200	~~U~~ UJ
205-99-2	Benzo(b)fluoranthene	17000	J
207-08-9	Benzo(k)fluoranthene	14000	
50-32-8	Benzo(a)pyrene	15000	
193-39-5	Indeno(1,2,3-cd)pyrene	5600	J
53-70-3	Dibenzo(a,h)anthracene	2000	~~U~~ UJ
191-24-2	Benzo(g,h,i)perylene	5900	~~U~~ UJ
58-90-2	2,3,4,6-Tetrachlorophenol	6200	U

[1] Cannot be separated from Diphenylamine

NW 9/18/13

1D - FORM I SV-1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-87-072

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17083

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17083-3

Sample wt/vol: 31.0 (g/mL) g Lab File ID: ULLBN04.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 44 Decanted: (Y/N) Date Received: 06/19/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/28/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/04/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 50.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
100-52-7	Benzaldehyde	15000	U	
108-95-2	Phenol	15000	U	
111-44-4	Bis(2-chloroethyl)ether	15000	U	
95-57-8	2-Chlorophenol	15000	U	
95-48-7	2-Methylphenol	15000	U	
108-60-1	2,2'-Oxybis(1-chloropropane)	15000	U	
98-86-2	Acetophenone	15000	U	
106-44-5	4-Methylphenol	15000	U	
621-64-7	N-Nitroso-di-n-propylamine	15000	U	
67-72-1	Hexachloroethane	15000	U	
98-95-3	Nitrobenzene	15000	U	
78-59-1	Isophorone	15000	U	
88-75-5	2-Nitrophenol	15000	U	
105-67-9	2,4-Dimethylphenol	15000	U	
111-91-1	Bis(2-chloroethoxy)methane	15000	U	
120-83-2	2,4-Dichlorophenol	15000	U	
91-20-3	Naphthalene	110000	~~E~~	
106-47-8	4-Chloroaniline	15000	~~U~~	R
87-68-3	Hexachlorobutadiene	15000	U	
105-60-2	Caprolactam	15000	U	
59-50-7	4-Chloro-3-methylphenol	15000	U	
91-57-6	2-Methylnaphthalene	4000	J	
77-47-4	Hexachlorocyclopentadiene	15000	~~U~~	R
88-06-2	2,4,6-Trichlorophenol	15000	U	
95-95-4	2,4,5-Trichlorophenol	15000	U	
92-52-4	1,1'-Biphenyl	680	J	
91-58-7	2-Chloronaphthalene	15000	U	
88-74-4	2-Nitroaniline	28000	U	
131-11-3	Dimethylphthalate	15000	U	
606-20-2	2,6-Dinitrotoluene	15000	U	
208-96-8	Acenaphthylene	15000	U	
99-09-2	3-Nitroaniline	28000	U	
83-32-9	Acenaphthene	2100	J	

9/18/13

1E - FORM I SV-2
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-87-072

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678 3

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17083

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17083-3

Sample wt/vol: 31.0 (g/mL) g Lab File ID: ULLBN04.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 44 Decanted: (Y/N) Date Received: 06/19/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/28/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/04/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 50.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
51-28-5	2,4-Dinitrophenol	28000	U	
100-02-7	4-Nitrophenol	28000	U	
132-64-9	Dibenzofuran	2600	J	
121-14-2	2,4-Dinitrotoluene	15000	U	
84-66-2	Diethylphthalate	15000	U	
86-73-7	Fluorene	4300	J	
7005-72-3	4-Chlorophenyl-phenylether	15000	U	
100-01-6	4-Nitroaniline	28000	U	
534-52-1	4,6-Dinitro-2-methylphenol	28000	U	
86-30-6	N-Nitrosodiphenylamin [1]	15000	U	
95-94-3	1,2,4,5-Tetrachlorobenzene	15000	U	
101-55-3	4-Bromophenyl-phenylether	15000	U	
118-74-1	Hexachlorobenzene	15000	U	
1912-24-9	Atrazine	15000	U	
87-86-5	Pentachlorophenol	28000	U	
85-01-8	Phenanthrene	16000		
120-12-7	Anthracene	4300	J	
86-74-8	Carbazole	1400	J	
84-74-2	Di-n-butylphthalate	15000	U	
206-44-0	Fluoranthene	15000		
129-00-0	Pyrene	11000	J	
85-68-7	Butylbenzylphthalate	15000	U	
91-94-1	3,3'-Dichlorobenzidine	15000	~~U~~	R
56-55-3	Benzo(a)anthracene	4900	J	
218-01-9	Chrysene	5700	J	
117-81-7	Bis(2-ethylhexyl)phthalate	15000	U	
117-84-0	Di-n-octylphthalate	15000	~~U~~	UJ
205-99-2	Benzo(b)fluoranthene	2900	~~J~~	J
207-08-9	Benzo(k)fluoranthene	5500	J	
50-32-8	Benzo(a)pyrene	4300	J	
193-39-5	Indeno(1,2,3-cd)pyrene	2200	J	
53-70-3	Dibenzo(a,h)anthracene	930	~~J~~	J
191-24-2	Benzo(g,h,i)perylene	2800	J	
58-90-2	2,3,4,6-Tetrachlorophenol	15000	U	

[1] Cannot be separated from Diphenylamine

MW 9/18/13

1D - FORM I SV-1

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-87-096

4

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17083

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17083-4

Sample wt/vol: 30.4 (g/mL) g Lab File ID: ULLBK05.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 36 Decanted: (Y/N) Date Received: 06/19/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/28/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/03/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 100.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
100-52-7	Benzaldehyde	26000	U
108-95-2	Phenol	26000	U
111-44-4	Bis(2-chloroethyl)ether	26000	U
95-57-8	2-Chlorophenol	26000	U
95-48-7	2-Methylphenol	26000	U
108-60-1	2,2'-Oxybis(1-chloropropane)	26000	U
98-86-2	Acetophenone	26000	U
106-44-5	4-Methylphenol	26000	U
621-64-7	N-Nitroso-di-n-propylamine	26000	U
67-72-1	Hexachloroethane	26000	U
98-95-3	Nitrobenzene	26000	U
78-59-1	Isophorone	26000	U
88-75-5	2-Nitrophenol	26000	U
105-67-9	2,4-Dimethylphenol	26000	U
111-91-1	Bis(2-chloroethoxy)methane	26000	U
120-83-2	2,4-Dichlorophenol	26000	U
91-20-3	Naphthalene	340000	~~E~~
106-47-8	4-Chloroaniline	26000	U
87-68-3	Hexachlorobutadiene	26000	U
105-60-2	Caprolactam	26000	U
59-50-7	4-Chloro-3-methylphenol	26000	U
91-57-6	2-Methylnaphthalene	36000	
77-47-4	Hexachlorocyclopentadiene	26000	~~U~~ UJ
88-06-2	2,4,6-Trichlorophenol	26000	U
95-95-4	2,4,5-Trichlorophenol	26000	U
92-52-4	1,1'-Biphenyl	7800	J
91-58-7	2-Chloronaphthalene	26000	U
88-74-4	2-Nitroaniline	51000	U
131-11-3	Dimethylphthalate	26000	U
606-20-2	2,6-Dinitrotoluene	26000	U
208-96-8	Acenaphthylene	5900	J
99-09-2	3-Nitroaniline	51000	U
83-32-9	Acenaphthene	5500	J

MW 9/18/13

1E - FORM I SV-2
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-87-096

4

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17083

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17083-4

Sample wt/vol: 30.4 (g/mL) g Lab File ID: ULLBK05.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 36 Decanted: (Y/N) Date Received: 06/19/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/28/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/03/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 100.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
51-28-5	2,4-Dinitrophenol	51000	~~U~~ UJ
100-02-7	4-Nitrophenol	51000	U
132-64-9	Dibenzofuran	26000	
121-14-2	2,4-Dinitrotoluene	26000	U
84-66-2	Diethylphthalate	26000	U
86-73-7	Fluorene	39000	
7005-72-3	4-Chlorophenyl-phenylether	26000	U
100-01-6	4-Nitroaniline	51000	U
534-52-1	4,6-Dinitro-2-methylphenol	51000	U
86-30-6	N-Nitrosodiphenylamin [1]	26000	U
95-94-3	1,2,4,5-Tetrachlorobenzene	26000	U
101-55-3	4-Bromophenyl-phenylether	26000	U
118-74-1	Hexachlorobenzene	26000	U
1912-24-9	Atrazine	26000	U
87-86-5	Pentachlorophenol	51000	U
85-01-8	Phenanthrene	130000	
120-12-7	Anthracene	22000	J
86-74-8	Carbazole	12000	J
84-74-2	Di-n-butylphthalate	26000	U
206-44-0	Fluoranthene	79000	
129-00-0	Pyrene	59000	
85-68-7	Butylbenzylphthalate	26000	U
91-94-1	3,3'-Dichlorobenzidine	26000	U
56-55-3	Benzo(a)anthracene	22000	J
218-01-9	Chrysene	22000	J
117-81-7	Bis(2-ethylhexyl)phthalate	26000	U
117-84-0	Di-n-octylphthalate	26000	~~U~~ UJ
205-99-2	Benzo(b)fluoranthene	12000	~~J~~ J
207-08-9	Benzo(k)fluoranthene	22000	J
50-32-8	Benzo(a)pyrene	19000	J
193-39-5	Indeno(1,2,3-cd)pyrene	7500	J
53-70-3	Dibenzo(a,h)anthracene	2100	~~J~~ J
191-24-2	Benzo(g,h,i)perylene	7900	J
58-90-2	2,3,4,6-Tetrachlorophenol	26000	U

[1] Cannot be separated from Diphenylamine

MW 9/18/13

1D - FORM I SV-1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-86-012

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678 6

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17083

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17083-6

Sample wt/vol: 30.4 (g/mL) g Lab File ID: ULKAX12.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 53 Decanted: (Y/N) Date Received: 06/19/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/28/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/30/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
100-52-7	Benzaldehyde	42	J
108-95-2	Phenol	360	U
111-44-4	Bis(2-chloroethyl)ether	360	U
95-57-8	2-Chlorophenol	360	U
95-48-7	2-Methylphenol	360	U
108-60-1	2,2'-Oxybis(1-chloropropane)	360	U
98-86-2	Acetophenone	360 ~~93~~	~~J B~~ U
106-44-5	4-Methylphenol	47	J
621-64-7	N-Nitroso-di-n-propylamine	360	U
67-72-1	Hexachloroethane	360	U
98-95-3	Nitrobenzene	360	U
78-59-1	Isophorone	360	U
88-75-5	2-Nitrophenol	360	U
105-67-9	2,4-Dimethylphenol	360	U
111-91-1	Bis(2-chloroethoxy)methane	360	U
120-83-2	2,4-Dichlorophenol	360	U
91-20-3	Naphthalene	360 ~~290~~	~~J B~~ U
106-47-8	4-Chloroaniline	360	U
87-68-3	Hexachlorobutadiene	360	U
105-60-2	Caprolactam	360	U
59-50-7	4-Chloro-3-methylphenol	360	U
91-57-6	2-Methylnaphthalene	60	J
77-47-4	Hexachlorocyclopentadiene	360	~~U~~ UJ
88-06-2	2,4,6-Trichlorophenol	360	U
95-95-4	2,4,5-Trichlorophenol	360	U
92-52-4	1,1'-Biphenyl	18	J
91-58-7	2-Chloronaphthalene	360	U
88-74-4	2-Nitroaniline	690	U
131-11-3	Dimethylphthalate	360	U
606-20-2	2,6-Dinitrotoluene	360	U
208-96-8	Acenaphthylene	140	J
99-09-2	3-Nitroaniline	690	U
83-32-9	Acenaphthene	420	

9/18/13

EPA SAMPLE NO.
LMR13-86-012

6

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17083

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17083-6

Sample wt/vol: 30.4 (g/mL) g Lab File ID: ULKAX12.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 53 Decanted: (Y/N) Date Received: 06/19/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/28/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/30/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
51-28-5	2,4-Dinitrophenol	690	U
100-02-7	4-Nitrophenol	690	U
132-64-9	Dibenzofuran	120	J
121-14-2	2,4-Dinitrotoluene	360	U
84-66-2	Diethylphthalate	360	U
86-73-7	Fluorene	670	
7005-72-3	4-Chlorophenyl-phenylether	360	U
100-01-6	4-Nitroaniline	690	U
534-52-1	4,6-Dinitro-2-methylphenol	690	U
86-30-6	N-Nitrosodiphenylamin [1]	360	U
95-94-3	1,2,4,5-Tetrachlorobenzene	360	U
101-55-3	4-Bromophenyl-phenylether	360	U
118-74-1	Hexachlorobenzene	360	U
1912-24-9	Atrazine	360	U
87-86-5	Pentachlorophenol	690	~~U~~ UJ
85-01-8	Phenanthrene	3300	
120-12-7	Anthracene	510	
86-74-8	Carbazole	72	J
84-74-2	Di-n-butylphthalate	360 ~~52~~	~~J B~~ U
206-44-0	Fluoranthene	4200	
129-00-0	Pyrene	3300	
85-68-7	Butylbenzylphthalate	360 ~~55~~	~~J B~~ U
91-94-1	3,3'-Dichlorobenzidine	360	U
56-55-3	Benzo(a)anthracene	1700	
218-01-9	Chrysene	1800	
117-81-7	Bis(2-ethylhexyl)phthalate	1600	~~B~~
117-84-0	Di-n-octylphthalate	360	~~U~~ UJ
205-99-2	Benzo(b)fluoranthene	1500	J
207-08-9	Benzo(k)fluoranthene	960	
50-32-8	Benzo(a)pyrene	1400	
193-39-5	Indeno(1,2,3-cd)pyrene	970	J
53-70-3	Dibenzo(a,h)anthracene	300	~~J~~ UJ
191-24-2	Benzo(g,h,i)perylene	1200	
58-90-2	2,3,4,6-Tetrachlorophenol	360	U

[1] Cannot be separated from Diphenylamine

MW 9/18/13

EPA SAMPLE NO.
LMR13-86-024

7

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17083

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17083-7

Sample wt/vol: 30.8 (g/mL) g Lab File ID: ULKAX13.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 48 Decanted: (Y/N) Date Received: 06/19/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/28/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/30/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
100-52-7	Benzaldehyde	320	U
108-95-2	Phenol	320	U
111-44-4	Bis(2-chloroethyl)ether	320	U
95-57-8	2-Chlorophenol	320	U
95-48-7	2-Methylphenol	320	U
108-60-1	2,2'-Oxybis(1-chloropropane)	320	U
98-86-2	Acetophenone	320 ~~79~~ ~~J B~~	U
106-44-5	4-Methylphenol	320	U
621-64-7	N-Nitroso-di-n-propylamine	320	U
67-72-1	Hexachloroethane	320	U
98-95-3	Nitrobenzene	320	U
78-59-1	Isophorone	320	U
88-75-5	2-Nitrophenol	320	U
105-67-9	2,4-Dimethylphenol	320	U
111-91-1	Bis(2-chloroethoxy)methane	320	U
120-83-2	2,4-Dichlorophenol	320	U
91-20-3	Naphthalene	320 ~~220~~ ~~J B~~	U
106-47-8	4-Chloroaniline	320	U
87-68-3	Hexachlorobutadiene	320	U
105-60-2	Caprolactam	320	U
59-50-7	4-Chloro-3-methylphenol	320	U
91-57-6	2-Methylnaphthalene	52	J
77-47-4	Hexachlorocyclopentadiene	320 ~~U~~	UJ
88-06-2	2,4,6-Trichlorophenol	320	U
95-95-4	2,4,5-Trichlorophenol	320	U
92-52-4	1,1'-Biphenyl	320	U
91-58-7	2-Chloronaphthalene	320	U
88-74-4	2-Nitroaniline	620	U
131-11-3	Dimethylphthalate	320	U
606-20-2	2,6-Dinitrotoluene	320	U
208-96-8	Acenaphthylene	81	J
99-09-2	3-Nitroaniline	620	U
83-32-9	Acenaphthene	380	

MW 9/18/13

1E - FORM I SV-2
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-86-024

7

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17083

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17083-7

Sample wt/vol: 30.8 (g/mL) g Lab File ID: ULKAX13.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 48 Decanted: (Y/N) Date Received: 06/19/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/28/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/30/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
51-28-5	2,4-Dinitrophenol	620	U
100-02-7	4-Nitrophenol	620	U
132-64-9	Dibenzofuran	90	J
121-14-2	2,4-Dinitrotoluene	320	U
84-66-2	Diethylphthalate	320	U
86-73-7	Fluorene	410	
7005-72-3	4-Chlorophenyl-phenylether	320	U
100-01-6	4-Nitroaniline	620	U
534-52-1	4,6-Dinitro-2-methylphenol	620	U
86-30-6	N-Nitrosodiphenylamin [1]	320	U
95-94-3	1,2,4,5-Tetrachlorobenzene	320	U
101-55-3	4-Bromophenyl-phenylether	320	U
118-74-1	Hexachlorobenzene	320	U
1912-24-9	Atrazine	320	U
87-86-5	Pentachlorophenol	620	U UJ
85-01-8	Phenanthrene	2000	
120-12-7	Anthracene	300	J
86-74-8	Carbazole	30	J
84-74-2	Di-n-butylphthalate	320	U
206-44-0	Fluoranthene	2300	
129-00-0	Pyrene	3100	
85-68-7	Butylbenzylphthalate	320	U
91-94-1	3,3'-Dichlorobenzidine	320	U
56-55-3	Benzo(a)anthracene	1400	
218-01-9	Chrysene	1200	
117-81-7	Bis(2-ethylhexyl)phthalate	2600	
117-84-0	Di-n-octylphthalate	320	U UJ
205-99-2	Benzo(b)fluoranthene	1200	J
207-08-9	Benzo(k)fluoranthene	870	
50-32-8	Benzo(a)pyrene	970	
193-39-5	Indeno(1,2,3-cd)pyrene	740	J
53-70-3	Dibenzo(a,h)anthracene	290	
191-24-2	Benzo(g,h,i)perylene	910	
58-90-2	2,3,4,6-Tetrachlorophenol	320	U

[1] Cannot be separated from Diphenylamine

MW 9/18/13

EPA SAMPLE NO.
LMR13-87-048

8

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17083

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17083-8

Sample wt/vol: 30.1 (g/mL) g Lab File ID: ULKAX14.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 41 Decanted: (Y/N) Date Received: 06/19/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/28/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/30/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 10.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
100-52-7	Benzaldehyde	2900	U	
108-95-2	Phenol	2900	U	
111-44-4	Bis(2-chloroethyl)ether	2900	U	
95-57-8	2-Chlorophenol	2900	U	
95-48-7	2-Methylphenol	2900	U	
108-60-1	2,2'-Oxybis(1-chloropropane)	2900	U	
98-86-2	Acetophenone	2900 ~~580 J B~~	U	
106-44-5	4-Methylphenol	2900	U	
621-64-7	N-Nitroso-di-n-propylamine	2900	U	
67-72-1	Hexachloroethane	2900	U	
98-95-3	Nitrobenzene	2900	U	
78-59-1	Isophorone	2900	U	
88-75-5	2-Nitrophenol	2900	U	
105-67-9	2,4-Dimethylphenol	2900	U	
111-91-1	Bis(2-chloroethoxy)methane	2900	U	
120-83-2	2,4-Dichlorophenol	2900	U	
91-20-3	Naphthalene	19000	~~B~~	
106-47-8	4-Chloroaniline	2900	~~U~~	R
87-68-3	Hexachlorobutadiene	2900	U	
105-60-2	Caprolactam	2900	U	
59-50-7	4-Chloro-3-methylphenol	2900	U	
91-57-6	2-Methylnaphthalene	11000		
77-47-4	Hexachlorocyclopentadiene	2900	~~U~~	R
88-06-2	2,4,6-Trichlorophenol	2900	U	
95-95-4	2,4,5-Trichlorophenol	2900	U	
92-52-4	1,1'-Biphenyl	980	J	
91-58-7	2-Chloronaphthalene	2900	U	
88-74-4	2-Nitroaniline	5600	U	
131-11-3	Dimethylphthalate	2900	U	
606-20-2	2,6-Dinitrotoluene	2900	U	
208-96-8	Acenaphthylene	2600	J	
99-09-2	3-Nitroaniline	5600	U	
83-32-9	Acenaphthene	10000		

NW 9/18/13

1E - FORM I SV-2
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-87-048

8

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17083

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17083-8

Sample wt/vol: 30.1 (g/mL) g Lab File ID: ULKAX14.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 41 Decanted: (Y/N) Date Received: 06/19/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/28/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/30/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 10.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
51-28-5	2,4-Dinitrophenol	5600	U	
100-02-7	4-Nitrophenol	5600	U	
132-64-9	Dibenzofuran	6800		
121-14-2	2,4-Dinitrotoluene	2900	U	
84-66-2	Diethylphthalate	2900	U	
86-73-7	Fluorene	16000		
7005-72-3	4-Chlorophenyl-phenylether	2900	U	
100-01-6	4-Nitroaniline	5600	U	
534-52-1	4,6-Dinitro-2-methylphenol	5600	~~U~~	R
86-30-6	N-Nitrosodiphenylamin [1]	2900	U	
95-94-3	1,2,4,5-Tetrachlorobenzene	2900	U	
101-55-3	4-Bromophenyl-phenylether	2900	U	
118-74-1	Hexachlorobenzene	2900	U	
1912-24-9	Atrazine	2900	U	
87-86-5	Pentachlorophenol	5600	~~U~~	UJ
85-01-8	Phenanthrene	38000		J
120-12-7	Anthracene	12000		J
86-74-8	Carbazole	1800	J	
84-74-2	Di-n-butylphthalate	2900	U	
206-44-0	Fluoranthene	36000		
129-00-0	Pyrene	25000		
85-68-7	Butylbenzylphthalate	2900	U	
91-94-1	3,3'-Dichlorobenzidine	2900	~~U~~	R
56-55-3	Benzo(a)anthracene	14000		
218-01-9	Chrysene	14000		
117-81-7	Bis(2-ethylhexyl)phthalate	2900 ~~530~~	J ~~B~~	J
117-84-0	Di-n-octylphthalate	2900	~~U~~	UJ
205-99-2	Benzo(b)fluoranthene	9700		J
207-08-9	Benzo(k)fluoranthene	11000		
50-32-8	Benzo(a)pyrene	11000		
193-39-5	Indeno(1,2,3-cd)pyrene	7000		
53-70-3	Dibenzo(a,h)anthracene	2500	~~U~~	J
191-24-2	Benzo(g,h,i)perylene	7700		
58-90-2	2,3,4,6-Tetrachlorophenol	2900	U	

[1]Cannot be separated from Diphenylamine

MJ 9/18/13

1D - FORM I SV-1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-87-120

9

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17083

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17083-9

Sample wt/vol: 30.2 (g/mL) g Lab File ID: ULLBK06.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 36 Decanted: (Y/N) Date Received: 06/19/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/28/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/03/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 400.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
100-52-7	Benzaldehyde	110000	U
108-95-2	Phenol	1500	J
111-44-4	Bis(2-chloroethyl)ether	110000	U
95-57-8	2-Chlorophenol	110000	U
95-48-7	2-Methylphenol	110000	U
108-60-1	2,2'-Oxybis(1-chloropropane)	110000	U
98-86-2	Acetophenone	110000	U
106-44-5	4-Methylphenol	2900	J
621-64-7	N-Nitroso-di-n-propylamine	110000	U
67-72-1	Hexachloroethane	110000	U
98-95-3	Nitrobenzene	110000	U
78-59-1	Isophorone	110000	U
88-75-5	2-Nitrophenol	110000	U
105-67-9	2,4-Dimethylphenol	110000	U
111-91-1	Bis(2-chloroethoxy)methane	110000	U
120-83-2	2,4-Dichlorophenol	110000	U
91-20-3	Naphthalene	780000	~~E~~
106-47-8	4-Chloroaniline	110000	U
87-68-3	Hexachlorobutadiene	110000	U
105-60-2	Caprolactam	110000	U
59-50-7	4-Chloro-3-methylphenol	110000	U
91-57-6	2-Methylnaphthalene	91000	J
77-47-4	Hexachlorocyclopentadiene	110000	~~U~~ UJ
88-06-2	2,4,6-Trichlorophenol	110000	U
95-95-4	2,4,5-Trichlorophenol	110000	U
92-52-4	1,1'-Biphenyl	19000	J
91-58-7	2-Chloronaphthalene	110000	U
88-74-4	2-Nitroaniline	210000	U
131-11-3	Dimethylphthalate	110000	U
606-20-2	2,6-Dinitrotoluene	110000	U
208-96-8	Acenaphthylene	20000	J
99-09-2	3-Nitroaniline	210000	U
83-32-9	Acenaphthene	14000	J

MW 9/18/13

1E - FORM I SV-2

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-87-120

9

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17083

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17083-9

Sample wt/vol: 30.2 (g/mL) g Lab File ID: ULLBK06.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 36 Decanted: (Y/N) Date Received: 06/19/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/28/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/03/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 400.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
51-28-5	2,4-Dinitrophenol	210000	~~U~~ UJ
100-02-7	4-Nitrophenol	210000	U
132-64-9	Dibenzofuran	72000	J
121-14-2	2,4-Dinitrotoluene	110000	U
84-66-2	Diethylphthalate	110000	U
86-73-7	Fluorene	110000	
7005-72-3	4-Chlorophenyl-phenylether	110000	U
100-01-6	4-Nitroaniline	210000	U
534-52-1	4,6-Dinitro-2-methylphenol	210000	U
86-30-6	N-Nitrosodiphenylamin [1]	110000	U
95-94-3	1,2,4,5-Tetrachlorobenzene	110000	U
101-55-3	4-Bromophenyl-phenylether	110000	U
118-74-1	Hexachlorobenzene	110000	U
1912-24-9	Atrazine	110000	U
87-86-5	Pentachlorophenol	210000	U
85-01-8	Phenanthrene	330000	
120-12-7	Anthracene	75000	J
86-74-8	Carbazole	34000	J
84-74-2	Di-n-butylphthalate	110000 ~~1600~~	~~J B~~ U
206-44-0	Fluoranthene	220000	
129-00-0	Pyrene	160000	
85-68-7	Butylbenzylphthalate	110000	U
91-94-1	3,3'-Dichlorobenzidine	110000	U
56-55-3	Benzo(a)anthracene	66000	J
218-01-9	Chrysene	76000	J
117-81-7	Bis(2-ethylhexyl)phthalate	110000	U
117-84-0	Di-n-octylphthalate	110000	~~U~~ UJ
205-99-2	Benzo(b)fluoranthene	33000	~~J~~ J
207-08-9	Benzo(k)fluoranthene	61000	J
50-32-8	Benzo(a)pyrene	53000	J
193-39-5	Indeno(1,2,3-cd)pyrene	22000	J
53-70-3	Dibenzo(a,h)anthracene	6800	~~J~~ J
191-24-2	Benzo(g,h,i)perylene	25000	J
58-90-2	2,3,4,6-Tetrachlorophenol	110000	U

[1] Cannot be separated from Diphenylamine

MW 9/18/13

1D - FORM I SV-1

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-87-024FD

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17083

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17083-11

Sample wt/vol: 30.7 (g/mL) g Lab File ID: ULKAX16.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 45 Decanted: (Y/N) Date Received: 06/19/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/28/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/30/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 50.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
100-52-7	Benzaldehyde	15000	U
108-95-2	Phenol	15000	U
111-44-4	Bis(2-chloroethyl)ether	15000	U
95-57-8	2-Chlorophenol	15000	U
95-48-7	2-Methylphenol	15000	U
108-60-1	2,2'-Oxybis(1-chloropropane)	15000	U
98-86-2	Acetophenone	15000	U
106-44-5	4-Methylphenol	15000	U
621-64-7	N-Nitroso-di-n-propylamine	15000	U
67-72-1	Hexachloroethane	15000	U
98-95-3	Nitrobenzene	15000	U
78-59-1	Isophorone	15000	U
88-75-5	2-Nitrophenol	15000	U
105-67-9	2,4-Dimethylphenol	15000	U
111-91-1	Bis(2-chloroethoxy)methane	15000	U
120-83-2	2,4-Dichlorophenol	15000	U
91-20-3	Naphthalene	15000 ~~12000~~ ~~J B~~	U
106-47-8	4-Chloroaniline	15000	U
87-68-3	Hexachlorobutadiene	15000	U
105-60-2	Caprolactam	15000	U
59-50-7	4-Chloro-3-methylphenol	15000	U
91-57-6	2-Methylnaphthalene	34000	
77-47-4	Hexachlorocyclopentadiene	15000	~~U~~ UJ
88-06-2	2,4,6-Trichlorophenol	15000	U
95-95-4	2,4,5-Trichlorophenol	15000	U
92-52-4	1,1'-Biphenyl	3800	J
91-58-7	2-Chloronaphthalene	15000	U
88-74-4	2-Nitroaniline	30000	U
131-11-3	Dimethylphthalate	15000	U
606-20-2	2,6-Dinitrotoluene	15000	U
208-96-8	Acenaphthylene	11000	J
99-09-2	3-Nitroaniline	30000	U
83-32-9	Acenaphthene	20000	

MW 9/18/13

1E - FORM I SV-2
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-87-024FD

11

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17083

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17083-11

Sample wt/vol: 30.7 (g/mL) g Lab File ID: ULKAX16.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 45 Decanted: (Y/N) Date Received: 06/19/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/28/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 07/30/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 50.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
51-28-5	2,4-Dinitrophenol	30000	U
100-02-7	4-Nitrophenol	30000	U
132-64-9	Dibenzofuran	22000	
121-14-2	2,4-Dinitrotoluene	15000	U
84-66-2	Diethylphthalate	15000	U
86-73-7	Fluorene	42000	
7005-72-3	4-Chlorophenyl-phenylether	15000	U
100-01-6	4-Nitroaniline	30000	U
534-52-1	4,6-Dinitro-2-methylphenol	30000	U
86-30-6	N-Nitrosodiphenylamin [1]	15000	U
95-94-3	1,2,4,5-Tetrachlorobenzene	15000	U
101-55-3	4-Bromophenyl-phenylether	15000	U
118-74-1	Hexachlorobenzene	15000	U
1912-24-9	Atrazine	15000	U
87-86-5	Pentachlorophenol	30000	~~U~~ UJ
85-01-8	Phenanthrene	120000	
120-12-7	Anthracene	40000	
86-74-8	Carbazole	3300	J
84-74-2	Di-n-butylphthalate	15000	U
206-44-0	Fluoranthene	110000	
129-00-0	Pyrene	67000	
85-68-7	Butylbenzylphthalate	15000	U
91-94-1	3,3'-Dichlorobenzidine	15000	U
56-55-3	Benzo(a)anthracene	38000	
218-01-9	Chrysene	40000	
117-81-7	Bis(2-ethylhexyl)phthalate	15000 ~~1500~~	~~J B~~ U
117-84-0	Di-n-octylphthalate	15000	~~U~~ UJ
205-99-2	Benzo(b)fluoranthene	20000	J
207-08-9	Benzo(k)fluoranthene	34000	
50-32-8	Benzo(a)pyrene	30000	
193-39-5	Indeno(1,2,3-cd)pyrene	15000	J
53-70-3	Dibenzo(a,h)anthracene	4700	~~U~~ J
191-24-2	Benzo(g,h,i)perylene	18000	J
58-90-2	2,3,4,6-Tetrachlorophenol	15000	U

[1] Cannot be separated from Diphenylamine

MW 9/18/13

1D - FORM I SV-1

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-84-012

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17083

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17103-2

Sample wt/vol: 30.9 (g/mL) g Lab File ID: RKXYQ21.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 42 Decanted: (Y/N) Date Received: 06/20/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/29/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/08/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
100-52-7	Benzaldehyde	38	J	
108-95-2	Phenol	280	U	
111-44-4	Bis(2-chloroethyl)ether	280	U	
95-57-8	2-Chlorophenol	280	U	
95-48-7	2-Methylphenol	280	U	
108-60-1	2,2'-Oxybis(1-chloropropane)	280	U	
98-86-2	Acetophenone	280	U	
106-44-5	4-Methylphenol	280	U	
621-64-7	N-Nitroso-di-n-propylamine	280	U	
67-72-1	Hexachloroethane	280	U	
98-95-3	Nitrobenzene	280	U	
78-59-1	Isophorone	280	U	
88-75-5	2-Nitrophenol	280	U	
105-67-9	2,4-Dimethylphenol	280	U	
111-91-1	Bis(2-chloroethoxy)methane	280	U	
120-83-2	2,4-Dichlorophenol	280	U	
91-20-3	Naphthalene	280	U	
106-47-8	4-Chloroaniline	280	U	R
87-68-3	Hexachlorobutadiene	280	U	
105-60-2	Caprolactam	280	U	
59-50-7	4-Chloro-3-methylphenol	280	U	
91-57-6	2-Methylnaphthalene	280	U	
77-47-4	Hexachlorocyclopentadiene	280	U	R
88-06-2	2,4,6-Trichlorophenol	280	U	
95-95-4	2,4,5-Trichlorophenol	280	U	
92-52-4	1,1'-Biphenyl	280	U	
91-58-7	2-Chloronaphthalene	280	U	
88-74-4	2-Nitroaniline	550	U	
131-11-3	Dimethylphthalate	280	U	
606-20-2	2,6-Dinitrotoluene	280	U	
208-96-8	Acenaphthylene	280	U	
99-09-2	3-Nitroaniline	550	U	
83-32-9	Acenaphthene	27	J	

9/18/13

1E - FORM I SV-2
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-84-012

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678 13

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17083

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17103-2

Sample wt/vol: 30.9 (g/mL) g Lab File ID: RKXYQ21.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 42 Decanted: (Y/N) Date Received: 06/20/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/29/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/08/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
51-28-5	2,4-Dinitrophenol	550	U
100-02-7	4-Nitrophenol	550	U
132-64-9	Dibenzofuran	280	U
121-14-2	2,4-Dinitrotoluene	280	U
84-66-2	Diethylphthalate	280	U
86-73-7	Fluorene	26	J
7005-72-3	4-Chlorophenyl-phenylether	280	U
100-01-6	4-Nitroaniline	550	~~U~~ UJ
534-52-1	4,6-Dinitro-2-methylphenol	550	U
86-30-6	N-Nitrosodiphenylamin [1]	280	U
95-94-3	1,2,4,5-Tetrachlorobenzene	280	U
101-55-3	4-Bromophenyl-phenylether	280	U
118-74-1	Hexachlorobenzene	280	U
1912-24-9	Atrazine	280	U
87-86-5	Pentachlorophenol	550	~~U~~ UJ
85-01-8	Phenanthrene	280	
120-12-7	Anthracene	88	J
86-74-8	Carbazole	280	U
84-74-2	Di-n-butylphthalate	280 ~~18~~ ~~J B~~	U
206-44-0	Fluoranthene	810	
129-00-0	Pyrene	650	J
85-68-7	Butylbenzylphthalate	280 ~~34~~ ~~J B~~	U
91-94-1	3,3'-Dichlorobenzidine	280	~~U~~ R
56-55-3	Benzo(a)anthracene	350	
218-01-9	Chrysene	470	
117-81-7	Bis(2-ethylhexyl)phthalate	280 ~~63~~ ~~J B~~	U
117-84-0	Di-n-octylphthalate	280	U
205-99-2	Benzo(b)fluoranthene	360	
207-08-9	Benzo(k)fluoranthene	340	
50-32-8	Benzo(a)pyrene	320	
193-39-5	Indeno(1,2,3-cd)pyrene	170	~~J~~ J
53-70-3	Dibenzo(a,h)anthracene	60	~~J~~ J
191-24-2	Benzo(g,h,i)perylene	180	~~J~~ J
58-90-2	2,3,4,6-Tetrachlorophenol	280	U

[1] Cannot be separated from Diphenylamine

NW 9/18/13

1D - FORM I SV-1

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-84-024

14

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17083

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17103-3

Sample wt/vol: 29.5 (g/mL) g Lab File ID: RKXYQ22.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 40 Decanted: (Y/N) Date Received: 06/20/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/29/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/08/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
100-52-7	Benzaldehyde	46	J	
108-95-2	Phenol	290	U	
111-44-4	Bis(2-chloroethyl)ether	290	U	
95-57-8	2-Chlorophenol	290	U	
95-48-7	2-Methylphenol	290	U	
108-60-1	2,2'-Oxybis(1-chloropropane)	290	U	
98-86-2	Acetophenone	290	U	
106-44-5	4-Methylphenol	290	U	
621-64-7	N-Nitroso-di-n-propylamine	290	U	
67-72-1	Hexachloroethane	290	U	
98-95-3	Nitrobenzene	290	U	
78-59-1	Isophorone	290	U	
88-75-5	2-Nitrophenol	290	U	
105-67-9	2,4-Dimethylphenol	290	U	
111-91-1	Bis(2-chloroethoxy)methane	290	U	
120-83-2	2,4-Dichlorophenol	290	U	
91-20-3	Naphthalene	11	J	
106-47-8	4-Chloroaniline	290	U	R
87-68-3	Hexachlorobutadiene	290	U	
105-60-2	Caprolactam	290	U	
59-50-7	4-Chloro-3-methylphenol	290	U	
91-57-6	2-Methylnaphthalene	290	U	
77-47-4	Hexachlorocyclopentadiene	290	U	R
88-06-2	2,4,6-Trichlorophenol	290	U	
95-95-4	2,4,5-Trichlorophenol	290	U	
92-52-4	1,1'-Biphenyl	290	U	
91-58-7	2-Chloronaphthalene	290	U	
88-74-4	2-Nitroaniline	560	U	
131-11-3	Dimethylphthalate	290	U	
606-20-2	2,6-Dinitrotoluene	290	U	
208-96-8	Acenaphthylene	290	U	
99-09-2	3-Nitroaniline	560	U	
83-32-9	Acenaphthene	28	J	

LW 9/18/13

1E - FORM I SV-2
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-84-024

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678 14

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17083

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17103-3

Sample wt/vol: 29.5 (g/mL) g Lab File ID: RKXYQ22.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 40 Decanted: (Y/N) Date Received: 06/20/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/29/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/08/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
51-28-5	2,4-Dinitrophenol	560	U
100-02-7	4-Nitrophenol	560	U
132-64-9	Dibenzofuran	6.4	J
121-14-2	2,4-Dinitrotoluene	290	U
84-66-2	Diethylphthalate	290	U
86-73-7	Fluorene	15	J
7005-72-3	4-Chlorophenyl-phenylether	290	U
100-01-6	4-Nitroaniline	560	~~U~~ UJ
534-52-1	4,6-Dinitro-2-methylphenol	560	U
86-30-6	N-Nitrosodiphenylamin [1]	290	U
95-94-3	1,2,4,5-Tetrachlorobenzene	290	U
101-55-3	4-Bromophenyl-phenylether	290	U
118-74-1	Hexachlorobenzene	290	U
1912-24-9	Atrazine	290	U
87-86-5	Pentachlorophenol	560	~~U~~ UJ
85-01-8	Phenanthrene	160	J
120-12-7	Anthracene	65	J
86-74-8	Carbazole	290	U
84-74-2	Di-n-butylphthalate	290 ~~14~~ ~~J B~~ U	
206-44-0	Fluoranthene	370	
129-00-0	Pyrene	510	J
85-68-7	Butylbenzylphthalate	290 ~~31~~ ~~J B~~ U	
91-94-1	3,3'-Dichlorobenzidine	290	~~U~~ R
56-55-3	Benzo(a)anthracene	210	J
218-01-9	Chrysene	250	J
117-81-7	Bis(2-ethylhexyl)phthalate	290 ~~71~~ ~~J B~~ U	
117-84-0	Di-n-octylphthalate	290	U
205-99-2	Benzo(b)fluoranthene	190	J
207-08-9	Benzo(k)fluoranthene	230	J
50-32-8	Benzo(a)pyrene	230	J
193-39-5	Indeno(1,2,3-cd)pyrene	89	~~U~~ J
53-70-3	Dibenzo(a,h)anthracene	30	~~U~~ J
191-24-2	Benzo(g,h,i)perylene	120	~~U~~ J
58-90-2	2,3,4,6-Tetrachlorophenol	290	U

[1] Cannot be separated from Diphenylamine

MW 9/18/13

1D - FORM I SV-1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-84-048

15

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17083

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17103-4

Sample wt/vol: 29.6 (g/mL) g Lab File ID: RKXYQ23.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 34 Decanted: (Y/N) Date Received: 06/20/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/29/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/08/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
100-52-7	Benzaldehyde	260	U	
108-95-2	Phenol	260	U	
111-44-4	Bis(2-chloroethyl)ether	260	U	
95-57-8	2-Chlorophenol	260	U	
95-48-7	2-Methylphenol	260	U	
108-60-1	2,2'-Oxybis(1-chloropropane)	260	U	
98-86-2	Acetophenone	260	U	
106-44-5	4-Methylphenol	260	U	
621-64-7	N-Nitroso-di-n-propylamine	260	U	
67-72-1	Hexachloroethane	260	U	
98-95-3	Nitrobenzene	260	U	
78-59-1	Isophorone	260	U	
88-75-5	2-Nitrophenol	260	U	
105-67-9	2,4-Dimethylphenol	260	U	
111-91-1	Bis(2-chloroethoxy)methane	260	U	
120-83-2	2,4-Dichlorophenol	260	U	
91-20-3	Naphthalene	8.6	J	
106-47-8	4-Chloroaniline	260	U	R
87-68-3	Hexachlorobutadiene	260	U	
105-60-2	Caprolactam	260	U	
59-50-7	4-Chloro-3-methylphenol	260	U	
91-57-6	2-Methylnaphthalene	260	U	
77-47-4	Hexachlorocyclopentadiene	260	U	R
88-06-2	2,4,6-Trichlorophenol	260	U	
95-95-4	2,4,5-Trichlorophenol	260	U	
92-52-4	1,1'-Biphenyl	260	U	
91-58-7	2-Chloronaphthalene	260	U	
88-74-4	2-Nitroaniline	500	U	
131-11-3	Dimethylphthalate	260	U	
606-20-2	2,6-Dinitrotoluene	260	U	
208-96-8	Acenaphthylene	260	U	
99-09-2	3-Nitroaniline	500	U	
83-32-9	Acenaphthene	26	J	

MW 9/18/13

EPA SAMPLE NO.
LMR13-84-048

15

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17083

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17103-4

Sample wt/vol: 29.6 (g/mL) g Lab File ID: RKXYQ23.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 34 Decanted: (Y/N) Date Received: 06/20/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/29/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/08/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
51-28-5	2,4-Dinitrophenol	500	U
100-02-7	4-Nitrophenol	500	U
132-64-9	Dibenzofuran	15	J
121-14-2	2,4-Dinitrotoluene	260	U
84-66-2	Diethylphthalate	260	U
86-73-7	Fluorene	25	J
7005-72-3	4-Chlorophenyl-phenylether	260	U
100-01-6	4-Nitroaniline	500	~~U~~ UJ
534-52-1	4,6-Dinitro-2-methylphenol	500	U
86-30-6	N-Nitrosodiphenylamin [1]	260	U
95-94-3	1,2,4,5-Tetrachlorobenzene	260	U
101-55-3	4-Bromophenyl-phenylether	260	U
118-74-1	Hexachlorobenzene	260	U
1912-24-9	Atrazine	260	U
87-86-5	Pentachlorophenol	500	~~U~~ UJ
85-01-8	Phenanthrene	150	J
120-12-7	Anthracene	57	J
86-74-8	Carbazole	260	U
84-74-2	Di-n-butylphthalate	260 ~~14~~ ~~J B~~	U
206-44-0	Fluoranthene	270	
129-00-0	Pyrene	290	J
85-68-7	Butylbenzylphthalate	260 ~~24~~ ~~J B~~	U
91-94-1	3,3'-Dichlorobenzidine	260	~~U~~ R
56-55-3	Benzo(a)anthracene	130	J
218-01-9	Chrysene	150	J
117-81-7	Bis(2-ethylhexyl)phthalate	260 ~~66~~ ~~J B~~	U
117-84-0	Di-n-octylphthalate	260	U
205-99-2	Benzo(b)fluoranthene	120	J
207-08-9	Benzo(k)fluoranthene	130	J
50-32-8	Benzo(a)pyrene	140	J
193-39-5	Indeno(1,2,3-cd)pyrene	65	~~J~~ J
53-70-3	Dibenzo(a,h)anthracene	20	~~J~~
191-24-2	Benzo(g,h,i)perylene	60	~~J~~
58-90-2	2,3,4,6-Tetrachlorophenol	260	U

[1] Cannot be separated from Diphenylamine

MW 9/18/13

1D - FORM I SV-1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-84-072

16

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17083

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17103-5

Sample wt/vol: 29.2 (g/mL) g Lab File ID: RKXYQ24.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 23 Decanted: (Y/N) Date Received: 06/20/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/29/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/08/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
100-52-7	Benzaldehyde	20	J	
108-95-2	Phenol	230	U	
111-44-4	Bis(2-chloroethyl)ether	230	U	
95-57-8	2-Chlorophenol	230	U	
95-48-7	2-Methylphenol	230	U	
108-60-1	2,2'-Oxybis(1-chloropropane)	230	U	
98-86-2	Acetophenone	230	U	
106-44-5	4-Methylphenol	230	U	
621-64-7	N-Nitroso-di-n-propylamine	230	U	
67-72-1	Hexachloroethane	230	U	
98-95-3	Nitrobenzene	230	U	
78-59-1	Isophorone	230	U	
88-75-5	2-Nitrophenol	230	U	
105-67-9	2,4-Dimethylphenol	230	U	
111-91-1	Bis(2-chloroethoxy)methane	230	U	
120-83-2	2,4-Dichlorophenol	230	U	
91-20-3	Naphthalene	38	J	
106-47-8	4-Chloroaniline	230	U	R
87-68-3	Hexachlorobutadiene	230	U	
105-60-2	Caprolactam	230	U	
59-50-7	4-Chloro-3-methylphenol	230	U	
91-57-6	2-Methylnaphthalene	19	J	
77-47-4	Hexachlorocyclopentadiene	230	U	R
88-06-2	2,4,6-Trichlorophenol	230	U	
95-95-4	2,4,5-Trichlorophenol	230	U	
92-52-4	1,1'-Biphenyl	230	U	
91-58-7	2-Chloronaphthalene	230	U	
88-74-4	2-Nitroaniline	440	U	
131-11-3	Dimethylphthalate	230	U	
606-20-2	2,6-Dinitrotoluene	230	U	
208-96-8	Acenaphthylene	230	U	
99-09-2	3-Nitroaniline	440	U	
83-32-9	Acenaphthene	14	J	

MW 9/18/13

1E - FORM I SV-2
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-84-072

16

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17083

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17103-5

Sample wt/vol: 29.2 (g/mL) g Lab File ID: RKXYQ24.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 23 Decanted: (Y/N) Date Received: 06/20/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/29/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/08/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
51-28-5	2,4-Dinitrophenol	440	U
100-02-7	4-Nitrophenol	440	U
132-64-9	Dibenzofuran	13	J
121-14-2	2,4-Dinitrotoluene	230	U
84-66-2	Diethylphthalate	230	U
86-73-7	Fluorene	27	J
7005-72-3	4-Chlorophenyl-phenylether	230	U
100-01-6	4-Nitroaniline	440	~~U~~ UJ
534-52-1	4,6-Dinitro-2-methylphenol	440	U
86-30-6	N-Nitrosodiphenylamin [1]	230	U
95-94-3	1,2,4,5-Tetrachlorobenzene	230	U
101-55-3	4-Bromophenyl-phenylether	230	U
118-74-1	Hexachlorobenzene	230	U
1912-24-9	Atrazine	230	U
87-86-5	Pentachlorophenol	440	~~U~~ UJ
85-01-8	Phenanthrene	170	J
120-12-7	Anthracene	55	J
86-74-8	Carbazole	230	U
84-74-2	Di-n-butylphthalate	230 ~~12 J B~~	U
206-44-0	Fluoranthene	150	J
129-00-0	Pyrene	150	~~J~~ J
85-68-7	Butylbenzylphthalate	230 ~~27 J B~~	U
91-94-1	3,3'-Dichlorobenzidine	230	~~U~~ R
56-55-3	Benzo(a)anthracene	76	J
218-01-9	Chrysene	93	J
117-81-7	Bis(2-ethylhexyl)phthalate	230 ~~120 J B~~	U
117-84-0	Di-n-octylphthalate	230	U
205-99-2	Benzo(b)fluoranthene	66	J
207-08-9	Benzo(k)fluoranthene	71	J
50-32-8	Benzo(a)pyrene	68	J
193-39-5	Indeno(1,2,3-cd)pyrene	29	~~J~~ J
53-70-3	Dibenzo(a,h)anthracene	12	~~J~~ J
191-24-2	Benzo(g,h,i)perylene	32	~~J~~ J
58-90-2	2,3,4,6-Tetrachlorophenol	230	U

[1] Cannot be separated from Diphenylamine

NN 9/18/13

1D - FORM I SV-1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-86-048

17

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17083

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17103-6

Sample wt/vol: 29.3 (g/mL) g Lab File ID: RKXYQ25.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 47 Decanted: (Y/N) Date Received: 06/20/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/29/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/08/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
100-52-7	Benzaldehyde	330	U
108-95-2	Phenol	330	U
111-44-4	Bis(2-chloroethyl)ether	330	U
95-57-8	2-Chlorophenol	330	U
95-48-7	2-Methylphenol	330	U
108-60-1	2,2'-Oxybis(1-chloropropane)	330	U
98-86-2	Acetophenone	330	U
106-44-5	4-Methylphenol	330	U
621-64-7	N-Nitroso-di-n-propylamine	330	U
67-72-1	Hexachloroethane	330	U
98-95-3	Nitrobenzene	330	U
78-59-1	Isophorone	330	U
88-75-5	2-Nitrophenol	330	U
105-67-9	2,4-Dimethylphenol	330	U
111-91-1	Bis(2-chloroethoxy)methane	330	U
120-83-2	2,4-Dichlorophenol	330	U
91-20-3	Naphthalene	320	J
106-47-8	4-Chloroaniline	330	U
87-68-3	Hexachlorobutadiene	330	U
105-60-2	Caprolactam	330	U
59-50-7	4-Chloro-3-methylphenol	330	U
91-57-6	2-Methylnaphthalene	95	J
77-47-4	Hexachlorocyclopentadiene	330	~~U~~ UJ
88-06-2	2,4,6-Trichlorophenol	330	U
95-95-4	2,4,5-Trichlorophenol	330	U
92-52-4	1,1'-Biphenyl	330	U
91-58-7	2-Chloronaphthalene	330	U
88-74-4	2-Nitroaniline	640	U
131-11-3	Dimethylphthalate	330	U
606-20-2	2,6-Dinitrotoluene	330	U
208-96-8	Acenaphthylene	330	U
99-09-2	3-Nitroaniline	640	U
83-32-9	Acenaphthene	330	

MW 9/18/13

1E - FORM I SV-2
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-86-048

17

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17083

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17103-6

Sample wt/vol: 29.3 (g/mL) g Lab File ID: RKXYQ25.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 47 Decanted: (Y/N) Date Received: 06/20/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/29/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/08/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
51-28-5	2,4-Dinitrophenol	640	U
100-02-7	4-Nitrophenol	640	U
132-64-9	Dibenzofuran	240	J
121-14-2	2,4-Dinitrotoluene	330	U
84-66-2	Diethylphthalate	330	U
86-73-7	Fluorene	520	
7005-72-3	4-Chlorophenyl-phenylether	330	U
100-01-6	4-Nitroaniline	640	~~U~~ UJ
534-52-1	4,6-Dinitro-2-methylphenol	640	U
86-30-6	N-Nitrosodiphenylamin [1]	330	U
95-94-3	1,2,4,5-Tetrachlorobenzene	330	U
101-55-3	4-Bromophenyl-phenylether	330	U
118-74-1	Hexachlorobenzene	330	U
1912-24-9	Atrazine	330	U
87-86-5	Pentachlorophenol	640	~~U~~ UJ
85-01-8	Phenanthrene	2300	
120-12-7	Anthracene	460	
86-74-8	Carbazole	58	J
84-74-2	Di-n-butylphthalate	330 ~~30~~ ~~J B~~	U
206-44-0	Fluoranthene	3300	
129-00-0	Pyrene	1800	J
85-68-7	Butylbenzylphthalate	330 ~~50~~ ~~J B~~	U
91-94-1	3,3'-Dichlorobenzidine	330	U
56-55-3	Benzo(a)anthracene	930	
218-01-9	Chrysene	1100	
117-81-7	Bis(2-ethylhexyl)phthalate	1700	~~B~~
117-84-0	Di-n-octylphthalate	330	U
205-99-2	Benzo(b)fluoranthene	890	
207-08-9	Benzo(k)fluoranthene	1200	
50-32-8	Benzo(a)pyrene	1100	
193-39-5	Indeno(1,2,3-cd)pyrene	460	J
53-70-3	Dibenzo(a,h)anthracene	140	~~J~~ ↓
191-24-2	Benzo(g,h,i)perylene	520	
58-90-2	2,3,4,6-Tetrachlorophenol	330	U

[1] Cannot be separated from Diphenylamine

NW 9/18/13

1D - FORM I SV-1

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-86-096

18

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17083

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17103-7

Sample wt/vol: 30.7 (g/mL) g Lab File ID: RKXYQ26.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 44 Decanted: (Y/N) Date Received: 06/20/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/29/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/08/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 5.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
100-52-7	Benzaldehyde	1500	U
108-95-2	Phenol	1500	U
111-44-4	Bis(2-chloroethyl)ether	1500	U
95-57-8	2-Chlorophenol	1500	U
95-48-7	2-Methylphenol	1500	U
108-60-1	2,2'-Oxybis(1-chloropropane)	1500	U
98-86-2	Acetophenone	1500	U
106-44-5	4-Methylphenol	1500	U
621-64-7	N-Nitroso-di-n-propylamine	1500	U
67-72-1	Hexachloroethane	1500	U
98-95-3	Nitrobenzene	1500	U
78-59-1	Isophorone	1500	U
88-75-5	2-Nitrophenol	1500	U
105-67-9	2,4-Dimethylphenol	1500	U
111-91-1	Bis(2-chloroethoxy)methane	1500	U
120-83-2	2,4-Dichlorophenol	1500	U
91-20-3	Naphthalene	2400	
106-47-8	4-Chloroaniline	1500	U
87-68-3	Hexachlorobutadiene	1500	U
105-60-2	Caprolactam	1500	U
59-50-7	4-Chloro-3-methylphenol	1500	U
91-57-6	2-Methylnaphthalene	2300	
77-47-4	Hexachlorocyclopentadiene	1500	~~U~~ UJ
88-06-2	2,4,6-Trichlorophenol	1500	U
95-95-4	2,4,5-Trichlorophenol	1500	U
92-52-4	1,1'-Biphenyl	1500	U
91-58-7	2-Chloronaphthalene	1500	U
88-74-4	2-Nitroaniline	2900	U
131-11-3	Dimethylphthalate	1500	U
606-20-2	2,6-Dinitrotoluene	1500	U
208-96-8	Acenaphthylene	120	J
99-09-2	3-Nitroaniline	2900	U
83-32-9	Acenaphthene	1500	

NW 9/18/13

1E - FORM I SV-2
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-86-096

18

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17083

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17103-7

Sample wt/vol: 30.7 (g/mL) g Lab File ID: RKXYQ26.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 44 Decanted: (Y/N) Date Received: 06/20/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/29/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/08/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 5.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
51-28-5	2,4-Dinitrophenol	2900	U
100-02-7	4-Nitrophenol	2900	U
132-64-9	Dibenzofuran	1100	J
121-14-2	2,4-Dinitrotoluene	1500	U
84-66-2	Diethylphthalate	1500	U
86-73-7	Fluorene	2900	
7005-72-3	4-Chlorophenyl-phenylether	1500	U
100-01-6	4-Nitroaniline	2900	U UJ
534-52-1	4,6-Dinitro-2-methylphenol	2900	U
86-30-6	N-Nitrosodiphenylamin [1]	1500	U
95-94-3	1,2,4,5-Tetrachlorobenzene	1500	U
101-55-3	4-Bromophenyl-phenylether	1500	U
118-74-1	Hexachlorobenzene	1500	U
1912-24-9	Atrazine	1500	U
87-86-5	Pentachlorophenol	2900	U UJ
85-01-8	Phenanthrene	15000	
120-12-7	Anthracene	4000	
86-74-8	Carbazole	860	J
84-74-2	Di-n-butylphthalate	1500	U
206-44-0	Fluoranthene	17000	
129-00-0	Pyrene	8500	
85-68-7	Butylbenzylphthalate	1500	U
91-94-1	3,3'-Dichlorobenzidine	1500	U
56-55-3	Benzo(a)anthracene	5200	
218-01-9	Chrysene	5800	
117-81-7	Bis(2-ethylhexyl)phthalate	8600	B
117-84-0	Di-n-octylphthalate	1500	U
205-99-2	Benzo(b)fluoranthene	5100	
207-08-9	Benzo(k)fluoranthene	4500	
50-32-8	Benzo(a)pyrene	4700	
193-39-5	Indeno(1,2,3-cd)pyrene	1800	
53-70-3	Dibenzo(a,h)anthracene	630	J
191-24-2	Benzo(g,h,i)perylene	1800	
58-90-2	2,3,4,6-Tetrachlorophenol	1500	U

[1] Cannot be separated from Diphenylamine

MW 9/18/13

1D - FORM I SV-1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-30-012

19

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17083

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17103-8

Sample wt/vol: 30.1 (g/mL) g Lab File ID: PJZKM09.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 47 Decanted: (Y/N) Date Received: 06/20/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/29/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/10/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 2.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
100-52-7	Benzaldehyde	640	U	UJ
108-95-2	Phenol	640	U	
111-44-4	Bis(2-chloroethyl)ether	640	U	
95-57-8	2-Chlorophenol	640	U	
95-48-7	2-Methylphenol	640	U	
108-60-1	2,2'-Oxybis(1-chloropropane)	640	U	
98-86-2	Acetophenone	27	J	J
106-44-5	4-Methylphenol	640	U	UJ
621-64-7	N-Nitroso-di-n-propylamine	640	U	
67-72-1	Hexachloroethane	640	U	
98-95-3	Nitrobenzene	640	U	
78-59-1	Isophorone	640	U	
88-75-5	2-Nitrophenol	640	U	
105-67-9	2,4-Dimethylphenol	640	U	
111-91-1	Bis(2-chloroethoxy)methane	640	U	
120-83-2	2,4-Dichlorophenol	640	U	
91-20-3	Naphthalene	160	J	J
106-47-8	4-Chloroaniline	640	U	UJ
87-68-3	Hexachlorobutadiene	640	U	
105-60-2	Caprolactam	640	U	
59-50-7	4-Chloro-3-methylphenol	640	U	
91-57-6	2-Methylnaphthalene	63	J	J
77-47-4	Hexachlorocyclopentadiene	640	U	UJ
88-06-2	2,4,6-Trichlorophenol	640	U	
95-95-4	2,4,5-Trichlorophenol	640	U	
92-52-4	1,1'-Biphenyl	640	U	
91-58-7	2-Chloronaphthalene	640	U	
88-74-4	2-Nitroaniline	1200	U	
131-11-3	Dimethylphthalate	640	U	
606-20-2	2,6-Dinitrotoluene	640	U	
208-96-8	Acenaphthylene	36	J	J
99-09-2	3-Nitroaniline	1200	U	UJ
83-32-9	Acenaphthene	190	J	J

MW 9/18/13

1E - FORM I SV-2
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-30-012

19

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17083

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17103-8

Sample wt/vol: 30.1 (g/mL) g Lab File ID: PJZKM09.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 47 Decanted: (Y/N) Date Received: 06/20/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/29/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/10/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 2.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
51-28-5	2,4-Dinitrophenol	1200	U UJ
100-02-7	4-Nitrophenol	1200	U UJ
132-64-9	Dibenzofuran	68	J J
121-14-2	2,4-Dinitrotoluene	640	U UJ
84-66-2	Diethylphthalate	640	U UJ
86-73-7	Fluorene	330	J J
7005-72-3	4-Chlorophenyl-phenylether	640	U UJ
100-01-6	4-Nitroaniline	1200	U
534-52-1	4,6-Dinitro-2-methylphenol	1200	U
86-30-6	N-Nitrosodiphenylamin [1]	640	U
95-94-3	1,2,4,5-Tetrachlorobenzene	640	U
101-55-3	4-Bromophenyl-phenylether	640	U
118-74-1	Hexachlorobenzene	640	U
1912-24-9	Atrazine	640	U
87-86-5	Pentachlorophenol	1200	U
85-01-8	Phenanthrene	1200	J
120-12-7	Anthracene	310	J J
86-74-8	Carbazole	640	U UJ
84-74-2	Di-n-butylphthalate	640	U UJ
206-44-0	Fluoranthene	1600	J
129-00-0	Pyrene	3500	J
85-68-7	Butylbenzylphthalate	640	U UJ
91-94-1	3,3'-Dichlorobenzidine	640	U UJ
56-55-3	Benzo(a)anthracene	2000	J
218-01-9	Chrysene	1800	J
117-81-7	Bis(2-ethylhexyl)phthalate	640	U UJ
117-84-0	Di-n-octylphthalate	640	U UJ
205-99-2	Benzo(b)fluoranthene	1200	J
207-08-9	Benzo(k)fluoranthene	700	
50-32-8	Benzo(a)pyrene	1000	
193-39-5	Indeno(1,2,3-cd)pyrene	630	J
53-70-3	Dibenzo(a,h)anthracene	420	J
191-24-2	Benzo(g,h,i)perylene	770	
58-90-2	2,3,4,6-Tetrachlorophenol	640	U UJ

[1] Cannot be separated from Diphenylamine

NW 9/18/13

1D - FORM I SV-1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-30-024

20

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17083

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17103-9

Sample wt/vol: 30.5 (g/mL) g Lab File ID: RKXYQ28.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 44 Decanted: (Y/N) Date Received: 06/20/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/29/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/08/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.7

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
100-52-7	Benzaldehyde	54	J
108-95-2	Phenol	510	U
111-44-4	Bis(2-chloroethyl)ether	510	U
95-57-8	2-Chlorophenol	510	U
95-48-7	2-Methylphenol	510	U
108-60-1	2,2'-Oxybis(1-chloropropane)	510	U
98-86-2	Acetophenone	510	U
106-44-5	4-Methylphenol	510	U
621-64-7	N-Nitroso-di-n-propylamine	510	U
67-72-1	Hexachloroethane	510	U
98-95-3	Nitrobenzene	510	U
78-59-1	Isophorone	510	U
88-75-5	2-Nitrophenol	510	U
105-67-9	2,4-Dimethylphenol	510	U
111-91-1	Bis(2-chloroethoxy)methane	510	U
120-83-2	2,4-Dichlorophenol	510	U
91-20-3	Naphthalene	180	J
106-47-8	4-Chloroaniline	510	U
87-68-3	Hexachlorobutadiene	510	U
105-60-2	Caprolactam	510	U
59-50-7	4-Chloro-3-methylphenol	510	U
91-57-6	2-Methylnaphthalene	78	J
77-47-4	Hexachlorocyclopentadiene	510	~~U~~ UJ
88-06-2	2,4,6-Trichlorophenol	510	U
95-95-4	2,4,5-Trichlorophenol	510	U
92-52-4	1,1'-Biphenyl	510	U
91-58-7	2-Chloronaphthalene	510	U
88-74-4	2-Nitroaniline	990	U
131-11-3	Dimethylphthalate	510	U
606-20-2	2,6-Dinitrotoluene	510	U
208-96-8	Acenaphthylene	52	J
99-09-2	3-Nitroaniline	990	U
83-32-9	Acenaphthene	260	J

MW 9/18/13

1E - FORM I SV-2
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-30-024

20

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17083

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17103-9

Sample wt/vol: 30.5 (g/mL) g Lab File ID: RKXYQ28.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 44 Decanted: (Y/N) Date Received: 06/20/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/29/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/08/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.7

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
51-28-5	2,4-Dinitrophenol	990	U
100-02-7	4-Nitrophenol	990	U
132-64-9	Dibenzofuran	82	J
121-14-2	2,4-Dinitrotoluene	510	U
84-66-2	Diethylphthalate	510	U
86-73-7	Fluorene	430	J
7005-72-3	4-Chlorophenyl-phenylether	510	U
100-01-6	4-Nitroaniline	990	U UJ
534-52-1	4,6-Dinitro-2-methylphenol	990	U
86-30-6	N-Nitrosodiphenylamin [1]	510	U
95-94-3	1,2,4,5-Tetrachlorobenzene	510	U
101-55-3	4-Bromophenyl-phenylether	510	U
118-74-1	Hexachlorobenzene	510	U
1912-24-9	Atrazine	510	U
87-86-5	Pentachlorophenol	990	U UJ
85-01-8	Phenanthrene	3300	
120-12-7	Anthracene	470	J
86-74-8	Carbazole	510	U
84-74-2	Di-n-butylphthalate	510	U
206-44-0	Fluoranthene	6700	
129-00-0	Pyrene	4200	J
85-68-7	Butylbenzylphthalate	510	U
91-94-1	3,3'-Dichlorobenzidine	510	U
56-55-3	Benzo(a)anthracene	2300	
218-01-9	Chrysene	2500	
117-81-7	Bis(2-ethylhexyl)phthalate	510	U
117-84-0	Di-n-octylphthalate	510	U
205-99-2	Benzo(b)fluoranthene	1900	
207-08-9	Benzo(k)fluoranthene	2000	
50-32-8	Benzo(a)pyrene	1800	
193-39-5	Indeno(1,2,3-cd)pyrene	750	
53-70-3	Dibenzo(a,h)anthracene	330	J
191-24-2	Benzo(g,h,i)perylene	880	
58-90-2	2,3,4,6-Tetrachlorophenol	510	U

[1] Cannot be separated from Diphenylamine

MW 9/18/13

EPA SAMPLE NO.
LMR13-30-048

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678 21

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17083

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17103-10

Sample wt/vol: 30.3 (g/mL) g Lab File ID: RKXYQ29.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 45 Decanted: (Y/N) Date Received: 06/20/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/29/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/08/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 2.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
100-52-7	Benzaldehyde	610	U
108-95-2	Phenol	610	U
111-44-4	Bis(2-chloroethyl)ether	610	U
95-57-8	2-Chlorophenol	610	U
95-48-7	2-Methylphenol	610	U
108-60-1	2,2'-Oxybis(1-chloropropane)	610	U
98-86-2	Acetophenone	610	U
106-44-5	4-Methylphenol	610	U
621-64-7	N-Nitroso-di-n-propylamine	610	U
67-72-1	Hexachloroethane	610	U
98-95-3	Nitrobenzene	610	U
78-59-1	Isophorone	610	U
88-75-5	2-Nitrophenol	610	U
105-67-9	2,4-Dimethylphenol	610	U
111-91-1	Bis(2-chloroethoxy)methane	610	U
120-83-2	2,4-Dichlorophenol	610	U
91-20-3	Naphthalene	150	J
106-47-8	4-Chloroaniline	610	U
87-68-3	Hexachlorobutadiene	610	U
105-60-2	Caprolactam	610	U
59-50-7	4-Chloro-3-methylphenol	610	U
91-57-6	2-Methylnaphthalene	72	J
77-47-4	Hexachlorocyclopentadiene	610	U UJ
88-06-2	2,4,6-Trichlorophenol	610	U
95-95-4	2,4,5-Trichlorophenol	610	U
92-52-4	1,1'-Biphenyl	610	U
91-58-7	2-Chloronaphthalene	610	U
88-74-4	2-Nitroaniline	1200	U
131-11-3	Dimethylphthalate	610	U
606-20-2	2,6-Dinitrotoluene	610	U
208-96-8	Acenaphthylene	47	J
99-09-2	3-Nitroaniline	1200	U
83-32-9	Acenaphthene	180	J

MW 9/18/13

1E - FORM I SV-2
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-30-048

21

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17083

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17103-10

Sample wt/vol: 30.3 (g/mL) g Lab File ID: RKXYQ29.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 45 Decanted: (Y/N) Date Received: 06/20/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/29/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/08/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 2.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
51-28-5	2,4-Dinitrophenol	1200	U	
100-02-7	4-Nitrophenol	1200	U	
132-64-9	Dibenzofuran	62	J	
121-14-2	2,4-Dinitrotoluene	610	U	
84-66-2	Diethylphthalate	610	U	
86-73-7	Fluorene	580	J	
7005-72-3	4-Chlorophenyl-phenylether	610	U	
100-01-6	4-Nitroaniline	1200	~~U~~	UJ
534-52-1	4,6-Dinitro-2-methylphenol	1200	U	
86-30-6	N-Nitrosodiphenylamin [1]	610	U	
95-94-3	1,2,4,5-Tetrachlorobenzene	610	U	
101-55-3	4-Bromophenyl-phenylether	610	U	
118-74-1	Hexachlorobenzene	610	U	
1912-24-9	Atrazine	610	U	
87-86-5	Pentachlorophenol	1200	~~U~~	UJ
85-01-8	Phenanthrene	4200		
120-12-7	Anthracene	660		
86-74-8	Carbazole	610	U	
84-74-2	Di-n-butylphthalate	610	U	
206-44-0	Fluoranthene	5000		J
129-00-0	Pyrene	3200		J
85-68-7	Butylbenzylphthalate	610	U	
91-94-1	3,3'-Dichlorobenzidine	610	U	
56-55-3	Benzo(a)anthracene	2400		J
218-01-9	Chrysene	3200		J
117-81-7	Bis(2-ethylhexyl)phthalate	610	U	
117-84-0	Di-n-octylphthalate	610	U	
205-99-2	Benzo(b)fluoranthene	2600		
207-08-9	Benzo(k)fluoranthene	2000		
50-32-8	Benzo(a)pyrene	2100		
193-39-5	Indeno(1,2,3-cd)pyrene	860		J
53-70-3	Dibenzo(a,h)anthracene	290	~~J~~	
191-24-2	Benzo(g,h,i)perylene	860		J
58-90-2	2,3,4,6-Tetrachlorophenol	610	U	

[1] Cannot be separated from Diphenylamine

NW 9/18/13

1D - FORM I SV-1

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-30-012FD

22

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17083

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17103-11

Sample wt/vol: 29.4 (g/mL) g Lab File ID: PJZKM10.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 46 Decanted: (Y/N) Date Received: 06/20/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/29/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/10/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 2.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
100-52-7	Benzaldehyde	63	J
108-95-2	Phenol	640	UJ
111-44-4	Bis(2-chloroethyl)ether	640	U
95-57-8	2-Chlorophenol	640	U
95-48-7	2-Methylphenol	640	U
108-60-1	2,2'-Oxybis(1-chloropropane)	640	U
98-86-2	Acetophenone	640	U
106-44-5	4-Methylphenol	640	U
621-64-7	N-Nitroso-di-n-propylamine	640	U
67-72-1	Hexachloroethane	640	U
98-95-3	Nitrobenzene	640	U
78-59-1	Isophorone	640	U
88-75-5	2-Nitrophenol	640	U
105-67-9	2,4-Dimethylphenol	640	U
111-91-1	Bis(2-chloroethoxy)methane	640	U
120-83-2	2,4-Dichlorophenol	640	U
91-20-3	Naphthalene	220	J
106-47-8	4-Chloroaniline	640	UJ
87-68-3	Hexachlorobutadiene	640	U
105-60-2	Caprolactam	640	U
59-50-7	4-Chloro-3-methylphenol	640	U
91-57-6	2-Methylnaphthalene	85	J
77-47-4	Hexachlorocyclopentadiene	640	UJ
88-06-2	2,4,6-Trichlorophenol	640	U
95-95-4	2,4,5-Trichlorophenol	640	U
92-52-4	1,1'-Biphenyl	640	U
91-58-7	2-Chloronaphthalene	640	U
88-74-4	2-Nitroaniline	1300	U
131-11-3	Dimethylphthalate	640	U
606-20-2	2,6-Dinitrotoluene	640	U
208-96-8	Acenaphthylene	47	J
99-09-2	3-Nitroaniline	1300	UJ
83-32-9	Acenaphthene	210	J

NW 9/18/13

1E - FORM I SV-2
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-30-012FD

22

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17083

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17103-11

Sample wt/vol: 29.4 (g/mL) g Lab File ID: PJZKM10.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 46 Decanted: (Y/N) Date Received: 06/20/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/29/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/10/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 2.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
51-28-5	2,4-Dinitrophenol	1300	U UJ
100-02-7	4-Nitrophenol	1300	U UJ
132-64-9	Dibenzofuran	84	J
121-14-2	2,4-Dinitrotoluene	640	U UJ
84-66-2	Diethylphthalate	640	U UJ
86-73-7	Fluorene	390	J
7005-72-3	4-Chlorophenyl-phenylether	640	U UJ
100-01-6	4-Nitroaniline	1300	U
534-52-1	4,6-Dinitro-2-methylphenol	1300	U
86-30-6	N-Nitrosodiphenylamin [1]	640	U
95-94-3	1,2,4,5-Tetrachlorobenzene	640	U
101-55-3	4-Bromophenyl-phenylether	640	U
118-74-1	Hexachlorobenzene	640	U
1912-24-9	Atrazine	640	U
87-86-5	Pentachlorophenol	1300	U
85-01-8	Phenanthrene	1600	J
120-12-7	Anthracene	400	J
86-74-8	Carbazole	640	U UJ
84-74-2	Di-n-butylphthalate	640	U UJ
206-44-0	Fluoranthene	2100	J
129-00-0	Pyrene	3600	J
85-68-7	Butylbenzylphthalate	640	U UJ
91-94-1	3,3'-Dichlorobenzidine	640	U UJ
56-55-3	Benzo(a)anthracene	2100	J
218-01-9	Chrysene	1800	J
117-81-7	Bis(2-ethylhexyl)phthalate	640	U UJ
117-84-0	Di-n-octylphthalate	640	U UJ
205-99-2	Benzo(b)fluoranthene	1500	J
207-08-9	Benzo(k)fluoranthene	830	
50-32-8	Benzo(a)pyrene	1300	
193-39-5	Indeno(1,2,3-cd)pyrene	700	
53-70-3	Dibenzo(a,h)anthracene	340	J
191-24-2	Benzo(g,h,i)perylene	930	
58-90-2	2,3,4,6-Tetrachlorophenol	640	U UJ

[1] Cannot be separated from Diphenylamine

NW 9/18/13

1D - FORM I SV-1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-30-024FD

23

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678
Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17083
Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17103-12
Sample wt/vol: 30.6 (g/mL) g Lab File ID: RKXYQ31.D
Level: (LOW/MED) LOW Extraction: (Type) SONC
% Moisture: 45 Decanted: (Y/N) Date Received: 06/20/2013
Concentrated Extract Volume: 500 (uL) Date Extracted: 06/29/2013
Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/08/2013
GPC Cleanup: (Y/N) Y pH: Dilution Factor: 2.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
100-52-7	Benzaldehyde	600	U
108-95-2	Phenol	600	U
111-44-4	Bis(2-chloroethyl)ether	600	U
95-57-8	2-Chlorophenol	600	U
95-48-7	2-Methylphenol	600	U
108-60-1	2,2'-Oxybis(1-chloropropane)	600	U
98-86-2	Acetophenone	600	U
106-44-5	4-Methylphenol	600	U
621-64-7	N-Nitroso-di-n-propylamine	600	U
67-72-1	Hexachloroethane	600	U
98-95-3	Nitrobenzene	600	U
78-59-1	Isophorone	600	U
88-75-5	2-Nitrophenol	600	U
105-67-9	2,4-Dimethylphenol	600	U
111-91-1	Bis(2-chloroethoxy)methane	600	U
120-83-2	2,4-Dichlorophenol	600	U
91-20-3	Naphthalene	190	J
106-47-8	4-Chloroaniline	600	U
87-68-3	Hexachlorobutadiene	600	U
105-60-2	Caprolactam	600	U
59-50-7	4-Chloro-3-methylphenol	600	U
91-57-6	2-Methylnaphthalene	84	J
77-47-4	Hexachlorocyclopentadiene	600	~~U~~ UJ
88-06-2	2,4,6-Trichlorophenol	600	U
95-95-4	2,4,5-Trichlorophenol	600	U
92-52-4	1,1'-Biphenyl	600	U
91-58-7	2-Chloronaphthalene	600	U
88-74-4	2-Nitroaniline	1200	U
131-11-3	Dimethylphthalate	600	U
606-20-2	2,6-Dinitrotoluene	600	U
208-96-8	Acenaphthylene	41	J
99-09-2	3-Nitroaniline	1200	U
83-32-9	Acenaphthene	260	J

9/18/13

1E - FORM I SV-2
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-30-024FD

23

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17083

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17103-12

Sample wt/vol: 30.6 (g/mL) g Lab File ID: RKXYQ31.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 45 Decanted: (Y/N) Date Received: 06/20/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/29/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/08/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 2.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
51-28-5	2,4-Dinitrophenol	1200	U
100-02-7	4-Nitrophenol	1200	U
132-64-9	Dibenzofuran	89	J
121-14-2	2,4-Dinitrotoluene	600	U
84-66-2	Diethylphthalate	600	U
86-73-7	Fluorene	450	J
7005-72-3	4-Chlorophenyl-phenylether	600	U
100-01-6	4-Nitroaniline	1200	~~U~~ UJ
534-52-1	4,6-Dinitro-2-methylphenol	1200	U
86-30-6	N-Nitrosodiphenylamin [1]	600	U
95-94-3	1,2,4,5-Tetrachlorobenzene	600	U
101-55-3	4-Bromophenyl-phenylether	600	U
118-74-1	Hexachlorobenzene	600	U
1912-24-9	Atrazine	600	U
87-86-5	Pentachlorophenol	1200	~~U~~ UJ
85-01-8	Phenanthrene	3200	
120-12-7	Anthracene	510	J
86-74-8	Carbazole	600	U
84-74-2	Di-n-butylphthalate	600	U
206-44-0	Fluoranthene	5600	
129-00-0	Pyrene	2900	J
85-68-7	Butylbenzylphthalate	600	U
91-94-1	3,3'-Dichlorobenzidine	600	U
56-55-3	Benzo(a)anthracene	2200	
218-01-9	Chrysene	2600	
117-81-7	Bis(2-ethylhexyl)phthalate	600	U
117-84-0	Di-n-octylphthalate	600	U
205-99-2	Benzo(b)fluoranthene	2000	
207-08-9	Benzo(k)fluoranthene	2200	
50-32-8	Benzo(a)pyrene	2000	
193-39-5	Indeno(1,2,3-cd)pyrene	800	
53-70-3	Dibenzo(a,h)anthracene	330	~~U~~ J ↓
191-24-2	Benzo(g,h,i)perylene	840	
58-90-2	2,3,4,6-Tetrachlorophenol	600	U

[1] Cannot be separated from Diphenylamine

NW 9/18/13

1F - FORM I SV-SIM
SEMIVOLATILE SIM ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-86-012

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678 6

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: 1734.2 SDG No.: 17083

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17083-6

Sample wt/vol: 30.4 (g/mL) g Lab File ID: HQIST06.D

Extraction: (Type) SONC

% Moisture: 53 Decanted: (Y/N) Date Received: 06/19/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/28/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/06/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 6.7

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
91-20-3	Naphthalene	310	
90-12-0	1-Methylnaphthalene	46 ~~33~~	~~J~~ U
91-57-6	2-Methylnaphthalene	65	
208-96-8	Acenaphthylene	87	
83-32-9	Acenaphthene	410	
86-73-7	Fluorene	680	~~E~~ J
85-01-8	Phenanthrene	2900	E
120-12-7	Anthracene	470	E
206-44-0	Fluoranthene	2900	E
129-00-0	Pyrene	2500	~~E~~ J
56-55-3	Benzo(a)anthracene	1500	E
218-01-9	Chrysene	1500	E
205-99-2	Benzo(b)fluoranthene	1100	E
207-08-9	Benzo(k)fluoranthene	1300	E
192-97-2	Benzo(e)pyrene	840	~~E~~ J
50-32-8	Benzo(a)pyrene	1500	E
198-55-0	Perylene	710	E
193-39-5	Indeno(1,2,3-cd)pyrene	750	E
53-70-3	Dibenzo(a,h)anthracene	230	
191-24-2	Benzo(g,h,i)perylene	680	~~E~~ J
C1NAPH	C1-Naphthalenes	64	J
C2NAPH	C2-Naphthalenes	190	J
C3NAPH	C3-Naphthalenes	620	J
C4NAPH	C4-Naphthalenes	450	J
C1FLUOR	C1 Fluorenes	79	J
C2FLUOR	C2 Fluorenes	100	J
C3FLUOR	C3 Fluorenes	170	J
C1PHAN	C1-Phenanthrenes/Anthracenes	970	J
C2PHAN	C2-Phenanthrenes/Anthracenes	590	J
C3PHAN	C3-Phenanthrenes/Anthracenes	660	J
C4PHAN	C4-Phenanthrenes/Anthracenes	330	J
C1FLPY	C1-Fluoranthenes/Pyrenes	1200	J
C2FLPY	C2-Fluoranthenes/Pyrenes	630	J
C3FLPY	C3-Fluoranthenes/Pyrenes	370	J
C1CHRYS	C1 Chrysenes	780	J
C2CHRYS	C2 Chrysenes	520	J
C3CHRYS	C3 Chrysenes	200	J
C4CHRYS	C4 Chrysenes	79	J

9/18/13

1F - FORM I SV-SIM

SEMIVOLATILE SIM ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-86-012

6

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: 1734.2 SDG No.: 17083

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17083-6

Sample wt/vol: 30.4 (g/mL) g Lab File ID: HQIST06.D

Extraction: (Type) SONC

% Moisture: 53 Decanted: (Y/N) Date Received: 06/19/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/28/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/06/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 6.7

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
TPPAH	Total 16 PPAH	19000	~~J~~ J
TPAH	Total PAH	28000	~~J~~ J

lw 9/18/13

1F - FORM I SV-SIM
SEMIVOLATILE SIM ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-30-012

19

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: 1734.2 SDG No.: 17083

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17103-8

Sample wt/vol: 30.1 (g/mL) g Lab File ID: SERHT13.D

Extraction: (Type) SONC

% Moisture: 47 Decanted: (Y/N) Date Received: 06/20/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/29/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/08/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 14.3

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
91-20-3	Naphthalene	190	~~B~~
90-12-0	1-Methylnaphthalene	42	J
91-57-6	2-Methylnaphthalene	86	J
208-96-8	Acenaphthylene	120	
83-32-9	Acenaphthene	200	
86-73-7	Fluorene	470	
85-01-8	Phenanthrene	1700	~~E B~~ J
120-12-7	Anthracene	400	
206-44-0	Fluoranthene	2900	~~E B~~ J
129-00-0	Pyrene	2700	~~E B~~
56-55-3	Benzo(a)anthracene	1900	~~E B~~
218-01-9	Chrysene	1900	~~E B~~
205-99-2	Benzo(b)fluoranthene	1500	~~E~~
207-08-9	Benzo(k)fluoranthene	950	~~E~~
192-97-2	Benzo(e)pyrene	1100	~~E~~
50-32-8	Benzo(a)pyrene	1300	~~E~~
198-55-0	Perylene	670	~~E~~
193-39-5	Indeno(1,2,3-cd)pyrene	930	~~E~~ J
53-70-3	Dibenzo(a,h)anthracene	420	
191-24-2	Benzo(g,h,i)perylene	1000	~~E~~ J
C1NAPH	C1-Naphthalenes	87	J
C2NAPH	C2-Naphthalenes	340	J
C3NAPH	C3-Naphthalenes	890	J
C4NAPH	C4-Naphthalenes	830	J
C1FLUOR	C1 Fluorenes	160	J
C2FLUOR	C2 Fluorenes	230	J
C3FLUOR	C3 Fluorenes	490	J
C1PHAN	C1-Phenanthrenes/Anthracenes	2200	J
C2PHAN	C2-Phenanthrenes/Anthracenes	1700	J
C3PHAN	C3-Phenanthrenes/Anthracenes	1400	J
C4PHAN	C4-Phenanthrenes/Anthracenes	1100	J
C1FLPY	C1-Fluoranthenes/Pyrenes	2700	J
C2FLPY	C2-Fluoranthenes/Pyrenes	1700	J
C3FLPY	C3-Fluoranthenes/Pyrenes	970	J
C1CHRYS	C1 Chrysenes	1900	J
C2CHRYS	C2 Chrysenes	1100	J
C3CHRYS	C3 Chrysenes	610	J
C4CHRYS	C4 Chrysenes	250	J

MW 9/18/13

1F - FORM I SV-SIM

SEMIVOLATILE SIM ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-30-012

19

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: 1734.2 SDG No.: 17083

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17103-8

Sample wt/vol: 30.1 (g/mL) g Lab File ID: SERHT13.D

Extraction: (Type) SONC

% Moisture: 47 Decanted: (Y/N) Date Received: 06/20/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/29/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/08/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 14.3

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
TPPAH	Total 16 PPAH	19000	~~B~~ J
TPAH	Total PAH	39000	~~B~~ J

9/18/13

1F - FORM I SV-SIM

SEMIVOLATILE SIM ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-30-012FD

22

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: 1734.2 SDG No.: 17083

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17103-11

Sample wt/vol: 29.4 (g/mL) g Lab File ID: SERHT14.D

Extraction: (Type) SONC

% Moisture: 46 Decanted: (Y/N) Date Received: 06/20/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/29/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/08/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 16.7

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
91-20-3	Naphthalene	220	~~B~~
90-12-0	1-Methylnaphthalene	46	J
91-57-6	2-Methylnaphthalene	96	J
208-96-8	Acenaphthylene	140	
83-32-9	Acenaphthene	210	
86-73-7	Fluorene	480	
85-01-8	Phenanthrene	1900	~~E B~~ J
120-12-7	Anthracene	420	
206-44-0	Fluoranthene	3100	~~E B~~ J
129-00-0	Pyrene	2900	~~E B~~
56-55-3	Benzo(a)anthracene	2100	~~E B~~
218-01-9	Chrysene	2000	~~E B~~
205-99-2	Benzo(b)fluoranthene	1400	E
207-08-9	Benzo(k)fluoranthene	1200	E
192-97-2	Benzo(e)pyrene	1100	E
50-32-8	Benzo(a)pyrene	1400	E J
198-55-0	Perylene	750	~~B~~
193-39-5	Indeno(1,2,3-cd)pyrene	950	
53-70-3	Dibenzo(a,h)anthracene	430	
191-24-2	Benzo(g,h,i)perylene	1100	~~B~~ J
C1NAPH	C1-Naphthalenes	96	J
C2NAPH	C2-Naphthalenes	360	J
C3NAPH	C3-Naphthalenes	930	J
C4NAPH	C4-Naphthalenes	800	J
C1FLUOR	C1 Fluorenes	160	J
C2FLUOR	C2 Fluorenes	240	J
C3FLUOR	C3 Fluorenes	530	J
C1PHAN	C1-Phenanthrenes/Anthracenes	2300	J
C2PHAN	C2-Phenanthrenes/Anthracenes	1700	J
C3PHAN	C3-Phenanthrenes/Anthracenes	1600	J
C4PHAN	C4-Phenanthrenes/Anthracenes	1100	J
C1FLPY	C1-Fluoranthenes/Pyrenes	2800	J
C2FLPY	C2-Fluoranthenes/Pyrenes	1800	J
C3FLPY	C3-Fluoranthenes/Pyrenes	960	J
C1CHRYS	C1 Chrysenes	2000	J
C2CHRYS	C2 Chrysenes	1200	J
C3CHRYS	C3 Chrysenes	670	J
C4CHRYS	C4 Chrysenes	250	J

MW 9/18/13

1F - FORM I SV-SIM

SEMIVOLATILE SIM ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-30-012FD

22

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: 1734.2 SDG No.: 17083

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17103-11

Sample wt/vol: 29.4 (g/mL) g Lab File ID: SERHT14.D

Extraction: (Type) SONC

% Moisture: 46 Decanted: (Y/N) Date Received: 06/20/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/29/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/08/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 16.7

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
TPPAH	Total 16 PPAH	20000	~~B~~ J
TPAH	Total PAH	41000	~~B~~ J

JW 9/18/13

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-87-012

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678 1

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17083

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17083-1

Sample wt/vol: 30.3 (g/mL) g Lab File ID: 0825AHESOM05.D

% Moisture: 48 Decanted: (Y/N) Date Received: 06/19/2013

Extraction: (Type) SONC Date Extracted: 06/27/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 08/03/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 5.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	320	U
11104-28-2	Aroclor-1221	320	U
11141-16-5	Aroclor-1232	320	U
53469-21-9	Aroclor-1242	320	U
12672-29-6	Aroclor-1248	520	
11097-69-1	Aroclor-1254	420	~~P~~ J
11096-82-5	Aroclor-1260	170	~~J P~~ J
37324-23-5	Aroclor-1262	320	U
11100-14-4	Aroclor-1268	320	U

LW 9/18/13

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-87-024

2

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17083

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17083-2

Sample wt/vol: 29.1 (g/mL) g Lab File ID: 0825AHESOM06.D

% Moisture: 46 Decanted: (Y/N) Date Received: 06/19/2013

Extraction: (Type) SONC Date Extracted: 06/27/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 08/03/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 5.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	310	U
11104-28-2	Aroclor-1221	310	U
11141-16-5	Aroclor-1232	310	U
53469-21-9	Aroclor-1242	310	U
12672-29-6	Aroclor-1248	100	J
11097-69-1	Aroclor-1254	200	~~J~~ P J
11096-82-5	Aroclor-1260	60	~~J~~ P J
37324-23-5	Aroclor-1262	310	U
11100-14-4	Aroclor-1268	310	U

9/18/13

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-87-072

3

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17083

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17083-3

Sample wt/vol: 30.7 (g/mL) g Lab File ID: 0825AHESOM10.D

% Moisture: 44 Decanted: (Y/N) Date Received: 06/19/2013

Extraction: (Type) SONC Date Extracted: 06/27/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 08/03/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 5.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	290	U
11104-28-2	Aroclor-1221	290	U
11141-16-5	Aroclor-1232	290	U
53469-21-9	Aroclor-1242	290	U
12672-29-6	Aroclor-1248	290	U
11097-69-1	Aroclor-1254	72	J
11096-82-5	Aroclor-1260	40	~~J P~~ J
37324-23-5	Aroclor-1262	290	U
11100-14-4	Aroclor-1268	290	U

9/18/13

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-87-096

4

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17083

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17083-4

Sample wt/vol: 29.5 (g/mL) g Lab File ID: 0825AHESOM11.D

% Moisture: 36 Decanted: (Y/N) Date Received: 06/19/2013

Extraction: (Type) SONC Date Extracted: 06/27/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 08/03/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 5.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	260	U
11104-28-2	Aroclor-1221	260	U
11141-16-5	Aroclor-1232	260	U
53469-21-9	Aroclor-1242	260	U
12672-29-6	Aroclor-1248	260	U
11097-69-1	Aroclor-1254	52	J
11096-82-5	Aroclor-1260	30	~~J P~~ J
37324-23-5	Aroclor-1262	260	U
11100-14-4	Aroclor-1268	260	U

jw 9/18/13

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-86-024FD

5

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17083

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17083-5

Sample wt/vol: 29.4 (g/mL) g Lab File ID: 0825AHESOM07.D

% Moisture: 48 Decanted: (Y/N) Date Received: 06/19/2013

Extraction: (Type) SONC Date Extracted: 06/27/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 08/03/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 5.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	330	U
11104-28-2	Aroclor-1221	330	U
11141-16-5	Aroclor-1232	330	U
53469-21-9	Aroclor-1242	330	U
12672-29-6	Aroclor-1248	380	
11097-69-1	Aroclor-1254	220	J
11096-82-5	Aroclor-1260	53	~~J P~~ J
37324-23-5	Aroclor-1262	330	U
11100-14-4	Aroclor-1268	330	U

MW 9/18/13

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-86-012

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678 6

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17083

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17083-6

Sample wt/vol: 29.7 (g/mL) g Lab File ID: 0825AHESOM08.D

% Moisture: 53 Decanted: (Y/N) Date Received: 06/19/2013

Extraction: (Type) SONC Date Extracted: 06/27/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 08/03/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 5.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	350	U
11104-28-2	Aroclor-1221	350	U
11141-16-5	Aroclor-1232	350	U
53469-21-9	Aroclor-1242	350	U
12672-29-6	Aroclor-1248	390	
11097-69-1	Aroclor-1254	220	J
11096-82-5	Aroclor-1260	46	~~J P~~ J
37324-23-5	Aroclor-1262	350	U
11100-14-4	Aroclor-1268	350	U

MW 9/18/13

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-86-024

7

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17083

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17083-7

Sample wt/vol: 30.8 (g/mL) g Lab File ID: 0825AHESOM09.D

% Moisture: 48 Decanted: (Y/N) Date Received: 06/19/2013

Extraction: (Type) SONC Date Extracted: 06/27/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 08/03/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 5.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	310	U
11104-28-2	Aroclor-1221	310	U
11141-16-5	Aroclor-1232	310	U
53469-21-9	Aroclor-1242	310	U
12672-29-6	Aroclor-1248	470	
11097-69-1	Aroclor-1254	270	J
11096-82-5	Aroclor-1260	61	~~J P~~ J
37324-23-5	Aroclor-1262	310	U
11100-14-4	Aroclor-1268	310	U

MW 9/18/13

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-87-048

8

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17083

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17083-8

Sample wt/vol: 30.9 (g/mL) g Lab File ID: 0825AHESOM03.D

% Moisture: 41 Decanted: (Y/N) Date Received: 06/19/2013

Extraction: (Type) SONC Date Extracted: 06/27/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 08/03/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 5.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	270	U
11104-28-2	Aroclor-1221	270	U
11141-16-5	Aroclor-1232	270	U
53469-21-9	Aroclor-1242	270	U
12672-29-6	Aroclor-1248	270	U
11097-69-1	Aroclor-1254	70	J
11096-82-5	Aroclor-1260	26	~~J P~~ J
37324-23-5	Aroclor-1262	270	U
11100-14-4	Aroclor-1268	270	U

9/18/13

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-87-120

9

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17083

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17083-9

Sample wt/vol: 29.3 (g/mL) g Lab File ID: 0825AHESOM04.D

% Moisture: 36 Decanted: (Y/N) Date Received: 06/19/2013

Extraction: (Type) SONC Date Extracted: 06/27/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 08/03/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 5.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	270	U
11104-28-2	Aroclor-1221	270	U
11141-16-5	Aroclor-1232	270	U
53469-21-9	Aroclor-1242	270	U
12672-29-6	Aroclor-1248	270	U
11097-69-1	Aroclor-1254	270	U
11096-82-5	Aroclor-1260	69	J
37324-23-5	Aroclor-1262	270	U
11100-14-4	Aroclor-1268	270	U

9/18/13

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-84-024FD

12

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17083

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17103-1

Sample wt/vol: 30.3 (g/mL) g Lab File ID: 0825AHCSOM12.D

% Moisture: 40 Decanted: (Y/N) Date Received: 06/20/2013

Extraction: (Type) SONC Date Extracted: 06/27/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 08/02/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 5.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	270	U
11104-28-2	Aroclor-1221	270	U
11141-16-5	Aroclor-1232	270	U
53469-21-9	Aroclor-1242	270	U
12672-29-6	Aroclor-1248	270	U
11097-69-1	Aroclor-1254	270	U
11096-82-5	Aroclor-1260	270	U
37324-23-5	Aroclor-1262	270	U
11100-14-4	Aroclor-1268	270	U

MW 9/18/13

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-84-012

13

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17083

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17103-2

Sample wt/vol: 30.4 (g/mL) g Lab File ID: 0825AHCSOM13.D

% Moisture: 42 Decanted: (Y/N) Date Received: 06/20/2013

Extraction: (Type) SONC Date Extracted: 06/27/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 08/02/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 5.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	280	U
11104-28-2	Aroclor-1221	280	U
11141-16-5	Aroclor-1232	280	U
53469-21-9	Aroclor-1242	280	U
12672-29-6	Aroclor-1248	280	U
11097-69-1	Aroclor-1254	280	U
11096-82-5	Aroclor-1260	280	U
37324-23-5	Aroclor-1262	280	U
11100-14-4	Aroclor-1268	280	U

MW 9/18/13

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-84-024

14

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17083

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17103-3

Sample wt/vol: 29.8 (g/mL) g Lab File ID: 0825AHCSOM14.D

% Moisture: 40 Decanted: (Y/N) Date Received: 06/20/2013

Extraction: (Type) SONC Date Extracted: 06/27/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 08/02/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 5.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	280	U
11104-28-2	Aroclor-1221	280	U
11141-16-5	Aroclor-1232	280	U
53469-21-9	Aroclor-1242	280	U
12672-29-6	Aroclor-1248	280	U
11097-69-1	Aroclor-1254	280	U
11096-82-5	Aroclor-1260	280	U
37324-23-5	Aroclor-1262	280	U
11100-14-4	Aroclor-1268	280	U

MW 9/18/13

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-84-048

15

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17083

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17103-4

Sample wt/vol: 30.1 (g/mL) g Lab File ID: 0825AHCSOM15.D

% Moisture: 34 Decanted: (Y/N) Date Received: 06/20/2013

Extraction: (Type) SONC Date Extracted: 06/27/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 08/02/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 5.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	250	U
11104-28-2	Aroclor-1221	250	U
11141-16-5	Aroclor-1232	250	U
53469-21-9	Aroclor-1242	250	U
12672-29-6	Aroclor-1248	250	U
11097-69-1	Aroclor-1254	250	U
11096-82-5	Aroclor-1260	250	U
37324-23-5	Aroclor-1262	250	U
11100-14-4	Aroclor-1268	250	U

jmw 9/18/13

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-84-072

16

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17083

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17103-5

Sample wt/vol: 30.7 (g/mL) g Lab File ID: 0825AHCSOM16.D

% Moisture: 23 Decanted: (Y/N) Date Received: 06/20/2013

Extraction: (Type) SONC Date Extracted: 06/27/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 08/02/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 5.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	210	U
11104-28-2	Aroclor-1221	210	U
11141-16-5	Aroclor-1232	210	U
53469-21-9	Aroclor-1242	210	U
12672-29-6	Aroclor-1248	210	U
11097-69-1	Aroclor-1254	210	U
11096-82-5	Aroclor-1260	210	U
37324-23-5	Aroclor-1262	210	U
11100-14-4	Aroclor-1268	210	U

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1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-86-048

17

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17083

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17103-6

Sample wt/vol: 29.4 (g/mL) g Lab File ID: 0825AHCSOM17.D

% Moisture: 47 Decanted: (Y/N) Date Received: 06/20/2013

Extraction: (Type) SONC Date Extracted: 06/27/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 08/02/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 5.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	320	U
11104-28-2	Aroclor-1221	320	U
11141-16-5	Aroclor-1232	320	U
53469-21-9	Aroclor-1242	520	
12672-29-6	Aroclor-1248	320	U
11097-69-1	Aroclor-1254	370	
11096-82-5	Aroclor-1260	75	~~J~~ J
37324-23-5	Aroclor-1262	320	U
11100-14-4	Aroclor-1268	320	U

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1H - FORM I ARO
AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-86-096

18

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17083

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17103-7

Sample wt/vol: 30.5 (g/mL) g Lab File ID: 0825AHCSOM18.D

% Moisture: 44 Decanted: (Y/N) Date Received: 06/20/2013

Extraction: (Type) SONC Date Extracted: 06/27/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 08/02/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 5.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	290	U
11104-28-2	Aroclor-1221	290	U
11141-16-5	Aroclor-1232	290	U
53469-21-9	Aroclor-1242	1300	
12672-29-6	Aroclor-1248	290	U
11097-69-1	Aroclor-1254	820	
11096-82-5	Aroclor-1260	140	~~J P~~ J
37324-23-5	Aroclor-1262	290	U
11100-14-4	Aroclor-1268	290	U

MW 9/18/13

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-30-012

19

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17083

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17103-8

Sample wt/vol: 29.3 (g/mL) g Lab File ID: 0825AHCSOM19.D

% Moisture: 47 Decanted: (Y/N) Date Received: 06/20/2013

Extraction: (Type) SONC Date Extracted: 06/27/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 08/02/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 5.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	320	U
11104-28-2	Aroclor-1221	320	U
11141-16-5	Aroclor-1232	320	U
53469-21-9	Aroclor-1242	320	U
12672-29-6	Aroclor-1248	320	U
11097-69-1	Aroclor-1254	320	U
11096-82-5	Aroclor-1260	11	~~J P~~ J
37324-23-5	Aroclor-1262	320	U
11100-14-4	Aroclor-1268	320	U

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1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-30-024

20

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17083

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17103-9

Sample wt/vol: 29.7 (g/mL) g Lab File ID: 0825AHCSOM20.D

% Moisture: 44 Decanted: (Y/N) Date Received: 06/20/2013

Extraction: (Type) SONC Date Extracted: 06/27/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 08/02/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 5.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	300	U
11104-28-2	Aroclor-1221	300	U
11141-16-5	Aroclor-1232	300	U
53469-21-9	Aroclor-1242	300	U
12672-29-6	Aroclor-1248	300	U
11097-69-1	Aroclor-1254	300	U
11096-82-5	Aroclor-1260	300	U
37324-23-5	Aroclor-1262	300	U
11100-14-4	Aroclor-1268	300	U

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1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-30-048

21

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17083

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17103-10

Sample wt/vol: 30.9 (g/mL) g Lab File ID: 0825AHCSOM21.D

% Moisture: 45 Decanted: (Y/N) Date Received: 06/20/2013

Extraction: (Type) SONC Date Extracted: 06/27/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 08/02/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 5.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	290	U
11104-28-2	Aroclor-1221	290	U
11141-16-5	Aroclor-1232	290	U
53469-21-9	Aroclor-1242	290	U
12672-29-6	Aroclor-1248	290	U
11097-69-1	Aroclor-1254	290	U
11096-82-5	Aroclor-1260	290	U
37324-23-5	Aroclor-1262	290	U
11100-14-4	Aroclor-1268	290	U

MW 9/18/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-87-012

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17083

Matrix: SED Lab Sample Id: 200-17083-1

% Solids: 51.6 Date Received: 06/19/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	18.3	J	~~N~~	P
7440-43-9	Cadmium	3.2	J	~~N E~~	P
7440-47-3	Chromium	70.7		~~E~~	P
7440-50-8	Copper	57.2		~~E~~	P
7439-92-1	Lead	73.9		~~* E~~	P
7440-02-0	Nickel	38.8		~~E~~	P
7440-66-6	Zinc	301		~~* E~~	P

Color Before: BROWN Clarity Before: Texture: FINE

Color After: TAN Clarity After: CLOUDY Artifacts:

Comments:

MW 9/18/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-87-012

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678
Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17083
Matrix: SED Lab Sample Id: 200-17083-1
% Solids: 51.6 Date Received: 06/19/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.41			CV

Color Before: GRAY Clarity Before: CLOUDY Texture: FINE
Color After: COLORLESS Clarity After: CLEAR Artifacts:
Comments:

MW 7/18/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-87-024

2

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678
Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 17083
Matrix: SED | Lab Sample Id: 200-17083-2
% Solids: 54.4 | Date Received: 06/19/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	16.9	J	~~N~~	P
7440-43-9	Cadmium	3.9		~~E~~ N	P
7440-47-3	Chromium	62.1		~~E~~	P
7440-50-8	Copper	57.8		~~E~~	P
7439-92-1	Lead	85.2		~~E~~ *	P
7440-02-0	Nickel	35.8		~~E~~	P
7440-66-6	Zinc	378		~~E~~ *	P

Color Before: BROWN | Clarity Before: | Texture: FINE
Color After: TAN | Clarity After: CLOUDY | Artifacts:
Comments:

mw 9/18/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-87-024

2

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678
Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17083
Matrix: SED Lab Sample Id: 200-17083-2
% Solids: 54.4 Date Received: 06/19/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.32			CV

Color Before: GRAY Clarity Before: CLOUDY Texture: FINE
Color After: COLORLESS Clarity After: CLEAR Artifacts:
Comments:

lw 9/18/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-87-072

3

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678

Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 17083

Matrix: SED | Lab Sample Id: 200-17083-3

% Solids: 56.5 | Date Received: 06/19/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	19.5	J	~~M~~	P
7440-43-9	Cadmium	2.6		~~M~~ ~~E~~	P
7440-47-3	Chromium	43.7		~~E~~	P
7440-50-8	Copper	52.1		~~E~~	P
7439-92-1	Lead	85.8		~~*~~ ~~E~~	P
7440-02-0	Nickel	29.7		~~E~~	P
7440-66-6	Zinc	551		~~*~~ ~~E~~	P

Color Before: BROWN | Clarity Before: | Texture: FINE

Color After: TAN | Clarity After: CLOUDY | Artifacts:

Comments:

MW 9/18/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-87-072

3

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678
Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 17083
Matrix: SED | Lab Sample Id: 200-17083-3
% Solids: 56.5 | Date Received: 06/19/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.17 ~~0.098~~	J	u	CV

Color Before: GRAY | Clarity Before: CLOUDY | Texture: FINE
Color After: COLORLESS | Clarity After: CLEAR | Artifacts:
Comments:

JW 9/18/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-87-096

4

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678
Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 17083
Matrix: SED | Lab Sample Id: 200-17083-4
% Solids: 64.4 | Date Received: 06/19/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	19.1	J	~~N~~	P
7440-43-9	Cadmium	2.2		~~N~~ ~~E~~	P
7440-47-3	Chromium	54.5		~~E~~	P
7440-50-8	Copper	53.2		~~E~~	P
7439-92-1	Lead	53.7		~~*~~ ~~E~~	P
7440-02-0	Nickel	26.1		~~E~~	P
7440-66-6	Zinc	388		~~*~~ ~~E~~	P

Color Before: BROWN | Clarity Before: | Texture: FINE
Color After: TAN | Clarity After: CLOUDY | Artifacts:
Comments:

jw 9/18/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-87-096

4

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678
Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 17083
Matrix: SED | Lab Sample Id: 200-17083-4
% Solids: 64.4 | Date Received: 06/19/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.14 ~~0.11~~	~~J~~	U	CV

Color Before: GRAY | Clarity Before: CLOUDY | Texture: FINE
Color After: COLORLESS | Clarity After: CLEAR | Artifacts:
Comments:

MW 9/4/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-86-024FD

5

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678

Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 17083

Matrix: SED | Lab Sample Id: 200-17083-5

% Solids: 51.7 | Date Received: 06/19/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	10.0	J	~~N~~	P
7440-43-9	Cadmium	3.0		~~N E~~	P
7440-47-3	Chromium	43.3		~~E~~	P
7440-50-8	Copper	40.6		~~E~~	P
7439-92-1	Lead	67.9		~~N E~~	P
7440-02-0	Nickel	40.2		~~E~~	P
7440-66-6	Zinc	183		~~N E~~	P

Color Before: BROWN | Clarity Before: | Texture: FINE

Color After: TAN | Clarity After: CLOUDY | Artifacts:

Comments:

LW 9/18/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-86-024FD

5

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678
Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17083
Matrix: SED Lab Sample Id: 200-17083-5
% Solids: 51.7 Date Received: 06/19/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.19 ~~0.12~~	J	U	CV

Color Before: GRAY Clarity Before: CLOUDY Texture: FINE
Color After: COLORLESS Clarity After: CLEAR Artifacts:
Comments:

MW 9/18/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-86-012

6

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17083

Matrix: SED Lab Sample Id: 200-17083-6

% Solids: 47.2 Date Received: 06/19/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	10.6	J	~~N~~	P
7440-43-9	Cadmium	2.0		~~N~~ ~~E~~	P
7440-47-3	Chromium	37.0		~~E~~	P
7440-50-8	Copper	36.8		~~E~~	P
7439-92-1	Lead	50.5		~~*~~ ~~E~~	P
7440-02-0	Nickel	36.7		~~E~~	P
7440-66-6	Zinc	156		~~*~~ ~~E~~	P

Color Before: BROWN Clarity Before: Texture: FINE

Color After: TAN Clarity After: CLOUDY Artifacts:

Comments:

LW 9/18/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-86-012

6

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678
Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 17083
Matrix: SED | Lab Sample Id: 200-17083-6
% Solids: 47.2 | Date Received: 06/19/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.19 ~~0.10~~	J	u	CV

Color Before: GRAY | Clarity Before: CLOUDY | Texture: FINE
Color After: COLORLESS | Clarity After: CLEAR | Artifacts:
Comments:

NW 9/18/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-86-024

7

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678
Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 17083
Matrix: SED | Lab Sample Id: 200-17083-7
% Solids: 51.8 | Date Received: 06/19/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	10.8	J	~~N~~	P
7440-43-9	Cadmium	3.2		~~N E~~	P
7440-47-3	Chromium	46.4		~~E~~	P
7440-50-8	Copper	42.2		~~E~~	P
7439-92-1	Lead	62.6		~~* E~~	P
7440-02-0	Nickel	42.0		~~E~~	P
7440-66-6	Zinc	180		~~* E~~	P

Color Before: BROWN | Clarity Before: | Texture: FINE
Color After: TAN | Clarity After: CLOUDY | Artifacts:
Comments:

LW 9/18/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-86-024

7

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678
Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 17083
Matrix: SED | Lab Sample Id: 200-17083-7
% Solids: 51.8 | Date Received: 06/19/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.18 ~~0.10~~	~~J~~	U	CV

Color Before: GRAY | Clarity Before: CLOUDY | Texture: FINE
Color After: COLORLESS | Clarity After: CLEAR | Artifacts:
Comments:

DLW 9/18/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-87-048

8

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678
Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 17083
Matrix: SED | Lab Sample Id: 200-17083-8
% Solids: 59.2 | Date Received: 06/19/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	17.8	J	~~N~~	P
7440-43-9	Cadmium	2.6		~~N E~~	P
7440-47-3	Chromium	45.0		~~E~~	P
7440-50-8	Copper	55.5		~~E~~	P
7439-92-1	Lead	74.8		~~* E~~	P
7440-02-0	Nickel	32.2		~~E~~	P
7440-66-6	Zinc	376		~~* E~~	P

Color Before: BROWN | Clarity Before: | Texture: FINE
Color After: TAN | Clarity After: CLOUDY | Artifacts:
Comments:

mw 9/18/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-87-048

8

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678
Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 17083
Matrix: SED | Lab Sample Id: 200-17083-8
% Solids: 59.2 | Date Received: 06/19/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.21	U		CV

Color Before: GRAY | Clarity Before: CLOUDY | Texture: FINE
Color After: COLORLESS | Clarity After: CLEAR | Artifacts:
Comments:

9/18/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-87-120

9

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678
Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 17083
Matrix: SED | Lab Sample Id: 200-17083-9
% Solids: 63.8 | Date Received: 06/19/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	25.6	J	~~N~~	P
7440-43-9	Cadmium	4.2		~~E N~~	P
7440-47-3	Chromium	80.0		~~E~~	P
7440-50-8	Copper	70.6		~~E~~	P
7439-92-1	Lead	138		~~E~~	P
7440-02-0	Nickel	44.7		~~E~~	P
7440-66-6	Zinc	1030		~~E~~	P

Color Before: BROWN | Clarity Before: | Texture: FINE
Color After: TAN | Clarity After: CLOUDY | Artifacts:
Comments:

MW 9/4/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-87-120

9

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678
Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 17083
Matrix: SED | Lab Sample Id: 200-17083-9
% Solids: 63.8 | Date Received: 06/19/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.20	U		CV

Color Before: GRAY | Clarity Before: CLOUDY | Texture: FINE
Color After: COLORLESS | Clarity After: CLEAR | Artifacts:
Comments:

9/18/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-84-024FD

12

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678
Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 17083
Matrix: SED | Lab Sample Id: 200-17103-1
% Solids: 60.5 | Date Received: 06/20/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	6.9	J	~~N~~	P
7440-43-9	Cadmium	0.49	J	~~E N~~	P
7440-47-3	Chromium	21.4		~~E~~	P
7440-50-8	Copper	24.4		~~E~~	P
7439-92-1	Lead	39.5		~~E~~	P
7440-02-0	Nickel	27.4		~~E~~	P
7440-66-6	Zinc	97.5		~~E~~	P

Color Before: BROWN | Clarity Before: | Texture: FINE
Color After: TAN | Clarity After: CLOUDY | Artifacts:
Comments:

dlw 7/18/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-84-024FD

12

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17083

Matrix: SED Lab Sample Id: 200-17103-1

% Solids: 60.5 Date Received: 06/20/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.26			CV

Color Before: GRAY Clarity Before: CLOUDY Texture: FINE

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

MW 9/18/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-84-012

13

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678
Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 17083
Matrix: SED | Lab Sample Id: 200-17103-2
% Solids: 58.4 | Date Received: 06/20/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	12.0	J	~~N~~	P
7440-43-9	Cadmium	0.66		~~E N~~	P
7440-47-3	Chromium	20.5		~~E~~	P
7440-50-8	Copper	25.6		~~E~~	P
7439-92-1	Lead	42.6		~~E~~	P
7440-02-0	Nickel	24.7		~~E~~	P
7440-66-6	Zinc	132		~~E~~	P

Color Before: BROWN | Clarity Before: | Texture: FINE
Color After: TAN | Clarity After: CLOUDY | Artifacts:
Comments:

lw 9/18/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-84-012

13

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678
Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17083
Matrix: SED Lab Sample Id: 200-17103-2
% Solids: 58.4 Date Received: 06/20/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.32			CV

Color Before: GRAY Clarity Before: CLOUDY Texture: FINE
Color After: COLORLESS Clarity After: CLEAR Artifacts:
Comments:

MW 9/18/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-84-024

14

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17083

Matrix: SED Lab Sample Id: 200-17103-3

% Solids: 60.0 Date Received: 06/20/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	6.3	J	~~N~~	P
7440-43-9	Cadmium	0.51	J	~~E N~~	P
7440-47-3	Chromium	21.4		~~E~~	P
7440-50-8	Copper	24.8		~~E~~	P
7439-92-1	Lead	40.0		~~E~~	P
7440-02-0	Nickel	28.0		~~E~~	P
7440-66-6	Zinc	101		~~E~~	P

Color Before: BROWN Clarity Before: Texture: FINE

Color After: TAN Clarity After: CLOUDY Artifacts:

Comments:

MW 9/18/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-84-024

14

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678
Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 17083
Matrix: SED | Lab Sample Id: 200-17103-3
% Solids: 60.0 | Date Received: 06/20/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.23	U		CV

Color Before: GRAY | Clarity Before: CLOUDY | Texture: FINE
Color After: COLORLESS | Clarity After: CLEAR | Artifacts:
Comments:

MW 9/18/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-84-048

15

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678
Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 17083
Matrix: SED | Lab Sample Id: 200-17103-4
% Solids: 66.4 | Date Received: 06/20/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	5.2	J	~~N~~	P
7440-43-9	Cadmium	0.43	J	~~E N~~	P
7440-47-3	Chromium	18.0		~~E~~	P
7440-50-8	Copper	18.4		~~E~~	P
7439-92-1	Lead	19.9		~~E~~	P
7440-02-0	Nickel	24.2		~~E~~	P
7440-66-6	Zinc	77.1		~~E~~	P

Color Before: BROWN | Clarity Before: | Texture: FINE
Color After: TAN | Clarity After: CLOUDY | Artifacts:
Comments:

MW 9/18/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-84-048

15

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678
Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 17083
Matrix: SED | Lab Sample Id: 200-17103-4
% Solids: 66.4 | Date Received: 06/20/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.15 ~~0.11~~	~~J~~	U	CV

Color Before: GRAY | Clarity Before: CLOUDY | Texture: FINE
Color After: COLORLESS | Clarity After: CLEAR | Artifacts:
Comments:

MW 9/18/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-84-072

16

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678
Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17083
Matrix: SED Lab Sample Id: 200-17103-5
% Solids: 76.6 Date Received: 06/20/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	2.9	J	~~N~~	P
7440-43-9	Cadmium	0.35	~~J~~	~~E N~~	P
7440-47-3	Chromium	10.5		~~E~~	P
7440-50-8	Copper	10.0		~~E~~	P
7439-92-1	Lead	8.6		~~E~~	P
7440-02-0	Nickel	15.6		~~E~~	P
7440-66-6	Zinc	42.5		~~E~~	P

Color Before: BROWN Clarity Before: Texture: FINE
Color After: TAN Clarity After: CLOUDY Artifacts:
Comments:

MW 7/18/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-84-072

16

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17083

Matrix: SED Lab Sample Id: 200-17103-5

% Solids: 76.6 Date Received: 06/20/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.13	U		CV

Color Before: GRAY Clarity Before: CLOUDY Texture: FINE

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

JW 9/18/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-86-048

17

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678
Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 17083
Matrix: SED | Lab Sample Id: 200-17103-6
% Solids: 53.2 | Date Received: 06/20/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	8.5	J	~~N~~	P
7440-43-9	Cadmium	2.9		~~E N~~	P
7440-47-3	Chromium	44.4		~~E~~	P
7440-50-8	Copper	39.8		~~E~~	P
7439-92-1	Lead	53.6		~~E~~	P
7440-02-0	Nickel	40.0		~~E~~	P
7440-66-6	Zinc	169		~~E~~	P

Color Before: BROWN | Clarity Before: | Texture: FINE
Color After: TAN | Clarity After: CLOUDY | Artifacts:
Comments:

MW 9/18/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-86-048

17

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678
Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 17083
Matrix: SED | Lab Sample Id: 200-17103-6
% Solids: 53.2 | Date Received: 06/20/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.18 ~~0.12~~	~~J~~	U	CV

Color Before: GRAY | Clarity Before: CLOUDY | Texture: FINE
Color After: COLORLESS | Clarity After: CLEAR | Artifacts:
Comments:

MW 9/18/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-86-096

18

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678
Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 17083
Matrix: SED | Lab Sample Id: 200-17103-7
% Solids: 55.8 | Date Received: 06/20/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	11.1	J	~~N~~	P
7440-43-9	Cadmium	3.3		~~E N~~	P
7440-47-3	Chromium	55.0		~~E~~	P
7440-50-8	Copper	46.4		~~E~~	P
7439-92-1	Lead	211		~~E~~	P
7440-02-0	Nickel	38.0		~~E~~	P
7440-66-6	Zinc	288		~~E N~~	P

Color Before: BROWN | Clarity Before: | Texture: FINE
Color After: TAN | Clarity After: CLOUDY | Artifacts:
Comments:

JLW 9/18/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-86-096

18

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17083

Matrix: SED Lab Sample Id: 200-17103-7

% Solids: 55.8 Date Received: 06/20/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.28			CV

Color Before: GRAY Clarity Before: CLOUDY Texture: FINE

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

MW 9/18/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-30-012

19

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678
Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 17083
Matrix: SED | Lab Sample Id: 200-17103-8
% Solids: 53.3 | Date Received: 06/20/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	24.6	J	~~N~~	P
7440-43-9	Cadmium	2.9		~~E N~~	P
7440-47-3	Chromium	54.7		~~E~~	P
7440-50-8	Copper	51.7		~~E~~	P
7439-92-1	Lead	111		~~E *~~	P
7440-02-0	Nickel	34.4		~~E~~	P
7440-66-6	Zinc	446		~~E *~~	P

Color Before: BROWN | Clarity Before: | Texture: FINE
Color After: TAN | Clarity After: CLOUDY | Artifacts:
Comments:

LW 9/18/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-30-012

19

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17083

Matrix: SED Lab Sample Id: 200-17103-8

% Solids: 53.3 Date Received: 06/20/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.41			CV

Color Before: GRAY Clarity Before: CLOUDY Texture: FINE

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

lw 9/18/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-30-024

20

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678
Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 17083
Matrix: SED | Lab Sample Id: 200-17103-9
% Solids: 55.9 | Date Received: 06/20/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	4.3	J	~~N~~	P
7440-43-9	Cadmium	0.38	J	~~E N~~	P
7440-47-3	Chromium	13.4		~~E~~	P
7440-50-8	Copper	13.2		~~E~~	P
7439-92-1	Lead	11.3		~~E~~	P
7440-02-0	Nickel	19.2		~~E~~	P
7440-66-6	Zinc	49.3		~~E~~	P

Color Before: BROWN | Clarity Before: | Texture: FINE
Color After: TAN | Clarity After: CLOUDY | Artifacts:
Comments:

JW 9/18/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-30-024

20

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17083

Matrix: SED Lab Sample Id: 200-17103-9

% Solids: 55.9 Date Received: 06/20/2013

Concentration Units (**ug/L, ug,** or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.58			CV

Color Before: GRAY Clarity Before: CLOUDY Texture: FINE

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

lw 9/18/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-30-048

21

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17083

Matrix: SED Lab Sample Id: 200-17103-10

% Solids: 55.5 Date Received: 06/20/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	7.9	J	~~N~~	P
7440-43-9	Cadmium	2.0	↓	~~E N~~	P
7440-47-3	Chromium	36.3	↓	~~E~~	P
7440-50-8	Copper	43.9	↓	~~E~~	P
7439-92-1	Lead	45.8	↓	~~E~~	P
7440-02-0	Nickel	32.1	↓	~~E~~	P
7440-66-6	Zinc	160	↓	~~E~~	P

Color Before: BROWN Clarity Before: Texture: FINE

Color After: TAN Clarity After: CLOUDY Artifacts:

Comments:

lw 9/18/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-30-048

21

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678

Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 17083

Matrix: SED | Lab Sample Id: 200-17103-10

% Solids: 55.5 | Date Received: 06/20/2013

Concentration Units (**ug/L, ug,** or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.75			CV

Color Before: GRAY | Clarity Before: CLOUDY | Texture: FINE

Color After: COLORLESS | Clarity After: CLEAR | Artifacts:

Comments:

LW 9/18/13

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - SEM/AVS

6

Client Sample ID: LMR13-86-012 | Lab Sample ID: 200-17083-6

Lab Name: TestAmerica Burlington | Job No.: 200-17083-1

SDG ID.: 17083

Matrix: Sediment | Date Sampled: 06/18/2013 16:10

Reporting Basis: DRY | Date Received: 06/19/2013 10:30

% Solids: 47.2

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-43-9	Cadmium SEM	0.79	2.4	0.39	mg/Kg	J		10	6010C
7440-43-9	Cadmium SEM	0.0070	0.022	0.0034	umol/g	J		10	6010C
7440-50-8	Copper SEM	8.7	12.6	1.1	mg/Kg	J		10	6010C
7440-50-8	Copper SEM	0.14	0.20	0.017	umol/g	J		10	6010C
7439-92-1	Lead SEM	15.7	5.1	2.2	mg/Kg			10	6010C
7439-92-1	Lead SEM	0.076	0.025	0.011	umol/g			10	6010C
7440-02-0	Nickel SEM	7.1	20.4	1.5	mg/Kg	J		10	6010C
7440-02-0	Nickel SEM	0.12	0.35	0.025	umol/g	J		10	6010C
7440-66-6	Zinc SEM	44.5	10.2	2.9	mg/Kg			10	6010C
7440-66-6	Zinc SEM	0.68	0.16	0.044	umol/g			10	6010C
7439-97-6	Mercury SEM	0.0098	0.010	0.0034	mg/Kg	J		1	7470A
7439-97-6	Mercury SEM	0.000049	0.000051	0.000017	umol/g	J		1	7470A

9/18/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY - SEM/AVS

6

Client Sample ID: LMR13-86-012
Lab Sample ID: 200-17083-6
Lab Name: TestAmerica Burlington
Job No.: 200-17083-1
SDG ID.: 17083
Matrix: Sediment
Date Sampled: 06/18/2013 16:10
Reporting Basis: DRY
Date Received: 06/19/2013 10:30
% Solids: 47.2

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
18496-25-8	Acid Volatile Sulfides (AVS)	32.6	32.6		mg/Kg	U		1	AVS
18496-25-8	Acid Volatile Sulfides (AVS)	1.0	1.0		umol/g	U		1	AVS

9/18/13

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - SEM/AVS

6

Client Sample ID: LMR13-86-012 Lab Sample ID: 200-17083-6

Lab Name: TestAmerica Burlington Job No.: 200-17083-1

SDG ID.: 17083

Matrix: Sediment Date Sampled: 06/18/2013 16:10

Reporting Basis: WET Date Received: 06/19/2013 10:30

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	SEM/AVS Ratio	NC	0.00100	0.00100	NONE			1	SEM

MW 9/18/13

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - SEM/AVS

10

Client Sample ID: LMR13-86-012FD
Lab Sample ID: 200-17083-10
Lab Name: TestAmerica Burlington
Job No.: 200-17083-1
SDG ID.: 17083
Matrix: Sediment
Date Sampled: 06/18/2013 16:10
Reporting Basis: DRY
Date Received: 06/19/2013 10:30
% Solids: 48.6

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-43-9	Cadmium SEM	0.92	2.4	0.38	mg/Kg	J		10	6010C
7440-43-9	Cadmium SEM	0.0082	0.021	0.0034	umol/g	J		10	6010C
7440-50-8	Copper SEM	9.8	12.5	1.1	mg/Kg	J		10	6010C
7440-50-8	Copper SEM	0.15	0.20	0.017	umol/g	J		10	6010C
7439-92-1	Lead SEM	23.2	5.0	2.2	mg/Kg			10	6010C
7439-92-1	Lead SEM	0.11	0.024	0.011	umol/g			10	6010C
7440-02-0	Nickel SEM	9.4	20.1	1.4	mg/Kg	J		10	6010C
7440-02-0	Nickel SEM	0.16	0.34	0.025	umol/g	J		10	6010C
7440-66-6	Zinc SEM	56.5	10.1	2.8	mg/Kg			10	6010C
7440-66-6	Zinc SEM	0.86	0.15	0.043	umol/g			10	6010C
7439-97-6	Mercury SEM	0.010	0.010	0.0033	mg/Kg	U		1	7470A
7439-97-6	Mercury SEM	0.000050	0.000050	0.000017	umol/g	U		1	7470A

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1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY - SEM/AVS

10

Client Sample ID: LMR13-86-012FD
Lab Sample ID: 200-17083-10
Lab Name: TestAmerica Burlington
Job No.: 200-17083-1
SDG ID.: 17083
Matrix: Sediment
Date Sampled: 06/18/2013 16:10
Reporting Basis: DRY
Date Received: 06/19/2013 10:30
% Solids: 48.6

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
18496-25-8	Acid Volatile Sulfides (AVS)	48.3	32.2		mg/Kg			1	AVS
18496-25-8	Acid Volatile Sulfides (AVS)	1.5	1.0		umol/g			1	AVS

MW 6/18/13

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - SEM/AVS

10

Client Sample ID: LMR13-86-012FD
Lab Sample ID: 200-17083-10
Lab Name: TestAmerica Burlington
Job No.: 200-17083-1
SDG ID.: 17083
Matrix: Sediment
Date Sampled: 06/18/2013 16:10
Reporting Basis: WET
Date Received: 06/19/2013 10:30

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	SEM/AVS Ratio	0.862	0.00100	0.00100	NONE			1	SEM

9/18/13

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - SEM/AVS

19

Client Sample ID: LMR13-30-012
Lab Sample ID: 200-17103-8
Lab Name: TestAmerica Burlington
Job No.: 200-17083-1
SDG ID.: 17083
Matrix: Sediment
Date Sampled: 06/19/2013 07:50
Reporting Basis: DRY
Date Received: 06/20/2013 10:30
% Solids: 53.3

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-43-9	Cadmium SEM	0.76	2.2	0.34	mg/Kg	J		10	6010C
7440-43-9	Cadmium SEM	0.0067	0.019	0.0031	umol/g	J		10	6010C
7440-50-8	Copper SEM	7.8	11.3	0.98	mg/Kg	J		10	6010C
7440-50-8	Copper SEM	0.12	0.18	0.015	umol/g	J		10	6010C
7439-92-1	Lead SEM	172	4.5	2.0	mg/Kg			10	6010C
7439-92-1	Lead SEM	0.83	0.022	0.0096	umol/g			10	6010C
7440-02-0	Nickel SEM	7.5	18.1	1.3	mg/Kg	J		10	6010C
7440-02-0	Nickel SEM	0.13	0.31	0.022	umol/g	J		10	6010C
7440-66-6	Zinc SEM	241	9.1	2.5	mg/Kg			10	6010C
7440-66-6	Zinc SEM	3.7	0.14	0.039	umol/g			10	6010C
7439-97-6	Mercury SEM	0.0091	0.0091	0.0030	mg/Kg	U		1	7470A
7439-97-6	Mercury SEM	0.000045	0.000045	0.000015	umol/g	U		1	7470A

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1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY - SEM/AVS

19

Client Sample ID: LMR13-30-012
Lab Sample ID: 200-17103-8
Lab Name: TestAmerica Burlington
Job No.: 200-17083-1
SDG ID.: 17083
Matrix: Sediment
Date Sampled: 06/19/2013 07:50
Reporting Basis: DRY
Date Received: 06/20/2013 10:30
% Solids: 53.3

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
18496-25-8	Acid Volatile Sulfides (AVS)	36.3	29.0		mg/Kg			1	AVS
18496-25-8	Acid Volatile Sulfides (AVS)	1.1	0.91		umol/g			1	AVS

CW 9/18/13

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - SEM/AVS

19

Client Sample ID: LMR13-30-012 Lab Sample ID: 200-17103-8

Lab Name: TestAmerica Burlington Job No.: 200-17083-1

SDG ID.: 17083

Matrix: Sediment Date Sampled: 06/19/2013 07:50

Reporting Basis: WET Date Received: 06/20/2013 10:30

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	SEM/AVS Ratio	4.22	0.00100	0.00100	NONE			1	SEM

MW 9/18/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: LMR13-87-012
Lab Sample ID: 200-17083-1
Lab Name: TestAmerica Burlington
Job No.: 200-17083-1
SDG ID.: 17083
Matrix: Sediment
Date Sampled: 06/18/2013 15:00
Reporting Basis: WET
Date Received: 06/19/2013 10:30

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	46300	J 1000		mg/Kg		H	1	Lloyd Kahn

MW 9/18/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: LMR13-87-024 Lab Sample ID: 200-17083-2 2

Lab Name: TestAmerica Burlington Job No.: 200-17083-1

SDG ID.: 17083

Matrix: Sediment Date Sampled: 06/18/2013 15:10

Reporting Basis: WET Date Received: 06/19/2013 10:30

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	63000	J 1000		mg/Kg		J	1	Lloyd Kahn

qw 9/18/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

3

Client Sample ID: LMR13-87-072 | Lab Sample ID: 200-17083-3

Lab Name: TestAmerica Burlington | Job No.: 200-17083-1

SDG ID.: 17083

Matrix: Sediment | Date Sampled: 06/18/2013 15:30

Reporting Basis: WET | Date Received: 06/19/2013 10:30

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	50300	J 1000		mg/Kg		~~F~~	1	Lloyd Kahn

MW 9/18/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

4

Client Sample ID: LMR13-87-096 Lab Sample ID: 200-17083-4

Lab Name: TestAmerica Burlington Job No.: 200-17083-1

SDG ID.: 17083

Matrix: Sediment Date Sampled: 06/18/2013 15:40

Reporting Basis: WET Date Received: 06/19/2013 10:30

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	50000	J 1000		mg/Kg			1	Lloyd Kahn

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1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

5

Client Sample ID: LMR13-86-024FD
Lab Sample ID: 200-17083-5
Lab Name: TestAmerica Burlington
Job No.: 200-17083-1
SDG ID.: 17083
Matrix: Sediment
Date Sampled: 06/18/2013 16:20
Reporting Basis: WET
Date Received: 06/19/2013 10:30

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	39400	J 1000		mg/Kg		H	1	Lloyd Kahn

MDC 11/18/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: LMR13-86-012 | Lab Sample ID: 200-17083-6 6

Lab Name: TestAmerica Burlington | Job No.: 200-17083-1

SDG ID.: 17083

Matrix: Sediment | Date Sampled: 06/18/2013 16:10

Reporting Basis: WET | Date Received: 06/19/2013 10:30

% Solids: 47.2

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	33500	J 1000		mg/Kg		~~F~~	1	Lloyd Kahn

JW 9/18/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

7

Client Sample ID: LMR13-86-024
Lab Sample ID: 200-17083-7
Lab Name: TestAmerica Burlington
Job No.: 200-17083-1
SDG ID.: 17083
Matrix: Sediment
Date Sampled: 06/18/2013 16:20
Reporting Basis: WET
Date Received: 06/19/2013 10:30
% Solids: 51.8

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	33200	J 1000		mg/Kg		H	1	Lloyd Kahn

MW 9/18/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

8

Client Sample ID: LMR13-87-048 Lab Sample ID: 200-17083-8

Lab Name: TestAmerica Burlington Job No.: 200-17083-1

SDG ID.: 17083

Matrix: Sediment Date Sampled: 06/18/2013 15:20

Reporting Basis: WET Date Received: 06/19/2013 10:30

% Solids: 59.2

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	52500	J 1000		mg/Kg		~~U~~	1	Lloyd Kahn

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1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

9

Client Sample ID: LMR13-87-120 | Lab Sample ID: 200-17083-9

Lab Name: TestAmerica Burlington | Job No.: 200-17083-1

SDG ID.: 17083

Matrix: Sediment | Date Sampled: 06/18/2013 15:50

Reporting Basis: WET | Date Received: 06/19/2013 10:30

% Solids: 63.8

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	75000	J 1000		mg/Kg		~~V~~	1	Lloyd Kahn

MW 9/18/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

12

Client Sample ID: LMR13-84-024FD
Lab Sample ID: 200-17103-1
Lab Name: TestAmerica Burlington
Job No.: 200-17083-1
SDG ID.: 17083
Matrix: Sediment
Date Sampled: 06/18/2013 17:30
Reporting Basis: WET
Date Received: 06/20/2013 10:30
% Solids: 60.5

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	19900	J 1000		mg/Kg		H	1	Lloyd Kahn

MW 9/18/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

13

Client Sample ID: LMR13-84-012
Lab Sample ID: 200-17103-2
Lab Name: TestAmerica Burlington
Job No.: 200-17083-1
SDG ID.: 17083
Matrix: Sediment
Date Sampled: 06/18/2013 17:20
Reporting Basis: WET
Date Received: 06/20/2013 10:30
% Solids: 58.4

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	21400	J 1000		mg/Kg		H	1	Lloyd Kahn

MW 9/18/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

14

Client Sample ID: LMR13-84-024 | Lab Sample ID: 200-17103-3

Lab Name: TestAmerica Burlington | Job No.: 200-17083-1

SDG ID.: 17083

Matrix: Sediment | Date Sampled: 06/18/2013 17:30

Reporting Basis: WET | Date Received: 06/20/2013 10:30

% Solids: 60.0

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	22700	J 1000		mg/Kg		H	1	Lloyd Kahn

LW 9/10/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

15

Client Sample ID: LMR13-84-048
Lab Sample ID: 200-17103-4
Lab Name: TestAmerica Burlington
Job No.: 200-17083-1
SDG ID.: 17083
Matrix: Sediment
Date Sampled: 06/18/2013 17:40
Reporting Basis: WET
Date Received: 06/20/2013 10:30
% Solids: 66.4

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	19900	J 1000		mg/Kg		H	1	Lloyd Kahn

lew 9/18/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

16

Client Sample ID: LMR13-84-072
Lab Sample ID: 200-17103-5
Lab Name: TestAmerica Burlington
Job No.: 200-17083-1
SDG ID.: 17083
Matrix: Sediment
Date Sampled: 06/18/2013 17:50
Reporting Basis: WET
Date Received: 06/20/2013 10:30
% Solids: 76.6

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	13200	J 1000		mg/Kg			1	Lloyd Kahn

LW 9/18/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

17

Client Sample ID: LMR13-86-048 Lab Sample ID: 200-17103-6

Lab Name: TestAmerica Burlington Job No.: 200-17083-1

SDG ID.: 17083

Matrix: Sediment Date Sampled: 06/18/2013 16:30

Reporting Basis: WET Date Received: 06/20/2013 10:30

% Solids: 53.2

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	26100	J 1000		mg/Kg		J	1	Lloyd Kahn

MW 9/18/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

18

Client Sample ID: LMR13-86-096
Lab Sample ID: 200-17103-7
Lab Name: TestAmerica Burlington
Job No.: 200-17083-1
SDG ID.: 17083
Matrix: Sediment
Date Sampled: 06/18/2013 16:50
Reporting Basis: WET
Date Received: 06/20/2013 10:30
% Solids: 55.8

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	42500	J 1000		mg/Kg		H	1	Lloyd Kahn

lw 9/18/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

19

Client Sample ID: LMR13-30-012 Lab Sample ID: 200-17103-8

Lab Name: TestAmerica Burlington Job No.: 200-17083-1

SDG ID.: 17083

Matrix: Sediment Date Sampled: 06/19/2013 07:50

Reporting Basis: WET Date Received: 06/20/2013 10:30

% Solids: 53.3

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	35300	J 1000		mg/Kg		J	1	Lloyd Kahn

jmw 9/18/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

20

Client Sample ID: LMR13-30-024 | Lab Sample ID: 200-17103-9

Lab Name: TestAmerica Burlington | Job No.: 200-17083-1

SDG ID.: 17083

Matrix: Sediment | Date Sampled: 06/19/2013 08:00

Reporting Basis: WET | Date Received: 06/20/2013 10:30

% Solids: 55.9

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	41200	J 1000		mg/Kg		✓	1	Lloyd Kahn

LW 9/18/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

21

Client Sample ID: LMR13-30-048
Lab Sample ID: 200-17103-10
Lab Name: TestAmerica Burlington
Job No.: 200-17083-1
SDG ID.: 17083
Matrix: Sediment
Date Sampled: 06/19/2013 08:10
Reporting Basis: WET
Date Received: 06/20/2013 10:30
% Solids: 55.5

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	36000 J	1000		mg/Kg		~~U~~	1	Lloyd Kahn

9/18/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: LMR13-87-012
Lab Sample ID: 200-17083-1
Lab Name: TestAmerica Canton
Job No.: 200-17083-1
SDG ID.: 17083
Matrix: Sediment
Date Sampled: 06/18/2013 15:00
Reporting Basis: DRY
Date Received: 06/19/2013 10:30
% Solids: 51.6

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	2440	387	171	mg/Kg			1	9071B

9/18/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

2

Client Sample ID: LMR13-87-024
Lab Sample ID: 200-17083-2
Lab Name: TestAmerica Canton
Job No.: 200-17083-1
SDG ID.: 17083
Matrix: Sediment
Date Sampled: 06/18/2013 15:10
Reporting Basis: DRY
Date Received: 06/19/2013 10:30
% Solids: 54.4

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	7280	366	162	mg/Kg			1	9071B

LW 9/18/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

3

Client Sample ID: LMR13-87-072
Lab Sample ID: 200-17083-3
Lab Name: TestAmerica Canton
Job No.: 200-17083-1
SDG ID.: 17083
Matrix: Sediment
Date Sampled: 06/18/2013 15:30
Reporting Basis: DRY
Date Received: 06/19/2013 10:30
% Solids: 56.5

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	1580	355	157	mg/Kg			1	9071B

cw 9/18/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

4

Client Sample ID: LMR13-87-096
Lab Sample ID: 200-17083-4
Lab Name: TestAmerica Canton
Job No.: 200-17083-1
SDG ID.: 17083
Matrix: Sediment
Date Sampled: 06/18/2013 15:40
Reporting Basis: DRY
Date Received: 06/19/2013 10:30
% Solids: 64.4

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	4740	310	137	mg/Kg			1	9071B

LMR 6/18/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

6

Client Sample ID: LMR13-86-012
Lab Sample ID: 200-17083-6
Lab Name: TestAmerica Canton
Job No.: 200-17083-1
SDG ID.: 17083
Matrix: Sediment
Date Sampled: 06/18/2013 16:10
Reporting Basis: DRY
Date Received: 06/19/2013 10:30
% Solids: 47.2

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	1150	424	187	mg/Kg			1	9071B

NW 9/18/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

7

Client Sample ID: LMR13-86-024 Lab Sample ID: 200-17083-7

Lab Name: TestAmerica Canton Job No.: 200-17083-1

SDG ID.: 17083

Matrix: Sediment Date Sampled: 06/18/2013 16:20

Reporting Basis: DRY Date Received: 06/19/2013 10:30

% Solids: 51.8

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	1520	385	170	mg/Kg			1	9071B

NW 9/18/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

8

Client Sample ID: LMR13-87-048
Lab Sample ID: 200-17083-8
Lab Name: TestAmerica Canton
Job No.: 200-17083-1
SDG ID.: 17083
Matrix: Sediment
Date Sampled: 06/18/2013 15:20
Reporting Basis: DRY
Date Received: 06/19/2013 10:30
% Solids: 59.2

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	4080	339	150	mg/Kg			1	9071B

MW 9/18/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

9

Client Sample ID: LMR13-87-120
Lab Sample ID: 200-17083-9
Lab Name: TestAmerica Canton
Job No.: 200-17083-1
SDG ID.: 17083
Matrix: Sediment
Date Sampled: 06/18/2013 15:50
Reporting Basis: DRY
Date Received: 06/19/2013 10:30
% Solids: 63.8

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	8680	312	138	mg/Kg			1	9071B

MW 9/18/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

11

Client Sample ID: LMR13-87-024FD
Lab Sample ID: 200-17083-11
Lab Name: TestAmerica Canton
Job No.: 200-17083-1
SDG ID.: 17083
Matrix: Sediment
Date Sampled: 06/18/2013 15:10
Reporting Basis: DRY
Date Received: 06/19/2013 10:30
% Solids: 54.6

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	7040	367	162	mg/Kg			1	9071B

MW 9/18/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

13

Client Sample ID: LMR13-84-012 Lab Sample ID: 200-17103-2

Lab Name: TestAmerica Canton Job No.: 200-17083-1

SDG ID.: 17083

Matrix: Sediment Date Sampled: 06/18/2013 17:20

Reporting Basis: DRY Date Received: 06/20/2013 10:30

% Solids: 58.4

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	581	U 332	147	mg/Kg		U	1	9071B

6/18/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

14

Client Sample ID: LMR13-84-024
Lab Sample ID: 200-17103-3
Lab Name: TestAmerica Canton
Job No.: 200-17083-1
SDG ID.: 17083
Matrix: Sediment
Date Sampled: 06/18/2013 17:30
Reporting Basis: DRY
Date Received: 06/20/2013 10:30
% Solids: 60.0

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	979	332	147	mg/Kg		J	1	9071B

MW 9/18/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

15

Client Sample ID: LMR13-84-048
Lab Sample ID: 200-17103-4
Lab Name: TestAmerica Canton
Job No.: 200-17083-1
SDG ID.: 17083
Matrix: Sediment
Date Sampled: 06/18/2013 17:40
Reporting Basis: DRY
Date Received: 06/20/2013 10:30
% Solids: 66.4

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	299	u 299	132	mg/Kg		F	1	9071B

lw 9/18/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

16

Client Sample ID: LMR13-84-072 | Lab Sample ID: 200-17103-5

Lab Name: TestAmerica Canton | Job No.: 200-17083-1

SDG ID.: 17083

Matrix: Sediment | Date Sampled: 06/18/2013 17:50

Reporting Basis: DRY | Date Received: 06/20/2013 10:30

% Solids: 76.6

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	379	U 252	112	mg/Kg			1	9071B

lw 9/18/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

17

Client Sample ID: LMR13-86-048
Lab Sample ID: 200-17103-6
Lab Name: TestAmerica Canton
Job No.: 200-17083-1
SDG ID.: 17083
Matrix: Sediment
Date Sampled: 06/18/2013 16:30
Reporting Basis: DRY
Date Received: 06/20/2013 10:30
% Solids: 53.2

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	1820	375	166	mg/Kg		F	1	9071B

6/18/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

18

Client Sample ID: LMR13-86-096
Lab Sample ID: 200-17103-7
Lab Name: TestAmerica Canton
Job No.: 200-17083-1
SDG ID.: 17083
Matrix: Sediment
Date Sampled: 06/18/2013 16:50
Reporting Basis: DRY
Date Received: 06/20/2013 10:30
% Solids: 55.8

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	5200	357	158	mg/Kg		F	1	9071B

mw 9/18/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

19

Client Sample ID: LMR13-30-012
Lab Sample ID: 200-17103-8
Lab Name: TestAmerica Canton
Job No.: 200-17083-1
SDG ID.: 17083
Matrix: Sediment
Date Sampled: 06/19/2013 07:50
Reporting Basis: DRY
Date Received: 06/20/2013 10:30
% Solids: 53.3

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	1680	365	161	mg/Kg		F	1	9071B

RW 9/18/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

20

Client Sample ID: LMR13-30-024 | Lab Sample ID: 200-17103-9

Lab Name: TestAmerica Canton | Job No.: 200-17083-1

SDG ID.: 17083

Matrix: Sediment | Date Sampled: 06/19/2013 08:00

Reporting Basis: DRY | Date Received: 06/20/2013 10:30

% Solids: 55.9

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	1450	346	153	mg/Kg		B	1	9071B

MW 9/18/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

23

Client Sample ID: LMR13-30-024FD
Lab Sample ID: 200-17103-12
Lab Name: TestAmerica Canton
Job No.: 200-17083-1
SDG ID.: 17083
Matrix: Sediment
Date Sampled: 06/19/2013 08:00
Reporting Basis: DRY
Date Received: 06/20/2013 10:30
% Solids: 55.4

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	1560	347	153	mg/Kg		B	1	9071B

MW 9/18/13

ENVIRONMENTAL
Data Services, Inc.

DATA VALIDATION SUMMARY REPORT
LOWER MAUMEE RIVER, TOLEDO, OHIO

Client: EA Engineering, Science & Technology, Inc., Hunt Valley, Maryland
SDG: 200-17096
Laboratory: Test America Laboratories, Burlington, Vermont
Test America Laboratories, Canton, Ohio
Site: Lower Maumee River, Maumee Area of Concern, Toledo, Ohio
Date: September 22, 2013

SVOC			
EDS ID	Client Sample ID	Laboratory Sample ID	Matrix
1	LMR13-55-048	200-17096-1	Sediment
2	LMR13-55-072	200-17096-2	Sediment
3	LMR13-89-012	200-17096-3	Sediment
4	LMR13-89-024	200-17096-4	Sediment
6	LMR13-39-048	200-17096-6	Sediment
7	LMR13-88-012	200-17096-7	Sediment
8	LMR13-88-024	200-17096-8	Sediment
9	LMR13-88-048	200-17096-9	Sediment
11	LMR13-39-012	200-17096-11	Sediment
12	LMR13-39-024	200-17096-12	Sediment
13	LMR13-39-072	200-17096-13	Sediment
14	LMR13-85-024	200-17096-14	Sediment
15	LMR13-85-048	200-17096-15	Sediment
17	LMR13-67-012	200-17096-17	Sediment
18	LMR13-67-024	200-17096-18	Sediment
19	LMR13-67-048	200-17096-19	Sediment
20	LMR13-85-012	200-17096-20	Sediment
21	LMR13-89-024FD	200-17096-21	Sediment
22	LMR13-85-024FD	200-17096-22	Sediment

PAH 34			
EDS ID	Client Sample ID	Laboratory Sample ID	Matrix
3	LMR13-89-012	200-17096-3	Sediment
7	LMR13-88-012	200-17096-7	Sediment
11	LMR13-39-012	200-17096-11	Sediment
17	LMR13-67-012	200-17096-17	Sediment
20	LMR13-85-012	200-17096-20	Sediment

PCBs/Metals/Mercury/TOC			
EDS ID	Client Sample ID	Laboratory Sample ID	Matrix
1	LMR13-55-048	200-17096-1	Sediment
2	LMR13-55-072	200-17096-2	Sediment
3	LMR13-89-012	200-17096-3	Sediment
4	LMR13-89-024	200-17096-4	Sediment

PCBs/Metals/Mercury/TOC			
EDS ID	Client Sample ID	Laboratory Sample ID	Matrix
5	LMR13-88-012FD	200-17096-5	Sediment
6	LMR13-39-048	200-17096-6	Sediment
7	LMR13-88-012	200-17096-7	Sediment
8	LMR13-88-024	200-17096-8	Sediment
9	LMR13-88-048	200-17096-9	Sediment
9MS	LMR13-88-048MS	200-17096-9MS	Sediment
9MSD	LMR13-88-048MSD	200-17096-9MSD	Sediment
10	LMR13-39-024FD	200-17096-10	Sediment
11	LMR13-39-012	200-17096-11	Sediment
12	LMR13-39-024	200-17096-12	Sediment
13	LMR13-39-072	200-17096-13	Sediment
14	LMR13-85-024	200-17096-14	Sediment
15	LMR13-85-048	200-17096-15	Sediment
16	LMR13-67-024FD	200-17096-16	Sediment
17	LMR13-67-012	200-17096-17	Sediment
18	LMR13-67-024	200-17096-18	Sediment
19	LMR13-67-048	200-17096-19	Sediment
20	LMR13-85-012	200-17096-20	Sediment

AVS/SEM			
EDS ID	Client Sample ID	Laboratory Sample ID	Matrix
3	LMR13-89-012	200-17096-3	Sediment
7	LMR13-88-012	200-17096-7	Sediment
11	LMR13-39-012	200-17096-11	Sediment
17	LMR13-67-012	200-17096-17	Sediment
20	LMR13-85-012	200-17096-20	Sediment

HEM			
EDS ID	Client Sample ID	Laboratory Sample ID	Matrix
1	LMR13-55-048	200-17096-1	Sediment
2	LMR13-55-072	200-17096-2	Sediment
3	LMR13-89-012	200-17096-3	Sediment
4	LMR13-89-024	200-17096-4	Sediment
6	LMR13-39-048	200-17096-6	Sediment
7	LMR13-88-012	200-17096-7	Sediment
8	LMR13-88-024	200-17096-8	Sediment
9	LMR13-88-048	200-17096-9	Sediment
9MS	LMR13-88-048MS	200-17096-9MS	Sediment
9MSD	LMR13-88-048MSD	200-17096-9MSD	Sediment
11	LMR13-39-012	200-17096-11	Sediment
12	LMR13-39-024	200-17096-12	Sediment
13	LMR13-39-072	200-17096-13	Sediment
14	LMR13-85-024	200-17096-14	Sediment
15	LMR13-85-048	200-17096-15	Sediment
17	LMR13-67-012	200-17096-17	Sediment
18	LMR13-67-024	200-17096-18	Sediment
19	LMR13-67-048	200-17096-19	Sediment
20	LMR13-85-012	200-17096-20	Sediment
21	LMR13-89-024FD	200-17096-21	Sediment
22	LMR13-85-024FD	200-17096-22	Sediment

A full data validation was performed on the analytical data for twenty-two sediment samples collected on June 19, 2013 by EA Engineering at the Lower Maumee River site in Toledo, Ohio. The samples were analyzed under the Environmental Protection Agency (USEPA) Contract Laboratory Program (CLP) Multi-Media Multi-Concentration Organics Analysis SOM01.2 and Inorganic Analysis ILM05.4 and the Test Methods for the Evaluation of Solid Waste, USEPA SW-846, Third Edition, September 1986, with revisions.

Specific method references are as follows:

Analysis	*Method References*
SVOC	USEPA CLP SOM01.2
PAH 34	USEPA CLP SOM01.2
PCBs	USEPA CLP SOM01.2
Michigan Metals & Mercury	USEPA CLP ISM01.3
AVS/SEM	USEPA SW-846 Methods 6010C/7470A
TOC	Lloyd Kahn
Oil & Grease (HEM)	USEPA SW-846 Method 9071B

The data have been validated according to the protocols and quality control (QC) requirements of the analytical methods, the Great Lakes Legacy Act, March 2010, the Quality Assurance Project Plan for Phase 2 of the Lower Maumee River Site Characterization, May 2013, and the USEPA National Functional Guidelines for Organic Data Review as follows:

- The USEPA "Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review," June 2008;
- The USEPA "Contract Laboratory Program National Functional Guidelines for Inorganic Superfund Data Review," January 2010;
- and the reviewer's professional judgment.

The following items/criteria were reviewed for this report:

Organics

- Holding times and sample preservation
- Gas Chromatography/Mass Spectroscopy (GC/MS) Tuning
- Initial and continuing calibration summaries
- Method blank and field blank contamination
- Surrogate Spike recoveries
- Matrix Spike/Matrix Spike Duplicate (MS/MSD) recoveries
- Laboratory Control Sample (LCS) recoveries
- Internal standard area and retention time summary forms
- Target Compound Identification
- Compound Quantitation
- Tentatively Identified Compounds (TICs)
- Field Duplicate sample precision

Inorganics

- Holding times and sample preservation
- ICP/MS Tuning
- Initial and continuing calibration verifications
- Method blank and field blank contamination
- ICP Interference Check Sample
- Laboratory Control Sample (LCS) recoveries
- Matrix Spike Analysis
- Duplicate Sample Analysis
- ICP Serial Dilution
- Compound Quantitation
- Field Duplicate sample precision

Overall Usability Issues:

There were minor rejections of data. This data cannot be used in the decision-making process for this project.

- Three SVOC compounds were rejected in eight samples due to severely low surrogate recoveries.

Overall the remaining data is acceptable for the intended purposes as qualified for the deficiencies detailed in this report.

Please note that any results qualified (U) due to blank contamination may be then qualified (J) due to another action. Therefore, the results may be qualified (UJ) due to the culmination of the blank contaminations and actions from other exceedences of QC criteria.

Semivolatile Organic Compounds (SVOC)

Holding Times

- All samples were extracted within 14 days for sediment samples and analyzed within 40 days for all samples except the following.

Sample	Date Sampled	Date Extracted	# of Days	Qualifier
6	06/28/13	08/12/13	45	J/UJ – Unless (R)
9	06/28/13	08/12/13	45	J/UJ

GC/MS Tuning

- All criteria were met.

Initial Calibration

- All %RSD and mean RRF criteria.

Continuing Calibration

- All %D and RRF criteria were met except the following.

CCAL Date	Compound	%D/RRF	Qualifier	Affected Samples
08/07/13 (2010)	Pentachlorophenol	59.1%	J/UJ	7, 11-15, 17-19
	2,4-Dinitrophenol	61.5%	J/UJ	
	Hexachlorocyclopentadiene	61.1%	J/UJ	7, 11-13, 15
08/12/13 (1943)	Hexachlorocyclopentadiene	61.2%	None	See HT

Method Blank

- The method blanks exhibited the following contamination.

Blank ID	Compound	Conc. ug/kg	Qualifier	Affected Samples
SBLKN6	Di-n-butylphthalate	16	U	3, 4, 6, 11-15, 17-22
	Butylbenzylphthalate	33	U	3, 6, 7, 11-15, 17-22
	Bis(2-ethylhexyl)phthalate	53	U	3, 4, 6, 11-13, 17-21

Field Blank

- Field QC samples were not analyzed.

Surrogate Spike Recoveries

- All samples exhibited acceptable surrogate %R values except the following.

Sample ID	Surrogate	%R	Qualifier
1	4-Nitrophenol-d4	0%	None - 10X Dilution
2	4,6-Dinitro-2-methylphenol-d2	0%	None - 12.5X Dilution
6	4-Chloroaniline-d4	0%	R - Associated Compounds
7	4-Chloroaniline-d4	0%	None - 66.7X Dilution
	4-Nitrophenol-d4	0%	
	4,6-Dinitro-2-methylphennol-d2	0%	
8	4-Chloroaniline-d4	0%	None - 50X Dilution
	Acenaphthylene-d8	577%	
	4-Nitrophenol-d4	0%	
	4,6-Dinitro-2-methylphenol-d2	0%	
9	4-Chloroaniline-d4	0%	None - 50X Dilution
	4-Nitrophenol-d4	0%	
	4,6-Dinitro-2-methylphenol-d2	0%	

Sample ID	Surrogate	%R	Qualifier
14	4-Chloroaniline-d4	0%	R - Associated Compounds
17	Methylphenol-d8	104%	None - ND
	4-Chloroaniline-d4	0%	R - Associated Compounds
18	4-Chloroaniline-d4	0%	R - Associated Compounds
19	4-Chloroaniline-d4	0%	R - Associated Compounds
20	4-Chloroaniline-d4	0%	R - Associated Compounds
21	4-Chloroaniline-d4	0%	R - Associated Compounds
22	4-Chloroaniline-d4	0%	R - Associated Compounds

Matrix Spike/Matrix Spike Duplicate (MS/MSD) Recoveries

- A MS/MSD sample was not analyzed.

Laboratory Control Samples

- A LCS sample was not analyzed.

Internal Standard (IS) Area Performance

- All internal standards met response and retention time (RT) criteria.

Target Compound Identification

- All mass spectra and quantitation criteria were met.

Compound Quantitation

- Several samples were analyzed at various dilutions due to high concentrations of target compounds. No action was required.

Field Duplicate Sample Precision

- Field duplicate results are summarized below.

SVOC				
Compound	LMR13-89-024 ug/kg	LMR13-89-024FD ug/kg	RPD	Qualifier
Benzaldehyde	210U	17	NC	None
Acetophenone	210U	19	NC	
Chrysene	18	220U	NC	

SVOC				
Compound	LMR13-85-024 ug/kg	LMR13-85-024FD ug/kg	RPD	Qualifier
Benzaldehyde	43	47	9%	None
Acetophenone	35	340U	NC	
Naphthalene	120	67	57%	
2-Methylnaphthalene	27	340U	NC	
Acenaphthene	62	54	14%	
Dibenzofuran	38	29	27%	
Diethylphthalate	7.4	340U	NC	
Fluorene	72	59	20%	
Phenanthrene	360	360	0%	
Anthracene	94	71	28%	
Carbazole	330U	16	NC	
Fluoranthene	410	520	24%	
Pyrene	640	700	9%	
Benzo(a)anthracene	240	320	29%	
Chrysene	370	410	10%	
Bis(2-ethylhexyl)phthalate	790	760	4%	
Benzo(b)fluoranthene	220	350	46%	
Benzo(k)fluoranthene	230	240	4%	
Benzo(a)pyrene	220	220	0%	
Indeno(1,2,3-cd)pyrene	180	200	11%	
Dibenzo(a,h)anthracene	81	120	39%	
Benzo(g,h,i)perylene	190	260	31%	

Polynuclear Aromatic Hydrocarbons (PAH 34)

Holding Times

- All samples were extracted within 14 days for sediment samples and analyzed within 40 days for all samples.

GC/MS Tuning

- All criteria were met.

Initial Calibration

- All %RSD and mean RRF criteria were met.

Continuing Calibration

- All %D and RRF criteria were met except the following.

CCAL Date	Compound	%D/RRF	Qualifier	Affected Samples
08/07/13 (0941)	Dibenzo(a,h)anthracene	35.5%	J/UJ	3, 17, 20

Method Blank

- The method blanks exhibited the following contamination.

Blank ID	Compound	Conc. ug/kg	Qualifier	Affected Samples
SBLKN6	Naphthalene	0.34	U	20
	Fluorene	0.14	U	3, 20
	Phenanthrene	0.54	None	All >5X
	Anthracene	0.099	U	3, 20
	Fluoranthene	0.30	None	All >5X
	Pyrene	0.28	None	
	Benzo(a)anthracene	0.23	U	3
	Chrysene	0.22	None	All >5X
	Benzo(b)fluoranthene	0.095	None	
	Benzo(k)fluoranthene	0.15	U	3
	Total 16 PPAH	2.4	J	All Samples
	Total PAH	2.4	J	

Field Blank

- Field QC samples were not analyzed.

Surrogate Spike Recoveries

- All samples exhibited acceptable surrogate %R values.

Matrix Spike/Matrix Spike Duplicate (MS/MSD) Recoveries

- A MS/MSD sample was not analyzed.

Laboratory Control Samples

- A LCS sample was not analyzed.

Internal Standard (IS) Area Performance

- All internal standards met response and retention time (RT) criteria except the following.

Sample ID	Internal Standard	Area Count	Qualifier
17	IS4=Chrysene-d12	High	J – Associated Compounds

Target Compound Identification

- All mass spectra and quantitation criteria were met.

Compound Quantitation

- Several samples were analyzed at various dilutions due to high concentrations of target compounds. Several compound concentrations exceeded the linear range of the instrument and were flagged (E) by the laboratory and further qualified as estimated (J).
- Total 16 PPAH and Total PAH were estimated (J) in all samples due to blank contamination.

Field Duplicate Sample Precision

- Field duplicate samples were not analyzed.

Polychlorinated Biphenyls (PCBs)

Holding Times

- All samples were extracted within 14 days for sediment samples and analyzed within 40 days.

Initial Calibration

- All %RSD and/or correlation coefficient criteria were met.

Continuing Calibration

- All %D criteria were met.

Method Blank

- The method blanks were free of contamination.

Field Blank

- Field QC samples were not analyzed.

Surrogate Spike Recoveries

- All samples exhibited acceptable surrogate recoveries.

Matrix Spike/Matrix Spike Duplicate (MS/MSD) Recoveries

- The MS/MSD samples exhibited acceptable %R and RPD values.

Laboratory Control Samples

- The LCS sample exhibited acceptable %R values.

Compound Quantitation

- Several samples were analyzed at various dilutions due to high concentrations of target compounds.

Field Duplicate Sample Precision

- Field duplicate results are summarized below.

PCBs				
Compound	LMR13-88-012 ug/kg	LMR13-88 -012FD ug/kg	RPD	Qualifier
Aroclor-1254	57	72	23%	None
Aroclor-1260	19	23	19%	

PCBs				
Compound	LMR13-39-024 ug/kg	LMR13-39-024FD ug/kg	RPD	Qualifier
None	ND	ND	-	-

PCBs				
Compound	LMR13-67-024 ug/kg	LMR13-67-024FD ug/kg	RPD	Qualifier
Aroclor-1242	25	22	13%	None
Aroclor-1254	44	41	7%	
Aroclor-1260	11	10	10%	

GC Column Difference Results

- Several samples exhibited high %D values > 25% between columns and have been qualified as estimated (J) by the reviewer.

Metals & Mercury

Holding Times

- All samples were prepared and analyzed within 28 days for mercury and 180 days for all other metals.

ICP/MS Tuning

- Not applicable.

Initial Calibration Verification

- All initial calibration criteria were met.

Continuing Calibration Verification

- All continuing calibration criteria were met.

Method Blank

- The method blanks exhibited the following contamination.

Blank ID	Compound	Conc. mg/kg	Qualifier	Affected Samples
MB	Zinc	0.30	None	All Associated >10X

Field Blank

- Field QC samples were not analyzed.

ICP Interference Check Sample

- The ICP interference check sample exhibited acceptable %R values.

Laboratory Control Samples

- The LCS sample exhibited acceptable recoveries.

Matrix Spike Analysis

- The matrix spike samples exhibited acceptable %R values.

Duplicate Sample Analysis

- The duplicate samples exhibited acceptable RPD values.

ICP Serial Dilution

- ICP serial dilution percent differences (%D) were within acceptance limits except the following.

ICP Sample ID	Compound	%D	Qualifier	Affected Samples
9	Arsenic	19%	J	All Samples
	Cadmium	20%	J	
	Chromium	22%	J	
	Copper	23%	J	
	Lead	25%	J	
	Nickel	29%	J	
	Zinc	22%	J	

Compound Quantitation

- All criteria were met.

Field Duplicate Sample Precision

- Field duplicate results are summarized below.

Metals				
Compound	LMR13-88-012 mg/kg	LMR13-88 -012FD mg/kg	RPD	Qualifier
Arsenic	19.1	20.7	8%	None
Cadmium	2.4	5.3	75%	
Chromium	36.4	56.3	43%	
Copper	37.5	53.6	35%	
Lead	131	132	1%	
Nickel	28.5	34.0	18%	
Zinc	454	599	28%	
Mercury	0.51	0.53	4%	

Metals				
Compound	LMR13-39-024 mg/kg	LMR13-39-024FD mg/kg	RPD	Qualifier
Arsenic	5.6	4.7	17%	None
Cadmium	0.37	0.38	3%	

Metals				
Compound	LMR13-39-024 mg/kg	LMR13-39-024FD mg/kg	RPD	Qualifier
Chromium	12.0	13.5	12%	None
Copper	14.0	14.3	2%	
Lead	24.9	21.9	13%	
Nickel	16.2	17.8	9%	
Zinc	60.8	63.0	4%	
Mercury	0.15	0.11	31%	

Metals				
Compound	LMR13-67-024 mg/kg	LMR13-67-024FD mg/kg	RPD	Qualifier
Arsenic	7.6	7.7	1%	None
Cadmium	0.88	0.93	6%	
Chromium	29.6	30.3	2%	
Copper	32.8	32.4	1%	
Lead	24.4	26.1	7%	
Nickel	31.6	33.3	5%	
Zinc	122	127	4%	
Mercury	0.13	0.14	7%	

Oil & Grease, Total Organic Carbon, AVS/SEM (Metals & Hg)

Holding Times

- All samples were analyzed within the recommended holding time for each analysis except the following.

TOC				
Sample ID	Date Collected	Date Analyzed	# of Days	Qualifier
All Samples	06/19/13	07/17/13-07/18/13	28-29	J

Initial and Continuing Calibration

- All %R criteria were met.

Method Blank

- The method blanks exhibited the following contamination.

Blank ID	Compound	Conc. mg/kg	Qualifier	Affected Samples
240-92706/1-A	HEM	89.55	U	3, 4, 6, 11-13

Field Blank

- Field QC samples were not included in this data package.

Laboratory Control Samples

- The LCS samples exhibited acceptable %R values.

Matrix Spike/Duplicate (MS/DUP) Recoveries

- The MS/DUP samples exhibited acceptable %R and RPD values except the following.

MS/DUP ID	Compound	MS %R/MSD %R/RPD	Qualifier	Affected Samples
9	HEM	203%/160%/Ok	J	1, 2, 7, 8, 9, 14, 15, 17-20, 22

Compound Quantitation

- All criteria were met.

Field Duplicate Sample Precision

- Field duplicate results are summarized below.

TOC				
Compound	LMR13-88-012 mg/kg	LMR13-88-012FD mg/kg	RPD	Qualifier
TOC	68800	67800	1%	None

HEM				
Compound	LMR13-89-024 mg/kg	LMR13-89-024FD mg/kg	RPD	Qualifier
HEM	258U	251	NC	None

TOC				
Compound	LMR13-39-024 mg/kg	LMR13-39-024FD mg/kg	RPD	Qualifier
TOC	14200	22600	46%	None

HEM				
Compound	LMR13-85-024 mg/kg	LMR13-85-024FD mg/kg	RPD	Qualifier
HEM	549	645	16%	None

TOC				
Compound	LMR13-67-024 mg/kg	LMR13-67-024FD mg/kg	RPD	Qualifier
TOC	31600	30200	5%	None

Please contact the undersigned at (757) 564-0090 if you have any questions or need further information.

Signed: Nancy Weaver Dated: 9/25/13

Nancy Weaver
Senior Chemist

Data Qualifiers

U = The analyte was analyzed for, but was not detected at a level greater than or equal to the level of the adjusted Contract Required Quantitation Limit (CRQL) for sample and method.

UJ = The analyte was not detected at a level greater than or equal to the adjusted CRQL. However, the reported adjusted CRQL is approximate and may be inaccurate or imprecise.

J = The analyte was positively identified and the associated numerical value is the approximate concentration of the analyte in the sample (due either to the quality of the data generated because certain quality control criteria were not met, or the concentration of the analyte was below the CRQL).

J+ = The result is an estimated quantity, but the result may be biased high.

J- = The result is an estimated quantity, but the result may be biased low.

R = The sample results are unusable due to the quality of the data generated because certain criteria were not met. The analyte may or may not be present in the sample.

NJ = The analysis indicates the presence of an analyte that has been "tentatively identified" and the associated numerical value represents its approximate concentration.

EPA SAMPLE NO.
LMR13-55-048

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17096

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17096-1

Sample wt/vol: 30.6 (g/mL) g Lab File ID: PJZ23.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 31 Decanted: (Y/N) Date Received: 06/20/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/28/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/07/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 10.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
100-52-7	Benzaldehyde	2400	U
108-95-2	Phenol	2400	U
111-44-4	Bis(2-chloroethyl)ether	2400	U
95-57-8	2-Chlorophenol	2400	U
95-48-7	2-Methylphenol	2400	U
108-60-1	2,2'-Oxybis(1-chloropropane)	2400	U
98-86-2	Acetophenone	2400	U
106-44-5	4-Methylphenol	2400	U
621-64-7	N-Nitroso-di-n-propylamine	2400	U
67-72-1	Hexachloroethane	2400	U
98-95-3	Nitrobenzene	2400	U
78-59-1	Isophorone	2400	U
88-75-5	2-Nitrophenol	2400	U
105-67-9	2,4-Dimethylphenol	2400	U
111-91-1	Bis(2-chloroethoxy)methane	2400	U
120-83-2	2,4-Dichlorophenol	2400	U
91-20-3	Naphthalene	2700	
106-47-8	4-Chloroaniline	2400	U
87-68-3	Hexachlorobutadiene	2400	U
105-60-2	Caprolactam	2400	U
59-50-7	4-Chloro-3-methylphenol	2400	U
91-57-6	2-Methylnaphthalene	450	J
77-47-4	Hexachlorocyclopentadiene	2400	U
88-06-2	2,4,6-Trichlorophenol	2400	U
95-95-4	2,4,5-Trichlorophenol	2400	U
92-52-4	1,1'-Biphenyl	2400	U
91-58-7	2-Chloronaphthalene	2400	U
88-74-4	2-Nitroaniline	4700	U
131-11-3	Dimethylphthalate	2400	U
606-20-2	2,6-Dinitrotoluene	2400	U
208-96-8	Acenaphthylene	360	J
99-09-2	3-Nitroaniline	4700	U
83-32-9	Acenaphthene	5200	

NW 9/22/13

EPA SAMPLE NO.
LMR13-55-048

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17096

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17096-1

Sample wt/vol: 30.6 (g/mL) g Lab File ID: PJZ23.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 31 Decanted: (Y/N) Date Received: 06/20/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/28/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/07/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 10.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
51-28-5	2,4-Dinitrophenol	4700	U
100-02-7	4-Nitrophenol	4700	U
132-64-9	Dibenzofuran	1900	J
121-14-2	2,4-Dinitrotoluene	2400	U
84-66-2	Diethylphthalate	2400	U
86-73-7	Fluorene	7000	
7005-72-3	4-Chlorophenyl-phenylether	2400	U
100-01-6	4-Nitroaniline	4700	U
534-52-1	4,6-Dinitro-2-methylphenol	4700	U
86-30-6	N-Nitrosodiphenylamin [1]	2400	U
95-94-3	1,2,4,5-Tetrachlorobenzene	2400	U
101-55-3	4-Bromophenyl-phenylether	2400	U
118-74-1	Hexachlorobenzene	2400	U
1912-24-9	Atrazine	2400	U
87-86-5	Pentachlorophenol	4700	U
85-01-8	Phenanthrene	29000	
120-12-7	Anthracene	7100	
86-74-8	Carbazole	2400	U
84-74-2	Di-n-butylphthalate	2400	U
206-44-0	Fluoranthene	16000	
129-00-0	Pyrene	17000	
85-68-7	Butylbenzylphthalate	2400	U
91-94-1	3,3'-Dichlorobenzidine	2400	U
56-55-3	Benzo(a)anthracene	8400	
218-01-9	Chrysene	8800	
117-81-7	Bis(2-ethylhexyl)phthalate	2400	U
117-84-0	Di-n-octylphthalate	2400	U
205-99-2	Benzo(b)fluoranthene	6200	
207-08-9	Benzo(k)fluoranthene	4100	
50-32-8	Benzo(a)pyrene	6500	
193-39-5	Indeno(1,2,3-cd)pyrene	4200	
53-70-3	Dibenzo(a,h)anthracene	1600	J
191-24-2	Benzo(g,h,i)perylene	4600	
58-90-2	2,3,4,6-Tetrachlorophenol	2400	U

[1] Cannot be separated from Diphenylamine

NW 9/22/13

1D - FORM I SV-1

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-55-072

2

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17096

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17096-2

Sample wt/vol: 30.4 (g/mL) g Lab File ID: PJZ24.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 47 Decanted: (Y/N) Date Received: 06/20/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/28/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/07/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 12.5

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
100-52-7	Benzaldehyde	3900	U
108-95-2	Phenol	3900	U
111-44-4	Bis(2-chloroethyl)ether	3900	U
95-57-8	2-Chlorophenol	3900	U
95-48-7	2-Methylphenol	3900	U
108-60-1	2,2'-Oxybis(1-chloropropane)	3900	U
98-86-2	Acetophenone	3900	U
106-44-5	4-Methylphenol	3900	U
621-64-7	N-Nitroso-di-n-propylamine	3900	U
67-72-1	Hexachloroethane	3900	U
98-95-3	Nitrobenzene	3900	U
78-59-1	Isophorone	3900	U
88-75-5	2-Nitrophenol	3900	U
105-67-9	2,4-Dimethylphenol	3900	U
111-91-1	Bis(2-chloroethoxy)methane	3900	U
120-83-2	2,4-Dichlorophenol	3900	U
91-20-3	Naphthalene	2400	J
106-47-8	4-Chloroaniline	3900	U
87-68-3	Hexachlorobutadiene	3900	U
105-60-2	Caprolactam	3900	U
59-50-7	4-Chloro-3-methylphenol	3900	U
91-57-6	2-Methylnaphthalene	1300	J
77-47-4	Hexachlorocyclopentadiene	3900	U
88-06-2	2,4,6-Trichlorophenol	3900	U
95-95-4	2,4,5-Trichlorophenol	3900	U
92-52-4	1,1'-Biphenyl	3900	U
91-58-7	2-Chloronaphthalene	3900	U
88-74-4	2-Nitroaniline	7600	U
131-11-3	Dimethylphthalate	3900	U
606-20-2	2,6-Dinitrotoluene	3900	U
208-96-8	Acenaphthylene	720	J
99-09-2	3-Nitroaniline	7600	U
83-32-9	Acenaphthene	7800	

NW 9/22/13

1E - FORM I SV-2

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-55-072

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678 2

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17096

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17096-2

Sample wt/vol: 30.4 (g/mL) g Lab File ID: PJZ24.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 47 Decanted: (Y/N) Date Received: 06/20/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/28/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/07/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 12.5

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
51-28-5	2,4-Dinitrophenol	7600	U
100-02-7	4-Nitrophenol	7600	U
132-64-9	Dibenzofuran	6700	
121-14-2	2,4-Dinitrotoluene	3900	U
84-66-2	Diethylphthalate	3900	U
86-73-7	Fluorene	12000	
7005-72-3	4-Chlorophenyl-phenylether	3900	U
100-01-6	4-Nitroaniline	7600	U
534-52-1	4,6-Dinitro-2-methylphenol	7600	U
86-30-6	N-Nitrosodiphenylamin [1]	3900	U
95-94-3	1,2,4,5-Tetrachlorobenzene	3900	U
101-55-3	4-Bromophenyl-phenylether	3900	U
118-74-1	Hexachlorobenzene	3900	U
1912-24-9	Atrazine	3900	U
87-86-5	Pentachlorophenol	7600	U
85-01-8	Phenanthrene	53000	
120-12-7	Anthracene	15000	
86-74-8	Carbazole	3900	U
84-74-2	Di-n-butylphthalate	3900	U
206-44-0	Fluoranthene	33000	
129-00-0	Pyrene	39000	
85-68-7	Butylbenzylphthalate	3900	U
91-94-1	3,3'-Dichlorobenzidine	3900	U
56-55-3	Benzo(a)anthracene	17000	
218-01-9	Chrysene	18000	
117-81-7	Bis(2-ethylhexyl)phthalate	3900	U
117-84-0	Di-n-octylphthalate	3900	U
205-99-2	Benzo(b)fluoranthene	9000	
207-08-9	Benzo(k)fluoranthene	9600	
50-32-8	Benzo(a)pyrene	12000	
193-39-5	Indeno(1,2,3-cd)pyrene	7000	
53-70-3	Dibenzo(a,h)anthracene	3400	J
191-24-2	Benzo(g,h,i)perylene	8300	
58-90-2	2,3,4,6-Tetrachlorophenol	3900	U

[1] Cannot be separated from Diphenylamine

NW 9/22/13

1D - FORM I SV-1

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-89-012

3

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17096

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17096-3

Sample wt/vol: 30.7 (g/mL) g Lab File ID: PJZ18.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 18 Decanted: (Y/N) Date Received: 06/20/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/28/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/07/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
100-52-7	Benzaldehyde	200	U
108-95-2	Phenol	200	U
111-44-4	Bis(2-chloroethyl)ether	200	U
95-57-8	2-Chlorophenol	200	U
95-48-7	2-Methylphenol	200	U
108-60-1	2,2'-Oxybis(1-chloropropane)	200	U
98-86-2	Acetophenone	200	U
106-44-5	4-Methylphenol	200	U
621-64-7	N-Nitroso-di-n-propylamine	200	U
67-72-1	Hexachloroethane	200	U
98-95-3	Nitrobenzene	200	U
78-59-1	Isophorone	200	U
88-75-5	2-Nitrophenol	200	U
105-67-9	2,4-Dimethylphenol	200	U
111-91-1	Bis(2-chloroethoxy)methane	200	U
120-83-2	2,4-Dichlorophenol	200	U
91-20-3	Naphthalene	200	U
106-47-8	4-Chloroaniline	200	U
87-68-3	Hexachlorobutadiene	200	U
105-60-2	Caprolactam	200	U
59-50-7	4-Chloro-3-methylphenol	200	U
91-57-6	2-Methylnaphthalene	200	U
77-47-4	Hexachlorocyclopentadiene	200	U
88-06-2	2,4,6-Trichlorophenol	200	U
95-95-4	2,4,5-Trichlorophenol	200	U
92-52-4	1,1'-Biphenyl	200	U
91-58-7	2-Chloronaphthalene	200	U
88-74-4	2-Nitroaniline	390	U
131-11-3	Dimethylphthalate	200	U
606-20-2	2,6-Dinitrotoluene	200	U
208-96-8	Acenaphthylene	200	U
99-09-2	3-Nitroaniline	390	U
83-32-9	Acenaphthene	200	U

NW 9/22/13

1E - FORM I SV-2

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-89-012

3

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17096

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17096-3

Sample wt/vol: 30.7 (g/mL) g Lab File ID: PJZ18.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 18 Decanted: (Y/N) Date Received: 06/20/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/28/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/07/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
51-28-5	2,4-Dinitrophenol	390	U
100-02-7	4-Nitrophenol	390	U
132-64-9	Dibenzofuran	200	U
121-14-2	2,4-Dinitrotoluene	200	U
84-66-2	Diethylphthalate	200	U
86-73-7	Fluorene	200	U
7005-72-3	4-Chlorophenyl-phenylether	200	U
100-01-6	4-Nitroaniline	390	U
534-52-1	4,6-Dinitro-2-methylphenol	390	U
86-30-6	N-Nitrosodiphenylamin [1]	200	U
95-94-3	1,2,4,5-Tetrachlorobenzene	200	U
101-55-3	4-Bromophenyl-phenylether	200	U
118-74-1	Hexachlorobenzene	200	U
1912-24-9	Atrazine	200	U
87-86-5	Pentachlorophenol	390	U
85-01-8	Phenanthrene	24	J
120-12-7	Anthracene	200	U
86-74-8	Carbazole	200	U
84-74-2	Di-n-butylphthalate	200 ~~20~~ ~~J B~~ U	
206-44-0	Fluoranthene	20	J
129-00-0	Pyrene	33	J
85-68-7	Butylbenzylphthalate	200 ~~32~~ ~~J B~~ U	
91-94-1	3,3'-Dichlorobenzidine	200	U
56-55-3	Benzo(a)anthracene	200	U
218-01-9	Chrysene	200	U
117-81-7	Bis(2-ethylhexyl)phthalate	200 ~~61~~ ~~J B~~ U	
117-84-0	Di-n-octylphthalate	200	U
205-99-2	Benzo(b)fluoranthene	200	U
207-08-9	Benzo(k)fluoranthene	200	U
50-32-8	Benzo(a)pyrene	200	U
193-39-5	Indeno(1,2,3-cd)pyrene	200	U
53-70-3	Dibenzo(a,h)anthracene	200	U
191-24-2	Benzo(g,h,i)perylene	200	U
58-90-2	2,3,4,6-Tetrachlorophenol	200	U

[1] Cannot be separated from Diphenylamine

NW 9/22/13

EPA SAMPLE NO.
LMR13-89-024

4

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17096

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17096-4

Sample wt/vol: 30.7 (g/mL) g Lab File ID: PJZ19.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 22 Decanted: (Y/N) Date Received: 06/20/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/28/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/07/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
100-52-7	Benzaldehyde	210	U
108-95-2	Phenol	210	U
111-44-4	Bis(2-chloroethyl)ether	210	U
95-57-8	2-Chlorophenol	210	U
95-48-7	2-Methylphenol	210	U
108-60-1	2,2'-Oxybis(1-chloropropane)	210	U
98-86-2	Acetophenone	210	U
106-44-5	4-Methylphenol	210	U
621-64-7	N-Nitroso-di-n-propylamine	210	U
67-72-1	Hexachloroethane	210	U
98-95-3	Nitrobenzene	210	U
78-59-1	Isophorone	210	U
88-75-5	2-Nitrophenol	210	U
105-67-9	2,4-Dimethylphenol	210	U
111-91-1	Bis(2-chloroethoxy)methane	210	U
120-83-2	2,4-Dichlorophenol	210	U
91-20-3	Naphthalene	210	U
106-47-8	4-Chloroaniline	210	U
87-68-3	Hexachlorobutadiene	210	U
105-60-2	Caprolactam	210	U
59-50-7	4-Chloro-3-methylphenol	210	U
91-57-6	2-Methylnaphthalene	210	U
77-47-4	Hexachlorocyclopentadiene	210	U
88-06-2	2,4,6-Trichlorophenol	210	U
95-95-4	2,4,5-Trichlorophenol	210	U
92-52-4	1,1'-Biphenyl	210	U
91-58-7	2-Chloronaphthalene	210	U
88-74-4	2-Nitroaniline	420	U
131-11-3	Dimethylphthalate	210	U
606-20-2	2,6-Dinitrotoluene	210	U
208-96-8	Acenaphthylene	210	U
99-09-2	3-Nitroaniline	420	U
83-32-9	Acenaphthene	210	U

MW 9/22/13

1E - FORM I SV-2
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-89-024

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678 4

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17096

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17096-4

Sample wt/vol: 30.7 (g/mL) g Lab File ID: PJZ19.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 22 Decanted: (Y/N) Date Received: 06/20/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/28/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/07/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
51-28-5	2,4-Dinitrophenol	420	U
100-02-7	4-Nitrophenol	420	U
132-64-9	Dibenzofuran	210	U
121-14-2	2,4-Dinitrotoluene	210	U
84-66-2	Diethylphthalate	210	U
86-73-7	Fluorene	210	U
7005-72-3	4-Chlorophenyl-phenylether	210	U
100-01-6	4-Nitroaniline	420	U
534-52-1	4,6-Dinitro-2-methylphenol	420	U
86-30-6	N-Nitrosodiphenylamin [1]	210	U
95-94-3	1,2,4,5-Tetrachlorobenzene	210	U
101-55-3	4-Bromophenyl-phenylether	210	U
118-74-1	Hexachlorobenzene	210	U
1912-24-9	Atrazine	210	U
87-86-5	Pentachlorophenol	420	U
85-01-8	Phenanthrene	210	U
120-12-7	Anthracene	210	U
86-74-8	Carbazole	210	U
84-74-2	Di-n-butylphthalate	210 ~~33 J B~~ U	
206-44-0	Fluoranthene	210	U
129-00-0	Pyrene	210	U
85-68-7	Butylbenzylphthalate	210	U
91-94-1	3,3'-Dichlorobenzidine	210	U
56-55-3	Benzo(a)anthracene	210	U
218-01-9	Chrysene	18	J
117-81-7	Bis(2-ethylhexyl)phthalate	210 ~~64 J B~~ U	
117-84-0	Di-n-octylphthalate	210	U
205-99-2	Benzo(b)fluoranthene	210	U
207-08-9	Benzo(k)fluoranthene	210	U
50-32-8	Benzo(a)pyrene	210	U
193-39-5	Indeno(1,2,3-cd)pyrene	210	U
53-70-3	Dibenzo(a,h)anthracene	210	U
191-24-2	Benzo(g,h,i)perylene	210	U
58-90-2	2,3,4,6-Tetrachlorophenol	210	U

[1] Cannot be separated from Diphenylamine

NW 9/22/13

EPA SAMPLE NO.
LMR13-39-048

6

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17096

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17096-6

Sample wt/vol: 30.2 (g/mL) g Lab File ID: PJZKQ13.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 35 Decanted: (Y/N) Date Received: 06/20/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/28/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/12/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
100-52-7	Benzaldehyde	42	J	J
108-95-2	Phenol	260	U	UJ
111-44-4	Bis(2-chloroethyl)ether	260	U	
95-57-8	2-Chlorophenol	260	U	
95-48-7	2-Methylphenol	260	U	
108-60-1	2,2'-Oxybis(1-chloropropane)	260	U	
98-86-2	Acetophenone	35	J	J
106-44-5	4-Methylphenol	260	U	UJ
621-64-7	N-Nitroso-di-n-propylamine	260	U	
67-72-1	Hexachloroethane	260	U	
98-95-3	Nitrobenzene	260	U	
78-59-1	Isophorone	260	U	
88-75-5	2-Nitrophenol	260	U	
105-67-9	2,4-Dimethylphenol	260	U	
111-91-1	Bis(2-chloroethoxy)methane	260	U	
120-83-2	2,4-Dichlorophenol	260	U	
91-20-3	Naphthalene	19	J	J
106-47-8	4-Chloroaniline	16	J	J
87-68-3	Hexachlorobutadiene	260	U	UJ
105-60-2	Caprolactam	260	U	
59-50-7	4-Chloro-3-methylphenol	260	U	
91-57-6	2-Methylnaphthalene	260	U	
77-47-4	Hexachlorocyclopentadiene	260	R	R
88-06-2	2,4,6-Trichlorophenol	260	U	UJ
95-95-4	2,4,5-Trichlorophenol	260	U	
92-52-4	1,1'-Biphenyl	260	U	
91-58-7	2-Chloronaphthalene	260	U	
88-74-4	2-Nitroaniline	500	U	
131-11-3	Dimethylphthalate	260	U	
606-20-2	2,6-Dinitrotoluene	260	U	
208-96-8	Acenaphthylene	25	U	J
99-09-2	3-Nitroaniline	500	U	UJ
83-32-9	Acenaphthene	110	J	J

NW 9/22/13

1E - FORM I SV-2

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-39-048

6

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17096

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17096-6

Sample wt/vol: 30.2 (g/mL) g Lab File ID: PJZKQ13.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 35 Decanted: (Y/N) Date Received: 06/20/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/28/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/12/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
51-28-5	2,4-Dinitrophenol	500	~~U~~ UJ
100-02-7	4-Nitrophenol	500	~~U~~ UJ
132-64-9	Dibenzofuran	28	~~J~~ J
121-14-2	2,4-Dinitrotoluene	260	~~U~~ UJ
84-66-2	Diethylphthalate	260	~~U~~ UJ
86-73-7	Fluorene	110	~~J~~ J
7005-72-3	4-Chlorophenyl-phenylether	260	U UJ
100-01-6	4-Nitroaniline	500	U
534-52-1	4,6-Dinitro-2-methylphenol	500	U
86-30-6	N-Nitrosodiphenylamin [1]	260	U
95-94-3	1,2,4,5-Tetrachlorobenzene	260	U
101-55-3	4-Bromophenyl-phenylether	260	U
118-74-1	Hexachlorobenzene	260	U
1912-24-9	Atrazine	260	U
87-86-5	Pentachlorophenol	500	U
85-01-8	Phenanthrene	680	J
120-12-7	Anthracene	240	~~J~~ J
86-74-8	Carbazole	260	~~U~~ UJ
84-74-2	Di-n-butylphthalate	~~14~~ 260	~~J B~~ UJ
206-44-0	Fluoranthene	760	J
129-00-0	Pyrene	1600	J
85-68-7	Butylbenzylphthalate	~~43~~ 260	~~J B~~ UJ
91-94-1	3,3'-Dichlorobenzidine	260	~~X~~ R
56-55-3	Benzo(a)anthracene	500	J
218-01-9	Chrysene	560	J
117-81-7	Bis(2-ethylhexyl)phthalate	~~64~~ 260	~~J B~~ UJ
117-84-0	Di-n-octylphthalate	260	~~X~~ UJ
205-99-2	Benzo(b)fluoranthene	280	J
207-08-9	Benzo(k)fluoranthene	370	
50-32-8	Benzo(a)pyrene	470	
193-39-5	Indeno(1,2,3-cd)pyrene	260	
53-70-3	Dibenzo(a,h)anthracene	87	~~X~~
191-24-2	Benzo(g,h,i)perylene	280	
58-90-2	2,3,4,6-Tetrachlorophenol	260	~~X~~ UJ

[1] Cannot be separated from Diphenylamine

MW 9/22/13

EPA SAMPLE NO.
LMR13-88-012

7

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17096

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17096-7

Sample wt/vol: 30.6 (g/mL) g Lab File ID: PJZ27.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 55 Decanted: (Y/N) Date Received: 06/20/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/28/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/07/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 66.7

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
100-52-7	Benzaldehyde	24000	U
108-95-2	Phenol	24000	U
111-44-4	Bis(2-chloroethyl)ether	24000	U
95-57-8	2-Chlorophenol	24000	U
95-48-7	2-Methylphenol	24000	U
108-60-1	2,2'-Oxybis(1-chloropropane)	24000	U
98-86-2	Acetophenone	24000	U
106-44-5	4-Methylphenol	24000	U
621-64-7	N-Nitroso-di-n-propylamine	24000	U
67-72-1	Hexachloroethane	24000	U
98-95-3	Nitrobenzene	24000	U
78-59-1	Isophorone	24000	U
88-75-5	2-Nitrophenol	24000	U
105-67-9	2,4-Dimethylphenol	24000	U
111-91-1	Bis(2-chloroethoxy)methane	24000	U
120-83-2	2,4-Dichlorophenol	24000	U
91-20-3	Naphthalene	350000	
106-47-8	4-Chloroaniline	24000	U
87-68-3	Hexachlorobutadiene	24000	U
105-60-2	Caprolactam	24000	U
59-50-7	4-Chloro-3-methylphenol	24000	U
91-57-6	2-Methylnaphthalene	19000	J
77-47-4	Hexachlorocyclopentadiene	24000	~~U~~ UJ
88-06-2	2,4,6-Trichlorophenol	24000	U
95-95-4	2,4,5-Trichlorophenol	24000	U
92-52-4	1,1'-Biphenyl	24000	U
91-58-7	2-Chloronaphthalene	24000	U
88-74-4	2-Nitroaniline	47000	U
131-11-3	Dimethylphthalate	24000	U
606-20-2	2,6-Dinitrotoluene	24000	U
208-96-8	Acenaphthylene	24000	U
99-09-2	3-Nitroaniline	47000	U
83-32-9	Acenaphthene	20000	J

MW 9/22/13

1E - FORM I SV-2
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-88-012

7

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17096

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17096-7

Sample wt/vol: 30.6 (g/mL) g Lab File ID: PJZ27.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 55 Decanted: (Y/N) Date Received: 06/20/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/28/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/07/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 66.7

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
51-28-5	2,4-Dinitrophenol	47000	~~U~~ UJ
100-02-7	4-Nitrophenol	47000	U
132-64-9	Dibenzofuran	10000	J
121-14-2	2,4-Dinitrotoluene	24000	U
84-66-2	Diethylphthalate	24000	U
86-73-7	Fluorene	16000	J
7005-72-3	4-Chlorophenyl-phenylether	24000	U
100-01-6	4-Nitroaniline	47000	U
534-52-1	4,6-Dinitro-2-methylphenol	47000	U
86-30-6	N-Nitrosodiphenylamin [1]	24000	U
95-94-3	1,2,4,5-Tetrachlorobenzene	24000	U
101-55-3	4-Bromophenyl-phenylether	24000	U
118-74-1	Hexachlorobenzene	24000	U
1912-24-9	Atrazine	24000	U
87-86-5	Pentachlorophenol	47000	~~U~~ UJ
85-01-8	Phenanthrene	66000	
120-12-7	Anthracene	21000	J
86-74-8	Carbazole	2900	J
84-74-2	Di-n-butylphthalate	24000	U
206-44-0	Fluoranthene	54000	
129-00-0	Pyrene	49000	
85-68-7	Butylbenzylphthalate	24000 ~~1900~~ ~~J B~~ U	
91-94-1	3,3'-Dichlorobenzidine	24000	U
56-55-3	Benzo(a)anthracene	24000	J
218-01-9	Chrysene	26000	
117-81-7	Bis(2-ethylhexyl)phthalate	24000	U
117-84-0	Di-n-octylphthalate	24000	U
205-99-2	Benzo(b)fluoranthene	13000	J
207-08-9	Benzo(k)fluoranthene	22000	J
50-32-8	Benzo(a)pyrene	20000	J
193-39-5	Indeno(1,2,3-cd)pyrene	10000	J
53-70-3	Dibenzo(a,h)anthracene	5200	J
191-24-2	Benzo(g,h,i)perylene	15000	J
58-90-2	2,3,4,6-Tetrachlorophenol	24000	U

[1] Cannot be separated from Diphenylamine

NW 9/22/13

1D - FORM I SV-1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-88-024

8

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17096

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17096-8

Sample wt/vol: 30.6 (g/mL) g Lab File ID: PJZ22.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 41 Decanted: (Y/N) Date Received: 06/20/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/28/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/07/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 50.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
100-52-7	Benzaldehyde	14000	U
108-95-2	Phenol	14000	U
111-44-4	Bis(2-chloroethyl)ether	14000	U
95-57-8	2-Chlorophenol	14000	U
95-48-7	2-Methylphenol	14000	U
108-60-1	2,2'-Oxybis(1-chloropropane)	14000	U
98-86-2	Acetophenone	14000	U
106-44-5	4-Methylphenol	14000	U
621-64-7	N-Nitroso-di-n-propylamine	14000	U
67-72-1	Hexachloroethane	14000	U
98-95-3	Nitrobenzene	14000	U
78-59-1	Isophorone	14000	U
88-75-5	2-Nitrophenol	14000	U
105-67-9	2,4-Dimethylphenol	14000	U
111-91-1	Bis(2-chloroethoxy)methane	14000	U
120-83-2	2,4-Dichlorophenol	14000	U
91-20-3	Naphthalene	39000	
106-47-8	4-Chloroaniline	14000	U
87-68-3	Hexachlorobutadiene	14000	U
105-60-2	Caprolactam	14000	U
59-50-7	4-Chloro-3-methylphenol	14000	U
91-57-6	2-Methylnaphthalene	8900	J
77-47-4	Hexachlorocyclopentadiene	14000	U
88-06-2	2,4,6-Trichlorophenol	14000	U
95-95-4	2,4,5-Trichlorophenol	14000	U
92-52-4	1,1'-Biphenyl	14000	U
91-58-7	2-Chloronaphthalene	14000	U
88-74-4	2-Nitroaniline	27000	U
131-11-3	Dimethylphthalate	14000	U
606-20-2	2,6-Dinitrotoluene	14000	U
208-96-8	Acenaphthylene	1500	J
99-09-2	3-Nitroaniline	27000	U
83-32-9	Acenaphthene	38000	

MW 9/22/13

EPA SAMPLE NO.
LMR13-88-024

8

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17096

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17096-8

Sample wt/vol: 30.6 (g/mL) g Lab File ID: PJZ22.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 41 Decanted: (Y/N) Date Received: 06/20/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/28/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/07/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 50.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
51-28-5	2,4-Dinitrophenol	27000	U
100-02-7	4-Nitrophenol	27000	U
132-64-9	Dibenzofuran	25000	
121-14-2	2,4-Dinitrotoluene	14000	U
84-66-2	Diethylphthalate	14000	U
86-73-7	Fluorene	43000	
7005-72-3	4-Chlorophenyl-phenylether	14000	U
100-01-6	4-Nitroaniline	27000	U
534-52-1	4,6-Dinitro-2-methylphenol	27000	U
86-30-6	N-Nitrosodiphenylamin [1]	14000	U
95-94-3	1,2,4,5-Tetrachlorobenzene	14000	U
101-55-3	4-Bromophenyl-phenylether	14000	U
118-74-1	Hexachlorobenzene	14000	U
1912-24-9	Atrazine	14000	U
87-86-5	Pentachlorophenol	27000	U
85-01-8	Phenanthrene	140000	
120-12-7	Anthracene	46000	
86-74-8	Carbazole	2100	J
84-74-2	Di-n-butylphthalate	14000	U
206-44-0	Fluoranthene	83000	
129-00-0	Pyrene	78000	
85-68-7	Butylbenzylphthalate	14000	U
91-94-1	3,3'-Dichlorobenzidine	14000	U
56-55-3	Benzo(a)anthracene	34000	
218-01-9	Chrysene	37000	
117-81-7	Bis(2-ethylhexyl)phthalate	14000	U
117-84-0	Di-n-octylphthalate	14000	U
205-99-2	Benzo(b)fluoranthene	20000	
207-08-9	Benzo(k)fluoranthene	23000	
50-32-8	Benzo(a)pyrene	28000	
193-39-5	Indeno(1,2,3-cd)pyrene	13000	J
53-70-3	Dibenzo(a,h)anthracene	5200	J
191-24-2	Benzo(g,h,i)perylene	13000	J
58-90-2	2,3,4,6-Tetrachlorophenol	14000	U

[1] Cannot be separated from Diphenylamine

NW 9/22/13

1D - FORM I SV-1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-88-048

9

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17096

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17096-9

Sample wt/vol: 30.4 (g/mL) g Lab File ID: PJZKQ14.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 42 Decanted: (Y/N) Date Received: 06/20/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/28/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/12/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 50.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
100-52-7	Benzaldehyde	14000	U
108-95-2	Phenol	14000	U
111-44-4	Bis(2-chloroethyl)ether	14000	U
95-57-8	2-Chlorophenol	14000	U
95-48-7	2-Methylphenol	14000	U
108-60-1	2,2'-Oxybis(1-chloropropane)	14000	U
98-86-2	Acetophenone	14000	U
106-44-5	4-Methylphenol	14000	U
621-64-7	N-Nitroso-di-n-propylamine	14000	U
67-72-1	Hexachloroethane	14000	U
98-95-3	Nitrobenzene	14000	U
78-59-1	Isophorone	14000	U
88-75-5	2-Nitrophenol	14000	U
105-67-9	2,4-Dimethylphenol	14000	U
111-91-1	Bis(2-chloroethoxy)methane	14000	U
120-83-2	2,4-Dichlorophenol	14000	U
91-20-3	Naphthalene	13000	J
106-47-8	4-Chloroaniline	14000	U
87-68-3	Hexachlorobutadiene	14000	U
105-60-2	Caprolactam	14000	U
59-50-7	4-Chloro-3-methylphenol	14000	U
91-57-6	2-Methylnaphthalene	37000	
77-47-4	Hexachlorocyclopentadiene	14000	U
88-06-2	2,4,6-Trichlorophenol	14000	U
95-95-4	2,4,5-Trichlorophenol	14000	U
92-52-4	1,1'-Biphenyl	14000	U
91-58-7	2-Chloronaphthalene	14000	U
88-74-4	2-Nitroaniline	28000	U
131-11-3	Dimethylphthalate	14000	U
606-20-2	2,6-Dinitrotoluene	14000	U
208-96-8	Acenaphthylene	1100	J
99-09-2	3-Nitroaniline	28000	U
83-32-9	Acenaphthene	36000	

UJ
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MW 9/22/13

EPA SAMPLE NO.
LMR13-88-048

9

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17096

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17096-9

Sample wt/vol: 30.4 (g/mL) g Lab File ID: PJZKQ14.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 42 Decanted: (Y/N) Date Received: 06/20/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/28/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/12/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 50.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
51-28-5	2,4-Dinitrophenol	28000	U UJ
100-02-7	4-Nitrophenol	28000	U UJ
132-64-9	Dibenzofuran	25000	J
121-14-2	2,4-Dinitrotoluene	14000	U UJ
84-66-2	Diethylphthalate	14000	U UJ
86-73-7	Fluorene	43000	J
7005-72-3	4-Chlorophenyl-phenylether	14000	U UJ
100-01-6	4-Nitroaniline	28000	U
534-52-1	4,6-Dinitro-2-methylphenol	28000	U
86-30-6	N-Nitrosodiphenylamin [1]	14000	U
95-94-3	1,2,4,5-Tetrachlorobenzene	14000	U
101-55-3	4-Bromophenyl-phenylether	14000	U
118-74-1	Hexachlorobenzene	14000	U
1912-24-9	Atrazine	14000	U
87-86-5	Pentachlorophenol	28000	U
85-01-8	Phenanthrene	140000	J
120-12-7	Anthracene	43000	
86-74-8	Carbazole	2600	J
84-74-2	Di-n-butylphthalate	14000	U UJ
206-44-0	Fluoranthene	76000	J
129-00-0	Pyrene	73000	J
85-68-7	Butylbenzylphthalate	14000	U UJ
91-94-1	3,3'-Dichlorobenzidine	14000	U UJ
56-55-3	Benzo(a)anthracene	33000	J
218-01-9	Chrysene	33000	J
117-81-7	Bis(2-ethylhexyl)phthalate	14000	U UJ
117-84-0	Di-n-octylphthalate	14000	U UJ
205-99-2	Benzo(b)fluoranthene	21000	J
207-08-9	Benzo(k)fluoranthene	18000	
50-32-8	Benzo(a)pyrene	25000	
193-39-5	Indeno(1,2,3-cd)pyrene	14000	J J
53-70-3	Dibenzo(a,h)anthracene	6200	J
191-24-2	Benzo(g,h,i)perylene	12000	J
58-90-2	2,3,4,6-Tetrachlorophenol	14000	U UJ

[1] Cannot be separated from Diphenylamine

NW 9/22/13

1D - FORM I SV-1

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-39-012

11

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17096

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17096-11

Sample wt/vol: 30.0 (g/mL) g Lab File ID: PJZ29.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 29 Decanted: (Y/N) Date Received: 06/20/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/28/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/07/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
100-52-7	Benzaldehyde	18	J
108-95-2	Phenol	240	U
111-44-4	Bis(2-chloroethyl)ether	240	U
95-57-8	2-Chlorophenol	240	U
95-48-7	2-Methylphenol	240	U
108-60-1	2,2'-Oxybis(1-chloropropane)	240	U
98-86-2	Acetophenone	240	U
106-44-5	4-Methylphenol	240	U
621-64-7	N-Nitroso-di-n-propylamine	240	U
67-72-1	Hexachloroethane	240	U
98-95-3	Nitrobenzene	240	U
78-59-1	Isophorone	240	U
88-75-5	2-Nitrophenol	240	U
105-67-9	2,4-Dimethylphenol	240	U
111-91-1	Bis(2-chloroethoxy)methane	240	U
120-83-2	2,4-Dichlorophenol	240	U
91-20-3	Naphthalene	60	J
106-47-8	4-Chloroaniline	240	U
87-68-3	Hexachlorobutadiene	240	U
105-60-2	Caprolactam	240	U
59-50-7	4-Chloro-3-methylphenol	240	U
91-57-6	2-Methylnaphthalene	24	J
77-47-4	Hexachlorocyclopentadiene	240	U UJ
88-06-2	2,4,6-Trichlorophenol	240	U
95-95-4	2,4,5-Trichlorophenol	240	U
92-52-4	1,1'-Biphenyl	240	U
91-58-7	2-Chloronaphthalene	240	U
88-74-4	2-Nitroaniline	470	U
131-11-3	Dimethylphthalate	240	U
606-20-2	2,6-Dinitrotoluene	240	U
208-96-8	Acenaphthylene	27	J
99-09-2	3-Nitroaniline	470	U
83-32-9	Acenaphthene	160	J

NW 9/22/13

1E - FORM I SV-2
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-39-012

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678 11

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17096

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17096-11

Sample wt/vol: 30.0 (g/mL) g Lab File ID: PJZ29.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 29 Decanted: (Y/N) Date Received: 06/20/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/28/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/07/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
51-28-5	2,4-Dinitrophenol	470	~~U~~ UJ
100-02-7	4-Nitrophenol	470	U
132-64-9	Dibenzofuran	39	J
121-14-2	2,4-Dinitrotoluene	240	U
84-66-2	Diethylphthalate	240	U
86-73-7	Fluorene	110	J
7005-72-3	4-Chlorophenyl-phenylether	240	U
100-01-6	4-Nitroaniline	470	U
534-52-1	4,6-Dinitro-2-methylphenol	470	U
86-30-6	N-Nitrosodiphenylamin [1]	240	U
95-94-3	1,2,4,5-Tetrachlorobenzene	240	U
101-55-3	4-Bromophenyl-phenylether	240	U
118-74-1	Hexachlorobenzene	240	U
1912-24-9	Atrazine	240	U
87-86-5	Pentachlorophenol	470	~~U~~ UJ
85-01-8	Phenanthrene	1100	
120-12-7	Anthracene	200	J
86-74-8	Carbazole	16	J
84-74-2	Di-n-butylphthalate	240 ~~12~~	~~J B~~ U
206-44-0	Fluoranthene	1100	
129-00-0	Pyrene	2100	
85-68-7	Butylbenzylphthalate	240 ~~36~~	~~J B~~ U
91-94-1	3,3'-Dichlorobenzidine	240	U
56-55-3	Benzo(a)anthracene	780	
218-01-9	Chrysene	920	
117-81-7	Bis(2-ethylhexyl)phthalate	240 ~~160~~	~~J B~~ U
117-84-0	Di-n-octylphthalate	240	U
205-99-2	Benzo(b)fluoranthene	510	
207-08-9	Benzo(k)fluoranthene	470	
50-32-8	Benzo(a)pyrene	600	
193-39-5	Indeno(1,2,3-cd)pyrene	350	
53-70-3	Dibenzo(a,h)anthracene	130	J
191-24-2	Benzo(g,h,i)perylene	360	
58-90-2	2,3,4,6-Tetrachlorophenol	240	U

[1] Cannot be separated from Diphenylamine

NW 9/22/13

1D - FORM I SV-1

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-39-024

12

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17096

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17096-12

Sample wt/vol: 30.3 (g/mL) g Lab File ID: PJZ30.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 28 Decanted: (Y/N) Date Received: 06/20/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/28/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/07/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
100-52-7	Benzaldehyde	24	J
108-95-2	Phenol	7.0	J
111-44-4	Bis(2-chloroethyl)ether	230	U
95-57-8	2-Chlorophenol	230	U
95-48-7	2-Methylphenol	230	U
108-60-1	2,2'-Oxybis(1-chloropropane)	230	U
98-86-2	Acetophenone	28	J
106-44-5	4-Methylphenol	230	U
621-64-7	N-Nitroso-di-n-propylamine	230	U
67-72-1	Hexachloroethane	230	U
98-95-3	Nitrobenzene	230	U
78-59-1	Isophorone	230	U
88-75-5	2-Nitrophenol	230	U
105-67-9	2,4-Dimethylphenol	230	U
111-91-1	Bis(2-chloroethoxy)methane	230	U
120-83-2	2,4-Dichlorophenol	230	U
91-20-3	Naphthalene	28	J
106-47-8	4-Chloroaniline	230	U
87-68-3	Hexachlorobutadiene	230	U
105-60-2	Caprolactam	230	U
59-50-7	4-Chloro-3-methylphenol	230	U
91-57-6	2-Methylnaphthalene	12	J
77-47-4	Hexachlorocyclopentadiene	230	~~U~~ UJ
88-06-2	2,4,6-Trichlorophenol	230	U
95-95-4	2,4,5-Trichlorophenol	230	U
92-52-4	1,1'-Biphenyl	6.6	J
91-58-7	2-Chloronaphthalene	230	U
88-74-4	2-Nitroaniline	450	U
131-11-3	Dimethylphthalate	230	U
606-20-2	2,6-Dinitrotoluene	230	U
208-96-8	Acenaphthylene	28	J
99-09-2	3-Nitroaniline	450	U
83-32-9	Acenaphthene	130	J

NW 9/22/13

EPA SAMPLE NO.
LMR13-39-024

12

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17096

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17096-12

Sample wt/vol: 30.3 (g/mL) g Lab File ID: PJZ30.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 28 Decanted: (Y/N) Date Received: 06/20/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/28/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/07/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
51-28-5	2,4-Dinitrophenol	450	~~U~~ UJ
100-02-7	4-Nitrophenol	450	U
132-64-9	Dibenzofuran	19	J
121-14-2	2,4-Dinitrotoluene	230	U
84-66-2	Diethylphthalate	230	U
86-73-7	Fluorene	84	J
7005-72-3	4-Chlorophenyl-phenylether	230	U
100-01-6	4-Nitroaniline	450	U
534-52-1	4,6-Dinitro-2-methylphenol	450	U
86-30-6	N-Nitrosodiphenylamin [1]	230	U
95-94-3	1,2,4,5-Tetrachlorobenzene	230	U
101-55-3	4-Bromophenyl-phenylether	230	U
118-74-1	Hexachlorobenzene	230	U
1912-24-9	Atrazine	230	U
87-86-5	Pentachlorophenol	450	~~U~~ UJ
85-01-8	Phenanthrene	670	
120-12-7	Anthracene	230	J
86-74-8	Carbazole	230	U
84-74-2	Di-n-butylphthalate	230 ~~12~~	~~J B~~ U
206-44-0	Fluoranthene	800	
129-00-0	Pyrene	1700	
85-68-7	Butylbenzylphthalate	230 ~~33~~	~~J B~~ U
91-94-1	3,3'-Dichlorobenzidine	230	U
56-55-3	Benzo(a)anthracene	540	
218-01-9	Chrysene	650	
117-81-7	Bis(2-ethylhexyl)phthalate	230 ~~66~~	~~J B~~ U
117-84-0	Di-n-octylphthalate	230	U
205-99-2	Benzo(b)fluoranthene	420	
207-08-9	Benzo(k)fluoranthene	270	
50-32-8	Benzo(a)pyrene	500	
193-39-5	Indeno(1,2,3-cd)pyrene	250	
53-70-3	Dibenzo(a,h)anthracene	91	J
191-24-2	Benzo(g,h,i)perylene	310	
58-90-2	2,3,4,6-Tetrachlorophenol	230	U

[1] Cannot be separated from Diphenylamine

NW 9/22/13

EPA SAMPLE NO.
LMR13-39-072

13

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17096

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17096-13

Sample wt/vol: 30.8 (g/mL) g Lab File ID: PJZ31.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 24 Decanted: (Y/N) Date Received: 06/20/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/28/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/07/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
100-52-7	Benzaldehyde	19	J
108-95-2	Phenol	220	U
111-44-4	Bis(2-chloroethyl)ether	220	U
95-57-8	2-Chlorophenol	220	U
95-48-7	2-Methylphenol	220	U
108-60-1	2,2'-Oxybis(1-chloropropane)	220	U
98-86-2	Acetophenone	19	J
106-44-5	4-Methylphenol	220	U
621-64-7	N-Nitroso-di-n-propylamine	220	U
67-72-1	Hexachloroethane	220	U
98-95-3	Nitrobenzene	220	U
78-59-1	Isophorone	220	U
88-75-5	2-Nitrophenol	220	U
105-67-9	2,4-Dimethylphenol	220	U
111-91-1	Bis(2-chloroethoxy)methane	220	U
120-83-2	2,4-Dichlorophenol	220	U
91-20-3	Naphthalene	220	U
106-47-8	4-Chloroaniline	220	U
87-68-3	Hexachlorobutadiene	220	U
105-60-2	Caprolactam	220	U
59-50-7	4-Chloro-3-methylphenol	220	U
91-57-6	2-Methylnaphthalene	220	U
77-47-4	Hexachlorocyclopentadiene	220	~~U~~ UJ
88-06-2	2,4,6-Trichlorophenol	220	U
95-95-4	2,4,5-Trichlorophenol	220	U
92-52-4	1,1'-Biphenyl	220	U
91-58-7	2-Chloronaphthalene	220	U
88-74-4	2-Nitroaniline	420	U
131-11-3	Dimethylphthalate	220	U
606-20-2	2,6-Dinitrotoluene	220	U
208-96-8	Acenaphthylene	220	U
99-09-2	3-Nitroaniline	420	U
83-32-9	Acenaphthene	220	U

NW 9/22/13

1E - FORM I SV-2
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-39-072

13

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17096

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17096-13

Sample wt/vol: 30.8 (g/mL) g Lab File ID: PJZ31.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 24 Decanted: (Y/N) Date Received: 06/20/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/28/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/07/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
51-28-5	2,4-Dinitrophenol	420	~~U~~ UJ
100-02-7	4-Nitrophenol	420	U
132-64-9	Dibenzofuran	220	U
121-14-2	2,4-Dinitrotoluene	220	U
84-66-2	Diethylphthalate	220	U
86-73-7	Fluorene	220	U
7005-72-3	4-Chlorophenyl-phenylether	220	U
100-01-6	4-Nitroaniline	420	U
534-52-1	4,6-Dinitro-2-methylphenol	420	U
86-30-6	N-Nitrosodiphenylamin [1]	220	U
95-94-3	1,2,4,5-Tetrachlorobenzene	220	U
101-55-3	4-Bromophenyl-phenylether	220	U
118-74-1	Hexachlorobenzene	220	U
1912-24-9	Atrazine	220	U
87-86-5	Pentachlorophenol	420	~~U~~ UJ
85-01-8	Phenanthrene	21	J
120-12-7	Anthracene	8.7	J
86-74-8	Carbazole	220	U
84-74-2	Di-n-butylphthalate	220 ~~19~~	~~J B~~ U
206-44-0	Fluoranthene	19	J
129-00-0	Pyrene	32	J
85-68-7	Butylbenzylphthalate	220 ~~39~~	~~J B~~ U
91-94-1	3,3'-Dichlorobenzidine	220	U
56-55-3	Benzo(a)anthracene	220	U
218-01-9	Chrysene	220	U
117-81-7	Bis(2-ethylhexyl)phthalate	220 ~~79~~	~~J B~~ U
117-84-0	Di-n-octylphthalate	220	U
205-99-2	Benzo(b)fluoranthene	220	U
207-08-9	Benzo(k)fluoranthene	220	U
50-32-8	Benzo(a)pyrene	220	U
193-39-5	Indeno(1,2,3-cd)pyrene	220	U
53-70-3	Dibenzo(a,h)anthracene	220	U
191-24-2	Benzo(g,h,i)perylene	220	U
58-90-2	2,3,4,6-Tetrachlorophenol	220	U

[1] Cannot be separated from Diphenylamine

NW 9/22/13

1D - FORM I SV-1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-85-024

14

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17096

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17096-14

Sample wt/vol: 30.1 (g/mL) g Lab File ID: PJZ32.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 49 Decanted: (Y/N) Date Received: 06/20/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/28/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/07/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
100-52-7	Benzaldehyde	43	J	
108-95-2	Phenol	330	U	
111-44-4	Bis(2-chloroethyl)ether	330	U	
95-57-8	2-Chlorophenol	330	U	
95-48-7	2-Methylphenol	330	U	
108-60-1	2,2'-Oxybis(1-chloropropane)	330	U	
98-86-2	Acetophenone	35	J	
106-44-5	4-Methylphenol	330	U	
621-64-7	N-Nitroso-di-n-propylamine	330	U	
67-72-1	Hexachloroethane	330	U	
98-95-3	Nitrobenzene	330	U	
78-59-1	Isophorone	330	U	
88-75-5	2-Nitrophenol	330	U	
105-67-9	2,4-Dimethylphenol	330	U	
111-91-1	Bis(2-chloroethoxy)methane	330	U	
120-83-2	2,4-Dichlorophenol	330	U	
91-20-3	Naphthalene	120	J	
106-47-8	4-Chloroaniline	330	U	R
87-68-3	Hexachlorobutadiene	330	U	
105-60-2	Caprolactam	330	U	
59-50-7	4-Chloro-3-methylphenol	330	U	
91-57-6	2-Methylnaphthalene	27	J	
77-47-4	Hexachlorocyclopentadiene	330	U	R
88-06-2	2,4,6-Trichlorophenol	330	U	
95-95-4	2,4,5-Trichlorophenol	330	U	
92-52-4	1,1'-Biphenyl	330	U	
91-58-7	2-Chloronaphthalene	330	U	
88-74-4	2-Nitroaniline	650	U	
131-11-3	Dimethylphthalate	330	U	
606-20-2	2,6-Dinitrotoluene	330	U	
208-96-8	Acenaphthylene	330	U	
99-09-2	3-Nitroaniline	650	U	
83-32-9	Acenaphthene	62	J	

NW 9/22/13

EPA SAMPLE NO.
LMR13-85-024

14

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17096

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17096-14

Sample wt/vol: 30.1 (g/mL) g Lab File ID: PJZ32.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 49 Decanted: (Y/N) Date Received: 06/20/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/28/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/07/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
51-28-5	2,4-Dinitrophenol	650	~~U~~ UJ
100-02-7	4-Nitrophenol	650	U
132-64-9	Dibenzofuran	38	J
121-14-2	2,4-Dinitrotoluene	330	U
84-66-2	Diethylphthalate	7.4	J
86-73-7	Fluorene	72	J
7005-72-3	4-Chlorophenyl-phenylether	330	U
100-01-6	4-Nitroaniline	650	U
534-52-1	4,6-Dinitro-2-methylphenol	650	U
86-30-6	N-Nitrosodiphenylamin [1]	330	U
95-94-3	1,2,4,5-Tetrachlorobenzene	330	U
101-55-3	4-Bromophenyl-phenylether	330	U
118-74-1	Hexachlorobenzene	330	U
1912-24-9	Atrazine	330	U
87-86-5	Pentachlorophenol	650	~~U~~ UJ
85-01-8	Phenanthrene	360	
120-12-7	Anthracene	94	J
86-74-8	Carbazole	330	U
84-74-2	Di-n-butylphthalate	330 ~~23~~ ~~J B~~ U	
206-44-0	Fluoranthene	410	
129-00-0	Pyrene	640	
85-68-7	Butylbenzylphthalate	330 ~~58~~ ~~J B~~ U	
91-94-1	3,3'-Dichlorobenzidine	330	~~U~~ R
56-55-3	Benzo(a)anthracene	240	J
218-01-9	Chrysene	370	
117-81-7	Bis(2-ethylhexyl)phthalate	790	~~U~~
117-84-0	Di-n-octylphthalate	330	U
205-99-2	Benzo(b)fluoranthene	220	J
207-08-9	Benzo(k)fluoranthene	230	J
50-32-8	Benzo(a)pyrene	220	J
193-39-5	Indeno(1,2,3-cd)pyrene	180	J
53-70-3	Dibenzo(a,h)anthracene	81	J
191-24-2	Benzo(g,h,i)perylene	190	J
58-90-2	2,3,4,6-Tetrachlorophenol	330	U

[1] Cannot be separated from Diphenylamine

MW 9/22/13

1D - FORM I SV-1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-85-048

15

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17096

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17096-15

Sample wt/vol: 30.4 (g/mL) g Lab File ID: PJZ33.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 45 Decanted: (Y/N) Date Received: 06/20/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/28/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/07/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
100-52-7	Benzaldehyde	39	J
108-95-2	Phenol	310	U
111-44-4	Bis(2-chloroethyl)ether	310	U
95-57-8	2-Chlorophenol	310	U
95-48-7	2-Methylphenol	310	U
108-60-1	2,2'-Oxybis(1-chloropropane)	310	U
98-86-2	Acetophenone	310	U
106-44-5	4-Methylphenol	310	U
621-64-7	N-Nitroso-di-n-propylamine	310	U
67-72-1	Hexachloroethane	310	U
98-95-3	Nitrobenzene	310	U
78-59-1	Isophorone	310	U
88-75-5	2-Nitrophenol	310	U
105-67-9	2,4-Dimethylphenol	310	U
111-91-1	Bis(2-chloroethoxy)methane	310	U
120-83-2	2,4-Dichlorophenol	310	U
91-20-3	Naphthalene	93	J
106-47-8	4-Chloroaniline	310	U
87-68-3	Hexachlorobutadiene	310	U
105-60-2	Caprolactam	310	U
59-50-7	4-Chloro-3-methylphenol	310	U
91-57-6	2-Methylnaphthalene	25	J
77-47-4	Hexachlorocyclopentadiene	310	~~U~~ UJ
88-06-2	2,4,6-Trichlorophenol	310	U
95-95-4	2,4,5-Trichlorophenol	310	U
92-52-4	1,1'-Biphenyl	310	U
91-58-7	2-Chloronaphthalene	310	U
88-74-4	2-Nitroaniline	600	U
131-11-3	Dimethylphthalate	310	U
606-20-2	2,6-Dinitrotoluene	310	U
208-96-8	Acenaphthylene	18	J
99-09-2	3-Nitroaniline	600	U
83-32-9	Acenaphthene	73	J

MW 9/22/13

1E - FORM I SV-2

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-85-048

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678 15

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17096

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17096-15

Sample wt/vol: 30.4 (g/mL) g Lab File ID: PJZ33.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 45 Decanted: (Y/N) Date Received: 06/20/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/28/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/07/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
51-28-5	2,4-Dinitrophenol	600	~~U~~ UJ
100-02-7	4-Nitrophenol	600	U
132-64-9	Dibenzofuran	40	J
121-14-2	2,4-Dinitrotoluene	310	U
84-66-2	Diethylphthalate	11	J
86-73-7	Fluorene	80	J
7005-72-3	4-Chlorophenyl-phenylether	310	U
100-01-6	4-Nitroaniline	600	U
534-52-1	4,6-Dinitro-2-methylphenol	600	U
86-30-6	N-Nitrosodiphenylamin [1]	310	U
95-94-3	1,2,4,5-Tetrachlorobenzene	310	U
101-55-3	4-Bromophenyl-phenylether	310	U
118-74-1	Hexachlorobenzene	310	U
1912-24-9	Atrazine	310	U
87-86-5	Pentachlorophenol	600	~~U~~ UJ
85-01-8	Phenanthrene	350	
120-12-7	Anthracene	91	J
86-74-8	Carbazole	12	J
84-74-2	Di-n-butylphthalate	310 ~~46~~ ~~J B~~ U	
206-44-0	Fluoranthene	330	
129-00-0	Pyrene	640	
85-68-7	Butylbenzylphthalate	310 ~~71~~ ~~J B~~ U	
91-94-1	3,3'-Dichlorobenzidine	310	U
56-55-3	Benzo(a)anthracene	280	J
218-01-9	Chrysene	350	
117-81-7	Bis(2-ethylhexyl)phthalate	690	~~B~~
117-84-0	Di-n-octylphthalate	310	U
205-99-2	Benzo(b)fluoranthene	260	J
207-08-9	Benzo(k)fluoranthene	220	J
50-32-8	Benzo(a)pyrene	230	J
193-39-5	Indeno(1,2,3-cd)pyrene	180	J
53-70-3	Dibenzo(a,h)anthracene	90	J
191-24-2	Benzo(g,h,i)perylene	200	J
58-90-2	2,3,4,6-Tetrachlorophenol	310	U

[1] Cannot be separated from Diphenylamine

NW 9/22/13

1D - FORM I SV-1

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-67-012

17

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17096

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17096-17

Sample wt/vol: 29.7 (g/mL) g Lab File ID: PJZ34.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 57 Decanted: (Y/N) Date Received: 06/20/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/28/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/07/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
100-52-7	Benzaldehyde	59	J	
108-95-2	Phenol	390	U	
111-44-4	Bis(2-chloroethyl)ether	390	U	
95-57-8	2-Chlorophenol	390	U	
95-48-7	2-Methylphenol	390	U	
108-60-1	2,2'-Oxybis(1-chloropropane)	390	U	
98-86-2	Acetophenone	50	J	
106-44-5	4-Methylphenol	390	U	
621-64-7	N-Nitroso-di-n-propylamine	390	U	
67-72-1	Hexachloroethane	390	U	
98-95-3	Nitrobenzene	390	U	
78-59-1	Isophorone	390	U	
88-75-5	2-Nitrophenol	390	U	
105-67-9	2,4-Dimethylphenol	390	U	
111-91-1	Bis(2-chloroethoxy)methane	390	U	
120-83-2	2,4-Dichlorophenol	390	U	
91-20-3	Naphthalene	58	J	
106-47-8	4-Chloroaniline	390	~~U~~	R
87-68-3	Hexachlorobutadiene	390	U	
105-60-2	Caprolactam	390	U	
59-50-7	4-Chloro-3-methylphenol	390	U	
91-57-6	2-Methylnaphthalene	41	J	
77-47-4	Hexachlorocyclopentadiene	390	~~U~~	R
88-06-2	2,4,6-Trichlorophenol	390	U	
95-95-4	2,4,5-Trichlorophenol	390	U	
92-52-4	1,1'-Biphenyl	390	U	
91-58-7	2-Chloronaphthalene	390	U	
88-74-4	2-Nitroaniline	770	U	
131-11-3	Dimethylphthalate	390	U	
606-20-2	2,6-Dinitrotoluene	390	U	
208-96-8	Acenaphthylene	390	U	
99-09-2	3-Nitroaniline	770	U	
83-32-9	Acenaphthene	28	J	

MW 9/22/13

1E - FORM I SV-2
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-67-012

17

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17096

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17096-17

Sample wt/vol: 29.7 (g/mL) g Lab File ID: PJZ34.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 57 Decanted: (Y/N) Date Received: 06/20/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/28/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/07/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
51-28-5	2,4-Dinitrophenol	770	~~U~~ UJ
100-02-7	4-Nitrophenol	770	U
132-64-9	Dibenzofuran	24	J
121-14-2	2,4-Dinitrotoluene	390	U
84-66-2	Diethylphthalate	390	U
86-73-7	Fluorene	38	J
7005-72-3	4-Chlorophenyl-phenylether	390	U
100-01-6	4-Nitroaniline	770	U
534-52-1	4,6-Dinitro-2-methylphenol	770	U
86-30-6	N-Nitrosodiphenylamin [1]	390	U
95-94-3	1,2,4,5-Tetrachlorobenzene	390	U
101-55-3	4-Bromophenyl-phenylether	390	U
118-74-1	Hexachlorobenzene	390	U
1912-24-9	Atrazine	390	U
87-86-5	Pentachlorophenol	770	~~U~~ UJ
85-01-8	Phenanthrene	230	J
120-12-7	Anthracene	53	J
86-74-8	Carbazole	14	J
84-74-2	Di-n-butylphthalate	390 ~~25~~	~~J B~~ U
206-44-0	Fluoranthene	270	J
129-00-0	Pyrene	520	
85-68-7	Butylbenzylphthalate	390 ~~76~~	~~J B~~ U
91-94-1	3,3'-Dichlorobenzidine	390	~~U~~ R
56-55-3	Benzo(a)anthracene	200	J
218-01-9	Chrysene	400	
117-81-7	Bis(2-ethylhexyl)phthalate	390 ~~250~~	~~J B~~ U
117-84-0	Di-n-octylphthalate	390	U
205-99-2	Benzo(b)fluoranthene	210	J
207-08-9	Benzo(k)fluoranthene	230	J
50-32-8	Benzo(a)pyrene	210	J
193-39-5	Indeno(1,2,3-cd)pyrene	160	J
53-70-3	Dibenzo(a,h)anthracene	95	J
191-24-2	Benzo(g,h,i)perylene	200	J
58-90-2	2,3,4,6-Tetrachlorophenol	390	U

[1] Cannot be separated from Diphenylamine

NW 9/22/13

EPA SAMPLE NO.
LMR13-67-024

18

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17096

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17096-18

Sample wt/vol: 30.4 (g/mL) g Lab File ID: PJZ35.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 54 Decanted: (Y/N) Date Received: 06/20/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/28/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/07/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
100-52-7	Benzaldehyde	41	J	
108-95-2	Phenol	360	U	
111-44-4	Bis(2-chloroethyl)ether	360	U	
95-57-8	2-Chlorophenol	360	U	
95-48-7	2-Methylphenol	360	U	
108-60-1	2,2'-Oxybis(1-chloropropane)	360	U	
98-86-2	Acetophenone	360	U	
106-44-5	4-Methylphenol	360	U	
621-64-7	N-Nitroso-di-n-propylamine	360	U	
67-72-1	Hexachloroethane	360	U	
98-95-3	Nitrobenzene	360	U	
78-59-1	Isophorone	360	U	
88-75-5	2-Nitrophenol	360	U	
105-67-9	2,4-Dimethylphenol	360	U	
111-91-1	Bis(2-chloroethoxy)methane	360	U	
120-83-2	2,4-Dichlorophenol	360	U	
91-20-3	Naphthalene	41	J	
106-47-8	4-Chloroaniline	360	~~U~~	R
87-68-3	Hexachlorobutadiene	360	U	
105-60-2	Caprolactam	360	U	
59-50-7	4-Chloro-3-methylphenol	360	U	
91-57-6	2-Methylnaphthalene	31	J	
77-47-4	Hexachlorocyclopentadiene	360	~~U~~	R
88-06-2	2,4,6-Trichlorophenol	360	U	
95-95-4	2,4,5-Trichlorophenol	360	U	
92-52-4	1,1'-Biphenyl	360	U	
91-58-7	2-Chloronaphthalene	360	U	
88-74-4	2-Nitroaniline	700	U	
131-11-3	Dimethylphthalate	360	U	
606-20-2	2,6-Dinitrotoluene	360	U	
208-96-8	Acenaphthylene	360	U	
99-09-2	3-Nitroaniline	700	U	
83-32-9	Acenaphthene	23	J	

NW 9/22/13

EPA SAMPLE NO.
LMR13-67-024

18

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17096

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17096-18

Sample wt/vol: 30.4 (g/mL) g Lab File ID: PJZ35.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 54 Decanted: (Y/N) Date Received: 06/20/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/28/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/07/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
51-28-5	2,4-Dinitrophenol	700	~~U~~ UJ
100-02-7	4-Nitrophenol	700	U
132-64-9	Dibenzofuran	360	U
121-14-2	2,4-Dinitrotoluene	360	U
84-66-2	Diethylphthalate	360	U
86-73-7	Fluorene	38	J
7005-72-3	4-Chlorophenyl-phenylether	360	U
100-01-6	4-Nitroaniline	700	U
534-52-1	4,6-Dinitro-2-methylphenol	700	U
86-30-6	N-Nitrosodiphenylamin [1]	360	U
95-94-3	1,2,4,5-Tetrachlorobenzene	360	U
101-55-3	4-Bromophenyl-phenylether	360	U
118-74-1	Hexachlorobenzene	360	U
1912-24-9	Atrazine	360	U
87-86-5	Pentachlorophenol	700	~~U~~ UJ
85-01-8	Phenanthrene	230	J
120-12-7	Anthracene	46	J
86-74-8	Carbazole	360	U
84-74-2	Di-n-butylphthalate	360 ~~22~~	~~J B~~ U
206-44-0	Fluoranthene	330	J
129-00-0	Pyrene	480	
85-68-7	Butylbenzylphthalate	360 ~~56~~	~~J B~~ U
91-94-1	3,3'-Dichlorobenzidine	360	~~U~~ R
56-55-3	Benzo(a)anthracene	170	J
218-01-9	Chrysene	380	
117-81-7	Bis(2-ethylhexyl)phthalate	360 ~~220~~	~~J B~~ U
117-84-0	Di-n-octylphthalate	360	U
205-99-2	Benzo(b)fluoranthene	230	J
207-08-9	Benzo(k)fluoranthene	160	J
50-32-8	Benzo(a)pyrene	170	J
193-39-5	Indeno(1,2,3-cd)pyrene	170	J
53-70-3	Dibenzo(a,h)anthracene	82	J
191-24-2	Benzo(g,h,i)perylene	190	J
58-90-2	2,3,4,6-Tetrachlorophenol	360	U

[1] Cannot be separated from Diphenylamine

MW 9/22/13

1D - FORM I SV-1

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-67-048

19

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17096

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17096-19

Sample wt/vol: 30.8 (g/mL) g Lab File ID: PJZ36.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 51 Decanted: (Y/N) Date Received: 06/20/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/28/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/07/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
100-52-7	Benzaldehyde	45	J	
108-95-2	Phenol	340	U	
111-44-4	Bis(2-chloroethyl)ether	340	U	
95-57-8	2-Chlorophenol	340	U	
95-48-7	2-Methylphenol	340	U	
108-60-1	2,2'-Oxybis(1-chloropropane)	340	U	
98-86-2	Acetophenone	340	U	
106-44-5	4-Methylphenol	340	U	
621-64-7	N-Nitroso-di-n-propylamine	340	U	
67-72-1	Hexachloroethane	340	U	
98-95-3	Nitrobenzene	340	U	
78-59-1	Isophorone	340	U	
88-75-5	2-Nitrophenol	340	U	
105-67-9	2,4-Dimethylphenol	340	U	
111-91-1	Bis(2-chloroethoxy)methane	340	U	
120-83-2	2,4-Dichlorophenol	340	U	
91-20-3	Naphthalene	39	J	
106-47-8	4-Chloroaniline	340	U	R
87-68-3	Hexachlorobutadiene	340	U	
105-60-2	Caprolactam	340	U	
59-50-7	4-Chloro-3-methylphenol	340	U	
91-57-6	2-Methylnaphthalene	35	J	
77-47-4	Hexachlorocyclopentadiene	340	U	R
88-06-2	2,4,6-Trichlorophenol	340	U	
95-95-4	2,4,5-Trichlorophenol	340	U	
92-52-4	1,1'-Biphenyl	340	U	
91-58-7	2-Chloronaphthalene	340	U	
88-74-4	2-Nitroaniline	660	U	
131-11-3	Dimethylphthalate	340	U	
606-20-2	2,6-Dinitrotoluene	340	U	
208-96-8	Acenaphthylene	340	U	
99-09-2	3-Nitroaniline	660	U	
83-32-9	Acenaphthene	20	J	

MW 9/22/13

1E - FORM I SV-2
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-67-048

19

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17096

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17096-19

Sample wt/vol: 30.8 (g/mL) g Lab File ID: PJZ36.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 51 Decanted: (Y/N) Date Received: 06/20/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/28/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/07/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
51-28-5	2,4-Dinitrophenol	660	~~U~~ UJ
100-02-7	4-Nitrophenol	660	U
132-64-9	Dibenzofuran	16	J
121-14-2	2,4-Dinitrotoluene	340	U
84-66-2	Diethylphthalate	340	U
86-73-7	Fluorene	30	J
7005-72-3	4-Chlorophenyl-phenylether	340	U
100-01-6	4-Nitroaniline	660	U
534-52-1	4,6-Dinitro-2-methylphenol	660	U
86-30-6	N-Nitrosodiphenylamin [1]	340	U
95-94-3	1,2,4,5-Tetrachlorobenzene	340	U
101-55-3	4-Bromophenyl-phenylether	340	U
118-74-1	Hexachlorobenzene	340	U
1912-24-9	Atrazine	340	U
87-86-5	Pentachlorophenol	660	~~U~~ UJ
85-01-8	Phenanthrene	170	J
120-12-7	Anthracene	37	J
86-74-8	Carbazole	340	U
84-74-2	Di-n-butylphthalate	340 ~~25~~ ~~J B~~	U
206-44-0	Fluoranthene	240	J
129-00-0	Pyrene	440	
85-68-7	Butylbenzylphthalate	340 ~~77~~ ~~J B~~	U
91-94-1	3,3'-Dichlorobenzidine	340	~~U~~ R
56-55-3	Benzo(a)anthracene	180	J
218-01-9	Chrysene	340	
117-81-7	Bis(2-ethylhexyl)phthalate	340 ~~270~~ ~~J B~~	U
117-84-0	Di-n-octylphthalate	340	U
205-99-2	Benzo(b)fluoranthene	220	J
207-08-9	Benzo(k)fluoranthene	170	J
50-32-8	Benzo(a)pyrene	150	J
193-39-5	Indeno(1,2,3-cd)pyrene	150	J
53-70-3	Dibenzo(a,h)anthracene	98	J
191-24-2	Benzo(g,h,i)perylene	190	J
58-90-2	2,3,4,6-Tetrachlorophenol	340	U

[1] Cannot be separated from Diphenylamine

MW 9/22/13

EPA SAMPLE NO.
LMR13-85-012

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678 20

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17096

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17096-20

Sample wt/vol: 30.5 (g/mL) g Lab File ID: PJZ13.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 54 Decanted: (Y/N) Date Received: 06/20/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/28/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/06/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
100-52-7	Benzaldehyde	43	J	
108-95-2	Phenol	16	J	
111-44-4	Bis(2-chloroethyl)ether	360	U	
95-57-8	2-Chlorophenol	360	U	
95-48-7	2-Methylphenol	360	U	
108-60-1	2,2'-Oxybis(1-chloropropane)	360	U	
98-86-2	Acetophenone	50	J	
106-44-5	4-Methylphenol	360	U	
621-64-7	N-Nitroso-di-n-propylamine	360	U	
67-72-1	Hexachloroethane	360	U	
98-95-3	Nitrobenzene	360	U	
78-59-1	Isophorone	360	U	
88-75-5	2-Nitrophenol	360	U	
105-67-9	2,4-Dimethylphenol	360	U	
111-91-1	Bis(2-chloroethoxy)methane	360	U	
120-83-2	2,4-Dichlorophenol	360	U	
91-20-3	Naphthalene	15	J	
106-47-8	4-Chloroaniline	360	~~U~~	R
87-68-3	Hexachlorobutadiene	360	U	
105-60-2	Caprolactam	360	U	
59-50-7	4-Chloro-3-methylphenol	360	U	
91-57-6	2-Methylnaphthalene	360	U	
77-47-4	Hexachlorocyclopentadiene	360	~~U~~	R
88-06-2	2,4,6-Trichlorophenol	360	U	
95-95-4	2,4,5-Trichlorophenol	360	U	
92-52-4	1,1'-Biphenyl	360	U	
91-58-7	2-Chloronaphthalene	360	U	
88-74-4	2-Nitroaniline	700	U	
131-11-3	Dimethylphthalate	360	U	
606-20-2	2,6-Dinitrotoluene	360	U	
208-96-8	Acenaphthylene	360	U	
99-09-2	3-Nitroaniline	700	U	
83-32-9	Acenaphthene	360	U	

NW 9/22/13

EPA SAMPLE NO.
LMR13-85-012

20

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17096

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17096-20

Sample wt/vol: 30.5 (g/mL) g Lab File ID: PJZ13.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 54 Decanted: (Y/N) Date Received: 06/20/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/28/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/06/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
51-28-5	2,4-Dinitrophenol	700	U
100-02-7	4-Nitrophenol	700	U
132-64-9	Dibenzofuran	360	U
121-14-2	2,4-Dinitrotoluene	360	U
84-66-2	Diethylphthalate	360	U
86-73-7	Fluorene	360	U
7005-72-3	4-Chlorophenyl-phenylether	360	U
100-01-6	4-Nitroaniline	700	U
534-52-1	4,6-Dinitro-2-methylphenol	700	U
86-30-6	N-Nitrosodiphenylamin [1]	360	U
95-94-3	1,2,4,5-Tetrachlorobenzene	360	U
101-55-3	4-Bromophenyl-phenylether	360	U
118-74-1	Hexachlorobenzene	360	U
1912-24-9	Atrazine	360	U
87-86-5	Pentachlorophenol	700	U
85-01-8	Phenanthrene	100	J
120-12-7	Anthracene	26	J
86-74-8	Carbazole	360	U
84-74-2	Di-n-butylphthalate	360 ~~24~~ ~~J B~~ U	
206-44-0	Fluoranthene	210	J
129-00-0	Pyrene	310	J
85-68-7	Butylbenzylphthalate	360 ~~86~~ ~~J B~~ U	
91-94-1	3,3'-Dichlorobenzidine	360 ~~U~~ R	
56-55-3	Benzo(a)anthracene	99	J
218-01-9	Chrysene	170	J
117-81-7	Bis(2-ethylhexyl)phthalate	360 ~~230~~ ~~J B~~ U	
117-84-0	Di-n-octylphthalate	360	U
205-99-2	Benzo(b)fluoranthene	110	J
207-08-9	Benzo(k)fluoranthene	140	J
50-32-8	Benzo(a)pyrene	110	J
193-39-5	Indeno(1,2,3-cd)pyrene	78	J
53-70-3	Dibenzo(a,h)anthracene	360	U
191-24-2	Benzo(g,h,i)perylene	85	J
58-90-2	2,3,4,6-Tetrachlorophenol	360	U

[1] Cannot be separated from Diphenylamine

MW 9/22/13

EPA SAMPLE NO.
LMR13-89-024FD

21

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17096

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17096-21

Sample wt/vol: 29.8 (g/mL) g Lab File ID: PJZ14.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 21 Decanted: (Y/N) Date Received: 06/20/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/28/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/07/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
100-52-7	Benzaldehyde	17	J
108-95-2	Phenol	220	U
111-44-4	Bis(2-chloroethyl)ether	220	U
95-57-8	2-Chlorophenol	220	U
95-48-7	2-Methylphenol	220	U
108-60-1	2,2'-Oxybis(1-chloropropane)	220	U
98-86-2	Acetophenone	19	J
106-44-5	4-Methylphenol	220	U
621-64-7	N-Nitroso-di-n-propylamine	220	U
67-72-1	Hexachloroethane	220	U
98-95-3	Nitrobenzene	220	U
78-59-1	Isophorone	220	U
88-75-5	2-Nitrophenol	220	U
105-67-9	2,4-Dimethylphenol	220	U
111-91-1	Bis(2-chloroethoxy)methane	220	U
120-83-2	2,4-Dichlorophenol	220	U
91-20-3	Naphthalene	220	U
106-47-8	4-Chloroaniline	220	~~U~~ R
87-68-3	Hexachlorobutadiene	220	U
105-60-2	Caprolactam	220	U
59-50-7	4-Chloro-3-methylphenol	220	U
91-57-6	2-Methylnaphthalene	220	U
77-47-4	Hexachlorocyclopentadiene	220	~~U~~ R
88-06-2	2,4,6-Trichlorophenol	220	U
95-95-4	2,4,5-Trichlorophenol	220	U
92-52-4	1,1'-Biphenyl	220	U
91-58-7	2-Chloronaphthalene	220	U
88-74-4	2-Nitroaniline	420	U
131-11-3	Dimethylphthalate	220	U
606-20-2	2,6-Dinitrotoluene	220	U
208-96-8	Acenaphthylene	220	U
99-09-2	3-Nitroaniline	420	U
83-32-9	Acenaphthene	220	U

NW 9/22/13

EPA SAMPLE NO.
LMR13-89-024FD

21

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17096

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17096-21

Sample wt/vol: 29.8 (g/mL) g Lab File ID: PJZ14.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 21 Decanted: (Y/N) Date Received: 06/20/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/28/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/07/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
51-28-5	2,4-Dinitrophenol	420	U
100-02-7	4-Nitrophenol	420	U
132-64-9	Dibenzofuran	220	U
121-14-2	2,4-Dinitrotoluene	220	U
84-66-2	Diethylphthalate	220	U
86-73-7	Fluorene	220	U
7005-72-3	4-Chlorophenyl-phenylether	220	U
100-01-6	4-Nitroaniline	420	U
534-52-1	4,6-Dinitro-2-methylphenol	420	U
86-30-6	N-Nitrosodiphenylamin [1]	220	U
95-94-3	1,2,4,5-Tetrachlorobenzene	220	U
101-55-3	4-Bromophenyl-phenylether	220	U
118-74-1	Hexachlorobenzene	220	U
1912-24-9	Atrazine	220	U
87-86-5	Pentachlorophenol	420	U
85-01-8	Phenanthrene	220	U
120-12-7	Anthracene	220	U
86-74-8	Carbazole	220	U
84-74-2	Di-n-butylphthalate	220 ~~27~~ ~~J B~~	U
206-44-0	Fluoranthene	220	U
129-00-0	Pyrene	220	U
85-68-7	Butylbenzylphthalate	220 ~~40~~ ~~J B~~	U
91-94-1	3,3'-Dichlorobenzidine	220	~~U~~ R
56-55-3	Benzo(a)anthracene	220	U
218-01-9	Chrysene	220	U
117-81-7	Bis(2-ethylhexyl)phthalate	220 ~~80~~ ~~J B~~	U
117-84-0	Di-n-octylphthalate	220	U
205-99-2	Benzo(b)fluoranthene	220	U
207-08-9	Benzo(k)fluoranthene	220	U
50-32-8	Benzo(a)pyrene	220	U
193-39-5	Indeno(1,2,3-cd)pyrene	220	U
53-70-3	Dibenzo(a,h)anthracene	220	U
191-24-2	Benzo(g,h,i)perylene	220	U
58-90-2	2,3,4,6-Tetrachlorophenol	220	U

[1]Cannot be separated from Diphenylamine

NW 9/22/13

1D - FORM I SV-1

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-85-024FD

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678 22

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17096

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17096-22

Sample wt/vol: 30.2 (g/mL) g Lab File ID: PJZ15.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 50 Decanted: (Y/N) Date Received: 06/20/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/28/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/07/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
100-52-7	Benzaldehyde	47	J
108-95-2	Phenol	340	U
111-44-4	Bis(2-chloroethyl)ether	340	U
95-57-8	2-Chlorophenol	340	U
95-48-7	2-Methylphenol	340	U
108-60-1	2,2'-Oxybis(1-chloropropane)	340	U
98-86-2	Acetophenone	340	U
106-44-5	4-Methylphenol	340	U
621-64-7	N-Nitroso-di-n-propylamine	340	U
67-72-1	Hexachloroethane	340	U
98-95-3	Nitrobenzene	340	U
78-59-1	Isophorone	340	U
88-75-5	2-Nitrophenol	340	U
105-67-9	2,4-Dimethylphenol	340	U
111-91-1	Bis(2-chloroethoxy)methane	340	U
120-83-2	2,4-Dichlorophenol	340	U
91-20-3	Naphthalene	67	J
106-47-8	4-Chloroaniline	340	U R
87-68-3	Hexachlorobutadiene	340	U
105-60-2	Caprolactam	340	U
59-50-7	4-Chloro-3-methylphenol	340	U
91-57-6	2-Methylnaphthalene	340	U
77-47-4	Hexachlorocyclopentadiene	340	U R
88-06-2	2,4,6-Trichlorophenol	340	U
95-95-4	2,4,5-Trichlorophenol	340	U
92-52-4	1,1'-Biphenyl	340	U
91-58-7	2-Chloronaphthalene	340	U
88-74-4	2-Nitroaniline	660	U
131-11-3	Dimethylphthalate	340	U
606-20-2	2,6-Dinitrotoluene	340	U
208-96-8	Acenaphthylene	340	U
99-09-2	3-Nitroaniline	660	U
83-32-9	Acenaphthene	54	J

MW 9/22/13

EPA SAMPLE NO.
LMR13-85-024FD

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678 22

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17096

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17096-22

Sample wt/vol: 30.2 (g/mL) g Lab File ID: PJZ15.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 50 Decanted: (Y/N) Date Received: 06/20/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/28/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/07/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
51-28-5	2,4-Dinitrophenol	660	U
100-02-7	4-Nitrophenol	660	U
132-64-9	Dibenzofuran	29	J
121-14-2	2,4-Dinitrotoluene	340	U
84-66-2	Diethylphthalate	340	U
86-73-7	Fluorene	59	J
7005-72-3	4-Chlorophenyl-phenylether	340	U
100-01-6	4-Nitroaniline	660	U
534-52-1	4,6-Dinitro-2-methylphenol	660	U
86-30-6	N-Nitrosodiphenylamin [1]	340	U
95-94-3	1,2,4,5-Tetrachlorobenzene	340	U
101-55-3	4-Bromophenyl-phenylether	340	U
118-74-1	Hexachlorobenzene	340	U
1912-24-9	Atrazine	340	U
87-86-5	Pentachlorophenol	660	U
85-01-8	Phenanthrene	360	
120-12-7	Anthracene	71	J
86-74-8	Carbazole	16	J
84-74-2	Di-n-butylphthalate	340 ~~30~~ ~~J B~~	U
206-44-0	Fluoranthene	520	
129-00-0	Pyrene	700	
85-68-7	Butylbenzylphthalate	340 ~~90~~ ~~J B~~	U
91-94-1	3,3'-Dichlorobenzidine	340 ~~U~~	R
56-55-3	Benzo(a)anthracene	320	J
218-01-9	Chrysene	410	
117-81-7	Bis(2-ethylhexyl)phthalate	760 ~~B~~	
117-84-0	Di-n-octylphthalate	340	U
205-99-2	Benzo(b)fluoranthene	350	
207-08-9	Benzo(k)fluoranthene	240	J
50-32-8	Benzo(a)pyrene	220	J
193-39-5	Indeno(1,2,3-cd)pyrene	200	J
53-70-3	Dibenzo(a,h)anthracene	120	J
191-24-2	Benzo(g,h,i)perylene	260	J
58-90-2	2,3,4,6-Tetrachlorophenol	340	U

[1] Cannot be separated from Diphenylamine

NW 9/22/13

1F - FORM I SV-SIM

SEMIVOLATILE SIM ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-89-012

3

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: 1734.2 SDG No.: 17096

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17096-3

Sample wt/vol: 30.7 (g/mL) g Lab File ID: HQISW15.D

Extraction: (Type) SONC

% Moisture: 18 Decanted: (Y/N) Date Received: 06/20/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/28/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/07/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
91-20-3	Naphthalene	4.3	~~B~~	
90-12-0	1-Methylnaphthalene	1.7	J	
91-57-6	2-Methylnaphthalene	2.6	J	
208-96-8	Acenaphthylene	0.77	J	
83-32-9	Acenaphthene	1.6	J	
86-73-7	Fluorene	3.9 ~~1.6~~	~~J B~~	U
85-01-8	Phenanthrene	14	~~B~~	
120-12-7	Anthracene	3.9 ~~1.2~~	~~J B~~	U
206-44-0	Fluoranthene	8.2	~~B~~	
129-00-0	Pyrene	10	~~B~~	
56-55-3	Benzo(a)anthracene	3.9 ~~3.8~~	~~J B~~	U
218-01-9	Chrysene	11	~~B~~	
205-99-2	Benzo(b)fluoranthene	4.5	~~B~~	
207-08-9	Benzo(k)fluoranthene	3.9 ~~3.2~~	~~J B~~	U
192-97-2	Benzo(e)pyrene	4.8		
50-32-8	Benzo(a)pyrene	3.7	J	
198-55-0	Perylene	260	~~B~~	J
193-39-5	Indeno(1,2,3-cd)pyrene	1.4	J	
53-70-3	Dibenzo(a,h)anthracene	0.50	~~J~~	J
191-24-2	Benzo(g,h,i)perylene	3.3	J	
C1NAPH	C1-Naphthalenes	3.3	J	
C2NAPH	C2-Naphthalenes	22	J	
C3NAPH	C3-Naphthalenes	53	J	
C4NAPH	C4-Naphthalenes	110	J	
C1FLUOR	C1 Fluorenes	3.4	J	
C2FLUOR	C2 Fluorenes	6.7	J	
C3FLUOR	C3 Fluorenes	16	J	
C1PHAN	C1-Phenanthrenes/Anthracenes	52	J	
C2PHAN	C2-Phenanthrenes/Anthracenes	54	J	
C3PHAN	C3-Phenanthrenes/Anthracenes	75	J	
C4PHAN	C4-Phenanthrenes/Anthracenes	41	J	
C1FLPY	C1-Fluoranthenes/Pyrenes	17	J	
C2FLPY	C2-Fluoranthenes/Pyrenes	22	J	
C3FLPY	C3-Fluoranthenes/Pyrenes	21	J	
C1CHRYS	C1 Chrysenes	16	J	
C2CHRYS	C2 Chrysenes	35	J	
C3CHRYS	C3 Chrysenes	17	J	
C4CHRYS	C4 Chrysenes	6.7	J	

1F - FORM I SV-SIM

SEMIVOLATILE SIM ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-89-012

3

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: 1734.2 SDG No.: 17096

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17096-3

Sample wt/vol: 30.7 (g/mL) g Lab File ID: HQISW15.D

Extraction: (Type) SONC

% Moisture: 18 Decanted: (Y/N) Date Received: 06/20/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/28/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/07/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
TPPAH	Total 16 PPAH	73	~~B~~	J
TPAH	Total PAH	910	~~B~~	J

NW 9/22/13

1F - FORM I SV-SIM

SEMIVOLATILE SIM ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-88-012

7

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: 1734.2 SDG No.: 17096

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17096-7

Sample wt/vol: 30.6 (g/mL) g Lab File ID: HQIST13.D

Extraction: (Type) SONC

% Moisture: 55 Decanted: (Y/N) Date Received: 06/20/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/28/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/06/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 500.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
91-20-3	Naphthalene	330000	~~E B~~ J
90-12-0	1-Methylnaphthalene	7100	
91-57-6	2-Methylnaphthalene	18000	
208-96-8	Acenaphthylene	790	J
83-32-9	Acenaphthene	16000	
86-73-7	Fluorene	20000	~~D~~
85-01-8	Phenanthrene	55000	~~E B~~ J
120-12-7	Anthracene	17000	~~D~~
206-44-0	Fluoranthene	44000	~~E B~~ J
129-00-0	Pyrene	39000	~~E B~~ J
56-55-3	Benzo(a)anthracene	21000	~~B~~
218-01-9	Chrysene	20000	~~B~~
205-99-2	Benzo(b)fluoranthene	13000	~~B~~
207-08-9	Benzo(k)fluoranthene	16000	~~B~~
192-97-2	Benzo(e)pyrene	9700	
50-32-8	Benzo(a)pyrene	20000	
198-55-0	Perylene	5600	
193-39-5	Indeno(1,2,3-cd)pyrene	10000	
53-70-3	Dibenzo(a,h)anthracene	3100	J
191-24-2	Benzo(g,h,i)perylene	9600	
C1NAPH	C1-Naphthalenes	16000	J
C2NAPH	C2-Naphthalenes	8500	J
C3NAPH	C3-Naphthalenes	6900	J
C4NAPH	C4-Naphthalenes	5100	J
C1FLUOR	C1 Fluorenes	1400	J
C2FLUOR	C2 Fluorenes	1300	J
C3FLUOR	C3 Fluorenes	2700	J
C1PHAN	C1-Phenanthrenes/Anthracenes	16000	J
C2PHAN	C2-Phenanthrenes/Anthracenes	8400	J
C3PHAN	C3-Phenanthrenes/Anthracenes	8800	J
C4PHAN	C4-Phenanthrenes/Anthracenes	4200	J
C1FLPY	C1-Fluoranthenes/Pyrenes	20000	J
C2FLPY	C2-Fluoranthenes/Pyrenes	6300	J
C3FLPY	C3-Fluoranthenes/Pyrenes	2700	J
C1CHRYS	C1 Chrysenes	8900	J
C2CHRYS	C2 Chrysenes	3900	J
C3CHRYS	C3 Chrysenes	1300	J
C4CHRYS	C4 Chrysenes	3600	U

NW 9/22/13

1F - FORM I SV-SIM

SEMIVOLATILE SIM ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-88-012

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678 7

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: 1734.2 SDG No.: 17096

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17096-7

Sample wt/vol: 30.6 (g/mL) g Lab File ID: HQIST13.D

Extraction: (Type) SONC

% Moisture: 55 Decanted: (Y/N) Date Received: 06/20/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/28/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/06/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 500.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
TPPAH	Total 16 PPAH	640000	~~B~~ J
TPAH	Total PAH	770000	~~B~~ J

NW 9/22/13

1F - FORM I SV-SIM

SEMIVOLATILE SIM ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-39-012

11

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: 1734.2 SDG No.: 17096

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17096-11

Sample wt/vol: 30.0 (g/mL) g Lab File ID: HQIST14.D

Extraction: (Type) SONC

% Moisture: 29 Decanted: (Y/N) Date Received: 06/20/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/28/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/07/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 5.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
91-20-3	Naphthalene	58	~~B~~
90-12-0	1-Methylnaphthalene	15	J
91-57-6	2-Methylnaphthalene	24	
208-96-8	Acenaphthylene	31	
83-32-9	Acenaphthene	130	
86-73-7	Fluorene	160	~~B~~
85-01-8	Phenanthrene	1200	~~E~~ ~~B~~
120-12-7	Anthracene	290	E ~~B~~
206-44-0	Fluoranthene	1700	E ~~B~~
129-00-0	Pyrene	1200	E ~~B~~
56-55-3	Benzo(a)anthracene	720	E ~~B~~
218-01-9	Chrysene	770	E ~~B~~
205-99-2	Benzo(b)fluoranthene	490	E ~~B~~
207-08-9	Benzo(k)fluoranthene	480	E ~~B~~
192-97-2	Benzo(e)pyrene	370	E
50-32-8	Benzo(a)pyrene	580	E
198-55-0	Perylene	330	~~B~~
193-39-5	Indeno(1,2,3-cd)pyrene	230	
53-70-3	Dibenzo(a,h)anthracene	94	
191-24-2	Benzo(g,h,i)perylene	220	
C1NAPH	C1-Naphthalenes	25	J
C2NAPH	C2-Naphthalenes	110	J
C3NAPH	C3-Naphthalenes	350	J
C4NAPH	C4-Naphthalenes	470	J
C1FLUOR	C1 Fluorenes	110	J
C2FLUOR	C2 Fluorenes	150	J
C3FLUOR	C3 Fluorenes	220	J
C1PHAN	C1-Phenanthrenes/Anthracenes	1400	J
C2PHAN	C2-Phenanthrenes/Anthracenes	870	J
C3PHAN	C3-Phenanthrenes/Anthracenes	550	J
C4PHAN	C4-Phenanthrenes/Anthracenes	320	J
C1FLPY	C1-Fluoranthenes/Pyrenes	1000	J
C2FLPY	C2-Fluoranthenes/Pyrenes	580	J
C3FLPY	C3-Fluoranthenes/Pyrenes	350	J
C1CHRYS	C1 Chrysenes	720	J
C2CHRYS	C2 Chrysenes	500	J
C3CHRYS	C3 Chrysenes	210	J
C4CHRYS	C4 Chrysenes	71	J

J

NW 9/22/13

1F - FORM I SV-SIM

SEMIVOLATILE SIM ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-39-012

11

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: 1734.2 SDG No.: 17096

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17096-11

Sample wt/vol: 30.0 (g/mL) g Lab File ID: HQIST14.D

Extraction: (Type) SONC

% Moisture: 29 Decanted: (Y/N) Date Received: 06/20/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/28/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/07/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 5.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
TPPAH	Total 16 PPAH	8400	J
TPAH	Total PAH	17000	J

NW 9/22/13

1F - FORM I SV-SIM
SEMIVOLATILE SIM ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-67-012

17

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: 1734.2 SDG No.: 17096

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17096-17

Sample wt/vol: 29.7 (g/mL) g Lab File ID: HQISW18.D

Extraction: (Type) SONC

% Moisture: 57 Decanted: (Y/N) Date Received: 06/20/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/28/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/07/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 4.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
91-20-3	Naphthalene	56	~~B~~
90-12-0	1-Methylnaphthalene	23	J
91-57-6	2-Methylnaphthalene	41	
208-96-8	Acenaphthylene	7.5	J
83-32-9	Acenaphthene	21	J
86-73-7	Fluorene	43	~~B~~
85-01-8	Phenanthrene	180	~~B~~
120-12-7	Anthracene	35	~~B~~
206-44-0	Fluoranthene	290	~~B~~
129-00-0	Pyrene	330	~~E B~~
56-55-3	Benzo(a)anthracene	200	~~B~~
218-01-9	Chrysene	350	~~E B~~
205-99-2	Benzo(b)fluoranthene	280	~~B~~
207-08-9	Benzo(k)fluoranthene	200	~~B~~
192-97-2	Benzo(e)pyrene	240	
50-32-8	Benzo(a)pyrene	240	
198-55-0	Perylene	270	
193-39-5	Indeno(1,2,3-cd)pyrene	140	
53-70-3	Dibenzo(a,h)anthracene	67	
191-24-2	Benzo(g,h,i)perylene	170	
C1NAPH	C1-Naphthalenes	42	J
C2NAPH	C2-Naphthalenes	190	J
C3NAPH	C3-Naphthalenes	270	J
C4NAPH	C4-Naphthalenes	170	J
C1FLUOR	C1 Fluorenes	19	J
C2FLUOR	C2 Fluorenes	38	J
C3FLUOR	C3 Fluorenes	72	J
C1PHAN	C1-Phenanthrenes/Anthracenes	230	J
C2PHAN	C2-Phenanthrenes/Anthracenes	240	J
C3PHAN	C3-Phenanthrenes/Anthracenes	290	J
C4PHAN	C4-Phenanthrenes/Anthracenes	180	J
C1FLPY	C1-Fluoranthenes/Pyrenes	330	J
C2FLPY	C2-Fluoranthenes/Pyrenes	350	J
C3FLPY	C3-Fluoranthenes/Pyrenes	240	J
C1CHRYS	C1 Chrysenes	380	J
C2CHRYS	C2 Chrysenes	440	J
C3CHRYS	C3 Chrysenes	200	J
C4CHRYS	C4 Chrysenes	73	J

J J J

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1F - FORM I SV-SIM

SEMIVOLATILE SIM ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-67-012

17

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: 1734.2 SDG No.: 17096

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17096-17

Sample wt/vol: 29.7 (g/mL) g Lab File ID: HQISW18.D

Extraction: (Type) SONC

% Moisture: 57 Decanted: (Y/N) Date Received: 06/20/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/28/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/07/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 4.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
TPPAH	Total 16 PPAH	2600	~~B~~
TPAH	Total PAH	6900	~~B~~

JJ

NW 9/22/13

1F - FORM I SV-SIM

SEMIVOLATILE SIM ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-85-012

20

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: 1734.2 SDG No.: 17096

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17096-20

Sample wt/vol: 30.5 (g/mL) g Lab File ID: HQISW12.D

Extraction: (Type) SONC

% Moisture: 54 Decanted: (Y/N) Date Received: 06/20/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/28/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/07/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 5.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
91-20-3	Naphthalene	35 ~~15~~	~~J B~~	U
90-12-0	1-Methylnaphthalene	5.7	J	
91-57-6	2-Methylnaphthalene	8.6	J	
208-96-8	Acenaphthylene	3.6	J	
83-32-9	Acenaphthene	14	J	
86-73-7	Fluorene	35 ~~24~~	~~J B~~	U
85-01-8	Phenanthrene	99	~~B~~	
120-12-7	Anthracene	35 ~~22~~	~~J B~~	U
206-44-0	Fluoranthene	210	~~B~~	
129-00-0	Pyrene	180	~~B~~	
56-55-3	Benzo(a)anthracene	88	~~B~~	
218-01-9	Chrysene	140	~~B~~	
205-99-2	Benzo(b)fluoranthene	100	~~B~~	
207-08-9	Benzo(k)fluoranthene	94	~~B~~	
192-97-2	Benzo(e)pyrene	75		
50-32-8	Benzo(a)pyrene	81		
198-55-0	Perylene	180		
193-39-5	Indeno(1,2,3-cd)pyrene	65		
53-70-3	Dibenzo(a,h)anthracene	22	~~J~~	J
191-24-2	Benzo(g,h,i)perylene	67		
C1NAPH	C1-Naphthalenes	9.1	J	
C2NAPH	C2-Naphthalenes	41	J	
C3NAPH	C3-Naphthalenes	66	J	
C4NAPH	C4-Naphthalenes	66	J	
C1FLUOR	C1 Fluorenes	6.1	J	
C2FLUOR	C2 Fluorenes	10	J	
C3FLUOR	C3 Fluorenes	13	J	
C1PHAN	C1-Phenanthrenes/Anthracenes	73	J	
C2PHAN	C2-Phenanthrenes/Anthracenes	62	J	
C3PHAN	C3-Phenanthrenes/Anthracenes	67	J	
C4PHAN	C4-Phenanthrenes/Anthracenes	36	J	
C1FLPY	C1-Fluoranthenes/Pyrenes	110	J	
C2FLPY	C2-Fluoranthenes/Pyrenes	80	J	
C3FLPY	C3-Fluoranthenes/Pyrenes	39	J	
C1CHRYS	C1 Chrysenes	78	J	
C2CHRYS	C2 Chrysenes	47	J	
C3CHRYS	C3 Chrysenes	22	J	
C4CHRYS	C4 Chrysenes	10	J	

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1F - FORM I SV-SIM

SEMIVOLATILE SIM ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-85-012

20

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: 1734.2 SDG No.: 17096

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17096-20

Sample wt/vol: 30.5 (g/mL) g Lab File ID: HQISW12.D

Extraction: (Type) SONC

% Moisture: 54 Decanted: (Y/N) Date Received: 06/20/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/28/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/07/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 5.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
TPPAH	Total 16 PPAH	1200	J
TPAH	Total PAH	2300	J

JJ

NW 9/22/13

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-55-048

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17096

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17096-1

Sample wt/vol: 30.9 (g/mL) g Lab File ID: 0825AHESOM14.D

% Moisture: 31 Decanted: (Y/N) Date Received: 06/20/2013

Extraction: (Type) SONC Date Extracted: 06/27/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 08/03/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 5.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	230	U
11104-28-2	Aroclor-1221	230	U
11141-16-5	Aroclor-1232	230	U
53469-21-9	Aroclor-1242	230	U
12672-29-6	Aroclor-1248	42	~~J P~~ J
11097-69-1	Aroclor-1254	33	J
11096-82-5	Aroclor-1260	18	J
37324-23-5	Aroclor-1262	230	U
11100-14-4	Aroclor-1268	230	U

NW 9/22/13

1H - FORM I ARO
AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-55-072

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678 2

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17096

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17096-2

Sample wt/vol: 30.5 (g/mL) g Lab File ID: 0825AHESOM15.D

% Moisture: 47 Decanted: (Y/N) Date Received: 06/20/2013

Extraction: (Type) SONC Date Extracted: 06/27/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 08/03/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 5.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	300	U
11104-28-2	Aroclor-1221	300	U
11141-16-5	Aroclor-1232	300	U
53469-21-9	Aroclor-1242	300	U
12672-29-6	Aroclor-1248	300	U
11097-69-1	Aroclor-1254	300	U
11096-82-5	Aroclor-1260	300	U
37324-23-5	Aroclor-1262	300	U
11100-14-4	Aroclor-1268	300	U

MW 9/22/13

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-89-012

3

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17096

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17096-3

Sample wt/vol: 30.4 (g/mL) g Lab File ID: 0825AHESOM16.D

% Moisture: 18 Decanted: (Y/N) Date Received: 06/20/2013

Extraction: (Type) SONC Date Extracted: 06/27/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 08/03/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 5.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	200	U
11104-28-2	Aroclor-1221	200	U
11141-16-5	Aroclor-1232	200	U
53469-21-9	Aroclor-1242	200	U
12672-29-6	Aroclor-1248	200	U
11097-69-1	Aroclor-1254	200	U
11096-82-5	Aroclor-1260	200	U
37324-23-5	Aroclor-1262	200	U
11100-14-4	Aroclor-1268	200	U

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1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-89-024

4

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17096

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17096-4

Sample wt/vol: 29.8 (g/mL) g Lab File ID: 0825AHESOM17.D

% Moisture: 22 Decanted: (Y/N) Date Received: 06/20/2013

Extraction: (Type) SONC Date Extracted: 06/27/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 08/03/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 5.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	210	U
11104-28-2	Aroclor-1221	210	U
11141-16-5	Aroclor-1232	210	U
53469-21-9	Aroclor-1242	210	U
12672-29-6	Aroclor-1248	210	U
11097-69-1	Aroclor-1254	210	U
11096-82-5	Aroclor-1260	210	U
37324-23-5	Aroclor-1262	210	U
11100-14-4	Aroclor-1268	210	U

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1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-88-012FD

5

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17096

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17096-5

Sample wt/vol: 29.3 (g/mL) g Lab File ID: 0825AHFSOM01.D

% Moisture: 55 Decanted: (Y/N) Date Received: 06/20/2013

Extraction: (Type) SONC Date Extracted: 06/27/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 08/03/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 5.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	370	U
11104-28-2	Aroclor-1221	370	U
11141-16-5	Aroclor-1232	370	U
53469-21-9	Aroclor-1242	370	U
12672-29-6	Aroclor-1248	370	U
11097-69-1	Aroclor-1254	72	~~J P~~ J
11096-82-5	Aroclor-1260	23	~~J P~~ J
37324-23-5	Aroclor-1262	370	U
11100-14-4	Aroclor-1268	370	U

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1H - FORM I ARO
AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-39-048

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678 6

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17096

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17096-6

Sample wt/vol: 30.3 (g/mL) g Lab File ID: 0825AHFSOM15.D

% Moisture: 35 Decanted: (Y/N) Date Received: 06/20/2013

Extraction: (Type) SONC Date Extracted: 06/27/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 08/03/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 5.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	250	U
11104-28-2	Aroclor-1221	250	U
11141-16-5	Aroclor-1232	250	U
53469-21-9	Aroclor-1242	250	U
12672-29-6	Aroclor-1248	250	U
11097-69-1	Aroclor-1254	250	U
11096-82-5	Aroclor-1260	250	U
37324-23-5	Aroclor-1262	250	U
11100-14-4	Aroclor-1268	250	U

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1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-88-012

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678 7

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17096

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17096-7

Sample wt/vol: 29.2 (g/mL) g Lab File ID: 0825AHFSOM02.D

% Moisture: 55 Decanted: (Y/N) Date Received: 06/20/2013

Extraction: (Type) SONC Date Extracted: 06/27/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 08/03/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 5.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	370	U
11104-28-2	Aroclor-1221	370	U
11141-16-5	Aroclor-1232	370	U
53469-21-9	Aroclor-1242	370	U
12672-29-6	Aroclor-1248	370	U
11097-69-1	Aroclor-1254	57	~~J P~~ J
11096-82-5	Aroclor-1260	19	~~J P~~ J
37324-23-5	Aroclor-1262	370	U
11100-14-4	Aroclor-1268	370	U

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1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-88-024

8

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17096

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17096-8

Sample wt/vol: 29.5 (g/mL) g Lab File ID: 0825AHFSOM03.D

% Moisture: 41 Decanted: (Y/N) Date Received: 06/20/2013

Extraction: (Type) SONC Date Extracted: 06/27/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 08/03/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 5.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	280	U
11104-28-2	Aroclor-1221	280	U
11141-16-5	Aroclor-1232	280	U
53469-21-9	Aroclor-1242	280	U
12672-29-6	Aroclor-1248	280	U
11097-69-1	Aroclor-1254	280	U
11096-82-5	Aroclor-1260	5.5	~~J P~~ J
37324-23-5	Aroclor-1262	280	U
11100-14-4	Aroclor-1268	280	U

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1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-88-048

9

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17096

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17096-9

Sample wt/vol: 30.1 (g/mL) g Lab File ID: 0825AHFSOM04.D

% Moisture: 42 Decanted: (Y/N) Date Received: 06/20/2013

Extraction: (Type) SONC Date Extracted: 06/27/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 08/03/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 5.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	280	U
11104-28-2	Aroclor-1221	280	U
11141-16-5	Aroclor-1232	280	U
53469-21-9	Aroclor-1242	280	U
12672-29-6	Aroclor-1248	280	U
11097-69-1	Aroclor-1254	280	U
11096-82-5	Aroclor-1260	280	U
37324-23-5	Aroclor-1262	280	U
11100-14-4	Aroclor-1268	280	U

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1H - FORM I ARO
AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-39-024FD

10

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17096

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17096-10

Sample wt/vol: 30.2 (g/mL) g Lab File ID: 0825AHFSOM16.D

% Moisture: 27 Decanted: (Y/N) Date Received: 06/20/2013

Extraction: (Type) SONC Date Extracted: 06/27/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 08/03/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 5.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	220	U
11104-28-2	Aroclor-1221	220	U
11141-16-5	Aroclor-1232	220	U
53469-21-9	Aroclor-1242	220	U
12672-29-6	Aroclor-1248	220	U
11097-69-1	Aroclor-1254	220	U
11096-82-5	Aroclor-1260	220	U
37324-23-5	Aroclor-1262	220	U
11100-14-4	Aroclor-1268	220	U

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1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-39-012

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678 11

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17096

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17096-11

Sample wt/vol: 29.6 (g/mL) g Lab File ID: 0825AHFSOM07.D

% Moisture: 29 Decanted: (Y/N) Date Received: 06/20/2013

Extraction: (Type) SONC Date Extracted: 06/27/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 08/03/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 5.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
12674-11-2	Aroclor-1016	240	U	
11104-28-2	Aroclor-1221	240	U	
11141-16-5	Aroclor-1232	240	U	
53469-21-9	Aroclor-1242	25	~~J P~~	J
12672-29-6	Aroclor-1248	240	U	
11097-69-1	Aroclor-1254	27	~~J P~~	J
11096-82-5	Aroclor-1260	240	U	
37324-23-5	Aroclor-1262	240	U	
11100-14-4	Aroclor-1268	240	U	

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AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-39-024

12

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17096

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17096-12

Sample wt/vol: 29.5 (g/mL) g Lab File ID: 0825AHFSOM17.D

% Moisture: 28 Decanted: (Y/N) Date Received: 06/20/2013

Extraction: (Type) SONC Date Extracted: 06/27/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 08/03/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 5.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	230	U
11104-28-2	Aroclor-1221	230	U
11141-16-5	Aroclor-1232	230	U
53469-21-9	Aroclor-1242	230	U
12672-29-6	Aroclor-1248	230	U
11097-69-1	Aroclor-1254	230	U
11096-82-5	Aroclor-1260	230	U
37324-23-5	Aroclor-1262	230	U
11100-14-4	Aroclor-1268	230	U

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AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-39-072

13

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17096

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17096-13

Sample wt/vol: 29.6 (g/mL) g Lab File ID: 0825AHFSOM18.D

% Moisture: 24 Decanted: (Y/N) Date Received: 06/20/2013

Extraction: (Type) SONC Date Extracted: 06/27/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 08/03/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 5.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	220	U
11104-28-2	Aroclor-1221	220	U
11141-16-5	Aroclor-1232	220	U
53469-21-9	Aroclor-1242	220	U
12672-29-6	Aroclor-1248	220	U
11097-69-1	Aroclor-1254	220	U
11096-82-5	Aroclor-1260	220	U
37324-23-5	Aroclor-1262	220	U
11100-14-4	Aroclor-1268	220	U

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1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-85-024

14

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17096

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17096-14

Sample wt/vol: 30.0 (g/mL) g Lab File ID: 0825AHFSOM08.D

% Moisture: 49 Decanted: (Y/N) Date Received: 06/20/2013

Extraction: (Type) SONC Date Extracted: 06/27/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 08/03/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 5.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	330	U
11104-28-2	Aroclor-1221	330	U
11141-16-5	Aroclor-1232	330	U
53469-21-9	Aroclor-1242	120	J
12672-29-6	Aroclor-1248	330	U
11097-69-1	Aroclor-1254	130	J
11096-82-5	Aroclor-1260	28	J
37324-23-5	Aroclor-1262	330	U
11100-14-4	Aroclor-1268	330	U

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1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-85-048

15

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17096

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17096-15

Sample wt/vol: 29.6 (g/mL) g Lab File ID: 0825AHFSOM09.D

% Moisture: 45 Decanted: (Y/N) Date Received: 06/20/2013

Extraction: (Type) SONC Date Extracted: 06/27/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 08/03/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 5.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	310	U
11104-28-2	Aroclor-1221	310	U
11141-16-5	Aroclor-1232	310	U
53469-21-9	Aroclor-1242	120	J
12672-29-6	Aroclor-1248	310	U
11097-69-1	Aroclor-1254	150	J
11096-82-5	Aroclor-1260	33	J
37324-23-5	Aroclor-1262	310	U
11100-14-4	Aroclor-1268	310	U

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1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-67-024FD

16

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17096

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17096-16

Sample wt/vol: 30.1 (g/mL) g Lab File ID: 0825AHFSOM10.D

% Moisture: 54 Decanted: (Y/N) Date Received: 06/20/2013

Extraction: (Type) SONC Date Extracted: 06/27/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 08/03/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 5.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	360	U
11104-28-2	Aroclor-1221	360	U
11141-16-5	Aroclor-1232	360	U
53469-21-9	Aroclor-1242	22	J
12672-29-6	Aroclor-1248	360	U
11097-69-1	Aroclor-1254	41	J
11096-82-5	Aroclor-1260	10	J
37324-23-5	Aroclor-1262	360	U
11100-14-4	Aroclor-1268	360	U

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AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-67-012

17

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17096

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17096-17

Sample wt/vol: 30.1 (g/mL) g Lab File ID: 0825AHFSOM11.D

% Moisture: 57 Decanted: (Y/N) Date Received: 06/20/2013

Extraction: (Type) SONC Date Extracted: 06/27/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 08/03/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 5.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	380	U
11104-28-2	Aroclor-1221	380	U
11141-16-5	Aroclor-1232	380	U
53469-21-9	Aroclor-1242	26	J
12672-29-6	Aroclor-1248	380	U
11097-69-1	Aroclor-1254	49	J
11096-82-5	Aroclor-1260	12	J
37324-23-5	Aroclor-1262	380	U
11100-14-4	Aroclor-1268	380	U

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1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-67-024

18

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17096

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17096-18

Sample wt/vol: 30.0 (g/mL) g Lab File ID: 0825AHFSOM12.D

% Moisture: 54 Decanted: (Y/N) Date Received: 06/20/2013

Extraction: (Type) SONC Date Extracted: 06/27/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 08/03/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 5.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	360	U
11104-28-2	Aroclor-1221	360	U
11141-16-5	Aroclor-1232	360	U
53469-21-9	Aroclor-1242	25	J
12672-29-6	Aroclor-1248	360	U
11097-69-1	Aroclor-1254	44	J
11096-82-5	Aroclor-1260	11	J
37324-23-5	Aroclor-1262	360	U
11100-14-4	Aroclor-1268	360	U

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1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-67-048

19

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17096

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17096-19

Sample wt/vol: 30.6 (g/mL) g Lab File ID: 0825AHFSOM13.D

% Moisture: 51 Decanted: (Y/N) Date Received: 06/20/2013

Extraction: (Type) SONC Date Extracted: 06/27/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 08/03/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 5.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	330	U
11104-28-2	Aroclor-1221	330	U
11141-16-5	Aroclor-1232	330	U
53469-21-9	Aroclor-1242	24	J
12672-29-6	Aroclor-1248	330	U
11097-69-1	Aroclor-1254	38	J
11096-82-5	Aroclor-1260	9.1	J
37324-23-5	Aroclor-1262	330	U
11100-14-4	Aroclor-1268	330	U

MW 9/22/13

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-85-012

20

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17096

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17096-20

Sample wt/vol: 30.5 (g/mL) g Lab File ID: 0825AHFSOM14.D

% Moisture: 54 Decanted: (Y/N) Date Received: 06/20/2013

Extraction: (Type) SONC Date Extracted: 06/27/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 08/03/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 5.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	350	U
11104-28-2	Aroclor-1221	350	U
11141-16-5	Aroclor-1232	350	U
53469-21-9	Aroclor-1242	20	~~J~~ J
12672-29-6	Aroclor-1248	350	U
11097-69-1	Aroclor-1254	44	J
11096-82-5	Aroclor-1260	15	J
37324-23-5	Aroclor-1262	350	U
11100-14-4	Aroclor-1268	350	U

MW 9/22/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-55-048

1

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17096

Matrix: SED Lab Sample Id: 200-17096-1

% Solids: 68.8 Date Received: 06/20/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	12.3		J	P
7440-43-9	Cadmium	1.8			P
7440-47-3	Chromium	31.4			P
7440-50-8	Copper	30.3			P
7439-92-1	Lead	262			P
7440-02-0	Nickel	26.5			P
7440-66-6	Zinc	279			P

Color Before: BROWN Clarity Before: Texture: FINE

Color After: TAN Clarity After: CLOUDY Artifacts:

Comments:

NW 9/22/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-55-048

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17096

Matrix: SED Lab Sample Id: 200-17096-1

% Solids: 68.8 Date Received: 06/20/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.45			CV

Color Before: GRAY Clarity Before: CLOUDY Texture: FINE

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

JRW 9/22/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-55-072

2

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17096

Matrix: SED Lab Sample Id: 200-17096-2

% Solids: 53.4 Date Received: 06/20/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	36.6	J	E	P
7440-43-9	Cadmium	3.8		E	P
7440-47-3	Chromium	46.9		E	P
7440-50-8	Copper	67.8		E	P
7439-92-1	Lead	665		~~*E~~	P
7440-02-0	Nickel	39.9		E	P
7440-66-6	Zinc	728		E	P

Color Before: BROWN Clarity Before: Texture: FINE

Color After: TAN Clarity After: CLOUDY Artifacts:

Comments:

MW 9/22/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-55-072

2

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17096

Matrix: SED Lab Sample Id: 200-17096-2

% Solids: 53.4 Date Received: 06/20/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	1.2			CV

Color Before: GRAY Clarity Before: CLOUDY Texture: FINE

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

NW 9/22/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-89-012

3

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17096

Matrix: SED Lab Sample Id: 200-17096-3

% Solids: 82.4 Date Received: 06/20/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	3.5	J	E	P
7440-43-9	Cadmium	0.23	J	E	P
7440-47-3	Chromium	7.8		E	P
7440-50-8	Copper	6.2		E	P
7439-92-1	Lead	7.4		*E	P
7440-02-0	Nickel	10.6		E	P
7440-66-6	Zinc	32.6		E	P

Color Before: GREY Clarity Before: Texture: FINE

Color After: TAN Clarity After: CLOUDY Artifacts: STONES

Comments:

NW 9/22/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-89-012
3

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678
Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 17096
Matrix: SED | Lab Sample Id: 200-17096-3
% Solids: 82.4 | Date Received: 06/20/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.12	U		CV

Color Before: GRAY | Clarity Before: CLOUDY | Texture: FINE
Color After: COLORLESS | Clarity After: CLEAR | Artifacts:
Comments:

NW 9/22/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-89-024
4

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678
Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 17096
Matrix: SED | Lab Sample Id: 200-17096-4
% Solids: 77.6 | Date Received: 06/20/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	3.0	J	E	P
7440-43-9	Cadmium	0.31	J	E	P
7440-47-3	Chromium	8.9		E	P
7440-50-8	Copper	8.0		E	P
7439-92-1	Lead	6.4		*E	P
7440-02-0	Nickel	13.4		E	P
7440-66-6	Zinc	35.2		E	P

Color Before: GREY | Clarity Before: | Texture: FINE
Color After: TAN | Clarity After: CLOUDY | Artifacts: STONES
Comments:

MW 9/22/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-89-024

4

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678
Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17096
Matrix: SED Lab Sample Id: 200-17096-4
% Solids: 77.6 Date Received: 06/20/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.040	J		CV

Color Before: GRAY Clarity Before: CLOUDY Texture: FINE
Color After: COLORLESS Clarity After: CLEAR Artifacts:
Comments:

NW 9/22/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-88-012FD

5

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678

Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 17096

Matrix: SED | Lab Sample Id: 200-17096-5

% Solids: 45.3 | Date Received: 06/20/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	20.7	J	E	P
7440-43-9	Cadmium	5.3		E	P
7440-47-3	Chromium	56.3		E	P
7440-50-8	Copper	53.6		E	P
7439-92-1	Lead	132		* ~~E~~	P
7440-02-0	Nickel	34.0		E	P
7440-66-6	Zinc	599		E	P

Color Before: DARK BROWN | Clarity Before: | Texture: MEDIUM

Color After: TAN | Clarity After: CLOUDY | Artifacts:

Comments:

NW 9/22/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-88-012FD

5

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678

Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 17096

Matrix: SED | Lab Sample Id: 200-17096-5

% Solids: 45.3 | Date Received: 06/20/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.53			CV

Color Before: GRAY | Clarity Before: CLOUDY | Texture: FINE

Color After: COLORLESS | Clarity After: CLEAR | Artifacts:

Comments:

NW 9/22/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-39-048

6

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678
Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 17096
Matrix: SED | Lab Sample Id: 200-17096-6
% Solids: 65.4 | Date Received: 06/20/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	13.6	J	E	P
7440-43-9	Cadmium	3.4		E	P
7440-47-3	Chromium	37.3		E	P
7440-50-8	Copper	35.2		E	P
7439-92-1	Lead	82.5		*E	P
7440-02-0	Nickel	22.7		E	P
7440-66-6	Zinc	365		E	P

Color Before: DARK BROWN | Clarity Before: | Texture: FINE
Color After: TAN | Clarity After: CLOUDY | Artifacts:
Comments:

NW 9/22/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-39-048

6

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678
Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17096
Matrix: SED Lab Sample Id: 200-17096-6
% Solids: 65.4 Date Received: 06/20/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.13	J		CV

Color Before: GRAY Clarity Before: CLOUDY Texture: FINE
Color After: COLORLESS Clarity After: CLEAR Artifacts:
Comments:

NW 9/22/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-88-012

7

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678
Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 17096
Matrix: SED | Lab Sample Id: 200-17096-7
% Solids: 45.5 | Date Received: 06/20/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	19.1	J	E	P
7440-43-9	Cadmium	2.4		E	P
7440-47-3	Chromium	36.4		E	P
7440-50-8	Copper	37.5		E	P
7439-92-1	Lead	131		~~*~~ E	P
7440-02-0	Nickel	28.5		E	P
7440-66-6	Zinc	454		E	P

Color Before: DARK BROWN | Clarity Before: | Texture: FINE
Color After: TAN | Clarity After: CLOUDY | Artifacts:
Comments:

NW 9/22/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-88-012

7

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678

Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 17096

Matrix: SED | Lab Sample Id: 200-17096-7

% Solids: 45.5 | Date Received: 06/20/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.51			CV

Color Before: GRAY | Clarity Before: CLOUDY | Texture: FINE

Color After: COLORLESS | Clarity After: CLEAR | Artifacts:

Comments:

MW 9/22/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-88-024
8

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678
Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 17096
Matrix: SED | Lab Sample Id: 200-17096-8
% Solids: 59.2 | Date Received: 06/20/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	17.3	J	E	P
7440-43-9	Cadmium	1.6		E	P
7440-47-3	Chromium	26.2		E	P
7440-50-8	Copper	32.7		E	P
7439-92-1	Lead	106		*~~E~~	P
7440-02-0	Nickel	22.4		E	P
7440-66-6	Zinc	281		E	P

Color Before: BROWN | Clarity Before: | Texture: FINE
Color After: TAN | Clarity After: CLOUDY | Artifacts:
Comments:

NJS 9/22/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-88-024

8

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17096

Matrix: SED Lab Sample Id: 200-17096-8

% Solids: 59.2 Date Received: 06/20/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.28			CV

Color Before: GRAY Clarity Before: CLOUDY Texture: FINE

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

MW 9/22/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-88-048

9

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678
Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 17096
Matrix: SED | Lab Sample Id: 200-17096-9
% Solids: 58.4 | Date Received: 06/20/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	23.0	J	E	P
7440-43-9	Cadmium	2.0		E	P
7440-47-3	Chromium	33.7		E	P
7440-50-8	Copper	42.3		E	P
7439-92-1	Lead	166		E	P
7440-02-0	Nickel	26.2		E	P
7440-66-6	Zinc	405		E	P

Color Before: DARK BROWN | Clarity Before: | Texture: FINE
Color After: TAN | Clarity After: CLOUDY | Artifacts:
Comments:

NW 9/22/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-88-048

9

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678

Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 17096

Matrix: SED | Lab Sample Id: 200-17096-9

% Solids: 58.4 | Date Received: 06/20/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.66			CV

Color Before: GRAY | Clarity Before: CLOUDY | Texture: FINE

Color After: COLORLESS | Clarity After: CLEAR | Artifacts:

Comments:

NW 9/22/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-39-024FD

10

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678

Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 17096

Matrix: SED | Lab Sample Id: 200-17096-10

% Solids: 72.9 | Date Received: 06/20/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	4.7	J	E	P
7440-43-9	Cadmium	0.38	J	E	P
7440-47-3	Chromium	13.5		E	P
7440-50-8	Copper	14.3		E	P
7439-92-1	Lead	21.9		*E	P
7440-02-0	Nickel	17.8		E	P
7440-66-6	Zinc	63.0		E	P

Color Before: BROWN | Clarity Before: | Texture: FINE

Color After: TAN | Clarity After: CLOUDY | Artifacts:

Comments:

NW 9/22/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-39-024FD

10

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678

Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 17096

Matrix: SED | Lab Sample Id: 200-17096-10

% Solids: 72.9 | Date Received: 06/20/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.11	J		CV

Color Before: GRAY | Clarity Before: CLOUDY | Texture: FINE

Color After: COLORLESS | Clarity After: CLEAR | Artifacts:

Comments:

MW 9/22/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-39-012

11

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17096

Matrix: SED Lab Sample Id: 200-17096-11

% Solids: 70.6 Date Received: 06/20/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	7.8	J	E	P
7440-43-9	Cadmium	0.68		E	P
7440-47-3	Chromium	16.3		E	P
7440-50-8	Copper	20.2		E	P
7439-92-1	Lead	39.6		*E	P
7440-02-0	Nickel	18.4		E	P
7440-66-6	Zinc	102		E	P

Color Before: BROWN Clarity Before: Texture: FINE

Color After: TAN Clarity After: CLOUDY Artifacts:

Comments:

NW 9/22/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-39-012

11

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17096

Matrix: SED Lab Sample Id: 200-17096-11

% Solids: 70.6 Date Received: 06/20/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.13	J		CV

Color Before: GRAY Clarity Before: CLOUDY Texture: FINE

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

NW 9/22/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-39-024

12

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678
Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 17096
Matrix: SED | Lab Sample Id: 200-17096-12
% Solids: 72.5 | Date Received: 06/20/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	5.6	J	E	P
7440-43-9	Cadmium	0.37	J	E	P
7440-47-3	Chromium	12.0		E	P
7440-50-8	Copper	14.0		E	P
7439-92-1	Lead	24.9		~~E~~	P
7440-02-0	Nickel	16.2		E	P
7440-66-6	Zinc	60.8		E	P

Color Before: BROWN | Clarity Before: | Texture: MEDIUM
Color After: TAN | Clarity After: CLOUDY | Artifacts:
Comments:

NW 9/22/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-39-024

12

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678

Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 17096

Matrix: SED | Lab Sample Id: 200-17096-12

% Solids: 72.5 | Date Received: 06/20/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.15			CV

Color Before: GRAY | Clarity Before: CLOUDY | Texture: FINE

Color After: COLORLESS | Clarity After: CLEAR | Artifacts:

Comments:

NW 9/22/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-39-072

13

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678
Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 17096
Matrix: SED | Lab Sample Id: 200-17096-13
% Solids: 75.6 | Date Received: 06/20/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	3.1	J	E	P
7440-43-9	Cadmium	0.32	J	E	P
7440-47-3	Chromium	7.0		E	P
7440-50-8	Copper	7.0		E	P
7439-92-1	Lead	5.6		* E	P
7440-02-0	Nickel	10.9		E	P
7440-66-6	Zinc	29.9		E	P

Color Before: BROWN | Clarity Before: | Texture: MEDIUM
Color After: TAN | Clarity After: CLOUDY | Artifacts:
Comments:

MW 9/22/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-39-072

13

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17096

Matrix: SED Lab Sample Id: 200-17096-13

% Solids: 75.6 Date Received: 06/20/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.049	J		CV

Color Before: GRAY Clarity Before: CLOUDY Texture: FINE

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

NW 9/22/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-85-024

14

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678
Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 17096
Matrix: SED | Lab Sample Id: 200-17096-14
% Solids: 50.7 | Date Received: 06/20/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	7.5	J	E	P
7440-43-9	Cadmium	1.2		E	P
7440-47-3	Chromium	29.5		E	P
7440-50-8	Copper	31.9		E	P
7439-92-1	Lead	31.7		*E	P
7440-02-0	Nickel	30.4		E	P
7440-66-6	Zinc	133		E	P

Color Before: BROWN | Clarity Before: | Texture: FINE
Color After: TAN | Clarity After: CLOUDY | Artifacts: STONES
Comments:

MW 9/22/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-85-024

14

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17096

Matrix: SED Lab Sample Id: 200-17096-14

% Solids: 50.7 Date Received: 06/20/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.091	J		CV

Color Before: GRAY Clarity Before: CLOUDY Texture: FINE

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

NLS 9/22/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-85-048

15

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678
Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 17096
Matrix: SED | Lab Sample Id: 200-17096-15
% Solids: 54.6 | Date Received: 06/20/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	7.4	J	E	P
7440-43-9	Cadmium	1.2		E	P
7440-47-3	Chromium	27.7		E	P
7440-50-8	Copper	30.4		E	P
7439-92-1	Lead	32.9		*E	P
7440-02-0	Nickel	29.8		E	P
7440-66-6	Zinc	125		E	P

Color Before: BROWN | Clarity Before: | Texture: FINE
Color After: BROWN | Clarity After: CLOUDY | Artifacts:
Comments:

NW 9/22/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-85-048

15

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678

Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 17096

Matrix: SED | Lab Sample Id: 200-17096-15

% Solids: 54.6 | Date Received: 06/20/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.14	J		CV

Color Before: GRAY | Clarity Before: CLOUDY | Texture: FINE

Color After: COLORLESS | Clarity After: CLEAR | Artifacts:

Comments:

MW 9/22/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-67-024FD

16

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678

Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 17096

Matrix: SED | Lab Sample Id: 200-17096-16

% Solids: 46.2 | Date Received: 06/20/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	7.7	J	E	P
7440-43-9	Cadmium	0.93		E	P
7440-47-3	Chromium	30.3		E	P
7440-50-8	Copper	32.4		E	P
7439-92-1	Lead	26.1		E	P
7440-02-0	Nickel	33.3		E	P
7440-66-6	Zinc	127		E	P

Color Before: BROWN | Clarity Before: | Texture: FINE

Color After: TAN | Clarity After: CLOUDY | Artifacts:

Comments:

NW 9/22/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-67-024FD

16

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678
Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 17096
Matrix: SED | Lab Sample Id: 200-17096-16
% Solids: 46.2 | Date Received: 06/20/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.14	J		CV

Color Before: GRAY | Clarity Before: CLOUDY | Texture: FINE
Color After: COLORLESS | Clarity After: CLEAR | Artifacts:
Comments:

MW 9/22/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-67-012

17

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678

Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 17096

Matrix: SED | Lab Sample Id: 200-17096-17

% Solids: 43.5 | Date Received: 06/20/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	7.8	J	E	P
7440-43-9	Cadmium	0.89		E	P
7440-47-3	Chromium	30.0		E	P
7440-50-8	Copper	31.3		E	P
7439-92-1	Lead	25.2		*E	P
7440-02-0	Nickel	31.8		E	P
7440-66-6	Zinc	122		E	P

Color Before: BROWN | Clarity Before: | Texture: FINE

Color After: TAN | Clarity After: CLOUDY | Artifacts:

Comments:

JW 9/22/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-67-012

17

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678
Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 17096
Matrix: SED | Lab Sample Id: 200-17096-17
% Solids: 43.5 | Date Received: 06/20/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.14	J		CV

Color Before: GRAY | Clarity Before: CLOUDY | Texture: FINE
Color After: COLORLESS | Clarity After: CLEAR | Artifacts:
Comments:

NW 9/22/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-67-024

18

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678
Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 17096
Matrix: SED | Lab Sample Id: 200-17096-18
% Solids: 46.4 | Date Received: 06/20/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	7.6	J	E	P
7440-43-9	Cadmium	0.88		E	P
7440-47-3	Chromium	29.6		E	P
7440-50-8	Copper	32.8		E	P
7439-92-1	Lead	24.4		*E	P
7440-02-0	Nickel	31.6		E	P
7440-66-6	Zinc	122		E	P

Color Before: BROWN | Clarity Before: | Texture: FINE
Color After: TAN | Clarity After: CLOUDY | Artifacts:
Comments:

MW 9/22/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-67-024

18

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678

Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 17096

Matrix: SED | Lab Sample Id: 200-17096-18

% Solids: 46.4 | Date Received: 06/20/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.13	J		CV

Color Before: GRAY | Clarity Before: CLOUDY | Texture: FINE

Color After: COLORLESS | Clarity After: CLEAR | Artifacts:

Comments:

MW 9/22/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-67-048

19

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678
Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 17096
Matrix: SED | Lab Sample Id: 200-17096-19
% Solids: 49.0 | Date Received: 06/20/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	7.5	J	B	P
7440-43-9	Cadmium	0.88		B	P
7440-47-3	Chromium	28.7		B	P
7440-50-8	Copper	31.2		B	P
7439-92-1	Lead	25.7		~~B~~	P
7440-02-0	Nickel	31.8		B	P
7440-66-6	Zinc	122		B	P

Color Before: BROWN | Clarity Before: | Texture: FINE
Color After: TAN | Clarity After: CLOUDY | Artifacts:
Comments:

MW 9/22/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-67-048

19

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678
Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 17096
Matrix: SED | Lab Sample Id: 200-17096-19
% Solids: 49.0 | Date Received: 06/20/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.11	J		CV

Color Before: GRAY | Clarity Before: CLOUDY | Texture: FINE
Color After: COLORLESS | Clarity After: CLEAR | Artifacts:
Comments:

NW 9/22/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-85-012

20

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678
Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 17096
Matrix: SED | Lab Sample Id: 200-17096-20
% Solids: 46.3 | Date Received: 06/20/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	7.6	J	E	P
7440-43-9	Cadmium	0.81		E	P
7440-47-3	Chromium	23.7		E	P
7440-50-8	Copper	28.5		E	P
7439-92-1	Lead	23.1		*E	P
7440-02-0	Nickel	29.2		E	P
7440-66-6	Zinc	109		E	P

Color Before: BROWN | Clarity Before: | Texture: FINE
Color After: TAN | Clarity After: CLOUDY | Artifacts:
Comments:

NW 9/22/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-85-012

20

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678
Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17096
Matrix: SED Lab Sample Id: 200-17096-20
% Solids: 46.3 Date Received: 06/20/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.12	J		CV

Color Before: GRAY Clarity Before: CLOUDY Texture: FINE
Color After: COLORLESS Clarity After: CLEAR Artifacts:
Comments:

MW 9/22/13

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - SEM/AVS

3

Client Sample ID: LMR13-89-012 Lab Sample ID: 200-17096-3

Lab Name: TestAmerica Burlington Job No.: 200-17096-1

SDG ID.: 17096

Matrix: Sediment Date Sampled: 06/19/2013 13:00

Reporting Basis: DRY Date Received: 06/20/2013 12:07

% Solids: 82.4

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-43-9	Cadmium SEM	1.4	1.4	0.23	mg/Kg	U		10	6010C
7440-43-9	Cadmium SEM	0.013	0.013	0.0020	umol/g	U		10	6010C
7440-50-8	Copper SEM	2.6	7.4	0.64	mg/Kg	J		10	6010C
7440-50-8	Copper SEM	0.041	0.12	0.010	umol/g	J		10	6010C
7439-92-1	Lead SEM	3.6	3.0	1.3	mg/Kg			10	6010C
7439-92-1	Lead SEM	0.017	0.014	0.0063	umol/g			10	6010C
7440-02-0	Nickel SEM	3.6	11.9	0.86	mg/Kg	J		10	6010C
7440-02-0	Nickel SEM	0.062	0.20	0.015	umol/g	J		10	6010C
7440-66-6	Zinc SEM	13.6	6.0	1.7	mg/Kg			10	6010C
7440-66-6	Zinc SEM	0.21	0.091	0.026	umol/g			10	6010C
7439-97-6	Mercury SEM	0.0060	0.0060	0.0020	mg/Kg	U		1	7470A
7439-97-6	Mercury SEM	0.000030	0.000030	0.0000098	umol/g	U		1	7470A

MW 9/22/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY - SEM/AVS

Client Sample ID: LMR13-89-012
Lab Sample ID: 200-17096-3
3
Lab Name: TestAmerica Burlington
Job No.: 200-17096-1
SDG ID.: 17096
Matrix: Sediment
Date Sampled: 06/19/2013 13:00
Reporting Basis: DRY
Date Received: 06/20/2013 12:07
% Solids: 82.4

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
18496-25-8	Acid Volatile Sulfides (AVS)	23.9	19.1		mg/Kg			1	AVS
18496-25-8	Acid Volatile Sulfides (AVS)	0.74	0.60		umol/g			1	AVS

MW 9/22/13

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - SEM/AVS

Client Sample ID: LMR13-89-012 | Lab Sample ID: 200-17096-3 | 3

Lab Name: TestAmerica Burlington | Job No.: 200-17096-1

SDG ID.: 17096

Matrix: Sediment | Date Sampled: 06/19/2013 13:00

Reporting Basis: WET | Date Received: 06/20/2013 12:07

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	SEM/AVS Ratio	0.440	0.00100	0.00100	NONE			1	SEM

NW 9/22/13

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - SEM/AVS

7

Client Sample ID: LMR13-88-012
Lab Sample ID: 200-17096-7
Lab Name: TestAmerica Burlington
Job No.: 200-17096-1
SDG ID.: 17096
Matrix: Sediment
Date Sampled: 06/19/2013 13:20
Reporting Basis: DRY
Date Received: 06/20/2013 12:07
% Solids: 45.5

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-43-9	Cadmium SEM	2.9	2.5	0.40	mg/Kg			10	6010C
7440-43-9	Cadmium SEM	0.026	0.023	0.0036	umol/g			10	6010C
7440-50-8	Copper SEM	15.8	13.1	1.1	mg/Kg			10	6010C
7440-50-8	Copper SEM	0.25	0.21	0.018	umol/g			10	6010C
7439-92-1	Lead SEM	86.4	5.3	2.3	mg/Kg			10	6010C
7439-92-1	Lead SEM	0.42	0.025	0.011	umol/g			10	6010C
7440-02-0	Nickel SEM	9.7	21.1	1.5	mg/Kg	J		10	6010C
7440-02-0	Nickel SEM	0.17	0.36	0.026	umol/g	J		10	6010C
7440-66-6	Zinc SEM	309	10.6	3.0	mg/Kg			10	6010C
7440-66-6	Zinc SEM	4.7	0.16	0.045	umol/g			10	6010C
7439-97-6	Mercury SEM	0.011	0.011	0.0035	mg/Kg	U		1	7470A
7439-97-6	Mercury SEM	0.000053	0.000053	0.000017	umol/g	U		1	7470A

MW 9/22/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY - SEM/AVS

7

Client Sample ID: LMR13-88-012
Lab Sample ID: 200-17096-7
Lab Name: TestAmerica Burlington
Job No.: 200-17096-1
SDG ID.: 17096
Matrix: Sediment
Date Sampled: 06/19/2013 13:20
Reporting Basis: DRY
Date Received: 06/20/2013 12:07
% Solids: 45.5

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
18496-25-8	Acid Volatile Sulfides (AVS)	33.8	33.8		mg/Kg	U		1	AVS
18496-25-8	Acid Volatile Sulfides (AVS)	1.1	1.1		umol/g	U		1	AVS

MW 9/22/13

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - SEM/AVS

7

Client Sample ID: LMR13-88-012 | Lab Sample ID: 200-17096-7

Lab Name: TestAmerica Burlington | Job No.: 200-17096-1

SDG ID.: 17096

Matrix: Sediment | Date Sampled: 06/19/2013 13:20

Reporting Basis: WET | Date Received: 06/20/2013 12:07

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	SEM/AVS Ratio	NC	0.00100	0.00100	NONE			1	SEM

MW 9/22/13

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - SEM/AVS

11

Client Sample ID: LMR13-39-012
Lab Sample ID: 200-17096-11
Lab Name: TestAmerica Burlington
Job No.: 200-17096-1
SDG ID.: 17096
Matrix: Sediment
Date Sampled: 06/19/2013 14:05
Reporting Basis: DRY
Date Received: 06/20/2013 12:07
% Solids: 70.6

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-43-9	Cadmium SEM	0.41	1.6	0.26	mg/Kg	J		10	6010C
7440-43-9	Cadmium SEM	0.0037	0.015	0.0023	umol/g	J		10	6010C
7440-50-8	Copper SEM	6.4	8.5	0.74	mg/Kg	J		10	6010C
7440-50-8	Copper SEM	0.10	0.13	0.012	umol/g	J		10	6010C
7439-92-1	Lead SEM	21.2	3.4	1.5	mg/Kg			10	6010C
7439-92-1	Lead SEM	0.10	0.017	0.0073	umol/g			10	6010C
7440-02-0	Nickel SEM	5.5	13.7	0.98	mg/Kg	J		10	6010C
7440-02-0	Nickel SEM	0.093	0.23	0.017	umol/g	J		10	6010C
7440-66-6	Zinc SEM	48.0	6.8	1.9	mg/Kg			10	6010C
7440-66-6	Zinc SEM	0.73	0.10	0.029	umol/g			10	6010C
7439-97-6	Mercury SEM	0.0055	0.0068	0.0023	mg/Kg	J		1	7470A
7439-97-6	Mercury SEM	0.000027	0.000034	0.000011	umol/g	J		1	7470A

MW 9/22/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY - SEM/AVS

11

Client Sample ID: LMR13-39-012
Lab Sample ID: 200-17096-11
Lab Name: TestAmerica Burlington
Job No.: 200-17096-1
SDG ID.: 17096
Matrix: Sediment
Date Sampled: 06/19/2013 14:05
Reporting Basis: DRY
Date Received: 06/20/2013 12:07
% Solids: 70.6

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
18496-25-8	Acid Volatile Sulfides (AVS)	21.9	21.9		mg/Kg	U		1	AVS
18496-25-8	Acid Volatile Sulfides (AVS)	0.68	0.68		umol/g	U		1	AVS

NW 9/22/13

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - SEM/AVS

11

Client Sample ID: LMR13-39-012 Lab Sample ID: 200-17096-11

Lab Name: TestAmerica Burlington Job No.: 200-17096-1

SDG ID.: 17096

Matrix: Sediment Date Sampled: 06/19/2013 14:05

Reporting Basis: WET Date Received: 06/20/2013 12:07

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	SEM/AVS Ratio	NC	0.00100	0.00100	NONE			1	SEM

MW 9/22/13

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - SEM/AVS

17

Client Sample ID: LMR13-67-012 | Lab Sample ID: 200-17096-17

Lab Name: TestAmerica Burlington | Job No.: 200-17096-1

SDG ID.: 17096

Matrix: Sediment | Date Sampled: 06/19/2013 15:30

Reporting Basis: DRY | Date Received: 06/20/2013 12:07

% Solids: 43.5

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-43-9	Cadmium SEM	2.7	2.7	0.42	mg/Kg	U		10	6010C
7440-43-9	Cadmium SEM	0.024	0.024	0.0038	umol/g	U		10	6010C
7440-50-8	Copper SEM	8.1	13.8	1.2	mg/Kg	J		10	6010C
7440-50-8	Copper SEM	0.13	0.22	0.019	umol/g	J		10	6010C
7439-92-1	Lead SEM	11.2	5.6	2.4	mg/Kg			10	6010C
7439-92-1	Lead SEM	0.054	0.027	0.012	umol/g			10	6010C
7440-02-0	Nickel SEM	6.7	22.3	1.6	mg/Kg	J		10	6010C
7440-02-0	Nickel SEM	0.11	0.38	0.027	umol/g	J		10	6010C
7440-66-6	Zinc SEM	38.6	11.1	3.1	mg/Kg			10	6010C
7440-66-6	Zinc SEM	0.59	0.17	0.048	umol/g			10	6010C
7439-97-6	Mercury SEM	0.011	0.011	0.0037	mg/Kg	U		1	7470A
7439-97-6	Mercury SEM	0.000055	0.000055	0.000018	umol/g	U		1	7470A

MW 9/22/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY - SEM/AVS

17

Client Sample ID: LMR13-67-012 Lab Sample ID: 200-17096-17

Lab Name: TestAmerica Burlington Job No.: 200-17096-1

SDG ID.: 17096

Matrix: Sediment Date Sampled: 06/19/2013 15:30

Reporting Basis: DRY Date Received: 06/20/2013 12:07

% Solids: 43.5

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
18496-25-8	Acid Volatile Sulfides (AVS)	35.6	35.6		mg/Kg	U		1	AVS
18496-25-8	Acid Volatile Sulfides (AVS)	1.1	1.1		umol/g	U		1	AVS

NW 9/22/13

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - SEM/AVS

17

Client Sample ID: LMR13-67-012 Lab Sample ID: 200-17096-17

Lab Name: TestAmerica Burlington Job No.: 200-17096-1

SDG ID.: 17096

Matrix: Sediment Date Sampled: 06/19/2013 15:30

Reporting Basis: WET Date Received: 06/20/2013 12:07

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	SEM/AVS Ratio	NC	0.00100	0.00100	NONE			1	SEM

NW 9/22/13

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - SEM/AVS

20

Client Sample ID: LMR13-85-012
Lab Sample ID: 200-17096-20
Lab Name: TestAmerica Burlington
Job No.: 200-17096-1
SDG ID.: 17096
Matrix: Sediment
Date Sampled: 06/19/2013 14:50
Reporting Basis: DRY
Date Received: 06/20/2013 12:07
% Solids: 46.3

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-43-9	Cadmium SEM	2.5	2.5	0.39	mg/Kg	U		10	6010C
7440-43-9	Cadmium SEM	0.022	0.022	0.0035	umol/g	U		10	6010C
7440-50-8	Copper SEM	7.7	12.8	1.1	mg/Kg	J		10	6010C
7440-50-8	Copper SEM	0.12	0.20	0.018	umol/g	J		10	6010C
7439-92-1	Lead SEM	12.4	5.2	2.3	mg/Kg			10	6010C
7439-92-1	Lead SEM	0.060	0.025	0.011	umol/g			10	6010C
7440-02-0	Nickel SEM	6.4	20.6	1.5	mg/Kg	J		10	6010C
7440-02-0	Nickel SEM	0.11	0.35	0.025	umol/g	J		10	6010C
7440-66-6	Zinc SEM	35.7	10.3	2.9	mg/Kg			10	6010C
7440-66-6	Zinc SEM	0.55	0.16	0.044	umol/g			10	6010C
7439-97-6	Mercury SEM	0.010	0.010	0.0034	mg/Kg	U		1	7470A
7439-97-6	Mercury SEM	0.000051	0.000051	0.000017	umol/g	U		1	7470A

MW 9/22/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY - SEM/AVS

20

Client Sample ID: LMR13-85-012 Lab Sample ID: 200-17096-20

Lab Name: TestAmerica Burlington Job No.: 200-17096-1

SDG ID.: 17096

Matrix: Sediment Date Sampled: 06/19/2013 14:50

Reporting Basis: DRY Date Received: 06/20/2013 12:07

% Solids: 46.3

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
18496-25-8	Acid Volatile Sulfides (AVS)	33.0	33.0		mg/Kg	U		1	AVS
18496-25-8	Acid Volatile Sulfides (AVS)	1.0	1.0		umol/g	U		1	AVS

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1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - SEM/AVS

20

Client Sample ID: LMR13-85-012 Lab Sample ID: 200-17096-20

Lab Name: TestAmerica Burlington Job No.: 200-17096-1

SDG ID.: 17096

Matrix: Sediment Date Sampled: 06/19/2013 14:50

Reporting Basis: WET Date Received: 06/20/2013 12:07

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	SEM/AVS Ratio	NC	0.00100	0.00100	NONE			1	SEM

NW 9/22/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: LMR13-55-048
Lab Sample ID: 200-17096-1
Lab Name: TestAmerica Burlington
Job No.: 200-17096-1
SDG ID.: 17096
Matrix: Sediment
Date Sampled: 06/19/2013 11:25
Reporting Basis: WET
Date Received: 06/20/2013 12:07
% Solids: 68.8

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	34400	J 1000		mg/Kg		H	1	Lloyd Kahn

NW 9/22/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

2

Client Sample ID: LMR13-55-072
Lab Sample ID: 200-17096-2
Lab Name: TestAmerica Burlington
Job No.: 200-17096-1
SDG ID.: 17096
Matrix: Sediment
Date Sampled: 06/19/2013 11:35
Reporting Basis: WET
Date Received: 06/20/2013 12:07
% Solids: 53.4

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	47100	J 1000		mg/Kg			1	Lloyd Kahn

NW 9/22/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

3

Client Sample ID: LMR13-89-012
Lab Sample ID: 200-17096-3
Lab Name: TestAmerica Burlington
Job No.: 200-17096-1
SDG ID.: 17096
Matrix: Sediment
Date Sampled: 06/19/2013 13:00
Reporting Basis: WET
Date Received: 06/20/2013 12:07
% Solids: 82.4

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	18000	J 1000		mg/Kg		H	1	Lloyd Kahn

NW 9/22/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

4

Client Sample ID: LMR13-89-024 Lab Sample ID: 200-17096-4

Lab Name: TestAmerica Burlington Job No.: 200-17096-1

SDG ID.: 17096

Matrix: Sediment Date Sampled: 06/19/2013 13:05

Reporting Basis: WET Date Received: 06/20/2013 12:07

% Solids: 77.6

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	19100	J 1000		mg/Kg		H	1	Lloyd Kahn

NW 9/22/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

5

Client Sample ID: LMR13-88-012FD
Lab Sample ID: 200-17096-5
Lab Name: TestAmerica Burlington
Job No.: 200-17096-1
SDG ID.: 17096
Matrix: Sediment
Date Sampled: 06/19/2013 13:20
Reporting Basis: WET
Date Received: 06/20/2013 12:07
% Solids: 45.3

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	67800	J 1000		mg/Kg		~~H~~	1	Lloyd Kahn

NWS 9/22/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

6

Client Sample ID: LMR13-39-048
Lab Sample ID: 200-17096-6
Lab Name: TestAmerica Burlington
Job No.: 200-17096-1
SDG ID.: 17096
Matrix: Sediment
Date Sampled: 06/19/2013 14:25
Reporting Basis: WET
Date Received: 06/20/2013 12:07
% Solids: 65.4

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	25300	J 1000		mg/Kg			1	Lloyd Kahn

NMJ 9/22/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

7

Client Sample ID: LMR13-88-012
Lab Sample ID: 200-17096-7
Lab Name: TestAmerica Burlington
Job No.: 200-17096-1
SDG ID.: 17096
Matrix: Sediment
Date Sampled: 06/19/2013 13:20
Reporting Basis: WET
Date Received: 06/20/2013 12:07
% Solids: 45.5

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	68800	J 1000		mg/Kg		J	1	Lloyd Kahn

NW 9/22/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

8

Client Sample ID: LMR13-88-024 Lab Sample ID: 200-17096-8

Lab Name: TestAmerica Burlington Job No.: 200-17096-1

SDG ID.: 17096

Matrix: Sediment Date Sampled: 06/19/2013 13:30

Reporting Basis: WET Date Received: 06/20/2013 12:07

% Solids: 59.2

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	50400	J 1000		mg/Kg		✓	1	Lloyd Kahn

NW 9/22/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

9

Client Sample ID: LMR13-88-048 | Lab Sample ID: 200-17096-9

Lab Name: TestAmerica Burlington | Job No.: 200-17096-1

SDG ID.: 17096

Matrix: Sediment | Date Sampled: 06/19/2013 13:40

Reporting Basis: WET | Date Received: 06/20/2013 12:07

% Solids: 58.4

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	53900	J 1000		mg/Kg			1	Lloyd Kahn

MW 9/22/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

10

Client Sample ID: LMR13-39-024FD
Lab Sample ID: 200-17096-10
Lab Name: TestAmerica Burlington
Job No.: 200-17096-1
SDG ID.: 17096
Matrix: Sediment
Date Sampled: 06/19/2013 14:15
Reporting Basis: WET
Date Received: 06/20/2013 12:07
% Solids: 72.9

CAS No.	Analyte	Result		RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	22600	J	1000		mg/Kg		P	1	Lloyd Kahn

NW 9/22/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

11

Client Sample ID: LMR13-39-012 | Lab Sample ID: 200-17096-11

Lab Name: TestAmerica Burlington | Job No.: 200-17096-1

SDG ID.: 17096

Matrix: Sediment | Date Sampled: 06/19/2013 14:05

Reporting Basis: WET | Date Received: 06/20/2013 12:07

% Solids: 70.6

CAS No.	Analyte	Result		RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	16500	J	1000		mg/Kg		H	1	Lloyd Kahn

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1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

12

Client Sample ID: LMR13-39-024 Lab Sample ID: 200-17096-12

Lab Name: TestAmerica Burlington Job No.: 200-17096-1

SDG ID.: 17096

Matrix: Sediment Date Sampled: 06/19/2013 14:15

Reporting Basis: WET Date Received: 06/20/2013 12:07

% Solids: 72.5

CAS No.	Analyte	Result		RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	14200	J	1000		mg/Kg			1	Lloyd Kahn

NW 9/22/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

13

Client Sample ID: LMR13-39-072
Lab Sample ID: 200-17096-13
Lab Name: TestAmerica Burlington
Job No.: 200-17096-1
SDG ID.: 17096
Matrix: Sediment
Date Sampled: 06/19/2013 14:35
Reporting Basis: WET
Date Received: 06/20/2013 12:07
% Solids: 75.6

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	20400	J 1000		mg/Kg		H	1	Lloyd Kahn

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1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

14

Client Sample ID: LMR13-85-024
Lab Sample ID: 200-17096-14
Lab Name: TestAmerica Burlington
Job No.: 200-17096-1
SDG ID.: 17096
Matrix: Sediment
Date Sampled: 06/19/2013 15:00
Reporting Basis: WET
Date Received: 06/20/2013 12:07
% Solids: 50.7

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	30300 J	1000		mg/Kg		H	1	Lloyd Kahn

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1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

15

Client Sample ID: LMR13-85-048 | Lab Sample ID: 200-17096-15

Lab Name: TestAmerica Burlington | Job No.: 200-17096-1

SDG ID.: 17096

Matrix: Sediment | Date Sampled: 06/19/2013 15:10

Reporting Basis: WET | Date Received: 06/20/2013 12:07

% Solids: 54.6

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	26900	J 1000		mg/Kg		H	1	Lloyd Kahn

NW 9/22/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

16

Client Sample ID: LMR13-67-024FD
Lab Sample ID: 200-17096-16
Lab Name: TestAmerica Burlington
Job No.: 200-17096-1
SDG ID.: 17096
Matrix: Sediment
Date Sampled: 06/19/2013 15:40
Reporting Basis: WET
Date Received: 06/20/2013 12:07
% Solids: 46.2

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	30200 J	1000		mg/Kg		J	1	Lloyd Kahn

NW 9/22/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

17

Client Sample ID: LMR13-67-012 Lab Sample ID: 200-17096-17

Lab Name: TestAmerica Burlington Job No.: 200-17096-1

SDG ID.: 17096

Matrix: Sediment Date Sampled: 06/19/2013 15:30

Reporting Basis: WET Date Received: 06/20/2013 12:07

% Solids: 43.5

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	30200	J 1000		mg/Kg		J	1	Lloyd Kahn

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1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

18

Client Sample ID: LMR13-67-024 Lab Sample ID: 200-17096-18

Lab Name: TestAmerica Burlington Job No.: 200-17096-1

SDG ID.: 17096

Matrix: Sediment Date Sampled: 06/19/2013 15:40

Reporting Basis: WET Date Received: 06/20/2013 12:07

% Solids: 46.4

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	31600 J	1000		mg/Kg		H	1	Lloyd Kahn

MW 9/22/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

19

Client Sample ID: LMR13-67-048 | Lab Sample ID: 200-17096-19

Lab Name: TestAmerica Burlington | Job No.: 200-17096-1

SDG ID.: 17096

Matrix: Sediment | Date Sampled: 06/19/2013 15:50

Reporting Basis: WET | Date Received: 06/20/2013 12:07

% Solids: 49.0

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	28600 J	1000		mg/Kg			1	Lloyd Kahn

NW 9/22/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

20

Client Sample ID: LMR13-85-012
Lab Sample ID: 200-17096-20
Lab Name: TestAmerica Burlington
Job No.: 200-17096-1
SDG ID.: 17096
Matrix: Sediment
Date Sampled: 06/19/2013 14:50
Reporting Basis: WET
Date Received: 06/20/2013 12:07
% Solids: 46.3

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	30500 J	1000		mg/Kg		H	1	Lloyd Kahn

MW 9/22/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: LMR13-55-048
Lab Sample ID: 200-17096-1
Lab Name: TestAmerica Canton
Job No.: 200-17096-1
SDG ID.: 17096
Matrix: Sediment
Date Sampled: 06/19/2013 11:25
Reporting Basis: DRY
Date Received: 06/20/2013 12:07
% Solids: 68.8

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	2040 J	290	128	mg/Kg			1	9071B

NW 9/22/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

2

Client Sample ID: LMR13-55-072
Lab Sample ID: 200-17096-2
Lab Name: TestAmerica Canton
Job No.: 200-17096-1
SDG ID.: 17096
Matrix: Sediment
Date Sampled: 06/19/2013 11:35
Reporting Basis: DRY
Date Received: 06/20/2013 12:07
% Solids: 53.4

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	3530 J	374	165	mg/Kg			1	9071B

MW 9/22/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

3

Client Sample ID: LMR13-89-012 | Lab Sample ID: 200-17096-3

Lab Name: TestAmerica Canton | Job No.: 200-17096-1

SDG ID.: 17096

Matrix: Sediment | Date Sampled: 06/19/2013 13:00

Reporting Basis: DRY | Date Received: 06/20/2013 12:07

% Solids: 82.4

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	278	U 241	107	mg/Kg			1	9071B

MW 9/22/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

4

Client Sample ID: LMR13-89-024 Lab Sample ID: 200-17096-4

Lab Name: TestAmerica Canton Job No.: 200-17096-1

SDG ID.: 17096

Matrix: Sediment Date Sampled: 06/19/2013 13:05

Reporting Basis: DRY Date Received: 06/20/2013 12:07

% Solids: 77.6

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	258	U 258	114	mg/Kg			1	9071B

MW 9/22/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

6

Client Sample ID: LMR13-39-048
Lab Sample ID: 200-17096-6
Lab Name: TestAmerica Canton
Job No.: 200-17096-1
SDG ID.: 17096
Matrix: Sediment
Date Sampled: 06/19/2013 14:25
Reporting Basis: DRY
Date Received: 06/20/2013 12:07
% Solids: 65.4

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	460	U 307	136	mg/Kg		B	1	9071B

NW 9/22/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

7

Client Sample ID: LMR13-88-012 | Lab Sample ID: 200-17096-7

Lab Name: TestAmerica Canton | Job No.: 200-17096-1

SDG ID.: 17096

Matrix: Sediment | Date Sampled: 06/19/2013 13:20

Reporting Basis: DRY | Date Received: 06/20/2013 12:07

% Solids: 45.5

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	6510 J	440	194	mg/Kg		P	1	9071B

NW 9/22/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

8

Client Sample ID: LMR13-88-024
Lab Sample ID: 200-17096-8
Lab Name: TestAmerica Canton
Job No.: 200-17096-1
SDG ID.: 17096
Matrix: Sediment
Date Sampled: 06/19/2013 13:30
Reporting Basis: DRY
Date Received: 06/20/2013 12:07
% Solids: 59.2

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	6230	J 337	149	mg/Kg		B	1	9071B

NW 9/22/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

9

Client Sample ID: LMR13-88-048
Lab Sample ID: 200-17096-9
Lab Name: TestAmerica Canton
Job No.: 200-17096-1
SDG ID.: 17096
Matrix: Sediment
Date Sampled: 06/19/2013 13:40
Reporting Basis: DRY
Date Received: 06/20/2013 12:07
% Solids: 58.4

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	7160	J 342	151	mg/Kg			1	9071B

NW 9/22/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

11

Client Sample ID: LMR13-39-012
Lab Sample ID: 200-17096-11
Lab Name: TestAmerica Canton
Job No.: 200-17096-1
SDG ID.: 17096
Matrix: Sediment
Date Sampled: 06/19/2013 14:05
Reporting Basis: DRY
Date Received: 06/20/2013 12:07
% Solids: 70.6

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	284 ~~270~~	U 284	126	mg/Kg			1	9071B

NW 9/22/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: LMR13-39-024 Lab Sample ID: 200-17096-12 12

Lab Name: TestAmerica Canton Job No.: 200-17096-1

SDG ID.: 17096

Matrix: Sediment Date Sampled: 06/19/2013 14:15

Reporting Basis: DRY Date Received: 06/20/2013 12:07

% Solids: 72.5

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	275 ~~261~~	U 275	121	mg/Kg		B	1	9071B

NW 9/22/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

13

Client Sample ID: LMR13-39-072 | Lab Sample ID: 200-17096-13

Lab Name: TestAmerica Canton | Job No.: 200-17096-1

SDG ID.: 17096

Matrix: Sediment | Date Sampled: 06/19/2013 14:35

Reporting Basis: DRY | Date Received: 06/20/2013 12:07

% Solids: 75.6

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	264 ~~132~~	U 264	116	mg/Kg	J	~~B~~	1	9071B

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1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

14

Client Sample ID: LMR13-85-024
Lab Sample ID: 200-17096-14
Lab Name: TestAmerica Canton
Job No.: 200-17096-1
SDG ID.: 17096
Matrix: Sediment
Date Sampled: 06/19/2013 15:00
Reporting Basis: DRY
Date Received: 06/20/2013 12:07
% Solids: 50.7

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	549	J 392	173	mg/Kg		P	1	9071B

NW 9/22/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

15

Client Sample ID: LMR13-85-048
Lab Sample ID: 200-17096-15
Lab Name: TestAmerica Canton
Job No.: 200-17096-1
SDG ID.: 17096
Matrix: Sediment
Date Sampled: 06/19/2013 15:10
Reporting Basis: DRY
Date Received: 06/20/2013 12:07
% Solids: 54.6

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	711	J 365	161	mg/Kg			1	9071B

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1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

17

Client Sample ID: LMR13-67-012
Lab Sample ID: 200-17096-17
Lab Name: TestAmerica Canton
Job No.: 200-17096-1
SDG ID.: 17096
Matrix: Sediment
Date Sampled: 06/19/2013 15:30
Reporting Basis: DRY
Date Received: 06/20/2013 12:07
% Solids: 43.5

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	646	J 461	204	mg/Kg		J	1	9071B

MW 9/22/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

18

Client Sample ID: LMR13-67-024
Lab Sample ID: 200-17096-18
Lab Name: TestAmerica Canton
Job No.: 200-17096-1
SDG ID.: 17096
Matrix: Sediment
Date Sampled: 06/19/2013 15:40
Reporting Basis: DRY
Date Received: 06/20/2013 12:07
% Solids: 46.4

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	865	J 433	191	mg/Kg		J	1	9071B

NW 9/22/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

19

Client Sample ID: LMR13-67-048
Lab Sample ID: 200-17096-19
Lab Name: TestAmerica Canton
Job No.: 200-17096-1
SDG ID.: 17096
Matrix: Sediment
Date Sampled: 06/19/2013 15:50
Reporting Basis: DRY
Date Received: 06/20/2013 12:07
% Solids: 49.0

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	549	J 407	180	mg/Kg		B	1	9071B

MW 9/22/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

20

Client Sample ID: LMR13-85-012
Lab Sample ID: 200-17096-20
Lab Name: TestAmerica Canton
Job No.: 200-17096-1
SDG ID.: 17096
Matrix: Sediment
Date Sampled: 06/19/2013 14:50
Reporting Basis: DRY
Date Received: 06/20/2013 12:07
% Solids: 46.3

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	498	J 433	191	mg/Kg		J	1	9071B

MW 9/22/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

21

Client Sample ID: LMR13-89-024FD
Lab Sample ID: 200-17096-21
Lab Name: TestAmerica Canton
Job No.: 200-17096-1
SDG ID.: 17096
Matrix: Sediment
Date Sampled: 06/19/2013 13:05
Reporting Basis: DRY
Date Received: 06/20/2013 12:07
% Solids: 78.7

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	251	251	111	mg/Kg	U		1	9071B

MW 9/22/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

22

Client Sample ID: LMR13-85-024FD
Lab Sample ID: 200-17096-22
Lab Name: TestAmerica Canton
Job No.: 200-17096-1
SDG ID.: 17096
Matrix: Sediment
Date Sampled: 06/19/2013 15:00
Reporting Basis: DRY
Date Received: 06/20/2013 12:07
% Solids: 49.8

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	645	J 391	173	mg/Kg			1	9071B

NW 9/22/13

ENVIRONMENTAL
Data Services, Inc.

DATA VALIDATION SUMMARY REPORT
LOWER MAUMEE RIVER, TOLEDO, OHIO

Client: EA Engineering, Science & Technology, Inc., Hunt Valley, Maryland
SDG: 200-17099
Laboratory: Test America Laboratories, Burlington, Vermont
Test America Laboratories, Canton, Ohio
Site: Lower Maumee River, Maumee Area of Concern, Toledo, Ohio
Date: September 22, 2013

SVOC			
EDS ID	Client Sample ID	Laboratory Sample ID	Matrix
1	LMR13-30-072	200-17099-1	Sediment
1RE	LMR13-30-072RE	200-17099-1RE	Sediment
2	LMR13-86-072	200-17099-2	Sediment
3	LMR13-33-072	200-17099-3	Sediment
4	LMR13-33-096	200-17099-4	Sediment
4MS	LMR13-33-096MS	200-17099-4MS	Sediment
4MSD	LMR13-33-096MSD	200-17099-4MSD	Sediment
5	LMR13-54-012	200-17099-5	Sediment
6	LMR13-54-024	200-17099-6	Sediment
7	LMR13-54-048	200-17099-7	Sediment
9	LMR13-33-024	200-17099-9	Sediment
10	LMR13-33-048	200-17099-10	Sediment
11	LMR13-54-072	200-17099-11	Sediment
12	LMR13-54-096	200-17099-12	Sediment
13	LMR13-54-120	200-17099-13	Sediment
14	LMR13-30-096	200-17099-14	Sediment
15	LMR13-30-120	200-17099-15	Sediment
16	LMR13-33-012	200-17099-16	Sediment
17	LMR13-55-012	200-17099-17	Sediment
20	LMR13-55-024	200-17099-20	Sediment
21	LMR13-33-048FD	200-17099-21	Sediment
22	LMR13-54-024FD	200-17099-22	Sediment

PAH 34			
EDS ID	Client Sample ID	Laboratory Sample ID	Matrix
5	LMR13-54-012	200-17099-5	Sediment
16	LMR13-33-012	200-17099-16	Sediment
17	LMR13-55-012	200-17099-17	Sediment

PCBs/Metals/Mercury/TOC			
EDS ID	Client Sample ID	Laboratory Sample ID	Matrix
1	LMR13-30-072	200-17099-1	Sediment
2	LMR13-86-072	200-17099-2	Sediment
3	LMR13-33-072	200-17099-3	Sediment
4	LMR13-33-096	200-17099-4	Sediment

PCBs/Metals/Mercury/TOC			
EDS ID	Client Sample ID	Laboratory Sample ID	Matrix
5	LMR13-54-012	200-17099-5	Sediment
6	LMR13-54-024	200-17099-6	Sediment
7	LMR13-54-048	200-17099-7	Sediment
8	LMR13-33-024FD	200-17099-8	Sediment
9	LMR13-33-024	200-17099-9	Sediment
10	LMR13-33-048	200-17099-10	Sediment
11	LMR13-54-072	200-17099-11	Sediment
12	LMR13-54-096	200-17099-12	Sediment
13	LMR13-54-120	200-17099-13	Sediment
14	LMR13-30-096	200-17099-14	Sediment
15	LMR13-30-120	200-17099-15	Sediment
15MS	LMR13-30-120MS	200-17099-15MS	Sediment
15MSD	LMR13-30-120MSD	200-17099-15MSD	Sediment
16	LMR13-33-012	200-17099-16	Sediment
17	LMR13-55-012	200-17099-17	Sediment
18	LMR13-54-048FD	200-17099-18	Sediment
19	LMR13-55-024FD	200-17099-19	Sediment
20	LMR13-55-024	200-17099-20	Sediment

AVS/SEM			
EDS ID	Client Sample ID	Laboratory Sample ID	Matrix
5	LMR13-54-012	200-17099-5	Sediment
16	LMR13-33-012	200-17099-16	Sediment
17	LMR13-55-012	200-17099-17	Sediment

HEM			
EDS ID	Client Sample ID	Laboratory Sample ID	Matrix
1	LMR13-30-072	200-17099-1	Sediment
2	LMR13-86-072	200-17099-2	Sediment
3	LMR13-33-072	200-17099-3	Sediment
4	LMR13-33-096	200-17099-4	Sediment
5	LMR13-54-012	200-17099-5	Sediment
6	LMR13-54-024	200-17099-6	Sediment
7	LMR13-54-048	200-17099-7	Sediment
8	LMR13-33-024FD	200-17099-8	Sediment
9	LMR13-33-024	200-17099-9	Sediment
10	LMR13-33-048	200-17099-10	Sediment
11	LMR13-54-072	200-17099-11	Sediment
12	LMR13-54-096	200-17099-12	Sediment
13	LMR13-54-120	200-17099-13	Sediment
14	LMR13-30-096	200-17099-14	Sediment
15	LMR13-30-120	200-17099-15	Sediment
15MS	LMR13-30-120MS	200-17099-15MS	Sediment
15MSD	LMR13-30-120MSD	200-17099-15MSD	Sediment
16	LMR13-33-012	200-17099-16	Sediment
17	LMR13-55-012	200-17099-17	Sediment
20	LMR13-55-024	200-17099-20	Sediment
21	LMR13-33-048FD	200-17099-21	Sediment
22	LMR13-54-024FD	200-17099-22	Sediment

A full data validation was performed on the analytical data for twenty-two sediment samples collected on June 19, 2013 by EA Engineering at the Lower Maumee River site in Toledo, Ohio. The samples were analyzed under the Environmental Protection Agency (USEPA) Contract Laboratory Program (CLP) Multi-Media Multi-Concentration Organics Analysis SOM01.2 and Inorganic Analysis ILM05.4 and the Test Methods for the Evaluation of Solid Waste, USEPA SW-846, Third Edition, September 1986, with revisions.

Specific method references are as follows:

Analysis	*Method References*
SVOC	USEPA CLP SOM01.2
PAH 34	USEPA CLP SOM01.2
PCBs	USEPA CLP SOM01.2
Michigan Metals & Mercury	USEPA CLP ISM01.3
AVS/SEM	USEPA SW-846 Methods 6010C/7470A
TOC	Lloyd Kahn
Oil & Grease (HEM)	USEPA SW-846 Method 9071B

The data have been validated according to the protocols and quality control (QC) requirements of the analytical methods, the Great Lakes Legacy Act, March 2010, the Quality Assurance Project Plan for Phase 2 of the Lower Maumee River Site Characterization, May 2013, and the USEPA National Functional Guidelines for Organic Data Review as follows:

- The USEPA "Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review," June 2008;
- The USEPA "Contract Laboratory Program National Functional Guidelines for Inorganic Superfund Data Review," January 2010;
- and the reviewer's professional judgment.

The following items/criteria were reviewed for this report:

Organics

- Holding times and sample preservation
- Gas Chromatography/Mass Spectroscopy (GC/MS) Tuning
- Initial and continuing calibration summaries
- Method blank and field blank contamination
- Surrogate Spike recoveries
- Matrix Spike/Matrix Spike Duplicate (MS/MSD) recoveries
- Laboratory Control Sample (LCS) recoveries
- Internal standard area and retention time summary forms
- Target Compound Identification
- Compound Quantitation
- Tentatively Identified Compounds (TICs)
- Field Duplicate sample precision

Inorganics

- Holding times and sample preservation
- ICP/MS Tuning
- Initial and continuing calibration verifications
- Method blank and field blank contamination
- ICP Interference Check Sample
- Laboratory Control Sample (LCS) recoveries
- Matrix Spike Analysis
- Duplicate Sample Analysis
- ICP Serial Dilution
- Compound Quantitation
- Field Duplicate sample precision

Overall Usability Issues:

There were minor rejections of data. This data cannot be used in the decision-making process for this project.

- Three SVOC compounds were rejected in one sample due to severely low surrogate recoveries.

Overall the remaining data is acceptable for the intended purposes as qualified for the deficiencies detailed in this report.

Please note that any results qualified (U) due to blank contamination may be then qualified (J) due to another action. Therefore, the results may be qualified (UJ) due to the culmination of the blank contaminations and actions from other exceedences of QC criteria.

Semivolatile Organic Compounds (SVOC)

Holding Times

- All samples were extracted within 14 days for sediment samples and analyzed within 40 days for all samples except the following.

Sample	Date Sampled	Date Extracted	# of Days	Qualifier
1	06/28/13	08/10/13	43	J/UJ
1RE	06/28/13	08/12/13	45	J/UJ
3	06/28/13	08/13/13	46	J/UJ
10	06/28/13	08/13/13	46	J/UJ
13	06/28/13	08/15/13	48	J/UJ - Unless (R)
14	06/28/13	08/13/13	46	J/UJ
16	06/28/13	08/13/13	46	J/UJ

GC/MS Tuning

- All criteria were met.

Initial Calibration

- All %RSD and mean RRF criteria were met except the following.

ICAL Date	Compound	%RSD/RRF	Qualifier	Affected Samples
07/29/13	Pentachlorophenol	21.2%	J/UJ	4, 5, 17
	Pyrene	22.6%	J/UJ	
08/02/13	Benzo(b)fluoranthene	23.7%	J/UJ	2, 6, 7, 9, 11, 12, 15, 20-22
	Dibenzo(a,h)anthracene	20.6%	J/UJ	

Continuing Calibration

- All %D and RRF criteria were met except the following.

CCAL Date	Compound	%D/RRF	Qualifier	Affected Samples
08/07/13 (1451)	Indeno(1,2,3-cd)pyrene	25.6%	J/UJ	2, 6, 7, 9, 11, 12, 15, 20-22
08/07/13 (2328)	Hexachlorocyclopentadiene	62.4%	J/UJ	
08/07/13 (1731)	Indeno(1,2,3-cd)pyrene	27.0%	J/UJ	4, 5, 17
	Dibenzo(a,h)anthracene	29.0%	J/UJ	
	Benzo(g,h,i)perylene	30.5%	J/UJ	
08/11/13 (0325)	Hexachlorocyclopentadiene	57.3%	None	See HT
08/12/13 (1943)	Hexachlorocyclopentadiene	61.2%	None	See HT
08/14/13 (0257)	Hexachlorocyclopentadiene	62.7%	None	See HT

Method Blank

- The method blanks exhibited the following contamination.

Blank ID	Compound	Conc. ug/kg	Qualifier	Affected Samples
SBLK5N	Butylbenzylphthalate	22	None	ND
	Bis(2-ethylhexyl)phthalate	37	U	5
SBLKNN	Butylbenzylphthalate	27	U	13
	Bis(2-ethylhexyl)phthalate	49	U	10, 13
SBLKN5	Acetophenone	2.9	U	2
	di-n-Butylphthalate	12	U	21
	Butylbenzylphthalate	22	None	ND
	Bis(2-ethylhexyl)phthalate	36	U	6, 20, 21, 22

Field Blank

- Field QC samples were not analyzed.

Surrogate Spike Recoveries

- All samples exhibited acceptable surrogate %R values except the following.

Sample ID	Surrogate	%R	Qualifier
4	Pyrene-d10	50%	J/UJ - Associated Compounds
7	Phenol-d5	107%	None - ND
9	Phenol-d5	105%	None - ND
	4-Methylphenol-d8	108%	J - Associated Positive Compounds
10	4-Methylphenol-d8	103%	None - ND
11	4-Methylphenol-d8	102%	None - ND
12	Phenol-d5	111%	None - ND
13	bis(2-Chloroethyl)ether-d8	101%	None - ND
	4-Methylphenol-d8	112%	
	4-Chloroaniline-d4	0%	R - Associated Compounds
20	Anthracene-d10	106%	J - Associated Positive Compounds
21	2,4-Dichlorophenol-d3	15%	J/UJ - Associated Compounds
22	Phenol-d5	111%	None - ND
	4-Methylphenol-d8	123%	
	Acenaphthylene-d8	100%	J - Associated Positive Compounds

Matrix Spike/Matrix Spike Duplicate (MS/MSD) Recoveries

- The MS/MSD sample exhibited acceptable %R and RPD values except the following.

MS/MSD Sample ID	Compound	MS %R/MSD %R/ RPD	Qualifier
4	Pyrene	OK/OK/75	None for RPD Alone

Laboratory Control Samples

- A LCS sample was not analyzed.

Internal Standard (IS) Area Performance

- All internal standards met response and retention time (RT) criteria except the following.

Sample ID	Internal Standard	Area Count	Qualifier
1	IS5=Chrysene-d12	Low	None - See HT
	IS6=Perylene-d12	Low	
1RE	IS5=Chrysene-d12	Low	None - See HT
	IS6=Perylene-d12	Low	
4	IS1=1,4-Dichlorobenzene-d4	High	J - Positive Associated Compounds
	IS2=Naphthalene-d8	High	
	IS3=Acenaphthene-d10	High	

Target Compound Identification

- All mass spectra and quantitation criteria were met.

Compound Quantitation

- Several samples were analyzed at various dilutions due to high concentrations of target compounds. No action was required.

Field Duplicate Sample Precision

- Field duplicate results are summarized below.

SVOC				
Compound	LMR13-33-048 ug/kg	LMR13-33-048FD ug/kg	RPD	Qualifier
Naphthalene	440	280	44%	None
2-Methylnaphthalene	160	120	29%	
1,1'-Biphenyl	35	20	55%	
Acenaphthylene	63	90	35%	
Acenaphthene	290	210	32%	
Dibenzofuran	120	100	18%	
Fluorene	550	350	44%	
Phenanthrene	2800	1300	73%	
Anthracene	800	350	78%	
di-n-Butylphthalate	46	300U	NC	
Fluoranthene	2400	2200	9%	
Pyrene	3500	2800	22%	
Benzo(a)anthracene	1600	1800	12%	
Chrysene	1800	1200	40%	
Benzo(b)fluoranthene	1100	1500	31%	
Benzo(k)fluoranthene	970	860	12%	
Benzo(a)pyrene	1200	1200	0%	
Indeno(1,2,3-cd)pyrene	720	590	20%	
Dibenzo(a,h)anthracene	290	280	4%	
Benzo(g,h,i)perylene	720	580	22%	

SVOC				
Compound	LMR13-54-024 ug/kg	LMR13-54-024FD ug/kg	RPD	Qualifier
Naphthalene	7800	7100	9%	None
2-Methylnaphthalene	1300	1400	7%	
Acenaphthylene	720	850	17%	
Acenaphthene	6400	8200	25%	
Dibenzofuran	3900	3400	14%	
Fluorene	7300	8600	16%	
Phenanthrene	32000	33000	3%	
Anthracene	9400	9900	5%	
Carbazole	250	210	17%	
Fluoranthene	35000	34000	3%	

SVOC				
Compound	LMR13-54-024 ug/kg	LMR13-54-024FD ug/kg	RPD	Qualifier
Pyrene	19000	27000	35%	None
Benzo(a)anthracene	13000	16000	21%	
Chrysene	13000	15000	14%	
Benzo(b)fluoranthene	13000	12000	8%	
Benzo(k)fluoranthene	8800	13000	39%	
Benzo(a)pyrene	12000	13000	8%	
Indeno(1,2,3-cd)pyrene	5400	7400	31%	
Dibenzo(a,h)anthracene	1700	2400	34%	
Benzo(g,h,i)perylene	5900	7600	25%	

Polynuclear Aromatic Hydrocarbons (PAH 34)

Holding Times

- All samples were extracted within 14 days for sediment samples and analyzed within 40 days for all samples.

GC/MS Tuning

- All criteria were met.

Initial Calibration

- All %RSD and mean RRF criteria were met.

Continuing Calibration

- All %D and RRF criteria were met.

Method Blank

- The method blanks exhibited the following contamination.

Blank ID	Compound	Conc. ug/kg	Qualifier	Affected Samples
SBLKN5	Naphthalene	0.17	None	All >5X
	Benzo(k)fluoranthene	0.16	None	All >5X
	Total 16 PPAH	0.33	J	All Samples
	Total PAH	0.33	J	

Field Blank

- Field QC samples were not analyzed.

Surrogate Spike Recoveries

- All samples exhibited acceptable surrogate %R values.

Matrix Spike/Matrix Spike Duplicate (MS/MSD) Recoveries

- A MS/MSD sample was not analyzed.

Laboratory Control Samples

- A LCS sample was not analyzed.

Internal Standard (IS) Area Performance

- All internal standards met response and retention time (RT) criteria.

Target Compound Identification

- All mass spectra and quantitation criteria were met.

Compound Quantitation

- All samples were analyzed at various dilutions due to high concentrations of target compounds. Several compound concentrations exceeded the linear range of the instrument and were flagged (E) by the laboratory and further qualified as estimated (J).
- Total 16 PPAH and Total PAH were estimated (J) in all samples due to blank contamination.

Field Duplicate Sample Precision

- Field duplicate samples were not analyzed.

Polychlorinated Biphenyls (PCBs)

Holding Times

- All samples were extracted within 14 days for sediment samples and analyzed within 40 days.

Initial Calibration

- All %RSD and/or correlation coefficient criteria were met.

Continuing Calibration

- All %D criteria were met.

Method Blank

- The method blanks were free of contamination.

Field Blank

- Field QC samples were not analyzed.

Surrogate Spike Recoveries

- All samples exhibited acceptable surrogate recoveries.

Matrix Spike/Matrix Spike Duplicate (MS/MSD) Recoveries

- The MS/MSD samples exhibited acceptable %R and RPD values.

Laboratory Control Samples

- The LCS sample exhibited acceptable %R values.

Compound Quantitation

- All samples were analyzed at various dilutions due to high concentrations of target compounds.

Field Duplicate Sample Precision

- Field duplicate results are summarized below.

PCBs				
Compound	LMR13-33-024 ug/kg	LMR13-33-024FD ug/kg	RPD	Qualifier
Aroclor-1260	10	12	18%	None

PCBs				
Compound	LMR13-54-048 ug/kg	LMR13-54-048FD ug/kg	RPD	Qualifier
Aroclor-1260	13	22	51%	None

PCBs				
Compound	LMR13-55-024 ug/kg	LMR13-55-024FD ug/kg	RPD	Qualifier
Aroclor-1242	45	51	12%	None
Aroclor-1254	35	41	16%	
Aroclor-1260	15	11	31%	

GC Column Difference Results

- Several samples exhibited high %D values > 25% between columns and have been qualified as estimated (J) by the reviewer.

Metals & Mercury

Holding Times

- All samples were prepared and analyzed within 28 days for mercury and 180 days for all other metals.

ICP/MS Tuning

- Not applicable.

Initial Calibration Verification

- All initial calibration criteria were met.

Continuing Calibration Verification

- All continuing calibration criteria were met.

Method Blank

- The method blanks exhibited the following contamination.

Blank ID	Compound	Conc. mg/kg	Qualifier	Affected Samples
MB	Zinc	0.55	None	All Associated >10X

Field Blank

- Field QC samples were not analyzed.

ICP Interference Check Sample

- The ICP interference check sample exhibited acceptable %R values.

Laboratory Control Samples

- The LCS sample exhibited acceptable recoveries.

Matrix Spike Analysis

- The matrix spike samples exhibited acceptable %R values except the following.

MS Sample ID	Compound	MS %R	Qualifier	Affected Samples
8	Arsenic	130%/OK	J	All Samples
	Zinc	164%/OK	None	See SD

Duplicate Sample Analysis

- The duplicate samples exhibited acceptable RPD values.

ICP Serial Dilution

- ICP serial dilution percent differences (%D) were within acceptance limits except the following.

ICP Sample ID	Compound	%D	Qualifier	Affected Samples
8	Chromium	14%	J	All Samples
	Nickel	16%	J	
	Zinc	14%	J	

Compound Quantitation

- All criteria were met.

Field Duplicate Sample Precision

- Field duplicate results are summarized below.

Metals				
Compound	LMR13-33-024 mg/kg	LMR13-33-024FD mg/kg	RPD	Qualifier
Arsenic	32.6	30.4	7%	None
Cadmium	6.0	5.5	9%	
Chromium	76.1	70.8	7%	
Copper	82.9	83.4	1%	
Lead	254	233	9%	
Nickel	50.9	50.4	1%	
Zinc	737	686	7%	
Mercury	0.36	0.34	6%	

Metals				
Compound	LMR13-54-048 mg/kg	LMR13-54-048FD mg/kg	RPD	Qualifier
Arsenic	16.4	16.5	1%	None

Metals				
Compound	LMR13-54-048 mg/kg	LMR13-54-048FD mg/kg	RPD	Qualifier
Cadmium	3.4	3.2	6%	None
Chromium	48.4	44.9	8%	
Copper	44.5	44.1	1%	
Lead	151	164	8%	
Nickel	37.2	34.8	7%	
Zinc	510	500	2%	
Mercury	0.39	0.36	8%	

Metals				
Compound	LMR13-55-024 mg/kg	LMR13-55-024FD mg/kg	RPD	Qualifier
Arsenic	11.9	11.8	1%	None
Cadmium	1.5	1.4	7%	
Chromium	28.2	25.8	9%	
Copper	29.8	29.2	2%	
Lead	322	162	66%	
Nickel	24.5	24.7	1%	
Zinc	250	264	5%	
Mercury	0.41	0.30	31%	

Oil & Grease, Total Organic Carbon, AVS/SEM (Metals & Hg)

Holding Times

- All samples were analyzed within the recommended holding time for each analysis except the following.

TOC				
Sample ID	Date Collected	Date Analyzed	# of Days	Qualifier
All Samples	06/19/13	07/15/13 & 07/17/13	26, 28	J

Initial and Continuing Calibration

- All %R criteria were met.

Method Blank

- The method blanks exhibited the following contamination.

Blank ID	Compound	Conc. mg/kg	Qualifier	Affected Samples
240-93031/1-A	HEM	118.7%	None	All >5X

Field Blank

- Field QC samples were not included in this data package.

Laboratory Control Samples

- The LCS samples exhibited acceptable %R values.

Matrix Spike/Duplicate (MS/DUP) Recoveries

- The MS/DUP samples exhibited acceptable %R and RPD values except the following.

MS/DUP ID	Compound	MS %R/MSD %R/RPD	Qualifier	Affected Samples
15	HEM	OK/47%/21	J/UJ	All Samples

Compound Quantitation

- All criteria were met.

Field Duplicate Sample Precision

- Field duplicate results are summarized below.

TOC				
Compound	LMR13-33-024 mg/kg	LMR13-33-024FD mg/kg	RPD	Qualifier
TOC	43100	44800	4%	None

TOC				
Compound	LMR13-54-048 mg/kg	LMR13-54-048FD mg/kg	RPD	Qualifier
TOC	37300	42000	12%	None

TOC				
Compound	LMR13-55-024 mg/kg	LMR13-55-024FD mg/kg	RPD	Qualifier
TOC	36900	36300	2%	None

HEM				
Compound	LMR13-54-024 mg/kg	LMR13-54-024FD mg/kg	RPD	Qualifier
HEM	4030	2530	46%	None

HEM				
Compound	LMR13-33-048 mg/kg	LMR13-33-048FD mg/kg	RPD	Qualifier
HEM	1820	992	59%	None

Please contact the undersigned at (757) 564-0090 if you have any questions or need further information.

Signed: Nancy Weaver Dated: 9/25/13

Nancy Weaver
Senior Chemist

Data Qualifiers

U = The analyte was analyzed for, but was not detected at a level greater than or equal to the level of the adjusted Contract Required Quantitation Limit (CRQL) for sample and method.

UJ = The analyte was not detected at a level greater than or equal to the adjusted CRQL. However, the reported adjusted CRQL is approximate and may be inaccurate or imprecise.

J = The analyte was positively identified and the associated numerical value is the approximate concentration of the analyte in the sample (due either to the quality of the data generated because certain quality control criteria were not met, or the concentration of the analyte was below the CRQL).

J+ = The result is an estimated quantity, but the result may be biased high.

J- = The result is an estimated quantity, but the result may be biased low.

R = The sample results are unusable due to the quality of the data generated because certain criteria were not met. The analyte may or may not be present in the sample.

NJ = The analysis indicates the presence of an analyte that has been "tentatively identified" and the associated numerical value represents its approximate concentration.

1D - FORM I SV-1

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-30-072

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17099

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17099-1

Sample wt/vol: 30.5 (g/mL) g Lab File ID: PJZKM13.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 43 Decanted: (Y/N) Date Received: 06/20/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/28/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/10/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 5.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
100-52-7	Benzaldehyde	1500	U	UJ
108-95-2	Phenol	1500	U	
111-44-4	Bis(2-chloroethyl)ether	1500	U	
95-57-8	2-Chlorophenol	1500	U	
95-48-7	2-Methylphenol	1500	U	
108-60-1	2,2'-Oxybis(1-chloropropane)	1500	U	
98-86-2	Acetophenone	1500	U	
106-44-5	4-Methylphenol	1500	U	
621-64-7	N-Nitroso-di-n-propylamine	1500	U	
67-72-1	Hexachloroethane	1500	U	
98-95-3	Nitrobenzene	1500	U	
78-59-1	Isophorone	1500	U	
88-75-5	2-Nitrophenol	1500	U	
105-67-9	2,4-Dimethylphenol	1500	U	
111-91-1	Bis(2-chloroethoxy)methane	1500	U	
120-83-2	2,4-Dichlorophenol	1500	U	
91-20-3	Naphthalene	160	J	J
106-47-8	4-Chloroaniline	1500	U	UJ
87-68-3	Hexachlorobutadiene	1500	U	
105-60-2	Caprolactam	1500	U	
59-50-7	4-Chloro-3-methylphenol	1500	U	
91-57-6	2-Methylnaphthalene	95	J	J
77-47-4	Hexachlorocyclopentadiene	1500	U	UJ
88-06-2	2,4,6-Trichlorophenol	1500	U	
95-95-4	2,4,5-Trichlorophenol	1500	U	
92-52-4	1,1'-Biphenyl	1500	U	
91-58-7	2-Chloronaphthalene	1500	U	
88-74-4	2-Nitroaniline	2800	U	
131-11-3	Dimethylphthalate	1500	U	
606-20-2	2,6-Dinitrotoluene	1500	U	
208-96-8	Acenaphthylene	140	J	J
99-09-2	3-Nitroaniline	2800	U	UJ
83-32-9	Acenaphthene	450	J	J

NW 9/22/13

1E - FORM I SV-2
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-30-072

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17099

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17099-1

Sample wt/vol: 30.5 (g/mL) g Lab File ID: PJZKM13.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 43 Decanted: (Y/N) Date Received: 06/20/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/28/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/10/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 5.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
51-28-5	2,4-Dinitrophenol	2800	U UJ
100-02-7	4-Nitrophenol	2800	U
132-64-9	Dibenzofuran	280	J J
121-14-2	2,4-Dinitrotoluene	1500	U UJ
84-66-2	Diethylphthalate	1500	U UJ
86-73-7	Fluorene	960	J J
7005-72-3	4-Chlorophenyl-phenylether	1500	U UJ
100-01-6	4-Nitroaniline	2800	U
534-52-1	4,6-Dinitro-2-methylphenol	2800	U
86-30-6	N-Nitrosodiphenylamin [1]	1500	U
95-94-3	1,2,4,5-Tetrachlorobenzene	1500	U
101-55-3	4-Bromophenyl-phenylether	1500	U
118-74-1	Hexachlorobenzene	1500	U
1912-24-9	Atrazine	1500	U
87-86-5	Pentachlorophenol	2800	U
85-01-8	Phenanthrene	6000	J
120-12-7	Anthracene	1300	J J
86-74-8	Carbazole	1500	U UJ
84-74-2	Di-n-butylphthalate	1500	U UJ
206-44-0	Fluoranthene	5200	J
129-00-0	Pyrene	6100	J
85-68-7	Butylbenzylphthalate	1500	U UJ
91-94-1	3,3'-Dichlorobenzidine	1500	U
56-55-3	Benzo(a)anthracene	1500	U
218-01-9	Chrysene	3200	J
117-81-7	Bis(2-ethylhexyl)phthalate	1500	U UJ
117-84-0	Di-n-octylphthalate	1500	U UJ
205-99-2	Benzo(b)fluoranthene	2100	J
207-08-9	Benzo(k)fluoranthene	1700	
50-32-8	Benzo(a)pyrene	1800	
193-39-5	Indeno(1,2,3-cd)pyrene	1200	J
53-70-3	Dibenzo(a,h)anthracene	700	J
191-24-2	Benzo(g,h,i)perylene	1600	
58-90-2	2,3,4,6-Tetrachlorophenol	1500	U UJ

[1] Cannot be separated from Diphenylamine

NW 9/22/13

1D - FORM I SV-1

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR-30-072RE

1RE

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17099

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17099-1

Sample wt/vol: 30.5 (g/mL) g Lab File ID: PJZKQ16.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 43 Decanted: (Y/N) Date Received: 06/20/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/28/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/12/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 5.0

Use original results

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
100-52-7	Benzaldehyde	1500	U UJ
108-95-2	Phenol	1500	U
111-44-4	Bis(2-chloroethyl)ether	1500	U
95-57-8	2-Chlorophenol	1500	U
95-48-7	2-Methylphenol	1500	U
108-60-1	2,2'-Oxybis(1-chloropropane)	1500	U
98-86-2	Acetophenone	1500	U
106-44-5	4-Methylphenol	1500	U
621-64-7	N-Nitroso-di-n-propylamine	1500	U
67-72-1	Hexachloroethane	1500	U
98-95-3	Nitrobenzene	1500	U
78-59-1	Isophorone	1500	U
88-75-5	2-Nitrophenol	1500	U
105-67-9	2,4-Dimethylphenol	1500	U
111-91-1	Bis(2-chloroethoxy)methane	1500	U
120-83-2	2,4-Dichlorophenol	1500	U
91-20-3	Naphthalene	140	J J
106-47-8	4-Chloroaniline	1500	U UJ
87-68-3	Hexachlorobutadiene	1500	U
105-60-2	Caprolactam	1500	U
59-50-7	4-Chloro-3-methylphenol	1500	U
91-57-6	2-Methylnaphthalene	93	J J
77-47-4	Hexachlorocyclopentadiene	1500	U UJ
88-06-2	2,4,6-Trichlorophenol	1500	U
95-95-4	2,4,5-Trichlorophenol	1500	U
92-52-4	1,1'-Biphenyl	1500	U
91-58-7	2-Chloronaphthalene	1500	U
88-74-4	2-Nitroaniline	2800	U
131-11-3	Dimethylphthalate	1500	U
606-20-2	2,6-Dinitrotoluene	1500	U
208-96-8	Acenaphthylene	140	J J
99-09-2	3-Nitroaniline	2800	U UJ
83-32-9	Acenaphthene	410	J J

NW 9/22/13

1E - FORM I SV-2

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR-30-072RE

1RE

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17099

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17099-1

Sample wt/vol: 30.5 (g/mL) g Lab File ID: PJZKQ16.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 43 Decanted: (Y/N) Date Received: 06/20/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/28/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/12/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 5.0

use original results

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
51-28-5	2,4-Dinitrophenol	2800	U	UJ
100-02-7	4-Nitrophenol	2800	U	UJ
132-64-9	Dibenzofuran	280	J	J
121-14-2	2,4-Dinitrotoluene	1500	U	UJ
84-66-2	Diethylphthalate	1500	U	UJ
86-73-7	Fluorene	830	J	J
7005-72-3	4-Chlorophenyl-phenylether	1500	U	UJ
100-01-6	4-Nitroaniline	2800	U	
534-52-1	4,6-Dinitro-2-methylphenol	2800	U	
86-30-6	N-Nitrosodiphenylamin [1]	1500	U	
95-94-3	1,2,4,5-Tetrachlorobenzene	1500	U	
101-55-3	4-Bromophenyl-phenylether	1500	U	
118-74-1	Hexachlorobenzene	1500	U	
1912-24-9	Atrazine	1500	U	
87-86-5	Pentachlorophenol	2800	U	
85-01-8	Phenanthrene	5500		J
120-12-7	Anthracene	1300	J	J
86-74-8	Carbazole	1500	U	UJ
84-74-2	Di-n-butylphthalate	1500	U	UJ
206-44-0	Fluoranthene	4600		J
129-00-0	Pyrene	6400		J
85-68-7	Butylbenzylphthalate	1500	U	UJ
91-94-1	3,3'-Dichlorobenzidine	1500	U	UJ
56-55-3	Benzo(a)anthracene	2800		J
218-01-9	Chrysene	3400		J
117-81-7	Bis(2-ethylhexyl)phthalate	1500	U	UJ
117-84-0	Di-n-octylphthalate	1500	U	UJ
205-99-2	Benzo(b)fluoranthene	2000		J
207-08-9	Benzo(k)fluoranthene	1900		
50-32-8	Benzo(a)pyrene	2000		
193-39-5	Indeno(1,2,3-cd)pyrene	1500		
53-70-3	Dibenzo(a,h)anthracene	570	U	
191-24-2	Benzo(g,h,i)perylene	1500	U	
58-90-2	2,3,4,6-Tetrachlorophenol	1500	U	UJ

[1] Cannot be separated from Diphenylamine

NW 9/22/13

1D - FORM I SV-1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-86-072

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678 2

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17099

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17099-2

Sample wt/vol: 29.6 (g/mL) g Lab File ID: ULLCA09.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 44 Decanted: (Y/N) Date Received: 06/20/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/28/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/07/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
100-52-7	Benzaldehyde	310	U
108-95-2	Phenol	310	U
111-44-4	Bis(2-chloroethyl)ether	310	U
95-57-8	2-Chlorophenol	310	U
95-48-7	2-Methylphenol	310	U
108-60-1	2,2'-Oxybis(1-chloropropane)	310	U
98-86-2	Acetophenone	310 ~~45~~	~~J B~~ U
106-44-5	4-Methylphenol	310	U
621-64-7	N-Nitroso-di-n-propylamine	310	U
67-72-1	Hexachloroethane	310	U
98-95-3	Nitrobenzene	310	U
78-59-1	Isophorone	310	U
88-75-5	2-Nitrophenol	310	U
105-67-9	2,4-Dimethylphenol	310	U
111-91-1	Bis(2-chloroethoxy)methane	310	U
120-83-2	2,4-Dichlorophenol	310	U
91-20-3	Naphthalene	260	J
106-47-8	4-Chloroaniline	310	U
87-68-3	Hexachlorobutadiene	310	U
105-60-2	Caprolactam	310	U
59-50-7	4-Chloro-3-methylphenol	310	U
91-57-6	2-Methylnaphthalene	430	
77-47-4	Hexachlorocyclopentadiene	310	~~U~~ UJ
88-06-2	2,4,6-Trichlorophenol	310	U
95-95-4	2,4,5-Trichlorophenol	310	U
92-52-4	1,1'-Biphenyl	310	U
91-58-7	2-Chloronaphthalene	310	U
88-74-4	2-Nitroaniline	600	U
131-11-3	Dimethylphthalate	310	U
606-20-2	2,6-Dinitrotoluene	310	U
208-96-8	Acenaphthylene	48	J
99-09-2	3-Nitroaniline	600	U
83-32-9	Acenaphthene	570	

MW 9/22/13

EPA SAMPLE NO.
LMR13-86-072

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678 2

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17099

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17099-2

Sample wt/vol: 29.6 (g/mL) g Lab File ID: ULLCA09.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 44 Decanted: (Y/N) Date Received: 06/20/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/28/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/07/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
51-28-5	2,4-Dinitrophenol	600	U	
100-02-7	4-Nitrophenol	600	U	
132-64-9	Dibenzofuran	300	J	
121-14-2	2,4-Dinitrotoluene	310	U	
84-66-2	Diethylphthalate	310	U	
86-73-7	Fluorene	470		
7005-72-3	4-Chlorophenyl-phenylether	310	U	
100-01-6	4-Nitroaniline	600	U	
534-52-1	4,6-Dinitro-2-methylphenol	600	U	
86-30-6	N-Nitrosodiphenylamin [1]	310	U	
95-94-3	1,2,4,5-Tetrachlorobenzene	310	U	
101-55-3	4-Bromophenyl-phenylether	310	U	
118-74-1	Hexachlorobenzene	310	U	
1912-24-9	Atrazine	310	U	
87-86-5	Pentachlorophenol	600	U	
85-01-8	Phenanthrene	1500		
120-12-7	Anthracene	280	J	
86-74-8	Carbazole	100	J	
84-74-2	Di-n-butylphthalate	310	U	
206-44-0	Fluoranthene	1500		
129-00-0	Pyrene	1400		
85-68-7	Butylbenzylphthalate	310	U	
91-94-1	3,3'-Dichlorobenzidine	310	U	
56-55-3	Benzo(a)anthracene	730		
218-01-9	Chrysene	530		
117-81-7	Bis(2-ethylhexyl)phthalate	1400	~~B~~	
117-84-0	Di-n-octylphthalate	310	U	
205-99-2	Benzo(b)fluoranthene	590		J
207-08-9	Benzo(k)fluoranthene	360		
50-32-8	Benzo(a)pyrene	400		
193-39-5	Indeno(1,2,3-cd)pyrene	290	~~J~~	J
53-70-3	Dibenzo(a,h)anthracene	98	~~J~~	J
191-24-2	Benzo(g,h,i)perylene	360		
58-90-2	2,3,4,6-Tetrachlorophenol	310	U	

[1] Cannot be separated from Diphenylamine

NW 9/22/13

1D - FORM I SV-1

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-33-072

3

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17099

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17099-3

Sample wt/vol: 30.2 (g/mL) g Lab File ID: PJZKT10.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 44 Decanted: (Y/N) Date Received: 06/20/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/28/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/13/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 2.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
100-52-7	Benzaldehyde	600	U
108-95-2	Phenol	600	U
111-44-4	Bis(2-chloroethyl)ether	600	U
95-57-8	2-Chlorophenol	600	U
95-48-7	2-Methylphenol	600	U
108-60-1	2,2'-Oxybis(1-chloropropane)	600	U
98-86-2	Acetophenone	42	J
106-44-5	4-Methylphenol	600	U
621-64-7	N-Nitroso-di-n-propylamine	600	U
67-72-1	Hexachloroethane	600	U
98-95-3	Nitrobenzene	600	U
78-59-1	Isophorone	600	U
88-75-5	2-Nitrophenol	600	U
105-67-9	2,4-Dimethylphenol	600	U
111-91-1	Bis(2-chloroethoxy)methane	600	U
120-83-2	2,4-Dichlorophenol	600	U
91-20-3	Naphthalene	250	J
106-47-8	4-Chloroaniline	600	U
87-68-3	Hexachlorobutadiene	600	U
105-60-2	Caprolactam	600	U
59-50-7	4-Chloro-3-methylphenol	600	U
91-57-6	2-Methylnaphthalene	120	J
77-47-4	Hexachlorocyclopentadiene	600	U
88-06-2	2,4,6-Trichlorophenol	600	U
95-95-4	2,4,5-Trichlorophenol	600	U
92-52-4	1,1'-Biphenyl	32	J
91-58-7	2-Chloronaphthalene	600	U
88-74-4	2-Nitroaniline	1200	U
131-11-3	Dimethylphthalate	600	U
606-20-2	2,6-Dinitrotoluene	600	U
208-96-8	Acenaphthylene	110	J
99-09-2	3-Nitroaniline	1200	U
83-32-9	Acenaphthene	350	J

MW 9/22/13

1E - FORM I SV-2

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-33-072

3

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17099

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17099-3

Sample wt/vol: 30.2 (g/mL) g Lab File ID: PJZKT10.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 44 Decanted: (Y/N) Date Received: 06/20/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/28/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/13/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 2.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
51-28-5	2,4-Dinitrophenol	1200	U UJ
100-02-7	4-Nitrophenol	1200	U UJ
132-64-9	Dibenzofuran	170	J J
121-14-2	2,4-Dinitrotoluene	600	U UJ
84-66-2	Diethylphthalate	600	U UJ
86-73-7	Fluorene	560	J J
7005-72-3	4-Chlorophenyl-phenylether	600	U UJ
100-01-6	4-Nitroaniline	1200	U
534-52-1	4,6-Dinitro-2-methylphenol	1200	U
86-30-6	N-Nitrosodiphenylamin [1]	600	U
95-94-3	1,2,4,5-Tetrachlorobenzene	600	U
101-55-3	4-Bromophenyl-phenylether	600	U
118-74-1	Hexachlorobenzene	600	U
1912-24-9	Atrazine	600	U
87-86-5	Pentachlorophenol	1200	U
85-01-8	Phenanthrene	2600	J
120-12-7	Anthracene	760	J
86-74-8	Carbazole	600	U UJ
84-74-2	Di-n-butylphthalate	600	U UJ
206-44-0	Fluoranthene	2500	J
129-00-0	Pyrene	3300	J
85-68-7	Butylbenzylphthalate	600	U UJ
91-94-1	3,3'-Dichlorobenzidine	600	U UJ
56-55-3	Benzo(a)anthracene	1900	J
218-01-9	Chrysene	2100	J
117-81-7	Bis(2-ethylhexyl)phthalate	600	U UJ
117-84-0	Di-n-octylphthalate	600	U UJ
205-99-2	Benzo(b)fluoranthene	1400	J
207-08-9	Benzo(k)fluoranthene	1000	
50-32-8	Benzo(a)pyrene	1500	
193-39-5	Indeno(1,2,3-cd)pyrene	780	
53-70-3	Dibenzo(a,h)anthracene	350	J
191-24-2	Benzo(g,h,i)perylene	860	
58-90-2	2,3,4,6-Tetrachlorophenol	600	U UJ

[1] Cannot be separated from Diphenylamine

MW 9/22/13

1D - FORM I SV-1

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-33-096

4

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17099

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17099-4

Sample wt/vol: 30.5 (g/mL) g Lab File ID: RKXYQ13.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 26 Decanted: (Y/N) Date Received: 06/20/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/28/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/07/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 2.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
100-52-7	Benzaldehyde	450	U
108-95-2	Phenol	450	U
111-44-4	Bis(2-chloroethyl)ether	450	U
95-57-8	2-Chlorophenol	450	U
95-48-7	2-Methylphenol	450	U
108-60-1	2,2'-Oxybis(1-chloropropane)	450	U
98-86-2	Acetophenone	450	U
106-44-5	4-Methylphenol	450	U
621-64-7	N-Nitroso-di-n-propylamine	450	U
67-72-1	Hexachloroethane	450	U
98-95-3	Nitrobenzene	450	U
78-59-1	Isophorone	450	U
88-75-5	2-Nitrophenol	450	U
105-67-9	2,4-Dimethylphenol	450	U
111-91-1	Bis(2-chloroethoxy)methane	450	U
120-83-2	2,4-Dichlorophenol	450	U
91-20-3	Naphthalene	67	~~J~~ J
106-47-8	4-Chloroaniline	450	U
87-68-3	Hexachlorobutadiene	450	U
105-60-2	Caprolactam	450	U
59-50-7	4-Chloro-3-methylphenol	450	U
91-57-6	2-Methylnaphthalene	25	~~J~~ J
77-47-4	Hexachlorocyclopentadiene	450	U
88-06-2	2,4,6-Trichlorophenol	450	U
95-95-4	2,4,5-Trichlorophenol	450	U
92-52-4	1,1'-Biphenyl	450	U
91-58-7	2-Chloronaphthalene	450	U
88-74-4	2-Nitroaniline	880	U
131-11-3	Dimethylphthalate	450	U
606-20-2	2,6-Dinitrotoluene	450	U
208-96-8	Acenaphthylene	31	~~J~~ J
99-09-2	3-Nitroaniline	880	U
83-32-9	Acenaphthene	140	~~J~~ J

NW 9/22/13

1E - FORM I SV-2

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-33-096

4

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17099

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17099-4

Sample wt/vol: 30.5 (g/mL) g Lab File ID: RKXYQ13.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 26 Decanted: (Y/N) Date Received: 06/20/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/28/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/07/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 2.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
51-28-5	2,4-Dinitrophenol	880	U
100-02-7	4-Nitrophenol	880	U
132-64-9	Dibenzofuran	47	~~J~~ J
121-14-2	2,4-Dinitrotoluene	450	U
84-66-2	Diethylphthalate	450	U
86-73-7	Fluorene	300	~~J~~ J
7005-72-3	4-Chlorophenyl-phenylether	450	U
100-01-6	4-Nitroaniline	880	U
534-52-1	4,6-Dinitro-2-methylphenol	880	U
86-30-6	N-Nitrosodiphenylamin [1]	450	U
95-94-3	1,2,4,5-Tetrachlorobenzene	450	U
101-55-3	4-Bromophenyl-phenylether	450	U
118-74-1	Hexachlorobenzene	450	U
1912-24-9	Atrazine	450	U
87-86-5	Pentachlorophenol	880	~~U~~ UJ
85-01-8	Phenanthrene	1900	J
120-12-7	Anthracene	470	J
86-74-8	Carbazole	450	U
84-74-2	Di-n-butylphthalate	450	U
206-44-0	Fluoranthene	2700	J
129-00-0	Pyrene	1800	J
85-68-7	Butylbenzylphthalate	450	U
91-94-1	3,3'-Dichlorobenzidine	450	U
56-55-3	Benzo(a)anthracene	1300	J
218-01-9	Chrysene	1500	J
117-81-7	Bis(2-ethylhexyl)phthalate	450	U
117-84-0	Di-n-octylphthalate	450	U
205-99-2	Benzo(b)fluoranthene	1100	
207-08-9	Benzo(k)fluoranthene	900	
50-32-8	Benzo(a)pyrene	1000	
193-39-5	Indeno(1,2,3-cd)pyrene	400	J
53-70-3	Dibenzo(a,h)anthracene	140	J
191-24-2	Benzo(g,h,i)perylene	480	J
58-90-2	2,3,4,6-Tetrachlorophenol	450	U

[1] Cannot be separated from Diphenylamine

MW 9/22/13

EPA SAMPLE NO.
LMR13-54-012

5

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17099

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17099-5

Sample wt/vol: 30.0 (g/mL) g Lab File ID: RKXYQ08.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 49 Decanted: (Y/N) Date Received: 06/20/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/28/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/07/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 4.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
100-52-7	Benzaldehyde	1300	U
108-95-2	Phenol	1300	U
111-44-4	Bis(2-chloroethyl)ether	1300	U
95-57-8	2-Chlorophenol	1300	U
95-48-7	2-Methylphenol	1300	U
108-60-1	2,2'-Oxybis(1-chloropropane)	1300	U
98-86-2	Acetophenone	1300	U
106-44-5	4-Methylphenol	1300	U
621-64-7	N-Nitroso-di-n-propylamine	1300	U
67-72-1	Hexachloroethane	1300	U
98-95-3	Nitrobenzene	1300	U
78-59-1	Isophorone	1300	U
88-75-5	2-Nitrophenol	1300	U
105-67-9	2,4-Dimethylphenol	1300	U
111-91-1	Bis(2-chloroethoxy)methane	1300	U
120-83-2	2,4-Dichlorophenol	1300	U
91-20-3	Naphthalene	3800	
106-47-8	4-Chloroaniline	1300	U
87-68-3	Hexachlorobutadiene	1300	U
105-60-2	Caprolactam	1300	U
59-50-7	4-Chloro-3-methylphenol	1300	U
91-57-6	2-Methylnaphthalene	270	J
77-47-4	Hexachlorocyclopentadiene	1300	U
88-06-2	2,4,6-Trichlorophenol	1300	U
95-95-4	2,4,5-Trichlorophenol	1300	U
92-52-4	1,1'-Biphenyl	1300	U
91-58-7	2-Chloronaphthalene	1300	U
88-74-4	2-Nitroaniline	2600	U
131-11-3	Dimethylphthalate	1300	U
606-20-2	2,6-Dinitrotoluene	1300	U
208-96-8	Acenaphthylene	190	J
99-09-2	3-Nitroaniline	2600	U
83-32-9	Acenaphthene	1500	

MW 9/22/13

EPA SAMPLE NO.
LMR13-54-012

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678 5

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17099

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17099-5

Sample wt/vol: 30.0 (g/mL) g Lab File ID: RKXYQ08.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 49 Decanted: (Y/N) Date Received: 06/20/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/28/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/07/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 4.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
51-28-5	2,4-Dinitrophenol	2600	U
100-02-7	4-Nitrophenol	2600	U
132-64-9	Dibenzofuran	400	J
121-14-2	2,4-Dinitrotoluene	1300	U
84-66-2	Diethylphthalate	1300	U
86-73-7	Fluorene	2000	
7005-72-3	4-Chlorophenyl-phenylether	1300	U
100-01-6	4-Nitroaniline	2600	U
534-52-1	4,6-Dinitro-2-methylphenol	2600	U
86-30-6	N-Nitrosodiphenylamin [1]	1300	U
95-94-3	1,2,4,5-Tetrachlorobenzene	1300	U
101-55-3	4-Bromophenyl-phenylether	1300	U
118-74-1	Hexachlorobenzene	1300	U
1912-24-9	Atrazine	1300	U
87-86-5	Pentachlorophenol	2600	~~U~~ UJ
85-01-8	Phenanthrene	7800	
120-12-7	Anthracene	1700	
86-74-8	Carbazole	130	J
84-74-2	Di-n-butylphthalate	47	J
206-44-0	Fluoranthene	12000	
129-00-0	Pyrene	9000	J
85-68-7	Butylbenzylphthalate	1300	U
91-94-1	3,3'-Dichlorobenzidine	1300	U
56-55-3	Benzo(a)anthracene	5500	
218-01-9	Chrysene	5600	
117-81-7	Bis(2-ethylhexyl)phthalate	~~490~~ 1300	~~J B~~ U
117-84-0	Di-n-octylphthalate	1300	U
205-99-2	Benzo(b)fluoranthene	5600	
207-08-9	Benzo(k)fluoranthene	4600	
50-32-8	Benzo(a)pyrene	5800	
193-39-5	Indeno(1,2,3-cd)pyrene	3200	J
53-70-3	Dibenzo(a,h)anthracene	970	J
191-24-2	Benzo(g,h,i)perylene	3500	
58-90-2	2,3,4,6-Tetrachlorophenol	1300	U

[1] Cannot be separated from Diphenylamine

NW 9/22/13

1D - FORM I SV-1

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-54-024

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678 4

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17099

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17099-6

Sample wt/vol: 30.8 (g/mL) g Lab File ID: ULLCA10.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 41 Decanted: (Y/N) Date Received: 06/20/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/28/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/07/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 10.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
100-52-7	Benzaldehyde	2800	U
108-95-2	Phenol	2800	U
111-44-4	Bis(2-chloroethyl)ether	2800	U
95-57-8	2-Chlorophenol	2800	U
95-48-7	2-Methylphenol	2800	U
108-60-1	2,2'-Oxybis(1-chloropropane)	2800	U
98-86-2	Acetophenone	2800	U
106-44-5	4-Methylphenol	2800	U
621-64-7	N-Nitroso-di-n-propylamine	2800	U
67-72-1	Hexachloroethane	2800	U
98-95-3	Nitrobenzene	2800	U
78-59-1	Isophorone	2800	U
88-75-5	2-Nitrophenol	2800	U
105-67-9	2,4-Dimethylphenol	2800	U
111-91-1	Bis(2-chloroethoxy)methane	2800	U
120-83-2	2,4-Dichlorophenol	2800	U
91-20-3	Naphthalene	7800	
106-47-8	4-Chloroaniline	2800	U
87-68-3	Hexachlorobutadiene	2800	U
105-60-2	Caprolactam	2800	U
59-50-7	4-Chloro-3-methylphenol	2800	U
91-57-6	2-Methylnaphthalene	1300	J
77-47-4	Hexachlorocyclopentadiene	2800	~~U~~ UJ
88-06-2	2,4,6-Trichlorophenol	2800	U
95-95-4	2,4,5-Trichlorophenol	2800	U
92-52-4	1,1'-Biphenyl	2800	U
91-58-7	2-Chloronaphthalene	2800	U
88-74-4	2-Nitroaniline	5400	U
131-11-3	Dimethylphthalate	2800	U
606-20-2	2,6-Dinitrotoluene	2800	U
208-96-8	Acenaphthylene	720	J
99-09-2	3-Nitroaniline	5400	U
83-32-9	Acenaphthene	6400	

NW 9/22/13

EPA SAMPLE NO.
LMR13-54-024

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678 6

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17099

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17099-6

Sample wt/vol: 30.8 (g/mL) g Lab File ID: ULLCA10.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 41 Decanted: (Y/N) Date Received: 06/20/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/28/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/07/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 10.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
51-28-5	2,4-Dinitrophenol	5400	U
100-02-7	4-Nitrophenol	5400	U
132-64-9	Dibenzofuran	3900	
121-14-2	2,4-Dinitrotoluene	2800	U
84-66-2	Diethylphthalate	2800	U
86-73-7	Fluorene	7300	
7005-72-3	4-Chlorophenyl-phenylether	2800	U
100-01-6	4-Nitroaniline	5400	U
534-52-1	4,6-Dinitro-2-methylphenol	5400	U
86-30-6	N-Nitrosodiphenylamin [1]	2800	U
95-94-3	1,2,4,5-Tetrachlorobenzene	2800	U
101-55-3	4-Bromophenyl-phenylether	2800	U
118-74-1	Hexachlorobenzene	2800	U
1912-24-9	Atrazine	2800	U
87-86-5	Pentachlorophenol	5400	U
85-01-8	Phenanthrene	32000	
120-12-7	Anthracene	9400	
86-74-8	Carbazole	250	J
84-74-2	Di-n-butylphthalate	2800	U
206-44-0	Fluoranthene	35000	
129-00-0	Pyrene	19000	
85-68-7	Butylbenzylphthalate	2800	U
91-94-1	3,3'-Dichlorobenzidine	2800	U
56-55-3	Benzo(a)anthracene	13000	
218-01-9	Chrysene	13000	
117-81-7	Bis(2-ethylhexyl)phthalate	2800 ~~230~~	~~J B~~ U
117-84-0	Di-n-octylphthalate	2800	U
205-99-2	Benzo(b)fluoranthene	13000	J
207-08-9	Benzo(k)fluoranthene	8800	
50-32-8	Benzo(a)pyrene	12000	
193-39-5	Indeno(1,2,3-cd)pyrene	5400	
53-70-3	Dibenzo(a,h)anthracene	1700	~~J~~ J
191-24-2	Benzo(g,h,i)perylene	5900	
58-90-2	2,3,4,6-Tetrachlorophenol	2800	U

[1] Cannot be separated from Diphenylamine

NW 9/22/13

1D - FORM I SV-1

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-54-048

7

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17099

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17099-7

Sample wt/vol: 29.7 (g/mL) g Lab File ID: ULLCA11.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 45 Decanted: (Y/N) Date Received: 06/20/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/28/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/07/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 10.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
100-52-7	Benzaldehyde	3100	U
108-95-2	Phenol	3100	U
111-44-4	Bis(2-chloroethyl)ether	3100	U
95-57-8	2-Chlorophenol	3100	U
95-48-7	2-Methylphenol	3100	U
108-60-1	2,2'-Oxybis(1-chloropropane)	3100	U
98-86-2	Acetophenone	3100	U
106-44-5	4-Methylphenol	3100	U
621-64-7	N-Nitroso-di-n-propylamine	3100	U
67-72-1	Hexachloroethane	3100	U
98-95-3	Nitrobenzene	3100	U
78-59-1	Isophorone	3100	U
88-75-5	2-Nitrophenol	3100	U
105-67-9	2,4-Dimethylphenol	3100	U
111-91-1	Bis(2-chloroethoxy)methane	3100	U
120-83-2	2,4-Dichlorophenol	3100	U
91-20-3	Naphthalene	7100	
106-47-8	4-Chloroaniline	3100	U
87-68-3	Hexachlorobutadiene	3100	U
105-60-2	Caprolactam	3100	U
59-50-7	4-Chloro-3-methylphenol	3100	U
91-57-6	2-Methylnaphthalene	6200	
77-47-4	Hexachlorocyclopentadiene	3100	~~U~~ UJ
88-06-2	2,4,6-Trichlorophenol	3100	U
95-95-4	2,4,5-Trichlorophenol	3100	U
92-52-4	1,1'-Biphenyl	3100	U
91-58-7	2-Chloronaphthalene	3100	U
88-74-4	2-Nitroaniline	6100	U
131-11-3	Dimethylphthalate	3100	U
606-20-2	2,6-Dinitrotoluene	3100	U
208-96-8	Acenaphthylene	540	J
99-09-2	3-Nitroaniline	6100	U
83-32-9	Acenaphthene	6800	

MW 9/22/13

EPA SAMPLE NO.
LMR13-54-048

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678 7

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: _____ SDG No.: 17099

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17099-7

Sample wt/vol: 29.7 (g/mL) g Lab File ID: ULLCA11.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 45 Decanted: (Y/N) __ Date Received: 06/20/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/28/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/07/2013

GPC Cleanup: (Y/N) Y pH: _____ Dilution Factor: 10.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
51-28-5	2,4-Dinitrophenol	6100	U
100-02-7	4-Nitrophenol	6100	U
132-64-9	Dibenzofuran	4700	
121-14-2	2,4-Dinitrotoluene	3100	U
84-66-2	Diethylphthalate	3100	U
86-73-7	Fluorene	7400	
7005-72-3	4-Chlorophenyl-phenylether	3100	U
100-01-6	4-Nitroaniline	6100	U
534-52-1	4,6-Dinitro-2-methylphenol	6100	U
86-30-6	N-Nitrosodiphenylamin [1]	3100	U
95-94-3	1,2,4,5-Tetrachlorobenzene	3100	U
101-55-3	4-Bromophenyl-phenylether	3100	U
118-74-1	Hexachlorobenzene	3100	U
1912-24-9	Atrazine	3100	U
87-86-5	Pentachlorophenol	6100	U
85-01-8	Phenanthrene	35000	
120-12-7	Anthracene	10000	
86-74-8	Carbazole	700	J
84-74-2	Di-n-butylphthalate	3100	U
206-44-0	Fluoranthene	28000	
129-00-0	Pyrene	15000	
85-68-7	Butylbenzylphthalate	3100	U
91-94-1	3,3'-Dichlorobenzidine	3100	U
56-55-3	Benzo(a)anthracene	10000	
218-01-9	Chrysene	10000	
117-81-7	Bis(2-ethylhexyl)phthalate	3100	U
117-84-0	Di-n-octylphthalate	3100	U
205-99-2	Benzo(b)fluoranthene	9800	J
207-08-9	Benzo(k)fluoranthene	7300	
50-32-8	Benzo(a)pyrene	9100	
193-39-5	Indeno(1,2,3-cd)pyrene	4000	J
53-70-3	Dibenzo(a,h)anthracene	1500	J
191-24-2	Benzo(g,h,i)perylene	4000	
58-90-2	2,3,4,6-Tetrachlorophenol	3100	U

[1] Cannot be separated from Diphenylamine

NW 9/22/13

EPA SAMPLE NO.
LMR13-33-024

9

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17099

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17099-9

Sample wt/vol: 30.4 (g/mL) g Lab File ID: ULLCA12.D

Level: (LOW/MED) LOW Extraction: (Type) SOM01.2SV_SONC

% Moisture: 53 Decanted: (Y/N) Date Received: 06/20/2013

Concentrated Extract Volume: 1000 (uL) Date Extracted: 06/28/2013

Injection Volume: 2.0 (uL) GPC Factor: 1.0 Date Analyzed: 08/07/2013

GPC Cleanup: (Y/N) N pH: Dilution Factor: 2.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
100-52-7	Benzaldehyde	710	U
108-95-2	Phenol	710	U
111-44-4	Bis(2-chloroethyl)ether	710	U
95-57-8	2-Chlorophenol	710	U
95-48-7	2-Methylphenol	710	U
108-60-1	2,2'-Oxybis(1-chloropropane)	710	U
98-86-2	Acetophenone	710	U
106-44-5	4-Methylphenol	110	~~J~~ J
621-64-7	N-Nitroso-di-n-propylamine	710	U
67-72-1	Hexachloroethane	710	U
98-95-3	Nitrobenzene	710	U
78-59-1	Isophorone	710	U
88-75-5	2-Nitrophenol	710	U
105-67-9	2,4-Dimethylphenol	710	U
111-91-1	Bis(2-chloroethoxy)methane	710	U
120-83-2	2,4-Dichlorophenol	710	U
91-20-3	Naphthalene	1900	
106-47-8	4-Chloroaniline	710	U
87-68-3	Hexachlorobutadiene	710	U
105-60-2	Caprolactam	710	U
59-50-7	4-Chloro-3-methylphenol	710	U
91-57-6	2-Methylnaphthalene	610	J
77-47-4	Hexachlorocyclopentadiene	710	~~J~~ UJ
88-06-2	2,4,6-Trichlorophenol	710	U
95-95-4	2,4,5-Trichlorophenol	710	U
92-52-4	1,1'-Biphenyl	110	J
91-58-7	2-Chloronaphthalene	710	U
88-74-4	2-Nitroaniline	1400	U
131-11-3	Dimethylphthalate	710	U
606-20-2	2,6-Dinitrotoluene	710	U
208-96-8	Acenaphthylene	130	J
99-09-2	3-Nitroaniline	1400	U
83-32-9	Acenaphthene	420	J

NW 9/22/13

1E - FORM I SV-2
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-33-024

9

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17099

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17099-9

Sample wt/vol: 30.4 (g/mL) g Lab File ID: ULLCA12.D

Level: (LOW/MED) LOW Extraction: (Type) SOM01.2SV_SONC

% Moisture: 53 Decanted: (Y/N) Date Received: 06/20/2013

Concentrated Extract Volume: 1000 (uL) Date Extracted: 06/28/2013

Injection Volume: 2.0 (uL) GPC Factor: 1.0 Date Analyzed: 08/07/2013

GPC Cleanup: (Y/N) N pH: Dilution Factor: 2.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
51-28-5	2,4-Dinitrophenol	1400	U	
100-02-7	4-Nitrophenol	1400	U	
132-64-9	Dibenzofuran	510	J	
121-14-2	2,4-Dinitrotoluene	710	U	
84-66-2	Diethylphthalate	710	U	
86-73-7	Fluorene	1100		
7005-72-3	4-Chlorophenyl-phenylether	710	U	
100-01-6	4-Nitroaniline	1400	U	
534-52-1	4,6-Dinitro-2-methylphenol	1400	U	
86-30-6	N-Nitrosodiphenylamin [1]	710	U	
95-94-3	1,2,4,5-Tetrachlorobenzene	710	U	
101-55-3	4-Bromophenyl-phenylether	710	U	
118-74-1	Hexachlorobenzene	710	U	
1912-24-9	Atrazine	710	U	
87-86-5	Pentachlorophenol	1400	U	
85-01-8	Phenanthrene	4200		
120-12-7	Anthracene	1300		
86-74-8	Carbazole	710	U	
84-74-2	Di-n-butylphthalate	710	U	
206-44-0	Fluoranthene	5400		
129-00-0	Pyrene	5900		
85-68-7	Butylbenzylphthalate	710	U	
91-94-1	3,3'-Dichlorobenzidine	710	U	
56-55-3	Benzo(a)anthracene	4500		
218-01-9	Chrysene	3800		
117-81-7	Bis(2-ethylhexyl)phthalate	710	U	
117-84-0	Di-n-octylphthalate	710	U	
205-99-2	Benzo(b)fluoranthene	2800		J
207-08-9	Benzo(k)fluoranthene	1500		
50-32-8	Benzo(a)pyrene	2600		
193-39-5	Indeno(1,2,3-cd)pyrene	1200		J
53-70-3	Dibenzo(a,h)anthracene	510	J	J
191-24-2	Benzo(g,h,i)perylene	1400		
58-90-2	2,3,4,6-Tetrachlorophenol	710	U	

[1] Cannot be separated from Diphenylamine

NW 9/22/13

1D - FORM I SV-1

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-33-048

10

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17099

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17099-10

Sample wt/vol: 30.6 (g/mL) g Lab File ID: PJZKT13.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 43 Decanted: (Y/N) Date Received: 06/20/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/28/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/13/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 2.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
100-52-7	Benzaldehyde	590	U UJ
108-95-2	Phenol	590	U
111-44-4	Bis(2-chloroethyl)ether	590	U
95-57-8	2-Chlorophenol	590	U
95-48-7	2-Methylphenol	590	U
108-60-1	2,2'-Oxybis(1-chloropropane)	590	U
98-86-2	Acetophenone	590	U
106-44-5	4-Methylphenol	590	U
621-64-7	N-Nitroso-di-n-propylamine	590	U
67-72-1	Hexachloroethane	590	U
98-95-3	Nitrobenzene	590	U
78-59-1	Isophorone	590	U
88-75-5	2-Nitrophenol	590	U
105-67-9	2,4-Dimethylphenol	590	U
111-91-1	Bis(2-chloroethoxy)methane	590	U
120-83-2	2,4-Dichlorophenol	590	U
91-20-3	Naphthalene	440	J J
106-47-8	4-Chloroaniline	590	U UJ
87-68-3	Hexachlorobutadiene	590	U
105-60-2	Caprolactam	590	U
59-50-7	4-Chloro-3-methylphenol	590	U
91-57-6	2-Methylnaphthalene	160	J J
77-47-4	Hexachlorocyclopentadiene	590	U UJ
88-06-2	2,4,6-Trichlorophenol	590	U
95-95-4	2,4,5-Trichlorophenol	590	U
92-52-4	1,1'-Biphenyl	35	J J
91-58-7	2-Chloronaphthalene	590	U UJ
88-74-4	2-Nitroaniline	1100	U
131-11-3	Dimethylphthalate	590	U
606-20-2	2,6-Dinitrotoluene	590	U
208-96-8	Acenaphthylene	63	J J
99-09-2	3-Nitroaniline	1100	U UJ
83-32-9	Acenaphthene	290	J J

MW 9/22/13

EPA SAMPLE NO.
LMR13-33-048

10

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17099

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17099-10

Sample wt/vol: 30.6 (g/mL) g Lab File ID: PJZKT13.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 43 Decanted: (Y/N) Date Received: 06/20/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/28/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/13/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 2.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
51-28-5	2,4-Dinitrophenol	1100	U UJ
100-02-7	4-Nitrophenol	1100	U UJ
132-64-9	Dibenzofuran	120	J J
121-14-2	2,4-Dinitrotoluene	590	U UJ
84-66-2	Diethylphthalate	590	U ↓
86-73-7	Fluorene	550	J J
7005-72-3	4-Chlorophenyl-phenylether	590	U UJ
100-01-6	4-Nitroaniline	1100	U
534-52-1	4,6-Dinitro-2-methylphenol	1100	U
86-30-6	N-Nitrosodiphenylamin [1]	590	U
95-94-3	1,2,4,5-Tetrachlorobenzene	590	U
101-55-3	4-Bromophenyl-phenylether	590	U
118-74-1	Hexachlorobenzene	590	U
1912-24-9	Atrazine	590	U
87-86-5	Pentachlorophenol	1100	U ↓
85-01-8	Phenanthrene	2800	J
120-12-7	Anthracene	800	J J
86-74-8	Carbazole	590	U UJ
84-74-2	Di-n-butylphthalate	46	J J
206-44-0	Fluoranthene	2400	↓
129-00-0	Pyrene	3500	
85-68-7	Butylbenzylphthalate	590	U UJ
91-94-1	3,3'-Dichlorobenzidine	590	U UJ
56-55-3	Benzo(a)anthracene	1600	J
218-01-9	Chrysene	1800	J
117-81-7	Bis(2-ethylhexyl)phthalate	590 ~~85~~	J B UJ
117-84-0	Di-n-octylphthalate	590	U UJ
205-99-2	Benzo(b)fluoranthene	1100	J
207-08-9	Benzo(k)fluoranthene	970	↓
50-32-8	Benzo(a)pyrene	1200	
193-39-5	Indeno(1,2,3-cd)pyrene	720	
53-70-3	Dibenzo(a,h)anthracene	290	U
191-24-2	Benzo(g,h,i)perylene	720	↓
58-90-2	2,3,4,6-Tetrachlorophenol	590	U UJ

[1] Cannot be separated from Diphenylamine

NW 9/22/13

1D - FORM I SV-1

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-54-072

11

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17099

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17099-11

Sample wt/vol: 29.9 (g/mL) g Lab File ID: ULLCA13.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 46 Decanted: (Y/N) Date Received: 06/20/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/28/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/07/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 20.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
100-52-7	Benzaldehyde	6300	U
108-95-2	Phenol	6300	U
111-44-4	Bis(2-chloroethyl)ether	6300	U
95-57-8	2-Chlorophenol	6300	U
95-48-7	2-Methylphenol	6300	U
108-60-1	2,2'-Oxybis(1-chloropropane)	6300	U
98-86-2	Acetophenone	6300	U
106-44-5	4-Methylphenol	6300	U
621-64-7	N-Nitroso-di-n-propylamine	6300	U
67-72-1	Hexachloroethane	6300	U
98-95-3	Nitrobenzene	6300	U
78-59-1	Isophorone	6300	U
88-75-5	2-Nitrophenol	6300	U
105-67-9	2,4-Dimethylphenol	6300	U
111-91-1	Bis(2-chloroethoxy)methane	6300	U
120-83-2	2,4-Dichlorophenol	6300	U
91-20-3	Naphthalene	14000	
106-47-8	4-Chloroaniline	6300	U
87-68-3	Hexachlorobutadiene	6300	U
105-60-2	Caprolactam	6300	U
59-50-7	4-Chloro-3-methylphenol	6300	U
91-57-6	2-Methylnaphthalene	15000	
77-47-4	Hexachlorocyclopentadiene	6300	U / UJ
88-06-2	2,4,6-Trichlorophenol	6300	U
95-95-4	2,4,5-Trichlorophenol	6300	U
92-52-4	1,1'-Biphenyl	6300	U
91-58-7	2-Chloronaphthalene	6300	U
88-74-4	2-Nitroaniline	12000	U
131-11-3	Dimethylphthalate	6300	U
606-20-2	2,6-Dinitrotoluene	6300	U
208-96-8	Acenaphthylene	1000	J
99-09-2	3-Nitroaniline	12000	U
83-32-9	Acenaphthene	13000	

MW 9/22/13

1E - FORM I SV-2
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-54-072

11

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17099

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17099-11

Sample wt/vol: 29.9 (g/mL) g Lab File ID: ULLCA13.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 46 Decanted: (Y/N) Date Received: 06/20/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/28/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/07/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 20.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
51-28-5	2,4-Dinitrophenol	12000	U
100-02-7	4-Nitrophenol	12000	U
132-64-9	Dibenzofuran	12000	
121-14-2	2,4-Dinitrotoluene	6300	U
84-66-2	Diethylphthalate	6300	U
86-73-7	Fluorene	16000	
7005-72-3	4-Chlorophenyl-phenylether	6300	U
100-01-6	4-Nitroaniline	12000	U
534-52-1	4,6-Dinitro-2-methylphenol	12000	U
86-30-6	N-Nitrosodiphenylamin [1]	6300	U
95-94-3	1,2,4,5-Tetrachlorobenzene	6300	U
101-55-3	4-Bromophenyl-phenylether	6300	U
118-74-1	Hexachlorobenzene	6300	U
1912-24-9	Atrazine	6300	U
87-86-5	Pentachlorophenol	12000	U
85-01-8	Phenanthrene	61000	
120-12-7	Anthracene	23000	
86-74-8	Carbazole	1900	J
84-74-2	Di-n-butylphthalate	6300	U
206-44-0	Fluoranthene	61000	
129-00-0	Pyrene	36000	
85-68-7	Butylbenzylphthalate	6300	U
91-94-1	3,3'-Dichlorobenzidine	6300	U
56-55-3	Benzo(a)anthracene	23000	
218-01-9	Chrysene	22000	
117-81-7	Bis(2-ethylhexyl)phthalate	6300	U
117-84-0	Di-n-octylphthalate	6300	U
205-99-2	Benzo(b)fluoranthene	15000	J
207-08-9	Benzo(k)fluoranthene	19000	
50-32-8	Benzo(a)pyrene	19000	
193-39-5	Indeno(1,2,3-cd)pyrene	7400	J
53-70-3	Dibenzo(a,h)anthracene	2900	J
191-24-2	Benzo(g,h,i)perylene	6800	
58-90-2	2,3,4,6-Tetrachlorophenol	6300	U

[1] Cannot be separated from Diphenylamine

NW 9/22/13

1D - FORM I SV-1

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-54-096

12

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17099

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17099-12

Sample wt/vol: 30.2 (g/mL) g Lab File ID: ULLCA14.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 41 Decanted: (Y/N) Date Received: 06/20/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/28/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/07/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 14.3

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
100-52-7	Benzaldehyde	4100	U
108-95-2	Phenol	4100	U
111-44-4	Bis(2-chloroethyl)ether	4100	U
95-57-8	2-Chlorophenol	4100	U
95-48-7	2-Methylphenol	4100	U
108-60-1	2,2'-Oxybis(1-chloropropane)	4100	U
98-86-2	Acetophenone	4100	U
106-44-5	4-Methylphenol	4100	U
621-64-7	N-Nitroso-di-n-propylamine	4100	U
67-72-1	Hexachloroethane	4100	U
98-95-3	Nitrobenzene	4100	U
78-59-1	Isophorone	4100	U
88-75-5	2-Nitrophenol	4100	U
105-67-9	2,4-Dimethylphenol	4100	U
111-91-1	Bis(2-chloroethoxy)methane	4100	U
120-83-2	2,4-Dichlorophenol	4100	U
91-20-3	Naphthalene	3700	J
106-47-8	4-Chloroaniline	4100	U
87-68-3	Hexachlorobutadiene	4100	U
105-60-2	Caprolactam	4100	U
59-50-7	4-Chloro-3-methylphenol	4100	U
91-57-6	2-Methylnaphthalene	4000	J
77-47-4	Hexachlorocyclopentadiene	4100	U UJ
88-06-2	2,4,6-Trichlorophenol	4100	U
95-95-4	2,4,5-Trichlorophenol	4100	U
92-52-4	1,1'-Biphenyl	4100	U
91-58-7	2-Chloronaphthalene	4100	U
88-74-4	2-Nitroaniline	8000	U
131-11-3	Dimethylphthalate	4100	U
606-20-2	2,6-Dinitrotoluene	4100	U
208-96-8	Acenaphthylene	870	J
99-09-2	3-Nitroaniline	8000	U
83-32-9	Acenaphthene	10000	

MW 9/22/13

EPA SAMPLE NO.
LMR13-54-096

12

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17099

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17099-12

Sample wt/vol: 30.2 (g/mL) g Lab File ID: ULLCA14.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 41 Decanted: (Y/N) Date Received: 06/20/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/28/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/07/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 14.3

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
51-28-5	2,4-Dinitrophenol	8000	U
100-02-7	4-Nitrophenol	8000	U
132-64-9	Dibenzofuran	4200	
121-14-2	2,4-Dinitrotoluene	4100	U
84-66-2	Diethylphthalate	4100	U
86-73-7	Fluorene	12000	
7005-72-3	4-Chlorophenyl-phenylether	4100	U
100-01-6	4-Nitroaniline	8000	U
534-52-1	4,6-Dinitro-2-methylphenol	8000	U
86-30-6	N-Nitrosodiphenylamin [1]	4100	U
95-94-3	1,2,4,5-Tetrachlorobenzene	4100	U
101-55-3	4-Bromophenyl-phenylether	4100	U
118-74-1	Hexachlorobenzene	4100	U
1912-24-9	Atrazine	4100	U
87-86-5	Pentachlorophenol	8000	U
85-01-8	Phenanthrene	43000	
120-12-7	Anthracene	13000	
86-74-8	Carbazole	410	J
84-74-2	Di-n-butylphthalate	4100	U
206-44-0	Fluoranthene	37000	
129-00-0	Pyrene	26000	
85-68-7	Butylbenzylphthalate	4100	U
91-94-1	3,3'-Dichlorobenzidine	4100	U
56-55-3	Benzo(a)anthracene	16000	
218-01-9	Chrysene	15000	
117-81-7	Bis(2-ethylhexyl)phthalate	4100	U
117-84-0	Di-n-octylphthalate	4100	U
205-99-2	Benzo(b)fluoranthene	12000	J
207-08-9	Benzo(k)fluoranthene	11000	
50-32-8	Benzo(a)pyrene	12000	
193-39-5	Indeno(1,2,3-cd)pyrene	4700	J
53-70-3	Dibenzo(a,h)anthracene	1800	J
191-24-2	Benzo(g,h,i)perylene	5200	
58-90-2	2,3,4,6-Tetrachlorophenol	4100	U

[1] Cannot be separated from Diphenylamine

NW 9/22/13

1D - FORM I SV-1

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-54-120

13

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17099

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17099-13

Sample wt/vol: 30.9 (g/mL) g Lab File ID: PJZLD04.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 43 Decanted: (Y/N) Date Received: 06/20/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/28/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/15/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 40.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
100-52-7	Benzaldehyde	12000	U UJ
108-95-2	Phenol	12000	U
111-44-4	Bis(2-chloroethyl)ether	12000	U
95-57-8	2-Chlorophenol	12000	U
95-48-7	2-Methylphenol	12000	U
108-60-1	2,2'-Oxybis(1-chloropropane)	12000	U
98-86-2	Acetophenone	400	J J
106-44-5	4-Methylphenol	12000	U UJ
621-64-7	N-Nitroso-di-n-propylamine	12000	U
67-72-1	Hexachloroethane	12000	U
98-95-3	Nitrobenzene	12000	U
78-59-1	Isophorone	12000	U
88-75-5	2-Nitrophenol	12000	U
105-67-9	2,4-Dimethylphenol	12000	U
111-91-1	Bis(2-chloroethoxy)methane	12000	U
120-83-2	2,4-Dichlorophenol	12000	U
91-20-3	Naphthalene	30000	J
106-47-8	4-Chloroaniline	12000	R R
87-68-3	Hexachlorobutadiene	12000	U UJ
105-60-2	Caprolactam	12000	U
59-50-7	4-Chloro-3-methylphenol	12000	U
91-57-6	2-Methylnaphthalene	34000	J
77-47-4	Hexachlorocyclopentadiene	12000	R R
88-06-2	2,4,6-Trichlorophenol	12000	U UJ
95-95-4	2,4,5-Trichlorophenol	12000	U UJ
92-52-4	1,1'-Biphenyl	2500	J J
91-58-7	2-Chloronaphthalene	12000	U UJ
88-74-4	2-Nitroaniline	22000	U
131-11-3	Dimethylphthalate	12000	U
606-20-2	2,6-Dinitrotoluene	12000	U
208-96-8	Acenaphthylene	12000	U
99-09-2	3-Nitroaniline	22000	U
83-32-9	Acenaphthene	35000	J

MW 9/22/13

EPA SAMPLE NO.
LMR13-54-120

13

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17099

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17099-13

Sample wt/vol: 30.9 (g/mL) g Lab File ID: PJZLD04.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 43 Decanted: (Y/N) Date Received: 06/20/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/28/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/15/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 40.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
51-28-5	2,4-Dinitrophenol	22000	U UJ
100-02-7	4-Nitrophenol	22000	U UJ
132-64-9	Dibenzofuran	25000	J
121-14-2	2,4-Dinitrotoluene	12000	U UJ
84-66-2	Diethylphthalate	12000	U UJ
86-73-7	Fluorene	36000	J
7005-72-3	4-Chlorophenyl-phenylether	12000	U UJ
100-01-6	4-Nitroaniline	22000	U
534-52-1	4,6-Dinitro-2-methylphenol	22000	U
86-30-6	N-Nitrosodiphenylamin [1]	12000	U
95-94-3	1,2,4,5-Tetrachlorobenzene	12000	U
101-55-3	4-Bromophenyl-phenylether	12000	U
118-74-1	Hexachlorobenzene	12000	U
1912-24-9	Atrazine	12000	U
87-86-5	Pentachlorophenol	22000	U
85-01-8	Phenanthrene	170000	J
120-12-7	Anthracene	43000	
86-74-8	Carbazole	4800	J
84-74-2	Di-n-butylphthalate	350	J
206-44-0	Fluoranthene	85000	
129-00-0	Pyrene	100000	
85-68-7	Butylbenzylphthalate	12000 ~~610~~ J B	UJ
91-94-1	3,3'-Dichlorobenzidine	12000	U R
56-55-3	Benzo(a)anthracene	40000	J
218-01-9	Chrysene	42000	J
117-81-7	Bis(2-ethylhexyl)phthalate	12000 ~~730~~ J B	UJ
117-84-0	Di-n-octylphthalate	12000	U UJ
205-99-2	Benzo(b)fluoranthene	27000	J
207-08-9	Benzo(k)fluoranthene	18000	
50-32-8	Benzo(a)pyrene	25000	
193-39-5	Indeno(1,2,3-cd)pyrene	14000	
53-70-3	Dibenzo(a,h)anthracene	10000	J
191-24-2	Benzo(g,h,i)perylene	17000	
58-90-2	2,3,4,6-Tetrachlorophenol	12000	U UJ

[1] Cannot be separated from Diphenylamine

MW 9/22/13

1D - FORM I SV-1

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-30-096

14

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17099

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17099-14

Sample wt/vol: 30.0 (g/mL) g Lab File ID: PJZKT11.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 42 Decanted: (Y/N) Date Received: 06/20/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/28/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/13/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 5.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
100-52-7	Benzaldehyde	1500	U UJ
108-95-2	Phenol	1500	U
111-44-4	Bis(2-chloroethyl)ether	1500	U
95-57-8	2-Chlorophenol	1500	U
95-48-7	2-Methylphenol	1500	U
108-60-1	2,2'-Oxybis(1-chloropropane)	1500	U
98-86-2	Acetophenone	1500	U
106-44-5	4-Methylphenol	1500	U
621-64-7	N-Nitroso-di-n-propylamine	1500	U
67-72-1	Hexachloroethane	1500	U
98-95-3	Nitrobenzene	1500	U
78-59-1	Isophorone	1500	U
88-75-5	2-Nitrophenol	1500	U
105-67-9	2,4-Dimethylphenol	1500	U
111-91-1	Bis(2-chloroethoxy)methane	1500	U
120-83-2	2,4-Dichlorophenol	1500	U
91-20-3	Naphthalene	170	J J
106-47-8	4-Chloroaniline	1500	U UJ
87-68-3	Hexachlorobutadiene	1500	U
105-60-2	Caprolactam	1500	U
59-50-7	4-Chloro-3-methylphenol	1500	U
91-57-6	2-Methylnaphthalene	120	J J
77-47-4	Hexachlorocyclopentadiene	1500	U UJ
88-06-2	2,4,6-Trichlorophenol	1500	U
95-95-4	2,4,5-Trichlorophenol	1500	U
92-52-4	1,1'-Biphenyl	40	J J
91-58-7	2-Chloronaphthalene	1500	U UJ
88-74-4	2-Nitroaniline	2800	U
131-11-3	Dimethylphthalate	1500	U
606-20-2	2,6-Dinitrotoluene	1500	U
208-96-8	Acenaphthylene	84	J J
99-09-2	3-Nitroaniline	2800	U UJ
83-32-9	Acenaphthene	390	J J

NW 9/22/13

1E - FORM I SV-2

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-30-096

14

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17099

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17099-14

Sample wt/vol: 30.0 (g/mL) g Lab File ID: PJZKT11.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 42 Decanted: (Y/N) Date Received: 06/20/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/28/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/13/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 5.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
51-28-5	2,4-Dinitrophenol	2800	U UJ
100-02-7	4-Nitrophenol	2800	U UJ
132-64-9	Dibenzofuran	200	J J
121-14-2	2,4-Dinitrotoluene	1500	U UJ
84-66-2	Diethylphthalate	1500	U UJ
86-73-7	Fluorene	580	J J
7005-72-3	4-Chlorophenyl-phenylether	1500	U UJ
100-01-6	4-Nitroaniline	2800	U
534-52-1	4,6-Dinitro-2-methylphenol	2800	U
86-30-6	N-Nitrosodiphenylamin [1]	1500	U
95-94-3	1,2,4,5-Tetrachlorobenzene	1500	U
101-55-3	4-Bromophenyl-phenylether	1500	U
118-74-1	Hexachlorobenzene	1500	U
1912-24-9	Atrazine	1500	U
87-86-5	Pentachlorophenol	2800	U
85-01-8	Phenanthrene	3300	J
120-12-7	Anthracene	1000	J J
86-74-8	Carbazole	1500	U UJ
84-74-2	Di-n-butylphthalate	1500	U UJ
206-44-0	Fluoranthene	3300	J
129-00-0	Pyrene	4800	J
85-68-7	Butylbenzylphthalate	1500	U UJ
91-94-1	3,3'-Dichlorobenzidine	1500	U UJ
56-55-3	Benzo(a)anthracene	2300	J
218-01-9	Chrysene	2400	J
117-81-7	Bis(2-ethylhexyl)phthalate	1500	U UJ
117-84-0	Di-n-octylphthalate	1500	U UJ
205-99-2	Benzo(b)fluoranthene	1600	J
207-08-9	Benzo(k)fluoranthene	1100	J
50-32-8	Benzo(a)pyrene	1500	
193-39-5	Indeno(1,2,3-cd)pyrene	1000	J
53-70-3	Dibenzo(a,h)anthracene	390	J
191-24-2	Benzo(g,h,i)perylene	1300	J
58-90-2	2,3,4,6-Tetrachlorophenol	1500	U UJ

[1] Cannot be separated from Diphenylamine

MW 9/22/13

EPA SAMPLE NO.
LMR13-30-120

15

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17099

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17099-15

Sample wt/vol: 30.5 (g/mL) g Lab File ID: ULLCA16.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 36 Decanted: (Y/N) Date Received: 06/20/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/28/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/07/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.7

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
100-52-7	Benzaldehyde	440	U
108-95-2	Phenol	440	U
111-44-4	Bis(2-chloroethyl)ether	440	U
95-57-8	2-Chlorophenol	440	U
95-48-7	2-Methylphenol	440	U
108-60-1	2,2'-Oxybis(1-chloropropane)	440	U
98-86-2	Acetophenone	440	U
106-44-5	4-Methylphenol	440	U
621-64-7	N-Nitroso-di-n-propylamine	440	U
67-72-1	Hexachloroethane	440	U
98-95-3	Nitrobenzene	440	U
78-59-1	Isophorone	440	U
88-75-5	2-Nitrophenol	440	U
105-67-9	2,4-Dimethylphenol	440	U
111-91-1	Bis(2-chloroethoxy)methane	440	U
120-83-2	2,4-Dichlorophenol	440	U
91-20-3	Naphthalene	220	J
106-47-8	4-Chloroaniline	440	U
87-68-3	Hexachlorobutadiene	440	U
105-60-2	Caprolactam	440	U
59-50-7	4-Chloro-3-methylphenol	440	U
91-57-6	2-Methylnaphthalene	84	J
77-47-4	Hexachlorocyclopentadiene	440	~~U~~ UJ
88-06-2	2,4,6-Trichlorophenol	440	U
95-95-4	2,4,5-Trichlorophenol	440	U
92-52-4	1,1'-Biphenyl	15	J
91-58-7	2-Chloronaphthalene	440	U
88-74-4	2-Nitroaniline	860	U
131-11-3	Dimethylphthalate	440	U
606-20-2	2,6-Dinitrotoluene	440	U
208-96-8	Acenaphthylene	58	J
99-09-2	3-Nitroaniline	860	U
83-32-9	Acenaphthene	360	J

NW 9/22/13

1E - FORM I SV-2
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-30-120

15

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17099

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17099-15

Sample wt/vol: 30.5 (g/mL) g Lab File ID: ULLCA16.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 36 Decanted: (Y/N) Date Received: 06/20/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/28/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/07/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.7

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
51-28-5	2,4-Dinitrophenol	860	U	
100-02-7	4-Nitrophenol	860	U	
132-64-9	Dibenzofuran	150	J	
121-14-2	2,4-Dinitrotoluene	440	U	
84-66-2	Diethylphthalate	440	U	
86-73-7	Fluorene	450		
7005-72-3	4-Chlorophenyl-phenylether	440	U	
100-01-6	4-Nitroaniline	860	U	
534-52-1	4,6-Dinitro-2-methylphenol	860	U	
86-30-6	N-Nitrosodiphenylamin [1]	440	U	
95-94-3	1,2,4,5-Tetrachlorobenzene	440	U	
101-55-3	4-Bromophenyl-phenylether	440	U	
118-74-1	Hexachlorobenzene	440	U	
1912-24-9	Atrazine	440	U	
87-86-5	Pentachlorophenol	860	U	
85-01-8	Phenanthrene	1900		
120-12-7	Anthracene	510		
86-74-8	Carbazole	18	J	
84-74-2	Di-n-butylphthalate	440	U	
206-44-0	Fluoranthene	2800		
129-00-0	Pyrene	2200		
85-68-7	Butylbenzylphthalate	440	U	
91-94-1	3,3'-Dichlorobenzidine	440	U	
56-55-3	Benzo(a)anthracene	1300		
218-01-9	Chrysene	1000		
117-81-7	Bis(2-ethylhexyl)phthalate	440	U	
117-84-0	Di-n-octylphthalate	440	U	
205-99-2	Benzo(b)fluoranthene	960		J
207-08-9	Benzo(k)fluoranthene	680		
50-32-8	Benzo(a)pyrene	840		
193-39-5	Indeno(1,2,3-cd)pyrene	410	~~U~~	J
53-70-3	Dibenzo(a,h)anthracene	150	~~U~~	J
191-24-2	Benzo(g,h,i)perylene	440	J	
58-90-2	2,3,4,6-Tetrachlorophenol	440	U	

[1] Cannot be separated from Diphenylamine

NW 9/22/13

1D - FORM I SV-1

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-33-012

16

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17099

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17099-16

Sample wt/vol: 30.0 (g/mL) g Lab File ID: PJZKT12.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 58 Decanted: (Y/N) Date Received: 06/20/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/28/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/13/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 3.3

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
100-52-7	Benzaldehyde	1300	U UJ
108-95-2	Phenol	1300	U
111-44-4	Bis(2-chloroethyl)ether	1300	U
95-57-8	2-Chlorophenol	1300	U
95-48-7	2-Methylphenol	1300	U
108-60-1	2,2'-Oxybis(1-chloropropane)	1300	U
98-86-2	Acetophenone	1300	U
106-44-5	4-Methylphenol	110	J J
621-64-7	N-Nitroso-di-n-propylamine	1300	U UJ
67-72-1	Hexachloroethane	1300	U
98-95-3	Nitrobenzene	1300	U
78-59-1	Isophorone	1300	U
88-75-5	2-Nitrophenol	1300	U
105-67-9	2,4-Dimethylphenol	1300	U
111-91-1	Bis(2-chloroethoxy)methane	1300	U
120-83-2	2,4-Dichlorophenol	1300	U
91-20-3	Naphthalene	2300	J
106-47-8	4-Chloroaniline	1300	U UJ
87-68-3	Hexachlorobutadiene	1300	U
105-60-2	Caprolactam	1300	U
59-50-7	4-Chloro-3-methylphenol	1300	U
91-57-6	2-Methylnaphthalene	490	J J
77-47-4	Hexachlorocyclopentadiene	1300	U UJ
88-06-2	2,4,6-Trichlorophenol	1300	U
95-95-4	2,4,5-Trichlorophenol	1300	U
92-52-4	1,1'-Biphenyl	120	J J
91-58-7	2-Chloronaphthalene	1300	U UJ
88-74-4	2-Nitroaniline	2600	U
131-11-3	Dimethylphthalate	1300	U
606-20-2	2,6-Dinitrotoluene	1300	U
208-96-8	Acenaphthylene	100	J J
99-09-2	3-Nitroaniline	2600	U UJ
83-32-9	Acenaphthene	250	J J

NW 9/22/13

EPA SAMPLE NO.
LMR13-33-012

16

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17099

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17099-16

Sample wt/vol: 30.0 (g/mL) g Lab File ID: PJZKT12.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 58 Decanted: (Y/N) Date Received: 06/20/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/28/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/13/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 3.3

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
51-28-5	2,4-Dinitrophenol	2600	U UJ
100-02-7	4-Nitrophenol	2600	U UJ
132-64-9	Dibenzofuran	330	J J
121-14-2	2,4-Dinitrotoluene	1300	U UJ
84-66-2	Diethylphthalate	1300	U UJ
86-73-7	Fluorene	630	J J
7005-72-3	4-Chlorophenyl-phenylether	1300	U UJ
100-01-6	4-Nitroaniline	2600	U
534-52-1	4,6-Dinitro-2-methylphenol	2600	U
86-30-6	N-Nitrosodiphenylamin [1]	1300	U
95-94-3	1,2,4,5-Tetrachlorobenzene	1300	U
101-55-3	4-Bromophenyl-phenylether	1300	U
118-74-1	Hexachlorobenzene	1300	U
1912-24-9	Atrazine	1300	U
87-86-5	Pentachlorophenol	2600	U
85-01-8	Phenanthrene	2900	J
120-12-7	Anthracene	850	J
86-74-8	Carbazole	76	J
84-74-2	Di-n-butylphthalate	1300	U UJ
206-44-0	Fluoranthene	2400	J
129-00-0	Pyrene	3600	J
85-68-7	Butylbenzylphthalate	1300	U UJ
91-94-1	3,3'-Dichlorobenzidine	1300	U UJ
56-55-3	Benzo(a)anthracene	1900	J
218-01-9	Chrysene	2400	J
117-81-7	Bis(2-ethylhexyl)phthalate	1300	U UJ
117-84-0	Di-n-octylphthalate	1300	U UJ
205-99-2	Benzo(b)fluoranthene	1100	J J
207-08-9	Benzo(k)fluoranthene	1400	
50-32-8	Benzo(a)pyrene	1300	
193-39-5	Indeno(1,2,3-cd)pyrene	790	J
53-70-3	Dibenzo(a,h)anthracene	500	J
191-24-2	Benzo(g,h,i)perylene	850	J
58-90-2	2,3,4,6-Tetrachlorophenol	1300	U UJ

[1] Cannot be separated from Diphenylamine

MW 9/22/13

EPA SAMPLE NO.
LMR13-55-012

17

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17099

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17099-17

Sample wt/vol: 30.1 (g/mL) g Lab File ID: RKXYQ10.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 27 Decanted: (Y/N) Date Received: 06/20/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/28/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/07/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 20.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
100-52-7	Benzaldehyde	4700	U
108-95-2	Phenol	4700	U
111-44-4	Bis(2-chloroethyl)ether	4700	U
95-57-8	2-Chlorophenol	4700	U
95-48-7	2-Methylphenol	4700	U
108-60-1	2,2'-Oxybis(1-chloropropane)	4700	U
98-86-2	Acetophenone	4700	U
106-44-5	4-Methylphenol	4700	U
621-64-7	N-Nitroso-di-n-propylamine	4700	U
67-72-1	Hexachloroethane	4700	U
98-95-3	Nitrobenzene	4700	U
78-59-1	Isophorone	4700	U
88-75-5	2-Nitrophenol	4700	U
105-67-9	2,4-Dimethylphenol	4700	U
111-91-1	Bis(2-chloroethoxy)methane	4700	U
120-83-2	2,4-Dichlorophenol	4700	U
91-20-3	Naphthalene	2100	J
106-47-8	4-Chloroaniline	4700	U
87-68-3	Hexachlorobutadiene	4700	U
105-60-2	Caprolactam	4700	U
59-50-7	4-Chloro-3-methylphenol	4700	U
91-57-6	2-Methylnaphthalene	910	J
77-47-4	Hexachlorocyclopentadiene	4700	U
88-06-2	2,4,6-Trichlorophenol	4700	U
95-95-4	2,4,5-Trichlorophenol	4700	U
92-52-4	1,1'-Biphenyl	4700	U
91-58-7	2-Chloronaphthalene	4700	U
88-74-4	2-Nitroaniline	9000	U
131-11-3	Dimethylphthalate	4700	U
606-20-2	2,6-Dinitrotoluene	4700	U
208-96-8	Acenaphthylene	4700	U
99-09-2	3-Nitroaniline	9000	U
83-32-9	Acenaphthene	8900	

MW 9/22/13

1E - FORM I SV-2

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-55-012

17

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17099

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17099-17

Sample wt/vol: 30.1 (g/mL) g Lab File ID: RKXYQ10.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 27 Decanted: (Y/N) Date Received: 06/20/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/28/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/07/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 20.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
51-28-5	2,4-Dinitrophenol	9000	U
100-02-7	4-Nitrophenol	9000	U
132-64-9	Dibenzofuran	4900	
121-14-2	2,4-Dinitrotoluene	4700	U
84-66-2	Diethylphthalate	4700	U
86-73-7	Fluorene	11000	
7005-72-3	4-Chlorophenyl-phenylether	4700	U
100-01-6	4-Nitroaniline	9000	U
534-52-1	4,6-Dinitro-2-methylphenol	9000	U
86-30-6	N-Nitrosodiphenylamin [1]	4700	U
95-94-3	1,2,4,5-Tetrachlorobenzene	4700	U
101-55-3	4-Bromophenyl-phenylether	4700	U
118-74-1	Hexachlorobenzene	4700	U
1912-24-9	Atrazine	4700	U
87-86-5	Pentachlorophenol	9000	~~U~~ UJ
85-01-8	Phenanthrene	51000	
120-12-7	Anthracene	12000	
86-74-8	Carbazole	640	J
84-74-2	Di-n-butylphthalate	4700	U
206-44-0	Fluoranthene	32000	
129-00-0	Pyrene	21000	J
85-68-7	Butylbenzylphthalate	4700	U
91-94-1	3,3'-Dichlorobenzidine	4700	U
56-55-3	Benzo(a)anthracene	12000	
218-01-9	Chrysene	13000	
117-81-7	Bis(2-ethylhexyl)phthalate	4700	U
117-84-0	Di-n-octylphthalate	4700	U
205-99-2	Benzo(b)fluoranthene	8300	
207-08-9	Benzo(k)fluoranthene	9200	
50-32-8	Benzo(a)pyrene	8900	
193-39-5	Indeno(1,2,3-cd)pyrene	3800	J J
53-70-3	Dibenzo(a,h)anthracene	2000	J ↓
191-24-2	Benzo(g,h,i)perylene	3500	J ↓
58-90-2	2,3,4,6-Tetrachlorophenol	4700	U

[1] Cannot be separated from Diphenylamine

MW 9/22/13

1D - FORM I SV-1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-55-024

20

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17099

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17099-20

Sample wt/vol: 30.6 (g/mL) g Lab File ID: ULLCA17.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 33 Decanted: (Y/N) Date Received: 06/20/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/28/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/07/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 16.7

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
100-52-7	Benzaldehyde	4100	U
108-95-2	Phenol	4100	U
111-44-4	Bis(2-chloroethyl)ether	4100	U
95-57-8	2-Chlorophenol	4100	U
95-48-7	2-Methylphenol	4100	U
108-60-1	2,2'-Oxybis(1-chloropropane)	4100	U
98-86-2	Acetophenone	4100	U
106-44-5	4-Methylphenol	4100	U
621-64-7	N-Nitroso-di-n-propylamine	4100	U
67-72-1	Hexachloroethane	4100	U
98-95-3	Nitrobenzene	4100	U
78-59-1	Isophorone	4100	U
88-75-5	2-Nitrophenol	4100	U
105-67-9	2,4-Dimethylphenol	4100	U
111-91-1	Bis(2-chloroethoxy)methane	4100	U
120-83-2	2,4-Dichlorophenol	4100	U
91-20-3	Naphthalene	4100	J
106-47-8	4-Chloroaniline	4100	U
87-68-3	Hexachlorobutadiene	4100	U
105-60-2	Caprolactam	4100	U
59-50-7	4-Chloro-3-methylphenol	4100	U
91-57-6	2-Methylnaphthalene	1100	J
77-47-4	Hexachlorocyclopentadiene	4100	~~U~~ UJ
88-06-2	2,4,6-Trichlorophenol	4100	U
95-95-4	2,4,5-Trichlorophenol	4100	U
92-52-4	1,1'-Biphenyl	4100	U
91-58-7	2-Chloronaphthalene	4100	U
88-74-4	2-Nitroaniline	8000	U
131-11-3	Dimethylphthalate	4100	U
606-20-2	2,6-Dinitrotoluene	4100	U
208-96-8	Acenaphthylene	700	J
99-09-2	3-Nitroaniline	8000	U
83-32-9	Acenaphthene	9700	

MW 9/22/13

EPA SAMPLE NO.
LMR13-55-024

20

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17099

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17099-20

Sample wt/vol: 30.6 (g/mL) g Lab File ID: ULLCA17.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 33 Decanted: (Y/N) Date Received: 06/20/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/28/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/07/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 16.7

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
51-28-5	2,4-Dinitrophenol	8000	U
100-02-7	4-Nitrophenol	8000	U
132-64-9	Dibenzofuran	5300	
121-14-2	2,4-Dinitrotoluene	4100	U
84-66-2	Diethylphthalate	4100	U
86-73-7	Fluorene	11000	
7005-72-3	4-Chlorophenyl-phenylether	4100	U
100-01-6	4-Nitroaniline	8000	U
534-52-1	4,6-Dinitro-2-methylphenol	8000	U
86-30-6	N-Nitrosodiphenylamin [1]	4100	U
95-94-3	1,2,4,5-Tetrachlorobenzene	4100	U
101-55-3	4-Bromophenyl-phenylether	4100	U
118-74-1	Hexachlorobenzene	4100	U
1912-24-9	Atrazine	4100	U
87-86-5	Pentachlorophenol	8000	U
85-01-8	Phenanthrene	48000	
120-12-7	Anthracene	11000	
86-74-8	Carbazole	680	J
84-74-2	Di-n-butylphthalate	4100	U
206-44-0	Fluoranthene	34000	
129-00-0	Pyrene	21000	
85-68-7	Butylbenzylphthalate	4100	U
91-94-1	3,3'-Dichlorobenzidine	4100	U
56-55-3	Benzo(a)anthracene	12000	
218-01-9	Chrysene	14000	
117-81-7	Bis(2-ethylhexyl)phthalate	4100 ~~280~~	~~J B~~ U
117-84-0	Di-n-octylphthalate	4100	U
205-99-2	Benzo(b)fluoranthene	11000	
207-08-9	Benzo(k)fluoranthene	8700	
50-32-8	Benzo(a)pyrene	9500	
193-39-5	Indeno(1,2,3-cd)pyrene	4300	
53-70-3	Dibenzo(a,h)anthracene	1600	~~J~~
191-24-2	Benzo(g,h,i)perylene	4200	
58-90-2	2,3,4,6-Tetrachlorophenol	4100	U

[1] Cannot be separated from Diphenylamine

NW 9/22/13

1D - FORM I SV-1

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-33-048FD

21

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17099

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17099-21

Sample wt/vol: 30.3 (g/mL) g Lab File ID: ULLCA18.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 43 Decanted: (Y/N) Date Received: 06/20/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/28/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/07/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
100-52-7	Benzaldehyde	300	U	
108-95-2	Phenol	300	U	
111-44-4	Bis(2-chloroethyl)ether	300	U	
95-57-8	2-Chlorophenol	300	U	
95-48-7	2-Methylphenol	300	U	
108-60-1	2,2'-Oxybis(1-chloropropane)	300	U	
98-86-2	Acetophenone	300	U	
106-44-5	4-Methylphenol	300	U	
621-64-7	N-Nitroso-di-n-propylamine	300	U	
67-72-1	Hexachloroethane	300	U	
98-95-3	Nitrobenzene	300	U	
78-59-1	Isophorone	300	U	
88-75-5	2-Nitrophenol	300	U	
105-67-9	2,4-Dimethylphenol	300	U	
111-91-1	Bis(2-chloroethoxy)methane	300	U	
120-83-2	2,4-Dichlorophenol	300	~~U~~	UJ
91-20-3	Naphthalene	280	J	
106-47-8	4-Chloroaniline	300	U	
87-68-3	Hexachlorobutadiene	300	~~U~~	UJ
105-60-2	Caprolactam	300	U	
59-50-7	4-Chloro-3-methylphenol	300	~~U~~	UJ
91-57-6	2-Methylnaphthalene	120	J	
77-47-4	Hexachlorocyclopentadiene	300	~~U~~	UJ
88-06-2	2,4,6-Trichlorophenol	300	~~U~~	UJ
95-95-4	2,4,5-Trichlorophenol	300	~~U~~	UJ
92-52-4	1,1'-Biphenyl	20	J	
91-58-7	2-Chloronaphthalene	300	U	
88-74-4	2-Nitroaniline	580	U	
131-11-3	Dimethylphthalate	300	U	
606-20-2	2,6-Dinitrotoluene	300	U	
208-96-8	Acenaphthylene	90	J	
99-09-2	3-Nitroaniline	580	U	
83-32-9	Acenaphthene	210	J	

MW 9/22/13

EPA SAMPLE NO.
LMR13-33-048FD

21

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: _____ SDG No.: 17099

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17099-21

Sample wt/vol: 30.3 (g/mL) g Lab File ID: ULLCA18.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 43 Decanted: (Y/N) _____ Date Received: 06/20/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/28/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/07/2013

GPC Cleanup: (Y/N) Y pH: _____ Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
51-28-5	2,4-Dinitrophenol	580	U	
100-02-7	4-Nitrophenol	580	U	
132-64-9	Dibenzofuran	100	J	
121-14-2	2,4-Dinitrotoluene	300	U	
84-66-2	Diethylphthalate	300	U	
86-73-7	Fluorene	350		
7005-72-3	4-Chlorophenyl-phenylether	300	U	
100-01-6	4-Nitroaniline	580	U	
534-52-1	4,6-Dinitro-2-methylphenol	580	U	
86-30-6	N-Nitrosodiphenylamin [1]	300	U	
95-94-3	1,2,4,5-Tetrachlorobenzene	300	~~U~~	UJ
101-55-3	4-Bromophenyl-phenylether	300	U	
118-74-1	Hexachlorobenzene	300	U	
1912-24-9	Atrazine	300	U	
87-86-5	Pentachlorophenol	580	~~U~~	UJ
85-01-8	Phenanthrene	1300		
120-12-7	Anthracene	350		
86-74-8	Carbazole	300	U	
84-74-2	Di-n-butylphthalate	300 ~~15~~	~~J B~~	U
206-44-0	Fluoranthene	2200		
129-00-0	Pyrene	2800		
85-68-7	Butylbenzylphthalate	300	U	
91-94-1	3,3'-Dichlorobenzidine	300	U	
56-55-3	Benzo(a)anthracene	1800		
218-01-9	Chrysene	1200		
117-81-7	Bis(2-ethylhexyl)phthalate	300 ~~97~~	~~J B~~	U
117-84-0	Di-n-octylphthalate	300	U	
205-99-2	Benzo(b)fluoranthene	1500		J
207-08-9	Benzo(k)fluoranthene	860		
50-32-8	Benzo(a)pyrene	1200		
193-39-5	Indeno(1,2,3-cd)pyrene	590		J
53-70-3	Dibenzo(a,h)anthracene	280	~~J~~	J
191-24-2	Benzo(g,h,i)perylene	580		
58-90-2	2,3,4,6-Tetrachlorophenol	300	~~U~~	UJ

[1] Cannot be separated from Diphenylamine

NW 9/22/13

EPA SAMPLE NO.
LMR13-54-024FD

22

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17099

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17099-22

Sample wt/vol: 30.1 (g/mL) g Lab File ID: ULLCA19.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 39 Decanted: (Y/N) Date Received: 06/20/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/28/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/07/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 10.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
100-52-7	Benzaldehyde	2800	U
108-95-2	Phenol	2800	U
111-44-4	Bis(2-chloroethyl)ether	2800	U
95-57-8	2-Chlorophenol	2800	U
95-48-7	2-Methylphenol	2800	U
108-60-1	2,2'-Oxybis(1-chloropropane)	2800	U
98-86-2	Acetophenone	2800	U
106-44-5	4-Methylphenol	2800	U
621-64-7	N-Nitroso-di-n-propylamine	2800	U
67-72-1	Hexachloroethane	2800	U
98-95-3	Nitrobenzene	2800	U
78-59-1	Isophorone	2800	U
88-75-5	2-Nitrophenol	2800	U
105-67-9	2,4-Dimethylphenol	2800	U
111-91-1	Bis(2-chloroethoxy)methane	2800	U
120-83-2	2,4-Dichlorophenol	2800	U
91-20-3	Naphthalene	7100	J
106-47-8	4-Chloroaniline	2800	U
87-68-3	Hexachlorobutadiene	2800	U
105-60-2	Caprolactam	2800	U
59-50-7	4-Chloro-3-methylphenol	2800	U
91-57-6	2-Methylnaphthalene	1400	J
77-47-4	Hexachlorocyclopentadiene	2800	UJ
88-06-2	2,4,6-Trichlorophenol	2800	U
95-95-4	2,4,5-Trichlorophenol	2800	U
92-52-4	1,1'-Biphenyl	2800	U
91-58-7	2-Chloronaphthalene	2800	U
88-74-4	2-Nitroaniline	5300	U
131-11-3	Dimethylphthalate	2800	U
606-20-2	2,6-Dinitrotoluene	2800	U
208-96-8	Acenaphthylene	850	J
99-09-2	3-Nitroaniline	5300	U
83-32-9	Acenaphthene	8200	J

MW 9/22/13

EPA SAMPLE NO.
LMR13-54-024FD

22

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17099

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17099-22

Sample wt/vol: 30.1 (g/mL) g Lab File ID: ULLCA19.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 39 Decanted: (Y/N) Date Received: 06/20/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/28/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/07/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 10.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
51-28-5	2,4-Dinitrophenol	5300	U
100-02-7	4-Nitrophenol	5300	U
132-64-9	Dibenzofuran	3400	
121-14-2	2,4-Dinitrotoluene	2800	U
84-66-2	Diethylphthalate	2800	U
86-73-7	Fluorene	8600	
7005-72-3	4-Chlorophenyl-phenylether	2800	U
100-01-6	4-Nitroaniline	5300	U
534-52-1	4,6-Dinitro-2-methylphenol	5300	U
86-30-6	N-Nitrosodiphenylamin [1]	2800	U
95-94-3	1,2,4,5-Tetrachlorobenzene	2800	U
101-55-3	4-Bromophenyl-phenylether	2800	U
118-74-1	Hexachlorobenzene	2800	U
1912-24-9	Atrazine	2800	U
87-86-5	Pentachlorophenol	5300	U
85-01-8	Phenanthrene	33000	
120-12-7	Anthracene	9900	
86-74-8	Carbazole	210	J
84-74-2	Di-n-butylphthalate	2800	U
206-44-0	Fluoranthene	34000	
129-00-0	Pyrene	27000	
85-68-7	Butylbenzylphthalate	2800	U
91-94-1	3,3'-Dichlorobenzidine	2800	U
56-55-3	Benzo(a)anthracene	16000	
218-01-9	Chrysene	15000	
117-81-7	Bis(2-ethylhexyl)phthalate	2800 ~~250~~	~~J B~~ U
117-84-0	Di-n-octylphthalate	2800	U
205-99-2	Benzo(b)fluoranthene	12000	J
207-08-9	Benzo(k)fluoranthene	13000	
50-32-8	Benzo(a)pyrene	13000	
193-39-5	Indeno(1,2,3-cd)pyrene	7400	J
53-70-3	Dibenzo(a,h)anthracene	2400	~~J~~ J
191-24-2	Benzo(g,h,i)perylene	7600	
58-90-2	2,3,4,6-Tetrachlorophenol	2800	U

[1]Cannot be separated from Diphenylamine

MW 9/22/13

EPA SAMPLE NO.
LMR13-54-012

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678 5

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17099

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17099-5

Sample wt/vol: 30.0 (g/mL) g Lab File ID: HQP17.D

Extraction: (Type) SONC

% Moisture: 49 Decanted: (Y/N) Date Received: 06/20/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/28/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/14/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 33.3

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
91-20-3	Naphthalene	4800	~~E B~~	J
90-12-0	1-Methylnaphthalene	210	J	
91-57-6	2-Methylnaphthalene	440		
208-96-8	Acenaphthylene	390		
83-32-9	Acenaphthene	1700		
86-73-7	Fluorene	3500	~~B~~	J
85-01-8	Phenanthrene	8500	~~E~~	
120-12-7	Anthracene	2200	~~E~~	
206-44-0	Fluoranthene	12000	~~E~~	
129-00-0	Pyrene	9600	~~E~~	
56-55-3	Benzo(a)anthracene	7000	~~E~~	
218-01-9	Chrysene	6600	~~E~~	
205-99-2	Benzo(b)fluoranthene	5500	~~E~~	
207-08-9	Benzo(k)fluoranthene	5000	~~E B~~	
192-97-2	Benzo(e)pyrene	3600	~~E~~	
50-32-8	Benzo(a)pyrene	5900	~~E~~	
198-55-0	Perylene	1800		
193-39-5	Indeno(1,2,3-cd)pyrene	2900	~~E~~	J
53-70-3	Dibenzo(a,h)anthracene	940		
191-24-2	Benzo(g,h,i)perylene	2600	~~B~~	J
C1NAPH	C1-Naphthalenes	420	J	
C2NAPH	C2-Naphthalenes	560	J	
C3NAPH	C3-Naphthalenes	750	J	
C4NAPH	C4-Naphthalenes	480	J	
C1FLUOR	C1 Fluorenes	310	J	
C2FLUOR	C2 Fluorenes	220	J	
C3FLUOR	C3 Fluorenes	300	J	
C1PHAN	C1-Phenanthrenes/Anthracenes	3100	J	
C2PHAN	C2-Phenanthrenes/Anthracenes	1400	J	
C3PHAN	C3-Phenanthrenes/Anthracenes	1100	J	
C4PHAN	C4-Phenanthrenes/Anthracenes	530	J	
C1FLPY	C1-Fluoranthenes/Pyrenes	6500	J	
C2FLPY	C2-Fluoranthenes/Pyrenes	1900	J	
C3FLPY	C3-Fluoranthenes/Pyrenes	710	J	
C1CHRYS	C1 Chrysenes	3100	J	
C2CHRYS	C2 Chrysenes	1200	J	
C3CHRYS	C3 Chrysenes	600	J	
C4CHRYS	C4 Chrysenes	160	J	

MW 9/22/13

1F - FORM I SV-SIM

SEMIVOLATILE SIM ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-54-012

5

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17099

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17099-5

Sample wt/vol: 30.0 (g/mL) g Lab File ID: HQP17.D

Extraction: (Type) SONC

% Moisture: 49 Decanted: (Y/N) Date Received: 06/20/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/28/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/14/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 33.3

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
TPPAH	Total 16 PPAH	79000	~~B~~ J	J
TPAH	Total PAH	110000	~~B~~ J	

MW 9/22/13

EPA SAMPLE NO.
LMR13-33-012

16

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17099

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17099-16

Sample wt/vol: 30.0 (g/mL) g Lab File ID: HQP18.D

Extraction: (Type) SONC

% Moisture: 58 Decanted: (Y/N) Date Received: 06/20/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/28/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/14/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 16.7

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
91-20-3	Naphthalene	2500	~~E B~~ J
90-12-0	1-Methylnaphthalene	340	
91-57-6	2-Methylnaphthalene	610	
208-96-8	Acenaphthylene	110	J
83-32-9	Acenaphthene	140	
86-73-7	Fluorene	1000	
85-01-8	Phenanthrene	4000	~~E~~ J
120-12-7	Anthracene	1300	
206-44-0	Fluoranthene	5800	E J
129-00-0	Pyrene	3200	E
56-55-3	Benzo(a)anthracene	2200	E
218-01-9	Chrysene	2600	E
205-99-2	Benzo(b)fluoranthene	1600	E
207-08-9	Benzo(k)fluoranthene	1500	E ~~B~~
192-97-2	Benzo(e)pyrene	1300	
50-32-8	Benzo(a)pyrene	1500	~~E~~ J
198-55-0	Perylene	370	
193-39-5	Indeno(1,2,3-cd)pyrene	580	
53-70-3	Dibenzo(a,h)anthracene	250	
191-24-2	Benzo(g,h,i)perylene	560	
C1NAPH	C1-Naphthalenes	610	J
C2NAPH	C2-Naphthalenes	1200	J
C3NAPH	C3-Naphthalenes	1700	J
C4NAPH	C4-Naphthalenes	2800	J
C1FLUOR	C1 Fluorenes	350	J
C2FLUOR	C2 Fluorenes	870	J
C3FLUOR	C3 Fluorenes	2400	J
C1PHAN	C1-Phenanthrenes/Anthracenes	5500	J
C2PHAN	C2-Phenanthrenes/Anthracenes	7000	J
C3PHAN	C3-Phenanthrenes/Anthracenes	6300	J
C4PHAN	C4-Phenanthrenes/Anthracenes	4000	J
C1FLPY	C1-Fluoranthenes/Pyrenes	4300	J
C2FLPY	C2-Fluoranthenes/Pyrenes	3300	J
C3FLPY	C3-Fluoranthenes/Pyrenes	2300	J
C1CHRYS	C1 Chrysenes	2800	J
C2CHRYS	C2 Chrysenes	2700	J
C3CHRYS	C3 Chrysenes	1200	J
C4CHRYS	C4 Chrysenes	440	J

NW 9/22/13

1F - FORM I SV-SIM

SEMIVOLATILE SIM ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-33-012

16

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17099

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17099-16

Sample wt/vol: 30.0 (g/mL) g Lab File ID: HQP18.D

Extraction: (Type) SONC

% Moisture: 58 Decanted: (Y/N) Date Received: 06/20/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/28/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/14/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 16.7

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
TPPAH	Total 16 PPAH	29000	~~J B~~	J
TPAH	Total PAH	80000	~~J B~~	J

MW 9/22/13

EPA SAMPLE NO.
LMR13-55-012

17

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17099

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17099-17

Sample wt/vol: 30.1 (g/mL) g Lab File ID: HQP19.D

Extraction: (Type) SONC

% Moisture: 27 Decanted: (Y/N) Date Received: 06/20/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/28/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/15/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 125.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
91-20-3	Naphthalene	2400	~~B~~
90-12-0	1-Methylnaphthalene	2700	
91-57-6	2-Methylnaphthalene	1400	
208-96-8	Acenaphthylene	540	J
83-32-9	Acenaphthene	9000	~~E~~
86-73-7	Fluorene	13000	~~E~~
85-01-8	Phenanthrene	34000	~~E~~
120-12-7	Anthracene	13000	~~E~~
206-44-0	Fluoranthene	28000	~~E~~
129-00-0	Pyrene	21000	~~E~~
56-55-3	Benzo(a)anthracene	13000	~~E~~
218-01-9	Chrysene	13000	~~E~~
205-99-2	Benzo(b)fluoranthene	8600	~~E~~
207-08-9	Benzo(k)fluoranthene	7700	~~E~~ ~~B~~
192-97-2	Benzo(e)pyrene	5900	~~E~~
50-32-8	Benzo(a)pyrene	8600	~~E~~
198-55-0	Perylene	2300	
193-39-5	Indeno(1,2,3-cd)pyrene	3800	
53-70-3	Dibenzo(a,h)anthracene	1600	
191-24-2	Benzo(g,h,i)perylene	3400	
C1NAPH	C1-Naphthalenes	2700	J
C2NAPH	C2-Naphthalenes	10000	J
C3NAPH	C3-Naphthalenes	13000	J
C4NAPH	C4-Naphthalenes	5700	J
C1FLUOR	C1 Fluorenes	1700	J
C2FLUOR	C2 Fluorenes	1900	J
C3FLUOR	C3 Fluorenes	2600	J
C1PHAN	C1-Phenanthrenes/Anthracenes	23000	J
C2PHAN	C2-Phenanthrenes/Anthracenes	10000	J
C3PHAN	C3-Phenanthrenes/Anthracenes	7000	J
C4PHAN	C4-Phenanthrenes/Anthracenes	3800	J
C1FLPY	C1-Fluoranthenes/Pyrenes	20000	J
C2FLPY	C2-Fluoranthenes/Pyrenes	8400	J
C3FLPY	C3-Fluoranthenes/Pyrenes	4300	J
C1CHRYS	C1 Chrysenes	9000	J
C2CHRYS	C2 Chrysenes	5300	J
C3CHRYS	C3 Chrysenes	2600	J
C4CHRYS	C4 Chrysenes	1000	J

J

MW 9/22/13

EPA SAMPLE NO.
LMR13-55-012

17

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17099

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17099-17

Sample wt/vol: 30.1 (g/mL) g Lab File ID: HQP19.D

Extraction: (Type) SONC

% Moisture: 27 Decanted: (Y/N) Date Received: 06/20/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/28/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/15/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 125.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
TPPAH	Total 16 PPAH	180000	~~J B~~
TPAH	Total PAH	320000	~~J B~~ J

MW 9/22/13

1H - FORM I ARO
AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-30-072

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17099

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17099-1

Sample wt/vol: 29.3 (g/mL) g Lab File ID: 0825AHHSOM13.D

% Moisture: 43 Decanted: (Y/N) Date Received: 06/20/2013

Extraction: (Type) SONC Date Extracted: 06/27/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 08/04/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 5.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	300	U
11104-28-2	Aroclor-1221	300	U
11141-16-5	Aroclor-1232	300	U
53469-21-9	Aroclor-1242	300	U
12672-29-6	Aroclor-1248	300	U
11097-69-1	Aroclor-1254	300	U
11096-82-5	Aroclor-1260	300	U
37324-23-5	Aroclor-1262	300	U
11100-14-4	Aroclor-1268	300	U

NW 9/22/13

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-86-072

2

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17099

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17099-2

Sample wt/vol: 30.8 (g/mL) g Lab File ID: 0825AHHSOM03.D

% Moisture: 44 Decanted: (Y/N) Date Received: 06/20/2013

Extraction: (Type) SONC Date Extracted: 06/27/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 08/04/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 5.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	290	U
11104-28-2	Aroclor-1221	290	U
11141-16-5	Aroclor-1232	290	U
53469-21-9	Aroclor-1242	330	
12672-29-6	Aroclor-1248	290	U
11097-69-1	Aroclor-1254	280	J
11096-82-5	Aroclor-1260	55	~~J~~ J
37324-23-5	Aroclor-1262	290	U
11100-14-4	Aroclor-1268	290	U

NW 9/22/13

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-33-072

3

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17099

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17099-3

Sample wt/vol: 30.6 (g/mL) g Lab File ID: 0825AHHSOM14.D

% Moisture: 44 Decanted: (Y/N) Date Received: 06/20/2013

Extraction: (Type) SONC Date Extracted: 06/27/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 08/04/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 5.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	290	U
11104-28-2	Aroclor-1221	290	U
11141-16-5	Aroclor-1232	290	U
53469-21-9	Aroclor-1242	290	U
12672-29-6	Aroclor-1248	290	U
11097-69-1	Aroclor-1254	290	U
11096-82-5	Aroclor-1260	290	U
37324-23-5	Aroclor-1262	290	U
11100-14-4	Aroclor-1268	290	U

NW 9/22/13

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-33-096

4

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17099

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17099-4

Sample wt/vol: 29.6 (g/mL) g Lab File ID: 0825AHHSOM15.D

% Moisture: 26 Decanted: (Y/N) Date Received: 06/20/2013

Extraction: (Type) SONC Date Extracted: 06/27/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 08/04/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 5.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	230	U
11104-28-2	Aroclor-1221	230	U
11141-16-5	Aroclor-1232	230	U
53469-21-9	Aroclor-1242	230	U
12672-29-6	Aroclor-1248	230	U
11097-69-1	Aroclor-1254	230	U
11096-82-5	Aroclor-1260	230	U
37324-23-5	Aroclor-1262	230	U
11100-14-4	Aroclor-1268	230	U

MW 9/22/13

1H - FORM I ARO
AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-54-012

5

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17099

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17099-5

Sample wt/vol: 30.0 (g/mL) g Lab File ID: 0825AHHSOM04.D

% Moisture: 49 Decanted: (Y/N) Date Received: 06/20/2013

Extraction: (Type) SONC Date Extracted: 06/27/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 08/04/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 5.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	320	U
11104-28-2	Aroclor-1221	320	U
11141-16-5	Aroclor-1232	320	U
53469-21-9	Aroclor-1242	89	J
12672-29-6	Aroclor-1248	320	U
11097-69-1	Aroclor-1254	120	J
11096-82-5	Aroclor-1260	27	~~J~~ P J
37324-23-5	Aroclor-1262	320	U
11100-14-4	Aroclor-1268	320	U

MW 9/22/13

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-54-024

6

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17099

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17099-6

Sample wt/vol: 29.4 (g/mL) g Lab File ID: 0825AHHSOM05.D

% Moisture: 41 Decanted: (Y/N) Date Received: 06/20/2013

Extraction: (Type) SONC Date Extracted: 06/27/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 08/04/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 5.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	280	U
11104-28-2	Aroclor-1221	280	U
11141-16-5	Aroclor-1232	280	U
53469-21-9	Aroclor-1242	12	J
12672-29-6	Aroclor-1248	280	U
11097-69-1	Aroclor-1254	32	~~J P~~ J
11096-82-5	Aroclor-1260	12	~~J P~~ J
37324-23-5	Aroclor-1262	280	U
11100-14-4	Aroclor-1268	280	U

MW 9/22/13

EPA SAMPLE NO.
LMR13-54-048

7

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17099

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17099-7

Sample wt/vol: 30.2 (g/mL) g Lab File ID: 0825AHHSOM06.D

% Moisture: 45 Decanted: (Y/N) Date Received: 06/20/2013

Extraction: (Type) SONC Date Extracted: 06/27/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 08/04/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 5.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	300	U
11104-28-2	Aroclor-1221	300	U
11141-16-5	Aroclor-1232	300	U
53469-21-9	Aroclor-1242	300	U
12672-29-6	Aroclor-1248	300	U
11097-69-1	Aroclor-1254	300	U
11096-82-5	Aroclor-1260	13	~~J P~~ J
37324-23-5	Aroclor-1262	300	U
11100-14-4	Aroclor-1268	300	U

MW 9/22/13

1H - FORM I ARO
AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-33-024FD

8

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17099

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17099-8

Sample wt/vol: 29.8 (g/mL) g Lab File ID: 0825AHHSOM07.D

% Moisture: 55 Decanted: (Y/N) Date Received: 06/20/2013

Extraction: (Type) SONC Date Extracted: 06/27/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 08/04/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 5.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	370	U
11104-28-2	Aroclor-1221	370	U
11141-16-5	Aroclor-1232	370	U
53469-21-9	Aroclor-1242	370	U
12672-29-6	Aroclor-1248	370	U
11097-69-1	Aroclor-1254	370	U
11096-82-5	Aroclor-1260	12	~~J P~~ J
37324-23-5	Aroclor-1262	370	U
11100-14-4	Aroclor-1268	370	U

MW 9/22/13

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-33-024

9

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17099

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17099-9

Sample wt/vol: 30.8 (g/mL) g Lab File ID: 0825AHHSOM08.D

% Moisture: 53 Decanted: (Y/N) Date Received: 06/20/2013

Extraction: (Type) SONC Date Extracted: 06/27/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 08/04/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 5.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	340	U
11104-28-2	Aroclor-1221	340	U
11141-16-5	Aroclor-1232	340	U
53469-21-9	Aroclor-1242	340	U
12672-29-6	Aroclor-1248	340	U
11097-69-1	Aroclor-1254	340	U
11096-82-5	Aroclor-1260	10	~~J P~~ J
37324-23-5	Aroclor-1262	340	U
11100-14-4	Aroclor-1268	340	U

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1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-33-048

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678 10

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17099

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17099-10

Sample wt/vol: 29.8 (g/mL) g Lab File ID: 0825AHHSOM09.D

% Moisture: 43 Decanted: (Y/N) Date Received: 06/20/2013

Extraction: (Type) SONC Date Extracted: 06/27/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 08/04/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 5.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	290	U
11104-28-2	Aroclor-1221	290	U
11141-16-5	Aroclor-1232	290	U
53469-21-9	Aroclor-1242	290	U
12672-29-6	Aroclor-1248	290	U
11097-69-1	Aroclor-1254	290	U
11096-82-5	Aroclor-1260	11	~~J P~~ J
37324-23-5	Aroclor-1262	290	U
11100-14-4	Aroclor-1268	290	U

NW 9/22/13

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-54-072

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678 11

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17099

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17099-11

Sample wt/vol: 30.7 (g/mL) g Lab File ID: 0825AHHSOM10.D

% Moisture: 46 Decanted: (Y/N) Date Received: 06/20/2013

Extraction: (Type) SONC Date Extracted: 06/27/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 08/04/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 5.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	300	U
11104-28-2	Aroclor-1221	300	U
11141-16-5	Aroclor-1232	300	U
53469-21-9	Aroclor-1242	300	U
12672-29-6	Aroclor-1248	300	U
11097-69-1	Aroclor-1254	300	U
11096-82-5	Aroclor-1260	13	~~J P~~ J
37324-23-5	Aroclor-1262	300	U
11100-14-4	Aroclor-1268	300	U

MW 9/22/13

1H - FORM I ARO
AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-54-096

12

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17099

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17099-12

Sample wt/vol: 29.9 (g/mL) g Lab File ID: 0825AHHSOM11.D

% Moisture: 41 Decanted: (Y/N) Date Received: 06/20/2013

Extraction: (Type) SONC Date Extracted: 06/27/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 08/04/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 5.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	280	U
11104-28-2	Aroclor-1221	280	U
11141-16-5	Aroclor-1232	280	U
53469-21-9	Aroclor-1242	280	U
12672-29-6	Aroclor-1248	280	U
11097-69-1	Aroclor-1254	280	U
11096-82-5	Aroclor-1260	280	U
37324-23-5	Aroclor-1262	280	U
11100-14-4	Aroclor-1268	280	U

MW 9/22/13

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-54-120

13

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17099

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17099-13

Sample wt/vol: 29.5 (g/mL) g Lab File ID: 0825AHHSOM12.D

% Moisture: 43 Decanted: (Y/N) Date Received: 06/20/2013

Extraction: (Type) SONC Date Extracted: 06/27/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 08/04/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 5.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	290	U
11104-28-2	Aroclor-1221	290	U
11141-16-5	Aroclor-1232	290	U
53469-21-9	Aroclor-1242	290	U
12672-29-6	Aroclor-1248	290	U
11097-69-1	Aroclor-1254	290	U
11096-82-5	Aroclor-1260	290	U
37324-23-5	Aroclor-1262	290	U
11100-14-4	Aroclor-1268	290	U

AW 9/22/13

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-30-096

14

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17099

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17099-14

Sample wt/vol: 30.3 (g/mL) g Lab File ID: 0825AHHSOM16.D

% Moisture: 42 Decanted: (Y/N) Date Received: 06/20/2013

Extraction: (Type) SONC Date Extracted: 06/27/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 08/04/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 5.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	280	U
11104-28-2	Aroclor-1221	280	U
11141-16-5	Aroclor-1232	280	U
53469-21-9	Aroclor-1242	280	U
12672-29-6	Aroclor-1248	280	U
11097-69-1	Aroclor-1254	280	U
11096-82-5	Aroclor-1260	280	U
37324-23-5	Aroclor-1262	280	U
11100-14-4	Aroclor-1268	280	U

NW 9/22/13

1H - FORM I ARO
AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-30-120

15

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17099

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17099-15

Sample wt/vol: 30.3 (g/mL) g Lab File ID: 0825AHISOM01.D

% Moisture: 36 Decanted: (Y/N) Date Received: 06/20/2013

Extraction: (Type) SONC Date Extracted: 06/27/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 08/04/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 5.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	250	U
11104-28-2	Aroclor-1221	250	U
11141-16-5	Aroclor-1232	250	U
53469-21-9	Aroclor-1242	250	U
12672-29-6	Aroclor-1248	250	U
11097-69-1	Aroclor-1254	250	U
11096-82-5	Aroclor-1260	250	U
37324-23-5	Aroclor-1262	250	U
11100-14-4	Aroclor-1268	250	U

MW 9/22/13

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-33-012

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678 16

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17099

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17099-16

Sample wt/vol: 29.8 (g/mL) g Lab File ID: 0825AHISOM04.D

% Moisture: 58 Decanted: (Y/N) Date Received: 06/20/2013

Extraction: (Type) SONC Date Extracted: 06/27/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 08/04/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 5.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	390	U
11104-28-2	Aroclor-1221	390	U
11141-16-5	Aroclor-1232	390	U
53469-21-9	Aroclor-1242	390	U
12672-29-6	Aroclor-1248	390	U
11097-69-1	Aroclor-1254	390	U
11096-82-5	Aroclor-1260	36	J
37324-23-5	Aroclor-1262	390	U
11100-14-4	Aroclor-1268	390	U

NW 9/22/13

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-55-012

17

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17099

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17099-17

Sample wt/vol: 30.6 (g/mL) g Lab File ID: 0825AHISOM05.D

% Moisture: 27 Decanted: (Y/N) Date Received: 06/20/2013

Extraction: (Type) SONC Date Extracted: 06/27/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 08/04/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 5.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	220	U
11104-28-2	Aroclor-1221	220	U
11141-16-5	Aroclor-1232	220	U
53469-21-9	Aroclor-1242	61	J
12672-29-6	Aroclor-1248	220	U
11097-69-1	Aroclor-1254	49	J
11096-82-5	Aroclor-1260	13	~~J P~~ J
37324-23-5	Aroclor-1262	220	U
11100-14-4	Aroclor-1268	220	U

MW 9/22/13

1H - FORM I ARO
AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-54-048FD

18

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17099

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17099-18

Sample wt/vol: 30.9 (g/mL) g Lab File ID: 0825AHISOM06.D

% Moisture: 46 Decanted: (Y/N) Date Received: 06/20/2013

Extraction: (Type) SONC Date Extracted: 06/27/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 08/04/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 5.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	300	U
11104-28-2	Aroclor-1221	300	U
11141-16-5	Aroclor-1232	300	U
53469-21-9	Aroclor-1242	300	U
12672-29-6	Aroclor-1248	300	U
11097-69-1	Aroclor-1254	300	U
11096-82-5	Aroclor-1260	22	~~J P~~ J
37324-23-5	Aroclor-1262	300	U
11100-14-4	Aroclor-1268	300	U

MW 9/22/13

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-55-024FD

19

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17099

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17099-19

Sample wt/vol: 29.4 (g/mL) g Lab File ID: 0825AHISOM07.D

% Moisture: 37 Decanted: (Y/N) Date Received: 06/20/2013

Extraction: (Type) SONC Date Extracted: 06/27/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 08/04/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 5.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	270	U
11104-28-2	Aroclor-1221	270	U
11141-16-5	Aroclor-1232	270	U
53469-21-9	Aroclor-1242	51	J
12672-29-6	Aroclor-1248	270	U
11097-69-1	Aroclor-1254	41	~~J P~~ J
11096-82-5	Aroclor-1260	11	~~J P~~ J
37324-23-5	Aroclor-1262	270	U
11100-14-4	Aroclor-1268	270	U

NW 9/22/13

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-55-024

20

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17099

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17099-20

Sample wt/vol: 29.4 (g/mL) g Lab File ID: 0825AHISOM08.D

% Moisture: 33 Decanted: (Y/N) Date Received: 06/20/2013

Extraction: (Type) SONC Date Extracted: 06/27/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 08/04/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 5.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
12674-11-2	Aroclor-1016	250	U	
11104-28-2	Aroclor-1221	250	U	
11141-16-5	Aroclor-1232	250	U	
53469-21-9	Aroclor-1242	45	J	
12672-29-6	Aroclor-1248	250	U	
11097-69-1	Aroclor-1254	35	~~J P~~	J
11096-82-5	Aroclor-1260	15	~~J P~~	J
37324-23-5	Aroclor-1262	250	U	
11100-14-4	Aroclor-1268	250	U	

MW 9/22/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-30-072

1

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678

Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 17099

Matrix: SED | Lab Sample Id: 200-17099-1

% Solids: 57.0 | Date Received: 06/20/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	18.3	J	~~N~~	P
7440-43-9	Cadmium	1.2			P
7440-47-3	Chromium	32.8	J	~~E~~	P
7440-50-8	Copper	40.3			P
7439-92-1	Lead	122			P
7440-02-0	Nickel	35.5	J	~~E~~	P
7440-66-6	Zinc	456	J	~~N E~~	P

Color Before: GREY | Clarity Before: | Texture: FINE

Color After: TAN | Clarity After: CLOUDY | Artifacts:

Comments:

NW 9/22/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-30-072

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17099

Matrix: SED Lab Sample Id: 200-17099-1

% Solids: 57.0 Date Received: 06/20/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.46			CV

Color Before: GRAY Clarity Before: CLOUDY Texture: FINE

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

MW 9/22/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-86-072

2

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678
Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 17099
Matrix: SED | Lab Sample Id: 200-17099-2
% Solids: 56.1 | Date Received: 06/20/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	9.5	J	~~N~~	P
7440-43-9	Cadmium	3.5			P
7440-47-3	Chromium	49.9	J	~~E~~	P
7440-50-8	Copper	42.0			P
7439-92-1	Lead	65.1			P
7440-02-0	Nickel	42.2	J	~~E~~	P
7440-66-6	Zinc	182	J	~~N~~ E	P

Color Before: GREY | Clarity Before: | Texture: FINE
Color After: TAN | Clarity After: CLOUDY | Artifacts:
Comments:

NW 9/22/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-86-072

2

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678

Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 17099

Matrix: SED | Lab Sample Id: 200-17099-2

% Solids: 56.1 | Date Received: 06/20/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.19			CV

Color Before: GRAY | Clarity Before: CLOUDY | Texture: FINE

Color After: COLORLESS | Clarity After: CLEAR | Artifacts:

Comments:

NW 9/22/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-33-072

3

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17099

Matrix: SED Lab Sample Id: 200-17099-3

% Solids: 56.0 Date Received: 06/20/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	28.8	J	~~N~~	P
7440-43-9	Cadmium	3.5			P
7440-47-3	Chromium	51.8	J	~~E~~	P
7440-50-8	Copper	54.8			P
7439-92-1	Lead	122			P
7440-02-0	Nickel	36.7	J	~~E~~	P
7440-66-6	Zinc	419	J	~~N~~ E	P

Color Before: GREY Clarity Before: Texture: FINE

Color After: TAN Clarity After: CLOUDY Artifacts:

Comments:

NW 9/22/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-33-072

3

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17099

Matrix: SED Lab Sample Id: 200-17099-3

% Solids: 56.0 Date Received: 06/20/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.54			CV

Color Before: GRAY Clarity Before: CLOUDY Texture: FINE

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

MW 9/22/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-33-096

4

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678
Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 17099
Matrix: SED | Lab Sample Id: 200-17099-4
% Solids: 73.9 | Date Received: 06/20/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	9.9	J	~~N~~	P
7440-43-9	Cadmium	0.96			P
7440-47-3	Chromium	15.7	J	~~E~~	P
7440-50-8	Copper	20.1			P
7439-92-1	Lead	48.7			P
7440-02-0	Nickel	17.0	J	~~E~~	P
7440-66-6	Zinc	158	J	~~N E~~	P

Color Before: GREY | Clarity Before: | Texture: FINE
Color After: TAN | Clarity After: CLOUDY | Artifacts:
Comments:

NW 9/22/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-33-096

4

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678

Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 17099

Matrix: SED | Lab Sample Id: 200-17099-4

% Solids: 73.9 | Date Received: 06/20/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.31			CV

Color Before: GRAY | Clarity Before: CLOUDY | Texture: FINE

Color After: COLORLESS | Clarity After: CLEAR | Artifacts:

Comments:

NW 9/22/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-54-012

5

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678

Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 17099

Matrix: SED | Lab Sample Id: 200-17099-5

% Solids: 50.9 | Date Received: 06/20/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	9.6	J	~~N~~	P
7440-43-9	Cadmium	1.1			P
7440-47-3	Chromium	29.7	J	~~E~~	P
7440-50-8	Copper	32.0			P
7439-92-1	Lead	42.6			P
7440-02-0	Nickel	32.2	J	~~E~~	P
7440-66-6	Zinc	157	J	~~N E~~	P

Color Before: GREY | Clarity Before: | Texture: FINE

Color After: TAN | Clarity After: CLOUDY | Artifacts:

Comments:

NW 9/22/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-54-012
5

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678
Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17099
Matrix: SED Lab Sample Id: 200-17099-5
% Solids: 50.9 Date Received: 06/20/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.21			CV

Color Before: GRAY Clarity Before: CLOUDY Texture: FINE
Color After: COLORLESS Clarity After: CLEAR Artifacts:
Comments:

NW 9/22/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-54-024
6

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678
Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 17099
Matrix: SED | Lab Sample Id: 200-17099-6
% Solids: 59.2 | Date Received: 06/20/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	14.0	J	~~W~~	P
7440-43-9	Cadmium	3.1			P
7440-47-3	Chromium	39.3	J	~~F~~	P
7440-50-8	Copper	40.5			P
7439-92-1	Lead	110			P
7440-02-0	Nickel	33.2	J	~~F~~	P
7440-66-6	Zinc	337	J	~~N E~~	P

Color Before: GREY | Clarity Before: | Texture: FINE
Color After: TAN | Clarity After: CLOUDY | Artifacts:
Comments:

NW 9/22/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-54-024
6

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678
Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 17099
Matrix: SED | Lab Sample Id: 200-17099-6
% Solids: 59.2 | Date Received: 06/20/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.30			CV

Color Before: GRAY | Clarity Before: CLOUDY | Texture: FINE
Color After: COLORLESS | Clarity After: CLEAR | Artifacts:
Comments:

NW 9/22/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-54-048

7

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17099

Matrix: SED Lab Sample Id: 200-17099-7

% Solids: 54.6 Date Received: 06/20/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	16.5	J	~~N~~	P
7440-43-9	Cadmium	3.4			P
7440-47-3	Chromium	48.4	J	~~E~~	P
7440-50-8	Copper	44.5			P
7439-92-1	Lead	151			P
7440-02-0	Nickel	37.2	J	~~E~~	P
7440-66-6	Zinc	510	J	~~N E~~	P

Color Before: GREY Clarity Before: Texture: FINE

Color After: TAN Clarity After: CLOUDY Artifacts:

Comments:

NW 9/22/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-54-048
7

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678
Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 17099
Matrix: SED | Lab Sample Id: 200-17099-7
% Solids: 54.6 | Date Received: 06/20/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.39			CV

Color Before: GRAY | Clarity Before: CLOUDY | Texture: FINE
Color After: COLORLESS | Clarity After: CLEAR | Artifacts:
Comments:

NW 9/22/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-33-024FD

8

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678

Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 17099

Matrix: SED | Lab Sample Id: 200-17099-8

% Solids: 45.0 | Date Received: 06/20/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	30.4	J	~~N~~	P
7440-43-9	Cadmium	5.5			P
7440-47-3	Chromium	70.8	J	~~E~~	P
7440-50-8	Copper	83.4			P
7439-92-1	Lead	233			P
7440-02-0	Nickel	50.4	J	~~E~~	P
7440-66-6	Zinc	686	J	~~N E~~	P

Color Before: GREY | Clarity Before: | Texture: FINE

Color After: TAN | Clarity After: CLOUDY | Artifacts:

Comments:

NW 9/22/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-33-024FD

8

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17099

Matrix: SED Lab Sample Id: 200-17099-8

% Solids: 45.0 Date Received: 06/20/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.34			CV

Color Before: GRAY Clarity Before: CLOUDY Texture: FINE

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

MW 9/22/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-33-024

9

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17099

Matrix: SED Lab Sample Id: 200-17099-9

% Solids: 47.5 Date Received: 06/20/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	32.6	J	~~N~~	P
7440-43-9	Cadmium	6.0			P
7440-47-3	Chromium	76.1	J	~~E~~	P
7440-50-8	Copper	82.9			P
7439-92-1	Lead	254			P
7440-02-0	Nickel	50.9	J	~~E~~	P
7440-66-6	Zinc	737	J	~~N~~ E	P

Color Before: BROWNISH GREY Clarity Before: Texture: FINE

Color After: TAN Clarity After: CLOUDY Artifacts:

Comments:

MW 9/22/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-33-024

9

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17099

Matrix: SED Lab Sample Id: 200-17099-9

% Solids: 47.5 Date Received: 06/20/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.36			CV

Color Before: GRAY Clarity Before: CLOUDY Texture: FINE

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

NW 9/22/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-33-048

10

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678
Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 17099
Matrix: SED | Lab Sample Id: 200-17099-10
% Solids: 56.8 | Date Received: 06/20/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	21.9	J	~~N~~	P
7440-43-9	Cadmium	2.6			P
7440-47-3	Chromium	46.3	J	~~E~~	P
7440-50-8	Copper	48.0			P
7439-92-1	Lead	113			P
7440-02-0	Nickel	35.6	J	~~E~~	P
7440-66-6	Zinc	510	J	~~N E~~	P

Color Before: GREY | Clarity Before: | Texture: FINE
Color After: TAN | Clarity After: CLOUDY | Artifacts:
Comments:

NW 9/22/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-33-048

10

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17099

Matrix: SED Lab Sample Id: 200-17099-10

% Solids: 56.8 Date Received: 06/20/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.42			CV

Color Before: GRAY Clarity Before: CLOUDY Texture: FINE

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

NW 9/22/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-54-072

11

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678

Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 17099

Matrix: SED | Lab Sample Id: 200-17099-11

% Solids: 54.4 | Date Received: 06/20/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	20.3	J	~~N~~	P
7440-43-9	Cadmium	2.7			P
7440-47-3	Chromium	56.7	J	~~E~~	P
7440-50-8	Copper	44.8			P
7439-92-1	Lead	156			P
7440-02-0	Nickel	36.4	J	~~E~~	P
7440-66-6	Zinc	560	J	~~N~~ E	P

Color Before: GREY | Clarity Before: | Texture: FINE

Color After: TAN | Clarity After: CLOUDY | Artifacts:

Comments:

NW 9/22/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-54-072

11

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17099

Matrix: SED Lab Sample Id: 200-17099-11

% Solids: 54.4 Date Received: 06/20/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.49			CV

Color Before: GRAY Clarity Before: CLOUDY Texture: FINE

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

NW 9/22/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-54-096

12

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678
Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 17099
Matrix: SED | Lab Sample Id: 200-17099-12
% Solids: 58.9 | Date Received: 06/20/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	21.8	J	~~N~~	P
7440-43-9	Cadmium	1.9			P
7440-47-3	Chromium	36.5	J	~~E~~	P
7440-50-8	Copper	40.5			P
7439-92-1	Lead	168			P
7440-02-0	Nickel	31.0	J	~~E~~	P
7440-66-6	Zinc	389	J	~~N E~~	P

Color Before: GREY | Clarity Before: | Texture: FINE
Color After: TAN | Clarity After: CLOUDY | Artifacts:
Comments:

MW 9/22/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-54-096

12

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17099

Matrix: SED Lab Sample Id: 200-17099-12

% Solids: 58.9 Date Received: 06/20/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.59			CV

Color Before: GRAY Clarity Before: CLOUDY Texture: FINE

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

MW 9/22/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-54-120

13

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678

Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 17099

Matrix: SED | Lab Sample Id: 200-17099-13

% Solids: 57.1 | Date Received: 06/20/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	24.4	J	~~N~~	P
7440-43-9	Cadmium	2.2			P
7440-47-3	Chromium	39.8	J	~~E~~	P
7440-50-8	Copper	55.9			P
7439-92-1	Lead	347			P
7440-02-0	Nickel	35.6	J	~~E~~	P
7440-66-6	Zinc	612	J	~~N E~~	P

Color Before: GREY | Clarity Before: | Texture: FINE

Color After: TAN | Clarity After: CLOUDY | Artifacts:

Comments:

MW 9/22/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-54-120

13

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678

Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 17099

Matrix: SED | Lab Sample Id: 200-17099-13

% Solids: 57.1 | Date Received: 06/20/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.74			CV

Color Before: GRAY | Clarity Before: CLOUDY | Texture: FINE

Color After: COLORLESS | Clarity After: CLEAR | Artifacts:

Comments:

NW 9/22/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-30-096

14

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17099

Matrix: SED Lab Sample Id: 200-17099-14

% Solids: 58.5 Date Received: 06/20/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	26.3	J	~~N~~	P
7440-43-9	Cadmium	1.2			P
7440-47-3	Chromium	27.7	J	~~E~~	P
7440-50-8	Copper	45.1			P
7439-92-1	Lead	225			P
7440-02-0	Nickel	34.0	J	~~E~~	P
7440-66-6	Zinc	509	J	~~N E~~	P

Color Before: GREY Clarity Before: Texture: FINE

Color After: TAN Clarity After: CLOUDY Artifacts:

Comments:

NW 9/22/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-30-096
14

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678
Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17099
Matrix: SED Lab Sample Id: 200-17099-14
% Solids: 58.5 Date Received: 06/20/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.65			CV

Color Before: GRAY Clarity Before: CLOUDY Texture: FINE
Color After: COLORLESS Clarity After: CLEAR Artifacts:
Comments:

NW 9/22/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-30-120
15

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678
Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 17099
Matrix: SED | Lab Sample Id: 200-17099-15
% Solids: 64.3 | Date Received: 06/20/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	16.2	J	~~N~~	P
7440-43-9	Cadmium	0.64	J		P
7440-47-3	Chromium	18.5	J	~~E~~	P
7440-50-8	Copper	26.3			P
7439-92-1	Lead	76.7			P
7440-02-0	Nickel	23.7	J	~~E~~	P
7440-66-6	Zinc	176	J	~~N E~~	P

Color Before: GREY | Clarity Before: | Texture: FINE
Color After: TAN | Clarity After: CLOUDY | Artifacts:
Comments:

NW 9/22/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-30-120

15

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17099

Matrix: SED Lab Sample Id: 200-17099-15

% Solids: 64.3 Date Received: 06/20/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.32			CV

Color Before: GRAY Clarity Before: CLOUDY Texture: FINE

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

MW 9/22/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-33-012

16

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17099

Matrix: SED Lab Sample Id: 200-17099-16

% Solids: 42.5 Date Received: 06/20/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	38.4	J	~~N~~	P
7440-43-9	Cadmium	8.0			P
7440-47-3	Chromium	135	J	~~E~~	P
7440-50-8	Copper	131			P
7439-92-1	Lead	340			P
7440-02-0	Nickel	98.1	J	~~E~~	P
7440-66-6	Zinc	950	J	~~N E~~	P

Color Before: BROWNISH GREY Clarity Before: Texture: FINE

Color After: TAN Clarity After: CLOUDY Artifacts:

Comments:

NW 9/22/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-33-012

16

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17099

Matrix: SED Lab Sample Id: 200-17099-16

% Solids: 42.5 Date Received: 06/20/2013

Concentration Units (**ug/L, ug,** or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.31			CV

Color Before: GRAY Clarity Before: CLOUDY Texture: FINE

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

NW 9/22/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-55-012

17

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17099

Matrix: SED Lab Sample Id: 200-17099-17

% Solids: 72.8 Date Received: 06/20/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	9.2	J	~~N~~	P
7440-43-9	Cadmium	0.97			P
7440-47-3	Chromium	19.2	J	~~E~~	P
7440-50-8	Copper	23.0			P
7439-92-1	Lead	155			P
7440-02-0	Nickel	22.5	J	~~E~~	P
7440-66-6	Zinc	311	J	~~N E~~	P

Color Before: GREY Clarity Before: Texture: FINE

Color After: TAN Clarity After: CLOUDY Artifacts:

Comments:

NW 9/22/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-55-012

17

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17099

Matrix: SED Lab Sample Id: 200-17099-17

% Solids: 72.8 Date Received: 06/20/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.22			CV

Color Before: GRAY Clarity Before: CLOUDY Texture: FINE

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

NW 9/22/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-54-048FD

18

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17099

Matrix: SED Lab Sample Id: 200-17099-18

% Solids: 53.8 Date Received: 06/20/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	16.5	J	~~N~~	P
7440-43-9	Cadmium	3.2			P
7440-47-3	Chromium	44.9	J	~~E~~	P
7440-50-8	Copper	44.1			P
7439-92-1	Lead	164			P
7440-02-0	Nickel	34.8	J	~~E~~	P
7440-66-6	Zinc	500	J	~~N E~~	P

Color Before: BROWNISH GREY Clarity Before: Texture: FINE

Color After: TAN Clarity After: CLOUDY Artifacts:

Comments:

NW 9/22/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-54-048FD

18

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17099

Matrix: SED Lab Sample Id: 200-17099-18

% Solids: 53.8 Date Received: 06/20/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.36			CV

Color Before: GRAY Clarity Before: CLOUDY Texture: FINE

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

KW 9/22/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-55-024FD

19

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17099

Matrix: SED Lab Sample Id: 200-17099-19

% Solids: 62.6 Date Received: 06/20/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	11.8	J	~~N~~	P
7440-43-9	Cadmium	1.4			P
7440-47-3	Chromium	25.8	J	~~E~~	P
7440-50-8	Copper	29.2			P
7439-92-1	Lead	162			P
7440-02-0	Nickel	24.7	J	~~E~~	P
7440-66-6	Zinc	264	J	~~N~~ E	P

Color Before: GREY Clarity Before: Texture: FINE

Color After: TAN Clarity After: CLOUDY Artifacts:

Comments:

NW 9/22/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-55-024FD

19

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678
Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17099
Matrix: SED Lab Sample Id: 200-17099-19
% Solids: 62.6 Date Received: 06/20/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.30			CV

Color Before: GRAY Clarity Before: CLOUDY Texture: FINE
Color After: COLORLESS Clarity After: CLEAR Artifacts:
Comments:

NW 9/22/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-55-024

20

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678
Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 17099
Matrix: SED | Lab Sample Id: 200-17099-20
% Solids: 67.4 | Date Received: 06/20/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	11.9	J	~~N~~	P
7440-43-9	Cadmium	1.5			P
7440-47-3	Chromium	28.2	J	~~E~~	P
7440-50-8	Copper	29.8			P
7439-92-1	Lead	322			P
7440-02-0	Nickel	24.5	J	~~E~~	P
7440-66-6	Zinc	250	J	~~N~~ E	P

Color Before: GREY | Clarity Before: | Texture: FINE
Color After: TAN | Clarity After: CLOUDY | Artifacts:
Comments:

MW 9/22/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-55-024

20

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678

Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 17099

Matrix: SED | Lab Sample Id: 200-17099-20

% Solids: 67.4 | Date Received: 06/20/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.41			CV

Color Before: GRAY | Clarity Before: CLOUDY | Texture: FINE

Color After: COLORLESS | Clarity After: CLEAR | Artifacts:

Comments:

NW 9/22/13

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - SEM/AVS

5

Client Sample ID: LMR13-54-012 | Lab Sample ID: 200-17099-5

Lab Name: TestAmerica Burlington | Job No.: 200-17099-1

SDG ID.: 17099

Matrix: Sediment | Date Sampled: 06/19/2013 10:10

Reporting Basis: DRY | Date Received: 06/20/2013 10:30

% Solids: 50.9

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-43-9	Cadmium SEM	2.3	2.3	0.37	mg/Kg	U		10	6010C
7440-43-9	Cadmium SEM	0.021	0.021	0.0033	umol/g	U		10	6010C
7440-50-8	Copper SEM	6.6	12.1	1.1	mg/Kg	J		10	6010C
7440-50-8	Copper SEM	0.10	0.19	0.017	umol/g	J		10	6010C
7439-92-1	Lead SEM	16.1	4.9	2.2	mg/Kg			10	6010C
7439-92-1	Lead SEM	0.078	0.024	0.010	umol/g			10	6010C
7440-02-0	Nickel SEM	6.1	19.6	1.4	mg/Kg	J		10	6010C
7440-02-0	Nickel SEM	0.10	0.33	0.024	umol/g	J		10	6010C
7440-66-6	Zinc SEM	33.3	9.8	2.7	mg/Kg			10	6010C
7440-66-6	Zinc SEM	0.51	0.15	0.042	umol/g			10	6010C
7439-97-6	Mercury SEM	0.0098	0.0098	0.0032	mg/Kg	U		1	7470A
7439-97-6	Mercury SEM	0.000049	0.000049	0.000016	umol/g	U		1	7470A

NW 9/22/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY - SEM/AVS

5

Client Sample ID: LMR13-54-012
Lab Sample ID: 200-17099-5
Lab Name: TestAmerica Burlington
Job No.: 200-17099-1
SDG ID.: 17099
Matrix: Sediment
Date Sampled: 06/19/2013 10:10
Reporting Basis: DRY
Date Received: 06/20/2013 10:30
% Solids: 50.9

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
18496-25-8	Acid Volatile Sulfides (AVS)	39.1	31.3		mg/Kg			1	AVS
18496-25-8	Acid Volatile Sulfides (AVS)	1.2	0.98		umol/g			1	AVS

NW 9/22/13

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - SEM/AVS

5

Client Sample ID: LMR13-54-012 Lab Sample ID: 200-17099-5

Lab Name: TestAmerica Burlington Job No.: 200-17099-1

SDG ID.: 17099

Matrix: Sediment Date Sampled: 06/19/2013 10:10

Reporting Basis: WET Date Received: 06/20/2013 10:30

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	SEM/AVS Ratio	0.652	0.00100	0.00100	NONE			1	SEM

NW 9/22/13

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - SEM/AVS

Client Sample ID: LMR13-33-012 | Lab Sample ID: 200-17099-16 | 16

Lab Name: TestAmerica Burlington | Job No.: 200-17099-1

SDG ID.: 17099

Matrix: Sediment | Date Sampled: 06/19/2013 09:10

Reporting Basis: DRY | Date Received: 06/20/2013 10:30

% Solids: 42.5

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-43-9	Cadmium SEM	0.85	2.7	0.44	mg/Kg	J		10	6010C
7440-43-9	Cadmium SEM	0.0075	0.024	0.0039	umol/g	J		10	6010C
7440-50-8	Copper SEM	8.6	14.2	1.2	mg/Kg	J		10	6010C
7440-50-8	Copper SEM	0.13	0.22	0.019	umol/g	J		10	6010C
7439-92-1	Lead SEM	26.2	5.7	2.5	mg/Kg			10	6010C
7439-92-1	Lead SEM	0.13	0.028	0.012	umol/g			10	6010C
7440-02-0	Nickel SEM	10.5	22.9	1.6	mg/Kg	J		10	6010C
7440-02-0	Nickel SEM	0.18	0.39	0.028	umol/g	J		10	6010C
7440-66-6	Zinc SEM	73.4	11.5	3.2	mg/Kg			10	6010C
7440-66-6	Zinc SEM	1.1	0.18	0.049	umol/g			10	6010C
7439-97-6	Mercury SEM	0.011	0.011	0.0038	mg/Kg	U		1	7470A
7439-97-6	Mercury SEM	0.000057	0.000057	0.000019	umol/g	U		1	7470A

NW 9/22/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY - SEM/AVS

16

Client Sample ID: LMR13-33-012
Lab Sample ID: 200-17099-16
Lab Name: TestAmerica Burlington
Job No.: 200-17099-1
SDG ID.: 17099
Matrix: Sediment
Date Sampled: 06/19/2013 09:10
Reporting Basis: DRY
Date Received: 06/20/2013 10:30
% Solids: 42.5

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
18496-25-8	Acid Volatile Sulfides (AVS)	36.7	36.7		mg/Kg	U		1	AVS
18496-25-8	Acid Volatile Sulfides (AVS)	1.1	1.1		umol/g	U		1	AVS

MW 9/22/13

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - SEM/AVS

16

Client Sample ID: LMR13-33-012 Lab Sample ID: 200-17099-16

Lab Name: TestAmerica Burlington Job No.: 200-17099-1

SDG ID.: 17099

Matrix: Sediment Date Sampled: 06/19/2013 09:10

Reporting Basis: WET Date Received: 06/20/2013 10:30

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	SEM/AVS Ratio	NC	0.00100	0.00100	NONE			1	SEM

NW 9/22/13

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - SEM/AVS

17

Client Sample ID: LMR13-55-012 | Lab Sample ID: 200-17099-17

Lab Name: TestAmerica Burlington | Job No.: 200-17099-1

SDG ID.: 17099

Matrix: Sediment | Date Sampled: 06/19/2013 11:05

Reporting Basis: DRY | Date Received: 06/20/2013 10:30

% Solids: 72.8

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-43-9	Cadmium SEM	3.0	1.6	0.26	mg/Kg			10	6010C
7440-43-9	Cadmium SEM	0.027	0.015	0.0023	umol/g			10	6010C
7440-50-8	Copper SEM	37.2	8.5	0.74	mg/Kg			10	6010C
7440-50-8	Copper SEM	0.59	0.13	0.012	umol/g			10	6010C
7439-92-1	Lead SEM	147	3.4	1.5	mg/Kg			10	6010C
7439-92-1	Lead SEM	0.71	0.016	0.0072	umol/g			10	6010C
7440-02-0	Nickel SEM	28.6	13.6	0.98	mg/Kg			10	6010C
7440-02-0	Nickel SEM	0.49	0.23	0.017	umol/g			10	6010C
7440-66-6	Zinc SEM	325	6.8	1.9	mg/Kg			10	6010C
7440-66-6	Zinc SEM	5.0	0.10	0.029	umol/g			10	6010C
7439-97-6	Mercury SEM	0.0032	0.0068	0.0023	mg/Kg	J		1	7470A
7439-97-6	Mercury SEM	0.000016	0.000034	0.000011	umol/g	J		1	7470A

MW 9/22/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY - SEM/AVS

17

Client Sample ID: LMR13-55-012
Lab Sample ID: 200-17099-17
Lab Name: TestAmerica Burlington
Job No.: 200-17099-1
SDG ID.: 17099
Matrix: Sediment
Date Sampled: 06/19/2013 11:05
Reporting Basis: DRY
Date Received: 06/20/2013 10:30
% Solids: 72.8

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
18496-25-8	Acid Volatile Sulfides (AVS)	21.8	21.8		mg/Kg	U		1	AVS
18496-25-8	Acid Volatile Sulfides (AVS)	0.68	0.68		umol/g	U		1	AVS

NW 9/22/13

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - SEM/AVS

17

Client Sample ID: LMR13-55-012
Lab Sample ID: 200-17099-17
Lab Name: TestAmerica Burlington
Job No.: 200-17099-1
SDG ID.: 17099
Matrix: Sediment
Date Sampled: 06/19/2013 11:05
Reporting Basis: WET
Date Received: 06/20/2013 10:30

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	SEM/AVS Ratio	NC	0.00100	0.00100	NONE			1	SEM

NW 9/22/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: LMR13-30-072
Lab Sample ID: 200-17099-1
Lab Name: TestAmerica Burlington
Job No.: 200-17099-1
SDG ID.: 17099
Matrix: Sediment
Date Sampled: 06/19/2013 08:20
Reporting Basis: WET
Date Received: 06/20/2013 10:30
% Solids: 57.0

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	32100 J	1000		mg/Kg		H	1	Lloyd Kahn

NW 9/22/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

2

Client Sample ID: LMR13-86-072
Lab Sample ID: 200-17099-2
Lab Name: TestAmerica Burlington
Job No.: 200-17099-1
SDG ID.: 17099
Matrix: Sediment
Date Sampled: 06/18/2013 16:40
Reporting Basis: WET
Date Received: 06/20/2013 10:30
% Solids: 56.1

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	34200	J 1000		mg/Kg		H	1	Lloyd Kahn

NW 9/22/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: LMR13-33-072
Lab Sample ID: 200-17099-3 3
Lab Name: TestAmerica Burlington
Job No.: 200-17099-1
SDG ID.: 17099
Matrix: Sediment
Date Sampled: 06/19/2013 09:40
Reporting Basis: WET
Date Received: 06/20/2013 10:30
% Solids: 56.0

CAS No.	Analyte	Result		RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	35500	J	1000		mg/Kg		H	1	Lloyd Kahn

NW 9/22/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

4

Client Sample ID: LMR13-33-096
Lab Sample ID: 200-17099-4
Lab Name: TestAmerica Burlington
Job No.: 200-17099-1
SDG ID.: 17099
Matrix: Sediment
Date Sampled: 06/19/2013 09:50
Reporting Basis: WET
Date Received: 06/20/2013 10:30
% Solids: 73.9

CAS No.	Analyte	Result		RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	22900	J	1000		mg/Kg		H	1	Lloyd Kahn

MW 9/22/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

5

Client Sample ID: LMR13-54-012
Lab Sample ID: 200-17099-5
Lab Name: TestAmerica Burlington
Job No.: 200-17099-1
SDG ID.: 17099
Matrix: Sediment
Date Sampled: 06/19/2013 10:10
Reporting Basis: WET
Date Received: 06/20/2013 10:30
% Solids: 50.9

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	45500 J	1000		mg/Kg			1	Lloyd Kahn

NW 9/22/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: LMR13-54-024 Lab Sample ID: 200-17099-6 6

Lab Name: TestAmerica Burlington Job No.: 200-17099-1

SDG ID.: 17099

Matrix: Sediment Date Sampled: 06/19/2013 10:20

Reporting Basis: WET Date Received: 06/20/2013 10:30

% Solids: 59.2

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	45700	J 1000		mg/Kg		H	1	Lloyd Kahn

NW 9/22/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

7

Client Sample ID: LMR13-54-048
Lab Sample ID: 200-17099-7
Lab Name: TestAmerica Burlington
Job No.: 200-17099-1
SDG ID.: 17099
Matrix: Sediment
Date Sampled: 06/19/2013 10:30
Reporting Basis: WET
Date Received: 06/20/2013 10:30
% Solids: 54.6

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	37300	J 1000		mg/Kg		✓	1	Lloyd Kahn

NW 9/22/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

8

Client Sample ID: LMR13-33-024FD
Lab Sample ID: 200-17099-8
Lab Name: TestAmerica Burlington
Job No.: 200-17099-1
SDG ID.: 17099
Matrix: Sediment
Date Sampled: 06/19/2013 09:20
Reporting Basis: WET
Date Received: 06/20/2013 10:30
% Solids: 45.0

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	44800	J 1000		mg/Kg		H	1	Lloyd Kahn

NW 9/22/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

9

Client Sample ID: LMR13-33-024
Lab Sample ID: 200-17099-9
Lab Name: TestAmerica Burlington
Job No.: 200-17099-1
SDG ID.: 17099
Matrix: Sediment
Date Sampled: 06/19/2013 09:20
Reporting Basis: WET
Date Received: 06/20/2013 10:30
% Solids: 47.5

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	43100	J 1000		mg/Kg		F	1	Lloyd Kahn

MW 9/22/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: LMR13-33-048
Lab Sample ID: 200-17099-10 10
Lab Name: TestAmerica Burlington
Job No.: 200-17099-1
SDG ID.: 17099
Matrix: Sediment
Date Sampled: 06/19/2013 09:30
Reporting Basis: WET
Date Received: 06/20/2013 10:30
% Solids: 56.8

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	32700	J 1000		mg/Kg		H	1	Lloyd Kahn

NW 9/22/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: LMR13-54-072 | Lab Sample ID: 200-17099-11 | 11

Lab Name: TestAmerica Burlington | Job No.: 200-17099-1

SDG ID.: 17099

Matrix: Sediment | Date Sampled: 06/19/2013 10:40

Reporting Basis: WET | Date Received: 06/20/2013 10:30

% Solids: 54.4

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	44700	J 1000		mg/Kg		~~H~~	1	Lloyd Kahn

NW 9/22/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

12

Client Sample ID: LMR13-54-096 Lab Sample ID: 200-17099-12

Lab Name: TestAmerica Burlington Job No.: 200-17099-1

SDG ID.: 17099

Matrix: Sediment Date Sampled: 06/19/2013 10:50

Reporting Basis: WET Date Received: 06/20/2013 10:30

% Solids: 58.9

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	42200	J 1000		mg/Kg		H	1	Lloyd Kahn

NW 9/22/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

13

Client Sample ID: LMR13-54-120 Lab Sample ID: 200-17099-13

Lab Name: TestAmerica Burlington Job No.: 200-17099-1

SDG ID.: 17099

Matrix: Sediment Date Sampled: 06/19/2013 11:00

Reporting Basis: WET Date Received: 06/20/2013 10:30

% Solids: 57.1

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	56200	J 1000		mg/Kg		~~H~~	1	Lloyd Kahn

NW 9/22/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

14

Client Sample ID: LMR13-30-096
Lab Sample ID: 200-17099-14
Lab Name: TestAmerica Burlington
Job No.: 200-17099-1
SDG ID.: 17099
Matrix: Sediment
Date Sampled: 06/19/2013 08:30
Reporting Basis: WET
Date Received: 06/20/2013 10:30
% Solids: 58.5

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	28400	J 1000		mg/Kg		~~H~~	1	Lloyd Kahn

MW 9/22/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

15

Client Sample ID: LMR13-30-120
Lab Sample ID: 200-17099-15
Lab Name: TestAmerica Burlington
Job No.: 200-17099-1
SDG ID.: 17099
Matrix: Sediment
Date Sampled: 06/19/2013 08:40
Reporting Basis: WET
Date Received: 06/20/2013 10:30
% Solids: 64.3

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	20600	J 1000		mg/Kg		H	1	Lloyd Kahn

NW 9/22/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

16

Client Sample ID: LMR13-33-012
Lab Sample ID: 200-17099-16
Lab Name: TestAmerica Burlington
Job No.: 200-17099-1
SDG ID.: 17099
Matrix: Sediment
Date Sampled: 06/19/2013 09:10
Reporting Basis: WET
Date Received: 06/20/2013 10:30
% Solids: 42.5

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	44700	J 1000		mg/Kg		H	1	Lloyd Kahn

MW 9/22/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

17

Client Sample ID: LMR13-55-012
Lab Sample ID: 200-17099-17
Lab Name: TestAmerica Burlington
Job No.: 200-17099-1
SDG ID.: 17099
Matrix: Sediment
Date Sampled: 06/19/2013 11:05
Reporting Basis: WET
Date Received: 06/20/2013 10:30
% Solids: 72.8

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	40600	J 1000		mg/Kg		H	1	Lloyd Kahn

NW 9/22/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: LMR13-54-048FD
Lab Sample ID: 200-17099-18 18
Lab Name: TestAmerica Burlington
Job No.: 200-17099-1
SDG ID.: 17099
Matrix: Sediment
Date Sampled: 06/19/2013 10:30
Reporting Basis: WET
Date Received: 06/20/2013 10:30
% Solids: 53.8

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	42000	J 1000		mg/Kg		J	1	Lloyd Kahn

NW 9/22/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

19

Client Sample ID: LMR13-55-024FD
Lab Sample ID: 200-17099-19
Lab Name: TestAmerica Burlington
Job No.: 200-17099-1
SDG ID.: 17099
Matrix: Sediment
Date Sampled: 06/19/2013 11:15
Reporting Basis: WET
Date Received: 06/20/2013 10:30
% Solids: 62.6

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	36300	J 1000		mg/Kg		✓	1	Lloyd Kahn

MW 9/22/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: LMR13-55-024 Lab Sample ID: 200-17099-20 20

Lab Name: TestAmerica Burlington Job No.: 200-17099-1

SDG ID.: 17099

Matrix: Sediment Date Sampled: 06/19/2013 11:15

Reporting Basis: WET Date Received: 06/20/2013 10:30

% Solids: 67.4

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	36900	J 1000		mg/Kg		H	1	Lloyd Kahn

NW 9/22/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: LMR13-30-072
Lab Sample ID: 200-17099-1
Lab Name: TestAmerica Canton
Job No.: 200-17099-1
SDG ID.: 17099
Matrix: Sediment
Date Sampled: 06/19/2013 08:20
Reporting Basis: DRY
Date Received: 06/20/2013 10:30
% Solids: 57.0

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	1510 J	348	154	mg/Kg			1	9071B

NW 9/22/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: LMR13-86-072
Lab Sample ID: 200-17099-2 2
Lab Name: TestAmerica Canton
Job No.: 200-17099-1
SDG ID.: 17099
Matrix: Sediment
Date Sampled: 06/18/2013 16:40
Reporting Basis: DRY
Date Received: 06/20/2013 10:30
% Solids: 56.1

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	1310 J	355	157	mg/Kg			1	9071B

MW 9/22/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

3

Client Sample ID: LMR13-33-072
Lab Sample ID: 200-17099-3
Lab Name: TestAmerica Canton
Job No.: 200-17099-1
SDG ID.: 17099
Matrix: Sediment
Date Sampled: 06/19/2013 09:40
Reporting Basis: DRY
Date Received: 06/20/2013 10:30
% Solids: 56.0

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	2260 J	356	157	mg/Kg			1	9071B

NW 9/22/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

4

Client Sample ID: LMR13-33-096
Lab Sample ID: 200-17099-4
Lab Name: TestAmerica Canton
Job No.: 200-17099-1
SDG ID.: 17099
Matrix: Sediment
Date Sampled: 06/19/2013 09:50
Reporting Basis: DRY
Date Received: 06/20/2013 10:30
% Solids: 73.9

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	2380 J	262	116	mg/Kg			1	9071B

NW 9/22/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

5

Client Sample ID: LMR13-54-012
Lab Sample ID: 200-17099-5
Lab Name: TestAmerica Canton
Job No.: 200-17099-1
SDG ID.: 17099
Matrix: Sediment
Date Sampled: 06/19/2013 10:10
Reporting Basis: DRY
Date Received: 06/20/2013 10:30
% Solids: 50.9

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	1550 J	382	169	mg/Kg			1	9071B

MW 9/22/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

6

Client Sample ID: LMR13-54-024 | Lab Sample ID: 200-17099-6

Lab Name: TestAmerica Canton | Job No.: 200-17099-1

SDG ID.: 17099

Matrix: Sediment | Date Sampled: 06/19/2013 10:20

Reporting Basis: DRY | Date Received: 06/20/2013 10:30

% Solids: 59.2

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	4030 J	329	145	mg/Kg			1	9071B

MW 9/22/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

7

Client Sample ID: LMR13-54-048
Lab Sample ID: 200-17099-7
Lab Name: TestAmerica Canton
Job No.: 200-17099-1
SDG ID.: 17099
Matrix: Sediment
Date Sampled: 06/19/2013 10:30
Reporting Basis: DRY
Date Received: 06/20/2013 10:30
% Solids: 54.6

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	4100 J	352	155	mg/Kg			1	9071B

NW 9/22/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

8

Client Sample ID: LMR13-33-024FD
Lab Sample ID: 200-17099-8
Lab Name: TestAmerica Canton
Job No.: 200-17099-1
SDG ID.: 17099
Matrix: Sediment
Date Sampled: 06/19/2013 09:20
Reporting Basis: DRY
Date Received: 06/20/2013 10:30
% Solids: 45.0

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	4300 J	441	195	mg/Kg			1	9071B

NW 9/22/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

9

Client Sample ID: LMR13-33-024 | Lab Sample ID: 200-17099-9

Lab Name: TestAmerica Canton | Job No.: 200-17099-1

SDG ID.: 17099

Matrix: Sediment | Date Sampled: 06/19/2013 09:20

Reporting Basis: DRY | Date Received: 06/20/2013 10:30

% Solids: 47.5

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	5210 J	410	181	mg/Kg			1	9071B

NW 9/22/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: LMR13-33-048 Lab Sample ID: 200-17099-10 10

Lab Name: TestAmerica Canton Job No.: 200-17099-1

SDG ID.: 17099

Matrix: Sediment Date Sampled: 06/19/2013 09:30

Reporting Basis: DRY Date Received: 06/20/2013 10:30

% Solids: 56.8

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	1820 J	339	150	mg/Kg			1	9071B

NW 9/22/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: LMR13-54-072
Lab Sample ID: 200-17099-11
11
Lab Name: TestAmerica Canton
Job No.: 200-17099-1
SDG ID.: 17099
Matrix: Sediment
Date Sampled: 06/19/2013 10:40
Reporting Basis: DRY
Date Received: 06/20/2013 10:30
% Solids: 54.4

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	4810 J	367	162	mg/Kg			1	9071B

MW 9/22/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: LMR13-54-096
Lab Sample ID: 200-17099-12 12
Lab Name: TestAmerica Canton
Job No.: 200-17099-1
SDG ID.: 17099
Matrix: Sediment
Date Sampled: 06/19/2013 10:50
Reporting Basis: DRY
Date Received: 06/20/2013 10:30
% Solids: 58.9

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	5180	J 332	147	mg/Kg			1	9071B

MW 9/22/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

13

Client Sample ID: LMR13-54-120
Lab Sample ID: 200-17099-13
Lab Name: TestAmerica Canton
Job No.: 200-17099-1
SDG ID.: 17099
Matrix: Sediment
Date Sampled: 06/19/2013 11:00
Reporting Basis: DRY
Date Received: 06/20/2013 10:30
% Solids: 57.1

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	13400 J	343	151	mg/Kg			1	9071B

NW 9/22/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

14

Client Sample ID: LMR13-30-096
Lab Sample ID: 200-17099-14
Lab Name: TestAmerica Canton
Job No.: 200-17099-1
SDG ID.: 17099
Matrix: Sediment
Date Sampled: 06/19/2013 08:30
Reporting Basis: DRY
Date Received: 06/20/2013 10:30
% Solids: 58.5

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	2190	J 332	147	mg/Kg		J	1	9071B

NW 9/22/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

15

Client Sample ID: LMR13-30-120
Lab Sample ID: 200-17099-15
Lab Name: TestAmerica Canton
Job No.: 200-17099-1
SDG ID.: 17099
Matrix: Sediment
Date Sampled: 06/19/2013 08:40
Reporting Basis: DRY
Date Received: 06/20/2013 10:30
% Solids: 64.3

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	1570 J	302	133	mg/Kg			1	9071B

NW 9/22/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

16

Client Sample ID: LMR13-33-012
Lab Sample ID: 200-17099-16
Lab Name: TestAmerica Canton
Job No.: 200-17099-1
SDG ID.: 17099
Matrix: Sediment
Date Sampled: 06/19/2013 09:10
Reporting Basis: DRY
Date Received: 06/20/2013 10:30
% Solids: 42.5

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	3490 J	466	206	mg/Kg		P	1	9071B

NW 9/22/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

17

Client Sample ID: LMR13-55-012 | Lab Sample ID: 200-17099-17

Lab Name: TestAmerica Canton | Job No.: 200-17099-1

SDG ID.: 17099

Matrix: Sediment | Date Sampled: 06/19/2013 11:05

Reporting Basis: DRY | Date Received: 06/20/2013 10:30

% Solids: 72.8

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	2190	J 271	120	mg/Kg		J	1	9071B

MW 9/22/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

20

Client Sample ID: LMR13-55-024
Lab Sample ID: 200-17099-20
Lab Name: TestAmerica Canton
Job No.: 200-17099-1
SDG ID.: 17099
Matrix: Sediment
Date Sampled: 06/19/2013 11:15
Reporting Basis: DRY
Date Received: 06/20/2013 10:30
% Solids: 67.4

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	3710	J 290	128	mg/Kg		F	1	9071B

NW 9/22/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: LMR13-33-048FD
Lab Sample ID: 200-17099-21 21
Lab Name: TestAmerica Canton
Job No.: 200-17099-1
SDG ID.: 17099
Matrix: Sediment
Date Sampled: 06/19/2013 09:30
Reporting Basis: DRY
Date Received: 06/20/2013 10:30
% Solids: 56.7

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	992	J 348	154	mg/Kg		B	1	9071B

NW 9/22/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

22

Client Sample ID: LMR13-54-024FD
Lab Sample ID: 200-17099-22
Lab Name: TestAmerica Canton
Job No.: 200-17099-1
SDG ID.: 17099
Matrix: Sediment
Date Sampled: 06/19/2013 10:20
Reporting Basis: DRY
Date Received: 06/20/2013 10:30
% Solids: 61.5

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	2530	J 324	143	mg/Kg		B	1	9071B

NW 9/22/13

ENVIRONMENTAL
Data Services, Inc.

DATA VALIDATION SUMMARY REPORT
LOWER MAUMEE RIVER, TOLEDO, OHIO

Client: EA Engineering, Science & Technology, Inc., Hunt Valley, Maryland
SDG: 200-17122
Laboratory: Test America Laboratories, Burlington, Vermont
Test America Laboratories, Canton, Ohio
Site: Lower Maumee River, Maumee Area of Concern, Toledo, Ohio
Date: September 27, 2013

SVOC			
EDS ID	Client Sample ID	Laboratory Sample ID	Matrix
1	LMR13-64-024	200-17122-6	Sediment
3	LMR13-64-072	200-17122-8	Sediment
4	LMR13-64-096	200-17122-9	Sediment
5	LMR13-64-120	200-17122-10	Sediment
6	LMR13-69-012	200-17122-11	Sediment
7	LMR13-68-012	200-17122-12	Sediment
7RE	LMR13-68-012RE	200-17122-12RE	Sediment
8	LMR13-69-048	200-17122-13	Sediment
9	LMR13-69-072	200-17122-14	Sediment
10	LMR13-92-012	200-17122-15	Sediment
11	LMR13-92-024	200-17122-16	Sediment
13	LMR13-65-012	200-17122-18	Sediment
14	LMR13-65-024	200-17122-19	Sediment
15	LMR13-69-024	200-17122-20	Sediment
16	LMR13-64-012	200-17148-1	Sediment
17	LMR13-64-048	200-17148-2	Sediment
18	LMR13-64-048FD	200-17148-3	Sediment
19	LMR13-67-072	200-17148-4	Sediment
20	LMR13-67-096	200-17148-5	Sediment
21	LMR13-67-120	200-17148-6	Sediment
21MS	LMR13-67-120MS	200-17148-6MS	Sediment
21MSD	LMR13-67-120MSD	200-17148-6MSD	Sediment

PAH 34			
EDS ID	Client Sample ID	Laboratory Sample ID	Matrix
6	LMR13-69-012	200-17122-11	Sediment
13	LMR13-65-012	200-17122-18	Sediment

PCBs/Metals/Mercury/TOC			
EDS ID	Client Sample ID	Laboratory Sample ID	Matrix
1	LMR13-64-024	200-17122-6	Sediment
2	LMR13-64-024FD	200-17122-7	Sediment
3	LMR13-64-072	200-17122-8	Sediment
4	LMR13-64-096	200-17122-9	Sediment
5	LMR13-64-120	200-17122-10	Sediment

DATA VALIDATION SUMMARY REPORT
LOWER MAUMEE RIVER, TOLEDO, OHIO

Client: EA Engineering, Science & Technology, Inc., Hunt Valley, Maryland
SDG: 200-17122
Laboratory: Test America Laboratories, Burlington, Vermont
Test America Laboratories, Canton, Ohio
Site: Lower Maumee River, Maumee Area of Concern, Toledo, Ohio
Date: September 27, 2013

SVOC			
EDS ID	Client Sample ID	Laboratory Sample ID	Matrix
1	LMR13-64-024	200-17122-6	Sediment
3	LMR13-64-072	200-17122-8	Sediment
4	LMR13-64-096	200-17122-9	Sediment
5	LMR13-64-120	200-17122-10	Sediment
6	LMR13-69-012	200-17122-11	Sediment
7	LMR13-68-012	200-17122-12	Sediment
7RE	LMR13-68-012RE	200-17122-12RE	Sediment
8	LMR13-69-048	200-17122-13	Sediment
9	LMR13-69-072	200-17122-14	Sediment
10	LMR13-92-012	200-17122-15	Sediment
11	LMR13-92-024	200-17122-16	Sediment
13	LMR13-65-012	200-17122-18	Sediment
14	LMR13-65-024	200-17122-19	Sediment
15	LMR13-69-024	200-17122-20	Sediment
16	LMR13-64-012	200-17148-1	Sediment
17	LMR13-64-048	200-17148-2	Sediment
18	LMR13-64-048FD	200-17148-3	Sediment
19	LMR13-67-072	200-17148-4	Sediment
20	LMR13-67-096	200-17148-5	Sediment
21	LMR13-67-120	200-17148-6	Sediment
21MS	LMR13-67-120MS	200-17148-6MS	Sediment
21MSD	LMR13-67-120MSD	200-17148-6MSD	Sediment

PAH 34			
EDS ID	Client Sample ID	Laboratory Sample ID	Matrix
6	LMR13-69-012	200-17122-11	Sediment
13	LMR13-65-012	200-17122-18	Sediment

PCBs/Metals/Mercury/TOC			
EDS ID	Client Sample ID	Laboratory Sample ID	Matrix
1	LMR13-64-024	200-17122-6	Sediment
2	LMR13-64-024FD	200-17122-7	Sediment
3	LMR13-64-072	200-17122-8	Sediment
4	LMR13-64-096	200-17122-9	Sediment
5	LMR13-64-120	200-17122-10	Sediment

PCBs/Metals/Mercury/TOC			
EDS ID	Client Sample ID	Laboratory Sample ID	Matrix
5MS	LMR13-64-120MS	200-17122-10MS	Sediment
5MSD	LMR13-64-120MSD	200-17122-10MSD	Sediment
6	LMR13-69-012	200-17122-11	Sediment
7	LMR13-68-012	200-17122-12	Sediment
8	LMR13-69-048	200-17122-13	Sediment
9	LMR13-69-072	200-17122-14	Sediment
10	LMR13-92-012	200-17122-15	Sediment
11	LMR13-92-024	200-17122-16	Sediment
12	LMR13-92-024FD	200-17122-17	Sediment
13	LMR13-65-012	200-17122-18	Sediment
14	LMR13-65-024	200-17122-19	Sediment
15	LMR13-69-024	200-17122-20	Sediment
16	LMR13-64-012	200-17148-1	Sediment
17	LMR13-64-048	200-17148-2	Sediment
19	LMR13-67-072	200-17148-4	Sediment
20	LMR13-67-096	200-17148-5	Sediment
21	LMR13-67-120	200-17148-6	Sediment

AVS/SEM			
EDS ID	Client Sample ID	Laboratory Sample ID	Matrix
6	LMR13-69-012	200-17122-11	Sediment
13	LMR13-65-012	200-17122-18	Sediment
13MS	LMR13-65-012MS	200-17122-18MS	Sediment
13MSD	LMR13-65-012MSD	200-17122-18MSD	Sediment

HEM			
EDS ID	Client Sample ID	Laboratory Sample ID	Matrix
1	LMR13-64-024	200-17122-6	Sediment
3	LMR13-64-072	200-17122-8	Sediment
4	LMR13-64-096	200-17122-9	Sediment
5	LMR13-64-120	200-17122-10	Sediment
5MS	LMR13-64-120MS	200-17122-10MS	Sediment
5MSD	LMR13-64-120MSD	200-17122-10MSD	Sediment
6	LMR13-69-012	200-17122-11	Sediment
7	LMR13-68-012	200-17122-12	Sediment
8	LMR13-69-048	200-17122-13	Sediment
9	LMR13-69-072	200-17122-14	Sediment
10	LMR13-92-012	200-17122-15	Sediment
11	LMR13-92-024	200-17122-16	Sediment
13	LMR13-65-012	200-17122-18	Sediment
14	LMR13-65-024	200-17122-19	Sediment
15	LMR13-69-024	200-17122-20	Sediment
16	LMR13-64-012	200-17148-1	Sediment
17	LMR13-64-048	200-17148-2	Sediment
18	LMR13-64-048FD	200-17148-3	Sediment
19	LMR13-67-072	200-17148-4	Sediment
20	LMR13-67-096	200-17148-5	Sediment
21	LMR13-67-120	200-17148-6	Sediment

A full data validation was performed on the analytical data for twenty-one sediment samples collected on June 19-20, 2013 by EA Engineering at the Lower Maumee River site in Toledo, Ohio. The samples were analyzed under the Environmental Protection Agency (USEPA) Contract Laboratory Program (CLP) Multi-Media Multi-Concentration Organics Analysis SOM01.2 and Inorganic Analysis ILM05.4 and the Test Methods for the Evaluation of Solid Waste, USEPA SW-846, Third Edition, September 1986, with revisions.

Specific method references are as follows:

Analysis	*Method References*
SVOC	USEPA CLP SOM01.2
PAH 34	USEPA CLP SOM01.2
PCBs	USEPA CLP SOM01.2
Michigan Metals & Mercury	USEPA CLP ISM01.3
AVS/SEM	USEPA SW-846 Methods 6010C/7470A
TOC	Lloyd Kahn
Oil & Grease (HEM)	USEPA SW-846 Method 9071B

The data have been validated according to the protocols and quality control (QC) requirements of the analytical methods, the Great Lakes Legacy Act, March 2010, the Quality Assurance Project Plan for Phase 2 of the Lower Maumee River Site Characterization, May 2013, and the USEPA National Functional Guidelines for Organic Data Review as follows:

- The USEPA "Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review," June 2008;
- The USEPA "Contract Laboratory Program National Functional Guidelines for Inorganic Superfund Data Review," January 2010;
- and the reviewer's professional judgment.

The following items/criteria were reviewed for this report:

Organics

- Holding times and sample preservation
- Gas Chromatography/Mass Spectroscopy (GC/MS) Tuning
- Initial and continuing calibration summaries
- Method blank and field blank contamination
- Surrogate Spike recoveries
- Matrix Spike/Matrix Spike Duplicate (MS/MSD) recoveries
- Laboratory Control Sample (LCS) recoveries
- Internal standard area and retention time summary forms
- Target Compound Identification
- Compound Quantitation
- Tentatively Identified Compounds (TICs)
- Field Duplicate sample precision

Inorganics

- Holding times and sample preservation
- ICP/MS Tuning
- Initial and continuing calibration verifications
- Method blank and field blank contamination
- ICP Interference Check Sample
- Laboratory Control Sample (LCS) recoveries
- Matrix Spike Analysis
- Duplicate Sample Analysis
- ICP Serial Dilution
- Compound Quantitation
- Field Duplicate sample precision

Overall Usability Issues:

There were minor rejections of data. This data cannot be used in the decision-making process for this project.

- Three SVOC compounds were rejected in fourteen samples due to severely low surrogate recoveries.

Overall the remaining data is acceptable for the intended purposes as qualified for the deficiencies detailed in this report.

Please note that any results qualified (U) due to blank contamination may be then qualified (J) due to another action. Therefore, the results may be qualified (UJ) due to the culmination of the blank contaminations and actions from other exceedences of QC criteria.

Semivolatile Organic Compounds (SVOC)

Holding Times

- All samples were extracted within 14 days for sediment samples and analyzed within 40 days for all samples except the following.

Sample	Date Extracted	Date Analyzed	# of Days	Qualifier
5, 6, 7RE, 8-10	06/29/13	08/13/13	45	J/UJ
13, 17-21	06/29/13	08/14/13	46	J/UJ - Unless (R)
16	06/29/13	08/13/13	45	J/UJ - Unless (R)

GC/MS Tuning

- All criteria were met.

Initial Calibration

- All %RSD and mean RRF criteria were met except the following.

ICAL Date	Compound	%RSD/RRF	Qualifier	Affected Samples
08/02/13	Benzo(b)fluoranthene	23.7%	J/UJ	1, 3, 4, 14, 15
	Dibenzo(a,h)anthracene	20.6%	J/UJ	

Continuing Calibration

- All %D and RRF criteria were met except the following.

CCAL Date	Compound	%D/RRF	Qualifier	Affected Samples
08/08/13 (0313)	Benzo(b)fluoranthene	25.9%	None	See ICAL
08/08/13 (1416)	Hexachlorocyclopentadiene	79.9%	None	See Surrogates
08/08/13 (1453)	Di-n-octylphthalate	66.1%	J/UJ	1, 3, 4, 11, 14, 15
08/14/13 (0115)	Caprolactam	62.5%	J/UJ	7
	Hexachlorocyclopentadiene	59.1%	J/UJ	
08/14/13 (0431)	2-Methylnaphthalene	65.5%	None	See HT
	Di-n-octylphthalate	65.0%	None	
08/14/13 (0509)	Hexachlorocyclopentadiene	62.9%	None	See HT

Method Blank

- The method blanks exhibited the following contamination.

Blank ID	Compound	Conc. ug/kg	Qualifier	Affected Samples
SBLKN8	Butylbenzylphthalate	14	U	1, 3, 4, 7, 14-21
	Bis(2-ethylhexyl)phthalate	25	U	1, 3, 14, 16, 17, 19
SBLK8N	Butylbenzylphthalate	21	U	5, 8-11, 13
	Bis(2-ethylhexyl)phthalate	36	U	6, 7RE, 8, 10, 11, 13

Field Blank

- Field QC samples were not analyzed.

Surrogate Spike Recoveries

- All samples exhibited acceptable surrogate %R values except the following.

Sample ID	Surrogate	%R	Qualifier
1	4-Methylphenol-d8	102%	None - ND
	4-Chloroaniline-d4	0%	R - Associated Compounds
3	4-Chloroaniline-d4	0%	R - Associated Compounds
4	4-Chloroaniline-d4	0%	R - Associated Compounds
5	4-Methylphenol-d8	109%	None - ND

Sample ID	Surrogate	%R	Qualifier
6	4-Methylphenol-d8	101%	None - ND
	4-Chloroaniline-d4	0%	R - Associated Compounds
8	4-Chloroaniline-d4	0%	R - Associated Compounds
10	4-Chloroaniline-d4	0%	R - Associated Compounds
11	Phenol-d5	107%	J - Associated Positive Compounds
	4-Methylphenol-d8	101%	
	4-Chloroaniline-d4	0%	R - Associated Compounds
13	4-Chloroaniline-d4	0%	R - Associated Compounds
14	4-Methylphenol-d8	101%	J - Associated Positive Compounds
	4-Chloroaniline-d4	0%	R - Associated Compounds
15	Phenol-d5	108%	None - ND
16	Phenol-d5	124%	J - Associated Positive Compounds
	4-Methylphenol-d8	118%	
	4-Chloroaniline-d4	0%	R - Associated Compounds
17	Phenol-d5	105%	J - Associated Positive Compounds
	4-Methylphenol-d8	208%	None - ND
	4-Chloroaniline-d4	0%	R - Associated Compounds
18	Phenol-d5	110%	J - Associated Positive Compounds
	4-Methylphenol-d8	103%	None - ND
	4-Chloroaniline-d4	0%	R - Associated Compounds
19	Phenol-d5	113%	J - Associated Positive Compounds
	4-Methylphenol-d8	115%	None - ND
	4-Chloroaniline-d4	0%	R - Associated Compounds
20	Phenol-d5	119%	J - Associated Positive Compounds
	4-Methylphenol-d8	106%	None - ND
	4-Chloroaniline-d4	0%	R - Associated Compounds
21	Phenol-d5	121%	J - Associated Positive Compounds
	4-Methylphenol-d8	116%	None - ND

Matrix Spike/Matrix Spike Duplicate (MS/MSD) Recoveries

- The MS/MSD sample exhibited acceptable %R and RPD values except the following.

MS/MSD Sample ID	Compound	MS %R/MSD %R/ RPD	Qualifier
21	2,4-Dinitrotoluene	90%/92%/OK	None - ND

Laboratory Control Samples

- A LCS sample was not analyzed.

Internal Standard (IS) Area Performance

- All internal standards met response and retention time (RT) criteria except the following.

Sample ID	Internal Standard	Area Count	Qualifier
7	IS6=Perylene-d12	Low	J/UJ - Associated Compounds
7RE	IS6=Perylene-d12	Low	None - See HT

Target Compound Identification

- All mass spectra and quantitation criteria were met.

Compound Quantitation

- Several samples were analyzed at various dilutions due to high concentrations of target compounds. No action was required.
- EDS Sample ID #7 exhibited low internal standard recoveries in the original analysis. The sample was reanalyzed with similar results. The original analysis results should be used for reporting purposes.

Field Duplicate Sample Precision

- Field duplicate results are summarized below.

SVOC				
Compound	LMR13-64-048 ug/kg	LMR13-64-048FD ug/kg	RPD	Qualifier
Benzaldehyde	54	61	12%	None
Acetophenone	20	18	11%	
Naphthalene	44	40	10%	
Acenaphthene	25	20	22%	
Dibenzofuran	18	18	0%	
Fluorene	28	29	4%	
Phenanthrene	160	130	21%	
Anthracene	35	27	26%	
Carbazole	7.6	320U	NC	
d-n-Butylphthalate	20	20	0%	
Fluoranthene	350	320	9%	
Pyrene	250	300	18%	
Benzo(a)anthracene	170	190	11%	
Chrysene	200	290	37%	
Bis(2-ethylhexyl)phthalate	320U	380	NC	
Benzo(b)fluoranthene	190	250	27%	
Benzo(k)fluoranthene	210	230	9%	
Benzo(a)pyrene	160	180	12%	
Indeno(1,2,3-cd)pyrene	110	130	17%	
Dibenzo(a,h)anthracene	44	42	5%	
Benzo(g,h,i)perylene	150	170	13%	

Polynuclear Aromatic Hydrocarbons (PAH 34)

Holding Times

- All samples were extracted within 14 days for sediment samples and analyzed within 40 days for all samples.

GC/MS Tuning

- All criteria were met.

Initial Calibration

- All %RSD and mean RRF criteria were met.

Continuing Calibration

- All %D and RRF criteria were met.

Method Blank

- The method blanks exhibited the following contamination.

Blank ID	Compound	Conc. ug/kg	Qualifier	Affected Samples
SBLKN8	Naphthalene	0.33	None	All >5X
	2-Methylnaphthalene	0.086	U	6, 13
	Phenanthrene	0.17	None	All >5X
	Fluoranthene	0.12	None	
	Pyrene	0.12	None	
	Benzo(a)anthracene	0.11	None	
	Chrysene	0.097	None	
	Total 16 PPAH	0.95	J	6, 13
	Total PAH	0.95	J	

Field Blank

- Field QC samples were not analyzed.

Surrogate Spike Recoveries

- All samples exhibited acceptable surrogate %R values.

Matrix Spike/Matrix Spike Duplicate (MS/MSD) Recoveries

- A MS/MSD sample was not analyzed.

Laboratory Control Samples

- A LCS sample was not analyzed.

Internal Standard (IS) Area Performance

- All internal standards met response and retention time (RT) criteria.

Target Compound Identification

- All mass spectra and quantitation criteria were met.

Compound Quantitation

- Both samples were analyzed at various dilutions due to high concentrations of target compounds. No action was required.
- Total 16 PPAH and Total PAH were estimated (J) in all samples due to blank contamination.

Field Duplicate Sample Precision

- Field duplicate samples were not analyzed.

Polychlorinated Biphenyls (PCBs)

Holding Times

- All samples were extracted within 14 days for sediment samples and analyzed within 40 days.

Initial Calibration

- All %RSD and/or correlation coefficient criteria were met.

Continuing Calibration

- All %D criteria were met.

Method Blank

- The method blanks were free of contamination.

Field Blank

- Field QC samples were not analyzed.

Surrogate Spike Recoveries

- All samples exhibited acceptable surrogate recoveries.

Matrix Spike/Matrix Spike Duplicate (MS/MSD) Recoveries

- The MS/MSD samples exhibited acceptable %R and RPD values.

Laboratory Control Samples

- The LCS sample exhibited acceptable %R values.

Compound Quantitation

- Several samples were analyzed at various dilutions due to high concentrations of target compounds. No action was required.

Field Duplicate Sample Precision

- Field duplicate results are summarized below.

PCBs				
Compound	LMR13-64-024 ug/kg	LMR13-64-024FD ug/kg	RPD	Qualifier
Aroclor-1248	56	44	24%	None
Aroclor-1254	41	37	10%	
Aroclor-1260	12	9.9	19%	

PCBs				
Compound	LMR13-92-024 ug/kg	LMR13-92-024FD ug/kg	RPD	Qualifier
Aroclor-1248	61	42	37%	None
Aroclor-1254	51	34	40%	
Aroclor-1260	13	9.0	36%	

GC Column Difference Results

- Several samples exhibited high %D values > 25% between columns and have been qualified as estimated (J) by the reviewer.

Metals & Mercury

Holding Times

- All samples were prepared and analyzed within 28 days for mercury and 180 days for all other metals.

ICP/MS Tuning

- Not applicable.

Initial Calibration Verification

- All initial calibration criteria were met.

Continuing Calibration Verification

- All continuing calibration criteria were met.

Method Blank

- The method blanks exhibited the following contamination.

Blank ID	Compound	Conc. mg/kg	Qualifier	Affected Samples
MB	Chromium	0.061	None	All Associated >10X
	Zinc	0.27	None	

Field Blank

- Field QC samples were not analyzed.

ICP Interference Check Sample

- The ICP interference check sample exhibited acceptable %R values.

Laboratory Control Samples

- The LCS sample exhibited acceptable recoveries.

Matrix Spike Analysis

- The matrix spike samples exhibited acceptable %R values.

Duplicate Sample Analysis

- The duplicate samples exhibited acceptable RPD values.

ICP Serial Dilution

- ICP serial dilution percent differences (%D) were within acceptance limits except the following.

ICP Sample ID	Compound	%D	Qualifier	Affected Samples
5	Cadmium	18%	J	All Samples
	Chromium	17%	J	
	Copper	16%	J	
	Nickel	21%	J	
	Zinc	17%	J	

Compound Quantitation

- All criteria were met.

Field Duplicate Sample Precision

- Field duplicate results are summarized below.

Metals				
Compound	LMR13-64-024 mg/kg	LMR13-64-024FD mg/kg	RPD	Qualifier
Arsenic	8.0	8.5	6%	None
Cadmium	1.0	1.0	0%	
Chromium	30.3	31.5	4%	
Copper	32.7	33.6	3%	
Lead	27.6	27.4	1%	
Nickel	34.5	35.4	3%	
Zinc	147	146	1%	
Mercury	0.078	0.086	10%	

Metals				
Compound	LMR13-92-024 mg/kg	LMR13-92-024FD mg/kg	RPD	Qualifier
Arsenic	7.5	8.1	8%	None
Cadmium	1.3	1.3	0%	
Chromium	33.7	33.9	1%	
Copper	32.5	32.8	1%	

Metals				
Compound	LMR13-92-024 mg/kg	LMR13-92-024FD mg/kg	RPD	Qualifier
Lead	32.4	33.2	2%	None
Nickel	34.7	35.2	1%	
Zinc	202	241	18%	
Mercury	0.12	0.10	18%	

Oil & Grease, Total Organic Carbon, AVS/SEM (Metals & Hg)

Holding Times

- All samples were analyzed within the recommended holding time for each analysis except the following.

TOC				
Sample ID	Date Collected	Date Analyzed	# of Days	Qualifier
All Samples	06/19/13-06/20/13	08/12/13	53-54	J/UJ

Initial and Continuing Calibration

- All %R criteria were met.

Method Blank

- The method blanks were free of contamination.

Field Blank

- Field QC samples were not included in this data package.

Laboratory Control Samples

- The LCS samples exhibited acceptable %R values.

Matrix Spike/Duplicate (MS/DUP) Recoveries

- The MS/DUP samples exhibited acceptable %R and RPD values except the following.

MS/DUP ID	Compound	MS %R/MSD %R/RPD	Qualifier	Affected Samples
5	HEM	54%/42%/OK	J/UJ	All Samples

Compound Quantitation

- All criteria were met.

Field Duplicate Sample Precision

- Field duplicate results are summarized below.

TOC				
Compound	LMR13-64-024 mg/kg	LMR13-64-024FD mg/kg	RPD	Qualifier
TOC	29400	28200	4%	None

TOC				
Compound	LMR13-92-024 mg/kg	LMR13-92-024FD mg/kg	RPD	Qualifier
TOC	28900	30900	7%	None

HEM				
Compound	LMR13-64-048 mg/kg	LMR13-64-048FD mg/kg	RPD	Qualifier
HEM	883	659	29%	None

Please contact the undersigned at (757) 564-0090 if you have any questions or need further information.

Signed: Nancy Weaver Dated: 9/30/13

Nancy Weaver
Senior Chemist

Data Qualifiers

U	=	The analyte was analyzed for, but was not detected at a level greater than or equal to the level of the adjusted Contract Required Quantitation Limit (CRQL) for sample and method.
UJ	=	The analyte was not detected at a level greater than or equal to the adjusted CRQL. However, the reported adjusted CRQL is approximate and may be inaccurate or imprecise.
J	=	The analyte was positively identified and the associated numerical value is the approximate concentration of the analyte in the sample (due either to the quality of the data generated because certain quality control criteria were not met, or the concentration of the analyte was below the CRQL).
J+	=	The result is an estimated quantity, but the result may be biased high.
J-	=	The result is an estimated quantity, but the result may be biased low.
R	=	The sample results are unusable due to the quality of the data generated because certain criteria were not met. The analyte may or may not be present in the sample.
NJ	=	The analysis indicates the presence of an analyte that has been "tentatively identified" and the associated numerical value represents its approximate concentration.

1D - FORM I SV-1

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-64-024

1

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17122

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17122-6

Sample wt/vol: 29.8 (g/mL) g Lab File ID: ULLCD08.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 49 Decanted: (Y/N) Date Received: 06/21/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/29/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/08/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
100-52-7	Benzaldehyde	43	J	
108-95-2	Phenol	340	U	
111-44-4	Bis(2-chloroethyl)ether	340	U	
95-57-8	2-Chlorophenol	340	U	
95-48-7	2-Methylphenol	340	U	
108-60-1	2,2'-Oxybis(1-chloropropane)	340	U	
98-86-2	Acetophenone	89	J	
106-44-5	4-Methylphenol	340	U	
621-64-7	N-Nitroso-di-n-propylamine	340	U	
67-72-1	Hexachloroethane	340	U	
98-95-3	Nitrobenzene	340	U	
78-59-1	Isophorone	340	U	
88-75-5	2-Nitrophenol	340	U	
105-67-9	2,4-Dimethylphenol	340	U	
111-91-1	Bis(2-chloroethoxy)methane	340	U	
120-83-2	2,4-Dichlorophenol	340	U	
91-20-3	Naphthalene	18	J	
106-47-8	4-Chloroaniline	340	~~U~~	R
87-68-3	Hexachlorobutadiene	340	U	
105-60-2	Caprolactam	340	U	
59-50-7	4-Chloro-3-methylphenol	340	U	
91-57-6	2-Methylnaphthalene	340	U	
77-47-4	Hexachlorocyclopentadiene	340	~~U~~	R
88-06-2	2,4,6-Trichlorophenol	340	U	
95-95-4	2,4,5-Trichlorophenol	340	U	
92-52-4	1,1'-Biphenyl	340	U	
91-58-7	2-Chloronaphthalene	340	U	
88-74-4	2-Nitroaniline	650	U	
131-11-3	Dimethylphthalate	340	U	
606-20-2	2,6-Dinitrotoluene	340	U	
208-96-8	Acenaphthylene	340	U	
99-09-2	3-Nitroaniline	650	U	
83-32-9	Acenaphthene	14	J	

NW 9/24/13

EPA SAMPLE NO.
LMR13-64-024

1

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17122

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17122-6

Sample wt/vol: 29.8 (g/mL) g Lab File ID: ULLCD08.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 49 Decanted: (Y/N) Date Received: 06/21/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/29/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/08/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
51-28-5	2,4-Dinitrophenol	650	U	
100-02-7	4-Nitrophenol	650	U	
132-64-9	Dibenzofuran	340	U	
121-14-2	2,4-Dinitrotoluene	340	U	
84-66-2	Diethylphthalate	340	U	
86-73-7	Fluorene	18	J	
7005-72-3	4-Chlorophenyl-phenylether	340	U	
100-01-6	4-Nitroaniline	650	U	
534-52-1	4,6-Dinitro-2-methylphenol	650	U	
86-30-6	N-Nitrosodiphenylamin [1]	340	U	
95-94-3	1,2,4,5-Tetrachlorobenzene	340	U	
101-55-3	4-Bromophenyl-phenylether	340	U	
118-74-1	Hexachlorobenzene	340	U	
1912-24-9	Atrazine	340	U	
87-86-5	Pentachlorophenol	650	U	
85-01-8	Phenanthrene	87	J	
120-12-7	Anthracene	19	J	
86-74-8	Carbazole	340	U	
84-74-2	Di-n-butylphthalate	12	J	
206-44-0	Fluoranthene	180	J	
129-00-0	Pyrene	180	J	
85-68-7	Butylbenzylphthalate	340 ~~45~~ ~~J B~~	U	
91-94-1	3,3'-Dichlorobenzidine	340	U/	R
56-55-3	Benzo(a)anthracene	100	J	
218-01-9	Chrysene	150	J	
117-81-7	Bis(2-ethylhexyl)phthalate	340 ~~230~~ ~~J B~~	U	
117-84-0	Di-n-octylphthalate	340	U/	UJ
205-99-2	Benzo(b)fluoranthene	140	J/	J
207-08-9	Benzo(k)fluoranthene	130	J	
50-32-8	Benzo(a)pyrene	120	J	
193-39-5	Indeno(1,2,3-cd)pyrene	62	J	
53-70-3	Dibenzo(a,h)anthracene	28	J/	J
191-24-2	Benzo(g,h,i)perylene	86	J	
58-90-2	2,3,4,6-Tetrachlorophenol	340	U	

[1] Cannot be separated from Diphenylamine

NW 9/24/13

EPA SAMPLE NO.
LMR13-64-072

3

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17122

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17122-8

Sample wt/vol: 29.7 (g/mL) g Lab File ID: ULLCD09.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 48 Decanted: (Y/N) Date Received: 06/21/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/29/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/08/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
100-52-7	Benzaldehyde	45	J	
108-95-2	Phenol	330	U	
111-44-4	Bis(2-chloroethyl)ether	330	U	
95-57-8	2-Chlorophenol	330	U	
95-48-7	2-Methylphenol	330	U	
108-60-1	2,2'-Oxybis(1-chloropropane)	330	U	
98-86-2	Acetophenone	79	J	
106-44-5	4-Methylphenol	330	U	
621-64-7	N-Nitroso-di-n-propylamine	330	U	
67-72-1	Hexachloroethane	330	U	
98-95-3	Nitrobenzene	330	U	
78-59-1	Isophorone	330	U	
88-75-5	2-Nitrophenol	330	U	
105-67-9	2,4-Dimethylphenol	330	U	
111-91-1	Bis(2-chloroethoxy)methane	330	U	
120-83-2	2,4-Dichlorophenol	330	U	
91-20-3	Naphthalene	18	J	
106-47-8	4-Chloroaniline	330	U	R
87-68-3	Hexachlorobutadiene	330	U	
105-60-2	Caprolactam	330	U	
59-50-7	4-Chloro-3-methylphenol	330	U	
91-57-6	2-Methylnaphthalene	330	U	
77-47-4	Hexachlorocyclopentadiene	330	U	R
88-06-2	2,4,6-Trichlorophenol	330	U	
95-95-4	2,4,5-Trichlorophenol	330	U	
92-52-4	1,1'-Biphenyl	330	U	
91-58-7	2-Chloronaphthalene	330	U	
88-74-4	2-Nitroaniline	640	U	
131-11-3	Dimethylphthalate	330	U	
606-20-2	2,6-Dinitrotoluene	330	U	
208-96-8	Acenaphthylene	330	U	
99-09-2	3-Nitroaniline	640	U	
83-32-9	Acenaphthene	13	J	

NW 9/24/13

EPA SAMPLE NO.
LMR13-64-072

3

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17122

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17122-8

Sample wt/vol: 29.7 (g/mL) g Lab File ID: ULLCD09.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 48 Decanted: (Y/N) Date Received: 06/21/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/29/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/08/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
51-28-5	2,4-Dinitrophenol	640	U	
100-02-7	4-Nitrophenol	640	U	
132-64-9	Dibenzofuran	11	J	
121-14-2	2,4-Dinitrotoluene	330	U	
84-66-2	Diethylphthalate	330	U	
86-73-7	Fluorene	16	J	
7005-72-3	4-Chlorophenyl-phenylether	330	U	
100-01-6	4-Nitroaniline	640	U	
534-52-1	4,6-Dinitro-2-methylphenol	640	U	
86-30-6	N-Nitrosodiphenylamin [1]	330	U	
95-94-3	1,2,4,5-Tetrachlorobenzene	330	U	
101-55-3	4-Bromophenyl-phenylether	330	U	
118-74-1	Hexachlorobenzene	330	U	
1912-24-9	Atrazine	330	U	
87-86-5	Pentachlorophenol	640	U	
85-01-8	Phenanthrene	73	J	
120-12-7	Anthracene	19	J	
86-74-8	Carbazole	330	U	
84-74-2	Di-n-butylphthalate	11	J	
206-44-0	Fluoranthene	160	J	
129-00-0	Pyrene	180	J	
85-68-7	Butylbenzylphthalate	330 ~~43~~	~~J B~~	U
91-94-1	3,3'-Dichlorobenzidine	330	~~U~~	R
56-55-3	Benzo(a)anthracene	110	J	
218-01-9	Chrysene	160	J	
117-81-7	Bis(2-ethylhexyl)phthalate	330 ~~240~~	~~J B~~	U
117-84-0	Di-n-octylphthalate	330	~~U~~	UJ
205-99-2	Benzo(b)fluoranthene	130	~~J~~	J
207-08-9	Benzo(k)fluoranthene	140	J	
50-32-8	Benzo(a)pyrene	120	J	
193-39-5	Indeno(1,2,3-cd)pyrene	66	J	
53-70-3	Dibenzo(a,h)anthracene	25	~~J~~	J
191-24-2	Benzo(g,h,i)perylene	87	J	
58-90-2	2,3,4,6-Tetrachlorophenol	330	U	

[1] Cannot be separated from Diphenylamine

NW 9/24/13

EPA SAMPLE NO.
LMR13-64-096

4

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17122

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17122-9

Sample wt/vol: 29.3 (g/mL) g Lab File ID: ULLCD10.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 46 Decanted: (Y/N) Date Received: 06/21/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/29/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/08/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
100-52-7	Benzaldehyde	38	J	
108-95-2	Phenol	320	U	
111-44-4	Bis(2-chloroethyl)ether	320	U	
95-57-8	2-Chlorophenol	320	U	
95-48-7	2-Methylphenol	320	U	
108-60-1	2,2'-Oxybis(1-chloropropane)	320	U	
98-86-2	Acetophenone	56	J	
106-44-5	4-Methylphenol	6.0	J	
621-64-7	N-Nitroso-di-n-propylamine	320	U	
67-72-1	Hexachloroethane	320	U	
98-95-3	Nitrobenzene	320	U	
78-59-1	Isophorone	320	U	
88-75-5	2-Nitrophenol	320	U	
105-67-9	2,4-Dimethylphenol	320	U	
111-91-1	Bis(2-chloroethoxy)methane	320	U	
120-83-2	2,4-Dichlorophenol	320	U	
91-20-3	Naphthalene	25	J	
106-47-8	4-Chloroaniline	320	U	R
87-68-3	Hexachlorobutadiene	320	U	
105-60-2	Caprolactam	320	U	
59-50-7	4-Chloro-3-methylphenol	320	U	
91-57-6	2-Methylnaphthalene	320	U	
77-47-4	Hexachlorocyclopentadiene	320	U	R
88-06-2	2,4,6-Trichlorophenol	320	U	
95-95-4	2,4,5-Trichlorophenol	320	U	
92-52-4	1,1'-Biphenyl	320	U	
91-58-7	2-Chloronaphthalene	320	U	
88-74-4	2-Nitroaniline	620	U	
131-11-3	Dimethylphthalate	320	U	
606-20-2	2,6-Dinitrotoluene	320	U	
208-96-8	Acenaphthylene	320	U	
99-09-2	3-Nitroaniline	620	U	
83-32-9	Acenaphthene	21	J	

MW 9/24/13

EPA SAMPLE NO.
LMR13-64-096

4

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17122

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17122-9

Sample wt/vol: 29.3 (g/mL) g Lab File ID: ULLCD10.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 46 Decanted: (Y/N) Date Received: 06/21/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/29/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/08/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
51-28-5	2,4-Dinitrophenol	620	U	
100-02-7	4-Nitrophenol	620	U	
132-64-9	Dibenzofuran	16	J	
121-14-2	2,4-Dinitrotoluene	320	U	
84-66-2	Diethylphthalate	320	U	
86-73-7	Fluorene	24	J	
7005-72-3	4-Chlorophenyl-phenylether	320	U	
100-01-6	4-Nitroaniline	620	U	
534-52-1	4,6-Dinitro-2-methylphenol	620	U	
86-30-6	N-Nitrosodiphenylamin [1]	320	U	
95-94-3	1,2,4,5-Tetrachlorobenzene	320	U	
101-55-3	4-Bromophenyl-phenylether	320	U	
118-74-1	Hexachlorobenzene	320	U	
1912-24-9	Atrazine	320	U	
87-86-5	Pentachlorophenol	620	U	
85-01-8	Phenanthrene	150	J	
120-12-7	Anthracene	38	J	
86-74-8	Carbazole	7.1	J	
84-74-2	Di-n-butylphthalate	18	J	
206-44-0	Fluoranthene	280	J	
129-00-0	Pyrene	200	J	
85-68-7	Butylbenzylphthalate	320 ~~53~~ ~~J B~~	U	
91-94-1	3,3'-Dichlorobenzidine	320 ~~U~~	R	
56-55-3	Benzo(a)anthracene	130	J	
218-01-9	Chrysene	180	J	
117-81-7	Bis(2-ethylhexyl)phthalate	350 ~~B~~		
117-84-0	Di-n-octylphthalate	320 ~~U~~	UJ	
205-99-2	Benzo(b)fluoranthene	180 ~~J~~	J	
207-08-9	Benzo(k)fluoranthene	110	J	
50-32-8	Benzo(a)pyrene	110	J	
193-39-5	Indeno(1,2,3-cd)pyrene	70	J	
53-70-3	Dibenzo(a,h)anthracene	31 ~~J~~	J	
191-24-2	Benzo(g,h,i)perylene	100	J	
58-90-2	2,3,4,6-Tetrachlorophenol	320	U	

[1] Cannot be separated from Diphenylamine

NW 9/24/13

1D - FORM I SV-1

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-64-120

5

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17122

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17122-10

Sample wt/vol: 30.9 (g/mL) g Lab File ID: RLA14.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 44 Decanted: (Y/N) Date Received: 06/21/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/29/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/13/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
100-52-7	Benzaldehyde	300	U
108-95-2	Phenol	300	U
111-44-4	Bis(2-chloroethyl)ether	300	U
95-57-8	2-Chlorophenol	300	U
95-48-7	2-Methylphenol	300	U
108-60-1	2,2'-Oxybis(1-chloropropane)	300	U
98-86-2	Acetophenone	300	U
106-44-5	4-Methylphenol	300	U
621-64-7	N-Nitroso-di-n-propylamine	300	U
67-72-1	Hexachloroethane	300	U
98-95-3	Nitrobenzene	300	U
78-59-1	Isophorone	300	U
88-75-5	2-Nitrophenol	300	U
105-67-9	2,4-Dimethylphenol	300	U
111-91-1	Bis(2-chloroethoxy)methane	300	U
120-83-2	2,4-Dichlorophenol	300	U
91-20-3	Naphthalene	59	J
106-47-8	4-Chloroaniline	300	U
87-68-3	Hexachlorobutadiene	300	U
105-60-2	Caprolactam	300	U
59-50-7	4-Chloro-3-methylphenol	300	U
91-57-6	2-Methylnaphthalene	300	U
77-47-4	Hexachlorocyclopentadiene	300	U
88-06-2	2,4,6-Trichlorophenol	300	U
95-95-4	2,4,5-Trichlorophenol	300	U
92-52-4	1,1'-Biphenyl	300	U
91-58-7	2-Chloronaphthalene	300	U
88-74-4	2-Nitroaniline	580	U
131-11-3	Dimethylphthalate	300	U
606-20-2	2,6-Dinitrotoluene	300	U
208-96-8	Acenaphthylene	300	U
99-09-2	3-Nitroaniline	580	U
83-32-9	Acenaphthene	36	J

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NW 9/24/13

EPA SAMPLE NO.
LMR13-64-120

5

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17122

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17122-10

Sample wt/vol: 30.9 (g/mL) g Lab File ID: RLA14.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 44 Decanted: (Y/N) Date Received: 06/21/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/29/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/13/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
51-28-5	2,4-Dinitrophenol	580	UJ
100-02-7	4-Nitrophenol	580	UJ
132-64-9	Dibenzofuran	28	J
121-14-2	2,4-Dinitrotoluene	300	UJ
84-66-2	Diethylphthalate	300	UJ
86-73-7	Fluorene	46	J
7005-72-3	4-Chlorophenyl-phenylether	300	UJ
100-01-6	4-Nitroaniline	580	UJ
534-52-1	4,6-Dinitro-2-methylphenol	580	UJ
86-30-6	N-Nitrosodiphenylamin [1]	300	UJ
95-94-3	1,2,4,5-Tetrachlorobenzene	300	UJ
101-55-3	4-Bromophenyl-phenylether	300	UJ
118-74-1	Hexachlorobenzene	300	UJ
1912-24-9	Atrazine	300	UJ
87-86-5	Pentachlorophenol	580	UJ
85-01-8	Phenanthrene	170	J
120-12-7	Anthracene	50	J
86-74-8	Carbazole	300	UJ
84-74-2	Di-n-butylphthalate	300	UJ
206-44-0	Fluoranthene	260	J
129-00-0	Pyrene	280	J
85-68-7	Butylbenzylphthalate	~~67~~ 300	~~B~~ UJ
91-94-1	3,3'-Dichlorobenzidine	300	UJ
56-55-3	Benzo(a)anthracene	140	J
218-01-9	Chrysene	240	J
117-81-7	Bis(2-ethylhexyl)phthalate	660	J
117-84-0	Di-n-octylphthalate	300	UJ
205-99-2	Benzo(b)fluoranthene	200	J
207-08-9	Benzo(k)fluoranthene	150	J
50-32-8	Benzo(a)pyrene	160	J
193-39-5	Indeno(1,2,3-cd)pyrene	83	J
53-70-3	Dibenzo(a,h)anthracene	48	J
191-24-2	Benzo(g,h,i)perylene	93	J
58-90-2	2,3,4,6-Tetrachlorophenol	300	UJ

[1] Cannot be separated from Diphenylamine

NW 9/24/13

1D - FORM I SV-1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-69-012

6

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17122

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17122-11

Sample wt/vol: 29.4 (g/mL) g Lab File ID: RLA15.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 51 Decanted: (Y/N) Date Received: 06/21/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/29/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/13/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
100-52-7	Benzaldehyde	360	U
108-95-2	Phenol	360	U
111-44-4	Bis(2-chloroethyl)ether	360	U
95-57-8	2-Chlorophenol	360	U
95-48-7	2-Methylphenol	360	U
108-60-1	2,2'-Oxybis(1-chloropropane)	360	U
98-86-2	Acetophenone	360	U
106-44-5	4-Methylphenol	360	U
621-64-7	N-Nitroso-di-n-propylamine	360	U
67-72-1	Hexachloroethane	360	U
98-95-3	Nitrobenzene	360	U
78-59-1	Isophorone	360	U
88-75-5	2-Nitrophenol	360	U
105-67-9	2,4-Dimethylphenol	360	U
111-91-1	Bis(2-chloroethoxy)methane	360	U
120-83-2	2,4-Dichlorophenol	360	U
91-20-3	Naphthalene	110	J
106-47-8	4-Chloroaniline	360	U
87-68-3	Hexachlorobutadiene	360	U
105-60-2	Caprolactam	360	U
59-50-7	4-Chloro-3-methylphenol	360	U
91-57-6	2-Methylnaphthalene	33	J
77-47-4	Hexachlorocyclopentadiene	360	U
88-06-2	2,4,6-Trichlorophenol	360	U
95-95-4	2,4,5-Trichlorophenol	360	U
92-52-4	1,1'-Biphenyl	360	U
91-58-7	2-Chloronaphthalene	360	U
88-74-4	2-Nitroaniline	690	U
131-11-3	Dimethylphthalate	360	U
606-20-2	2,6-Dinitrotoluene	360	U
208-96-8	Acenaphthylene	360	U
99-09-2	3-Nitroaniline	690	U
83-32-9	Acenaphthene	26	J

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MW 9/24/13

EPA SAMPLE NO.
LMR13-69-012

6

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17122

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17122-11

Sample wt/vol: 29.4 (g/mL) g Lab File ID: RLA15.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 51 Decanted: (Y/N) Date Received: 06/21/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/29/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/13/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
51-28-5	2,4-Dinitrophenol	690	U
100-02-7	4-Nitrophenol	690	U
132-64-9	Dibenzofuran	360	U
121-14-2	2,4-Dinitrotoluene	360	U
84-66-2	Diethylphthalate	360	U
86-73-7	Fluorene	73	J
7005-72-3	4-Chlorophenyl-phenylether	360	U
100-01-6	4-Nitroaniline	690	U
534-52-1	4,6-Dinitro-2-methylphenol	690	U
86-30-6	N-Nitrosodiphenylamin [1]	360	U
95-94-3	1,2,4,5-Tetrachlorobenzene	360	U
101-55-3	4-Bromophenyl-phenylether	360	U
118-74-1	Hexachlorobenzene	360	U
1912-24-9	Atrazine	360	U
87-86-5	Pentachlorophenol	690	U
85-01-8	Phenanthrene	330	J
120-12-7	Anthracene	62	J
86-74-8	Carbazole	360	U
84-74-2	Di-n-butylphthalate	360	U
206-44-0	Fluoranthene	370	
129-00-0	Pyrene	390	
85-68-7	Butylbenzylphthalate	360	U
91-94-1	3,3'-Dichlorobenzidine	360	U
56-55-3	Benzo(a)anthracene	200	J
218-01-9	Chrysene	410	
117-81-7	Bis(2-ethylhexyl)phthalate	360 ~~350~~	~~J B~~
117-84-0	Di-n-octylphthalate	360	U
205-99-2	Benzo(b)fluoranthene	260	J
207-08-9	Benzo(k)fluoranthene	200	J
50-32-8	Benzo(a)pyrene	200	J
193-39-5	Indeno(1,2,3-cd)pyrene	110	J
53-70-3	Dibenzo(a,h)anthracene	67	J
191-24-2	Benzo(g,h,i)perylene	130	J
58-90-2	2,3,4,6-Tetrachlorophenol	360	U

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[1] Cannot be separated from Diphenylamine

NW 9/24/13

EPA SAMPLE NO.
LMR13-68-012

7

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17122

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17122-12

Sample wt/vol: 29.5 (g/mL) g Lab File ID: ULLCD13.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 23 Decanted: (Y/N) Date Received: 06/21/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/29/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/08/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
100-52-7	Benzaldehyde	220	U	
108-95-2	Phenol	220	U	
111-44-4	Bis(2-chloroethyl)ether	220	U	
95-57-8	2-Chlorophenol	220	U	
95-48-7	2-Methylphenol	220	U	
108-60-1	2,2'-Oxybis(1-chloropropane)	220	U	
98-86-2	Acetophenone	220	U	
106-44-5	4-Methylphenol	220	U	
621-64-7	N-Nitroso-di-n-propylamine	220	U	
67-72-1	Hexachloroethane	220	U	
98-95-3	Nitrobenzene	220	U	
78-59-1	Isophorone	220	U	
88-75-5	2-Nitrophenol	220	U	
105-67-9	2,4-Dimethylphenol	220	U	
111-91-1	Bis(2-chloroethoxy)methane	220	U	
120-83-2	2,4-Dichlorophenol	220	U	
91-20-3	Naphthalene	63	J	
106-47-8	4-Chloroaniline	220	U	
87-68-3	Hexachlorobutadiene	220	U	
105-60-2	Caprolactam	220	~~U~~	UJ
59-50-7	4-Chloro-3-methylphenol	220	U	
91-57-6	2-Methylnaphthalene	82	J	
77-47-4	Hexachlorocyclopentadiene	220	~~U~~	UJ
88-06-2	2,4,6-Trichlorophenol	220	U	
95-95-4	2,4,5-Trichlorophenol	220	U	
92-52-4	1,1'-Biphenyl	220	U	
91-58-7	2-Chloronaphthalene	220	U	
88-74-4	2-Nitroaniline	430	U	
131-11-3	Dimethylphthalate	220	U	
606-20-2	2,6-Dinitrotoluene	220	U	
208-96-8	Acenaphthylene	220	U	
99-09-2	3-Nitroaniline	430	U	
83-32-9	Acenaphthene	220	U	

NW 9/24/13

EPA SAMPLE NO.
LMR13-68-012

7

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17122

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17122-12

Sample wt/vol: 29.5 (g/mL) g Lab File ID: ULLCD13.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 23 Decanted: (Y/N) Date Received: 06/21/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/29/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/08/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
51-28-5	2,4-Dinitrophenol	430	U
100-02-7	4-Nitrophenol	430	U
132-64-9	Dibenzofuran	40	J
121-14-2	2,4-Dinitrotoluene	220	U
84-66-2	Diethylphthalate	220	U
86-73-7	Fluorene	110	J
7005-72-3	4-Chlorophenyl-phenylether	220	U
100-01-6	4-Nitroaniline	430	U
534-52-1	4,6-Dinitro-2-methylphenol	430	U
86-30-6	N-Nitrosodiphenylamin [1]	220	U
95-94-3	1,2,4,5-Tetrachlorobenzene	220	U
101-55-3	4-Bromophenyl-phenylether	220	U
118-74-1	Hexachlorobenzene	220	U
1912-24-9	Atrazine	220	U
87-86-5	Pentachlorophenol	430	U
85-01-8	Phenanthrene	380	
120-12-7	Anthracene	48	J
86-74-8	Carbazole	220	U
84-74-2	Di-n-butylphthalate	16	J
206-44-0	Fluoranthene	170	J
129-00-0	Pyrene	470	
85-68-7	Butylbenzylphthalate	220 ~~37 J B~~	U
91-94-1	3,3'-Dichlorobenzidine	220	U
56-55-3	Benzo(a)anthracene	400	
218-01-9	Chrysene	490	
117-81-7	Bis(2-ethylhexyl)phthalate	350	~~B~~
117-84-0	Di-n-octylphthalate	220	U
205-99-2	Benzo(b)fluoranthene	240	J
207-08-9	Benzo(k)fluoranthene	95	~~J~~
50-32-8	Benzo(a)pyrene	280	
193-39-5	Indeno(1,2,3-cd)pyrene	110	~~J~~
53-70-3	Dibenzo(a,h)anthracene	140	~~J~~
191-24-2	Benzo(g,h,i)perylene	220	~~J~~
58-90-2	2,3,4,6-Tetrachlorophenol	220	UJ

[1] Cannot be separated from Diphenylamine

NW 9/24/13

1D - FORM I SV-1

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-68-012RE

7RE

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17122

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17122-12

Sample wt/vol: 29.5 (g/mL) g Lab File ID: RLA16.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 23 Decanted: (Y/N) Date Received: 06/21/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/29/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/13/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

use original results

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
100-52-7	Benzaldehyde	220	U
108-95-2	Phenol	220	U
111-44-4	Bis(2-chloroethyl)ether	220	U
95-57-8	2-Chlorophenol	220	U
95-48-7	2-Methylphenol	220	U
108-60-1	2,2'-Oxybis(1-chloropropane)	220	U
98-86-2	Acetophenone	220	U
106-44-5	4-Methylphenol	220	U
621-64-7	N-Nitroso-di-n-propylamine	220	U
67-72-1	Hexachloroethane	220	U
98-95-3	Nitrobenzene	220	U
78-59-1	Isophorone	220	U
88-75-5	2-Nitrophenol	220	U
105-67-9	2,4-Dimethylphenol	220	U
111-91-1	Bis(2-chloroethoxy)methane	220	U
120-83-2	2,4-Dichlorophenol	220	U
91-20-3	Naphthalene	76	J
106-47-8	4-Chloroaniline	220	U
87-68-3	Hexachlorobutadiene	220	U
105-60-2	Caprolactam	220	U
59-50-7	4-Chloro-3-methylphenol	220	U
91-57-6	2-Methylnaphthalene	82	J
77-47-4	Hexachlorocyclopentadiene	220	U
88-06-2	2,4,6-Trichlorophenol	220	U
95-95-4	2,4,5-Trichlorophenol	220	U
92-52-4	1,1'-Biphenyl	220	U
91-58-7	2-Chloronaphthalene	220	U
88-74-4	2-Nitroaniline	430	U
131-11-3	Dimethylphthalate	220	U
606-20-2	2,6-Dinitrotoluene	220	U
208-96-8	Acenaphthylene	220	U
99-09-2	3-Nitroaniline	430	U
83-32-9	Acenaphthene	220	U

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MW 9/24/13

1E - FORM I SV-2

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-68-012RE

7RE

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17122

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17122-12

Sample wt/vol: 29.5 (g/mL) g Lab File ID: RLA16.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 23 Decanted: (Y/N) Date Received: 06/21/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/29/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/13/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

Use original results

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
51-28-5	2,4-Dinitrophenol	430	U	UJ
100-02-7	4-Nitrophenol	430	U	
132-64-9	Dibenzofuran	220	U	
121-14-2	2,4-Dinitrotoluene	220	U	
84-66-2	Diethylphthalate	220	U	
86-73-7	Fluorene	90	J	J
7005-72-3	4-Chlorophenyl-phenylether	220	U	UJ
100-01-6	4-Nitroaniline	430	U	
534-52-1	4,6-Dinitro-2-methylphenol	430	U	
86-30-6	N-Nitrosodiphenylamin [1]	220	U	
95-94-3	1,2,4,5-Tetrachlorobenzene	220	U	
101-55-3	4-Bromophenyl-phenylether	220	U	
118-74-1	Hexachlorobenzene	220	U	
1912-24-9	Atrazine	220	U	
87-86-5	Pentachlorophenol	430	U	
85-01-8	Phenanthrene	540		J
120-12-7	Anthracene	100	J	J
86-74-8	Carbazole	220	U	UJ
84-74-2	Di-n-butylphthalate	220	U	UJ
206-44-0	Fluoranthene	220	J	J
129-00-0	Pyrene	430		J
85-68-7	Butylbenzylphthalate	220	U	UJ
91-94-1	3,3'-Dichlorobenzidine	220	U	UJ
56-55-3	Benzo(a)anthracene	340		J
218-01-9	Chrysene	550		J
117-81-7	Bis(2-ethylhexyl)phthalate	350	B	UJ
117-84-0	Di-n-octylphthalate	220	U	UJ
205-99-2	Benzo(b)fluoranthene	230		J
207-08-9	Benzo(k)fluoranthene	170	J	
50-32-8	Benzo(a)pyrene	290		
193-39-5	Indeno(1,2,3-cd)pyrene	80	J	
53-70-3	Dibenzo(a,h)anthracene	100	J	
191-24-2	Benzo(g,h,i)perylene	190	J	
58-90-2	2,3,4,6-Tetrachlorophenol	220	U	UJ

[1] Cannot be separated from Diphenylamine

NW 9/24/13

1D - FORM I SV-1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-69-048

8

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17122

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17122-13

Sample wt/vol: 30.3 (g/mL) g Lab File ID: RLA17.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 46 Decanted: (Y/N) Date Received: 06/21/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/29/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/13/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
100-52-7	Benzaldehyde	310	U	UJ
108-95-2	Phenol	310	U	
111-44-4	Bis(2-chloroethyl)ether	310	U	
95-57-8	2-Chlorophenol	310	U	
95-48-7	2-Methylphenol	310	U	
108-60-1	2,2'-Oxybis(1-chloropropane)	310	U	
98-86-2	Acetophenone	310	U	
106-44-5	4-Methylphenol	310	U	
621-64-7	N-Nitroso-di-n-propylamine	310	U	
67-72-1	Hexachloroethane	310	U	
98-95-3	Nitrobenzene	310	U	
78-59-1	Isophorone	310	U	
88-75-5	2-Nitrophenol	310	U	
105-67-9	2,4-Dimethylphenol	310	U	
111-91-1	Bis(2-chloroethoxy)methane	310	U	
120-83-2	2,4-Dichlorophenol	310	U	
91-20-3	Naphthalene	95	J	J
106-47-8	4-Chloroaniline	310	U	R
87-68-3	Hexachlorobutadiene	310	U	UJ
105-60-2	Caprolactam	310	U	
59-50-7	4-Chloro-3-methylphenol	310	U	
91-57-6	2-Methylnaphthalene	24	J	J
77-47-4	Hexachlorocyclopentadiene	310	U	R
88-06-2	2,4,6-Trichlorophenol	310	U	UJ
95-95-4	2,4,5-Trichlorophenol	310	U	
92-52-4	1,1'-Biphenyl	310	U	
91-58-7	2-Chloronaphthalene	310	U	
88-74-4	2-Nitroaniline	600	U	
131-11-3	Dimethylphthalate	310	U	
606-20-2	2,6-Dinitrotoluene	310	U	
208-96-8	Acenaphthylene	310	U	
99-09-2	3-Nitroaniline	600	U	
83-32-9	Acenaphthene	21	J	J

NW 9/24/13

EPA SAMPLE NO.
LMR13-69-048

8

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17122

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17122-13

Sample wt/vol: 30.3 (g/mL) g Lab File ID: RLA17.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 46 Decanted: (Y/N) Date Received: 06/21/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/29/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/13/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
51-28-5	2,4-Dinitrophenol	600	U
100-02-7	4-Nitrophenol	600	U
132-64-9	Dibenzofuran	15	J
121-14-2	2,4-Dinitrotoluene	310	U
84-66-2	Diethylphthalate	310	U
86-73-7	Fluorene	34	J
7005-72-3	4-Chlorophenyl-phenylether	310	U
100-01-6	4-Nitroaniline	600	U
534-52-1	4,6-Dinitro-2-methylphenol	600	U
86-30-6	N-Nitrosodiphenylamin [1]	310	U
95-94-3	1,2,4,5-Tetrachlorobenzene	310	U
101-55-3	4-Bromophenyl-phenylether	310	U
118-74-1	Hexachlorobenzene	310	U
1912-24-9	Atrazine	310	U
87-86-5	Pentachlorophenol	600	U
85-01-8	Phenanthrene	150	J
120-12-7	Anthracene	33	J
86-74-8	Carbazole	310	U
84-74-2	Di-n-butylphthalate	310	U
206-44-0	Fluoranthene	200	J
129-00-0	Pyrene	230	J
85-68-7	Butylbenzylphthalate	310 ~~43~~	~~J B~~
91-94-1	3,3'-Dichlorobenzidine	310	U
56-55-3	Benzo(a)anthracene	110	J
218-01-9	Chrysene	190	J
117-81-7	Bis(2-ethylhexyl)phthalate	310 ~~200~~	~~J B~~
117-84-0	Di-n-octylphthalate	310	U
205-99-2	Benzo(b)fluoranthene	140	J
207-08-9	Benzo(k)fluoranthene	110	J
50-32-8	Benzo(a)pyrene	120	J
193-39-5	Indeno(1,2,3-cd)pyrene	67	J
53-70-3	Dibenzo(a,h)anthracene	34	J
191-24-2	Benzo(g,h,i)perylene	89	J
58-90-2	2,3,4,6-Tetrachlorophenol	310	U

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[1]Cannot be separated from Diphenylamine

MW 9/24/13

EPA SAMPLE NO.
LMR13-69-072

9

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17122

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17122-14

Sample wt/vol: 30.7 (g/mL) g Lab File ID: RLA18.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 45 Decanted: (Y/N) Date Received: 06/21/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/29/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/13/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
100-52-7	Benzaldehyde	300	UJ
108-95-2	Phenol	300	U
111-44-4	Bis(2-chloroethyl)ether	300	U
95-57-8	2-Chlorophenol	300	U
95-48-7	2-Methylphenol	300	U
108-60-1	2,2'-Oxybis(1-chloropropane)	300	U
98-86-2	Acetophenone	300	U
106-44-5	4-Methylphenol	300	U
621-64-7	N-Nitroso-di-n-propylamine	300	U
67-72-1	Hexachloroethane	300	U
98-95-3	Nitrobenzene	300	U
78-59-1	Isophorone	300	U
88-75-5	2-Nitrophenol	300	U
105-67-9	2,4-Dimethylphenol	300	U
111-91-1	Bis(2-chloroethoxy)methane	300	U
120-83-2	2,4-Dichlorophenol	300	U
91-20-3	Naphthalene	83	J
106-47-8	4-Chloroaniline	300	UJ
87-68-3	Hexachlorobutadiene	300	U
105-60-2	Caprolactam	300	U
59-50-7	4-Chloro-3-methylphenol	300	U
91-57-6	2-Methylnaphthalene	39	J
77-47-4	Hexachlorocyclopentadiene	300	UJ
88-06-2	2,4,6-Trichlorophenol	300	U
95-95-4	2,4,5-Trichlorophenol	300	U
92-52-4	1,1'-Biphenyl	300	U
91-58-7	2-Chloronaphthalene	300	U
88-74-4	2-Nitroaniline	590	U
131-11-3	Dimethylphthalate	300	U
606-20-2	2,6-Dinitrotoluene	300	U
208-96-8	Acenaphthylene	300	U
99-09-2	3-Nitroaniline	590	U
83-32-9	Acenaphthene	38	J

NW 9/24/13

1E - FORM I SV-2
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-69-072

9

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17122

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17122-14

Sample wt/vol: 30.7 (g/mL) g Lab File ID: RLA18.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 45 Decanted: (Y/N) Date Received: 06/21/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/29/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/13/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
51-28-5	2,4-Dinitrophenol	590	U
100-02-7	4-Nitrophenol	590	U
132-64-9	Dibenzofuran	300	U
121-14-2	2,4-Dinitrotoluene	300	U
84-66-2	Diethylphthalate	300	U
86-73-7	Fluorene	51	J
7005-72-3	4-Chlorophenyl-phenylether	300	U
100-01-6	4-Nitroaniline	590	U
534-52-1	4,6-Dinitro-2-methylphenol	590	U
86-30-6	N-Nitrosodiphenylamin [1]	300	U
95-94-3	1,2,4,5-Tetrachlorobenzene	300	U
101-55-3	4-Bromophenyl-phenylether	300	U
118-74-1	Hexachlorobenzene	300	U
1912-24-9	Atrazine	300	U
87-86-5	Pentachlorophenol	590	U
85-01-8	Phenanthrene	290	J
120-12-7	Anthracene	53	J
86-74-8	Carbazole	300	U
84-74-2	Di-n-butylphthalate	300	U
206-44-0	Fluoranthene	380	
129-00-0	Pyrene	400	
85-68-7	Butylbenzylphthalate	300 ~~56~~ ~~J B~~	
91-94-1	3,3'-Dichlorobenzidine	300	U
56-55-3	Benzo(a)anthracene	210	J
218-01-9	Chrysene	530	
117-81-7	Bis(2-ethylhexyl)phthalate	580	B
117-84-0	Di-n-octylphthalate	300	U
205-99-2	Benzo(b)fluoranthene	290	J
207-08-9	Benzo(k)fluoranthene	210	J
50-32-8	Benzo(a)pyrene	240	J
193-39-5	Indeno(1,2,3-cd)pyrene	97	J
53-70-3	Dibenzo(a,h)anthracene	74	J
191-24-2	Benzo(g,h,i)perylene	160	J
58-90-2	2,3,4,6-Tetrachlorophenol	300	U

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[1] Cannot be separated from Diphenylamine

MW 9/24/13

EPA SAMPLE NO.
LMR13-92-012

10

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17122

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17122-15

Sample wt/vol: 30.0 (g/mL) g Lab File ID: RLA19.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 53 Decanted: (Y/N) Date Received: 06/21/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/29/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/13/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
100-52-7	Benzaldehyde	360	U
108-95-2	Phenol	360	U
111-44-4	Bis(2-chloroethyl)ether	360	U
95-57-8	2-Chlorophenol	360	U
95-48-7	2-Methylphenol	360	U
108-60-1	2,2'-Oxybis(1-chloropropane)	360	U
98-86-2	Acetophenone	360	U
106-44-5	4-Methylphenol	360	U
621-64-7	N-Nitroso-di-n-propylamine	360	U
67-72-1	Hexachloroethane	360	U
98-95-3	Nitrobenzene	360	U
78-59-1	Isophorone	360	U
88-75-5	2-Nitrophenol	360	U
105-67-9	2,4-Dimethylphenol	360	U
111-91-1	Bis(2-chloroethoxy)methane	360	U
120-83-2	2,4-Dichlorophenol	360	U
91-20-3	Naphthalene	36	J
106-47-8	4-Chloroaniline	360	U
87-68-3	Hexachlorobutadiene	360	U
105-60-2	Caprolactam	360	U
59-50-7	4-Chloro-3-methylphenol	360	U
91-57-6	2-Methylnaphthalene	24	J
77-47-4	Hexachlorocyclopentadiene	360	U
88-06-2	2,4,6-Trichlorophenol	360	U
95-95-4	2,4,5-Trichlorophenol	360	U
92-52-4	1,1'-Biphenyl	360	U
91-58-7	2-Chloronaphthalene	360	U
88-74-4	2-Nitroaniline	700	U
131-11-3	Dimethylphthalate	360	U
606-20-2	2,6-Dinitrotoluene	360	U
208-96-8	Acenaphthylene	360	U
99-09-2	3-Nitroaniline	700	U
83-32-9	Acenaphthene	360	U

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NW 9/24/13

EPA SAMPLE NO.
LMR13-92-012

10

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17122

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17122-15

Sample wt/vol: 30.0 (g/mL) g Lab File ID: RLA19.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 53 Decanted: (Y/N) Date Received: 06/21/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/29/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/13/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
51-28-5	2,4-Dinitrophenol	700	U
100-02-7	4-Nitrophenol	700	U
132-64-9	Dibenzofuran	360	U
121-14-2	2,4-Dinitrotoluene	360	U
84-66-2	Diethylphthalate	360	U
86-73-7	Fluorene	25	J
7005-72-3	4-Chlorophenyl-phenylether	360	U
100-01-6	4-Nitroaniline	700	U
534-52-1	4,6-Dinitro-2-methylphenol	700	U
86-30-6	N-Nitrosodiphenylamin [1]	360	U
95-94-3	1,2,4,5-Tetrachlorobenzene	360	U
101-55-3	4-Bromophenyl-phenylether	360	U
118-74-1	Hexachlorobenzene	360	U
1912-24-9	Atrazine	360	U
87-86-5	Pentachlorophenol	700	U
85-01-8	Phenanthrene	130	J
120-12-7	Anthracene	360	U
86-74-8	Carbazole	360	U
84-74-2	Di-n-butylphthalate	21	J
206-44-0	Fluoranthene	250	J
129-00-0	Pyrene	260	J
85-68-7	Butylbenzylphthalate	360 ~~49~~	~~J B~~
91-94-1	3,3'-Dichlorobenzidine	360	U
56-55-3	Benzo(a)anthracene	130	J
218-01-9	Chrysene	230	J
117-81-7	Bis(2-ethylhexyl)phthalate	360 ~~260~~	~~J B~~
117-84-0	Di-n-octylphthalate	360	U
205-99-2	Benzo(b)fluoranthene	190	J
207-08-9	Benzo(k)fluoranthene	190	J
50-32-8	Benzo(a)pyrene	150	J
193-39-5	Indeno(1,2,3-cd)pyrene	72	J
53-70-3	Dibenzo(a,h)anthracene	45	J
191-24-2	Benzo(g,h,i)perylene	110	J
58-90-2	2,3,4,6-Tetrachlorophenol	360	U

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[1] Cannot be separated from Diphenylamine

MW 9/24/13

1D - FORM I SV-1

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-92-024

11

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17122

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17122-16

Sample wt/vol: 29.8 (g/mL) g Lab File ID: ULLCD17.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 49 Decanted: (Y/N) Date Received: 06/21/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/29/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/08/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
100-52-7	Benzaldehyde	55	~~J~~	J
108-95-2	Phenol	340	U	
111-44-4	Bis(2-chloroethyl)ether	340	U	
95-57-8	2-Chlorophenol	340	U	
95-48-7	2-Methylphenol	340	U	
108-60-1	2,2'-Oxybis(1-chloropropane)	340	U	
98-86-2	Acetophenone	26	J	
106-44-5	4-Methylphenol	21	~~J~~	J
621-64-7	N-Nitroso-di-n-propylamine	340	U	
67-72-1	Hexachloroethane	340	U	
98-95-3	Nitrobenzene	340	U	
78-59-1	Isophorone	340	U	
88-75-5	2-Nitrophenol	340	U	
105-67-9	2,4-Dimethylphenol	340	U	
111-91-1	Bis(2-chloroethoxy)methane	340	U	
120-83-2	2,4-Dichlorophenol	340	U	
91-20-3	Naphthalene	59	J	
106-47-8	4-Chloroaniline	340	~~U~~	R
87-68-3	Hexachlorobutadiene	340	U	
105-60-2	Caprolactam	340	~~U~~	UJ
59-50-7	4-Chloro-3-methylphenol	340	U	
91-57-6	2-Methylnaphthalene	35	J	
77-47-4	Hexachlorocyclopentadiene	340	~~U~~	R
88-06-2	2,4,6-Trichlorophenol	340	U	
95-95-4	2,4,5-Trichlorophenol	340	U	
92-52-4	1,1'-Biphenyl	340	U	
91-58-7	2-Chloronaphthalene	340	U	
88-74-4	2-Nitroaniline	660	U	
131-11-3	Dimethylphthalate	340	U	
606-20-2	2,6-Dinitrotoluene	340	U	
208-96-8	Acenaphthylene	340	U	
99-09-2	3-Nitroaniline	660	U	
83-32-9	Acenaphthene	20	J	

NW 9/24/13

1E - FORM I SV-2

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-92-024

11

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17122

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17122-16

Sample wt/vol: 29.8 (g/mL) g Lab File ID: ULLCD17.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 49 Decanted: (Y/N) Date Received: 06/21/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/29/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/08/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
51-28-5	2,4-Dinitrophenol	660	U	
100-02-7	4-Nitrophenol	660	U	
132-64-9	Dibenzofuran	19	J	
121-14-2	2,4-Dinitrotoluene	340	U	
84-66-2	Diethylphthalate	340	U	
86-73-7	Fluorene	26	J	
7005-72-3	4-Chlorophenyl-phenylether	340	U	
100-01-6	4-Nitroaniline	660	U	
534-52-1	4,6-Dinitro-2-methylphenol	660	U	
86-30-6	N-Nitrosodiphenylamin [1]	340	U	
95-94-3	1,2,4,5-Tetrachlorobenzene	340	U	
101-55-3	4-Bromophenyl-phenylether	340	U	
118-74-1	Hexachlorobenzene	340	U	
1912-24-9	Atrazine	340	U	
87-86-5	Pentachlorophenol	660	U	
85-01-8	Phenanthrene	160	J	
120-12-7	Anthracene	40	J	
86-74-8	Carbazole	340	U	
84-74-2	Di-n-butylphthalate	26	J	
206-44-0	Fluoranthene	270	J	
129-00-0	Pyrene	330	J	
85-68-7	Butylbenzylphthalate	340 ~~46~~	J B	U R
91-94-1	3,3'-Dichlorobenzidine	340	~~U~~	
56-55-3	Benzo(a)anthracene	220	J	
218-01-9	Chrysene	290	J	
117-81-7	Bis(2-ethylhexyl)phthalate	350	B	
117-84-0	Di-n-octylphthalate	340	~~U~~	UJ
205-99-2	Benzo(b)fluoranthene	190	J	J
207-08-9	Benzo(k)fluoranthene	160	J	
50-32-8	Benzo(a)pyrene	170	J	
193-39-5	Indeno(1,2,3-cd)pyrene	110	J	
53-70-3	Dibenzo(a,h)anthracene	49	J	
191-24-2	Benzo(g,h,i)perylene	140	J	
58-90-2	2,3,4,6-Tetrachlorophenol	340	~~U~~	UJ

[1] Cannot be separated from Diphenylamine

NW 9/24/13

1D - FORM I SV-1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-65-012

13

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17122

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17122-18

Sample wt/vol: 30.0 (g/mL) g Lab File ID: RLA20.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 62 Decanted: (Y/N) Date Received: 06/21/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/29/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/14/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
100-52-7	Benzaldehyde	83	J
108-95-2	Phenol	450	U
111-44-4	Bis(2-chloroethyl)ether	450	U
95-57-8	2-Chlorophenol	450	U
95-48-7	2-Methylphenol	450	U
108-60-1	2,2'-Oxybis(1-chloropropane)	450	U
98-86-2	Acetophenone	450	U
106-44-5	4-Methylphenol	450	U
621-64-7	N-Nitroso-di-n-propylamine	450	U
67-72-1	Hexachloroethane	450	U
98-95-3	Nitrobenzene	450	U
78-59-1	Isophorone	450	U
88-75-5	2-Nitrophenol	450	U
105-67-9	2,4-Dimethylphenol	450	U
111-91-1	Bis(2-chloroethoxy)methane	450	U
120-83-2	2,4-Dichlorophenol	450	U
91-20-3	Naphthalene	58	J
106-47-8	4-Chloroaniline	450	U
87-68-3	Hexachlorobutadiene	450	U
105-60-2	Caprolactam	450	U
59-50-7	4-Chloro-3-methylphenol	450	U
91-57-6	2-Methylnaphthalene	450	U
77-47-4	Hexachlorocyclopentadiene	450	U
88-06-2	2,4,6-Trichlorophenol	450	U
95-95-4	2,4,5-Trichlorophenol	450	U
92-52-4	1,1'-Biphenyl	450	U
91-58-7	2-Chloronaphthalene	450	U
88-74-4	2-Nitroaniline	870	U
131-11-3	Dimethylphthalate	450	U
606-20-2	2,6-Dinitrotoluene	450	U
208-96-8	Acenaphthylene	450	U
99-09-2	3-Nitroaniline	870	U
83-32-9	Acenaphthene	450	U

J
UJ
J
R
UJ
R
UJ

MW 9/24/13

1E - FORM I SV-2
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-65-012

13

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17122

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17122-18

Sample wt/vol: 30.0 (g/mL) g Lab File ID: RLA20.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 62 Decanted: (Y/N) Date Received: 06/21/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/29/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/14/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
51-28-5	2,4-Dinitrophenol	870	U
100-02-7	4-Nitrophenol	870	U
132-64-9	Dibenzofuran	15	J
121-14-2	2,4-Dinitrotoluene	450	U
84-66-2	Diethylphthalate	450	U
86-73-7	Fluorene	450	U
7005-72-3	4-Chlorophenyl-phenylether	450	U
100-01-6	4-Nitroaniline	870	U
534-52-1	4,6-Dinitro-2-methylphenol	870	U
86-30-6	N-Nitrosodiphenylamin [1]	450	U
95-94-3	1,2,4,5-Tetrachlorobenzene	450	U
101-55-3	4-Bromophenyl-phenylether	450	U
118-74-1	Hexachlorobenzene	450	U
1912-24-9	Atrazine	450	U
87-86-5	Pentachlorophenol	870	U
85-01-8	Phenanthrene	140	J
120-12-7	Anthracene	43	J
86-74-8	Carbazole	450	U
84-74-2	Di-n-butylphthalate	33	J
206-44-0	Fluoranthene	280	J
129-00-0	Pyrene	240	J
85-68-7	Butylbenzylphthalate	450 ~~39~~	J B
91-94-1	3,3'-Dichlorobenzidine	450	U
56-55-3	Benzo(a)anthracene	110	J
218-01-9	Chrysene	210	J
117-81-7	Bis(2-ethylhexyl)phthalate	450 ~~240~~	J B
117-84-0	Di-n-octylphthalate	450	U
205-99-2	Benzo(b)fluoranthene	180	J
207-08-9	Benzo(k)fluoranthene	190	J
50-32-8	Benzo(a)pyrene	150	J
193-39-5	Indeno(1,2,3-cd)pyrene	95	J
53-70-3	Dibenzo(a,h)anthracene	450	U
191-24-2	Benzo(g,h,i)perylene	95	J
58-90-2	2,3,4,6-Tetrachlorophenol	450	U

UJ UJ J UJ J J UJ J UJ R J J UJ UJ J UJ J UJ

[1] Cannot be separated from Diphenylamine

NW 9/24/13

EPA SAMPLE NO.
LMR13-65-024

14

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17122

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17122-19

Sample wt/vol: 29.7 (g/mL) g Lab File ID: ULLCD19.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 61 Decanted: (Y/N) Date Received: 06/21/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/29/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/08/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
100-52-7	Benzaldehyde	58	J	
108-95-2	Phenol	450	U	
111-44-4	Bis(2-chloroethyl)ether	450	U	
95-57-8	2-Chlorophenol	450	U	
95-48-7	2-Methylphenol	450	U	
108-60-1	2,2'-Oxybis(1-chloropropane)	450	U	
98-86-2	Acetophenone	20	J	
106-44-5	4-Methylphenol	200	~~J~~	J
621-64-7	N-Nitroso-di-n-propylamine	450	U	
67-72-1	Hexachloroethane	450	U	
98-95-3	Nitrobenzene	450	U	
78-59-1	Isophorone	450	U	
88-75-5	2-Nitrophenol	450	U	
105-67-9	2,4-Dimethylphenol	450	U	
111-91-1	Bis(2-chloroethoxy)methane	450	U	
120-83-2	2,4-Dichlorophenol	450	U	
91-20-3	Naphthalene	45	J	
106-47-8	4-Chloroaniline	450	~~U~~	R
87-68-3	Hexachlorobutadiene	450	U	
105-60-2	Caprolactam	450	U	
59-50-7	4-Chloro-3-methylphenol	450	U	
91-57-6	2-Methylnaphthalene	450	U	
77-47-4	Hexachlorocyclopentadiene	450	~~U~~	R
88-06-2	2,4,6-Trichlorophenol	450	U	
95-95-4	2,4,5-Trichlorophenol	450	U	
92-52-4	1,1'-Biphenyl	450	U	
91-58-7	2-Chloronaphthalene	450	U	
88-74-4	2-Nitroaniline	860	U	
131-11-3	Dimethylphthalate	450	U	
606-20-2	2,6-Dinitrotoluene	450	U	
208-96-8	Acenaphthylene	450	U	
99-09-2	3-Nitroaniline	860	U	
83-32-9	Acenaphthene	14	J	

NW 9/24/13

EPA SAMPLE NO.
LMR13-65-024

14

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17122

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17122-19

Sample wt/vol: 29.7 (g/mL) g Lab File ID: ULLCD19.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 61 Decanted: (Y/N) Date Received: 06/21/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/29/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/08/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
51-28-5	2,4-Dinitrophenol	860	U	
100-02-7	4-Nitrophenol	860	U	
132-64-9	Dibenzofuran	12	J	
121-14-2	2,4-Dinitrotoluene	450	U	
84-66-2	Diethylphthalate	450	U	
86-73-7	Fluorene	19	J	
7005-72-3	4-Chlorophenyl-phenylether	450	U	
100-01-6	4-Nitroaniline	860	U	
534-52-1	4,6-Dinitro-2-methylphenol	860	U	
86-30-6	N-Nitrosodiphenylamin [1]	450	U	
95-94-3	1,2,4,5-Tetrachlorobenzene	450	U	
101-55-3	4-Bromophenyl-phenylether	450	U	
118-74-1	Hexachlorobenzene	450	U	
1912-24-9	Atrazine	450	U	
87-86-5	Pentachlorophenol	860	U	
85-01-8	Phenanthrene	140	J	
120-12-7	Anthracene	32	J	
86-74-8	Carbazole	20	J	
84-74-2	Di-n-butylphthalate	36	J	
206-44-0	Fluoranthene	310	J	
129-00-0	Pyrene	250	J	
85-68-7	Butylbenzylphthalate	450 ~~47~~ ~~J B~~	U	U
91-94-1	3,3'-Dichlorobenzidine	450 ~~U~~	~~U~~	R
56-55-3	Benzo(a)anthracene	120	J	
218-01-9	Chrysene	180	J	
117-81-7	Bis(2-ethylhexyl)phthalate	450 ~~260~~ ~~J B~~	U	U
117-84-0	Di-n-octylphthalate	450 ~~U~~	~~U~~	UJ
205-99-2	Benzo(b)fluoranthene	140 ~~J~~	~~J~~	J
207-08-9	Benzo(k)fluoranthene	190	J	
50-32-8	Benzo(a)pyrene	140	J	
193-39-5	Indeno(1,2,3-cd)pyrene	89	J	
53-70-3	Dibenzo(a,h)anthracene	28 ~~J~~	~~J~~	J
191-24-2	Benzo(g,h,i)perylene	110	J	
58-90-2	2,3,4,6-Tetrachlorophenol	450	U	

[1] Cannot be separated from Diphenylamine

NW 9/24/13

EPA SAMPLE NO.
LMR13-69-024

15

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17122

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17122-20

Sample wt/vol: 29.6 (g/mL) g Lab File ID: ULLCD20.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 47 Decanted: (Y/N) Date Received: 06/21/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/29/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/08/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
100-52-7	Benzaldehyde	330	U
108-95-2	Phenol	330	U
111-44-4	Bis(2-chloroethyl)ether	330	U
95-57-8	2-Chlorophenol	330	U
95-48-7	2-Methylphenol	330	U
108-60-1	2,2'-Oxybis(1-chloropropane)	330	U
98-86-2	Acetophenone	330	U
106-44-5	4-Methylphenol	19	J
621-64-7	N-Nitroso-di-n-propylamine	330	U
67-72-1	Hexachloroethane	330	U
98-95-3	Nitrobenzene	330	U
78-59-1	Isophorone	330	U
88-75-5	2-Nitrophenol	330	U
105-67-9	2,4-Dimethylphenol	330	U
111-91-1	Bis(2-chloroethoxy)methane	330	U
120-83-2	2,4-Dichlorophenol	330	U
91-20-3	Naphthalene	140	J
106-47-8	4-Chloroaniline	330	U
87-68-3	Hexachlorobutadiene	330	U
105-60-2	Caprolactam	330	U
59-50-7	4-Chloro-3-methylphenol	330	U
91-57-6	2-Methylnaphthalene	55	J
77-47-4	Hexachlorocyclopentadiene	330	U
88-06-2	2,4,6-Trichlorophenol	330	U
95-95-4	2,4,5-Trichlorophenol	330	U
92-52-4	1,1'-Biphenyl	330	U
91-58-7	2-Chloronaphthalene	330	U
88-74-4	2-Nitroaniline	630	U
131-11-3	Dimethylphthalate	330	U
606-20-2	2,6-Dinitrotoluene	330	U
208-96-8	Acenaphthylene	330	U
99-09-2	3-Nitroaniline	630	U
83-32-9	Acenaphthene	28	J

NW 9/24/13

EPA SAMPLE NO.
LMR13-69-024

15

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17122

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17122-20

Sample wt/vol: 29.6 (g/mL) g Lab File ID: ULLCD20.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 47 Decanted: (Y/N) Date Received: 06/21/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/29/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/08/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
51-28-5	2,4-Dinitrophenol	630	U	
100-02-7	4-Nitrophenol	630	U	
132-64-9	Dibenzofuran	15	J	
121-14-2	2,4-Dinitrotoluene	330	U	
84-66-2	Diethylphthalate	9.4	J	
86-73-7	Fluorene	33	J	
7005-72-3	4-Chlorophenyl-phenylether	330	U	
100-01-6	4-Nitroaniline	630	U	
534-52-1	4,6-Dinitro-2-methylphenol	630	U	
86-30-6	N-Nitrosodiphenylamin [1]	330	U	
95-94-3	1,2,4,5-Tetrachlorobenzene	330	U	
101-55-3	4-Bromophenyl-phenylether	330	U	
118-74-1	Hexachlorobenzene	330	U	
1912-24-9	Atrazine	330	U	
87-86-5	Pentachlorophenol	630	U	
85-01-8	Phenanthrene	320	J	
120-12-7	Anthracene	38	J	
86-74-8	Carbazole	330	U	
84-74-2	Di-n-butylphthalate	20	J	
206-44-0	Fluoranthene	410		
129-00-0	Pyrene	620		
85-68-7	Butylbenzylphthalate	330 ~~85~~ ~~J B~~	U	
91-94-1	3,3'-Dichlorobenzidine	330	U	
56-55-3	Benzo(a)anthracene	540		
218-01-9	Chrysene	730		
117-81-7	Bis(2-ethylhexyl)phthalate	740	~~B~~	
117-84-0	Di-n-octylphthalate	330	~~U~~	UJ
205-99-2	Benzo(b)fluoranthene	310	~~J~~	J
207-08-9	Benzo(k)fluoranthene	190	J	
50-32-8	Benzo(a)pyrene	270	J	
193-39-5	Indeno(1,2,3-cd)pyrene	130	J	
53-70-3	Dibenzo(a,h)anthracene	93	~~J~~	J
191-24-2	Benzo(g,h,i)perylene	230	J	
58-90-2	2,3,4,6-Tetrachlorophenol	330	U	

[1] Cannot be separated from Diphenylamine

MW 9/24/13

1D - FORM I SV-1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-64-012

16

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17122

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17148-1

Sample wt/vol: 30.4 (g/mL) g Lab File ID: ULLCR16.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 61 Decanted: (Y/N) Date Received: 06/22/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/29/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/13/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
100-52-7	Benzaldehyde	71	J
108-95-2	Phenol	430	U
111-44-4	Bis(2-chloroethyl)ether	430	U
95-57-8	2-Chlorophenol	430	U
95-48-7	2-Methylphenol	430	U
108-60-1	2,2'-Oxybis(1-chloropropane)	430	U
98-86-2	Acetophenone	430	U
106-44-5	4-Methylphenol	430	U
621-64-7	N-Nitroso-di-n-propylamine	430	U
67-72-1	Hexachloroethane	430	U
98-95-3	Nitrobenzene	430	U
78-59-1	Isophorone	430	U
88-75-5	2-Nitrophenol	430	U
105-67-9	2,4-Dimethylphenol	430	U
111-91-1	Bis(2-chloroethoxy)methane	430	U
120-83-2	2,4-Dichlorophenol	430	U
91-20-3	Naphthalene	67	J
106-47-8	4-Chloroaniline	430	U
87-68-3	Hexachlorobutadiene	430	U
105-60-2	Caprolactam	430	U
59-50-7	4-Chloro-3-methylphenol	430	U
91-57-6	2-Methylnaphthalene	31	J
77-47-4	Hexachlorocyclopentadiene	430	U
88-06-2	2,4,6-Trichlorophenol	430	U
95-95-4	2,4,5-Trichlorophenol	430	U
92-52-4	1,1'-Biphenyl	430	U
91-58-7	2-Chloronaphthalene	430	U
88-74-4	2-Nitroaniline	840	U
131-11-3	Dimethylphthalate	430	U
606-20-2	2,6-Dinitrotoluene	430	U
208-96-8	Acenaphthylene	430	U
99-09-2	3-Nitroaniline	840	U
83-32-9	Acenaphthene	26	J

J UJ → J R UJ → J R UJ → J

NW 9/24/13

1E - FORM I SV-2
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-64-012

16

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17122

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17148-1

Sample wt/vol: 30.4 (g/mL) g Lab File ID: ULLCR16.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 61 Decanted: (Y/N) Date Received: 06/22/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/29/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/13/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
51-28-5	2,4-Dinitrophenol	840	U
100-02-7	4-Nitrophenol	840	U
132-64-9	Dibenzofuran	20	J
121-14-2	2,4-Dinitrotoluene	430	U
84-66-2	Diethylphthalate	430	U
86-73-7	Fluorene	32	J
7005-72-3	4-Chlorophenyl-phenylether	430	U
100-01-6	4-Nitroaniline	840	U
534-52-1	4,6-Dinitro-2-methylphenol	840	U
86-30-6	N-Nitrosodiphenylamin [1]	430	U
95-94-3	1,2,4,5-Tetrachlorobenzene	430	U
101-55-3	4-Bromophenyl-phenylether	430	U
118-74-1	Hexachlorobenzene	430	U
1912-24-9	Atrazine	430	U
87-86-5	Pentachlorophenol	840	U
85-01-8	Phenanthrene	150	J
120-12-7	Anthracene	36	J
86-74-8	Carbazole	20	J
84-74-2	Di-n-butylphthalate	24	J
206-44-0	Fluoranthene	320	J
129-00-0	Pyrene	340	J
85-68-7	Butylbenzylphthalate	430 ~~48~~	~~J B~~
91-94-1	3,3'-Dichlorobenzidine	430	U
56-55-3	Benzo(a)anthracene	210	J
218-01-9	Chrysene	270	J
117-81-7	Bis(2-ethylhexyl)phthalate	430 ~~360~~	~~J B~~
117-84-0	Di-n-octylphthalate	15	J
205-99-2	Benzo(b)fluoranthene	290	J
207-08-9	Benzo(k)fluoranthene	190	J
50-32-8	Benzo(a)pyrene	220	J
193-39-5	Indeno(1,2,3-cd)pyrene	120	J
53-70-3	Dibenzo(a,h)anthracene	79	J
191-24-2	Benzo(g,h,i)perylene	190	J
58-90-2	2,3,4,6-Tetrachlorophenol	430	U

UJ
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R
J
UJ
J
UJ

[1] Cannot be separated from Diphenylamine

NW 9/24/13

EPA SAMPLE NO.
LMR13-64-048

17

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17122

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17148-2

Sample wt/vol: 30.5 (g/mL) g Lab File ID: ULLCR17.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 49 Decanted: (Y/N) Date Received: 06/22/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/29/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/14/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
100-52-7	Benzaldehyde	54	J
108-95-2	Phenol	320	U
111-44-4	Bis(2-chloroethyl)ether	320	U
95-57-8	2-Chlorophenol	320	U
95-48-7	2-Methylphenol	320	U
108-60-1	2,2'-Oxybis(1-chloropropane)	320	U
98-86-2	Acetophenone	20	J
106-44-5	4-Methylphenol	320	U
621-64-7	N-Nitroso-di-n-propylamine	320	U
67-72-1	Hexachloroethane	320	U
98-95-3	Nitrobenzene	320	U
78-59-1	Isophorone	320	U
88-75-5	2-Nitrophenol	320	U
105-67-9	2,4-Dimethylphenol	320	U
111-91-1	Bis(2-chloroethoxy)methane	320	U
120-83-2	2,4-Dichlorophenol	320	U
91-20-3	Naphthalene	44	J
106-47-8	4-Chloroaniline	320	U
87-68-3	Hexachlorobutadiene	320	U
105-60-2	Caprolactam	320	U
59-50-7	4-Chloro-3-methylphenol	320	U
91-57-6	2-Methylnaphthalene	320	U
77-47-4	Hexachlorocyclopentadiene	320	U
88-06-2	2,4,6-Trichlorophenol	320	U
95-95-4	2,4,5-Trichlorophenol	320	U
92-52-4	1,1'-Biphenyl	320	U
91-58-7	2-Chloronaphthalene	320	U
88-74-4	2-Nitroaniline	630	U
131-11-3	Dimethylphthalate	320	U
606-20-2	2,6-Dinitrotoluene	320	U
208-96-8	Acenaphthylene	320	U
99-09-2	3-Nitroaniline	630	U
83-32-9	Acenaphthene	25	J

J UJ J UJ J R UJ R UJ J

NW 9/24/13

EPA SAMPLE NO.
LMR13-64-048

17

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17122

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17148-2

Sample wt/vol: 30.5 (g/mL) g Lab File ID: ULLCR17.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 49 Decanted: (Y/N) Date Received: 06/22/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/29/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/14/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
51-28-5	2,4-Dinitrophenol	630	U
100-02-7	4-Nitrophenol	630	U
132-64-9	Dibenzofuran	18	J
121-14-2	2,4-Dinitrotoluene	320	U
84-66-2	Diethylphthalate	320	U
86-73-7	Fluorene	28	J
7005-72-3	4-Chlorophenyl-phenylether	320	U
100-01-6	4-Nitroaniline	630	U
534-52-1	4,6-Dinitro-2-methylphenol	630	U
86-30-6	N-Nitrosodiphenylamin [1]	320	U
95-94-3	1,2,4,5-Tetrachlorobenzene	320	U
101-55-3	4-Bromophenyl-phenylether	320	U
118-74-1	Hexachlorobenzene	320	U
1912-24-9	Atrazine	320	U
87-86-5	Pentachlorophenol	630	U
85-01-8	Phenanthrene	160	J
120-12-7	Anthracene	35	J
86-74-8	Carbazole	7.6	J
84-74-2	Di-n-butylphthalate	20	J
206-44-0	Fluoranthene	350	
129-00-0	Pyrene	250	J
85-68-7	Butylbenzylphthalate	320 ~~27~~	~~J~~ ~~B~~
91-94-1	3,3'-Dichlorobenzidine	320	R
56-55-3	Benzo(a)anthracene	170	J
218-01-9	Chrysene	200	J
117-81-7	Bis(2-ethylhexyl)phthalate	320	~~J~~ ~~B~~
117-84-0	Di-n-octylphthalate	320	U
205-99-2	Benzo(b)fluoranthene	190	J
207-08-9	Benzo(k)fluoranthene	210	J
50-32-8	Benzo(a)pyrene	160	J
193-39-5	Indeno(1,2,3-cd)pyrene	110	J
53-70-3	Dibenzo(a,h)anthracene	44	J
191-24-2	Benzo(g,h,i)perylene	150	J
58-90-2	2,3,4,6-Tetrachlorophenol	320	U

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[1] Cannot be separated from Diphenylamine

NW 9/24/13

1D - FORM I SV-1

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-64-048FD

18

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17122

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17148-3

Sample wt/vol: 30.5 (g/mL) g Lab File ID: ULLCR18.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 48 Decanted: (Y/N) Date Received: 06/22/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/29/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/14/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
100-52-7	Benzaldehyde	61	J
108-95-2	Phenol	320	UJ
111-44-4	Bis(2-chloroethyl)ether	320	U
95-57-8	2-Chlorophenol	320	U
95-48-7	2-Methylphenol	320	U
108-60-1	2,2'-Oxybis(1-chloropropane)	320	U
98-86-2	Acetophenone	18	J
106-44-5	4-Methylphenol	320	UJ
621-64-7	N-Nitroso-di-n-propylamine	320	U
67-72-1	Hexachloroethane	320	U
98-95-3	Nitrobenzene	320	U
78-59-1	Isophorone	320	U
88-75-5	2-Nitrophenol	320	U
105-67-9	2,4-Dimethylphenol	320	U
111-91-1	Bis(2-chloroethoxy)methane	320	U
120-83-2	2,4-Dichlorophenol	320	U
91-20-3	Naphthalene	40	J
106-47-8	4-Chloroaniline	320	R
87-68-3	Hexachlorobutadiene	320	UJ
105-60-2	Caprolactam	320	U
59-50-7	4-Chloro-3-methylphenol	320	U
91-57-6	2-Methylnaphthalene	320	U
77-47-4	Hexachlorocyclopentadiene	320	R
88-06-2	2,4,6-Trichlorophenol	320	UJ
95-95-4	2,4,5-Trichlorophenol	320	U
92-52-4	1,1'-Biphenyl	320	U
91-58-7	2-Chloronaphthalene	320	U
88-74-4	2-Nitroaniline	630	U
131-11-3	Dimethylphthalate	320	U
606-20-2	2,6-Dinitrotoluene	320	U
208-96-8	Acenaphthylene	320	U
99-09-2	3-Nitroaniline	630	U
83-32-9	Acenaphthene	20	J

NW 9/24/13

1E - FORM I SV-2
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-64-048FD

18

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17122

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17148-3

Sample wt/vol: 30.5 (g/mL) g Lab File ID: ULLCR18.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 48 Decanted: (Y/N) Date Received: 06/22/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/29/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/14/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
51-28-5	2,4-Dinitrophenol	630	U
100-02-7	4-Nitrophenol	630	U
132-64-9	Dibenzofuran	18	J
121-14-2	2,4-Dinitrotoluene	320	U
84-66-2	Diethylphthalate	320	U
86-73-7	Fluorene	29	J
7005-72-3	4-Chlorophenyl-phenylether	320	U
100-01-6	4-Nitroaniline	630	U
534-52-1	4,6-Dinitro-2-methylphenol	630	U
86-30-6	N-Nitrosodiphenylamin [1]	320	U
95-94-3	1,2,4,5-Tetrachlorobenzene	320	U
101-55-3	4-Bromophenyl-phenylether	320	U
118-74-1	Hexachlorobenzene	320	U
1912-24-9	Atrazine	320	U
87-86-5	Pentachlorophenol	630	U
85-01-8	Phenanthrene	130	J
120-12-7	Anthracene	27	J
86-74-8	Carbazole	320	U
84-74-2	Di-n-butylphthalate	20	J
206-44-0	Fluoranthene	320	J
129-00-0	Pyrene	300	J
85-68-7	Butylbenzylphthalate	320 ~~39~~	~~J B~~
91-94-1	3,3'-Dichlorobenzidine	320	U
56-55-3	Benzo(a)anthracene	190	J
218-01-9	Chrysene	290	J
117-81-7	Bis(2-ethylhexyl)phthalate	380	B
117-84-0	Di-n-octylphthalate	320	U
205-99-2	Benzo(b)fluoranthene	250	J
207-08-9	Benzo(k)fluoranthene	230	J
50-32-8	Benzo(a)pyrene	180	J
193-39-5	Indeno(1,2,3-cd)pyrene	130	J
53-70-3	Dibenzo(a,h)anthracene	42	J
191-24-2	Benzo(g,h,i)perylene	170	J
58-90-2	2,3,4,6-Tetrachlorophenol	320	U

UJ UJ J UJ UJ J UJ J J UJ J UJ R J UJ J UJ

[1] Cannot be separated from Diphenylamine

NW 9/24/13

EPA SAMPLE NO.
LMR13-67-072

19

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17122

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17148-4

Sample wt/vol: 30.4 (g/mL) g Lab File ID: ULLCR19.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 50 Decanted: (Y/N) Date Received: 06/22/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/29/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/14/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
100-52-7	Benzaldehyde	61	J
108-95-2	Phenol	340	U
111-44-4	Bis(2-chloroethyl)ether	340	U
95-57-8	2-Chlorophenol	340	U
95-48-7	2-Methylphenol	340	U
108-60-1	2,2'-Oxybis(1-chloropropane)	340	U
98-86-2	Acetophenone	340	U
106-44-5	4-Methylphenol	340	U
621-64-7	N-Nitroso-di-n-propylamine	340	U
67-72-1	Hexachloroethane	340	U
98-95-3	Nitrobenzene	340	U
78-59-1	Isophorone	340	U
88-75-5	2-Nitrophenol	340	U
105-67-9	2,4-Dimethylphenol	340	U
111-91-1	Bis(2-chloroethoxy)methane	340	U
120-83-2	2,4-Dichlorophenol	340	U
91-20-3	Naphthalene	34	J
106-47-8	4-Chloroaniline	340	U
87-68-3	Hexachlorobutadiene	340	U
105-60-2	Caprolactam	340	U
59-50-7	4-Chloro-3-methylphenol	340	U
91-57-6	2-Methylnaphthalene	42	J
77-47-4	Hexachlorocyclopentadiene	340	U
88-06-2	2,4,6-Trichlorophenol	340	U
95-95-4	2,4,5-Trichlorophenol	340	U
92-52-4	1,1'-Biphenyl	340	U
91-58-7	2-Chloronaphthalene	340	U
88-74-4	2-Nitroaniline	650	U
131-11-3	Dimethylphthalate	340	U
606-20-2	2,6-Dinitrotoluene	340	U
208-96-8	Acenaphthylene	340	U
99-09-2	3-Nitroaniline	650	U
83-32-9	Acenaphthene	21	J

MW 9/24/13

EPA SAMPLE NO.
LMR13-67-072

19

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17122

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17148-4

Sample wt/vol: 30.4 (g/mL) g Lab File ID: ULLCR19.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 50 Decanted: (Y/N) Date Received: 06/22/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/29/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/14/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
51-28-5	2,4-Dinitrophenol	650	U
100-02-7	4-Nitrophenol	650	U
132-64-9	Dibenzofuran	16	J
121-14-2	2,4-Dinitrotoluene	340	U
84-66-2	Diethylphthalate	340	U
86-73-7	Fluorene	32	J
7005-72-3	4-Chlorophenyl-phenylether	340	U
100-01-6	4-Nitroaniline	650	U
534-52-1	4,6-Dinitro-2-methylphenol	650	U
86-30-6	N-Nitrosodiphenylamin [1]	340	U
95-94-3	1,2,4,5-Tetrachlorobenzene	340	U
101-55-3	4-Bromophenyl-phenylether	340	U
118-74-1	Hexachlorobenzene	340	U
1912-24-9	Atrazine	340	U
87-86-5	Pentachlorophenol	650	U
85-01-8	Phenanthrene	170	J
120-12-7	Anthracene	34	J
86-74-8	Carbazole	340	U
84-74-2	Di-n-butylphthalate	19	J
206-44-0	Fluoranthene	320	J
129-00-0	Pyrene	270	J
85-68-7	Butylbenzylphthalate	340 ~~43~~	~~J B~~
91-94-1	3,3'-Dichlorobenzidine	340	~~U~~
56-55-3	Benzo(a)anthracene	240	~~J~~
218-01-9	Chrysene	350	
117-81-7	Bis(2-ethylhexyl)phthalate	340 ~~300~~	~~J B~~
117-84-0	Di-n-octylphthalate	340	U
205-99-2	Benzo(b)fluoranthene	310	J
207-08-9	Benzo(k)fluoranthene	160	J
50-32-8	Benzo(a)pyrene	190	J
193-39-5	Indeno(1,2,3-cd)pyrene	110	J
53-70-3	Dibenzo(a,h)anthracene	58	J
191-24-2	Benzo(g,h,i)perylene	200	J
58-90-2	2,3,4,6-Tetrachlorophenol	340	U

UJ UJ J UJ UJ J UJ → J J UJ UJ J → UJ R J J UJ UJ J → UJ

[1] Cannot be separated from Diphenylamine

NW 9/24/13

EPA SAMPLE NO.
LMR13-67-096

20

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17122

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17148-5

Sample wt/vol: 30.5 (g/mL) g Lab File ID: ULLCR20.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 47 Decanted: (Y/N) Date Received: 06/22/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/29/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/14/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
100-52-7	Benzaldehyde	50	J
108-95-2	Phenol	16	J
111-44-4	Bis(2-chloroethyl)ether	320	U
95-57-8	2-Chlorophenol	320	U
95-48-7	2-Methylphenol	320	U
108-60-1	2,2'-Oxybis(1-chloropropane)	320	U
98-86-2	Acetophenone	17	J
106-44-5	4-Methylphenol	320	U
621-64-7	N-Nitroso-di-n-propylamine	320	U
67-72-1	Hexachloroethane	320	U
98-95-3	Nitrobenzene	320	U
78-59-1	Isophorone	320	U
88-75-5	2-Nitrophenol	320	U
105-67-9	2,4-Dimethylphenol	320	U
111-91-1	Bis(2-chloroethoxy)methane	320	U
120-83-2	2,4-Dichlorophenol	320	U
91-20-3	Naphthalene	21	J
106-47-8	4-Chloroaniline	320	U
87-68-3	Hexachlorobutadiene	320	U
105-60-2	Caprolactam	320	U
59-50-7	4-Chloro-3-methylphenol	320	U
91-57-6	2-Methylnaphthalene	35	J
77-47-4	Hexachlorocyclopentadiene	320	U
88-06-2	2,4,6-Trichlorophenol	320	U
95-95-4	2,4,5-Trichlorophenol	320	U
92-52-4	1,1'-Biphenyl	320	U
91-58-7	2-Chloronaphthalene	320	U
88-74-4	2-Nitroaniline	620	U
131-11-3	Dimethylphthalate	320	U
606-20-2	2,6-Dinitrotoluene	320	U
208-96-8	Acenaphthylene	320	U
99-09-2	3-Nitroaniline	620	U
83-32-9	Acenaphthene	15	J

J J UJ UJ J UJ R UJ J R UJ J

NW 9/24/13

1E - FORM I SV-2
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-67-096

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678 20

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17122

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17148-5

Sample wt/vol: 30.5 (g/mL) g Lab File ID: ULLCR20.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 47 Decanted: (Y/N) Date Received: 06/22/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/29/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/14/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
51-28-5	2,4-Dinitrophenol	620	U	UJ
100-02-7	4-Nitrophenol	620	U	UJ
132-64-9	Dibenzofuran	14	J	J
121-14-2	2,4-Dinitrotoluene	320	U	UJ
84-66-2	Diethylphthalate	320	U	UJ
86-73-7	Fluorene	19	J	J
7005-72-3	4-Chlorophenyl-phenylether	320	U	UJ
100-01-6	4-Nitroaniline	620	U	
534-52-1	4,6-Dinitro-2-methylphenol	620	U	
86-30-6	N-Nitrosodiphenylamin [1]	320	U	
95-94-3	1,2,4,5-Tetrachlorobenzene	320	U	
101-55-3	4-Bromophenyl-phenylether	320	U	
118-74-1	Hexachlorobenzene	320	U	
1912-24-9	Atrazine	320	U	
87-86-5	Pentachlorophenol	620	U	
85-01-8	Phenanthrene	140	J	J
120-12-7	Anthracene	20	J	J
86-74-8	Carbazole	320	U	UJ
84-74-2	Di-n-butylphthalate	10	J	J
206-44-0	Fluoranthene	200	J	
129-00-0	Pyrene	300	J	
85-68-7	Butylbenzylphthalate	320 ~~30~~	~~J B~~	U
91-94-1	3,3'-Dichlorobenzidine	320	U	R
56-55-3	Benzo(a)anthracene	270	J	J
218-01-9	Chrysene	380		
117-81-7	Bis(2-ethylhexyl)phthalate	350	B	
117-84-0	Di-n-octylphthalate	320	U	UJ
205-99-2	Benzo(b)fluoranthene	310	J	J
207-08-9	Benzo(k)fluoranthene	140	J	
50-32-8	Benzo(a)pyrene	210	J	
193-39-5	Indeno(1,2,3-cd)pyrene	140	J	
53-70-3	Dibenzo(a,h)anthracene	73	J	
191-24-2	Benzo(g,h,i)perylene	190	J	
58-90-2	2,3,4,6-Tetrachlorophenol	320	U	UJ

[1] Cannot be separated from Diphenylamine

NW 9/24/13

SOM01.2 (4/2007)
08/19/2013

EPA SAMPLE NO.
LMR13-67-120

21

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17122

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17148-6

Sample wt/vol: 30.8 (g/mL) g Lab File ID: ULLCR21.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 48 Decanted: (Y/N) Date Received: 06/22/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/29/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/14/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
100-52-7	Benzaldehyde	63	J
108-95-2	Phenol	320	UJ
111-44-4	Bis(2-chloroethyl)ether	320	U
95-57-8	2-Chlorophenol	320	U
95-48-7	2-Methylphenol	320	U
108-60-1	2,2'-Oxybis(1-chloropropane)	320	U
98-86-2	Acetophenone	320	U
106-44-5	4-Methylphenol	320	U
621-64-7	N-Nitroso-di-n-propylamine	320	U
67-72-1	Hexachloroethane	320	U
98-95-3	Nitrobenzene	320	U
78-59-1	Isophorone	320	U
88-75-5	2-Nitrophenol	320	U
105-67-9	2,4-Dimethylphenol	320	U
111-91-1	Bis(2-chloroethoxy)methane	320	U
120-83-2	2,4-Dichlorophenol	320	U
91-20-3	Naphthalene	22	J
106-47-8	4-Chloroaniline	320	UJ
87-68-3	Hexachlorobutadiene	320	U
105-60-2	Caprolactam	320	U
59-50-7	4-Chloro-3-methylphenol	320	U
91-57-6	2-Methylnaphthalene	38	J
77-47-4	Hexachlorocyclopentadiene	320	UJ
88-06-2	2,4,6-Trichlorophenol	320	U
95-95-4	2,4,5-Trichlorophenol	320	U
92-52-4	1,1'-Biphenyl	320	U
91-58-7	2-Chloronaphthalene	320	U
88-74-4	2-Nitroaniline	620	U
131-11-3	Dimethylphthalate	320	U
606-20-2	2,6-Dinitrotoluene	320	U
208-96-8	Acenaphthylene	320	U
99-09-2	3-Nitroaniline	620	U
83-32-9	Acenaphthene	15	J

MW 9/24/13

EPA SAMPLE NO.
LMR13-67-120

21

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17122

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17148-6

Sample wt/vol: 30.8 (g/mL) g Lab File ID: ULLCR21.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 48 Decanted: (Y/N) Date Received: 06/22/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/29/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/14/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg		Q
51-28-5	2,4-Dinitrophenol	620	U	UJ
100-02-7	4-Nitrophenol	620	U	UJ
132-64-9	Dibenzofuran	14	J	J
121-14-2	2,4-Dinitrotoluene	320	U	UJ
84-66-2	Diethylphthalate	320	U	UJ
86-73-7	Fluorene	29	J	J
7005-72-3	4-Chlorophenyl-phenylether	320	U	UJ
100-01-6	4-Nitroaniline	620	U	
534-52-1	4,6-Dinitro-2-methylphenol	620	U	
86-30-6	N-Nitrosodiphenylamin [1]	320	U	
95-94-3	1,2,4,5-Tetrachlorobenzene	320	U	
101-55-3	4-Bromophenyl-phenylether	320	U	
118-74-1	Hexachlorobenzene	320	U	
1912-24-9	Atrazine	320	U	
87-86-5	Pentachlorophenol	620	U	
85-01-8	Phenanthrene	200	J	J
120-12-7	Anthracene	31	J	J
86-74-8	Carbazole	320	U	UJ
84-74-2	Di-n-butylphthalate	17	J	J
206-44-0	Fluoranthene	270	J	J
129-00-0	Pyrene	420		J
85-68-7	Butylbenzylphthalate	320 ~~24~~	~~J B~~	UJ
91-94-1	3,3'-Dichlorobenzidine	320	U	UJ
56-55-3	Benzo(a)anthracene	380		J
218-01-9	Chrysene	660		J
117-81-7	Bis(2-ethylhexyl)phthalate	350	~~B~~	J
117-84-0	Di-n-octylphthalate	320	~~U~~	UJ
205-99-2	Benzo(b)fluoranthene	320		J
207-08-9	Benzo(k)fluoranthene	290	J	J
50-32-8	Benzo(a)pyrene	270	J	J
193-39-5	Indeno(1,2,3-cd)pyrene	170	J	J
53-70-3	Dibenzo(a,h)anthracene	120	J	J
191-24-2	Benzo(g,h,i)perylene	240	J	J
58-90-2	2,3,4,6-Tetrachlorophenol	320	U	UJ

[1] Cannot be separated from Diphenylamine

NW 9/24/13

1F - FORM I SV-SIM

SEMIVOLATILE SIM ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-69-012

6

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: 1734.2 SDG No.: 17122

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17122-11

Sample wt/vol: 29.4 (g/mL) g Lab File ID: SERHT09.D

Extraction: (Type) SONC

% Moisture: 51 Decanted: (Y/N) Date Received: 06/21/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/29/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/08/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 5.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
91-20-3	Naphthalene	80	~~B~~
90-12-0	1-Methylnaphthalene	14	J
91-57-6	2-Methylnaphthalene	35 ~~25~~	~~J B~~ U
208-96-8	Acenaphthylene	7.8	J
83-32-9	Acenaphthene	20	J
86-73-7	Fluorene	35	
85-01-8	Phenanthrene	250	~~B~~
120-12-7	Anthracene	33	J
206-44-0	Fluoranthene	280	~~B~~
129-00-0	Pyrene	280	~~B~~
56-55-3	Benzo(a)anthracene	160	~~B~~
218-01-9	Chrysene	280	~~B~~
205-99-2	Benzo(b)fluoranthene	200	
207-08-9	Benzo(k)fluoranthene	120	
192-97-2	Benzo(e)pyrene	200	
50-32-8	Benzo(a)pyrene	170	
198-55-0	Perylene	340	
193-39-5	Indeno(1,2,3-cd)pyrene	120	
53-70-3	Dibenzo(a,h)anthracene	58	
191-24-2	Benzo(g,h,i)perylene	170	
C1NAPH	C1-Naphthalenes	26	J
C2NAPH	C2-Naphthalenes	270	J
C3NAPH	C3-Naphthalenes	370	J
C4NAPH	C4-Naphthalenes	230	J
C1FLUOR	C1 Fluorenes	26	J
C2FLUOR	C2 Fluorenes	45	J
C3FLUOR	C3 Fluorenes	88	J
C1PHAN	C1-Phenanthrenes/Anthracenes	380	J
C2PHAN	C2-Phenanthrenes/Anthracenes	270	J
C3PHAN	C3-Phenanthrenes/Anthracenes	190	J
C4PHAN	C4-Phenanthrenes/Anthracenes	130	J
C1FLPY	C1-Fluoranthenes/Pyrenes	240	J
C2FLPY	C2-Fluoranthenes/Pyrenes	230	J
C3FLPY	C3-Fluoranthenes/Pyrenes	150	J
C1CHRYS	C1 Chrysenes	300	J
C2CHRYS	C2 Chrysenes	250	J
C3CHRYS	C3 Chrysenes	140	J
C4CHRYS	C4 Chrysenes	62	J

MW 9/24/13

1F - FORM I SV-SIM

SEMIVOLATILE SIM ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-69-012

6

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: 1734.2 SDG No.: 17122

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17122-11

Sample wt/vol: 29.4 (g/mL) g Lab File ID: SERHT09.D

Extraction: (Type) SONC

% Moisture: 51 Decanted: (Y/N) Date Received: 06/21/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/29/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/08/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 5.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
TPPAH	Total 16 PPAH	2300	B J
TPAH	Total PAH	6200	B J

NW 9/24/13

1F - FORM I SV-SIM

SEMIVOLATILE SIM ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-65-012

13

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: 1734.2 SDG No.: 17122

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17122-18

Sample wt/vol: 30.0 (g/mL) g Lab File ID: SERHT10.D

Extraction: (Type) SONC

% Moisture: 62 Decanted: (Y/N) Date Received: 06/21/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/29/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/08/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 4.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
91-20-3	Naphthalene	55	~~B~~
90-12-0	1-Methylnaphthalene	8.3	J
91-57-6	2-Methylnaphthalene	35 ~~14~~	~~J B~~ U
208-96-8	Acenaphthylene	6.8	J
83-32-9	Acenaphthene	14	J
86-73-7	Fluorene	20	J
85-01-8	Phenanthrene	140	~~B~~
120-12-7	Anthracene	29	J
206-44-0	Fluoranthene	300	~~B~~
129-00-0	Pyrene	210	~~B~~
56-55-3	Benzo(a)anthracene	110	~~B~~
218-01-9	Chrysene	160	~~B~~
205-99-2	Benzo(b)fluoranthene	190	
207-08-9	Benzo(k)fluoranthene	110	
192-97-2	Benzo(e)pyrene	130	
50-32-8	Benzo(a)pyrene	130	
198-55-0	Perylene	150	
193-39-5	Indeno(1,2,3-cd)pyrene	130	
53-70-3	Dibenzo(a,h)anthracene	41	
191-24-2	Benzo(g,h,i)perylene	160	
C1NAPH	C1-Naphthalenes	16	J
C2NAPH	C2-Naphthalenes	43	J
C3NAPH	C3-Naphthalenes	58	J
C4NAPH	C4-Naphthalenes	62	J
C1FLUOR	C1 Fluorenes	6.4	J
C2FLUOR	C2 Fluorenes	8.6	J
C3FLUOR	C3 Fluorenes	12	J
C1PHAN	C1-Phenanthrenes/Anthracenes	98	J
C2PHAN	C2-Phenanthrenes/Anthracenes	72	J
C3PHAN	C3-Phenanthrenes/Anthracenes	46	J
C4PHAN	C4-Phenanthrenes/Anthracenes	34	J
C1FLPY	C1-Fluoranthenes/Pyrenes	110	J
C2FLPY	C2-Fluoranthenes/Pyrenes	83	J
C3FLPY	C3-Fluoranthenes/Pyrenes	47	J
C1CHRYS	C1 Chrysenes	88	J
C2CHRYS	C2 Chrysenes	68	J
C3CHRYS	C3 Chrysenes	49	J
C4CHRYS	C4 Chrysenes	19	J

NW 9/24/13

1F - FORM I SV-SIM

SEMIVOLATILE SIM ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-65-012

13

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: 1734.2 SDG No.: 17122

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17122-18

Sample wt/vol: 30.0 (g/mL) g Lab File ID: SERHT10.D

Extraction: (Type) SONC

% Moisture: 62 Decanted: (Y/N) Date Received: 06/21/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/29/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/08/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 4.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
TPPAH	Total 16 PPAH	1800	B J
TPAH	Total PAH	3000	B J

MW 9/24/13

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-64-024

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17122

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17122-6

Sample wt/vol: 30.1 (g/mL) g Lab File ID: 0825AHJSOM03.D

% Moisture: 49 Decanted: (Y/N) Date Received: 06/21/2013

Extraction: (Type) SONC Date Extracted: 06/27/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 08/04/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 5.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	320	U
11104-28-2	Aroclor-1221	320	U
11141-16-5	Aroclor-1232	320	U
53469-21-9	Aroclor-1242	320	U
12672-29-6	Aroclor-1248	56	J
11097-69-1	Aroclor-1254	41	J
11096-82-5	Aroclor-1260	12	J
37324-23-5	Aroclor-1262	320	U
11100-14-4	Aroclor-1268	320	U

NW 9/24/13

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-64-024FD

2

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17122

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17122-7

Sample wt/vol: 30.8 (g/mL) g Lab File ID: 0825AHJSOM04.D

% Moisture: 51 Decanted: (Y/N) Date Received: 06/21/2013

Extraction: (Type) SONC Date Extracted: 06/27/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 08/04/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 5.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	330	U
11104-28-2	Aroclor-1221	330	U
11141-16-5	Aroclor-1232	330	U
53469-21-9	Aroclor-1242	330	U
12672-29-6	Aroclor-1248	44	J
11097-69-1	Aroclor-1254	37	J
11096-82-5	Aroclor-1260	9.9	~~J~~ J
37324-23-5	Aroclor-1262	330	U
11100-14-4	Aroclor-1268	330	U

NW 9/24/13

1H - FORM I ARO
AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-64-072

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678 3

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17122

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17122-8

Sample wt/vol: 30.5 (g/mL) g Lab File ID: 0825AHJSOM05.D

% Moisture: 48 Decanted: (Y/N) Date Received: 06/21/2013

Extraction: (Type) SONC Date Extracted: 06/27/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 08/04/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 5.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	310	U
11104-28-2	Aroclor-1221	310	U
11141-16-5	Aroclor-1232	310	U
53469-21-9	Aroclor-1242	310	U
12672-29-6	Aroclor-1248	37	J
11097-69-1	Aroclor-1254	29	J
11096-82-5	Aroclor-1260	7.1	~~J~~ P J
37324-23-5	Aroclor-1262	310	U
11100-14-4	Aroclor-1268	310	U

NW 9/24/13

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-64-096

4

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17122

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17122-9

Sample wt/vol: 30.2 (g/mL) g Lab File ID: 0825AHJSOM06.D

% Moisture: 46 Decanted: (Y/N) Date Received: 06/21/2013

Extraction: (Type) SONC Date Extracted: 06/27/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 08/04/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 5.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	300	U
11104-28-2	Aroclor-1221	300	U
11141-16-5	Aroclor-1232	300	U
53469-21-9	Aroclor-1242	300	U
12672-29-6	Aroclor-1248	45	J
11097-69-1	Aroclor-1254	33	J
11096-82-5	Aroclor-1260	10	~~J P~~ J
37324-23-5	Aroclor-1262	300	U
11100-14-4	Aroclor-1268	300	U

NW 9/24/13

1H - FORM I ARO
AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-64-120

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678 5

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17122

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17122-10

Sample wt/vol: 30.9 (g/mL) g Lab File ID: 0825AHJSOM07.D

% Moisture: 44 Decanted: (Y/N) Date Received: 06/21/2013

Extraction: (Type) SONC Date Extracted: 06/27/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 08/05/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 5.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	290	U
11104-28-2	Aroclor-1221	290	U
11141-16-5	Aroclor-1232	290	U
53469-21-9	Aroclor-1242	290	U
12672-29-6	Aroclor-1248	65	J
11097-69-1	Aroclor-1254	45	J
11096-82-5	Aroclor-1260	13	J
37324-23-5	Aroclor-1262	290	U
11100-14-4	Aroclor-1268	290	U

MW 9/24/13

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-69-012

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678 6

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17122

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17122-11

Sample wt/vol: 29.4 (g/mL) g Lab File ID: 0825AHJSOM10.D

% Moisture: 51 Decanted: (Y/N) Date Received: 06/21/2013

Extraction: (Type) SONC Date Extracted: 06/27/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 08/05/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 5.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	350	U
11104-28-2	Aroclor-1221	350	U
11141-16-5	Aroclor-1232	350	U
53469-21-9	Aroclor-1242	350	U
12672-29-6	Aroclor-1248	51	J
11097-69-1	Aroclor-1254	43	J
11096-82-5	Aroclor-1260	11	~~J P~~ J
37324-23-5	Aroclor-1262	350	U
11100-14-4	Aroclor-1268	350	U

NW 9/24/13

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-68-012

7

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17122

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17122-12

Sample wt/vol: 30.5 (g/mL) g Lab File ID: 0825AHJSOM11.D

% Moisture: 23 Decanted: (Y/N) Date Received: 06/21/2013

Extraction: (Type) SONC Date Extracted: 06/27/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 08/05/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 5.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	210	U
11104-28-2	Aroclor-1221	210	U
11141-16-5	Aroclor-1232	210	U
53469-21-9	Aroclor-1242	210	U
12672-29-6	Aroclor-1248	66	J
11097-69-1	Aroclor-1254	110	J
11096-82-5	Aroclor-1260	18	J
37324-23-5	Aroclor-1262	210	U
11100-14-4	Aroclor-1268	210	U

NW 9/24/13

1H - FORM I ARO
AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-69-048

8

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17122

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17122-13

Sample wt/vol: 29.6 (g/mL) g Lab File ID: 0825AHJSOM12.D

% Moisture: 46 Decanted: (Y/N) Date Received: 06/21/2013

Extraction: (Type) SONC Date Extracted: 06/27/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 08/05/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 5.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	310	U
11104-28-2	Aroclor-1221	310	U
11141-16-5	Aroclor-1232	310	U
53469-21-9	Aroclor-1242	310	U
12672-29-6	Aroclor-1248	42	J
11097-69-1	Aroclor-1254	34	J
11096-82-5	Aroclor-1260	310	U
37324-23-5	Aroclor-1262	310	U
11100-14-4	Aroclor-1268	310	U

NW 9/24/13

1H - FORM I ARO
AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-69-072

9

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17122

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17122-14

Sample wt/vol: 29.5 (g/mL) g Lab File ID: 0825AHJSOM13.D

% Moisture: 45 Decanted: (Y/N) Date Received: 06/21/2013

Extraction: (Type) SONC Date Extracted: 06/27/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 08/05/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 5.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	300	U
11104-28-2	Aroclor-1221	300	U
11141-16-5	Aroclor-1232	300	U
53469-21-9	Aroclor-1242	300	U
12672-29-6	Aroclor-1248	120	J
11097-69-1	Aroclor-1254	84	J
11096-82-5	Aroclor-1260	21	J
37324-23-5	Aroclor-1262	300	U
11100-14-4	Aroclor-1268	300	U

MW 9/24/13

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-92-012

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678 10

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17122

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17122-15

Sample wt/vol: 30.0 (g/mL) g Lab File ID: 0825AHJSOM14.D

% Moisture: 53 Decanted: (Y/N) Date Received: 06/21/2013

Extraction: (Type) SONC Date Extracted: 06/27/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 08/05/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 5.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	350	U
11104-28-2	Aroclor-1221	350	U
11141-16-5	Aroclor-1232	350	U
53469-21-9	Aroclor-1242	350	U
12672-29-6	Aroclor-1248	29	~~J P~~ J
11097-69-1	Aroclor-1254	25	J
11096-82-5	Aroclor-1260	9.6	~~J P~~ J
37324-23-5	Aroclor-1262	350	U
11100-14-4	Aroclor-1268	350	U

NW 9/24/13

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-92-024

11

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17122

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17122-16

Sample wt/vol: 30.2 (g/mL) g Lab File ID: 0825AHJSOM15.D

% Moisture: 49 Decanted: (Y/N) Date Received: 06/21/2013

Extraction: (Type) SONC Date Extracted: 06/27/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 08/05/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 5.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	320	U
11104-28-2	Aroclor-1221	320	U
11141-16-5	Aroclor-1232	320	U
53469-21-9	Aroclor-1242	320	U
12672-29-6	Aroclor-1248	61	J
11097-69-1	Aroclor-1254	51	J
11096-82-5	Aroclor-1260	13	~~J P~~ J
37324-23-5	Aroclor-1262	320	U
11100-14-4	Aroclor-1268	320	U

MW 9/24/13

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-92-024FD

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678 12

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17122

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17122-17

Sample wt/vol: 30.0 (g/mL) g Lab File ID: 0825AHJSOM16.D

% Moisture: 49 Decanted: (Y/N) Date Received: 06/21/2013

Extraction: (Type) SONC Date Extracted: 06/27/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 08/05/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 5.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	320	U
11104-28-2	Aroclor-1221	320	U
11141-16-5	Aroclor-1232	320	U
53469-21-9	Aroclor-1242	320	U
12672-29-6	Aroclor-1248	42	J
11097-69-1	Aroclor-1254	34	J
11096-82-5	Aroclor-1260	9.0	~~J P~~ J
37324-23-5	Aroclor-1262	320	U
11100-14-4	Aroclor-1268	320	U

MW 9/24/13

1H - FORM I ARO
AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-65-012

13

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17122

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17122-18

Sample wt/vol: 30.2 (g/mL) g Lab File ID: 0825AHJSOM17.D

% Moisture: 62 Decanted: (Y/N) Date Received: 06/21/2013

Extraction: (Type) SONC Date Extracted: 06/27/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 08/05/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 5.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	430	U
11104-28-2	Aroclor-1221	430	U
11141-16-5	Aroclor-1232	430	U
53469-21-9	Aroclor-1242	430	U
12672-29-6	Aroclor-1248	430	U
11097-69-1	Aroclor-1254	430	U
11096-82-5	Aroclor-1260	430	U
37324-23-5	Aroclor-1262	430	U
11100-14-4	Aroclor-1268	430	U

MW 9/24/13

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-65-024

14

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17122

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17122-19

Sample wt/vol: 29.6 (g/mL) g Lab File ID: 0825AHJSOM18.D

% Moisture: 61 Decanted: (Y/N) Date Received: 06/21/2013

Extraction: (Type) SONC Date Extracted: 06/27/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 08/05/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 5.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	430	U
11104-28-2	Aroclor-1221	430	U
11141-16-5	Aroclor-1232	430	U
53469-21-9	Aroclor-1242	430	U
12672-29-6	Aroclor-1248	430	U
11097-69-1	Aroclor-1254	430	U
11096-82-5	Aroclor-1260	430	U
37324-23-5	Aroclor-1262	430	U
11100-14-4	Aroclor-1268	430	U

MW 9/24/13

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-69-024

15

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17122

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17122-20

Sample wt/vol: 30.0 (g/mL) g Lab File ID: 0825AHJSOM19.D

% Moisture: 47 Decanted: (Y/N) Date Received: 06/21/2013

Extraction: (Type) SONC Date Extracted: 06/27/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 08/05/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 5.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	310	U
11104-28-2	Aroclor-1221	310	U
11141-16-5	Aroclor-1232	310	U
53469-21-9	Aroclor-1242	310	U
12672-29-6	Aroclor-1248	67	J
11097-69-1	Aroclor-1254	74	J
11096-82-5	Aroclor-1260	14	~~J P~~ J
37324-23-5	Aroclor-1262	310	U
11100-14-4	Aroclor-1268	310	U

NW 9/24/13

1H - FORM I ARO
AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-64-012

16

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17122

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17148-1

Sample wt/vol: 29.9 (g/mL) g Lab File ID: 0825AHLSOM03.D

% Moisture: 61 Decanted: (Y/N) Date Received: 06/22/2013

Extraction: (Type) SONC Date Extracted: 06/28/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 08/05/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 5.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	430	U
11104-28-2	Aroclor-1221	430	U
11141-16-5	Aroclor-1232	430	U
53469-21-9	Aroclor-1242	27	J
12672-29-6	Aroclor-1248	430	U
11097-69-1	Aroclor-1254	31	J
11096-82-5	Aroclor-1260	11	J
37324-23-5	Aroclor-1262	430	U
11100-14-4	Aroclor-1268	430	U

NW 9/24/13

1H - FORM I ARO
AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-64-048

17

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17122

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17148-2

Sample wt/vol: 29.4 (g/mL) g Lab File ID: 0825AHLSOM04.D

% Moisture: 49 Decanted: (Y/N) Date Received: 06/22/2013

Extraction: (Type) SONC Date Extracted: 06/28/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 08/05/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 5.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	330	U
11104-28-2	Aroclor-1221	330	U
11141-16-5	Aroclor-1232	330	U
53469-21-9	Aroclor-1242	26	~~J P~~ J
12672-29-6	Aroclor-1248	330	U
11097-69-1	Aroclor-1254	31	J
11096-82-5	Aroclor-1260	10	J
37324-23-5	Aroclor-1262	330	U
11100-14-4	Aroclor-1268	330	U

NW 9/24/13

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-67-072

19

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17122

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17148-4

Sample wt/vol: 30.0 (g/mL) g Lab File ID: 0825AHLSOM05.D

% Moisture: 50 Decanted: (Y/N) Date Received: 06/22/2013

Extraction: (Type) SONC Date Extracted: 06/28/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 08/05/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 5.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	330	U
11104-28-2	Aroclor-1221	330	U
11141-16-5	Aroclor-1232	330	U
53469-21-9	Aroclor-1242	29	J
12672-29-6	Aroclor-1248	330	U
11097-69-1	Aroclor-1254	37	J
11096-82-5	Aroclor-1260	13	J
37324-23-5	Aroclor-1262	330	U
11100-14-4	Aroclor-1268	330	U

MW 9/24/13

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-67-096

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678 20

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17122

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17148-5

Sample wt/vol: 30.6 (g/mL) g Lab File ID: 0825AHLSOM06.D

% Moisture: 47 Decanted: (Y/N) Date Received: 06/22/2013

Extraction: (Type) SONC Date Extracted: 06/28/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 08/05/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 5.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	310	U
11104-28-2	Aroclor-1221	310	U
11141-16-5	Aroclor-1232	310	U
53469-21-9	Aroclor-1242	37	J
12672-29-6	Aroclor-1248	310	U
11097-69-1	Aroclor-1254	44	J
11096-82-5	Aroclor-1260	14	J
37324-23-5	Aroclor-1262	310	U
11100-14-4	Aroclor-1268	310	U

NW 9/24/13

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-67-120

21

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17122

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17148-6

Sample wt/vol: 30.4 (g/mL) g Lab File ID: 0825AHLSOM07.D

% Moisture: 48 Decanted: (Y/N) Date Received: 06/22/2013

Extraction: (Type) SONC Date Extracted: 06/28/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 08/05/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 5.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	310	U
11104-28-2	Aroclor-1221	310	U
11141-16-5	Aroclor-1232	310	U
53469-21-9	Aroclor-1242	36	~~J P~~ J
12672-29-6	Aroclor-1248	310	U
11097-69-1	Aroclor-1254	48	J
11096-82-5	Aroclor-1260	16	J
37324-23-5	Aroclor-1262	310	U
11100-14-4	Aroclor-1268	310	U

NW 9/24/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-64-024

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17122

Matrix: SED Lab Sample Id: 200-17122-6

% Solids: 50.7 Date Received: 06/21/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	8.0			P
7440-43-9	Cadmium	1.0	J	~~E~~	P
7440-47-3	Chromium	30.3	↓	~~E~~	P
7440-50-8	Copper	32.7	↓	~~E~~	P
7439-92-1	Lead	27.6			P
7440-02-0	Nickel	34.5	J	~~E~~	P
7440-66-6	Zinc	147	J	~~E~~	P

Color Before: GRAY Clarity Before: Texture: FINE

Color After: LIGHT YELLOW Clarity After: CLOUDY Artifacts:

Comments:

NW 9/24/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-64-024

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17122

Matrix: SED Lab Sample Id: 200-17122-6

% Solids: 50.7 Date Received: 06/21/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.078	J		CV

Color Before: GRAY Clarity Before: CLOUDY Texture: FINE

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

NW 9/24/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-64-024FD

2

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17122

Matrix: SED Lab Sample Id: 200-17122-7

% Solids: 49.4 Date Received: 06/21/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	8.5			P
7440-43-9	Cadmium	1.0	J	E	P
7440-47-3	Chromium	31.5	↓	E	P
7440-50-8	Copper	33.6	↓	E	P
7439-92-1	Lead	27.4			P
7440-02-0	Nickel	35.4	J	E	P
7440-66-6	Zinc	146	J	E	P

Color Before: GRAY Clarity Before: Texture: FINE

Color After: LIGHT YELLOW Clarity After: CLOUDY Artifacts:

Comments:

NW 9/24/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-64-024FD

2

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17122

Matrix: SED Lab Sample Id: 200-17122-7

% Solids: 49.4 Date Received: 06/21/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.086	J		CV

Color Before: GRAY Clarity Before: CLOUDY Texture: FINE

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

KDW 9/24/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-64-072

3

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678
Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 17122
Matrix: SED | Lab Sample Id: 200-17122-8
% Solids: 52.0 | Date Received: 06/21/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	8.2			P
7440-43-9	Cadmium	0.96	J	~~E~~	P
7440-47-3	Chromium	30.2	↓	~~E~~	P
7440-50-8	Copper	33.1	↓	~~E~~	P
7439-92-1	Lead	26.7			P
7440-02-0	Nickel	35.1	J	~~E~~	P
7440-66-6	Zinc	141	J	~~E~~	P

Color Before: GRAY | Clarity Before: | Texture: FINE
Color After: LIGHT YELLOW | Clarity After: CLOUDY | Artifacts:
Comments:

NW 9/24/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-64-072

3

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17122

Matrix: SED Lab Sample Id: 200-17122-8

% Solids: 52.0 Date Received: 06/21/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.090	J		CV

Color Before: GRAY Clarity Before: CLOUDY Texture: FINE

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

NW 9/24/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-64-096

4

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17122

Matrix: SED Lab Sample Id: 200-17122-9

% Solids: 54.1 Date Received: 06/21/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	9.2			P
7440-43-9	Cadmium	1.3	J	~~E~~	P
7440-47-3	Chromium	35.6	↓	~~E~~	P
7440-50-8	Copper	36.1	↓	~~E~~	P
7439-92-1	Lead	32.5			P
7440-02-0	Nickel	38.5	J	~~E~~	P
7440-66-6	Zinc	185	J	~~E~~	P

Color Before: GRAY Clarity Before: Texture: FINE

Color After: LIGHT YELLOW Clarity After: CLOUDY Artifacts:

Comments:

NW 9/24/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-64-096

4

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17122

Matrix: SED Lab Sample Id: 200-17122-9

% Solids: 54.1 Date Received: 06/21/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.11	J		CV

Color Before: GRAY Clarity Before: CLOUDY Texture: FINE

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

NW 9/24/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-64-120

5

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678

Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 17122

Matrix: SED | Lab Sample Id: 200-17122-10

% Solids: 55.7 | Date Received: 06/21/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	8.9			P
7440-43-9	Cadmium	1.5	J	~~F~~	P
7440-47-3	Chromium	38.1	↓	~~F~~	P
7440-50-8	Copper	36.6	↓	~~F~~	P
7439-92-1	Lead	35.4			P
7440-02-0	Nickel	38.5	J	~~F~~	P
7440-66-6	Zinc	195	J	~~F~~	P

Color Before: GRAY | Clarity Before: | Texture: FINE

Color After: LIGHT YELLOW | Clarity After: CLOUDY | Artifacts:

Comments:

MW 9/24/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-64-120

5

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17122

Matrix: SED Lab Sample Id: 200-17122-10

% Solids: 55.7 Date Received: 06/21/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.079	J		CV

Color Before: GRAY Clarity Before: CLOUDY Texture: FINE

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

MW 9/24/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-69-012

6

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678
Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 17122
Matrix: SED | Lab Sample Id: 200-17122-11
% Solids: 48.7 | Date Received: 06/21/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	7.7			P
7440-43-9	Cadmium	1.1	J	~~E~~	P
7440-47-3	Chromium	29.2	↓	~~E~~	P
7440-50-8	Copper	31.1	↓	~~E~~	P
7439-92-1	Lead	25.8			P
7440-02-0	Nickel	32.3	J	~~E~~	P
7440-66-6	Zinc	128	J	~~E~~	P

Color Before: GRAY | Clarity Before: | Texture: FINE
Color After: LIGHT YELLOW | Clarity After: CLOUDY | Artifacts:
Comments:

MW 9/24/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-69-012

6

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678
Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 17122
Matrix: SED | Lab Sample Id: 200-17122-11
% Solids: 48.7 | Date Received: 06/21/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.065	J		CV

Color Before: GRAY | Clarity Before: CLOUDY | Texture: FINE
Color After: COLORLESS | Clarity After: CLEAR | Artifacts:
Comments:

NW 9/24/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-68-012

7

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678
Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 17122
Matrix: SED | Lab Sample Id: 200-17122-12
% Solids: 77.5 | Date Received: 06/21/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	7.4			P
7440-43-9	Cadmium	0.70	J	~~E~~	P
7440-47-3	Chromium	20.2	↓	~~E~~	P
7440-50-8	Copper	22.2	↓	~~E~~	P
7439-92-1	Lead	20.8			P
7440-02-0	Nickel	22.0	J	~~E~~	P
7440-66-6	Zinc	61.8	J	~~E~~	P

Color Before: GRAY | Clarity Before: | Texture: FINE
Color After: LIGHT YELLOW | Clarity After: CLOUDY | Artifacts:
Comments:

NW 9/24/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-68-012

7

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17122

Matrix: SED Lab Sample Id: 200-17122-12

% Solids: 77.5 Date Received: 06/21/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.081	J		CV

Color Before: GRAY Clarity Before: CLOUDY Texture: FINE

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

NW 9/24/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-69-048

8

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678
Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 17122
Matrix: SED | Lab Sample Id: 200-17122-13
% Solids: 54.2 | Date Received: 06/21/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	6.9			P
7440-43-9	Cadmium	0.92	J	~~E~~	P
7440-47-3	Chromium	27.0	↓	~~E~~	P
7440-50-8	Copper	29.2	↓	~~E~~	P
7439-92-1	Lead	23.8			P
7440-02-0	Nickel	30.5	J	~~E~~	P
7440-66-6	Zinc	119	J	~~E~~	P

Color Before: GRAY | Clarity Before: | Texture: FINE
Color After: LIGHT YELLOW | Clarity After: CLOUDY | Artifacts:
Comments:

MW 9/24/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-69-048

8

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678
Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 17122
Matrix: SED | Lab Sample Id: 200-17122-13
% Solids: 54.2 | Date Received: 06/21/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.077	J		CV

Color Before: GRAY | Clarity Before: CLOUDY | Texture: FINE
Color After: COLORLESS | Clarity After: CLEAR | Artifacts:
Comments:

NW 9/24/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-69-072

9

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678
Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17122
Matrix: SED Lab Sample Id: 200-17122-14
% Solids: 55.1 Date Received: 06/21/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	8.0			P
7440-43-9	Cadmium	1.2	J	~~E~~	P
7440-47-3	Chromium	34.5	↓	~~E~~	P
7440-50-8	Copper	33.7	↓	~~E~~	P
7439-92-1	Lead	30.3			P
7440-02-0	Nickel	35.6	J	~~E~~	P
7440-66-6	Zinc	161	J	~~E~~	P

Color Before: GRAY Clarity Before: Texture: FINE
Color After: LIGHT YELLOW Clarity After: CLOUDY Artifacts:
Comments:

MW 9/24/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-69-072

9

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17122

Matrix: SED Lab Sample Id: 200-17122-14

% Solids: 55.1 Date Received: 06/21/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.099	J		CV

Color Before: GRAY Clarity Before: CLOUDY Texture: FINE

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

NW 9/24/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-92-012

10

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17122

Matrix: SED Lab Sample Id: 200-17122-15

% Solids: 47.1 Date Received: 06/21/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	6.8			P
7440-43-9	Cadmium	0.91	J	~~E~~	P
7440-47-3	Chromium	29.3	↓	~~E~~	P
7440-50-8	Copper	30.4	↓	~~E~~	P
7439-92-1	Lead	24.8			P
7440-02-0	Nickel	32.7	J	~~E~~	P
7440-66-6	Zinc	131	J	~~E~~	P

Color Before: GRAY Clarity Before: Texture: FINE

Color After: LIGHT YELLOW Clarity After: CLOUDY Artifacts:

Comments:

NW 9/24/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-92-012

10

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678

Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 17122

Matrix: SED | Lab Sample Id: 200-17122-15

% Solids: 47.1 | Date Received: 06/21/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.21	U		CV

Color Before: GRAY | Clarity Before: CLOUDY | Texture: FINE

Color After: COLORLESS | Clarity After: CLEAR | Artifacts:

Comments:

MW 9/24/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-92-024

11

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678
Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 17122
Matrix: SED | Lab Sample Id: 200-17122-16
% Solids: 50.7 | Date Received: 06/21/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	7.5			P
7440-43-9	Cadmium	1.3	J	~~E~~	P
7440-47-3	Chromium	33.7	J	~~E~~	P
7440-50-8	Copper	32.5	J	~~E~~	P
7439-92-1	Lead	32.4			P
7440-02-0	Nickel	34.7	J	~~E~~	P
7440-66-6	Zinc	202	J	~~E~~	P

Color Before: GRAY | Clarity Before: | Texture: FINE
Color After: LIGHT YELLOW | Clarity After: CLOUDY | Artifacts:
Comments:

MW 9/24/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-92-024

11

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17122

Matrix: SED Lab Sample Id: 200-17122-16

% Solids: 50.7 Date Received: 06/21/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.12	J		CV

Color Before: GRAY Clarity Before: CLOUDY Texture: FINE

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

NW 9/24/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-92-024FD

12

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678
Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 17122
Matrix: SED | Lab Sample Id: 200-17122-17
% Solids: 51.4 | Date Received: 06/21/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	8.1			P
7440-43-9	Cadmium	1.3	J	~~E~~	P
7440-47-3	Chromium	33.9	↓	~~E~~	P
7440-50-8	Copper	32.8	↓	~~E~~	P
7439-92-1	Lead	33.2			P
7440-02-0	Nickel	35.2	J	~~E~~	P
7440-66-6	Zinc	241	J	~~E~~ *	P

Color Before: GRAY | Clarity Before: | Texture: FINE
Color After: LIGHT YELLOW | Clarity After: CLOUDY | Artifacts:
Comments:

MW 9/24/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-92-024FD

12

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17122

Matrix: SED Lab Sample Id: 200-17122-17

% Solids: 51.4 Date Received: 06/21/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.10	J		CV

Color Before: GRAY Clarity Before: CLOUDY Texture: FINE

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

NW 9/24/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-65-012

13

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678
Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17122
Matrix: SED Lab Sample Id: 200-17122-18
% Solids: 38.0 Date Received: 06/21/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	8.9			P
7440-43-9	Cadmium	0.88	J	~~E~~	P
7440-47-3	Chromium	30.7	↓	~~E~~	P
7440-50-8	Copper	33.1	↓	~~E~~	P
7439-92-1	Lead	23.5			P
7440-02-0	Nickel	35.3	J	~~E~~	P
7440-66-6	Zinc	133	J	E	P

Color Before: GRAY Clarity Before: Texture: FINE
Color After: LIGHT YELLOW Clarity After: CLOUDY Artifacts:
Comments:

MW 9/24/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-65-012

13

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678
Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17122
Matrix: SED Lab Sample Id: 200-17122-18
% Solids: 38.0 Date Received: 06/21/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.076	J		CV

Color Before: GRAY Clarity Before: CLOUDY Texture: FINE
Color After: COLORLESS Clarity After: CLEAR Artifacts:
Comments:

NW 9/24/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-65-024

14

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17122

Matrix: SED Lab Sample Id: 200-17122-19

% Solids: 38.6 Date Received: 06/21/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	7.7			P
7440-43-9	Cadmium	0.87	J	~~E~~	P
7440-47-3	Chromium	26.5	J	~~E~~	P
7440-50-8	Copper	30.9	J	~~E~~	P
7439-92-1	Lead	21.8			P
7440-02-0	Nickel	31.2	J	~~E~~	P
7440-66-6	Zinc	120	J	~~E~~	P

Color Before: GRAY Clarity Before: Texture: FINE

Color After: LIGHT YELLOW Clarity After: CLOUDY Artifacts:

Comments:

NW 9/24/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-65-024

14

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678
Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17122
Matrix: SED Lab Sample Id: 200-17122-19
% Solids: 38.6 Date Received: 06/21/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.044	J		CV

Color Before: GRAY Clarity Before: CLOUDY Texture: FINE
Color After: COLORLESS Clarity After: CLEAR Artifacts:
Comments:

NW 9/24/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-69-024

15

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678
Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17122
Matrix: SED Lab Sample Id: 200-17122-20
% Solids: 53.0 Date Received: 06/21/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	7.7			P
7440-43-9	Cadmium	1.1	J	E	P
7440-47-3	Chromium	28.8	↓	E	P
7440-50-8	Copper	32.5	↓	E	P
7439-92-1	Lead	27.6			P
7440-02-0	Nickel	32.1	J	E	P
7440-66-6	Zinc	133	J	E	P

Color Before: GRAY Clarity Before: Texture: FINE
Color After: LIGHT YELLOW Clarity After: CLOUDY Artifacts:
Comments:

MW 9/24/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-69-024

15

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17122

Matrix: SED Lab Sample Id: 200-17122-20

% Solids: 53.0 Date Received: 06/21/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.13	J		CV

Color Before: GRAY Clarity Before: CLOUDY Texture: FINE

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

NW 9/24/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-64-012

16

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678
Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17122
Matrix: SED Lab Sample Id: 200-17148-1
% Solids: 38.7 Date Received: 06/22/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	7.8			P
7440-43-9	Cadmium	0.95	J	~~E~~	P
7440-47-3	Chromium	32.7	↓	~~E~~	P
7440-50-8	Copper	33.9	↓	~~E~~	P
7439-92-1	Lead	26.2			P
7440-02-0	Nickel	36.6	J	~~E~~	P
7440-66-6	Zinc	141	J	~~E~~	P

Color Before: GRAY Clarity Before: Texture: FINE
Color After: TAN Clarity After: CLOUDY Artifacts:
Comments:

NW 9/24/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-64-012

16

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678
Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17122
Matrix: SED Lab Sample Id: 200-17148-1
% Solids: 38.7 Date Received: 06/22/2013

Concentration Units (**ug/L, ug,** or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.12	J		CV

Color Before: GRAY Clarity Before: CLOUDY Texture: FINE
Color After: COLORLESS Clarity After: CLEAR Artifacts:
Comments:

NW 9/24/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-64-048

17

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678
Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17122
Matrix: SED Lab Sample Id: 200-17148-2
% Solids: 51.5 Date Received: 06/22/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	7.0			P
7440-43-9	Cadmium	0.87	J	~~E~~	P
7440-47-3	Chromium	26.5	|	~~E~~	P
7440-50-8	Copper	28.9	|	~~E~~	P
7439-92-1	Lead	23.0			P
7440-02-0	Nickel	30.5	J	~~E~~	P
7440-66-6	Zinc	119	J	~~E~~ *	P

Color Before: GRAY Clarity Before: Texture: FINE
Color After: TAN Clarity After: CLOUDY Artifacts:
Comments:

NW 9/24/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-64-048

17

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17122

Matrix: SED Lab Sample Id: 200-17148-2

% Solids: 51.5 Date Received: 06/22/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.068	J		CV

Color Before: GRAY Clarity Before: CLOUDY Texture: FINE

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

NW 9/24/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-67-072

19

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678
Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17122
Matrix: SED Lab Sample Id: 200-17148-4
% Solids: 50.0 Date Received: 06/22/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	8.4			P
7440-43-9	Cadmium	1.0	J	~~E~~	P
7440-47-3	Chromium	31.9	↓	~~E~~	P
7440-50-8	Copper	34.7	↓	~~E~~	P
7439-92-1	Lead	27.8			P
7440-02-0	Nickel	36.3	J	~~E~~	P
7440-66-6	Zinc	141	J	~~E~~ *	P

Color Before: GRAY Clarity Before: Texture: FINE
Color After: TAN Clarity After: CLOUDY Artifacts:
Comments:

MW 9/24/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-67-072

19

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17122

Matrix: SED Lab Sample Id: 200-17148-4

% Solids: 50.0 Date Received: 06/22/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.12	J		CV

Color Before: GRAY Clarity Before: CLOUDY Texture: FINE

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

NW 9/24/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-67-096

20

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678

Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 17122

Matrix: SED | Lab Sample Id: 200-17148-5

% Solids: 52.7 | Date Received: 06/22/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	8.5			P
7440-43-9	Cadmium	1.0	J	~~E~~	P
7440-47-3	Chromium	32.7	↓	~~E~~	P
7440-50-8	Copper	35.2	↓	~~E~~	P
7439-92-1	Lead	29.0			P
7440-02-0	Nickel	37.3	J	~~E~~	P
7440-66-6	Zinc	143	J	~~E~~ *	P

Color Before: GRAY | Clarity Before: | Texture: FINE

Color After: TAN | Clarity After: CLOUDY | Artifacts:

Comments:

NW 9/24/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-67-096

20

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678

Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 17122

Matrix: SED | Lab Sample Id: 200-17148-5

% Solids: 52.7 | Date Received: 06/22/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.075	J		CV

Color Before: GRAY | Clarity Before: CLOUDY | Texture: FINE

Color After: COLORLESS | Clarity After: CLEAR | Artifacts:

Comments:

NW 9/24/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-67-120

21

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678
Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 17122
Matrix: SED | Lab Sample Id: 200-17148-6
% Solids: 52.2 | Date Received: 06/22/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	8.9			P
7440-43-9	Cadmium	1.1	J	~~E~~	P
7440-47-3	Chromium	34.1	↓	~~E~~	P
7440-50-8	Copper	36.2	↓	~~E~~	P
7439-92-1	Lead	29.7			P
7440-02-0	Nickel	37.4	J	~~E~~	P
7440-66-6	Zinc	147	J	~~E~~	P

Color Before: GRAY | Clarity Before: | Texture: FINE
Color After: TAN | Clarity After: CLOUDY | Artifacts:
Comments:

MW 9/24/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-67-120

21

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17122

Matrix: SED Lab Sample Id: 200-17148-6

% Solids: 52.2 Date Received: 06/22/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.12	J		CV

Color Before: GRAY Clarity Before: CLOUDY Texture: FINE

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

NW 9/24/13

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - SEM/AVS

6

Client Sample ID: LMR13-69-012
Lab Sample ID: 200-17122-11
Lab Name: TestAmerica Burlington
Job No.: 200-17122-1
SDG ID.: 17122
Matrix: Sediment
Date Sampled: 06/20/2013 07:45
Reporting Basis: DRY
Date Received: 06/21/2013 09:45
% Solids: 48.7

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-43-9	Cadmium SEM	1.1	2.4	0.38	mg/Kg	J		10	6010C
7440-43-9	Cadmium SEM	0.010	0.021	0.0033	umol/g	J		10	6010C
7440-50-8	Copper SEM	5.4	12.2	1.1	mg/Kg	J		10	6010C
7440-50-8	Copper SEM	0.085	0.19	0.017	umol/g	J		10	6010C
7439-92-1	Lead SEM	7.5	4.9	2.2	mg/Kg			10	6010C
7439-92-1	Lead SEM	0.036	0.024	0.010	umol/g			10	6010C
7440-02-0	Nickel SEM	3.2	19.8	1.4	mg/Kg	J		10	6010C
7440-02-0	Nickel SEM	0.055	0.34	0.024	umol/g	J		10	6010C
7440-66-6	Zinc SEM	16.1	9.9	2.8	mg/Kg			10	6010C
7440-66-6	Zinc SEM	0.25	0.15	0.042	umol/g			10	6010C
7439-97-6	Mercury SEM	0.0099	0.0099	0.0033	mg/Kg	U		1	7470A
7439-97-6	Mercury SEM	0.000049	0.000049	0.000016	umol/g	U		1	7470A

NW 9/24/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY - SEM/AVS

Client Sample ID: LMR13-69-012
Lab Sample ID: 200-17122-11
Lab Name: TestAmerica Burlington
Job No.: 200-17122-1
SDG ID.: 17122
Matrix: Sediment
Date Sampled: 06/20/2013 07:45
Reporting Basis: DRY
Date Received: 06/21/2013 09:45
% Solids: 48.7

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
18496-25-8	Acid Volatile Sulfides (AVS)	47.4	31.6		mg/Kg			1	AVS
18496-25-8	Acid Volatile Sulfides (AVS)	1.5	0.99		umol/g			1	AVS

NW 9/24/13

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - SEM/AVS

6

Client Sample ID: LMR13-69-012 Lab Sample ID: 200-17122-11

Lab Name: TestAmerica Burlington Job No.: 200-17122-1

SDG ID.: 17122

Matrix: Sediment Date Sampled: 06/20/2013 07:45

Reporting Basis: WET Date Received: 06/21/2013 09:45

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	SEM/AVS Ratio	0.292	0.00100	0.00100	NONE			1	SEM

NW 9/24/13

INORGANIC ANALYSIS DATA SHEET
METALS - SEM/AVS

13

Client Sample ID: LMR13-65-012 | Lab Sample ID: 200-17122-18

Lab Name: TestAmerica Burlington | Job No.: 200-17122-1

SDG ID.: 17122

Matrix: Sediment | Date Sampled: 06/20/2013 09:25

Reporting Basis: DRY | Date Received: 06/21/2013 09:45

% Solids: 38.0

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-43-9	Cadmium SEM	3.0	3.0	0.48	mg/Kg	U		10	6010C
7440-43-9	Cadmium SEM	0.027	0.027	0.0042	umol/g	U		10	6010C
7440-50-8	Copper SEM	5.3	15.6	1.4	mg/Kg	J		10	6010C
7440-50-8	Copper SEM	0.083	0.25	0.021	umol/g	J		10	6010C
7439-92-1	Lead SEM	9.5	6.3	2.8	mg/Kg			10	6010C
7439-92-1	Lead SEM	0.046	0.030	0.013	umol/g			10	6010C
7440-02-0	Nickel SEM	3.1	25.1	1.8	mg/Kg	J		10	6010C
7440-02-0	Nickel SEM	0.053	0.43	0.031	umol/g	J		10	6010C
7440-66-6	Zinc SEM	22.6	12.6	3.5	mg/Kg			10	6010C
7440-66-6	Zinc SEM	0.35	0.19	0.054	umol/g			10	6010C
7439-97-6	Mercury SEM	0.0082	0.013	0.0041	mg/Kg	J		1	7470A
7439-97-6	Mercury SEM	0.000041	0.000063	0.000021	umol/g	J		1	7470A

NW 9/24/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY - SEM/AVS

Client Sample ID: LMR13-65-012 Lab Sample ID: 200-17122-18

Lab Name: TestAmerica Burlington Job No.: 200-17122-1

SDG ID.: 17122

Matrix: Sediment Date Sampled: 06/20/2013 09:25

Reporting Basis: DRY Date Received: 06/21/2013 09:45

% Solids: 38.0

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
18496-25-8	Acid Volatile Sulfides (AVS)	161	40.2		mg/Kg			1	AVS
18496-25-8	Acid Volatile Sulfides (AVS)	5.0	1.3		umol/g			1	AVS

NW 9/24/13

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - SEM/AVS

Client Sample ID: LMR13-65-012 Lab Sample ID: 200-17122-18

Lab Name: TestAmerica Burlington Job No.: 200-17122-1

SDG ID.: 17122

Matrix: Sediment Date Sampled: 06/20/2013 09:25

Reporting Basis: WET Date Received: 06/21/2013 09:45

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	SEM/AVS Ratio	0.105	0.00100	0.00100	NONE			1	SEM

NW 9/24/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

1

Client Sample ID: LMR13-64-024
Lab Sample ID: 200-17122-6
Lab Name: TestAmerica Burlington
Job No.: 200-17122-1
SDG ID.: 17122
Matrix: Sediment
Date Sampled: 06/19/2013 17:15
Reporting Basis: WET
Date Received: 06/21/2013 09:45
% Solids: 50.7

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	29400	J 1000		mg/Kg		H	1	Lloyd Kahn

NW 9/24/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

2

Client Sample ID: LMR13-64-024FD
Lab Sample ID: 200-17122-7
Lab Name: TestAmerica Burlington
Job No.: 200-17122-1
SDG ID.: 17122
Matrix: Sediment
Date Sampled: 06/19/2013 17:15
Reporting Basis: WET
Date Received: 06/21/2013 09:45
% Solids: 49.4

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	28200	J 1000		mg/Kg		H	1	Lloyd Kahn

NW 9/24/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

3

Client Sample ID: LMR13-64-072
Lab Sample ID: 200-17122-8
Lab Name: TestAmerica Burlington
Job No.: 200-17122-1
SDG ID.: 17122
Matrix: Sediment
Date Sampled: 06/19/2013 17:35
Reporting Basis: WET
Date Received: 06/21/2013 09:45
% Solids: 52.0

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	28500	J 1000		mg/Kg			1	Lloyd Kahn

NW 9/24/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

4

Client Sample ID: LMR13-64-096
Lab Sample ID: 200-17122-9
Lab Name: TestAmerica Burlington
Job No.: 200-17122-1
SDG ID.: 17122
Matrix: Sediment
Date Sampled: 06/19/2013 17:45
Reporting Basis: WET
Date Received: 06/21/2013 09:45
% Solids: 54.1

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	27200	J 1000		mg/Kg		~~P~~	1	Lloyd Kahn

NW 9/24/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

5

Client Sample ID: LMR13-64-120
Lab Sample ID: 200-17122-10
Lab Name: TestAmerica Burlington
Job No.: 200-17122-1
SDG ID.: 17122
Matrix: Sediment
Date Sampled: 06/19/2013 17:55
Reporting Basis: WET
Date Received: 06/21/2013 09:45
% Solids: 55.7

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	25800	J 1000		mg/Kg		H	1	Lloyd Kahn

NW 9/24/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

6

Client Sample ID: LMR13-69-012
Lab Sample ID: 200-17122-11
Lab Name: TestAmerica Burlington
Job No.: 200-17122-1
SDG ID.: 17122
Matrix: Sediment
Date Sampled: 06/20/2013 07:45
Reporting Basis: WET
Date Received: 06/21/2013 09:45
% Solids: 48.7

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	30800	J 1000		mg/Kg		J	1	Lloyd Kahn

NW 9/24/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: LMR13-68-012
Lab Sample ID: 200-17122-12
Lab Name: TestAmerica Burlington
Job No.: 200-17122-1
SDG ID.: 17122
Matrix: Sediment
Date Sampled: 06/20/2013 08:45
Reporting Basis: WET
Date Received: 06/21/2013 09:45
% Solids: 77.5

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	27000	J 1000		mg/Kg		F	1	Lloyd Kahn

NW 9/24/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: LMR13-69-048
Lab Sample ID: 200-17122-13
Lab Name: TestAmerica Burlington
Job No.: 200-17122-1
SDG ID.: 17122
Matrix: Sediment
Date Sampled: 06/20/2013 08:05
Reporting Basis: WET
Date Received: 06/21/2013 09:45
% Solids: 54.2

8

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	26200	J 1000		mg/Kg		J	1	Lloyd Kahn

NW 9/24/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: LMR13-69-072 | Lab Sample ID: 200-17122-14

Lab Name: TestAmerica Burlington | Job No.: 200-17122-1

SDG ID.: 17122

Matrix: Sediment | Date Sampled: 06/20/2013 08:15

Reporting Basis: WET | Date Received: 06/21/2013 09:45

% Solids: 55.1

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	25500	J 1000		mg/Kg		H	1	Lloyd Kahn

NW 9/24/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: LMR13-92-012 | Lab Sample ID: 200-17122-15

Lab Name: TestAmerica Burlington | Job No.: 200-17122-1

10

SDG ID.: 17122

Matrix: Sediment | Date Sampled: 06/20/2013 08:50

Reporting Basis: WET | Date Received: 06/21/2013 09:45

% Solids: 47.1

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	25400	J 1000		mg/Kg		J	1	Lloyd Kahn

MW 9/24/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: LMR13-92-024
Lab Sample ID: 200-17122-16
Lab Name: TestAmerica Burlington
Job No.: 200-17122-1
SDG ID.: 17122
Matrix: Sediment
Date Sampled: 06/20/2013 08:55
Reporting Basis: WET
Date Received: 06/21/2013 09:45
% Solids: 50.7

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	28900 J	1000		mg/Kg		H	1	Lloyd Kahn

NW 9/24/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: LMR13-92-024FD
Lab Sample ID: 200-17122-17
Lab Name: TestAmerica Burlington
Job No.: 200-17122-1
12
SDG ID.: 17122
Matrix: Sediment
Date Sampled: 06/20/2013 08:55
Reporting Basis: WET
Date Received: 06/21/2013 09:45
% Solids: 51.4

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	30900	J 1000		mg/Kg		J	1	Lloyd Kahn

MW 9/24/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: LMR13-65-012
Lab Sample ID: 200-17122-18
Lab Name: TestAmerica Burlington
Job No.: 200-17122-1
13
SDG ID.: 17122
Matrix: Sediment
Date Sampled: 06/20/2013 09:25
Reporting Basis: WET
Date Received: 06/21/2013 09:45
% Solids: 38.0

CAS No.	Analyte	Result		RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	29100	J	1000		mg/Kg		H	1	Lloyd Kahn

MW 9/24/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

14

Client Sample ID: LMR13-65-024
Lab Sample ID: 200-17122-19
Lab Name: TestAmerica Burlington
Job No.: 200-17122-1
SDG ID.: 17122
Matrix: Sediment
Date Sampled: 06/20/2013 09:35
Reporting Basis: WET
Date Received: 06/21/2013 09:45
% Solids: 38.6

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	26900	J 1000		mg/Kg		J	1	Lloyd Kahn

NW 9/24/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

15

Client Sample ID: LMR13-69-024 Lab Sample ID: 200-17122-20

Lab Name: TestAmerica Burlington Job No.: 200-17122-1

SDG ID.: 17122

Matrix: Sediment Date Sampled: 06/20/2013 07:55

Reporting Basis: WET Date Received: 06/21/2013 09:45

% Solids: 53.0

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	26200	J 1000		mg/Kg		F	1	Lloyd Kahn

NW 9/24/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: LMR13-64-012 | Lab Sample ID: 200-17148-1 | 16

Lab Name: TestAmerica Burlington | Job No.: 200-17122-1

SDG ID.: 17122

Matrix: Sediment | Date Sampled: 06/19/2013 17:05

Reporting Basis: WET | Date Received: 06/22/2013 10:15

% Solids: 38.7

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	23200	J 1000		mg/Kg		J	1	Lloyd Kahn

NW 9/24/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

17

Client Sample ID: LMR13-64-048 Lab Sample ID: 200-17148-2

Lab Name: TestAmerica Burlington Job No.: 200-17122-1

SDG ID.: 17122

Matrix: Sediment Date Sampled: 06/19/2013 17:25

Reporting Basis: WET Date Received: 06/22/2013 10:15

% Solids: 51.5

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	25200	J 1000		mg/Kg		F	1	Lloyd Kahn

NW 9/24/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

19

Client Sample ID: LMR13-67-072 | Lab Sample ID: 200-17148-4

Lab Name: TestAmerica Burlington | Job No.: 200-17122-1

SDG ID.: 17122

Matrix: Sediment | Date Sampled: 06/19/2013 16:00

Reporting Basis: WET | Date Received: 06/22/2013 10:15

% Solids: 50.0

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	32400	J 1000		mg/Kg		H	1	Lloyd Kahn

MW 9/24/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

20

Client Sample ID: LMR13-67-096
Lab Sample ID: 200-17148-5
Lab Name: TestAmerica Burlington
Job No.: 200-17122-1
SDG ID.: 17122
Matrix: Sediment
Date Sampled: 06/19/2013 16:10
Reporting Basis: WET
Date Received: 06/22/2013 10:15
% Solids: 52.7

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	37100	J 1000		mg/Kg		H	1	Lloyd Kahn

MW 9/24/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

21

Client Sample ID: LMR13-67-120
Lab Sample ID: 200-17148-6
Lab Name: TestAmerica Burlington
Job No.: 200-17122-1
SDG ID.: 17122
Matrix: Sediment
Date Sampled: 06/19/2013 16:20
Reporting Basis: WET
Date Received: 06/22/2013 10:15
% Solids: 52.2

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	27900	J 1000		mg/Kg		✓	1	Lloyd Kahn

MW 9/24/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: LMR13-64-024
Lab Sample ID: 200-17122-6
Lab Name: TestAmerica Canton
Job No.: 200-17122-1
SDG ID.: 17122
Matrix: Sediment
Date Sampled: 06/19/2013 17:15
Reporting Basis: DRY
Date Received: 06/21/2013 09:45
% Solids: 50.7

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	1080	J 393	174	mg/Kg			1	9071B

NW 9/24/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

3

Client Sample ID: LMR13-64-072
Lab Sample ID: 200-17122-8
Lab Name: TestAmerica Canton
Job No.: 200-17122-1
SDG ID.: 17122
Matrix: Sediment
Date Sampled: 06/19/2013 17:35
Reporting Basis: DRY
Date Received: 06/21/2013 09:45
% Solids: 52.0

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	679	J 377	167	mg/Kg			1	9071B

MW 9/24/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

4

Client Sample ID: LMR13-64-096
Lab Sample ID: 200-17122-9
Lab Name: TestAmerica Canton
Job No.: 200-17122-1
SDG ID.: 17122
Matrix: Sediment
Date Sampled: 06/19/2013 17:45
Reporting Basis: DRY
Date Received: 06/21/2013 09:45
% Solids: 54.1

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	340	J 358	158	mg/Kg			1	9071B

NW 9/24/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

5

Client Sample ID: LMR13-64-120
Lab Sample ID: 200-17122-10
Lab Name: TestAmerica Canton
Job No.: 200-17122-1
SDG ID.: 17122
Matrix: Sediment
Date Sampled: 06/19/2013 17:55
Reporting Basis: DRY
Date Received: 06/21/2013 09:45
% Solids: 55.7

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	1020	J 356	157	mg/Kg			1	9071B

NW 9/24/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: LMR13-69-012 Lab Sample ID: 200-17122-11 6

Lab Name: TestAmerica Canton Job No.: 200-17122-1

SDG ID.: 17122

Matrix: Sediment Date Sampled: 06/20/2013 07:45

Reporting Basis: DRY Date Received: 06/21/2013 09:45

% Solids: 48.7

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	702	J 413	182	mg/Kg			1	9071B

MW 9/24/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

7

Client Sample ID: LMR13-68-012
Lab Sample ID: 200-17122-12
Lab Name: TestAmerica Canton
Job No.: 200-17122-1
SDG ID.: 17122
Matrix: Sediment
Date Sampled: 06/20/2013 08:45
Reporting Basis: DRY
Date Received: 06/21/2013 09:45
% Solids: 77.5

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	630	J 257	114	mg/Kg			1	9071B

MW 9/24/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

8

Client Sample ID: LMR13-69-048 | Lab Sample ID: 200-17122-13

Lab Name: TestAmerica Canton | Job No.: 200-17122-1

SDG ID.: 17122

Matrix: Sediment | Date Sampled: 06/20/2013 08:05

Reporting Basis: DRY | Date Received: 06/21/2013 09:45

% Solids: 54.2

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	535	J 369	163	mg/Kg			1	9071B

MW 9/24/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

9

Client Sample ID: LMR13-69-072
Lab Sample ID: 200-17122-14
Lab Name: TestAmerica Canton
Job No.: 200-17122-1
SDG ID.: 17122
Matrix: Sediment
Date Sampled: 06/20/2013 08:15
Reporting Basis: DRY
Date Received: 06/21/2013 09:45
% Solids: 55.1

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	708	J 363	160	mg/Kg			1	9071B

MW 9/24/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: LMR13-92-012
Lab Sample ID: 200-17122-15
10
Lab Name: TestAmerica Canton
Job No.: 200-17122-1
SDG ID.: 17122
Matrix: Sediment
Date Sampled: 06/20/2013 08:50
Reporting Basis: DRY
Date Received: 06/21/2013 09:45
% Solids: 47.1

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	341	J 426	188	mg/Kg			1	9071B

MW 9/24/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

11

Client Sample ID: LMR13-92-024
Lab Sample ID: 200-17122-16
Lab Name: TestAmerica Canton
Job No.: 200-17122-1
SDG ID.: 17122
Matrix: Sediment
Date Sampled: 06/20/2013 08:55
Reporting Basis: DRY
Date Received: 06/21/2013 09:45
% Solids: 50.7

CAS No.	Analyte	Result		RL	MDL	Units	C	Q	DIL	Method
	HEM	610	J	393	174	mg/Kg			1	9071B

MW 9/24/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: LMR13-65-012 | Lab Sample ID: 200-17122-18 | 13

Lab Name: TestAmerica Canton | Job No.: 200-17122-1

SDG ID.: 17122

Matrix: Sediment | Date Sampled: 06/20/2013 09:25

Reporting Basis: DRY | Date Received: 06/21/2013 09:45

% Solids: 38.0

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	766	J 528	234	mg/Kg			1	9071B

MW 9/24/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

14

Client Sample ID: LMR13-65-024
Lab Sample ID: 200-17122-19
Lab Name: TestAmerica Canton
Job No.: 200-17122-1
SDG ID.: 17122
Matrix: Sediment
Date Sampled: 06/20/2013 09:35
Reporting Basis: DRY
Date Received: 06/21/2013 09:45
% Solids: 38.6

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	572	J 520	230	mg/Kg			1	9071B

MW 9/24/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

15

Client Sample ID: LMR13-69-024
Lab Sample ID: 200-17122-20
Lab Name: TestAmerica Canton
Job No.: 200-17122-1
SDG ID.: 17122
Matrix: Sediment
Date Sampled: 06/20/2013 07:55
Reporting Basis: DRY
Date Received: 06/21/2013 09:45
% Solids: 53.0

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	640	J 377	166	mg/Kg			1	9071B

MW 9/24/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

16

Client Sample ID: LMR13-64-012
Lab Sample ID: 200-17148-1
Lab Name: TestAmerica Canton
Job No.: 200-17122-1
SDG ID.: 17122
Matrix: Sediment
Date Sampled: 06/19/2013 17:05
Reporting Basis: DRY
Date Received: 06/22/2013 10:15
% Solids: 38.7

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	830	J 503	222	mg/Kg			1	9071B

NW 9/24/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

17

Client Sample ID: LMR13-64-048 Lab Sample ID: 200-17148-2

Lab Name: TestAmerica Canton Job No.: 200-17122-1

SDG ID.: 17122

Matrix: Sediment Date Sampled: 06/19/2013 17:25

Reporting Basis: DRY Date Received: 06/22/2013 10:15

% Solids: 51.5

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	883 J	384	170	mg/Kg			1	9071B

MW 9/24/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

18

Client Sample ID: LMR13-64-048FD
Lab Sample ID: 200-17148-3
Lab Name: TestAmerica Canton
Job No.: 200-17122-1
SDG ID.: 17122
Matrix: Sediment
Date Sampled: 06/19/2013 17:25
Reporting Basis: DRY
Date Received: 06/22/2013 10:15
% Solids: 51.7

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	659	J 376	166	mg/Kg			1	9071B

MW 9/24/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

19

Client Sample ID: LMR13-67-072
Lab Sample ID: 200-17148-4
Lab Name: TestAmerica Canton
Job No.: 200-17122-1
SDG ID.: 17122
Matrix: Sediment
Date Sampled: 06/19/2013 16:00
Reporting Basis: DRY
Date Received: 06/22/2013 10:15
% Solids: 50.0

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	978	J 391	173	mg/Kg			1	9071B

MW 9/24/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

20

Client Sample ID: LMR13-67-096 Lab Sample ID: 200-17148-5

Lab Name: TestAmerica Canton Job No.: 200-17122-1

SDG ID.: 17122

Matrix: Sediment Date Sampled: 06/19/2013 16:10

Reporting Basis: DRY Date Received: 06/22/2013 10:15

% Solids: 52.7

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	668	J 371	164	mg/Kg			1	9071B

MW 9/24/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

21

Client Sample ID: LMR13-67-120
Lab Sample ID: 200-17148-6
Lab Name: TestAmerica Canton
Job No.: 200-17122-1
SDG ID.: 17122
Matrix: Sediment
Date Sampled: 06/19/2013 16:20
Reporting Basis: DRY
Date Received: 06/22/2013 10:15
% Solids: 52.2

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	586	J 378	167	mg/Kg			1	9071B

MW 9/24/13

ENVIRONMENTAL
Data Services, Inc.

DATA VALIDATION SUMMARY REPORT
LOWER MAUMEE RIVER, TOLEDO, OHIO

Client: EA Engineering, Science & Technology, Inc., Hunt Valley, Maryland
SDG: 200-17125
Laboratory: Test America Laboratories, Burlington, Vermont
Test America Laboratories, Canton, Ohio
Site: Lower Maumee River, Maumee Area of Concern, Toledo, Ohio
Date: September 25, 2013

SVOC			
EDS ID	Client Sample ID	Laboratory Sample ID	Matrix
2	LMR13-69-096	200-17125-2	Sediment
3	LMR13-69-120	200-17125-3	Sediment
4	LMR13-61-012	200-17125-4	Sediment
5	LMR13-61-048	200-17125-5	Sediment
6	LMR13-61-096	200-17125-6	Sediment
7	LMR13-65-048	200-17125-7	Sediment
8	LMR13-65-072	200-17125-8	Sediment
9	LMR13-61-024	200-17125-9	Sediment
9MS	LMR13-61-024MS	200-17125-9MS	Sediment
9MSD	LMR13-61-024MSD	200-17125-9MSD	Sediment
10	LMR13-61-072	200-17125-10	Sediment
11	LMR13-61-120	200-17125-11	Sediment
12	LMR13-66-012	200-17125-12	Sediment
13	LMR13-66-024	200-17125-13	Sediment
14	LMR13-60-012	200-17125-14	Sediment
15	LMR13-60-024	200-17125-15	Sediment
16	LMR13-60-048	200-17125-16	Sediment
17	LMR13-60-072	200-17125-17	Sediment
18	LMR13-60-096	200-17125-18	Sediment
19	LMR13-66-048	200-17125-19	Sediment
20	LMR13-58-024	200-17125-20	Sediment
22	LMR13-66-024FD	200-17125-22	Sediment

PAH 34			
EDS ID	Client Sample ID	Laboratory Sample ID	Matrix
12	LMR13-66-012	200-17125-12	Sediment

PCBs/Metals/Mercury/TOC			
EDS ID	Client Sample ID	Laboratory Sample ID	Matrix
1	LMR13-69-024FD	200-17125-1	Sediment
2	LMR13-69-096	200-17125-2	Sediment
3	LMR13-69-120	200-17125-3	Sediment
4	LMR13-61-012	200-17125-4	Sediment
5	LMR13-61-048	200-17125-5	Sediment
5MS	LMR13-61-048MS	200-17125-5MS	Sediment

PCBs/Metals/Mercury/TOC			
EDS ID	Client Sample ID	Laboratory Sample ID	Matrix
5MSD	LMR13-61-048MSD	200-17125-5MSD	Sediment
6	LMR13-61-096	200-17125-6	Sediment
7	LMR13-65-048	200-17125-7	Sediment
8	LMR13-65-072	200-17125-8	Sediment
9	LMR13-61-024	200-17125-9	Sediment
10	LMR13-61-072	200-17125-10	Sediment
11	LMR13-61-120	200-17125-11	Sediment
12	LMR13-66-012	200-17125-12	Sediment
13	LMR13-66-024	200-17125-13	Sediment
14	LMR13-60-012	200-17125-14	Sediment
15	LMR13-60-024	200-17125-15	Sediment
16	LMR13-60-048	200-17125-16	Sediment
17	LMR13-60-072	200-17125-17	Sediment
18	LMR13-60-096	200-17125-18	Sediment
19	LMR13-66-048	200-17125-19	Sediment
20	LMR13-58-024	200-17125-20	Sediment

AVS/SEM			
EDS ID	Client Sample ID	Laboratory Sample ID	Matrix
12	LMR13-66-012	200-17125-12	Sediment
21	LMR13-66-012FD	200-17125-21	Sediment

HEM			
EDS ID	Client Sample ID	Laboratory Sample ID	Matrix
2	LMR13-69-096	200-17125-2	Sediment
3	LMR13-69-120	200-17125-3	Sediment
4	LMR13-61-012	200-17125-4	Sediment
5	LMR13-61-048	200-17125-5	Sediment
5MS	LMR13-61-048MS	200-17125-5MS	Sediment
5MSD	LMR13-61-048MSD	200-17125-5MSD	Sediment
6	LMR13-61-096	200-17125-6	Sediment
7	LMR13-65-048	200-17125-7	Sediment
8	LMR13-65-072	200-17125-8	Sediment
9	LMR13-61-024	200-17125-9	Sediment
10	LMR13-61-072	200-17125-10	Sediment
11	LMR13-61-120	200-17125-11	Sediment
12	LMR13-66-012	200-17125-12	Sediment
13	LMR13-66-024	200-17125-13	Sediment
14	LMR13-60-012	200-17125-14	Sediment
15	LMR13-60-024	200-17125-15	Sediment
16	LMR13-60-048	200-17125-16	Sediment
17	LMR13-60-072	200-17125-17	Sediment
18	LMR13-60-096	200-17125-18	Sediment
19	LMR13-66-048	200-17125-19	Sediment
20	LMR13-58-024	200-17125-20	Sediment
22	LMR13-66-024FD	200-17125-22	Sediment

A full data validation was performed on the analytical data for twenty-two sediment samples collected on June 20, 2013 by EA Engineering at the Lower Maumee River site in Toledo, Ohio. The samples were analyzed under the Environmental Protection Agency (USEPA) Contract

Laboratory Program (CLP) Multi-Media Multi-Concentration Organics Analysis SOM01.2 and Inorganic Analysis ILM05.4 and the Test Methods for the Evaluation of Solid Waste, USEPA SW-846, Third Edition, September 1986, with revisions.

Specific method references are as follows:

Analysis	*Method References*
SVOC	USEPA CLP SOM01.2
PAH 34	USEPA CLP SOM01.2
PCBs	USEPA CLP SOM01.2
Michigan Metals & Mercury	USEPA CLP ISM01.3
AVS/SEM	USEPA SW-846 Methods 6010C/7470A
TOC	Lloyd Kahn
Oil & Grease (HEM)	USEPA SW-846 Method 9071B

The data have been validated according to the protocols and quality control (QC) requirements of the analytical methods, the Great Lakes Legacy Act, March 2010, the Quality Assurance Project Plan for Phase 2 of the Lower Maumee River Site Characterization, May 2013, and the USEPA National Functional Guidelines for Organic Data Review as follows:

- The USEPA "Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review," June 2008;
- The USEPA "Contract Laboratory Program National Functional Guidelines for Inorganic Superfund Data Review," January 2010;
- and the reviewer's professional judgment.

The following items/criteria were reviewed for this report:

Organics

- Holding times and sample preservation
- Gas Chromatography/Mass Spectroscopy (GC/MS) Tuning
- Initial and continuing calibration summaries
- Method blank and field blank contamination
- Surrogate Spike recoveries
- Matrix Spike/Matrix Spike Duplicate (MS/MSD) recoveries
- Laboratory Control Sample (LCS) recoveries
- Internal standard area and retention time summary forms
- Target Compound Identification
- Compound Quantitation
- Tentatively Identified Compounds (TICs)
- Field Duplicate sample precision

Inorganics

- Holding times and sample preservation
- ICP/MS Tuning

- Initial and continuing calibration verifications
- Method blank and field blank contamination
- ICP Interference Check Sample
- Laboratory Control Sample (LCS) recoveries
- Matrix Spike Analysis
- Duplicate Sample Analysis
- ICP Serial Dilution
- Compound Quantitation
- Field Duplicate sample precision

Overall Usability Issues:

There were minor rejections of data. This data cannot be used in the decision-making process for this project.

- Three SVOC compounds were rejected in one sample due to severely low surrogate recoveries.

Overall the remaining data is acceptable for the intended purposes as qualified for the deficiencies detailed in this report.

Please note that any results qualified (U) due to blank contamination may be then qualified (J) due to another action. Therefore, the results may be qualified (UJ) due to the culmination of the blank contaminations and actions from other exceedences of QC criteria.

Semivolatile Organic Compounds (SVOC)

Holding Times

- All samples were extracted within 14 days for sediment samples and analyzed within 40 days for all samples except the following.

Sample ID	Date Collected	Date Analyzed	# of Days	Qualifier
2-8, 10	06/29/13	08/10/13	42	J/UJ – Unless (R)
12-14	06/29/13	08/11/13	43	J/UJ – Unless (R)
20	06/29/13	08/13/13	45	J/UJ – Unless (R)

GC/MS Tuning

- All criteria were met.

Initial Calibration

- All %RSD and mean RRF criteria.

ICAL Date	Compound	%RSD/RRF	Qualifier	Affected Samples
07/29/13	Pentachlorophenol	21.2%	None	See HT
	Pyrene	22.6%	None	

Continuing Calibration

- All %D and RRF criteria were met except the following.

CCAL Date	Compound	%D/RRF	Qualifier	Affected Samples
08/07/13 (2309)	Pentachlorophenol	26.3%	J/UJ	9, 11
08/08/13 (1021)	Hexachlorocyclopentadiene	69.0%	J/UJ	9, 11
08/08/13 (2311)	Hexachlorocyclopentadiene	75.2%	J/UJ	15-19, 22
08/10/13 (1830)	Indeno(1,2,3-cd)pyrene	39.1%	None	See HT
	Dibenzo(a,h)anthracene	38.1%	None	
	Benzo(g,h,i)perylene	39.0%	None	
08/11/13 (0248)	Hexachlorocyclopentadiene	76.0%	None	See HT
08/14/13 (0115)	Hexachlorocyclopentadiene	59.1%	None	See HT
	Caprolactam	62.5%	None	

Method Blank

- The method blanks exhibited the following contamination.

Blank ID	Compound	Conc. ug/kg	Qualifier	Affected Samples
SBLK10	Bis(2-ethylhexyl)phthalate	20	U	4, 7, 12-14

Field Blank

- Field QC samples were not analyzed.

Surrogate Spike Recoveries

- All samples exhibited acceptable surrogate %R values except the following.

Sample ID	Surrogate	%R	Qualifier
3	4-Methylphenol-d8	104%	J - Associated Positive Results
4	4-Methylphenol-d8	102%	None - ND
5	4-Methylphenol-d8	106%	None - ND
6	4-Methylphenol-d8	106%	J - Associated Positive Results
7	4-Methylphenol-d8	111%	None - ND
	4-Chloroaniline-d4	0%	R - Associated Compounds
9	4-Methylphenol-d8	118%	None - ND

Sample ID	Surrogate	%R	Qualifier
10	4-Methylphenol-d8	119%	None - ND
12	4-Methylphenol-d8	129%	None - ND
	Anthracene-d10	99%	J - Associated Positive Results
14	4-Methylphenol-d8	122%	None - ND
15	Phenol-d5	116%	J - Associated Positive Results
	4-Methylphenol-d8	132%	None - ND
	Pyrene-d10	125%	J - Associated Positive Results
16	Phenol-d5	119%	None - ND
	4-Methylphenol-d8	143%	
	Pyrene-d10	133%	J - Associated Positive Results
17	Phenol-d5	111%	None - ND
	4-Methylphenol-d8	127%	
18	4-Methylphenol-d8	117%	None - ND
19	Phenol-d5	121%	None - ND
	4-Methylphenol-d8	126%	
20	Phenol-d5	104%	None - ND
	4-Methylphenol-d8	112%	

Matrix Spike/Matrix Spike Duplicate (MS/MSD) Recoveries

- The MS/MSD sample exhibited acceptable %R and RPD values.

Laboratory Control Samples

- A LCS sample was not analyzed.

Internal Standard (IS) Area Performance

- All internal standards met response and retention time (RT) criteria except the following.

Sample ID	Internal Standard	Area Count	Qualifier
5	IS5=Chrysene-d12	Low	None - See HT
	IS6=Perylene-d12	Low	
20	IS6=Perylene-d12	Low	None - See HT

Target Compound Identification

- All mass spectra and quantitation criteria were met.

Compound Quantitation

- Several samples were analyzed at various dilutions due to high concentrations of target compounds. No action was required.

Field Duplicate Sample Precision

- Field duplicate results are summarized below.

SVOC				
Compound	LMR13-66-024 ug/kg	LMR13-66-024FD ug/kg	RPD	Qualifier
Benzaldehyde	29	33	13%	None
Naphthalene	54	52	4%	
2-Methylnaphthalene	14	11	24%	
Acenaphthylene	15	39	89%	
Acenaphthene	180	210	15%	
Dibenzofuran	24	25	4%	
Fluorene	160	140	13%	
Phenanthrene	1600	1400	13%	
Anthracene	310	310	0%	
Carbazole	230U	16	NC	
Di-n-butylphthalate	230U	9.8	NC	
Fluoranthene	2100	1400	40%	
Pyrene	1400	1500	7%	
Benzo(a)anthracene	760	660	14%	
Chrysene	820	700	16%	
Benzo(b)fluoranthene	770	440	55%	
Benzo(k)fluoranthene	630	440	36%	
Benzo(a)pyrene	730	560	26%	
Indeno(1,2,3-cd)pyrene	320	350	9%	
Dibenzo(a,h)anthracene	120	130	8%	
Benzo(g,h,i)perylene	320	360	12%	

Polynuclear Aromatic Hydrocarbons (PAH 34)

Holding Times

- All samples were extracted within 14 days for sediment samples and analyzed within 40 days for all samples.

GC/MS Tuning

- All criteria were met.

Initial Calibration

- All %RSD and mean RRF criteria were met.

Continuing Calibration

- All %D and RRF criteria were met.

Method Blank

- The method blanks exhibited the following contamination.

Blank ID	Compound	Conc. ug/kg	Qualifier	Affected Samples
SBLKO1	Naphthalene	0.47	U	12
	Acenaphthylene	0.19	U	
	Phenanthrene	0.27	None	All >5X
	Fluoranthene	0.68	None	
	Pyrene	0.80	None	
	Benzo(a)anthracene	1.2	None	
	Chrysene	1.1	None	
	Benzo(b)fluoranthene	1.2	None	
	Benzo(k)fluoranthene	1.3	None	
	Benzo(e)pyrene	0.97	None	
	Benzo(a)pyrene	1.9	None	
	Perylene	0.55	None	
	Indeno(1,2,3-cd)pyrene	0.95	None	
	Dibenzo(a,h)anthracene	0.25	None	
	Benzo(g,h,i)perylene	1.2	None	
	C1-Fluoranthenes/Pyrenes	0.76	U	12
	C1 Chyrsenes	0.61	U	
	Total 16 PPAH	12	J	
	Total PAH	14	J	

Field Blank

- Field QC samples were not analyzed.

Surrogate Spike Recoveries

- All samples exhibited acceptable surrogate %R values.

Matrix Spike/Matrix Spike Duplicate (MS/MSD) Recoveries

- A MS/MSD sample was not analyzed.

Laboratory Control Samples

- A LCS sample was not analyzed.

Internal Standard (IS) Area Performance

- All internal standards met response and retention time (RT) criteria.

Target Compound Identification

- All mass spectra and quantitation criteria were met.

Compound Quantitation

- EDS Sample ID #12 was analyzed at a 6.7X dilution due to high concentrations of target compounds. Several compound concentrations exceeded the linear range of the instrument and were flagged (E) by the laboratory and further qualified as estimated (J).
- Total 16 PPAH and Total PAH were estimated (J) in all samples due to blank contamination.

Field Duplicate Sample Precision

- Field duplicate samples were not analyzed.

Polychlorinated Biphenyls (PCBs)

Holding Times

- All samples were extracted within 14 days for sediment samples and analyzed within 40 days.

Initial Calibration

- All %RSD and/or correlation coefficient criteria were met.

Continuing Calibration

- All %D criteria were met.

Method Blank

- The method blanks were free of contamination.

Field Blank

- Field QC samples were not analyzed.

Surrogate Spike Recoveries

- All samples exhibited acceptable surrogate recoveries.

Matrix Spike/Matrix Spike Duplicate (MS/MSD) Recoveries

- The MS/MSD samples exhibited acceptable %R and RPD values.

Laboratory Control Samples

- The LCS sample exhibited acceptable %R values.

Compound Quantitation

- Several samples were analyzed at various dilutions due to high concentrations of target compounds. No action was required.

Field Duplicate Sample Precision

- Field duplicate results are summarized below.

PCBs				
Compound	LMR13-69-024 (SDG 200-17122) ug/kg	LMR13-69-024FD ug/kg	RPD	Qualifier
Aroclor-1248	67	64	5%	None
Aroclor-1254	74	59	23%	
Aroclor-1260	14	15	7%	

GC Column Difference Results

- Several samples exhibited high %D values > 25% between columns and have been qualified as estimated (J) by the reviewer.

Metals & Mercury

Holding Times

- All samples were prepared and analyzed within 28 days for mercury and 180 days for all other metals.

ICP/MS Tuning

- Not applicable.

Initial Calibration Verification

- All initial calibration criteria were met.

Continuing Calibration Verification

- All continuing calibration criteria were met.

Method Blank

- The method blanks exhibited the following contamination.

Blank ID	Compound	Conc. mg/kg	Qualifier	Affected Samples
PBS	Zinc	2.2	None	All Associated >10X

Field Blank

- Field QC samples were not analyzed.

ICP Interference Check Sample

- The ICP interference check sample exhibited acceptable %R values.

Laboratory Control Samples

- The LCS sample exhibited acceptable recoveries.

Matrix Spike Analysis

- The matrix spike samples exhibited acceptable %R values.

Duplicate Sample Analysis

- The duplicate samples exhibited acceptable RPD values.

ICP Serial Dilution

- ICP serial dilution percent differences (%D) were within acceptance limits except the following.

ICP Sample ID	Compound	%D	Qualifier	Affected Samples
5	Cadmium	55%	J	All Samples
	Chromium	18%	J	
	Copper	12%	J	
	Nickel	17%	J	
	Zinc	16%	J	

Compound Quantitation

- All criteria were met.

Field Duplicate Sample Precision

- Field duplicate results are summarized below.

Metals				
Compound	LMR13-69-024 (SDG 200-17122) mg/kg	LMR13-69-024FD mg/kg	RPD	Qualifier
Arsenic	7.7	7.3	5%	None
Cadmium	1.1	1.0	10%	
Chromium	28.8	28.1	2%	
Copper	32.5	30.8	5%	
Lead	27.6	25.1	9%	
Nickel	32.1	32.4	1%	
Zinc	133	129	3%	
Mercury	0.13	0.068	63%	

Oil & Grease, Total Organic Carbon, AVS/SEM (Metals & Hg)

Holding Times

- All samples were analyzed within the recommended holding time for each analysis except the following.

TOC				
Sample ID	Date Collected	Date Analyzed	# of Days	Qualifier
All Samples	06/20/13	08/08/13-08/15/13	18-25	J/UJ

Initial and Continuing Calibration

- All %R criteria were met.

Method Blank

- The method blanks exhibited the following contamination.

Blank ID	Compound	Conc. mg/kg	Qualifier	Affected Samples
MB 240-93562/1-A	HEM	120.1	U	12-16, 22

Field Blank

- Field QC samples were not included in this data package.

Laboratory Control Samples

- The LCS samples exhibited acceptable %R values.

Matrix Spike/Duplicate (MS/DUP) Recoveries

- The MS/DUP samples exhibited acceptable %R and RPD values except the following.

MS/DUP ID	Compound	MS %R/MSD %R/RPD	Qualifier	Affected Samples
5	HEM	OK/58/OK	J/UJ	All Samples

Compound Quantitation

- All criteria were met.

Field Duplicate Sample Precision

- Field duplicate results are summarized below.

TOC				
Compound	LMR13-69-024 (SDG 200-17122) mg/kg	LMR13-69-024FD mg/kg	RPD	Qualifier
TOC	26200	29600	12%	None

HEM				
Compound	LMR13-66-024 mg/kg	LMR13-66-024FD mg/kg	RPD	Qualifier
HEM	292	437U	None	NC

Please contact the undersigned at (757) 564-0090 if you have any questions or need further information.

Signed: Nancy Weaver Dated: 9/30/13

Nancy Weaver
Senior Chemist

Data Qualifiers

U = The analyte was analyzed for, but was not detected at a level greater than or equal to the level of the adjusted Contract Required Quantitation Limit (CRQL) for sample and method.

UJ = The analyte was not detected at a level greater than or equal to the adjusted CRQL. However, the reported adjusted CRQL is approximate and may be inaccurate or imprecise.

J = The analyte was positively identified and the associated numerical value is the approximate concentration of the analyte in the sample (due either to the quality of the data generated because certain quality control criteria were not met, or the concentration of the analyte was below the CRQL).

J+ = The result is an estimated quantity, but the result may be biased high.

J- = The result is an estimated quantity, but the result may be biased low.

R = The sample results are unusable due to the quality of the data generated because certain criteria were not met. The analyte may or may not be present in the sample.

NJ = The analysis indicates the presence of an analyte that has been "tentatively identified" and the associated numerical value represents its approximate concentration.

EPA SAMPLE NO.
LMR13-69-096

2

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17125

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17125-2

Sample wt/vol: 29.2 (g/mL) g Lab File ID: RKXZA07.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 41 Decanted: (Y/N) Date Received: 06/21/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/29/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/10/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
100-52-7	Benzaldehyde	300	U
108-95-2	Phenol	300	U
111-44-4	Bis(2-chloroethyl)ether	300	U
95-57-8	2-Chlorophenol	300	U
95-48-7	2-Methylphenol	300	U
108-60-1	2,2'-Oxybis(1-chloropropane)	300	U
98-86-2	Acetophenone	300	U
106-44-5	4-Methylphenol	300	U
621-64-7	N-Nitroso-di-n-propylamine	300	U
67-72-1	Hexachloroethane	300	U
98-95-3	Nitrobenzene	300	U
78-59-1	Isophorone	300	U
88-75-5	2-Nitrophenol	300	U
105-67-9	2,4-Dimethylphenol	300	U
111-91-1	Bis(2-chloroethoxy)methane	300	U
120-83-2	2,4-Dichlorophenol	300	U
91-20-3	Naphthalene	54	J
106-47-8	4-Chloroaniline	300	U
87-68-3	Hexachlorobutadiene	300	U
105-60-2	Caprolactam	300	U
59-50-7	4-Chloro-3-methylphenol	300	U
91-57-6	2-Methylnaphthalene	30	J
77-47-4	Hexachlorocyclopentadiene	300	U
88-06-2	2,4,6-Trichlorophenol	300	U
95-95-4	2,4,5-Trichlorophenol	300	U
92-52-4	1,1'-Biphenyl	300	U
91-58-7	2-Chloronaphthalene	300	U
88-74-4	2-Nitroaniline	580	U
131-11-3	Dimethylphthalate	300	U
606-20-2	2,6-Dinitrotoluene	300	U
208-96-8	Acenaphthylene	300	U
99-09-2	3-Nitroaniline	580	U
83-32-9	Acenaphthene	300	U

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NW 9/25/13

EPA SAMPLE NO.
LMR13-69-096

2

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17125

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17125-2

Sample wt/vol: 29.2 (g/mL) g Lab File ID: RKXZA07.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 41 Decanted: (Y/N) Date Received: 06/21/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/29/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/10/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
51-28-5	2,4-Dinitrophenol	580	U
100-02-7	4-Nitrophenol	580	U
132-64-9	Dibenzofuran	300	U
121-14-2	2,4-Dinitrotoluene	300	U
84-66-2	Diethylphthalate	300	U
86-73-7	Fluorene	300	U
7005-72-3	4-Chlorophenyl-phenylether	300	U
100-01-6	4-Nitroaniline	580	U
534-52-1	4,6-Dinitro-2-methylphenol	580	U
86-30-6	N-Nitrosodiphenylamin [1]	300	U
95-94-3	1,2,4,5-Tetrachlorobenzene	300	U
101-55-3	4-Bromophenyl-phenylether	300	U
118-74-1	Hexachlorobenzene	300	U
1912-24-9	Atrazine	300	U
87-86-5	Pentachlorophenol	580	U
85-01-8	Phenanthrene	370	
120-12-7	Anthracene	36	J
86-74-8	Carbazole	300	U
84-74-2	Di-n-butylphthalate	300	U
206-44-0	Fluoranthene	570	
129-00-0	Pyrene	650	
85-68-7	Butylbenzylphthalate	300	U
91-94-1	3,3'-Dichlorobenzidine	300	U
56-55-3	Benzo(a)anthracene	400	
218-01-9	Chrysene	1000	
117-81-7	Bis(2-ethylhexyl)phthalate	1200	B
117-84-0	Di-n-octylphthalate	300	U
205-99-2	Benzo(b)fluoranthene	500	
207-08-9	Benzo(k)fluoranthene	270	J
50-32-8	Benzo(a)pyrene	420	
193-39-5	Indeno(1,2,3-cd)pyrene	160	J
53-70-3	Dibenzo(a,h)anthracene	110	J
191-24-2	Benzo(g,h,i)perylene	270	J
58-90-2	2,3,4,6-Tetrachlorophenol	300	U

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[1] Cannot be separated from Diphenylamine

NW 9/25/13

EPA SAMPLE NO.
LMR13-69-120

3

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17125

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17125-3

Sample wt/vol: 30.0 (g/mL) g Lab File ID: RKXZA08.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 41 Decanted: (Y/N) Date Received: 06/21/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/29/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/10/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
100-52-7	Benzaldehyde	290	UJ
108-95-2	Phenol	290	U
111-44-4	Bis(2-chloroethyl)ether	290	U
95-57-8	2-Chlorophenol	290	U
95-48-7	2-Methylphenol	290	U
108-60-1	2,2'-Oxybis(1-chloropropane)	290	U
98-86-2	Acetophenone	290	U
106-44-5	4-Methylphenol	26	J
621-64-7	N-Nitroso-di-n-propylamine	290	UJ
67-72-1	Hexachloroethane	290	U
98-95-3	Nitrobenzene	290	U
78-59-1	Isophorone	290	U
88-75-5	2-Nitrophenol	290	U
105-67-9	2,4-Dimethylphenol	290	U
111-91-1	Bis(2-chloroethoxy)methane	290	U
120-83-2	2,4-Dichlorophenol	290	U
91-20-3	Naphthalene	46	J
106-47-8	4-Chloroaniline	290	UJ
87-68-3	Hexachlorobutadiene	290	U
105-60-2	Caprolactam	290	U
59-50-7	4-Chloro-3-methylphenol	290	U
91-57-6	2-Methylnaphthalene	23	J
77-47-4	Hexachlorocyclopentadiene	290	UJ
88-06-2	2,4,6-Trichlorophenol	290	U
95-95-4	2,4,5-Trichlorophenol	290	U
92-52-4	1,1'-Biphenyl	290	U
91-58-7	2-Chloronaphthalene	290	U
88-74-4	2-Nitroaniline	560	U
131-11-3	Dimethylphthalate	290	U
606-20-2	2,6-Dinitrotoluene	290	U
208-96-8	Acenaphthylene	290	U
99-09-2	3-Nitroaniline	560	U
83-32-9	Acenaphthene	24	J

NW 9/25/13

EPA SAMPLE NO.
LMR13-69-120

3

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17125

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17125-3

Sample wt/vol: 30.0 (g/mL) g Lab File ID: RKXZA08.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 41 Decanted: (Y/N) Date Received: 06/21/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/29/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/10/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
51-28-5	2,4-Dinitrophenol	560	U
100-02-7	4-Nitrophenol	560	U
132-64-9	Dibenzofuran	19	J
121-14-2	2,4-Dinitrotoluene	290	U
84-66-2	Diethylphthalate	290	U
86-73-7	Fluorene	27	J
7005-72-3	4-Chlorophenyl-phenylether	290	U
100-01-6	4-Nitroaniline	560	U
534-52-1	4,6-Dinitro-2-methylphenol	560	U
86-30-6	N-Nitrosodiphenylamin [1]	290	U
95-94-3	1,2,4,5-Tetrachlorobenzene	290	U
101-55-3	4-Bromophenyl-phenylether	290	U
118-74-1	Hexachlorobenzene	290	U
1912-24-9	Atrazine	290	U
87-86-5	Pentachlorophenol	560	U
85-01-8	Phenanthrene	280	J
120-12-7	Anthracene	44	J
86-74-8	Carbazole	290	U
84-74-2	Di-n-butylphthalate	18	J
206-44-0	Fluoranthene	410	
129-00-0	Pyrene	490	
85-68-7	Butylbenzylphthalate	290	U
91-94-1	3,3'-Dichlorobenzidine	290	U
56-55-3	Benzo(a)anthracene	360	
218-01-9	Chrysene	750	
117-81-7	Bis(2-ethylhexyl)phthalate	720	B
117-84-0	Di-n-octylphthalate	290	U
205-99-2	Benzo(b)fluoranthene	370	
207-08-9	Benzo(k)fluoranthene	290	
50-32-8	Benzo(a)pyrene	360	
193-39-5	Indeno(1,2,3-cd)pyrene	150	J
53-70-3	Dibenzo(a,h)anthracene	120	J
191-24-2	Benzo(g,h,i)perylene	230	J
58-90-2	2,3,4,6-Tetrachlorophenol	290	U

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[1] Cannot be separated from Diphenylamine

NW 9/25/13

1D - FORM I SV-1

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-61-012

4

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17125

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17125-4

Sample wt/vol: 30.2 (g/mL) g Lab File ID: RKXZA09.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 57 Decanted: (Y/N) Date Received: 06/21/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/29/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/10/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
100-52-7	Benzaldehyde	58	J
108-95-2	Phenol	400	U
111-44-4	Bis(2-chloroethyl)ether	400	U
95-57-8	2-Chlorophenol	400	U
95-48-7	2-Methylphenol	400	U
108-60-1	2,2'-Oxybis(1-chloropropane)	400	U
98-86-2	Acetophenone	400	U
106-44-5	4-Methylphenol	400	U
621-64-7	N-Nitroso-di-n-propylamine	400	U
67-72-1	Hexachloroethane	400	U
98-95-3	Nitrobenzene	400	U
78-59-1	Isophorone	400	U
88-75-5	2-Nitrophenol	400	U
105-67-9	2,4-Dimethylphenol	400	U
111-91-1	Bis(2-chloroethoxy)methane	400	U
120-83-2	2,4-Dichlorophenol	400	U
91-20-3	Naphthalene	58	J
106-47-8	4-Chloroaniline	400	U
87-68-3	Hexachlorobutadiene	400	U
105-60-2	Caprolactam	400	U
59-50-7	4-Chloro-3-methylphenol	400	U
91-57-6	2-Methylnaphthalene	26	J
77-47-4	Hexachlorocyclopentadiene	400	U
88-06-2	2,4,6-Trichlorophenol	400	U
95-95-4	2,4,5-Trichlorophenol	400	U
92-52-4	1,1'-Biphenyl	400	U
91-58-7	2-Chloronaphthalene	400	U
88-74-4	2-Nitroaniline	770	U
131-11-3	Dimethylphthalate	400	U
606-20-2	2,6-Dinitrotoluene	400	U
208-96-8	Acenaphthylene	400	U
99-09-2	3-Nitroaniline	770	U
83-32-9	Acenaphthene	49	J

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MW 9/25/13

EPA SAMPLE NO.
LMR13-61-012

4

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17125

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17125-4

Sample wt/vol: 30.2 (g/mL) g Lab File ID: RKXZA09.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 57 Decanted: (Y/N) Date Received: 06/21/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/29/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/10/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
51-28-5	2,4-Dinitrophenol	770	U
100-02-7	4-Nitrophenol	770	U
132-64-9	Dibenzofuran	28	J
121-14-2	2,4-Dinitrotoluene	400	U
84-66-2	Diethylphthalate	400	U
86-73-7	Fluorene	48	J
7005-72-3	4-Chlorophenyl-phenylether	400	U
100-01-6	4-Nitroaniline	770	U
534-52-1	4,6-Dinitro-2-methylphenol	770	U
86-30-6	N-Nitrosodiphenylamin [1]	400	U
95-94-3	1,2,4,5-Tetrachlorobenzene	400	U
101-55-3	4-Bromophenyl-phenylether	400	U
118-74-1	Hexachlorobenzene	400	U
1912-24-9	Atrazine	400	U
87-86-5	Pentachlorophenol	770	U
85-01-8	Phenanthrene	150	J
120-12-7	Anthracene	48	J
86-74-8	Carbazole	400	U
84-74-2	Di-n-butylphthalate	23	J
206-44-0	Fluoranthene	390	J
129-00-0	Pyrene	290	J
85-68-7	Butylbenzylphthalate	36	J
91-94-1	3,3'-Dichlorobenzidine	400	U
56-55-3	Benzo(a)anthracene	150	J
218-01-9	Chrysene	220	J
117-81-7	Bis(2-ethylhexyl)phthalate	400 ~~290~~	~~J~~ B
117-84-0	Di-n-octylphthalate	400	U
205-99-2	Benzo(b)fluoranthene	220	J
207-08-9	Benzo(k)fluoranthene	180	J
50-32-8	Benzo(a)pyrene	180	J
193-39-5	Indeno(1,2,3-cd)pyrene	110	J
53-70-3	Dibenzo(a,h)anthracene	39	J
191-24-2	Benzo(g,h,i)perylene	150	J
58-90-2	2,3,4,6-Tetrachlorophenol	400	U

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[1] Cannot be separated from Diphenylamine

MW 9/25/13

EPA SAMPLE NO.
LMR13-61-048

5

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17125

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17125-5

Sample wt/vol: 30.5 (g/mL) g Lab File ID: RKXZA10.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 49 Decanted: (Y/N) Date Received: 06/21/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/29/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/10/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
100-52-7	Benzaldehyde	35	J
108-95-2	Phenol	330	UJ
111-44-4	Bis(2-chloroethyl)ether	330	U
95-57-8	2-Chlorophenol	330	U
95-48-7	2-Methylphenol	330	U
108-60-1	2,2'-Oxybis(1-chloropropane)	330	U
98-86-2	Acetophenone	330	U
106-44-5	4-Methylphenol	330	U
621-64-7	N-Nitroso-di-n-propylamine	330	U
67-72-1	Hexachloroethane	330	U
98-95-3	Nitrobenzene	330	U
78-59-1	Isophorone	330	U
88-75-5	2-Nitrophenol	330	U
105-67-9	2,4-Dimethylphenol	330	U
111-91-1	Bis(2-chloroethoxy)methane	330	U
120-83-2	2,4-Dichlorophenol	330	U
91-20-3	Naphthalene	46	J
106-47-8	4-Chloroaniline	330	UJ
87-68-3	Hexachlorobutadiene	330	U
105-60-2	Caprolactam	330	U
59-50-7	4-Chloro-3-methylphenol	330	U
91-57-6	2-Methylnaphthalene	14	J
77-47-4	Hexachlorocyclopentadiene	330	UJ
88-06-2	2,4,6-Trichlorophenol	330	U
95-95-4	2,4,5-Trichlorophenol	330	U
92-52-4	1,1'-Biphenyl	330	U
91-58-7	2-Chloronaphthalene	330	U
88-74-4	2-Nitroaniline	640	U
131-11-3	Dimethylphthalate	330	U
606-20-2	2,6-Dinitrotoluene	330	U
208-96-8	Acenaphthylene	330	U
99-09-2	3-Nitroaniline	640	U
83-32-9	Acenaphthene	130	J

MW 9/25/13

1E - FORM I SV-2

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-61-048

5

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17125

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17125-5

Sample wt/vol: 30.5 (g/mL) g Lab File ID: RKXZA10.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 49 Decanted: (Y/N) Date Received: 06/21/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/29/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/10/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
51-28-5	2,4-Dinitrophenol	640	U	UJ
100-02-7	4-Nitrophenol	640	U	UJ
132-64-9	Dibenzofuran	64	J	J
121-14-2	2,4-Dinitrotoluene	330	U	UJ
84-66-2	Diethylphthalate	330	U	UJ
86-73-7	Fluorene	140	J	J
7005-72-3	4-Chlorophenyl-phenylether	330	U	UJ
100-01-6	4-Nitroaniline	640	U	UJ
534-52-1	4,6-Dinitro-2-methylphenol	16	J	J
86-30-6	N-Nitrosodiphenylamin [1]	330	U	UJ
95-94-3	1,2,4,5-Tetrachlorobenzene	330	U	UJ
101-55-3	4-Bromophenyl-phenylether	330	U	UJ
118-74-1	Hexachlorobenzene	330	U	UJ
1912-24-9	Atrazine	330	U	UJ
87-86-5	Pentachlorophenol	640	U	UJ
85-01-8	Phenanthrene	520		J
120-12-7	Anthracene	97	J	J
86-74-8	Carbazole	330	U	UJ
84-74-2	Di-n-butylphthalate	330	U	UJ
206-44-0	Fluoranthene	540		J
129-00-0	Pyrene	440		J
85-68-7	Butylbenzylphthalate	72	J	J
91-94-1	3,3'-Dichlorobenzidine	330	U	UJ
56-55-3	Benzo(a)anthracene	200	J	J
218-01-9	Chrysene	300	J	J
117-81-7	Bis(2-ethylhexyl)phthalate	880	B	J
117-84-0	Di-n-octylphthalate	330	U	UJ
205-99-2	Benzo(b)fluoranthene	220	J	J
207-08-9	Benzo(k)fluoranthene	280	J	J
50-32-8	Benzo(a)pyrene	220	J	J
193-39-5	Indeno(1,2,3-cd)pyrene	110	J	J
53-70-3	Dibenzo(a,h)anthracene	46	J	J
191-24-2	Benzo(g,h,i)perylene	130	J	J
58-90-2	2,3,4,6-Tetrachlorophenol	330	U	UJ

[1] Cannot be separated from Diphenylamine

MW 9/25/13

EPA SAMPLE NO.
LMR13-61-096

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17125

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17125-6

Sample wt/vol: 30.1 (g/mL) g Lab File ID: RKXZA11.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 45 Decanted: (Y/N) Date Received: 06/21/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/29/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/10/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
100-52-7	Benzaldehyde	49	J
108-95-2	Phenol	310	UJ
111-44-4	Bis(2-chloroethyl)ether	310	U
95-57-8	2-Chlorophenol	310	U
95-48-7	2-Methylphenol	310	U
108-60-1	2,2'-Oxybis(1-chloropropane)	310	U
98-86-2	Acetophenone	310	U
106-44-5	4-Methylphenol	22	J
621-64-7	N-Nitroso-di-n-propylamine	310	UJ
67-72-1	Hexachloroethane	310	U
98-95-3	Nitrobenzene	310	U
78-59-1	Isophorone	310	U
88-75-5	2-Nitrophenol	310	U
105-67-9	2,4-Dimethylphenol	310	U
111-91-1	Bis(2-chloroethoxy)methane	310	U
120-83-2	2,4-Dichlorophenol	310	U
91-20-3	Naphthalene	77	J
106-47-8	4-Chloroaniline	310	UJ
87-68-3	Hexachlorobutadiene	310	U
105-60-2	Caprolactam	310	U
59-50-7	4-Chloro-3-methylphenol	310	U
91-57-6	2-Methylnaphthalene	22	J
77-47-4	Hexachlorocyclopentadiene	310	UJ
88-06-2	2,4,6-Trichlorophenol	310	U
95-95-4	2,4,5-Trichlorophenol	310	U
92-52-4	1,1'-Biphenyl	310	U
91-58-7	2-Chloronaphthalene	310	U
88-74-4	2-Nitroaniline	590	U
131-11-3	Dimethylphthalate	310	U
606-20-2	2,6-Dinitrotoluene	310	U
208-96-8	Acenaphthylene	310	U
99-09-2	3-Nitroaniline	590	U
83-32-9	Acenaphthene	49	J

NW 9/25/13

EPA SAMPLE NO.
LMR13-61-096

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17125

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17125-6

Sample wt/vol: 30.1 (g/mL) g Lab File ID: RKXZA11.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 45 Decanted: (Y/N) Date Received: 06/21/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/29/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/10/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
51-28-5	2,4-Dinitrophenol	590	U
100-02-7	4-Nitrophenol	590	U
132-64-9	Dibenzofuran	37	J
121-14-2	2,4-Dinitrotoluene	310	U
84-66-2	Diethylphthalate	310	U
86-73-7	Fluorene	56	J
7005-72-3	4-Chlorophenyl-phenylether	310	U
100-01-6	4-Nitroaniline	590	U
534-52-1	4,6-Dinitro-2-methylphenol	590	U
86-30-6	N-Nitrosodiphenylamin [1]	310	U
95-94-3	1,2,4,5-Tetrachlorobenzene	310	U
101-55-3	4-Bromophenyl-phenylether	310	U
118-74-1	Hexachlorobenzene	310	U
1912-24-9	Atrazine	310	U
87-86-5	Pentachlorophenol	590	U
85-01-8	Phenanthrene	310	
120-12-7	Anthracene	86	J
86-74-8	Carbazole	310	U
84-74-2	Di-n-butylphthalate	310	U
206-44-0	Fluoranthene	630	
129-00-0	Pyrene	490	
85-68-7	Butylbenzylphthalate	310	U
91-94-1	3,3'-Dichlorobenzidine	310	U
56-55-3	Benzo(a)anthracene	300	J
218-01-9	Chrysene	390	
117-81-7	Bis(2-ethylhexyl)phthalate	1200	B
117-84-0	Di-n-octylphthalate	310	U
205-99-2	Benzo(b)fluoranthene	440	
207-08-9	Benzo(k)fluoranthene	350	
50-32-8	Benzo(a)pyrene	340	
193-39-5	Indeno(1,2,3-cd)pyrene	180	J
53-70-3	Dibenzo(a,h)anthracene	55	J
191-24-2	Benzo(g,h,i)perylene	160	J
58-90-2	2,3,4,6-Tetrachlorophenol	310	U

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[1] Cannot be separated from Diphenylamine

NW 9/25/13

1D - FORM I SV-1

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-65-048

7

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17125

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17125-7

Sample wt/vol: 30.6 (g/mL) g Lab File ID: RKXZA12.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 56 Decanted: (Y/N) Date Received: 06/21/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/29/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/10/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
100-52-7	Benzaldehyde	380	U
108-95-2	Phenol	380	U
111-44-4	Bis(2-chloroethyl)ether	380	U
95-57-8	2-Chlorophenol	380	U
95-48-7	2-Methylphenol	380	U
108-60-1	2,2'-Oxybis(1-chloropropane)	380	U
98-86-2	Acetophenone	380	U
106-44-5	4-Methylphenol	380	U
621-64-7	N-Nitroso-di-n-propylamine	380	U
67-72-1	Hexachloroethane	380	U
98-95-3	Nitrobenzene	380	U
78-59-1	Isophorone	380	U
88-75-5	2-Nitrophenol	380	U
105-67-9	2,4-Dimethylphenol	380	U
111-91-1	Bis(2-chloroethoxy)methane	380	U
120-83-2	2,4-Dichlorophenol	380	U
91-20-3	Naphthalene	29	J
106-47-8	4-Chloroaniline	380	U
87-68-3	Hexachlorobutadiene	380	U
105-60-2	Caprolactam	380	U
59-50-7	4-Chloro-3-methylphenol	380	U
91-57-6	2-Methylnaphthalene	12	J
77-47-4	Hexachlorocyclopentadiene	380	U
88-06-2	2,4,6-Trichlorophenol	380	U
95-95-4	2,4,5-Trichlorophenol	380	U
92-52-4	1,1'-Biphenyl	380	U
91-58-7	2-Chloronaphthalene	380	U
88-74-4	2-Nitroaniline	740	U
131-11-3	Dimethylphthalate	380	U
606-20-2	2,6-Dinitrotoluene	380	U
208-96-8	Acenaphthylene	380	U
99-09-2	3-Nitroaniline	740	U
83-32-9	Acenaphthene	16	J

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MW 9/25/13

EPA SAMPLE NO.
LMR13-65-048

7

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17125

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17125-7

Sample wt/vol: 30.6 (g/mL) g Lab File ID: RKXZA12.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 56 Decanted: (Y/N) Date Received: 06/21/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/29/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/10/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
51-28-5	2,4-Dinitrophenol	740	U	UJ
100-02-7	4-Nitrophenol	740	U	
132-64-9	Dibenzofuran	380	U	
121-14-2	2,4-Dinitrotoluene	380	U	
84-66-2	Diethylphthalate	380	U	
86-73-7	Fluorene	380	U	
7005-72-3	4-Chlorophenyl-phenylether	380	U	
100-01-6	4-Nitroaniline	740	U	
534-52-1	4,6-Dinitro-2-methylphenol	740	U	
86-30-6	N-Nitrosodiphenylamin [1]	380	U	
95-94-3	1,2,4,5-Tetrachlorobenzene	380	U	
101-55-3	4-Bromophenyl-phenylether	380	U	
118-74-1	Hexachlorobenzene	380	U	
1912-24-9	Atrazine	380	U	
87-86-5	Pentachlorophenol	740	U	
85-01-8	Phenanthrene	120	J	J
120-12-7	Anthracene	23	J	J
86-74-8	Carbazole	380	U	UJ
84-74-2	Di-n-butylphthalate	16	J	J
206-44-0	Fluoranthene	290	J	
129-00-0	Pyrene	210	J	
85-68-7	Butylbenzylphthalate	33	J	
91-94-1	3,3'-Dichlorobenzidine	380	U	UJ
56-55-3	Benzo(a)anthracene	110	J	J
218-01-9	Chrysene	180	J	J
117-81-7	Bis(2-ethylhexyl)phthalate	380 ~~240~~	~~J B~~	UJ
117-84-0	Di-n-octylphthalate	380	U	UJ
205-99-2	Benzo(b)fluoranthene	180	J	J
207-08-9	Benzo(k)fluoranthene	180	J	
50-32-8	Benzo(a)pyrene	170	J	
193-39-5	Indeno(1,2,3-cd)pyrene	95	J	
53-70-3	Dibenzo(a,h)anthracene	39	J	
191-24-2	Benzo(g,h,i)perylene	140	J	
58-90-2	2,3,4,6-Tetrachlorophenol	380	U	UJ

[1] Cannot be separated from Diphenylamine

NW 9/25/13

EPA SAMPLE NO.
LMR13-65-072

8

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17125

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17125-8

Sample wt/vol: 30.9 (g/mL) g Lab File ID: RKXZA13.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 39 Decanted: (Y/N) Date Received: 06/21/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/29/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/10/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
100-52-7	Benzaldehyde	270	U
108-95-2	Phenol	270	U
111-44-4	Bis(2-chloroethyl)ether	270	U
95-57-8	2-Chlorophenol	270	U
95-48-7	2-Methylphenol	270	U
108-60-1	2,2'-Oxybis(1-chloropropane)	270	U
98-86-2	Acetophenone	270	U
106-44-5	4-Methylphenol	31	J
621-64-7	N-Nitroso-di-n-propylamine	270	U
67-72-1	Hexachloroethane	270	U
98-95-3	Nitrobenzene	270	U
78-59-1	Isophorone	270	U
88-75-5	2-Nitrophenol	270	U
105-67-9	2,4-Dimethylphenol	270	U
111-91-1	Bis(2-chloroethoxy)methane	270	U
120-83-2	2,4-Dichlorophenol	270	U
91-20-3	Naphthalene	140	J
106-47-8	4-Chloroaniline	270	U
87-68-3	Hexachlorobutadiene	270	U
105-60-2	Caprolactam	270	U
59-50-7	4-Chloro-3-methylphenol	270	U
91-57-6	2-Methylnaphthalene	31	J
77-47-4	Hexachlorocyclopentadiene	270	U
88-06-2	2,4,6-Trichlorophenol	270	U
95-95-4	2,4,5-Trichlorophenol	270	U
92-52-4	1,1'-Biphenyl	270	U
91-58-7	2-Chloronaphthalene	270	U
88-74-4	2-Nitroaniline	520	U
131-11-3	Dimethylphthalate	270	U
606-20-2	2,6-Dinitrotoluene	270	U
208-96-8	Acenaphthylene	270	U
99-09-2	3-Nitroaniline	520	U
83-32-9	Acenaphthene	130	J

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MW 9/25/13

EPA SAMPLE NO.
LMR13-65-072

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678 8

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17125

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17125-8

Sample wt/vol: 30.9 (g/mL) g Lab File ID: RKXZA13.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 39 Decanted: (Y/N) Date Received: 06/21/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/29/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/10/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
51-28-5	2,4-Dinitrophenol	520	U	UJ
100-02-7	4-Nitrophenol	520	U	UJ
132-64-9	Dibenzofuran	78	J	J
121-14-2	2,4-Dinitrotoluene	270	U	UJ
84-66-2	Diethylphthalate	270	U	UJ
86-73-7	Fluorene	130	J	J
7005-72-3	4-Chlorophenyl-phenylether	270	U	UJ
100-01-6	4-Nitroaniline	520	U	
534-52-1	4,6-Dinitro-2-methylphenol	520	U	
86-30-6	N-Nitrosodiphenylamin [1]	270	U	
95-94-3	1,2,4,5-Tetrachlorobenzene	270	U	
101-55-3	4-Bromophenyl-phenylether	270	U	
118-74-1	Hexachlorobenzene	270	U	
1912-24-9	Atrazine	270	U	
87-86-5	Pentachlorophenol	520	U	J
85-01-8	Phenanthrene	720		J
120-12-7	Anthracene	150	J	J
86-74-8	Carbazole	270	U	UJ
84-74-2	Di-n-butylphthalate	270	U	UJ
206-44-0	Fluoranthene	870		J
129-00-0	Pyrene	690		J
85-68-7	Butylbenzylphthalate	270	U	UJ
91-94-1	3,3'-Dichlorobenzidine	270	U	UJ
56-55-3	Benzo(a)anthracene	350		J
218-01-9	Chrysene	670		J
117-81-7	Bis(2-ethylhexyl)phthalate	750	B	J
117-84-0	Di-n-octylphthalate	270	U	UJ
205-99-2	Benzo(b)fluoranthene	360		J
207-08-9	Benzo(k)fluoranthene	330		J
50-32-8	Benzo(a)pyrene	320		J
193-39-5	Indeno(1,2,3-cd)pyrene	130	J	J
53-70-3	Dibenzo(a,h)anthracene	84	J	J
191-24-2	Benzo(g,h,i)perylene	190	J	J
58-90-2	2,3,4,6-Tetrachlorophenol	270	U	UJ

[1] Cannot be separated from Diphenylamine

MW 9/25/13

EPA SAMPLE NO.
LMR13-61-024

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678 9

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17125

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17125-9

Sample wt/vol: 29.1 (g/mL) g Lab File ID: PJZKF12.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 50 Decanted: (Y/N) Date Received: 06/21/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/29/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/08/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
100-52-7	Benzaldehyde	53	J
108-95-2	Phenol	350	U
111-44-4	Bis(2-chloroethyl)ether	350	U
95-57-8	2-Chlorophenol	350	U
95-48-7	2-Methylphenol	350	U
108-60-1	2,2'-Oxybis(1-chloropropane)	350	U
98-86-2	Acetophenone	350	U
106-44-5	4-Methylphenol	350	U
621-64-7	N-Nitroso-di-n-propylamine	350	U
67-72-1	Hexachloroethane	350	U
98-95-3	Nitrobenzene	350	U
78-59-1	Isophorone	350	U
88-75-5	2-Nitrophenol	350	U
105-67-9	2,4-Dimethylphenol	350	U
111-91-1	Bis(2-chloroethoxy)methane	350	U
120-83-2	2,4-Dichlorophenol	350	U
91-20-3	Naphthalene	27	J
106-47-8	4-Chloroaniline	350	U
87-68-3	Hexachlorobutadiene	350	U
105-60-2	Caprolactam	350	U
59-50-7	4-Chloro-3-methylphenol	350	U
91-57-6	2-Methylnaphthalene	350	U
77-47-4	Hexachlorocyclopentadiene	350	~~U~~ UJ
88-06-2	2,4,6-Trichlorophenol	350	U
95-95-4	2,4,5-Trichlorophenol	350	U
92-52-4	1,1'-Biphenyl	350	U
91-58-7	2-Chloronaphthalene	350	U
88-74-4	2-Nitroaniline	690	U
131-11-3	Dimethylphthalate	350	U
606-20-2	2,6-Dinitrotoluene	350	U
208-96-8	Acenaphthylene	350	U
99-09-2	3-Nitroaniline	690	U
83-32-9	Acenaphthene	22	J

NW 9/25/13

EPA SAMPLE NO.
LMR13-61-024

9

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17125

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17125-9

Sample wt/vol: 29.1 (g/mL) g Lab File ID: PJZKF12.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 50 Decanted: (Y/N) Date Received: 06/21/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/29/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/08/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
51-28-5	2,4-Dinitrophenol	690	U
100-02-7	4-Nitrophenol	690	U
132-64-9	Dibenzofuran	18	J
121-14-2	2,4-Dinitrotoluene	350	U
84-66-2	Diethylphthalate	350	U
86-73-7	Fluorene	43	J
7005-72-3	4-Chlorophenyl-phenylether	350	U
100-01-6	4-Nitroaniline	690	U
534-52-1	4,6-Dinitro-2-methylphenol	690	U
86-30-6	N-Nitrosodiphenylamin [1]	350	U
95-94-3	1,2,4,5-Tetrachlorobenzene	350	U
101-55-3	4-Bromophenyl-phenylether	350	U
118-74-1	Hexachlorobenzene	350	U
1912-24-9	Atrazine	350	U
87-86-5	Pentachlorophenol	690	U UJ
85-01-8	Phenanthrene	140	J
120-12-7	Anthracene	36	J
86-74-8	Carbazole	350	U
84-74-2	Di-n-butylphthalate	17	J
206-44-0	Fluoranthene	230	J
129-00-0	Pyrene	470	
85-68-7	Butylbenzylphthalate	350	U
91-94-1	3,3'-Dichlorobenzidine	350	U
56-55-3	Benzo(a)anthracene	200	J
218-01-9	Chrysene	260	J
117-81-7	Bis(2-ethylhexyl)phthalate	390	
117-84-0	Di-n-octylphthalate	350	U
205-99-2	Benzo(b)fluoranthene	250	J
207-08-9	Benzo(k)fluoranthene	160	J
50-32-8	Benzo(a)pyrene	180	J
193-39-5	Indeno(1,2,3-cd)pyrene	170	J
53-70-3	Dibenzo(a,h)anthracene	350	U
191-24-2	Benzo(g,h,i)perylene	180	J
58-90-2	2,3,4,6-Tetrachlorophenol	350	U

[1] Cannot be separated from Diphenylamine

MW 9/25/13

EPA SAMPLE NO.
LMR13-61-072

10

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17125

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17125-10

Sample wt/vol: 29.7 (g/mL) g Lab File ID: RKXZA14.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 48 Decanted: (Y/N) Date Received: 06/21/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/29/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/10/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
100-52-7	Benzaldehyde	330	U
108-95-2	Phenol	330	U
111-44-4	Bis(2-chloroethyl)ether	330	U
95-57-8	2-Chlorophenol	330	U
95-48-7	2-Methylphenol	330	U
108-60-1	2,2'-Oxybis(1-chloropropane)	330	U
98-86-2	Acetophenone	330	U
106-44-5	4-Methylphenol	330	U
621-64-7	N-Nitroso-di-n-propylamine	330	U
67-72-1	Hexachloroethane	330	U
98-95-3	Nitrobenzene	330	U
78-59-1	Isophorone	330	U
88-75-5	2-Nitrophenol	330	U
105-67-9	2,4-Dimethylphenol	330	U
111-91-1	Bis(2-chloroethoxy)methane	330	U
120-83-2	2,4-Dichlorophenol	330	U
91-20-3	Naphthalene	56	J
106-47-8	4-Chloroaniline	330	U
87-68-3	Hexachlorobutadiene	330	U
105-60-2	Caprolactam	330	U
59-50-7	4-Chloro-3-methylphenol	330	U
91-57-6	2-Methylnaphthalene	18	J
77-47-4	Hexachlorocyclopentadiene	330	U
88-06-2	2,4,6-Trichlorophenol	330	U
95-95-4	2,4,5-Trichlorophenol	330	U
92-52-4	1,1'-Biphenyl	330	U
91-58-7	2-Chloronaphthalene	330	U
88-74-4	2-Nitroaniline	640	U
131-11-3	Dimethylphthalate	330	U
606-20-2	2,6-Dinitrotoluene	330	U
208-96-8	Acenaphthylene	330	U
99-09-2	3-Nitroaniline	640	U
83-32-9	Acenaphthene	55	J

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MW 9/25/13

1E - FORM I SV-2
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-61-072

10

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17125

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17125-10

Sample wt/vol: 29.7 (g/mL) g Lab File ID: RKXZA14.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 48 Decanted: (Y/N) Date Received: 06/21/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/29/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/10/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
51-28-5	2,4-Dinitrophenol	640	U
100-02-7	4-Nitrophenol	640	U
132-64-9	Dibenzofuran	46	J
121-14-2	2,4-Dinitrotoluene	330	U
84-66-2	Diethylphthalate	330	U
86-73-7	Fluorene	75	J
7005-72-3	4-Chlorophenyl-phenylether	330	U
100-01-6	4-Nitroaniline	640	U
534-52-1	4,6-Dinitro-2-methylphenol	640	U
86-30-6	N-Nitrosodiphenylamin [1]	330	U
95-94-3	1,2,4,5-Tetrachlorobenzene	330	U
101-55-3	4-Bromophenyl-phenylether	330	U
118-74-1	Hexachlorobenzene	330	U
1912-24-9	Atrazine	330	U
87-86-5	Pentachlorophenol	640	U
85-01-8	Phenanthrene	350	
120-12-7	Anthracene	83	J
86-74-8	Carbazole	330	U
84-74-2	Di-n-butylphthalate	330	U
206-44-0	Fluoranthene	880	
129-00-0	Pyrene	670	
85-68-7	Butylbenzylphthalate	330	U
91-94-1	3,3'-Dichlorobenzidine	330	U
56-55-3	Benzo(a)anthracene	310	J
218-01-9	Chrysene	440	
117-81-7	Bis(2-ethylhexyl)phthalate	1500	B
117-84-0	Di-n-octylphthalate	330	U
205-99-2	Benzo(b)fluoranthene	390	
207-08-9	Benzo(k)fluoranthene	340	
50-32-8	Benzo(a)pyrene	320	J
193-39-5	Indeno(1,2,3-cd)pyrene	160	J
53-70-3	Dibenzo(a,h)anthracene	63	J
191-24-2	Benzo(g,h,i)perylene	180	J
58-90-2	2,3,4,6-Tetrachlorophenol	330	U

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UJ J UJ

[1] Cannot be separated from Diphenylamine

NW 9/25/13

1D - FORM I SV-1

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-61-120

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678 11

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17125

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17125-11

Sample wt/vol: 30.4 (g/mL) g Lab File ID: PJZKF16.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 43 Decanted: (Y/N) Date Received: 06/21/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/29/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/08/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
100-52-7	Benzaldehyde	290	U
108-95-2	Phenol	290	U
111-44-4	Bis(2-chloroethyl)ether	290	U
95-57-8	2-Chlorophenol	290	U
95-48-7	2-Methylphenol	290	U
108-60-1	2,2'-Oxybis(1-chloropropane)	290	U
98-86-2	Acetophenone	290	U
106-44-5	4-Methylphenol	36	J
621-64-7	N-Nitroso-di-n-propylamine	290	U
67-72-1	Hexachloroethane	290	U
98-95-3	Nitrobenzene	290	U
78-59-1	Isophorone	290	U
88-75-5	2-Nitrophenol	290	U
105-67-9	2,4-Dimethylphenol	290	U
111-91-1	Bis(2-chloroethoxy)methane	290	U
120-83-2	2,4-Dichlorophenol	290	U
91-20-3	Naphthalene	140	J
106-47-8	4-Chloroaniline	290	U
87-68-3	Hexachlorobutadiene	290	U
105-60-2	Caprolactam	290	U
59-50-7	4-Chloro-3-methylphenol	290	U
91-57-6	2-Methylnaphthalene	37	J
77-47-4	Hexachlorocyclopentadiene	290	~~U~~ UJ
88-06-2	2,4,6-Trichlorophenol	290	U
95-95-4	2,4,5-Trichlorophenol	290	U
92-52-4	1,1'-Biphenyl	290	U
91-58-7	2-Chloronaphthalene	290	U
88-74-4	2-Nitroaniline	570	U
131-11-3	Dimethylphthalate	290	U
606-20-2	2,6-Dinitrotoluene	290	U
208-96-8	Acenaphthylene	12	J
99-09-2	3-Nitroaniline	570	U
83-32-9	Acenaphthene	56	J

MW 9/25/13

EPA SAMPLE NO.
LMR13-61-120

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678 11

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17125

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17125-11

Sample wt/vol: 30.4 (g/mL) g Lab File ID: PJZKF16.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 43 Decanted: (Y/N) Date Received: 06/21/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/29/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/08/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
51-28-5	2,4-Dinitrophenol	570	U
100-02-7	4-Nitrophenol	570	U
132-64-9	Dibenzofuran	38	J
121-14-2	2,4-Dinitrotoluene	290	U
84-66-2	Diethylphthalate	290	U
86-73-7	Fluorene	57	J
7005-72-3	4-Chlorophenyl-phenylether	290	U
100-01-6	4-Nitroaniline	570	U
534-52-1	4,6-Dinitro-2-methylphenol	570	U
86-30-6	N-Nitrosodiphenylamin [1]	290	U
95-94-3	1,2,4,5-Tetrachlorobenzene	290	U
101-55-3	4-Bromophenyl-phenylether	290	U
118-74-1	Hexachlorobenzene	290	U
1912-24-9	Atrazine	290	U
87-86-5	Pentachlorophenol	570	~~U~~ UJ
85-01-8	Phenanthrene	240	J
120-12-7	Anthracene	64	J
86-74-8	Carbazole	290	U
84-74-2	Di-n-butylphthalate	28	J
206-44-0	Fluoranthene	320	
129-00-0	Pyrene	690	
85-68-7	Butylbenzylphthalate	290	U
91-94-1	3,3'-Dichlorobenzidine	290	U
56-55-3	Benzo(a)anthracene	280	J
218-01-9	Chrysene	400	
117-81-7	Bis(2-ethylhexyl)phthalate	1300	
117-84-0	Di-n-octylphthalate	290	U
205-99-2	Benzo(b)fluoranthene	340	
207-08-9	Benzo(k)fluoranthene	170	J
50-32-8	Benzo(a)pyrene	260	J
193-39-5	Indeno(1,2,3-cd)pyrene	150	J
53-70-3	Dibenzo(a,h)anthracene	59	J
191-24-2	Benzo(g,h,i)perylene	170	J
58-90-2	2,3,4,6-Tetrachlorophenol	290	U

[1] Cannot be separated from Diphenylamine

MW 9/25/13

1D - FORM I SV-1

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-66-012

12

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17125

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17125-12

Sample wt/vol: 29.4 (g/mL) g Lab File ID: RKXZA15.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 33 Decanted: (Y/N) Date Received: 06/21/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/29/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/11/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
100-52-7	Benzaldehyde	260	U
108-95-2	Phenol	260	U
111-44-4	Bis(2-chloroethyl)ether	260	U
95-57-8	2-Chlorophenol	260	U
95-48-7	2-Methylphenol	260	U
108-60-1	2,2'-Oxybis(1-chloropropane)	260	U
98-86-2	Acetophenone	260	U
106-44-5	4-Methylphenol	260	U
621-64-7	N-Nitroso-di-n-propylamine	260	U
67-72-1	Hexachloroethane	260	U
98-95-3	Nitrobenzene	260	U
78-59-1	Isophorone	260	U
88-75-5	2-Nitrophenol	260	U
105-67-9	2,4-Dimethylphenol	260	U
111-91-1	Bis(2-chloroethoxy)methane	260	U
120-83-2	2,4-Dichlorophenol	260	U
91-20-3	Naphthalene	46	J
106-47-8	4-Chloroaniline	260	U
87-68-3	Hexachlorobutadiene	260	U
105-60-2	Caprolactam	260	U
59-50-7	4-Chloro-3-methylphenol	260	U
91-57-6	2-Methylnaphthalene	23	J
77-47-4	Hexachlorocyclopentadiene	260	U
88-06-2	2,4,6-Trichlorophenol	260	U
95-95-4	2,4,5-Trichlorophenol	260	U
92-52-4	1,1'-Biphenyl	260	U
91-58-7	2-Chloronaphthalene	260	U
88-74-4	2-Nitroaniline	510	U
131-11-3	Dimethylphthalate	260	U
606-20-2	2,6-Dinitrotoluene	260	U
208-96-8	Acenaphthylene	260	U
99-09-2	3-Nitroaniline	510	U
83-32-9	Acenaphthene	130	J

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MW 9/25/13

1E - FORM I SV-2
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-66-012

12

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17125

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17125-12

Sample wt/vol: 29.4 (g/mL) g Lab File ID: RKXZA15.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 33 Decanted: (Y/N) Date Received: 06/21/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/29/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/11/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
51-28-5	2,4-Dinitrophenol	510	U
100-02-7	4-Nitrophenol	510	U
132-64-9	Dibenzofuran	23	J
121-14-2	2,4-Dinitrotoluene	260	U
84-66-2	Diethylphthalate	260	U
86-73-7	Fluorene	130	J
7005-72-3	4-Chlorophenyl-phenylether	260	U
100-01-6	4-Nitroaniline	510	U
534-52-1	4,6-Dinitro-2-methylphenol	510	U
86-30-6	N-Nitrosodiphenylamin [1]	260	U
95-94-3	1,2,4,5-Tetrachlorobenzene	260	U
101-55-3	4-Bromophenyl-phenylether	260	U
118-74-1	Hexachlorobenzene	260	U
1912-24-9	Atrazine	260	U
87-86-5	Pentachlorophenol	510	U
85-01-8	Phenanthrene	870	
120-12-7	Anthracene	190	J
86-74-8	Carbazole	260	U
84-74-2	Di-n-butylphthalate	19	J
206-44-0	Fluoranthene	980	
129-00-0	Pyrene	900	
85-68-7	Butylbenzylphthalate	43	J
91-94-1	3,3'-Dichlorobenzidine	260	U
56-55-3	Benzo(a)anthracene	490	
218-01-9	Chrysene	700	
117-81-7	Bis(2-ethylhexyl)phthalate	260 ~~140~~	J B
117-84-0	Di-n-octylphthalate	260	U
205-99-2	Benzo(b)fluoranthene	360	
207-08-9	Benzo(k)fluoranthene	460	
50-32-8	Benzo(a)pyrene	450	
193-39-5	Indeno(1,2,3-cd)pyrene	180	J
53-70-3	Dibenzo(a,h)anthracene	91	J
191-24-2	Benzo(g,h,i)perylene	240	J
58-90-2	2,3,4,6-Tetrachlorophenol	260	U

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[1] Cannot be separated from Diphenylamine

MW 9/25/13

EPA SAMPLE NO.
LMR13-66-024

13

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17125

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17125-13

Sample wt/vol: 30.6 (g/mL) g Lab File ID: RKXZA16.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 28 Decanted: (Y/N) Date Received: 06/21/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/29/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/11/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
100-52-7	Benzaldehyde	29	J
108-95-2	Phenol	230	U
111-44-4	Bis(2-chloroethyl)ether	230	U
95-57-8	2-Chlorophenol	230	U
95-48-7	2-Methylphenol	230	U
108-60-1	2,2'-Oxybis(1-chloropropane)	230	U
98-86-2	Acetophenone	230	U
106-44-5	4-Methylphenol	230	U
621-64-7	N-Nitroso-di-n-propylamine	230	U
67-72-1	Hexachloroethane	230	U
98-95-3	Nitrobenzene	230	U
78-59-1	Isophorone	230	U
88-75-5	2-Nitrophenol	230	U
105-67-9	2,4-Dimethylphenol	230	U
111-91-1	Bis(2-chloroethoxy)methane	230	U
120-83-2	2,4-Dichlorophenol	230	U
91-20-3	Naphthalene	54	J
106-47-8	4-Chloroaniline	230	U
87-68-3	Hexachlorobutadiene	230	U
105-60-2	Caprolactam	230	U
59-50-7	4-Chloro-3-methylphenol	230	U
91-57-6	2-Methylnaphthalene	14	J
77-47-4	Hexachlorocyclopentadiene	230	U
88-06-2	2,4,6-Trichlorophenol	230	U
95-95-4	2,4,5-Trichlorophenol	230	U
92-52-4	1,1'-Biphenyl	230	U
91-58-7	2-Chloronaphthalene	230	U
88-74-4	2-Nitroaniline	450	U
131-11-3	Dimethylphthalate	230	U
606-20-2	2,6-Dinitrotoluene	230	U
208-96-8	Acenaphthylene	15	J
99-09-2	3-Nitroaniline	450	U
83-32-9	Acenaphthene	180	J

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MW 9/25/13

EPA SAMPLE NO.
LMR13-66-024

13

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17125

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17125-13

Sample wt/vol: 30.6 (g/mL) g Lab File ID: RKXZA16.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 28 Decanted: (Y/N) Date Received: 06/21/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/29/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/11/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
51-28-5	2,4-Dinitrophenol	450	U
100-02-7	4-Nitrophenol	450	U
132-64-9	Dibenzofuran	24	J
121-14-2	2,4-Dinitrotoluene	230	U
84-66-2	Diethylphthalate	230	U
86-73-7	Fluorene	160	J
7005-72-3	4-Chlorophenyl-phenylether	230	U
100-01-6	4-Nitroaniline	450	U
534-52-1	4,6-Dinitro-2-methylphenol	450	U
86-30-6	N-Nitrosodiphenylamin [1]	230	U
95-94-3	1,2,4,5-Tetrachlorobenzene	230	U
101-55-3	4-Bromophenyl-phenylether	230	U
118-74-1	Hexachlorobenzene	230	U
1912-24-9	Atrazine	230	U
87-86-5	Pentachlorophenol	450	U
85-01-8	Phenanthrene	1600	
120-12-7	Anthracene	310	
86-74-8	Carbazole	230	U
84-74-2	Di-n-butylphthalate	230	U
206-44-0	Fluoranthene	2100	
129-00-0	Pyrene	1400	
85-68-7	Butylbenzylphthalate	230	U
91-94-1	3,3'-Dichlorobenzidine	230	U
56-55-3	Benzo(a)anthracene	760	
218-01-9	Chrysene	820	
117-81-7	Bis(2-ethylhexyl)phthalate	230 ~~54~~	~~J B~~
117-84-0	Di-n-octylphthalate	230	U
205-99-2	Benzo(b)fluoranthene	770	
207-08-9	Benzo(k)fluoranthene	630	
50-32-8	Benzo(a)pyrene	730	
193-39-5	Indeno(1,2,3-cd)pyrene	320	
53-70-3	Dibenzo(a,h)anthracene	120	J
191-24-2	Benzo(g,h,i)perylene	320	
58-90-2	2,3,4,6-Tetrachlorophenol	230	U

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[1] Cannot be separated from Diphenylamine

MW 9/25/13

1D - FORM I SV-1

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-60-012

14

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17125

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17125-14

Sample wt/vol: 30.3 (g/mL) g Lab File ID: RKXZA17.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 55 Decanted: (Y/N) Date Received: 06/21/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/29/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/11/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
100-52-7	Benzaldehyde	43	U
108-95-2	Phenol	370	U
111-44-4	Bis(2-chloroethyl)ether	370	U
95-57-8	2-Chlorophenol	370	U
95-48-7	2-Methylphenol	370	U
108-60-1	2,2'-Oxybis(1-chloropropane)	370	U
98-86-2	Acetophenone	370	U
106-44-5	4-Methylphenol	370	U
621-64-7	N-Nitroso-di-n-propylamine	370	U
67-72-1	Hexachloroethane	370	U
98-95-3	Nitrobenzene	370	U
78-59-1	Isophorone	370	U
88-75-5	2-Nitrophenol	370	U
105-67-9	2,4-Dimethylphenol	370	U
111-91-1	Bis(2-chloroethoxy)methane	370	U
120-83-2	2,4-Dichlorophenol	370	U
91-20-3	Naphthalene	47	J
106-47-8	4-Chloroaniline	370	U
87-68-3	Hexachlorobutadiene	370	U
105-60-2	Caprolactam	370	U
59-50-7	4-Chloro-3-methylphenol	370	U
91-57-6	2-Methylnaphthalene	370	U
77-47-4	Hexachlorocyclopentadiene	370	U
88-06-2	2,4,6-Trichlorophenol	370	U
95-95-4	2,4,5-Trichlorophenol	370	U
92-52-4	1,1'-Biphenyl	370	U
91-58-7	2-Chloronaphthalene	370	U
88-74-4	2-Nitroaniline	720	U
131-11-3	Dimethylphthalate	370	U
606-20-2	2,6-Dinitrotoluene	370	U
208-96-8	Acenaphthylene	370	U
99-09-2	3-Nitroaniline	720	U
83-32-9	Acenaphthene	26	J

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MW 9/25/13

1E - FORM I SV-2
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-60-012

14

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17125

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17125-14

Sample wt/vol: 30.3 (g/mL) g Lab File ID: RKXZA17.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 55 Decanted: (Y/N) Date Received: 06/21/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/29/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/11/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
51-28-5	2,4-Dinitrophenol	720	U UJ
100-02-7	4-Nitrophenol	720	U UJ
132-64-9	Dibenzofuran	21	J J
121-14-2	2,4-Dinitrotoluene	370	U UJ
84-66-2	Diethylphthalate	370	U UJ
86-73-7	Fluorene	30	J J
7005-72-3	4-Chlorophenyl-phenylether	370	U UJ
100-01-6	4-Nitroaniline	720	U
534-52-1	4,6-Dinitro-2-methylphenol	720	U
86-30-6	N-Nitrosodiphenylamin [1]	370	U
95-94-3	1,2,4,5-Tetrachlorobenzene	370	U
101-55-3	4-Bromophenyl-phenylether	370	U
118-74-1	Hexachlorobenzene	370	U
1912-24-9	Atrazine	370	U
87-86-5	Pentachlorophenol	720	U
85-01-8	Phenanthrene	200	J J
120-12-7	Anthracene	51	J J
86-74-8	Carbazole	370	U UJ
84-74-2	Di-n-butylphthalate	18	J J
206-44-0	Fluoranthene	360	J
129-00-0	Pyrene	280	J
85-68-7	Butylbenzylphthalate	33	J J
91-94-1	3,3'-Dichlorobenzidine	370	U UJ
56-55-3	Benzo(a)anthracene	140	J J
218-01-9	Chrysene	240	J J
117-81-7	Bis(2-ethylhexyl)phthalate	370 ~~330~~	~~J B~~ UJ
117-84-0	Di-n-octylphthalate	370	U UJ
205-99-2	Benzo(b)fluoranthene	230	J J
207-08-9	Benzo(k)fluoranthene	200	J
50-32-8	Benzo(a)pyrene	170	J
193-39-5	Indeno(1,2,3-cd)pyrene	110	J
53-70-3	Dibenzo(a,h)anthracene	46	J
191-24-2	Benzo(g,h,i)perylene	130	J
58-90-2	2,3,4,6-Tetrachlorophenol	370	U UJ

[1] Cannot be separated from Diphenylamine

MW 9/25/13

EPA SAMPLE NO.
LMR13-60-024

15

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17125

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17125-15

Sample wt/vol: 30.5 (g/mL) g Lab File ID: PJZKI06.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 50 Decanted: (Y/N) Date Received: 06/21/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/29/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/08/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
100-52-7	Benzaldehyde	58	~~J~~
108-95-2	Phenol	340	U
111-44-4	Bis(2-chloroethyl)ether	340	U
95-57-8	2-Chlorophenol	340	U
95-48-7	2-Methylphenol	340	U
108-60-1	2,2'-Oxybis(1-chloropropane)	340	U
98-86-2	Acetophenone	340	U
106-44-5	4-Methylphenol	340	U
621-64-7	N-Nitroso-di-n-propylamine	340	U
67-72-1	Hexachloroethane	340	U
98-95-3	Nitrobenzene	340	U
78-59-1	Isophorone	340	U
88-75-5	2-Nitrophenol	340	U
105-67-9	2,4-Dimethylphenol	340	U
111-91-1	Bis(2-chloroethoxy)methane	340	U
120-83-2	2,4-Dichlorophenol	340	U
91-20-3	Naphthalene	30	J
106-47-8	4-Chloroaniline	340	U
87-68-3	Hexachlorobutadiene	340	U
105-60-2	Caprolactam	340	U
59-50-7	4-Chloro-3-methylphenol	340	U
91-57-6	2-Methylnaphthalene	340	U
77-47-4	Hexachlorocyclopentadiene	340	~~U~~ UJ
88-06-2	2,4,6-Trichlorophenol	340	U
95-95-4	2,4,5-Trichlorophenol	340	U
92-52-4	1,1'-Biphenyl	340	U
91-58-7	2-Chloronaphthalene	340	U
88-74-4	2-Nitroaniline	650	U
131-11-3	Dimethylphthalate	340	U
606-20-2	2,6-Dinitrotoluene	340	U
208-96-8	Acenaphthylene	340	U
99-09-2	3-Nitroaniline	650	U
83-32-9	Acenaphthene	340	U

MW 9/25/13

1E - FORM I SV-2

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-60-024

15

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17125

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17125-15

Sample wt/vol: 30.5 (g/mL) g Lab File ID: PJZKI06.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 50 Decanted: (Y/N) Date Received: 06/21/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/29/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/08/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
51-28-5	2,4-Dinitrophenol	650	U
100-02-7	4-Nitrophenol	650	U
132-64-9	Dibenzofuran	340	U
121-14-2	2,4-Dinitrotoluene	340	U
84-66-2	Diethylphthalate	340	U
86-73-7	Fluorene	38	J
7005-72-3	4-Chlorophenyl-phenylether	340	U
100-01-6	4-Nitroaniline	650	U
534-52-1	4,6-Dinitro-2-methylphenol	650	U
86-30-6	N-Nitrosodiphenylamin [1]	340	U
95-94-3	1,2,4,5-Tetrachlorobenzene	340	U
101-55-3	4-Bromophenyl-phenylether	340	U
118-74-1	Hexachlorobenzene	340	U
1912-24-9	Atrazine	340	U
87-86-5	Pentachlorophenol	650	U
85-01-8	Phenanthrene	180	J
120-12-7	Anthracene	49	J
86-74-8	Carbazole	340	U
84-74-2	Di-n-butylphthalate	27	J
206-44-0	Fluoranthene	330	~~J~~
129-00-0	Pyrene	430	
85-68-7	Butylbenzylphthalate	47	J
91-94-1	3,3'-Dichlorobenzidine	340	U
56-55-3	Benzo(a)anthracene	140	~~J~~
218-01-9	Chrysene	240	~~J~~
117-81-7	Bis(2-ethylhexyl)phthalate	310	J
117-84-0	Di-n-octylphthalate	340	U
205-99-2	Benzo(b)fluoranthene	160	J
207-08-9	Benzo(k)fluoranthene	160	J
50-32-8	Benzo(a)pyrene	140	J
193-39-5	Indeno(1,2,3-cd)pyrene	140	J
53-70-3	Dibenzo(a,h)anthracene	63	J
191-24-2	Benzo(g,h,i)perylene	150	J
58-90-2	2,3,4,6-Tetrachlorophenol	340	U

44

JJ

[1] Cannot be separated from Diphenylamine

NW 9/25/13

EPA SAMPLE NO.
LMR13-60-048

16

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17125

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17125-16

Sample wt/vol: 29.3 (g/mL) g Lab File ID: PJZKI07.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 48 Decanted: (Y/N) Date Received: 06/21/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/29/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/08/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
100-52-7	Benzaldehyde	330	U
108-95-2	Phenol	330	U
111-44-4	Bis(2-chloroethyl)ether	330	U
95-57-8	2-Chlorophenol	330	U
95-48-7	2-Methylphenol	330	U
108-60-1	2,2'-Oxybis(1-chloropropane)	330	U
98-86-2	Acetophenone	330	U
106-44-5	4-Methylphenol	330	U
621-64-7	N-Nitroso-di-n-propylamine	330	U
67-72-1	Hexachloroethane	330	U
98-95-3	Nitrobenzene	330	U
78-59-1	Isophorone	330	U
88-75-5	2-Nitrophenol	330	U
105-67-9	2,4-Dimethylphenol	330	U
111-91-1	Bis(2-chloroethoxy)methane	330	U
120-83-2	2,4-Dichlorophenol	330	U
91-20-3	Naphthalene	59	J
106-47-8	4-Chloroaniline	330	U
87-68-3	Hexachlorobutadiene	330	U
105-60-2	Caprolactam	330	U
59-50-7	4-Chloro-3-methylphenol	330	U
91-57-6	2-Methylnaphthalene	330	U
77-47-4	Hexachlorocyclopentadiene	330	U UJ
88-06-2	2,4,6-Trichlorophenol	330	U
95-95-4	2,4,5-Trichlorophenol	330	U
92-52-4	1,1'-Biphenyl	330	U
91-58-7	2-Chloronaphthalene	330	U
88-74-4	2-Nitroaniline	650	U
131-11-3	Dimethylphthalate	330	U
606-20-2	2,6-Dinitrotoluene	330	U
208-96-8	Acenaphthylene	330	U
99-09-2	3-Nitroaniline	650	U
83-32-9	Acenaphthene	41	J

MW 9/25/13

1E - FORM I SV-2

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-60-048

16

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17125

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17125-16

Sample wt/vol: 29.3 (g/mL) g Lab File ID: PJZKI07.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 48 Decanted: (Y/N) Date Received: 06/21/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/29/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/08/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
51-28-5	2,4-Dinitrophenol	650	U
100-02-7	4-Nitrophenol	650	U
132-64-9	Dibenzofuran	34	J
121-14-2	2,4-Dinitrotoluene	330	U
84-66-2	Diethylphthalate	330	U
86-73-7	Fluorene	84	J
7005-72-3	4-Chlorophenyl-phenylether	330	U
100-01-6	4-Nitroaniline	650	U
534-52-1	4,6-Dinitro-2-methylphenol	650	U
86-30-6	N-Nitrosodiphenylamin [1]	330	U
95-94-3	1,2,4,5-Tetrachlorobenzene	330	U
101-55-3	4-Bromophenyl-phenylether	330	U
118-74-1	Hexachlorobenzene	330	U
1912-24-9	Atrazine	330	U
87-86-5	Pentachlorophenol	650	U
85-01-8	Phenanthrene	440	
120-12-7	Anthracene	120	J
86-74-8	Carbazole	23	J
84-74-2	Di-n-butylphthalate	24	J
206-44-0	Fluoranthene	630	
129-00-0	Pyrene	810	
85-68-7	Butylbenzylphthalate	54	J
91-94-1	3,3'-Dichlorobenzidine	330	U
56-55-3	Benzo(a)anthracene	310	J
218-01-9	Chrysene	350	
117-81-7	Bis(2-ethylhexyl)phthalate	350	
117-84-0	Di-n-octylphthalate	330	U
205-99-2	Benzo(b)fluoranthene	320	J
207-08-9	Benzo(k)fluoranthene	210	J
50-32-8	Benzo(a)pyrene	290	J
193-39-5	Indeno(1,2,3-cd)pyrene	230	J
53-70-3	Dibenzo(a,h)anthracene	90	J
191-24-2	Benzo(g,h,i)perylene	260	J
58-90-2	2,3,4,6-Tetrachlorophenol	330	U

JJ

JJ

[1] Cannot be separated from Diphenylamine

NW 9/25/13

1D - FORM I SV-1

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-60-072

17

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17125

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17125-17

Sample wt/vol: 30.0 (g/mL) g Lab File ID: PJZKI08.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 45 Decanted: (Y/N) Date Received: 06/21/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/29/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/08/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
100-52-7	Benzaldehyde	310	U
108-95-2	Phenol	310	U
111-44-4	Bis(2-chloroethyl)ether	310	U
95-57-8	2-Chlorophenol	310	U
95-48-7	2-Methylphenol	310	U
108-60-1	2,2'-Oxybis(1-chloropropane)	310	U
98-86-2	Acetophenone	310	U
106-44-5	4-Methylphenol	310	U
621-64-7	N-Nitroso-di-n-propylamine	310	U
67-72-1	Hexachloroethane	310	U
98-95-3	Nitrobenzene	310	U
78-59-1	Isophorone	310	U
88-75-5	2-Nitrophenol	310	U
105-67-9	2,4-Dimethylphenol	310	U
111-91-1	Bis(2-chloroethoxy)methane	310	U
120-83-2	2,4-Dichlorophenol	310	U
91-20-3	Naphthalene	59	J
106-47-8	4-Chloroaniline	310	U
87-68-3	Hexachlorobutadiene	310	U
105-60-2	Caprolactam	310	U
59-50-7	4-Chloro-3-methylphenol	310	U
91-57-6	2-Methylnaphthalene	310	U
77-47-4	Hexachlorocyclopentadiene	310	~~U~~ UJ
88-06-2	2,4,6-Trichlorophenol	310	U
95-95-4	2,4,5-Trichlorophenol	310	U
92-52-4	1,1'-Biphenyl	310	U
91-58-7	2-Chloronaphthalene	310	U
88-74-4	2-Nitroaniline	600	U
131-11-3	Dimethylphthalate	310	U
606-20-2	2,6-Dinitrotoluene	310	U
208-96-8	Acenaphthylene	310	U
99-09-2	3-Nitroaniline	600	U
83-32-9	Acenaphthene	46	J

MW 9/25/13

EPA SAMPLE NO.
LMR13-60-072

17

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17125

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17125-17

Sample wt/vol: 30.0 (g/mL) g Lab File ID: PJZKI08.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 45 Decanted: (Y/N) Date Received: 06/21/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/29/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/08/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
51-28-5	2,4-Dinitrophenol	600	U
100-02-7	4-Nitrophenol	600	U
132-64-9	Dibenzofuran	33	J
121-14-2	2,4-Dinitrotoluene	310	U
84-66-2	Diethylphthalate	310	U
86-73-7	Fluorene	63	J
7005-72-3	4-Chlorophenyl-phenylether	310	U
100-01-6	4-Nitroaniline	600	U
534-52-1	4,6-Dinitro-2-methylphenol	600	U
86-30-6	N-Nitrosodiphenylamin [1]	310	U
95-94-3	1,2,4,5-Tetrachlorobenzene	310	U
101-55-3	4-Bromophenyl-phenylether	310	U
118-74-1	Hexachlorobenzene	310	U
1912-24-9	Atrazine	310	U
87-86-5	Pentachlorophenol	600	U
85-01-8	Phenanthrene	240	J
120-12-7	Anthracene	65	J
86-74-8	Carbazole	310	U
84-74-2	Di-n-butylphthalate	17	J
206-44-0	Fluoranthene	290	J
129-00-0	Pyrene	480	
85-68-7	Butylbenzylphthalate	310	U
91-94-1	3,3'-Dichlorobenzidine	310	U
56-55-3	Benzo(a)anthracene	190	J
218-01-9	Chrysene	280	J
117-81-7	Bis(2-ethylhexyl)phthalate	770	
117-84-0	Di-n-octylphthalate	310	U
205-99-2	Benzo(b)fluoranthene	150	J
207-08-9	Benzo(k)fluoranthene	200	J
50-32-8	Benzo(a)pyrene	180	J
193-39-5	Indeno(1,2,3-cd)pyrene	140	J
53-70-3	Dibenzo(a,h)anthracene	70	J
191-24-2	Benzo(g,h,i)perylene	160	J
58-90-2	2,3,4,6-Tetrachlorophenol	310	U

[1] Cannot be separated from Diphenylamine

MW 9/25/13

EPA SAMPLE NO.
LMR13-60-096

18

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17125

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17125-18

Sample wt/vol: 31.0 (g/mL) g Lab File ID: PJZKI09.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 43 Decanted: (Y/N) Date Received: 06/21/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/29/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/08/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
100-52-7	Benzaldehyde	290	U
108-95-2	Phenol	290	U
111-44-4	Bis(2-chloroethyl)ether	290	U
95-57-8	2-Chlorophenol	290	U
95-48-7	2-Methylphenol	290	U
108-60-1	2,2'-Oxybis(1-chloropropane)	290	U
98-86-2	Acetophenone	290	U
106-44-5	4-Methylphenol	290	U
621-64-7	N-Nitroso-di-n-propylamine	290	U
67-72-1	Hexachloroethane	290	U
98-95-3	Nitrobenzene	290	U
78-59-1	Isophorone	290	U
88-75-5	2-Nitrophenol	290	U
105-67-9	2,4-Dimethylphenol	290	U
111-91-1	Bis(2-chloroethoxy)methane	290	U
120-83-2	2,4-Dichlorophenol	290	U
91-20-3	Naphthalene	53	J
106-47-8	4-Chloroaniline	290	U
87-68-3	Hexachlorobutadiene	290	U
105-60-2	Caprolactam	290	U
59-50-7	4-Chloro-3-methylphenol	290	U
91-57-6	2-Methylnaphthalene	15	J
77-47-4	Hexachlorocyclopentadiene	290	UJ
88-06-2	2,4,6-Trichlorophenol	290	U
95-95-4	2,4,5-Trichlorophenol	290	U
92-52-4	1,1'-Biphenyl	290	U
91-58-7	2-Chloronaphthalene	290	U
88-74-4	2-Nitroaniline	560	U
131-11-3	Dimethylphthalate	290	U
606-20-2	2,6-Dinitrotoluene	290	U
208-96-8	Acenaphthylene	290	U
99-09-2	3-Nitroaniline	560	U
83-32-9	Acenaphthene	67	J

NW 9/25/13

EPA SAMPLE NO.
LMR13-60-096

18

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17125

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17125-18

Sample wt/vol: 31.0 (g/mL) g Lab File ID: PJZKI09.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 43 Decanted: (Y/N) Date Received: 06/21/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/29/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/08/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
51-28-5	2,4-Dinitrophenol	560	U
100-02-7	4-Nitrophenol	560	U
132-64-9	Dibenzofuran	39	J
121-14-2	2,4-Dinitrotoluene	290	U
84-66-2	Diethylphthalate	290	U
86-73-7	Fluorene	77	J
7005-72-3	4-Chlorophenyl-phenylether	290	U
100-01-6	4-Nitroaniline	560	U
534-52-1	4,6-Dinitro-2-methylphenol	560	U
86-30-6	N-Nitrosodiphenylamin [1]	290	U
95-94-3	1,2,4,5-Tetrachlorobenzene	290	U
101-55-3	4-Bromophenyl-phenylether	290	U
118-74-1	Hexachlorobenzene	290	U
1912-24-9	Atrazine	290	U
87-86-5	Pentachlorophenol	560	U
85-01-8	Phenanthrene	290	
120-12-7	Anthracene	69	J
86-74-8	Carbazole	290	U
84-74-2	Di-n-butylphthalate	40	J
206-44-0	Fluoranthene	320	
129-00-0	Pyrene	440	
85-68-7	Butylbenzylphthalate	47	J
91-94-1	3,3'-Dichlorobenzidine	290	U
56-55-3	Benzo(a)anthracene	160	J
218-01-9	Chrysene	240	J
117-81-7	Bis(2-ethylhexyl)phthalate	510	
117-84-0	Di-n-octylphthalate	290	U
205-99-2	Benzo(b)fluoranthene	150	J
207-08-9	Benzo(k)fluoranthene	170	J
50-32-8	Benzo(a)pyrene	170	J
193-39-5	Indeno(1,2,3-cd)pyrene	140	J
53-70-3	Dibenzo(a,h)anthracene	53	J
191-24-2	Benzo(g,h,i)perylene	150	J
58-90-2	2,3,4,6-Tetrachlorophenol	290	U

[1] Cannot be separated from Diphenylamine

MW 9/25/13

1D - FORM I SV-1

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-66-048

19

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17125

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17125-19

Sample wt/vol: 30.5 (g/mL) g Lab File ID: PJZKI10.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 25 Decanted: (Y/N) Date Received: 06/21/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/29/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/08/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
100-52-7	Benzaldehyde	220	U
108-95-2	Phenol	220	U
111-44-4	Bis(2-chloroethyl)ether	220	U
95-57-8	2-Chlorophenol	220	U
95-48-7	2-Methylphenol	220	U
108-60-1	2,2'-Oxybis(1-chloropropane)	220	U
98-86-2	Acetophenone	220	U
106-44-5	4-Methylphenol	220	U
621-64-7	N-Nitroso-di-n-propylamine	220	U
67-72-1	Hexachloroethane	220	U
98-95-3	Nitrobenzene	220	U
78-59-1	Isophorone	220	U
88-75-5	2-Nitrophenol	220	U
105-67-9	2,4-Dimethylphenol	220	U
111-91-1	Bis(2-chloroethoxy)methane	220	U
120-83-2	2,4-Dichlorophenol	220	U
91-20-3	Naphthalene	220	U
106-47-8	4-Chloroaniline	220	U
87-68-3	Hexachlorobutadiene	220	U
105-60-2	Caprolactam	220	U
59-50-7	4-Chloro-3-methylphenol	220	U
91-57-6	2-Methylnaphthalene	220	U
77-47-4	Hexachlorocyclopentadiene	220	U UJ
88-06-2	2,4,6-Trichlorophenol	220	U
95-95-4	2,4,5-Trichlorophenol	220	U
92-52-4	1,1'-Biphenyl	220	U
91-58-7	2-Chloronaphthalene	220	U
88-74-4	2-Nitroaniline	440	U
131-11-3	Dimethylphthalate	220	U
606-20-2	2,6-Dinitrotoluene	220	U
208-96-8	Acenaphthylene	220	U
99-09-2	3-Nitroaniline	440	U
83-32-9	Acenaphthene	220	U

MW 9/25/13

EPA SAMPLE NO.
LMR13-66-048

19

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17125

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17125-19

Sample wt/vol: 30.5 (g/mL) g Lab File ID: PJZKI10.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 25 Decanted: (Y/N) Date Received: 06/21/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/29/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/08/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
51-28-5	2,4-Dinitrophenol	440	U
100-02-7	4-Nitrophenol	440	U
132-64-9	Dibenzofuran	220	U
121-14-2	2,4-Dinitrotoluene	220	U
84-66-2	Diethylphthalate	220	U
86-73-7	Fluorene	220	U
7005-72-3	4-Chlorophenyl-phenylether	220	U
100-01-6	4-Nitroaniline	440	U
534-52-1	4,6-Dinitro-2-methylphenol	440	U
86-30-6	N-Nitrosodiphenylamin [1]	220	U
95-94-3	1,2,4,5-Tetrachlorobenzene	220	U
101-55-3	4-Bromophenyl-phenylether	220	U
118-74-1	Hexachlorobenzene	220	U
1912-24-9	Atrazine	220	U
87-86-5	Pentachlorophenol	440	U
85-01-8	Phenanthrene	28	J
120-12-7	Anthracene	220	U
86-74-8	Carbazole	220	U
84-74-2	Di-n-butylphthalate	15	J
206-44-0	Fluoranthene	35	J
129-00-0	Pyrene	40	J
85-68-7	Butylbenzylphthalate	29	J
91-94-1	3,3'-Dichlorobenzidine	220	U
56-55-3	Benzo(a)anthracene	19	J
218-01-9	Chrysene	26	J
117-81-7	Bis(2-ethylhexyl)phthalate	57	J
117-84-0	Di-n-octylphthalate	220	U
205-99-2	Benzo(b)fluoranthene	17	J
207-08-9	Benzo(k)fluoranthene	14	J
50-32-8	Benzo(a)pyrene	19	J
193-39-5	Indeno(1,2,3-cd)pyrene	220	U
53-70-3	Dibenzo(a,h)anthracene	220	U
191-24-2	Benzo(g,h,i)perylene	220	U
58-90-2	2,3,4,6-Tetrachlorophenol	220	U

[1] Cannot be separated from Diphenylamine

MW 9/25/13

EPA SAMPLE NO.
LMR13-58-024RE

20 1

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17125

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17125-20

Sample wt/vol: 30.2 (g/mL) g Lab File ID: RLA12.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 38 Decanted: (Y/N) Date Received: 06/21/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/29/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/13/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 3.3

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
100-52-7	Benzaldehyde	890	U
108-95-2	Phenol	890	U
111-44-4	Bis(2-chloroethyl)ether	890	U
95-57-8	2-Chlorophenol	890	U
95-48-7	2-Methylphenol	890	U
108-60-1	2,2'-Oxybis(1-chloropropane)	890	U
98-86-2	Acetophenone	890	U
106-44-5	4-Methylphenol	890	U
621-64-7	N-Nitroso-di-n-propylamine	890	U
67-72-1	Hexachloroethane	890	U
98-95-3	Nitrobenzene	890	U
78-59-1	Isophorone	890	U
88-75-5	2-Nitrophenol	890	U
105-67-9	2,4-Dimethylphenol	890	U
111-91-1	Bis(2-chloroethoxy)methane	890	U
120-83-2	2,4-Dichlorophenol	890	U
91-20-3	Naphthalene	300	J
106-47-8	4-Chloroaniline	890	U
87-68-3	Hexachlorobutadiene	890	U
105-60-2	Caprolactam	890	U
59-50-7	4-Chloro-3-methylphenol	890	U
91-57-6	2-Methylnaphthalene	890	U
77-47-4	Hexachlorocyclopentadiene	890	U
88-06-2	2,4,6-Trichlorophenol	890	U
95-95-4	2,4,5-Trichlorophenol	890	U
92-52-4	1,1'-Biphenyl	890	U
91-58-7	2-Chloronaphthalene	890	U
88-74-4	2-Nitroaniline	1700	U
131-11-3	Dimethylphthalate	890	U
606-20-2	2,6-Dinitrotoluene	890	U
208-96-8	Acenaphthylene	890	U
99-09-2	3-Nitroaniline	1700	U
83-32-9	Acenaphthene	330	J

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MW 9/25/13

EPA SAMPLE NO.
LMR13-58-024RE

20

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17125

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17125-20

Sample wt/vol: 30.2 (g/mL) g Lab File ID: RLA12.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 38 Decanted: (Y/N) Date Received: 06/21/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/29/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/13/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 3.3

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
51-28-5	2,4-Dinitrophenol	1700	U
100-02-7	4-Nitrophenol	1700	U
132-64-9	Dibenzofuran	890	U
121-14-2	2,4-Dinitrotoluene	890	U
84-66-2	Diethylphthalate	890	U
86-73-7	Fluorene	960	
7005-72-3	4-Chlorophenyl-phenylether	890	U
100-01-6	4-Nitroaniline	1700	U
534-52-1	4,6-Dinitro-2-methylphenol	1700	U
86-30-6	N-Nitrosodiphenylamin [1]	890	U
95-94-3	1,2,4,5-Tetrachlorobenzene	890	U
101-55-3	4-Bromophenyl-phenylether	890	U
118-74-1	Hexachlorobenzene	890	U
1912-24-9	Atrazine	890	U
87-86-5	Pentachlorophenol	1700	U
85-01-8	Phenanthrene	2000	
120-12-7	Anthracene	530	J
86-74-8	Carbazole	890	U
84-74-2	Di-n-butylphthalate	890	U
206-44-0	Fluoranthene	2700	
129-00-0	Pyrene	1900	
85-68-7	Butylbenzylphthalate	890	U
91-94-1	3,3'-Dichlorobenzidine	890	U
56-55-3	Benzo(a)anthracene	880	J
218-01-9	Chrysene	1300	
117-81-7	Bis(2-ethylhexyl)phthalate	11000	U
117-84-0	Di-n-octylphthalate	890	U
205-99-2	Benzo(b)fluoranthene	700	J
207-08-9	Benzo(k)fluoranthene	1100	
50-32-8	Benzo(a)pyrene	880	J
193-39-5	Indeno(1,2,3-cd)pyrene	320	J
53-70-3	Dibenzo(a,h)anthracene	180	J
191-24-2	Benzo(g,h,i)perylene	450	J
58-90-2	2,3,4,6-Tetrachlorophenol	890	U

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[1] Cannot be separated from Diphenylamine

NW 9/25/13

EPA SAMPLE NO.
LMR13-66-024FD

22

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17125

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17125-22

Sample wt/vol: 30.5 (g/mL) g Lab File ID: PJZKI12.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 27 Decanted: (Y/N) Date Received: 06/21/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/29/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/08/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
100-52-7	Benzaldehyde	33	J
108-95-2	Phenol	230	U
111-44-4	Bis(2-chloroethyl)ether	230	U
95-57-8	2-Chlorophenol	230	U
95-48-7	2-Methylphenol	230	U
108-60-1	2,2'-Oxybis(1-chloropropane)	230	U
98-86-2	Acetophenone	230	U
106-44-5	4-Methylphenol	230	U
621-64-7	N-Nitroso-di-n-propylamine	230	U
67-72-1	Hexachloroethane	230	U
98-95-3	Nitrobenzene	230	U
78-59-1	Isophorone	230	U
88-75-5	2-Nitrophenol	230	U
105-67-9	2,4-Dimethylphenol	230	U
111-91-1	Bis(2-chloroethoxy)methane	230	U
120-83-2	2,4-Dichlorophenol	230	U
91-20-3	Naphthalene	52	J
106-47-8	4-Chloroaniline	230	U
87-68-3	Hexachlorobutadiene	230	U
105-60-2	Caprolactam	230	U
59-50-7	4-Chloro-3-methylphenol	230	U
91-57-6	2-Methylnaphthalene	11	J
77-47-4	Hexachlorocyclopentadiene	230	~~U~~ UJ
88-06-2	2,4,6-Trichlorophenol	230	U
95-95-4	2,4,5-Trichlorophenol	230	U
92-52-4	1,1'-Biphenyl	230	U
91-58-7	2-Chloronaphthalene	230	U
88-74-4	2-Nitroaniline	440	U
131-11-3	Dimethylphthalate	230	U
606-20-2	2,6-Dinitrotoluene	230	U
208-96-8	Acenaphthylene	39	J
99-09-2	3-Nitroaniline	440	U
83-32-9	Acenaphthene	210	J

MW 9/25/13

EPA SAMPLE NO.
LMR13-66-024FD

22

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17125

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17125-22

Sample wt/vol: 30.5 (g/mL) g Lab File ID: PJZKI12.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 27 Decanted: (Y/N) Date Received: 06/21/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/29/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/08/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
51-28-5	2,4-Dinitrophenol	440	U
100-02-7	4-Nitrophenol	440	U
132-64-9	Dibenzofuran	25	J
121-14-2	2,4-Dinitrotoluene	230	U
84-66-2	Diethylphthalate	230	U
86-73-7	Fluorene	140	J
7005-72-3	4-Chlorophenyl-phenylether	230	U
100-01-6	4-Nitroaniline	440	U
534-52-1	4,6-Dinitro-2-methylphenol	440	U
86-30-6	N-Nitrosodiphenylamin [1]	230	U
95-94-3	1,2,4,5-Tetrachlorobenzene	230	U
101-55-3	4-Bromophenyl-phenylether	230	U
118-74-1	Hexachlorobenzene	230	U
1912-24-9	Atrazine	230	U
87-86-5	Pentachlorophenol	440	U
85-01-8	Phenanthrene	1400	
120-12-7	Anthracene	310	
86-74-8	Carbazole	16	J
84-74-2	Di-n-butylphthalate	9.8	J
206-44-0	Fluoranthene	1400	
129-00-0	Pyrene	1500	
85-68-7	Butylbenzylphthalate	230	U
91-94-1	3,3'-Dichlorobenzidine	230	U
56-55-3	Benzo(a)anthracene	660	
218-01-9	Chrysene	700	
117-81-7	Bis(2-ethylhexyl)phthalate	48	J
117-84-0	Di-n-octylphthalate	230	U
205-99-2	Benzo(b)fluoranthene	440	
207-08-9	Benzo(k)fluoranthene	440	
50-32-8	Benzo(a)pyrene	560	
193-39-5	Indeno(1,2,3-cd)pyrene	350	
53-70-3	Dibenzo(a,h)anthracene	130	J
191-24-2	Benzo(g,h,i)perylene	360	
58-90-2	2,3,4,6-Tetrachlorophenol	230	U

[1] Cannot be separated from Diphenylamine

NW 9/25/13

1F - FORM I SV-SIM

SEMIVOLATILE SIM ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-66-012

12

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: 1734.2 SDG No.: 17125

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17125-12

Sample wt/vol: 29.4 (g/mL) g Lab File ID: SERHT06.D

Extraction: (Type) SONC

% Moisture: 33 Decanted: (Y/N) Date Received: 06/21/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/29/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/08/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 6.7

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
91-20-3	Naphthalene	~~32~~	~~J B~~	U
90-12-0	1-Methylnaphthalene	11	J	
91-57-6	2-Methylnaphthalene	18	J	
208-96-8	Acenaphthylene	~~25~~	~~J B~~	U
83-32-9	Acenaphthene	110		
86-73-7	Fluorene	120		
85-01-8	Phenanthrene	500	~~E B~~	J
120-12-7	Anthracene	120		
206-44-0	Fluoranthene	470	~~E B~~	J
129-00-0	Pyrene	600	~~E B~~	J
56-55-3	Benzo(a)anthracene	340	~~B~~	
218-01-9	Chrysene	390	~~E B~~	J
205-99-2	Benzo(b)fluoranthene	250	~~B~~	
207-08-9	Benzo(k)fluoranthene	200	~~B~~	
192-97-2	Benzo(e)pyrene	260	~~B~~	
50-32-8	Benzo(a)pyrene	260	~~B~~	
198-55-0	Perylene	260	~~B~~	
193-39-5	Indeno(1,2,3-cd)pyrene	160	~~B~~	
53-70-3	Dibenzo(a,h)anthracene	69	~~B~~	
191-24-2	Benzo(g,h,i)perylene	200	~~B~~	
C1NAPH	C1-Naphthalenes	20	J	
C2NAPH	C2-Naphthalenes	170	J	
C3NAPH	C3-Naphthalenes	490	J	
C4NAPH	C4-Naphthalenes	380	J	
C1FLUOR	C1 Fluorenes	48	J	
C2FLUOR	C2 Fluorenes	78	J	
C3FLUOR	C3 Fluorenes	150	J	
C1PHAN	C1-Phenanthrenes/Anthracenes	570	J	
C2PHAN	C2-Phenanthrenes/Anthracenes	430	J	
C3PHAN	C3-Phenanthrenes/Anthracenes	450	J	
C4PHAN	C4-Phenanthrenes/Anthracenes	320	J	
C1FLPY	C1-Fluoranthenes/Pyrenes	~~560~~	~~B J~~	U
C2FLPY	C2-Fluoranthenes/Pyrenes	440	J	
C3FLPY	C3-Fluoranthenes/Pyrenes	290	J	
C1CHRYS	C1 Chrysenes	~~490~~	~~B J~~	U
C2CHRYS	C2 Chrysenes	430	J	
C3CHRYS	C3 Chrysenes	250	J	
C4CHRYS	C4 Chrysenes	100	J	

MW 9/25/13

1F - FORM I SV-SIM

SEMIVOLATILE SIM ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-66-012

12

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: 1734.2 SDG No.: 17125

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17125-12

Sample wt/vol: 29.4 (g/mL) g Lab File ID: SERHT06.D

Extraction: (Type) SONC

% Moisture: 33 Decanted: (Y/N) Date Received: 06/21/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/29/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/08/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 6.7

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
TPPAH	Total 16 PPAH	3900	~~B~~ J
TPAH	Total PAH	10000	~~B~~ J

MW 9/25/13

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-69-024FD

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17125

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17125-1

Sample wt/vol: 30.7 (g/mL) g Lab File ID: 0825AHGSOM03.D

% Moisture: 47 Decanted: (Y/N) Date Received: 06/21/2013

Extraction: (Type) SONC Date Extracted: 06/27/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 08/03/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 5.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	300	U
11104-28-2	Aroclor-1221	300	U
11141-16-5	Aroclor-1232	300	U
53469-21-9	Aroclor-1242	300	U
12672-29-6	Aroclor-1248	64	J
11097-69-1	Aroclor-1254	59	J
11096-82-5	Aroclor-1260	15	J
37324-23-5	Aroclor-1262	300	U
11100-14-4	Aroclor-1268	300	U

MW 9/25/13

1H - FORM I ARO
AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-69-096

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678 2

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17125

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17125-2

Sample wt/vol: 30.3 (g/mL) g Lab File ID: 0825AHGSOM04.D

% Moisture: 41 Decanted: (Y/N) Date Received: 06/21/2013

Extraction: (Type) SONC Date Extracted: 06/27/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 08/03/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 5.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	280	U
11104-28-2	Aroclor-1221	280	U
11141-16-5	Aroclor-1232	280	U
53469-21-9	Aroclor-1242	280	U
12672-29-6	Aroclor-1248	510	
11097-69-1	Aroclor-1254	260	J
11096-82-5	Aroclor-1260	57	~~J P~~ J
37324-23-5	Aroclor-1262	280	U
11100-14-4	Aroclor-1268	280	U

MW 9/25/13

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-69-120

3

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17125

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17125-3

Sample wt/vol: 29.3 (g/mL) g Lab File ID: 0825AHGSOM05.D

% Moisture: 41 Decanted: (Y/N) Date Received: 06/21/2013

Extraction: (Type) SONC Date Extracted: 06/27/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 08/03/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 5.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	290	U
11104-28-2	Aroclor-1221	290	U
11141-16-5	Aroclor-1232	290	U
53469-21-9	Aroclor-1242	290	U
12672-29-6	Aroclor-1248	330	
11097-69-1	Aroclor-1254	200	J
11096-82-5	Aroclor-1260	40	J
37324-23-5	Aroclor-1262	290	U
11100-14-4	Aroclor-1268	290	U

MW 9/25/13

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-61-012

4

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17125

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17125-4

Sample wt/vol: 29.7 (g/mL) g Lab File ID: 0825AHGSOM06.D

% Moisture: 57 Decanted: (Y/N) Date Received: 06/21/2013

Extraction: (Type) SONC Date Extracted: 06/27/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 08/03/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 5.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	390	U
11104-28-2	Aroclor-1221	390	U
11141-16-5	Aroclor-1232	390	U
53469-21-9	Aroclor-1242	390	U
12672-29-6	Aroclor-1248	50	J
11097-69-1	Aroclor-1254	38	J
11096-82-5	Aroclor-1260	12	J
37324-23-5	Aroclor-1262	390	U
11100-14-4	Aroclor-1268	390	U

MW 9/25/13

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-61-048

5

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17125

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17125-5

Sample wt/vol: 30.6 (g/mL) g Lab File ID: 0825AHGSOM07.D

% Moisture: 49 Decanted: (Y/N) Date Received: 06/21/2013

Extraction: (Type) SONC Date Extracted: 06/27/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 08/03/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 5.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	320	U
11104-28-2	Aroclor-1221	320	U
11141-16-5	Aroclor-1232	320	U
53469-21-9	Aroclor-1242	320	U
12672-29-6	Aroclor-1248	210	J
11097-69-1	Aroclor-1254	120	J
11096-82-5	Aroclor-1260	29	~~J P~~ J
37324-23-5	Aroclor-1262	320	U
11100-14-4	Aroclor-1268	320	U

NW 9/25/13

1H - FORM I ARO
AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-61-096

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678 6

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17125

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17125-6

Sample wt/vol: 30.3 (g/mL) g Lab File ID: 0825AHGSOM10.D

% Moisture: 45 Decanted: (Y/N) Date Received: 06/21/2013

Extraction: (Type) SONC Date Extracted: 06/27/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 08/03/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 5.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	290	U
11104-28-2	Aroclor-1221	290	U
11141-16-5	Aroclor-1232	290	U
53469-21-9	Aroclor-1242	290	U
12672-29-6	Aroclor-1248	110	J
11097-69-1	Aroclor-1254	69	J
11096-82-5	Aroclor-1260	18	~~J P~~ J
37324-23-5	Aroclor-1262	290	U
11100-14-4	Aroclor-1268	290	U

MW 9/25/13

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-65-048

7

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17125

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17125-7

Sample wt/vol: 29.7 (g/mL) g Lab File ID: 0825AHGSOM11.D

% Moisture: 56 Decanted: (Y/N) Date Received: 06/21/2013

Extraction: (Type) SONC Date Extracted: 06/27/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 08/03/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 5.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	380	U
11104-28-2	Aroclor-1221	380	U
11141-16-5	Aroclor-1232	380	U
53469-21-9	Aroclor-1242	380	U
12672-29-6	Aroclor-1248	380	U
11097-69-1	Aroclor-1254	380	U
11096-82-5	Aroclor-1260	380	U
37324-23-5	Aroclor-1262	380	U
11100-14-4	Aroclor-1268	380	U

MW 9/25/13

1H - FORM I ARO
AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-65-072

8

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17125

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17125-8

Sample wt/vol: 30.6 (g/mL) g Lab File ID: 0825AHGSOM12.D

% Moisture: 39 Decanted: (Y/N) Date Received: 06/21/2013

Extraction: (Type) SONC Date Extracted: 06/27/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 08/03/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 5.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	260	U
11104-28-2	Aroclor-1221	260	U
11141-16-5	Aroclor-1232	260	U
53469-21-9	Aroclor-1242	260	U
12672-29-6	Aroclor-1248	350	
11097-69-1	Aroclor-1254	170	J
11096-82-5	Aroclor-1260	31	J
37324-23-5	Aroclor-1262	260	U
11100-14-4	Aroclor-1268	260	U

MW 9/25/13

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-61-024

9

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17125

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17125-9

Sample wt/vol: 29.8 (g/mL) g Lab File ID: 0825AHGSOM13.D

% Moisture: 50 Decanted: (Y/N) Date Received: 06/21/2013

Extraction: (Type) SONC Date Extracted: 06/27/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 08/04/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 5.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	340	U
11104-28-2	Aroclor-1221	340	U
11141-16-5	Aroclor-1232	340	U
53469-21-9	Aroclor-1242	340	U
12672-29-6	Aroclor-1248	35	J
11097-69-1	Aroclor-1254	25	J
11096-82-5	Aroclor-1260	7.1	~~J P~~ J
37324-23-5	Aroclor-1262	340	U
11100-14-4	Aroclor-1268	340	U

MW 9/25/13

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-61-072

10

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17125

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17125-10

Sample wt/vol: 29.3 (g/mL) g Lab File ID: 0825AHGSOM14.D

% Moisture: 48 Decanted: (Y/N) Date Received: 06/21/2013

Extraction: (Type) SONC Date Extracted: 06/27/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 08/04/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 5.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	320	U
11104-28-2	Aroclor-1221	320	U
11141-16-5	Aroclor-1232	320	U
53469-21-9	Aroclor-1242	320	U
12672-29-6	Aroclor-1248	87	J
11097-69-1	Aroclor-1254	58	J
11096-82-5	Aroclor-1260	15	~~J P~~ J
37324-23-5	Aroclor-1262	320	U
11100-14-4	Aroclor-1268	320	U

NW 9/25/13

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-61-120

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678 11

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17125

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17125-11

Sample wt/vol: 30.4 (g/mL) g Lab File ID: 0825AHGSOM15.D

% Moisture: 43 Decanted: (Y/N) Date Received: 06/21/2013

Extraction: (Type) SONC Date Extracted: 06/27/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 08/04/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 5.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	280	U
11104-28-2	Aroclor-1221	280	U
11141-16-5	Aroclor-1232	280	U
53469-21-9	Aroclor-1242	280	U
12672-29-6	Aroclor-1248	190	J
11097-69-1	Aroclor-1254	110	J
11096-82-5	Aroclor-1260	27	~~J P~~ J
37324-23-5	Aroclor-1262	280	U
11100-14-4	Aroclor-1268	280	U

NW 9/25/13

1H - FORM I ARO
AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-66-012

12

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17125

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17125-12

Sample wt/vol: 29.3 (g/mL) g Lab File ID: 0825AHGSOM16.D

% Moisture: 33 Decanted: (Y/N) Date Received: 06/21/2013

Extraction: (Type) SONC Date Extracted: 06/27/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 08/04/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 5.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	250	U
11104-28-2	Aroclor-1221	250	U
11141-16-5	Aroclor-1232	250	U
53469-21-9	Aroclor-1242	250	U
12672-29-6	Aroclor-1248	250	U
11097-69-1	Aroclor-1254	250	U
11096-82-5	Aroclor-1260	250	U
37324-23-5	Aroclor-1262	250	U
11100-14-4	Aroclor-1268	250	U

MW 9/25/13

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-66-024

13

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17125

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17125-13

Sample wt/vol: 29.8 (g/mL) g Lab File ID: 0825AHGSOM17.D

% Moisture: 28 Decanted: (Y/N) Date Received: 06/21/2013

Extraction: (Type) SONC Date Extracted: 06/27/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 08/04/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 5.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	230	U
11104-28-2	Aroclor-1221	230	U
11141-16-5	Aroclor-1232	230	U
53469-21-9	Aroclor-1242	230	U
12672-29-6	Aroclor-1248	230	U
11097-69-1	Aroclor-1254	230	U
11096-82-5	Aroclor-1260	230	U
37324-23-5	Aroclor-1262	230	U
11100-14-4	Aroclor-1268	230	U

MW 9/25/13

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-60-012

14

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17125

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17125-14

Sample wt/vol: 30.2 (g/mL) g Lab File ID: 0825AHISOM10.D

% Moisture: 55 Decanted: (Y/N) Date Received: 06/21/2013

Extraction: (Type) SONC Date Extracted: 06/27/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 08/04/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 5.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	360	U
11104-28-2	Aroclor-1221	360	U
11141-16-5	Aroclor-1232	360	U
53469-21-9	Aroclor-1242	31	J
12672-29-6	Aroclor-1248	360	U
11097-69-1	Aroclor-1254	30	J
11096-82-5	Aroclor-1260	360	U
37324-23-5	Aroclor-1262	360	U
11100-14-4	Aroclor-1268	360	U

MW 9/25/13

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-60-024

15

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17125

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17125-15

Sample wt/vol: 30.8 (g/mL) g Lab File ID: 0825AHISOM11.D

% Moisture: 50 Decanted: (Y/N) Date Received: 06/21/2013

Extraction: (Type) SONC Date Extracted: 06/27/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 08/04/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 5.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	320	U
11104-28-2	Aroclor-1221	320	U
11141-16-5	Aroclor-1232	320	U
53469-21-9	Aroclor-1242	26	~~J P~~ J
12672-29-6	Aroclor-1248	320	U
11097-69-1	Aroclor-1254	32	J
11096-82-5	Aroclor-1260	9.4	J
37324-23-5	Aroclor-1262	320	U
11100-14-4	Aroclor-1268	320	U

NW 9/25/13

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-60-048

16

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17125

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17125-16

Sample wt/vol: 29.9 (g/mL) g Lab File ID: 0825AHISOM12.D

% Moisture: 48 Decanted: (Y/N) Date Received: 06/21/2013

Extraction: (Type) SONC Date Extracted: 06/27/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 08/04/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 5.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	320	U
11104-28-2	Aroclor-1221	320	U
11141-16-5	Aroclor-1232	320	U
53469-21-9	Aroclor-1242	35	J
12672-29-6	Aroclor-1248	320	U
11097-69-1	Aroclor-1254	37	J
11096-82-5	Aroclor-1260	11	J
37324-23-5	Aroclor-1262	320	U
11100-14-4	Aroclor-1268	320	U

MW 9/25/13

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-60-072

17

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17125

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17125-17

Sample wt/vol: 30.7 (g/mL) g Lab File ID: 0825AHISOM13.D

% Moisture: 45 Decanted: (Y/N) Date Received: 06/21/2013

Extraction: (Type) SONC Date Extracted: 06/27/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 08/04/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 5.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	290	U
11104-28-2	Aroclor-1221	290	U
11141-16-5	Aroclor-1232	290	U
53469-21-9	Aroclor-1242	53	J
12672-29-6	Aroclor-1248	290	U
11097-69-1	Aroclor-1254	50	J
11096-82-5	Aroclor-1260	14	J
37324-23-5	Aroclor-1262	290	U
11100-14-4	Aroclor-1268	290	U

MW 9/25/13

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-60-096

18

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17125

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17125-18

Sample wt/vol: 29.9 (g/mL) g Lab File ID: 0825AHISOM14.D

% Moisture: 43 Decanted: (Y/N) Date Received: 06/21/2013

Extraction: (Type) SONC Date Extracted: 06/27/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 08/04/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 5.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	290	U
11104-28-2	Aroclor-1221	290	U
11141-16-5	Aroclor-1232	290	U
53469-21-9	Aroclor-1242	50	J
12672-29-6	Aroclor-1248	290	U
11097-69-1	Aroclor-1254	53	J
11096-82-5	Aroclor-1260	16	J
37324-23-5	Aroclor-1262	290	U
11100-14-4	Aroclor-1268	290	U

MW 9/25/13

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-66-048

19

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17125

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17125-19

Sample wt/vol: 30.5 (g/mL) g Lab File ID: 0825AHISOM15.D

% Moisture: 25 Decanted: (Y/N) Date Received: 06/21/2013

Extraction: (Type) SONC Date Extracted: 06/27/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 08/04/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 5.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	220	U
11104-28-2	Aroclor-1221	220	U
11141-16-5	Aroclor-1232	220	U
53469-21-9	Aroclor-1242	220	U
12672-29-6	Aroclor-1248	220	U
11097-69-1	Aroclor-1254	220	U
11096-82-5	Aroclor-1260	220	U
37324-23-5	Aroclor-1262	220	U
11100-14-4	Aroclor-1268	220	U

MW 9/25/13

1H - FORM I ARO
AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-58-024

20

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17125

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17125-20

Sample wt/vol: 30.1 (g/mL) g Lab File ID: 0825AHISOM09.D

% Moisture: 38 Decanted: (Y/N) Date Received: 06/21/2013

Extraction: (Type) SONC Date Extracted: 06/27/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 08/04/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 5.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	260	U
11104-28-2	Aroclor-1221	260	U
11141-16-5	Aroclor-1232	260	U
53469-21-9	Aroclor-1242	840	
12672-29-6	Aroclor-1248	260	U
11097-69-1	Aroclor-1254	530	
11096-82-5	Aroclor-1260	110	~~J P~~ J
37324-23-5	Aroclor-1262	260	U
11100-14-4	Aroclor-1268	260	U

NW 9/25/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-69-024FD

1

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17125

Matrix: SED Lab Sample Id: 200-17125-1

% Solids: 53.1 Date Received: 06/21/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	7.3			P
7440-43-9	Cadmium	1.0	J	~~E~~	P
7440-47-3	Chromium	28.1	↓	~~E~~	P
7440-50-8	Copper	30.8	↓	~~E~~	P
7439-92-1	Lead	25.1			P
7440-02-0	Nickel	32.4	J	~~E~~	P
7440-66-6	Zinc	129	J	~~E~~	P

Color Before: GRAY Clarity Before: Texture: FINE

Color After: TAN Clarity After: CLOUDY Artifacts:

Comments:

NW 9/25/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-69-024FD

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678
Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 17125
Matrix: SED | Lab Sample Id: 200-17125-1
% Solids: 53.1 | Date Received: 06/21/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.068	J		CV

Color Before: GRAY | Clarity Before: CLOUDY | Texture: FINE
Color After: COLORLESS | Clarity After: CLEAR | Artifacts:
Comments:

MW 9/25/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-69-096
2

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678
Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 17125
Matrix: SED | Lab Sample Id: 200-17125-2
% Solids: 58.9 | Date Received: 06/21/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	9.1			P
7440-43-9	Cadmium	3.2	J	~~E~~	P
7440-47-3	Chromium	54.7	↓	~~E~~	P
7440-50-8	Copper	42.1	↓	~~E~~	P
7439-92-1	Lead	48.4			P
7440-02-0	Nickel	43.0	J	~~E~~	P
7440-66-6	Zinc	172	J	~~E~~	P

Color Before: GRAY | Clarity Before: | Texture: FINE
Color After: TAN | Clarity After: CLOUDY | Artifacts:
Comments:

NW 9/25/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-69-096

2

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17125

Matrix: SED Lab Sample Id: 200-17125-2

% Solids: 58.9 Date Received: 06/21/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.20			CV

Color Before: GRAY Clarity Before: CLOUDY Texture: FINE

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

MW 9/25/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-69-120

3

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678
Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 17125
Matrix: SED | Lab Sample Id: 200-17125-3
% Solids: 59.1 | Date Received: 06/21/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	9.4			P
7440-43-9	Cadmium	3.6	J	~~E~~	P
7440-47-3	Chromium	53.7	↓	~~E~~	P
7440-50-8	Copper	42.0	↓	~~E~~	P
7439-92-1	Lead	46.8			P
7440-02-0	Nickel	43.7	J	~~E~~	P
7440-66-6	Zinc	169	J	~~E~~	P

Color Before: GRAY | Clarity Before: | Texture: FINE
Color After: TAN | Clarity After: CLOUDY | Artifacts:
Comments:

MW 9/25/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-69-120

3

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17125

Matrix: SED Lab Sample Id: 200-17125-3

% Solids: 59.1 Date Received: 06/21/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.16			CV

Color Before: GRAY Clarity Before: CLOUDY Texture: FINE

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

MW 9/25/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-61-012

4

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678
Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 17125
Matrix: SED | Lab Sample Id: 200-17125-4
% Solids: 42.6 | Date Received: 06/21/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	6.9			P
7440-43-9	Cadmium	0.85	J		P
7440-47-3	Chromium	27.4	↓		P
7440-50-8	Copper	30.1	↓		P
7439-92-1	Lead	23.5			P
7440-02-0	Nickel	32.0	J		P
7440-66-6	Zinc	124	J		P

Color Before: GRAY | Clarity Before: | Texture: FINE
Color After: TAN | Clarity After: CLOUDY | Artifacts:
Comments:

MW 9/25/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-61-012

4

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678

Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 17125

Matrix: SED | Lab Sample Id: 200-17125-4

% Solids: 42.6 | Date Received: 06/21/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.075	J		CV

Color Before: GRAY | Clarity Before: CLOUDY | Texture: FINE

Color After: COLORLESS | Clarity After: CLEAR | Artifacts:

Comments:

MW 9/25/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-61-048

5

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678
Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 17125
Matrix: SED | Lab Sample Id: 200-17125-5
% Solids: 51.0 | Date Received: 06/21/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	10			P
7440-43-9	Cadmium	1.6	J	~~E~~	P
7440-47-3	Chromium	38.9	↓	~~E~~	P
7440-50-8	Copper	37.3	↓	~~E~~	P
7439-92-1	Lead	36.7			P
7440-02-0	Nickel	40.1	J	~~E~~	P
7440-66-6	Zinc	189	J	~~E~~	P

Color Before: GRAY | Clarity Before: | Texture: FINE
Color After: TAN | Clarity After: CLOUDY | Artifacts:
Comments:

NW 9/25/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-61-048

5

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678

Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 17125

Matrix: SED | Lab Sample Id: 200-17125-5

% Solids: 51.0 | Date Received: 06/21/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.095	J		CV

Color Before: GRAY | Clarity Before: CLOUDY | Texture: FINE

Color After: COLORLESS | Clarity After: CLEAR | Artifacts:

Comments:

MW 9/25/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-61-096

6

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678
Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 17125
Matrix: SED | Lab Sample Id: 200-17125-6
% Solids: 55.5 | Date Received: 06/21/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	9.7			P
7440-43-9	Cadmium	1.9	J	~~E~~	P
7440-47-3	Chromium	45.1	↓	~~E~~	P
7440-50-8	Copper	36.7	↓	~~E~~	P
7439-92-1	Lead	40.0			P
7440-02-0	Nickel	41.5	J	~~E~~	P
7440-66-6	Zinc	161	J	~~E~~	P

Color Before: GRAY | Clarity Before: | Texture: FINE
Color After: TAN | Clarity After: CLOUDY | Artifacts:
Comments:

MW 9/25/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-61-096

6

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678
Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 17125
Matrix: SED | Lab Sample Id: 200-17125-6
% Solids: 55.5 | Date Received: 06/21/2013

Concentration Units (**ug/L, ug,** or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.15	J		CV

Color Before: GRAY | Clarity Before: CLOUDY | Texture: FINE
Color After: COLORLESS | Clarity After: CLEAR | Artifacts:
Comments:

NW 9/25/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-65-048

7

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17125

Matrix: SED Lab Sample Id: 200-17125-7

% Solids: 43.8 Date Received: 06/21/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	8.0			P
7440-43-9	Cadmium	0.94	J	~~B~~	P
7440-47-3	Chromium	28.5	↓	~~B~~	P
7440-50-8	Copper	31.9	↓	~~B~~	P
7439-92-1	Lead	25.4			P
7440-02-0	Nickel	33.7	J	~~E~~	P
7440-66-6	Zinc	134	J	~~E~~	P

Color Before: GRAY Clarity Before: Texture: FINE

Color After: TAN Clarity After: CLOUDY Artifacts:

Comments:

NW 9/25/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-65-048

7

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678
Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 17125
Matrix: SED | Lab Sample Id: 200-17125-7
% Solids: 43.8 | Date Received: 06/21/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.068	J		CV

Color Before: GRAY | Clarity Before: CLOUDY | Texture: FINE
Color After: COLORLESS | Clarity After: CLEAR | Artifacts:
Comments:

MW 9/25/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-65-072

8

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678
Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 17125
Matrix: SED | Lab Sample Id: 200-17125-8
% Solids: 61.4 | Date Received: 06/21/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	8.0			P
7440-43-9	Cadmium	2.0	J	~~E~~	P
7440-47-3	Chromium	35.9	↓	~~E~~	P
7440-50-8	Copper	33.2	↓	~~E~~	P
7439-92-1	Lead	35.4			P
7440-02-0	Nickel	34.9	J	~~E~~	P
7440-66-6	Zinc	135	J	~~E~~	P

Color Before: GRAY | Clarity Before: | Texture: FINE
Color After: TAN | Clarity After: CLOUDY | Artifacts:
Comments:

MW 9/25/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-65-072

8

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17125

Matrix: SED Lab Sample Id: 200-17125-8

% Solids: 61.4 Date Received: 06/21/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.096	J		CV

Color Before: GRAY Clarity Before: CLOUDY Texture: FINE

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

MW 9/25/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-61-024

9

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678
Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 17125
Matrix: SED | Lab Sample Id: 200-17125-9
% Solids: 49.6 | Date Received: 06/21/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	8.3			P
7440-43-9	Cadmium	1.0	J	~~E~~	P
7440-47-3	Chromium	31.0	↓	~~E~~	P
7440-50-8	Copper	33.3	↓	~~E~~	P
7439-92-1	Lead	28.2			P
7440-02-0	Nickel	35.7	J	~~E~~	P
7440-66-6	Zinc	143	J	~~E~~	P

Color Before: GRAY | Clarity Before: | Texture: FINE
Color After: TAN | Clarity After: CLOUDY | Artifacts:
Comments:

MW 9/25/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-61-024

9

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678
Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 17125
Matrix: SED | Lab Sample Id: 200-17125-9
% Solids: 49.6 | Date Received: 06/21/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.11	J		CV

Color Before: GRAY | Clarity Before: CLOUDY | Texture: FINE
Color After: COLORLESS | Clarity After: CLEAR | Artifacts:
Comments:

NW 9/25/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-61-072

10

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678
Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 17125
Matrix: SED | Lab Sample Id: 200-17125-10
% Solids: 52.2 | Date Received: 06/21/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	10.5			P
7440-43-9	Cadmium	1.9	J	~~E~~	P
7440-47-3	Chromium	47.2	↓	~~E~~	P
7440-50-8	Copper	41.3	↓	~~E~~	P
7439-92-1	Lead	41.8			P
7440-02-0	Nickel	43.7	J	~~E~~	P
7440-66-6	Zinc	221	J	~~E~~	P

Color Before: GRAY | Clarity Before: | Texture: FINE
Color After: TAN | Clarity After: CLOUDY | Artifacts:
Comments:

MW 9/25/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-61-072

10

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678

Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 17125

Matrix: SED | Lab Sample Id: 200-17125-10

% Solids: 52.2 | Date Received: 06/21/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.19			CV

Color Before: GRAY | Clarity Before: CLOUDY | Texture: FINE

Color After: COLORLESS | Clarity After: CLEAR | Artifacts:

Comments:

MW 9/25/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-61-120

11

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678
Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 17125
Matrix: SED | Lab Sample Id: 200-17125-11
% Solids: 57.2 | Date Received: 06/21/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	10.1			P
7440-43-9	Cadmium	2.6	J	~~E~~	P
7440-47-3	Chromium	45.0	↓	~~E~~	P
7440-50-8	Copper	40.9	↓	~~E~~	P
7439-92-1	Lead	48.1			P
7440-02-0	Nickel	42.8	J	~~E~~	P
7440-66-6	Zinc	176	J	~~E~~	P

Color Before: GRAY | Clarity Before: | Texture: FINE
Color After: TAN | Clarity After: CLOUDY | Artifacts:
Comments:

MW 9/25/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-61-120

11

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678
Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 17125
Matrix: SED | Lab Sample Id: 200-17125-11
% Solids: 57.2 | Date Received: 06/21/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.17			CV

Color Before: GRAY | Clarity Before: CLOUDY | Texture: FINE
Color After: COLORLESS | Clarity After: CLEAR | Artifacts:
Comments:

MW 9/25/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-66-012
12

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678
Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 17125
Matrix: SED | Lab Sample Id: 200-17125-12
% Solids: 66.6 | Date Received: 06/21/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	6.7			P
7440-43-9	Cadmium	0.67	J	~~E~~	P
7440-47-3	Chromium	19.0	↓	~~E~~	P
7440-50-8	Copper	21.3	↓	~~E~~	P
7439-92-1	Lead	30.0			P
7440-02-0	Nickel	23.0	J	~~E~~	P
7440-66-6	Zinc	128	J	~~E~~	P

Color Before: GRAY | Clarity Before: | Texture: FINE
Color After: TAN | Clarity After: CLOUDY | Artifacts:
Comments:

MW 9/25/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-66-012

12

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678

Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 17125

Matrix: SED | Lab Sample Id: 200-17125-12

% Solids: 66.6 | Date Received: 06/21/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.12	J		CV

Color Before: GRAY | Clarity Before: CLOUDY | Texture: FINE

Color After: COLORLESS | Clarity After: CLEAR | Artifacts:

Comments:

MH 9/25/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-66-024

13

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678
Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 17125
Matrix: SED | Lab Sample Id: 200-17125-13
% Solids: 71.8 | Date Received: 06/21/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	6.6			P
7440-43-9	Cadmium	0.36	J		P
7440-47-3	Chromium	11.7	↓		P
7440-50-8	Copper	14.4	↓		P
7439-92-1	Lead	37.9			P
7440-02-0	Nickel	18.1	J		P
7440-66-6	Zinc	54.2	J		P

Color Before: GRAY | Clarity Before: | Texture: FINE
Color After: TAN | Clarity After: CLOUDY | Artifacts:
Comments:

MW 9/25/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-66-024

13

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17125

Matrix: SED Lab Sample Id: 200-17125-13

% Solids: 71.8 Date Received: 06/21/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.048	J		CV

Color Before: GRAY Clarity Before: CLOUDY Texture: FINE

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

MW 9/25/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-60-012

14

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678
Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 17125
Matrix: SED | Lab Sample Id: 200-17125-14
% Solids: 45.2 | Date Received: 06/21/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	7.2			P
7440-43-9	Cadmium	0.83	J	~~E~~	P
7440-47-3	Chromium	26.3	↓	~~E~~	P
7440-50-8	Copper	28.6	↓	~~E~~	P
7439-92-1	Lead	23.1			P
7440-02-0	Nickel	31.3	J	~~E~~	P
7440-66-6	Zinc	123	J	~~E~~	P

Color Before: GRAY | Clarity Before: | Texture: FINE
Color After: TAN | Clarity After: CLOUDY | Artifacts:
Comments:

NW 9/25/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-60-012

14

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678

Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 17125

Matrix: SED | Lab Sample Id: 200-17125-14

% Solids: 45.2 | Date Received: 06/21/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.047	J		CV

Color Before: GRAY | Clarity Before: CLOUDY | Texture: FINE

Color After: COLORLESS | Clarity After: CLEAR | Artifacts:

Comments:

MW 9/25/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-60-024

15

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678
Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 17125
Matrix: SED | Lab Sample Id: 200-17125-15
% Solids: 49.8 | Date Received: 06/21/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	8.2			P
7440-43-9	Cadmium	0.90	J	~~B~~	P
7440-47-3	Chromium	29.7	↓	~~E~~	P
7440-50-8	Copper	31.5	↓	~~E~~	P
7439-92-1	Lead	24.7			P
7440-02-0	Nickel	35.4	J	~~E~~	P
7440-66-6	Zinc	135	J	~~E~~	P

Color Before: GRAY | Clarity Before: | Texture: FINE
Color After: TAN | Clarity After: CLOUDY | Artifacts:
Comments:

MW 9/25/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-60-024

15

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17125

Matrix: SED Lab Sample Id: 200-17125-15

% Solids: 49.8 Date Received: 06/21/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.097	J		CV

Color Before: GRAY Clarity Before: CLOUDY Texture: FINE

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

MW 9/25/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-60-048

16

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678

Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 17125

Matrix: SED | Lab Sample Id: 200-17125-16

% Solids: 52.2 | Date Received: 06/21/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	7.9			P
7440-43-9	Cadmium	0.99	J	~~E~~	P
7440-47-3	Chromium	28.5	↓	~~E~~	P
7440-50-8	Copper	31.4	↓	~~E~~	P
7439-92-1	Lead	25.8			P
7440-02-0	Nickel	34.5	J	~~E~~	P
7440-66-6	Zinc	135	J	~~E~~	P

Color Before: GRAY | Clarity Before: | Texture: FINE

Color After: TAN | Clarity After: CLOUDY | Artifacts:

Comments:

MW 9/25/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-60-048

16

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678
Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17125
Matrix: SED Lab Sample Id: 200-17125-16
% Solids: 52.2 Date Received: 06/21/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.11	J		CV

Color Before: GRAY Clarity Before: CLOUDY Texture: FINE
Color After: COLORLESS Clarity After: CLEAR Artifacts:
Comments:

MW 9/25/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-60-072

17

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17125

Matrix: SED Lab Sample Id: 200-17125-17

% Solids: 55.0 Date Received: 06/21/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	9.2			P
7440-43-9	Cadmium	1.2	J	~~E~~	P
7440-47-3	Chromium	34.3	↓	~~E~~	P
7440-50-8	Copper	34.1	↓	~~E~~	P
7439-92-1	Lead	35.3			P
7440-02-0	Nickel	38.2	J	~~E~~	P
7440-66-6	Zinc	219	J	~~E~~	P

Color Before: GRAY Clarity Before: Texture: FINE

Color After: TAN Clarity After: CLOUDY Artifacts:

Comments:

MW 9/25/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-60-072

17

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17125

Matrix: SED Lab Sample Id: 200-17125-17

% Solids: 55.0 Date Received: 06/21/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.17			CV

Color Before: GRAY Clarity Before: CLOUDY Texture: FINE

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

MW 9/25/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-60-096

18

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17125

Matrix: SED Lab Sample Id: 200-17125-18

% Solids: 57.4 Date Received: 06/21/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	8.7			P
7440-43-9	Cadmium	1.3	J	~~E~~	P
7440-47-3	Chromium	33.3	↓	~~E~~	P
7440-50-8	Copper	31.6	↓	~~E~~	P
7439-92-1	Lead	34.6			P
7440-02-0	Nickel	36.6	J	~~E~~	P
7440-66-6	Zinc	277	J	~~E~~	P

Color Before: GRAY Clarity Before: Texture: FINE

Color After: TAN Clarity After: CLOUDY Artifacts:

Comments:

NW 9/25/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-60-096

18

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17125

Matrix: SED Lab Sample Id: 200-17125-18

% Solids: 57.4 Date Received: 06/21/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.086	J		CV

Color Before: GRAY Clarity Before: CLOUDY Texture: FINE

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

MW 9/25/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-66-048

19

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678
Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17125
Matrix: SED Lab Sample Id: 200-17125-19
% Solids: 74.7 Date Received: 06/21/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	8.0			P
7440-43-9	Cadmium	0.26	J	~~E~~	P
7440-47-3	Chromium	18.5	↓	~~E~~	P
7440-50-8	Copper	19.1	↓	~~E~~	P
7439-92-1	Lead	11.4			P
7440-02-0	Nickel	27.5	J	~~E~~	P
7440-66-6	Zinc	56.4	J	~~E~~	P

Color Before: GRAY Clarity Before: Texture: FINE
Color After: TAN Clarity After: CLOUDY Artifacts:
Comments:

MW 9/25/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-66-048

19

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17125

Matrix: SED Lab Sample Id: 200-17125-19

% Solids: 74.7 Date Received: 06/21/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.030	J		CV

Color Before: GRAY Clarity Before: CLOUDY Texture: FINE

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

MW 9/25/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-58-024

20

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678
Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 17125
Matrix: SED | Lab Sample Id: 200-17125-20
% Solids: 62.3 | Date Received: 06/21/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	12.0			P
7440-43-9	Cadmium	4.7	J	~~E~~	P
7440-47-3	Chromium	93.4	↓	~~E~~	P
7440-50-8	Copper	67.2	↓	~~E~~	P
7439-92-1	Lead	77.5			P
7440-02-0	Nickel	50.8	J	~~E~~	P
7440-66-6	Zinc	247	J	~~E~~	P

Color Before: GRAY | Clarity Before: | Texture: FINE
Color After: TAN | Clarity After: CLOUDY | Artifacts:
Comments:

MW 9/25/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-58-024

20

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17125

Matrix: SED Lab Sample Id: 200-17125-20

% Solids: 62.3 Date Received: 06/21/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.24			CV

Color Before: GRAY Clarity Before: CLOUDY Texture: FINE

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

NW 9/25/13

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - SEM/AVS

12

Client Sample ID: LMR13-66-012
Lab Sample ID: 200-17125-12
Lab Name: TestAmerica Burlington
Job No.: 200-17125-1
SDG ID.: 17125
Matrix: Sediment
Date Sampled: 06/20/2013 11:20
Reporting Basis: DRY
Date Received: 06/21/2013 09:45
% Solids: 66.6

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-43-9	Cadmium SEM	1.8	1.8	0.28	mg/Kg	U		10	6010C
7440-43-9	Cadmium SEM	0.016	0.016	0.0025	umol/g	U		10	6010C
7440-50-8	Copper SEM	1.5	9.3	0.81	mg/Kg	J		10	6010C
7440-50-8	Copper SEM	0.024	0.15	0.013	umol/g	J		10	6010C
7439-92-1	Lead SEM	3.3	3.7	1.6	mg/Kg	J		10	6010C
7439-92-1	Lead SEM	0.016	0.018	0.0079	umol/g	J		10	6010C
7440-02-0	Nickel SEM	14.9	14.9	1.1	mg/Kg	U		10	6010C
7440-02-0	Nickel SEM	0.25	0.25	0.018	umol/g	U		10	6010C
7440-66-6	Zinc SEM	7.9	7.5	2.1	mg/Kg			10	6010C
7440-66-6	Zinc SEM	0.12	0.11	0.032	umol/g			10	6010C
7439-97-6	Mercury SEM	0.0063	0.0075	0.0025	mg/Kg	J		1	7470A
7439-97-6	Mercury SEM	0.000031	0.000037	0.000012	umol/g	J		1	7470A

NW 9/25/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY - SEM/AVS

12

Client Sample ID: LMR13-66-012 Lab Sample ID: 200-17125-12

Lab Name: TestAmerica Burlington Job No.: 200-17125-1

SDG ID.: 17125

Matrix: Sediment Date Sampled: 06/20/2013 11:20

Reporting Basis: DRY Date Received: 06/21/2013 09:45

% Solids: 66.6

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
18496-25-8	Acid Volatile Sulfides (AVS)	35.8	23.9		mg/Kg			1	AVS
18496-25-8	Acid Volatile Sulfides (AVS)	1.1	0.75		umol/g			1	AVS

NW 9/25/13

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - SEM/AVS

12

Client Sample ID: LMR13-66-012 | Lab Sample ID: 200-17125-12

Lab Name: TestAmerica Burlington | Job No.: 200-17125-1

SDG ID.: 17125

Matrix: Sediment | Date Sampled: 06/20/2013 11:20

Reporting Basis: WET | Date Received: 06/21/2013 09:45

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	SEM/AVS Ratio	0.144	0.00100	0.00100	NONE			1	SEM

MW 9/25/13

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - SEM/AVS

21

Client Sample ID: LMR13-66-012FD
Lab Sample ID: 200-17125-21
Lab Name: TestAmerica Burlington
Job No.: 200-17125-1
SDG ID.: 17125
Matrix: Sediment
Date Sampled: 06/20/2013 11:20
Reporting Basis: DRY
Date Received: 06/21/2013 09:45
% Solids: 67.2

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-43-9	Cadmium SEM	1.7	1.7	0.27	mg/Kg	U		10	6010C
7440-43-9	Cadmium SEM	0.015	0.015	0.0024	umol/g	U		10	6010C
7440-50-8	Copper SEM	1.9	8.9	0.78	mg/Kg	J		10	6010C
7440-50-8	Copper SEM	0.030	0.14	0.012	umol/g	J		10	6010C
7439-92-1	Lead SEM	6.7	3.6	1.6	mg/Kg			10	6010C
7439-92-1	Lead SEM	0.032	0.017	0.0077	umol/g			10	6010C
7440-02-0	Nickel SEM	14.4	14.4	1.0	mg/Kg	U		10	6010C
7440-02-0	Nickel SEM	0.25	0.25	0.018	umol/g	U		10	6010C
7440-66-6	Zinc SEM	12.2	7.2	2.0	mg/Kg			10	6010C
7440-66-6	Zinc SEM	0.19	0.11	0.031	umol/g			10	6010C
7439-97-6	Mercury SEM	0.0072	0.0072	0.0024	mg/Kg	U		1	7470A
7439-97-6	Mercury SEM	0.000036	0.000036	0.000012	umol/g	U		1	7470A

MW 9/25/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY - SEM/AVS

21

Client Sample ID: LMR13-66-012FD
Lab Sample ID: 200-17125-21
Lab Name: TestAmerica Burlington
Job No.: 200-17125-1
SDG ID.: 17125
Matrix: Sediment
Date Sampled: 06/20/2013 11:20
Reporting Basis: DRY
Date Received: 06/21/2013 09:45
% Solids: 67.2

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
18496-25-8	Acid Volatile Sulfides (AVS)	57.7	23.1		mg/Kg			1	AVS
18496-25-8	Acid Volatile Sulfides (AVS)	1.8	0.72		umol/g			1	AVS

MW 9/25/13

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - SEM/AVS

21

Client Sample ID: LMR13-66-012FD
Lab Sample ID: 200-17125-21
Lab Name: TestAmerica Burlington
Job No.: 200-17125-1
SDG ID.: 17125
Matrix: Sediment
Date Sampled: 06/20/2013 11:20
Reporting Basis: WET
Date Received: 06/21/2013 09:45

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	SEM/AVS Ratio	0.138	0.00100	0.00100	NONE			1	SEM

MW 9/25/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

1

Client Sample ID: LMR13-69-024FD
Lab Sample ID: 200-17125-1

Lab Name: TestAmerica Burlington
Job No.: 200-17125-1

SDG ID.: 17125

Matrix: Sediment
Date Sampled: 06/20/2013 07:55

Reporting Basis: WET
Date Received: 06/21/2013 09:45

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	29600	J 1000		mg/Kg		H	1	Lloyd Kahn

MW 9/25/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

2

Client Sample ID: LMR13-69-096 Lab Sample ID: 200-17125-2

Lab Name: TestAmerica Burlington Job No.: 200-17125-1

SDG ID.: 17125

Matrix: Sediment Date Sampled: 06/20/2013 08:25

Reporting Basis: WET Date Received: 06/21/2013 09:45

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	29400	J 1000		mg/Kg		H	1	Lloyd Kahn

MW 9/25/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

3

Client Sample ID: LMR13-69-120
Lab Sample ID: 200-17125-3
Lab Name: TestAmerica Burlington
Job No.: 200-17125-1
SDG ID.: 17125
Matrix: Sediment
Date Sampled: 06/20/2013 08:35
Reporting Basis: WET
Date Received: 06/21/2013 09:45

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	26700	J 1000		mg/Kg		H	1	Lloyd Kahn

NW 9/25/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

4

Client Sample ID: LMR13-61-012 | Lab Sample ID: 200-17125-4

Lab Name: TestAmerica Burlington | Job No.: 200-17125-1

SDG ID.: 17125

Matrix: Sediment | Date Sampled: 06/20/2013 10:15

Reporting Basis: WET | Date Received: 06/21/2013 09:45

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	29100	J 1000		mg/Kg		H	1	Lloyd Kahn

NW 9/25/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: LMR13-61-048
Lab Sample ID: 200-17125-5 5
Lab Name: TestAmerica Burlington
Job No.: 200-17125-1
SDG ID.: 17125
Matrix: Sediment
Date Sampled: 06/20/2013 10:35
Reporting Basis: WET
Date Received: 06/21/2013 09:45

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	25700	J 1000		mg/Kg		H	1	Lloyd Kahn

NW 9/25/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: LMR13-61-096
Lab Sample ID: 200-17125-6 6
Lab Name: TestAmerica Burlington
Job No.: 200-17125-1
SDG ID.: 17125
Matrix: Sediment
Date Sampled: 06/20/2013 10:55
Reporting Basis: WET
Date Received: 06/21/2013 09:45
% Solids: 55.5

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	26400	J 1000		mg/Kg		H	1	Lloyd Kahn

MW 9/25/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

7

Client Sample ID: LMR13-65-048
Lab Sample ID: 200-17125-7
Lab Name: TestAmerica Burlington
Job No.: 200-17125-1
SDG ID.: 17125
Matrix: Sediment
Date Sampled: 06/20/2013 09:45
Reporting Basis: WET
Date Received: 06/21/2013 09:45
% Solids: 43.8

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	32300	J 1000		mg/Kg		J	1	Lloyd Kahn

MW 9/25/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

8

Client Sample ID: LMR13-65-072 | Lab Sample ID: 200-17125-8

Lab Name: TestAmerica Burlington | Job No.: 200-17125-1

SDG ID.: 17125

Matrix: Sediment | Date Sampled: 06/20/2013 09:55

Reporting Basis: WET | Date Received: 06/21/2013 09:45

% Solids: 61.4

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	28900	J 1000		mg/Kg		H	1	Lloyd Kahn

MW 9/25/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

9

Client Sample ID: LMR13-61-024
Lab Sample ID: 200-17125-9
Lab Name: TestAmerica Burlington
Job No.: 200-17125-1
SDG ID.: 17125
Matrix: Sediment
Date Sampled: 06/20/2013 10:25
Reporting Basis: WET
Date Received: 06/21/2013 09:45
% Solids: 49.6

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	21900	J 1000		mg/Kg		~~H~~	1	Lloyd Kahn

MW 9/25/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

10

Client Sample ID: LMR13-61-072
Lab Sample ID: 200-17125-10
Lab Name: TestAmerica Burlington
Job No.: 200-17125-1
SDG ID.: 17125
Matrix: Sediment
Date Sampled: 06/20/2013 10:45
Reporting Basis: WET
Date Received: 06/21/2013 09:45
% Solids: 52.2

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	26300	J 1000		mg/Kg		H	1	Lloyd Kahn

MW 9/25/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: LMR13-61-120
Lab Sample ID: 200-17125-11
11
Lab Name: TestAmerica Burlington
Job No.: 200-17125-1
SDG ID.: 17125
Matrix: Sediment
Date Sampled: 06/20/2013 11:05
Reporting Basis: WET
Date Received: 06/21/2013 09:45
% Solids: 57.2

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	27300	J 1000		mg/Kg		H	1	Lloyd Kahn

NW 9/25/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

12

Client Sample ID: LMR13-66-012 | Lab Sample ID: 200-17125-12

Lab Name: TestAmerica Burlington | Job No.: 200-17125-1

SDG ID.: 17125

Matrix: Sediment | Date Sampled: 06/20/2013 11:20

Reporting Basis: WET | Date Received: 06/21/2013 09:45

% Solids: 66.6

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	23900	J 1000		mg/Kg		~~H~~	1	Lloyd Kahn

NW 9/25/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

13

Client Sample ID: LMR13-66-024
Lab Sample ID: 200-17125-13
Lab Name: TestAmerica Burlington
Job No.: 200-17125-1
SDG ID.: 17125
Matrix: Sediment
Date Sampled: 06/20/2013 11:25
Reporting Basis: WET
Date Received: 06/21/2013 09:45
% Solids: 71.8

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	18700	J 1000		mg/Kg		H	1	Lloyd Kahn

MW 9/25/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

14

Client Sample ID: LMR13-60-012 | Lab Sample ID: 200-17125-14

Lab Name: TestAmerica Burlington | Job No.: 200-17125-1

SDG ID.: 17125

Matrix: Sediment | Date Sampled: 06/20/2013 13:25

Reporting Basis: WET | Date Received: 06/21/2013 09:45

% Solids: 45.2

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	28200	J 1000		mg/Kg		H	1	Lloyd Kahn

MW 9/25/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

15

Client Sample ID: LMR13-60-024 Lab Sample ID: 200-17125-15

Lab Name: TestAmerica Burlington Job No.: 200-17125-1

SDG ID.: 17125

Matrix: Sediment Date Sampled: 06/20/2013 13:35

Reporting Basis: WET Date Received: 06/21/2013 09:45

% Solids: 49.8

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	27200	J 1000		mg/Kg		H	1	Lloyd Kahn

MW 9/25/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

16

Client Sample ID: LMR13-60-048 Lab Sample ID: 200-17125-16

Lab Name: TestAmerica Burlington Job No.: 200-17125-1

SDG ID.: 17125

Matrix: Sediment Date Sampled: 06/20/2013 13:45

Reporting Basis: WET Date Received: 06/21/2013 09:45

CAS No.	Analyte	Result		RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	35500	J	1000		mg/Kg		H ^	1	Lloyd Kahn

NW 9/25/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

17

Client Sample ID: LMR13-60-072 Lab Sample ID: 200-17125-17

Lab Name: TestAmerica Burlington Job No.: 200-17125-1

SDG ID.: 17125

Matrix: Sediment Date Sampled: 06/20/2013 13:55

Reporting Basis: WET Date Received: 06/21/2013 09:45

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	26600	J 1000		mg/Kg		J ^	1	Lloyd Kahn

NW 9/25/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

18

Client Sample ID: LMR13-60-096 Lab Sample ID: 200-17125-18

Lab Name: TestAmerica Burlington Job No.: 200-17125-1

SDG ID.: 17125

Matrix: Sediment Date Sampled: 06/20/2013 14:05

Reporting Basis: WET Date Received: 06/21/2013 09:45

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	28600	J 1000		mg/Kg		H^	1	Lloyd Kahn

MW 9/25/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

19

Client Sample ID: LMR13-66-048 Lab Sample ID: 200-17125-19

Lab Name: TestAmerica Burlington Job No.: 200-17125-1

SDG ID.: 17125

Matrix: Sediment Date Sampled: 06/20/2013 11:30

Reporting Basis: WET Date Received: 06/21/2013 09:45

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	16600	J 1000		mg/Kg		H ^	1	Lloyd Kahn

MW 9/25/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

20

Client Sample ID: LMR13-58-024 Lab Sample ID: 200-17125-20

Lab Name: TestAmerica Burlington Job No.: 200-17125-1

SDG ID.: 17125

Matrix: Sediment Date Sampled: 06/20/2013 11:40

Reporting Basis: WET Date Received: 06/21/2013 09:45

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	40700	J 1000		mg/Kg		H ^	1	Lloyd Kahn

MW 9/25/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

2

Client Sample ID: LMR13-69-096
Lab Sample ID: 200-17125-2
Lab Name: TestAmerica Canton
Job No.: 200-17125-1
SDG ID.: 17125
Matrix: Sediment
Date Sampled: 06/20/2013 08:25
Reporting Basis: DRY
Date Received: 06/21/2013 09:45
% Solids: 58.9

CAS No.	Analyte	Result		RL	MDL	Units	C	Q	DIL	Method
	HEM	1370	J	339	150	mg/Kg			1	9071B

NW 9/25/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

3

Client Sample ID: LMR13-69-120
Lab Sample ID: 200-17125-3
Lab Name: TestAmerica Canton
Job No.: 200-17125-1
SDG ID.: 17125
Matrix: Sediment
Date Sampled: 06/20/2013 08:35
Reporting Basis: DRY
Date Received: 06/21/2013 09:45
% Solids: 59.1

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	964	J 338	149	mg/Kg			1	9071B

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1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

4

Client Sample ID: LMR13-61-012
Lab Sample ID: 200-17125-4
Lab Name: TestAmerica Canton
Job No.: 200-17125-1
SDG ID.: 17125
Matrix: Sediment
Date Sampled: 06/20/2013 10:15
Reporting Basis: DRY
Date Received: 06/21/2013 09:45
% Solids: 42.6

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	677	J 467	206	mg/Kg			1	9071B

MW 9/25/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

5

Client Sample ID: LMR13-61-048
Lab Sample ID: 200-17125-5
Lab Name: TestAmerica Canton
Job No.: 200-17125-1
SDG ID.: 17125
Matrix: Sediment
Date Sampled: 06/20/2013 10:35
Reporting Basis: DRY
Date Received: 06/21/2013 09:45
% Solids: 51.0

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	1140	J 391	173	mg/Kg			1	9071B

MW 9/25/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: LMR13-61-096 Lab Sample ID: 200-17125-6 6

Lab Name: TestAmerica Canton Job No.: 200-17125-1

SDG ID.: 17125

Matrix: Sediment Date Sampled: 06/20/2013 10:55

Reporting Basis: DRY Date Received: 06/21/2013 09:45

% Solids: 55.5

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	1140	J 362	160	mg/Kg			1	9071B

MW 9/25/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

7

Client Sample ID: LMR13-65-048 Lab Sample ID: 200-17125-7

Lab Name: TestAmerica Canton Job No.: 200-17125-1

SDG ID.: 17125

Matrix: Sediment Date Sampled: 06/20/2013 09:45

Reporting Basis: DRY Date Received: 06/21/2013 09:45

% Solids: 43.8

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	794	J 454	201	mg/Kg			1	9071B

NW 9/25/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

8

Client Sample ID: LMR13-65-072
Lab Sample ID: 200-17125-8
Lab Name: TestAmerica Canton
Job No.: 200-17125-1
SDG ID.: 17125
Matrix: Sediment
Date Sampled: 06/20/2013 09:55
Reporting Basis: DRY
Date Received: 06/21/2013 09:45
% Solids: 61.4

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	749	J 326	144	mg/Kg		P	1	9071B

MW 9/25/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

9

Client Sample ID: LMR13-61-024 Lab Sample ID: 200-17125-9

Lab Name: TestAmerica Canton Job No.: 200-17125-1

SDG ID.: 17125

Matrix: Sediment Date Sampled: 06/20/2013 10:25

Reporting Basis: DRY Date Received: 06/21/2013 09:45

% Solids: 49.6

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	704	J 402	178	mg/Kg		J	1	9071B

NW 9/25/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

10

Client Sample ID: LMR13-61-072
Lab Sample ID: 200-17125-10
Lab Name: TestAmerica Canton
Job No.: 200-17125-1
SDG ID.: 17125
Matrix: Sediment
Date Sampled: 06/20/2013 10:45
Reporting Basis: DRY
Date Received: 06/21/2013 09:45
% Solids: 52.2

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	1200	J 382	169	mg/Kg		B	1	9071B

NW 9/25/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

11

Client Sample ID: LMR13-61-120
Lab Sample ID: 200-17125-11
Lab Name: TestAmerica Canton
Job No.: 200-17125-1
SDG ID.: 17125
Matrix: Sediment
Date Sampled: 06/20/2013 11:05
Reporting Basis: DRY
Date Received: 06/21/2013 09:45
% Solids: 57.2

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	959	J 349	154	mg/Kg		B	1	9071B

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1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

12

Client Sample ID: LMR13-66-012 Lab Sample ID: 200-17125-12

Lab Name: TestAmerica Canton Job No.: 200-17125-1

SDG ID.: 17125

Matrix: Sediment Date Sampled: 06/20/2013 11:20

Reporting Basis: DRY Date Received: 06/21/2013 09:45

% Solids: 66.6

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	541	UJ 301	133	mg/Kg		J	1	9071B

NW 9/25/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

13

Client Sample ID: LMR13-66-024 | Lab Sample ID: 200-17125-13

Lab Name: TestAmerica Canton | Job No.: 200-17125-1

SDG ID.: 17125

Matrix: Sediment | Date Sampled: 06/20/2013 11:25

Reporting Basis: DRY | Date Received: 06/21/2013 09:45

% Solids: 71.8

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	292	UJ 278	123	mg/Kg		J	1	9071B

MW 9/25/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

14

Client Sample ID: LMR13-60-012
Lab Sample ID: 200-17125-14
Lab Name: TestAmerica Canton
Job No.: 200-17125-1
SDG ID.: 17125
Matrix: Sediment
Date Sampled: 06/20/2013 13:25
Reporting Basis: DRY
Date Received: 06/21/2013 09:45
% Solids: 45.2

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	441	UJ 441	195	mg/Kg		B	1	9071B

MW 9/25/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

15

Client Sample ID: LMR13-60-024 | Lab Sample ID: 200-17125-15

Lab Name: TestAmerica Canton | Job No.: 200-17125-1

SDG ID.: 17125

Matrix: Sediment | Date Sampled: 06/20/2013 13:35

Reporting Basis: DRY | Date Received: 06/21/2013 09:45

% Solids: 49.8

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	564	UJ 403	178	mg/Kg		B	1	9071B

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1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

16

Client Sample ID: LMR13-60-048
Lab Sample ID: 200-17125-16
Lab Name: TestAmerica Canton
Job No.: 200-17125-1
SDG ID.: 17125
Matrix: Sediment
Date Sampled: 06/20/2013 13:45
Reporting Basis: DRY
Date Received: 06/21/2013 09:45
% Solids: 52.2

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	442	UJ 385	170	mg/Kg		~~B~~	1	9071B

NW 9/25/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

17

Client Sample ID: LMR13-60-072 Lab Sample ID: 200-17125-17

Lab Name: TestAmerica Canton Job No.: 200-17125-1

SDG ID.: 17125

Matrix: Sediment Date Sampled: 06/20/2013 13:55

Reporting Basis: DRY Date Received: 06/21/2013 09:45

% Solids: 55.0

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	814	J 362	160	mg/Kg		F	1	9071B

MW 9/25/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

18

Client Sample ID: LMR13-60-096
Lab Sample ID: 200-17125-18
Lab Name: TestAmerica Canton
Job No.: 200-17125-1
SDG ID.: 17125
Matrix: Sediment
Date Sampled: 06/20/2013 14:05
Reporting Basis: DRY
Date Received: 06/21/2013 09:45
% Solids: 57.4

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	765	J 348	154	mg/Kg		J	1	9071B

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1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

19

Client Sample ID: LMR13-66-048
Lab Sample ID: 200-17125-19
Lab Name: TestAmerica Canton
Job No.: 200-17125-1
SDG ID.: 17125
Matrix: Sediment
Date Sampled: 06/20/2013 11:30
Reporting Basis: DRY
Date Received: 06/21/2013 09:45
% Solids: 74.7

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	269	UJ 269	119	mg/Kg			1	9071B

MW 9/25/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

20

Client Sample ID: LMR13-58-024 Lab Sample ID: 200-17125-20

Lab Name: TestAmerica Canton Job No.: 200-17125-1

SDG ID.: 17125

Matrix: Sediment Date Sampled: 06/20/2013 11:40

Reporting Basis: DRY Date Received: 06/21/2013 09:45

% Solids: 62.3

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	1970	J 321	142	mg/Kg		F	1	9071B

NW 9/25/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

22

Client Sample ID: LMR13-66-024FD
Lab Sample ID: 200-17125-22
Lab Name: TestAmerica Canton
Job No.: 200-17125-1
SDG ID.: 17125
Matrix: Sediment
Date Sampled: 06/20/2013 11:25
Reporting Basis: DRY
Date Received: 06/21/2013 09:45
% Solids: 73.0

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	437	UJ 273	121	mg/Kg		B	1	9071B

NW 9/25/13

ENVIRONMENTAL
Data Services, Inc.

DATA VALIDATION SUMMARY REPORT
LOWER MAUMEE RIVER, TOLEDO, OHIO

Client: EA Engineering, Science & Technology, Inc., Hunt Valley, Maryland
SDG: 200-17127
Laboratory: Test America Laboratories, Burlington, Vermont
Test America Laboratories, Canton, Ohio
Site: Lower Maumee River, Maumee Area of Concern, Toledo, Ohio
Date: September 27, 2013

SVOC			
EDS ID	Client Sample ID	Laboratory Sample ID	Matrix
1	LMR13-59-012	200-17127-1	Sediment
2	LMR13-59-024	200-17127-2	Sediment
3	LMR13-59-048	200-17127-3	Sediment
4	LMR13-94-024	200-17127-4	Sediment
5	LMR13-94-072	200-17127-5	Sediment
6	LMR13-58-012	200-17127-6	Sediment
7	LMR13-94-012	200-17127-7	Sediment
8	LMR13-94-048	200-17127-8	Sediment
9	LMR13-95-012	200-17127-9	Sediment
9MS	LMR13-95-012MS	200-17127-9MS	Sediment
9MSD	LMR13-95-012MSD	200-17127-9MSD	Sediment
10	LMR13-70-024	200-17127-10	Sediment
11	LMR13-95-024	200-17127-11	Sediment
12	LMR13-95-048	200-17127-12	Sediment
13	LMR13-95-072	200-17127-13	Sediment
14	LMR13-95-096	200-17127-14	Sediment
15	LMR13-95-024FD	200-17127-15	Sediment

PAH 34			
EDS ID	Client Sample ID	Laboratory Sample ID	Matrix
6	LMR13-58-012	200-17127-6	Sediment
7	LMR13-94-012	200-17127-7	Sediment
9	LMR13-95-012	200-17127-9	Sediment
9MS	LMR13-95-012MS	200-17127-9MS	Sediment
9MSD	LMR13-95-012MSD	200-17127-9MSD	Sediment

PCBs/Metals/Mercury/TOC			
EDS ID	Client Sample ID	Laboratory Sample ID	Matrix
1	LMR13-59-012	200-17127-1	Sediment
2	LMR13-59-024	200-17127-2	Sediment
3	LMR13-59-048	200-17127-3	Sediment
4	LMR13-94-024	200-17127-4	Sediment
5	LMR13-94-072	200-17127-5	Sediment
6	LMR13-58-012	200-17127-6	Sediment
7	LMR13-94-012	200-17127-7	Sediment

PCBs/Metals/Mercury/TOC			
EDS ID	Client Sample ID	Laboratory Sample ID	Matrix
8	LMR13-94-048	200-17127-8	Sediment
9	LMR13-95-012	200-17127-9	Sediment
10	LMR13-70-024	200-17127-10	Sediment
11	LMR13-95-024	200-17127-11	Sediment
12	LMR13-95-048	200-17127-12	Sediment
13	LMR13-95-072	200-17127-13	Sediment
13MS	LMR13-95-072MS	200-17127-13MS	Sediment
13MSD	LMR13-95-072MSD	200-17127-13MSD	Sediment
14	LMR13-95-096	200-17127-14	Sediment

AVS/SEM			
EDS ID	Client Sample ID	Laboratory Sample ID	Matrix
6	LMR13-58-012	200-17127-6	Sediment
7	LMR13-94-012	200-17127-7	Sediment
9	LMR13-95-012	200-17127-9	Sediment

HEM			
EDS ID	Client Sample ID	Laboratory Sample ID	Matrix
1	LMR13-59-012	200-17127-1	Sediment
2	LMR13-59-024	200-17127-2	Sediment
3	LMR13-59-048	200-17127-3	Sediment
4	LMR13-94-024	200-17127-4	Sediment
5	LMR13-94-072	200-17127-5	Sediment
6	LMR13-58-012	200-17127-6	Sediment
7	LMR13-94-012	200-17127-7	Sediment
8	LMR13-94-048	200-17127-8	Sediment
9	LMR13-95-012	200-17127-9	Sediment
10	LMR13-70-024	200-17127-10	Sediment
11	LMR13-95-024	200-17127-11	Sediment
12	LMR13-95-048	200-17127-12	Sediment
13	LMR13-95-072	200-17127-13	Sediment
13MS	LMR13-95-072MS	200-17127-13MS	Sediment
13MSD	LMR13-95-072MSD	200-17127-13MSD	Sediment
14	LMR13-95-096	200-17127-14	Sediment
15	LMR13-95-024FD	200-17127-15	Sediment

A full data validation was performed on the analytical data for fifteen sediment samples collected on June 20, 2013 by EA Engineering at the Lower Maumee River site in Toledo, Ohio. The samples were analyzed under the Environmental Protection Agency (USEPA) Contract Laboratory Program (CLP) Multi-Media Multi-Concentration Organics Analysis SOM01.2 and Inorganic Analysis ILM05.4 and the Test Methods for the Evaluation of Solid Waste, USEPA SW-846, Third Edition, September 1986, with revisions.

Specific method references are as follows:

Analysis	*Method References*
SVOC	USEPA CLP SOM01.2
PAH 34	USEPA CLP SOM01.2
PCBs	USEPA CLP SOM01.2

Analysis	*Method References*
Michigan Metals & Mercury	USEPA CLP ISM01.3
AVS/SEM	USEPA SW-846 Methods 6010C/7470A
TOC	Lloyd Kahn
Oil & Grease (HEM)	USEPA SW-846 Method 9071B

The data have been validated according to the protocols and quality control (QC) requirements of the analytical methods, the Great Lakes Legacy Act, March 2010, the Quality Assurance Project Plan for Phase 2 of the Lower Maumee River Site Characterization, May 2013, and the USEPA National Functional Guidelines for Organic Data Review as follows:

- The USEPA "Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review," June 2008;
- The USEPA "Contract Laboratory Program National Functional Guidelines for Inorganic Superfund Data Review," January 2010;
- and the reviewer's professional judgment.

The following items/criteria were reviewed for this report:

Organics

- Holding times and sample preservation
- Gas Chromatography/Mass Spectroscopy (GC/MS) Tuning
- Initial and continuing calibration summaries
- Method blank and field blank contamination
- Surrogate Spike recoveries
- Matrix Spike/Matrix Spike Duplicate (MS/MSD) recoveries
- Laboratory Control Sample (LCS) recoveries
- Internal standard area and retention time summary forms
- Target Compound Identification
- Compound Quantitation
- Tentatively Identified Compounds (TICs)
- Field Duplicate sample precision

Inorganics

- Holding times and sample preservation
- ICP/MS Tuning
- Initial and continuing calibration verifications
- Method blank and field blank contamination
- ICP Interference Check Sample
- Laboratory Control Sample (LCS) recoveries
- Matrix Spike Analysis
- Duplicate Sample Analysis
- ICP Serial Dilution
- Compound Quantitation
- Field Duplicate sample precision

Overall Usability Issues:

There were minor rejections of data. This data cannot be used in the decision-making process for this project.

- Three SVOC compounds were rejected in three samples due to severely low surrogate recoveries.

Overall the remaining data is acceptable for the intended purposes as qualified for the deficiencies detailed in this report.

Please note that any results qualified (U) due to blank contamination may be then qualified (J) due to another action. Therefore, the results may be qualified (UJ) due to the culmination of the blank contaminations and actions from other exceedences of QC criteria.

Semivolatile Organic Compounds (SVOC)

Holding Times

- All samples were extracted within 14 days for sediment samples and analyzed within 40 days for all samples except the following.

Sample	Date Extracted	Date Analyzed	# of Days	Qualifier
1, 5, 6, 8, 11	06/29/13	08/12/13	44	J/UJ - Unless (R)
3, 12, 13, 14	06/29/13	08/13/13	45	J/UJ - Unless (R)

GC/MS Tuning

- All criteria were met.

Initial Calibration

- All %RSD and mean RRF criteria were met except the following.

ICAL Date	Compound	%RSD/RRF	Qualifier	Affected Samples
07/29/13	Pentachlorophenol	21.2%	J/UJ	7, 9, 10
	Pyrene	22.6%	J/UJ	

Continuing Calibration

- All %D and RRF criteria were met except the following.

CCAL Date	Compound	%D/RRF	Qualifier	Affected Samples
08/08/13 (1254)	Pyrene	31.3%	None	See ICAL
	Indeno(1,2,3-cd)pyrene	37.8%	J/UJ	7, 9, 10
	Dibenzo(a,h)anthracene	38.9%	J/UJ	
	Benzo(g,h,i)perylene	34.6%	J/UJ	
08/08/13 (2252)	Hexachlorocyclopentadiene	71.5%	J/UJ	7, 9, 10
08/08/13 (2311)	Hexachlorocyclopentadiene	75.2%	J/UJ	2, 4
08/12/13 (1943)	Hexachlorocyclopentadiene	61.2%	None	See HT
08/13/13 (0257)	Hexachlorocyclopentadiene	62.7%	J/UJ	15

Method Blank

- The method blanks exhibited the following contamination.

Blank ID	Compound	Conc. ug/kg	Qualifier	Affected Samples
SBLKN9	Naphthalene	29	U	1, 2, 3, 6
	Di-n-butylphthalate	27	U	1, 2, 3, 4, 6
	Benzo(a)anthracene	8.1	U	1, 2, 6, 11, 12, 13-15
	Chrysene	8.7	U	1, 2, 6, 11, 12, 13-15
	Bis(2-ethylhexyl)phthalate	32	U	1, 2, 4, 8
SBLK9N	Naphthalene	24	U	10
	Phenanthrene	5.5	None	All >5X
	Di-n-butylphthalate	18	U	7, 10
	Butylbenzylphthalate	10	None	All ND
	Bis(2-ethylhexyl)phthalate	28	U	7

Field Blank

- Field QC samples were not analyzed.

Surrogate Spike Recoveries

- All samples exhibited acceptable surrogate %R values except the following.

Sample ID	Surrogate	%R	Qualifier
1	Phenol-d5	105%	J - Associated Positive Compounds
	4-Methylphenol-d8	121%	None - ND
	4-Chloroaniline-d4	0%	R - Associated Compounds
	Pyrene-d10	141%	None - ND
3	Phenol-d5	113%	None - ND
	4-Methylphenol-d8	128%	None - ND
	Acenaphthylene-d8	100%	J - Associated Positive Compounds
5	4-Chloroaniline-d4	0%D	None - 50X Dilution
	4-Nitrophenol-d4	0%D	
6	Phenol-d5	110%	J - Associated Positive Compounds
	4-Methylphenol-d8	129%	None - ND
	4-Chloroaniline-d4	0%	R - Associated Compounds
	Pyrene-d10	39%	J - Associated Positive Compounds

Sample ID	Surrogate	%R	Qualifier
7	4-Methylphenol-d8	107%	None - ND
8	4-Methylphenol-d8	101%	None - ND
9	Several Surrogates	High/Low	None - 500X Dilution
10	4-Methylphenol-d8	107%	None - ND
	4-Chloroaniline-d4	0%	R - Associated Compounds
11	Several Surrogates	High/Low	None - 1428X Dilution
12	Several Surrogates	High/Low	None - 666X Dilution
13	Several Surrogates	High/Low	None - 1250X Dilution
14	Several Surrogates	High/Low	None - 100X Dilution
15	Several Surrogates	High/Low	None - 666X Dilution

Matrix Spike/Matrix Spike Duplicate (MS/MSD) Recoveries

- The MS/MSD sample exhibited acceptable %R and RPD values except the following.

MS/MSD Sample ID	Compound	MS %R/MSD %R/ RPD	Qualifier
9	Several Compounds	High/Low	None - 500X Dilution

Laboratory Control Samples

- A LCS sample was not analyzed.

Internal Standard (IS) Area Performance

- All internal standards met response and retention time (RT) criteria.

Target Compound Identification

- All mass spectra and quantitation criteria were met.

Compound Quantitation

- Several samples were analyzed at various dilutions due to high concentrations of target compounds. No action was required.

Field Duplicate Sample Precision

- Field duplicate results are summarized below.

SVOC				
Compound	LMR13-95-024 ug/kg	LMR13-95-024FD ug/kg	RPD	Qualifier
Naphthalene	12000000	8400000	35%	None
2-Methylnaphthalene	1200000	780000	42%	
1,1'-Biphenyl	240000	150000	46%	
Acenaphthylene	840000	600000	33%	
Acenaphthene	130000	98000	28%	
Dibenzofuran	800000	520000	42%	
Fluorene	1100000	740000	39%	
Phenanthrene	3400000	2300000	39%	
Anthracene	1100000	760000	37%	
Carbazole	320000	220000	37%	
Fluoranthene	2200000	1500000	38%	
Pyrene	1600000	1100000	37%	
Benzo(b)fluoranthene	510000	270000	62%	
Benzo(k)fluoranthene	510000	370000	32%	
Benzo(a)pyrene	590000	400000	38%	
Indeno(1,2,3-cd)pyrene	270000	210000	25%	
Dibenzo(a,h)anthracene	1500000U	89000	NC	
Benzo(g,h,i)perylene	250000	200000	22%	

Polynuclear Aromatic Hydrocarbons (PAH 34)

Holding Times

- All samples were extracted within 14 days for sediment samples and analyzed within 40 days for all samples except the following.

Sample	Date Extracted	Date Analyzed	# of Days	Qualifier
9	06/29/13	08/14/13	46	J/UJ

GC/MS Tuning

- All criteria were met.

Initial Calibration

- All %RSD and mean RRF criteria were met.

Continuing Calibration

- All %D and RRF criteria were met.

Method Blank

- The method blanks exhibited the following contamination.

Blank ID	Compound	Conc. ug/kg	Qualifier	Affected Samples
SBLKN9	Naphthalene	21	U	6
	1-Methylnaphthalene	0.83	U	6
	2-Methylnaphthalene	1.8	U	6
	Acenaphthylene	2.5	U	6
	Acenaphthene	0.23	None	All >5X
	Fluorene	1.3	None	All >5X
	Phenanthrene	4.4	None	All >5X
	Anthracene	1.3	None	All >5X
	Fluoranthene	2.9	None	All >5X
	Pyrene	2.3	None	All >5X
	Benzo(a)anthracene	1.4	None	All >5X
	Chrysene	1.1	None	All >5X
	Benzo(b)fluoranthene	1.1	None	All >5X
	Benzo(k)fluoranthene	1.1	None	All >5X
	Benzo(e)pyrene	0.92	None	All >5X
	Benzo(a)pyrene	1.6	None	All >5X
	Perylene	0.44	None	All >5X

Blank ID	Compound	Conc. ug/kg	Qualifier	Affected Samples
SBLKN9 (Cont.)	Indeno(1,2,3-cd)pyrene	0.72	None	All >5X
	Dibenzo(a,h)anthracene	0.18	U	6, 9
	Benzo(g,h,i)perylene	0.90	None	All >5X
	C1 Naphthalenes	2.3	U	6, 7, 9
	C2 Naphthalenes	1.5	U	6, 7, 9
	C1 Phenanthrenes/Anthracenes	1.0	U	6, 7, 9
	C2 Phenanthrenes/Anthracenes	0.36	U	6, 7, 9
	C1 Fluoranthenes/Pyrenes	1.3	U	6, 7, 9
	C1 Chrysenes	0.54	U	6, 7, 9
	Total 16 PPAH	0.95	J	6, 7, 9
	Total PAH	0.95	J	

Field Blank

- Field QC samples were not analyzed.

Surrogate Spike Recoveries

- All samples exhibited acceptable surrogate %R values.

Matrix Spike/Matrix Spike Duplicate (MS/MSD) Recoveries

- The MS/MSD sample exhibited acceptable %R and RPD values except the following.

MS/MSD Sample ID	Compound	MS %R/MSD %R/ RPD	Qualifier
9	Several Compounds	High/Low	None - 3333.3X Dilution

Laboratory Control Samples

- A LCS sample was not analyzed.

Internal Standard (IS) Area Performance

- All internal standards met response and retention time (RT) criteria.

Target Compound Identification

- All mass spectra and quantitation criteria were met.

Compound Quantitation

- EDS Sample ID #s 7 and 9 exhibited high concentrations of several target compounds and were flagged (E) by the laboratory. These samples were not reanalyzed and these results were qualified as estimated (J).
- Total 16 PPAH and Total PAH were estimated (J) in all samples due to blank contamination.

Field Duplicate Sample Precision

- Field duplicate samples were not analyzed.

Polychlorinated Biphenyls (PCBs)

Holding Times

- All samples were extracted within 14 days for sediment samples and analyzed within 40 days.

Initial Calibration

- All %RSD and/or correlation coefficient criteria were met.

Continuing Calibration

- All %D criteria were met.

Method Blank

- The method blanks were free of contamination.

Field Blank

- Field QC samples were not analyzed.

Surrogate Spike Recoveries

- All samples exhibited acceptable surrogate recoveries.

Matrix Spike/Matrix Spike Duplicate (MS/MSD) Recoveries

- The MS/MSD samples exhibited acceptable %R and RPD values.

Laboratory Control Samples

- The LCS sample exhibited acceptable %R values.

Compound Quantitation

- Several samples were analyzed at various dilutions due to high concentrations of target compounds. No action was required.

Field Duplicate Sample Precision

- Field duplicate samples were not analyzed.

GC Column Difference Results

- Several samples exhibited high %D values > 25% between columns and have been qualified as estimated (J) by the reviewer.

Metals & Mercury

Holding Times

- All samples were prepared and analyzed within 28 days for mercury and 180 days for all other metals.

ICP/MS Tuning

- Not applicable.

Initial Calibration Verification

- All initial calibration criteria were met.

Continuing Calibration Verification

- All continuing calibration criteria were met.

Method Blank

- The method blanks exhibited the following contamination.

Blank ID	Compound	Conc. mg/kg	Qualifier	Affected Samples
MB	Zinc	0.39	None	All Associated >10X

Field Blank

- Field QC samples were not analyzed.

ICP Interference Check Sample

- The ICP interference check sample exhibited acceptable %R values.

Laboratory Control Samples

- The LCS sample exhibited acceptable recoveries.

Matrix Spike/Duplicate (MS/DUP) Analysis

- The MS/DUP samples exhibited acceptable %R and RPD values except the following.

MS/DUP Sample ID	Compound	MS %R/RPD	Qualifier	Affected Samples
13	Zinc	138%/Ok	None	See ICP SD
	Mercury	59%/94	J/UJ	All Samples

ICP Serial Dilution

- ICP serial dilution percent differences (%D) were within acceptance limits except the following.

ICP Sample ID	Compound	%D	Qualifier	Affected Samples
13	Arsenic	16%	J	All Samples
	Chromium	20%	J	
	Copper	18%	J	
	Lead	13%	J	
	Nickel	25%	J	
	Zinc	20%	J	

Compound Quantitation

- All criteria were met.

Field Duplicate Sample Precision

- Field duplicate samples were not analyzed.

Oil & Grease, Total Organic Carbon, AVS/SEM (Metals & Hg)

Holding Times

- All samples were analyzed within the recommended holding time for each analysis except the following.

TOC				
Sample ID	Date Collected	Date Analyzed	# of Days	Qualifier
All Samples	06/20/13	07/22/13 or 08/15/13	32 or 55	J/UJ

Initial and Continuing Calibration

- All %R criteria were met.

Method Blank

- The method blanks exhibited the following contamination.

Blank ID	Compound	Conc. mg/kg	Qualifier	Affected Samples
240-93562/1-A	HEM	120.1	U	10

Field Blank

- Field QC samples were not included in this data package.

Laboratory Control Samples

- The LCS samples exhibited acceptable %R values.

Matrix Spike/Duplicate (MS/DUP) Recoveries

- The MS/DUP samples exhibited acceptable %R and RPD values except the following.

MS/DUP ID	Compound	MS %R/MSD %R/RPD	Qualifier	Affected Samples
13	HEM	227%/169%/OK	None	4X Rule Applies

Compound Quantitation

- All criteria were met.

Field Duplicate Sample Precision

- Field duplicate results are summarized below.

HEM				
Compound	LMR13-95-024 mg/kg	LMR13-95-024FD mg/kg	RPD	Qualifier
HEM	39500	48000	19%	None

Please contact the undersigned at (757) 564-0090 if you have any questions or need further information.

Signed: Nancy Weaver Dated: 9/30/13

Nancy Weaver
Senior Chemist

Data Qualifiers

U = The analyte was analyzed for, but was not detected at a level greater than or equal to the level of the adjusted Contract Required Quantitation Limit (CRQL) for sample and method.

UJ = The analyte was not detected at a level greater than or equal to the adjusted CRQL. However, the reported adjusted CRQL is approximate and may be inaccurate or imprecise.

J = The analyte was positively identified and the associated numerical value is the approximate concentration of the analyte in the sample (due either to the quality of the data generated because certain quality control criteria were not met, or the concentration of the analyte was below the CRQL).

J+ = The result is an estimated quantity, but the result may be biased high.

J- = The result is an estimated quantity, but the result may be biased low.

R = The sample results are unusable due to the quality of the data generated because certain criteria were not met. The analyte may or may not be present in the sample.

NJ = The analysis indicates the presence of an analyte that has been "tentatively identified" and the associated numerical value represents its approximate concentration.

1D - FORM I SV-1

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-59-012

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17127

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17127-1

Sample wt/vol: 29.8 (g/mL) g Lab File ID: PJZKQ03.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 57 Decanted: (Y/N) Date Received: 06/21/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/29/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/12/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
100-52-7	Benzaldehyde	47	J
108-95-2	Phenol	400	U
111-44-4	Bis(2-chloroethyl)ether	400	U
95-57-8	2-Chlorophenol	400	U
95-48-7	2-Methylphenol	400	U
108-60-1	2,2'-Oxybis(1-chloropropane)	400	U
98-86-2	Acetophenone	28	J
106-44-5	4-Methylphenol	400	U
621-64-7	N-Nitroso-di-n-propylamine	400	U
67-72-1	Hexachloroethane	400	U
98-95-3	Nitrobenzene	400	U
78-59-1	Isophorone	400	U
88-75-5	2-Nitrophenol	400	U
105-67-9	2,4-Dimethylphenol	400	U
111-91-1	Bis(2-chloroethoxy)methane	400	U
120-83-2	2,4-Dichlorophenol	400	U
91-20-3	Naphthalene	400 ~~84~~	~~J~~ B
106-47-8	4-Chloroaniline	400	U
87-68-3	Hexachlorobutadiene	400	U
105-60-2	Caprolactam	400	U
59-50-7	4-Chloro-3-methylphenol	400	U
91-57-6	2-Methylnaphthalene	22	J
77-47-4	Hexachlorocyclopentadiene	400	U
88-06-2	2,4,6-Trichlorophenol	400	U
95-95-4	2,4,5-Trichlorophenol	400	U
92-52-4	1,1'-Biphenyl	400	U
91-58-7	2-Chloronaphthalene	400	U
88-74-4	2-Nitroaniline	770	U
131-11-3	Dimethylphthalate	400	U
606-20-2	2,6-Dinitrotoluene	400	U
208-96-8	Acenaphthylene	400	U
99-09-2	3-Nitroaniline	770	U
83-32-9	Acenaphthene	51	J

J UJ J UJ UJ R UJ J R UJ J

NW 9/26/13

1E - FORM I SV-2

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-59-012

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17127

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17127-1

Sample wt/vol: 29.8 (g/mL) g Lab File ID: PJZKQ03.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 57 Decanted: (Y/N) Date Received: 06/21/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/29/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/12/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
51-28-5	2,4-Dinitrophenol	770	U
100-02-7	4-Nitrophenol	770	U
132-64-9	Dibenzofuran	400	U
121-14-2	2,4-Dinitrotoluene	400	U
84-66-2	Diethylphthalate	400	U
86-73-7	Fluorene	70	~~J~~
7005-72-3	4-Chlorophenyl-phenylether	400	U
100-01-6	4-Nitroaniline	770	U
534-52-1	4,6-Dinitro-2-methylphenol	770	U
86-30-6	N-Nitrosodiphenylamin [1]	400	U
95-94-3	1,2,4,5-Tetrachlorobenzene	400	U
101-55-3	4-Bromophenyl-phenylether	400	U
118-74-1	Hexachlorobenzene	400	U
1912-24-9	Atrazine	400	U
87-86-5	Pentachlorophenol	770	U
85-01-8	Phenanthrene	300	J
120-12-7	Anthracene	83	J
86-74-8	Carbazole	400	U
84-74-2	Di-n-butylphthalate	400 ~~26~~	~~J B~~
206-44-0	Fluoranthene	400	
129-00-0	Pyrene	600	
85-68-7	Butylbenzylphthalate	49	~~J~~
91-94-1	3,3'-Dichlorobenzidine	400	~~U~~
56-55-3	Benzo(a)anthracene	400 ~~190~~	~~J B~~
218-01-9	Chrysene	~~270~~	~~J B~~
117-81-7	Bis(2-ethylhexyl)phthalate	~~370~~	~~J B~~
117-84-0	Di-n-octylphthalate	400	~~U~~
205-99-2	Benzo(b)fluoranthene	180	J
207-08-9	Benzo(k)fluoranthene	260	J
50-32-8	Benzo(a)pyrene	220	J
193-39-5	Indeno(1,2,3-cd)pyrene	160	J
53-70-3	Dibenzo(a,h)anthracene	51	J
191-24-2	Benzo(g,h,i)perylene	180	J
58-90-2	2,3,4,6-Tetrachlorophenol	400	~~U~~

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[1] Cannot be separated from Diphenylamine

MW 9/26/13

EPA SAMPLE NO.
LMR13-59-024

2

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17127

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17127-2

Sample wt/vol: 29.9 (g/mL) g Lab File ID: PJZKI14.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 47 Decanted: (Y/N) Date Received: 06/21/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/29/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/08/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
100-52-7	Benzaldehyde	37	J	
108-95-2	Phenol	320	U	
111-44-4	Bis(2-chloroethyl)ether	320	U	
95-57-8	2-Chlorophenol	320	U	
95-48-7	2-Methylphenol	320	U	
108-60-1	2,2'-Oxybis(1-chloropropane)	320	U	
98-86-2	Acetophenone	320	U	
106-44-5	4-Methylphenol	320	U	
621-64-7	N-Nitroso-di-n-propylamine	320	U	
67-72-1	Hexachloroethane	320	U	
98-95-3	Nitrobenzene	320	U	
78-59-1	Isophorone	320	U	
88-75-5	2-Nitrophenol	320	U	
105-67-9	2,4-Dimethylphenol	320	U	
111-91-1	Bis(2-chloroethoxy)methane	320	U	
120-83-2	2,4-Dichlorophenol	320	U	
91-20-3	Naphthalene	320 ~~73~~	~~J B~~	U
106-47-8	4-Chloroaniline	320	U	
87-68-3	Hexachlorobutadiene	320	U	
105-60-2	Caprolactam	320	U	
59-50-7	4-Chloro-3-methylphenol	320	U	
91-57-6	2-Methylnaphthalene	39	J	
77-47-4	Hexachlorocyclopentadiene	320	~~U~~	UJ
88-06-2	2,4,6-Trichlorophenol	320	U	
95-95-4	2,4,5-Trichlorophenol	320	U	
92-52-4	1,1'-Biphenyl	12	J	
91-58-7	2-Chloronaphthalene	320	U	
88-74-4	2-Nitroaniline	620	U	
131-11-3	Dimethylphthalate	320	U	
606-20-2	2,6-Dinitrotoluene	320	U	
208-96-8	Acenaphthylene	9.7	J	
99-09-2	3-Nitroaniline	620	U	
83-32-9	Acenaphthene	81	J	

NW 9/26/13

1E - FORM I SV-2
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-59-024

2

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17127

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17127-2

Sample wt/vol: 29.9 (g/mL) g Lab File ID: PJZKI14.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 47 Decanted: (Y/N) Date Received: 06/21/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/29/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/08/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
51-28-5	2,4-Dinitrophenol	620	U
100-02-7	4-Nitrophenol	620	U
132-64-9	Dibenzofuran	67	J
121-14-2	2,4-Dinitrotoluene	320	U
84-66-2	Diethylphthalate	320	U
86-73-7	Fluorene	130	J
7005-72-3	4-Chlorophenyl-phenylether	320	U
100-01-6	4-Nitroaniline	620	U
534-52-1	4,6-Dinitro-2-methylphenol	620	U
86-30-6	N-Nitrosodiphenylamin [1]	320	U
95-94-3	1,2,4,5-Tetrachlorobenzene	320	U
101-55-3	4-Bromophenyl-phenylether	320	U
118-74-1	Hexachlorobenzene	320	U
1912-24-9	Atrazine	320	U
87-86-5	Pentachlorophenol	620	U
85-01-8	Phenanthrene	400	
120-12-7	Anthracene	110	J
86-74-8	Carbazole	320	U
84-74-2	Di-n-butylphthalate	320 ~~17~~	~~J B~~ U
206-44-0	Fluoranthene	480	
129-00-0	Pyrene	600	
85-68-7	Butylbenzylphthalate	35	J
91-94-1	3,3'-Dichlorobenzidine	320	U
56-55-3	Benzo(a)anthracene	320 ~~200~~	~~J B~~ U
218-01-9	Chrysene	~~240~~	~~J B~~ ↓
117-81-7	Bis(2-ethylhexyl)phthalate	↓ ~~230~~	~~J B~~ ↓
117-84-0	Di-n-octylphthalate	320	U
205-99-2	Benzo(b)fluoranthene	170	J
207-08-9	Benzo(k)fluoranthene	220	J
50-32-8	Benzo(a)pyrene	170	J
193-39-5	Indeno(1,2,3-cd)pyrene	150	J
53-70-3	Dibenzo(a,h)anthracene	59	J
191-24-2	Benzo(g,h,i)perylene	160	J
58-90-2	2,3,4,6-Tetrachlorophenol	320	U

[1] Cannot be separated from Diphenylamine

MW 9/26/13

EPA SAMPLE NO.
LMR13-59-048

3

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17127

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17127-3

Sample wt/vol: 29.7 (g/mL) g Lab File ID: PJZKT14.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 35 Decanted: (Y/N) Date Received: 06/21/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/29/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/13/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
100-52-7	Benzaldehyde	270	U
108-95-2	Phenol	270	U
111-44-4	Bis(2-chloroethyl)ether	270	U
95-57-8	2-Chlorophenol	270	U
95-48-7	2-Methylphenol	270	U
108-60-1	2,2'-Oxybis(1-chloropropane)	270	U
98-86-2	Acetophenone	270	U
106-44-5	4-Methylphenol	270	U
621-64-7	N-Nitroso-di-n-propylamine	270	U
67-72-1	Hexachloroethane	270	U
98-95-3	Nitrobenzene	270	U
78-59-1	Isophorone	270	U
88-75-5	2-Nitrophenol	270	U
105-67-9	2,4-Dimethylphenol	270	U
111-91-1	Bis(2-chloroethoxy)methane	270	U
120-83-2	2,4-Dichlorophenol	270	U
91-20-3	Naphthalene	270 ~~140~~	~~J B~~
106-47-8	4-Chloroaniline	270	U
87-68-3	Hexachlorobutadiene	270	U
105-60-2	Caprolactam	270	U
59-50-7	4-Chloro-3-methylphenol	270	U
91-57-6	2-Methylnaphthalene	33	J
77-47-4	Hexachlorocyclopentadiene	270	U
88-06-2	2,4,6-Trichlorophenol	270	U
95-95-4	2,4,5-Trichlorophenol	270	U
92-52-4	1,1'-Biphenyl	16	J
91-58-7	2-Chloronaphthalene	270	U
88-74-4	2-Nitroaniline	510	U
131-11-3	Dimethylphthalate	270	U
606-20-2	2,6-Dinitrotoluene	270	U
208-96-8	Acenaphthylene	29	J
99-09-2	3-Nitroaniline	510	U
83-32-9	Acenaphthene	100	J

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NW 9/26/13

1E - FORM I SV-2
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-59-048

3

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17127

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17127-3

Sample wt/vol: 29.7 (g/mL) g Lab File ID: PJZKT14.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 35 Decanted: (Y/N) Date Received: 06/21/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/29/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/13/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
51-28-5	2,4-Dinitrophenol	510	U	UJ
100-02-7	4-Nitrophenol	510	U	UJ
132-64-9	Dibenzofuran	67	J	J
121-14-2	2,4-Dinitrotoluene	270	U	UJ
84-66-2	Diethylphthalate	270	U	UJ
86-73-7	Fluorene	120	J	J
7005-72-3	4-Chlorophenyl-phenylether	270	U	UJ
100-01-6	4-Nitroaniline	510	U	
534-52-1	4,6-Dinitro-2-methylphenol	510	U	
86-30-6	N-Nitrosodiphenylamin [1]	270	U	
95-94-3	1,2,4,5-Tetrachlorobenzene	270	U	
101-55-3	4-Bromophenyl-phenylether	270	U	
118-74-1	Hexachlorobenzene	270	U	
1912-24-9	Atrazine	270	U	
87-86-5	Pentachlorophenol	510	U	
85-01-8	Phenanthrene	630		J
120-12-7	Anthracene	170	J	J
86-74-8	Carbazole	270	U	UJ
84-74-2	Di-n-butylphthalate	320 ~~39~~	~~J B~~	UJ
206-44-0	Fluoranthene	860		J
129-00-0	Pyrene	1300		J
85-68-7	Butylbenzylphthalate	270	U	UJ
91-94-1	3,3'-Dichlorobenzidine	270	U	UJ
56-55-3	Benzo(a)anthracene	580	~~B~~	J
218-01-9	Chrysene	630	~~B~~	
117-81-7	Bis(2-ethylhexyl)phthalate	2700	~~B~~	
117-84-0	Di-n-octylphthalate	270	~~U~~	UJ
205-99-2	Benzo(b)fluoranthene	450		J
207-08-9	Benzo(k)fluoranthene	560		
50-32-8	Benzo(a)pyrene	580		
193-39-5	Indeno(1,2,3-cd)pyrene	270		
53-70-3	Dibenzo(a,h)anthracene	160	~~U~~	
191-24-2	Benzo(g,h,i)perylene	290		
58-90-2	2,3,4,6-Tetrachlorophenol	270	~~U~~	UJ

[1] Cannot be separated from Diphenylamine

MW 9/26/13

1D - FORM I SV-1

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-94-024

4

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17127

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17127-4

Sample wt/vol: 29.3 (g/mL) g Lab File ID: PJZKI16.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 38 Decanted: (Y/N) Date Received: 06/21/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/29/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/08/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 10.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
100-52-7	Benzaldehyde	2800	U
108-95-2	Phenol	2800	U
111-44-4	Bis(2-chloroethyl)ether	2800	U
95-57-8	2-Chlorophenol	2800	U
95-48-7	2-Methylphenol	2800	U
108-60-1	2,2'-Oxybis(1-chloropropane)	2800	U
98-86-2	Acetophenone	2800	U
106-44-5	4-Methylphenol	2800	U
621-64-7	N-Nitroso-di-n-propylamine	2800	U
67-72-1	Hexachloroethane	2800	U
98-95-3	Nitrobenzene	2800	U
78-59-1	Isophorone	2800	U
88-75-5	2-Nitrophenol	2800	U
105-67-9	2,4-Dimethylphenol	2800	U
111-91-1	Bis(2-chloroethoxy)methane	2800	U
120-83-2	2,4-Dichlorophenol	2800	U
91-20-3	Naphthalene	11000	~~U~~
106-47-8	4-Chloroaniline	2800	U
87-68-3	Hexachlorobutadiene	2800	U
105-60-2	Caprolactam	2800	U
59-50-7	4-Chloro-3-methylphenol	2800	U
91-57-6	2-Methylnaphthalene	4100	
77-47-4	Hexachlorocyclopentadiene	2800	~~U~~ UJ
88-06-2	2,4,6-Trichlorophenol	2800	U
95-95-4	2,4,5-Trichlorophenol	2800	U
92-52-4	1,1'-Biphenyl	230	J
91-58-7	2-Chloronaphthalene	2800	U
88-74-4	2-Nitroaniline	5500	U
131-11-3	Dimethylphthalate	2800	U
606-20-2	2,6-Dinitrotoluene	2800	U
208-96-8	Acenaphthylene	960	J
99-09-2	3-Nitroaniline	5500	U
83-32-9	Acenaphthene	5100	

NW 9/26/13

EPA SAMPLE NO.
LMR13-94-024

4

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17127

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17127-4

Sample wt/vol: 29.3 (g/mL) g Lab File ID: PJZKI16.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 38 Decanted: (Y/N) Date Received: 06/21/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/29/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/08/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 10.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
51-28-5	2,4-Dinitrophenol	5500	U	
100-02-7	4-Nitrophenol	5500	U	
132-64-9	Dibenzofuran	2800		
121-14-2	2,4-Dinitrotoluene	2800	U	
84-66-2	Diethylphthalate	2800	U	
86-73-7	Fluorene	8200		
7005-72-3	4-Chlorophenyl-phenylether	2800	U	
100-01-6	4-Nitroaniline	5500	U	
534-52-1	4,6-Dinitro-2-methylphenol	5500	U	
86-30-6	N-Nitrosodiphenylamin [1]	2800	U	
95-94-3	1,2,4,5-Tetrachlorobenzene	2800	U	
101-55-3	4-Bromophenyl-phenylether	2800	U	
118-74-1	Hexachlorobenzene	2800	U	
1912-24-9	Atrazine	2800	U	
87-86-5	Pentachlorophenol	5500	U	
85-01-8	Phenanthrene	32000		J
120-12-7	Anthracene	9600		J
86-74-8	Carbazole	1500	J	
84-74-2	Di-n-butylphthalate	2800 ~~110~~	~~J B~~	U
206-44-0	Fluoranthene	34000		J
129-00-0	Pyrene	37000		J
85-68-7	Butylbenzylphthalate	2800	U	
91-94-1	3,3'-Dichlorobenzidine	2800	U	
56-55-3	Benzo(a)anthracene	16000	~~B~~	J
218-01-9	Chrysene	16000	~~B~~	J
117-81-7	Bis(2-ethylhexyl)phthalate	2800 ~~550~~	~~J B~~	U
117-84-0	Di-n-octylphthalate	2800	U	
205-99-2	Benzo(b)fluoranthene	11000		
207-08-9	Benzo(k)fluoranthene	12000		
50-32-8	Benzo(a)pyrene	13000		
193-39-5	Indeno(1,2,3-cd)pyrene	9600		
53-70-3	Dibenzo(a,h)anthracene	3300		
191-24-2	Benzo(g,h,i)perylene	8600		
58-90-2	2,3,4,6-Tetrachlorophenol	2800	U	

[1] Cannot be separated from Diphenylamine

MW 9/26/13

1D - FORM I SV-1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-94-072

5

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17127

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17127-5

Sample wt/vol: 30.0 (g/mL) g Lab File ID: PJZKQ05.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 40 Decanted: (Y/N) Date Received: 06/21/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/29/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/12/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 50.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
100-52-7	Benzaldehyde	14000	U
108-95-2	Phenol	14000	U
111-44-4	Bis(2-chloroethyl)ether	14000	U
95-57-8	2-Chlorophenol	14000	U
95-48-7	2-Methylphenol	14000	U
108-60-1	2,2'-Oxybis(1-chloropropane)	14000	U
98-86-2	Acetophenone	14000	U
106-44-5	4-Methylphenol	14000	U
621-64-7	N-Nitroso-di-n-propylamine	14000	U
67-72-1	Hexachloroethane	14000	U
98-95-3	Nitrobenzene	14000	U
78-59-1	Isophorone	14000	U
88-75-5	2-Nitrophenol	14000	U
105-67-9	2,4-Dimethylphenol	14000	U
111-91-1	Bis(2-chloroethoxy)methane	14000	U
120-83-2	2,4-Dichlorophenol	14000	U
91-20-3	Naphthalene	60000	J
106-47-8	4-Chloroaniline	14000	U
87-68-3	Hexachlorobutadiene	14000	U
105-60-2	Caprolactam	14000	U
59-50-7	4-Chloro-3-methylphenol	14000	U
91-57-6	2-Methylnaphthalene	79000	
77-47-4	Hexachlorocyclopentadiene	14000	U
88-06-2	2,4,6-Trichlorophenol	14000	U
95-95-4	2,4,5-Trichlorophenol	14000	U
92-52-4	1,1'-Biphenyl	11000	J
91-58-7	2-Chloronaphthalene	14000	U
88-74-4	2-Nitroaniline	27000	U
131-11-3	Dimethylphthalate	14000	U
606-20-2	2,6-Dinitrotoluene	14000	U
208-96-8	Acenaphthylene	910	J
99-09-2	3-Nitroaniline	27000	U
83-32-9	Acenaphthene	51000	

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MW 9/26/13

EPA SAMPLE NO.
LMR13-94-072

5

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17127

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17127-5

Sample wt/vol: 30.0 (g/mL) g Lab File ID: PJZKQ05.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 40 Decanted: (Y/N) Date Received: 06/21/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/29/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/12/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 50.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
51-28-5	2,4-Dinitrophenol	27000	U	UJ
100-02-7	4-Nitrophenol	27000	U	UJ
132-64-9	Dibenzofuran	40000		J
121-14-2	2,4-Dinitrotoluene	14000	U	UJ
84-66-2	Diethylphthalate	14000	U	UJ
86-73-7	Fluorene	56000		J
7005-72-3	4-Chlorophenyl-phenylether	14000	U	UJ
100-01-6	4-Nitroaniline	27000	U	
534-52-1	4,6-Dinitro-2-methylphenol	27000	U	
86-30-6	N-Nitrosodiphenylamin [1]	14000	U	
95-94-3	1,2,4,5-Tetrachlorobenzene	14000	U	
101-55-3	4-Bromophenyl-phenylether	14000	U	
118-74-1	Hexachlorobenzene	14000	U	
1912-24-9	Atrazine	14000	U	
87-86-5	Pentachlorophenol	27000	U	
85-01-8	Phenanthrene	170000		J
120-12-7	Anthracene	50000		
86-74-8	Carbazole	7600	J	
84-74-2	Di-n-butylphthalate	14000	U	UJ
206-44-0	Fluoranthene	82000		J
129-00-0	Pyrene	76000		J
85-68-7	Butylbenzylphthalate	14000	U	UJ
91-94-1	3,3'-Dichlorobenzidine	14000	U	UJ
56-55-3	Benzo(a)anthracene	33000	J	J
218-01-9	Chrysene	30000	J	J
117-81-7	Bis(2-ethylhexyl)phthalate	14000	U	UJ
117-84-0	Di-n-octylphthalate	14000	U	UJ
205-99-2	Benzo(b)fluoranthene	24000		J
207-08-9	Benzo(k)fluoranthene	17000		
50-32-8	Benzo(a)pyrene	24000		
193-39-5	Indeno(1,2,3-cd)pyrene	12000	J	
53-70-3	Dibenzo(a,h)anthracene	4700	J	
191-24-2	Benzo(g,h,i)perylene	13000	J	
58-90-2	2,3,4,6-Tetrachlorophenol	14000	U	UJ

[1] Cannot be separated from Diphenylamine

MW 9/26/13

1D - FORM I SV-1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-58-012

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678 6

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17127

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17127-6

Sample wt/vol: 29.8 (g/mL) g Lab File ID: PJZKQ12.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 53 Decanted: (Y/N) Date Received: 06/21/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/29/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/12/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
100-52-7	Benzaldehyde	45	~~U~~ J
108-95-2	Phenol	370	U UJ
111-44-4	Bis(2-chloroethyl)ether	370	U
95-57-8	2-Chlorophenol	370	U
95-48-7	2-Methylphenol	370	U
108-60-1	2,2'-Oxybis(1-chloropropane)	370	U
98-86-2	Acetophenone	370	U
106-44-5	4-Methylphenol	370	U
621-64-7	N-Nitroso-di-n-propylamine	370	U
67-72-1	Hexachloroethane	370	U
98-95-3	Nitrobenzene	370	U
78-59-1	Isophorone	370	U
88-75-5	2-Nitrophenol	370	U
105-67-9	2,4-Dimethylphenol	370	U
111-91-1	Bis(2-chloroethoxy)methane	370	U
120-83-2	2,4-Dichlorophenol	370	U
91-20-3	Naphthalene	370 ~~150~~	~~J B~~ UJ
106-47-8	4-Chloroaniline	370	U R
87-68-3	Hexachlorobutadiene	370	U UJ
105-60-2	Caprolactam	370	U
59-50-7	4-Chloro-3-methylphenol	370	U J
91-57-6	2-Methylnaphthalene	28	J
77-47-4	Hexachlorocyclopentadiene	370	U R
88-06-2	2,4,6-Trichlorophenol	370	U UJ
95-95-4	2,4,5-Trichlorophenol	370	U UJ
92-52-4	1,1'-Biphenyl	9.1	J J
91-58-7	2-Chloronaphthalene	370	U UJ
88-74-4	2-Nitroaniline	710	U
131-11-3	Dimethylphthalate	370	U
606-20-2	2,6-Dinitrotoluene	370	U
208-96-8	Acenaphthylene	370	U
99-09-2	3-Nitroaniline	710	U
83-32-9	Acenaphthene	89	J J

MW 9/26/13

1E - FORM I SV-2
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-58-012

6

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17127

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17127-6

Sample wt/vol: 29.8 (g/mL) g Lab File ID: PJZKQ12.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 53 Decanted: (Y/N) Date Received: 06/21/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/29/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/12/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
51-28-5	2,4-Dinitrophenol	710	U
100-02-7	4-Nitrophenol	710	U
132-64-9	Dibenzofuran	65	J
121-14-2	2,4-Dinitrotoluene	370	U
84-66-2	Diethylphthalate	370	U
86-73-7	Fluorene	110	J
7005-72-3	4-Chlorophenyl-phenylether	370	U
100-01-6	4-Nitroaniline	710	U
534-52-1	4,6-Dinitro-2-methylphenol	710	U
86-30-6	N-Nitrosodiphenylamin [1]	370	U
95-94-3	1,2,4,5-Tetrachlorobenzene	370	U
101-55-3	4-Bromophenyl-phenylether	370	U
118-74-1	Hexachlorobenzene	370	U
1912-24-9	Atrazine	370	U
87-86-5	Pentachlorophenol	710	U
85-01-8	Phenanthrene	450	
120-12-7	Anthracene	110	J
86-74-8	Carbazole	16	J
84-74-2	Di-n-butylphthalate	370 ~~32~~	~~J B~~
206-44-0	Fluoranthene	460	
129-00-0	Pyrene	720	
85-68-7	Butylbenzylphthalate	370	~~U~~
91-94-1	3,3'-Dichlorobenzidine	370	~~U~~
56-55-3	Benzo(a)anthracene	370 ~~240~~	~~J B~~
218-01-9	Chrysene	370 ~~350~~	~~J B~~
117-81-7	Bis(2-ethylhexyl)phthalate	760	~~B~~
117-84-0	Di-n-octylphthalate	370	~~U~~
205-99-2	Benzo(b)fluoranthene	300	J
207-08-9	Benzo(k)fluoranthene	200	J
50-32-8	Benzo(a)pyrene	250	J
193-39-5	Indeno(1,2,3-cd)pyrene	180	J
53-70-3	Dibenzo(a,h)anthracene	92	J
191-24-2	Benzo(g,h,i)perylene	200	J
58-90-2	2,3,4,6-Tetrachlorophenol	370	U

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[1] Cannot be separated from Diphenylamine

MW 9/26/13

1D - FORM I SV-1

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-94-012

7

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17127

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17127-7

Sample wt/vol: 30.1 (g/mL) g Lab File ID: RKXYV05.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 49 Decanted: (Y/N) Date Received: 06/21/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/29/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/08/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 4.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
100-52-7	Benzaldehyde	1300	U
108-95-2	Phenol	1300	U
111-44-4	Bis(2-chloroethyl)ether	1300	U
95-57-8	2-Chlorophenol	1300	U
95-48-7	2-Methylphenol	1300	U
108-60-1	2,2'-Oxybis(1-chloropropane)	1300	U
98-86-2	Acetophenone	1300	U
106-44-5	4-Methylphenol	1300	U
621-64-7	N-Nitroso-di-n-propylamine	1300	U
67-72-1	Hexachloroethane	1300	U
98-95-3	Nitrobenzene	1300	U
78-59-1	Isophorone	1300	U
88-75-5	2-Nitrophenol	1300	U
105-67-9	2,4-Dimethylphenol	1300	U
111-91-1	Bis(2-chloroethoxy)methane	1300	U
120-83-2	2,4-Dichlorophenol	1300	U
91-20-3	Naphthalene	2300	~~U~~
106-47-8	4-Chloroaniline	1300	U
87-68-3	Hexachlorobutadiene	1300	U
105-60-2	Caprolactam	1300	U
59-50-7	4-Chloro-3-methylphenol	1300	U
91-57-6	2-Methylnaphthalene	490	J
77-47-4	Hexachlorocyclopentadiene	1300	~~U~~ UJ
88-06-2	2,4,6-Trichlorophenol	1300	U
95-95-4	2,4,5-Trichlorophenol	1300	U
92-52-4	1,1'-Biphenyl	1300	U
91-58-7	2-Chloronaphthalene	1300	U
88-74-4	2-Nitroaniline	2600	U
131-11-3	Dimethylphthalate	1300	U
606-20-2	2,6-Dinitrotoluene	1300	U
208-96-8	Acenaphthylene	160	J
99-09-2	3-Nitroaniline	2600	U
83-32-9	Acenaphthene	2300	

NW 9/26/13

EPA SAMPLE NO.
LMR13-94-012

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678 7

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17127

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17127-7

Sample wt/vol: 30.1 (g/mL) g Lab File ID: RKXYV05.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 49 Decanted: (Y/N) Date Received: 06/21/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/29/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/08/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 4.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
51-28-5	2,4-Dinitrophenol	2600	U	
100-02-7	4-Nitrophenol	2600	U	
132-64-9	Dibenzofuran	790	J	
121-14-2	2,4-Dinitrotoluene	1300	U	
84-66-2	Diethylphthalate	1300	U	
86-73-7	Fluorene	3200		
7005-72-3	4-Chlorophenyl-phenylether	1300	U	
100-01-6	4-Nitroaniline	2600	U	
534-52-1	4,6-Dinitro-2-methylphenol	2600	U	
86-30-6	N-Nitrosodiphenylamin [1]	1300	U	
95-94-3	1,2,4,5-Tetrachlorobenzene	1300	U	
101-55-3	4-Bromophenyl-phenylether	1300	U	
118-74-1	Hexachlorobenzene	1300	U	
1912-24-9	Atrazine	1300	U	
87-86-5	Pentachlorophenol	2600	~~U~~	UJ
85-01-8	Phenanthrene	18000	~~B~~	
120-12-7	Anthracene	4100		
86-74-8	Carbazole	390	J	
84-74-2	Di-n-butylphthalate	1300 ~~32~~	~~J B~~	U
206-44-0	Fluoranthene	18000		
129-00-0	Pyrene	14000		J
85-68-7	Butylbenzylphthalate	1300	U	
91-94-1	3,3'-Dichlorobenzidine	1300	U	
56-55-3	Benzo(a)anthracene	7200		
218-01-9	Chrysene	7200		
117-81-7	Bis(2-ethylhexyl)phthalate	1300 ~~280~~	~~J B~~	U
117-84-0	Di-n-octylphthalate	1300	U	
205-99-2	Benzo(b)fluoranthene	5300		
207-08-9	Benzo(k)fluoranthene	7900		
50-32-8	Benzo(a)pyrene	6500		
193-39-5	Indeno(1,2,3-cd)pyrene	3200		J
53-70-3	Dibenzo(a,h)anthracene	960	~~J~~	J
191-24-2	Benzo(g,h,i)perylene	3200		J
58-90-2	2,3,4,6-Tetrachlorophenol	1300	U	

[1] Cannot be separated from Diphenylamine

MW 9/26/13

1D - FORM I SV-1

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-94-048

8

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17127

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17127-8

Sample wt/vol: 29.1 (g/mL) g Lab File ID: PJZKQ06.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 39 Decanted: (Y/N) Date Received: 06/21/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/29/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/12/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 10.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
100-52-7	Benzaldehyde	2800	U
108-95-2	Phenol	2800	U
111-44-4	Bis(2-chloroethyl)ether	2800	U
95-57-8	2-Chlorophenol	2800	U
95-48-7	2-Methylphenol	2800	U
108-60-1	2,2'-Oxybis(1-chloropropane)	2800	U
98-86-2	Acetophenone	2800	U
106-44-5	4-Methylphenol	2800	U
621-64-7	N-Nitroso-di-n-propylamine	2800	U
67-72-1	Hexachloroethane	2800	U
98-95-3	Nitrobenzene	2800	U
78-59-1	Isophorone	2800	U
88-75-5	2-Nitrophenol	2800	U
105-67-9	2,4-Dimethylphenol	2800	U
111-91-1	Bis(2-chloroethoxy)methane	2800	U
120-83-2	2,4-Dichlorophenol	2800	U
91-20-3	Naphthalene	12000	J
106-47-8	4-Chloroaniline	2800	U
87-68-3	Hexachlorobutadiene	2800	U
105-60-2	Caprolactam	2800	U
59-50-7	4-Chloro-3-methylphenol	2800	U
91-57-6	2-Methylnaphthalene	9000	
77-47-4	Hexachlorocyclopentadiene	2800	U
88-06-2	2,4,6-Trichlorophenol	2800	U
95-95-4	2,4,5-Trichlorophenol	2800	U
92-52-4	1,1'-Biphenyl	2800	U
91-58-7	2-Chloronaphthalene	2800	U
88-74-4	2-Nitroaniline	5500	U
131-11-3	Dimethylphthalate	2800	U
606-20-2	2,6-Dinitrotoluene	2800	U
208-96-8	Acenaphthylene	260	J
99-09-2	3-Nitroaniline	5500	U
83-32-9	Acenaphthene	5800	

UJ J UJ J UJ J UJ J

MW 9/26/13

EPA SAMPLE NO.
LMR13-94-048

8

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17127

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17127-8

Sample wt/vol: 29.1 (g/mL) g Lab File ID: PJZKQ06.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 39 Decanted: (Y/N) Date Received: 06/21/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/29/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/12/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 10.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
51-28-5	2,4-Dinitrophenol	5500	UJ
100-02-7	4-Nitrophenol	5500	UJ
132-64-9	Dibenzofuran	4100	J
121-14-2	2,4-Dinitrotoluene	2800	UJ
84-66-2	Diethylphthalate	2800	UJ
86-73-7	Fluorene	7700	J
7005-72-3	4-Chlorophenyl-phenylether	2800	UJ
100-01-6	4-Nitroaniline	5500	U
534-52-1	4,6-Dinitro-2-methylphenol	5500	U
86-30-6	N-Nitrosodiphenylamin [1]	2800	U
95-94-3	1,2,4,5-Tetrachlorobenzene	2800	U
101-55-3	4-Bromophenyl-phenylether	2800	U
118-74-1	Hexachlorobenzene	2800	U
1912-24-9	Atrazine	2800	U
87-86-5	Pentachlorophenol	5500	U
85-01-8	Phenanthrene	24000	J
120-12-7	Anthracene	5900	J
86-74-8	Carbazole	1800	J
84-74-2	Di-n-butylphthalate	2800	UJ
206-44-0	Fluoranthene	14000	J
129-00-0	Pyrene	17000	J
85-68-7	Butylbenzylphthalate	2800	UJ
91-94-1	3,3'-Dichlorobenzidine	2800	UJ
56-55-3	Benzo(a)anthracene	6200	J
218-01-9	Chrysene	5700	J
117-81-7	Bis(2-ethylhexyl)phthalate	2800 ~~540~~	UJ ~~J B~~
117-84-0	Di-n-octylphthalate	2800	UJ
205-99-2	Benzo(b)fluoranthene	3400	J
207-08-9	Benzo(k)fluoranthene	4900	
50-32-8	Benzo(a)pyrene	5000	
193-39-5	Indeno(1,2,3-cd)pyrene	3500	
53-70-3	Dibenzo(a,h)anthracene	1500	J
191-24-2	Benzo(g,h,i)perylene	3200	
58-90-2	2,3,4,6-Tetrachlorophenol	2800	UJ

[1] Cannot be separated from Diphenylamine

MW 9/26/13

1D - FORM I SV-1

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-95-012

9

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17127

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17127-9

Sample wt/vol: 29.9 (g/mL) g Lab File ID: RKXYV15.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 42 Decanted: (Y/N) Date Received: 06/21/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/29/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/08/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 500.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
100-52-7	Benzaldehyde	150000	U
108-95-2	Phenol	150000	U
111-44-4	Bis(2-chloroethyl)ether	150000	U
95-57-8	2-Chlorophenol	150000	U
95-48-7	2-Methylphenol	150000	U
108-60-1	2,2'-Oxybis(1-chloropropane)	150000	U
98-86-2	Acetophenone	150000	U
106-44-5	4-Methylphenol	150000	U
621-64-7	N-Nitroso-di-n-propylamine	150000	U
67-72-1	Hexachloroethane	150000	U
98-95-3	Nitrobenzene	150000	U
78-59-1	Isophorone	150000	U
88-75-5	2-Nitrophenol	150000	U
105-67-9	2,4-Dimethylphenol	150000	U
111-91-1	Bis(2-chloroethoxy)methane	150000	U
120-83-2	2,4-Dichlorophenol	150000	U
91-20-3	Naphthalene	1500000	~~U~~
106-47-8	4-Chloroaniline	150000	U
87-68-3	Hexachlorobutadiene	150000	U
105-60-2	Caprolactam	150000	U
59-50-7	4-Chloro-3-methylphenol	150000	U
91-57-6	2-Methylnaphthalene	120000	J
77-47-4	Hexachlorocyclopentadiene	150000	~~U~~ UJ
88-06-2	2,4,6-Trichlorophenol	150000	U
95-95-4	2,4,5-Trichlorophenol	150000	U
92-52-4	1,1'-Biphenyl	18000	J
91-58-7	2-Chloronaphthalene	150000	U
88-74-4	2-Nitroaniline	290000	U
131-11-3	Dimethylphthalate	150000	U
606-20-2	2,6-Dinitrotoluene	150000	U
208-96-8	Acenaphthylene	53000	J
99-09-2	3-Nitroaniline	290000	U
83-32-9	Acenaphthene	53000	J

NW 9/26/13

EPA SAMPLE NO.
LMR13-95-012

9

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17127

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17127-9

Sample wt/vol: 29.9 (g/mL) g Lab File ID: RKXYV15.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 42 Decanted: (Y/N) Date Received: 06/21/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/29/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/08/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 500.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
51-28-5	2,4-Dinitrophenol	290000	U	
100-02-7	4-Nitrophenol	290000	U	
132-64-9	Dibenzofuran	93000	J	
121-14-2	2,4-Dinitrotoluene	150000	U	
84-66-2	Diethylphthalate	150000	U	
86-73-7	Fluorene	150000	J	
7005-72-3	4-Chlorophenyl-phenylether	150000	U	
100-01-6	4-Nitroaniline	290000	U	
534-52-1	4,6-Dinitro-2-methylphenol	290000	U	
86-30-6	N-Nitrosodiphenylamin [1]	150000	U	
95-94-3	1,2,4,5-Tetrachlorobenzene	150000	U	
101-55-3	4-Bromophenyl-phenylether	150000	U	
118-74-1	Hexachlorobenzene	150000	U	
1912-24-9	Atrazine	150000	U	
87-86-5	Pentachlorophenol	290000	~~U~~	UJ
85-01-8	Phenanthrene	510000	~~U~~	
120-12-7	Anthracene	130000	J	
86-74-8	Carbazole	29000	J	
84-74-2	Di-n-butylphthalate	150000	U	
206-44-0	Fluoranthene	270000		
129-00-0	Pyrene	520000		J
85-68-7	Butylbenzylphthalate	150000	U	
91-94-1	3,3'-Dichlorobenzidine	150000	U	
56-55-3	Benzo(a)anthracene	110000	J	
218-01-9	Chrysene	110000	J	
117-81-7	Bis(2-ethylhexyl)phthalate	150000	U	
117-84-0	Di-n-octylphthalate	150000	U	
205-99-2	Benzo(b)fluoranthene	75000	J	
207-08-9	Benzo(k)fluoranthene	77000	J	
50-32-8	Benzo(a)pyrene	87000	J	
193-39-5	Indeno(1,2,3-cd)pyrene	35000	~~J~~	J
53-70-3	Dibenzo(a,h)anthracene	20000	~~J~~	↓
191-24-2	Benzo(g,h,i)perylene	39000	~~J~~	
58-90-2	2,3,4,6-Tetrachlorophenol	150000	U	

[1] Cannot be separated from Diphenylamine

MR 9/26/13

1D - FORM I SV-1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-70-024

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678 10

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17127

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17127-10

Sample wt/vol: 29.6 (g/mL) g Lab File ID: RKXYV14.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 45 Decanted: (Y/N) Date Received: 06/21/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/29/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/08/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
100-52-7	Benzaldehyde	46	J	
108-95-2	Phenol	320	U	
111-44-4	Bis(2-chloroethyl)ether	320	U	
95-57-8	2-Chlorophenol	320	U	
95-48-7	2-Methylphenol	320	U	
108-60-1	2,2'-Oxybis(1-chloropropane)	320	U	
98-86-2	Acetophenone	320	U	
106-44-5	4-Methylphenol	320	U	
621-64-7	N-Nitroso-di-n-propylamine	320	U	
67-72-1	Hexachloroethane	320	U	
98-95-3	Nitrobenzene	320	U	
78-59-1	Isophorone	320	U	
88-75-5	2-Nitrophenol	320	U	
105-67-9	2,4-Dimethylphenol	320	U	
111-91-1	Bis(2-chloroethoxy)methane	320	U	
120-83-2	2,4-Dichlorophenol	320	U	
91-20-3	Naphthalene	320 ~~170~~ ~~U~~ B	U	
106-47-8	4-Chloroaniline	320 ~~U~~	R	
87-68-3	Hexachlorobutadiene	320	U	
105-60-2	Caprolactam	320	U	
59-50-7	4-Chloro-3-methylphenol	320	U	
91-57-6	2-Methylnaphthalene	320	U	
77-47-4	Hexachlorocyclopentadiene	320 ~~U~~	R	
88-06-2	2,4,6-Trichlorophenol	320	U	
95-95-4	2,4,5-Trichlorophenol	320	U	
92-52-4	1,1'-Biphenyl	320	U	
91-58-7	2-Chloronaphthalene	320	U	
88-74-4	2-Nitroaniline	610	U	
131-11-3	Dimethylphthalate	320	U	
606-20-2	2,6-Dinitrotoluene	320	U	
208-96-8	Acenaphthylene	320	U	
99-09-2	3-Nitroaniline	610	U	
83-32-9	Acenaphthene	140	J	

MW 9/26/13

1E - FORM I SV-2
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-70-024

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678 10

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17127

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17127-10

Sample wt/vol: 29.6 (g/mL) g Lab File ID: RKXYV14.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 45 Decanted: (Y/N) Date Received: 06/21/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/29/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/08/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
51-28-5	2,4-Dinitrophenol	610	U	
100-02-7	4-Nitrophenol	610	U	
132-64-9	Dibenzofuran	38	J	
121-14-2	2,4-Dinitrotoluene	320	U	
84-66-2	Diethylphthalate	320	U	
86-73-7	Fluorene	150	J	
7005-72-3	4-Chlorophenyl-phenylether	320	U	
100-01-6	4-Nitroaniline	610	U	
534-52-1	4,6-Dinitro-2-methylphenol	610	U	
86-30-6	N-Nitrosodiphenylamin [1]	320	U	
95-94-3	1,2,4,5-Tetrachlorobenzene	320	U	
101-55-3	4-Bromophenyl-phenylether	320	U	
118-74-1	Hexachlorobenzene	320	U	
1912-24-9	Atrazine	320	U	
87-86-5	Pentachlorophenol	610	~~U~~ J	UJ
85-01-8	Phenanthrene	820	~~B~~ J	
120-12-7	Anthracene	150	J	
86-74-8	Carbazole	320	U	
84-74-2	Di-n-butylphthalate	320 ~~39~~	~~J B~~ U	U
206-44-0	Fluoranthene	840		
129-00-0	Pyrene	660		J
85-68-7	Butylbenzylphthalate	320	U	
91-94-1	3,3'-Dichlorobenzidine	320	~~U~~ R	R
56-55-3	Benzo(a)anthracene	310	J	
218-01-9	Chrysene	430		
117-81-7	Bis(2-ethylhexyl)phthalate	900	~~B~~	
117-84-0	Di-n-octylphthalate	320	U	
205-99-2	Benzo(b)fluoranthene	390		
207-08-9	Benzo(k)fluoranthene	330		
50-32-8	Benzo(a)pyrene	280	J	
193-39-5	Indeno(1,2,3-cd)pyrene	140	J	J
53-70-3	Dibenzo(a,h)anthracene	63	J	
191-24-2	Benzo(g,h,i)perylene	160	J	
58-90-2	2,3,4,6-Tetrachlorophenol	320	U	

[1] Cannot be separated from Diphenylamine

MW 9/26/13

EPA SAMPLE NO.
LMR13-95-024

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17127

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17127-11

Sample wt/vol: 29.6 (g/mL) g Lab File ID: PJZKQ07.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 35 Decanted: (Y/N) Date Received: 06/21/2013

Concentrated Extract Volume: 2000 (uL) Date Extracted: 06/29/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/12/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1428.6

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
100-52-7	Benzaldehyde	1500000	U
108-95-2	Phenol	1500000	U
111-44-4	Bis(2-chloroethyl)ether	1500000	U
95-57-8	2-Chlorophenol	1500000	U
95-48-7	2-Methylphenol	1500000	U
108-60-1	2,2'-Oxybis(1-chloropropane)	1500000	U
98-86-2	Acetophenone	1500000	U
106-44-5	4-Methylphenol	1500000	U
621-64-7	N-Nitroso-di-n-propylamine	1500000	U
67-72-1	Hexachloroethane	1500000	U
98-95-3	Nitrobenzene	1500000	U
78-59-1	Isophorone	1500000	U
88-75-5	2-Nitrophenol	1500000	U
105-67-9	2,4-Dimethylphenol	1500000	U
111-91-1	Bis(2-chloroethoxy)methane	1500000	U
120-83-2	2,4-Dichlorophenol	1500000	U
91-20-3	Naphthalene	12000000	J
106-47-8	4-Chloroaniline	1500000	U
87-68-3	Hexachlorobutadiene	1500000	U
105-60-2	Caprolactam	1500000	U
59-50-7	4-Chloro-3-methylphenol	1500000	U
91-57-6	2-Methylnaphthalene	1200000	J
77-47-4	Hexachlorocyclopentadiene	1500000	U
88-06-2	2,4,6-Trichlorophenol	1500000	U
95-95-4	2,4,5-Trichlorophenol	1500000	U
92-52-4	1,1'-Biphenyl	240000	J
91-58-7	2-Chloronaphthalene	1500000	U
88-74-4	2-Nitroaniline	2900000	U
131-11-3	Dimethylphthalate	1500000	U
606-20-2	2,6-Dinitrotoluene	1500000	U
208-96-8	Acenaphthylene	840000	U
99-09-2	3-Nitroaniline	2900000	U
83-32-9	Acenaphthene	130000	U

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MW 9/26/13

EPA SAMPLE NO.
LMR13-95-024

11

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17127

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17127-11

Sample wt/vol: 29.6 (g/mL) g Lab File ID: PJZKQ07.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 35 Decanted: (Y/N) Date Received: 06/21/2013

Concentrated Extract Volume: 2000 (uL) Date Extracted: 06/29/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/12/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1428.6

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
51-28-5	2,4-Dinitrophenol	2900000	U	UJ
100-02-7	4-Nitrophenol	2900000	U	UJ
132-64-9	Dibenzofuran	800000	J	J
121-14-2	2,4-Dinitrotoluene	1500000	U	UJ
84-66-2	Diethylphthalate	1500000	U	UJ
86-73-7	Fluorene	1100000	J	J
7005-72-3	4-Chlorophenyl-phenylether	1500000	U	UJ
100-01-6	4-Nitroaniline	2900000	U	
534-52-1	4,6-Dinitro-2-methylphenol	2900000	U	
86-30-6	N-Nitrosodiphenylamin [1]	1500000	U	
95-94-3	1,2,4,5-Tetrachlorobenzene	1500000	U	
101-55-3	4-Bromophenyl-phenylether	1500000	U	
118-74-1	Hexachlorobenzene	1500000	U	
1912-24-9	Atrazine	1500000	U	
87-86-5	Pentachlorophenol	2900000	U	
85-01-8	Phenanthrene	3400000		J
120-12-7	Anthracene	1100000	J	J
86-74-8	Carbazole	320000	J	J
84-74-2	Di-n-butylphthalate	1500000	U	UJ
206-44-0	Fluoranthene	2200000		J
129-00-0	Pyrene	1600000		J
85-68-7	Butylbenzylphthalate	1500000	U	UJ
91-94-1	3,3'-Dichlorobenzidine	1500000	U	UJ
56-55-3	Benzo(a)anthracene	1500000 ~~730000~~	~~J B~~	UJ
218-01-9	Chrysene	~~740000~~	~~J B~~	UJ
117-81-7	Bis(2-ethylhexyl)phthalate	1500000	U	
117-84-0	Di-n-octylphthalate	1500000	U	
205-99-2	Benzo(b)fluoranthene	510000	J	J
207-08-9	Benzo(k)fluoranthene	510000	J	
50-32-8	Benzo(a)pyrene	590000	J	
193-39-5	Indeno(1,2,3-cd)pyrene	270000	J	
53-70-3	Dibenzo(a,h)anthracene	1500000	U	UJ
191-24-2	Benzo(g,h,i)perylene	250000	J	J
58-90-2	2,3,4,6-Tetrachlorophenol	1500000	U	UJ

[1] Cannot be separated from Diphenylamine

NW 9/26/13

1D - FORM I SV-1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-95-048

12

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17127

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17127-12

Sample wt/vol: 29.8 (g/mL) g Lab File ID: PJZKT15.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 48 Decanted: (Y/N) Date Received: 06/21/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/29/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/13/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 666.7

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
100-52-7	Benzaldehyde	220000	U
108-95-2	Phenol	220000	U
111-44-4	Bis(2-chloroethyl)ether	220000	U
95-57-8	2-Chlorophenol	220000	U
95-48-7	2-Methylphenol	220000	U
108-60-1	2,2'-Oxybis(1-chloropropane)	220000	U
98-86-2	Acetophenone	220000	U
106-44-5	4-Methylphenol	220000	U
621-64-7	N-Nitroso-di-n-propylamine	220000	U
67-72-1	Hexachloroethane	220000	U
98-95-3	Nitrobenzene	220000	U
78-59-1	Isophorone	220000	U
88-75-5	2-Nitrophenol	220000	U
105-67-9	2,4-Dimethylphenol	220000	U
111-91-1	Bis(2-chloroethoxy)methane	220000	U
120-83-2	2,4-Dichlorophenol	220000	U
91-20-3	Naphthalene	3200000	J
106-47-8	4-Chloroaniline	220000	U
87-68-3	Hexachlorobutadiene	220000	U
105-60-2	Caprolactam	220000	U
59-50-7	4-Chloro-3-methylphenol	220000	U
91-57-6	2-Methylnaphthalene	210000	U
77-47-4	Hexachlorocyclopentadiene	220000	U
88-06-2	2,4,6-Trichlorophenol	220000	U
95-95-4	2,4,5-Trichlorophenol	220000	U
92-52-4	1,1'-Biphenyl	43000	J
91-58-7	2-Chloronaphthalene	220000	U
88-74-4	2-Nitroaniline	430000	U
131-11-3	Dimethylphthalate	220000	U
606-20-2	2,6-Dinitrotoluene	220000	U
208-96-8	Acenaphthylene	220000	U
99-09-2	3-Nitroaniline	430000	U
83-32-9	Acenaphthene	200000	J

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MW 9/26/13

1E - FORM I SV-2
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-95-048

12

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17127

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17127-12

Sample wt/vol: 29.8 (g/mL) g Lab File ID: PJZKT15.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 48 Decanted: (Y/N) Date Received: 06/21/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/29/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/13/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 666.7

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
51-28-5	2,4-Dinitrophenol	430000	U
100-02-7	4-Nitrophenol	430000	U
132-64-9	Dibenzofuran	140000	J
121-14-2	2,4-Dinitrotoluene	220000	U
84-66-2	Diethylphthalate	220000	U
86-73-7	Fluorene	200000	J
7005-72-3	4-Chlorophenyl-phenylether	220000	U
100-01-6	4-Nitroaniline	430000	U
534-52-1	4,6-Dinitro-2-methylphenol	430000	U
86-30-6	N-Nitrosodiphenylamin [1]	220000	U
95-94-3	1,2,4,5-Tetrachlorobenzene	220000	U
101-55-3	4-Bromophenyl-phenylether	220000	U
118-74-1	Hexachlorobenzene	220000	U
1912-24-9	Atrazine	220000	U
87-86-5	Pentachlorophenol	430000	U
85-01-8	Phenanthrene	600000	
120-12-7	Anthracene	190000	J
86-74-8	Carbazole	43000	J
84-74-2	Di-n-butylphthalate	220000	U
206-44-0	Fluoranthene	360000	
129-00-0	Pyrene	260000	
85-68-7	Butylbenzylphthalate	220000	U
91-94-1	3,3'-Dichlorobenzidine	220000	U
56-55-3	Benzo(a)anthracene	220000 ~~110000~~	J B
218-01-9	Chrysene	220000 ~~120000~~	J B
117-81-7	Bis(2-ethylhexyl)phthalate	220000	U
117-84-0	Di-n-octylphthalate	220000	U
205-99-2	Benzo(b)fluoranthene	66000	J
207-08-9	Benzo(k)fluoranthene	71000	J
50-32-8	Benzo(a)pyrene	85000	J
193-39-5	Indeno(1,2,3-cd)pyrene	37000	J
53-70-3	Dibenzo(a,h)anthracene	14000	J
191-24-2	Benzo(g,h,i)perylene	36000	J
58-90-2	2,3,4,6-Tetrachlorophenol	220000	U

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[1] Cannot be separated from Diphenylamine

MW 9/26/13

EPA SAMPLE NO.
LMR13-95-072

13

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17127

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17127-13

Sample wt/vol: 30.6 (g/mL) g Lab File ID: PJZKT16.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 46 Decanted: (Y/N) Date Received: 06/21/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/29/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/13/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1250.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
100-52-7	Benzaldehyde	380000	U
108-95-2	Phenol	380000	U
111-44-4	Bis(2-chloroethyl)ether	380000	U
95-57-8	2-Chlorophenol	380000	U
95-48-7	2-Methylphenol	380000	U
108-60-1	2,2'-Oxybis(1-chloropropane)	380000	U
98-86-2	Acetophenone	380000	U
106-44-5	4-Methylphenol	380000	U
621-64-7	N-Nitroso-di-n-propylamine	380000	U
67-72-1	Hexachloroethane	380000	U
98-95-3	Nitrobenzene	380000	U
78-59-1	Isophorone	380000	U
88-75-5	2-Nitrophenol	380000	U
105-67-9	2,4-Dimethylphenol	380000	U
111-91-1	Bis(2-chloroethoxy)methane	380000	U
120-83-2	2,4-Dichlorophenol	380000	U
91-20-3	Naphthalene	4500000	J
106-47-8	4-Chloroaniline	380000	U
87-68-3	Hexachlorobutadiene	380000	U
105-60-2	Caprolactam	380000	U
59-50-7	4-Chloro-3-methylphenol	380000	U
91-57-6	2-Methylnaphthalene	290000	J
77-47-4	Hexachlorocyclopentadiene	380000	U
88-06-2	2,4,6-Trichlorophenol	380000	U
95-95-4	2,4,5-Trichlorophenol	380000	U
92-52-4	1,1'-Biphenyl	46000	J
91-58-7	2-Chloronaphthalene	380000	U
88-74-4	2-Nitroaniline	750000	U
131-11-3	Dimethylphthalate	380000	U
606-20-2	2,6-Dinitrotoluene	380000	U
208-96-8	Acenaphthylene	380000	U
99-09-2	3-Nitroaniline	750000	U
83-32-9	Acenaphthene	170000	J

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NW 9/26/13

EPA SAMPLE NO.
LMR13-95-072

13

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17127

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17127-13

Sample wt/vol: 30.6 (g/mL) g Lab File ID: PJZKT16.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 46 Decanted: (Y/N) Date Received: 06/21/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/29/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/13/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1250.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
51-28-5	2,4-Dinitrophenol	750000	U
100-02-7	4-Nitrophenol	750000	U
132-64-9	Dibenzofuran	130000	J
121-14-2	2,4-Dinitrotoluene	380000	U
84-66-2	Diethylphthalate	380000	U
86-73-7	Fluorene	150000	J
7005-72-3	4-Chlorophenyl-phenylether	380000	U
100-01-6	4-Nitroaniline	750000	U
534-52-1	4,6-Dinitro-2-methylphenol	750000	U
86-30-6	N-Nitrosodiphenylamin [1]	380000	U
95-94-3	1,2,4,5-Tetrachlorobenzene	380000	U
101-55-3	4-Bromophenyl-phenylether	380000	U
118-74-1	Hexachlorobenzene	380000	U
1912-24-9	Atrazine	380000	U
87-86-5	Pentachlorophenol	750000	U
85-01-8	Phenanthrene	410000	
120-12-7	Anthracene	120000	U
86-74-8	Carbazole	380000	U
84-74-2	Di-n-butylphthalate	380000	U
206-44-0	Fluoranthene	190000	J
129-00-0	Pyrene	150000	J
85-68-7	Butylbenzylphthalate	380000	U
91-94-1	3,3'-Dichlorobenzidine	380000	U
56-55-3	Benzo(a)anthracene	380000 ~~61000~~	~~J B~~
218-01-9	Chrysene	~~65000~~	~~J B~~
117-81-7	Bis(2-ethylhexyl)phthalate	380000	U
117-84-0	Di-n-octylphthalate	380000	U
205-99-2	Benzo(b)fluoranthene	22000	J
207-08-9	Benzo(k)fluoranthene	42000	J
50-32-8	Benzo(a)pyrene	38000	J
193-39-5	Indeno(1,2,3-cd)pyrene	380000	U
53-70-3	Dibenzo(a,h)anthracene	380000	U
191-24-2	Benzo(g,h,i)perylene	380000	U
58-90-2	2,3,4,6-Tetrachlorophenol	380000	U

UJ UJ J UJ UJ J UJ

J J UJ UJ J J UJ UJ UJ UJ

J J J J UJ

[1] Cannot be separated from Diphenylamine

MW 9/26/13

EPA SAMPLE NO.
LMR13-95-096

14

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17127

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17127-14

Sample wt/vol: 30.2 (g/mL) g Lab File ID: PJZKT17.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 44 Decanted: (Y/N) Date Received: 06/21/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/29/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/13/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 100.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
100-52-7	Benzaldehyde	30000	U
108-95-2	Phenol	30000	U
111-44-4	Bis(2-chloroethyl)ether	30000	U
95-57-8	2-Chlorophenol	30000	U
95-48-7	2-Methylphenol	30000	U
108-60-1	2,2'-Oxybis(1-chloropropane)	30000	U
98-86-2	Acetophenone	30000	U
106-44-5	4-Methylphenol	30000	U
621-64-7	N-Nitroso-di-n-propylamine	30000	U
67-72-1	Hexachloroethane	30000	U
98-95-3	Nitrobenzene	30000	U
78-59-1	Isophorone	30000	U
88-75-5	2-Nitrophenol	30000	U
105-67-9	2,4-Dimethylphenol	30000	U
111-91-1	Bis(2-chloroethoxy)methane	30000	U
120-83-2	2,4-Dichlorophenol	30000	U
91-20-3	Naphthalene	330000	J
106-47-8	4-Chloroaniline	30000	U
87-68-3	Hexachlorobutadiene	30000	U
105-60-2	Caprolactam	30000	U
59-50-7	4-Chloro-3-methylphenol	30000	U
91-57-6	2-Methylnaphthalene	60000	
77-47-4	Hexachlorocyclopentadiene	30000	U
88-06-2	2,4,6-Trichlorophenol	30000	U
95-95-4	2,4,5-Trichlorophenol	30000	U
92-52-4	1,1'-Biphenyl	14000	U
91-58-7	2-Chloronaphthalene	30000	U
88-74-4	2-Nitroaniline	58000	U
131-11-3	Dimethylphthalate	30000	U
606-20-2	2,6-Dinitrotoluene	30000	U
208-96-8	Acenaphthylene	30000	U
99-09-2	3-Nitroaniline	58000	U
83-32-9	Acenaphthene	62000	

UJ → J UJ → J UJ → J UJ → J

MW 9/26/13

1E - FORM I SV-2

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-95-096

14

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17127

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17127-14

Sample wt/vol: 30.2 (g/mL) g Lab File ID: PJZKT17.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 44 Decanted: (Y/N) Date Received: 06/21/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/29/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/13/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 100.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
51-28-5	2,4-Dinitrophenol	58000	UJ
100-02-7	4-Nitrophenol	58000	UJ
132-64-9	Dibenzofuran	42000	J
121-14-2	2,4-Dinitrotoluene	30000	UJ
84-66-2	Diethylphthalate	30000	UJ
86-73-7	Fluorene	59000	J
7005-72-3	4-Chlorophenyl-phenylether	30000	UJ
100-01-6	4-Nitroaniline	58000	U
534-52-1	4,6-Dinitro-2-methylphenol	58000	U
86-30-6	N-Nitrosodiphenylamin [1]	30000	U
95-94-3	1,2,4,5-Tetrachlorobenzene	30000	U
101-55-3	4-Bromophenyl-phenylether	30000	U
118-74-1	Hexachlorobenzene	30000	U
1912-24-9	Atrazine	30000	U
87-86-5	Pentachlorophenol	58000	U
85-01-8	Phenanthrene	180000	J
120-12-7	Anthracene	44000	J
86-74-8	Carbazole	12000	J
84-74-2	Di-n-butylphthalate	30000	UJ
206-44-0	Fluoranthene	88000	J
129-00-0	Pyrene	73000	J
85-68-7	Butylbenzylphthalate	30000	UJ
91-94-1	3,3'-Dichlorobenzidine	30000	UJ
56-55-3	Benzo(a)anthracene	30000 ~~27000~~	UJ B
218-01-9	Chrysene	~~26000~~	UJ B
117-81-7	Bis(2-ethylhexyl)phthalate	30000	UJ
117-84-0	Di-n-octylphthalate	30000	UJ
205-99-2	Benzo(b)fluoranthene	13000	J
207-08-9	Benzo(k)fluoranthene	19000	J
50-32-8	Benzo(a)pyrene	19000	J
193-39-5	Indeno(1,2,3-cd)pyrene	8700	J
53-70-3	Dibenzo(a,h)anthracene	3900	J
191-24-2	Benzo(g,h,i)perylene	9700	J
58-90-2	2,3,4,6-Tetrachlorophenol	30000	UJ

[1] Cannot be separated from Diphenylamine

MW 9/26/13

1D - FORM I SV-1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-95-024FD

15

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678
Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17127
Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17127-15
Sample wt/vol: 29.3 (g/mL) g Lab File ID: PJZKT18.D
Level: (LOW/MED) LOW Extraction: (Type) SONC
% Moisture: 34 Decanted: (Y/N) Date Received: 06/21/2013
Concentrated Extract Volume: 2000 (uL) Date Extracted: 06/29/2013
Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/14/2013
GPC Cleanup: (Y/N) Y pH: Dilution Factor: 666.7

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
100-52-7	Benzaldehyde	700000	U
108-95-2	Phenol	700000	U
111-44-4	Bis(2-chloroethyl)ether	700000	U
95-57-8	2-Chlorophenol	700000	U
95-48-7	2-Methylphenol	700000	U
108-60-1	2,2'-Oxybis(1-chloropropane)	700000	U
98-86-2	Acetophenone	700000	U
106-44-5	4-Methylphenol	700000	U
621-64-7	N-Nitroso-di-n-propylamine	700000	U
67-72-1	Hexachloroethane	700000	U
98-95-3	Nitrobenzene	700000	U
78-59-1	Isophorone	700000	U
88-75-5	2-Nitrophenol	700000	U
105-67-9	2,4-Dimethylphenol	700000	U
111-91-1	Bis(2-chloroethoxy)methane	700000	U
120-83-2	2,4-Dichlorophenol	700000	U
91-20-3	Naphthalene	8400000	
106-47-8	4-Chloroaniline	700000	U
87-68-3	Hexachlorobutadiene	700000	U
105-60-2	Caprolactam	700000	U
59-50-7	4-Chloro-3-methylphenol	700000	U
91-57-6	2-Methylnaphthalene	780000	
77-47-4	Hexachlorocyclopentadiene	700000	UJ
88-06-2	2,4,6-Trichlorophenol	700000	U
95-95-4	2,4,5-Trichlorophenol	700000	U
92-52-4	1,1'-Biphenyl	150000	J
91-58-7	2-Chloronaphthalene	700000	U
88-74-4	2-Nitroaniline	1400000	U
131-11-3	Dimethylphthalate	700000	U
606-20-2	2,6-Dinitrotoluene	700000	U
208-96-8	Acenaphthylene	600000	J
99-09-2	3-Nitroaniline	1400000	U
83-32-9	Acenaphthene	98000	J

MW 9/26/13

1E - FORM I SV-2

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-95-024FD

15

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17127

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17127-15

Sample wt/vol: 29.3 (g/mL) g Lab File ID: PJZKT18.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 34 Decanted: (Y/N) Date Received: 06/21/2013

Concentrated Extract Volume: 2000 (uL) Date Extracted: 06/29/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/14/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 666.7

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
51-28-5	2,4-Dinitrophenol	1400000	U
100-02-7	4-Nitrophenol	1400000	U
132-64-9	Dibenzofuran	520000	J
121-14-2	2,4-Dinitrotoluene	700000	U
84-66-2	Diethylphthalate	700000	U
86-73-7	Fluorene	740000	
7005-72-3	4-Chlorophenyl-phenylether	700000	U
100-01-6	4-Nitroaniline	1400000	U
534-52-1	4,6-Dinitro-2-methylphenol	1400000	U
86-30-6	N-Nitrosodiphenylamin [1]	700000	U
95-94-3	1,2,4,5-Tetrachlorobenzene	700000	U
101-55-3	4-Bromophenyl-phenylether	700000	U
118-74-1	Hexachlorobenzene	700000	U
1912-24-9	Atrazine	700000	U
87-86-5	Pentachlorophenol	1400000	U
85-01-8	Phenanthrene	2300000	
120-12-7	Anthracene	760000	
86-74-8	Carbazole	220000	J
84-74-2	Di-n-butylphthalate	700000	U
206-44-0	Fluoranthene	1500000	
129-00-0	Pyrene	1100000	
85-68-7	Butylbenzylphthalate	700000	U
91-94-1	3,3'-Dichlorobenzidine	700000	U
56-55-3	Benzo(a)anthracene	70000 ~~500000~~	~~J B~~ U
218-01-9	Chrysene	↓ ~~500000~~	~~J B~~ U
117-81-7	Bis(2-ethylhexyl)phthalate	700000	U
117-84-0	Di-n-octylphthalate	700000	U
205-99-2	Benzo(b)fluoranthene	270000	J
207-08-9	Benzo(k)fluoranthene	370000	J
50-32-8	Benzo(a)pyrene	400000	J
193-39-5	Indeno(1,2,3-cd)pyrene	210000	J
53-70-3	Dibenzo(a,h)anthracene	89000	J
191-24-2	Benzo(g,h,i)perylene	200000	J
58-90-2	2,3,4,6-Tetrachlorophenol	700000	U

[1] Cannot be separated from Diphenylamine

MW 9/26/13

EPA SAMPLE NO.
LMR13-58-012

6

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: 1734.2 SDG No.: 17127

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17127-6

Sample wt/vol: 29.8 (g/mL) g Lab File ID: SERHT11.D

Extraction: (Type) SONC

% Moisture: 53 Decanted: (Y/N) Date Received: 06/21/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/29/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/08/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 6.7

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
91-20-3	Naphthalene	120	~~B~~	U
90-12-0	1-Methylnaphthalene	48 ~~14~~	~~J B~~	U
91-57-6	2-Methylnaphthalene	~~24~~	~~J B~~	U
208-96-8	Acenaphthylene	~~15~~	~~J B~~	U
83-32-9	Acenaphthene	68	~~B~~	
86-73-7	Fluorene	85	~~B~~	
85-01-8	Phenanthrene	300	~~B~~	
120-12-7	Anthracene	70	~~B~~	
206-44-0	Fluoranthene	400	~~B~~	
129-00-0	Pyrene	410	~~B~~	
56-55-3	Benzo(a)anthracene	200	~~B~~	
218-01-9	Chrysene	240	~~B~~	
205-99-2	Benzo(b)fluoranthene	240	~~B~~	
207-08-9	Benzo(k)fluoranthene	150	~~B~~	
192-97-2	Benzo(e)pyrene	160	~~B~~	
50-32-8	Benzo(a)pyrene	170	~~B~~	
198-55-0	Perylene	310	~~B~~	
193-39-5	Indeno(1,2,3-cd)pyrene	140	~~B~~	
53-70-3	Dibenzo(a,h)anthracene	48 ~~42~~	~~J B~~	U
191-24-2	Benzo(g,h,i)perylene	170	~~B~~	
C1NAPH	C1-Naphthalenes	48 ~~25~~	~~B J~~	U
C2NAPH	C2-Naphthalenes	48 ~~100~~	~~B J~~	U
C3NAPH	C3-Naphthalenes	170	J	
C4NAPH	C4-Naphthalenes	120	J	
C1FLUOR	C1 Fluorenes	16	J	
C2FLUOR	C2 Fluorenes	21	J	
C3FLUOR	C3 Fluorenes	53	J	
C1PHAN	C1-Phenanthrenes/Anthracenes	48 ~~180~~	~~B J~~	U
C2PHAN	C2-Phenanthrenes/Anthracenes	48 ~~150~~	~~B J~~	U
C3PHAN	C3-Phenanthrenes/Anthracenes	160	J	
C4PHAN	C4-Phenanthrenes/Anthracenes	120	J	
C1FLPY	C1-Fluoranthenes/Pyrenes	48 ~~240~~	~~B J~~	U
C2FLPY	C2-Fluoranthenes/Pyrenes	160	J	
C3FLPY	C3-Fluoranthenes/Pyrenes	96	J	
C1CHRYS	C1 Chrysenes	48 ~~170~~	~~B J~~	U
C2CHRYS	C2 Chrysenes	110	J	
C3CHRYS	C3 Chrysenes	71	J	
C4CHRYS	C4 Chrysenes	32	J	

NW 9/26/13

1F - FORM I SV-SIM
SEMIVOLATILE SIM ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-58-012

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678 6

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: 1734.2 SDG No.: 17127

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17127-6

Sample wt/vol: 29.8 (g/mL) g Lab File ID: SERHT11.D

Extraction: (Type) SONC

% Moisture: 53 Decanted: (Y/N) Date Received: 06/21/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/29/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/08/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 6.7

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
TPPAH	Total 16 PPAH	2800	~~B~~	J
TPAH	Total PAH	5300	~~B~~	J

MW 9/26/13

1F - FORM I SV-SIM
SEMIVOLATILE SIM ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-94-012

7

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: 1734.2 SDG No.: 17127

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17127-7

Sample wt/vol: 30.1 (g/mL) g Lab File ID: SERHT12.D

Extraction: (Type) SONC

% Moisture: 49 Decanted: (Y/N) Date Received: 06/21/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/29/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/08/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 40.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
91-20-3	Naphthalene	2000	~~B~~	U
90-12-0	1-Methylnaphthalene	350	~~B~~	
91-57-6	2-Methylnaphthalene	500	~~B~~	
208-96-8	Acenaphthylene	650	~~B~~	
83-32-9	Acenaphthene	2100	~~B~~	
86-73-7	Fluorene	3200	~~E~~ ~~B~~	J
85-01-8	Phenanthrene	12000	~~E~~ ~~B~~	
120-12-7	Anthracene	3300	~~E~~ ~~B~~	
206-44-0	Fluoranthene	14000	~~E~~ ~~B~~	
129-00-0	Pyrene	11000	~~E~~ ~~B~~	
56-55-3	Benzo(a)anthracene	6300	~~E~~ ~~B~~	
218-01-9	Chrysene	5300	~~E~~ ~~B~~	
205-99-2	Benzo(b)fluoranthene	5700	~~E~~ ~~B~~	
207-08-9	Benzo(k)fluoranthene	3800	~~E~~ ~~B~~	
192-97-2	Benzo(e)pyrene	3000	~~E~~ ~~B~~	
50-32-8	Benzo(a)pyrene	4700	~~E~~ ~~B~~	
198-55-0	Perylene	1500	~~B~~	
193-39-5	Indeno(1,2,3-cd)pyrene	2800	~~E~~ ~~B~~	J
53-70-3	Dibenzo(a,h)anthracene	840	~~B~~	
191-24-2	Benzo(g,h,i)perylene	2700	~~E~~ ~~B~~	J
C1NAPH	C1-Naphthalenes	260 ~~570~~	~~B~~ ~~J~~	U
C2NAPH	C2-Naphthalenes	1100 ~~1100~~	~~B~~ ~~J~~	U
C3NAPH	C3-Naphthalenes	560	J	
C4NAPH	C4-Naphthalenes	200	J	
C1FLUOR	C1 Fluorenes	250	J	
C2FLUOR	C2 Fluorenes	93	J	
C3FLUOR	C3 Fluorenes	100	J	
C1PHAN	C1-Phenanthrenes/Anthracenes	3400 ~~3400~~	~~B~~ ~~J~~	U
C2PHAN	C2-Phenanthrenes/Anthracenes	1000 ~~1000~~	~~B~~ J	U
C3PHAN	C3-Phenanthrenes/Anthracenes	520	J	
C4PHAN	C4-Phenanthrenes/Anthracenes	240	J	
C1FLPY	C1-Fluoranthenes/Pyrenes	4600 ~~4600~~	~~B~~ ~~J~~	U
C2FLPY	C2-Fluoranthenes/Pyrenes	1300	J	
C3FLPY	C3-Fluoranthenes/Pyrenes	420	J	
C1CHRYS	C1 Chrysenes	3300 ~~2300~~	~~B~~ ~~J~~	U
C2CHRYS	C2 Chrysenes	750	J	
C3CHRYS	C3 Chrysenes	410	J	
C4CHRYS	C4 Chrysenes	110	J	

MW 9/26/13

1F - FORM I SV-SIM

SEMIVOLATILE SIM ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-94-012

7

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: 1734.2 SDG No.: 17127

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17127-7

Sample wt/vol: 30.1 (g/mL) g Lab File ID: SERHT12.D

Extraction: (Type) SONC

% Moisture: 49 Decanted: (Y/N) Date Received: 06/21/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/29/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/08/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 40.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
TPPAH	Total 16 PPAH	79000	E J
TPAH	Total PAH	100000	E J

NW 9/26/13

EPA SAMPLE NO.
LMR13-95-012

9

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: 1734.2 SDG No.: 17127

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17127-9

Sample wt/vol: 29.9 (g/mL) g Lab File ID: SET21.D

Extraction: (Type) SONC

% Moisture: 42 Decanted: (Y/N) Date Received: 06/21/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/29/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/14/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 3333.3

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
91-20-3	Naphthalene	1400000	~~E B~~ J
90-12-0	1-Methylnaphthalene	66000	~~B~~ J
91-57-6	2-Methylnaphthalene	150000	~~B~~ J
208-96-8	Acenaphthylene	82000	~~B~~ J
83-32-9	Acenaphthene	65000	~~B~~ J
86-73-7	Fluorene	170000	~~B~~ J
85-01-8	Phenanthrene	530000	~~E B~~ J
120-12-7	Anthracene	150000	~~B~~ J
206-44-0	Fluoranthene	350000	~~E B~~ J
129-00-0	Pyrene	260000	~~E B~~ J
56-55-3	Benzo(a)anthracene	140000	~~B~~ J
218-01-9	Chrysene	110000	~~B~~ J
205-99-2	Benzo(b)fluoranthene	93000	~~B~~ J
207-08-9	Benzo(k)fluoranthene	78000	~~B~~ J
192-97-2	Benzo(e)pyrene	53000	~~B~~ J
50-32-8	Benzo(a)pyrene	97000	~~B~~ J
198-55-0	Perylene	25000	~~B~~ J
193-39-5	Indeno(1,2,3-cd)pyrene	51000	~~B~~ J
53-70-3	Dibenzo(a,h)anthracene	19000 ~~18000~~	~~J B~~ UJ
191-24-2	Benzo(g,h,i)perylene	48000	~~B~~ J
C1NAPH	C1-Naphthalenes	150000 ~~150000~~	~~J B~~ UJ
C2NAPH	C2-Naphthalenes	81000 ~~81000~~	~~J B~~ UJ
C3NAPH	C3-Naphthalenes	21000	J J
C4NAPH	C4-Naphthalenes	4400	J
C1FLUOR	C1 Fluorenes	9500	J
C2FLUOR	C2 Fluorenes	2800	J
C3FLUOR	C3 Fluorenes	2400	J
C1PHAN	C1-Phenanthrenes/Anthracenes	120000 ~~120000~~	~~J B~~ UJ
C2PHAN	C2-Phenanthrenes/Anthracenes	27000 ~~27000~~	~~J B~~ UJ
C3PHAN	C3-Phenanthrenes/Anthracenes	11000	J J
C4PHAN	C4-Phenanthrenes/Anthracenes	2700	J J
C1FLPY	C1-Fluoranthenes/Pyrenes	130000 ~~130000~~	~~J B~~ UJ
C2FLPY	C2-Fluoranthenes/Pyrenes	27000	J J
C3FLPY	C3-Fluoranthenes/Pyrenes	5800	J J
C1CHRYS	C1 Chrysenes	47000 ~~47000~~	~~J B~~ UJ
C2CHRYS	C2 Chrysenes	14000	J J
C3CHRYS	C3 Chrysenes	7500	J J
C4CHRYS	C4 Chrysenes	2200	J J

NW 9/26/13

1F - FORM I SV-SIM

SEMIVOLATILE SIM ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-95-012

9

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: 1734.2 SDG No.: 17127

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17127-9

Sample wt/vol: 29.9 (g/mL) g Lab File ID: SET21.D

Extraction: (Type) SONC

% Moisture: 42 Decanted: (Y/N) Date Received: 06/21/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 06/29/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/14/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 3333.3

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
TPPAH	Total 16 PPAH	3600000	~~B~~ J
TPAH	Total PAH	4300000	~~B~~ J

NW 9/26/13

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-59-012

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17127

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17127-1

Sample wt/vol: 29.5 (g/mL) g Lab File ID: 0825AHKSOM03.D

% Moisture: 57 Decanted: (Y/N) Date Received: 06/21/2013

Extraction: (Type) SONC Date Extracted: 06/28/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 08/05/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 5.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	390	U
11104-28-2	Aroclor-1221	390	U
11141-16-5	Aroclor-1232	390	U
53469-21-9	Aroclor-1242	54	J
12672-29-6	Aroclor-1248	390	U
11097-69-1	Aroclor-1254	39	J
11096-82-5	Aroclor-1260	10	~~J P~~ J
37324-23-5	Aroclor-1262	390	U
11100-14-4	Aroclor-1268	390	U

NW 9/26/13

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-59-024

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17127

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17127-2

Sample wt/vol: 29.9 (g/mL) g Lab File ID: 0825AHKSOM04.D

% Moisture: 47 Decanted: (Y/N) Date Received: 06/21/2013

Extraction: (Type) SONC Date Extracted: 06/28/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 08/05/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 5.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	310	U
11104-28-2	Aroclor-1221	310	U
11141-16-5	Aroclor-1232	310	U
53469-21-9	Aroclor-1242	41	J
12672-29-6	Aroclor-1248	310	U
11097-69-1	Aroclor-1254	32	J
11096-82-5	Aroclor-1260	9.5	~~J~~ P
37324-23-5	Aroclor-1262	310	U
11100-14-4	Aroclor-1268	310	U

J

MW 9/26/13

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-59-048

3

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17127

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17127-3

Sample wt/vol: 29.3 (g/mL) g Lab File ID: 0825AHKSOM05.D

% Moisture: 35 Decanted: (Y/N) Date Received: 06/21/2013

Extraction: (Type) SONC Date Extracted: 06/28/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 08/05/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 5.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	260	U
11104-28-2	Aroclor-1221	260	U
11141-16-5	Aroclor-1232	260	U
53469-21-9	Aroclor-1242	360	
12672-29-6	Aroclor-1248	260	U
11097-69-1	Aroclor-1254	250	J
11096-82-5	Aroclor-1260	46	~~J P~~ J
37324-23-5	Aroclor-1262	260	U
11100-14-4	Aroclor-1268	260	U

MW 9/26/13

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-94-024

4

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17127

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17127-4

Sample wt/vol: 30.4 (g/mL) g Lab File ID: 0825AHKSOM06.D

% Moisture: 38 Decanted: (Y/N) Date Received: 06/21/2013

Extraction: (Type) SONC Date Extracted: 06/28/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 08/05/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 5.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	260	U
11104-28-2	Aroclor-1221	260	U
11141-16-5	Aroclor-1232	260	U
53469-21-9	Aroclor-1242	64	J
12672-29-6	Aroclor-1248	260	U
11097-69-1	Aroclor-1254	62	J
11096-82-5	Aroclor-1260	18	~~J P~~ J
37324-23-5	Aroclor-1262	260	U
11100-14-4	Aroclor-1268	260	U

MW 9/26/13

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-94-072

5

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17127

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17127-5

Sample wt/vol: 29.3 (g/mL) g Lab File ID: 0825AHKSOM07.D

% Moisture: 40 Decanted: (Y/N) Date Received: 06/21/2013

Extraction: (Type) SONC Date Extracted: 06/28/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 08/05/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 5.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	280	U
11104-28-2	Aroclor-1221	280	U
11141-16-5	Aroclor-1232	280	U
53469-21-9	Aroclor-1242	280	U
12672-29-6	Aroclor-1248	280	U
11097-69-1	Aroclor-1254	280	U
11096-82-5	Aroclor-1260	280	U
37324-23-5	Aroclor-1262	280	U
11100-14-4	Aroclor-1268	280	U

MW 9/26/13

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-58-012

6

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17127

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17127-6

Sample wt/vol: 30.0 (g/mL) g Lab File ID: 0825AHKSOM08.D

% Moisture: 53 Decanted: (Y/N) Date Received: 06/21/2013

Extraction: (Type) SONC Date Extracted: 06/28/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 08/05/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 5.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	350	U
11104-28-2	Aroclor-1221	350	U
11141-16-5	Aroclor-1232	350	U
53469-21-9	Aroclor-1242	110	J
12672-29-6	Aroclor-1248	350	U
11097-69-1	Aroclor-1254	74	~~J P~~
11096-82-5	Aroclor-1260	14	~~J P~~
37324-23-5	Aroclor-1262	350	U
11100-14-4	Aroclor-1268	350	U

J
J

MW 9/26/13

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-94-012

7

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17127

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17127-7

Sample wt/vol: 29.9 (g/mL) g Lab File ID: 0825AHKSOM09.D

% Moisture: 49 Decanted: (Y/N) Date Received: 06/21/2013

Extraction: (Type) SONC Date Extracted: 06/28/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 08/05/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 5.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	320	U
11104-28-2	Aroclor-1221	320	U
11141-16-5	Aroclor-1232	320	U
53469-21-9	Aroclor-1242	31	J
12672-29-6	Aroclor-1248	320	U
11097-69-1	Aroclor-1254	31	~~J P~~ J
11096-82-5	Aroclor-1260	15	J
37324-23-5	Aroclor-1262	320	U
11100-14-4	Aroclor-1268	320	U

MW 9/26/13

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-94-048

8

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17127

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17127-8

Sample wt/vol: 30.0 (g/mL) g Lab File ID: 0825AHKSOM10.D

% Moisture: 39 Decanted: (Y/N) Date Received: 06/21/2013

Extraction: (Type) SONC Date Extracted: 06/28/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 08/05/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 5.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	270	U
11104-28-2	Aroclor-1221	270	U
11141-16-5	Aroclor-1232	270	U
53469-21-9	Aroclor-1242	77	J
12672-29-6	Aroclor-1248	270	U
11097-69-1	Aroclor-1254	84	J
11096-82-5	Aroclor-1260	15	~~J P~~ J
37324-23-5	Aroclor-1262	270	U
11100-14-4	Aroclor-1268	270	U

NW 9/26/13

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-95-012

9

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17127

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17127-9

Sample wt/vol: 29.6 (g/mL) g Lab File ID: 0825AHKSOM11.D

% Moisture: 42 Decanted: (Y/N) Date Received: 06/21/2013

Extraction: (Type) SONC Date Extracted: 06/28/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 08/05/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 5.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	290	U
11104-28-2	Aroclor-1221	290	U
11141-16-5	Aroclor-1232	290	U
53469-21-9	Aroclor-1242	290	U
12672-29-6	Aroclor-1248	290	U
11097-69-1	Aroclor-1254	29	~~J P~~ J
11096-82-5	Aroclor-1260	10	~~J P~~ J
37324-23-5	Aroclor-1262	290	U
11100-14-4	Aroclor-1268	290	U

MW 9/26/13

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-70-024

10

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17127

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17127-10

Sample wt/vol: 30.5 (g/mL) g Lab File ID: 0825AHKSOM12.D

% Moisture: 45 Decanted: (Y/N) Date Received: 06/21/2013

Extraction: (Type) SONC Date Extracted: 06/28/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 08/05/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 5.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	300	U
11104-28-2	Aroclor-1221	300	U
11141-16-5	Aroclor-1232	300	U
53469-21-9	Aroclor-1242	140	J
12672-29-6	Aroclor-1248	300	U
11097-69-1	Aroclor-1254	150	J
11096-82-5	Aroclor-1260	33	J
37324-23-5	Aroclor-1262	300	U
11100-14-4	Aroclor-1268	300	U

MW 9/26/13

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-95-024

11

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17127

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17127-11

Sample wt/vol: 29.9 (g/mL) g Lab File ID: 0825AHKSOM13.D

% Moisture: 35 Decanted: (Y/N) Date Received: 06/21/2013

Extraction: (Type) SONC Date Extracted: 06/28/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 08/05/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 5.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	260	U
11104-28-2	Aroclor-1221	260	U
11141-16-5	Aroclor-1232	260	U
53469-21-9	Aroclor-1242	260	U
12672-29-6	Aroclor-1248	260	U
11097-69-1	Aroclor-1254	260	U
11096-82-5	Aroclor-1260	260	U
37324-23-5	Aroclor-1262	260	U
11100-14-4	Aroclor-1268	260	U

MW 9/26/13

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-95-048

12

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17127

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17127-12

Sample wt/vol: 29.9 (g/mL) g Lab File ID: 0825AHKSOM17.D

% Moisture: 48 Decanted: (Y/N) Date Received: 06/21/2013

Extraction: (Type) SONC Date Extracted: 06/28/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 08/05/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 5.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	320	U
11104-28-2	Aroclor-1221	320	U
11141-16-5	Aroclor-1232	320	U
53469-21-9	Aroclor-1242	320	U
12672-29-6	Aroclor-1248	320	U
11097-69-1	Aroclor-1254	320	U
11096-82-5	Aroclor-1260	320	U
37324-23-5	Aroclor-1262	320	U
11100-14-4	Aroclor-1268	320	U

NW 9/26/13

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-95-072

13

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17127

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17127-13

Sample wt/vol: 29.3 (g/mL) g Lab File ID: 0825AHKSOM14.D

% Moisture: 46 Decanted: (Y/N) Date Received: 06/21/2013

Extraction: (Type) SONC Date Extracted: 06/28/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 08/05/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 5.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	310	U
11104-28-2	Aroclor-1221	310	U
11141-16-5	Aroclor-1232	310	U
53469-21-9	Aroclor-1242	310	U
12672-29-6	Aroclor-1248	310	U
11097-69-1	Aroclor-1254	310	U
11096-82-5	Aroclor-1260	310	U
37324-23-5	Aroclor-1262	310	U
11100-14-4	Aroclor-1268	310	U

MW 9/26/13

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-95-096

14

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17127

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17127-14

Sample wt/vol: 29.6 (g/mL) g Lab File ID: 0825AHKSOM18.D

% Moisture: 44 Decanted: (Y/N) Date Received: 06/21/2013

Extraction: (Type) SONC Date Extracted: 06/28/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 08/05/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 5.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	300	U
11104-28-2	Aroclor-1221	300	U
11141-16-5	Aroclor-1232	300	U
53469-21-9	Aroclor-1242	300	U
12672-29-6	Aroclor-1248	300	U
11097-69-1	Aroclor-1254	300	U
11096-82-5	Aroclor-1260	300	U
37324-23-5	Aroclor-1262	300	U
11100-14-4	Aroclor-1268	300	U

MW 9/26/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-59-012

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678
Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 17127
Matrix: SED | Lab Sample Id: 200-17127-1
% Solids: 43.2 | Date Received: 06/21/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	8.3	J	E	P
7440-43-9	Cadmium	0.81			P
7440-47-3	Chromium	39.0	J	E	P
7440-50-8	Copper	31.5		E	P
7439-92-1	Lead	227		E	P
7440-02-0	Nickel	31.6		E	P
7440-66-6	Zinc	124		E N	P

Color Before: GRAY | Clarity Before: | Texture: FINE
Color After: TAN | Clarity After: CLOUDY | Artifacts:
Comments:

NW 9/26/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-59-012

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678
Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 17127
Matrix: SED | Lab Sample Id: 200-17127-1
% Solids: 43.2 | Date Received: 06/21/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.22	~~U~~ UJ	~~N~~	CV

Color Before: GRAY | Clarity Before: CLOUDY | Texture: FINE
Color After: COLORLESS | Clarity After: CLEAR | Artifacts:
Comments:

NW 9/26/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-59-024

2

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678
Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 17127
Matrix: SED | Lab Sample Id: 200-17127-2
% Solids: 53.3 | Date Received: 06/21/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	8.2	J	~~E~~	P
7440-43-9	Cadmium	0.78	J		P
7440-47-3	Chromium	25.0	J	E	P
7440-50-8	Copper	25.7		E	P
7439-92-1	Lead	20.0		E	P
7440-02-0	Nickel	28.5		E	P
7440-66-6	Zinc	107		~~E~~ N	P

Color Before: GRAY | Clarity Before: | Texture: FINE
Color After: TAN | Clarity After: CLOUDY | Artifacts:
Comments:

MW 9/26/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-59-024

2

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678

Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 17127

Matrix: SED | Lab Sample Id: 200-17127-2

% Solids: 53.3 | Date Received: 06/21/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.056	J	~~N~~	CV

Color Before: GRAY | Clarity Before: CLOUDY | Texture: FINE

Color After: COLORLESS | Clarity After: CLEAR | Artifacts:

Comments:

MW 9/26/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-59-048

3

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678
Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 17127
Matrix: SED | Lab Sample Id: 200-17127-3
% Solids: 64.9 | Date Received: 06/21/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	7.4	J	~~E~~	P
7440-43-9	Cadmium	1.5			P
7440-47-3	Chromium	33.7	J	~~E~~	P
7440-50-8	Copper	29.2	↓	~~E~~	P
7439-92-1	Lead	174	↓	~~E~~	P
7440-02-0	Nickel	27.5	↓	~~E~~	P
7440-66-6	Zinc	117	↓	~~E N~~	P

Color Before: GRAY | Clarity Before: | Texture: FINE
Color After: TAN | Clarity After: CLOUDY | Artifacts:
Comments:

MW 9/26/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-59-048

3

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678
Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 17127
Matrix: SED | Lab Sample Id: 200-17127-3
% Solids: 64.9 | Date Received: 06/21/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.094	J	~~N~~	CV

Color Before: GRAY | Clarity Before: CLOUDY | Texture: FINE
Color After: COLORLESS | Clarity After: CLEAR | Artifacts:
Comments:

NW 9/26/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-94-024

4

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678
Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 17127
Matrix: SED | Lab Sample Id: 200-17127-4
% Solids: 61.6 | Date Received: 06/21/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	13.1	J	~~E~~	P
7440-43-9	Cadmium	1.7			P
7440-47-3	Chromium	49.5	J	E	P
7440-50-8	Copper	41.5		E	P
7439-92-1	Lead	57.9		E	P
7440-02-0	Nickel	34.4		E	P
7440-66-6	Zinc	325		~~E~~ N	P

Color Before: GRAY | Clarity Before: | Texture: FINE
Color After: TAN | Clarity After: CLOUDY | Artifacts:
Comments:

MV 9/26/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-94-024

4

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678
Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 17127
Matrix: SED | Lab Sample Id: 200-17127-4
% Solids: 61.6 | Date Received: 06/21/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.27	J	~~N~~ *	CV

Color Before: GRAY | Clarity Before: CLOUDY | Texture: FINE
Color After: COLORLESS | Clarity After: CLEAR | Artifacts:
Comments:

MW 9/26/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-94-072

5

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678
Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 17127
Matrix: SED | Lab Sample Id: 200-17127-5
% Solids: 60.3 | Date Received: 06/21/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	15.2	J	~~E~~	P
7440-43-9	Cadmium	1.3			P
7440-47-3	Chromium	36.3	J	~~E~~	P
7440-50-8	Copper	33.3	↓	~~E~~	P
7439-92-1	Lead	70.2	↓	~~E~~	P
7440-02-0	Nickel	31.6	↓	~~E~~	P
7440-66-6	Zinc	309	↓	~~E N~~	P

Color Before: GRAY | Clarity Before: | Texture: FINE
Color After: TAN | Clarity After: CLOUDY | Artifacts:
Comments:

MW 9/26/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-94-072

5

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17127

Matrix: SED Lab Sample Id: 200-17127-5

% Solids: 60.3 Date Received: 06/21/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.63	J	N	CV

Color Before: GRAY Clarity Before: CLOUDY Texture: FINE

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

MW 9/26/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-58-012

6

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678
Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17127
Matrix: SED Lab Sample Id: 200-17127-6
% Solids: 46.9 Date Received: 06/21/2013

Concentration Units (**ug/L, ug,** or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	7.9	J	~~E~~	P
7440-43-9	Cadmium	0.97			P
7440-47-3	Chromium	31.2	J	E	P
7440-50-8	Copper	35.2	↓	E	P
7439-92-1	Lead	26.3	↓	E	P
7440-02-0	Nickel	35.8	↓	E	P
7440-66-6	Zinc	135	↓	~~E~~ N	P

Color Before: GRAY Clarity Before: Texture: FINE
Color After: TAN Clarity After: CLOUDY Artifacts:
Comments:

MW 9/26/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-58-012

6

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678

Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 17127

Matrix: SED | Lab Sample Id: 200-17127-6

% Solids: 46.9 | Date Received: 06/21/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.075	J	~~N~~	CV

Color Before: GRAY | Clarity Before: CLOUDY | Texture: FINE

Color After: COLORLESS | Clarity After: CLEAR | Artifacts:

Comments:

NW 9/26/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-94-012

7

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678
Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 17127
Matrix: SED | Lab Sample Id: 200-17127-7
% Solids: 51.0 | Date Received: 06/21/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	11.0	J	~~E~~	P
7440-43-9	Cadmium	0.98			P
7440-47-3	Chromium	47.7	J	~~E~~	P
7440-50-8	Copper	39.7		~~E~~	P
7439-92-1	Lead	43.1		~~E~~	P
7440-02-0	Nickel	33.5		~~E~~	P
7440-66-6	Zinc	178		~~E N~~	P

Color Before: GRAY | Clarity Before: | Texture: FINE
Color After: TAN | Clarity After: CLOUDY | Artifacts:
Comments:

NW 9/26/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-94-012
7

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678
Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 17127
Matrix: SED | Lab Sample Id: 200-17127-7
% Solids: 51.0 | Date Received: 06/21/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.19	U	UJ ~~N~~	CV

Color Before: GRAY | Clarity Before: CLOUDY | Texture: FINE
Color After: COLORLESS | Clarity After: CLEAR | Artifacts:
Comments:

MW 9/26/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-94-048

8

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678
Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 17127
Matrix: SED | Lab Sample Id: 200-17127-8
% Solids: 61.5 | Date Received: 06/21/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	14.0	J	~~E~~	P
7440-43-9	Cadmium	2.0			P
7440-47-3	Chromium	50.2	J	~~E~~	P
7440-50-8	Copper	51.9	↓	~~E~~	P
7439-92-1	Lead	68.3	↓	~~E~~	P
7440-02-0	Nickel	37.8	↓	~~E~~	P
7440-66-6	Zinc	387	↓	~~E~~ N	P

Color Before: GRAY | Clarity Before: | Texture: FINE
Color After: TAN | Clarity After: CLOUDY | Artifacts:
Comments:

MW 9/26/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-94-048

8

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17127

Matrix: SED Lab Sample Id: 200-17127-8

% Solids: 61.5 Date Received: 06/21/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.15	J	~~N~~	CV

Color Before: GRAY Clarity Before: CLOUDY Texture: FINE

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

MV 9/26/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-95-012

9

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678

Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 17127

Matrix: SED | Lab Sample Id: 200-17127-9

% Solids: 57.6 | Date Received: 06/21/2013

Concentration Units (**ug/L, ug,** or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	10.9	J	~~E~~	P
7440-43-9	Cadmium	1.0			P
7440-47-3	Chromium	30.9	J	E	P
7440-50-8	Copper	39.3	↓	E	P
7439-92-1	Lead	45.8	↓	E	P
7440-02-0	Nickel	27.5	↓	E	P
7440-66-6	Zinc	185	↓	~~E N~~	P

Color Before: GRAY | Clarity Before: | Texture: FINE

Color After: TAN | Clarity After: CLOUDY | Artifacts:

Comments:

MW 9/26/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-95-012

9

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17127

Matrix: SED Lab Sample Id: 200-17127-9

% Solids: 57.6 Date Received: 06/21/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.17	J	~~N~~	CV

Color Before: GRAY Clarity Before: CLOUDY Texture: FINE

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

MW 9/26/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-70-024

10

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678
Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 17127
Matrix: SED | Lab Sample Id: 200-17127-10
% Solids: 54.6 | Date Received: 06/21/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	10.0	J	~~E~~	P
7440-43-9	Cadmium	1.9			P
7440-47-3	Chromium	38.2	J	E	P
7440-50-8	Copper	36.1		E	P
7439-92-1	Lead	44.8		E	P
7440-02-0	Nickel	37.9		E	P
7440-66-6	Zinc	160		~~E~~ N	P

Color Before: GRAY | Clarity Before: | Texture: FINE
Color After: TAN | Clarity After: CLOUDY | Artifacts:
Comments:

NW 9/26/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-70-024

10

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678

Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 17127

Matrix: SED | Lab Sample Id: 200-17127-10

% Solids: 54.6 | Date Received: 06/21/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.12	J	~~N~~	CV

Color Before: GRAY | Clarity Before: CLOUDY | Texture: FINE

Color After: COLORLESS | Clarity After: CLEAR | Artifacts:

Comments:

NW 9/26/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-95-024

11

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678

Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 17127

Matrix: SED | Lab Sample Id: 200-17127-11

% Solids: 64.9 | Date Received: 06/21/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	14.8	J	~~E~~	P
7440-43-9	Cadmium	1.6			P
7440-47-3	Chromium	36.4	J	E	P
7440-50-8	Copper	44.9		E	P
7439-92-1	Lead	91.0		E	P
7440-02-0	Nickel	21.7		E	P
7440-66-6	Zinc	317		~~E~~ N	P

Color Before: GRAY | Clarity Before: | Texture: FINE-OILY

Color After: BROWN | Clarity After: CLOUDY | Artifacts:

Comments:

MW 9/26/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-95-024

11

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678
Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 17127
Matrix: SED | Lab Sample Id: 200-17127-11
% Solids: 64.9 | Date Received: 06/21/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.40	J	~~N~~	CV

Color Before: GRAY | Clarity Before: CLOUDY | Texture: FINE
Color After: COLORLESS | Clarity After: CLEAR | Artifacts:
Comments:

MW 9/26/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-95-048

12

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678
Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 17127
Matrix: SED | Lab Sample Id: 200-17127-12
% Solids: 51.9 | Date Received: 06/21/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	26.0	J	~~E~~	P
7440-43-9	Cadmium	2.7			P
7440-47-3	Chromium	71.2	J	E	P
7440-50-8	Copper	53.1		E	P
7439-92-1	Lead	144		E	P
7440-02-0	Nickel	38.0		E	P
7440-66-6	Zinc	756		~~E~~ N	P

Color Before: GRAY | Clarity Before: | Texture: FINE-OILY
Color After: TAN | Clarity After: CLOUDY | Artifacts:
Comments:

MW 9/26/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-95-048

12

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678

Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 17127

Matrix: SED | Lab Sample Id: 200-17127-12

% Solids: 51.9 | Date Received: 06/21/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.46	J	~~N~~	CV

Color Before: GRAY | Clarity Before: CLOUDY | Texture: FINE

Color After: COLORLESS | Clarity After: CLEAR | Artifacts:

Comments:

NW 9/26/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-95-072

13

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678
Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17127
Matrix: SED Lab Sample Id: 200-17127-13
% Solids: 54.3 Date Received: 06/21/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	22.3	J	~~E~~	P
7440-43-9	Cadmium	0.90			P
7440-47-3	Chromium	29.8	J	~~E~~	P
7440-50-8	Copper	30.7	↓	~~E~~	P
7439-92-1	Lead	92.2	↓	~~E~~	P
7440-02-0	Nickel	31.8	↓	~~E~~	P
7440-66-6	Zinc	398	↓	~~N E~~	P

Color Before: GRAY Clarity Before: Texture: FINE-OILY
Color After: TAN Clarity After: CLOUDY Artifacts:
Comments:

MW 9/26/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-95-072

13

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678
Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 17127
Matrix: SED | Lab Sample Id: 200-17127-13
% Solids: 54.3 | Date Received: 06/21/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	1.2	J	N	CV

Color Before: GRAY | Clarity Before: CLOUDY | Texture: FINE
Color After: COLORLESS | Clarity After: CLEAR | Artifacts:
Comments:

NW 9/26/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-95-096

14

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678
Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 17127
Matrix: SED | Lab Sample Id: 200-17127-14
% Solids: 56.1 | Date Received: 06/21/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	21.0	J	~~E~~	P
7440-43-9	Cadmium	0.81			P
7440-47-3	Chromium	25.5	J	~~E~~	P
7440-50-8	Copper	28.0	↓	~~E~~	P
7439-92-1	Lead	80.4	↓	~~E~~	P
7440-02-0	Nickel	27.3	↓	~~E~~	P
7440-66-6	Zinc	336	↓	~~E N~~	P

Color Before: GRAY | Clarity Before: | Texture: FINE
Color After: TAN | Clarity After: CLOUDY | Artifacts:
Comments:

MW 9/26/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-95-096

14

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17127

Matrix: SED Lab Sample Id: 200-17127-14

% Solids: 56.1 Date Received: 06/21/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.21	J	~~*N~~	CV

Color Before: GRAY Clarity Before: CLOUDY Texture: FINE

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

MW 9/26/13

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - SEM/AVS

6

Client Sample ID: LMR13-58-012
Lab Sample ID: 200-17127-6
Lab Name: TestAmerica Burlington
Job No.: 200-17127-1
SDG ID.: 17127
Matrix: Sediment
Date Sampled: 06/20/2013 11:35
Reporting Basis: DRY
Date Received: 06/21/2013 09:45
% Solids: 46.9

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-43-9	Cadmium SEM	2.5	2.5	0.40	mg/Kg	U		10	6010C
7440-43-9	Cadmium SEM	0.023	0.023	0.0036	umol/g	U		10	6010C
7440-50-8	Copper SEM	5.1	13.1	1.1	mg/Kg	J		10	6010C
7440-50-8	Copper SEM	0.081	0.21	0.018	umol/g	J		10	6010C
7439-92-1	Lead SEM	6.4	5.3	2.3	mg/Kg			10	6010C
7439-92-1	Lead SEM	0.031	0.026	0.011	umol/g			10	6010C
7440-02-0	Nickel SEM	2.2	21.2	1.5	mg/Kg	J		10	6010C
7440-02-0	Nickel SEM	0.038	0.36	0.026	umol/g	J		10	6010C
7440-66-6	Zinc SEM	16.9	10.6	3.0	mg/Kg			10	6010C
7440-66-6	Zinc SEM	0.26	0.16	0.045	umol/g			10	6010C
7439-97-6	Mercury SEM	0.011	0.011	0.0035	mg/Kg	U		1	7470A
7439-97-6	Mercury SEM	0.000053	0.000053	0.000017	umol/g	U		1	7470A

MW 9/26/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY - SEM/AVS

b

Client Sample ID: LMR13-58-012 Lab Sample ID: 200-17127-6

Lab Name: TestAmerica Burlington Job No.: 200-17127-1

SDG ID.: 17127

Matrix: Sediment Date Sampled: 06/20/2013 11:35

Reporting Basis: DRY Date Received: 06/21/2013 09:45

% Solids: 46.9

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
18496-25-8	Acid Volatile Sulfides (AVS)	127	33.9		mg/Kg			1	AVS
18496-25-8	Acid Volatile Sulfides (AVS)	4.0	1.1		umol/g			1	AVS

NW 9/26/13

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - SEM/AVS

6

Client Sample ID: LMR13-58-012 Lab Sample ID: 200-17127-6

Lab Name: TestAmerica Burlington Job No.: 200-17127-1

SDG ID.: 17127

Matrix: Sediment Date Sampled: 06/20/2013 11:35

Reporting Basis: WET Date Received: 06/21/2013 09:45

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	SEM/AVS Ratio	0.103	0.00100	0.00100	NONE			1	SEM

MW 9/26/13

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - SEM/AVS

7

Client Sample ID: LMR13-94-012
Lab Sample ID: 200-17127-7

Lab Name: TestAmerica Burlington
Job No.: 200-17127-1

SDG ID.: 17127

Matrix: Sediment
Date Sampled: 06/20/2013 14:45

Reporting Basis: DRY
Date Received: 06/21/2013 09:45

% Solids: 51.0

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-43-9	Cadmium SEM	2.3	2.3	0.36	mg/Kg	U		10	6010C
7440-43-9	Cadmium SEM	0.020	0.020	0.0032	umol/g	U		10	6010C
7440-50-8	Copper SEM	3.5	11.9	1.0	mg/Kg	J		10	6010C
7440-50-8	Copper SEM	0.055	0.19	0.016	umol/g	J		10	6010C
7439-92-1	Lead SEM	6.4	4.8	2.1	mg/Kg			10	6010C
7439-92-1	Lead SEM	0.031	0.023	0.010	umol/g			10	6010C
7440-02-0	Nickel SEM	1.5	19.1	1.4	mg/Kg	J		10	6010C
7440-02-0	Nickel SEM	0.026	0.33	0.023	umol/g	J		10	6010C
7440-66-6	Zinc SEM	19.9	9.6	2.7	mg/Kg			10	6010C
7440-66-6	Zinc SEM	0.30	0.15	0.041	umol/g			10	6010C
7439-97-6	Mercury SEM	0.0096	0.0096	0.0032	mg/Kg	U		1	7470A
7439-97-6	Mercury SEM	0.000048	0.000048	0.000016	umol/g	U		1	7470A

NW 9/26/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY - SEM/AVS

7

Client Sample ID: LMR13-94-012
Lab Sample ID: 200-17127-7
Lab Name: TestAmerica Burlington
Job No.: 200-17127-1
SDG ID.: 17127
Matrix: Sediment
Date Sampled: 06/20/2013 14:45
Reporting Basis: DRY
Date Received: 06/21/2013 09:45
% Solids: 51.0

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
18496-25-8	Acid Volatile Sulfides (AVS)	153	30.6		mg/Kg			1	AVS
18496-25-8	Acid Volatile Sulfides (AVS)	4.8	0.96		umol/g			1	AVS

NW 9/26/13

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - SEM/AVS

7

Client Sample ID: LMR13-94-012 | Lab Sample ID: 200-17127-7

Lab Name: TestAmerica Burlington | Job No.: 200-17127-1

SDG ID.: 17127

Matrix: Sediment | Date Sampled: 06/20/2013 14:45

Reporting Basis: WET | Date Received: 06/21/2013 09:45

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	SEM/AVS Ratio	0.0870	0.00100	0.00100	NONE			1	SEM

NW 9/26/13

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - SEM/AVS

9

Client Sample ID: LMR13-95-012
Lab Sample ID: 200-17127-9
Lab Name: TestAmerica Burlington
Job No.: 200-17127-1
SDG ID.: 17127
Matrix: Sediment
Date Sampled: 06/20/2013 15:25
Reporting Basis: DRY
Date Received: 06/21/2013 09:45
% Solids: 57.6

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-43-9	Cadmium SEM	0.32	2.0	0.32	mg/Kg	J		10	6010C
7440-43-9	Cadmium SEM	0.0029	0.018	0.0028	umol/g	J		10	6010C
7440-50-8	Copper SEM	4.0	10.4	0.90	mg/Kg	J		10	6010C
7440-50-8	Copper SEM	0.063	0.16	0.014	umol/g	J		10	6010C
7439-92-1	Lead SEM	14.3	4.2	1.8	mg/Kg			10	6010C
7439-92-1	Lead SEM	0.069	0.020	0.0089	umol/g			10	6010C
7440-02-0	Nickel SEM	2.8	16.7	1.2	mg/Kg	J		10	6010C
7440-02-0	Nickel SEM	0.048	0.28	0.020	umol/g	J		10	6010C
7440-66-6	Zinc SEM	45.0	8.4	2.3	mg/Kg			10	6010C
7440-66-6	Zinc SEM	0.69	0.13	0.036	umol/g			10	6010C
7439-97-6	Mercury SEM	0.0046	0.0084	0.0028	mg/Kg	J		1	7470A
7439-97-6	Mercury SEM	0.000023	0.000042	0.000014	umol/g	J		1	7470A

MW 9/26/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY - SEM/AVS

9

Client Sample ID: LMR13-95-012
Lab Sample ID: 200-17127-9
Lab Name: TestAmerica Burlington
Job No.: 200-17127-1
SDG ID.: 17127
Matrix: Sediment
Date Sampled: 06/20/2013 15:25
Reporting Basis: DRY
Date Received: 06/21/2013 09:45
% Solids: 57.6

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
18496-25-8	Acid Volatile Sulfides (AVS)	348	26.7		mg/Kg			1	AVS
18496-25-8	Acid Volatile Sulfides (AVS)	10.8	0.83		umol/g			1	AVS

MW 9/26/13

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - SEM/AVS

9

Client Sample ID: LMR13-95-012 Lab Sample ID: 200-17127-9

Lab Name: TestAmerica Burlington Job No.: 200-17127-1

SDG ID.: 17127

Matrix: Sediment Date Sampled: 06/20/2013 15:25

Reporting Basis: WET Date Received: 06/21/2013 09:45

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	SEM/AVS Ratio	0.0804	0.00100	0.00100	NONE			1	SEM

MW 9/26/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: LMR13-59-012
Lab Sample ID: 200-17127-1
Lab Name: TestAmerica Burlington
Job No.: 200-17127-1
SDG ID.: 17127
Matrix: Sediment
Date Sampled: 06/20/2013 14:15
Reporting Basis: WET
Date Received: 06/21/2013 09:45

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	28500	J 1000		mg/Kg		H ^	1	Lloyd Kahn

NW 9/26/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

2

Client Sample ID: LMR13-59-024 Lab Sample ID: 200-17127-2

Lab Name: TestAmerica Burlington Job No.: 200-17127-1

SDG ID.: 17127

Matrix: Sediment Date Sampled: 06/20/2013 14:25

Reporting Basis: WET Date Received: 06/21/2013 09:45

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	41500	J 1000		mg/Kg		~~H~~	1	Lloyd Kahn

NW 9/26/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

3

Client Sample ID: LMR13-59-048
Lab Sample ID: 200-17127-3
Lab Name: TestAmerica Burlington
Job No.: 200-17127-1
SDG ID.: 17127
Matrix: Sediment
Date Sampled: 06/20/2013 14:35
Reporting Basis: WET
Date Received: 06/21/2013 09:45

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	42900	J 1000		mg/Kg		~~H~~	1	Lloyd Kahn

JW 9/26/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

4

Client Sample ID: LMR13-94-024
Lab Sample ID: 200-17127-4
Lab Name: TestAmerica Burlington
Job No.: 200-17127-1
SDG ID.: 17127
Matrix: Sediment
Date Sampled: 06/20/2013 14:55
Reporting Basis: WET
Date Received: 06/21/2013 09:45

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	54300	J 1000		mg/Kg		H	1	Lloyd Kahn

MW 9/26/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

5

Client Sample ID: LMR13-94-072 Lab Sample ID: 200-17127-5

Lab Name: TestAmerica Burlington Job No.: 200-17127-1

SDG ID.: 17127

Matrix: Sediment Date Sampled: 06/20/2013 15:15

Reporting Basis: WET Date Received: 06/21/2013 09:45

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	65800	J 1000		mg/Kg		H	1	Lloyd Kahn

MW 9/26/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

6

Client Sample ID: LMR13-58-012 Lab Sample ID: 200-17127-6

Lab Name: TestAmerica Burlington Job No.: 200-17127-1

SDG ID.: 17127

Matrix: Sediment Date Sampled: 06/20/2013 11:35

Reporting Basis: WET Date Received: 06/21/2013 09:45

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	37200	J 1000		mg/Kg		H	1	Lloyd Kahn

NW 9/26/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

7

Client Sample ID: LMR13-94-012 Lab Sample ID: 200-17127-7

Lab Name: TestAmerica Burlington Job No.: 200-17127-1

SDG ID.: 17127

Matrix: Sediment Date Sampled: 06/20/2013 14:45

Reporting Basis: WET Date Received: 06/21/2013 09:45

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	53600	J 1000		mg/Kg		H	1	Lloyd Kahn

NW 9/26/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

8

Client Sample ID: LMR13-94-048
Lab Sample ID: 200-17127-8
Lab Name: TestAmerica Burlington
Job No.: 200-17127-1
SDG ID.: 17127
Matrix: Sediment
Date Sampled: 06/20/2013 15:05
Reporting Basis: WET
Date Received: 06/21/2013 09:45
% Solids: 61.5

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	39700	J 1000		mg/Kg		H	1	Lloyd Kahn

NW 9/26/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

9

Client Sample ID: LMR13-95-012 | Lab Sample ID: 200-17127-9

Lab Name: TestAmerica Burlington | Job No.: 200-17127-1

SDG ID.: 17127

Matrix: Sediment | Date Sampled: 06/20/2013 15:25

Reporting Basis: WET | Date Received: 06/21/2013 09:45

% Solids: 57.6

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	46400	J 1000		mg/Kg		~~U~~	1	Lloyd Kahn

NW 9/26/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

10

Client Sample ID: LMR13-70-024
Lab Sample ID: 200-17127-10
Lab Name: TestAmerica Burlington
Job No.: 200-17127-1
SDG ID.: 17127
Matrix: Sediment
Date Sampled: 06/20/2013 16:25
Reporting Basis: WET
Date Received: 06/21/2013 09:45
% Solids: 54.6

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	25300	J 1000		mg/Kg		~~H~~	1	Lloyd Kahn

MW 9/26/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

11

Client Sample ID: LMR13-95-024
Lab Sample ID: 200-17127-11
Lab Name: TestAmerica Burlington
Job No.: 200-17127-1
SDG ID.: 17127
Matrix: Sediment
Date Sampled: 06/20/2013 15:35
Reporting Basis: WET
Date Received: 06/21/2013 09:45
% Solids: 64.9

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	143000	J 1000		mg/Kg		✓	1	Lloyd Kahn

NW 9/26/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

12

Client Sample ID: LMR13-95-048 Lab Sample ID: 200-17127-12

Lab Name: TestAmerica Burlington Job No.: 200-17127-1

SDG ID.: 17127

Matrix: Sediment Date Sampled: 06/20/2013 15:45

Reporting Basis: WET Date Received: 06/21/2013 09:45

% Solids: 51.9

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	62700	J 1000		mg/Kg		H	1	Lloyd Kahn

MW 9/26/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

13

Client Sample ID: LMR13-95-072 | Lab Sample ID: 200-17127-13

Lab Name: TestAmerica Burlington | Job No.: 200-17127-1

SDG ID.: 17127

Matrix: Sediment | Date Sampled: 06/20/2013 15:55

Reporting Basis: WET | Date Received: 06/21/2013 09:45

% Solids: 54.3

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	47100	J 1000		mg/Kg		H	1	Lloyd Kahn

MW 9/26/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

14

Client Sample ID: LMR13-95-096
Lab Sample ID: 200-17127-14
Lab Name: TestAmerica Burlington
Job No.: 200-17127-1
SDG ID.: 17127
Matrix: Sediment
Date Sampled: 06/20/2013 16:05
Reporting Basis: WET
Date Received: 06/21/2013 09:45
% Solids: 56.1

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	38000	J 1000		mg/Kg		H	1	Lloyd Kahn

MW 9/26/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: LMR13-59-012
Lab Sample ID: 200-17127-1
Lab Name: TestAmerica Canton
Job No.: 200-17127-1
SDG ID.: 17127
Matrix: Sediment
Date Sampled: 06/20/2013 14:15
Reporting Basis: DRY
Date Received: 06/21/2013 09:45
% Solids: 43.2

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	691	461	204	mg/Kg			1	9071B

MW 9/26/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

2

Client Sample ID: LMR13-59-024
Lab Sample ID: 200-17127-2
Lab Name: TestAmerica Canton
Job No.: 200-17127-1
SDG ID.: 17127
Matrix: Sediment
Date Sampled: 06/20/2013 14:25
Reporting Basis: DRY
Date Received: 06/21/2013 09:45
% Solids: 53.3

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	618	375	166	mg/Kg		B	1	9071B

MW 9/26/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

3

Client Sample ID: LMR13-59-048
Lab Sample ID: 200-17127-3
Lab Name: TestAmerica Canton
Job No.: 200-17127-1
SDG ID.: 17127
Matrix: Sediment
Date Sampled: 06/20/2013 14:35
Reporting Basis: DRY
Date Received: 06/21/2013 09:45
% Solids: 64.9

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	858	307	135	mg/Kg			1	9071B

NW 9/26/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

4

Client Sample ID: LMR13-94-024
Lab Sample ID: 200-17127-4
Lab Name: TestAmerica Canton
Job No.: 200-17127-1
SDG ID.: 17127
Matrix: Sediment
Date Sampled: 06/20/2013 14:55
Reporting Basis: DRY
Date Received: 06/21/2013 09:45
% Solids: 61.6

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	1810	323	143	mg/Kg			1	9071B

MW 9/26/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

5

Client Sample ID: LMR13-94-072
Lab Sample ID: 200-17127-5
Lab Name: TestAmerica Canton
Job No.: 200-17127-1
SDG ID.: 17127
Matrix: Sediment
Date Sampled: 06/20/2013 15:15
Reporting Basis: DRY
Date Received: 06/21/2013 09:45
% Solids: 60.3

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	3530	333	147	mg/Kg			1	9071B

MW 9/26/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: LMR13-58-012
Lab Sample ID: 200-17127-6
Lab Name: TestAmerica Canton
Job No.: 200-17127-1
SDG ID.: 17127
Matrix: Sediment
Date Sampled: 06/20/2013 11:35
Reporting Basis: DRY
Date Received: 06/21/2013 09:45
% Solids: 46.9

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	554	426	188	mg/Kg			1	9071B

NW 9/26/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

7

Client Sample ID: LMR13-94-012
Lab Sample ID: 200-17127-7
Lab Name: TestAmerica Canton
Job No.: 200-17127-1
SDG ID.: 17127
Matrix: Sediment
Date Sampled: 06/20/2013 14:45
Reporting Basis: DRY
Date Received: 06/21/2013 09:45
% Solids: 51.0

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	1160	381	168	mg/Kg			1	9071B

MW 9/26/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

8

Client Sample ID: LMR13-94-048
Lab Sample ID: 200-17127-8
Lab Name: TestAmerica Canton
Job No.: 200-17127-1
SDG ID.: 17127
Matrix: Sediment
Date Sampled: 06/20/2013 15:05
Reporting Basis: DRY
Date Received: 06/21/2013 09:45
% Solids: 61.5

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	1750	320	142	mg/Kg			1	9071B

MW 9/26/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

9

Client Sample ID: LMR13-95-012
Lab Sample ID: 200-17127-9
Lab Name: TestAmerica Canton
Job No.: 200-17127-1
SDG ID.: 17127
Matrix: Sediment
Date Sampled: 06/20/2013 15:25
Reporting Basis: DRY
Date Received: 06/21/2013 09:45
% Solids: 57.6

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	10600	339	150	mg/Kg			1	9071B

MW 9/26/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

10

Client Sample ID: LMR13-70-024
Lab Sample ID: 200-17127-10
Lab Name: TestAmerica Canton
Job No.: 200-17127-1
SDG ID.: 17127
Matrix: Sediment
Date Sampled: 06/20/2013 16:25
Reporting Basis: DRY
Date Received: 06/21/2013 09:45
% Solids: 54.6

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	593	U 360	159	mg/Kg		B	1	9071B

MW 9/26/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: LMR13-95-024 Lab Sample ID: 200-17127-11 11

Lab Name: TestAmerica Canton Job No.: 200-17127-1

SDG ID.: 17127

Matrix: Sediment Date Sampled: 06/20/2013 15:35

Reporting Basis: DRY Date Received: 06/21/2013 09:45

% Solids: 64.9

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	39500	299	132	mg/Kg			1	9071B

MW 9/26/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

12

Client Sample ID: LMR13-95-048
Lab Sample ID: 200-17127-12
Lab Name: TestAmerica Canton
Job No.: 200-17127-1
SDG ID.: 17127
Matrix: Sediment
Date Sampled: 06/20/2013 15:45
Reporting Basis: DRY
Date Received: 06/21/2013 09:45
% Solids: 51.9

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	10500	377	167	mg/Kg		B	1	9071B

MW 9/26/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

13

Client Sample ID: LMR13-95-072 Lab Sample ID: 200-17127-13

Lab Name: TestAmerica Canton Job No.: 200-17127-1

SDG ID.: 17127

Matrix: Sediment Date Sampled: 06/20/2013 15:55

Reporting Basis: DRY Date Received: 06/21/2013 09:45

% Solids: 54.3

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	12800	355	157	mg/Kg		B	1	9071B

NW 9/26/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

14

Client Sample ID: LMR13-95-096
Lab Sample ID: 200-17127-14
Lab Name: TestAmerica Canton
Job No.: 200-17127-1
SDG ID.: 17127
Matrix: Sediment
Date Sampled: 06/20/2013 16:05
Reporting Basis: DRY
Date Received: 06/21/2013 09:45
% Solids: 56.1

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	3710	347	153	mg/Kg		B	1	9071B

MW 9/26/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

15

Client Sample ID: LMR13-95-024FD
Lab Sample ID: 200-17127-15
Lab Name: TestAmerica Canton
Job No.: 200-17127-1
SDG ID.: 17127
Matrix: Sediment
Date Sampled: 06/20/2013 15:35
Reporting Basis: DRY
Date Received: 06/21/2013 09:45
% Solids: 65.9

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	48000	300	132	mg/Kg		B	1	9071B

MW 9/26/13

ENVIRONMENTAL
Data Services, Inc.

DATA VALIDATION SUMMARY REPORT
LOWER MAUMEE RIVER, TOLEDO, OHIO

Client: EA Engineering, Science & Technology, Inc., Hunt Valley, Maryland
SDG: 200-17149
Laboratory: Test America Laboratories, Burlington, Vermont
Test America Laboratories, Canton, Ohio
Site: Lower Maumee River, Maumee Area of Concern, Toledo, Ohio
Date: September 29, 2013

SVOC			
EDS ID	Client Sample ID	Laboratory Sample ID	Matrix
1	LMR13-70-012	200-17149-1	Sediment
2	LMR13-70-048	200-17149-2	Sediment
2MS	LMR13-70-048MS	200-17149-2MS	Sediment
2MSD	LMR13-70-048MSD	200-17149-2MSD	Sediment
3	LMR13-80-024	200-17149-3	Sediment
5	LMR13-52-012	200-17149-5	Sediment
6	LMR13-52-024	200-17149-6	Sediment
7	LMR13-52-024FD	200-17149-7	Sediment
8	LMR13-80-072	200-17149-8	Sediment
9	LMR13-53-024	200-17149-9	Sediment
11	LMR13-80-012	200-17149-11	Sediment
12	LMR13-52-048	200-17149-12	Sediment
13	LMR13-53-012	200-17149-13	Sediment
14	LMR13-56-012	200-17149-14	Sediment
15	LMR13-80-048	200-17149-15	Sediment
16	LMR13-80-096	200-17149-16	Sediment

PAH 34			
EDS ID	Client Sample ID	Laboratory Sample ID	Matrix
1	LMR13-70-012	200-17149-1	Sediment

PCBs			
EDS ID	Client Sample ID	Laboratory Sample ID	Matrix
1	LMR13-70-012	200-17149-1	Sediment
2	LMR13-70-048	200-17149-2	Sediment
3	LMR13-80-024	200-17149-3	Sediment
4	LMR13-80-024FD	200-17149-4	Sediment
5	LMR13-52-012	200-17149-5	Sediment
6	LMR13-52-024	200-17149-6	Sediment
8	LMR13-80-072	200-17149-8	Sediment
9	LMR13-53-024	200-17149-9	Sediment
10	LMR13-53-024FD	200-17149-10	Sediment
11	LMR13-80-012	200-17149-11	Sediment
12	LMR13-52-048	200-17149-12	Sediment
13	LMR13-53-012	200-17149-13	Sediment

PCBs			
EDS ID	Client Sample ID	Laboratory Sample ID	Matrix
14	LMR13-56-012	200-17149-14	Sediment
15	LMR13-80-048	200-17149-15	Sediment

Metals/Mercury/TOC			
EDS ID	Client Sample ID	Laboratory Sample ID	Matrix
1	LMR13-70-012	200-17149-1	Sediment
1MS*	LMR13-70-012MS	200-17149-1MS	Sediment
1MSD*	LMR13-70-012MSD	200-17149-1MSD	Sediment
2	LMR13-70-048	200-17149-2	Sediment
3	LMR13-80-024	200-17149-3	Sediment
4	LMR13-80-024FD	200-17149-4	Sediment
5	LMR13-52-012	200-17149-5	Sediment
6	LMR13-52-024	200-17149-6	Sediment
8	LMR13-80-072	200-17149-8	Sediment
9	LMR13-53-024	200-17149-9	Sediment
10	LMR13-53-024FD	200-17149-10	Sediment
11	LMR13-80-012	200-17149-11	Sediment
12	LMR13-52-048	200-17149-12	Sediment
13	LMR13-53-012	200-17149-13	Sediment
14	LMR13-56-012	200-17149-14	Sediment
15	LMR13-80-048	200-17149-15	Sediment
16	LMR13-80-096	200-17149-16	Sediment

* - Metals/Hg only

AVS/SEM			
EDS ID	Client Sample ID	Laboratory Sample ID	Matrix
1	LMR13-70-012	200-17149-1	Sediment
1MS	LMR13-70-012MS	200-17149-1MS	Sediment
1MSD	LMR13-70-012MSD	200-17149-1MSD	Sediment

HEM			
EDS ID	Client Sample ID	Laboratory Sample ID	Matrix
1	LMR13-70-012	200-17149-1	Sediment
2	LMR13-70-048	200-17149-2	Sediment
3	LMR13-80-024	200-17149-3	Sediment
5	LMR13-52-012	200-17149-5	Sediment
6	LMR13-52-024	200-17149-6	Sediment
7	LMR13-52-024FD	200-17149-7	Sediment
8	LMR13-80-072	200-17149-8	Sediment
9	LMR13-53-024	200-17149-9	Sediment
11	LMR13-80-012	200-17149-11	Sediment
12	LMR13-52-048	200-17149-12	Sediment
13	LMR13-53-012	200-17149-13	Sediment
14	LMR13-56-012	200-17149-14	Sediment
15	LMR13-80-048	200-17149-15	Sediment
16	LMR13-80-096	200-17149-16	Sediment

A full data validation was performed on the analytical data for sixteen sediment samples collected on June 20, 2013 by EA Engineering at the Lower Maumee River site in Toledo, Ohio. The samples were analyzed under the Environmental Protection Agency (USEPA) Contract Laboratory Program (CLP) Multi-Media Multi-Concentration Organics Analysis SOM01.2 and Inorganic Analysis ILM05.4 and the Test Methods for the Evaluation of Solid Waste, USEPA SW-846, Third Edition, September 1986, with revisions.

Specific method references are as follows:

Analysis	*Method References*
SVOC	USEPA CLP SOM01.2
PAH 34	USEPA CLP SOM01.2
PCBs	USEPA CLP SOM01.2
Michigan Metals & Mercury	USEPA CLP ISM01.3
AVS/SEM	USEPA SW-846 Methods 6010C/7470A
TOC	Lloyd Kahn
Oil & Grease (HEM)	USEPA SW-846 Method 9071B

The data have been validated according to the protocols and quality control (QC) requirements of the analytical methods, the Great Lakes Legacy Act, March 2010, the Quality Assurance Project Plan for Phase 2 of the Lower Maumee River Site Characterization, May 2013, and the USEPA National Functional Guidelines for Organic Data Review as follows:

- The USEPA "Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review," June 2008;
- The USEPA "Contract Laboratory Program National Functional Guidelines for Inorganic Superfund Data Review," January 2010;
- and the reviewer's professional judgment.

The following items/criteria were reviewed for this report:

Organics

- Holding times and sample preservation
- Gas Chromatography/Mass Spectroscopy (GC/MS) Tuning
- Initial and continuing calibration summaries
- Method blank and field blank contamination
- Surrogate Spike recoveries
- Matrix Spike/Matrix Spike Duplicate (MS/MSD) recoveries
- Laboratory Control Sample (LCS) recoveries
- Internal standard area and retention time summary forms
- Target Compound Identification
- Compound Quantitation
- Tentatively Identified Compounds (TICs)
- Field Duplicate sample precision

Inorganics

- Holding times and sample preservation
- ICP/MS Tuning
- Initial and continuing calibration verifications
- Method blank and field blank contamination
- ICP Interference Check Sample
- Laboratory Control Sample (LCS) recoveries
- Matrix Spike Analysis
- Duplicate Sample Analysis
- ICP Serial Dilution
- Compound Quantitation
- Field Duplicate sample precision

Overall Usability Issues:

There were minor rejections of data. This data cannot be used in the decision-making process for this project.

- Three SVOC compounds were rejected in eleven samples due to severely low surrogate recoveries.

Overall the remaining data is acceptable for the intended purposes as qualified for the deficiencies detailed in this report.

Please note that any results qualified (U) due to blank contamination may be then qualified (J) due to another action. Therefore, the results may be qualified (UJ) due to the culmination of the blank contaminations and actions from other exceedences of QC criteria.

Semivolatile Organic Compounds (SVOC)

Holding Times

- All samples were extracted within 14 days for sediment samples and analyzed within 40 days for all samples. Except the following.

Sample ID	Date Collected	Date Analyzed	# of Days	Qualifier
1, 2, 5-7, 9, 11-16	07/01/13	08/18/13	48	J/UJ Unless (R)
3, 8	07/01/13	08/14/13	44	J/UJ Unless (R)

GC/MS Tuning

- All criteria were met.

Initial Calibration

- All %RSD and mean RRF criteria were met except the following.

ICAL Date	Compound	%RSD/RRF	Qualifier	Affected Samples
08/02/13	Benzo(b)fluoranthene	23.7%	None	See HT
	Dibenzo(a,h)anthracene	20.6%	None	

Continuing Calibration

- All %D and RRF criteria were met except the following.

CCAL Date	Compound	%D/RRF	Qualifier	Affected Samples
08/14/13 (1833)	Hexachlorocyclopentadiene	74.9%	None	See Surrogates
08/18/13 (1354)	2-Methylnaphthalene	38.5%	None	See Surrogates
08/18/13 (2319)	Di-n-octylphthalate	73.1%	None	See Surrogates
	Hexachlorocyclopentadiene	70.9%	None	

Method Blank

- The method blanks exhibited the following contamination.

Blank ID	Compound	Conc. ug/kg	Qualifier	Affected Samples
SBLKO2	Phenol	4.0	U	1, 2
	Di-n-butylphthalate	8.1	U	1, 2, 5-7, 9, 11-16
	Butylbenzylphthalate	15	U	1, 2, 5-7, 12, 14, 16
	Bis(2-ethylhexyl)phthalate	27	U	5, 7, 12, 14-16
SBLK2O	Bis(2-ethylhexyl)phthalate	39	U	8

Field Blank

- Field QC samples were not analyzed.

Surrogate Spike Recoveries

- All samples exhibited acceptable surrogate %R values except the following.

Sample ID	Surrogate	%R	Qualifier
1	Phenol-d5	108%	None - See HT
	4-Methylphenol-d8	111%	
	4-Chloroaniline-d4	0%	R – Associated Compounds
2	Phenol-d5	123%	None - See HT
	4-Methylphenol-d8	110%	
	4-Chloroaniline-d4	0%	R – Associated Compounds

Sample ID	Surrogate	%R	Qualifier
3	4-Chloroaniline-d4	0%	R – Associated Compounds
5	Phenol-d5	118%	None - See HT
	4-Methylphenol-d8	107%	
	4-Chloroaniline-d4	0%	R – Associated Compounds
6	Phenol-d5	113%	None - See HT
	4-Methylphenol-d8	112%	
	2,4-Dichlorophenol-d3	17%	
7	Phenol-d5	119%	None - See HT
	4-Chloroaniline-d4	0%	R – Associated Compounds
8	Phenol-d5	109%	None - See HT
	4-Methylphenol-d8	103%	
	Nitrobenzene-d5	106%	
	2-Nitrophenol-d4	106%	
	4-Chloroaniline	0%	R – Associated Compounds
	Pyrene-d10	132%	None - See HT
9	Phenol-d5	117%	None - See HT
	4-Methylphenol-d8	103%	
	4-Chloroaniline-d4	0%	R – Associated Compounds
11	Phenol-d5	123%	None - See HT
	4-Methylphenol-d8	110%	
	2,4-Dichlorophenol-d3	18%	
	Pyrene-d10	122%	
12	Phenol-d5	120%	None - See HT
	4-Methylphenol-d8	102%	
	2,4-Dichlorophenol-d3	14%	
	4-Chloroaniline-d4	0%	R – Associated Compounds
13	4-Chloroaniline-d4	0%	R – Associated Compounds
14	Phenol-d5	115%	None - See HT
15	Phenol-d5	123%	None - See HT
	4-Methylphenol-d8	112%	
	4-Chloroaniline-d4	0%	R – Associated Compounds
16	4-Chloroaniline-d4	0%	R – Associated Compounds

Matrix Spike/Matrix Spike Duplicate (MS/MSD) Recoveries

- The MS/MSD sample exhibited acceptable %R and RPD values.

Laboratory Control Samples

- A LCS sample was not analyzed.

Internal Standard (IS) Area Performance

- All internal standards met response and retention time (RT) criteria.

Target Compound Identification

- All mass spectra and quantitation criteria were met.

Compound Quantitation

- Several samples were analyzed at various dilutions due to high concentrations of target compounds. No action was required.

Field Duplicate Sample Precision

- Field duplicate results are summarized below.

SVOC				
Compound	LMR13-52-024 ug/kg	LMR13-52-024FD ug/kg	RPD	Qualifier
Benzaldehyde	50	26	63%	None
Acetophenone	26	230U	NC	
Naphthalene	88	48	59%	
2-Methylnaphthalene	68	31	75%	
Dimethylphthalate	300U	130	NC	
1,1'-Biphenyl	14	230U	NC	
Acenaphthylene	44	24	59%	
Acenaphthene	100	73	31%	
Dibenzofuran	65	38	52%	
Fluorene	140	91	42%	
Phenanthrene	610	620	2%	
Anthracene	160	150	6%	
Carbazole	31	38	20%	
Fluoranthene	1100	1000	10%	
Pyrene	1300	990	27%	
Benzo(a)anthracene	800	560	35%	
Chrysene	790	630	23%	
Bis(2-ethylhexyl)phthalate	470	230U	NC	
Benzo(b)fluoranthene	630	510	21%	
Benzo(k)fluoranthene	560	390	36%	
Benzo(a)pyrene	610	480	24%	
Indeno(1,2,3-cd)pyrene	370	250	39%	
Dibenzo(a,h)anthracene	130	84	43%	
Benzo(g,h,i)perylene	360	280	25%	

Polynuclear Aromatic Hydrocarbons (PAH 34)

Holding Times

- All samples were extracted within 14 days for sediment samples and analyzed within 40 days for all samples.

GC/MS Tuning

- All criteria were met.

Initial Calibration

- All %RSD and mean RRF criteria were met.

Continuing Calibration

- All %D and RRF criteria were met.

Method Blank

- The method blanks exhibited the following contamination.

Blank ID	Compound	Conc. ug/kg	Qualifier	Affected Samples
SBLKO2	Naphthalene	0.21	None	All >5X
	Phenanthrene	0.20	None	
	Fluoranthene	0.17	None	
	Pyrene	0.12	None	
	Benzo(a)anthracene	0.12	None	
	Chrysene	0.10	None	
	Benzo(b)fluoranthene	0.091	None	
	Benzo(k)fluoranthene	0.083	None	
	Total 16 PPAH	1.1	J	1
	Total PAH	1.1	J	

Field Blank

- Field QC samples were not analyzed.

Surrogate Spike Recoveries

- All samples exhibited acceptable surrogate %R values.

Matrix Spike/Matrix Spike Duplicate (MS/MSD) Recoveries

- A MS/MSD sample was not analyzed.

Laboratory Control Samples

- A LCS sample was not analyzed.

Internal Standard (IS) Area Performance

- All internal standards met response and retention time (RT) criteria.

Target Compound Identification

- All mass spectra and quantitation criteria were met.

Compound Quantitation

- EDS Sample ID #1 was analyzed at a 3.3X dilution due to high concentrations of target compounds. Several compound concentrations exceeded the linear range of the instrument and were flagged (E) by the laboratory and further qualified as estimated (J).
- Total 16 PPAH and Total PAH were estimated (J) in all samples due to blank contamination.

Field Duplicate Sample Precision

- Field duplicate samples were not analyzed.

Polychlorinated Biphenyls (PCBs)

Holding Times

- All samples were extracted within 14 days for sediment samples and analyzed within 40 days.

Initial Calibration

- All %RSD and/or correlation coefficient criteria were met.

Continuing Calibration

- All %D criteria were met.

Method Blank

- The method blanks were free of contamination.

Field Blank

- Field QC samples were not analyzed.

Surrogate Spike Recoveries

- All samples exhibited acceptable surrogate recoveries.

Matrix Spike/Matrix Spike Duplicate (MS/MSD) Recoveries

- A MS/MSD sample was not analyzed.

Laboratory Control Samples

- The LCS sample exhibited acceptable %R values.

Compound Quantitation

- Several samples were analyzed at various dilutions due to high concentrations of target compounds. No action was required.

Field Duplicate Sample Precision

- Field duplicate results are summarized below.

PCBs				
Compound	LMR13-80-024 ug/kg	LMR13-80-024FD ug/kg	RPD	Qualifier
None	ND	ND	-	-

PCBs				
Compound	LMR13-53-024 ug/kg	LMR13-53-024FD ug/kg	RPD	Qualifier
Aroclor-1248	200	160	22%	None
Aroclor-1254	260	170	42%	
Aroclor-1260	61	52	16%	

GC Column Difference Results

- Several samples exhibited high %D values > 25% between columns and have been qualified as estimated (J) by the reviewer.

Metals & Mercury

Holding Times

- All samples were prepared and analyzed within 28 days for mercury and 180 days for all other metals.

ICP/MS Tuning

- Not applicable.

Initial Calibration Verification

- All initial calibration criteria were met.

Continuing Calibration Verification

- All continuing calibration criteria were met.

Method Blank

- The method blanks exhibited the following contamination.

Blank ID	Compound	Conc. mg/kg	Qualifier	Affected Samples
MB	Chromium	0.092	None	All Associated >10X
	Zinc	0.27	None	

Field Blank

- Field QC samples were not analyzed.

ICP Interference Check Sample

- The ICP interference check sample exhibited acceptable %R values.

Laboratory Control Samples

- The LCS sample exhibited acceptable recoveries.

Matrix Spike Analysis

- The matrix spike samples exhibited acceptable %R values.

Duplicate Sample Analysis

- The duplicate samples exhibited acceptable RPD values.

ICP Serial Dilution

- ICP serial dilution percent differences (%D) were within acceptance limits except the following.

ICP Sample ID	Compound	%D	Qualifier	Affected Samples
1	Chromium	16%	J	All Samples
	Copper	12%	J	
	Nickel	19%	J	
	Zinc	17%	J	

Compound Quantitation

- All criteria were met.

Field Duplicate Sample Precision

- Field duplicate results are summarized below.

Metals				
Compound	LMR13-80-024 mg/kg	LMR13-80-024FD mg/kg	RPD	Qualifier
Arsenic	16.4	14.9	10%	None
Cadmium	0.89	0.82	8%	
Chromium	28.6	26.3	8%	
Copper	35.2	32.7	7%	
Lead	111	95.9	15%	
Nickel	32.9	31.1	6%	
Zinc	246	217	13%	
Mercury	0.51	0.40	24%	

Metals				
Compound	LMR13-53-024 mg/kg	LMR13-53-024FD mg/kg	RPD	Qualifier
Arsenic	9.3	7.8	18%	None
Cadmium	1.3	1.3	0%	
Chromium	35.7	36.0	1%	
Copper	41.1	33.1	22%	
Lead	199	80.0	85%	

Metals				
Compound	LMR13-53-024 mg/kg	LMR13-53-024FD mg/kg	RPD	Qualifier
Nickel	33.9	31.5	7%	None
Zinc	121	117	3%	
Mercury	0.12	0.12	0%	

Oil & Grease, Total Organic Carbon, AVS/SEM (Metals & Hg)

Holding Times

- All samples were analyzed within the recommended holding time for each analysis except the following.

TOC				
Sample ID	Date Collected	Date Analyzed	# of Days	Qualifier
All Samples	06/20/13	08/08/13	49	J

Initial and Continuing Calibration

- All %R criteria were met.

Method Blank

- The method blanks were free of contamination.

Field Blank

- Field QC samples were not included in this data package.

Laboratory Control Samples

- The LCS samples exhibited acceptable %R values.

Matrix Spike/Duplicate (MS/DUP) Recoveries

- The MS/DUP samples exhibited acceptable %R and RPD values.

Compound Quantitation

- All criteria were met.

Field Duplicate Sample Precision

- Field duplicate results are summarized below.

TOC				
Compound	LMR13-80-024 mg/kg	LMR13-80-024FD mg/kg	RPD	Qualifier
TOC	29800	27600	8%	None

HEM				
Compound	LMR13-52-024 mg/kg	LMR13-52-024FD mg/kg	RPD	Qualifier
HEM	941	178	136%	J

TOC				
Compound	LMR13-53-024 mg/kg	LMR13-53-024FD mg/kg	RPD	Qualifier
TOC	22700	26600	16%	None

Please contact the undersigned at (757) 564-0090 if you have any questions or need further information.

Signed: Nancy Weaver Dated: 9/30/13

Nancy Weaver
Senior Chemist

Data Qualifiers

U	=	The analyte was analyzed for, but was not detected at a level greater than or equal to the level of the adjusted Contract Required Quantitation Limit (CRQL) for sample and method.
UJ	=	The analyte was not detected at a level greater than or equal to the adjusted CRQL. However, the reported adjusted CRQL is approximate and may be inaccurate or imprecise.
J	=	The analyte was positively identified and the associated numerical value is the approximate concentration of the analyte in the sample (due either to the quality of the data generated because certain quality control criteria were not met, or the concentration of the analyte was below the CRQL).
J+	=	The result is an estimated quantity, but the result may be biased high.
J-	=	The result is an estimated quantity, but the result may be biased low.
R	=	The sample results are unusable due to the quality of the data generated because certain criteria were not met. The analyte may or may not be present in the sample.
NJ	=	The analysis indicates the presence of an analyte that has been "tentatively identified" and the associated numerical value represents its approximate concentration.

1D - FORM I SV-1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-70-012

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17149

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17149-1

Sample wt/vol: 30.2 (g/mL) g Lab File ID: ULLCU16.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 56 Decanted: (Y/N) Date Received: 06/22/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 07/01/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/18/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
100-52-7	Benzaldehyde	57	J
108-95-2	Phenol	390 ~~17~~	~~J B~~
111-44-4	Bis(2-chloroethyl)ether	390	U
95-57-8	2-Chlorophenol	390	U
95-48-7	2-Methylphenol	390	U
108-60-1	2,2'-Oxybis(1-chloropropane)	390	U
98-86-2	Acetophenone	23	J
106-44-5	4-Methylphenol	21	J
621-64-7	N-Nitroso-di-n-propylamine	390	U
67-72-1	Hexachloroethane	390	U
98-95-3	Nitrobenzene	390	U
78-59-1	Isophorone	390	U
88-75-5	2-Nitrophenol	390	U
105-67-9	2,4-Dimethylphenol	390	U
111-91-1	Bis(2-chloroethoxy)methane	390	U
120-83-2	2,4-Dichlorophenol	390	U
91-20-3	Naphthalene	110	J
106-47-8	4-Chloroaniline	390	U
87-68-3	Hexachlorobutadiene	390	U
105-60-2	Caprolactam	390	U
59-50-7	4-Chloro-3-methylphenol	390	U
91-57-6	2-Methylnaphthalene	24	J
77-47-4	Hexachlorocyclopentadiene	390	U
88-06-2	2,4,6-Trichlorophenol	390	U
95-95-4	2,4,5-Trichlorophenol	390	U
92-52-4	1,1'-Biphenyl	390	U
91-58-7	2-Chloronaphthalene	390	U
88-74-4	2-Nitroaniline	750	U
131-11-3	Dimethylphthalate	390	U
606-20-2	2,6-Dinitrotoluene	390	U
208-96-8	Acenaphthylene	16	J
99-09-2	3-Nitroaniline	750	U
83-32-9	Acenaphthene	70	J

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NW 09/29/13

1E - FORM I SV-2

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-70-012

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17149

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17149-1

Sample wt/vol: 30.2 (g/mL) g Lab File ID: ULLCU16.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 56 Decanted: (Y/N) Date Received: 06/22/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 07/01/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/18/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
51-28-5	2,4-Dinitrophenol	750	U
100-02-7	4-Nitrophenol	750	U
132-64-9	Dibenzofuran	27	J
121-14-2	2,4-Dinitrotoluene	390	U
84-66-2	Diethylphthalate	390	U
86-73-7	Fluorene	83	J
7005-72-3	4-Chlorophenyl-phenylether	390	U
100-01-6	4-Nitroaniline	750	U
534-52-1	4,6-Dinitro-2-methylphenol	750	U
86-30-6	N-Nitrosodiphenylamin [1]	390	U
95-94-3	1,2,4,5-Tetrachlorobenzene	390	U
101-55-3	4-Bromophenyl-phenylether	390	U
118-74-1	Hexachlorobenzene	390	U
1912-24-9	Atrazine	390	U
87-86-5	Pentachlorophenol	750	U
85-01-8	Phenanthrene	330	J
120-12-7	Anthracene	83	J
86-74-8	Carbazole	11	J
84-74-2	Di-n-butylphthalate	390 ~~28~~	~~J B~~
206-44-0	Fluoranthene	530	
129-00-0	Pyrene	700	
85-68-7	Butylbenzylphthalate	390 ~~63~~	~~J B~~
91-94-1	3,3'-Dichlorobenzidine	390	U
56-55-3	Benzo(a)anthracene	410	
218-01-9	Chrysene	420	
117-81-7	Bis(2-ethylhexyl)phthalate	1400	B
117-84-0	Di-n-octylphthalate	390	U
205-99-2	Benzo(b)fluoranthene	380	J
207-08-9	Benzo(k)fluoranthene	340	J
50-32-8	Benzo(a)pyrene	300	J
193-39-5	Indeno(1,2,3-cd)pyrene	170	J
53-70-3	Dibenzo(a,h)anthracene	68	J
191-24-2	Benzo(g,h,i)perylene	200	J
58-90-2	2,3,4,6-Tetrachlorophenol	390	U

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[1] Cannot be separated from Diphenylamine

MW 09/29/13

EPA SAMPLE NO.
LMR13-70-048

2

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17149

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17149-2

Sample wt/vol: 30.1 (g/mL) g Lab File ID: ULLCU17.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 48 Decanted: (Y/N) Date Received: 06/22/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 07/01/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/18/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
100-52-7	Benzaldehyde	43	J
108-95-2	Phenol	320 ~~18~~	~~J B~~
111-44-4	Bis(2-chloroethyl)ether	320	U
95-57-8	2-Chlorophenol	320	U
95-48-7	2-Methylphenol	320	U
108-60-1	2,2'-Oxybis(1-chloropropane)	320	U
98-86-2	Acetophenone	320	U
106-44-5	4-Methylphenol	14	J
621-64-7	N-Nitroso-di-n-propylamine	320	U
67-72-1	Hexachloroethane	320	U
98-95-3	Nitrobenzene	320	U
78-59-1	Isophorone	320	U
88-75-5	2-Nitrophenol	320	U
105-67-9	2,4-Dimethylphenol	320	U
111-91-1	Bis(2-chloroethoxy)methane	320	U
120-83-2	2,4-Dichlorophenol	320	U
91-20-3	Naphthalene	140	J
106-47-8	4-Chloroaniline	320	U
87-68-3	Hexachlorobutadiene	320	U
105-60-2	Caprolactam	320	U
59-50-7	4-Chloro-3-methylphenol	320	U
91-57-6	2-Methylnaphthalene	44	J
77-47-4	Hexachlorocyclopentadiene	320	U
88-06-2	2,4,6-Trichlorophenol	320	U
95-95-4	2,4,5-Trichlorophenol	320	U
92-52-4	1,1'-Biphenyl	10	J
91-58-7	2-Chloronaphthalene	320	U
88-74-4	2-Nitroaniline	630	U
131-11-3	Dimethylphthalate	320	U
606-20-2	2,6-Dinitrotoluene	320	U
208-96-8	Acenaphthylene	120	J
99-09-2	3-Nitroaniline	630	U
83-32-9	Acenaphthene	230	J

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MW 09/29/13

EPA SAMPLE NO.
LMR13-70-048

2

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17149

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17149-2

Sample wt/vol: 30.1 (g/mL) g Lab File ID: ULLCU17.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 48 Decanted: (Y/N) Date Received: 06/22/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 07/01/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/18/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
51-28-5	2,4-Dinitrophenol	630	U
100-02-7	4-Nitrophenol	630	U
132-64-9	Dibenzofuran	50	J
121-14-2	2,4-Dinitrotoluene	320	U
84-66-2	Diethylphthalate	320	U
86-73-7	Fluorene	280	J
7005-72-3	4-Chlorophenyl-phenylether	320	U
100-01-6	4-Nitroaniline	630	U
534-52-1	4,6-Dinitro-2-methylphenol	630	U
86-30-6	N-Nitrosodiphenylamin [1]	320	U
95-94-3	1,2,4,5-Tetrachlorobenzene	320	U
101-55-3	4-Bromophenyl-phenylether	320	U
118-74-1	Hexachlorobenzene	320	U
1912-24-9	Atrazine	320	U
87-86-5	Pentachlorophenol	630	U
85-01-8	Phenanthrene	1000	
120-12-7	Anthracene	250	J
86-74-8	Carbazole	27	J
84-74-2	Di-n-butylphthalate	320 ~~30~~	~~J B~~
206-44-0	Fluoranthene	1200	
129-00-0	Pyrene	1600	
85-68-7	Butylbenzylphthalate	320 ~~59~~	~~J B~~
91-94-1	3,3'-Dichlorobenzidine	320	~~U~~
56-55-3	Benzo(a)anthracene	1100	
218-01-9	Chrysene	990	
117-81-7	Bis(2-ethylhexyl)phthalate	1600	~~B~~
117-84-0	Di-n-octylphthalate	320	~~U~~
205-99-2	Benzo(b)fluoranthene	820	
207-08-9	Benzo(k)fluoranthene	740	
50-32-8	Benzo(a)pyrene	800	
193-39-5	Indeno(1,2,3-cd)pyrene	450	
53-70-3	Dibenzo(a,h)anthracene	160	J
191-24-2	Benzo(g,h,i)perylene	480	
58-90-2	2,3,4,6-Tetrachlorophenol	320	~~U~~

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[1] Cannot be separated from Diphenylamine

NW 09/29/13

EPA SAMPLE NO.
LMR13-80-024

3

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17149

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17149-3

Sample wt/vol: 30.9 (g/mL) g Lab File ID: PJZKW06.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 46 Decanted: (Y/N) Date Received: 06/22/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 07/01/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/14/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 3.3

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
100-52-7	Benzaldehyde	1000	U
108-95-2	Phenol	1000	U
111-44-4	Bis(2-chloroethyl)ether	1000	U
95-57-8	2-Chlorophenol	1000	U
95-48-7	2-Methylphenol	1000	U
108-60-1	2,2'-Oxybis(1-chloropropane)	1000	U
98-86-2	Acetophenone	1000	U
106-44-5	4-Methylphenol	1000	U
621-64-7	N-Nitroso-di-n-propylamine	1000	U
67-72-1	Hexachloroethane	1000	U
98-95-3	Nitrobenzene	1000	U
78-59-1	Isophorone	1000	U
88-75-5	2-Nitrophenol	1000	U
105-67-9	2,4-Dimethylphenol	1000	U
111-91-1	Bis(2-chloroethoxy)methane	1000	U
120-83-2	2,4-Dichlorophenol	1000	U
91-20-3	Naphthalene	65	J
106-47-8	4-Chloroaniline	1000	U
87-68-3	Hexachlorobutadiene	1000	U
105-60-2	Caprolactam	1000	U
59-50-7	4-Chloro-3-methylphenol	1000	U
91-57-6	2-Methylnaphthalene	1000	U
77-47-4	Hexachlorocyclopentadiene	1000	U
88-06-2	2,4,6-Trichlorophenol	1000	U
95-95-4	2,4,5-Trichlorophenol	1000	U
92-52-4	1,1'-Biphenyl	1000	U
91-58-7	2-Chloronaphthalene	1000	U
88-74-4	2-Nitroaniline	1900	U
131-11-3	Dimethylphthalate	1000	U
606-20-2	2,6-Dinitrotoluene	1000	U
208-96-8	Acenaphthylene	110	J
99-09-2	3-Nitroaniline	1900	U
83-32-9	Acenaphthene	240	J

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MW 09/29/13

EPA SAMPLE NO.
LMR13-80-024

3

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17149

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17149-3

Sample wt/vol: 30.9 (g/mL) g Lab File ID: PJZKW06.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 46 Decanted: (Y/N) Date Received: 06/22/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 07/01/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/14/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 3.3

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
51-28-5	2,4-Dinitrophenol	1900	U	UJ
100-02-7	4-Nitrophenol	1900	U	UJ
132-64-9	Dibenzofuran	55	J	J
121-14-2	2,4-Dinitrotoluene	1000	U	UJ
84-66-2	Diethylphthalate	1000	U	UJ
86-73-7	Fluorene	210	J	J
7005-72-3	4-Chlorophenyl-phenylether	1000	U	UJ
100-01-6	4-Nitroaniline	1900	U	
534-52-1	4,6-Dinitro-2-methylphenol	1900	U	
86-30-6	N-Nitrosodiphenylamin [1]	1000	U	
95-94-3	1,2,4,5-Tetrachlorobenzene	1000	U	
101-55-3	4-Bromophenyl-phenylether	1000	U	
118-74-1	Hexachlorobenzene	1000	U	
1912-24-9	Atrazine	1000	U	
87-86-5	Pentachlorophenol	1900	U	
85-01-8	Phenanthrene	1400		J
120-12-7	Anthracene	470	J	J
86-74-8	Carbazole	1000	U	UJ
84-74-2	Di-n-butylphthalate	1000	U	UJ
206-44-0	Fluoranthene	3900		J
129-00-0	Pyrene	5200		J
85-68-7	Butylbenzylphthalate	1000	U	UJ
91-94-1	3,3'-Dichlorobenzidine	1000	U	R
56-55-3	Benzo(a)anthracene	2600		J
218-01-9	Chrysene	2700		J
117-81-7	Bis(2-ethylhexyl)phthalate	1000	U	UJ
117-84-0	Di-n-octylphthalate	1000	U	UJ
205-99-2	Benzo(b)fluoranthene	2200		J
207-08-9	Benzo(k)fluoranthene	1500		
50-32-8	Benzo(a)pyrene	2100		
193-39-5	Indeno(1,2,3-cd)pyrene	1300		
53-70-3	Dibenzo(a,h)anthracene	500	U	
191-24-2	Benzo(g,h,i)perylene	1300		
58-90-2	2,3,4,6-Tetrachlorophenol	1000	U	UJ

[1] Cannot be separated from Diphenylamine

NW 09/29/13

1D - FORM I SV-1

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-52-012

5

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17149

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17149-5

Sample wt/vol: 30.1 (g/mL) g Lab File ID: ULLCU18.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 53 Decanted: (Y/N) Date Received: 06/22/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 07/01/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/18/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
100-52-7	Benzaldehyde	55	J
108-95-2	Phenol	360	U
111-44-4	Bis(2-chloroethyl)ether	360	U
95-57-8	2-Chlorophenol	360	U
95-48-7	2-Methylphenol	360	U
108-60-1	2,2'-Oxybis(1-chloropropane)	360	U
98-86-2	Acetophenone	18	J
106-44-5	4-Methylphenol	360	U
621-64-7	N-Nitroso-di-n-propylamine	360	U
67-72-1	Hexachloroethane	360	U
98-95-3	Nitrobenzene	360	U
78-59-1	Isophorone	360	U
88-75-5	2-Nitrophenol	360	U
105-67-9	2,4-Dimethylphenol	360	U
111-91-1	Bis(2-chloroethoxy)methane	360	U
120-83-2	2,4-Dichlorophenol	360	U
91-20-3	Naphthalene	41	J
106-47-8	4-Chloroaniline	360	U
87-68-3	Hexachlorobutadiene	360	U
105-60-2	Caprolactam	360	U
59-50-7	4-Chloro-3-methylphenol	360	U
91-57-6	2-Methylnaphthalene	29	J
77-47-4	Hexachlorocyclopentadiene	360	U
88-06-2	2,4,6-Trichlorophenol	360	U
95-95-4	2,4,5-Trichlorophenol	360	U
92-52-4	1,1'-Biphenyl	360	U
91-58-7	2-Chloronaphthalene	360	U
88-74-4	2-Nitroaniline	700	U
131-11-3	Dimethylphthalate	360	U
606-20-2	2,6-Dinitrotoluene	360	U
208-96-8	Acenaphthylene	24	J
99-09-2	3-Nitroaniline	700	U
83-32-9	Acenaphthene	44	J

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NW 09/29/13

1E - FORM I SV-2

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-52-012

5

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17149

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17149-5

Sample wt/vol: 30.1 (g/mL) g Lab File ID: ULLCU18.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 53 Decanted: (Y/N) Date Received: 06/22/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 07/01/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/18/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
51-28-5	2,4-Dinitrophenol	700	U
100-02-7	4-Nitrophenol	130	J
132-64-9	Dibenzofuran	31	J
121-14-2	2,4-Dinitrotoluene	360	U
84-66-2	Diethylphthalate	360	U
86-73-7	Fluorene	62	J
7005-72-3	4-Chlorophenyl-phenylether	360	U
100-01-6	4-Nitroaniline	700	U
534-52-1	4,6-Dinitro-2-methylphenol	700	U
86-30-6	N-Nitrosodiphenylamin [1]	360	U
95-94-3	1,2,4,5-Tetrachlorobenzene	360	U
101-55-3	4-Bromophenyl-phenylether	360	U
118-74-1	Hexachlorobenzene	360	U
1912-24-9	Atrazine	360	U
87-86-5	Pentachlorophenol	700	U
85-01-8	Phenanthrene	290	J
120-12-7	Anthracene	71	J
86-74-8	Carbazole	12	J
84-74-2	Di-n-butylphthalate	360 ~~20~~	~~J B~~
206-44-0	Fluoranthene	510	
129-00-0	Pyrene	680	
85-68-7	Butylbenzylphthalate	360 ~~64~~	~~J B~~
91-94-1	3,3'-Dichlorobenzidine	360	U
56-55-3	Benzo(a)anthracene	360	
218-01-9	Chrysene	460	
117-81-7	Bis(2-ethylhexyl)phthalate	360 ~~330~~	~~J B~~
117-84-0	Di-n-octylphthalate	360	U
205-99-2	Benzo(b)fluoranthene	340	J
207-08-9	Benzo(k)fluoranthene	390	
50-32-8	Benzo(a)pyrene	310	J
193-39-5	Indeno(1,2,3-cd)pyrene	230	J
53-70-3	Dibenzo(a,h)anthracene	64	J
191-24-2	Benzo(g,h,i)perylene	210	J
58-90-2	2,3,4,6-Tetrachlorophenol	360	U

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[1] Cannot be separated from Diphenylamine

MW 09/29/13

1D - FORM I SV-1

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-52-024

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678 6

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17149

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17149-6

Sample wt/vol: 30.5 (g/mL) g Lab File ID: ULLCU19.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 44 Decanted: (Y/N) Date Received: 06/22/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 07/01/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/18/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
100-52-7	Benzaldehyde	50	J
108-95-2	Phenol	300	U
111-44-4	Bis(2-chloroethyl)ether	300	U
95-57-8	2-Chlorophenol	300	U
95-48-7	2-Methylphenol	300	U
108-60-1	2,2'-Oxybis(1-chloropropane)	300	U
98-86-2	Acetophenone	26	J
106-44-5	4-Methylphenol	300	U
621-64-7	N-Nitroso-di-n-propylamine	300	U
67-72-1	Hexachloroethane	300	U
98-95-3	Nitrobenzene	300	U
78-59-1	Isophorone	300	U
88-75-5	2-Nitrophenol	300	U
105-67-9	2,4-Dimethylphenol	300	U
111-91-1	Bis(2-chloroethoxy)methane	300	U
120-83-2	2,4-Dichlorophenol	300	U
91-20-3	Naphthalene	88	J
106-47-8	4-Chloroaniline	300	U
87-68-3	Hexachlorobutadiene	300	U
105-60-2	Caprolactam	300	U
59-50-7	4-Chloro-3-methylphenol	300	U
91-57-6	2-Methylnaphthalene	68	J
77-47-4	Hexachlorocyclopentadiene	300	U
88-06-2	2,4,6-Trichlorophenol	300	U
95-95-4	2,4,5-Trichlorophenol	300	U
92-52-4	1,1'-Biphenyl	14	J
91-58-7	2-Chloronaphthalene	300	U
88-74-4	2-Nitroaniline	580	U
131-11-3	Dimethylphthalate	300	U
606-20-2	2,6-Dinitrotoluene	300	U
208-96-8	Acenaphthylene	44	J
99-09-2	3-Nitroaniline	580	U
83-32-9	Acenaphthene	100	J

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NW 09/29/13

EPA SAMPLE NO.
LMR13-52-024

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678 6

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17149

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17149-6

Sample wt/vol: 30.5 (g/mL) g Lab File ID: ULLCU19.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 44 Decanted: (Y/N) Date Received: 06/22/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 07/01/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/18/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
51-28-5	2,4-Dinitrophenol	580	U	UJ
100-02-7	4-Nitrophenol	580	U	UJ
132-64-9	Dibenzofuran	65	J	J
121-14-2	2,4-Dinitrotoluene	300	U	UJ
84-66-2	Diethylphthalate	300	U	UJ
86-73-7	Fluorene	140	J	J
7005-72-3	4-Chlorophenyl-phenylether	300	U	UJ
100-01-6	4-Nitroaniline	580	U	
534-52-1	4,6-Dinitro-2-methylphenol	580	U	
86-30-6	N-Nitrosodiphenylamin [1]	300	U	
95-94-3	1,2,4,5-Tetrachlorobenzene	300	~~U~~	UJ
101-55-3	4-Bromophenyl-phenylether	300	U	
118-74-1	Hexachlorobenzene	300	U	
1912-24-9	Atrazine	300	U	
87-86-5	Pentachlorophenol	580	~~U~~	UJ
85-01-8	Phenanthrene	610		J
120-12-7	Anthracene	160	J	
86-74-8	Carbazole	31	J	
84-74-2	Di-n-butylphthalate	300 ~~24~~	~~J B~~	UJ
206-44-0	Fluoranthene	1100		J
129-00-0	Pyrene	1300		J
85-68-7	Butylbenzylphthalate	300 ~~59~~	~~J B~~	UJ
91-94-1	3,3'-Dichlorobenzidine	300	~~U~~	UJ
56-55-3	Benzo(a)anthracene	800		J
218-01-9	Chrysene	790		
117-81-7	Bis(2-ethylhexyl)phthalate	470	~~B~~	
117-84-0	Di-n-octylphthalate	300	~~U~~	UJ
205-99-2	Benzo(b)fluoranthene	630		J
207-08-9	Benzo(k)fluoranthene	560		
50-32-8	Benzo(a)pyrene	610		
193-39-5	Indeno(1,2,3-cd)pyrene	370		
53-70-3	Dibenzo(a,h)anthracene	130	~~J~~	
191-24-2	Benzo(g,h,i)perylene	360		
58-90-2	2,3,4,6-Tetrachlorophenol	300	~~U~~	UJ

[1] Cannot be separated from Diphenylamine

MW 09/29/13

1D - FORM I SV-1

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-52-024FD

7

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17149

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17149-7

Sample wt/vol: 30.2 (g/mL) g Lab File ID: ULLCU20.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 27 Decanted: (Y/N) Date Received: 06/22/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 07/01/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/18/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
100-52-7	Benzaldehyde	26	J
108-95-2	Phenol	230	U
111-44-4	Bis(2-chloroethyl)ether	230	U
95-57-8	2-Chlorophenol	230	U
95-48-7	2-Methylphenol	230	U
108-60-1	2,2'-Oxybis(1-chloropropane)	230	U
98-86-2	Acetophenone	230	U
106-44-5	4-Methylphenol	230	U
621-64-7	N-Nitroso-di-n-propylamine	230	U
67-72-1	Hexachloroethane	230	U
98-95-3	Nitrobenzene	230	U
78-59-1	Isophorone	230	U
88-75-5	2-Nitrophenol	230	U
105-67-9	2,4-Dimethylphenol	230	U
111-91-1	Bis(2-chloroethoxy)methane	230	U
120-83-2	2,4-Dichlorophenol	230	U
91-20-3	Naphthalene	48	J
106-47-8	4-Chloroaniline	230	U
87-68-3	Hexachlorobutadiene	230	U
105-60-2	Caprolactam	230	U
59-50-7	4-Chloro-3-methylphenol	230	U
91-57-6	2-Methylnaphthalene	31	J
77-47-4	Hexachlorocyclopentadiene	230	U
88-06-2	2,4,6-Trichlorophenol	230	U
95-95-4	2,4,5-Trichlorophenol	230	U
92-52-4	1,1'-Biphenyl	230	U
91-58-7	2-Chloronaphthalene	230	U
88-74-4	2-Nitroaniline	450	U
131-11-3	Dimethylphthalate	130	J
606-20-2	2,6-Dinitrotoluene	230	U
208-96-8	Acenaphthylene	24	J
99-09-2	3-Nitroaniline	450	U
83-32-9	Acenaphthene	73	J

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NW 09/29/13

EPA SAMPLE NO.
LMR13-52-024FD

7

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17149

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17149-7

Sample wt/vol: 30.2 (g/mL) g Lab File ID: ULLCU20.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 27 Decanted: (Y/N) Date Received: 06/22/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 07/01/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/18/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
51-28-5	2,4-Dinitrophenol	450	U
100-02-7	4-Nitrophenol	450	U
132-64-9	Dibenzofuran	38	J
121-14-2	2,4-Dinitrotoluene	230	U
84-66-2	Diethylphthalate	230	U
86-73-7	Fluorene	91	J
7005-72-3	4-Chlorophenyl-phenylether	230	U
100-01-6	4-Nitroaniline	450	U
534-52-1	4,6-Dinitro-2-methylphenol	450	U
86-30-6	N-Nitrosodiphenylamin [1]	230	U
95-94-3	1,2,4,5-Tetrachlorobenzene	230	U
101-55-3	4-Bromophenyl-phenylether	230	U
118-74-1	Hexachlorobenzene	230	U
1912-24-9	Atrazine	230	U
87-86-5	Pentachlorophenol	450	U
85-01-8	Phenanthrene	620	
120-12-7	Anthracene	150	J
86-74-8	Carbazole	38	J
84-74-2	Di-n-butylphthalate	230 ~~17~~	~~J B~~
206-44-0	Fluoranthene	1000	
129-00-0	Pyrene	990	
85-68-7	Butylbenzylphthalate	230 ~~41~~	~~J B~~
91-94-1	3,3'-Dichlorobenzidine	230	~~U~~
56-55-3	Benzo(a)anthracene	560	
218-01-9	Chrysene	630	
117-81-7	Bis(2-ethylhexyl)phthalate	230 ~~170~~	~~J B~~
117-84-0	Di-n-octylphthalate	230	~~U~~
205-99-2	Benzo(b)fluoranthene	510	
207-08-9	Benzo(k)fluoranthene	390	
50-32-8	Benzo(a)pyrene	480	
193-39-5	Indeno(1,2,3-cd)pyrene	250	
53-70-3	Dibenzo(a,h)anthracene	84	~~J~~
191-24-2	Benzo(g,h,i)perylene	280	
58-90-2	2,3,4,6-Tetrachlorophenol	230	~~U~~

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[1] Cannot be separated from Diphenylamine

NW 09/29/13

1D - FORM I SV-1

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-80-072

8

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17149

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17149-8

Sample wt/vol: 30.5 (g/mL) g Lab File ID: PJZKW12.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 20 Decanted: (Y/N) Date Received: 06/22/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 07/01/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/14/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
100-52-7	Benzaldehyde	27	J
108-95-2	Phenol	210	U
111-44-4	Bis(2-chloroethyl)ether	210	U
95-57-8	2-Chlorophenol	210	U
95-48-7	2-Methylphenol	210	U
108-60-1	2,2'-Oxybis(1-chloropropane)	210	U
98-86-2	Acetophenone	210	U
106-44-5	4-Methylphenol	210	U
621-64-7	N-Nitroso-di-n-propylamine	210	U
67-72-1	Hexachloroethane	210	U
98-95-3	Nitrobenzene	210	U
78-59-1	Isophorone	210	U
88-75-5	2-Nitrophenol	210	U
105-67-9	2,4-Dimethylphenol	210	U
111-91-1	Bis(2-chloroethoxy)methane	210	U
120-83-2	2,4-Dichlorophenol	210	U
91-20-3	Naphthalene	210	U
106-47-8	4-Chloroaniline	210	U
87-68-3	Hexachlorobutadiene	210	U
105-60-2	Caprolactam	210	U
59-50-7	4-Chloro-3-methylphenol	210	U
91-57-6	2-Methylnaphthalene	210	U
77-47-4	Hexachlorocyclopentadiene	210	U
88-06-2	2,4,6-Trichlorophenol	210	U
95-95-4	2,4,5-Trichlorophenol	210	U
92-52-4	1,1'-Biphenyl	210	U
91-58-7	2-Chloronaphthalene	210	U
88-74-4	2-Nitroaniline	400	U
131-11-3	Dimethylphthalate	210	U
606-20-2	2,6-Dinitrotoluene	210	U
208-96-8	Acenaphthylene	210	U
99-09-2	3-Nitroaniline	400	U
83-32-9	Acenaphthene	6.7	J

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NW 09/29/13

EPA SAMPLE NO.
LMR13-80-072

8

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17149

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17149-8

Sample wt/vol: 30.5 (g/mL) g Lab File ID: PJZKW12.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 20 Decanted: (Y/N) Date Received: 06/22/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 07/01/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/14/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
51-28-5	2,4-Dinitrophenol	400	U
100-02-7	4-Nitrophenol	400	U
132-64-9	Dibenzofuran	4.4	J
121-14-2	2,4-Dinitrotoluene	210	U
84-66-2	Diethylphthalate	210	U
86-73-7	Fluorene	210	U
7005-72-3	4-Chlorophenyl-phenylether	210	U
100-01-6	4-Nitroaniline	400	U
534-52-1	4,6-Dinitro-2-methylphenol	400	U
86-30-6	N-Nitrosodiphenylamin [1]	210	U
95-94-3	1,2,4,5-Tetrachlorobenzene	210	U
101-55-3	4-Bromophenyl-phenylether	210	U
118-74-1	Hexachlorobenzene	210	U
1912-24-9	Atrazine	210	U
87-86-5	Pentachlorophenol	400	U
85-01-8	Phenanthrene	42	J
120-12-7	Anthracene	20	J
86-74-8	Carbazole	210	U
84-74-2	Di-n-butylphthalate	17	J
206-44-0	Fluoranthene	62	J
129-00-0	Pyrene	100	J
85-68-7	Butylbenzylphthalate	29	J
91-94-1	3,3'-Dichlorobenzidine	210	U
56-55-3	Benzo(a)anthracene	42	J
218-01-9	Chrysene	53	J
117-81-7	Bis(2-ethylhexyl)phthalate	210 ~~60~~	~~J B~~
117-84-0	Di-n-octylphthalate	210	U
205-99-2	Benzo(b)fluoranthene	26	J
207-08-9	Benzo(k)fluoranthene	33	J
50-32-8	Benzo(a)pyrene	37	J
193-39-5	Indeno(1,2,3-cd)pyrene	17	J
53-70-3	Dibenzo(a,h)anthracene	210	U
191-24-2	Benzo(g,h,i)perylene	210	U
58-90-2	2,3,4,6-Tetrachlorophenol	210	U

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[1] Cannot be separated from Diphenylamine NW 09/29/13

1D - FORM I SV-1

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-53-024

9

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17149

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17149-9

Sample wt/vol: 30.2 (g/mL) g Lab File ID: ULLCU21.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 36 Decanted: (Y/N) Date Received: 06/22/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 07/01/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/18/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
100-52-7	Benzaldehyde	34	J
108-95-2	Phenol	260	U
111-44-4	Bis(2-chloroethyl)ether	260	U
95-57-8	2-Chlorophenol	260	U
95-48-7	2-Methylphenol	260	U
108-60-1	2,2'-Oxybis(1-chloropropane)	260	U
98-86-2	Acetophenone	260	U
106-44-5	4-Methylphenol	260	U
621-64-7	N-Nitroso-di-n-propylamine	260	U
67-72-1	Hexachloroethane	260	U
98-95-3	Nitrobenzene	260	U
78-59-1	Isophorone	260	U
88-75-5	2-Nitrophenol	260	U
105-67-9	2,4-Dimethylphenol	260	U
111-91-1	Bis(2-chloroethoxy)methane	260	U
120-83-2	2,4-Dichlorophenol	260	U
91-20-3	Naphthalene	50	J
106-47-8	4-Chloroaniline	260	U
87-68-3	Hexachlorobutadiene	260	U
105-60-2	Caprolactam	260	U
59-50-7	4-Chloro-3-methylphenol	260	U
91-57-6	2-Methylnaphthalene	23	J
77-47-4	Hexachlorocyclopentadiene	260	U
88-06-2	2,4,6-Trichlorophenol	260	U
95-95-4	2,4,5-Trichlorophenol	260	U
92-52-4	1,1'-Biphenyl	260	U
91-58-7	2-Chloronaphthalene	260	U
88-74-4	2-Nitroaniline	510	U
131-11-3	Dimethylphthalate	260	U
606-20-2	2,6-Dinitrotoluene	260	U
208-96-8	Acenaphthylene	260	U
99-09-2	3-Nitroaniline	510	U
83-32-9	Acenaphthene	76	J

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MW 09/29/13

EPA SAMPLE NO.
LMR13-53-024

9

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17149

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17149-9

Sample wt/vol: 30.2 (g/mL) g Lab File ID: ULLCU21.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 36 Decanted: (Y/N) Date Received: 06/22/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 07/01/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/18/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
51-28-5	2,4-Dinitrophenol	510	U
100-02-7	4-Nitrophenol	510	U
132-64-9	Dibenzofuran	25	J
121-14-2	2,4-Dinitrotoluene	260	U
84-66-2	Diethylphthalate	260	U
86-73-7	Fluorene	62	J
7005-72-3	4-Chlorophenyl-phenylether	260	U
100-01-6	4-Nitroaniline	510	U
534-52-1	4,6-Dinitro-2-methylphenol	510	U
86-30-6	N-Nitrosodiphenylamin [1]	260	U
95-94-3	1,2,4,5-Tetrachlorobenzene	260	U
101-55-3	4-Bromophenyl-phenylether	260	U
118-74-1	Hexachlorobenzene	260	U
1912-24-9	Atrazine	260	U
87-86-5	Pentachlorophenol	510	U
85-01-8	Phenanthrene	490	
120-12-7	Anthracene	110	J
86-74-8	Carbazole	25	J
84-74-2	Di-n-butylphthalate	260 ~~30~~	~~J B~~
206-44-0	Fluoranthene	740	
129-00-0	Pyrene	660	
85-68-7	Butylbenzylphthalate	260	~~U~~
91-94-1	3,3'-Dichlorobenzidine	260	~~U~~
56-55-3	Benzo(a)anthracene	340	
218-01-9	Chrysene	400	
117-81-7	Bis(2-ethylhexyl)phthalate	720	~~B~~
117-84-0	Di-n-octylphthalate	260	~~U~~
205-99-2	Benzo(b)fluoranthene	350	
207-08-9	Benzo(k)fluoranthene	250	J
50-32-8	Benzo(a)pyrene	250	J
193-39-5	Indeno(1,2,3-cd)pyrene	170	J
53-70-3	Dibenzo(a,h)anthracene	66	J
191-24-2	Benzo(g,h,i)perylene	180	J
58-90-2	2,3,4,6-Tetrachlorophenol	260	U

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[1] Cannot be separated from Diphenylamine

NW 09/29/13

1D - FORM I SV-1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-80-012

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678 11

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17149

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17149-11

Sample wt/vol: 30.8 (g/mL) g Lab File ID: ULLCU22.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 43 Decanted: (Y/N) Date Received: 06/22/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 07/01/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/18/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
100-52-7	Benzaldehyde	47	J	J
108-95-2	Phenol	290	U	UJ
111-44-4	Bis(2-chloroethyl)ether	290	U	
95-57-8	2-Chlorophenol	290	U	
95-48-7	2-Methylphenol	290	U	
108-60-1	2,2'-Oxybis(1-chloropropane)	290	U	
98-86-2	Acetophenone	19	J	J
106-44-5	4-Methylphenol	290	U	UJ
621-64-7	N-Nitroso-di-n-propylamine	290	U	
67-72-1	Hexachloroethane	290	U	
98-95-3	Nitrobenzene	290	U	
78-59-1	Isophorone	290	U	
88-75-5	2-Nitrophenol	290	U	
105-67-9	2,4-Dimethylphenol	290	U	
111-91-1	Bis(2-chloroethoxy)methane	290	U	
120-83-2	2,4-Dichlorophenol	290	U	
91-20-3	Naphthalene	77	J	J
106-47-8	4-Chloroaniline	290	U	UJ
87-68-3	Hexachlorobutadiene	290	U	
105-60-2	Caprolactam	290	U	
59-50-7	4-Chloro-3-methylphenol	290	U	
91-57-6	2-Methylnaphthalene	30	J	J
77-47-4	Hexachlorocyclopentadiene	290	U	UJ
88-06-2	2,4,6-Trichlorophenol	290	U	
95-95-4	2,4,5-Trichlorophenol	290	U	
92-52-4	1,1'-Biphenyl	290	U	
91-58-7	2-Chloronaphthalene	290	U	
88-74-4	2-Nitroaniline	570	U	
131-11-3	Dimethylphthalate	290	U	
606-20-2	2,6-Dinitrotoluene	290	U	
208-96-8	Acenaphthylene	65	J	J
99-09-2	3-Nitroaniline	570	U	UJ
83-32-9	Acenaphthene	110	J	J

MW 09/29/13

SOM01.2 (4/2007)
08/23/2013

EPA SAMPLE NO.
LMR13-80-012

11

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17149

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17149-11

Sample wt/vol: 30.8 (g/mL) g Lab File ID: ULLCU22.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 43 Decanted: (Y/N) Date Received: 06/22/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 07/01/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/18/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
51-28-5	2,4-Dinitrophenol	570	U
100-02-7	4-Nitrophenol	570	U
132-64-9	Dibenzofuran	29	J
121-14-2	2,4-Dinitrotoluene	290	U
84-66-2	Diethylphthalate	290	U
86-73-7	Fluorene	110	J
7005-72-3	4-Chlorophenyl-phenylether	290	U
100-01-6	4-Nitroaniline	570	U
534-52-1	4,6-Dinitro-2-methylphenol	570	U
86-30-6	N-Nitrosodiphenylamin [1]	290	U
95-94-3	1,2,4,5-Tetrachlorobenzene	290	U
101-55-3	4-Bromophenyl-phenylether	290	U
118-74-1	Hexachlorobenzene	290	U
1912-24-9	Atrazine	290	U
87-86-5	Pentachlorophenol	570	U
85-01-8	Phenanthrene	440	
120-12-7	Anthracene	80	J
86-74-8	Carbazole	290	U
84-74-2	Di-n-butylphthalate	290 ~~20~~	~~J B~~
206-44-0	Fluoranthene	1300	
129-00-0	Pyrene	2100	
85-68-7	Butylbenzylphthalate	290	U
91-94-1	3,3'-Dichlorobenzidine	290	U
56-55-3	Benzo(a)anthracene	1000	
218-01-9	Chrysene	960	
117-81-7	Bis(2-ethylhexyl)phthalate	760	B
117-84-0	Di-n-octylphthalate	290	U
205-99-2	Benzo(b)fluoranthene	870	
207-08-9	Benzo(k)fluoranthene	510	
50-32-8	Benzo(a)pyrene	690	
193-39-5	Indeno(1,2,3-cd)pyrene	430	
53-70-3	Dibenzo(a,h)anthracene	160	J
191-24-2	Benzo(g,h,i)perylene	360	
58-90-2	2,3,4,6-Tetrachlorophenol	290	U

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[1] Cannot be separated from Diphenylamine

NW 09/29/13

EPA SAMPLE NO.
LMR13-52-048

12

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678
Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17149
Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17149-12
Sample wt/vol: 30.1 (g/mL) g Lab File ID: ULLCU23.D
Level: (LOW/MED) LOW Extraction: (Type) SONC
% Moisture: 26 Decanted: (Y/N) Date Received: 06/22/2013
Concentrated Extract Volume: 500 (uL) Date Extracted: 07/01/2013
Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/18/2013
GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
100-52-7	Benzaldehyde	29	J
108-95-2	Phenol	230	U
111-44-4	Bis(2-chloroethyl)ether	230	U
95-57-8	2-Chlorophenol	230	U
95-48-7	2-Methylphenol	230	U
108-60-1	2,2'-Oxybis(1-chloropropane)	230	U
98-86-2	Acetophenone	230	U
106-44-5	4-Methylphenol	230	U
621-64-7	N-Nitroso-di-n-propylamine	230	U
67-72-1	Hexachloroethane	230	U
98-95-3	Nitrobenzene	230	U
78-59-1	Isophorone	230	U
88-75-5	2-Nitrophenol	230	U
105-67-9	2,4-Dimethylphenol	230	U
111-91-1	Bis(2-chloroethoxy)methane	230	U
120-83-2	2,4-Dichlorophenol	230	U
91-20-3	Naphthalene	53	J
106-47-8	4-Chloroaniline	230	U
87-68-3	Hexachlorobutadiene	230	U
105-60-2	Caprolactam	230	U
59-50-7	4-Chloro-3-methylphenol	230	U
91-57-6	2-Methylnaphthalene	26	J
77-47-4	Hexachlorocyclopentadiene	230	U
88-06-2	2,4,6-Trichlorophenol	230	U
95-95-4	2,4,5-Trichlorophenol	230	U
92-52-4	1,1'-Biphenyl	230	U
91-58-7	2-Chloronaphthalene	230	U
88-74-4	2-Nitroaniline	440	U
131-11-3	Dimethylphthalate	230	U
606-20-2	2,6-Dinitrotoluene	230	U
208-96-8	Acenaphthylene	28	J
99-09-2	3-Nitroaniline	440	U
83-32-9	Acenaphthene	79	J

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MW 09/29/13

EPA SAMPLE NO.
LMR13-52-048

12

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17149

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17149-12

Sample wt/vol: 30.1 (g/mL) g Lab File ID: ULLCU23.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 26 Decanted: (Y/N) Date Received: 06/22/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 07/01/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/18/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
51-28-5	2,4-Dinitrophenol	440	~~U~~ UJ
100-02-7	4-Nitrophenol	440	~~U~~ UJ
132-64-9	Dibenzofuran	34	~~J~~ J
121-14-2	2,4-Dinitrotoluene	230	U UJ
84-66-2	Diethylphthalate	230	U UJ
86-73-7	Fluorene	110	J J
7005-72-3	4-Chlorophenyl-phenylether	230	U UJ
100-01-6	4-Nitroaniline	440	U
534-52-1	4,6-Dinitro-2-methylphenol	440	U
86-30-6	N-Nitrosodiphenylamin [1]	230	U
95-94-3	1,2,4,5-Tetrachlorobenzene	230	U
101-55-3	4-Bromophenyl-phenylether	230	U
118-74-1	Hexachlorobenzene	230	U
1912-24-9	Atrazine	230	U
87-86-5	Pentachlorophenol	440	U J
85-01-8	Phenanthrene	400	
120-12-7	Anthracene	120	J
86-74-8	Carbazole	11	J
84-74-2	Di-n-butylphthalate	230 ~~14~~	~~J B~~ UJ
206-44-0	Fluoranthene	800	J
129-00-0	Pyrene	800	J
85-68-7	Butylbenzylphthalate	230 ~~36~~	~~J B~~ UJ
91-94-1	3,3'-Dichlorobenzidine	230	~~U~~ R
56-55-3	Benzo(a)anthracene	410	J
218-01-9	Chrysene	450	J
117-81-7	Bis(2-ethylhexyl)phthalate	230 ~~100~~	~~J B~~ UJ
117-84-0	Di-n-octylphthalate	230	~~U~~ UJ
205-99-2	Benzo(b)fluoranthene	360	J
207-08-9	Benzo(k)fluoranthene	400	
50-32-8	Benzo(a)pyrene	360	
193-39-5	Indeno(1,2,3-cd)pyrene	220	J
53-70-3	Dibenzo(a,h)anthracene	72	J
191-24-2	Benzo(g,h,i)perylene	210	J
58-90-2	2,3,4,6-Tetrachlorophenol	230	~~U~~ UJ

[1] Cannot be separated from Diphenylamine

MW 09/29/13

1D - FORM I SV-1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-53-012

13

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17149

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17149-13

Sample wt/vol: 30.0 (g/mL) g Lab File ID: ULLCU24.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 44 Decanted: (Y/N) Date Received: 06/22/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 07/01/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/18/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
100-52-7	Benzaldehyde	42	J
108-95-2	Phenol	300	U
111-44-4	Bis(2-chloroethyl)ether	300	U
95-57-8	2-Chlorophenol	300	U
95-48-7	2-Methylphenol	300	U
108-60-1	2,2'-Oxybis(1-chloropropane)	300	U
98-86-2	Acetophenone	300	U
106-44-5	4-Methylphenol	300	U
621-64-7	N-Nitroso-di-n-propylamine	300	U
67-72-1	Hexachloroethane	300	U
98-95-3	Nitrobenzene	300	U
78-59-1	Isophorone	300	U
88-75-5	2-Nitrophenol	300	U
105-67-9	2,4-Dimethylphenol	300	U
111-91-1	Bis(2-chloroethoxy)methane	300	U
120-83-2	2,4-Dichlorophenol	300	U
91-20-3	Naphthalene	85	J
106-47-8	4-Chloroaniline	300	U
87-68-3	Hexachlorobutadiene	300	U
105-60-2	Caprolactam	300	U
59-50-7	4-Chloro-3-methylphenol	300	U
91-57-6	2-Methylnaphthalene	30	J
77-47-4	Hexachlorocyclopentadiene	300	U
88-06-2	2,4,6-Trichlorophenol	300	U
95-95-4	2,4,5-Trichlorophenol	300	U
92-52-4	1,1'-Biphenyl	300	U
91-58-7	2-Chloronaphthalene	300	U
88-74-4	2-Nitroaniline	590	U
131-11-3	Dimethylphthalate	300	U
606-20-2	2,6-Dinitrotoluene	300	U
208-96-8	Acenaphthylene	26	J
99-09-2	3-Nitroaniline	590	U
83-32-9	Acenaphthene	100	J

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NW 09/29/13

EPA SAMPLE NO.
LMR13-53-012

13

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17149

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17149-13

Sample wt/vol: 30.0 (g/mL) g Lab File ID: ULLCU24.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 44 Decanted: (Y/N) Date Received: 06/22/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 07/01/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/18/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
51-28-5	2,4-Dinitrophenol	590	~~U~~ UJ
100-02-7	4-Nitrophenol	590	~~U~~ UJ
132-64-9	Dibenzofuran	39	~~J~~ J
121-14-2	2,4-Dinitrotoluene	300	U UJ
84-66-2	Diethylphthalate	300	U UJ
86-73-7	Fluorene	84	~~J~~ J
7005-72-3	4-Chlorophenyl-phenylether	300	U UJ
100-01-6	4-Nitroaniline	590	U
534-52-1	4,6-Dinitro-2-methylphenol	590	U
86-30-6	N-Nitrosodiphenylamin [1]	300	U
95-94-3	1,2,4,5-Tetrachlorobenzene	300	U
101-55-3	4-Bromophenyl-phenylether	300	U
118-74-1	Hexachlorobenzene	300	U
1912-24-9	Atrazine	300	U
87-86-5	Pentachlorophenol	590	U
85-01-8	Phenanthrene	360	J
120-12-7	Anthracene	85	~~J~~ J
86-74-8	Carbazole	300	~~U~~ UJ
84-74-2	Di-n-butylphthalate	300 ~~33~~	~~J B~~ UJ
206-44-0	Fluoranthene	660	J
129-00-0	Pyrene	910	J
85-68-7	Butylbenzylphthalate	300	~~U~~ UJ
91-94-1	3,3'-Dichlorobenzidine	300	~~U~~ R
56-55-3	Benzo(a)anthracene	460	J
218-01-9	Chrysene	470	J
117-81-7	Bis(2-ethylhexyl)phthalate	1500	~~B~~
117-84-0	Di-n-octylphthalate	300	~~U~~ UJ
205-99-2	Benzo(b)fluoranthene	390	J
207-08-9	Benzo(k)fluoranthene	400	J
50-32-8	Benzo(a)pyrene	330	J
193-39-5	Indeno(1,2,3-cd)pyrene	180	J
53-70-3	Dibenzo(a,h)anthracene	62	J
191-24-2	Benzo(g,h,i)perylene	170	J
58-90-2	2,3,4,6-Tetrachlorophenol	300	U UJ

[1] Cannot be separated from Diphenylamine

MW 09/29/13

1D - FORM I SV-1

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-56-012

14

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17149

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17149-14

Sample wt/vol: 30.3 (g/mL) g Lab File ID: ULLCU25.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 20 Decanted: (Y/N) Date Received: 06/22/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 07/01/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/18/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
100-52-7	Benzaldehyde	210	U
108-95-2	Phenol	210	U
111-44-4	Bis(2-chloroethyl)ether	210	U
95-57-8	2-Chlorophenol	210	U
95-48-7	2-Methylphenol	210	U
108-60-1	2,2'-Oxybis(1-chloropropane)	210	U
98-86-2	Acetophenone	210	U
106-44-5	4-Methylphenol	210	U
621-64-7	N-Nitroso-di-n-propylamine	210	U
67-72-1	Hexachloroethane	210	U
98-95-3	Nitrobenzene	210	U
78-59-1	Isophorone	210	U
88-75-5	2-Nitrophenol	210	U
105-67-9	2,4-Dimethylphenol	210	U
111-91-1	Bis(2-chloroethoxy)methane	210	U
120-83-2	2,4-Dichlorophenol	210	U
91-20-3	Naphthalene	22	J
106-47-8	4-Chloroaniline	210	U
87-68-3	Hexachlorobutadiene	210	U
105-60-2	Caprolactam	210	U
59-50-7	4-Chloro-3-methylphenol	210	U
91-57-6	2-Methylnaphthalene	23	J
77-47-4	Hexachlorocyclopentadiene	210	U
88-06-2	2,4,6-Trichlorophenol	210	U
95-95-4	2,4,5-Trichlorophenol	210	U
92-52-4	1,1'-Biphenyl	210	U
91-58-7	2-Chloronaphthalene	210	U
88-74-4	2-Nitroaniline	410	U
131-11-3	Dimethylphthalate	210	U
606-20-2	2,6-Dinitrotoluene	210	U
208-96-8	Acenaphthylene	210	U
99-09-2	3-Nitroaniline	410	U
83-32-9	Acenaphthene	210	U

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NW 09/29/13

EPA SAMPLE NO.
LMR13-56-012

14

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17149

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17149-14

Sample wt/vol: 30.3 (g/mL) g Lab File ID: ULLCU25.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 20 Decanted: (Y/N) Date Received: 06/22/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 07/01/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/18/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
51-28-5	2,4-Dinitrophenol	410	U
100-02-7	4-Nitrophenol	410	U
132-64-9	Dibenzofuran	16	J
121-14-2	2,4-Dinitrotoluene	210	U
84-66-2	Diethylphthalate	210	U
86-73-7	Fluorene	210	U
7005-72-3	4-Chlorophenyl-phenylether	210	U
100-01-6	4-Nitroaniline	410	U
534-52-1	4,6-Dinitro-2-methylphenol	410	U
86-30-6	N-Nitrosodiphenylamin [1]	210	U
95-94-3	1,2,4,5-Tetrachlorobenzene	210	U
101-55-3	4-Bromophenyl-phenylether	210	U
118-74-1	Hexachlorobenzene	210	U
1912-24-9	Atrazine	210	U
87-86-5	Pentachlorophenol	410	U
85-01-8	Phenanthrene	72	J
120-12-7	Anthracene	7.0	J
86-74-8	Carbazole	210	U
84-74-2	Di-n-butylphthalate	210 ~~43~~	~~J B~~
206-44-0	Fluoranthene	30	J
129-00-0	Pyrene	33	J
85-68-7	Butylbenzylphthalate	210 ~~28~~	~~J B~~
91-94-1	3,3'-Dichlorobenzidine	210	U
56-55-3	Benzo(a)anthracene	24	J
218-01-9	Chrysene	49	J
117-81-7	Bis(2-ethylhexyl)phthalate	210 ~~73~~	~~J B~~
117-84-0	Di-n-octylphthalate	210	U
205-99-2	Benzo(b)fluoranthene	18	J
207-08-9	Benzo(k)fluoranthene	16	J
50-32-8	Benzo(a)pyrene	24	J
193-39-5	Indeno(1,2,3-cd)pyrene	11	J
53-70-3	Dibenzo(a,h)anthracene	210	U
191-24-2	Benzo(g,h,i)perylene	21	J
58-90-2	2,3,4,6-Tetrachlorophenol	210	U

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[1] Cannot be separated from Diphenylamine

MW 09/29/13

EPA SAMPLE NO.
LMR13-80-048

15

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17149

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17149-15

Sample wt/vol: 30.3 (g/mL) g Lab File ID: ULLCU26.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 32 Decanted: (Y/N) Date Received: 06/22/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 07/01/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/18/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
100-52-7	Benzaldehyde	47	J
108-95-2	Phenol	250	U
111-44-4	Bis(2-chloroethyl)ether	250	U
95-57-8	2-Chlorophenol	250	U
95-48-7	2-Methylphenol	250	U
108-60-1	2,2'-Oxybis(1-chloropropane)	250	U
98-86-2	Acetophenone	250	U
106-44-5	4-Methylphenol	250	U
621-64-7	N-Nitroso-di-n-propylamine	250	U
67-72-1	Hexachloroethane	250	U
98-95-3	Nitrobenzene	250	U
78-59-1	Isophorone	250	U
88-75-5	2-Nitrophenol	250	U
105-67-9	2,4-Dimethylphenol	250	U
111-91-1	Bis(2-chloroethoxy)methane	250	U
120-83-2	2,4-Dichlorophenol	250	U
91-20-3	Naphthalene	20	J
106-47-8	4-Chloroaniline	250	U
87-68-3	Hexachlorobutadiene	250	U
105-60-2	Caprolactam	250	U
59-50-7	4-Chloro-3-methylphenol	250	U
91-57-6	2-Methylnaphthalene	13	J
77-47-4	Hexachlorocyclopentadiene	250	U
88-06-2	2,4,6-Trichlorophenol	250	U
95-95-4	2,4,5-Trichlorophenol	250	U
92-52-4	1,1'-Biphenyl	250	U
91-58-7	2-Chloronaphthalene	250	U
88-74-4	2-Nitroaniline	480	U
131-11-3	Dimethylphthalate	250	U
606-20-2	2,6-Dinitrotoluene	250	U
208-96-8	Acenaphthylene	39	J
99-09-2	3-Nitroaniline	480	U
83-32-9	Acenaphthene	98	J

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MW 09/29/13

1E - FORM I SV-2
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-80-048

15

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17149

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17149-15

Sample wt/vol: 30.3 (g/mL) g Lab File ID: ULLCU26.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 32 Decanted: (Y/N) Date Received: 06/22/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 07/01/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/18/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q	
51-28-5	2,4-Dinitrophenol	480	U	UJ
100-02-7	4-Nitrophenol	480	U	UJ
132-64-9	Dibenzofuran	21	J	J
121-14-2	2,4-Dinitrotoluene	250	U	UJ
84-66-2	Diethylphthalate	250	U	UJ
86-73-7	Fluorene	37	J	J
7005-72-3	4-Chlorophenyl-phenylether	250	U	UJ
100-01-6	4-Nitroaniline	480	U	
534-52-1	4,6-Dinitro-2-methylphenol	480	U	
86-30-6	N-Nitrosodiphenylamin [1]	250	U	
95-94-3	1,2,4,5-Tetrachlorobenzene	250	U	
101-55-3	4-Bromophenyl-phenylether	250	U	
118-74-1	Hexachlorobenzene	250	U	
1912-24-9	Atrazine	250	U	
87-86-5	Pentachlorophenol	480	U	
85-01-8	Phenanthrene	430		J
120-12-7	Anthracene	110	~~J~~	J
86-74-8	Carbazole	250	~~U~~	UJ
84-74-2	Di-n-butylphthalate	250 ~~18~~	~~J B~~	UJ
206-44-0	Fluoranthene	780		J
129-00-0	Pyrene	1000		J
85-68-7	Butylbenzylphthalate	250	~~U~~	UJ
91-94-1	3,3'-Dichlorobenzidine	250	~~U~~	R
56-55-3	Benzo(a)anthracene	430		J
218-01-9	Chrysene	490		J
117-81-7	Bis(2-ethylhexyl)phthalate	250 ~~72~~	~~J B~~	UJ
117-84-0	Di-n-octylphthalate	250	~~U~~	UJ
205-99-2	Benzo(b)fluoranthene	260		J
207-08-9	Benzo(k)fluoranthene	410		
50-32-8	Benzo(a)pyrene	440		
193-39-5	Indeno(1,2,3-cd)pyrene	190	J	
53-70-3	Dibenzo(a,h)anthracene	54	J	
191-24-2	Benzo(g,h,i)perylene	250		
58-90-2	2,3,4,6-Tetrachlorophenol	250	~~U~~	UJ

[1] Cannot be separated from Diphenylamine

NW 09/29/13

SOM01.2 (4/2007)
08/23/2013

1D - FORM I SV-1
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-80-096

16

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678
Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17149
Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17149-16
Sample wt/vol: 30.8 (g/mL) g Lab File ID: ULLCU27.D
Level: (LOW/MED) LOW Extraction: (Type) SONC
% Moisture: 19 Decanted: (Y/N) Date Received: 06/22/2013
Concentrated Extract Volume: 500 (uL) Date Extracted: 07/01/2013
Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/18/2013
GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
100-52-7	Benzaldehyde	15	J
108-95-2	Phenol	200	U
111-44-4	Bis(2-chloroethyl)ether	200	U
95-57-8	2-Chlorophenol	200	U
95-48-7	2-Methylphenol	200	U
108-60-1	2,2'-Oxybis(1-chloropropane)	200	U
98-86-2	Acetophenone	200	U
106-44-5	4-Methylphenol	200	U
621-64-7	N-Nitroso-di-n-propylamine	200	U
67-72-1	Hexachloroethane	200	U
98-95-3	Nitrobenzene	200	U
78-59-1	Isophorone	200	U
88-75-5	2-Nitrophenol	200	U
105-67-9	2,4-Dimethylphenol	200	U
111-91-1	Bis(2-chloroethoxy)methane	200	U
120-83-2	2,4-Dichlorophenol	200	U
91-20-3	Naphthalene	200	U
106-47-8	4-Chloroaniline	200	U
87-68-3	Hexachlorobutadiene	200	U
105-60-2	Caprolactam	200	U
59-50-7	4-Chloro-3-methylphenol	200	U
91-57-6	2-Methylnaphthalene	200	U
77-47-4	Hexachlorocyclopentadiene	200	U
88-06-2	2,4,6-Trichlorophenol	200	U
95-95-4	2,4,5-Trichlorophenol	200	U
92-52-4	1,1'-Biphenyl	200	U
91-58-7	2-Chloronaphthalene	200	U
88-74-4	2-Nitroaniline	400	U
131-11-3	Dimethylphthalate	200	U
606-20-2	2,6-Dinitrotoluene	200	U
208-96-8	Acenaphthylene	200	U
99-09-2	3-Nitroaniline	400	U
83-32-9	Acenaphthene	200	U

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NW 09/24/13

EPA SAMPLE NO.
LMR13-80-096

16

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17149

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17149-16

Sample wt/vol: 30.8 (g/mL) g Lab File ID: ULLCU27.D

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 19 Decanted: (Y/N) Date Received: 06/22/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 07/01/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/18/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
51-28-5	2,4-Dinitrophenol	400	U
100-02-7	4-Nitrophenol	400	U
132-64-9	Dibenzofuran	200	U
121-14-2	2,4-Dinitrotoluene	200	U
84-66-2	Diethylphthalate	200	U
86-73-7	Fluorene	200	U
7005-72-3	4-Chlorophenyl-phenylether	200	U
100-01-6	4-Nitroaniline	400	U
534-52-1	4,6-Dinitro-2-methylphenol	400	U
86-30-6	N-Nitrosodiphenylamin [1]	200	U
95-94-3	1,2,4,5-Tetrachlorobenzene	200	U
101-55-3	4-Bromophenyl-phenylether	200	U
118-74-1	Hexachlorobenzene	200	U
1912-24-9	Atrazine	200	U
87-86-5	Pentachlorophenol	400	U
85-01-8	Phenanthrene	19	J
120-12-7	Anthracene	200	U
86-74-8	Carbazole	6.0	J
84-74-2	Di-n-butylphthalate	200 ~~15~~	~~J B~~
206-44-0	Fluoranthene	48	J
129-00-0	Pyrene	38	J
85-68-7	Butylbenzylphthalate	200 ~~30~~	~~J B~~
91-94-1	3,3'-Dichlorobenzidine	200	U
56-55-3	Benzo(a)anthracene	18	J
218-01-9	Chrysene	35	J
117-81-7	Bis(2-ethylhexyl)phthalate	200 ~~51~~	~~J B~~
117-84-0	Di-n-octylphthalate	200	U
205-99-2	Benzo(b)fluoranthene	11	J
207-08-9	Benzo(k)fluoranthene	22	J
50-32-8	Benzo(a)pyrene	13	J
193-39-5	Indeno(1,2,3-cd)pyrene	8.9	J
53-70-3	Dibenzo(a,h)anthracene	200	U
191-24-2	Benzo(g,h,i)perylene	10	J
58-90-2	2,3,4,6-Tetrachlorophenol	200	U

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[1] Cannot be separated from Diphenylamine

MW 09/29/13

1F - FORM I SV-SIM

SEMIVOLATILE SIM ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-70-012

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: 1734.2 SDG No.: 17149

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17149-1

Sample wt/vol: 30.2 (g/mL) g Lab File ID: SERHY04.D

Extraction: (Type) SONC

% Moisture: 56 Decanted: (Y/N) Date Received: 06/22/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 07/01/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/09/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 3.3

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
91-20-3	Naphthalene	86	~~B~~
90-12-0	1-Methylnaphthalene	9.7	J
91-57-6	2-Methylnaphthalene	17	J
208-96-8	Acenaphthylene	17	J
83-32-9	Acenaphthene	53	
86-73-7	Fluorene	70	
85-01-8	Phenanthrene	410	~~E B~~
120-12-7	Anthracene	96	
206-44-0	Fluoranthene	630	~~E B~~
129-00-0	Pyrene	460	~~E B~~
56-55-3	Benzo(a)anthracene	250	~~B~~
218-01-9	Chrysene	300	~~E B~~
205-99-2	Benzo(b)fluoranthene	270	~~E B~~
207-08-9	Benzo(k)fluoranthene	180	~~B~~
192-97-2	Benzo(e)pyrene	180	
50-32-8	Benzo(a)pyrene	210	
198-55-0	Perylene	830	~~E~~
193-39-5	Indeno(1,2,3-cd)pyrene	180	
53-70-3	Dibenzo(a,h)anthracene	65	
191-24-2	Benzo(g,h,i)perylene	210	
C1NAPH	C1-Naphthalenes	19	J
C2NAPH	C2-Naphthalenes	87	J
C3NAPH	C3-Naphthalenes	120	J
C4NAPH	C4-Naphthalenes	110	J
C1FLUOR	C1 Fluorenes	17	J
C2FLUOR	C2 Fluorenes	20	J
C3FLUOR	C3 Fluorenes	36	J
C1PHAN	C1-Phenanthrenes/Anthracenes	240	J
C2PHAN	C2-Phenanthrenes/Anthracenes	180	J
C3PHAN	C3-Phenanthrenes/Anthracenes	150	J
C4PHAN	C4-Phenanthrenes/Anthracenes	110	J
C1FLPY	C1-Fluoranthenes/Pyrenes	270	J
C2FLPY	C2-Fluoranthenes/Pyrenes	180	J
C3FLPY	C3-Fluoranthenes/Pyrenes	110	J
C1CHRYS	C1 Chrysenes	200	J
C2CHRYS	C2 Chrysenes	130	J
C3CHRYS	C3 Chrysenes	87	J
C4CHRYS	C4 Chrysenes	39	J

MW 09/29/13

1F - FORM I SV-SIM

SEMIVOLATILE SIM ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-70-012

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: 1734.2 SDG No.: 17149

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17149-1

Sample wt/vol: 30.2 (g/mL) g Lab File ID: SERHY04.D

Extraction: (Type) SONC

% Moisture: 56 Decanted: (Y/N) Date Received: 06/22/2013

Concentrated Extract Volume: 500 (uL) Date Extracted: 07/01/2013

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Date Analyzed: 08/09/2013

GPC Cleanup: (Y/N) Y pH: Dilution Factor: 3.3

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
TPPAH	Total 16 PPAH	3500	E
TPAH	Total PAH	6600	E

JJ

MW 09/29/13

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-70-012

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17149

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17149-1

Sample wt/vol: 30.2 (g/mL) g Lab File ID: 0825AHLSOM08.D

% Moisture: 56 Decanted: (Y/N) Date Received: 06/22/2013

Extraction: (Type) SONC Date Extracted: 06/28/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 08/05/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 5.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	380	U
11104-28-2	Aroclor-1221	380	U
11141-16-5	Aroclor-1232	380	U
53469-21-9	Aroclor-1242	48	J
12672-29-6	Aroclor-1248	380	U
11097-69-1	Aroclor-1254	54	~~J P~~ J
11096-82-5	Aroclor-1260	19	J
37324-23-5	Aroclor-1262	380	U
11100-14-4	Aroclor-1268	380	U

NW 09/29/13

1H - FORM I ARO
AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-70-048

2

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17149

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17149-2

Sample wt/vol: 30.0 (g/mL) g Lab File ID: 0825AHLSOM09.D

% Moisture: 48 Decanted: (Y/N) Date Received: 06/22/2013

Extraction: (Type) SONC Date Extracted: 06/28/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 08/05/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 5.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	320	U
11104-28-2	Aroclor-1221	320	U
11141-16-5	Aroclor-1232	320	U
53469-21-9	Aroclor-1242	240	J
12672-29-6	Aroclor-1248	320	U
11097-69-1	Aroclor-1254	250	J
11096-82-5	Aroclor-1260	52	J
37324-23-5	Aroclor-1262	320	U
11100-14-4	Aroclor-1268	320	U

NW 09/29/13

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-80-024

3

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17149

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17149-3

Sample wt/vol: 29.8 (g/mL) g Lab File ID: 0825AHLSOM10.D

% Moisture: 46 Decanted: (Y/N) Date Received: 06/22/2013

Extraction: (Type) SONC Date Extracted: 06/28/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 08/05/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 5.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	310	U
11104-28-2	Aroclor-1221	310	U
11141-16-5	Aroclor-1232	310	U
53469-21-9	Aroclor-1242	310	U
12672-29-6	Aroclor-1248	310	U
11097-69-1	Aroclor-1254	310	U
11096-82-5	Aroclor-1260	310	U
37324-23-5	Aroclor-1262	310	U
11100-14-4	Aroclor-1268	310	U

NW 09/29/13

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-80-024FD

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17149

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17149-4

Sample wt/vol: 29.0 (g/mL) g Lab File ID: 0825AHLSOM11.D

% Moisture: 45 Decanted: (Y/N) Date Received: 06/22/2013

Extraction: (Type) SONC Date Extracted: 06/28/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 08/05/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 5.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	310	U
11104-28-2	Aroclor-1221	310	U
11141-16-5	Aroclor-1232	310	U
53469-21-9	Aroclor-1242	310	U
12672-29-6	Aroclor-1248	310	U
11097-69-1	Aroclor-1254	310	U
11096-82-5	Aroclor-1260	310	U
37324-23-5	Aroclor-1262	310	U
11100-14-4	Aroclor-1268	310	U

NW 09/29/13

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-52-012

5

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17149

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17149-5

Sample wt/vol: 30.0 (g/mL) g Lab File ID: 0825AHNSOM06.D

% Moisture: 53 Decanted: (Y/N) Date Received: 06/22/2013

Extraction: (Type) SONC Date Extracted: 06/28/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 08/06/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 5.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	350	U
11104-28-2	Aroclor-1221	350	U
11141-16-5	Aroclor-1232	350	U
53469-21-9	Aroclor-1242	23	J
12672-29-6	Aroclor-1248	350	U
11097-69-1	Aroclor-1254	33	J
11096-82-5	Aroclor-1260	13	J
37324-23-5	Aroclor-1262	350	U
11100-14-4	Aroclor-1268	350	U

NW 09/29/13

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-52-024

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17149

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17149-6

Sample wt/vol: 30.3 (g/mL) g Lab File ID: 0825AHNSOM07.D

% Moisture: 44 Decanted: (Y/N) Date Received: 06/22/2013

Extraction: (Type) SONC Date Extracted: 06/28/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 08/06/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 5.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	290	U
11104-28-2	Aroclor-1221	290	U
11141-16-5	Aroclor-1232	290	U
53469-21-9	Aroclor-1242	42	J
12672-29-6	Aroclor-1248	290	U
11097-69-1	Aroclor-1254	62	J
11096-82-5	Aroclor-1260	17	J
37324-23-5	Aroclor-1262	290	U
11100-14-4	Aroclor-1268	290	U

NW 09/29/13

EPA SAMPLE NO.
LMR13-80-072

8

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17149

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17149-8

Sample wt/vol: 29.6 (g/mL) g Lab File ID: 0825AHNSOM08.D

% Moisture: 20 Decanted: (Y/N) Date Received: 06/22/2013

Extraction: (Type) SONC Date Extracted: 06/28/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 08/06/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 5.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	210	U
11104-28-2	Aroclor-1221	210	U
11141-16-5	Aroclor-1232	210	U
53469-21-9	Aroclor-1242	210	U
12672-29-6	Aroclor-1248	210	U
11097-69-1	Aroclor-1254	210	U
11096-82-5	Aroclor-1260	210	U
37324-23-5	Aroclor-1262	210	U
11100-14-4	Aroclor-1268	210	U

NW 09/29/13

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-53-024

9

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17149

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17149-9

Sample wt/vol: 29.5 (g/mL) g Lab File ID: 0825AHNSOM09.D

% Moisture: 36 Decanted: (Y/N) Date Received: 06/22/2013

Extraction: (Type) SONC Date Extracted: 06/28/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 08/06/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 5.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	260	U
11104-28-2	Aroclor-1221	260	U
11141-16-5	Aroclor-1232	260	U
53469-21-9	Aroclor-1242	260	U
12672-29-6	Aroclor-1248	200	J
11097-69-1	Aroclor-1254	260	
11096-82-5	Aroclor-1260	61	J
37324-23-5	Aroclor-1262	260	U
11100-14-4	Aroclor-1268	260	U

NW 09/29/13

EPA SAMPLE NO.
LMR13-53-024FD

10

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17149

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17149-10

Sample wt/vol: 30.3 (g/mL) g Lab File ID: 0825AHNSOM10.D

% Moisture: 35 Decanted: (Y/N) Date Received: 06/22/2013

Extraction: (Type) SONC Date Extracted: 06/28/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 08/06/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 5.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	250	U
11104-28-2	Aroclor-1221	250	U
11141-16-5	Aroclor-1232	250	U
53469-21-9	Aroclor-1242	250	U
12672-29-6	Aroclor-1248	160	J
11097-69-1	Aroclor-1254	170	J
11096-82-5	Aroclor-1260	52	J
37324-23-5	Aroclor-1262	250	U
11100-14-4	Aroclor-1268	250	U

NW 09/29/13

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-80-012

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17149

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17149-11

Sample wt/vol: 29.5 (g/mL) g Lab File ID: 0825AHNSOM11.D

% Moisture: 43 Decanted: (Y/N) Date Received: 06/22/2013

Extraction: (Type) SONC Date Extracted: 06/28/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 08/06/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 5.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	300	U
11104-28-2	Aroclor-1221	300	U
11141-16-5	Aroclor-1232	300	U
53469-21-9	Aroclor-1242	56	J
12672-29-6	Aroclor-1248	300	U
11097-69-1	Aroclor-1254	35	J
11096-82-5	Aroclor-1260	7.2	~~J P~~ J
37324-23-5	Aroclor-1262	300	U
11100-14-4	Aroclor-1268	300	U

NW 09/29/13

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-52-048

12

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17149

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17149-12

Sample wt/vol: 30.2 (g/mL) g Lab File ID: 0825AHNSOM12.D

% Moisture: 26 Decanted: (Y/N) Date Received: 06/22/2013

Extraction: (Type) SONC Date Extracted: 06/28/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 08/06/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 5.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	220	U
11104-28-2	Aroclor-1221	220	U
11141-16-5	Aroclor-1232	220	U
53469-21-9	Aroclor-1242	220	U
12672-29-6	Aroclor-1248	220	U
11097-69-1	Aroclor-1254	220	U
11096-82-5	Aroclor-1260	220	U
37324-23-5	Aroclor-1262	220	U
11100-14-4	Aroclor-1268	220	U

NW 09/29/13

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-53-012

13

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17149

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17149-13

Sample wt/vol: 30.2 (g/mL) g Lab File ID: 0825AHNSOM13.D

% Moisture: 44 Decanted: (Y/N) Date Received: 06/22/2013

Extraction: (Type) SONC Date Extracted: 06/28/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 08/06/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 5.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	290	U
11104-28-2	Aroclor-1221	290	U
11141-16-5	Aroclor-1232	290	U
53469-21-9	Aroclor-1242	290	U
12672-29-6	Aroclor-1248	600	
11097-69-1	Aroclor-1254	340	
11096-82-5	Aroclor-1260	70	J
37324-23-5	Aroclor-1262	290	U
11100-14-4	Aroclor-1268	290	U

NW 09/29/13

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-56-012

14

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17149

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17149-14

Sample wt/vol: 29.8 (g/mL) g Lab File ID: 0825AHNSOM14.D

% Moisture: 20 Decanted: (Y/N) Date Received: 06/22/2013

Extraction: (Type) SONC Date Extracted: 06/28/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 08/06/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 5.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	210	U
11104-28-2	Aroclor-1221	210	U
11141-16-5	Aroclor-1232	210	U
53469-21-9	Aroclor-1242	210	U
12672-29-6	Aroclor-1248	210	U
11097-69-1	Aroclor-1254	210	U
11096-82-5	Aroclor-1260	210	U
37324-23-5	Aroclor-1262	210	U
11100-14-4	Aroclor-1268	210	U

NW 09/29/13

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

LMR13-80-048

15

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref No.: SDG No.: 17149

Matrix: (SOIL/SED/WATER) Sed Lab Sample ID: 200-17149-15

Sample wt/vol: 29.4 (g/mL) g Lab File ID: 0825AHNSOM15.D

% Moisture: 32 Decanted: (Y/N) Date Received: 06/22/2013

Extraction: (Type) SONC Date Extracted: 06/28/2013

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 08/06/2013

Injection Volume: 1.0 (uL) GPC Factor: 1.0 Dilution Factor: 5.0

GPC Cleanup: (Y/N) N pH: Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	250	U
11104-28-2	Aroclor-1221	250	U
11141-16-5	Aroclor-1232	250	U
53469-21-9	Aroclor-1242	250	U
12672-29-6	Aroclor-1248	250	U
11097-69-1	Aroclor-1254	250	U
11096-82-5	Aroclor-1260	250	U
37324-23-5	Aroclor-1262	250	U
11100-14-4	Aroclor-1268	250	U

NW 09/29/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO. 1
LMR13-70-012

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678
Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17149
Matrix: SED Lab Sample Id: 200-17149-1
% Solids: 43.6 Date Received: 06/22/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	10.6			P
7440-43-9	Cadmium	1.2			P
7440-47-3	Chromium	39.2	J	~~E~~	P
7440-50-8	Copper	37.7	J	~~E~~	P
7439-92-1	Lead	47.9			P
7440-02-0	Nickel	40.7	J	~~E~~	P
7440-66-6	Zinc	190	J	~~E~~	P

Color Before: GRAY Clarity Before: Texture: FINE
Color After: TAN Clarity After: CLOUDY Artifacts:
Comments:

NW 9/29/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO. 1

LMR13-70-012

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17149

Matrix: SED Lab Sample Id: 200-17149-1

% Solids: 43.6 Date Received: 06/22/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.11	J		CV

Color Before: GRAY Clarity Before: CLOUDY Texture: FINE

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

NW 9/29/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO. 2

LMR13-70-048

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17149

Matrix: SED Lab Sample Id: 200-17149-2

% Solids: 52.4 Date Received: 06/22/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	10.6			P
7440-43-9	Cadmium	2.3			P
7440-47-3	Chromium	43.2	J	~~E~~	P
7440-50-8	Copper	40.8	J	~~E~~	P
7439-92-1	Lead	54.3			P
7440-02-0	Nickel	43.8	J	~~E~~	P
7440-66-6	Zinc	177	J	~~E~~	P

Color Before: GRAY Clarity Before: Texture: FINE

Color After: TAN Clarity After: CLOUDY Artifacts:

Comments:

NW 9/29/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO. 2

LMR13-70-048

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17149

Matrix: SED Lab Sample Id: 200-17149-2

% Solids: 52.4 Date Received: 06/22/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.17			CV

Color Before: GRAY Clarity Before: CLOUDY Texture: FINE

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

NW 9/29/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO. 3
LMR13-80-024

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678
Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 17149
Matrix: SED | Lab Sample Id: 200-17149-3
% Solids: 54.5 | Date Received: 06/22/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	16.4			P
7440-43-9	Cadmium	0.89			P
7440-47-3	Chromium	28.6	J	~~E~~	P
7440-50-8	Copper	35.2	J	~~E~~	P
7439-92-1	Lead	111			P
7440-02-0	Nickel	32.9	J	~~E~~	P
7440-66-6	Zinc	246	J	~~E~~	P

Color Before: GRAY | Clarity Before: | Texture: FINE
Color After: TAN | Clarity After: CLOUDY | Artifacts:
Comments:

NW 9/29/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO. 3

LMR13-80-024

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17149

Matrix: SED Lab Sample Id: 200-17149-3

% Solids: 54.5 Date Received: 06/22/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.51			CV

Color Before: GRAY Clarity Before: CLOUDY Texture: FINE

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

NSW 9/29/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO. 4
LMR13-80-024FD

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678
Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17149
Matrix: SED Lab Sample Id: 200-17149-4
% Solids: 55.4 Date Received: 06/22/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	14.9			P
7440-43-9	Cadmium	0.82	J		P
7440-47-3	Chromium	26.3	J	~~B~~	P
7440-50-8	Copper	32.7	J	~~B~~	P
7439-92-1	Lead	95.9			P
7440-02-0	Nickel	31.1	J	~~B~~	P
7440-66-6	Zinc	217	J	~~B~~	P

Color Before: GRAY Clarity Before: Texture: FINE
Color After: TAN Clarity After: CLOUDY Artifacts:
Comments:

NW 9/29/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO. 4
LMR13-80-024FD

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678
Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17149
Matrix: SED Lab Sample Id: 200-17149-4
% Solids: 55.4 Date Received: 06/22/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.40			CV

Color Before: GRAY Clarity Before: CLOUDY Texture: FINE
Color After: COLORLESS Clarity After: CLEAR Artifacts:
Comments:

NW 9/29/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO. 5
LMR13-52-012

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678
Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17149
Matrix: SED Lab Sample Id: 200-17149-5
% Solids: 47.3 Date Received: 06/22/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	10.2			P
7440-43-9	Cadmium	1.1			P
7440-47-3	Chromium	29.7	J	~~F~~	P
7440-50-8	Copper	31.8	J	~~F~~	P
7439-92-1	Lead	42.9			P
7440-02-0	Nickel	33.0	J	~~F~~	P
7440-66-6	Zinc	155	J	~~F~~	P

Color Before: GRAY Clarity Before: Texture: FINE
Color After: TAN Clarity After: CLOUDY Artifacts:
Comments:

NW 9/29/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO. 5
LMR13-52-012

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678
Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17149
Matrix: SED Lab Sample Id: 200-17149-5
% Solids: 47.3 Date Received: 06/22/2013

Concentration Units (**ug/L, ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.079	J		CV

Color Before: GRAY Clarity Before: CLOUDY Texture: FINE
Color After: COLORLESS Clarity After: CLEAR Artifacts:
Comments:

NW 9/29/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO. 6
LMR13-52-024

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678
Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17149
Matrix: SED Lab Sample Id: 200-17149-6
% Solids: 56.2 Date Received: 06/22/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	8.5			P
7440-43-9	Cadmium	0.99			P
7440-47-3	Chromium	24.2	J	~~E~~	P
7440-50-8	Copper	26.9	J	~~E~~	P
7439-92-1	Lead	41.0			P
7440-02-0	Nickel	26.2	J	~~E~~	P
7440-66-6	Zinc	136	J	~~E~~	P

Color Before: GRAY Clarity Before: Texture: FINE
Color After: TAN Clarity After: CLOUDY Artifacts:
Comments:

NW 9/29/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO. 6
LMR13-52-024

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678
Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17149
Matrix: SED Lab Sample Id: 200-17149-6
% Solids: 56.2 Date Received: 06/22/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.18			CV

Color Before: GRAY Clarity Before: CLOUDY Texture: FINE
Color After: COLORLESS Clarity After: CLEAR Artifacts:
Comments:

NW 9/29/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO. 8
LMR13-80-072

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678
Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 17149
Matrix: SED | Lab Sample Id: 200-17149-8
% Solids: 80.5 | Date Received: 06/22/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	3.2			P
7440-43-9	Cadmium	0.26	J		P
7440-47-3	Chromium	9.2	J	~~E~~	P
7440-50-8	Copper	8.7	J	~~E~~	P
7439-92-1	Lead	8.9			P
7440-02-0	Nickel	13.3	J	~~E~~	P
7440-66-6	Zinc	35.7	J	~~E~~	P

Color Before: GRAY | Clarity Before: | Texture: FINE
Color After: TAN | Clarity After: CLOUDY | Artifacts:
Comments:

NW 9/29/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO. 8
LMR13-80-072

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678
Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17149
Matrix: SED Lab Sample Id: 200-17149-8
% Solids: 80.5 Date Received: 06/22/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.030	J		CV

Color Before: GRAY Clarity Before: CLOUDY Texture: FINE
Color After: COLORLESS Clarity After: CLEAR Artifacts:
Comments:

MW 9/29/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-53-024

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17149

Matrix: SED Lab Sample Id: 200-17149-9

% Solids: 64.4 Date Received: 06/22/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	9.3			P
7440-43-9	Cadmium	1.3			P
7440-47-3	Chromium	35.7	J	~~E~~	P
7440-50-8	Copper	41.1	J	~~E~~	P
7439-92-1	Lead	199			P
7440-02-0	Nickel	33.9	J	~~E~~	P
7440-66-6	Zinc	121	J	~~E~~	P

Color Before: GRAY Clarity Before: Texture: FINE

Color After: TAN Clarity After: CLOUDY Artifacts:

Comments:

NW 9/29/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO. 9
LMR13-53-024

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678
Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17149
Matrix: SED Lab Sample Id: 200-17149-9
% Solids: 64.4 Date Received: 06/22/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.12	J		CV

Color Before: GRAY Clarity Before: CLOUDY Texture: FINE
Color After: COLORLESS Clarity After: CLEAR Artifacts:
Comments:

NW 9/29/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO. 10
LMR13-53-024FD

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678
Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17149
Matrix: SED Lab Sample Id: 200-17149-10
% Solids: 65.4 Date Received: 06/22/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	7.8			P
7440-43-9	Cadmium	1.3			P
7440-47-3	Chromium	36.0	J	~~E~~	P
7440-50-8	Copper	33.1	J	~~E~~	P
7439-92-1	Lead	80.0			P
7440-02-0	Nickel	31.5	J	~~E~~	P
7440-66-6	Zinc	117	J	~~E~~	P

Color Before: GRAY Clarity Before: Texture: FINE
Color After: TAN Clarity After: CLOUDY Artifacts:
Comments:

NW 9/29/13

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USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-53-024FD

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17149

Matrix: SED Lab Sample Id: 200-17149-10

% Solids: 65.4 Date Received: 06/22/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.12	J		CV

Color Before: GRAY Clarity Before: CLOUDY Texture: FINE

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

NW 9/29/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-80-012

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678
Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 17149
Matrix: SED | Lab Sample Id: 200-17149-11
% Solids: 56.6 | Date Received: 06/22/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	11.7			P
7440-43-9	Cadmium	1.4			P
7440-47-3	Chromium	28.3	J	~~E~~	P
7440-50-8	Copper	32.9	J	~~E~~	P
7439-92-1	Lead	87.4			P
7440-02-0	Nickel	29.3	J	~~E~~	P
7440-66-6	Zinc	179	J	~~E~~	P

Color Before: GRAY | Clarity Before: | Texture: FINE
Color After: TAN | Clarity After: CLOUDY | Artifacts:
Comments:

NW 9/29/13

11

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-80-012

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17149

Matrix: SED Lab Sample Id: 200-17149-11

% Solids: 56.6 Date Received: 06/22/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.24			CV

Color Before: GRAY Clarity Before: CLOUDY Texture: FINE

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

NW 9/29/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO. 12
LMR13-52-048

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678
Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17149
Matrix: SED Lab Sample Id: 200-17149-12
% Solids: 74.2 Date Received: 06/22/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	6.8			P
7440-43-9	Cadmium	0.46	J		P
7440-47-3	Chromium	12.6	J	~~J~~	P
7440-50-8	Copper	14.5	J	~~J~~	P
7439-92-1	Lead	30.1			P
7440-02-0	Nickel	16.1	J	~~J~~	P
7440-66-6	Zinc	84.0	J	~~J~~	P

Color Before: GRAY Clarity Before: Texture: FINE
Color After: TAN Clarity After: CLOUDY Artifacts:
Comments:

NW 9/29/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO. 12
LMR13-52-048

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678
Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17149
Matrix: SED Lab Sample Id: 200-17149-12
% Solids: 74.2 Date Received: 06/22/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.11	J		CV

Color Before: GRAY Clarity Before: CLOUDY Texture: FINE
Color After: COLORLESS Clarity After: CLEAR Artifacts:
Comments:

NW 9/29/13

13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
LMR13-53-012

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678
Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 17149
Matrix: SED | Lab Sample Id: 200-17149-13
% Solids: 55.8 | Date Received: 06/22/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	10.8			P
7440-43-9	Cadmium	2.6			P
7440-47-3	Chromium	41.6	J	~~E~~	P
7440-50-8	Copper	40.0	J	~~E~~	P
7439-92-1	Lead	66.3			P
7440-02-0	Nickel	41.1	J	~~E~~	P
7440-66-6	Zinc	173	J	~~E~~	P

Color Before: GRAY | Clarity Before: | Texture: FINE
Color After: TAN | Clarity After: CLOUDY | Artifacts:
Comments:

NW 9/29/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO. 13

LMR13-53-012

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17149

Matrix: SED Lab Sample Id: 200-17149-13

% Solids: 55.8 Date Received: 06/22/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.17			CV

Color Before: GRAY Clarity Before: CLOUDY Texture: FINE

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

NW 9/29/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO. 14
LMR13-56-012

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678
Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 17149
Matrix: SED | Lab Sample Id: 200-17149-14
% Solids: 80.2 | Date Received: 06/22/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	5.8			P
7440-43-9	Cadmium	0.32	J		P
7440-47-3	Chromium	17.2	J	~~E~~	P
7440-50-8	Copper	16.7	J	~~E~~	P
7439-92-1	Lead	10.3			P
7440-02-0	Nickel	26.9	J	~~E~~	P
7440-66-6	Zinc	57.6	J	~~E~~	P

Color Before: GRAY | Clarity Before: | Texture: FINE
Color After: TAN | Clarity After: CLOUDY | Artifacts:
Comments:

NW 9/29/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO. 14

LMR13-56-012

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17149

Matrix: SED Lab Sample Id: 200-17149-14

% Solids: 80.2 Date Received: 06/22/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.12	U		CV

Color Before: GRAY Clarity Before: CLOUDY Texture: FINE

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

NW 9/29/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO. 15

LMR13-80-048

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17149

Matrix: SED Lab Sample Id: 200-17149-15

% Solids: 68.0 Date Received: 06/22/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	5.9			P
7440-43-9	Cadmium	0.37	J		P
7440-47-3	Chromium	14.2	J	E	P
7440-50-8	Copper	15.1	J	E	P
7439-92-1	Lead	28.4			P
7440-02-0	Nickel	18.9	J	E	P
7440-66-6	Zinc	66.1	J	E	P

Color Before: GRAY Clarity Before: Texture: FINE

Color After: TAN Clarity After: CLOUDY Artifacts:

Comments:

NW 9/29/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO. 15

LMR13-80-048

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17149

Matrix: SED Lab Sample Id: 200-17149-15

% Solids: 68.0 Date Received: 06/22/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.12	J		CV

Color Before: GRAY Clarity Before: CLOUDY Texture: FINE

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

NW 9/29/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO. 16
LMR13-80-096

Lab Name: TESTAMERICA BURLINGTON | Contract: EA-11678
Lab Code: STLV | Case No.: MAUMEE | Mod. Ref. No.: | SDG No.: 17149
Matrix: SED | Lab Sample Id: 200-17149-16
% Solids: 81.4 | Date Received: 06/22/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7440-38-2	Arsenic	4.4			P
7440-43-9	Cadmium	0.20	J		P
7440-47-3	Chromium	7.2	J	~~E~~	P
7440-50-8	Copper	6.1	J	~~E~~	P
7439-92-1	Lead	5.7			P
7440-02-0	Nickel	11.8	J	~~E~~	P
7440-66-6	Zinc	27.3	J	~~E~~	P

Color Before: GRAY | Clarity Before: | Texture: FINE
Color After: TAN | Clarity After: CLOUDY | Artifacts:
Comments:

NW 9/29/13

USEPA - CLP
1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO. 16

LMR13-80-096

Lab Name: TESTAMERICA BURLINGTON Contract: EA-11678

Lab Code: STLV Case No.: MAUMEE Mod. Ref. No.: SDG No.: 17149

Matrix: SED Lab Sample Id: 200-17149-16

% Solids: 81.4 Date Received: 06/22/2013

Concentration Units (**ug/L**, **ug**, or **mg/kg** dry weight): mg/kg

CAS No.	Analyte	Concentration	C	Q	M
7439-97-6	Mercury	0.11	U		CV

Color Before: GRAY Clarity Before: CLOUDY Texture: FINE

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

NW 9/29/13

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - SEM/AVS

1

Client Sample ID: LMR13-70-012
Lab Sample ID: 200-17149-1
Lab Name: TestAmerica Burlington
Job No.: 200-17149-1
SDG ID.: 17149
Matrix: Sediment
Date Sampled: 06/20/2013 16:15
Reporting Basis: DRY
Date Received: 06/22/2013 10:15
% Solids: 43.6

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-43-9	Cadmium SEM	0.57	2.7	0.43	mg/Kg	J		10	6010C
7440-43-9	Cadmium SEM	0.0050	0.024	0.0038	umol/g	J		10	6010C
7440-50-8	Copper SEM	7.4	13.9	1.2	mg/Kg	J		10	6010C
7440-50-8	Copper SEM	0.12	0.22	0.019	umol/g	J		10	6010C
7439-92-1	Lead SEM	19.2	5.6	2.5	mg/Kg			10	6010C
7439-92-1	Lead SEM	0.093	0.027	0.012	umol/g			10	6010C
7440-02-0	Nickel SEM	9.8	22.5	1.6	mg/Kg	J		10	6010C
7440-02-0	Nickel SEM	0.17	0.38	0.028	umol/g	J		10	6010C
7440-66-6	Zinc SEM	67.1	11.2	3.1	mg/Kg			10	6010C
7440-66-6	Zinc SEM	1.0	0.17	0.048	umol/g			10	6010C
7439-97-6	Mercury SEM	0.011	0.011	0.0037	mg/Kg	U		1	7470A
7439-97-6	Mercury SEM	0.000056	0.000056	0.000018	umol/g	U		1	7470A

MW 09/29/13

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - SEM/AVS

1

Client Sample ID: LMR13-70-012 | Lab Sample ID: 200-17149-1

Lab Name: TestAmerica Burlington | Job No.: 200-17149-1

SDG ID.: 17149

Matrix: Sediment | Date Sampled: 06/20/2013 16:15

Reporting Basis: WET | Date Received: 06/22/2013 10:15

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	SEM/AVS Ratio	NC	0.00100	0.00100	NONE			1	SEM

NW 09/29/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY - SEM/AVS

1

Client Sample ID: LMR13-70-012
Lab Sample ID: 200-17149-1
Lab Name: TestAmerica Burlington
Job No.: 200-17149-1
SDG ID.: 17149
Matrix: Sediment
Date Sampled: 06/20/2013 16:15
Reporting Basis: DRY
Date Received: 06/22/2013 10:15
% Solids: 43.6

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
18496-25-8	Acid Volatile Sulfides (AVS)	36.0	36.0		mg/Kg	U		1	AVS
18496-25-8	Acid Volatile Sulfides (AVS)	1.1	1.1		umol/g	U		1	AVS

NW 09/29/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: LMR13-70-012 Lab Sample ID: 200-17149-1

Lab Name: TestAmerica Burlington Job No.: 200-17149-1

SDG ID.: 17149

Matrix: Sediment Date Sampled: 06/20/2013 16:15

Reporting Basis: WET Date Received: 06/22/2013 10:15

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	24500	J 1000		mg/Kg			1	Lloyd Kahn

MW 09/29/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

2

Client Sample ID: LMR13-70-048
Lab Sample ID: 200-17149-2
Lab Name: TestAmerica Burlington
Job No.: 200-17149-1
SDG ID.: 17149
Matrix: Sediment
Date Sampled: 06/20/2013 16:35
Reporting Basis: WET
Date Received: 06/22/2013 10:15

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	23700	J 1000		mg/Kg			1	Lloyd Kahn

NW 09/29/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

3

Client Sample ID: LMR13-80-024 Lab Sample ID: 200-17149-3

Lab Name: TestAmerica Burlington Job No.: 200-17149-1

SDG ID.: 17149

Matrix: Sediment Date Sampled: 06/20/2013 16:55

Reporting Basis: WET Date Received: 06/22/2013 10:15

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	29800	J 1000		mg/Kg		M	1	Lloyd Kahn

MW 09/20/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

4

Client Sample ID: LMR13-80-024FD
Lab Sample ID: 200-17149-4
Lab Name: TestAmerica Burlington
Job No.: 200-17149-1
SDG ID.: 17149
Matrix: Sediment
Date Sampled: 06/20/2013 16:55
Reporting Basis: WET
Date Received: 06/22/2013 10:15

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	27600	J 1000		mg/Kg		H	1	Lloyd Kahn

MW 09/29/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

5

Client Sample ID: LMR13-52-012 | Lab Sample ID: 200-17149-5

Lab Name: TestAmerica Burlington | Job No.: 200-17149-1

SDG ID.: 17149

Matrix: Sediment | Date Sampled: 06/20/2013 17:30

Reporting Basis: WET | Date Received: 06/22/2013 10:15

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	28700	J 1000		mg/Kg		H	1	Lloyd Kahn

MW 09/24/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

6

Client Sample ID: LMR13-52-024 | Lab Sample ID: 200-17149-6

Lab Name: TestAmerica Burlington | Job No.: 200-17149-1

SDG ID.: 17149

Matrix: Sediment | Date Sampled: 06/20/2013 17:35

Reporting Basis: WET | Date Received: 06/22/2013 10:15

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	25400	J 1000		mg/Kg		H	1	Lloyd Kahn

NW 09/29/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

8

Client Sample ID: LMR13-80-072 Lab Sample ID: 200-17149-8

Lab Name: TestAmerica Burlington Job No.: 200-17149-1

SDG ID.: 17149

Matrix: Sediment Date Sampled: 06/20/2013 17:15

Reporting Basis: WET Date Received: 06/22/2013 10:15

CAS No.	Analyte	Result		RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	15600	J	1000		mg/Kg		J	1	Lloyd Kahn

MW 09/29/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

9

Client Sample ID: LMR13-53-024 Lab Sample ID: 200-17149-9

Lab Name: TestAmerica Burlington Job No.: 200-17149-1

SDG ID.: 17149

Matrix: Sediment Date Sampled: 06/20/2013 17:55

Reporting Basis: WET Date Received: 06/22/2013 10:15

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	22700	J 1000		mg/Kg			1	Lloyd Kahn

NW 09/29/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

10

Client Sample ID: LMR13-53-024FD
Lab Sample ID: 200-17149-10
Lab Name: TestAmerica Burlington
Job No.: 200-17149-1
SDG ID.: 17149
Matrix: Sediment
Date Sampled: 06/20/2013 17:55
Reporting Basis: WET
Date Received: 06/22/2013 10:15

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	26600	J 1000		mg/Kg		J	1	Lloyd Kahn

MW 09/29/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

11

Client Sample ID: LMR13-80-012 Lab Sample ID: 200-17149-11

Lab Name: TestAmerica Burlington Job No.: 200-17149-1

SDG ID.: 17149

Matrix: Sediment Date Sampled: 06/20/2013 16:45

Reporting Basis: WET Date Received: 06/22/2013 10:15

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	27200	J 1000		mg/Kg			1	Lloyd Kahn

NW 09/29/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

12

Client Sample ID: LMR13-52-048 Lab Sample ID: 200-17149-12

Lab Name: TestAmerica Burlington Job No.: 200-17149-1

SDG ID.: 17149

Matrix: Sediment Date Sampled: 06/20/2013 17:40

Reporting Basis: WET Date Received: 06/22/2013 10:15

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	22700	J 1000		mg/Kg		J	1	Lloyd Kahn

NW 09/29/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

13

Client Sample ID: LMR13-53-012 Lab Sample ID: 200-17149-13

Lab Name: TestAmerica Burlington Job No.: 200-17149-1

SDG ID.: 17149

Matrix: Sediment Date Sampled: 06/20/2013 17:50

Reporting Basis: WET Date Received: 06/22/2013 10:15

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	26400	J 1000		mg/Kg		J	1	Lloyd Kahn

MW 09/29/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

14

Client Sample ID: LMR13-56-012 Lab Sample ID: 200-17149-14

Lab Name: TestAmerica Burlington Job No.: 200-17149-1

SDG ID.: 17149

Matrix: Sediment Date Sampled: 06/20/2013 17:45

Reporting Basis: WET Date Received: 06/22/2013 10:15

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	37000	J 1000		mg/Kg		J	1	Lloyd Kahn

NW 09/29/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

15

Client Sample ID: LMR13-80-048 Lab Sample ID: 200-17149-15

Lab Name: TestAmerica Burlington Job No.: 200-17149-1

SDG ID.: 17149

Matrix: Sediment Date Sampled: 06/20/2013 17:05

Reporting Basis: WET Date Received: 06/22/2013 10:15

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	22300	J 1000		mg/Kg		J	1	Lloyd Kahn

NW 09/24/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

16

Client Sample ID: LMR13-80-096 Lab Sample ID: 200-17149-16

Lab Name: TestAmerica Burlington Job No.: 200-17149-1

SDG ID.: 17149

Matrix: Sediment Date Sampled: 06/20/2013 17:25

Reporting Basis: WET Date Received: 06/22/2013 10:15

CAS No.	Analyte	Result	RL		Units	C	Q	DIL	Method
7440-44-0	Total Organic Carbon	15000	J 1000		mg/Kg		J	1	Lloyd Kahn

NW 09/24/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

1

Client Sample ID: LMR13-70-012
Lab Sample ID: 200-17149-1
Lab Name: TestAmerica Canton
Job No.: 200-17149-1
SDG ID.: 17149
Matrix: Sediment
Date Sampled: 06/20/2013 16:15
Reporting Basis: DRY
Date Received: 06/22/2013 10:15
% Solids: 43.6

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	963	448	198	mg/Kg			1	9071B

NW 09/29/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

2

Client Sample ID: LMR13-70-048
Lab Sample ID: 200-17149-2
Lab Name: TestAmerica Canton
Job No.: 200-17149-1
SDG ID.: 17149
Matrix: Sediment
Date Sampled: 06/20/2013 16:35
Reporting Basis: DRY
Date Received: 06/22/2013 10:15
% Solids: 52.4

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	1160	380	168	mg/Kg			1	9071B

NW 09/29/13

INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

3

Client Sample ID: LMR13-80-024 Lab Sample ID: 200-17149-3

Lab Name: TestAmerica Canton Job No.: 200-17149-1

SDG ID.: 17149

Matrix: Sediment Date Sampled: 06/20/2013 16:55

Reporting Basis: DRY Date Received: 06/22/2013 10:15

% Solids: 54.5

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	767	365	161	mg/Kg			1	9071B

MW 09/24/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

5

Client Sample ID: LMR13-52-012 Lab Sample ID: 200-17149-5

Lab Name: TestAmerica Canton Job No.: 200-17149-1

SDG ID.: 17149

Matrix: Sediment Date Sampled: 06/20/2013 17:30

Reporting Basis: DRY Date Received: 06/22/2013 10:15

% Solids: 47.3

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	763	424	187	mg/Kg			1	9071B

NW 09/24/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

6

Client Sample ID: LMR13-52-024 | Lab Sample ID: 200-17149-6

Lab Name: TestAmerica Canton | Job No.: 200-17149-1

SDG ID.: 17149

Matrix: Sediment | Date Sampled: 06/20/2013 17:35

Reporting Basis: DRY | Date Received: 06/22/2013 10:15

% Solids: 56.2

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	941	J 355	157	mg/Kg			1	9071B

MW 09/24/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

7

Client Sample ID: LMR13-52-024FD
Lab Sample ID: 200-17149-7
Lab Name: TestAmerica Canton
Job No.: 200-17149-1
SDG ID.: 17149
Matrix: Sediment
Date Sampled: 06/20/2013 17:35
Reporting Basis: DRY
Date Received: 06/22/2013 10:15
% Solids: 73.0

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	178	J 274	121	mg/Kg			1	9071B

NW 09/29/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

8

Client Sample ID: LMR13-80-072
Lab Sample ID: 200-17149-8
Lab Name: TestAmerica Canton
Job No.: 200-17149-1
SDG ID.: 17149
Matrix: Sediment
Date Sampled: 06/20/2013 17:15
Reporting Basis: DRY
Date Received: 06/22/2013 10:15
% Solids: 80.5

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	112	248	110	mg/Kg	J		1	9071B

MW 09/29/13

INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

9

Client Sample ID: LMR13-53-024 | Lab Sample ID: 200-17149-9

Lab Name: TestAmerica Canton | Job No.: 200-17149-1

SDG ID.: 17149

Matrix: Sediment | Date Sampled: 06/20/2013 17:55

Reporting Basis: DRY | Date Received: 06/22/2013 10:15

% Solids: 64.4

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	496	310	137	mg/Kg			1	9071B

NW 09/29/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

11

Client Sample ID: LMR13-80-012
Lab Sample ID: 200-17149-11
Lab Name: TestAmerica Canton
Job No.: 200-17149-1
SDG ID.: 17149
Matrix: Sediment
Date Sampled: 06/20/2013 16:45
Reporting Basis: DRY
Date Received: 06/22/2013 10:15
% Solids: 56.6

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	1600	352	156	mg/Kg			1	9071B

MW 09/29/13

INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

12

Client Sample ID: LMR13-52-048 Lab Sample ID: 200-17149-12

Lab Name: TestAmerica Canton Job No.: 200-17149-1

SDG ID.: 17149

Matrix: Sediment Date Sampled: 06/20/2013 17:40

Reporting Basis: DRY Date Received: 06/22/2013 10:15

% Solids: 74.2

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	203	271	120	mg/Kg	J		1	9071B

NW 09/29/13

INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

13

Client Sample ID: LMR13-53-012 Lab Sample ID: 200-17149-13

Lab Name: TestAmerica Canton Job No.: 200-17149-1

SDG ID.: 17149

Matrix: Sediment Date Sampled: 06/20/2013 17:50

Reporting Basis: DRY Date Received: 06/22/2013 10:15

% Solids: 55.8

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	892	357	158	mg/Kg			1	9071B

NW 09/29/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

14

Client Sample ID: LMR13-56-012 Lab Sample ID: 200-17149-14

Lab Name: TestAmerica Canton Job No.: 200-17149-1

SDG ID.: 17149

Matrix: Sediment Date Sampled: 06/20/2013 17:45

Reporting Basis: DRY Date Received: 06/22/2013 10:15

% Solids: 80.2

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	261	249	110	mg/Kg			1	9071B

MW 09/29/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

15

Client Sample ID: LMR13-80-048
Lab Sample ID: 200-17149-15
Lab Name: TestAmerica Canton
Job No.: 200-17149-1
SDG ID.: 17149
Matrix: Sediment
Date Sampled: 06/20/2013 17:05
Reporting Basis: DRY
Date Received: 06/22/2013 10:15
% Solids: 68.0

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	354	295	130	mg/Kg			1	9071B

NW 09/29/13

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

16

Client Sample ID: LMR13-80-096
Lab Sample ID: 200-17149-16
Lab Name: TestAmerica Canton
Job No.: 200-17149-1
SDG ID.: 17149
Matrix: Sediment
Date Sampled: 06/20/2013 17:25
Reporting Basis: DRY
Date Received: 06/22/2013 10:15
% Solids: 81.4

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	HEM	246	246	109	mg/Kg	U		1	9071B

NW 8/29/13

Appendix C

CB&I Data Verification Summary

CB&I
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December 10, 2013

Mark Loomis
Environmental Scientist
US EPA Great Lakes National Program Office
77 W. Jackson Blvd G-17J
Chicago, IL 60604

Document ID #: 2125-12102013-1

Dear Mr. Loomis:

EPA CONTRACT NUMBER EP-W-10-033
TASK ORDER NUMBER 2125
DATA VALIDATION SUPPORT

Enclosed please find the Summary of Qualifier Changes for the validation of Total Organic Carbon (TOC), Hexane Extractable Material (HEM), Metals, Mercury, Acid Volatile Sulfide (AVS), Simultaneously Extracted Metals (SEM), Semivolatile, Semivolatile SIM, Aroclors, and Geotechnical Methods sediment sample data for the Lower Maumee River, Phase 2 Characterization site in Toledo, Ohio analyzed by TestAmerica Laboratories, in Burlington, Vermont; North Canton, Ohio; and Pittsburgh, Pennsylvania. This report is a deliverable under Task 3 of the subject Task Order.

If you have any questions, please feel free to contact me.

Sincerely,

Shellee McGrath

Shellee McGrath
Task Leader, QATS Program
CB&I Federal Services, LLC
Phone: 702.895.8719
E-Mail Address: shellee.mcgrath@CBIfederalservices.com

cc: Shari Myer, EPA-ASB, QATS Task Order Project Officer
Administrative Contracting Officer (letter only)

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RELEASE OF VALIDATED DATA

DATE: December 10, 2013

SUBJECT: Review of Data for Phase 2 of the Lower Maumee River Site Characterization
Received for Review: November 5, 2013, November 20, 2013,
and December 5, 2013

LABORATORY: TestAmerica Laboratories, Burlington, Vermont; North Canton, Ohio; and Pittsburgh, Pennsylvania

FROM: Shellee McGrath, CB&I Federal Services, LLC
Quality Assurance Technical Support (QATS) Program, Las Vegas, NV

TO: Mark Loomis, Great Lakes National Program Office (GLNPO)

LEVEL OF REVIEW: Tier 2 Validation Review

QATS has completed review of the validated data for the following project:

SITE Name: Lower Maumee River, Phase 2 Site Characterization, Toledo, Ohio

Contractor: EA Engineering, Science, and Technology, Inc., Hunt Valley, Maryland

Primary Validators: Environmental Data Services, Inc. Williamsburg, Virginia

SDG Numbers: J16948, J16995, J16999, J17010, J17014, J17024, J17028, J17052, J17054 J17055, J17056, J17061, J17071, J17078, J17083, J17096, J17099, J17122 J17125, J17127, and J17149

Number and Type of Samples: 409 Sediment Samples

Case Number: NA SDG Number: 21 Various
Site Name: Lower Maumee River Laboratory: TestAmerica Laboratories

VALIDATION SUMMARY

Introduction: This report summarizes the data verification of previously validated analytical results from samples from the Lower Maumee River, Phase 2 Characterization site, in support of EPA's Great Lakes National Program Office (GLNPO). This evaluation and preparation of this report was performed by CB&I's Quality Assurance Technical Support Program (QATS) under Technical Direction 04, Task Order 2125.

Four hundred and nine (409) sediment samples in 21 SDGs (SDGs J16948, J16995, J16999, J17010, J17014, J17024, J17028, J17052, J17054, J17055, J17056, J17061, J17071, J17078, J17083, J17096, J17099, J17122, J17125, J17127, and J17149) were collected by EA Engineering, Science, and Technology, Inc. (EA) from the Lower Maumee River site locations between June 11, 2013 and June 20, 2013 and shipped to TestAmerica Laboratories in Burlington, Vermont and North Canton, Ohio for analysis. The samples designated for Hexane Extractable Material (HEM) analysis from SDGs J17052, J17054, J17056, J17061, and J17078 were subsequently shipped from the North Canton, Ohio laboratory to the TestAmerica Laboratory in Pittsburgh, Pennsylvania for analysis.

The TestAmerica Laboratory in Burlington, Vermont analyzed the samples for Total Organic Carbon (TOC), Metals, Mercury, Acid Volatile Sulfide (AVS), Simultaneously Extracted Metals (SEM), Semivolatile, Semivolatile SIM, Aroclors, and Geotechnical Methods. TestAmerica Laboratories in North Canton, Ohio and Pittsburgh, Pennsylvania analyzed the samples for HEM. Environmental Data Services, Inc. (EDS) in Williamsburg, Virginia performed an initial full validation on all samples between August 6, 2013 and September 29, 2013. The organic fractions were validated by EDS and validated/verified by QATS in accordance with the National Functional Guidelines (NFG) for Superfund Organic Methods Data Review, June 2008, and the inorganic parameters by the National Functional Guidelines (NFG) for Superfund Inorganic Methods Data Review, January 2010.

Data Verification: At the direction of EPA, the validated data and Electronic Data Deliverable (EDD) files were sent by EA to QATS on November 5, 2013 for a data validation/verification check. Missing data were requested by QATS and subsequently received, including missing ICP-AES data received on November 20, 2013 and a missing reanalyzed PAH sample Form 1 and EDD received on December 5, 2013. Since a full validation had previously been performed by EDS, QATS conducted a Tier 2 validation check (without the full validation reports) on all SDGs using the Tier 2 Validation Worksheets developed by QATS specifically for GLNPO validation. The resulting QATS qualifiers were compared to the EDS-applied qualifiers and verified in the EDD files included with the data submission.

Data validation of the HEM samples revealed a discrepancy in the project holding time requirements. The holding time required by the Quality Assurance Project Plan Phase 2 of the Lower Maumee River Site Characterization is 14 days from collection to extraction and 40 days to analysis. The North Canton, Ohio TestAmercia Laboratory Standard Operating Procedure (SOP) number NC-WC-091 for HEM/SGT-HEM for Methods 1664A, 9070A, and 9071B defines the holding time as 28 days from collection to analysis. Method 9071B, n-Hexane Extractable Material (HEM) for Sludge, Sediment, and Solid Samples recommends that the samples be analyzed as soon as possible. QATS validated the HEM samples using the 14-day Lower Maumee QAPP holding time, resulting in the qualification of 167 HEM sample results.

In the metals fraction, the EDS validators qualified sample results when the associated serial dilution percent differences (%D) exceeded 10%. The Inorganic Superfund Methods NFG allows

for an expanded %D criterion of 15% D for solid and sediment samples. Because the EDS validators appeared to use the expanded RPD criteria of 35% when evaluating the laboratory duplicate samples, QATS validated the serial dilution samples using the expanded criteria allowed in the NFG. This resulted in the removal of 323 J qualifiers from affected metals results for associated serial dilution %Ds that were greater than 10% but less than 15%.

In the PAH fraction, the EDS validators qualified all sample results associated with the deuterated monitoring compound (DMC) 4-chloroaniline-d4 (4CA) as rejected R when the recovery of 4CA was listed as zero (0) on the FORM II DMC report form. The three compounds affected were 4-chloroaniline, hexachlorocyclopentadiene, and 3,3'-dichlorobenzidine. However, since the acceptable %R range for this DMC is 1-145%, an R qualification for the three identified compounds is considered too severe based on the 0% recovery for 4CA. The QATS validators changed the qualifiers for these compounds in 148 samples from R rejected to UJ estimated because the lower acceptable limit for this DMC is so low. The semivolatiles fraction of the organic NFG states, "for %R < Lower Acceptance Limit, qualify non-detected associated compounds UJ or R."

Two closing continuing calibration verification (CCV) standards for the PAH fraction were analyzed by the laboratory at the end of every 12-hour sequence. The project method (SOM01.2) and QAPP (EA Project No. 62561.10, Revision 0, March 2013) both state that this is an acceptable practice. It appears that the EDS validators qualified the sample data results using the closing CCV that had the higher number of compounds not meeting QC criteria (worst case scenario). Since it is an acceptable practice to analyze two closing CCVs, the QATS validators qualified the sample data results using whichever closing CCV had the fewest number of compounds failing QC criteria. As a result, the qualifiers for 66 results from 61 samples were removed.

Results: Data validation verification was performed on all 2,603 analyses, totaling 54,420 results, 49,433 are analytical sample results and 4,987 are QC results (MB and LCS) from the 409 project samples. Of the 49,433 analytical results, 47,914 originally validated analytical results and qualifiers were verified to be correct. Revisions were required for 1,519 of the 49,433 result qualifiers (3.1%). The revisions made by the QATS validators included changing, adding, or removing select qualifiers from the validated data or changing the YES to NO (or vice versa) in the reportable result column.

A summary of the QATS-revised data qualifiers by SDG and fraction was prepared and is presented in tabular form in the next 26 pages of this report. Changes to the qualifiers were also applied to the Region 5 EDD file. Changes to the EDD file that accompany this report are highlighted in blue.

DATA QUALIFICATION CHANGES SUMMARY TABLE

SDG/Fraction	Analyte/ Compound	Original Qualifier	Revised Qualifier	EPA Sample IDs	QATS Justification for EDD Revision
16948 METALS	Chromium	J	None	LMR13-05-012 LMR13-09-012 LMR13-10-012 LMR13-17-012 LMR13-23-012 LMR13-06-012 LMR13-18-012 LMR13-19-012 LMR13-19-012FD LMR13-20-012 LMR13-02-012 LMR13-02-012FD LMR13-11-012 LMR13-12-012 LMR13-16-012 LMR13-24-012	J qualifiers that were originally applied to samples for which the serial dilution %D exceeded 10% were removed if less than the expanded NFG criterion of ±15%D. The %D for the analytes listed is <15%; therefore, the J qualifiers were removed (unless the result was between the MDL and CRQL).
16948 PAH	4-Chloroaniline Hexachlorocyclopentadiene 3,3'-Dichlorobenzidine	R	UJ	LMR13-12-012 LMR13-18-012 LMR13-19-012 LMR13-20-012	The R qualifiers originally assigned to the listed compounds in samples with a 0% R for the DMC 4-Chloroaniline-d_4 were replaced with a UJ due to the low (1%R) acceptance criteria for this DMC.
16948 PAH	Bis(2-ethylhexyl)phthalate	None	U	LMR13-09-012 LMR13-17-012 LMR13-06-012 LMR13-19-012	In accordance with the Organic NFG, results less than 5x the CRQL were qualified with a U when bis(2-ethylhexyl) phthalate was detected in the method blank.
16948 OIL AND GREASE	HEM	J UJ	None U	LMR13-20-012 LMR13-20-012FD	The original validators did not use the actual field duplicate (FD) value of 402 mg/kg for this sample to calculate the HEM %RPD for LMR13-20-012 field duplicate analysis; instead they compared a non-detected value assigned due to blank contamination which resulted in an RPD of 200%. Since the 402 mg/kg value is over the CRQL of 200 mg/kg, QATS used this value to calculate an RPD of 43.4%. The J qualifier for LMR13-20-012 and the J added to the U qualifier for LMR13-20-012FD were removed.
16995 METALS	Cadmium Chromium Zinc	J	None	LMR13-42-012 LMR13-42-024 LMR13-42-048 LMR13-42-072 LMR13-42-096 LMR13-43-012 LMR13-43-024 LMR13-43-024FD LMR13-43-048 LMR13-43-096 LMR13-44-012	J qualifiers that were originally applied to samples for which the serial dilution %D exceeded 10% were removed if less than the expanded NFG criterion of ±15%D. The %D for the analytes listed is <15%; therefore, the J qualifiers were removed (unless the result was between the MDL and CRQL).
16995 METALS	Copper	J	None	LMR13-42-120 LMR13-43-072	J qualifiers that were originally applied to samples for which the serial dilution %D exceeded 10% were removed if less than the expanded

DATA QUALIFICATION CHANGES SUMMARY TABLE

SDG/Fraction	Analyte/ Compound	Original Qualifier	Revised Qualifier	EPA Sample IDs	QATS Justification for EDD Revision
				LMR13-43-120 LMR13-44-024 LMR13-44-048 LMR13-44-048FD	NFG criterion of ±15%D. The %D for the analytes listed is <15%; therefore, the J qualifiers were removed (unless the result was between the MDL and CRQL).
16995 AROCLOR	Aroclor-1254	None	J	LMR13-43-024FD	The original validators did not qualify the Aroclor-1254 result for the DCB failure due to the 5x dilution. The result was J-qualified by QATS due to the low dilution factor and DCB %R failure in the original analysis.
16995 PAH	Bis(2-ethylhexyl)phthalate	None	U	LMR13-42-024 LMR13-42-024FD LMR13-43-096 LMR13-43-120	In accordance with the Organic NFG, results less than 5x the CRQL were qualified with a U when bis(2-ethylhexyl) phthalate was detected in the method blank.
16995 PAH	Hexachlorocyclopentadiene	U	UJ	LMR13-42-096 LMR13-43-024 LMR13-43-048 LMR13-43-120 LMR13-44-024FD	The original validators did not qualify all of the associated samples for the hexachlorocyclopentadiene closing CCV %D failure.
16995 PAH	Anthracene Phenanthrene	None	J	LMR13-42-096	Four DMC percent recoveries for sample LMR13-42-096 exceeded the upper control limits. The sample was analyzed at a 2.5x dilution. Detected results were qualified J due to the high percent recoveries.
16995 PAH	4-Chloroaniline Hexachlorocyclopentadiene 3,3'-Dichlorobenzidine	R	UJ	LMR13-44-024 LMR13-44-048	The R qualifiers originally assigned to the listed compounds in samples with a 0% R for the DMC 4-Chloroaniline-d_4 were replaced with a UJ due to the low (1%R) acceptance criteria for this DMC.
16995 OIL AND GREASE	HEM	U	J	LMR13-44-024 LMR13-44-024FD	Trace levels of HEM were detected in two of the three method blanks. The original validators incorrectly qualified two samples in the batch that was associated with the clean blank. The U qualifiers were removed from the two samples and the results returned to the original value with the original J qualifier.
16999 METALS	Copper	J	None	LMR13-44-072 LMR13-44-096 LMR13-46-012 LMR13-46-024 LMR13-46-048 LMR13-46-072 LMR13-46-096 LMR13-46-120 LMR13-81-012 LMR13-81-024 LMR13-81-048 LMR13-81-072 LMR13-81-096 LMR13-81-120	J qualifiers that were originally applied to samples for which the serial dilution %D exceeded 10% were removed if less than the expanded NFG criterion of ±15%D. The %D for the analytes listed is <15%; therefore, the J qualifiers were removed (unless the result was between the MDL and CRQL).
16999 MERCURY	Mercury	J	U	LMR13-44-072 LMR13-44-096	Trace level of mercury between the MDL and CRQL was detected in the CCB. The original validation did not report or qualify for the

DATA QUALIFICATION CHANGES SUMMARY TABLE

SDG/Fraction	Analyte/ Compound	Original Qualifier	Revised Qualifier	EPA Sample IDs	QATS Justification for EDD Revision
					calibration blank contamination. The results for two samples have been adjusted to the CRQL and qualified "U".
16999 PAH	4-Chloroaniline Hexachlorocyclopentadiene 3,3'-Dichlorobenzidine	R	UJ	LMR13-44-072 LMR13-44-096	The R qualifiers originally assigned to the listed compounds in samples with a 0% R for the DMC 4-Chloroaniline-d_4 were replaced with a UJ due to the low (1%R) acceptance criteria for this DMC.
16999 PAH	Pentachlorophenol	U	UJ	LMR13-46-120	The original validators did not report or qualify the associated sample for the pentachlorophenol closing CCV %D failure.
16999 PAH	Bis(2-ethylhexyl)phthalate	None	U	LMR13-81-012FD	In accordance with the Organic NFG, results less than 5x the CRQL were qualified with a U when bis(2-ethylhexyl) phthalate was detected in the method blank.
16999 PAH SIM	Fluorene Anthracene Benzo(b)fluoranthene Benzo(k)fluoranthene Benzo(e)pyrene Perylene Indeno (1,2,3-cd)pyrene Benzo(g,h,i)perylene	None	J	LMR13-81-012	The dilution for LMR13-81-012 was analyzed 41 days after extraction, which exceeds the analysis holding time by 1 day. Compounds reported from the diluted sample were qualified J.
16999 PAH SIM	Fluorene Acenaphthene Anthracene Benzo(b)fluoranthene Benzo(k)fluoranthene Benzo(e)pyrene Benzo(a)pyrene Perylene Indeno (1,2,3-cd)pyrene Benzo(g,h,i)perylene	None	J	LMR13-81-012FD	The dilution for LMR13-81-012FD was analyzed 41 days after extraction, which exceeds the analysis holding time by 1 day. Compounds reported from the diluted sample were qualified J.
17010 METALS	Copper	J	None	LMR13-93-012 LMR13-93-024 LMR13-93-048 LMR13-93-072 LMR13-93-096 LMR13-93-120 LMR13-62-024FD LMR13-90-024FD LMR13-62-024 LMR13-90-012 LMR13-90-024 LMR13-90-048 LMR13-90-072 LMR13-62-012 LMR13-62-048 LMR13-62-072	J qualifiers that were originally applied to samples for which the serial dilution %D exceeded 10% were removed if less than the expanded NFG criterion of ±15%D. The %D for the analytes listed is <15%; therefore, the J qualifiers were removed (unless the result was between the MDL and CRQL).

DATA QUALIFICATION CHANGES SUMMARY TABLE

SDG/Fraction	Analyte/ Compound	Original Qualifier	Revised Qualifier	EPA Sample IDs	QATS Justification for EDD Revision
				LMR13-62-096 LMR13-91-024 LMR13-91-048 LMR13-47-012 LMR13-91-012	
17010 PAH	4-Chlorophenyl-phenlyether	U	UJ	LMR13-93-012 LMR13-93-024 LMR13-93-048 LMR13-93-072 LMR13-93-096 LMR13-93-120 LMR13-62-024 LMR13-90-012 LMR13-90-024 LMR13-90-048 LMR13-90-072 LMR13-62-012 LMR13-62-048 LMR13-62-072 LMR13-62-096 LMR13-91-024 LMR13-91-048 LMR13-47-012 LMR13-91-012 LMR13-90-048FD LMR13-90-012FD LMR13-93-024FD	The original validators did not report or qualify the associated samples for the initial calibration %RSD failures.
17010 PAH	4-Chloroaniline Hexachlorocyclopentadiene 3,3'-Dichlorobenzidine	R	UJ	LMR13-93-096 LMR13-62-024 LMR13-90-012 LMR13-90-048 LMR13-62-048 LMR13-62-096 LMR13-91-048 LMR13-47-012 LMR13-91-012 LMR13-90-012FD	The R qualifiers originally assigned to the listed compounds in samples with a 0% R for the DMC 4-Chloroaniline-d_4 were replaced with a UJ due to the low (1%R) acceptance criteria for this DMC.
17010 PAH SIM	Phenanthrene Fluoranthene Pyrene Benzo(a)anthracene Chrysene Benzo(b)fluoranthene Benzo(k)fluoranthene Benzo(e)pyrene	None	J	LMR13-90-012FD	The sample was analyzed 41 days after extraction, which exceeds the analysis holding time by 1 day. Detected compounds reported from this sample were qualified J.

DATA QUALIFICATION CHANGES SUMMARY TABLE

SDG/Fraction	Analyte/ Compound	Original Qualifier	Revised Qualifier	EPA Sample IDs	QATS Justification for EDD Revision
	Benzo(a)pyrene Perylene				
17010 PAH SIM	Naphthalene C1 Naphthalenes C1 Fluorenes	U	UJ	LMR13-90-012FD	The sample was analyzed 41 days after extraction, which exceeds the analysis holding time by 1 day. Non-detected compounds reported from this sample were qualified UJ.
17010 OIL AND GREASE	HEM	U	UJ	LMR13-62-072 LMR13-91-024 LMR13-91-048 LMR13-91-012 LMR13-91-024FD	These samples were extracted outside of the QAPP-required 14-day holding time for oil and grease. The non-detect samples were qualified UJ.
17010 OIL AND GREASE	HEM	None	J	LMR13-47-012 LMR13-90-048FD LMR13-93-024FD	These samples were extracted outside of the QAPP-required 14-day holding time for oil and grease. The detect samples were qualified J.
17014 METALS	Cadmium	J	UJ	LMR13-51-024FD LMR13-51-024 LMR13-51-048 LMR13-51-072	Trace levels of cadmium between the MDL and CRQL were detected in the ICB and CCBs. The original validation did not report or qualify for this calibration blank contamination. The results for four samples have been adjusted to the CRQL and qualified U. The J is added for the serial dilution exceeding criteria.
17014 MERCURY	Mercury	J	U	LMR13-47-024 LMR13-47-048 LMR13-47-096 LMR13-51-048	Trace levels of mercury between the MDL and CRQL were detected in the ICB and CCBs. The original validation did not report or qualify for this calibration blank contamination. The results for four samples have been adjusted to the CRQL and qualified U.
17014 PAH	4-Chloroaniline Hexachlorocyclopentadiene 3,3'-Dichlorobenzidine	R	UJ	LMR13-91-072 LMR13-91-096 LMR13-47-024 LMR13-47-048 LMR13-47-072 LMR13-47-096 LMR13-63-012 LMR13-63-024 LMR13-63-048 LMR13-63-072 LMR13-63-096 LMR13-51-012 LMR13-51-024 LMR13-51-048 LMR13-63-024FD LMR13-51-012FD	The R qualifiers originally assigned to the listed compounds in samples with a 0% R for the DMC 4-Chloroaniline-d_4 were replaced with a UJ due to the low (1%R) acceptance criteria for this DMC.
17014 PAH	Bis(2-ethylhexyl)phthalate	None	U	LMR13-47-120 LMR13-63-024 LMR13-63-048	In accordance with the Organic NFG, results less than 5x the CRQL were qualified with a U when bis(2-ethylhexyl) phthalate was detected in the method blank.
17014 PAH	Hexachlorobutadiene	U	UJ	LMR13-91-072 LMR13-63-096	The original validators did not report or qualify the associated samples for the hexachlorobutadiene closing CCV %D failure.

DATA QUALIFICATION CHANGES SUMMARY TABLE

SDG/Fraction	Analyte/ Compound	Original Qualifier	Revised Qualifier	EPA Sample IDs	QATS Justification for EDD Revision
17014 PAH	Pyrene	None	J	LMR13-91-072	The original validators did not report or qualify the associated sample results for the Pyrene-d_{10} low DMC percent recovery.
17014 OIL AND GREASE	HEM	None	J	LMR13-91-072 LMR13-91-096 LMR13-47-024 LMR13-47-048 LMR13-47-072 LMR13-47-096	These samples were extracted outside of the QAPP-required 14-day holding time for oil and grease. The samples were qualified J.
17024 MERCURY	Mercury	None	J	LMR13-45-024FD	The original validator did not qualify mercury for a field duplicate RPD > 100%. A J qualifier was assigned.
17024 AROCLOR	Aroclor-1248	None	J	LMR13-45-048 LMR13-45-072	The original validator did not qualify for four CCV failures. Several results are already qualified J for other reasons. The QATS validator added a J qualifier to two samples.
17024 PAH	4-Chloroaniline Hexachlorocyclopentadiene 3,3'-Dichlorobenzidine	R	UJ	LMR13-45-012 LMR13-45-024RE LMR13-45-048 LMR13-49-048 LMR13-83-024 LMR13-50-024FD LMR13-83-024FD	The R qualifiers originally assigned to the listed compounds in samples with a 0% R for the DMC 4-Chloroaniline-d_4 were replaced with a UJ due to the low (1%R) acceptance criteria for this DMC.
17024 PAH	Bis(2-ethylhexyl)phthalate	None	U	LMR13-50-096 LMR13-50-120	In accordance with the Organic NFG, results less than 5x the CRQL were qualified with a U when bis(2-ethylhexyl) phthalate was detected in the method blank.
17024 PAH	1,2,4,5-Tetrachlorobenzene	UJ	U	LMR13-45-048 LMR13-45-072RE LMR13-45-120	Internal standard Phenanthrene-d10 exceeded criteria and associated compounds were qualified. 1,2,4,5-tetrachlorobenzene was incorrectly included in the qualified compounds. The J was removed from the UJ qualifier by the QATS validator.
17024 PAH	2,4-Dinitrophenol	UJ	U	LMR13-49-024 LMR13-49-048 LMR13-49-072 LMR13-50-120 LMR13-49-096 LMR13-49-120 LMR13-83-012 LMR13-83-024	The original validators qualified 2,4-Dinitrophenol UJ due to a closing CCV failure. The laboratory analyzed two closing CCVs. 2,4-dinitrophenol was within criteria in the first CCV and out in the second CCV (50.2 %D). The J was removed from the UJ qualifier by the QATS validators due to the passing %D in the first CCV.
17028 METALS	Chromium Zinc	J	None	LMR13-83-048 LMR13-83-072 LMR13-41-012 LMR13-41-024 LMR13-41-024FD LMR13-41-048 LMR13-57-012 LMR13-26-012 LMR13-26-012FD	J qualifiers that were originally applied to samples for which the serial dilution %D exceeded 10% were removed if less than the expanded NFG criterion of ±15%D. The %D for the analytes listed is <15%; therefore, the J qualifiers were removed (unless the result was between the MDL and CRQL).

DATA QUALIFICATION CHANGES SUMMARY TABLE

SDG/Fraction	Analyte/ Compound	Original Qualifier	Revised Qualifier	EPA Sample IDs	QATS Justification for EDD Revision
				LMR13-57-024 LMR13-57-048 LMR13-72-048 LMR13-27-012 LMR13-27-024 LMR13-27-024FD LMR13-27-048 LMR13-27-072 LMR13-72-012 LMR13-72-024 LMR13-72-024FD LMR13-72-096 LMR13-27-096 LMR13-72-072	
17028 MERCURY	Mercury	U	J	LMR13-26-012FD LMR13-57-048 LMR13-27-012 LMR13-27-072 LMR13-72-012	Trace levels of mercury were detected in one method blank. The original validators incorrectly qualified five samples that were in the batch associated with the clean blank. The U qualifiers were removed from the five samples and the results returned to the original value with the original J qualifier. Note that the original results for LMR13-27-072 and LMR13-72-012 were detects. A J qualifier was applied to those samples for failed matrix spike percent recovery.
17028 PAH	4-Chloroaniline Hexachlorocyclopentadiene 3,3'-Dichlorobenzidine	R	UJ	LMR13-83-048 LMR13-41-012 LMR13-41-048 LMR13-26-012 LMR13-26-012FD LMR13-27-048 LMR13-27-072 LMR13-72-012 LMR13-27-096 LMR13-72-072	The R qualifiers originally assigned to the listed compounds in samples with a 0% R for the DMC 4-Chloroaniline-d_4 were replaced with a UJ due to the low (1%R) acceptance criteria for this DMC.
17028 PAH	2-Methylphenol 4-Methlyphenol 2,4-Dimethylphenol	R	UJ	LMR13-83-048 LMR13-27-096	The R qualifier that was applied for the DMC recovery of 2% for 4-Methlyphenol-d_8 was replaced with a UJ because the lower acceptance criterion is 8%. Note for LMR13-27-096 the original validators qualified the compounds R on the report forms; however, the qualifiers were not applied in the EDD file. The UJ qualifier was added by the QATS validator.
17028 PAH	Bis(2-ethylhexyl)phthalate	None	U	LMR13-26-012 LMR13-27-012 LMR13-72-012	In accordance with the Organic NFG, results less than 5x the CRQL were qualified with a U when bis(2-ethylhexyl) phthalate was detected in the method blank.
17028 PAH	Bis(2-ethylhexyl)phthalate	J	U	LMR13-41-012 LMR13-26-012FD LMR13-57-048 LMR13-27-048 LMR13-27-072	Bis(2-ethylhexyl) phthalate was detected in all three method blanks; however, five samples were not qualified U. For these samples the value was changed to the CRQL and qualified U. Note the laboratory did not apply the B to the Lab qualifiers.

DATA QUALIFICATION CHANGES SUMMARY TABLE

SDG/Fraction	Analyte/ Compound	Original Qualifier	Revised Qualifier	EPA Sample IDs	QATS Justification for EDD Revision
17028 PAH	Di-n-butylphthalate Butylbenzylphthalate	J	U	LMR13-26-012FD LMR13-57-048 LMR13-27-012 LMR13-27-048 LMR13-27-072	Di-n-butylphthalate and butylbenzylphthalate were detected in the associated blank; however, five samples were not qualified U. For these samples the value was changed to the CRQL and qualified U. Note the laboratory did not apply the B to in the lab qualifier column for these samples.
17052 METALS	Cadmium	J	U	LMR13-29-096	Trace levels of cadmium between the MDL and CRQL were detected in the CCBs. The original validation did not report or qualify for this calibration blank contamination. The result for one sample was adjusted to the CRQL and qualified U.
17052 MERCURY	Mercury	J	U	LMR13-28-048	Trace level of mercury between the MDL and CRQL was detected in the CCB. The original validation did not report or qualify for this calibration blank contamination. The result for one sample was changed to the CRQL and qualified U.
17052 AROCLOR	Aroclor-1242	None	J	LMR13-29-048	The original validator did not qualify for a CCV %D failure. One result was already qualified J for another reason. The QATS validator added a J qualifier to one other sample.
17052 PAH	4-Chloroaniline Hexachlorocyclopentadiene 3,3'-Dichlorobenzidine	R	UJ	LMR13-28-012 LMR13-28-024 LMR13-28-048 LMR13-28-120 LMR13-29-012 LMR13-29-024 LMR13-34-012 LMR13-34-024 LMR13-34-048 LMR13-34-072 LMR13-34-096 LMR13-28-024FD LMR13-34-024FD	The R qualifiers originally assigned to the listed compounds in samples with a 0% R for the DMC 4-Chloroaniline-d_4 were replaced with a UJ due to the low (1%R) acceptance criteria for this DMC.
17052 PAH	Pentachlorophenol	UJ	U	LMR13-28-012 LMR13-28-048 LMR13-28-024 LMR13-28-072 LMR13-28-096 LMR13-28-120 LMR13-29-012 LMR13-29-024 LMR13-29-048 LMR13-29-072 LMR13-29-096 LMR13-34-012	The original validators qualified pentachlorophenol UJ due to a closing CCV %D failure. The laboratory analyzed two closing CCVs. Pentachlorophenol was within criteria in the first CCV and out in the second CCV (50.2 %D). The J was removed from the UJ qualifier by the QATS validators due to the passing %D in the first CCV.
17054 AROCLOR	Aroclor-1016 Aroclor-1260	U	UJ	LMR13-32-012 LMR13-32-024 LMR13-32-048	The original validator did not report or qualify for CCV %D failures. The QATS validator added a J qualifier to the existing U for two compounds in five associated samples.

DATA QUALIFICATION CHANGES SUMMARY TABLE

SDG/Fraction	Analyte/ Compound	Original Qualifier	Revised Qualifier	EPA Sample IDs	QATS Justification for EDD Revision
				LMR13-32-072 LMR13-75-024	
17054 AROCLOR	Aroclor-1016	U	UJ	LMR13-31-012 LMR13-31-024 LMR13-31-024FD LMR13-74-024	The original validator did not report or qualify for CCV %D failures. The QATS validator added a J qualifier to the existing U for one compound in four associated samples.
17054 PAH	4-Chloroaniline Hexachlorocyclopentadiene 3,3'-Dichlorobenzidine	R	UJ	LMR13-31-024 LMR13-74-024 LMR13-74-012 LMR13-74-072 LMR13-76-012 LMR13-35-012 LMR13-75-024FD	The R qualifiers originally assigned to the listed compounds in samples with a 0% R for the DMC 4-Chloroaniline-d_4 were replaced with a UJ due to the low (1%R) acceptance criteria for this DMC.
17054 PAH	Bis(2-ethylhexyl)phthalate	None	U	LMR13-34-168 LMR13-31-012 LMR13-74-024 LMR13-76-012 LMR13-76-024 LMR13-35-012	In accordance with the Organic NFG, results less than 5x the CRQL were qualified with a U when bis(2-ethylhexyl) phthalate was detected in the method blank.
17054 PAH	Nitrobenzene	U	UJ	LMR13-32-012 LMR13-32-024 LMR13-32-048 LMR13-32-072 LMR13-75-024 LMR13-31-012 LMR13-31-024 LMR13-74-024 LMR13-75-012 LMR13-74-012 LMR13-74-048 LMR13-74-072 LMR13-76-012	The original validator did not qualify nitrobenzene for opening CCV %D failure. The QATS validator added a J qualifier to the existing U in the associated samples.
17054 PAH	2,4-Dinitrophenol	UJ	U	LMR13-32-012 LMR13-32-024 LMR13-32-048 LMR13-32-072 LMR13-75-024 LMR13-31-012 LMR13-31-024 LMR13-74-024 LMR13-75-012 LMR13-74-012 LMR13-74-048 LMR13-74-072 LMR13-76-012	The original validators qualified 2,4-Dinitrophenol UJ due to a closing CCV failure. The laboratory analyzed two closing CCVs. 2,4-dinitrophenol was within criteria in the second CCV and out in the first CCV. The J was removed from the UJ qualifier by the QATS validators due to the passing %D in the second CCV.

DATA QUALIFICATION CHANGES SUMMARY TABLE

SDG/Fraction	Analyte/ Compound	Original Qualifier	Revised Qualifier	EPA Sample IDs	QATS Justification for EDD Revision
17054 PAH	3,3'-Dichlorobenzidine	U	UJ	LMR13-76-024 LMR13-35-024	The original validator did not report or qualify 3,3'-Dichlorobenzidine for opening CCV %D failure. The QATS validator added a J qualifier to the existing U in the associated samples.
17055 METALS	Lead	J	None	LMR13-48-072 LMR13-48-096 LMR13-48-120 LMR13-48-144 LMR13-48-168 LMR13-82-012 LMR13-82-024 LMR13-82-024FD LMR13-82-072 LMR13-03-012 LMR13-03-024 LMR13-03-048 LMR13-03-072 LMR13-03-096 LMR13-03-120 LMR13-82-048 LMR13-82-096 LMR13-82-120 LMR13-82-144	J qualifiers that were originally applied to samples for which the serial dilution %D exceeded 10% were removed if less than the expanded NFG criterion of ±15%D. The %D for the analytes listed is <15%; therefore, the J qualifiers were removed (unless the result was between the MDL and CRQL).
17055 MERCURY	Mercury	J	U	LMR13-03-120	Trace levels of mercury between the MDL and CRQL were detected in the ICB and CCBs. The original validation did not report or qualify for this calibration blank contamination. The result for one sample has been adjusted to the CRQL and qualified U.
17055 AROCLOR	Aroclor-1016 Aroclor-1260	U	UJ	LMR13-48-072 LMR13-48-096 LMR13-48-120 LMR13-48-144 LMR13-48-168	The original validator did not report or qualify for CCV %D failures. The QATS validator added a J qualifier to the existing U for two compounds in five associated samples.
17055 AROCLOR	Aroclor-1242	U	UJ	LMR13-82-012 LMR13-82-024 LMR13-82-024FD LMR13-82-072 LMR13-03-024 LMR13-03-048 LMR13-03-072 LMR13-03-096 LMR13-03-120 LMR13-82-048 LMR13-82-096 LMR13-82-120 LMR13-82-144	The original validator did not report or qualify for CCV %D failures. The QATS validator added a J qualifier to the existing U.
17055 AROCLOR	Aroclor-1248	None	J	LMR13-82-012	The original validator did not report or qualify for CCV %D failures.

DATA QUALIFICATION CHANGES SUMMARY TABLE

SDG/Fraction	Analyte/ Compound	Original Qualifier	Revised Qualifier	EPA Sample IDs	QATS Justification for EDD Revision
				LMR13-82-024 LMR13-82-024FD	The QATS validator added a J qualifier.
17055 AROCLOR	Aroclor-1248	U	UJ	LMR13-82-072 LMR13-03-012 LMR13-03-024 LMR13-03-048 LMR13-03-072 LMR13-03-096 LMR13-03-120 LMR13-82-048 LMR13-82-096 LMR13-82-120 LMR13-82-144	The original validator did not report or qualify for CCV %D failures. The QATS validator added a J qualifier to the existing U.
17055 PAH	4-Chloroaniline Hexachlorocyclopentadiene 3,3'-Dichlorobenzidine	R	UJ	LMR13-48-072 LMR13-48-120 LMR13-48-144 LMR13-82-012 LMR13-82-024 LMR13-03-024FD LMR13-82-096 LMR13-82-120 LMR13-82-144	The R qualifiers originally assigned to the listed compounds in samples with a 0% R for the DMC 4-Chloroaniline-d_4 were replaced with a UJ due to the low (1%R) acceptance criteria for this DMC.
17055 PAH	Bis(2-ethylhexyl)phthalate	None	U	LMR13-03-012	In accordance with the Organic NFG, results less than 5x the CRQL were qualified with a U when bis(2-ethylhexyl) phthalate was detected in the method blank.
17055 PAH SIM	Naphthalene 1-Methylnaphthalene 2-Methylnaphthalene Acenaphthylene Acenaphthene Fluorene Anthracene Perylene Dibenzo(a,h)anthracene	None	J	LMR13-82-012 LMR13-03-012	The sample was analyzed 43 days after extraction, which exceeds the analysis holding time by 3 days. Detected compounds (not already qualified J) reported from this sample were qualified J.
17055 OIL AND GREASE	HEM	None	J	LMR13-03-048	These samples were extracted outside of the QAPP-required 14-day holding time for oil and grease. The samples were qualified J.
17055 OIL AND GREASE	HEM	U	UJ	LMR13-03-072 LMR13-03-096 LMR13-03-120	These samples were extracted outside of the QAPP-required 14-day holding time for oil and grease. The samples were qualified UJ.
17056 METALS	Zinc	J	None	LMR13-35-024FD LMR13-35-048 LMR13-76-024FD LMR13-76-048 LMR13-76-072	J qualifiers that were originally applied to samples for which the serial dilution %D exceeded 10% were removed if less than the expanded NFG criterion of ±15%D. The %D for the analytes listed is <15%; therefore, the J qualifiers were removed (unless the result was between the MDL and CRQL).

DATA QUALIFICATION CHANGES SUMMARY TABLE

SDG/Fraction	Analyte/ Compound	Original Qualifier	Revised Qualifier	EPA Sample IDs	QATS Justification for EDD Revision
				LMR13-35-072 LMR13-35-096 LMR13-77-012 LMR13-77-024 LMR13-77-048 LMR13-77-072 LMR13-38-024 LMR13-38-072 LMR13-78-012 LMR13-78-024 LMR13-78-024FD LMR13-40-012 LMR13-40-024 LMR13-79-048 LMR13-79-048FD	
17056 MERCURY	Mercury	U	None	LMR13-35-024FD LMR13-35-048 LMR13-38-024	Trace level of mercury between the MDL and CRQL was detected in the MB. The original validation qualified results greater than the CRQL and greater than 5x the blank level as U. The U qualifier was removed.
17056 AROCLOR	Aroclor-1254	None	J	LMR13-35-024FD	The original validator did not qualify for CCV %D failures. A J qualifier was added.
17056 PAH SIM	Fluoranthene Pyrene Chrysene Benzo(g,h,i)perylene	None	J	LMR13-78-012	The sample was analyzed 48 days after extraction, which exceeds the analysis holding time by 8 days. Detected compounds (not already qualified J) reported from this sample were qualified J.
17056 PAH SIM	Naphthalene Acenaphthylene Phenanthrene Benzo(a)pyrene C1-Naphthalenes	U	UJ	LMR13-78-012	The sample was analyzed 48 days after extraction, which exceeds the analysis holding time by 8 days. Non-detected compounds were qualified UJ.
17056 PAH	4-Chloroaniline Hexachlorocyclopentadiene 3,3'-Dichlorobenzidine	R	UJ	LMR13-35-048 LMR13-77-012 LMR13-38-024 LMR13-38-024FD LMR13-77-024FD LMR13-40-012 LMR13-40-024FD	The R qualifiers originally assigned to the listed compounds in samples with a 0% R for the DMC 4-Chloroaniline-d_4 were replaced with a UJ due to the low (1%R) acceptance criteria for this DMC.
17056 PAH	Bis(2-ethylhexyl)phthalate	None	U	LMR13-76-048 LMR13-76-072	In accordance with the Organic NFG, results less than 5x the CRQL were qualified with a U when bis(2-ethylhexyl) phthalate was detected in the method blank.
17061 AROCLOR	Aroclor-1016 Aroclor-1260	U	UJ	LMR13-79-072 LMR13-79-096 LMR13-38-012 LMR13-40-072	The original validators did not report or qualify the associated samples for the Aroclor-1016 and Aroclor-1260 CCV %D failure.

DATA QUALIFICATION CHANGES SUMMARY TABLE

SDG/Fraction	Analyte/ Compound	Original Qualifier	Revised Qualifier	EPA Sample IDs	QATS Justification for EDD Revision
				LMR13-40-096 LMR13-79-012 LMR13-79-024 LMR13-01-072 LMR13-38-048 LMR13-38-096 LMR13-40-048	
17061 PAH SIM	Naphthalene 2-Methylnaphthalene Acenaphthylene Benzo(e)pyrene Perylene Indeno(1,2,3-cd)pyrene Dibenzo(a,h)anthracene Benzo(g,h,i)perylene	None	J	LMR13-01-012	The sample was analyzed 42 days after extraction, which exceeds the 40-day analytical holding time. The original validators did not qualify for the holding time exceedance. Compounds not already qualified J were qualified J.
17061 PAH	Benzo(b)fluoranthene Dibenzo(a,h)anthracene	U	UJ	LMR13-79-072 LMR13-79-096 LMR13-79-024 LMR13-38-096 LMR13-01-120	The original validators did not qualify the associated samples for the initial calibration %RSD failure.
17061 PAH	Dibenzo(a,h)anthracene	U	UJ	LMR13-01-096	The original validators did not qualify the associated samples for the initial calibration %RSD failure.
17061 PAH	Benzo(b)fluoranthene	None	J	LMR13-38-012 LMR13-40-072 LMR13-40-096 LMR13-79-012 LMR13-38-048 LMR13-01-012 LMR13-01-024 LMR13-01-048 LMR13-48-024 LMR13-48-012 LMR13-48-048 LMR13-48-024FD	The original validators did not qualify the associated samples for the initial calibration %RSD failure.
17061 PAH	4-Chloroaniline Hexachlorocyclopentadiene 3,3'-Dichlorobenzidine	R	UJ	LMR13-38-012 LMR13-01-072 LMR13-40-048	The R qualifiers originally assigned to the listed compounds in samples with a 0% R for the DMC 4-Chloroaniline-d_4 were replaced with a UJ due to the low (1%R) acceptance criteria for this DMC. (Unless the compound was a detected result qualified J).
17061 PAH	Di-n-octylphthalate	UJ	U	LMR13-38-048 LMR13-38-096 LMR13-40-048 LMR13-01-096 LMR13-01-120	The original validators qualified di-n-octylphthalate UJ due to a closing CCV %D failure. The laboratory analyzed two closing CCVs. Di-n-octylphthalate was within criteria in the second CCV and out in the first CCV (50.2 %D). The J was removed from the UJ qualifier by the QATS validators due to the passing %D in the second CCV.
17061 OIL AND	HEM	None	J	LMR13-79-072	These samples were extracted outside of the QAPP-required 14-day

DATA QUALIFICATION CHANGES SUMMARY TABLE

SDG/Fraction	Analyte/ Compound	Original Qualifier	Revised Qualifier	EPA Sample IDs	QATS Justification for EDD Revision
GREASE		or U	or UJ	LMR13-79-096 LMR13-38-012 LMR13-40-072 LMR13-40-096 LMR13-79-012 LMR13-79-024 LMR13-38-048 LMR13-38-096 LMR13-40-048	holding time for oil and grease. The samples were qualified J or UJ. Note that some of these samples were incorrectly qualified for MS/MSD recoveries in the EDD file. The qualifiers were highlighted blue to indicate the different reason for the qualification.
17061 OIL AND GREASE	HEM	J or UJ	None or U	LMR13-01-012 LMR13-01-024 LMR13-01-048 LMR13-01-096 LMR13-01-120 LMR13-48-012 LMR13-48-024 LMR13-48-048 LMR13-48-024FD LMR13-79-024FD	The samples were incorrectly qualified for MS/MSD recoveries. The MS/MSD recoveries were within criteria for the QC sample associated with these samples.
17071 PAH	All Compounds	U, J, or None	ZZZ	LMR13-13-024	The sample was reanalyzed due to low internal standard recoveries. The re-analysis produced better results; however, the reanalysis was not included in the EDD file. Upon request, the reanalysis EDD was sent to the QATS validators and incorporated into the Region 5 EDD. The original analysis was set to NO in the reportable result column and ZZZ were entered into the validator qualifier column. The reanalysis was set to YES in the reportable result column and validation qualifiers were added as needed.
17071 PAH	4-Chloroaniline Hexachlorocyclopentadiene 3,3'-Dichlorobenzidine	R	UJ	LMR13-08-048 LMR13-13-012 LMR13-13-024RE LMR13-14-120 LMR13-13-120 LMR13-14-096 LMR13-08-024 LMR13-25-072 LMR13-08-024FD LMR13-08-012 LMR13-14-012	The R qualifiers originally assigned to the listed compounds in samples with a 0% R for the DMC 4-Chloroaniline-d_4 were replaced with a UJ due to the low (1%R) acceptance criteria for this DMC.
17071 PAH	Bis(2-ethylhexyl)phthalate	None	U	LMR13-13-012 LMR13-08-024	In accordance with the Organic NFG, results less than 5x the CRQL were qualified with a U when bis(2-ethylhexyl) phthalate was detected in the method blank.
17071 SEM MERCURY	SEM Mercury	J	U	LMR13-25-012FD	Trace levels of mercury between the MDL and CRQL were detected in the ICB and CCB. The original validators did not qualify results for the calibration blank contamination. The result was changed to the CRQL and a U qualifier was applied.

DATA QUALIFICATION CHANGES SUMMARY TABLE

SDG/Fraction	Analyte/ Compound	Original Qualifier	Revised Qualifier	EPA Sample IDs	QATS Justification for EDD Revision
17071 OIL AND GREASE	HEM	None or U	J or UJ	LMR13-08-012 LMR13-14-012 LMR13-14-048 LMR13-14-072 LMR13-08-048 LMR13-08-072 LMR13-13-012 LMR13-13-024 LMR13-14-120 LMR13-13-072 LMR13-13-120 LMR13-14-096 LMR13-08-024 LMR13-03-024FD	These samples were extracted outside of the QAPP-required 14-day holding time for oil and grease. The samples were qualified J or UJ.
17078 METALS	Chromium Copper Zinc	J	None	LMR13-25-096 LMR13-13-048 LMR13-14-024 LMR13-71-012 LMR13-71-024 LMR13-71-048 LMR13-71-072 LMR13-07-024FD LMR13-71-024FD LMR13-07-012 LMR13-07-024 LMR13-07-048 LMR13-07-072 LMR13-21-048 LMR13-15-024FD LMR13-15-024 LMR13-21-012 LMR13-21-024 LMR13-21-072 LMR13-15-012	J qualifiers that were originally applied to samples for which the serial dilution %D exceeded 10% were removed if less than the expanded NFG criterion of ±15%D. The %D for the analytes listed is <15%; therefore, the J qualifiers were removed (unless the result was between the MDL and CRQL).
17078 AROCLOR	Aroclor-1016 Aroclor-1221 Aroclor-1232 Aroclor-1242 Aroclor-1262 Aroclor-1268	UJ	U	LMR13-13-048	Sample LMR13-13-048 was qualified UJ and J in the EDD file. The original validated Form I did not reflect qualifiers other than the U and J for the concentration qualifiers. The data validation report did not explain why qualifiers were entered for this sample. The QATS validators removed the J and left the original U.
17078 AROCLOR	Aroclor-1248 Aroclor-1254	J	None	LMR13-13-048	Sample LMR13-13-048 was qualified UJ and J in the EDD file. The original validated Form I did not reflect qualifiers other than the U and J for the concentration qualifiers. The data validation report did not explain why qualifiers were entered for this sample. The QATS validators removed the J qualifier.

DATA QUALIFICATION CHANGES SUMMARY TABLE

SDG/Fraction	Analyte/ Compound	Original Qualifier	Revised Qualifier	EPA Sample IDs	QATS Justification for EDD Revision
17078 PAH SIM	Benzo(e)pyrene Pyrene	None	J	LMR13-21-012 LMR13-15-012 LMR13-21-012FD	The original validator did not qualify benzo(e)pyrene or pyrene for opening CCV %D failure. J qualifiers were added to the associated samples.
17078 PAH	4-Chloroaniline Hexachlorocyclopentadiene 3,3'-Dichlorobenzidine	R	UJ	LMR13-71-024 LMR13-71-024FD LMR13-15-012	The R qualifiers originally assigned to the listed compounds in samples with a 0% R for the DMC 4-Chloroaniline-d_4 were replaced with a UJ due to the low (1%R) acceptance criteria for this DMC. (Unless the compound was a detected result qualified J).
17078 SEM MERCURY	SEM Mercury	J	U	LMR13-15-012	Trace levels of mercury between the MDL and CRQL were detected in the ICB and CCB. The original validators did not qualify results for the calibration blank contamination. The result was changed to the CRQL and a U qualifier was applied.
17083 METALS	Copper	J	None	LMR13-87-012 LMR13-87-024 LMR13-87-072 LMR13-87-096 LMR13-86-024FD LMR13-86-012 LMR13-86-024 LMR13-87-048 LMR13-87-120 LMR13-84-024FD LMR13-84-012 LMR13-84-024 LMR13-84-048 LMR13-84-072 LMR13-86-048 LMR13-86-096 LMR13-30-012 LMR13-30-024 LMR13-30-048	J qualifiers that were originally applied to samples for which the serial dilution %D exceeded 10% were removed if less than the expanded NFG criterion of ±15%D. The %D for the analytes listed is <15%; therefore, the J qualifiers were removed (unless the result was between the MDL and CRQL).
17083 PAH	4-Chloroaniline 3,3'-Dichlorobenzidine	R	U	LMR13-87-012 LMR13-87-048	The R qualifier that was applied for the DMC recovery of 0% for 4-Chloroaniline-d_4 was removed because the sample was run at a dilution and the DMC was diluted out. The QATS validator removed the R qualifier and changed it back to the original U.
17083 PAH	Hexachlorocyclopentadiene	R	UJ	LMR13-87-012 LMR13-87-048	The R qualifier that was applied for the DMC recovery of 0% for 4-Chloroaniline-d_4 was removed because the sample was run at a dilution and the DMC was diluted out. The R qualifier was removed and replaced with a UJ because the %D for hexachlorocyclopentadiene failed criteria in the closing CCVs.
17083 PAH	4-Chloroaniline Hexachlorocyclopentadiene 3,3'-Dichlorobenzidine	R	U	LMR13-87-072	The R qualifier that was applied for the DMC recovery of 0% for 4-Chloroaniline-d_4 was removed because the sample was run at a dilution and the DMC was diluted out. The QATS validator removed the R qualifier and changed it back to the original U.
17083 PAH	4-Chloroaniline	R	UJ	LMR13-84-012	The R qualifiers originally assigned to the listed compounds in

DATA QUALIFICATION CHANGES SUMMARY TABLE

SDG/Fraction	Analyte/ Compound	Original Qualifier	Revised Qualifier	EPA Sample IDs	QATS Justification for EDD Revision
	Hexachlorocyclopentadiene 3,3'-Dichlorobenzidine			LMR13-84-024 LMR13-84-048 LMR13-84-072	samples with a 0% R for the DMC 4-Chloroaniline-d_4 were replaced with a UJ due to the low (1%R) acceptance criteria for this DMC.
17083 PAH	Phenanthrene Anthracene	J	None	LMR13-87-048	The J qualifier that was applied for the DMC recovery for anthracene-d_{10} was removed because the sample was run at a dilution.
17083 PAH	Bis(2-ethylhexyl)phthalate	None	U	LMR13-87-012 LMR13-86-012	In accordance with the Organic NFG, results less than 5x the CRQL were qualified with a U when bis(2-ethylhexyl) phthalate was detected in the method blank.
17083 PAH	4-Nitroaniline	UJ	U	LMR13-84-012 LMR13-84-024 LMR13-84-048 LMR13-84-072 LMR13-86-048 LMR13-86-096 LMR13-30-024 LMR13-30-048 LMR13-30-024FD	The original validators qualified 4-Nitroaniline UJ due to a closing CCV %D failure. The laboratory analyzed two closing CCVs. 4-nitroaniline was within criteria in the first CCV and out in the second CCV (53.2 %D). The J was removed from the UJ qualifier due to the passing %D in the first CCV.
17083 PAH	Indeno(1,2,3-cd)pyrene Benzo(g,h,i)perylene	J	None	LMR13-86-048 LMR13-86-096 LMR13-30-024 LMR13-30-048 LMR13-30-024FD	The original validators qualified these compounds J based on a calibration that was not analyzed within the 12-hour window. The alternate continuing calibration standard was analyzed within the 12-hour window and was within criteria for these compounds. The QATS validators removed the J qualifiers.
17083 PAH	2,4-Dinitrophenol	UJ	U	LMR13-87-024 LMR13-87-096 LMR13-87-120	The original validators qualified 2,4-Dinitrophenol UJ due to a closing CCV %D failure. The laboratory analyzed two closing CCVs. 2,4-dinitrophenol was within criteria in the first CCV and out in the second CCV (50.5 %D). The J was removed from the UJ qualifier due to the passing %D in the first CCV.
17083 PAH	Fluoranthene Benzo(a)anthracene Chrysene	J	None	LMR13-86-096	The J qualifier that was applied for the DMC recovery for pyrene-d_{10} was removed because the sample was run at a dilution. Note that the pyrene result is qualified J due to an ICAL %RSD failure.
17083 SEM MERCURY	SEM Mercury	J	U	LMR13-86-012	Trace levels of mercury between the MDL and CRQL were detected in the ICB and CCB. The original validators did not qualify results for the calibration blank contamination. The result was changed to the CRQL and a U qualifier was applied.
17083 OIL AND GREASE	HEM	None or U	J or UJ	LMR13-87-012 LMR13-87-024 LMR13-87-072 LMR13-87-096 LMR13-86-012 LMR13-86-024 LMR13-87-048 LMR13-87-120 LMR13-87-024FD LMR13-84-012	These samples were extracted outside of the QAPP-required 14-day holding time for oil and grease. The samples were qualified J or UJ.

DATA QUALIFICATION CHANGES SUMMARY TABLE

SDG/Fraction	Analyte/ Compound	Original Qualifier	Revised Qualifier	EPA Sample IDs	QATS Justification for EDD Revision
				LMR13-84-024 LMR13-84-048 LMR13-84-072 LMR13-86-048 LMR13-86-096 LMR13-30-024 LMR13-30-048 LMR13-30-024FD	
17096 PAH	4-Chloroaniline Hexachlorocyclopentadiene 3,3'-Dichlorobenzidine	R	UJ	LMR13-39-048 LMR13-85-024 LMR13-67-012 LMR13-67-024 LMR13-67-048 LMR13-85-012 LMR13-89-024FD LMR13-85-024FD	The R qualifiers originally assigned to the listed compounds in samples with a 0% R for the DMC 4-Chloroaniline-d_4 were replaced with a UJ due to the low (1%R) acceptance criteria for this DMC. (Unless the compound was a detected result qualified J).
17096 PAH	Bis(2-ethylhexyl)phthalate	None	U	LMR13-85-024 LMR13-85-048 LMR13-85-024FD	In accordance with the Organic NFG, results less than 5x the CRQL were qualified with a U when bis(2-ethylhexyl) phthalate was detected in the method blank.
17096 PAH SIM	Benzo(e)pyrene	None	J	LMR13-88-012	The original validator did not report or qualify Benzo(e)pyrene for opening CCV %D failure. A J qualifier was assigned to the associated sample.
17096 SEM MERCURY	SEM Mercury	J	U	LMR13-39-012	Trace levels of mercury between the MDL and CRQL were detected in the ICB and CCB. The original validators did not qualify results for the calibration blank contamination. The result was changed to the CRQL and a U qualifier was applied.
17096 OIL AND GREASE	HEM	None or U	J or UJ	LMR13-55-048 LMR13-55-072 LMR13-89-012 LMR13-89-024 LMR13-39-048 LMR13-88-012 LMR13-88-024 LMR13-88-048 LMR13-39-012 LMR13-39-024 LMR13-39-072 LMR13-85-024 LMR13-85-048 LMR13-67-012 LMR13-67-024 LMR13-67-048 LMR13-85-012 LMR13-89-024FD LMR13-85-024FD	These samples were extracted outside of the QAPP-required 14-day holding time for oil and grease. The samples were qualified J or UJ.

DATA QUALIFICATION CHANGES SUMMARY TABLE

SDG/Fraction	Analyte/ Compound	Original Qualifier	Revised Qualifier	EPA Sample IDs	QATS Justification for EDD Revision
17099 METALS	Chromium	J	None	LMR13-86-072 LMR13-33-072 LMR13-33-096 LMR13-54-012 LMR13-54-024 LMR13-54-048 LMR13-33-024FD LMR13-33-024 LMR13-33-048 LMR13-54-072 LMR13-54-096 LMR13-54-120 LMR13-30-096 LMR13-30-120 LMR13-33-012 LMR13-55-012 LMR13-54-048FD LMR13-55-024FD LMR13-55-024 LMR13-30-072	J qualifiers that were originally applied to samples for which the serial dilution %D exceeded 10% were removed if less than the expanded NFG criterion of ±15%D. The %D for the analytes listed is <15%; therefore, the J qualifiers were removed (unless the result was between the MDL and CRQL).
17099 PAH	Phenanthrene Anthracene	J	None	LMR13-33-096	Phenanthrene and Anthracene were incorrectly qualified J by the original validators. These compounds are not associated with internal standards or DMC %R that failed criteria. There is no explanation for the qualifiers in the DVR, therefore the QATS validator removed the J qualifiers.
17099 PAH	Bis(2-ethylhexyl)phthalate	None	U	LMR13-86-072	In accordance with the Organic NFG, results less than 5x the CRQL were qualified with a U when bis(2-ethylhexyl) phthalate was detected in the method blank.
17099 PAH	4-Chloroaniline Hexachlorocyclopentadiene 3,3'-Dichlorobenzidine	R	UJ	LMR13-54-120	The R qualifiers originally assigned to the listed compounds in samples with a 0% R for the DMC 4-Chloroaniline-d_4 were replaced with a UJ due to the low (1%R) acceptance criteria for this DMC. (Unless the compound was a detected result qualified J).
17099 PAH SIM	Naphthalene 1-Methlynaphthalene 2-Methylnaphthalene Acenaphthene Fluorene Anthracene Benzo(e)pyrene Perylene Indeno(1,2,3-cd)pyrene Dibenzo(a,h)anthracene Benzo(g,h,i)perylene	None	J	LMR13-54-012 LMR13-33-012 LMR13-55-012	These samples were analyzed 47 or 48 days after extraction, which exceeds the analysis holding time by 7 or 8 days. Detected compounds (not already qualified J) reported from these samples were qualified J.

DATA QUALIFICATION CHANGES SUMMARY TABLE

SDG/Fraction	Analyte/ Compound	Original Qualifier	Revised Qualifier	EPA Sample IDs	QATS Justification for EDD Revision
17099 SEM MERCURY	SEM Mercury	J	U	LMR13-55-012	Trace levels of mercury between the MDL and CRQL were detected in the ICB and CCB. The original validators did not qualify results for the calibration blank contamination. The result was changed to the CRQL and a U qualifier was applied.
17099 OIL AND GREASE	HEM	J	J	LMR13-86-072 LMR13-33-072 LMR13-33-096 LMR13-54-012 LMR13-54-024 LMR13-54-048 LMR13-33-024FD LMR13-33-024 LMR13-33-048 LMR13-54-072 LMR13-54-096 LMR13-54-120 LMR13-30-096 LMR13-30-120 LMR13-33-012 LMR13-55-012 LMR13-33-048FD LMR13-54-024FD LMR13-55-024 LMR13-30-072	These samples were extracted outside of the QAPP-required 14-day holding time for oil and grease. The samples were already qualified J for failed MSD % recovery and %RPD in the EDD file. The qualifiers were highlighted blue to indicate another reason for the qualification.
17122 PAH	4-Chloroaniline Hexachlorocyclopentadiene 3,3'-Dichlorobenzidine	R	UJ	LMR13-64-012 LMR13-64-048 LMR13-64-048FD LMR13-67-072 LMR13-67-096 LMR13-64-024 LMR13-64-072 LMR13-64-096 LMR13-69-012 LMR13-69-048 LMR13-92-012 LMR13-92-024 LMR13-65-012 LMR13-65-024	The R qualifiers originally assigned to the listed compounds in samples with a 0% R for the DMC 4-Chloroaniline-d_4 were replaced with a UJ due to the low (1%R) acceptance criteria for this DMC. (Unless the compound was a detected result qualified J).
17122 PAH	Hexachlorocyclopentadiene	U	UJ	LMR13-92-024	Hexachlorocyclopendadiene was not qualified UJ by the original validators. The UJ was added due to %D failures in both closing CCVs.
17122 PAH	Bis(2-ethylhexyl)phthalate	None	U	LMR13-64-096 LMR13-68-012 LMR13-69-024	In accordance with the Organic NFG, results less than 5x the CRQL were qualified with a U when bis(2-ethylhexyl) phthalate was detected in the method blank.

DATA QUALIFICATION CHANGES SUMMARY TABLE

SDG/Fraction	Analyte/ Compound	Original Qualifier	Revised Qualifier	EPA Sample IDs	QATS Justification for EDD Revision
17122 PAH	Bis(2-ethylhexyl)phthalate	None	UJ	LMR13-64-048FD LMR13-67-096 LMR13-67-120 LMR13-64-120 LMR13-69-072	In accordance with the Organic NFG, results less than 5x the CRQL were qualified with a U when bis(2-ethylhexyl) phthalate was detected in the method blank. The J qualifier was added to the U because of exceeded holding time.
17122 PAH	Di-n-octylphthalate	UJ	U	LMR13-64-024 LMR13-64-072 LMR13-64-096 LMR13-92-024 LMR13-65-024 LMR13-69-024	The original validators qualified di-n-octylphthalate UJ due to a closing CCV %D failure. The laboratory analyzed two closing CCVs. Di-n-octylphthalate was within criteria in the first CCV and out in the second CCV. The J was removed from the UJ qualifier by the QATS validators due to the passing %D in the first CCV.
17122 PAH	Caprolactam	UJ	U	LMR13-68-012	The original validators qualified caprolactam UJ due to a CCV %D failure. The %D was not out of criteria for caprolactam in the associated CCV, but was out of criteria for a different analysis date. The J was removed from the UJ qualifier due to the passing %D in the associated CCV.
17122 SEM MERCURY	SEM Mercury	J	U	LMR13-65-012	Trace levels of mercury between the MDL and CRQL were detected in the ICB and CCB. The original validators did not qualify results for the calibration blank contamination. The result was changed to the CRQL and a U qualifier was applied.
17122 OIL AND GREASE	HEM	J	J	LMR13-64-024 LMR13-64-072 LMR13-64-096 LMR13-64-120 LMR13-69-012 LMR13-68-012 LMR13-69-048 LMR13-69-072 LMR13-92-012 LMR13-92-024 LMR13-65-012 LMR13-65-024 LMR13-69-024 LMR13-64-012 LMR13-64-048 LMR13-64-048FD LMR13-67-072 LMR13-67-096 LMR13-67-120	These samples were extracted outside of the QAPP-required 14-day holding time for oil and grease. The samples were already qualified J for failed MS/MSD recoveries in the EDD file. The qualifiers were highlighted blue to indicate another reason for the qualification.
17125 METALS	Copper	J	None	LMR13-69-024FD LMR13-69-096 LMR13-69-120 LMR13-61-012 LMR13-61-048 LMR13-61-096	J qualifiers that were originally applied to samples for which the serial dilution %D exceeded 10% were removed if less than the expanded NFG criterion of ±15%D. The %D for the analytes listed is <15%; therefore, the J qualifiers were removed (unless the result was between the MDL and CRQL).

DATA QUALIFICATION CHANGES SUMMARY TABLE

SDG/Fraction	Analyte/ Compound	Original Qualifier	Revised Qualifier	EPA Sample IDs	QATS Justification for EDD Revision
				LMR13-65-048 LMR13-65-072 LMR13-61-024 LMR13-61-072 LMR13-61-120 LMR13-66-012 LMR13-66-024 LMR13-60-012 LMR13-60-024 LMR13-60-048 LMR13-60-072 LMR13-60-096 LMR13-66-048 LMR13-58-024	
17125 PAH	Bis(2-ethylhexyl)phthalate	None	UJ	LMR13-69-096 LMR13-69-120 LMR13-61-048 LMR13-61-096 LMR13-65-072 LMR13-61-072 LMR13-58-024	In accordance with the Organic NFG, results less than 5x the CRQL were qualified with a U when bis(2-ethylhexyl) phthalate was detected in the method blank. The J qualifier was added to the U because of exceeded holding time.
17125 PAH	Pyrene Bis(2-ethylhexyl)phthalate	None	J	LMR13-61-024	Internal standard area recoveries for Chrysene-d12 and Perylene-d12 were out of criteria. Associated detected results (not already qualified J) are qualified J.
17125 PAH	Butylbenzylphthalate 3,3'-Dichlobenzidine Di-n-octlyphthalate Dibenzo(a,h)anthracene	U	UJ	LMR13-61-024	Internal standard area recoveries for Chrysene-d12 and Perylene-d12 were out of criteria. Associated non-detected results are qualified UJ.
17125 PAH SIM	C1-Fluoranthenes/Pyrenes C1-Chrysenes	U	J	LMR13-66-012	The original validators incorrectly qualified the sample for blank contamination. The results were qualified JB by the laboratory, B for the blank contamination and J because modification 1734.2 requires a J qualifier be added to the PAH Alkyl Homologues since no separate calibration is required for PAH alkyl homologues. The original validators incorrectly qualified these compounds U based on the J qualifier, when the actual concentration was above 10 X the CRQL. The QATS validators removed the U and replaced the qualifier with the original J.
17125 SEM MERCURY	SEM Mercury	J	U	LMR13-66-012	Trace levels of mercury between the MDL and CRQL were detected in the ICB and CCB. The original validators did not qualify results for the calibration blank contamination. The result was changed to the CRQL and a U qualifier was applied.
17125 OIL AND GREASE	HEM	J or UJ	J or UJ	LMR13-69-096 LMR13-69-120 LMR13-61-012	These samples were extracted outside of the QAPP-required 14-day holding time for oil and grease. The samples were already qualified J for MSD recovery in the EDD file. The qualifiers were highlighted blue

DATA QUALIFICATION CHANGES SUMMARY TABLE

SDG/Fraction	Analyte/ Compound	Original Qualifier	Revised Qualifier	EPA Sample IDs	QATS Justification for EDD Revision
				LMR13-61-048 LMR13-61-096 LMR13-65-048 LMR13-65-072 LMR13-61-024 LMR13-61-072 LMR13-61-120 LMR13-66-012 LMR13-66-024 LMR13-60-012 LMR13-60-024 LMR13-60-048 LMR13-60-072 LMR13-60-096 LMR13-66-048 LMR13-58-024 LMR13-66-024FD	to indicate another reason for the qualification.
17127 METALS	Lead	J	None	LMR13-59-012 LMR13-59-024 LMR13-59-048 LMR13-94-024 LMR13-94-072 LMR13-58-012 LMR13-94-012 LMR13-94-048 LMR13-95-012 LMR13-70-024 LMR13-95-024 LMR13-95-048 LMR13-95-072 LMR13-95-096	J qualifiers that were originally applied to samples for which the serial dilution %D exceeded 10% were removed if less than the expanded NFG criterion of ±15%D. The %D for the analytes listed is <15%; therefore, the J qualifiers were removed (unless the result was between the MDL and CRQL).
17127 MERCURY	Mercury	J	U	LMR13-59-024 LMR13-59-048 LMR13-58-012 LMR13-70-024	Trace level of mercury between the MDL and CRQL was detected in the ICB. The original validators did not qualify results for the calibration blank contamination. The result was changed to the CRQL and a U qualifier was applied to the four affected samples.
17127 PAH	4-Chloroaniline Hexachlorocyclopentadiene 3,3'-Dichlorobenzidine	R	UJ	LMR13-59-012 LMR13-58-012 LMR13-70-024	The R qualifiers originally assigned to the listed compounds in samples with a 0% R for the DMC 4-Chloroaniline-d_4 were replaced with a UJ due to the low (1%R) acceptance criteria for this DMC.
17127 PAH	Bis(2-ethylhexyl)phthalate	None	UJ	LMR13-58-012	In accordance with the Organic NFG, results less than 5x the CRQL were qualified with a U when bis(2-ethylhexyl) phthalate was detected in the method blank. The J qualifier was added to the U because of exceeded holding time.
17127 PAH	Phenanthrene Anthracene Fluoranthene	J	None	LMR13-94-024	These compounds were qualified J by the original validators. There is no explanation for the qualifiers in the DVR, therefore the QATS validator removed the J qualifiers.

DATA QUALIFICATION CHANGES SUMMARY TABLE

SDG/Fraction	Analyte/ Compound	Original Qualifier	Revised Qualifier	EPA Sample IDs	QATS Justification for EDD Revision
	Pyrene Benzo(a)anthracene Chrysene				
17127 PAH	Naphthalene 2-Methylnaphthalene Fluorene Phenanthrene Anthracene Fluoranthene Pyrene	None	J	LMR13-95-024FD	This sample was analyzed 46 days after extraction, which exceeds the analysis holding time by 6 days. Detected compounds (not already qualified J) reported from these samples were qualified J.
17127 PAH	46 Compounds	U	UJ	LMR13-95-024FD	This sample was analyzed 46 days after extraction, which exceeds the analysis holding time by 6 days. Non-detected compounds reported from these samples were qualified UJ.
17127 PAH	Bis(2-ethylhexyl)phthalate	None	U	LMR13-70-024	In accordance with the Organic NFG, results less than 5x the CRQL were qualified with a U when bis(2-ethylhexyl) phthalate was detected in the method blank.
17127 PAH SIM	C1-Naphthalenes C2-Naphthalenes C1-Phenanthrenes/Anthracenes C2-Phenanthrenes/Anthracenes C1-Fluoranthenes/Pyrenes C1-Chrysenes	U	J	LMR13-94-012 LMR13-95-012	The original validators incorrectly qualified these samples for blank contamination. The results were qualified JB by the laboratory, B for the blank contamination and J because modification 1734.2 requires a J qualifier be added to the PAH Alkyl Homologues since no separate calibration is required for PAH alkyl homologues. The original validators qualified these compounds U based on the J qualifier, when the actual concentration was above 10 X the CRQL. The QATS validators removed the U and replaced the qualifier with the original J.
17127 PAH SIM	C2-Naphthalenes C1-Phenanthrenes/Anthracenes C2-Phenanthrenes/Anthracenes C1-Fluoranthenes/Pyrenes C1-Chrysenes	U	J	LMR13-58-012	The original validators incorrectly qualified the sample for blank contamination. The results were qualified JB by the laboratory, B for the blank contamination and J because modification 1734.2 requires a J qualifier be added to the PAH Alkyl Homologues since no separate calibration is required for PAH alkyl homologues. The original validators qualified these compounds U based on the J qualifier, when the actual concentration was above 10 X the CRQL. The concentration was incorrectly changed to the lower CRQL. The QATS validators removed the U and replaced the qualifier with the original J and re-entered the original concentration in the result column.
17127 SEM MERCURY	SEM Mercury	J	U	LMR13-95-012	Trace level of mercury between the MDL and CRQL was detected in the ICB. The original validators did not qualify results for the calibration blank contamination. The result was changed to the CRQL and a U qualifier was applied.
17127 OIL AND GREASE	HEM	J or UJ	J or UJ	LMR13-59-012 LMR13-59-024 LMR13-59-048 LMR13-94-024 LMR13-94-072 LMR13-58-012	These samples were extracted outside of the QAPP-required 14-day holding time for oil and grease. The sample results were qualified J or UJ.

DATA QUALIFICATION CHANGES SUMMARY TABLE

SDG/Fraction	Analyte/ Compound	Original Qualifier	Revised Qualifier	EPA Sample IDs	QATS Justification for EDD Revision
				LMR13-94-012 LMR13-94-048 LMR13-95-012 LMR13-70-024 LMR13-95-024 LMR13-95-048 LMR13-95-072 LMR13-95-096 LMR13-95-024FD	
17149 METALS	Copper	J	None	LMR13-52-012 LMR13-52-024 LMR13-52-048 LMR13-53-012 LMR13-53-024 LMR13-53-024FD LMR13-56-012 LMR13-70-012 LMR13-70-048 LMR13-80-012 LMR13-80-024 LMR13-80-024FD LMR13-80-048 LMR13-80-072 LMR13-80-096	J qualifiers that were originally applied to samples for which the serial dilution %D exceeded 10% were removed if less than the expanded NFG criterion of ±15%D. The %D for the analytes listed is <15%; therefore, the J qualifiers were removed (unless the result was between the MDL and CRQL).
17149 PAH	4-Chloroaniline Hexachlorocyclopentadiene 3,3'-Dichlorobenzidine	R	UJ	LMR13-70-012 LMR13-70-048 LMR13-80-024 LMR13-52-012 LMR13-52-024FD LMR13-80-072 LMR13-53-024 LMR13-52-048 LMR13-53-012 LMR13-80-048 LMR13-80-096	The R qualifiers originally assigned to the listed compounds in samples with a 0% R for the DMC 4-Chloroaniline-d_4 were replaced with a UJ due to the low (1%R) acceptance criteria for this DMC.
17149 PAH	Bis(2-ethylhexyl)phthalate	None	UJ	LMR13-70-012 LMR13-52-024 LMR13-53-024 LMR13-80-012	In accordance with the Organic NFG, results less than 5x the CRQL were qualified with a U when bis(2-ethylhexyl) phthalate was detected in the method blank. The J qualifier was added to the U because of exceeded holding time.
17149 OIL AND GREASE	HEM	J or UJ	J or UJ	LMR13-70-012 LMR13-70-048 LMR13-80-024 LMR13-52-012 LMR13-52-024 LMR13-52-024FD	These samples were extracted outside of the QAPP-required 14-day holding time for oil and grease. The sample results were qualified J or UJ. (Note samples LMR13-52-024 and LMR13-52-024FD were already qualified J due to field duplicate RPD > 100%)

DATA QUALIFICATION CHANGES SUMMARY TABLE

SDG/Fraction	Analyte/ Compound	Original Qualifier	Revised Qualifier	EPA Sample IDs	QATS Justification for EDD Revision
				LMR13-80-072 LMR13-53-024 LMR13-80-012 LMR13-52-048 LMR13-53-012 LMR13-56-012 LMR13-80-048 LMR13-80-096	

Appendix E

Particle Size Graphs

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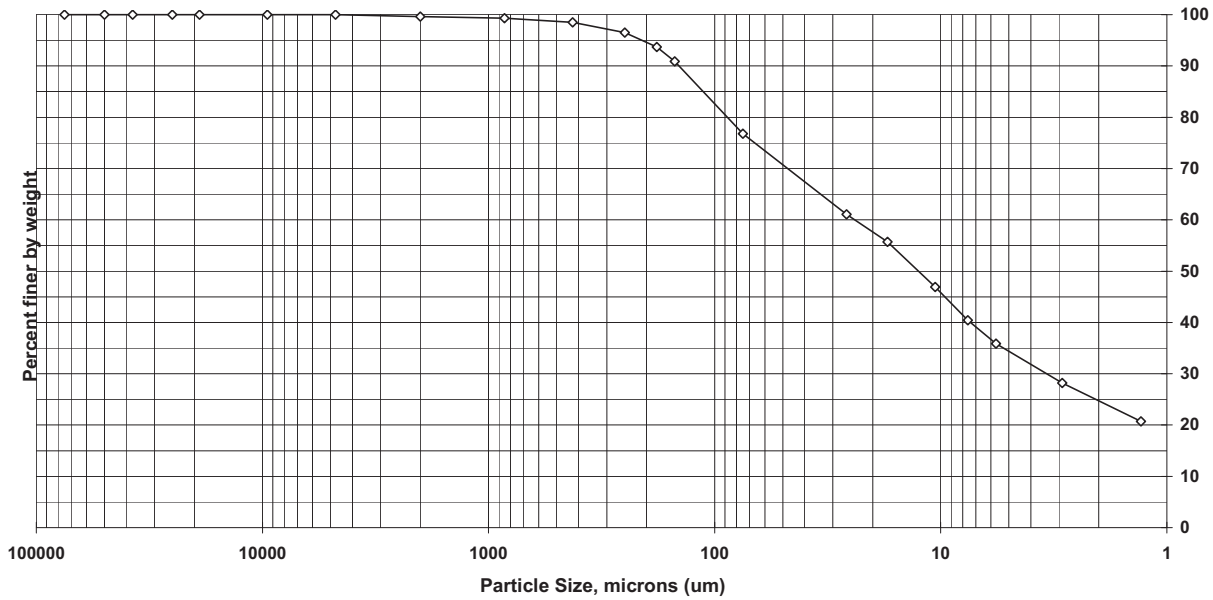
Particle Size of Soils by ASTM D422

				Date Received:	6/13/2013
Sample ID:	LMR13-42-012	**Percent Solids:**	51.1%	**Start Date:**	6/24/2013
Lab ID:	200-16995-F-1	**Specific Gravity:**	2.650	**End Date:**	6/28/2013

Shape (> #10): aubangular

Non-soil material: plant,shell

Hardness (> #10): hard



Sieve size	Particle size, um	Percent finer	Incremental percent
3 inch	75000	100.0	0.0
2 inch	50000	100.0	0.0
1.5 inch	37500	100.0	0.0
1 inch	25000	100.0	0.0
3/4 inch	19000	100.0	0.0
3/8 inch	9500	100.0	0.0
#4	4750	100.0	0.0
#10	2000	99.6	0.4
#20	850	99.3	0.3
#40	425	98.5	0.8
#60	250	96.5	2.0
#80	180	93.7	2.8
#100	150	90.9	2.8
#200	75	76.8	14.1
Hyd1	26.1	61.1	15.7
Hyd2	17.2	55.7	5.4
Hyd3	10.6	46.9	8.8
Hyd4	7.6	40.4	6.5
Hyd5	5.7	35.9	4.5
Hyd6	2.9	28.2	7.7
Hyd7	1.3	20.7	7.5

Soil Classification	Percent of sample
Gravel	0.0
Sand	23.2
Coarse Sand	0.4
Medium Sand	1.1
Fine Sand	21.7
Silt	40.9
Clay	35.9

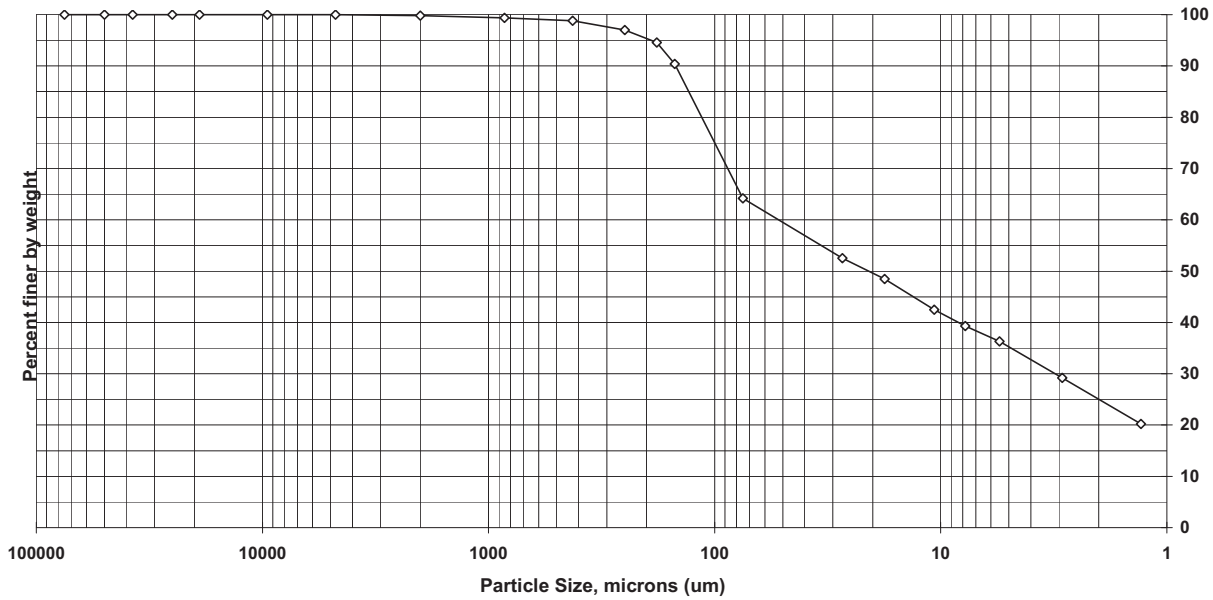
Particle Size of Soils by ASTM D422

				Date Received:	6/13/2013
Sample ID:	LMR13-43-012	**Percent Solids:**	54.0%	**Start Date:**	6/24/2013
Lab ID:	200-16995-E-8	**Specific Gravity:**	2.650	**End Date:**	6/28/2013

Shape (> #10): n/a

Non-soil material: plant,shell

Hardness (> #10): n/a



Sieve size	Particle size, um	Percent finer	Incremental percent
3 inch	75000	100.0	0.0
2 inch	50000	100.0	0.0
1.5 inch	37500	100.0	0.0
1 inch	25000	100.0	0.0
3/4 inch	19000	100.0	0.0
3/8 inch	9500	100.0	0.0
#4	4750	100.0	0.0
#10	2000	99.8	0.2
#20	850	99.4	0.4
#40	425	98.8	0.6
#60	250	97.0	1.8
#80	180	94.6	2.4
#100	150	90.4	4.2
#200	75	64.2	26.2
Hyd1	27.2	52.5	11.7
Hyd2	17.7	48.5	4.0
Hyd3	10.7	42.5	6.0
Hyd4	7.8	39.3	3.2
Hyd5	5.5	36.3	3.0
Hyd6	2.9	29.2	7.1
Hyd7	1.3	20.2	9.0

Soil Classification	Percent of sample
Gravel	0.0
Sand	35.8
Coarse Sand	0.2
Medium Sand	1.0
Fine Sand	34.6
Silt	27.9
Clay	36.3

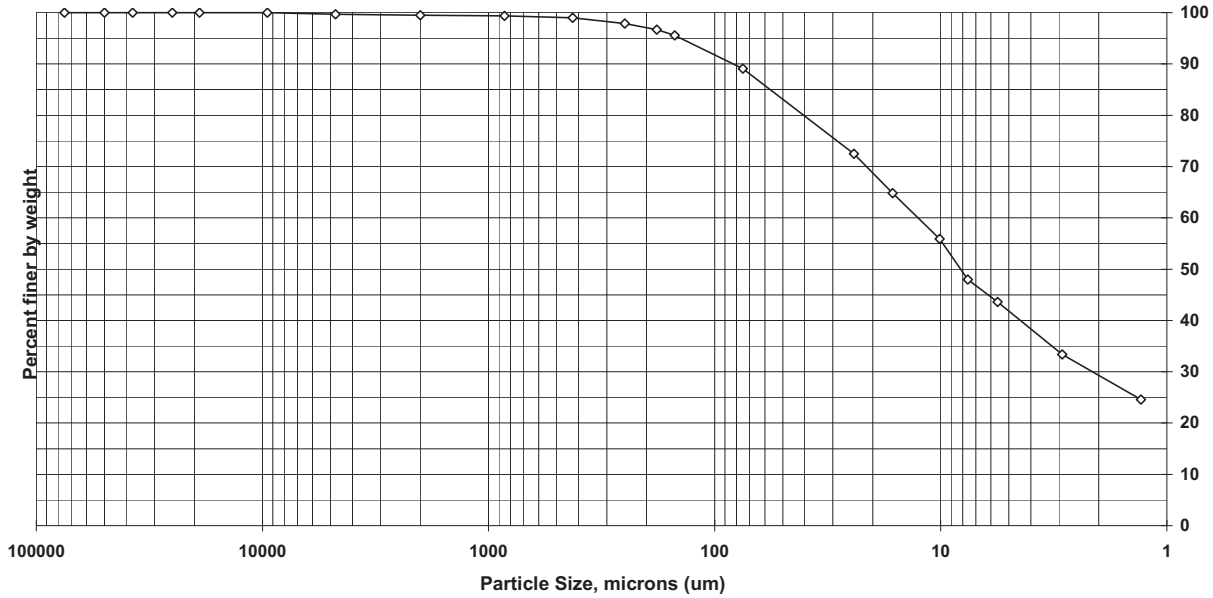
Particle Size of Soils by ASTM D422

				Date Received:	6/13/2013
Sample ID:	LMR13-44-012	**Percent Solids:**	60.5%	**Start Date:**	6/24/2013
Lab ID:	200-16995-C-15	**Specific Gravity:**	2.650	**End Date:**	6/28/2013

Shape (> #10): subangular

Non-soil material: shell

Hardness (> #10): hard



Sieve size	Particle size, um	Percent finer	Incremental percent
3 inch	75000	100.0	0.0
2 inch	50000	100.0	0.0
1.5 inch	37500	100.0	0.0
1 inch	25000	100.0	0.0
3/4 inch	19000	100.0	0.0
3/8 inch	9500	100.0	0.0
#4	4750	99.7	0.3
#10	2000	99.5	0.2
#20	850	99.4	0.1
#40	425	99.0	0.4
#60	250	97.9	1.1
#80	180	96.7	1.2
#100	150	95.6	1.1
#200	75	89.1	6.5
Hyd1	24.2	72.5	16.6
Hyd2	16.3	64.8	7.7
Hyd3	10.1	55.9	8.9
Hyd4	7.6	48.0	7.9
Hyd5	5.6	43.6	4.4
Hyd6	2.9	33.4	10.2
Hyd7	1.3	24.6	8.8

Soil Classification	Percent of sample
Gravel	0.3
Sand	10.6
Coarse Sand	0.2
Medium Sand	0.5
Fine Sand	9.9
Silt	45.5
Clay	43.6

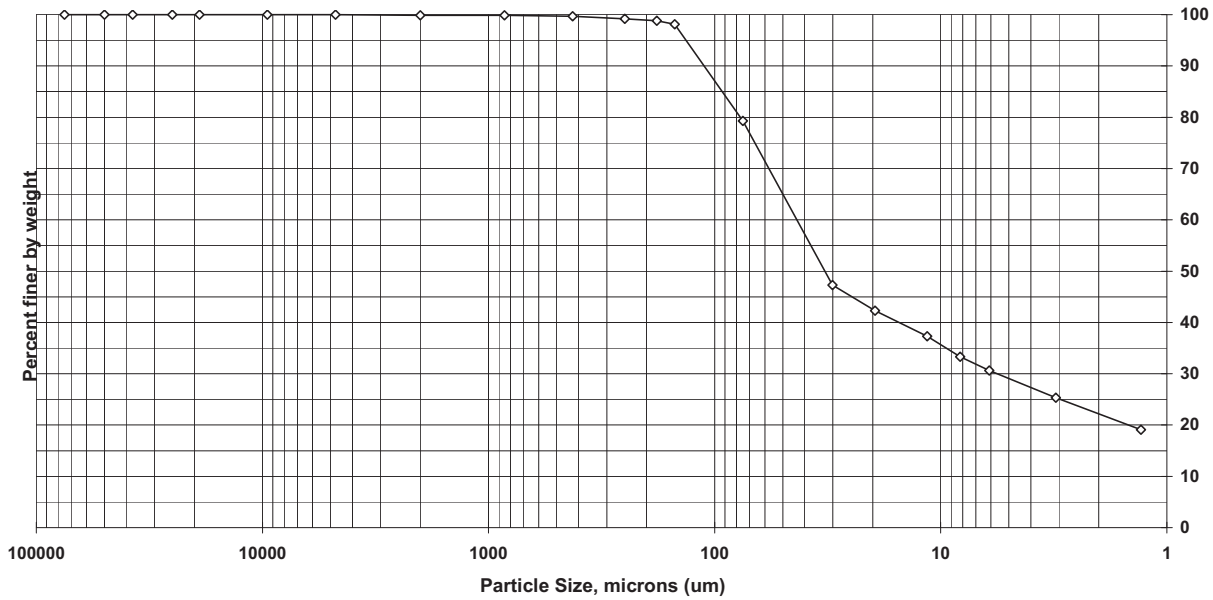
Particle Size of Soils by ASTM D422

				Date Received:	6/13/2013
Sample ID:	LMR13-46-012	**Percent Solids:**	54.3%	**Start Date:**	6/24/2013
Lab ID:	200-16999-E-3	**Specific Gravity:**	2.650	**End Date:**	6/28/2013

Shape (> #10): n/a

Non-soil material: plant

Hardness (> #10): n/a



Sieve size	Particle size, um	Percent finer	Incremental percent
3 inch	75000	100.0	0.0
2 inch	50000	100.0	0.0
1.5 inch	37500	100.0	0.0
1 inch	25000	100.0	0.0
3/4 inch	19000	100.0	0.0
3/8 inch	9500	100.0	0.0
#4	4750	100.0	0.0
#10	2000	99.9	0.1
#20	850	99.9	0.0
#40	425	99.7	0.2
#60	250	99.2	0.5
#80	180	98.8	0.4
#100	150	98.1	0.7
#200	75	79.3	18.8
Hyd1	30.1	47.3	32.0
Hyd2	19.5	42.3	5.0
Hyd3	11.5	37.3	5.0
Hyd4	8.2	33.3	4.0
Hyd5	6.1	30.6	2.7
Hyd6	3.1	25.3	5.3
Hyd7	1.3	19.1	6.2

Soil Classification	Percent of sample
Gravel	0.0
Sand	20.7
Coarse Sand	0.1
Medium Sand	0.2
Fine Sand	20.4
Silt	48.7
Clay	30.6

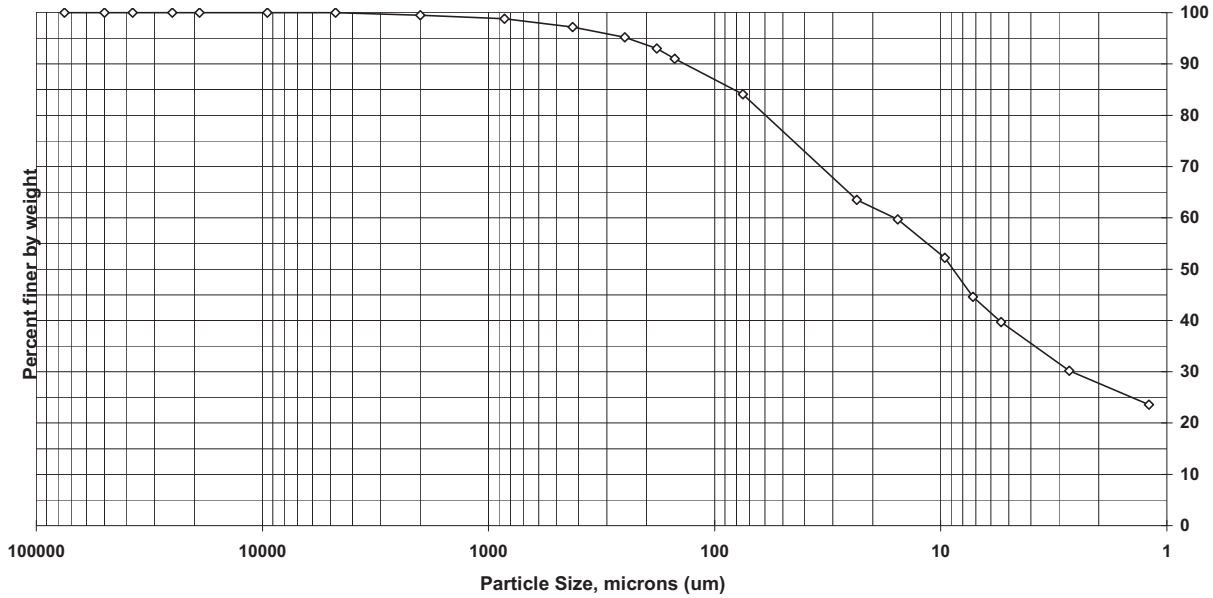
Particle Size of Soils by ASTM D422

Sample ID:	LMR13-81-012	**Percent Solids:**	63.6%	**Date Received:**	6/13/2013
Lab ID:	200-16999-E-10	**Specific Gravity:**	2.650	**Start Date:**	6/24/2013
				End Date:	6/28/2013

Shape (> #10): subangular

Non-soil material: shell,plant

Hardness (> #10): hard



Sieve size	Particle size, um	Percent finer	Incremental percent
3 inch	75000	100.0	0.0
2 inch	50000	100.0	0.0
1.5 inch	37500	100.0	0.0
1 inch	25000	100.0	0.0
3/4 inch	19000	100.0	0.0
3/8 inch	9500	100.0	0.0
#4	4750	100.0	0.0
#10	2000	99.5	0.5
#20	850	98.8	0.7
#40	425	97.2	1.6
#60	250	95.2	2.0
#80	180	93.0	2.2
#100	150	91.0	2.0
#200	75	84.1	6.9
Hyd1	23.5	63.5	20.6
Hyd2	15.5	59.7	3.8
Hyd3	9.6	52.2	7.5
Hyd4	7.2	44.6	7.6
Hyd5	5.4	39.7	4.9
Hyd6	2.7	30.2	9.5
Hyd7	1.2	23.6	6.6

Soil Classification	Percent of sample
Gravel	0.0
Sand	15.9
Coarse Sand	0.5
Medium Sand	2.3
Fine Sand	13.1
Silt	44.4
Clay	39.7

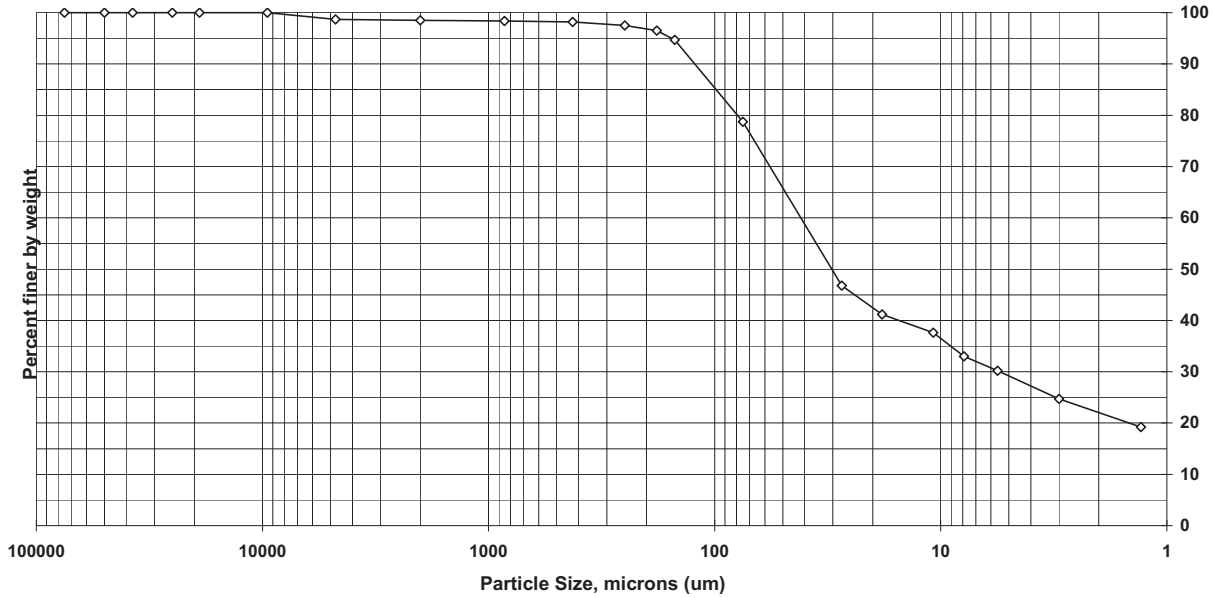
Particle Size of Soils by ASTM D422

				Date Received:	6/14/2013
Sample ID:	LMR13-93-012	**Percent Solids:**	58.2%	**Start Date:**	6/24/2013
Lab ID:	200-17010-F-1	**Specific Gravity:**	2.650	**End Date:**	6/28/2013

Shape (> #10): subangular

Non-soil material: shell,plant

Hardness (> #10): hard



Sieve size	Particle size, um	Percent finer	Incremental percent
3 inch	75000	100.0	0.0
2 inch	50000	100.0	0.0
1.5 inch	37500	100.0	0.0
1 inch	25000	100.0	0.0
3/4 inch	19000	100.0	0.0
3/8 inch	9500	100.0	0.0
#4	4750	98.7	1.3
#10	2000	98.5	0.2
#20	850	98.4	0.1
#40	425	98.2	0.2
#60	250	97.5	0.7
#80	180	96.5	1.0
#100	150	94.7	1.8
#200	75	78.7	16.0
Hyd1	27.4	46.8	31.9
Hyd2	18.2	41.2	5.6
Hyd3	10.8	37.6	3.6
Hyd4	7.9	33.0	4.6
Hyd5	5.6	30.2	2.8
Hyd6	3	24.7	5.5
Hyd7	1.3	19.2	5.5

Soil Classification	Percent of sample
Gravel	1.3
Sand	20.0
Coarse Sand	0.2
Medium Sand	0.3
Fine Sand	19.5
Silt	48.5
Clay	30.2

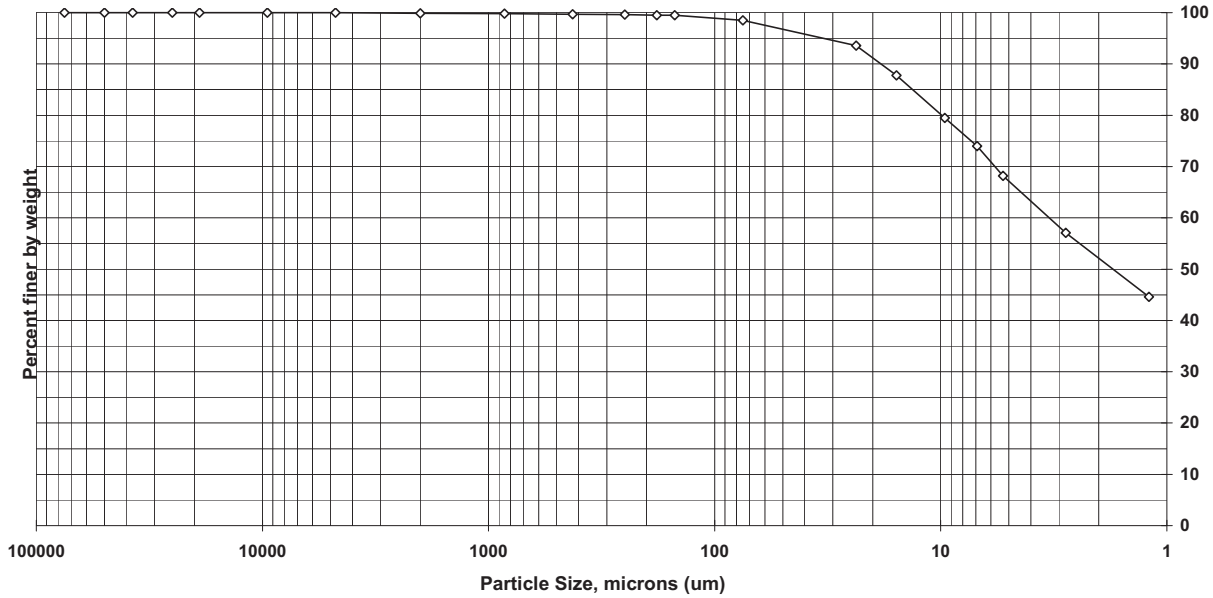
Particle Size of Soils by ASTM D422

				Date Received:	6/14/2013
Sample ID:	LMR13-90-012	**Percent Solids:**	48.4%	**Start Date:**	6/24/2013
Lab ID:	200-17010-F-10	**Specific Gravity:**	2.650	**End Date:**	6/28/2013

Shape (> #10): n/a

Non-soil material: shell

Hardness (> #10): n/a



Sieve size	Particle size, um	Percent finer	Incremental percent
3 inch	75000	100.0	0.0
2 inch	50000	100.0	0.0
1.5 inch	37500	100.0	0.0
1 inch	25000	100.0	0.0
3/4 inch	19000	100.0	0.0
3/8 inch	9500	100.0	0.0
#4	4750	100.0	0.0
#10	2000	99.9	0.1
#20	850	99.8	0.1
#40	425	99.7	0.1
#60	250	99.6	0.1
#80	180	99.5	0.1
#100	150	99.5	0.0
#200	75	98.5	1.0
Hyd1	23.7	93.6	4.9
Hyd2	15.7	87.8	5.8
Hyd3	9.6	79.5	8.3
Hyd4	6.9	74.0	5.5
Hyd5	5.3	68.2	5.8
Hyd6	2.8	57.1	11.1
Hyd7	1.2	44.6	12.5

Soil Classification	Percent of sample
Gravel	0.0
Sand	1.5
Coarse Sand	0.1
Medium Sand	0.2
Fine Sand	1.2
Silt	30.3
Clay	68.2

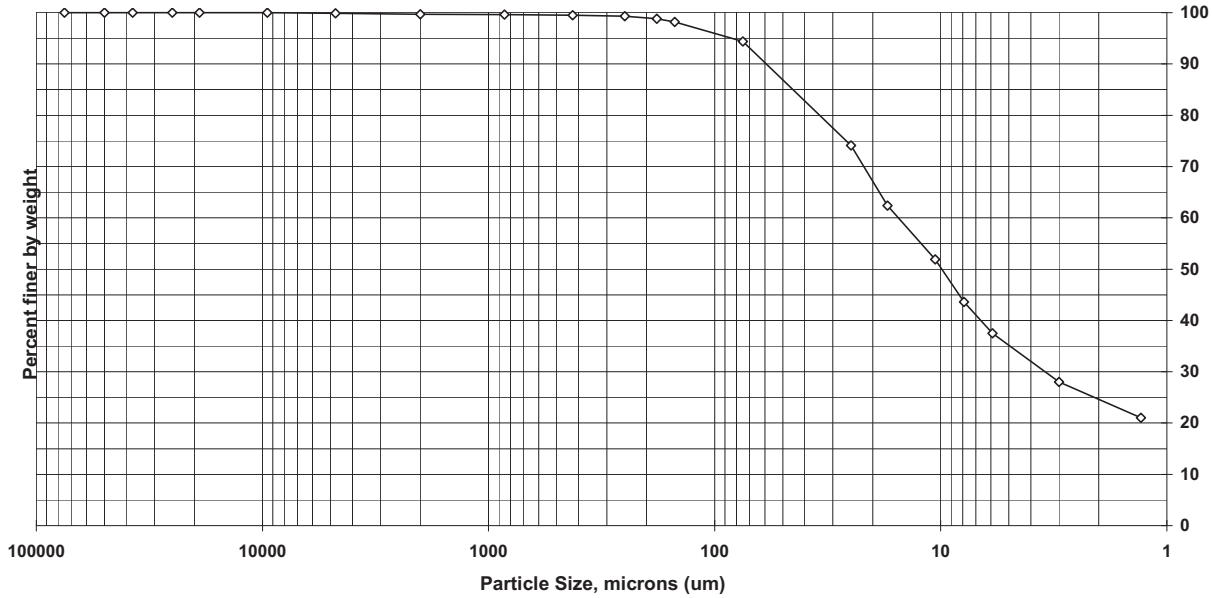
Particle Size of Soils by ASTM D422

				Date Received:	6/14/2013
Sample ID:	LMR13-62-012	**Percent Solids:**	67.2%	**Start Date:**	6/26/2013
Lab ID:	200-17010-E-14	**Specific Gravity:**	2.650	**End Date:**	6/29/2013

Shape (> #10): N/A

Non-soil material: shell

Hardness (> #10): N/A



Sieve size	Particle size, um	Percent finer	Incremental percent
3 inch	75000	100.0	0.0
2 inch	50000	100.0	0.0
1.5 inch	37500	100.0	0.0
1 inch	25000	100.0	0.0
3/4 inch	19000	100.0	0.0
3/8 inch	9500	100.0	0.0
#4	4750	99.9	0.1
#10	2000	99.7	0.2
#20	850	99.6	0.1
#40	425	99.5	0.1
#60	250	99.3	0.2
#80	180	98.8	0.5
#100	150	98.2	0.6
#200	75	94.4	3.8
Hyd1	24.9	74.1	20.3
Hyd2	17.2	62.4	11.7
Hyd3	10.6	51.9	10.5
Hyd4	7.9	43.6	8.3
Hyd5	5.9	37.5	6.1
Hyd6	3	28.0	9.5
Hyd7	1.3	21.0	7.0

Soil Classification	Percent of sample
Gravel	0.1
Sand	5.5
Coarse Sand	0.2
Medium Sand	0.2
Fine Sand	5.1
Silt	56.9
Clay	37.5

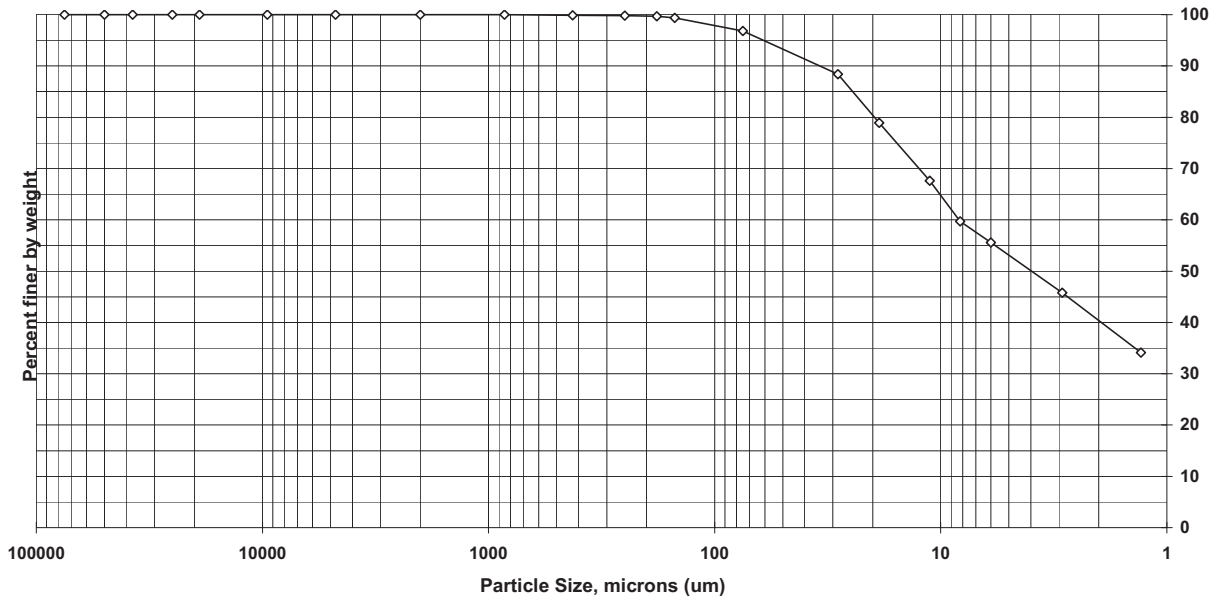
Particle Size of Soils by ASTM D422

				Date Received:	6/14/2013
Sample ID:	LMR13-47-012	**Percent Solids:**	39.6%	**Start Date:**	6/26/2013
Lab ID:	200-17010-F-20	**Specific Gravity:**	2.650	**End Date:**	6/29/2013

Shape (> #10): N/A

Non-soil material: N/A

Hardness (> #10): N/A



Sieve size	Particle size, um	Percent finer	Incremental percent
3 inch	75000	100.0	0.0
2 inch	50000	100.0	0.0
1.5 inch	37500	100.0	0.0
1 inch	25000	100.0	0.0
3/4 inch	19000	100.0	0.0
3/8 inch	9500	100.0	0.0
#4	4750	100.0	0.0
#10	2000	100.0	0.0
#20	850	100.0	0.0
#40	425	99.9	0.1
#60	250	99.8	0.1
#80	180	99.7	0.1
#100	150	99.4	0.3
#200	75	96.8	2.6
Hyd1	28.5	88.4	8.4
Hyd2	18.7	78.9	9.5
Hyd3	11.2	67.6	11.3
Hyd4	8.2	59.7	7.9
Hyd5	6	55.6	4.1
Hyd6	2.9	45.8	9.8
Hyd7	1.3	34.1	11.7

Soil Classification	Percent of sample
Gravel	0.0
Sand	3.2
Coarse Sand	0.0
Medium Sand	0.1
Fine Sand	3.1
Silt	41.2
Clay	55.6

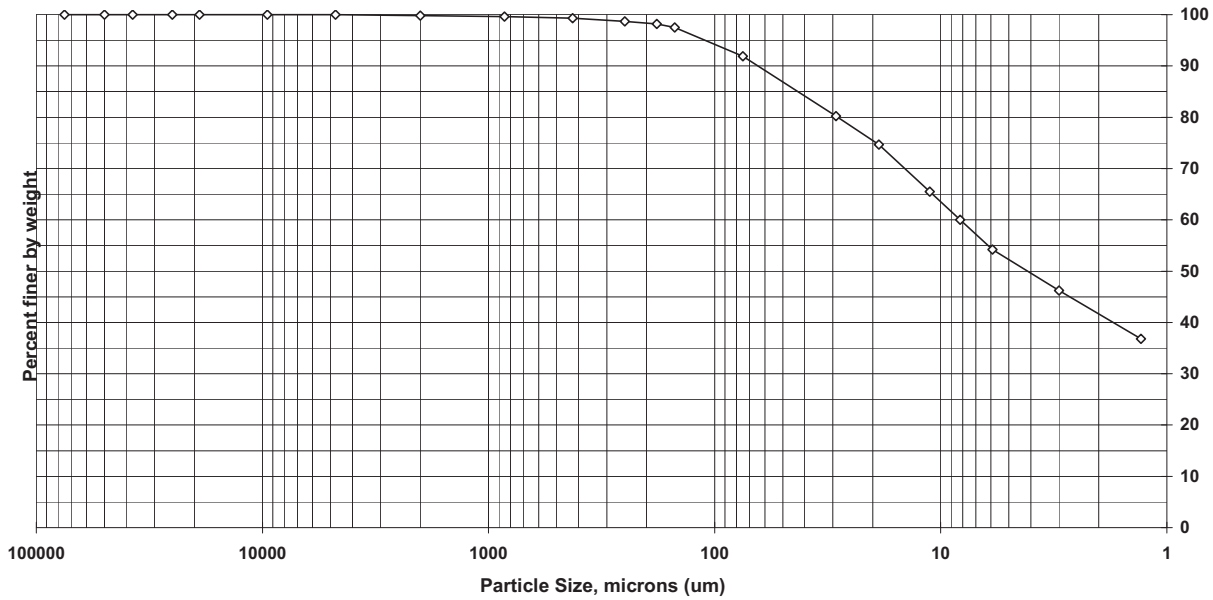
Particle Size of Soils by ASTM D422

				Date Received:	6/14/2013
Sample ID:	LMR13-91-012	**Percent Solids:**	46.0%	**Start Date:**	6/26/2013
Lab ID:	200-17010-F-21	**Specific Gravity:**	2.650	**End Date:**	6/29/2013

Shape (> #10): N/A

Non-soil material: shell

Hardness (> #10): N/A



Sieve size	Particle size, um	Percent finer	Incremental percent
3 inch	75000	100.0	0.0
2 inch	50000	100.0	0.0
1.5 inch	37500	100.0	0.0
1 inch	25000	100.0	0.0
3/4 inch	19000	100.0	0.0
3/8 inch	9500	100.0	0.0
#4	4750	100.0	0.0
#10	2000	99.8	0.2
#20	850	99.6	0.2
#40	425	99.3	0.3
#60	250	98.7	0.6
#80	180	98.2	0.5
#100	150	97.5	0.7
#200	75	91.9	5.6
Hyd1	29.1	80.2	11.7
Hyd2	18.8	74.7	5.5
Hyd3	11.2	65.5	9.2
Hyd4	8.2	60.0	5.5
Hyd5	5.9	54.2	5.8
Hyd6	3	46.2	8.0
Hyd7	1.3	36.8	9.4

Soil Classification	Percent of sample
Gravel	0.0
Sand	8.1
Coarse Sand	0.2
Medium Sand	0.5
Fine Sand	7.4
Silt	37.7
Clay	54.2

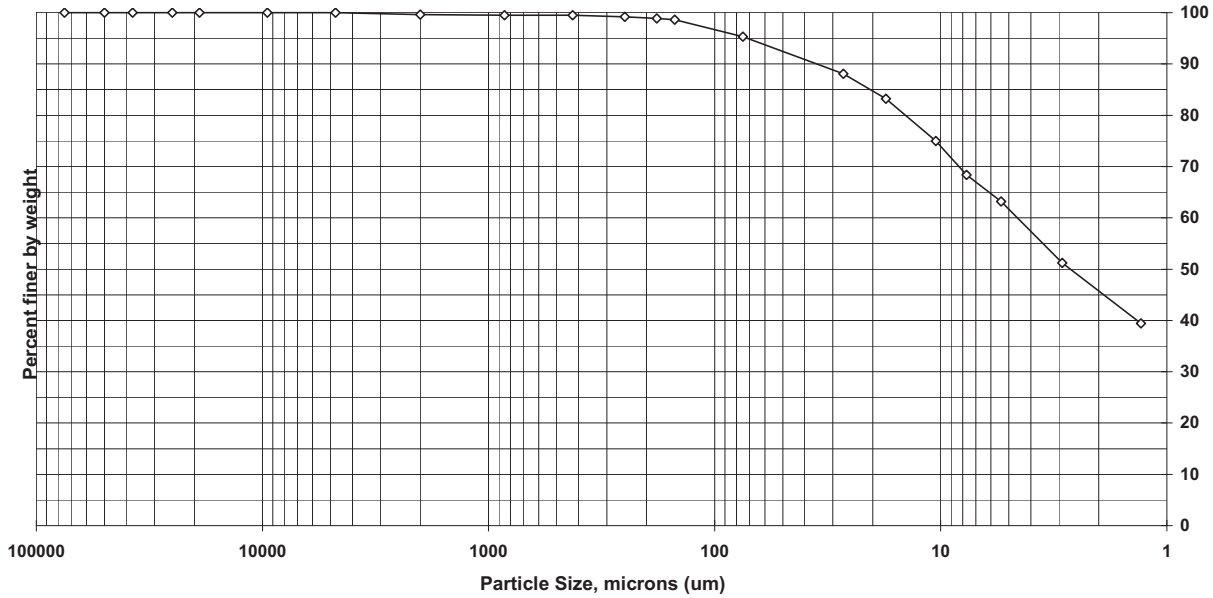
Particle Size of Soils by ASTM D422

				Date Received:	6/14/2013
Sample ID:	LMR13-63-012	**Percent Solids:**	46.6%	**Start Date:**	6/26/2013
Lab ID:	200-17014-E-9	**Specific Gravity:**	2.650	**End Date:**	6/29/2013

Shape (> #10): N/A

Non-soil material: shell

Hardness (> #10): N/A



Sieve size	Particle size, um	Percent finer	Incremental percent
3 inch	75000	100.0	0.0
2 inch	50000	100.0	0.0
1.5 inch	37500	100.0	0.0
1 inch	25000	100.0	0.0
3/4 inch	19000	100.0	0.0
3/8 inch	9500	100.0	0.0
#4	4750	100.0	0.0
#10	2000	99.6	0.4
#20	850	99.5	0.1
#40	425	99.5	0.0
#60	250	99.2	0.3
#80	180	98.9	0.3
#100	150	98.6	0.3
#200	75	95.3	3.3
Hyd1	27	88.1	7.2
Hyd2	17.5	83.2	4.9
Hyd3	10.5	75.0	8.2
Hyd4	7.7	68.4	6.6
Hyd5	5.4	63.2	5.2
Hyd6	2.9	51.2	12.0
Hyd7	1.3	39.4	11.8

Soil Classification	Percent of sample
Gravel	0.0
Sand	4.7
Coarse Sand	0.4
Medium Sand	0.1
Fine Sand	4.2
Silt	32.1
Clay	63.2

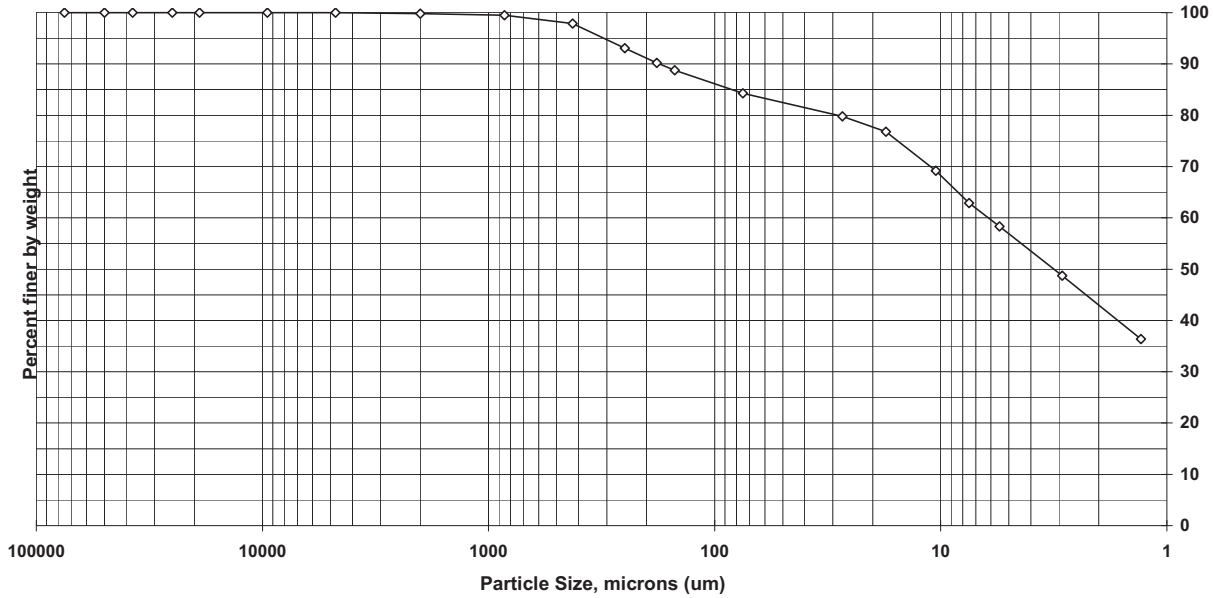
Particle Size of Soils by ASTM D422

				Date Received:	6/14/2013
Sample ID:	LMR13-51-012	**Percent Solids:**	54.2%	**Start Date:**	6/26/2013
Lab ID:	200-17014-F-18	**Specific Gravity:**	2.650	**End Date:**	6/29/2013

Shape (> #10): subrounded

Non-soil material: plant

Hardness (> #10): hard



Sieve size	Particle size, um	Percent finer	Incremental percent
3 inch	75000	100.0	0.0
2 inch	50000	100.0	0.0
1.5 inch	37500	100.0	0.0
1 inch	25000	100.0	0.0
3/4 inch	19000	100.0	0.0
3/8 inch	9500	100.0	0.0
#4	4750	100.0	0.0
#10	2000	99.8	0.2
#20	850	99.5	0.3
#40	425	97.9	1.6
#60	250	93.1	4.8
#80	180	90.2	2.9
#100	150	88.8	1.4
#200	75	84.3	4.5
Hyd1	27.2	79.8	4.5
Hyd2	17.5	76.8	3.0
Hyd3	10.5	69.2	7.6
Hyd4	7.5	62.9	6.3
Hyd5	5.5	58.3	4.6
Hyd6	2.9	48.7	9.6
Hyd7	1.3	36.4	12.3

Soil Classification	Percent of sample
Gravel	0.0
Sand	15.7
Coarse Sand	0.2
Medium Sand	1.9
Fine Sand	13.6
Silt	26.0
Clay	58.3

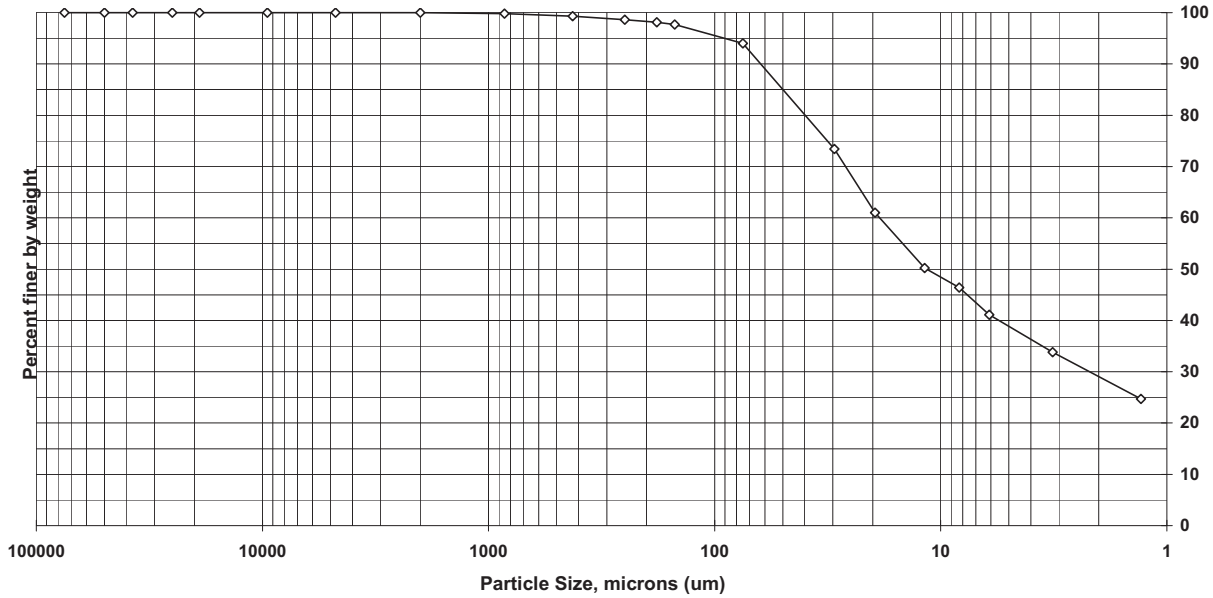
Particle Size of Soils by ASTM D422

				Date Received:	6/15/2013
Sample ID:	LMR13-45-012	**Percent Solids:**	46.1%	**Start Date:**	6/26/2013
Lab ID:	200-17024-F-1	**Specific Gravity:**	2.650	**End Date:**	6/29/2013

Shape (> #10): N/A

Non-soil material: wood

Hardness (> #10): N/A



Sieve size	Particle size, um	Percent finer	Incremental percent
3 inch	75000	100.0	0.0
2 inch	50000	100.0	0.0
1.5 inch	37500	100.0	0.0
1 inch	25000	100.0	0.0
3/4 inch	19000	100.0	0.0
3/8 inch	9500	100.0	0.0
#4	4750	100.0	0.0
#10	2000	100.0	0.0
#20	850	99.8	0.2
#40	425	99.3	0.5
#60	250	98.6	0.7
#80	180	98.1	0.5
#100	150	97.7	0.4
#200	75	94.0	3.7
Hyd1	29.5	73.4	20.6
Hyd2	19.5	61.0	12.4
Hyd3	11.8	50.2	10.8
Hyd4	8.3	46.4	3.8
Hyd5	6.1	41.1	5.3
Hyd6	3.2	33.8	7.3
Hyd7	1.3	24.7	9.1

Soil Classification	Percent of sample
Gravel	0.0
Sand	6.0
Coarse Sand	0.0
Medium Sand	0.7
Fine Sand	5.3
Silt	52.9
Clay	41.1

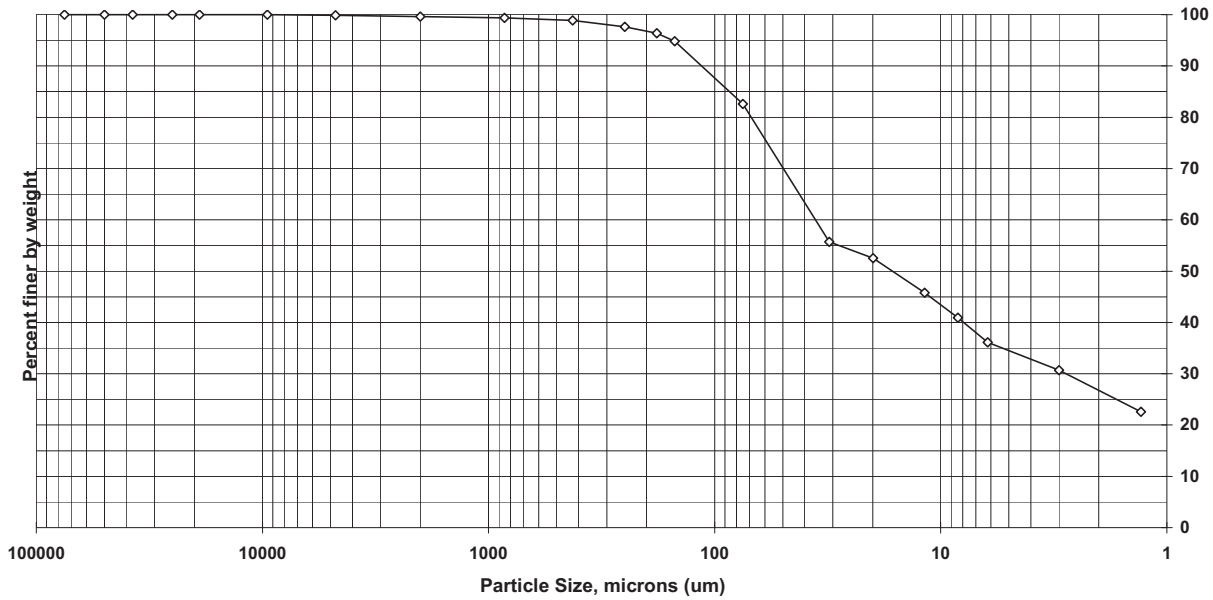
Particle Size of Soils by ASTM D422

				Date Received:	6/15/2013
Sample ID:	LMR13-50-012	**Percent Solids:**	52.3%	**Start Date:**	6/26/2013
Lab ID:	200-17024-F-8	**Specific Gravity:**	2.650	**End Date:**	6/29/2013

Shape (> #10): N/A

Non-soil material: plant

Hardness (> #10): N/A



Sieve size	Particle size, um	Percent finer	Incremental percent
3 inch	75000	100.0	0.0
2 inch	50000	100.0	0.0
1.5 inch	37500	100.0	0.0
1 inch	25000	100.0	0.0
3/4 inch	19000	100.0	0.0
3/8 inch	9500	100.0	0.0
#4	4750	99.9	0.1
#10	2000	99.6	0.3
#20	850	99.4	0.2
#40	425	98.9	0.5
#60	250	97.6	1.3
#80	180	96.4	1.2
#100	150	94.8	1.6
#200	75	82.6	12.2
Hyd1	31.1	55.7	26.9
Hyd2	19.9	52.5	3.2
Hyd3	11.8	45.8	6.7
Hyd4	8.4	40.9	4.9
Hyd5	6.2	36.1	4.8
Hyd6	3	30.7	5.4
Hyd7	1.3	22.6	8.1

Soil Classification	Percent of sample
Gravel	0.1
Sand	17.3
Coarse Sand	0.3
Medium Sand	0.7
Fine Sand	16.3
Silt	46.5
Clay	36.1

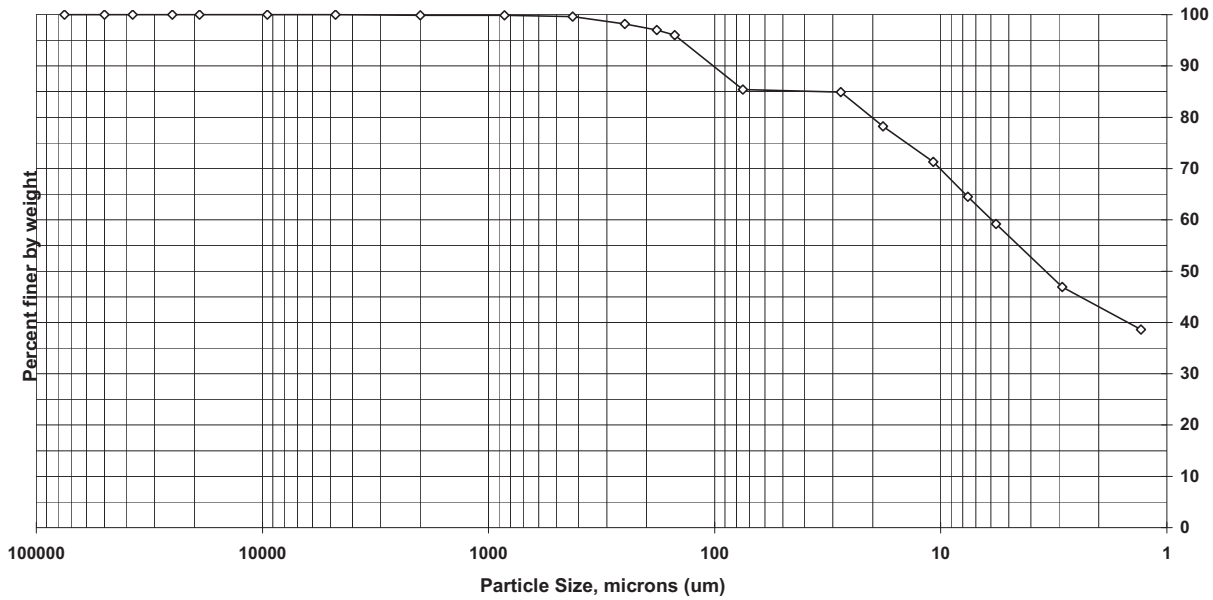
Particle Size of Soils by ASTM D422

				Date Received:	6/15/2013
Sample ID:	LMR13-49-012	**Percent Solids:**	47.7%	**Start Date:**	6/26/2013
Lab ID:	200-17024-F-13	**Specific Gravity:**	2.650	**End Date:**	6/29/2013

Shape (> #10): N/A

Non-soil material: plant

Hardness (> #10): N/A



Sieve size	Particle size, um	Percent finer	Incremental percent
3 inch	75000	100.0	0.0
2 inch	50000	100.0	0.0
1.5 inch	37500	100.0	0.0
1 inch	25000	100.0	0.0
3/4 inch	19000	100.0	0.0
3/8 inch	9500	100.0	0.0
#4	4750	100.0	0.0
#10	2000	99.9	0.1
#20	850	99.9	0.0
#40	425	99.6	0.3
#60	250	98.2	1.4
#80	180	97.0	1.2
#100	150	96.0	1.0
#200	75	85.4	10.6
Hyd1	27.7	84.9	0.5
Hyd2	18	78.2	6.7
Hyd3	10.8	71.3	6.9
Hyd4	7.6	64.5	6.8
Hyd5	5.7	59.2	5.3
Hyd6	2.9	46.9	12.3
Hyd7	1.3	38.6	8.3

Soil Classification	Percent of sample
Gravel	0.0
Sand	14.6
Coarse Sand	0.1
Medium Sand	0.3
Fine Sand	14.2
Silt	26.2
Clay	59.2

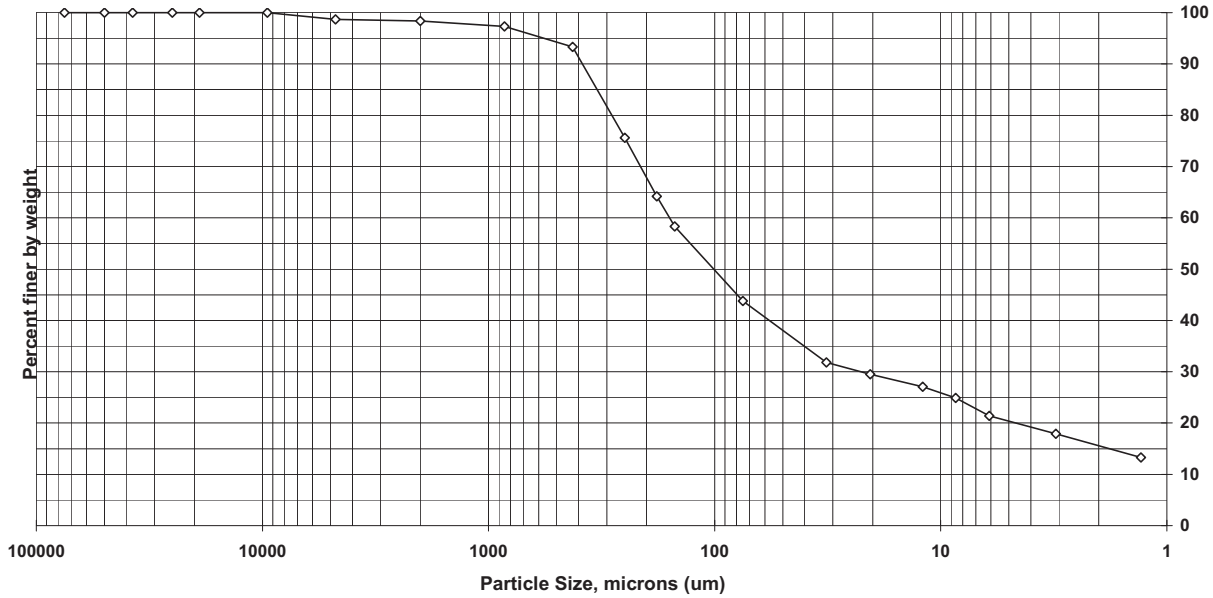
Particle Size of Soils by ASTM D422

				Date Received:	6/15/2013
Sample ID:	LMR13-83-012	**Percent Solids:**	70.8%	**Start Date:**	6/26/2013
Lab ID:	200-17024-F-21	**Specific Gravity:**	2.650	**End Date:**	6/29/2013

Shape (> #10): subangular

Non-soil material: plant

Hardness (> #10): hard



Sieve size	Particle size, um	Percent finer	Incremental percent
3 inch	75000	100.0	0.0
2 inch	50000	100.0	0.0
1.5 inch	37500	100.0	0.0
1 inch	25000	100.0	0.0
3/4 inch	19000	100.0	0.0
3/8 inch	9500	100.0	0.0
#4	4750	98.7	1.3
#10	2000	98.4	0.3
#20	850	97.3	1.1
#40	425	93.3	4.0
#60	250	75.6	17.7
#80	180	64.2	11.4
#100	150	58.3	5.9
#200	75	43.8	14.5
Hyd1	32	31.8	12.0
Hyd2	20.5	29.5	2.3
Hyd3	12	27.1	2.4
Hyd4	8.6	24.9	2.2
Hyd5	6.1	21.4	3.5
Hyd6	3.1	17.9	3.5
Hyd7	1.3	13.3	4.6

Soil Classification	Percent of sample
Gravel	1.3
Sand	54.9
Coarse Sand	0.3
Medium Sand	5.1
Fine Sand	49.5
Silt	22.4
Clay	21.4

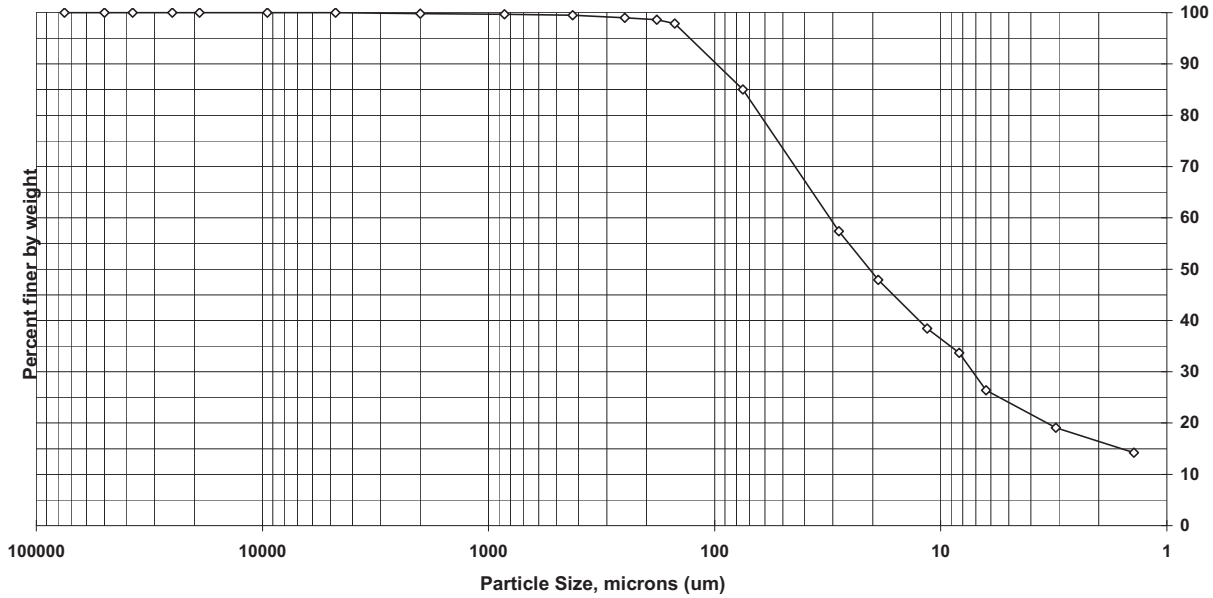
Particle Size of Soils by ASTM D422

				Date Received:	6/15/2013
Sample ID:	LMR13-41-012	**Percent Solids:**	68.8%	**Start Date:**	6/26/2013
Lab ID:	200-17028-E-3	**Specific Gravity:**	2.650	**End Date:**	6/29/2013

Shape (> #10): N/A

Non-soil material: shell

Hardness (> #10): N/A



Sieve size	Particle size, um	Percent finer	Incremental percent
3 inch	75000	100.0	0.0
2 inch	50000	100.0	0.0
1.5 inch	37500	100.0	0.0
1 inch	25000	100.0	0.0
3/4 inch	19000	100.0	0.0
3/8 inch	9500	100.0	0.0
#4	4750	100.0	0.0
#10	2000	99.8	0.2
#20	850	99.7	0.1
#40	425	99.5	0.2
#60	250	99.0	0.5
#80	180	98.6	0.4
#100	150	97.9	0.7
#200	75	85.0	12.9
Hyd1	28.2	57.4	27.6
Hyd2	18.9	47.9	9.5
Hyd3	11.5	38.4	9.5
Hyd4	8.3	33.7	4.7
Hyd5	6.3	26.4	7.3
Hyd6	3.1	19.1	7.3
Hyd7	1.4	14.2	4.9

Soil Classification	Percent of sample
Gravel	0.0
Sand	15.0
Coarse Sand	0.2
Medium Sand	0.3
Fine Sand	14.5
Silt	58.6
Clay	26.4

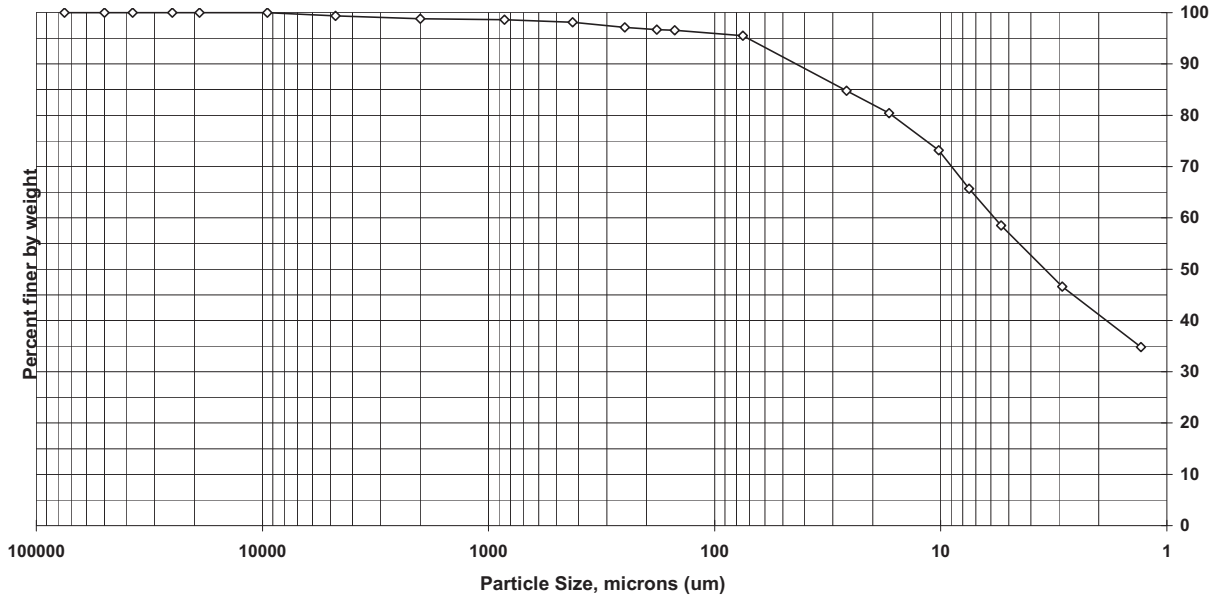
Particle Size of Soils by ASTM D422

				Date Received:	6/15/2013
Sample ID:	LMR13-57-012	**Percent Solids:**	55.5%	**Start Date:**	6/26/2013
Lab ID:	200-17028-F-7	**Specific Gravity:**	2.650	**End Date:**	6/29/2013

Shape (> #10): subangular

Non-soil material: wood, shell

Hardness (> #10): hard



Sieve size	Particle size, um	Percent finer	Incremental percent
3 inch	75000	100.0	0.0
2 inch	50000	100.0	0.0
1.5 inch	37500	100.0	0.0
1 inch	25000	100.0	0.0
3/4 inch	19000	100.0	0.0
3/8 inch	9500	100.0	0.0
#4	4750	99.4	0.6
#10	2000	98.8	0.6
#20	850	98.6	0.2
#40	425	98.1	0.5
#60	250	97.1	1.0
#80	180	96.7	0.4
#100	150	96.6	0.1
#200	75	95.5	1.1
Hyd1	26.1	84.8	10.7
Hyd2	16.9	80.4	4.4
Hyd3	10.2	73.2	7.2
Hyd4	7.5	65.7	7.5
Hyd5	5.4	58.5	7.2
Hyd6	2.9	46.6	11.9
Hyd7	1.3	34.8	11.8

Soil Classification	Percent of sample
Gravel	0.6
Sand	3.9
Coarse Sand	0.6
Medium Sand	0.7
Fine Sand	2.6
Silt	37.0
Clay	58.5

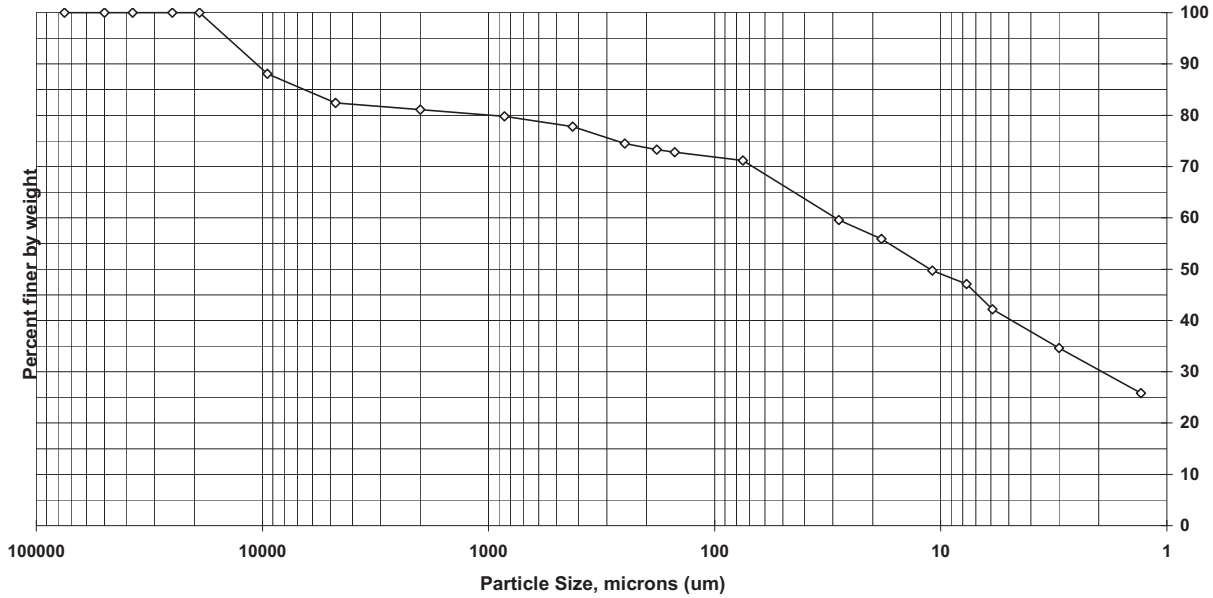
Particle Size of Soils by ASTM D422

				Date Received:	6/15/2013
Sample ID:	LMR13-26-012	**Percent Solids:**	62.0%	**Start Date:**	6/26/2013
Lab ID:	200-17028-E-8	**Specific Gravity:**	2.650	**End Date:**	6/29/2013

Shape (> #10): subangular

Non-soil material: shell

Hardness (> #10): hard



Sieve size	Particle size, um	Percent finer	Incremental percent
3 inch	75000	100.0	0.0
2 inch	50000	100.0	0.0
1.5 inch	37500	100.0	0.0
1 inch	25000	100.0	0.0
3/4 inch	19000	100.0	0.0
3/8 inch	9500	88.1	11.9
#4	4750	82.4	5.7
#10	2000	81.1	1.3
#20	850	79.8	1.3
#40	425	77.8	2.0
#60	250	74.5	3.3
#80	180	73.3	1.2
#100	150	72.8	0.5
#200	75	71.2	1.6
Hyd1	28.2	59.6	11.6
Hyd2	18.3	55.9	3.7
Hyd3	10.9	49.7	6.2
Hyd4	7.7	47.1	2.6
Hyd5	5.9	42.2	4.9
Hyd6	3	34.6	7.6
Hyd7	1.3	25.8	8.8

Soil Classification	Percent of sample
Gravel	17.6
Sand	11.2
Coarse Sand	1.3
Medium Sand	3.3
Fine Sand	6.6
Silt	29.0
Clay	42.2

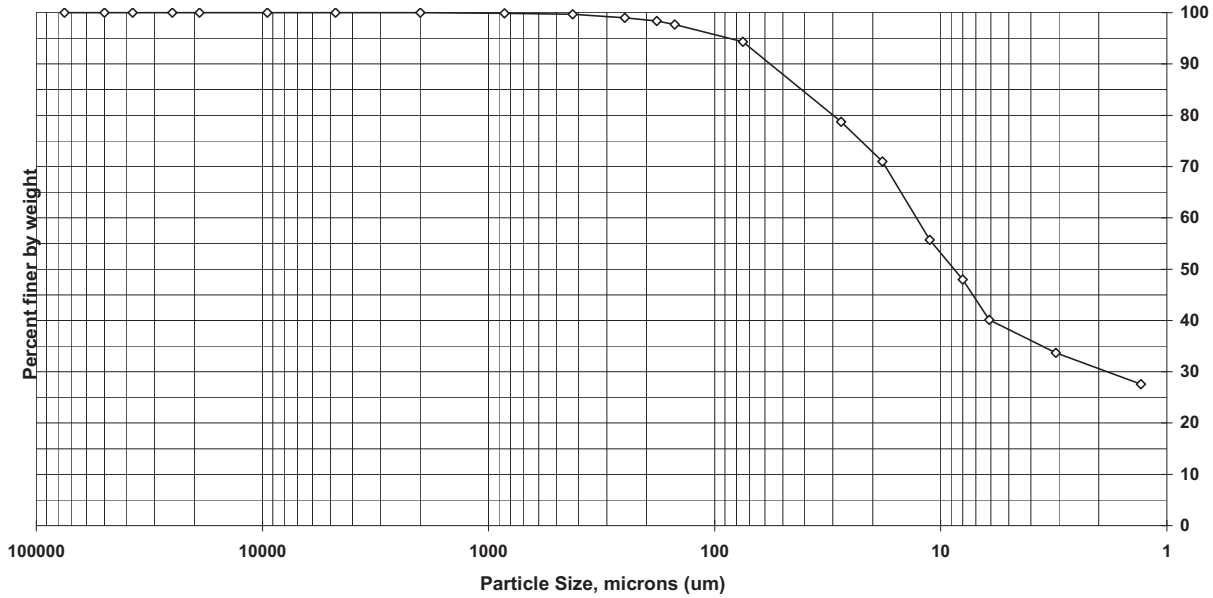
Particle Size of Soils by ASTM D422

				Date Received:	6/15/2013
Sample ID:	LMR13-27-012	**Percent Solids:**	47.4%	**Start Date:**	6/27/2013
Lab ID:	200-17028-E-13	**Specific Gravity:**	2.650	**End Date:**	6/30/2013

Shape (> #10): N/A

Non-soil material: N/A

Hardness (> #10): N/A



Sieve size	Particle size, um	Percent finer	Incremental percent
3 inch	75000	100.0	0.0
2 inch	50000	100.0	0.0
1.5 inch	37500	100.0	0.0
1 inch	25000	100.0	0.0
3/4 inch	19000	100.0	0.0
3/8 inch	9500	100.0	0.0
#4	4750	100.0	0.0
#10	2000	100.0	0.0
#20	850	99.9	0.1
#40	425	99.7	0.2
#60	250	99.0	0.7
#80	180	98.4	0.6
#100	150	97.7	0.7
#200	75	94.3	3.4
Hyd1	27.6	78.7	15.6
Hyd2	18.1	71.0	7.7
Hyd3	11.2	55.7	15.3
Hyd4	8	48.0	7.7
Hyd5	6.1	40.1	7.9
Hyd6	3.1	33.7	6.4
Hyd7	1.3	27.6	6.1

Soil Classification	Percent of sample
Gravel	0.0
Sand	5.7
Coarse Sand	0.0
Medium Sand	0.3
Fine Sand	5.4
Silt	54.2
Clay	40.1

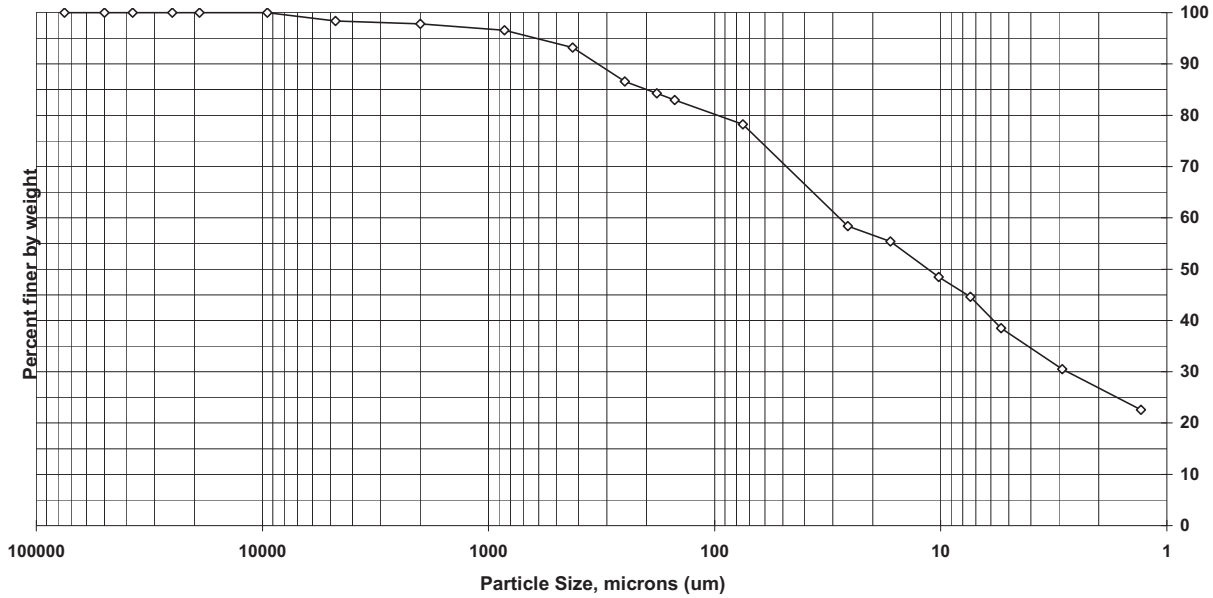
Particle Size of Soils by ASTM D422

				Date Received:	6/15/2013
Sample ID:	LMR13-72-012	**Percent Solids:**	67.7%	**Start Date:**	6/26/2013
Lab ID:	200-17028-E-18	**Specific Gravity:**	2.650	**End Date:**	6/30/2013

Shape (> #10): subangular

Non-soil material: shell

Hardness (> #10): hard



Sieve size	Particle size, um	Percent finer	Incremental percent
3 inch	75000	100.0	0.0
2 inch	50000	100.0	0.0
1.5 inch	37500	100.0	0.0
1 inch	25000	100.0	0.0
3/4 inch	19000	100.0	0.0
3/8 inch	9500	100.0	0.0
#4	4750	98.4	1.6
#10	2000	97.8	0.6
#20	850	96.6	1.2
#40	425	93.2	3.4
#60	250	86.6	6.6
#80	180	84.3	2.3
#100	150	83.0	1.3
#200	75	78.2	4.8
Hyd1	25.8	58.4	19.8
Hyd2	16.7	55.4	3.0
Hyd3	10.2	48.5	6.9
Hyd4	7.4	44.6	3.9
Hyd5	5.4	38.5	6.1
Hyd6	2.9	30.5	8.0
Hyd7	1.3	22.6	7.9

Soil Classification	Percent of sample
Gravel	1.6
Sand	20.2
Coarse Sand	0.6
Medium Sand	4.6
Fine Sand	15.0
Silt	39.7
Clay	38.5

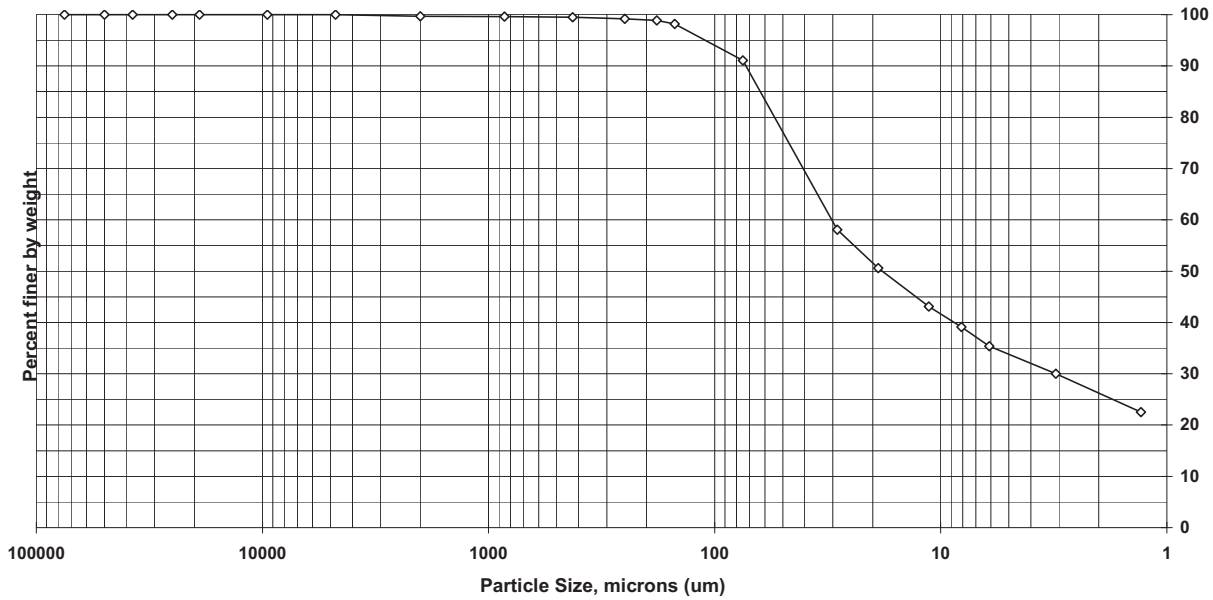
Particle Size of Soils by ASTM D422

				Date Received:	6/18/2013
Sample ID:	LMR13-28-012	**Percent Solids:**	46.5%	**Start Date:**	6/27/2013
Lab ID:	200-17052-F-1	**Specific Gravity:**	2.650	**End Date:**	6/30/2013

Shape (> #10): na

Non-soil material: shell, plant

Hardness (> #10): na



Sieve size	Particle size, um	Percent finer	Incremental percent
3 inch	75000	100.0	0.0
2 inch	50000	100.0	0.0
1.5 inch	37500	100.0	0.0
1 inch	25000	100.0	0.0
3/4 inch	19000	100.0	0.0
3/8 inch	9500	100.0	0.0
#4	4750	100.0	0.0
#10	2000	99.7	0.3
#20	850	99.6	0.1
#40	425	99.5	0.1
#60	250	99.2	0.3
#80	180	98.9	0.3
#100	150	98.2	0.7
#200	75	91.1	7.1
Hyd1	28.7	58.1	33.0
Hyd2	18.9	50.6	7.5
Hyd3	11.3	43.1	7.5
Hyd4	8.1	39.1	4.0
Hyd5	6.1	35.4	3.7
Hyd6	3.1	30.0	5.4
Hyd7	1.3	22.5	7.5

Soil Classification	Percent of sample
Gravel	0.0
Sand	8.9
Coarse Sand	0.3
Medium Sand	0.2
Fine Sand	8.4
Silt	55.7
Clay	35.4

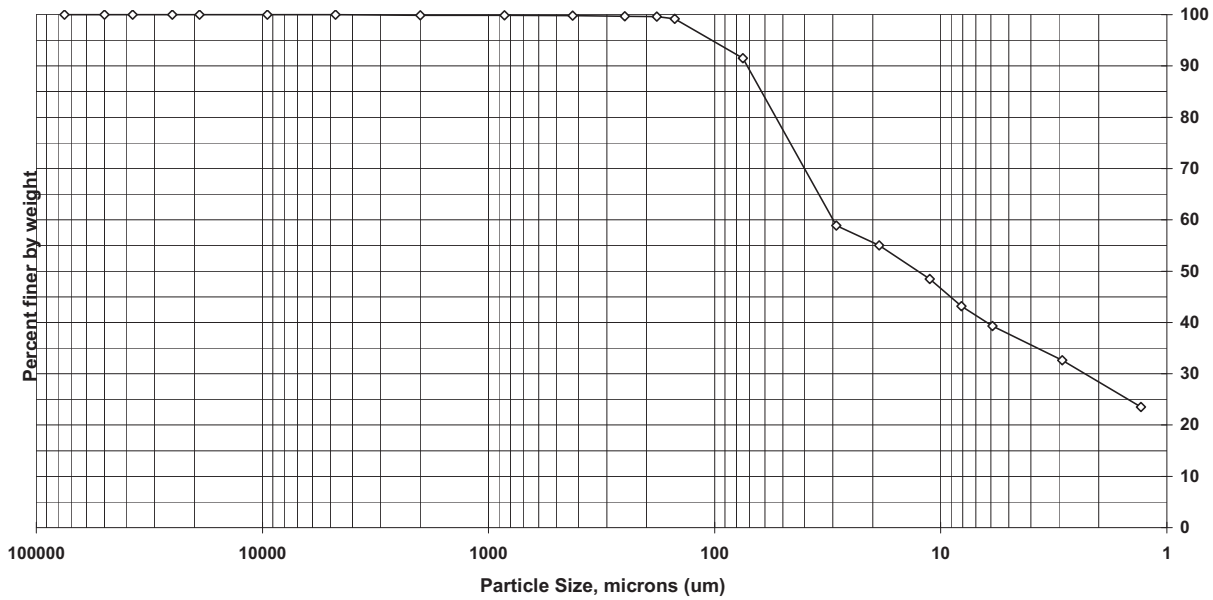
Particle Size of Soils by ASTM D422

				Date Received:	6/18/2013
Sample ID:	LMR13-29-012	**Percent Solids:**	53.6%	**Start Date:**	6/27/2013
Lab ID:	200-17052-E-7	**Specific Gravity:**	2.650	**End Date:**	7/1/2013

Shape (> #10): na

Non-soil material: plant

Hardness (> #10): na



Sieve size	Particle size, um	Percent finer	Incremental percent
3 inch	75000	100.0	0.0
2 inch	50000	100.0	0.0
1.5 inch	37500	100.0	0.0
1 inch	25000	100.0	0.0
3/4 inch	19000	100.0	0.0
3/8 inch	9500	100.0	0.0
#4	4750	100.0	0.0
#10	2000	99.9	0.1
#20	850	99.9	0.0
#40	425	99.8	0.1
#60	250	99.7	0.1
#80	180	99.6	0.1
#100	150	99.2	0.4
#200	75	91.5	7.7
Hyd1	29	58.9	32.6
Hyd2	18.7	55.0	3.9
Hyd3	11.2	48.5	6.5
Hyd4	8.1	43.2	5.3
Hyd5	5.9	39.3	3.9
Hyd6	2.9	32.6	6.7
Hyd7	1.3	23.5	9.1

Soil Classification	Percent of sample
Gravel	0.0
Sand	8.5
Coarse Sand	0.1
Medium Sand	0.1
Fine Sand	8.3
Silt	52.2
Clay	39.3

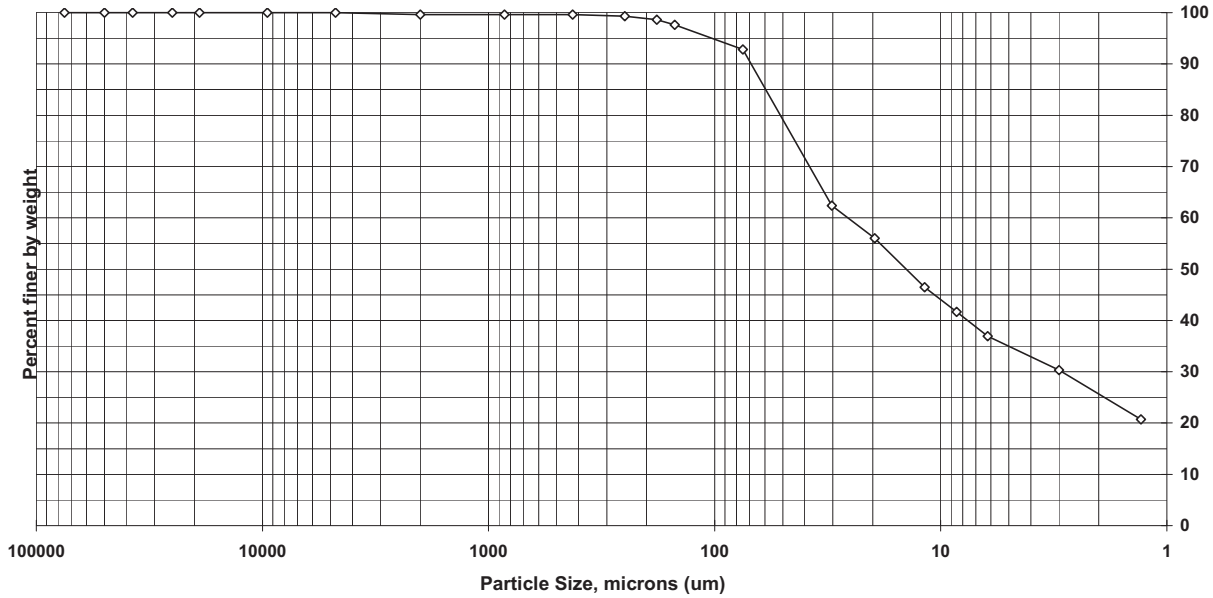
Particle Size of Soils by ASTM D422

Sample ID:	LMR13-34-012	**Percent Solids:**	40.8%	**Date Received:**	6/18/2013
Lab ID:	200-17052-E-13	**Specific Gravity:**	2.650	**Start Date:**	6/27/2013
				End Date:	7/1/2013

Shape (> #10): na

Non-soil material: plant

Hardness (> #10): na



Sieve size	Particle size, um	Percent finer	Incremental percent
3 inch	75000	100.0	0.0
2 inch	50000	100.0	0.0
1.5 inch	37500	100.0	0.0
1 inch	25000	100.0	0.0
3/4 inch	19000	100.0	0.0
3/8 inch	9500	100.0	0.0
#4	4750	100.0	0.0
#10	2000	99.6	0.4
#20	850	99.6	0.0
#40	425	99.6	0.0
#60	250	99.3	0.3
#80	180	98.6	0.7
#100	150	97.6	1.0
#200	75	92.8	4.8
Hyd1	30.3	62.4	30.4
Hyd2	19.6	56.0	6.4
Hyd3	11.8	46.5	9.5
Hyd4	8.5	41.7	4.8
Hyd5	6.2	36.9	4.8
Hyd6	3	30.3	6.6
Hyd7	1.3	20.7	9.6

Soil Classification	Percent of sample
Gravel	0.0
Sand	7.2
Coarse Sand	0.4
Medium Sand	0.0
Fine Sand	6.8
Silt	55.9
Clay	36.9

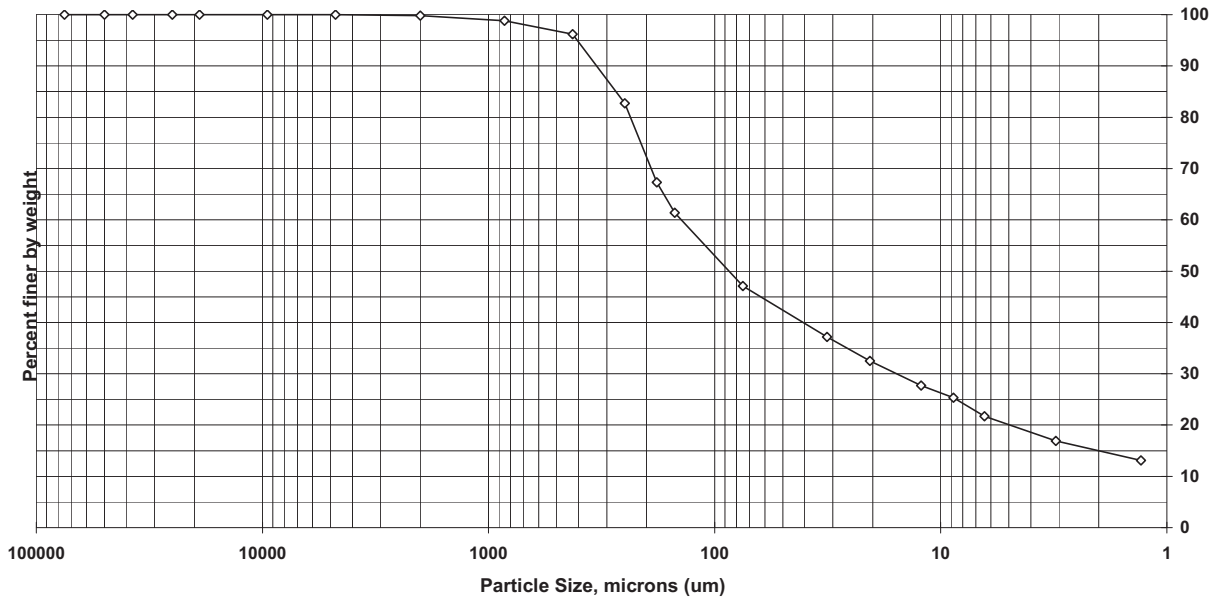
Particle Size of Soils by ASTM D422

				Date Received:	6/18/2013
Sample ID:	LMR13-32-012	**Percent Solids:**	74.2%	**Start Date:**	6/27/2013
Lab ID:	200-17054-E-3	**Specific Gravity:**	2.650	**End Date:**	7/1/2013

Shape (> #10): subangular

Non-soil material: plant

Hardness (> #10): hard



Sieve size	Particle size, um	Percent finer	Incremental percent
3 inch	75000	100.0	0.0
2 inch	50000	100.0	0.0
1.5 inch	37500	100.0	0.0
1 inch	25000	100.0	0.0
3/4 inch	19000	100.0	0.0
3/8 inch	9500	100.0	0.0
#4	4750	100.0	0.0
#10	2000	99.8	0.2
#20	850	98.8	1.0
#40	425	96.2	2.6
#60	250	82.7	13.5
#80	180	67.3	15.4
#100	150	61.4	5.9
#200	75	47.1	14.3
Hyd1	31.8	37.2	9.9
Hyd2	20.6	32.5	4.7
Hyd3	12.2	27.7	4.8
Hyd4	8.8	25.3	2.4
Hyd5	6.4	21.7	3.6
Hyd6	3.1	16.9	4.8
Hyd7	1.3	13.1	3.8

Soil Classification	Percent of sample
Gravel	0.0
Sand	52.9
Coarse Sand	0.2
Medium Sand	3.6
Fine Sand	49.1
Silt	25.4
Clay	21.7

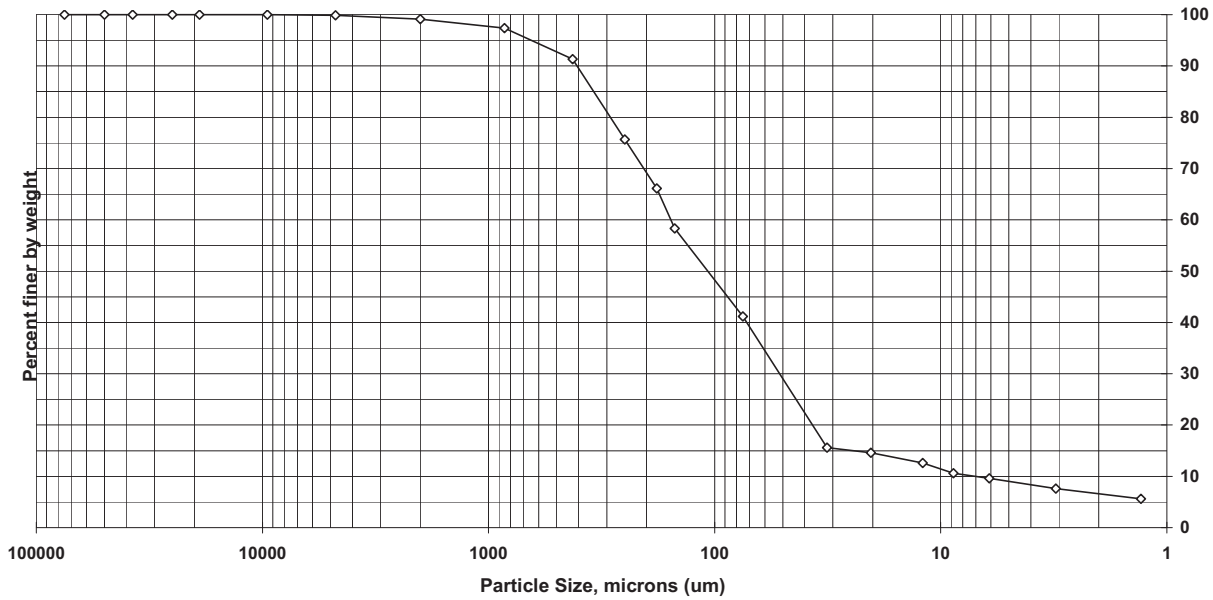
Particle Size of Soils by ASTM D422

				Date Received:	6/18/2013
Sample ID:	LMR13-31-012	**Percent Solids:**	75.9%	**Start Date:**	6/27/2013
Lab ID:	200-17054-E-8	**Specific Gravity:**	2.650	**End Date:**	7/1/2013

Shape (> #10): subrounded

Non-soil material: shell, plant

Hardness (> #10): hard



Sieve size	Particle size, um	Percent finer	Incremental percent
3 inch	75000	100.0	0.0
2 inch	50000	100.0	0.0
1.5 inch	37500	100.0	0.0
1 inch	25000	100.0	0.0
3/4 inch	19000	100.0	0.0
3/8 inch	9500	100.0	0.0
#4	4750	99.9	0.1
#10	2000	99.1	0.8
#20	850	97.4	1.7
#40	425	91.3	6.1
#60	250	75.7	15.6
#80	180	66.1	9.6
#100	150	58.3	7.8
#200	75	41.2	17.1
Hyd1	31.8	15.6	25.6
Hyd2	20.4	14.6	1.0
Hyd3	12	12.6	2.0
Hyd4	8.8	10.6	2.0
Hyd5	6.1	9.6	1.0
Hyd6	3.1	7.6	2.0
Hyd7	1.3	5.6	2.0

Soil Classification	Percent of sample
Gravel	0.1
Sand	58.7
Coarse Sand	0.8
Medium Sand	7.8
Fine Sand	50.1
Silt	31.6
Clay	9.6

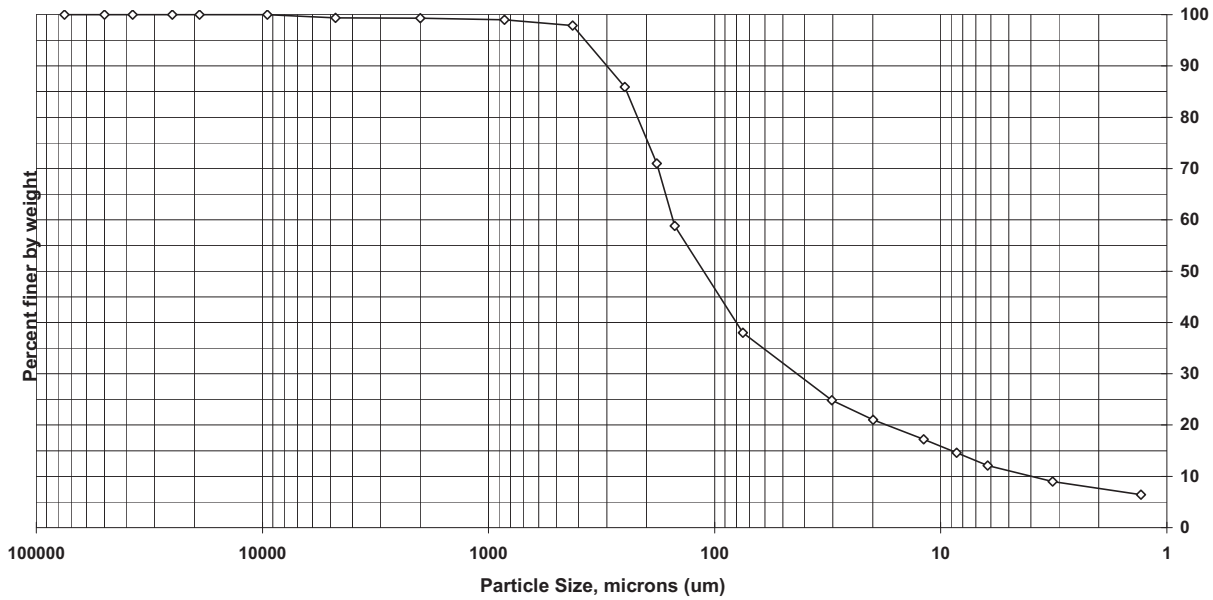
Particle Size of Soils by ASTM D422

				Date Received:	6/18/2013
Sample ID:	LMR13-75-012	**Percent Solids:**	79.2%	**Start Date:**	6/27/2013
Lab ID:	200-17054-F-13	**Specific Gravity:**	2.650	**End Date:**	7/1/2013

Shape (> #10): subrounded

Non-soil material: plant, shell

Hardness (> #10): hard



Sieve size	Particle size, um	Percent finer	Incremental percent
3 inch	75000	100.0	0.0
2 inch	50000	100.0	0.0
1.5 inch	37500	100.0	0.0
1 inch	25000	100.0	0.0
3/4 inch	19000	100.0	0.0
3/8 inch	9500	100.0	0.0
#4	4750	99.4	0.6
#10	2000	99.3	0.1
#20	850	99.0	0.3
#40	425	97.9	1.1
#60	250	85.9	12.0
#80	180	71.0	14.9
#100	150	58.8	12.2
#200	75	38.0	20.8
Hyd1	30.3	24.8	13.2
Hyd2	19.9	21.0	3.8
Hyd3	11.9	17.2	3.8
Hyd4	8.5	14.6	2.6
Hyd5	6.2	12.1	2.5
Hyd6	3.2	9.0	3.1
Hyd7	1.3	6.4	2.5

Soil Classification	Percent of sample
Gravel	0.6
Sand	61.4
Coarse Sand	0.1
Medium Sand	1.4
Fine Sand	59.9
Silt	25.9
Clay	12.1

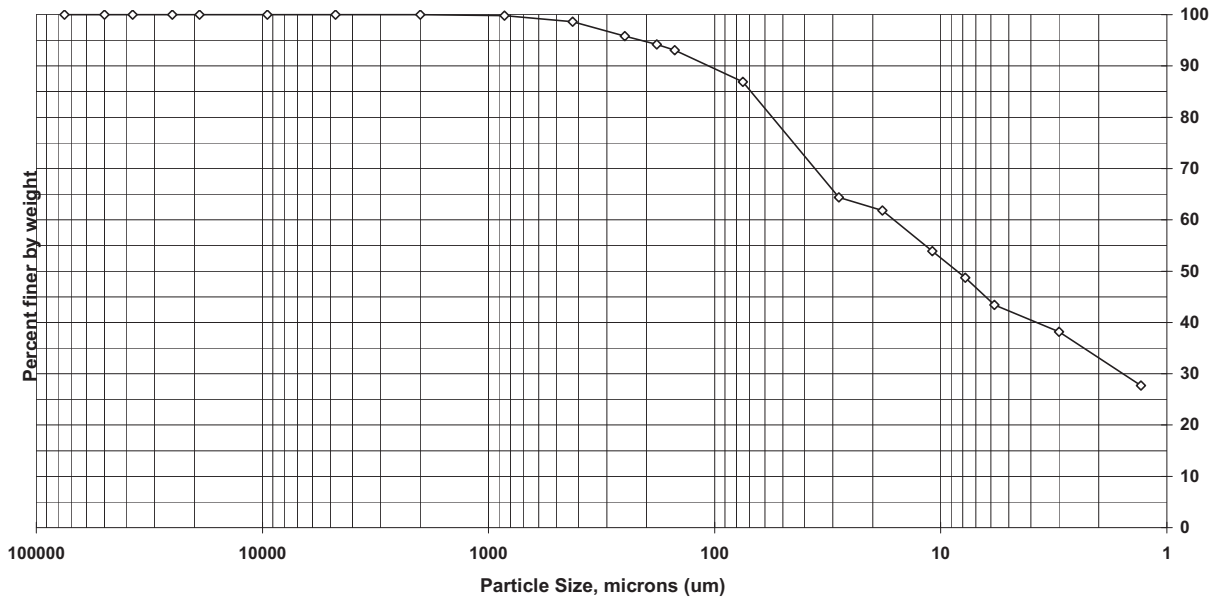
Particle Size of Soils by ASTM D422

				Date Received:	6/18/2013
Sample ID:	LMR13-74-012	**Percent Solids:**	53.9%	**Start Date:**	6/27/2013
Lab ID:	200-17054-F-14	**Specific Gravity:**	2.650	**End Date:**	7/1/2013

Shape (> #10): na

Non-soil material: na

Hardness (> #10): na



Sieve size	Particle size, um	Percent finer	Incremental percent
3 inch	75000	100.0	0.0
2 inch	50000	100.0	0.0
1.5 inch	37500	100.0	0.0
1 inch	25000	100.0	0.0
3/4 inch	19000	100.0	0.0
3/8 inch	9500	100.0	0.0
#4	4750	100.0	0.0
#10	2000	100.0	0.0
#20	850	99.8	0.2
#40	425	98.6	1.2
#60	250	95.8	2.8
#80	180	94.2	1.6
#100	150	93.1	1.1
#200	75	86.9	6.2
Hyd1	28.2	64.4	22.5
Hyd2	18.1	61.8	2.6
Hyd3	10.9	53.9	7.9
Hyd4	7.8	48.7	5.2
Hyd5	5.8	43.4	5.3
Hyd6	3	38.2	5.2
Hyd7	1.3	27.7	10.5

Soil Classification	Percent of sample
Gravel	0.0
Sand	13.1
Coarse Sand	0.0
Medium Sand	1.4
Fine Sand	11.7
Silt	43.5
Clay	43.4

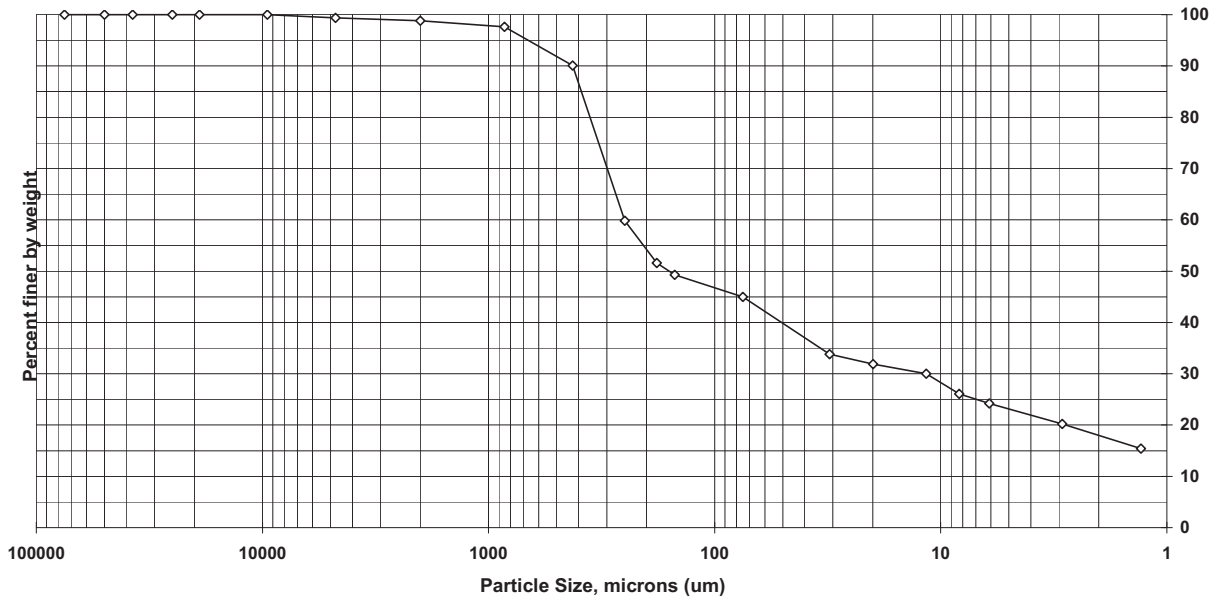
Particle Size of Soils by ASTM D422

				Date Received:	6/18/2013
Sample ID:	LMR13-76-012	**Percent Solids:**	65.3%	**Start Date:**	6/27/2013
Lab ID:	200-17054-F-17	**Specific Gravity:**	2.650	**End Date:**	7/1/2013

Shape (> #10): subangular

Non-soil material: shell, plant

Hardness (> #10): hard



Sieve size	Particle size, um	Percent finer	Incremental percent
3 inch	75000	100.0	0.0
2 inch	50000	100.0	0.0
1.5 inch	37500	100.0	0.0
1 inch	25000	100.0	0.0
3/4 inch	19000	100.0	0.0
3/8 inch	9500	100.0	0.0
#4	4750	99.4	0.6
#10	2000	98.8	0.6
#20	850	97.6	1.2
#40	425	90.1	7.5
#60	250	59.8	30.3
#80	180	51.6	8.2
#100	150	49.3	2.3
#200	75	45.0	4.3
Hyd1	31	33.8	11.2
Hyd2	19.9	31.9	1.9
Hyd3	11.6	30.0	1.9
Hyd4	8.3	26.1	3.9
Hyd5	6.1	24.2	1.9
Hyd6	2.9	20.2	4.0
Hyd7	1.3	15.4	4.8

Soil Classification	Percent of sample
Gravel	0.6
Sand	54.4
Coarse Sand	0.6
Medium Sand	8.7
Fine Sand	45.1
Silt	20.8
Clay	24.2

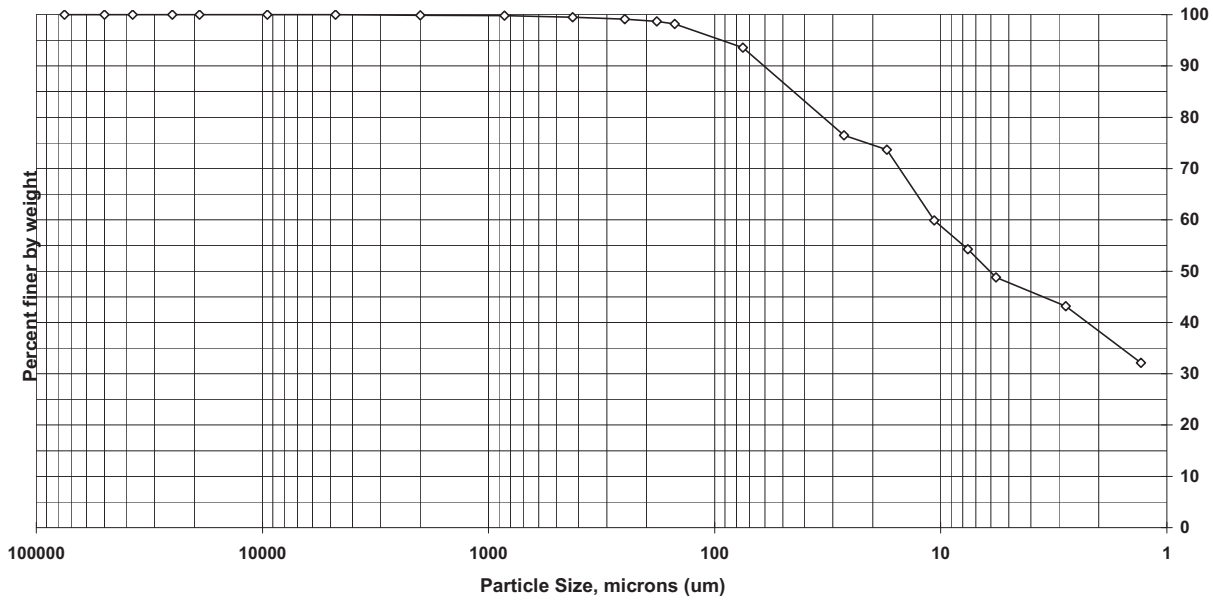
Particle Size of Soils by ASTM D422

				Date Received:	6/18/2013
Sample ID:	LMR13-35-012	**Percent Solids:**	54.2%	**Start Date:**	6/27/2013
Lab ID:	200-17054-F-19	**Specific Gravity:**	2.650	**End Date:**	7/1/2013

Shape (> #10): na

Non-soil material: plant, shell

Hardness (> #10): na



Sieve size	Particle size, um	Percent finer	Incremental percent
3 inch	75000	100.0	0.0
2 inch	50000	100.0	0.0
1.5 inch	37500	100.0	0.0
1 inch	25000	100.0	0.0
3/4 inch	19000	100.0	0.0
3/8 inch	9500	100.0	0.0
#4	4750	100.0	0.0
#10	2000	99.9	0.1
#20	850	99.8	0.1
#40	425	99.5	0.3
#60	250	99.1	0.4
#80	180	98.7	0.4
#100	150	98.2	0.5
#200	75	93.6	4.6
Hyd1	26.8	76.5	17.1
Hyd2	17.3	73.7	2.8
Hyd3	10.7	59.9	13.8
Hyd4	7.6	54.3	5.6
Hyd5	5.7	48.8	5.5
Hyd6	2.8	43.2	5.6
Hyd7	1.3	32.1	11.1

Soil Classification	Percent of sample
Gravel	0.0
Sand	6.4
Coarse Sand	0.1
Medium Sand	0.4
Fine Sand	5.9
Silt	44.8
Clay	48.8

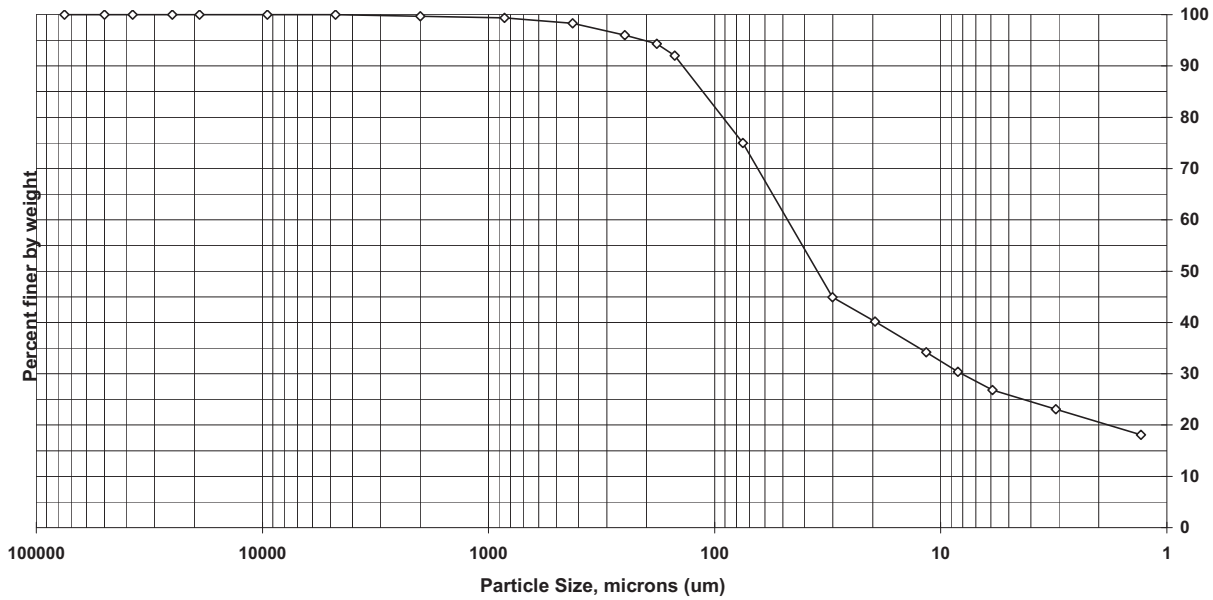
Particle Size of Soils by ASTM D422

				Date Received:	6/18/2013
Sample ID:	LMR13-82-012	**Percent Solids:**	55.8%	**Start Date:**	7/2/2013
Lab ID:	200-17055-F-6	**Specific Gravity:**	2.650	**End Date:**	7/6/2013

Shape (> #10): N/A

Non-soil material: wood, shell

Hardness (> #10): N/A



Sieve size	Particle size, um	Percent finer	Incremental percent
3 inch	75000	100.0	0.0
2 inch	50000	100.0	0.0
1.5 inch	37500	100.0	0.0
1 inch	25000	100.0	0.0
3/4 inch	19000	100.0	0.0
3/8 inch	9500	100.0	0.0
#4	4750	100.0	0.0
#10	2000	99.7	0.3
#20	850	99.4	0.3
#40	425	98.3	1.1
#60	250	96.0	2.3
#80	180	94.3	1.7
#100	150	92.0	2.3
#200	75	75.0	17.0
Hyd1	30.1	44.9	30.1
Hyd2	19.5	40.2	4.7
Hyd3	11.6	34.2	6.0
Hyd4	8.4	30.4	3.8
Hyd5	5.9	26.8	3.6
Hyd6	3.1	23.1	3.7
Hyd7	1.3	18.1	5.0

Soil Classification	Percent of sample
Gravel	0.0
Sand	25.0
Coarse Sand	0.3
Medium Sand	1.4
Fine Sand	23.3
Silt	48.2
Clay	26.8

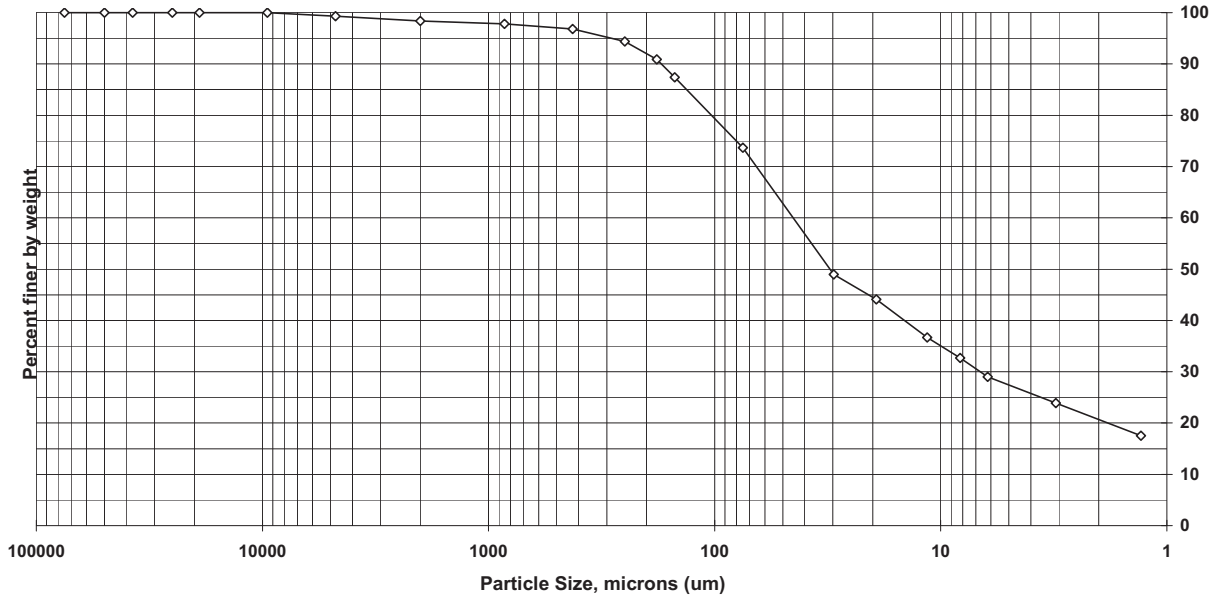
Particle Size of Soils by ASTM D422

				Date Received:	6/18/2013
Sample ID:	LMR13-03-012	**Percent Solids:**	60.7%	**Start Date:**	7/2/2013
Lab ID:	200-17055-F-14	**Specific Gravity:**	2.650	**End Date:**	7/8/2013

Shape (> #10): N/A

Non-soil material: shell

Hardness (> #10): N/A



Sieve size	Particle size, um	Percent finer	Incremental percent
3 inch	75000	100.0	0.0
2 inch	50000	100.0	0.0
1.5 inch	37500	100.0	0.0
1 inch	25000	100.0	0.0
3/4 inch	19000	100.0	0.0
3/8 inch	9500	100.0	0.0
#4	4750	99.3	0.7
#10	2000	98.4	0.9
#20	850	97.8	0.6
#40	425	96.8	1.0
#60	250	94.4	2.4
#80	180	90.9	3.5
#100	150	87.4	3.5
#200	75	73.7	13.7
Hyd1	29.7	49.0	24.7
Hyd2	19.3	44.1	4.9
Hyd3	11.5	36.7	7.4
Hyd4	8.2	32.7	4.0
Hyd5	6.2	29.0	3.7
Hyd6	3.1	23.9	5.1
Hyd7	1.3	17.5	6.4

Soil Classification	Percent of sample
Gravel	0.7
Sand	25.6
Coarse Sand	0.9
Medium Sand	1.6
Fine Sand	23.1
Silt	44.7
Clay	29.0

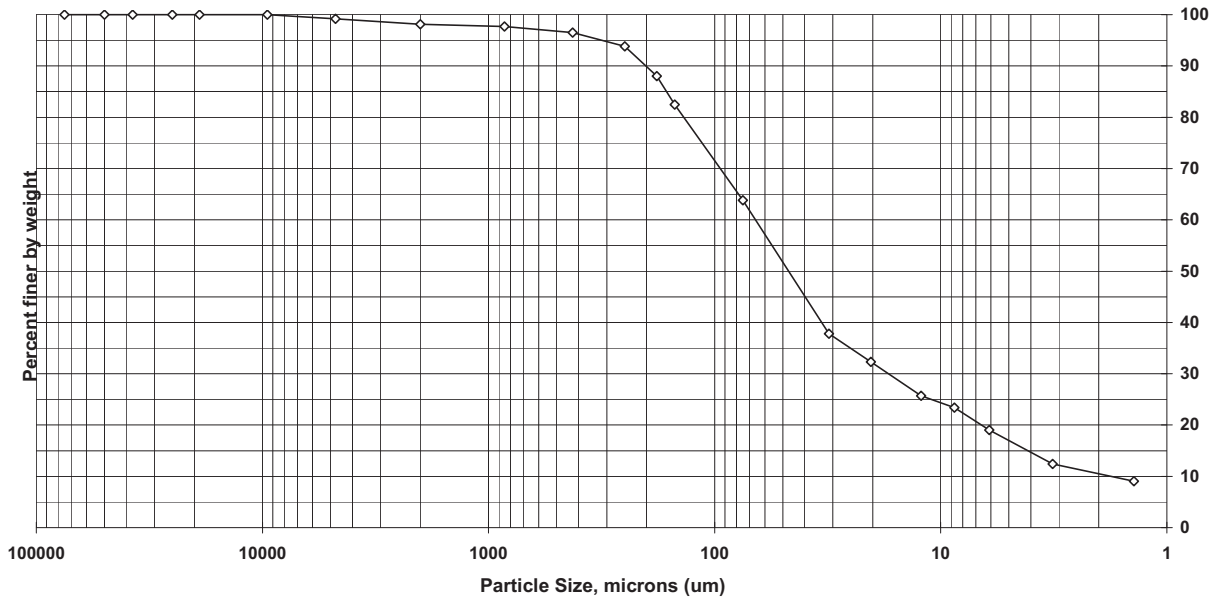
Particle Size of Soils by ASTM D422

				Date Received:	6/18/2013
Sample ID:	LMR13-77-012	**Percent Solids:**	58.6%	**Start Date:**	6/27/2013
Lab ID:	200-17056-E-8	**Specific Gravity:**	2.650	**End Date:**	7/1/2013

Shape (> #10): na

Non-soil material: shell, plant

Hardness (> #10): na



Sieve size	Particle size, um	Percent finer	Incremental percent
3 inch	75000	100.0	0.0
2 inch	50000	100.0	0.0
1.5 inch	37500	100.0	0.0
1 inch	25000	100.0	0.0
3/4 inch	19000	100.0	0.0
3/8 inch	9500	100.0	0.0
#4	4750	99.2	0.8
#10	2000	98.1	1.1
#20	850	97.7	0.4
#40	425	96.5	1.2
#60	250	93.8	2.7
#80	180	88.0	5.8
#100	150	82.5	5.5
#200	75	63.8	18.7
Hyd1	31.2	37.8	26.0
Hyd2	20.4	32.3	5.5
Hyd3	12.2	25.7	6.6
Hyd4	8.7	23.4	2.3
Hyd5	6.1	19.0	4.4
Hyd6	3.2	12.4	6.6
Hyd7	1.4	9.1	3.4

Soil Classification	Percent of sample
Gravel	0.8
Sand	35.4
Coarse Sand	1.1
Medium Sand	1.6
Fine Sand	32.7
Silt	44.8
Clay	19.0

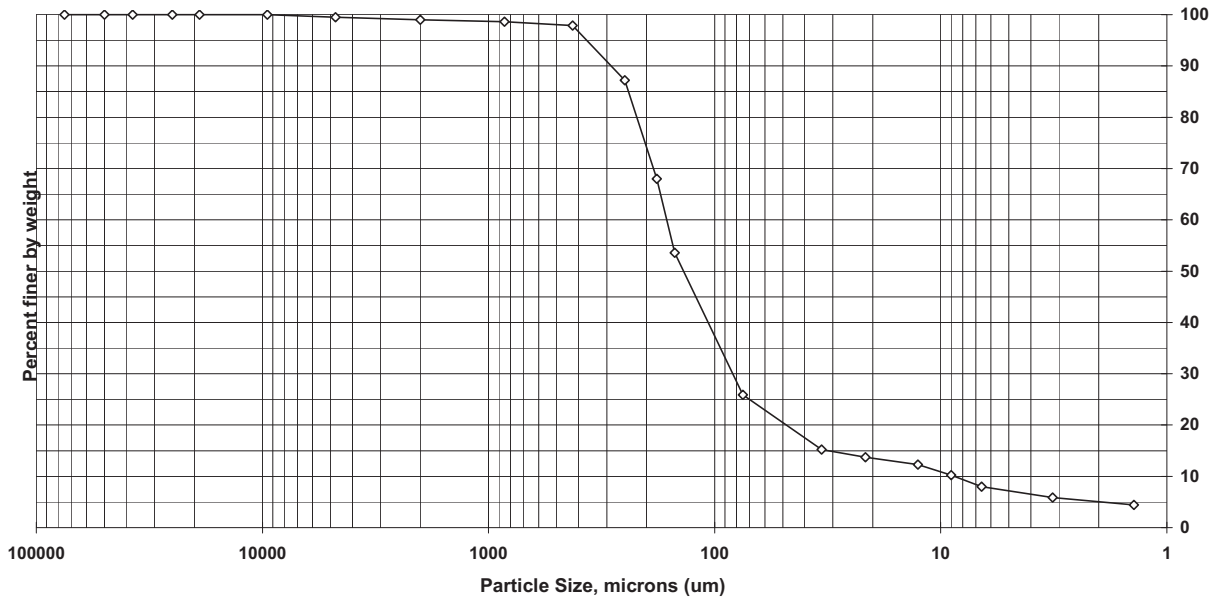
Particle Size of Soils by ASTM D422

				Date Received:	6/18/2013
Sample ID:	LMR13-78-012	**Percent Solids:**	69.0%	**Start Date:**	6/27/2013
Lab ID:	200-17056-F-16	**Specific Gravity:**	2.650	**End Date:**	7/1/2013

Shape (> #10): subangular

Non-soil material: shell, plant

Hardness (> #10): hard



Sieve size	Particle size, um	Percent finer	Incremental percent
3 inch	75000	100.0	0.0
2 inch	50000	100.0	0.0
1.5 inch	37500	100.0	0.0
1 inch	25000	100.0	0.0
3/4 inch	19000	100.0	0.0
3/8 inch	9500	100.0	0.0
#4	4750	99.5	0.5
#10	2000	99.0	0.5
#20	850	98.6	0.4
#40	425	97.9	0.7
#60	250	87.2	10.7
#80	180	68.0	19.2
#100	150	53.6	14.4
#200	75	25.9	27.7
Hyd1	33.7	15.2	10.7
Hyd2	21.5	13.7	1.5
Hyd3	12.6	12.3	1.4
Hyd4	9	10.2	2.1
Hyd5	6.6	8.0	2.2
Hyd6	3.2	5.9	2.2
Hyd7	1.4	4.4	1.4

Soil Classification	Percent of sample
Gravel	0.5
Sand	73.6
Coarse Sand	0.5
Medium Sand	1.1
Fine Sand	72.0
Silt	17.9
Clay	8.0

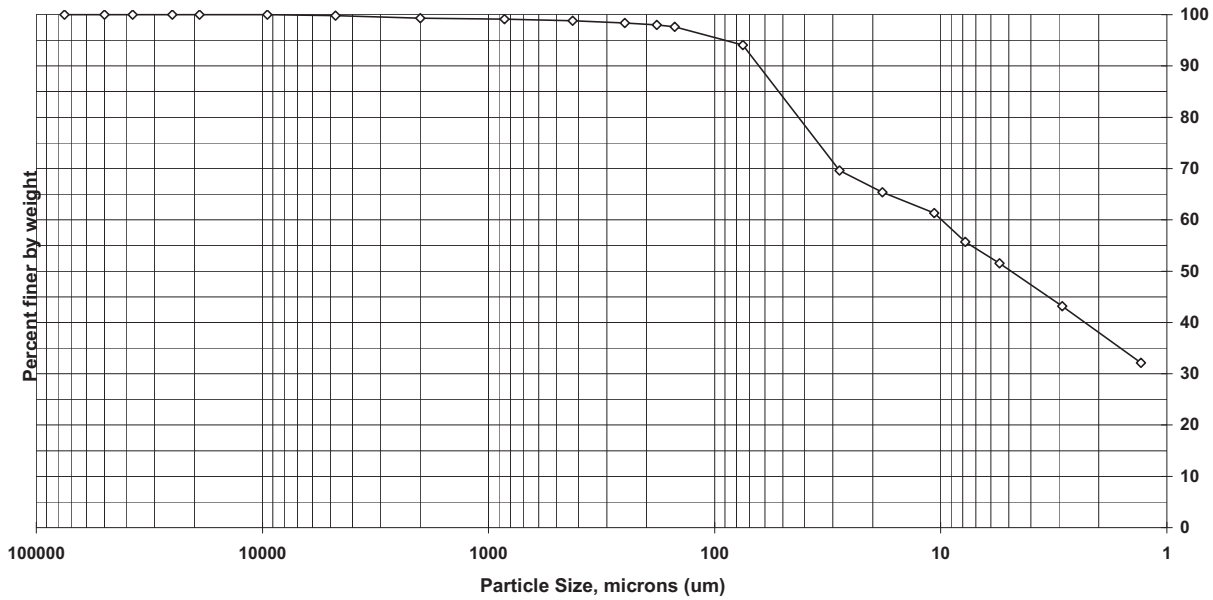
Particle Size of Soils by ASTM D422

Sample ID:	LMR13-40-012	**Percent Solids:**	45.2%	**Date Received:**	6/18/2013
Lab ID:	200-17056-E-19	**Specific Gravity:**	2.650	**Start Date:**	6/27/2013
				End Date:	7/1/2013

Shape (> #10): na

Non-soil material: shell, plant

Hardness (> #10): na



Sieve size	Particle size, um	Percent finer	Incremental percent
3 inch	75000	100.0	0.0
2 inch	50000	100.0	0.0
1.5 inch	37500	100.0	0.0
1 inch	25000	100.0	0.0
3/4 inch	19000	100.0	0.0
3/8 inch	9500	100.0	0.0
#4	4750	99.8	0.2
#10	2000	99.3	0.5
#20	850	99.1	0.2
#40	425	98.8	0.3
#60	250	98.4	0.4
#80	180	98.0	0.4
#100	150	97.6	0.4
#200	75	94.1	3.5
Hyd1	28	69.6	24.5
Hyd2	18.1	65.4	4.2
Hyd3	10.7	61.3	4.1
Hyd4	7.8	55.7	5.6
Hyd5	5.5	51.5	4.2
Hyd6	2.9	43.2	8.3
Hyd7	1.3	32.1	11.1

Soil Classification	Percent of sample
Gravel	0.2
Sand	5.7
Coarse Sand	0.5
Medium Sand	0.5
Fine Sand	4.7
Silt	42.6
Clay	51.5

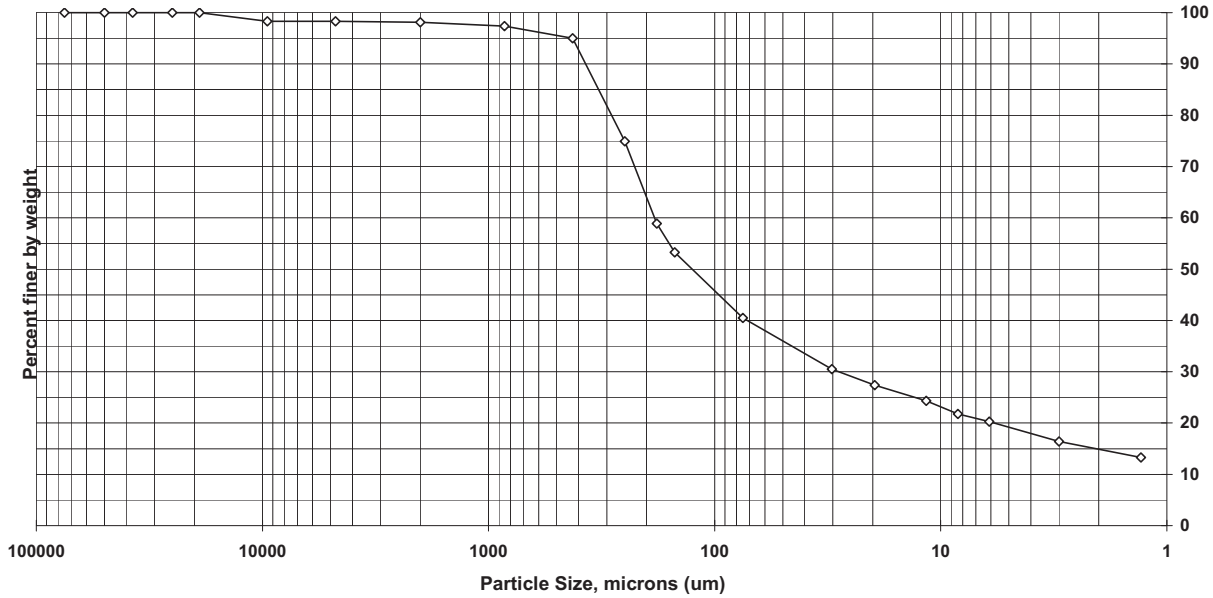
Particle Size of Soils by ASTM D422

				Date Received:	6/18/2013
Sample ID:	LMR13-38-012	**Percent Solids:**	69.0%	**Start Date:**	6/28/2013
Lab ID:	200-17061-E-3	**Specific Gravity:**	2.650	**End Date:**	7/3/2013

Shape (> #10): subangular

Non-soil material: shell,stick

Hardness (> #10): hard



Sieve size	Particle size, um	Percent finer	Incremental percent
3 inch	75000	100.0	0.0
2 inch	50000	100.0	0.0
1.5 inch	37500	100.0	0.0
1 inch	25000	100.0	0.0
3/4 inch	19000	100.0	0.0
3/8 inch	9500	98.3	1.7
#4	4750	98.3	0.0
#10	2000	98.1	0.2
#20	850	97.4	0.7
#40	425	95.0	2.4
#60	250	74.9	20.1
#80	180	58.9	16.0
#100	150	53.3	5.6
#200	75	40.5	12.8
Hyd1	30.3	30.5	10.0
Hyd2	19.6	27.4	3.1
Hyd3	11.6	24.3	3.1
Hyd4	8.4	21.8	2.5
Hyd5	6.1	20.3	1.5
Hyd6	3	16.4	3.9
Hyd7	1.3	13.3	3.1

Soil Classification	Percent of sample
Gravel	1.7
Sand	57.8
Coarse Sand	0.2
Medium Sand	3.1
Fine Sand	54.5
Silt	20.2
Clay	20.3

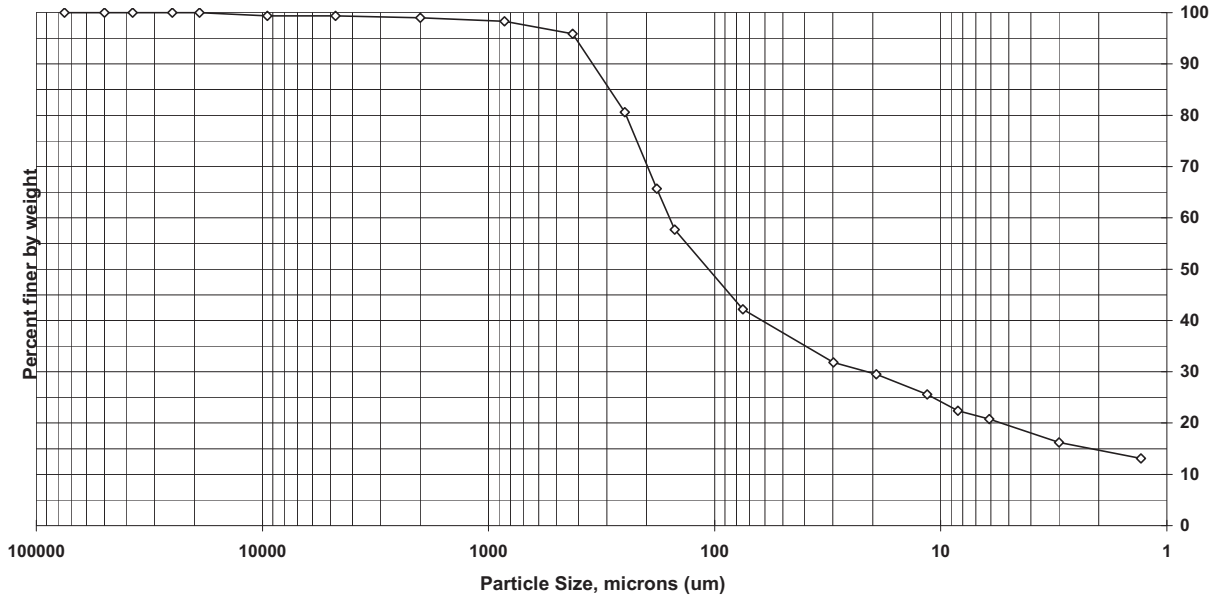
Particle Size of Soils by ASTM D422

				Date Received:	6/18/2013
Sample ID:	LMR13-79-012	**Percent Solids:**	68.9%	**Start Date:**	6/28/2013
Lab ID:	200-17061-E-6	**Specific Gravity:**	2.650	**End Date:**	7/3/2013

Shape (> #10): rounded

Non-soil material: shell,plant

Hardness (> #10): hard



Sieve size	Particle size, um	Percent finer	Incremental percent
3 inch	75000	100.0	0.0
2 inch	50000	100.0	0.0
1.5 inch	37500	100.0	0.0
1 inch	25000	100.0	0.0
3/4 inch	19000	100.0	0.0
3/8 inch	9500	99.4	0.6
#4	4750	99.4	0.0
#10	2000	99.0	0.4
#20	850	98.3	0.7
#40	425	95.9	2.4
#60	250	80.6	15.3
#80	180	65.7	14.9
#100	150	57.7	8.0
#200	75	42.2	15.5
Hyd1	29.8	31.8	10.4
Hyd2	19.3	29.5	2.3
Hyd3	11.5	25.6	3.9
Hyd4	8.4	22.4	3.2
Hyd5	6.1	20.8	1.6
Hyd6	3	16.2	4.6
Hyd7	1.3	13.1	3.1

Soil Classification	Percent of sample
Gravel	0.6
Sand	57.2
Coarse Sand	0.4
Medium Sand	3.1
Fine Sand	53.7
Silt	21.4
Clay	20.8

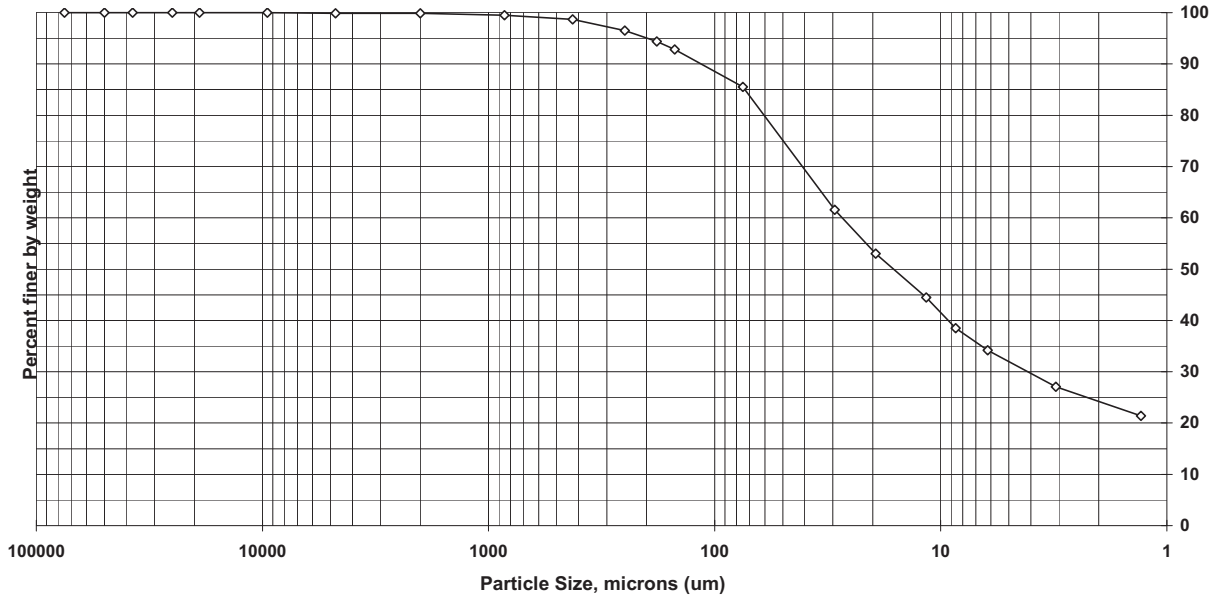
Particle Size of Soils by ASTM D422

				Date Received:	6/18/2013
Sample ID:	LMR13-01-012	**Percent Solids:**	70.3%	**Start Date:**	6/28/2013
Lab ID:	200-17061-F-12	**Specific Gravity:**	2.650	**End Date:**	7/3/2013

Shape (> #10): angular

Non-soil material: shell

Hardness (> #10): hard



Sieve size	Particle size, um	Percent finer	Incremental percent
3 inch	75000	100.0	0.0
2 inch	50000	100.0	0.0
1.5 inch	37500	100.0	0.0
1 inch	25000	100.0	0.0
3/4 inch	19000	100.0	0.0
3/8 inch	9500	100.0	0.0
#4	4750	99.9	0.1
#10	2000	99.9	0.0
#20	850	99.5	0.4
#40	425	98.7	0.8
#60	250	96.5	2.2
#80	180	94.4	2.1
#100	150	92.8	1.6
#200	75	85.5	7.3
Hyd1	29.4	61.6	23.9
Hyd2	19.4	53.0	8.6
Hyd3	11.6	44.5	8.5
Hyd4	8.6	38.5	6.0
Hyd5	6.2	34.2	4.3
Hyd6	3.1	27.1	7.1
Hyd7	1.3	21.4	5.7

Soil Classification	Percent of sample
Gravel	0.1
Sand	14.4
Coarse Sand	0.0
Medium Sand	1.2
Fine Sand	13.2
Silt	51.3
Clay	34.2

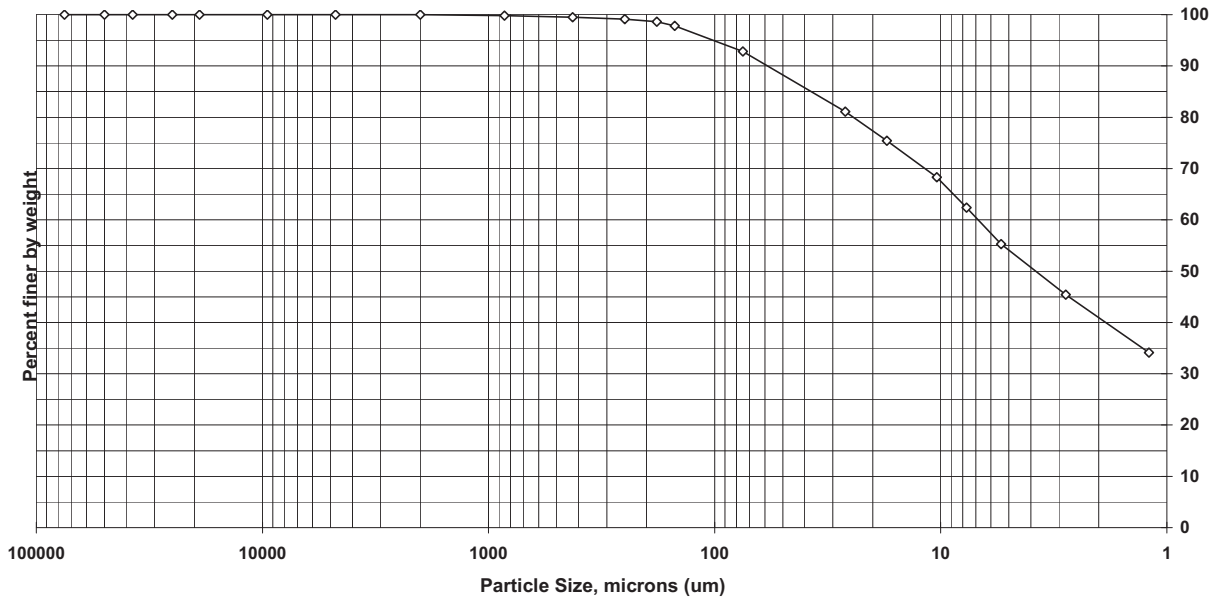
Particle Size of Soils by ASTM D422

				Date Received:	6/18/2013
Sample ID:	LMR13-48-012	**Percent Solids:**	54.6%	**Start Date:**	6/28/2013
Lab ID:	200-17061-E-18	**Specific Gravity:**	2.650	**End Date:**	7/3/2013

Shape (> #10): n/a

Non-soil material: n/a

Hardness (> #10): n/a



Sieve size	Particle size, um	Percent finer	Incremental percent
3 inch	75000	100.0	0.0
2 inch	50000	100.0	0.0
1.5 inch	37500	100.0	0.0
1 inch	25000	100.0	0.0
3/4 inch	19000	100.0	0.0
3/8 inch	9500	100.0	0.0
#4	4750	100.0	0.0
#10	2000	100.0	0.0
#20	850	99.8	0.2
#40	425	99.5	0.3
#60	250	99.1	0.4
#80	180	98.6	0.5
#100	150	97.8	0.8
#200	75	92.8	5.0
Hyd1	26.4	81.1	11.7
Hyd2	17.3	75.4	5.7
Hyd3	10.4	68.3	7.1
Hyd4	7.7	62.4	5.9
Hyd5	5.4	55.3	7.1
Hyd6	2.8	45.4	9.9
Hyd7	1.2	34.1	11.3

Soil Classification	Percent of sample
Gravel	0.0
Sand	7.2
Coarse Sand	0.0
Medium Sand	0.5
Fine Sand	6.7
Silt	37.5
Clay	55.3

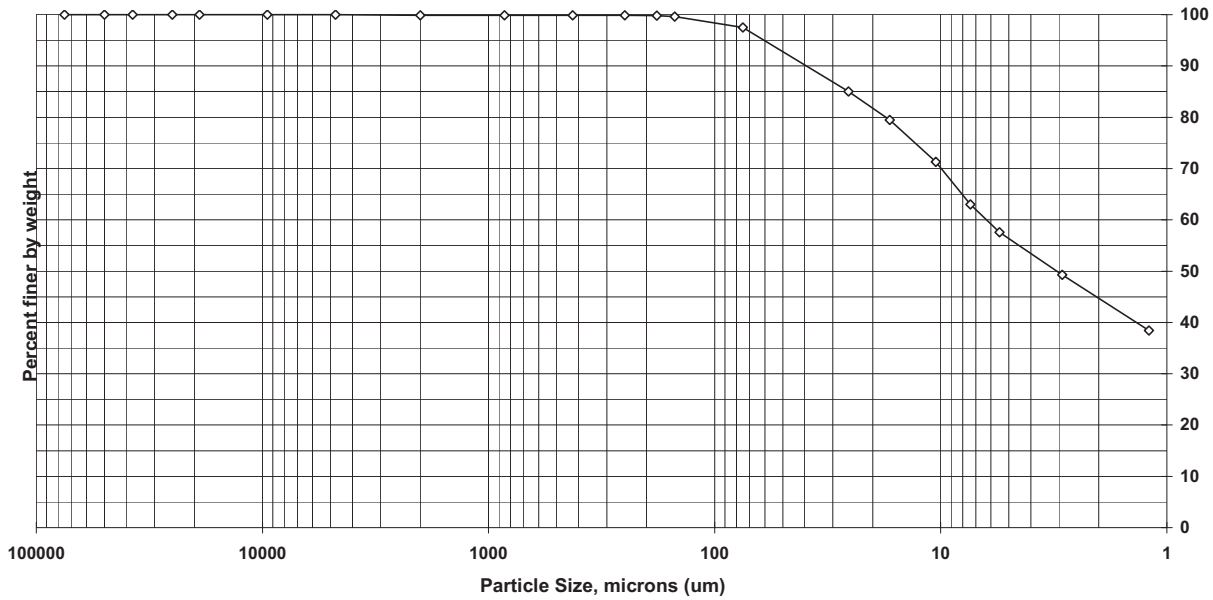
Particle Size of Soils by ASTM D422

				Date Received:	6/19/2013
Sample ID:	LMR13-13-012	**Percent Solids:**	47.9%	**Start Date:**	7/2/2013
Lab ID:	200-17071-F-8	**Specific Gravity:**	2.650	**End Date:**	7/12/2013

Shape (> #10): N/A

Non-soil material: shell

Hardness (> #10): N/A



Sieve size	Particle size, um	Percent finer	Incremental percent
3 inch	75000	100.0	0.0
2 inch	50000	100.0	0.0
1.5 inch	37500	100.0	0.0
1 inch	25000	100.0	0.0
3/4 inch	19000	100.0	0.0
3/8 inch	9500	100.0	0.0
#4	4750	100.0	0.0
#10	2000	99.9	0.1
#20	850	99.9	0.0
#40	425	99.9	0.0
#60	250	99.9	0.0
#80	180	99.8	0.1
#100	150	99.6	0.2
#200	75	97.5	2.1
Hyd1	25.6	85.0	12.5
Hyd2	16.8	79.5	5.5
Hyd3	10.5	71.3	8.2
Hyd4	7.4	63.0	8.3
Hyd5	5.5	57.6	5.4
Hyd6	2.9	49.3	8.3
Hyd7	1.2	38.4	10.9

Soil Classification	Percent of sample
Gravel	0.0
Sand	2.5
Coarse Sand	0.1
Medium Sand	0.0
Fine Sand	2.4
Silt	39.9
Clay	57.6

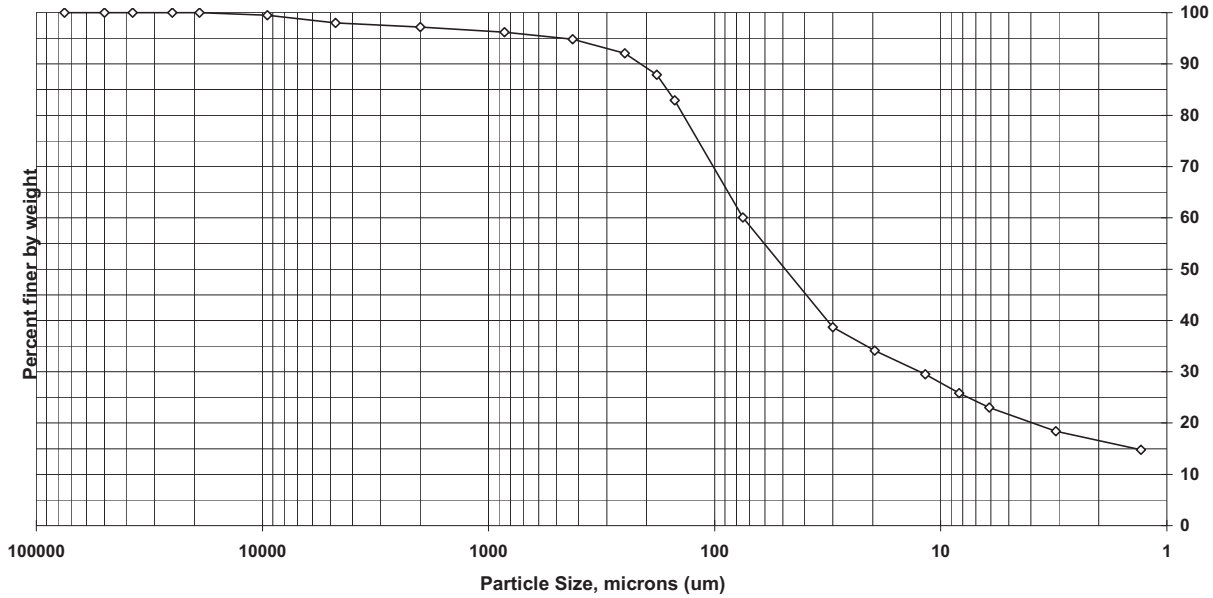
Particle Size of Soils by ASTM D422

				Date Received:	6/19/2013
Sample ID:	LMR13-25-012	**Percent Solids:**	71.6%	**Start Date:**	7/2/2013
Lab ID:	200-17071-F-15	**Specific Gravity:**	2.650	**End Date:**	7/12/2013

Shape (> #10): subangular

Non-soil material: shell, wood

Hardness (> #10): hard



Sieve size	Particle size, um	Percent finer	Incremental percent
3 inch	75000	100.0	0.0
2 inch	50000	100.0	0.0
1.5 inch	37500	100.0	0.0
1 inch	25000	100.0	0.0
3/4 inch	19000	100.0	0.0
3/8 inch	9500	99.5	0.5
#4	4750	98.0	1.5
#10	2000	97.2	0.8
#20	850	96.2	1.0
#40	425	94.8	1.4
#60	250	92.1	2.7
#80	180	87.9	4.2
#100	150	82.9	5.0
#200	75	60.1	22.8
Hyd1	30	38.7	21.4
Hyd2	19.6	34.1	4.6
Hyd3	11.7	29.5	4.6
Hyd4	8.3	25.8	3.7
Hyd5	6.1	23.0	2.8
Hyd6	3.1	18.4	4.6
Hyd7	1.3	14.8	3.6

Soil Classification	Percent of sample
Gravel	2.0
Sand	37.9
Coarse Sand	0.8
Medium Sand	2.4
Fine Sand	34.7
Silt	37.1
Clay	23.0

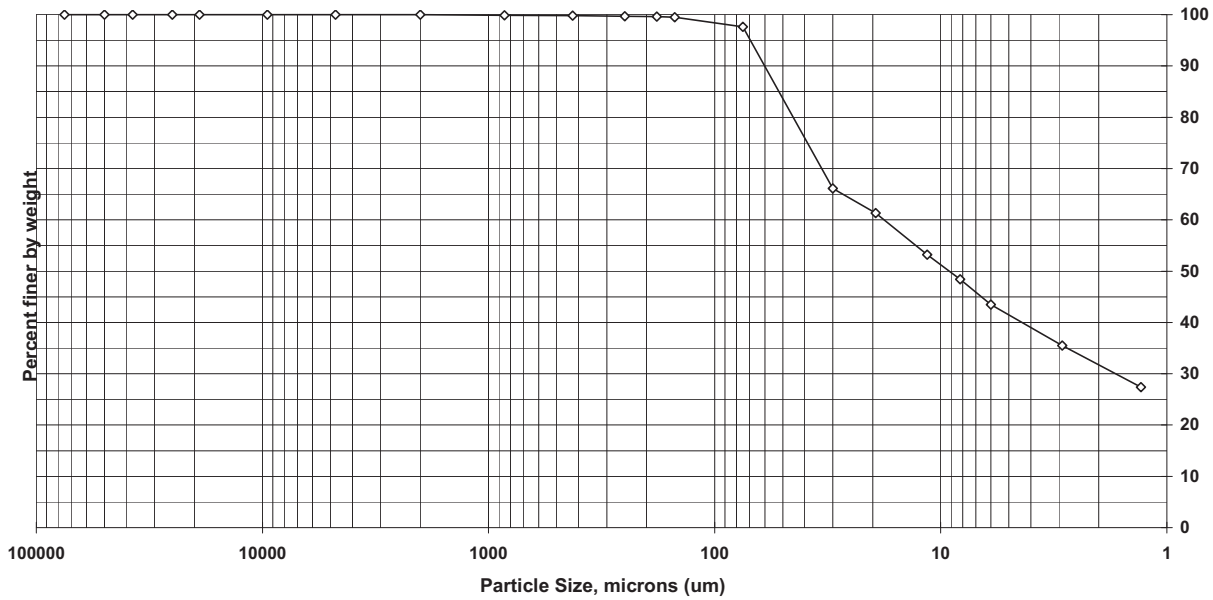
Particle Size of Soils by ASTM D422

				Date Received:	6/20/2013
Sample ID:	LMR13-08-012	**Percent Solids:**	46.6%	**Start Date:**	7/8/2013
Lab ID:	200-17120-F-1	**Specific Gravity:**	2.650	**End Date:**	7/16/2013

Shape (> #10): N/A

Non-soil material: shell

Hardness (> #10): N/A



Sieve size	Particle size, um	Percent finer	Incremental percent
3 inch	75000	100.0	0.0
2 inch	50000	100.0	0.0
1.5 inch	37500	100.0	0.0
1 inch	25000	100.0	0.0
3/4 inch	19000	100.0	0.0
3/8 inch	9500	100.0	0.0
#4	4750	100.0	0.0
#10	2000	100.0	0.0
#20	850	99.9	0.1
#40	425	99.8	0.1
#60	250	99.7	0.1
#80	180	99.6	0.1
#100	150	99.5	0.1
#200	75	97.6	1.9
Hyd1	30	66.1	31.5
Hyd2	19.4	61.3	4.8
Hyd3	11.5	53.2	8.1
Hyd4	8.2	48.4	4.8
Hyd5	6	43.5	4.9
Hyd6	2.9	35.5	8.0
Hyd7	1.3	27.4	8.1

Soil Classification	Percent of sample
Gravel	0.0
Sand	2.4
Coarse Sand	0.0
Medium Sand	0.2
Fine Sand	2.2
Silt	54.1
Clay	43.5

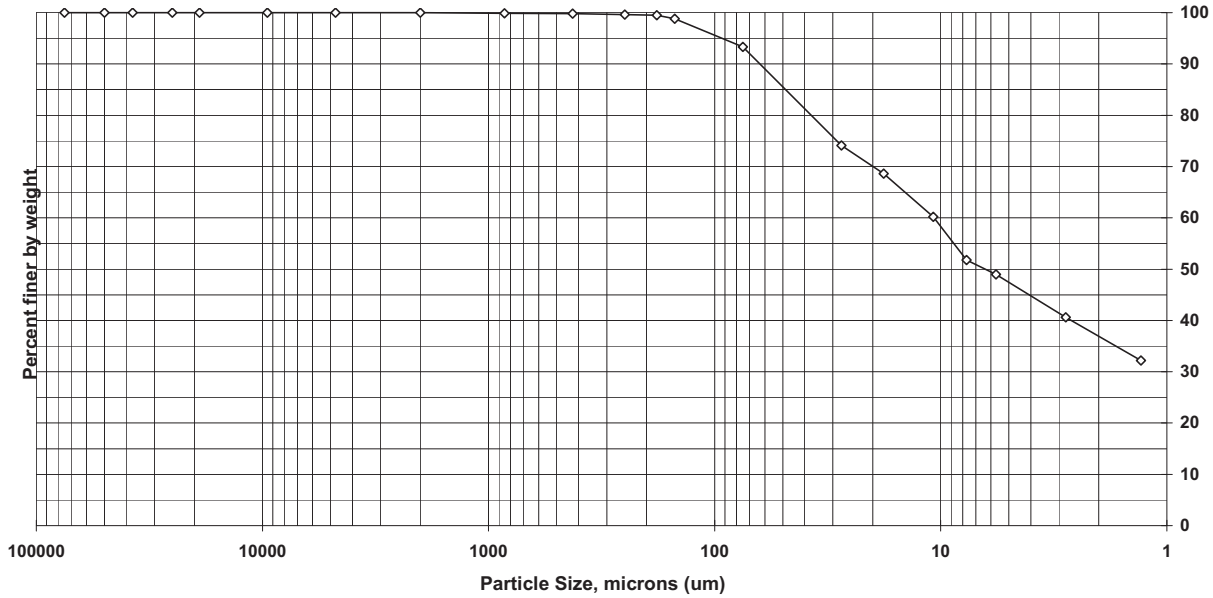
Particle Size of Soils by ASTM D422

				Date Received:	6/20/2013
Sample ID:	LMR13-14-012	**Percent Solids:**	52.4%	**Start Date:**	7/8/2013
Lab ID:	200-17120-F-2	**Specific Gravity:**	2.650	**End Date:**	7/16/2013

Shape (> #10): N/A

Non-soil material: N/A

Hardness (> #10): N/A



Sieve size	Particle size, um	Percent finer	Incremental percent
3 inch	75000	100.0	0.0
2 inch	50000	100.0	0.0
1.5 inch	37500	100.0	0.0
1 inch	25000	100.0	0.0
3/4 inch	19000	100.0	0.0
3/8 inch	9500	100.0	0.0
#4	4750	100.0	0.0
#10	2000	100.0	0.0
#20	850	99.9	0.1
#40	425	99.8	0.1
#60	250	99.6	0.2
#80	180	99.5	0.1
#100	150	98.8	0.7
#200	75	93.3	5.5
Hyd1	27.5	74.1	19.2
Hyd2	17.9	68.6	5.5
Hyd3	10.8	60.2	8.4
Hyd4	7.7	51.8	8.4
Hyd5	5.7	49.0	2.8
Hyd6	2.8	40.6	8.4
Hyd7	1.3	32.2	8.4

Soil Classification	Percent of sample
Gravel	0.0
Sand	6.7
Coarse Sand	0.0
Medium Sand	0.2
Fine Sand	6.5
Silt	44.3
Clay	49.0

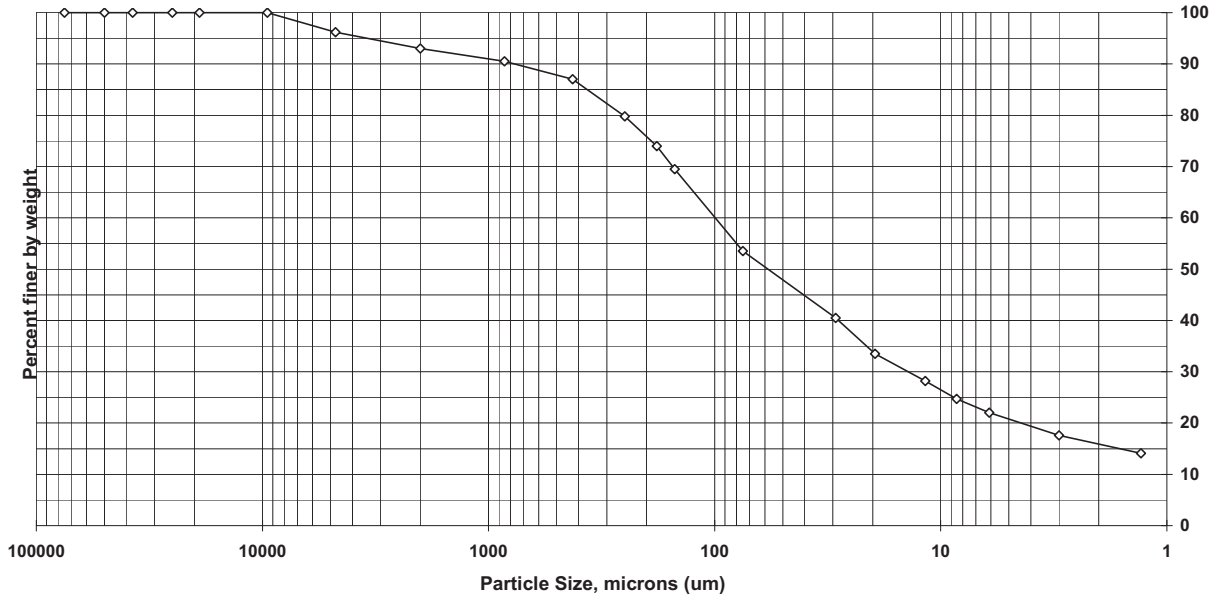
Particle Size of Soils by ASTM D422

				Date Received:	6/19/2013
Sample ID:	LMR13-71-012	**Percent Solids:**	77.8%	**Start Date:**	7/2/2013
Lab ID:	200-17078-E-4	**Specific Gravity:**	2.650	**End Date:**	7/12/2013

Shape (> #10): subangular

Non-soil material: shell

Hardness (> #10): hard



Sieve size	Particle size, um	Percent finer	Incremental percent
3 inch	75000	100.0	0.0
2 inch	50000	100.0	0.0
1.5 inch	37500	100.0	0.0
1 inch	25000	100.0	0.0
3/4 inch	19000	100.0	0.0
3/8 inch	9500	100.0	0.0
#4	4750	96.2	3.8
#10	2000	93.0	3.2
#20	850	90.5	2.5
#40	425	87.0	3.5
#60	250	79.8	7.2
#80	180	74.0	5.8
#100	150	69.5	4.5
#200	75	53.5	16.0
Hyd1	29.2	40.5	13.0
Hyd2	19.5	33.5	7.0
Hyd3	11.7	28.2	5.3
Hyd4	8.5	24.7	3.5
Hyd5	6.1	22.0	2.7
Hyd6	3	17.6	4.4
Hyd7	1.3	14.1	3.5

Soil Classification	Percent of sample
Gravel	3.8
Sand	42.7
Coarse Sand	3.2
Medium Sand	6.0
Fine Sand	33.5
Silt	31.5
Clay	22.0

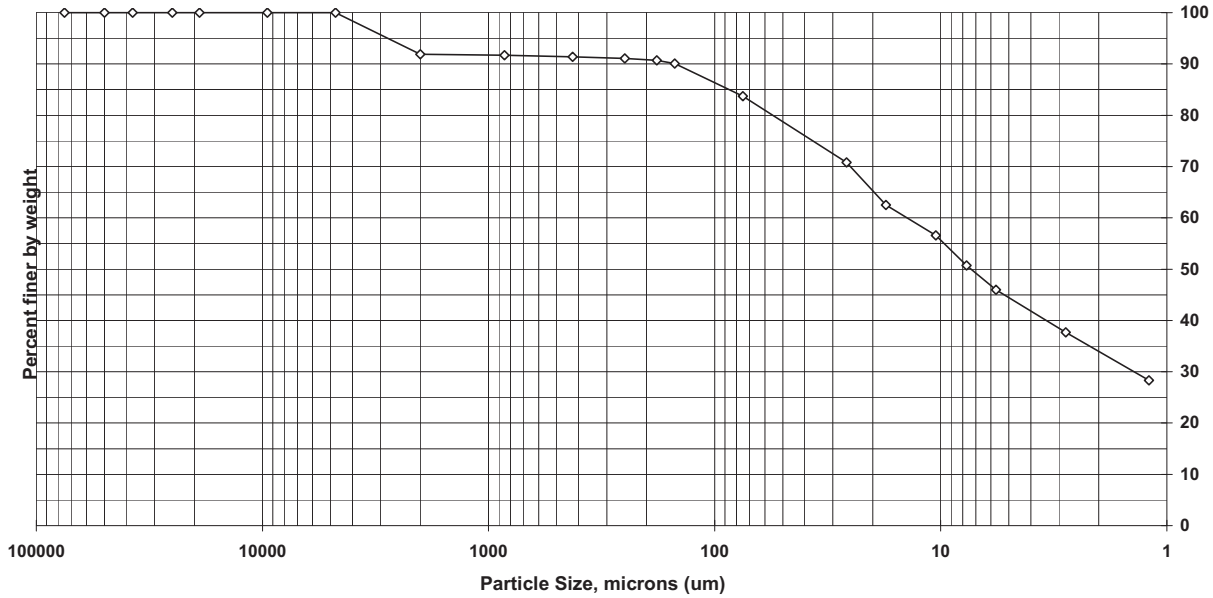
Particle Size of Soils by ASTM D422

				Date Received:	6/19/2013
Sample ID:	LMR13-07-012	**Percent Solids:**	52.3%	**Start Date:**	7/2/2013
Lab ID:	200-17078-E-10	**Specific Gravity:**	2.650	**End Date:**	7/12/2013

Shape (> #10): N/A

Non-soil material: shell

Hardness (> #10): N/A



Sieve size	Particle size, um	Percent finer	Incremental percent
3 inch	75000	100.0	0.0
2 inch	50000	100.0	0.0
1.5 inch	37500	100.0	0.0
1 inch	25000	100.0	0.0
3/4 inch	19000	100.0	0.0
3/8 inch	9500	100.0	0.0
#4	4750	100.0	0.0
#10	2000	91.9	8.1
#20	850	91.7	0.2
#40	425	91.4	0.3
#60	250	91.1	0.3
#80	180	90.7	0.4
#100	150	90.1	0.6
#200	75	83.7	6.4
Hyd1	26.1	70.8	12.9
Hyd2	17.5	62.5	8.3
Hyd3	10.5	56.6	5.9
Hyd4	7.7	50.7	5.9
Hyd5	5.7	46.0	4.7
Hyd6	2.8	37.7	8.3
Hyd7	1.2	28.3	9.4

Soil Classification	Percent of sample
Gravel	0.0
Sand	16.3
Coarse Sand	8.1
Medium Sand	0.5
Fine Sand	7.7
Silt	37.7
Clay	46.0

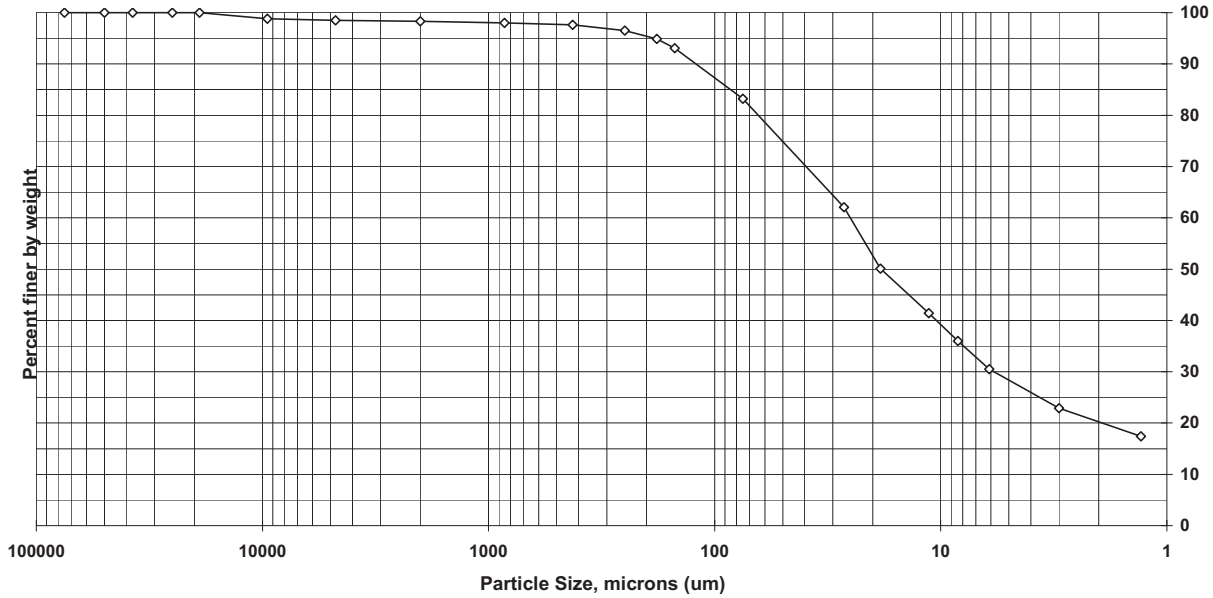
Particle Size of Soils by ASTM D422

				Date Received:	6/19/2013
Sample ID:	LMR13-21-012	**Percent Solids:**	75.0%	**Start Date:**	7/2/2013
Lab ID:	200-17078-F-17	**Specific Gravity:**	2.650	**End Date:**	7/12/2013

Shape (> #10): angular

Non-soil material: shell

Hardness (> #10): hard



Sieve size	Particle size, um	Percent finer	Incremental percent
3 inch	75000	100.0	0.0
2 inch	50000	100.0	0.0
1.5 inch	37500	100.0	0.0
1 inch	25000	100.0	0.0
3/4 inch	19000	100.0	0.0
3/8 inch	9500	98.8	1.2
#4	4750	98.5	0.3
#10	2000	98.3	0.2
#20	850	98.0	0.3
#40	425	97.6	0.4
#60	250	96.5	1.1
#80	180	94.9	1.6
#100	150	93.1	1.8
#200	75	83.2	9.9
Hyd1	26.8	62.1	21.1
Hyd2	18.5	50.1	12.0
Hyd3	11.3	41.4	8.7
Hyd4	8.4	36.0	5.4
Hyd5	6.1	30.5	5.5
Hyd6	3	22.9	7.6
Hyd7	1.3	17.4	5.5

Soil Classification	Percent of sample
Gravel	1.5
Sand	15.3
Coarse Sand	0.2
Medium Sand	0.7
Fine Sand	14.4
Silt	52.7
Clay	30.5

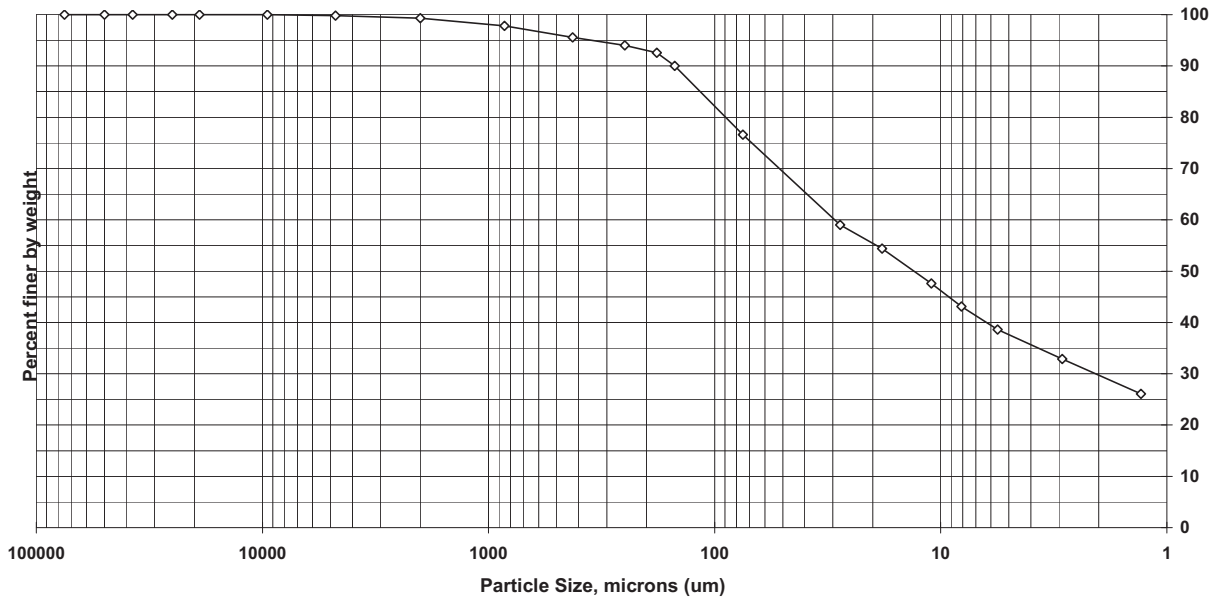
Particle Size of Soils by ASTM D422

				Date Received:	6/19/2013
Sample ID:	LMR13-15-012	**Percent Solids:**	54.1%	**Start Date:**	7/2/2013
Lab ID:	200-17078-E-20	**Specific Gravity:**	2.650	**End Date:**	7/12/2013

Shape (> #10): subrounded

Non-soil material: shell

Hardness (> #10): hard



Sieve size	Particle size, um	Percent finer	Incremental percent
3 inch	75000	100.0	0.0
2 inch	50000	100.0	0.0
1.5 inch	37500	100.0	0.0
1 inch	25000	100.0	0.0
3/4 inch	19000	100.0	0.0
3/8 inch	9500	100.0	0.0
#4	4750	99.8	0.2
#10	2000	99.3	0.5
#20	850	97.8	1.5
#40	425	95.6	2.2
#60	250	94.0	1.6
#80	180	92.6	1.4
#100	150	90.0	2.6
#200	75	76.6	13.4
Hyd1	27.9	59.0	17.6
Hyd2	18.2	54.4	4.6
Hyd3	11	47.6	6.8
Hyd4	8.1	43.1	4.5
Hyd5	5.6	38.6	4.5
Hyd6	2.9	32.9	5.7
Hyd7	1.3	26.1	6.8

Soil Classification	Percent of sample
Gravel	0.2
Sand	23.2
Coarse Sand	0.5
Medium Sand	3.7
Fine Sand	19.0
Silt	38.0
Clay	38.6

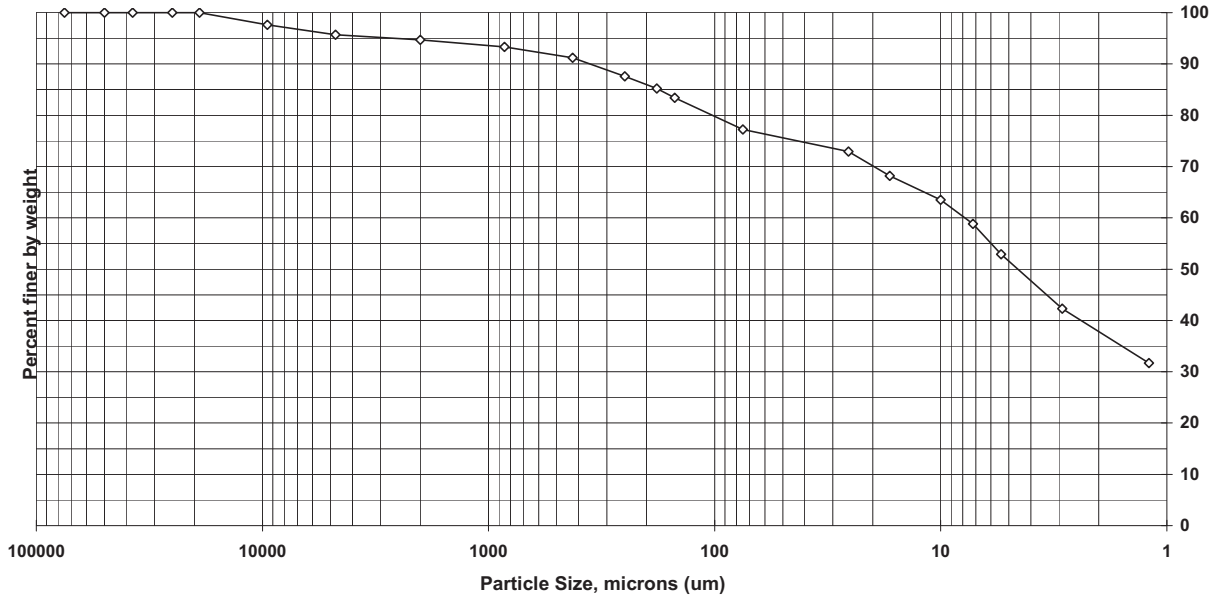
Particle Size of Soils by ASTM D422

				Date Received:	6/19/2013
Sample ID:	LMR13-87-012	**Percent Solids:**	52.3%	**Start Date:**	7/2/2013
Lab ID:	200-17083-E-1	**Specific Gravity:**	2.650	**End Date:**	7/12/2013

Shape (> #10): subangular

Non-soil material: wood

Hardness (> #10): hard



Sieve size	Particle size, um	Percent finer	Incremental percent
3 inch	75000	100.0	0.0
2 inch	50000	100.0	0.0
1.5 inch	37500	100.0	0.0
1 inch	25000	100.0	0.0
3/4 inch	19000	100.0	0.0
3/8 inch	9500	97.6	2.4
#4	4750	95.7	1.9
#10	2000	94.7	1.0
#20	850	93.3	1.4
#40	425	91.2	2.1
#60	250	87.6	3.6
#80	180	85.2	2.4
#100	150	83.4	1.8
#200	75	77.2	6.2
Hyd1	25.6	72.9	4.3
Hyd2	16.8	68.2	4.7
Hyd3	10	63.5	4.7
Hyd4	7.2	58.8	4.7
Hyd5	5.4	52.9	5.9
Hyd6	2.9	42.3	10.6
Hyd7	1.2	31.7	10.6

Soil Classification	Percent of sample
Gravel	4.3
Sand	18.5
Coarse Sand	1.0
Medium Sand	3.5
Fine Sand	14.0
Silt	24.3
Clay	52.9

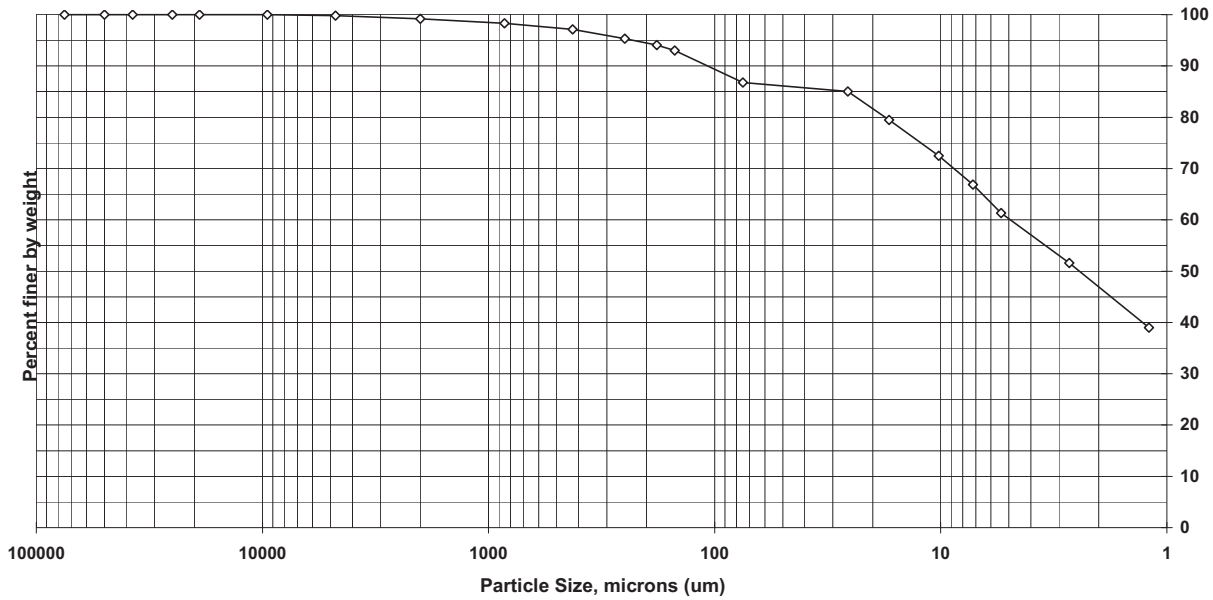
Particle Size of Soils by ASTM D422

				Date Received:	6/19/2013
Sample ID:	LMR13-86-012	**Percent Solids:**	47.0%	**Start Date:**	7/2/2013
Lab ID:	200-17083-F-6	**Specific Gravity:**	2.650	**End Date:**	7/12/2013

Shape (> #10): subangular

Non-soil material: wood, shell

Hardness (> #10): hard



Sieve size	Particle size, um	Percent finer	Incremental percent
3 inch	75000	100.0	0.0
2 inch	50000	100.0	0.0
1.5 inch	37500	100.0	0.0
1 inch	25000	100.0	0.0
3/4 inch	19000	100.0	0.0
3/8 inch	9500	100.0	0.0
#4	4750	99.8	0.2
#10	2000	99.2	0.6
#20	850	98.3	0.9
#40	425	97.1	1.2
#60	250	95.3	1.8
#80	180	94.1	1.2
#100	150	93.0	1.1
#200	75	86.8	6.2
Hyd1	25.8	85.0	1.8
Hyd2	16.9	79.5	5.5
Hyd3	10.2	72.5	7.0
Hyd4	7.2	66.9	5.6
Hyd5	5.4	61.3	5.6
Hyd6	2.7	51.6	9.7
Hyd7	1.2	39.0	12.6

Soil Classification	Percent of sample
Gravel	0.2
Sand	13.0
Coarse Sand	0.6
Medium Sand	2.1
Fine Sand	10.3
Silt	25.5
Clay	61.3

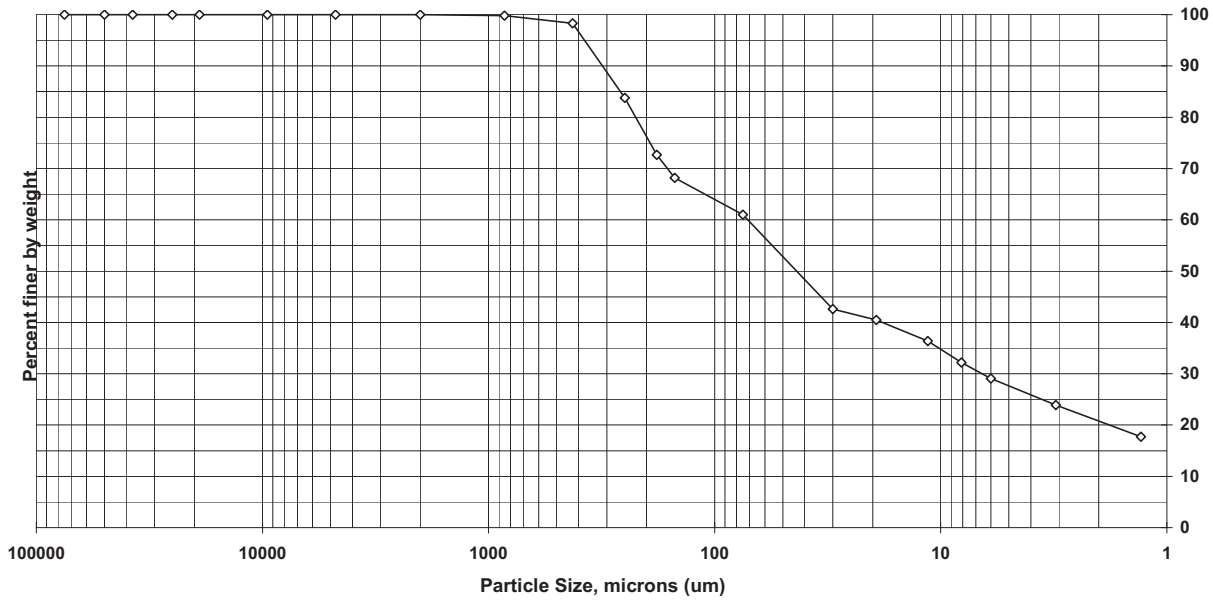
Particle Size of Soils by ASTM D422

				Date Received:	6/20/2013
Sample ID:	LMR13-84-012	**Percent Solids:**	64.4%	**Start Date:**	7/8/2013
Lab ID:	200-17103-E-2	**Specific Gravity:**	2.650	**End Date:**	7/16/2013

Shape (> #10): N/A

Non-soil material: shell

Hardness (> #10): N/A



Sieve size	Particle size, um	Percent finer	Incremental percent
3 inch	75000	100.0	0.0
2 inch	50000	100.0	0.0
1.5 inch	37500	100.0	0.0
1 inch	25000	100.0	0.0
3/4 inch	19000	100.0	0.0
3/8 inch	9500	100.0	0.0
#4	4750	100.0	0.0
#10	2000	100.0	0.0
#20	850	99.8	0.2
#40	425	98.3	1.5
#60	250	83.8	14.5
#80	180	72.7	11.1
#100	150	68.2	4.5
#200	75	61.0	7.2
Hyd1	30	42.6	18.4
Hyd2	19.3	40.5	2.1
Hyd3	11.4	36.4	4.1
Hyd4	8.1	32.2	4.2
Hyd5	6	29.1	3.1
Hyd6	3.1	23.9	5.2
Hyd7	1.3	17.7	6.2

Soil Classification	Percent of sample
Gravel	0.0
Sand	39.0
Coarse Sand	0.0
Medium Sand	1.7
Fine Sand	37.3
Silt	31.9
Clay	29.1

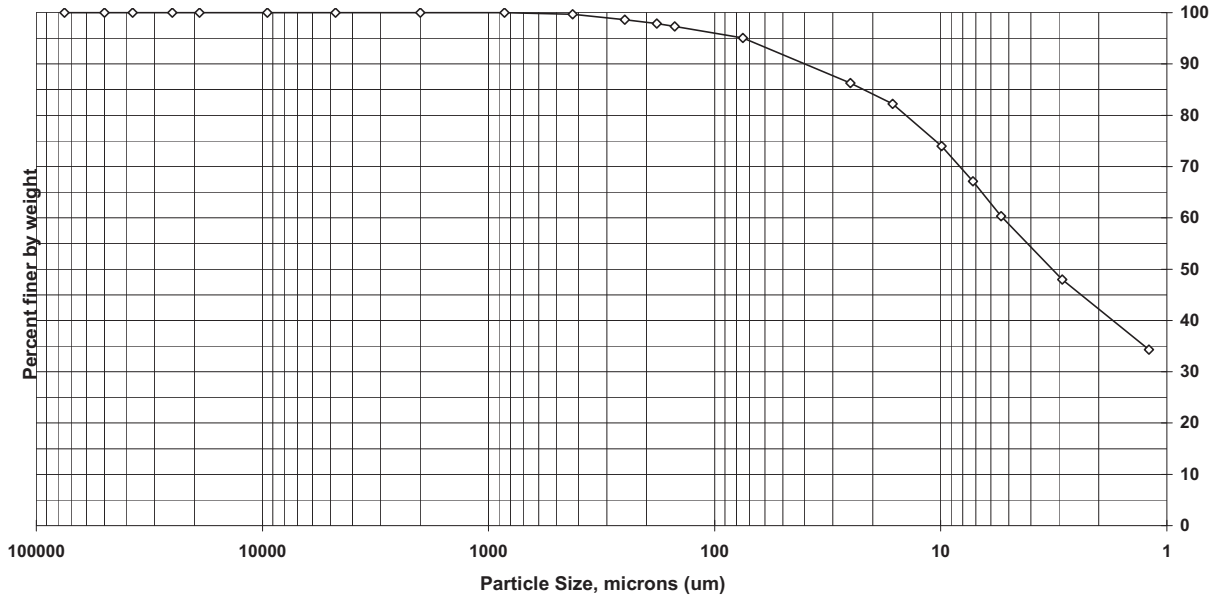
Particle Size of Soils by ASTM D422

				Date Received:	6/20/2013
Sample ID:	LMR13-30-012	**Percent Solids:**	53.7%	**Start Date:**	7/8/2013
Lab ID:	200-17103-F-8	**Specific Gravity:**	2.650	**End Date:**	7/16/2013

Shape (> #10): N/A

Non-soil material: N/A

Hardness (> #10): N/A



Sieve size	Particle size, um	Percent finer	Incremental percent
3 inch	75000	100.0	0.0
2 inch	50000	100.0	0.0
1.5 inch	37500	100.0	0.0
1 inch	25000	100.0	0.0
3/4 inch	19000	100.0	0.0
3/8 inch	9500	100.0	0.0
#4	4750	100.0	0.0
#10	2000	100.0	0.0
#20	850	100.0	0.0
#40	425	99.7	0.3
#60	250	98.6	1.1
#80	180	97.9	0.7
#100	150	97.3	0.6
#200	75	95.1	2.2
Hyd1	25.1	86.3	8.8
Hyd2	16.3	82.2	4.1
Hyd3	9.9	74.0	8.2
Hyd4	7.2	67.1	6.9
Hyd5	5.4	60.3	6.8
Hyd6	2.9	48.0	12.3
Hyd7	1.2	34.3	13.7

Soil Classification	Percent of sample
Gravel	0.0
Sand	4.9
Coarse Sand	0.0
Medium Sand	0.3
Fine Sand	4.6
Silt	34.8
Clay	60.3

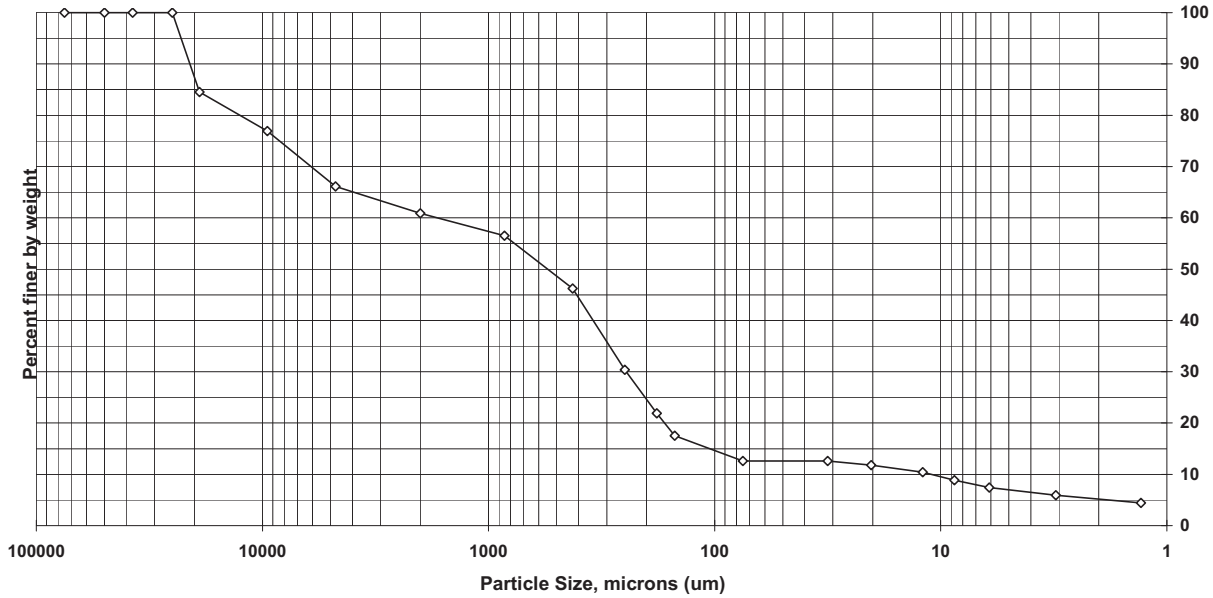
Particle Size of Soils by ASTM D422

				Date Received:	6/20/2013
Sample ID:	LMR13-89-012	**Percent Solids:**	83.8%	**Start Date:**	7/2/2013
Lab ID:	200-17096-F-3	**Specific Gravity:**	2.650	**End Date:**	7/12/2013

Shape (> #10): subangular

Non-soil material: shell

Hardness (> #10): hard



Sieve size	Particle size, um	Percent finer	Incremental percent
3 inch	75000	100.0	0.0
2 inch	50000	100.0	0.0
1.5 inch	37500	100.0	0.0
1 inch	25000	100.0	0.0
3/4 inch	19000	84.5	15.5
3/8 inch	9500	76.9	7.6
#4	4750	66.1	10.8
#10	2000	60.9	5.2
#20	850	56.5	4.4
#40	425	46.2	10.3
#60	250	30.4	15.8
#80	180	21.9	8.5
#100	150	17.5	4.4
#200	75	12.6	4.9
Hyd1	31.6	12.6	0.0
Hyd2	20.3	11.8	0.8
Hyd3	12	10.4	1.4
Hyd4	8.7	8.9	1.5
Hyd5	6.1	7.4	1.5
Hyd6	3.1	5.9	1.5
Hyd7	1.3	4.4	1.5

Soil Classification	Percent of sample
Gravel	33.9
Sand	53.5
Coarse Sand	5.2
Medium Sand	14.7
Fine Sand	33.6
Silt	5.2
Clay	7.4

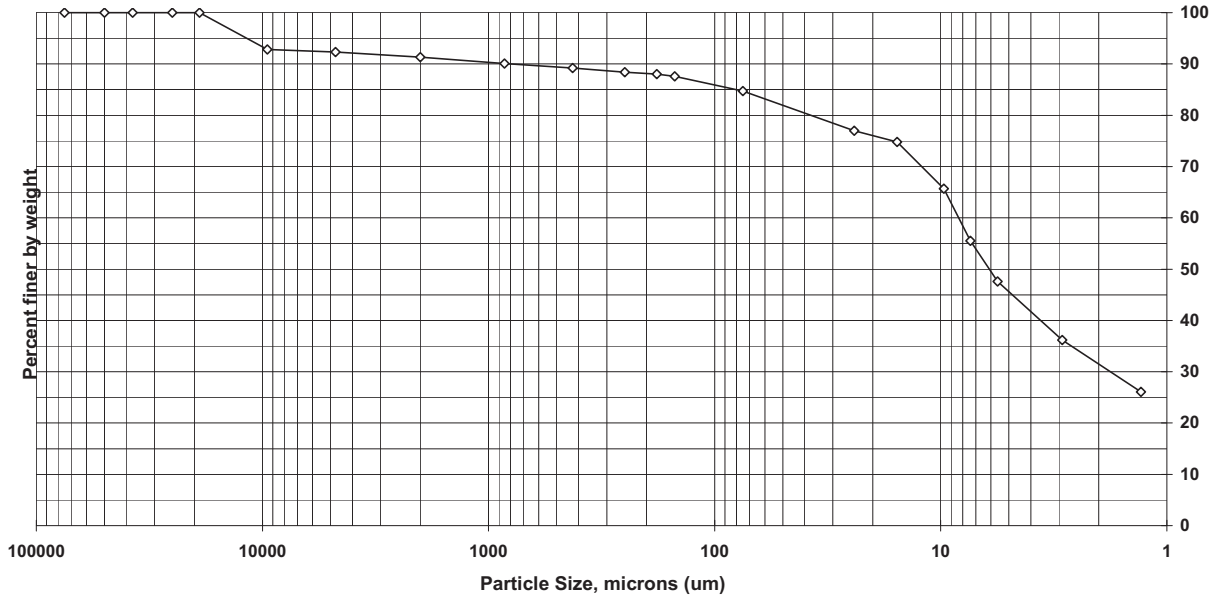
Particle Size of Soils by ASTM D422

				Date Received:	6/20/2013
Sample ID:	LMR13-88-012	**Percent Solids:**	45.3%	**Start Date:**	7/2/2013
Lab ID:	200-17096-F-7	**Specific Gravity:**	2.650	**End Date:**	7/12/2013

Shape (> #10): subangular

Non-soil material: N/A

Hardness (> #10): hard



Sieve size	Particle size, um	Percent finer	Incremental percent
3 inch	75000	100.0	0.0
2 inch	50000	100.0	0.0
1.5 inch	37500	100.0	0.0
1 inch	25000	100.0	0.0
3/4 inch	19000	100.0	0.0
3/8 inch	9500	92.8	7.2
#4	4750	92.3	0.5
#10	2000	91.3	1.0
#20	850	90.1	1.2
#40	425	89.2	0.9
#60	250	88.4	0.8
#80	180	88.0	0.4
#100	150	87.6	0.4
#200	75	84.7	2.9
Hyd1	24.1	77.0	7.7
Hyd2	15.6	74.8	2.2
Hyd3	9.7	65.7	9.1
Hyd4	7.4	55.5	10.2
Hyd5	5.6	47.6	7.9
Hyd6	2.9	36.2	11.4
Hyd7	1.3	26.1	10.1

Soil Classification	Percent of sample
Gravel	7.7
Sand	7.6
Coarse Sand	1.0
Medium Sand	2.1
Fine Sand	4.5
Silt	37.1
Clay	47.6

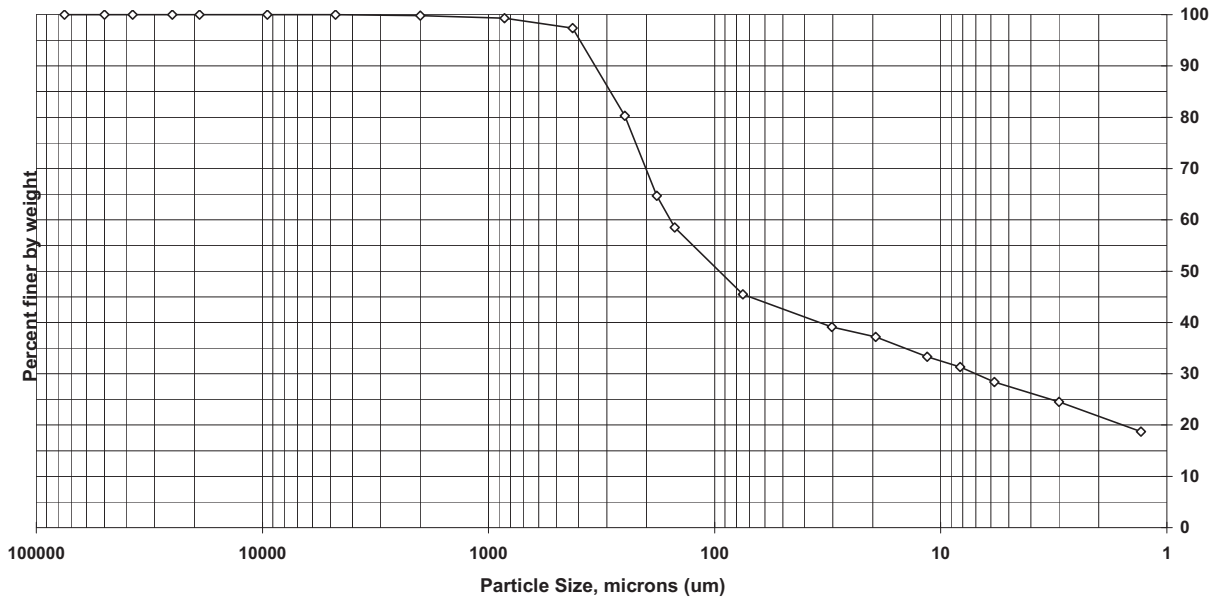
Particle Size of Soils by ASTM D422

				Date Received:	6/20/2013
Sample ID:	LMR13-39-012	**Percent Solids:**	70.5%	**Start Date:**	7/2/2013
Lab ID:	200-17096-F-11	**Specific Gravity:**	2.650	**End Date:**	7/12/2013

Shape (> #10): N/A

Non-soil material: shell

Hardness (> #10): N/A



Sieve size	Particle size, um	Percent finer	Incremental percent
3 inch	75000	100.0	0.0
2 inch	50000	100.0	0.0
1.5 inch	37500	100.0	0.0
1 inch	25000	100.0	0.0
3/4 inch	19000	100.0	0.0
3/8 inch	9500	100.0	0.0
#4	4750	100.0	0.0
#10	2000	99.8	0.2
#20	850	99.3	0.5
#40	425	97.4	1.9
#60	250	80.3	17.1
#80	180	64.7	15.6
#100	150	58.5	6.2
#200	75	45.5	13.0
Hyd1	30.3	39.1	6.4
Hyd2	19.4	37.2	1.9
Hyd3	11.5	33.3	3.9
Hyd4	8.2	31.3	2.0
Hyd5	5.8	28.4	2.9
Hyd6	3	24.5	3.9
Hyd7	1.3	18.7	5.8

Soil Classification	Percent of sample
Gravel	0.0
Sand	54.5
Coarse Sand	0.2
Medium Sand	2.4
Fine Sand	51.9
Silt	17.1
Clay	28.4

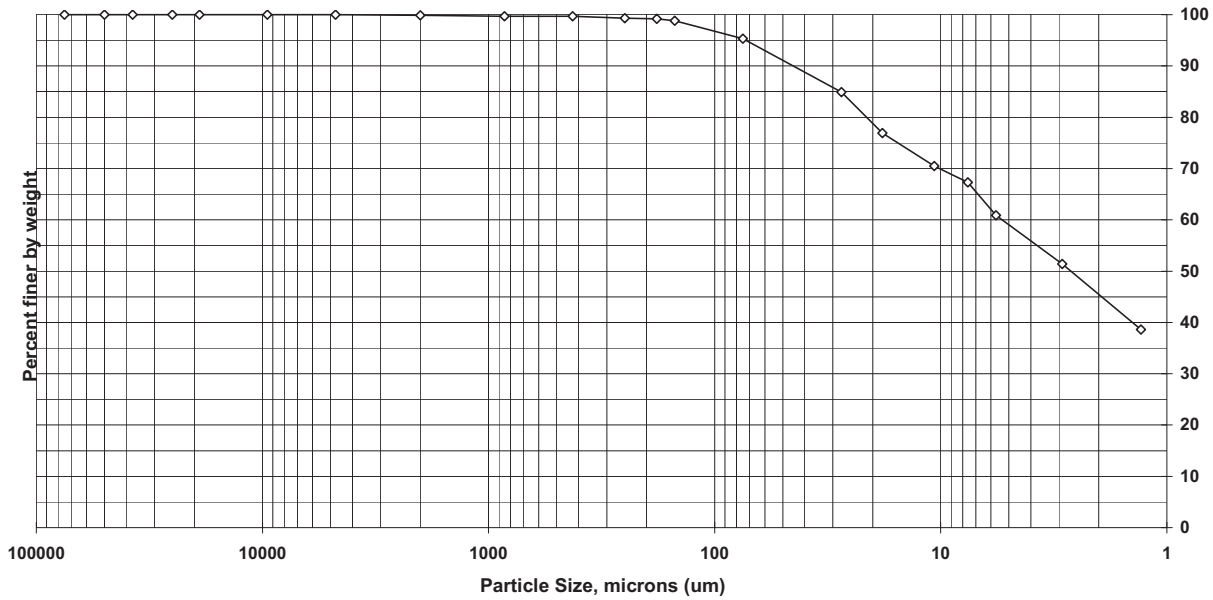
Particle Size of Soils by ASTM D422

				Date Received:	6/20/2013
Sample ID:	LMR13-67-012	**Percent Solids:**	40.5%	**Start Date:**	7/2/2013
Lab ID:	200-17096-F-17	**Specific Gravity:**	2.650	**End Date:**	7/12/2013

Shape (> #10): N/A

Non-soil material: plant, shell

Hardness (> #10): N/A



Sieve size	Particle size, um	Percent finer	Incremental percent
3 inch	75000	100.0	0.0
2 inch	50000	100.0	0.0
1.5 inch	37500	100.0	0.0
1 inch	25000	100.0	0.0
3/4 inch	19000	100.0	0.0
3/8 inch	9500	100.0	0.0
#4	4750	100.0	0.0
#10	2000	99.9	0.1
#20	850	99.7	0.2
#40	425	99.7	0.0
#60	250	99.3	0.4
#80	180	99.2	0.1
#100	150	98.8	0.4
#200	75	95.3	3.5
Hyd1	27.5	84.9	10.4
Hyd2	18.1	76.9	8.0
Hyd3	10.7	70.5	6.4
Hyd4	7.6	67.3	3.2
Hyd5	5.7	60.9	6.4
Hyd6	2.9	51.4	9.5
Hyd7	1.3	38.6	12.8

Soil Classification	Percent of sample
Gravel	0.0
Sand	4.7
Coarse Sand	0.1
Medium Sand	0.2
Fine Sand	4.4
Silt	34.4
Clay	60.9

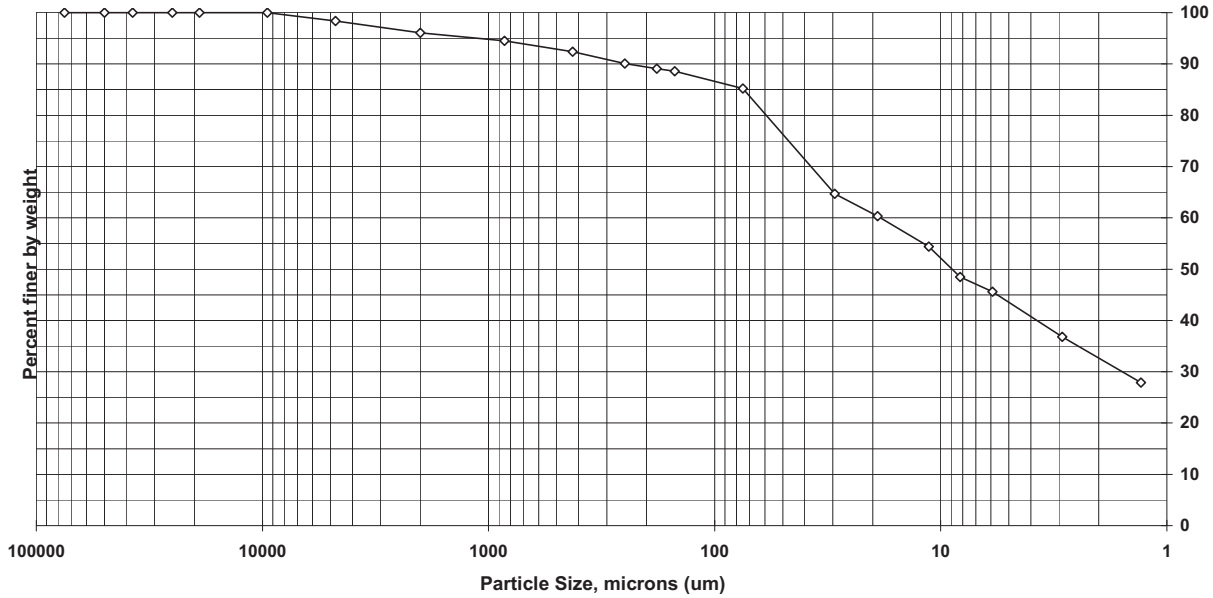
Particle Size of Soils by ASTM D422

Sample ID:	LMR13-85-012	**Percent Solids:**	45.0%	**Date Received:**	6/20/2013
Lab ID:	200-17096-F-20	**Specific Gravity:**	2.650	**Start Date:**	7/8/2013
				End Date:	7/16/2013

Shape (> #10): subangular

Non-soil material: shell, plant

Hardness (> #10): hard



Sieve size	Particle size, um	Percent finer	Incremental percent
3 inch	75000	100.0	0.0
2 inch	50000	100.0	0.0
1.5 inch	37500	100.0	0.0
1 inch	25000	100.0	0.0
3/4 inch	19000	100.0	0.0
3/8 inch	9500	100.0	0.0
#4	4750	98.4	1.6
#10	2000	96.1	2.3
#20	850	94.5	1.6
#40	425	92.4	2.1
#60	250	90.1	2.3
#80	180	89.1	1.0
#100	150	88.6	0.5
#200	75	85.2	3.4
Hyd1	29.4	64.7	20.5
Hyd2	19	60.3	4.4
Hyd3	11.3	54.4	5.9
Hyd4	8.2	48.5	5.9
Hyd5	5.9	45.6	2.9
Hyd6	2.9	36.8	8.8
Hyd7	1.3	27.9	8.9

Soil Classification	Percent of sample
Gravel	1.6
Sand	13.2
Coarse Sand	2.3
Medium Sand	3.7
Fine Sand	7.2
Silt	39.6
Clay	45.6

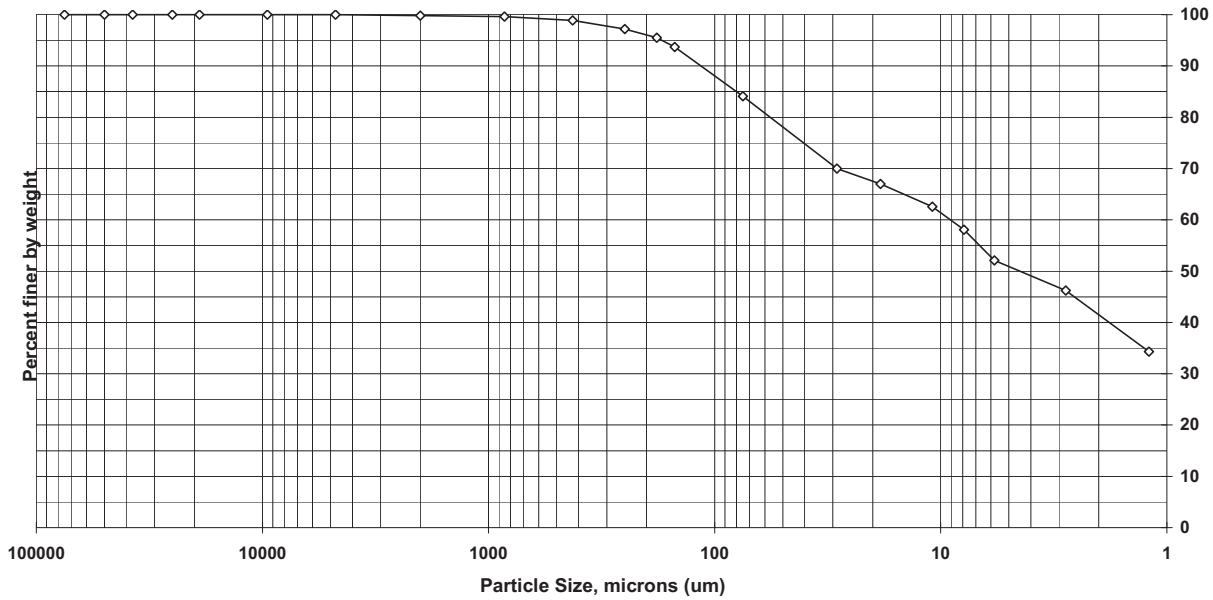
Particle Size of Soils by ASTM D422

				Date Received:	6/20/2013
Sample ID:	LMR13-54-012	**Percent Solids:**	50.0%	**Start Date:**	7/8/2013
Lab ID:	200-17099-F-5	**Specific Gravity:**	2.650	**End Date:**	7/16/2013

Shape (> #10): N/A

Non-soil material: wood, plant, shell

Hardness (> #10): N/A



Sieve size	Particle size, um	Percent finer	Incremental percent
3 inch	75000	100.0	0.0
2 inch	50000	100.0	0.0
1.5 inch	37500	100.0	0.0
1 inch	25000	100.0	0.0
3/4 inch	19000	100.0	0.0
3/8 inch	9500	100.0	0.0
#4	4750	100.0	0.0
#10	2000	99.8	0.2
#20	850	99.6	0.2
#40	425	98.9	0.7
#60	250	97.2	1.7
#80	180	95.5	1.7
#100	150	93.7	1.8
#200	75	84.1	9.6
Hyd1	28.8	70.0	14.1
Hyd2	18.5	67.0	3.0
Hyd3	10.9	62.6	4.4
Hyd4	7.9	58.1	4.5
Hyd5	5.8	52.1	6.0
Hyd6	2.8	46.2	5.9
Hyd7	1.2	34.3	11.9

Soil Classification	Percent of sample
Gravel	0.0
Sand	15.9
Coarse Sand	0.2
Medium Sand	0.9
Fine Sand	14.8
Silt	32.0
Clay	52.1

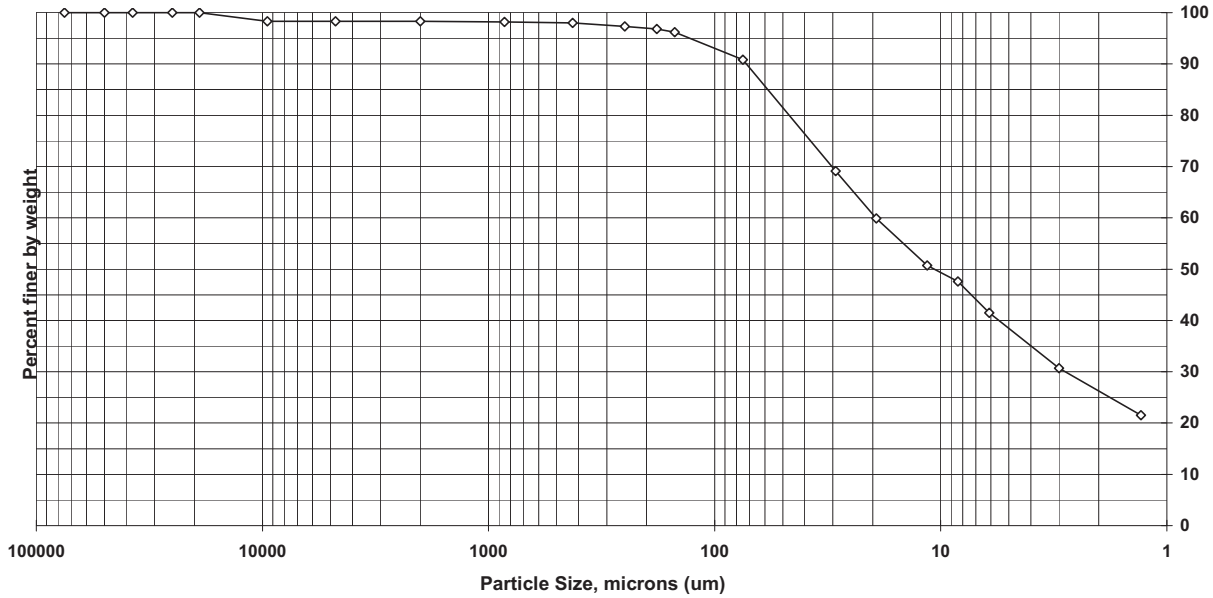
Particle Size of Soils by ASTM D422

				Date Received:	6/20/2013
Sample ID:	LMR13-33-012	**Percent Solids:**	48.7%	**Start Date:**	7/8/2013
Lab ID:	200-17099-F-16	**Specific Gravity:**	2.650	**End Date:**	7/16/2013

Shape (> #10): N/A

Non-soil material: shell

Hardness (> #10): N/A



Sieve size	Particle size, um	Percent finer	Incremental percent
3 inch	75000	100.0	0.0
2 inch	50000	100.0	0.0
1.5 inch	37500	100.0	0.0
1 inch	25000	100.0	0.0
3/4 inch	19000	100.0	0.0
3/8 inch	9500	98.3	1.7
#4	4750	98.3	0.0
#10	2000	98.3	0.0
#20	850	98.2	0.1
#40	425	98.0	0.2
#60	250	97.3	0.7
#80	180	96.8	0.5
#100	150	96.2	0.6
#200	75	90.8	5.4
Hyd1	29.2	69.1	21.7
Hyd2	19.3	59.9	9.2
Hyd3	11.5	50.7	9.2
Hyd4	8.4	47.6	3.1
Hyd5	6.1	41.5	6.1
Hyd6	3	30.7	10.8
Hyd7	1.3	21.5	9.2

Soil Classification	Percent of sample
Gravel	1.7
Sand	7.5
Coarse Sand	0.0
Medium Sand	0.3
Fine Sand	7.2
Silt	49.3
Clay	41.5

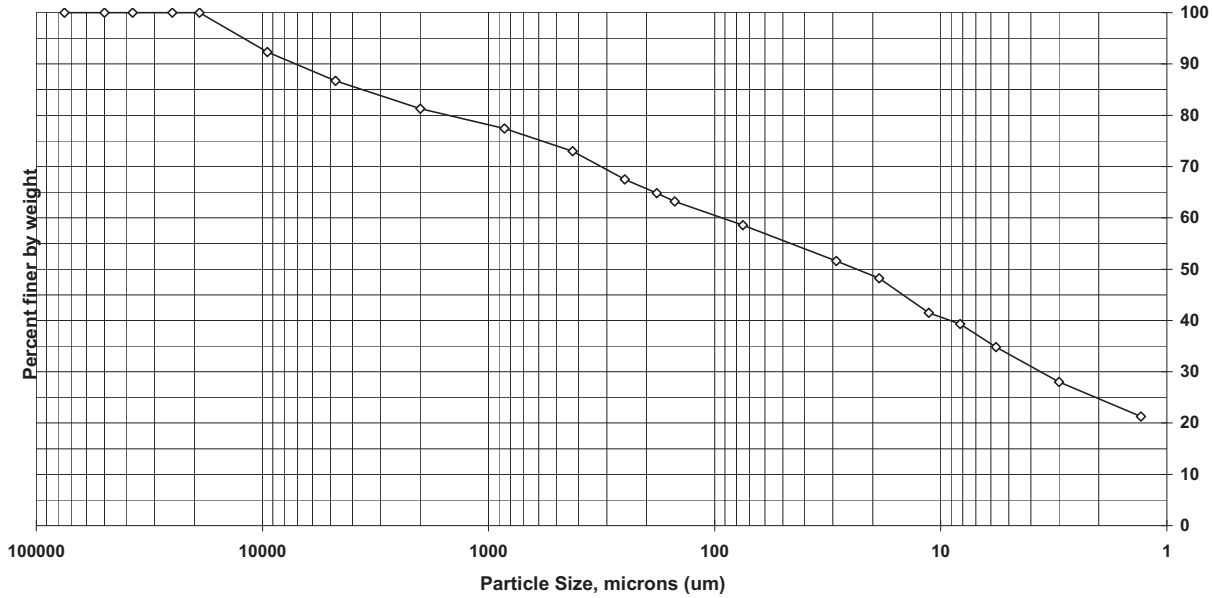
Particle Size of Soils by ASTM D422

				Date Received:	6/20/2013
Sample ID:	LMR13-55-012	**Percent Solids:**	73.2%	**Start Date:**	7/8/2013
Lab ID:	200-17099-F-17	**Specific Gravity:**	2.650	**End Date:**	7/16/2013

Shape (> #10): subangular

Non-soil material: wood

Hardness (> #10): hard



Sieve size	Particle size, um	Percent finer	Incremental percent
3 inch	75000	100.0	0.0
2 inch	50000	100.0	0.0
1.5 inch	37500	100.0	0.0
1 inch	25000	100.0	0.0
3/4 inch	19000	100.0	0.0
3/8 inch	9500	92.3	7.7
#4	4750	86.7	5.6
#10	2000	81.3	5.4
#20	850	77.4	3.9
#40	425	73.0	4.4
#60	250	67.5	5.5
#80	180	64.8	2.7
#100	150	63.2	1.6
#200	75	58.6	4.6
Hyd1	29	51.6	7.0
Hyd2	18.7	48.2	3.4
Hyd3	11.3	41.5	6.7
Hyd4	8.2	39.3	2.2
Hyd5	5.7	34.8	4.5
Hyd6	3	28.0	6.8
Hyd7	1.3	21.3	6.7

Soil Classification	Percent of sample
Gravel	13.3
Sand	28.1
Coarse Sand	5.4
Medium Sand	8.3
Fine Sand	14.4
Silt	23.8
Clay	34.8

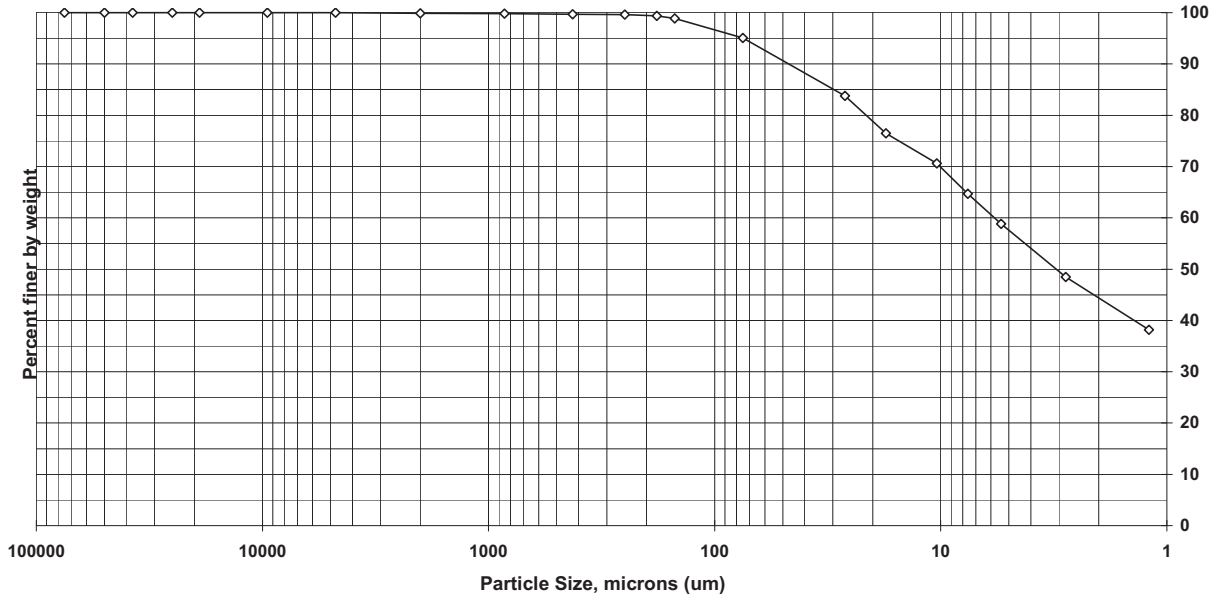
Particle Size of Soils by ASTM D422

				Date Received:	6/21/2013
Sample ID:	LMR13-69-012	**Percent Solids:**	48.7%	**Start Date:**	7/8/2013
Lab ID:	200-17122-F-11	**Specific Gravity:**	2.650	**End Date:**	7/16/2013

Shape (> #10): N/A

Non-soil material: plant

Hardness (> #10): N/A



Sieve size	Particle size, um	Percent finer	Incremental percent
3 inch	75000	100.0	0.0
2 inch	50000	100.0	0.0
1.5 inch	37500	100.0	0.0
1 inch	25000	100.0	0.0
3/4 inch	19000	100.0	0.0
3/8 inch	9500	100.0	0.0
#4	4750	100.0	0.0
#10	2000	99.9	0.1
#20	850	99.8	0.1
#40	425	99.7	0.1
#60	250	99.6	0.1
#80	180	99.4	0.2
#100	150	98.9	0.5
#200	75	95.1	3.8
Hyd1	26.5	83.8	11.3
Hyd2	17.5	76.5	7.3
Hyd3	10.4	70.6	5.9
Hyd4	7.6	64.7	5.9
Hyd5	5.4	58.8	5.9
Hyd6	2.8	48.5	10.3
Hyd7	1.2	38.2	10.3

Soil Classification	Percent of sample
Gravel	0.0
Sand	4.9
Coarse Sand	0.1
Medium Sand	0.2
Fine Sand	4.6
Silt	36.3
Clay	58.8

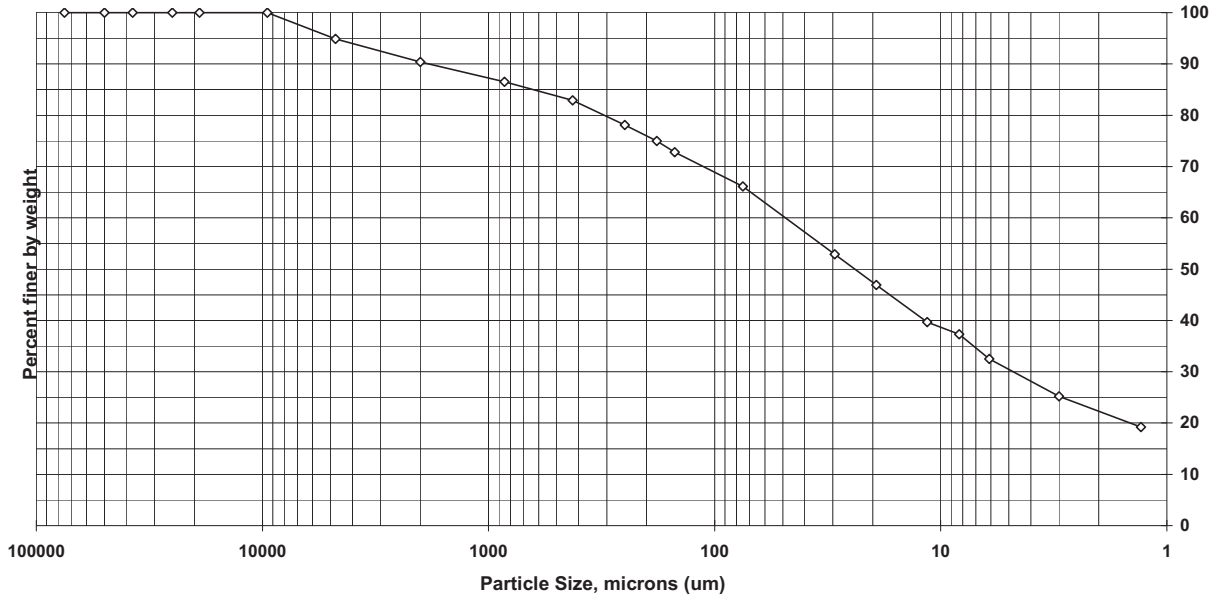
Particle Size of Soils by ASTM D422

				Date Received:	6/21/2013
Sample ID:	LMR13-68-012	**Percent Solids:**	80.2%	**Start Date:**	7/8/2013
Lab ID:	200-17122-E-12	**Specific Gravity:**	2.650	**End Date:**	7/16/2013

Shape (> #10): subangular

Non-soil material: N/A

Hardness (> #10): hard



Sieve size	Particle size, um	Percent finer	Incremental percent
3 inch	75000	100.0	0.0
2 inch	50000	100.0	0.0
1.5 inch	37500	100.0	0.0
1 inch	25000	100.0	0.0
3/4 inch	19000	100.0	0.0
3/8 inch	9500	100.0	0.0
#4	4750	94.9	5.1
#10	2000	90.4	4.5
#20	850	86.5	3.9
#40	425	82.9	3.6
#60	250	78.1	4.8
#80	180	75.0	3.1
#100	150	72.8	2.2
#200	75	66.1	6.7
Hyd1	29.4	52.9	13.2
Hyd2	19.3	46.9	6.0
Hyd3	11.5	39.7	7.2
Hyd4	8.3	37.3	2.4
Hyd5	6.1	32.5	4.8
Hyd6	3	25.2	7.3
Hyd7	1.3	19.2	6.0

Soil Classification	Percent of sample
Gravel	5.1
Sand	28.8
Coarse Sand	4.5
Medium Sand	7.5
Fine Sand	16.8
Silt	33.6
Clay	32.5

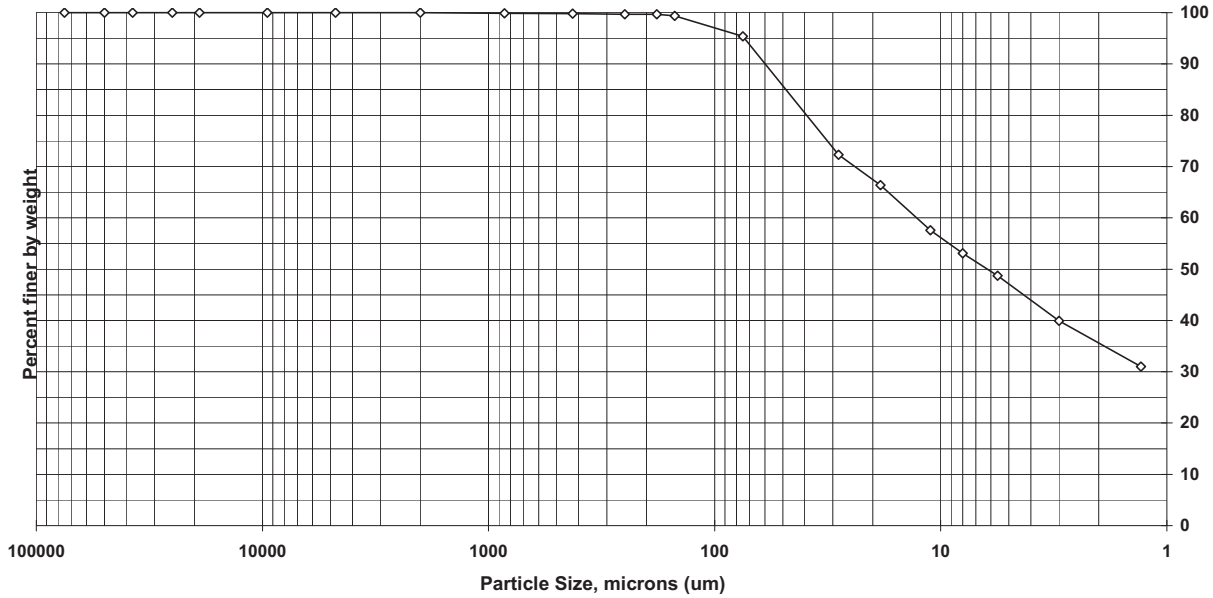
Particle Size of Soils by ASTM D422

				Date Received:	6/21/2013
Sample ID:	LMR13-92-012	**Percent Solids:**	47.9%	**Start Date:**	7/8/2013
Lab ID:	200-17122-E-15	**Specific Gravity:**	2.650	**End Date:**	7/16/2013

Shape (> #10): N/A

Non-soil material: N/A

Hardness (> #10): N/A



Sieve size	Particle size, um	Percent finer	Incremental percent
3 inch	75000	100.0	0.0
2 inch	50000	100.0	0.0
1.5 inch	37500	100.0	0.0
1 inch	25000	100.0	0.0
3/4 inch	19000	100.0	0.0
3/8 inch	9500	100.0	0.0
#4	4750	100.0	0.0
#10	2000	100.0	0.0
#20	850	99.9	0.1
#40	425	99.8	0.1
#60	250	99.7	0.1
#80	180	99.7	0.0
#100	150	99.4	0.3
#200	75	95.4	4.0
Hyd1	28.3	72.3	23.1
Hyd2	18.5	66.4	5.9
Hyd3	11.1	57.6	8.8
Hyd4	8	53.1	4.5
Hyd5	5.6	48.7	4.4
Hyd6	3	39.9	8.8
Hyd7	1.3	31.0	8.9

Soil Classification	Percent of sample
Gravel	0.0
Sand	4.6
Coarse Sand	0.0
Medium Sand	0.2
Fine Sand	4.4
Silt	46.7
Clay	48.7

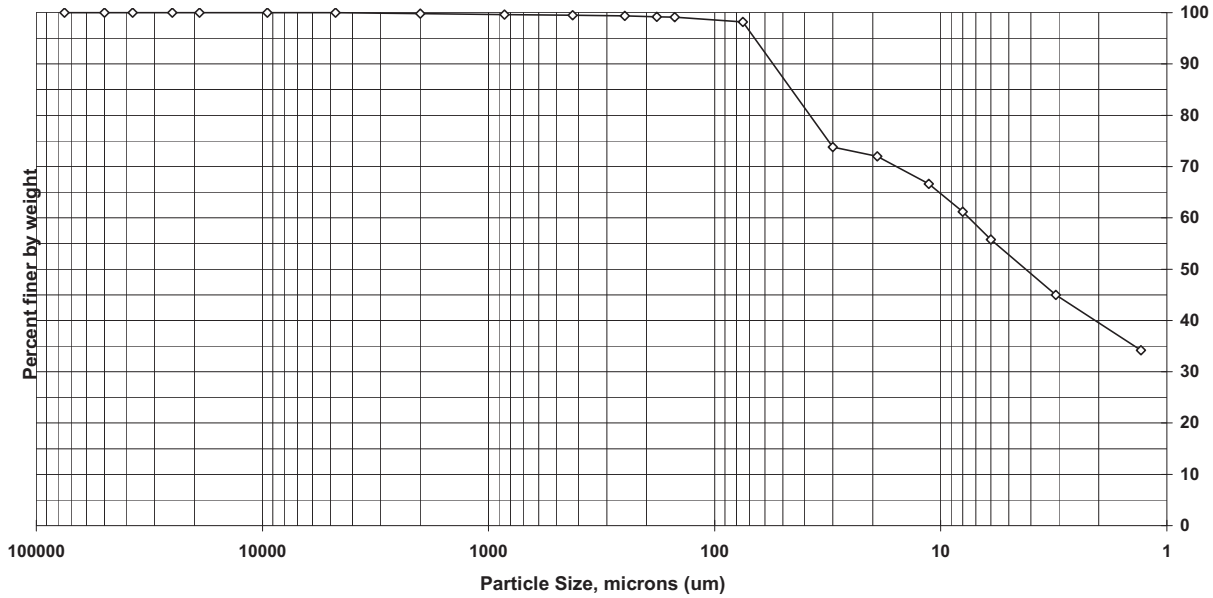
Particle Size of Soils by ASTM D422

				Date Received:	6/21/2013
Sample ID:	LMR13-65-012	**Percent Solids:**	38.8%	**Start Date:**	7/8/2013
Lab ID:	200-17122-F-18	**Specific Gravity:**	2.650	**End Date:**	7/16/2013

Shape (> #10): N/A

Non-soil material: plant

Hardness (> #10): N/A



Sieve size	Particle size, um	Percent finer	Incremental percent
3 inch	75000	100.0	0.0
2 inch	50000	100.0	0.0
1.5 inch	37500	100.0	0.0
1 inch	25000	100.0	0.0
3/4 inch	19000	100.0	0.0
3/8 inch	9500	100.0	0.0
#4	4750	100.0	0.0
#10	2000	99.8	0.2
#20	850	99.6	0.2
#40	425	99.5	0.1
#60	250	99.4	0.1
#80	180	99.2	0.2
#100	150	99.1	0.1
#200	75	98.2	0.9
Hyd1	30	73.8	24.4
Hyd2	19.1	72.0	1.8
Hyd3	11.3	66.6	5.4
Hyd4	8	61.2	5.4
Hyd5	6	55.8	5.4
Hyd6	3.1	45.0	10.8
Hyd7	1.3	34.2	10.8

Soil Classification	Percent of sample
Gravel	0.0
Sand	1.8
Coarse Sand	0.2
Medium Sand	0.3
Fine Sand	1.3
Silt	42.4
Clay	55.8

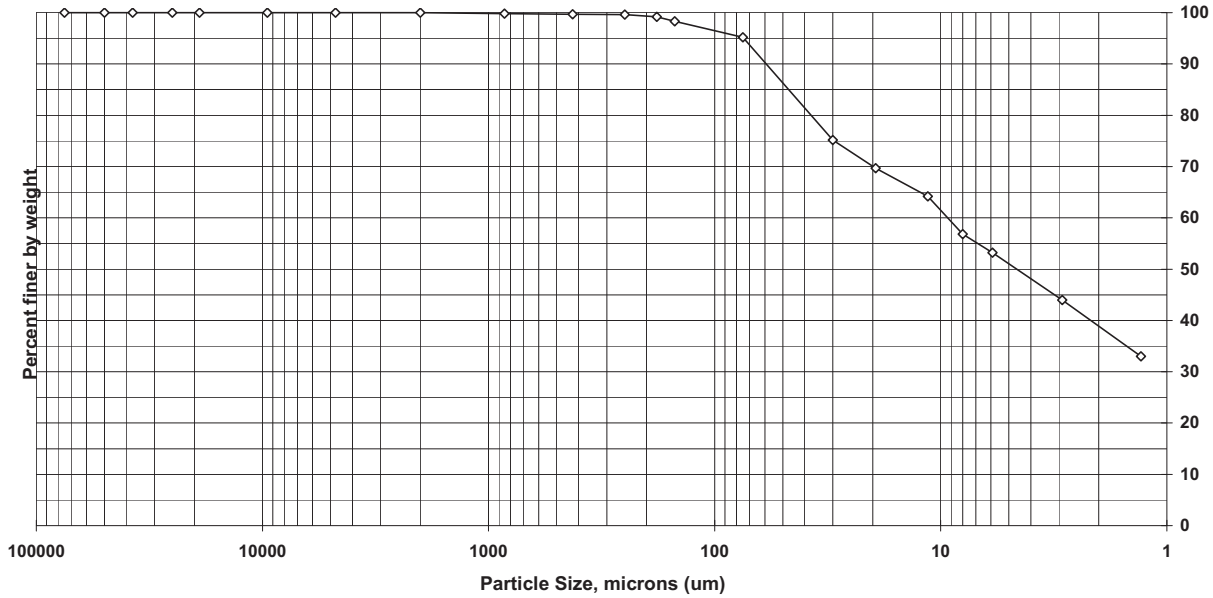
Particle Size of Soils by ASTM D422

				Date Received:	6/22/2013
Sample ID:	LMR13-64-012	**Percent Solids:**	41.1%	**Start Date:**	7/11/2013
Lab ID:	200-17148-E-1	**Specific Gravity:**	2.650	**End Date:**	7/20/2013

Shape (> #10): n/a

Non-soil material: n/a

Hardness (> #10): n/a



Sieve size	Particle size, um	Percent finer	Incremental percent
3 inch	75000	100.0	0.0
2 inch	50000	100.0	0.0
1.5 inch	37500	100.0	0.0
1 inch	25000	100.0	0.0
3/4 inch	19000	100.0	0.0
3/8 inch	9500	100.0	0.0
#4	4750	100.0	0.0
#10	2000	100.0	0.0
#20	850	99.8	0.2
#40	425	99.7	0.1
#60	250	99.6	0.1
#80	180	99.2	0.4
#100	150	98.3	0.9
#200	75	95.2	3.1
Hyd1	30	75.2	20.0
Hyd2	19.4	69.7	5.5
Hyd3	11.4	64.2	5.5
Hyd4	8	56.8	7.4
Hyd5	5.9	53.2	3.6
Hyd6	2.9	44.0	9.2
Hyd7	1.3	33.0	11.0

Soil Classification	Percent of sample
Gravel	0.0
Sand	4.8
Coarse Sand	0.0
Medium Sand	0.3
Fine Sand	4.5
Silt	42.0
Clay	53.2

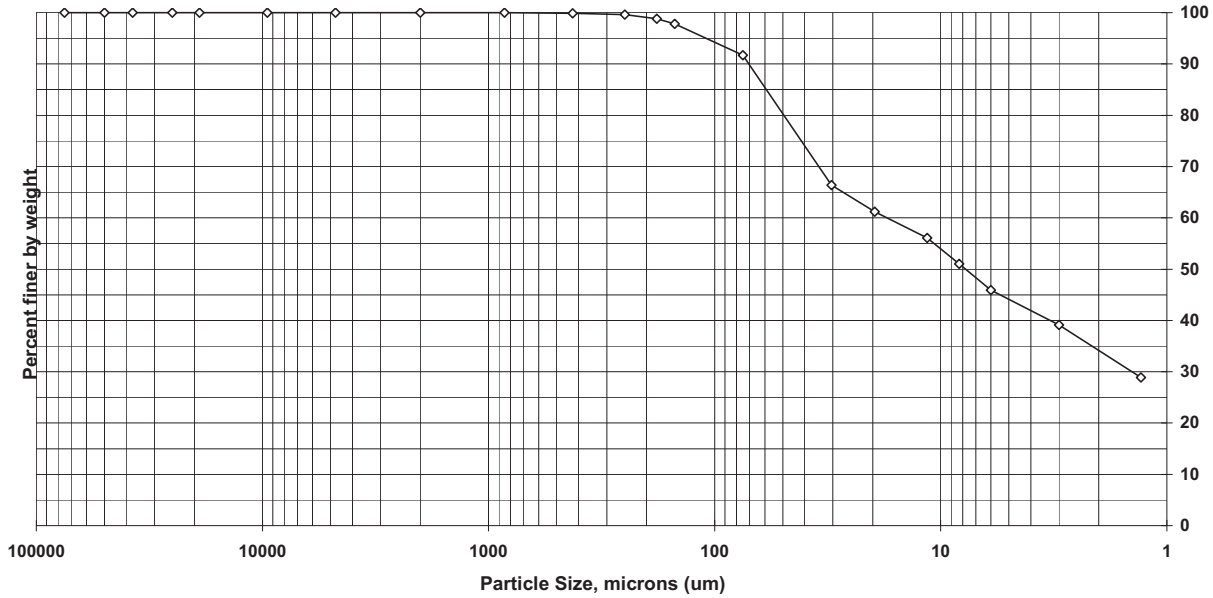
Particle Size of Soils by ASTM D422

				Date Received:	6/21/2013
Sample ID:	LMR13-61-012	**Percent Solids:**	44.3%	**Start Date:**	7/11/2013
Lab ID:	200-17125-E-4	**Specific Gravity:**	2.650	**End Date:**	7/20/2013

Shape (> #10): n/a

Non-soil material: n/a

Hardness (> #10): n/a



Sieve size	Particle size, um	Percent finer	Incremental percent
3 inch	75000	100.0	0.0
2 inch	50000	100.0	0.0
1.5 inch	37500	100.0	0.0
1 inch	25000	100.0	0.0
3/4 inch	19000	100.0	0.0
3/8 inch	9500	100.0	0.0
#4	4750	100.0	0.0
#10	2000	100.0	0.0
#20	850	100.0	0.0
#40	425	99.9	0.1
#60	250	99.6	0.3
#80	180	98.8	0.8
#100	150	97.8	1.0
#200	75	91.7	6.1
Hyd1	30.4	66.4	25.3
Hyd2	19.6	61.2	5.2
Hyd3	11.5	56.1	5.1
Hyd4	8.3	51.0	5.1
Hyd5	6	45.9	5.1
Hyd6	3	39.1	6.8
Hyd7	1.3	28.9	10.2

Soil Classification	Percent of sample
Gravel	0.0
Sand	8.3
Coarse Sand	0.0
Medium Sand	0.1
Fine Sand	8.2
Silt	45.8
Clay	45.9

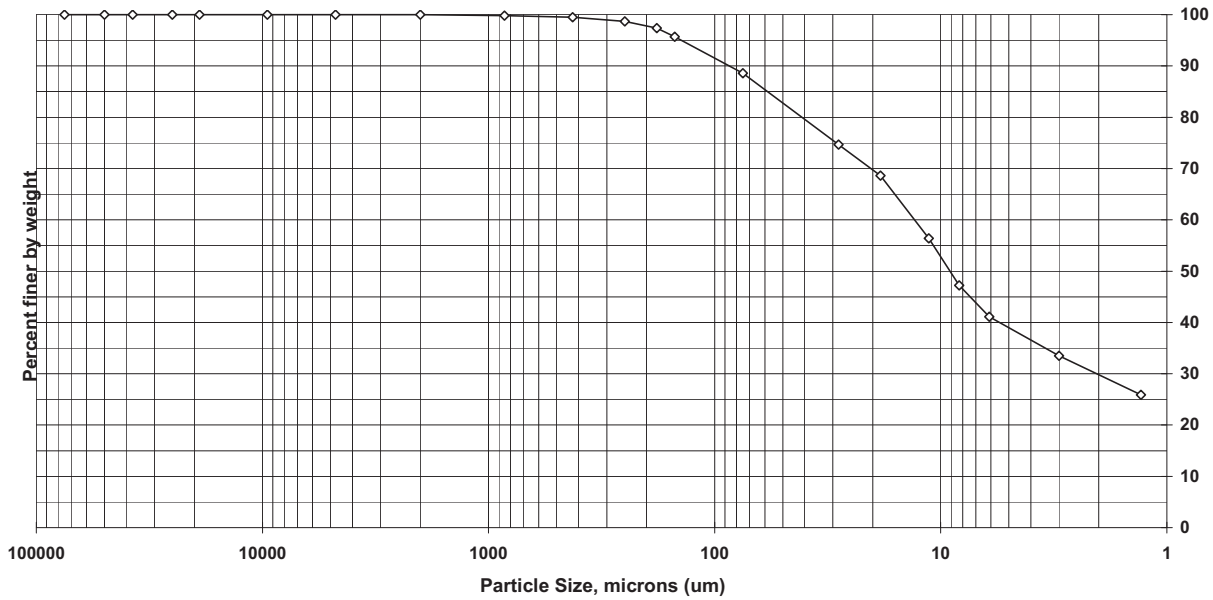
Particle Size of Soils by ASTM D422

				Date Received:	6/21/2013
Sample ID:	LMR13-66-012	**Percent Solids:**	65.8%	**Start Date:**	7/11/2013
Lab ID:	200-17125-F-12	**Specific Gravity:**	2.650	**End Date:**	7/20/2013

Shape (> #10): n/a

Non-soil material: n/a

Hardness (> #10): n/a



Sieve size	Particle size, um	Percent finer	Incremental percent
3 inch	75000	100.0	0.0
2 inch	50000	100.0	0.0
1.5 inch	37500	100.0	0.0
1 inch	25000	100.0	0.0
3/4 inch	19000	100.0	0.0
3/8 inch	9500	100.0	0.0
#4	4750	100.0	0.0
#10	2000	100.0	0.0
#20	850	99.8	0.2
#40	425	99.5	0.3
#60	250	98.7	0.8
#80	180	97.4	1.3
#100	150	95.7	1.7
#200	75	88.6	7.1
Hyd1	28.3	74.7	13.9
Hyd2	18.5	68.6	6.1
Hyd3	11.3	56.4	12.2
Hyd4	8.3	47.2	9.2
Hyd5	6.1	41.1	6.1
Hyd6	3	33.5	7.6
Hyd7	1.3	25.9	7.6

Soil Classification	Percent of sample
Gravel	0.0
Sand	11.4
Coarse Sand	0.0
Medium Sand	0.5
Fine Sand	10.9
Silt	47.5
Clay	41.1

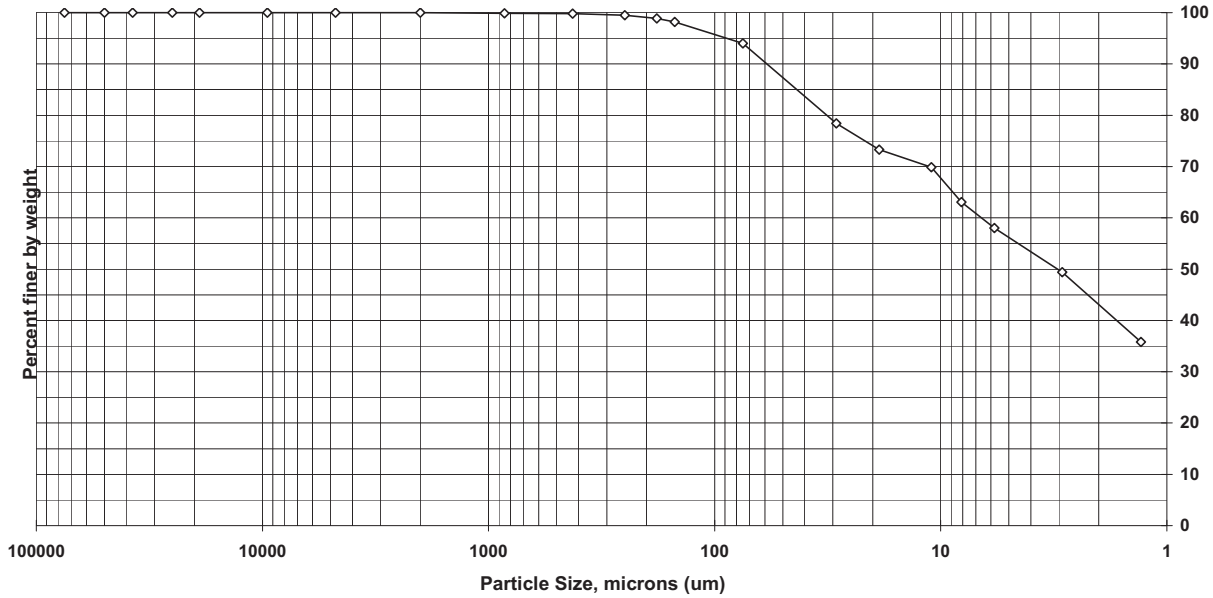
Particle Size of Soils by ASTM D422

				Date Received:	6/21/2013
Sample ID:	LMR13-60-012	**Percent Solids:**	44.7%	**Start Date:**	7/11/2013
Lab ID:	200-17125-E-14	**Specific Gravity:**	2.650	**End Date:**	7/20/2013

Shape (> #10): n/a

Non-soil material: n/a

Hardness (> #10): n/a



Sieve size	Particle size, um	Percent finer	Incremental percent
3 inch	75000	100.0	0.0
2 inch	50000	100.0	0.0
1.5 inch	37500	100.0	0.0
1 inch	25000	100.0	0.0
3/4 inch	19000	100.0	0.0
3/8 inch	9500	100.0	0.0
#4	4750	100.0	0.0
#10	2000	100.0	0.0
#20	850	99.9	0.1
#40	425	99.8	0.1
#60	250	99.5	0.3
#80	180	98.9	0.6
#100	150	98.2	0.7
#200	75	94.0	4.2
Hyd1	29	78.4	15.6
Hyd2	18.7	73.3	5.1
Hyd3	11	69.9	3.4
Hyd4	8.1	63.1	6.8
Hyd5	5.8	58.0	5.1
Hyd6	2.9	49.4	8.6
Hyd7	1.3	35.8	13.6

Soil Classification	Percent of sample
Gravel	0.0
Sand	6.0
Coarse Sand	0.0
Medium Sand	0.2
Fine Sand	5.8
Silt	36.0
Clay	58.0

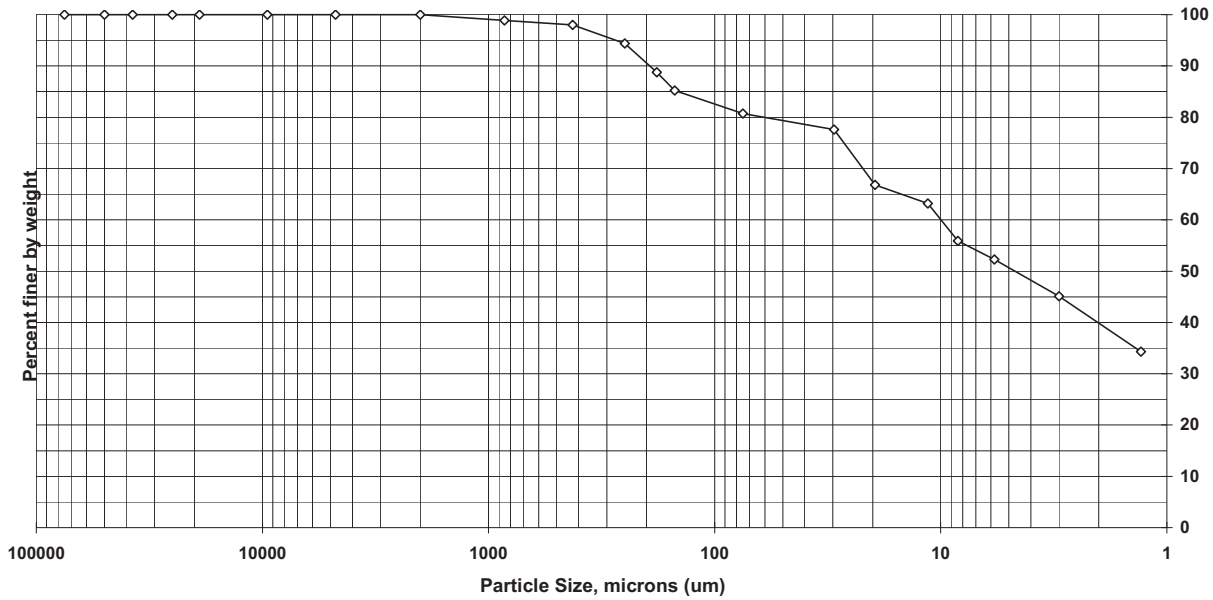
Particle Size of Soils by ASTM D422

				Date Received:	6/21/2013
Sample ID:	LMR13-59-012	**Percent Solids:**	44.2%	**Start Date:**	7/11/2013
Lab ID:	200-17127-E-1	**Specific Gravity:**	2.650	**End Date:**	7/20/2013

Shape (> #10): n/a

Non-soil material: n/a

Hardness (> #10): n/a



Sieve size	Particle size, um	Percent finer	Incremental percent
3 inch	75000	100.0	0.0
2 inch	50000	100.0	0.0
1.5 inch	37500	100.0	0.0
1 inch	25000	100.0	0.0
3/4 inch	19000	100.0	0.0
3/8 inch	9500	100.0	0.0
#4	4750	100.0	0.0
#10	2000	100.0	0.0
#20	850	98.9	1.1
#40	425	98.0	0.9
#60	250	94.4	3.6
#80	180	88.8	5.6
#100	150	85.2	3.6
#200	75	80.7	4.5
Hyd1	29.6	77.6	3.1
Hyd2	19.5	66.8	10.8
Hyd3	11.4	63.2	3.6
Hyd4	8.4	55.9	7.3
Hyd5	5.8	52.3	3.6
Hyd6	3	45.1	7.2
Hyd7	1.3	34.3	10.8

Soil Classification	Percent of sample
Gravel	0.0
Sand	19.3
Coarse Sand	0.0
Medium Sand	2.0
Fine Sand	17.3
Silt	28.4
Clay	52.3

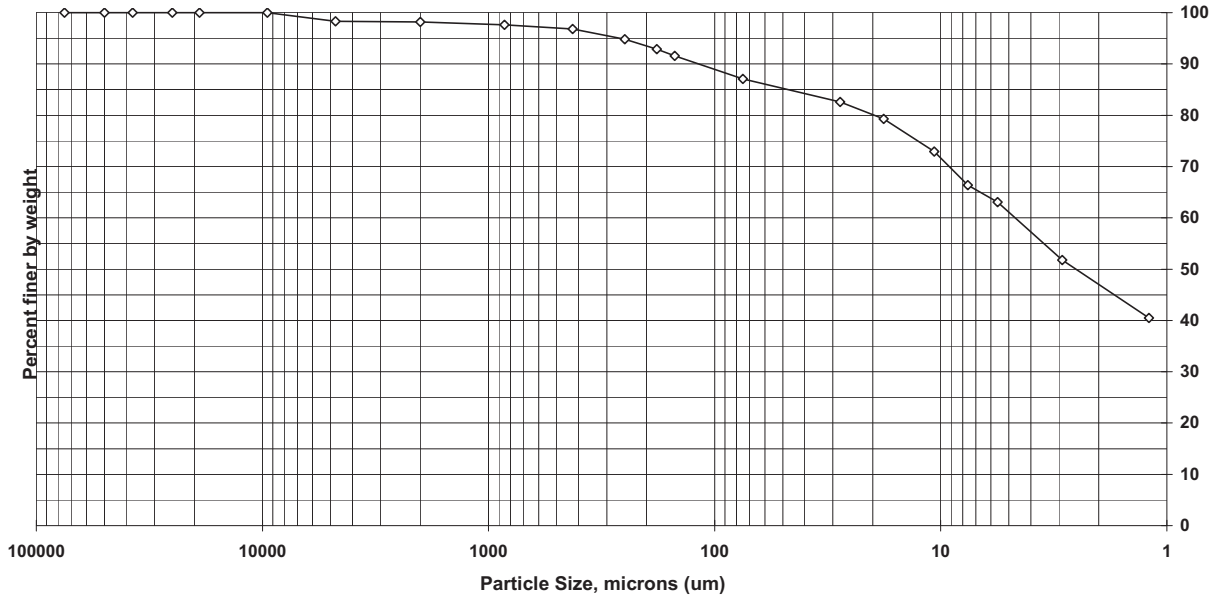
Particle Size of Soils by ASTM D422

				Date Received:	6/21/2013
Sample ID:	LMR13-58-012	**Percent Solids:**	46.2%	**Start Date:**	7/11/2013
Lab ID:	200-17127-F-6	**Specific Gravity:**	2.650	**End Date:**	7/20/2013

Shape (> #10): n/a

Non-soil material: shell,plant

Hardness (> #10): n/a



Sieve size	Particle size, um	Percent finer	Incremental percent
3 inch	75000	100.0	0.0
2 inch	50000	100.0	0.0
1.5 inch	37500	100.0	0.0
1 inch	25000	100.0	0.0
3/4 inch	19000	100.0	0.0
3/8 inch	9500	100.0	0.0
#4	4750	98.3	1.7
#10	2000	98.2	0.1
#20	850	97.6	0.6
#40	425	96.8	0.8
#60	250	94.8	2.0
#80	180	92.9	1.9
#100	150	91.6	1.3
#200	75	87.1	4.5
Hyd1	27.9	82.6	4.5
Hyd2	17.9	79.3	3.3
Hyd3	10.7	72.9	6.4
Hyd4	7.6	66.4	6.5
Hyd5	5.6	63.1	3.3
Hyd6	2.9	51.8	11.3
Hyd7	1.2	40.5	11.3

Soil Classification	Percent of sample
Gravel	1.7
Sand	11.2
Coarse Sand	0.1
Medium Sand	1.4
Fine Sand	9.7
Silt	24.0
Clay	63.1

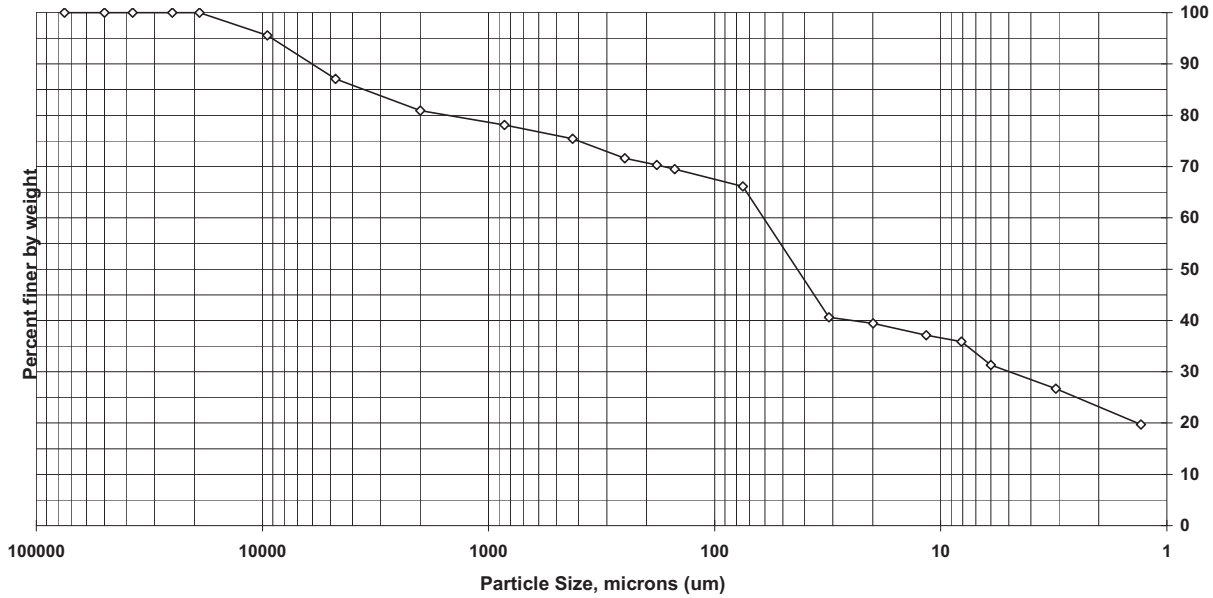
Particle Size of Soils by ASTM D422

				Date Received:	6/21/2013
Sample ID:	LMR13-94-012	**Percent Solids:**	59.9%	**Start Date:**	7/11/2013
Lab ID:	200-17127-F-7	**Specific Gravity:**	2.650	**End Date:**	7/20/2013

Shape (> #10): angular

Non-soil material: shell

Hardness (> #10): hard



Sieve size	Particle size, um	Percent finer	Incremental percent
3 inch	75000	100.0	0.0
2 inch	50000	100.0	0.0
1.5 inch	37500	100.0	0.0
1 inch	25000	100.0	0.0
3/4 inch	19000	100.0	0.0
3/8 inch	9500	95.6	4.4
#4	4750	87.1	8.5
#10	2000	80.9	6.2
#20	850	78.1	2.8
#40	425	75.4	2.7
#60	250	71.6	3.8
#80	180	70.3	1.3
#100	150	69.5	0.8
#200	75	66.1	3.4
Hyd1	31.2	40.6	25.5
Hyd2	19.9	39.4	1.2
Hyd3	11.6	37.1	2.3
Hyd4	8.1	35.9	1.2
Hyd5	6	31.3	4.6
Hyd6	3.1	26.7	4.6
Hyd7	1.3	19.7	7.0

Soil Classification	Percent of sample
Gravel	12.9
Sand	21.0
Coarse Sand	6.2
Medium Sand	5.5
Fine Sand	9.3
Silt	34.8
Clay	31.3

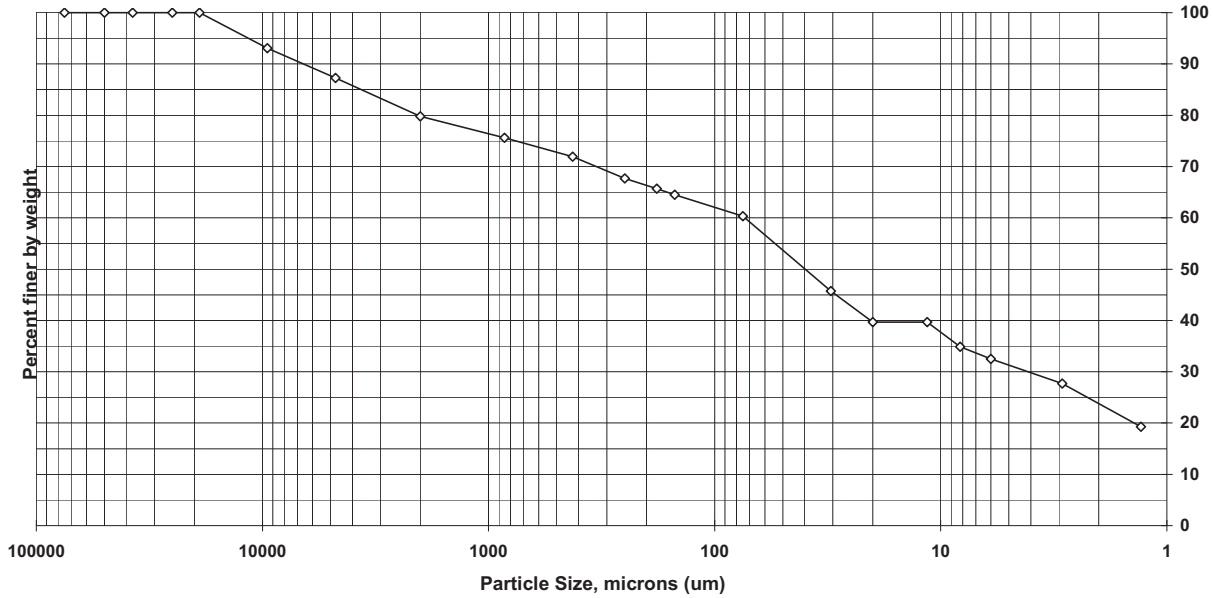
Particle Size of Soils by ASTM D422

				Date Received:	6/21/2013
Sample ID:	LMR13-95-012	**Percent Solids:**	61.2%	**Start Date:**	7/11/2013
Lab ID:	200-17127-F-9	**Specific Gravity:**	2.650	**End Date:**	7/20/2013

Shape (> #10): angular

Non-soil material: n/a

Hardness (> #10): hard



Sieve size	Particle size, um	Percent finer	Incremental percent
3 inch	75000	100.0	0.0
2 inch	50000	100.0	0.0
1.5 inch	37500	100.0	0.0
1 inch	25000	100.0	0.0
3/4 inch	19000	100.0	0.0
3/8 inch	9500	93.1	6.9
#4	4750	87.3	5.8
#10	2000	79.8	7.5
#20	850	75.6	4.2
#40	425	71.9	3.7
#60	250	67.7	4.2
#80	180	65.7	2.0
#100	150	64.5	1.2
#200	75	60.3	4.2
Hyd1	30.6	45.7	14.6
Hyd2	20	39.7	6.0
Hyd3	11.5	39.7	0.0
Hyd4	8.2	34.9	4.8
Hyd5	6	32.5	2.4
Hyd6	2.9	27.7	4.8
Hyd7	1.3	19.3	8.4

Soil Classification	Percent of sample
Gravel	12.7
Sand	27.0
Coarse Sand	7.5
Medium Sand	7.9
Fine Sand	11.6
Silt	27.8
Clay	32.5

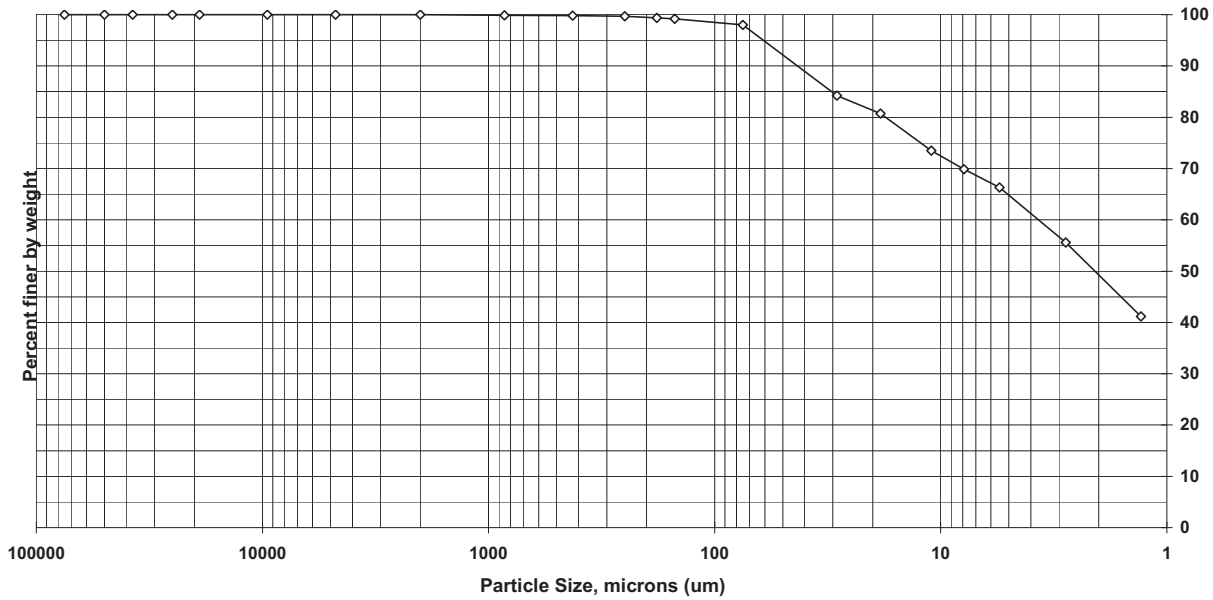
Particle Size of Soils by ASTM D422

				Date Received:	6/22/2013
Sample ID:	LMR13-70-012	**Percent Solids:**	45.4%	**Start Date:**	7/11/2013
Lab ID:	200-17149-F-1	**Specific Gravity:**	2.650	**End Date:**	7/20/2013

Shape (> #10): n/a

Non-soil material: n/a

Hardness (> #10): n/a



Sieve size	Particle size, um	Percent finer	Incremental percent
3 inch	75000	100.0	0.0
2 inch	50000	100.0	0.0
1.5 inch	37500	100.0	0.0
1 inch	25000	100.0	0.0
3/4 inch	19000	100.0	0.0
3/8 inch	9500	100.0	0.0
#4	4750	100.0	0.0
#10	2000	100.0	0.0
#20	850	99.9	0.1
#40	425	99.8	0.1
#60	250	99.7	0.1
#80	180	99.4	0.3
#100	150	99.2	0.2
#200	75	98.0	1.2
Hyd1	28.8	84.2	13.8
Hyd2	18.5	80.7	3.5
Hyd3	11	73.5	7.2
Hyd4	7.9	69.9	3.6
Hyd5	5.5	66.3	3.6
Hyd6	2.8	55.6	10.7
Hyd7	1.3	41.2	14.4

Soil Classification	Percent of sample
Gravel	0.0
Sand	2.0
Coarse Sand	0.0
Medium Sand	0.2
Fine Sand	1.8
Silt	31.7
Clay	66.3

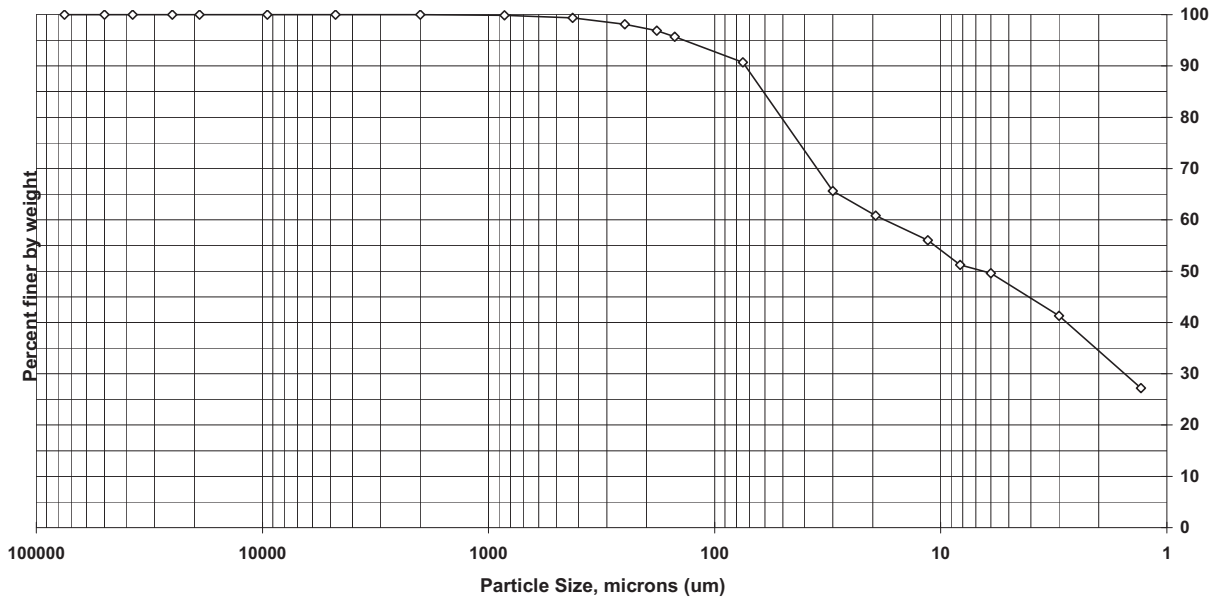
Particle Size of Soils by ASTM D422

				Date Received:	6/22/2013
Sample ID:	LMR13-52-012	**Percent Solids:**	49.3%	**Start Date:**	7/11/2013
Lab ID:	200-17149-E-5	**Specific Gravity:**	2.650	**End Date:**	7/20/2013

Shape (> #10): n/a

Non-soil material: n/a

Hardness (> #10): n/a



Sieve size	Particle size, um	Percent finer	Incremental percent
3 inch	75000	100.0	0.0
2 inch	50000	100.0	0.0
1.5 inch	37500	100.0	0.0
1 inch	25000	100.0	0.0
3/4 inch	19000	100.0	0.0
3/8 inch	9500	100.0	0.0
#4	4750	100.0	0.0
#10	2000	100.0	0.0
#20	850	99.9	0.1
#40	425	99.4	0.5
#60	250	98.1	1.3
#80	180	96.9	1.2
#100	150	95.7	1.2
#200	75	90.7	5.0
Hyd1	30	65.6	25.1
Hyd2	19.4	60.8	4.8
Hyd3	11.4	56.0	4.8
Hyd4	8.2	51.2	4.8
Hyd5	6	49.6	1.6
Hyd6	3	41.3	8.3
Hyd7	1.3	27.2	14.1

Soil Classification	Percent of sample
Gravel	0.0
Sand	9.3
Coarse Sand	0.0
Medium Sand	0.6
Fine Sand	8.7
Silt	41.1
Clay	49.6

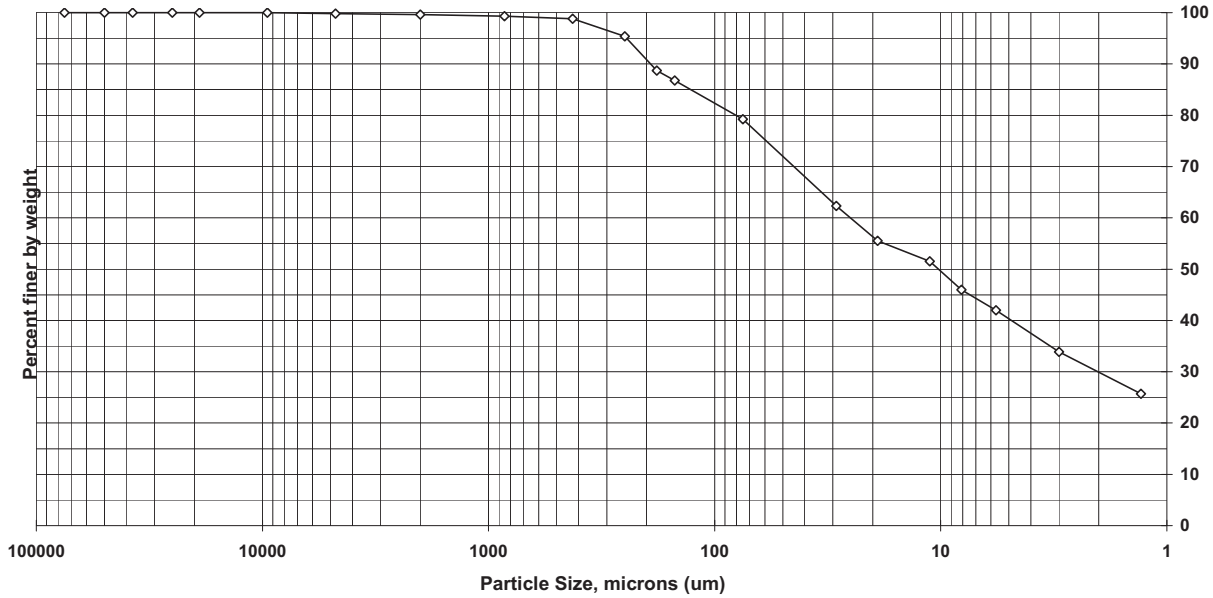
Particle Size of Soils by ASTM D422

				Date Received:	6/22/2013
Sample ID:	LMR13-80-012	**Percent Solids:**	57.7%	**Start Date:**	7/11/2013
Lab ID:	200-17149-E-11	**Specific Gravity:**	2.650	**End Date:**	7/20/2013

Shape (> #10): angular

Non-soil material: shell,plant

Hardness (> #10): hard



Sieve size	Particle size, um	Percent finer	Incremental percent
3 inch	75000	100.0	0.0
2 inch	50000	100.0	0.0
1.5 inch	37500	100.0	0.0
1 inch	25000	100.0	0.0
3/4 inch	19000	100.0	0.0
3/8 inch	9500	100.0	0.0
#4	4750	99.8	0.2
#10	2000	99.6	0.2
#20	850	99.3	0.3
#40	425	98.8	0.5
#60	250	95.4	3.4
#80	180	88.7	6.7
#100	150	86.8	1.9
#200	75	79.2	7.6
Hyd1	29	62.3	16.9
Hyd2	19	55.5	6.8
Hyd3	11.2	51.5	4.0
Hyd4	8.1	46.0	5.5
Hyd5	5.7	42.0	4.0
Hyd6	3	33.9	8.1
Hyd7	1.3	25.7	8.2

Soil Classification	Percent of sample
Gravel	0.2
Sand	20.6
Coarse Sand	0.2
Medium Sand	0.8
Fine Sand	19.6
Silt	37.2
Clay	42.0

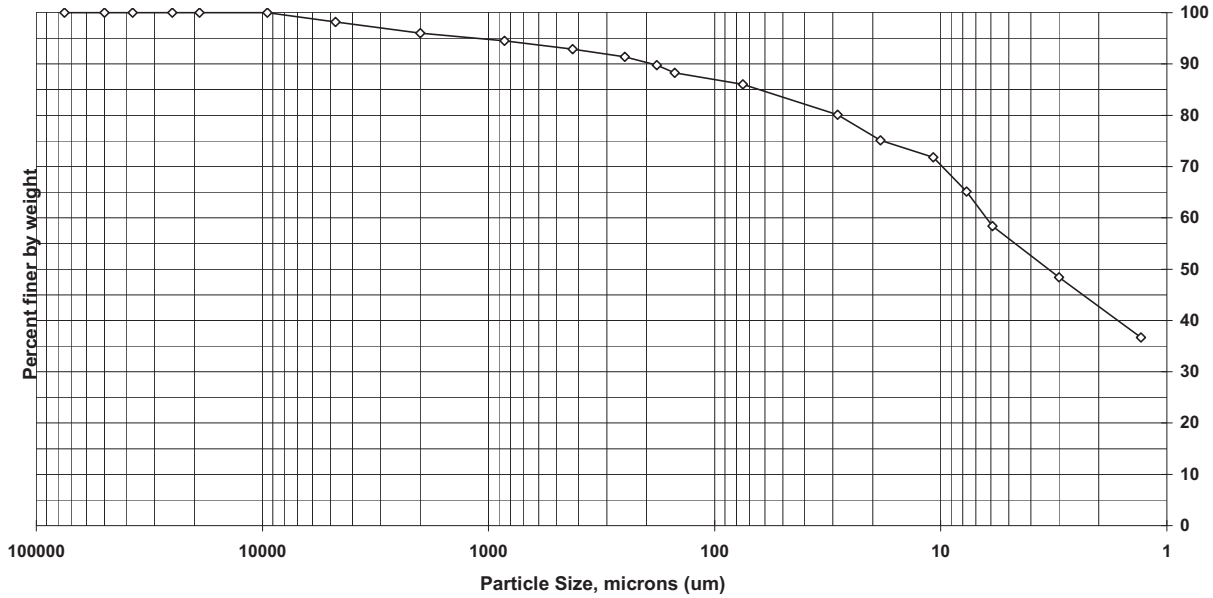
Particle Size of Soils by ASTM D422

				Date Received:	6/22/2013
Sample ID:	LMR13-53-012	**Percent Solids:**	58.7%	**Start Date:**	7/11/2013
Lab ID:	200-17149-E-13	**Specific Gravity:**	2.650	**End Date:**	7/20/2013

Shape (> #10): subangular

Non-soil material: shell,wood

Hardness (> #10): hard



Sieve size	Particle size, um	Percent finer	Incremental percent
3 inch	75000	100.0	0.0
2 inch	50000	100.0	0.0
1.5 inch	37500	100.0	0.0
1 inch	25000	100.0	0.0
3/4 inch	19000	100.0	0.0
3/8 inch	9500	100.0	0.0
#4	4750	98.2	1.8
#10	2000	96.0	2.2
#20	850	94.5	1.5
#40	425	92.9	1.6
#60	250	91.4	1.5
#80	180	89.8	1.6
#100	150	88.3	1.5
#200	75	86.0	2.3
Hyd1	28.6	80.1	5.9
Hyd2	18.5	75.1	5.0
Hyd3	10.8	71.8	3.3
Hyd4	7.7	65.1	6.7
Hyd5	5.9	58.4	6.7
Hyd6	3	48.4	10.0
Hyd7	1.3	36.7	11.7

Soil Classification	Percent of sample
Gravel	1.8
Sand	12.2
Coarse Sand	2.2
Medium Sand	3.1
Fine Sand	6.9
Silt	27.6
Clay	58.4

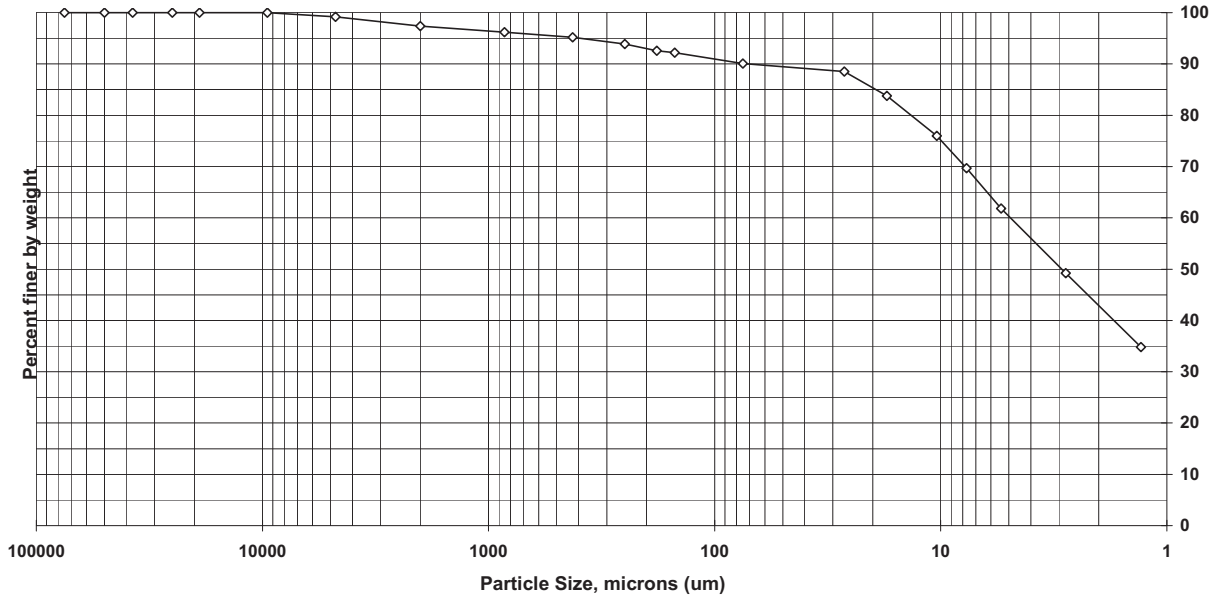
Particle Size of Soils by ASTM D422

				Date Received:	6/22/2013
Sample ID:	LMR13-56-012	**Percent Solids:**	81.5%	**Start Date:**	7/10/2013
Lab ID:	200-17149-E-14	**Specific Gravity:**	2.650	**End Date:**	7/12/2013

Shape (> #10): subangular

Non-soil material: N/A

Hardness (> #10): hard



Sieve size	Particle size, um	Percent finer	Incremental percent
3 inch	75000	100.0	0.0
2 inch	50000	100.0	0.0
1.5 inch	37500	100.0	0.0
1 inch	25000	100.0	0.0
3/4 inch	19000	100.0	0.0
3/8 inch	9500	100.0	0.0
#4	4750	99.2	0.8
#10	2000	97.4	1.8
#20	850	96.2	1.2
#40	425	95.2	1.0
#60	250	93.9	1.3
#80	180	92.6	1.3
#100	150	92.2	0.4
#200	75	90.1	2.1
Hyd1	26.7	88.5	1.6
Hyd2	17.3	83.8	4.7
Hyd3	10.4	76.0	7.8
Hyd4	7.7	69.7	6.3
Hyd5	5.4	61.8	7.9
Hyd6	2.8	49.2	12.6
Hyd7	1.3	34.8	14.4

Soil Classification	Percent of sample
Gravel	0.8
Sand	9.1
Coarse Sand	1.8
Medium Sand	2.2
Fine Sand	5.1
Silt	28.3
Clay	61.8

Appendix F

Previous Maumee River AOC Sediment Investigations

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SCREENING ANALYSIS

SEDIMENT QUALITY ASSESSMENT STUDY

OF THE

MAUMEE RIVER AREA OF CONCERN

GREAT LAKES NATIONAL PROGRAM OFFICE

1995 & 1996

Lucas and Wood Counties, Ohio



SCREENING ANALYSIS

SEDIMENT QUALITY ASSESSMENT STUDY

OF THE

MAUMEE RIVER AREA OF CONCERN

GREAT LAKES NATIONAL PROGRAM OFFICE

1995 & 1996

Lucas and Wood Counties, Ohio

Prepared for:
Ohio Environmental Protection Agency
Division of Emergency & Remedial Response
Northwest District Office
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1.0 Introduction

Sediment vibrocores were collected by Ohio EPA and U.S. EPA personnel from 147 locations in the Maumee River Area of Concern (AOC) in two phases; the Spring of 1995 (Phase 1) and the Fall of 1996 (Phase 2); to investigate the distribution and magnitude of metal and organic contamination in sediments in the Maumee River AOC. Areas sampled in this study included portions of the Maumee River, Ottawa River, Swan Creek, Otter Creek, Duck Creek, and Maumee Bay (Figures 1.1 and 1.2). The cores were divided into 338 samples and analyzed using screening analysis techniques for (a) metals and other elements by x-ray fluorescence (XRF) and (b) total polychlorinated biphenyls (PCBs) and total polycyclic aromatic hydrocarbons (PAHs) by quantitative enzyme immunoassay (EIA). These screening analyses have been recommended by the U.S. EPA (1997) for the relatively rapid and inexpensive analysis of environmental samples, and have been applied to previous Ohio EPA-funded sediment and soil quality assessment studies. This report combines the screening analysis data sets for Phases 1 and 2, and:

- Compares the contaminant concentrations to toxicity-based sediment quality guideline values (Long and Morgan, 1990);
- Describes the longitudinal distribution of contaminants in surficial samples from the cores, to identify current contaminant "hot spots";
- Describes the vertical distributions of contaminants from within the cores, to assess the potential for adverse effects should sediment be displaced by natural (e.g., floods) or anthropogenic (e.g., dredging) forces;
- Presents a rank score summarizing the overall degree of contamination for each sample.
- Describes results of comparisons between the screening analysis data and confirmatory analysis data for paired samples, to assess the utility of the screening analyses;

The objective of this document is to report the status of sediment quality in the Maumee River AOC, for use by Ohio EPA staff and other parties responsible for monitoring and management of the waters and lands in the AOC.

2.0 Summary and Conclusions

- One hundred and forty-seven sediment vibrocores were collected from the Maumee River AOC in 1995 and 1996. These cores were divided into 338 sediment samples.
- The samples were analyzed, by screening analyses, for 18 elements by x-ray fluorescence spectroscopy, and for total PCBs and total PAHs by quantitative enzyme immunoassay.
- Core stratigraphy was generally similar in most of the watershed: surficial sediments were usually silt; intermediate core layers were also usually silt or silty sand; and most cores ended in silt, clay, or sometimes peat.
- Traces of oil or other obvious signs of contamination were not often noted in the cores, except in Swan Creek.

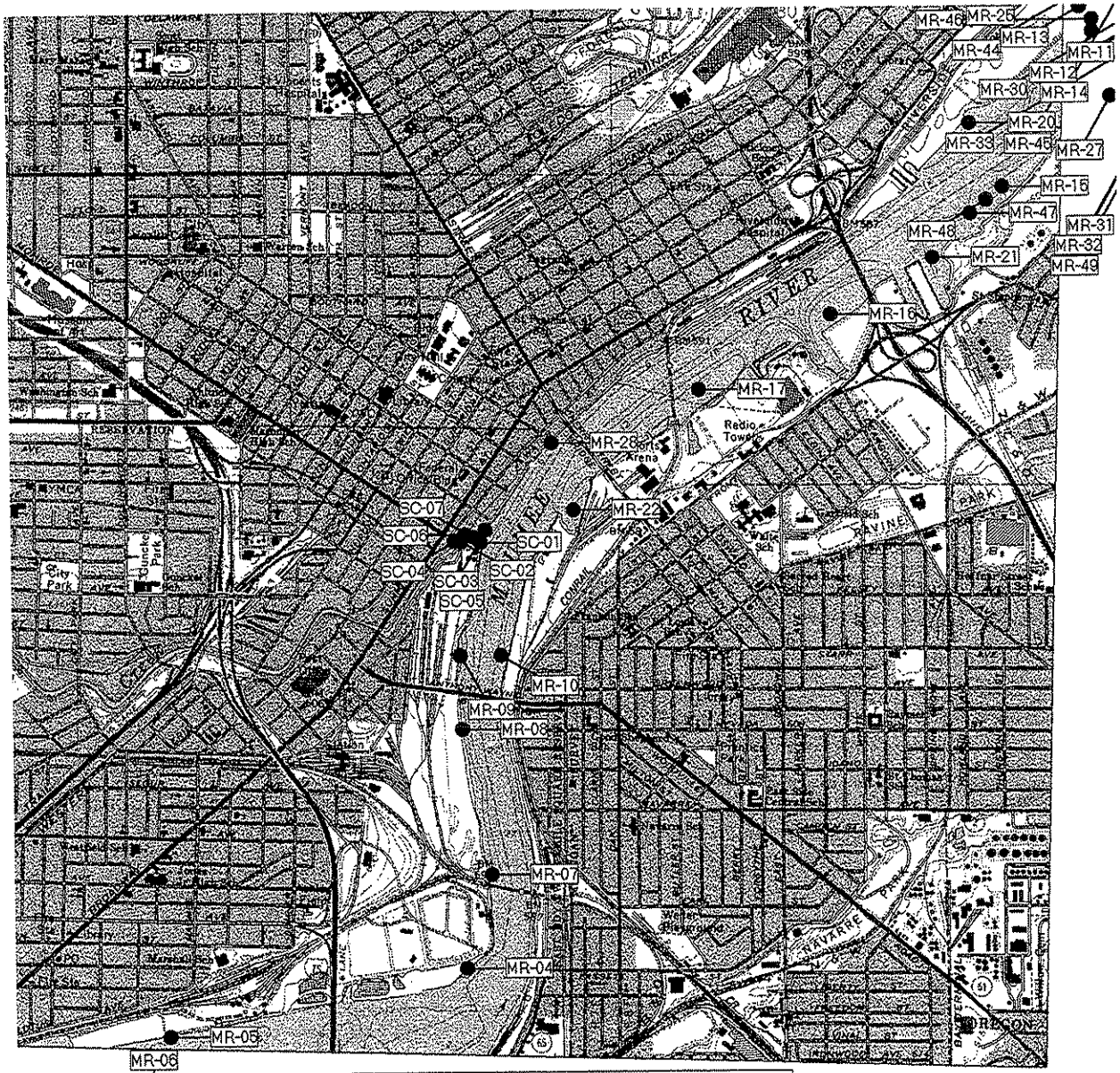


Figure 1.1. Station Locations Sampled during the Maumee River AOC Sediment Assessment Surveys - Upper Study Area

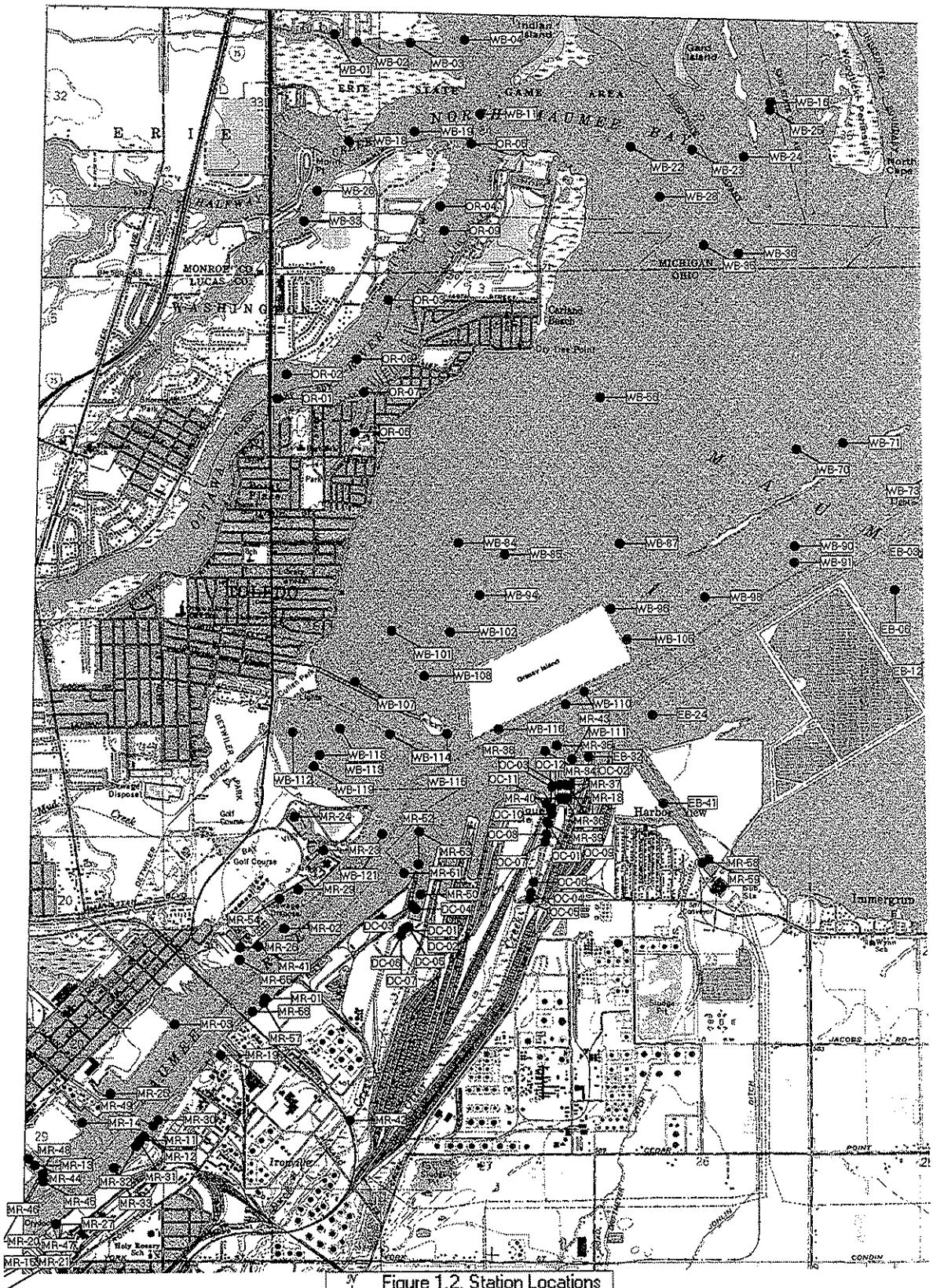


Figure 1.2. Station Locations Sampled during the Maumee River AOC Sediment Assessment Surveys - Lower Study Area
0 km
1 km
2 km
Stations

- The most highly contaminated sediments, based on individual contaminant concentrations and the results of the sample ranking calculations, were from Swan Creek.
- The least contaminated sediments, based on individual contaminant concentrations and the results of the sample ranking calculations, were from Maumee Bay.
- Prominent contaminant hot spots were located (a) near the former Toledo Coke facility; (b) near the mouth of Swan Creek; and (c) near the mouth of the Maumee River.
- Contaminant concentrations decreased or were consistent with depth in most cores.
- A fairly consistent percentage of the cores, 18% to 21%, exhibited increasing concentrations with depth for all six of the major contaminants.
- Six contaminants were present in elevated concentrations in a significant number of samples (i.e., exceeded the Long and Morgan ER-M values in 16 percent or more of the samples: chromium, lead, nickel, zinc, total PCBs, and total PAHs. These contaminants are referred to as "major" contaminants in the remainder of this report. The highest concentration observed in the study area for four of the six major contaminants occurred in the surficial layer (0"-24") of a core (Table 2.1). The other two highest concentrations occurred in subsurface layers.
- Total PCBs exceeded its ER-M value (0.40 µg/g DW) in the most samples (91%).
- Of the six major contaminants, total PAHs exceeded its ER-M value (35 µg/g DW) in the fewest samples (only 5%).
- Nickel was the metal which exceeded its ER-M value in the most samples (78%).
- According to the rank score calculations, the single most contaminated station was MR-29, on the left side of the Maumee River near the river mouth.

Table 2.1.
Highest Concentrations of the Major Contaminants Found in the Study Area

Contaminant	Station & Layer	Concentration (µg/g DW)	ER-M (µg/g DW)
Chromium	SC-04; 0"-24"	829	145
Lead	OC-10; 0"-24"	1,240	110
Nickel	MR-49; 42"-50"	292	50
Zinc	MR-12; 0"-24"	1,340	270
Total PCBs	OC-01; 28"-34"	717	0.40
Total PAHs	MR-11; 0"-24"	315	35

- Results of two of the three screening analyses, X-ray fluorescence (XRF) for metals and enzyme immunoassay (EIA) for total PCBs, moderately to strongly corresponded

with confirmatory analysis data for a subset of the samples. These screening analyses may be useful in future sediment quality assessments.

- Results of one of the screening analyses, EIA for total PAHs, did not correspond with the confirmatory data. This screening analysis should probably not be used in future sediment quality assessments.

3.0 Recommendations

- While contaminant concentrations generally decreased or were consistent with depth, concentrations increased with depth in approximately 20% of the cores. Moreover, contaminant concentrations exceeding the ER-M values often occurred in a subsurface sediment layer or in the material at the end of the cores. Consequently, future dredging or sediment remediation projects should require core sampling to evaluate contaminant distributions with depth, to ensure that newly exposed sediment layers will not contain potentially toxic contaminant concentrations.
- Two of the screening analyses used in this study; X-ray fluorescence spectroscopy for metals and enzyme immunoassay for total PCBs; seemed to produce reliable data, which could be used to identify contaminant "hot spots", and prioritize areas for remedial investigations. These assays may be useful in future sediment (or soil) contaminant screening surveys, in this AOC or elsewhere.
- One screening analysis; enzyme immunoassay for total PAHs; did not produce reliable data. This assay is apparently not useful for sediment or soil contaminant screening surveys. It would be desirable to identify another reliable screening technique for PAHs, but none are known at this time.
- Future sediment quality surveys in the Maumee River AOC may consider focusing on the six major contaminants identified in this study; chromium, lead, nickel, zinc, total PCBs, and total PAHs.
- The contaminant concentration data produced in this study, in combination with the sediment quality guideline values, are useful for assessing contaminant spatial gradients, hot spots, potential sources, and potential effects. The chemical data alone, however, do not necessarily correspond directly to predictable toxic effects. If toxicological effects from sediments are or become an issue in the Maumee River AOC, it would be desirable to perform sediment toxicity tests, to account for currently unknown factors like contaminant bioavailability.

4.0 METHODS

4.1 Sample Collection Methods

All sediment samples were collected by vibrocoring, using equipment operated from the U.S. EPA Great Lakes National Program Office's Research Vessel *Mudpuppy*. Specific details of the vibrocoring procedure are included in the project Quality Assurance Project Plan (U.S. EPA-GLNPO, 1995). In general, cores were collected in a 4"-diameter aluminum core tube equipped with a cellulose acetate butyrate plastic core liner. Cores were collected until "refusal" (i.e., the core tube encountered sediment it could not

penetrate), drained of overlying water, and transported to a shore-side facility. Here the core liners were opened, the cores were cut in half length-wise, photographed, and sediment color/texture/ odor/etc. were noted on core log forms. Cores were subsampled by a combination of predetermined intervals and core composition. For example, the 0" to 24" interval was usually collected, and then subsequent intervals were sampled based on core stratigraphy. Stainless steel implements were used for all sample processing. Sediment samples were stored on ice until transport to the laboratories.

Cores were collected from Maumee Bay, Maumee River, and four tributaries to the Maumee River (Duck Creek, Otter Creek, and Swan Creek) and Maumee Bay (Ottawa River). The upstream boundary of the Maumee River was in the vicinity of Corbutt Island. The upstream boundaries of the four tributaries were fixed bridges, beyond which the *Mudpuppy* could not pass. This was often only a short distance from the tributary mouth.

4.2 Screening Analysis Methods

Screening analysis methods were used to measure selected metals, total polychlorinated biphenyls (PCBs), and total polycyclic aromatic hydrocarbons (PAHs) in all of the sediment samples collected in this project. Total solids (sample dry weight) was also measured for all samples. In addition, PCBs and individual PAHs were measured in selected samples by conventional laboratory techniques to investigate the reliability of the screening analyses; see Section 4.3. Specific details of these analytical methods may be found in the project Quality Assurance Project Plan (U.S. EPA-GLNPO, 1995). These analyses were performed by AScI Corporation, and general descriptions of the methods are below.

Metals and selected other elements (Table 4.1) were measured in air-dried sediment using a Spectrace Model 6000 transportable x-ray fluorescence (XRF) analyzer equipped with a silicon-lithium detector and using Fundamental Parameters data analysis software. A total of 18 elements were quantified in each sample, including several required by the software for stoichiometric calculations (calcium, iron, potassium, and titanium). It should be noted that XRF quantifies the "total" metal in a sample; i.e., that metal incorporated into the mineral matrix of the sediment, as well as the metal sorbed to the sediment particles. Consequently, XRF metal concentration data are usually considered to be "conservative", and are often greater than values generated using other analytical techniques.

Table 4.1. Metals and Other Elements Measured by X-Ray Fluorescence.

Element		
Antimony	Chromium	Nickel
Arsenic	Copper	Potassium
Barium	Iron	Selenium
Bromine	Lead	Silver
Calcium	Manganese	Titanium
Cadmium	Mercury	Zinc

Total PCBs and total PAHs were measured in wet sediment using quantitative enzyme immunoassays (EIAs) manufactured by Millipore Corporation and its successor, Strategic Diagnostics Incorporated (Newark, Delaware). An aliquot of sediment was extracted with methanol using a shake extraction, and the extracts were analyzed using the quantitative technique developed by AScI. Standards of known concentrations (Aroclor 1248 for PCBs and phenanthrene for PAHs) were similarly analyzed, and used to calculate the sample concentrations using linear regression.

Total solids were measured using an Denver Instrument Company IR-100 infrared moisture analyzer, which dries samples at 105 °C to a constant weight in approximately 5 to 10 minutes. Total solids data were used to correct the PCB and PAH EIA data for sample dry weight. Dry weight correction was not necessary for the XRF analyses, since the samples were dried prior to analysis.

4.3 Confirmation Analysis Methods

A subset of 19 samples was also analyzed for metals, and 20 samples for PCBs, and PAHs by conventional laboratory methods, to investigate the accuracy of the screening analyses (XRF and EIAs). These confirmatory analyses are listed in Table 4.2. They were performed by the Ohio EPA Division of Environmental Services, and details of the results may be found in OEPA, 1995a and b.

Table 4.2. Confirmatory Analysis Procedures.

Parameter	Ohio EPA Procedures	U.S. EPA Procedures
Aluminum	400.1 / 401.1	200.2 / 200.7
Arsenic	400.1 / 407.1	200.2 / 206.2
Barium	400.1 / 401.1	200.2 / 200.7
Beryllium	400.1 / 411.1	200.2 / 210.2
Cadmium	400.1 / 415.2	200.2 / 213.2
Chromium	400.1 / 401.1	200.2 / 200.7
Copper	400.1 / 419.1	200.2 / 220.1
Iron	400.1 / 425.1	200.2 / 236.1
Lead	400.1 / 430.1	200.2 / 239.1
Mercury	400.1 / 438.2	200.2 / 245.5
Nickel	400.1 / 440.1	200.2 / 249.1
Selenium	400.1 / 450.1	200.2 / 270.2
Sodium	400.1 / 452.1	200.2 / 273.1
Strontium	400.1 / 401.1	200.2 / 200.7
Zinc	400.1 / 460.1	200.2 / 289.1
PCBs*	---	8080
PAHs**	---	8270

* Seven Aroclor mixtures quantified

** Thirteen individual PAHs quantified, along with numerous other semi-volatile compounds

Data sets for the screening and confirmatory analyses were compared by linear regression, performed in Quattro Pro. Concentrations of metals which were present below the method detection limit of either the XRF or the confirmatory metal analyses were included in the regression analysis as one-half the MDL. The same is true of the EIA data for PCBs and PAHs. The PCB and PAH confirmatory analyses quantified individual Aroclors and individual PAHs, however, and up to three Aroclor mixes (1248, 1254, and/or 1260) and up to thirteen PAHs were identified in each sample. The Aroclor values or individual PAH values were summed to produce a "total PCB" or "total PAH" concentration, for comparison to the EIA data. For "non-detect" samples in these confirmatory data sets, the detection limits for all three Aroclors or all 13 PAHs were summed and divided by 2, and this value was used in the regression analysis. Note that if, for example, only a single PAH was detected in a sample by the confirmatory analysis, it is possible that the assumed concentration in a second "non-detect" sample (one-half of the summed detection limits for all 13 PAHs) could be higher than the measured concentration in the first sample.

The strength of the confirmatory analysis:screening analysis correlation was evaluated using both the coefficient of determination (r^2) of the regression analysis and by comparing the concentration ranges of the each analysis. For example, a case where every concentration value of both the screening analysis and the confirmation analysis was less than the ER-L value would indicate a strong agreement between the two data sets, even if the r^2 value was low. In general, the statistical strength of the correlation was evaluated as per Table 4.3.

Table 4.3. Interpretation of r^2 values.

r^2 Value	Correlation Strength
$r^2 > 0.80$	"Strong"
$0.80 > r^2 > 0.60$	"Moderate"
$r^2 < 0.60$	"Poor"

4.4 Contaminant Concentration Data Interpretation Procedures. Two sets of sediment quality guideline values were used to interpret the contaminant concentration data generated in this study: the Long and Morgan guideline values established by NOAA (Long and Morgan, 1990), and a set of "background concentration" values established by the Illinois EPA (Kelly and Hite, 1984). It should be noted that criteria were not available for every contaminant detected in the course of this study, and that some of the toxicity guideline values and background concentrations are less than the detection limits of the analytical methods employed in this study.

The Long and Morgan toxicity-based sediment quality guidelines are derived from the Apparent Effects Threshold Approach, which uses quantitative relationships between individual sediment contaminants and observed biological effects to predict the sediment concentration of a contaminant above which significant biological effects may be expected

to occur. The Long and Morgan guidelines identify two sets of values for assessing sediment quality:

- Effects Range - Low (ER-L): contaminant concentrations above which adverse effects may occur in sensitive macroinvertebrate species and/or life stages (e.g., mayflies and caddisflies, or larval fish).

- Effects Range - Median (ER-M): contaminant concentrations above which effects frequently or always occurred (in the data base used to calculate the guideline values).

The Long and Morgan sediment quality guideline values cited in this study are listed in Table 4.4.

Table 4.4. Long and Morgan Sediment Quality Guideline Values.

Contaminant	ER-L (µg/g DW unless otherwise noted)	ER-M (µg/g DW unless otherwise noted)
Arsenic	33	85
Cadmium	5	9
Chromium	80	145
Copper	70	390
Lead	35	110
Mercury	0.15	1.3
Nickel	30	50
Zinc	120	270
Total PCBs	50 ng/g	400 ng/g
Total PAHs	4,000 ng/g	35,000 ng/g

It should be noted that sediment quality guideline values based on chemical concentrations in bulk sediment do not necessarily correspond directly to environmental risk, since they do not account for factors like contaminant availability. O'Conner et. al (1998) found that while guidelines based on bulk chemistry are useful for identifying samples of potential toxicological concern which may require further analysis, they should not be used alone as indicators of toxicity.

Kelly and Hite's background concentration values were derived from data for sediment samples collected by the Illinois EPA in support of water quality monitoring studies during the period 1974 to 1980. Land use information was used to identify 94 sampling sites which could be considered unimpacted by point or non-point source discharges, other than agricultural inputs. Background concentration values cited in this report are in Table 4.5.

Table 4.5. Contaminant "Background" Concentration Values For Illinois Stream Sediments.

Contaminant	Background Concentration (µg/g DW unless otherwise noted)
Arsenic	5.16
Cadmium	< 0.53
Chromium	9.78
Copper	14.9
Lead	16.7
Mercury	0.042
Zinc	50.3
Total PCBs	< 10 ng/g DW

4.5 Sample Ranking Procedures

Samples were ranked for their overall extent of contamination using the ranking procedure described by the U.S. EPA Great Lakes National Program Office (U.S. EPA, 1994). In this procedure, concentrations of each measured contaminant are scaled from 1 to 100, relative to each other; i.e., the lowest concentration for a given contaminant becomes 1, and the highest concentration becomes 100. The formula for calculating the sample-specific rank scores is:

$$\text{Rank} = 1 + [(\text{Site Value} - \text{Minimum Value})/(\text{Maximum Value} - \text{Minimum Value})] \times 99$$

Results of this ranking procedure provide a multi-contaminant summary of the degree of contamination at any one sample, in comparison to the rest of the samples in the study.

A limitation of sample ranking is that the rank scores are artifacts of the data set used to calculate them, and do not necessarily correspond to environmental risk. For example, the sample in the data set with the highest zinc concentration receives a rank of 100 for zinc, even if that concentration is so low it could not possibly cause toxic effects. Consequently, the bulk of the discussion in this report concerns comparisons between the measured contaminant concentrations and the toxicity-based sediment quality guideline values, rather than the sample ranking results.

5.0 Results and Discussion

5.1. Summary of Sediment Contamination Throughout the Study Area

The following discussions concern the screening analysis data; XRF for metals and EIA for PCBs and PAHs. All of the screening analysis data are in Appendices A (XRF), B (PCB EIA) and C (PAH EIA). See Section 5.5 for a comparison of the screening analysis data and the confirmatory data.

5.1.1. Comparisons to Illinois "Background" Criteria

The large majority of the contaminant concentrations measured in the Maumee River AOC sediments exceeded the "background" values established by Kelly and Hite (1984; Table 5.1). Essentially all of the sediment samples have been impacted by anthropogenic

Table 5.1.
Percentage of Samples below Kelly and Hite's Illinois Background Criteria

Parameter	Background Criteria (µg/g DW)	Less Than Background Criteria (%)
Chromium	9.78	1
Lead	16.7	16
Nickel	---	---
Zinc	50.3	3
Total PCBs	< 0.01	0
Total PAHs	---	---

--- Criteria not available

contamination, even those samples from the upstream boundaries of the study area.

5.1.2. Comparison to the Long and Morgan Sediment Guideline Values

The Long and Morgan toxicity-based sediment quality guideline values indicate whether a sediment sample might be expected to cause significant toxic effects in aquatic organisms in general (the ER-M value) or in sensitive aquatic species or life stages (the ER-L value). Measured concentrations of three metals of potential toxicological concern and for which sediment guideline values have been established - arsenic, cadmium, and copper - were generally low, exceeding their ER-Ms in less than 2% of the samples. Six other "major" contaminants; chromium, lead, nickel, zinc, total PCBs and total PAHs; exceeded their ER-M values in at least 5% of the samples. Distributions of these major contaminants are summarized below, and discussed in detail in Section 5.2 (surficial sediments) and Section 5.3 (sediment cores).

- The percentage of samples that exceeded the ER-M values for the six major contaminants in the Maumee River AOC (Table 5.2), indicating the possibility of significant toxicity to aquatic organisms, ranged from 5% (total PAHs) to 91% (total PCBs). The percentage of samples that were between the ER-L and ER-M in the study area, indicating the possibility of toxicity to sensitive aquatic species or life stages, ranged from 10% (total PCBs) to 82% (zinc).
- Sediments in Swan Creek were more contaminated than elsewhere in the study area, with over 50% of the samples being highly contaminated (> ER-M) for lead, nickel, zinc, and total PCBs. Swan Creek was also the most contaminated location for total PAHs (17% of the samples > ER-M).
- Maumee Bay was generally the least contaminated portion of the study area, with only a small percentage of samples exceeding the ER-M values for lead, nickel, zinc, and total PAHs.
- Nickel was the metal which most often exceeded its ER-M, in 78% of the samples overall.
- Total PAHs exceeded their ER-M in only 5% of the samples. This matches the field notes and core logs, which seldom mentioned oil sheens or odors in the samples.

It should be noted that the ER-M for total PCBs, 0.4 µg/g DW (400 µg/Kg DW), is rather low and likely to be exceeded by the majority of sediment samples from an urbanized study area like the Maumee River AOC. Long and Morgan (1990) stated that the degree of confidence in the ER-L (0.05 µg/g DW) and ER-M values should be considered as moderate; they are based on a large number of studies from across the country, including toxicity tests, benthic invertebrate community structure studies, and equilibrium partitioning modeling, but the results of these studies were sometimes quite variable. They state that the effects associated with PCBs in sediments is highly dependent on the bioavailability of the PCBs, and is not necessarily proportional to their absolute concentration. Sediment organic carbon is the major factor controlling the bioavailability of PCBs and other hydrophobic organic contaminants. TOC was not measured in this study.

5.2. Contaminant Concentrations in Surficial Sediment Samples

Contaminant concentrations in the surficial samples from each core are important toxicologically, since these are the sediments to which organisms are exposed under current conditions. Surficial samples in this study generally correspond to the top 24" of each core.

5.2.1. Duck Creek Surficial Sediments

Duck Creek is approximately 3.5 miles long, but only the lower 100 feet (0.02 miles) was sampled. Seven cores were collected. Concentrations of selected chemicals in surficial samples from the Duck Creek cores are plotted in Figures 5.1 - 5.6.

Table 5.2. Comparison of Contaminant Concentrations to Sediment Quality Guidelines

Area*	Chromium		Lead		Nickel		Zinc		Total PCBs		Total PAHs	
	>ER-M (%)	<ER-M, >ER-L (%)	>ER-M (%)	<ER-M, >ER-L (%)	>ER-M (%)	<ER-M, >ER-L (%)	>ER-M (%)	<ER-M, >ER-L (%)	>ER-M (%)	<ER-M, >ER-L (%)	>ER-M (%)	<ER-M, >ER-L (%)
All	*25*	*73*	*40*	*77*	*78*	*45*	*43*	*82*	*91*	*9*	*5*	*41*
DC	6	50	0	75	69	19	19	56	94	0	0	44
MR	19	55	26	54	56	24	34	56	92	8	6	53
OC	46	18	43	29	25	21	7	64	93	7	7	82
OR	19	23	23	23	58	27	19	27	100	0	0	62
SC	9	43	87	13	57	30	87	13	96	4	17	65
EB	0	42	0	33	33	58	8	42	25	75	0	0
WB	0	44	2	58	27	62	6	53	92	8	1	1

*Notes: All = Overall percentage of samples exceeding criteria from all locations; DC = Duck Creek; MR = Maumee River; OC = Otter Creek; OR = Ottawa River; SC = Swan Creek; EB = East Bay; WB = West Bay

Figure 5.1. Duck Creek
Longitudinal Profile of Chromium

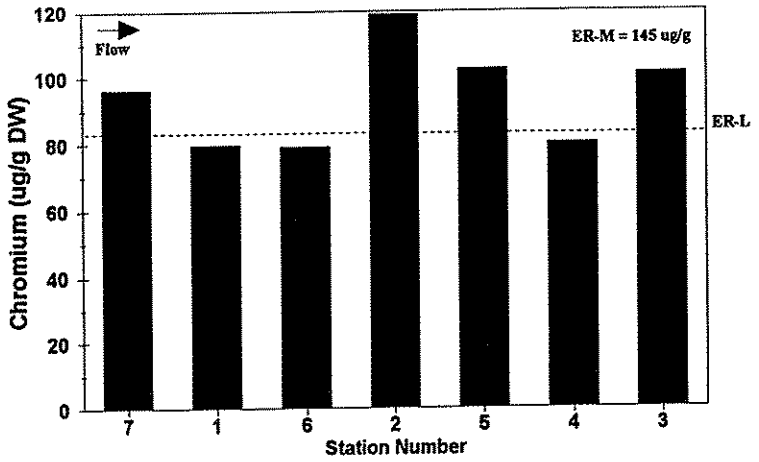


Figure 5.2. Duck Creek
Longitudinal Profile of Lead

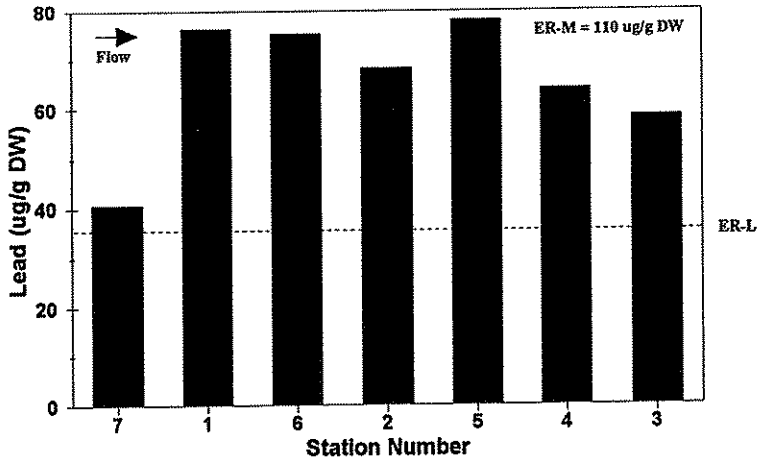


Figure 5.3. Duck Creek
Longitudinal Profile of Nickel

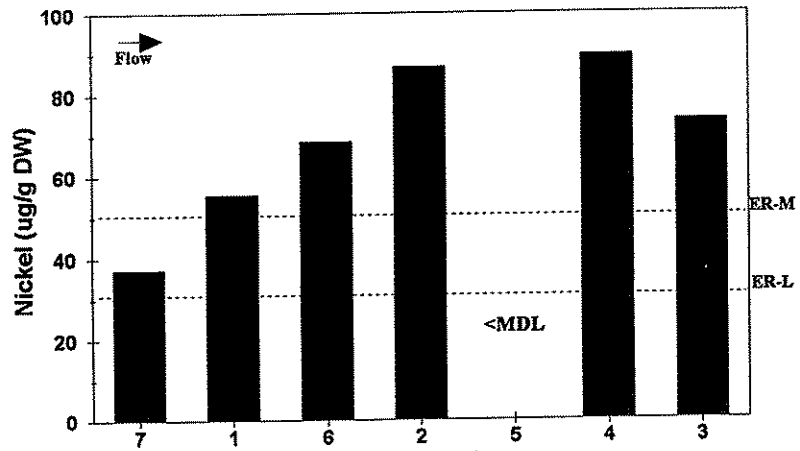


Figure 5.4. Duck Creek
Longitudinal Profile of Zinc

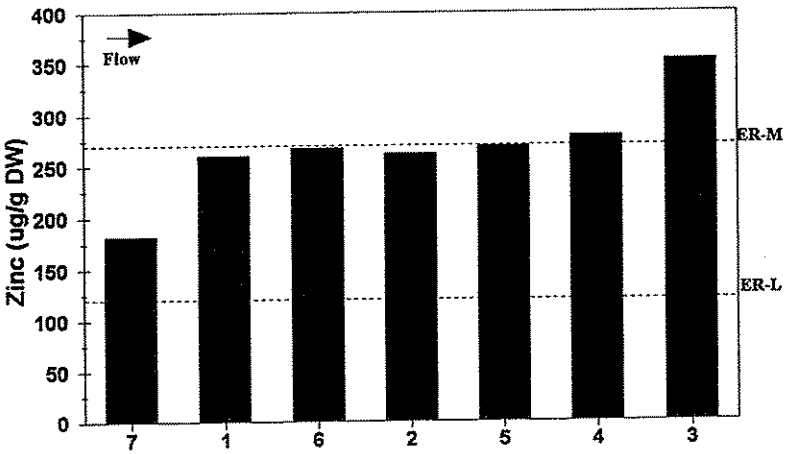


Figure 5.5. Duck Creek
Longitudinal Profile of Total PCBs

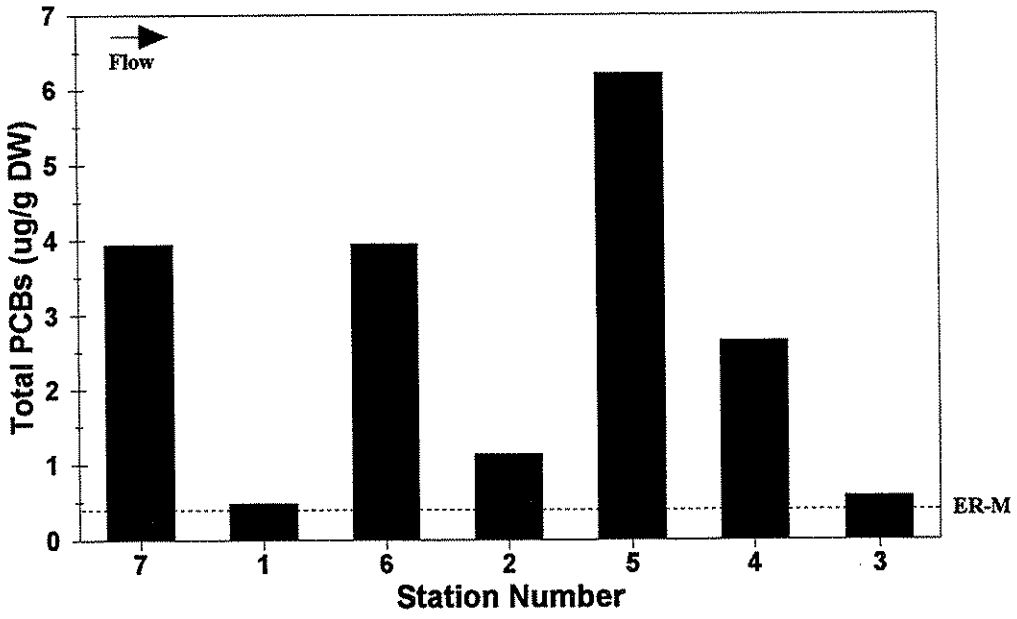
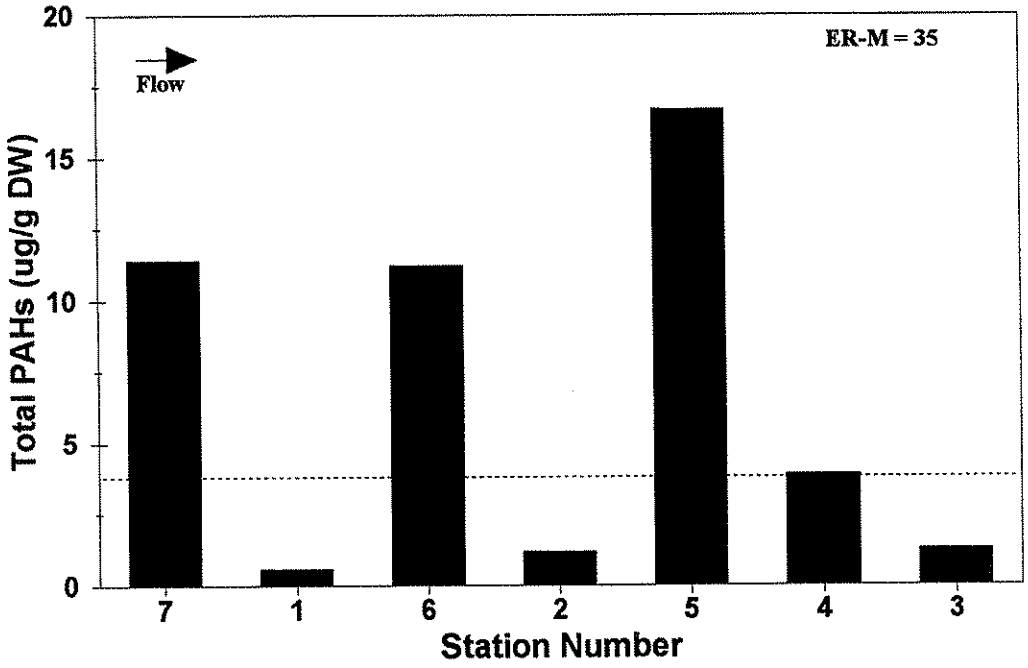


Figure 5.6. Duck Creek
Longitudinal Profile of Total PAHs



Metals

- Most of the surficial samples were moderately contaminated with chromium and lead; concentrations were generally between the ER-L and ER-M values. The majority of samples were highly contaminated for nickel and lead; 5 of 7 samples exceeded the nickel ER-M and 6 of 7 samples exceeded the zinc ER-M.

Total PCBs and Total PAHs

- Concentrations of total PCBs and total PAHs were consistently higher in surficial sediment at stations DC-07, DC-06, DC-05, and DC-04 than at the other three stations. These four stations were all sampled in 1996, while DC-01, DC-02, and DC-03 were sampled in 1995, suggesting the possibility of a pollution episode between the sampling surveys. Surficial sediments at station DC-05 exhibited the highest concentration of both total PCBs (6.21 µg/g DW) and total PAHs (16.7 µg/g DW).

5.2.2. Maumee River Surficial Sediments

Fifty-nine cores were collected from the lower 7.5 miles of the Maumee River, usually along the margins of the river, outside of the shipping channel.

Metals

- At most of the stations sampled, chromium, lead, nickel, and zinc concentrations were generally between the ER-L and the ER-M values (Figures 5.7 - 5.10).
- Concentrations consistently exceeded the ER-M for chromium, lead, nickel, and zinc on the left side of the river from Harrison Marina downstream to the Toledo Yacht Club (stations MR-26 → MR-23). The 1991 NOAA hydrographic chart indicates that this area is a discrete shoal of deposited sediment, usually in less than 5 feet of water.
- Additional locations exhibiting elevated metal concentrations (greater than the ER-Ms) included station MR-31 (lead and zinc), MR-12 (chromium, lead, nickel, and zinc), MR-30 (lead, nickel, and zinc), and MR-56 (lead, nickel, and zinc). These locations are all on the right side of the river, from the swing bridge near the Toledo Coke Facility to just downstream of Ashland Oil.
- The highest zinc concentration found in the study area was 1,340 µg/g DW, in the 0"-24" layer of core MR-12.

Total PCBs

- Fifty-four of 59 (92%) surficial samples exceeded the ER-M for total PCBs (Figure 5.11). The highest total PCB concentrations (greater than 10 µg/g DW) tend to occur in the vicinity of the Toledo Coke Facility, between stations MR-49 and MR-12. Possible coal tar residues were noted in samples MR-30, MR-32, and MR-31. Station MR-31 contained 42.1 µg/g DW total PCBs, the highest surficial PCB concentration

Figure 5.7. Maumee River
Longitudinal Profile of Chromium

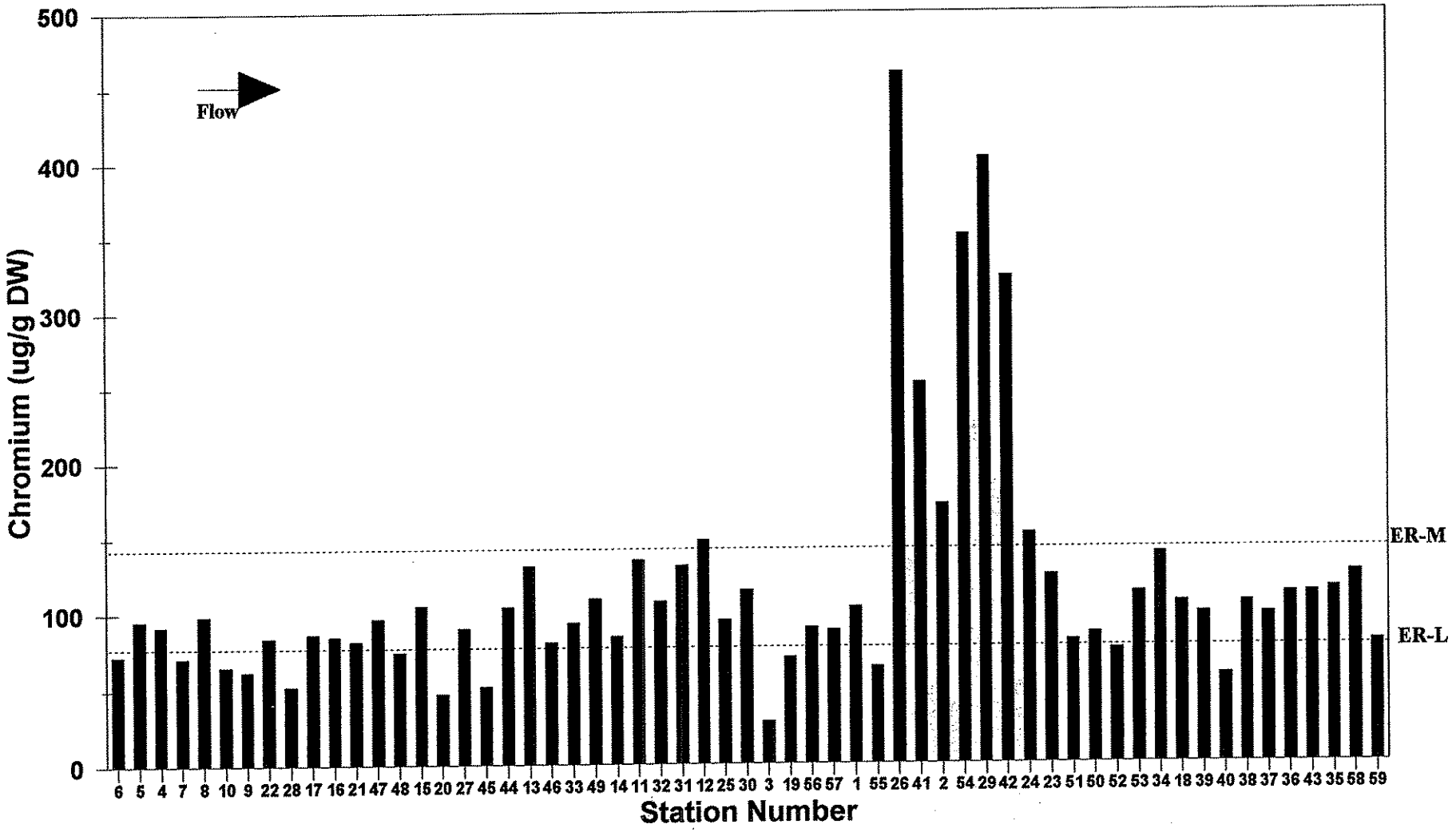


Figure 5.8. Maumee River Longitudinal Profile of Lead

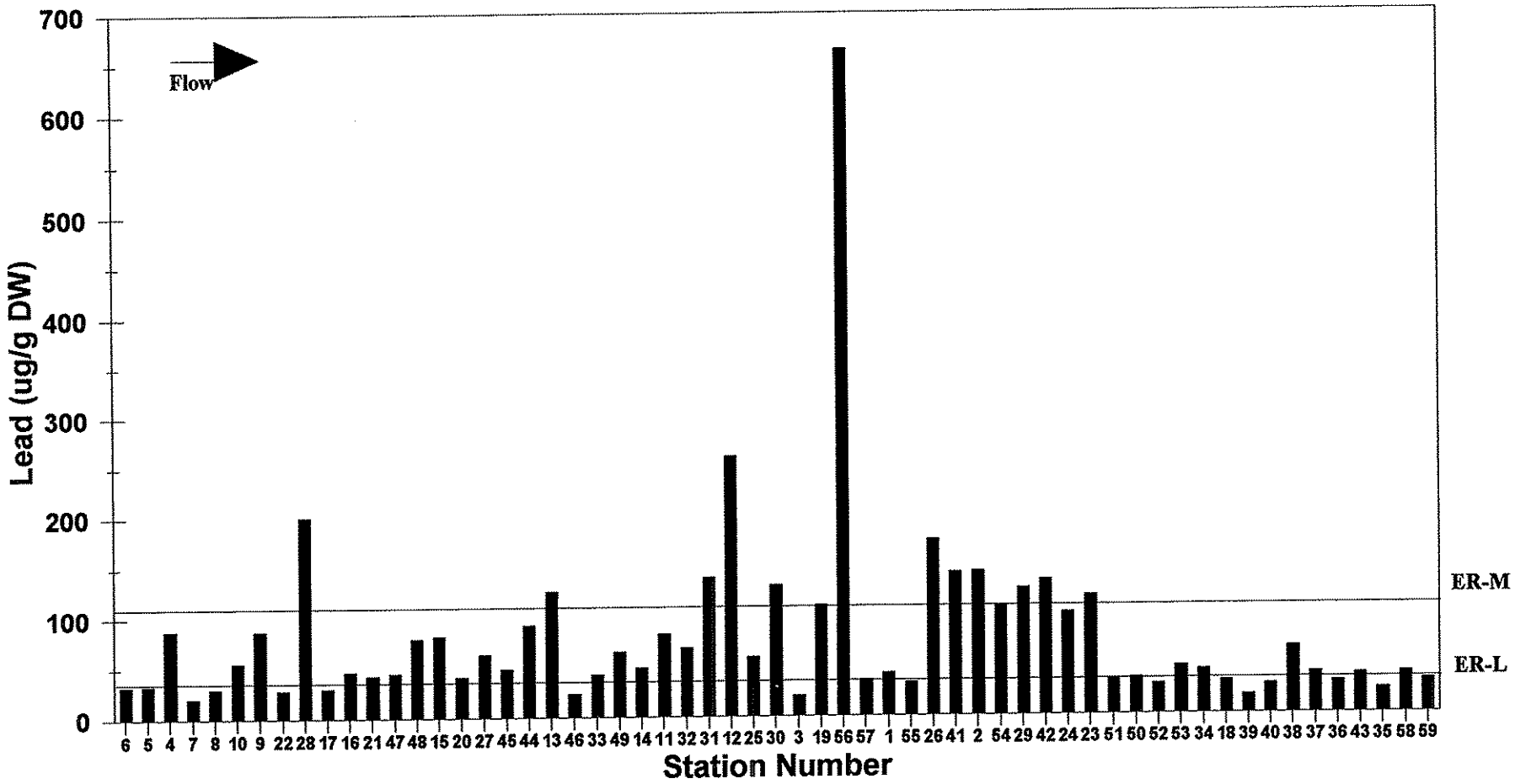


Figure 5.9. Maumee River
Longitudinal Profile of Nickel

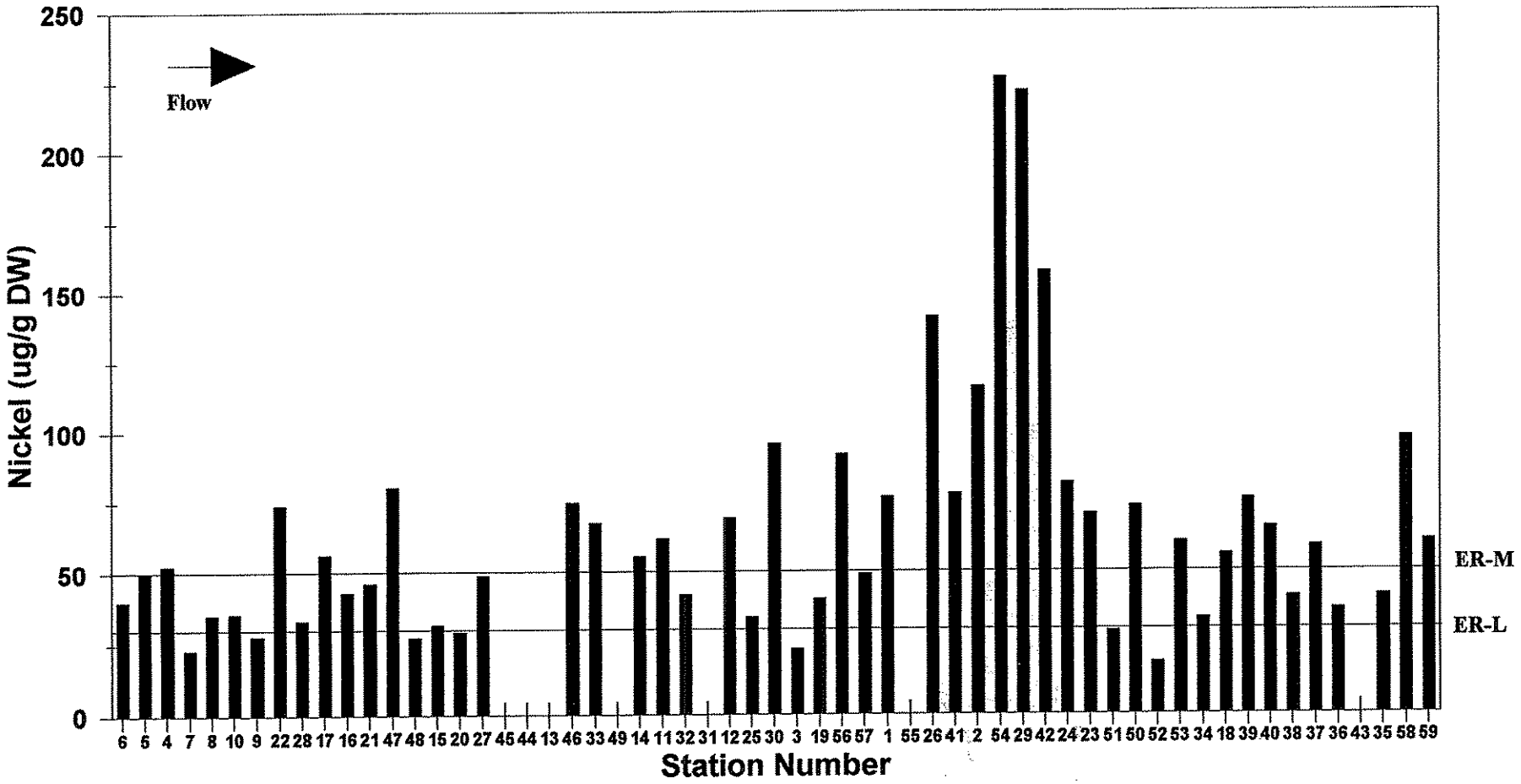


Figure 5.10. Maumee River Longitudinal Profile of Zinc

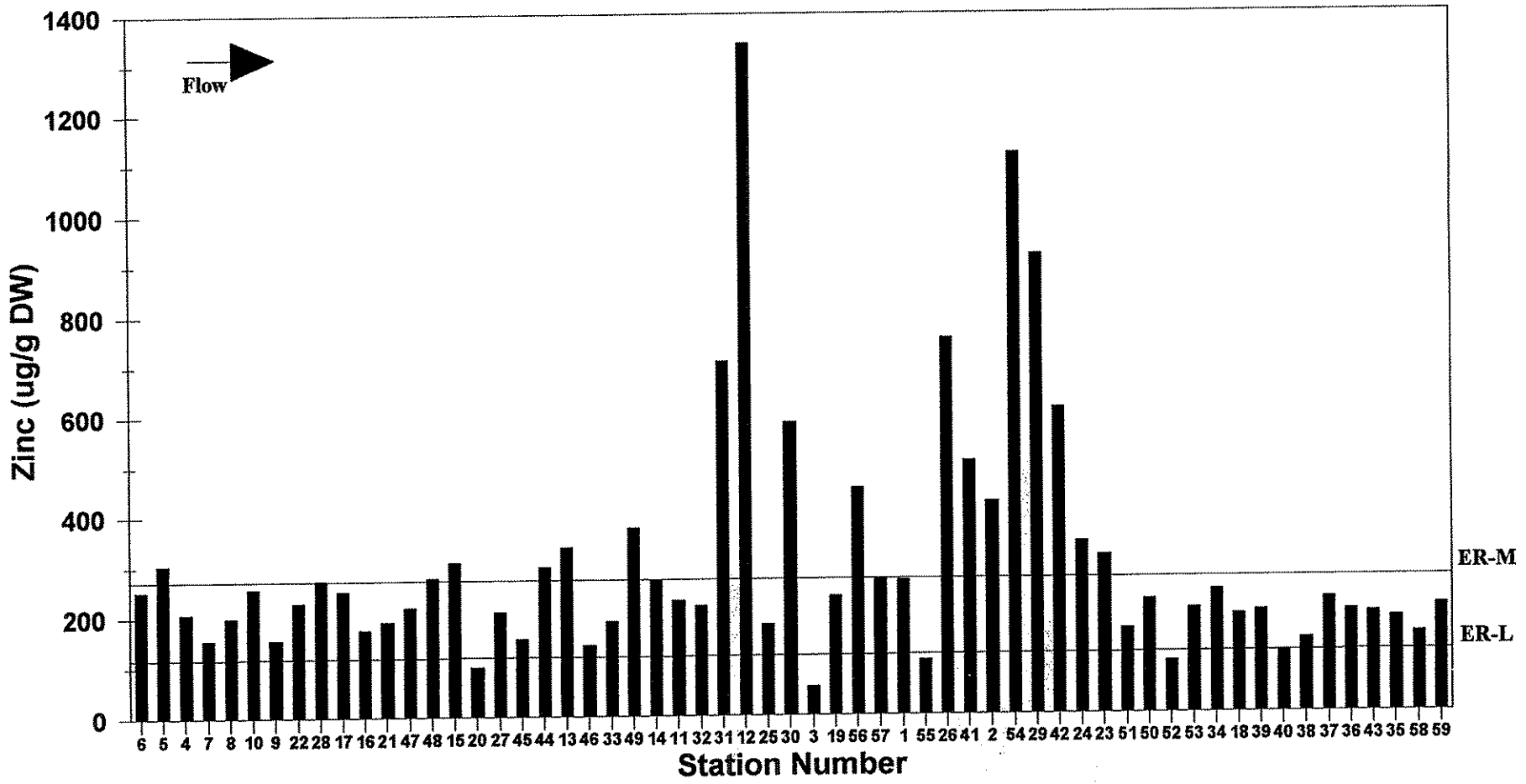
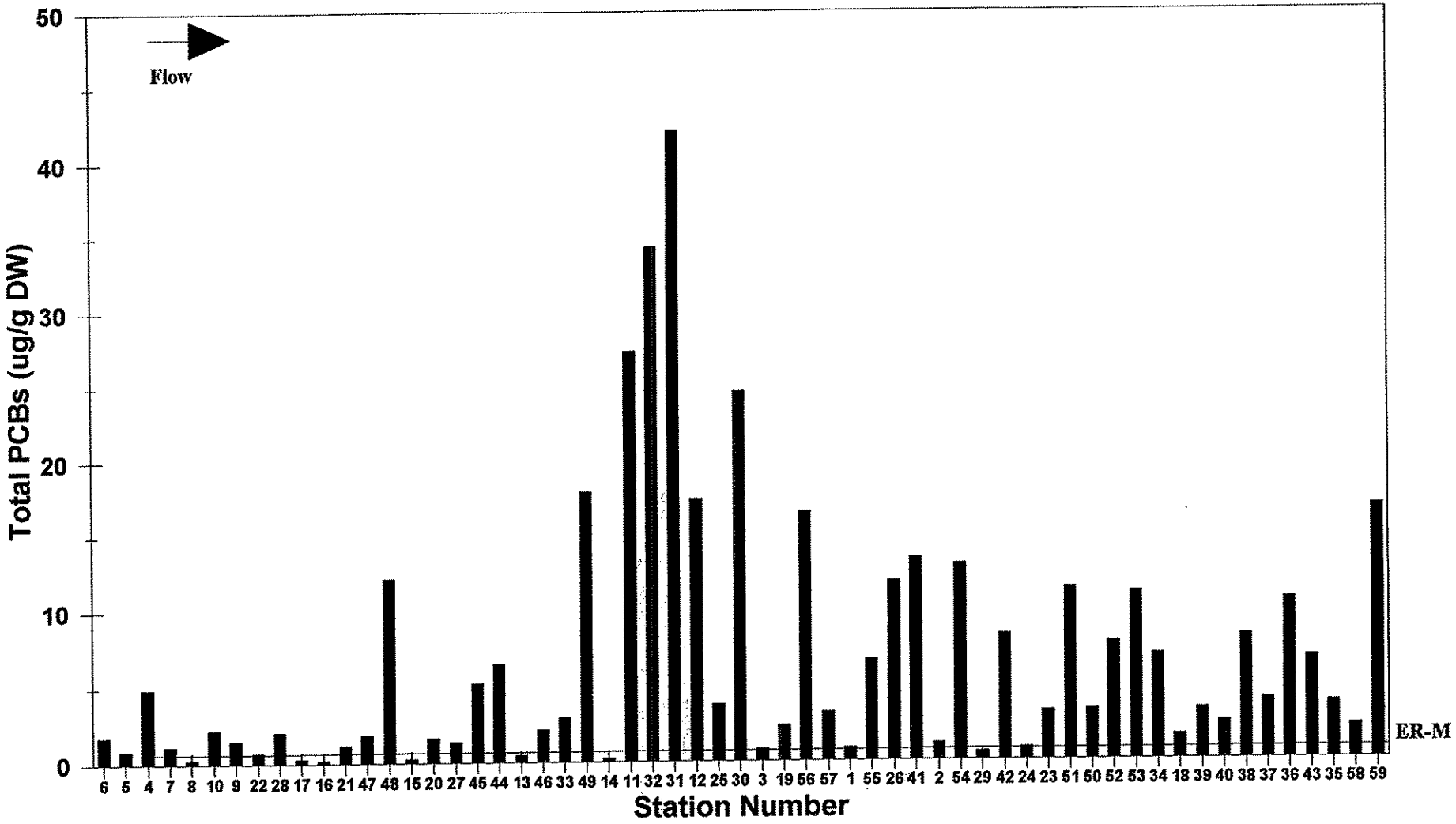


Figure 5.11. Maumee River Longitudinal Profile of Total PCBs



in the Maumee River. This core also contained the second the highest PCB concentration found in the study area; 348 µg/g DW, in the 46"-51" layer.

Total PAHs

- Twenty-eight of 59 Maumee River surficial sediment samples (47%) contained total PAHs that were less than the ER-L (Figure 5.12). Twenty-six (44%) of the samples were moderately contaminated with PAHs (between the ER-L and the ER-M). Only four surficial samples exceeded the ER-M: those from stations MR-49, MR-11, MR-12, and MR-59. Highest total PAHs concentrations were at MR-11 (315 µg/g DW, the highest in the study area) and MR-12 (159 µg/g DW), both adjacent to Toledo Coke.

5.2.3. Ottawa River Surficial Sediments

Nine cores were collected from the lower 1.5 miles of the Ottawa River, downstream of the Summit Road bridge. Samples were collected in 2 to 3 feet of water.

Metals

- Chromium, lead, nickel, and zinc concentrations all generally declined from upstream to downstream (Figures 5.13-5.16). Surficial sediment at the two upstream-most stations (OR-01 and OR-02) exceeded the ER-M values for all four metals, while the downstream-most station (OR-05) did not exceed the ER-L for any metal.

Total PCBs

- Stations OR-06, OR-07, and OR-08 are within a tributary along the Ottawa River and a stormwater drain feeds into this tributary. Also, a CSO and lift station are near these three stations. These stations exhibited the highest concentrations of total PCBs, ranging from 4.8 to 5.3 µg/g DW (Figure 5.17).

Total PAHs

- For total PAHs, surficial sediments at stations OR-03 and OR-04 were below the ER-L. The remaining 7 stations were moderately contaminated (between the ER-L and the ER-M) and OR-08 contained the highest total PAHs concentration (23.4 µg/g DW) observed in the Ottawa River stations (Figure 5.18).

5.2.4. Otter Creek Surficial Sediments

Otter Creek is approximately 8.2 miles long, but only the lower 2,900 feet was sampled in this study. Twelve cores were collected, approximately every 200 feet in the stream channel.

Figure 5.12. Maumee River Longitudinal Profile of Total PAHs

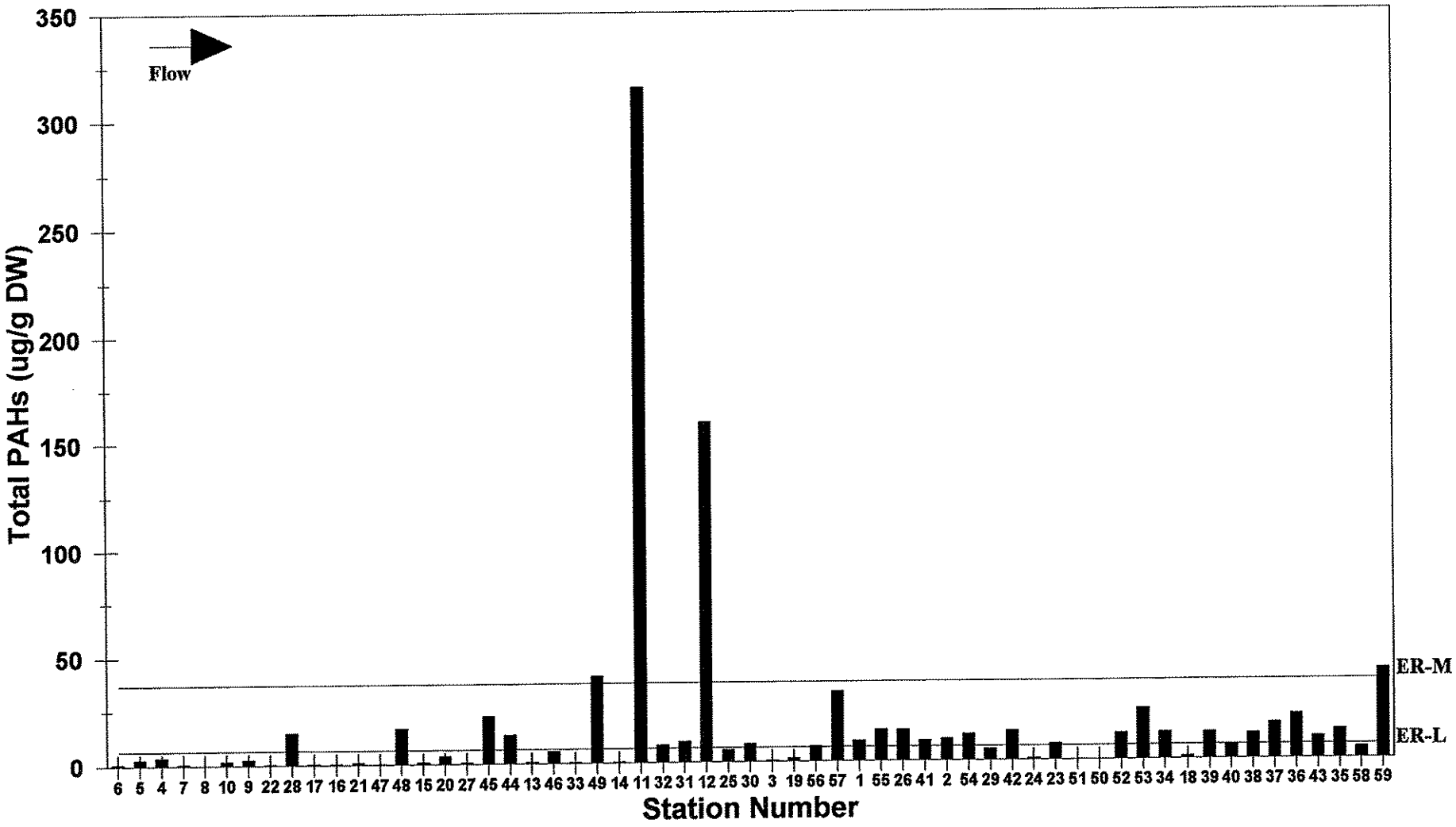


Figure 5.13. Ottawa River Longitudinal Profile of Chromium

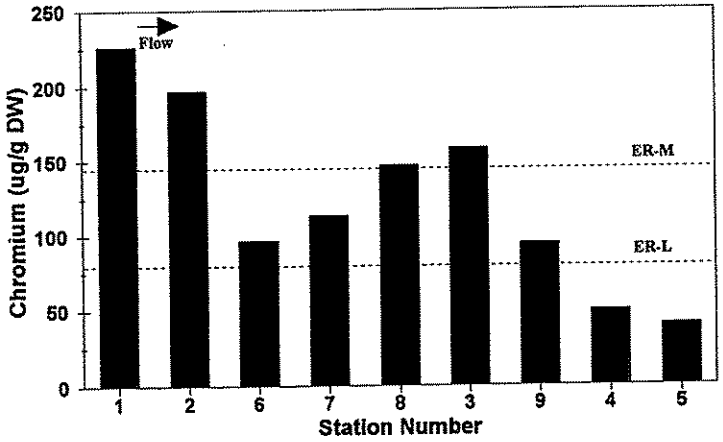


Figure 5.14. Ottawa River Longitudinal Profile of Lead

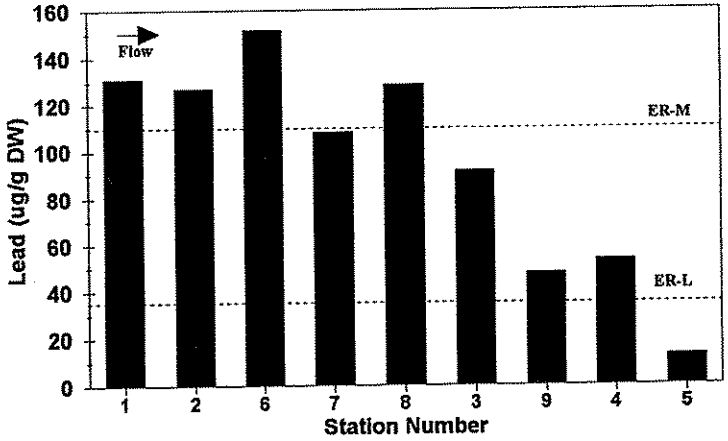


Figure 5.15. Ottawa River Longitudinal Profile of Nickel

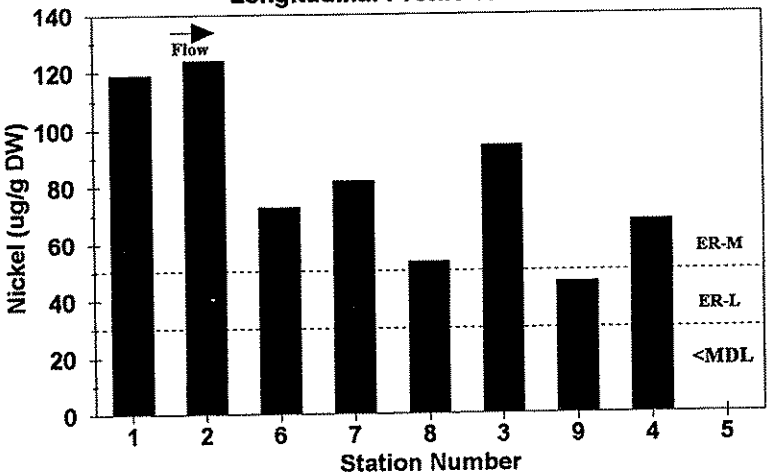


Figure 5.16. Ottawa River Longitudinal Profile of Zinc

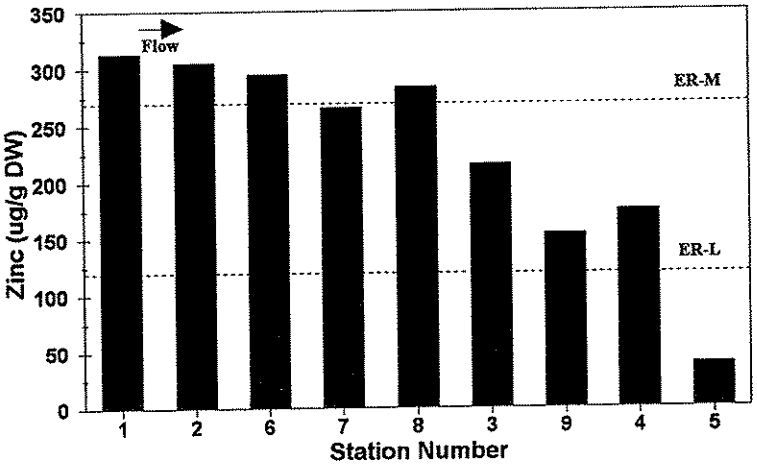


Figure 5.17. Ottawa River
Longitudinal Profile of Total PCBs

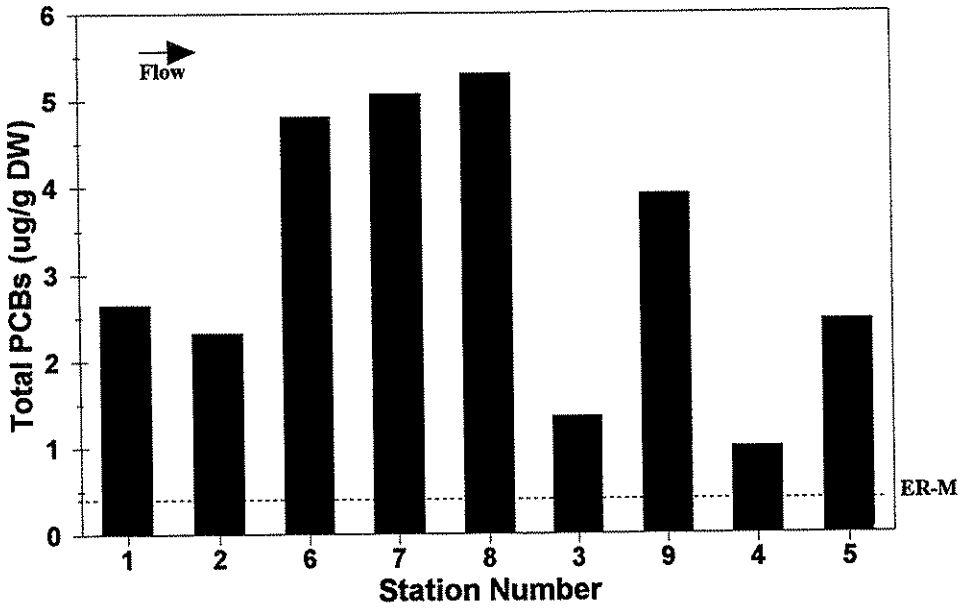
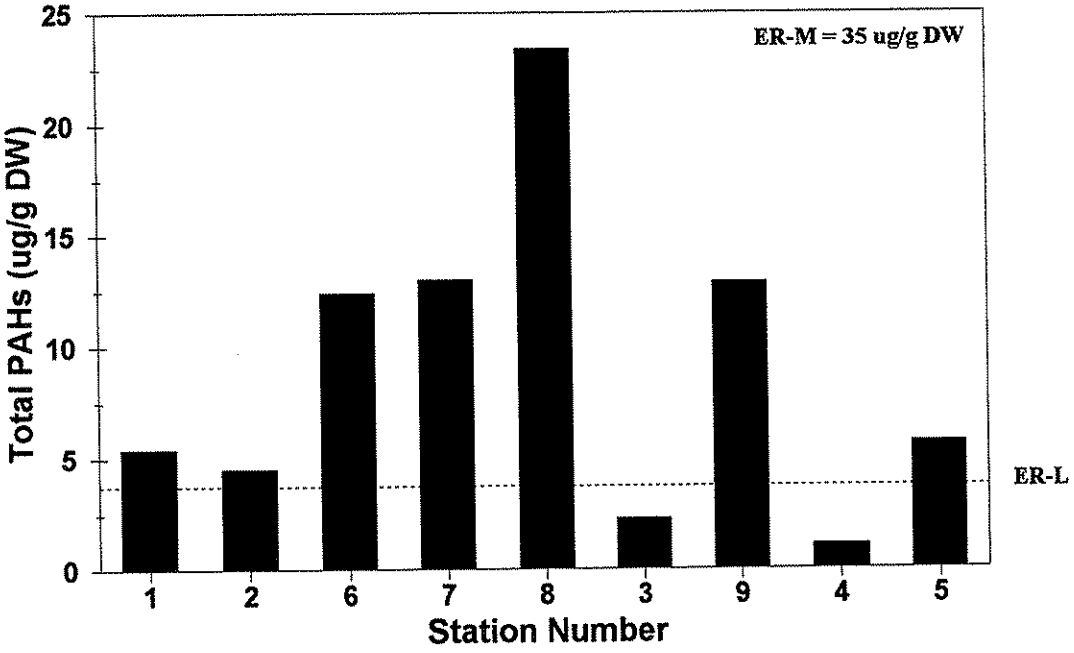


Figure 5.18. Ottawa River
Longitudinal Profile of Total PAHs



Metals and Total PCBs

- Spatial distributions of chromium, nickel, and zinc were similar: increasing concentrations between stations OC-04 and OC-06; a substantial decline at OC-07 and OC-08; and then intermediate and variable concentrations downstream to OC-03 (Figures 5.19, 5.21, and 5.22).
- Spatial distributions of lead and total PCBs were also similar (Figures 5.20 and 5.23), with greatly elevated concentrations at OC-10 and lower concentrations elsewhere.
- The lead concentration in the surficial station at OC-10, 1,240 µg/g DW, was the highest found in the study area. This sample also contained 57.6 µg/g DW total PCBs. This station is near an outfall on the CSX Railway property, and the surficial sediments exhibited a strong petroleum odor.

Total PAHs

- The spatial distribution of total PAHs was somewhat similar to that of chromium, nickel and zinc; increasing concentrations between OC-04 and OC-06, and then intermediate and variable concentrations downstream to OC-03 (Figure 5.24).

5.2.5. Swan Creek Surficial Sediments

Only the lower 500 feet of Swan Creek, downstream of the Monroe Street bridge, was sampled. Seven cores were collected. Potential pollution sources to Swan Creek, upstream of the study area, include a number of combined sewer overflows and a former creosote facility.

Metals

- Spatial distributions of chromium, lead, nickel, and zinc in the surficial sediments were generally similar (Figures 5.25 - 5.28); concentrations at stations SC-04 through SC-02 were generally higher than at stations further downstream (although the study area is quite small), and the highest concentration of each metal was found at Station SC-04.
- The chromium concentration in the surficial layer at station SC-04, 829 µg/g DW, was the highest found in the study area.

Total PCBs

- Total PCBs concentrations were highest at Station SC-07 (15.0 µg/g DW), and also elevated at SC-04, SC-05, and SC-06 (> 5 µg/g DW) (Figure 5.29).

Figure 5.19. Otter Creek
Longitudinal Profile of Chromium

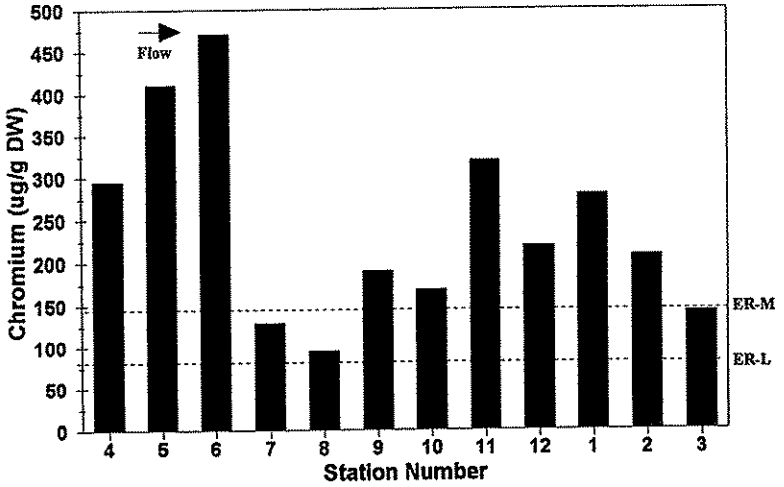


Figure 5.20. Otter Creek
Longitudinal Profile of Lead

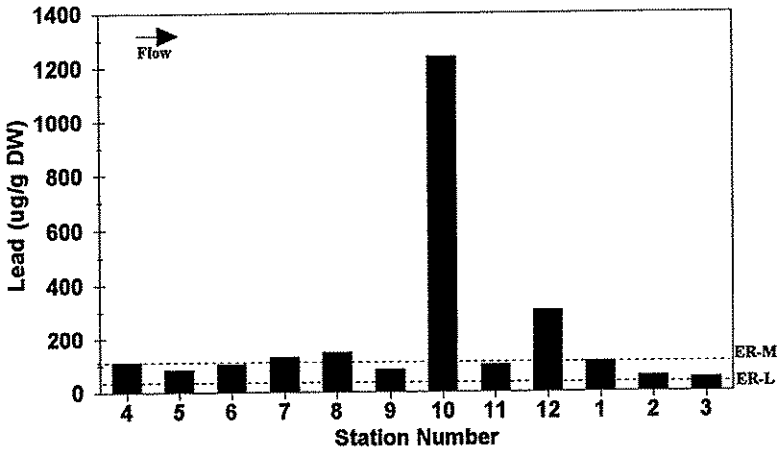


Figure 5.21. Otter Creek
Longitudinal Profile of Nickel

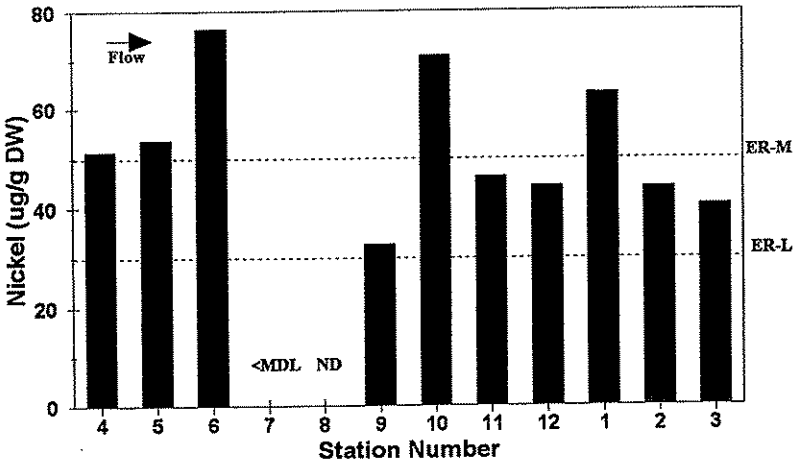


Figure 5.22. Otter Creek
Longitudinal Profile of Zinc

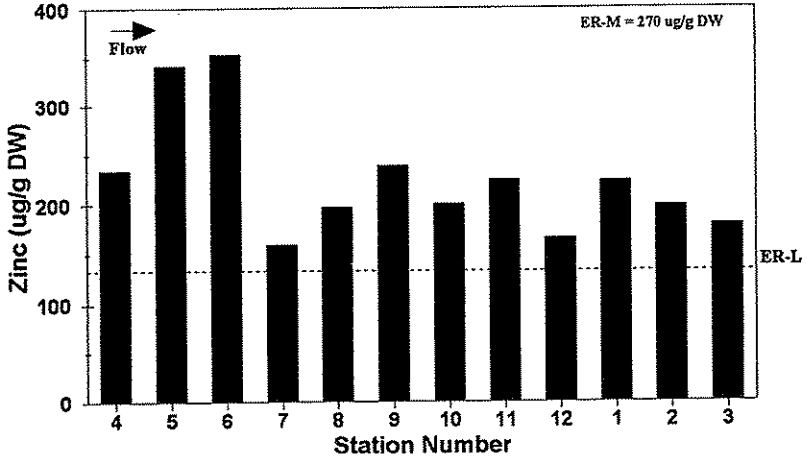


Figure 5.23. Otter Creek
Longitudinal Profile of Total PCBs

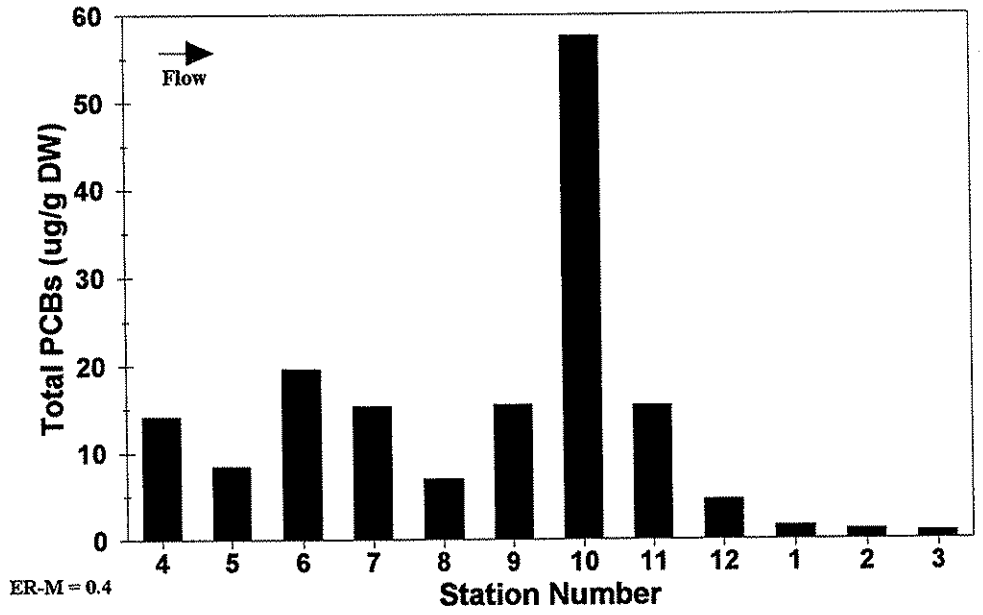


Figure 5.24. Otter Creek
Longitudinal Profile of Total PAHs

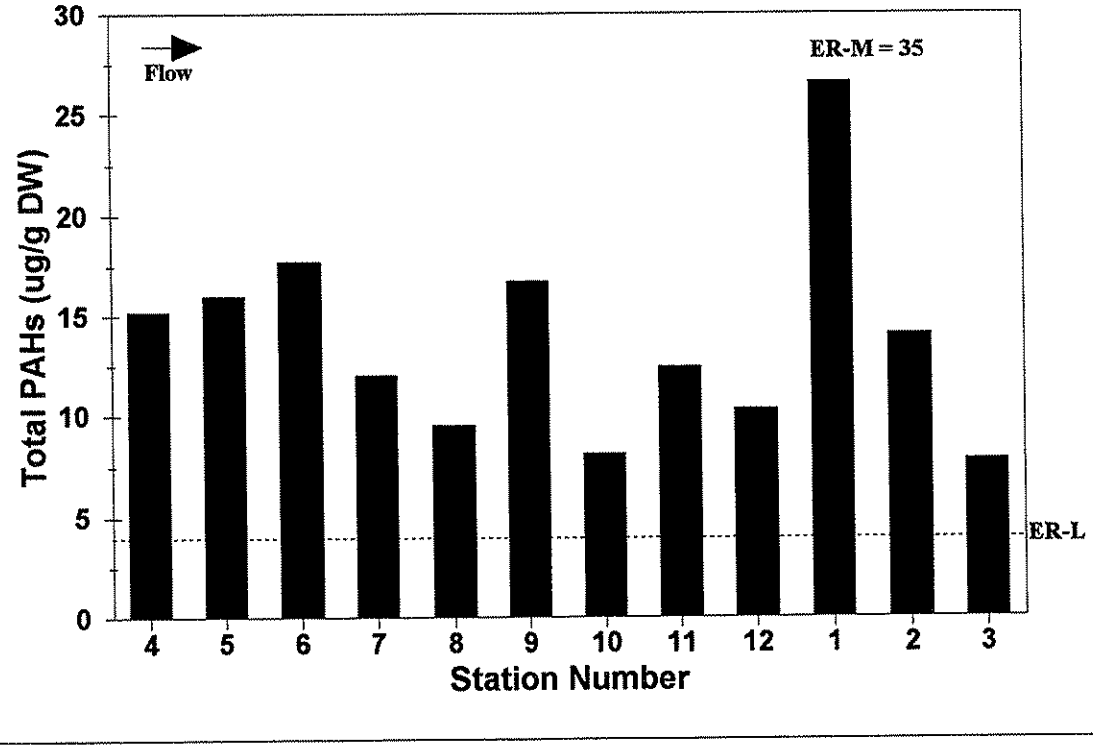


Figure 5.25. Swan Creek Longitudinal Profile of Chromium

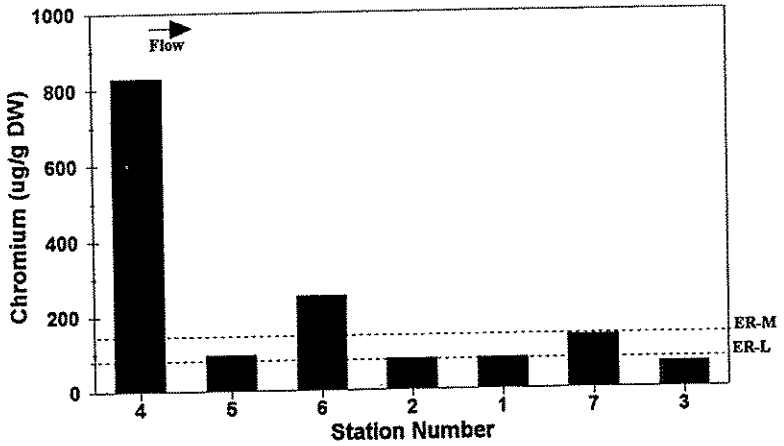


Figure 5.26. Swan Creek Longitudinal Profile of Lead

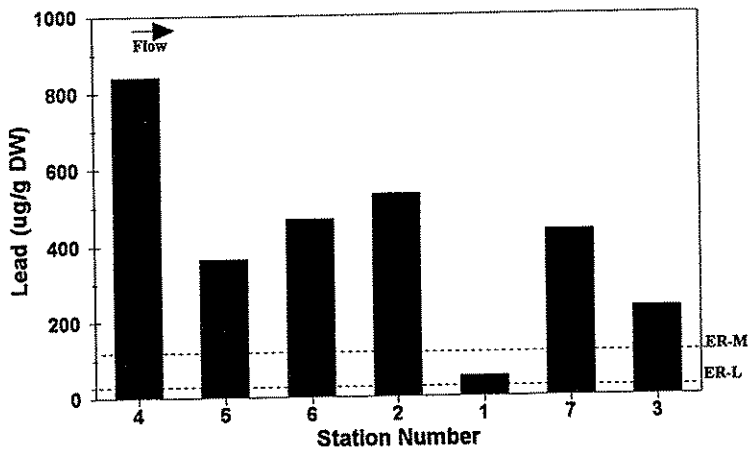


Figure 5.27. Swan Creek Longitudinal Profile of Nickel

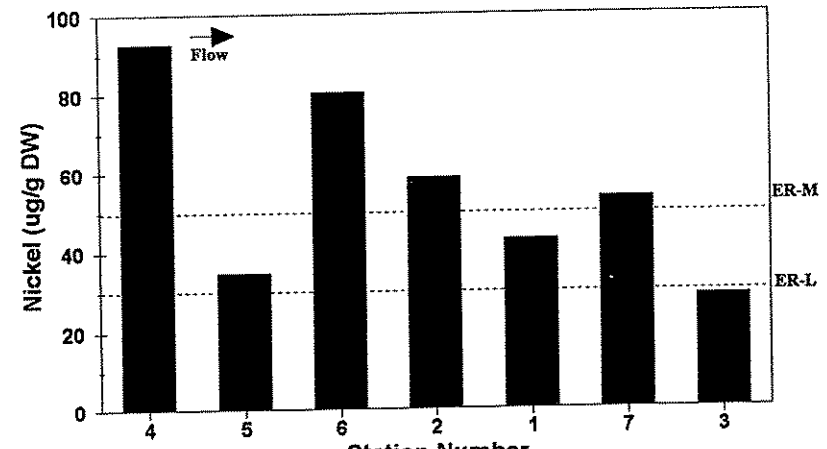
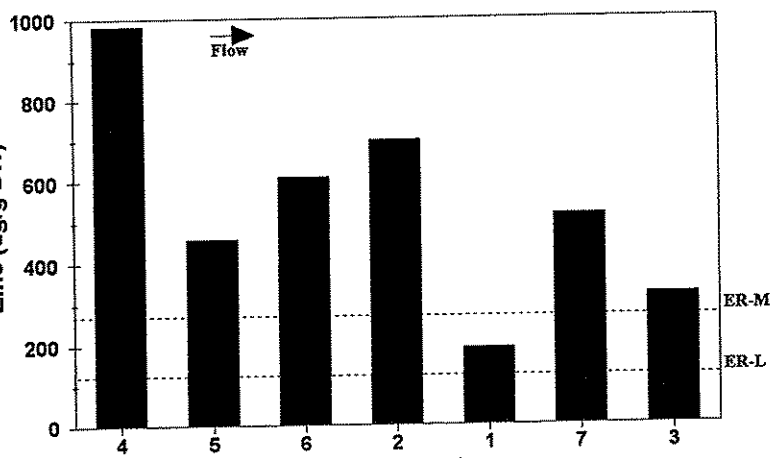


Figure 5.28. Swan Creek Longitudinal Profile of Zinc (ug/g DW)



Total PAHs

- In contrast to total PCBs, total PAH concentrations were highest at stations SC-02 and SC-03 (~20 µg/g DW), though all seven concentrations were below the ER-M (35 µg/g DW) (Figure 5.30).

5.2.6 Maumee Bay Surficial Sediments

A total of 53 stations were sampled in Maumee Bay; 45 in the Western Bay (i.e., west of the combined disposal facility [CDF] near the mouth of the Maumee River) and 8 in the Eastern Bay. This is less than half of the potential station locations identified in the project work plan using the U.S. EPA EMAP sampling grid. Nonetheless, several consistent contaminant distribution patterns are evident in the data plots (Figures 5.31 through 5.36).

Metals, Total PCBs, and Total PAHs

- In general, surficial sediment in the inner Western Bay and in the tributaries entering the northwestern corner of the Western Bay were more contaminated than surficial sediments in the outer Western Bay or most of the Eastern Bay.
- Contaminant concentrations were generally highest (usually > ER-L, sometimes > ER-M) near the mouth of the Maumee River, especially those stations nearest the river mouth and, secondarily, west of the CDF. This was true for all four metals, total PCBs, and total PAHs.
- Other areas exhibiting consistently elevated contaminant concentrations were (a) several stations off the mouth of the Ottawa River (lead, nickel, zinc, and PCBs); (b) a few stations in Shantee Creek (chromium, lead, nickel, and zinc); and (c) stations in Hooper Run (lead, nickel, zinc, and PCBs). Most of the elevated contaminant concentrations at these three locations exceeded the ER-Ls but not the ER-Ms for the listed contaminants. Exceptions were nickel, where the surficial sediments at three stations in Shantee Creek exceeded the ER-M, and total PCBs, where every detectable concentration exceeded the ER-M of 0.40 µg/g DW.

5.3. Vertical Distributions of Contaminants in Sediment Cores

The vertical distribution of contaminants in the sediment cores is important for several reasons:

- Normal sediment resuspension, due to storms, boat traffic, etc., can expose subsurface sediment layers which may be more contaminated than the current surficial sediment.
- It is necessary to know the volume of contaminated material at a location undergoing remedial activities, especially dredging.
- It is desirable to know the characteristics of the material exposed by dredging activities.

Figure 5.29. Swan Creek
Longitudinal Profile of Total PCBs

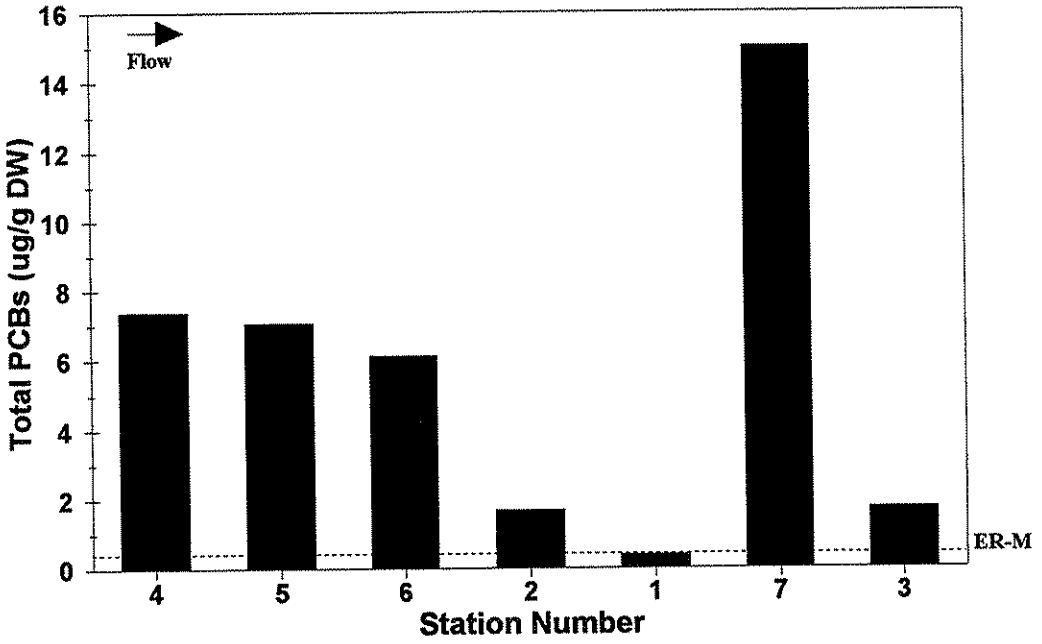
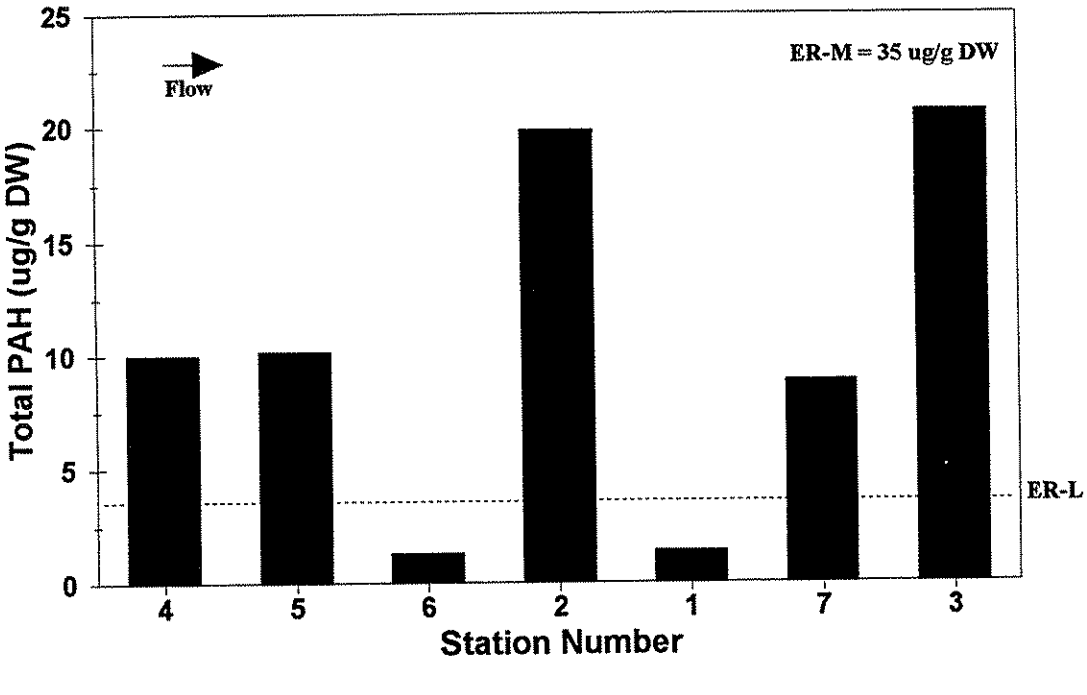


Figure 5.30. Swan Creek
Longitudinal Profile of Total PAHs



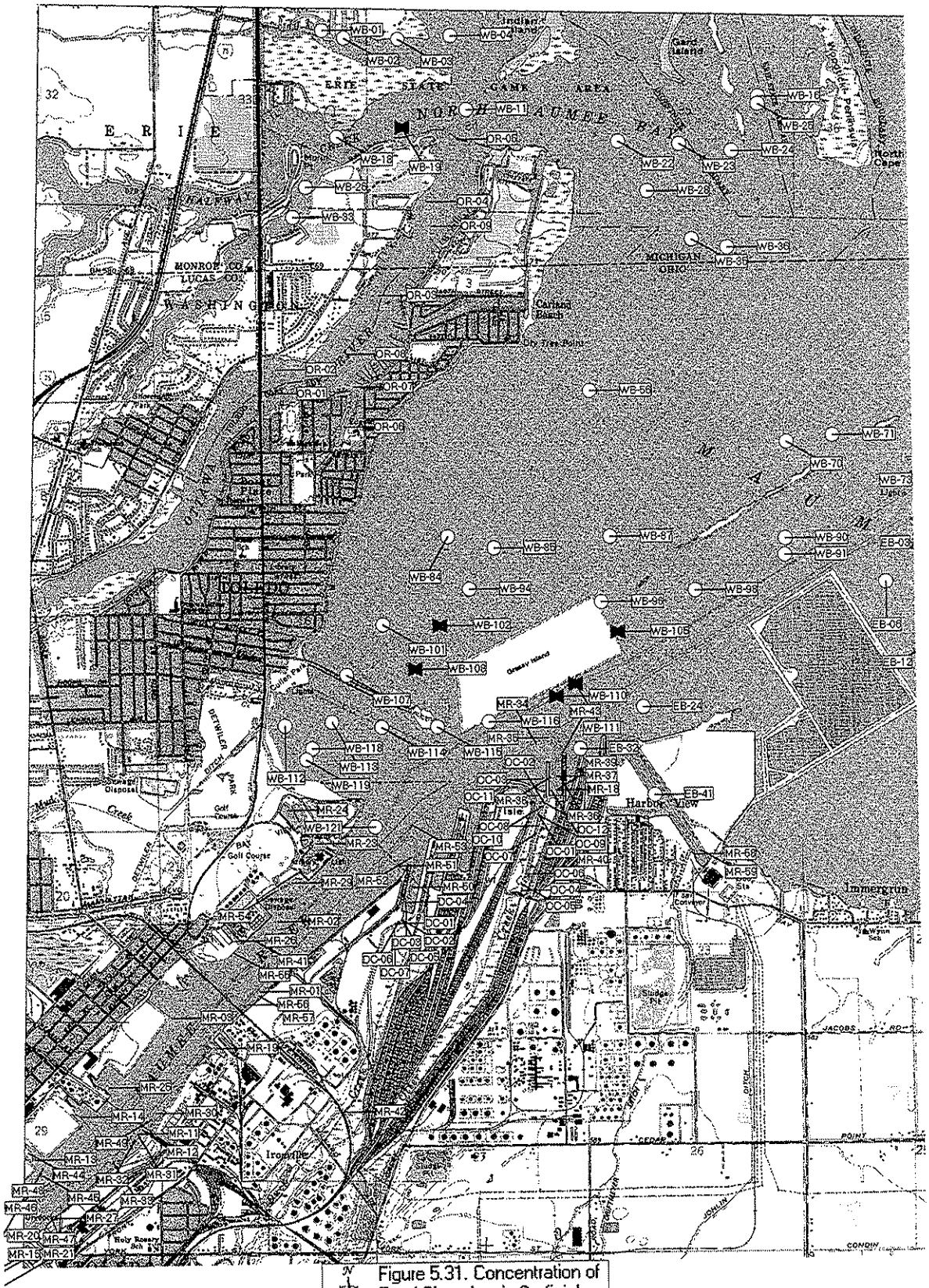


Figure 5.31. Concentration of Total Chromium in Surficial Sediments of Maumee Bay
0 km
1 km
2 km
Low
Medium
High

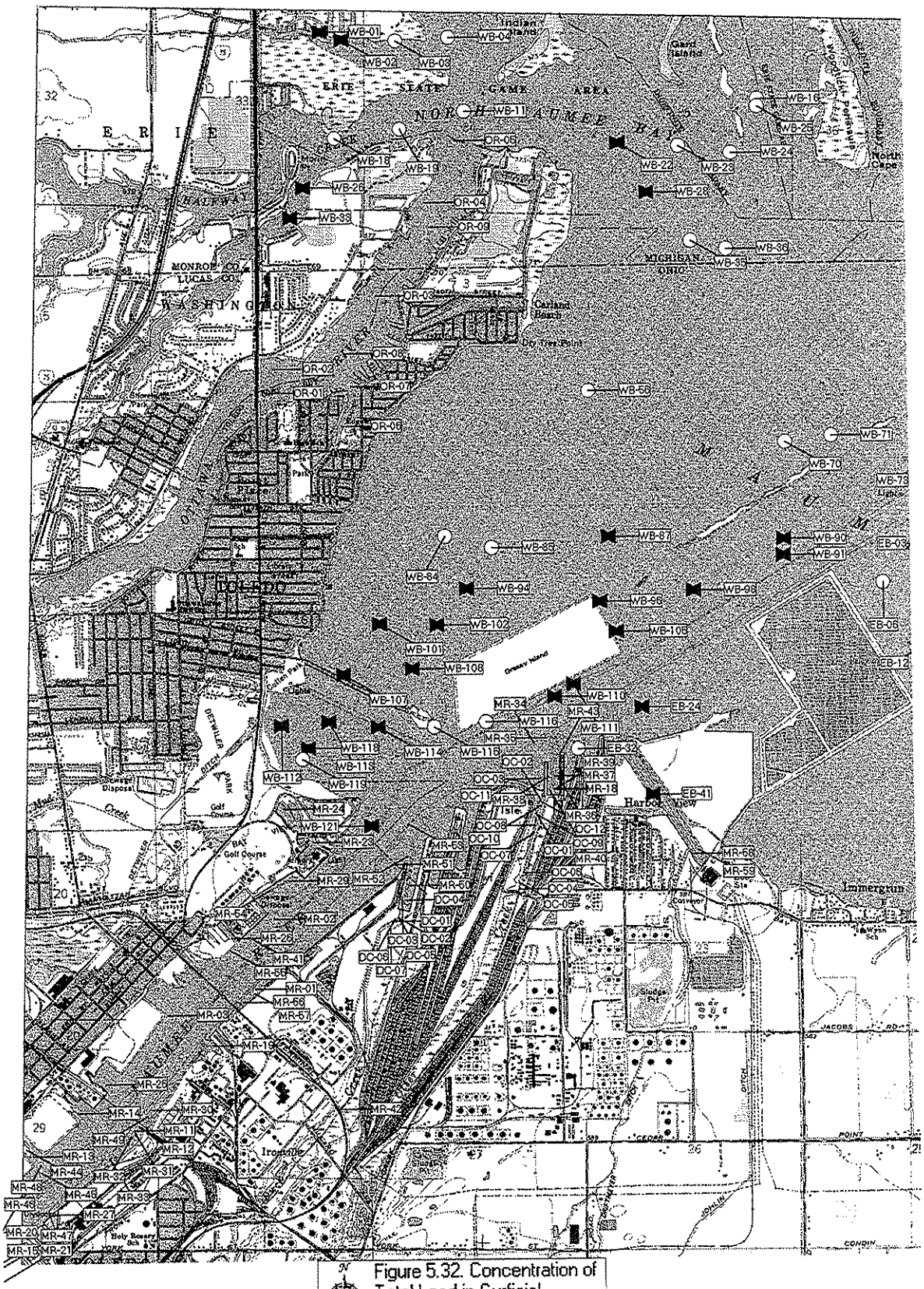


Figure 5.32. Concentration of Total Lead in Surficial Sediments of Maumee Bay
0 km
1 km
2 km
Low
Medium
High

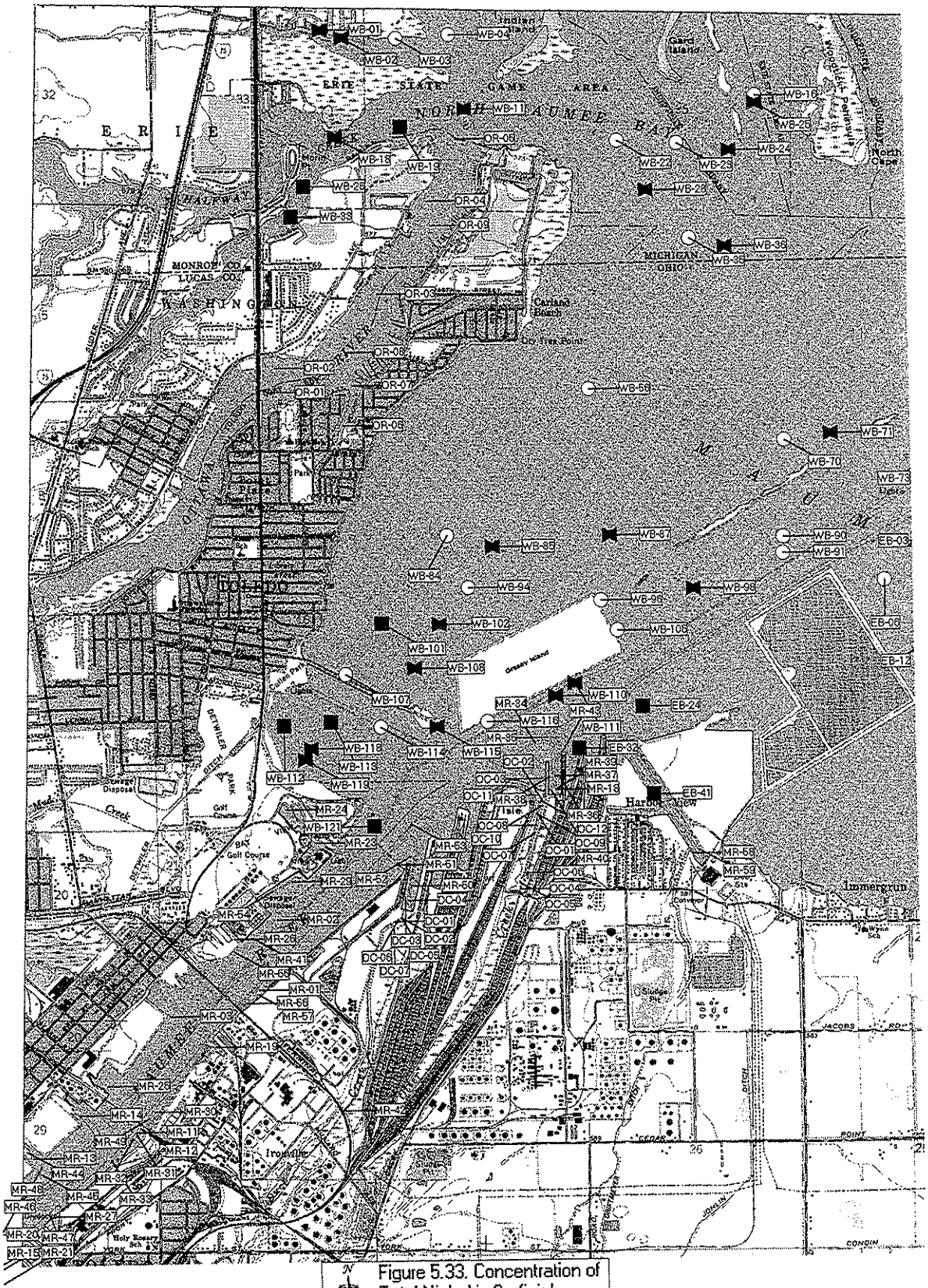


Figure 5.33. Concentration of Total Nickel in Surficial Sediments of Maumee Bay
0 km
1 km
2 km
Low
Medium
High

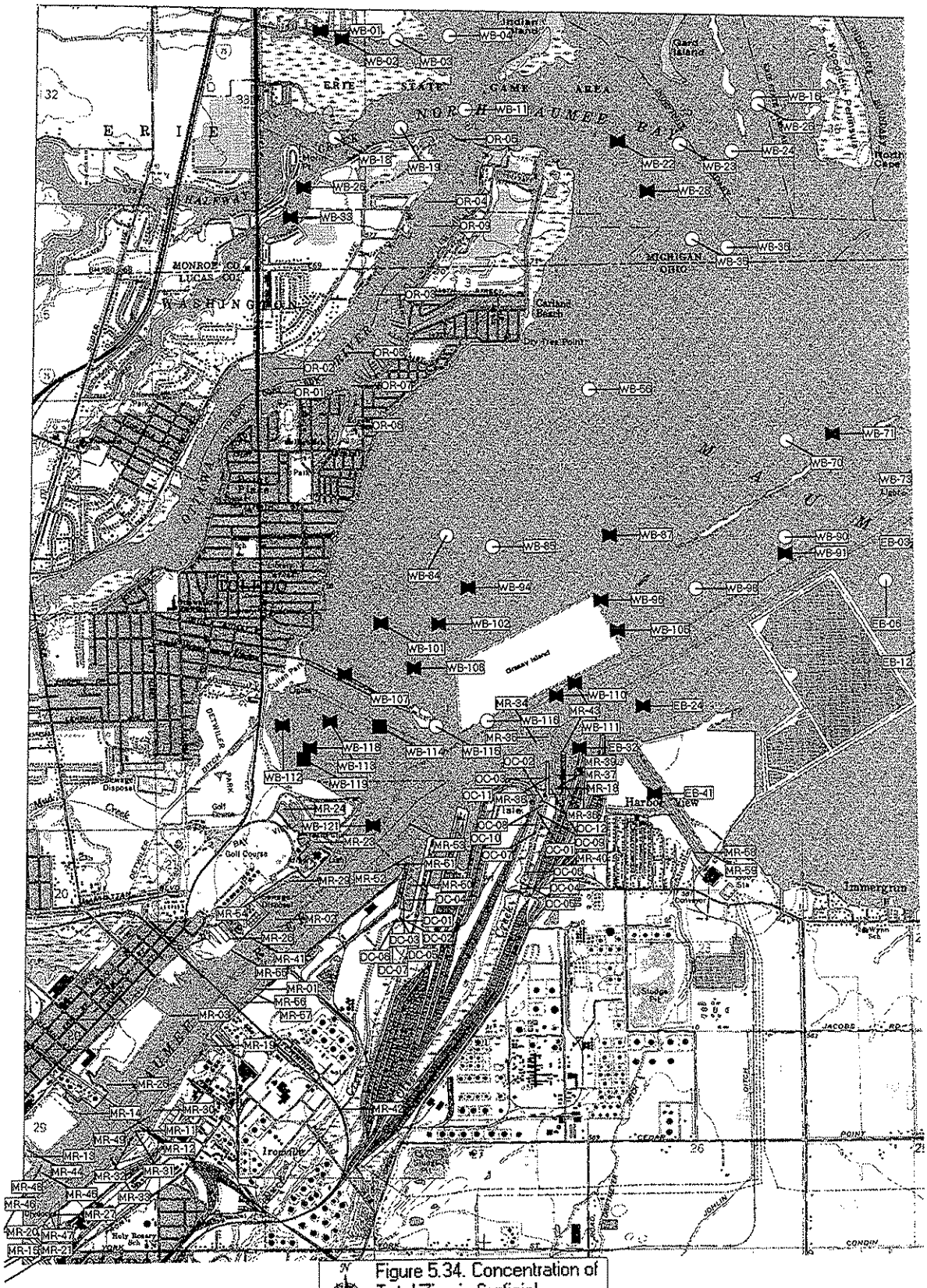


Figure 5.34. Concentration of Total Zinc in Surficial Sediments of Maumee Bay
0 km
1 km
2 km
Low
Medium
High

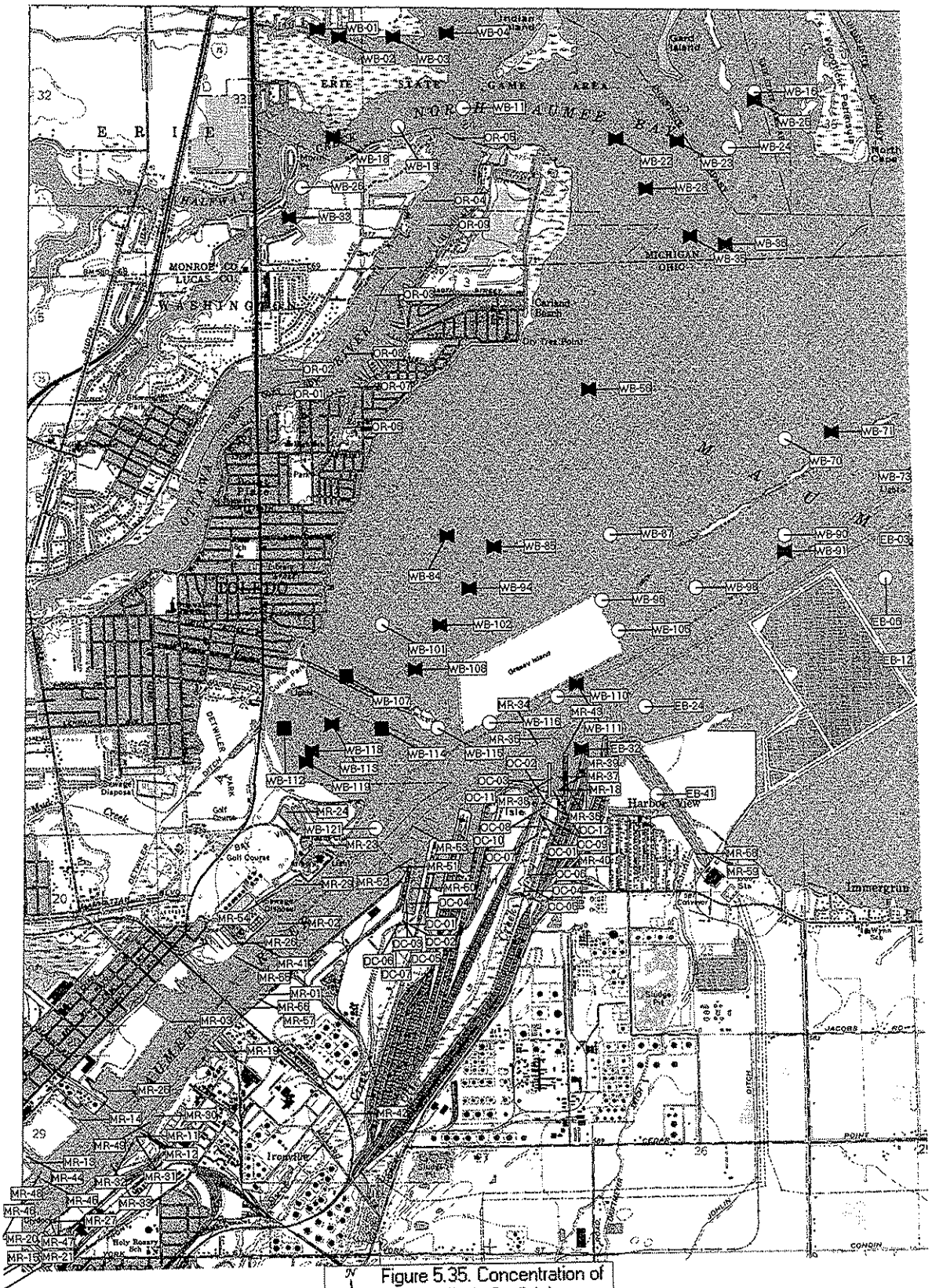


Figure 5.35. Concentration of Total PCBs in Surficial Sediments of Maumee Bay
0 km
1 km
2 km
Low
Medium
High

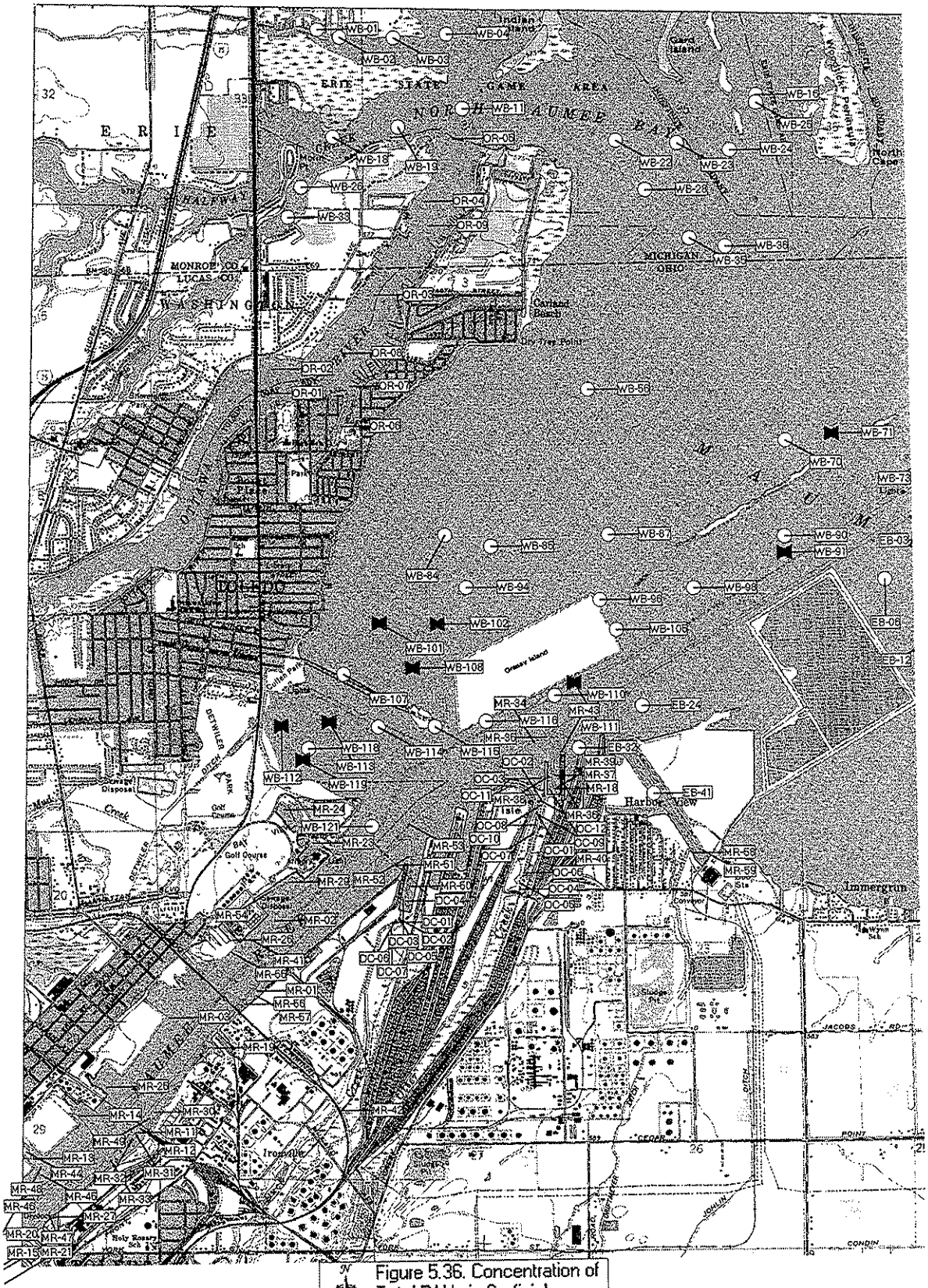


Figure 5.36. Concentration of Total PAHs in Surficial Sediments of Maumee Bay
0 km
1 km
2 km
Low
Medium
High

The following text describes just those cores from which at least 2 subsamples were collected, and emphasizes (a) the vertical distribution patterns of the contaminants and (b) the location of the highest contaminant concentrations in each area.

5.3.1. Duck Creek Sediment Cores

Seven cores were collected from the lower 100' of Duck Creek. One core consisted of a single surficial sample. They ranged from 14" to 77" in length, and averaged 44" long. Their composition was fairly consistent: surficial sediment in 6 of 7 cores was silt; the intermediate subsurface layers in most cores was a mix of silt and sand; and 5 of 7 cores ended in sand or silty sand. Oil was not noted in any core.

Metals

- Metal concentrations decreased with depth in most of the cores (Figure 5.37); 4 of 6 cores for chromium, lead, and zinc, and 3 of 6 for nickel.
- Nickel exceeded its ER-M (50 µg/g DW) most often, in 69% of the samples. The other metals did not exceed their ER-Ms in more than 20% of the samples.
- The 65"-77" layer from station DC-03 contained Duck Creek's highest concentrations of chromium (172 µg/g DW), lead (83.3 µg/g DW), nickel (113 µg/g DW), and zinc (355 µg/g DW). The 0"-24" layer at this station also contained 353 µg/g DW of zinc.

Total PCBs

- PCB concentrations decreased with depth in 4 of 6 cores (Figure 5.38), and increased with depth in the other 2.
- PCB concentrations exceeded the ER-M value of 0.40 µg/g DW in 94% of the samples.
- Highest PCB concentrations in Duck Creek, 6 - 7 µg/g DW, were found in the 36"-56" layer at station DC-04 and in the 0"-24" layer at station DC-05.

Total PAHs

- PAH concentrations in the cores decreased with depth in 3 of 6 cores (Figure 5.39); increased with depth in 2 of 6 cores (Figure 5.40); and were similar with depth in one core.
- No sample exceeded the PAH ER-M value of 35 µg/g DW.
- The highest PAH concentration in Duck Creek, 16.7 µg/g DW, occurred in the 0"-24" layer at station DC-05. This sample also contained the highest PCB concentration in Duck Creek.

5.3.2. Maumee River Sediment Cores

Fifty-nine cores were collected from the lower 7.5 miles of the Maumee River. They ranged in length from 11" to 108", and averaged 55" long. Their composition was fairly

Figure 5.37. Duck Creek Core Profile of Nickel at Station DC02

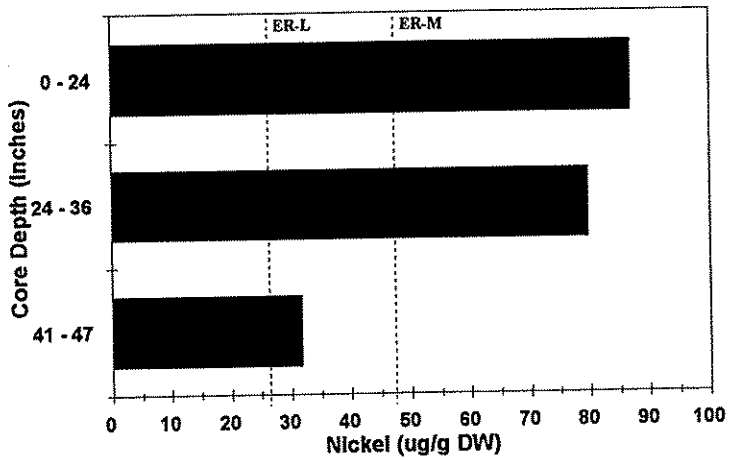


Figure 5.38. Duck Creek Core Profile of Total PCBs at Station DC02

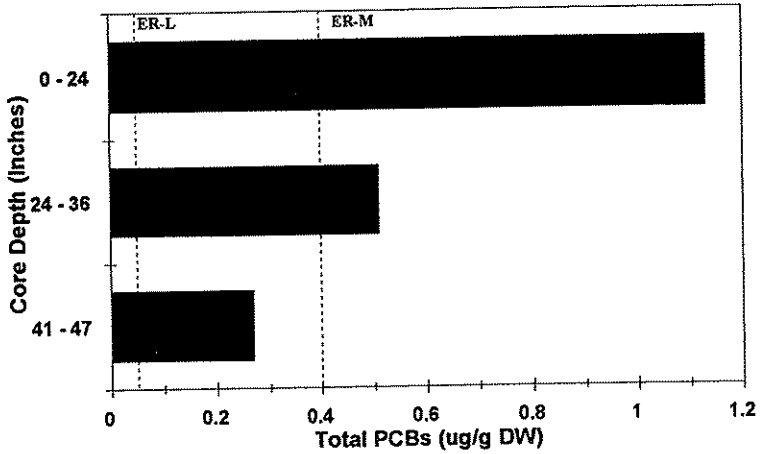


Figure 5.39. Duck Creek Core Profile of Total PAHs at Station DC05

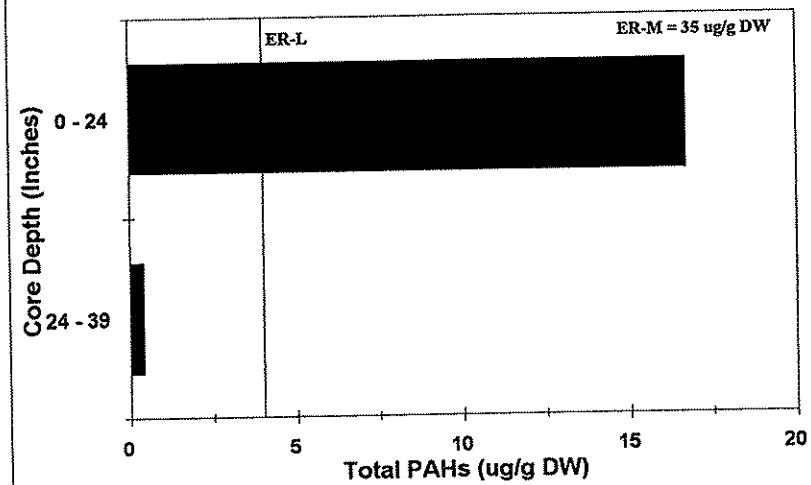
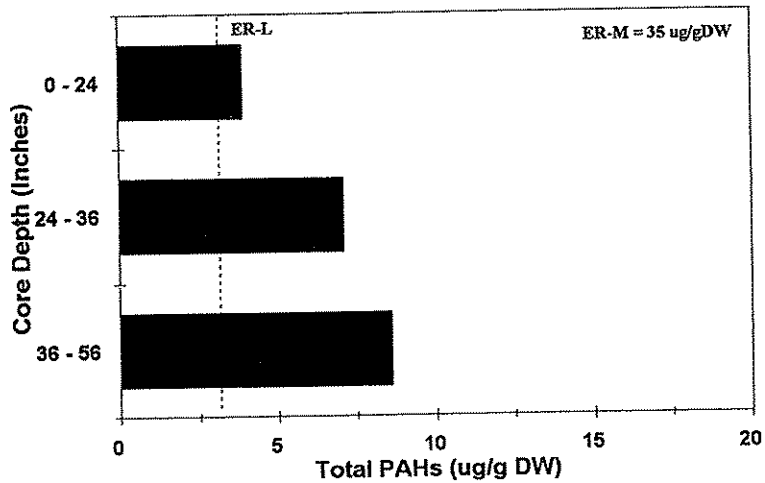


Figure 5.40. Duck Creek Core Profile of Total PAHs at Station DC04



consistent: the surficial sediment in all 59 cores was silt, and in only 6 cores was this silt oily; intermediate sediment layers were generally silt; and most cores ended in clay (30 of 59) or silt (25 of 59). Four cores ended in sand. Ten cores ended in oily material. Some subsurface layers were intermingled with sand, oil, shells, wood, or aggregate (small gravel). Three subsurface layers were also noted to contain coal tar.

Metals

- Vertical distributions of metals exhibited several patterns: (1) high concentrations throughout the core, especially in a subsurface layer (20% of the cores); (2) high concentrations in a subsurface layer, in a core that is otherwise clean (a single core); and (3) high concentrations in a subsurface layer, with decreasing concentrations lower in the core (34% of the cores).
- The first pattern is illustrated in Figure 5.41; zinc at station MR-49. Note that all of the sediment layers exceeded the ER-M value for zinc.
- The second pattern is illustrated in Figure 5.42; nickel at MR-49. This pattern occurred in just this core, which is near the Toledo Coke facility.
- The third pattern is illustrated in Figure 3.43; lead at MR-56. Note that the lead concentration in the lowest layer, 40"-60", approaches the ER-L value.
- Nickel exceeded its ER-M value more often than any other metal in the Maumee River cores, in 56% of the samples. The nickel concentration in the 42"-50" layer from core MR-49, 292 µg/g DW, was the highest found in the study area.
- One of the "minor" metals in this study (i.e., seldom exceeded its ER-M value) was arsenic, which exceeded its ER-M (85 µg/g DW) in just one sample; the 34.5"-42" layer in core MR-06, as shown below:

0"-24" = 19.3 µg/g DW
24"- 31" = 43.4 µg/g DW
34.5" - 42" = 117 µg/g DW.

Station MR-06 is located at the upstream boundary of the study area, on the right side of the river adjacent to the Libby-Owens-Ford Glass Company. It should be noted that arsenic trioxide (As_2O_3) is used as a decolorizing agent in glass making.

Total PCBs

- Total PCBs in the Maumee River cores exhibited four principal vertical distribution patterns: (1) decreasing concentrations with depth (32% of the cores); (2) increasing concentrations with depth (24%); (3) similar concentration with depth (20%); and (4) cores where the highest PCB concentration is found in a subsurface layer (18%; Figures 5.44 and 5.45).
- PCB concentrations exceeded the ER-M value of 0.40 µg/g DW in 92% of the samples. Concentrations exceeding 50 µg/g DW were found in subsurface layers at three locations; stations MR-31 and MR-32, near the Toledo Coke facility, and MR-19, near the Gulf Oil and Standard Oil facilities. Toledo Coke closed in 1992.

Figure 5.41. Maumee River Core Profile of Zinc at Station MR49

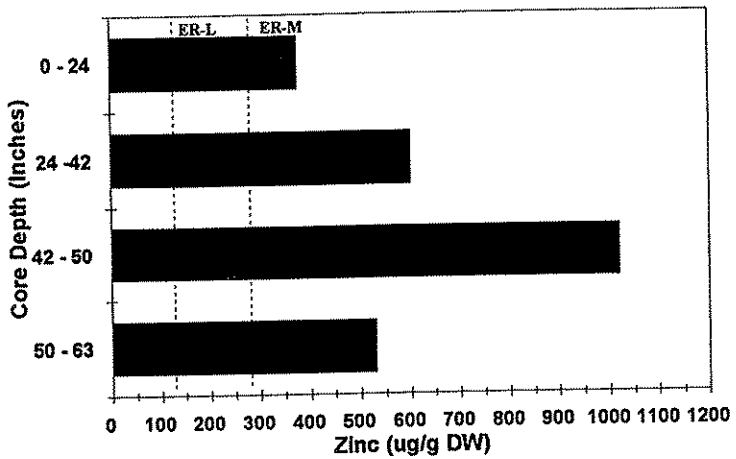


Figure 5.42. Maumee River Core Profile of Nickel at Station MR49

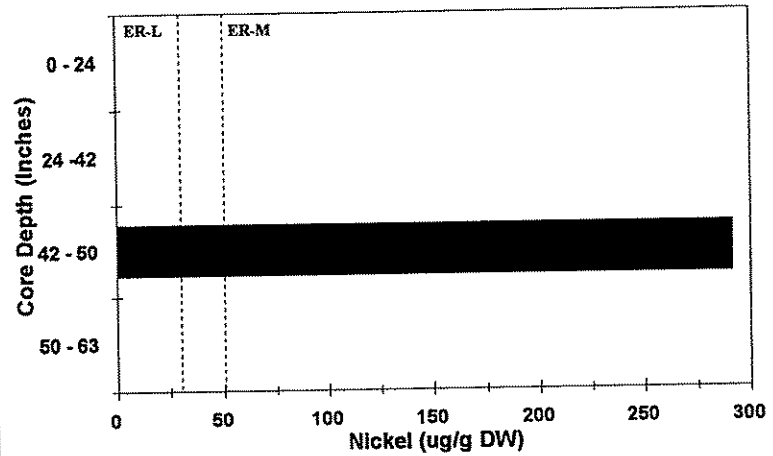


Figure 5.43. Maumee River Core Profile of Lead at Station MR56

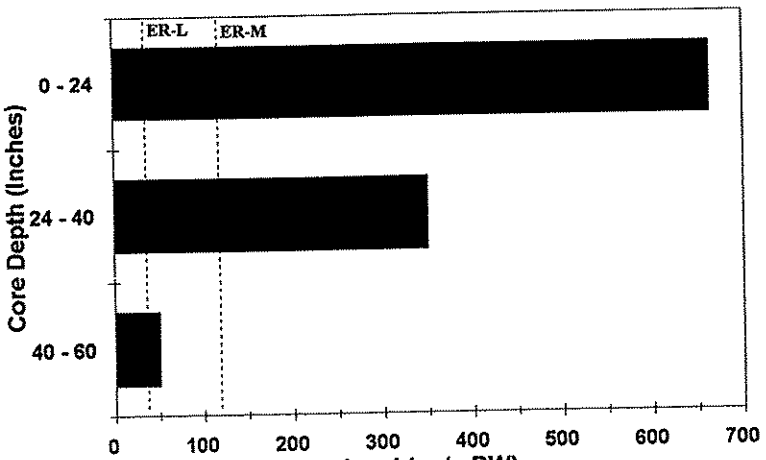
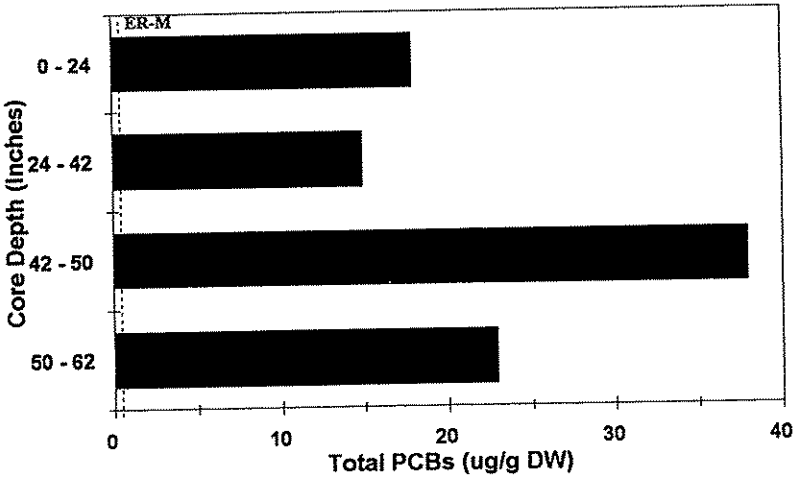


Figure 5.44. Maumee River Core Profile of Total PCBs at Station MR49



Total PAHs

- Like PCBs, total PAHs in the Maumee River cores exhibited four principal vertical distribution patterns: (1) decreasing concentration with depth (34% of the cores; Figure 3.46); (2) increasing concentration with depth (32%); (3) similar concentration with depth (16%); and (4) cores where the highest PAH concentration is in a subsurface layer (14%).
- PAH concentrations exceeded the ER-M value of 35 μg/g DW in only 6% of the samples. Very high PAH concentrations, exceeding 100 μg/g DW, were found in two cores; MR-11 and MR-12. These two stations are located near the Toledo Coke facility.

5.3.3. Ottawa River Sediment Cores

Nine cores were collected from the lower 1.5 miles of the Ottawa River. They ranged in length from 53" to 92", and averaged 72" long. Their composition was fairly consistent: the surficial sediment in all 9 cores was silt; most all of the subsurface layers in the cores was silt, sometimes mixed with fibrous material and/or shell fragments; and most ended in clay (5 of 9) or peat (2 of 9). Oily subsurface layers were noted in only 2 cores (OR-01 and OR-02), and only 1 core (OR-06) ended in oily material (oily clay).

Metals

- Metal concentrations decreased with depth in most of the Ottawa River cores (Figure 5.47); in 4 of 8 cores for chromium and nickel, and 7 of 8 cores for lead and zinc.
- Nickel exceeded its ER-M value more often than the other metals, in 58% of the samples.
- Highly contaminated (> ER-M values) surficial sediment (0"-24") were found at station OR-01 (chromium, zinc), OR-02 (chromium, nickel, zinc), and OR-06 (lead, zinc). In addition, the 24"-36" layer at station OR-02 was highly contaminated with chromium and zinc.

Total PCBs

- PCB concentrations in most of the cores either decreased with depth (4 of 9 cores; Figure 5.48) or were similar with depth (3 of 9 cores).
- All of the PCB concentrations measured exceeded the ER-M value of 0.40 μg/g DW, and the highest concentration was 8.56 μg/g DW, at station OR-08.

Total PAHs

- Most of the total PAH concentrations in the Ottawa River cores either decreased with depth (5 of 9; Figure 5.49) or were similar with depth (3 of 9).

Figure 5.45. Maumee River Core Profile of Total PCBs at Station MR32

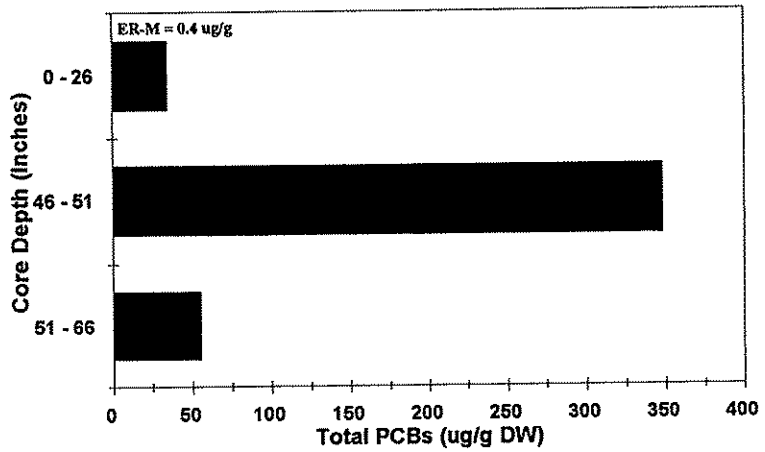


Figure 5.46. Maumee River Core Profile of Total PAHs at Station MR11

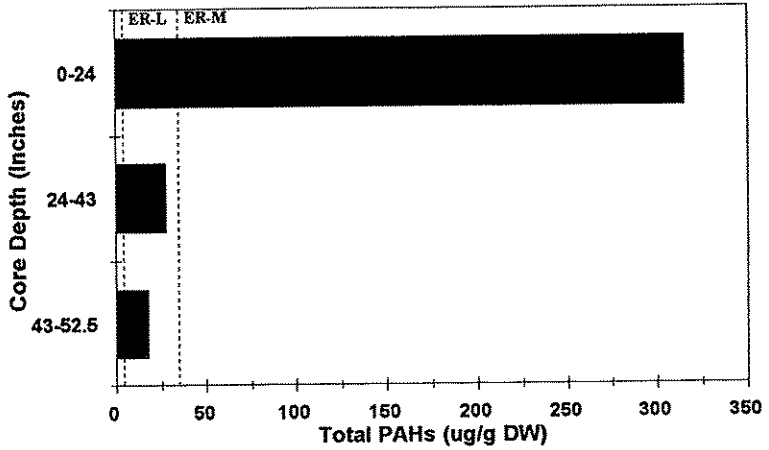


Figure 5.47. Ottawa River Core Profile of Zinc at Station OR01

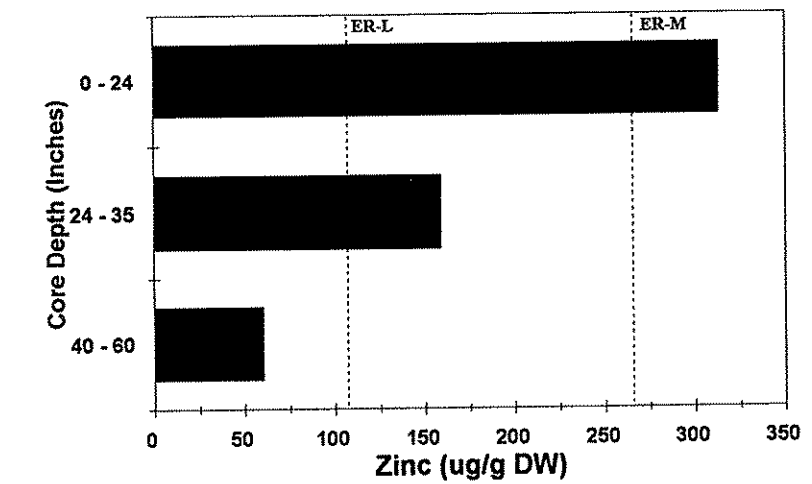
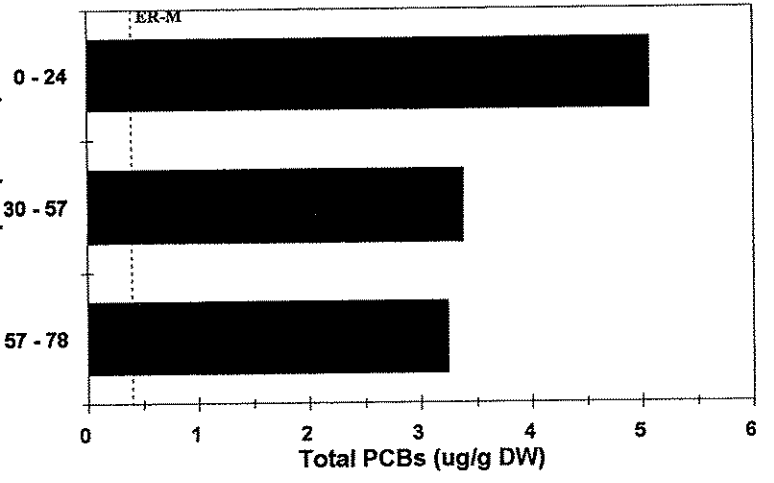


Figure 5.48. Ottawa River Core Profileof Total PCBs at Station OR07



No sample exceeded the PAH ER-M of 35 µg/g DW, and most (62%) of the concentrations were between the ER-L and ER-M values. The highest measured concentration was 23.4 µg/g DW, at station OR-08.

5.3.4. Otter Creek Core Profiles

Twelve cores were collected from the lower 2,900 feet of Otter Creek, though only a single surficial sample was collected from one core (OC-03). They ranged from 8" to 70" in length, and averaged 54" long. Their composition was fairly consistent: surficial sediment in all 12 cores was silt; the intermediate subsurface material was usually dark silt; and most ended in clay, which often contained fibrous plant remains. The surficial sediment in 5 cores contained traces of oil, as did subsurface layers in 4 cores.

Metals

- Vertical distributions of the metals in the cores were variable. Concentrations of chromium and zinc generally decreased with depth, in 9 of 11 cores for each metal. Nickel concentrations decreased with depth in 3 of 11 cores, increased with depth in 3 of 11 cores, and exhibited other distribution patterns in the remaining cores. Lead concentrations decreased with depth in 5 of 11 cores, increased with depth in 3 of 11 cores, and exhibited other distribution patterns in the remaining cores. Figures 5.50 and 5.51 illustrate the decreases-with-depth distribution pattern.
- Chromium and lead were the metals which most often exceeded their ER-M values in the Otter Creek cores, in 46% and 43% of the samples, respectively. Exceptionally high lead concentrations, exceeding the ER-M value of 110 µg/g DW, were found in the surficial sediment at station OC-10 (1,240 µg/g DW; Figure 5.50) and in the 28"-34" layer at station OC-01 (989 µg/g DW). Both stations are in the downstream half of the area sampled.

Total PCBs

- PCB concentrations in the cores decreased with depth in 6 of 11 cores (Figure 5.52), and increased with depth in 3 others.
- PCB concentrations exceeded the ER-M value of 0.4 µg/g DW in 93% of the samples. An exceptionally high PCB concentration of 717 µg/g DW was found in the 28"-34" layer of core OC-01 (Figure 5.53). This was the highest PCB concentration found in the study area. This layer was also highly contaminated with lead and PAHs.

Total PAHs

- PAH concentrations in the core samples decreased with depth in 6 of 11 cores, were similar with depth in 2 cores, and exhibited a highly contaminated subsurface layer in 2 cores; OC-01 (Figure 5.54) and OC-02.

Figure 5.49. Ottawa River Core Profile of Total PAHs at Station OR08

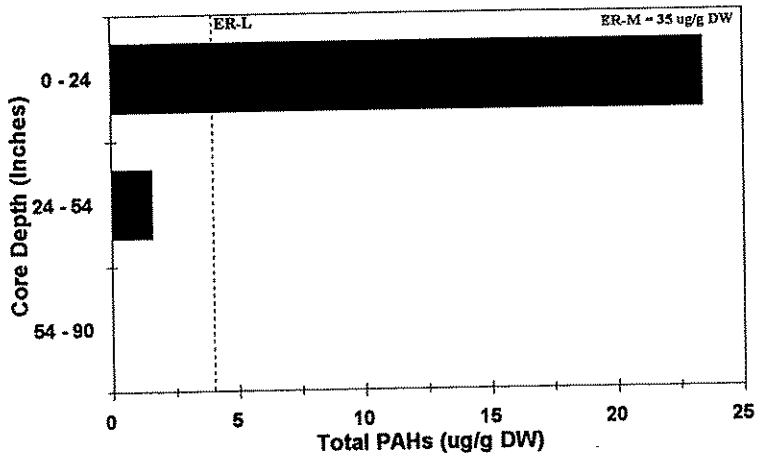


Figure 5.50. Otter Creek Core Profile of Lead at Station OC10

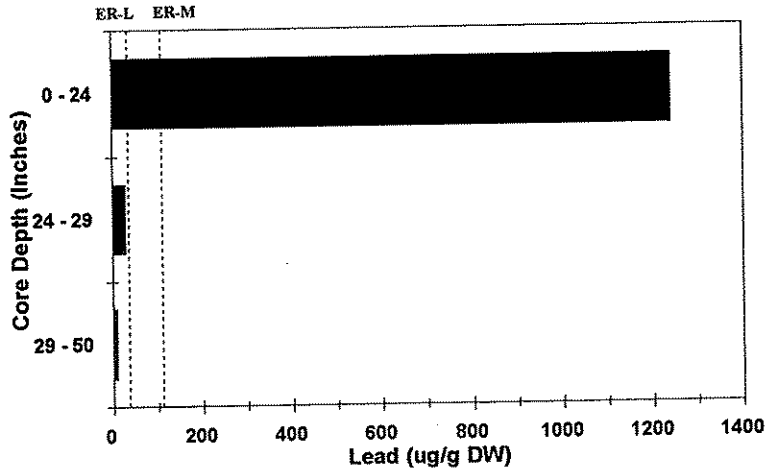


Figure 5.51. Otter Creek Core Profile of Chromium at Station OC10

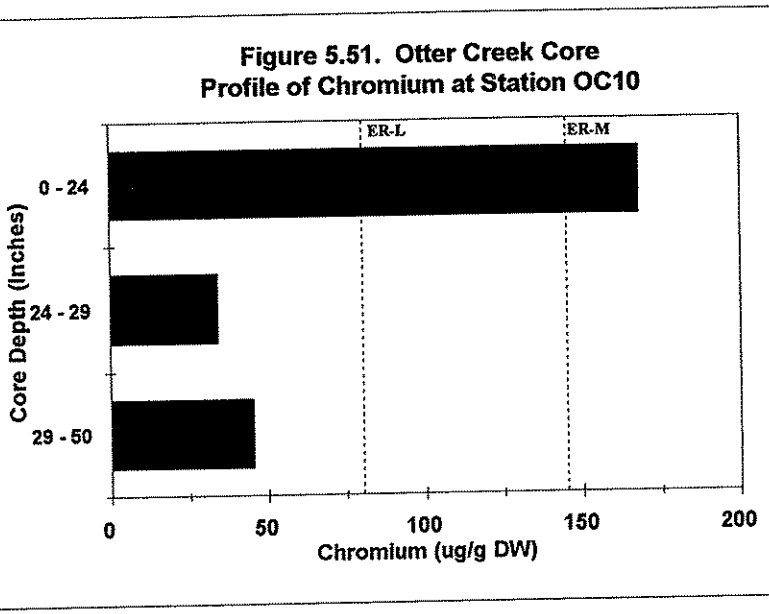
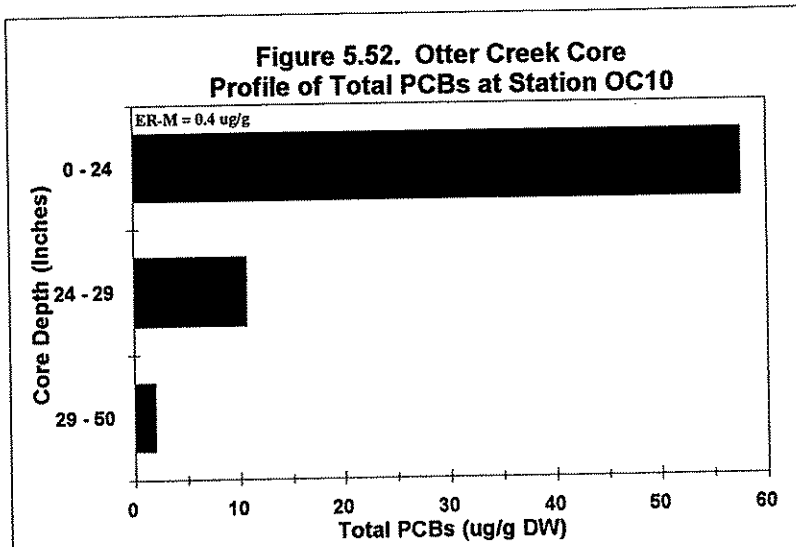


Figure 5.52. Otter Creek Core Profile of Total PCBs at Station OC10



- PAH concentrations exceeded the ER-M value of 35 μg/g DW in only 7% of the samples. The highest PAH concentration found was 137 μg/g DW, in the 28"-34" layer of core OC-01. This layer was also highly contaminated with lead and PCBs.

5.3.5. Swan Creek Sediment Cores

Seven cores were collected from the lower 500 feet of Swan Creek. The cores ranged in length from 33" to 83", and averaged 65" long. Their composition was fairly consistent: the surficial sediment was silt in all seven cores; most (4 of 7) contained subsurface oily layers; and most (5 of 7) ended in dark oily clay. In general, the sediments in Swan Creek were the most contaminated sediments sampled in this study.

Metals

- Vertical distributions of metals in the cores were variable. Concentrations of chromium decreased with depth in 5 of 7 cores; concentrations of nickel were similar with depth in 4 of 7 cores and increased with depth in 3 cores; and lead and zinc concentrations were similar with depth in 4 cores (Figure 5.55).
- Most of the sediment samples were highly contaminated with metals, exceeding the ER-M values for lead (87% of the samples), nickel (57%), and zinc (87%). The chromium ER-M, in contrast, was exceeded in only 9% of the samples.
- The core from station SC-04 was especially contaminated with metals, containing Swan Creek's highest concentrations of chromium (829 μg/g DW, in the 0"-24" layer; Figure 5.56), lead (841 μg/g DW at 0"-24"), and zinc (1,150 μg/g DW at 0"-24" and 1,040 μg/g DW at 64"-81"). All of these values greatly exceeded the ER-Ms.

Total PCBs

- PCB concentrations increased with depth in most of the cores (4 of 7; Figure 5.57).
- Ninety-seven of the samples exceeded the ER-M for total PCBs (0.40 μg/g DW). The highest PCB concentrations in Swan Creek were around 15 μg/g DW, in several cores.

Total PAHs

- Total PAH concentrations either increased with depth (3 of 7 cores; Figure 5.58) or were similar with depth (3 of 7) in most of the cores.
- Seventeen percent of the samples exceeded the ER-M value of 35 μg/g DW, the highest proportion of any of the study areas (River, Bay, tributaries). Highest PAH concentrations were observed in the core from station SC-02; 87.4 μg/g DW in 35"-54" layer and 89.0 μg/g DW in the 54"-63" layer (Figure 5.58)

Figure 5.53. Otter Creek Core Profile of Total PCBs at Station OC01

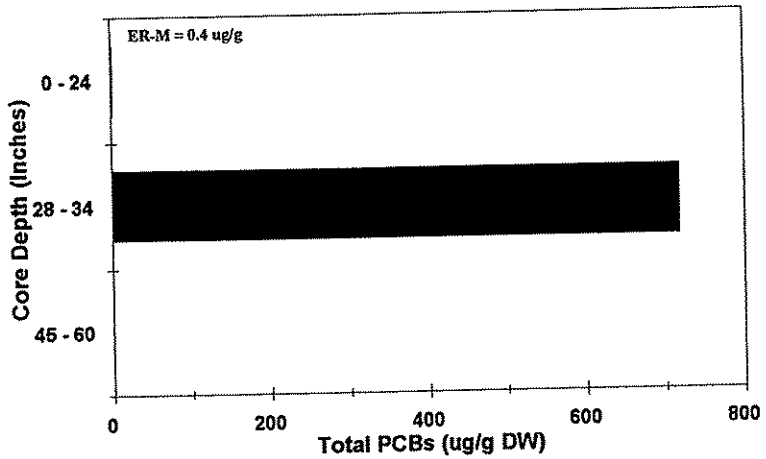


Figure 5.54. Otter Creek Core Profile of Total PAHs at Station OC01

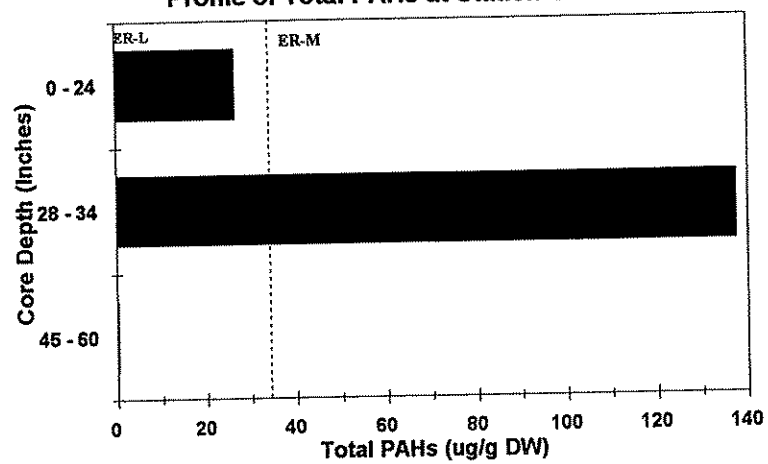


Figure 5.55. Swan Creek Core Profile of Zinc at Station SC04

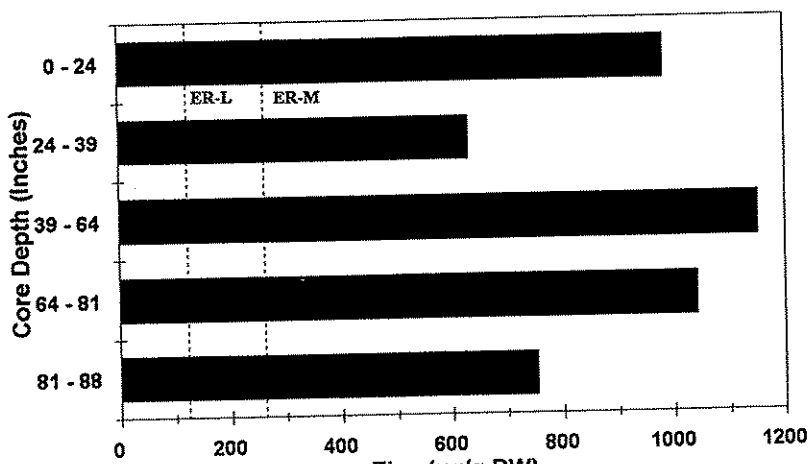
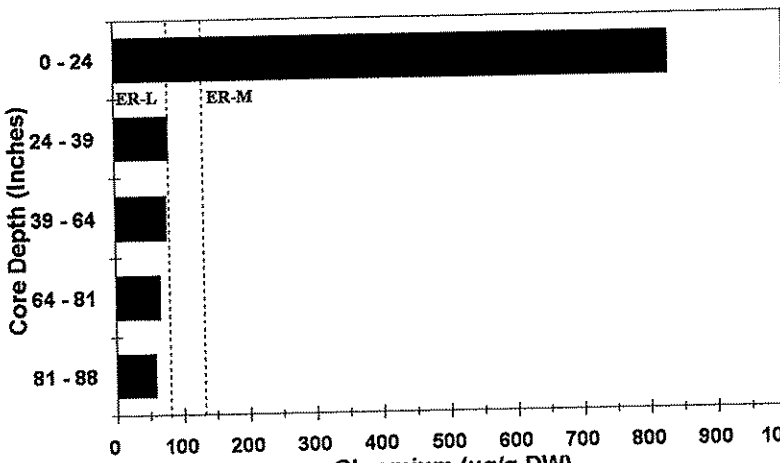


Figure 5.56. Swan Creek Core Profile of Chromium at Station SC04



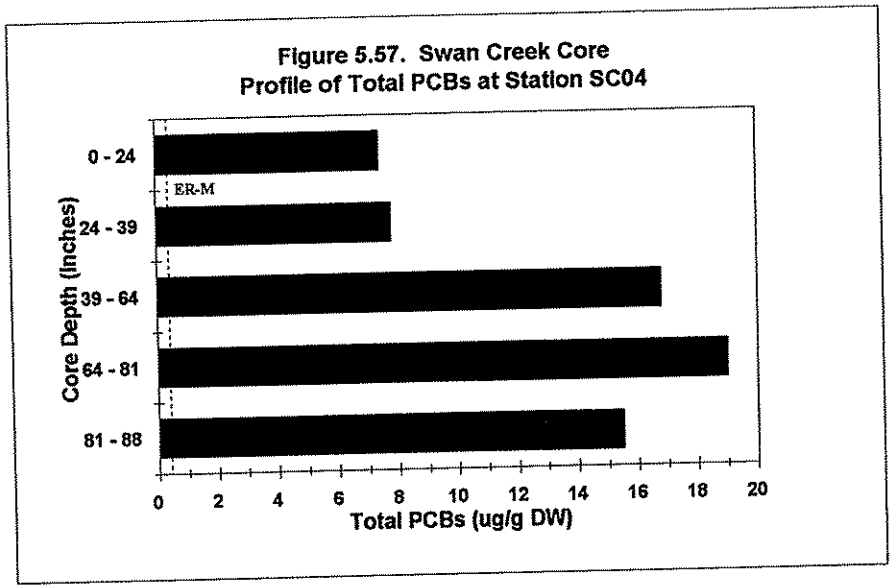


Figure 5.57. Swan Creek Core
Profile of Total PCBs at Station SC04
Core Depth (Inches)
0 - 24
24 - 39
39 - 64
64 - 81
81 - 88
ER-M
0
2
4
6
8
10
12
14
16
18
20
Total PCBs (ug/g DW)

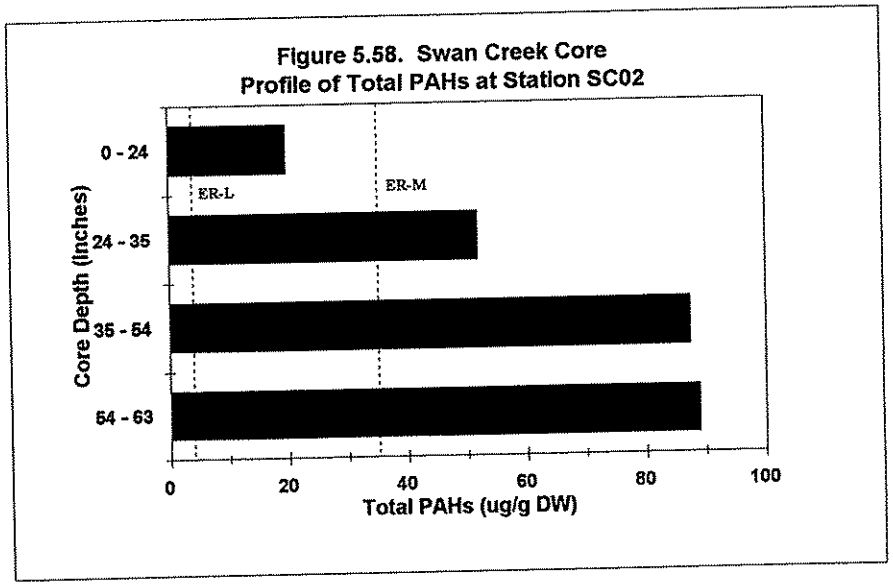


Figure 5.58. Swan Creek Core
Profile of Total PAHs at Station SC02
Core Depth (Inches)
0 - 24
24 - 35
35 - 54
54 - 63
ER-L
ER-M
0
20
40
60
80
100
Total PAHs (ug/g DW)

5.3.6. Maumee Bay Sediment Cores

Sediment in the 52 cores from the Eastern and Western Maumee Bay were generally quite similar. Eight Eastern Bay cores ranged from 9" to 66" in length, and averaged 33" long, while 44 Western Bay cores ranged from 11" to 68" in length, and averaged 35" long. Their composition was fairly consistent: surficial sediment in most cores (49 of 52, total) was silt; the intermediate subsurface layers in most of the cores was silt, occasionally mixed with shell fragments; and most (38 of 52) ended in silt or silty peat. Zebra mussel shells made up the upper 1" to 2" in two cores from the Western Bay. The sediment in most of these cores appeared to be clean: only one core contained oily surficial sediment; only three cores contained oily subsurface intermediate layers; and only one core was noted to exhibit a septic smell. No cores were noted to end in oily material.

On the whole, the sediments from Maumee Bay were the least contaminated of the study areas sampled (the River, Bay, and tributaries).

As elsewhere in the study area, not all of the cores collected in Maumee Bay were divided into multiple samples. Multiple samples were collected from cores at 28 of 52 stations (54%), and only surficial samples (usually 0"-24") were collected at the other stations. Most of the multi-sample cores exhibited similar vertical contaminant concentration profiles; contaminant concentrations usually decreased with depth. Specific examples are discussed below.

Metals

- Metal concentrations generally decreased with depth in the core (Figure 5.59); 64% of the cores for chromium, 71% for lead, 39% for nickel, and 68% for zinc.
- Metal concentrations increased with depth in a consistent percentage of the cores; 18% for chromium, lead, and zinc, and 21% for nickel. Nine cores (17%) exhibited increasing concentrations with depth for more than one contaminant (Table 5.3). These stations occurred in the inner bay, near the mouth of the Maumee River (6 stations), in the outer bay near Woodtick Peninsula (2 stations), and in Shantee Creek (1 station). These locations would be of special concern if dredged.
- On the whole, sediments from Maumee Bay contained the lowest concentrations of metals out of the study areas sampled. Nickel concentrations most often exceeded its ER-M (33% of the samples in the Eastern Bay and 27% of the samples in the Western Bay), while concentrations of the other three metals did not exceeded their ER-M values in more than 8% of the samples in either the Eastern or Western Bay (Table 5.2).
- Chromium concentrations never exceeded the ER-M value (145 μg/g DW), but samples from several cores in both the East and West Bay exceeded 100 μg/g DW. Only a single sample,; the surficial sediment at station WB-119, exceeded the lead ER-M of 110 μg/g DW (119 μg/g DW). The highest nickel concentrations (ER-M = 50 μg/g DW) were the 24"-34" layers in cores from WB-26 (111 μg/g DW) and WB-33

(118 µg/g DW). Highest zinc concentrations (ER-M = 270 µg/g DW) were in the core from WB-119; the 0"-24" layer = 293 µg/g DW, and 44"-56" = 368 µg/g DW.

Table 5.3.
Maumee Bay Stations Exhibiting Increasing Concentrations with Depth for Multiple Contaminants.

Station	Contaminants
EB-32	Pb, Zn
EB-41	PAHs, Cr, Pb, Zn
WB-16	Cr, Ni
WB-25	PAHs, Cr
WB-26	PAHs, PCBs, Ni
WB-101	PAHs, PCBs, Pb
WB-108	PAHs, PCBs, Pb
WB-111	Ni, Zn
WB-119	Ni, Pb, Zn

Total PCBs

- Most of the Maumee Bay cores exhibited similar concentrations with depth (39%; Figure 5.60) or decreasing concentration with depth (36%). PCB concentrations increased with depth in only 5 cores (18%).
- Eighty-four percent of the samples from the bay as a whole exceeded the PCB ER-M of 0.40 µg/g DW. On average PCB concentrations were lower in the Eastern Bay (25% > ER-M) than in the Western Bay (92% > ER-M).
- Only the surficial samples from two outer-bay cores; WB-107 and WB-114; contained PCB concentrations that exceeded 5 µg/g DW. Sediment layers in the remaining Maumee Bay cores generally contained less than 2 µg/g DW PCBs.

Total PAHs

- PAH concentrations decreased with depth in 43% of the Bay cores; were similar with depth in 21% of the cores; and increased with depth in 21% of the cores (Figure 5.61).
- Concentrations of total PAHs were generally low. Only 1% of the values from the Western Bay, and none of the Eastern Bay samples, exceeded the ER-M value (35 µg/g DW).
- One notable exception was the core at station WB-101, in the western lower bay, which contained 8.82 µg/g DW PAHs in the 0"-24" layer, and 211 µg/g DW in the 24"-30" layer.

Figure 5.59. Maumee Bay Core Profile for Zinc at Station WB33

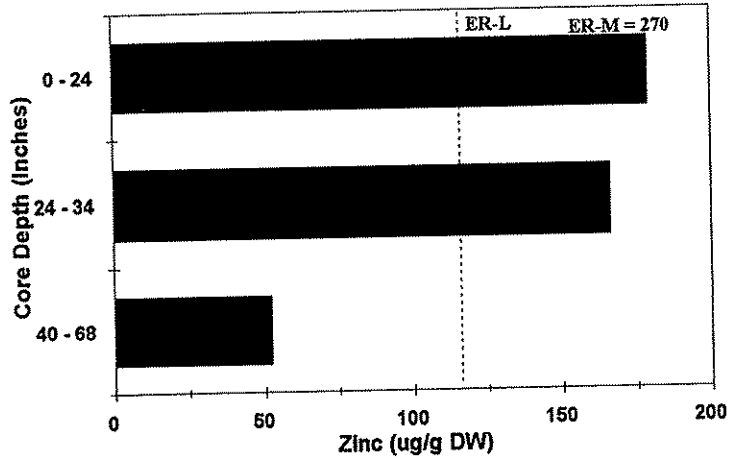


Figure 5.60. Maumee Bay Core Profile for Total PCBs at Station WB01

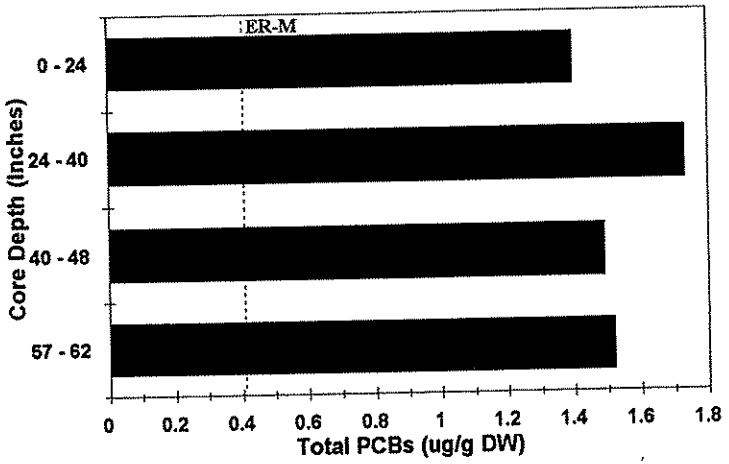
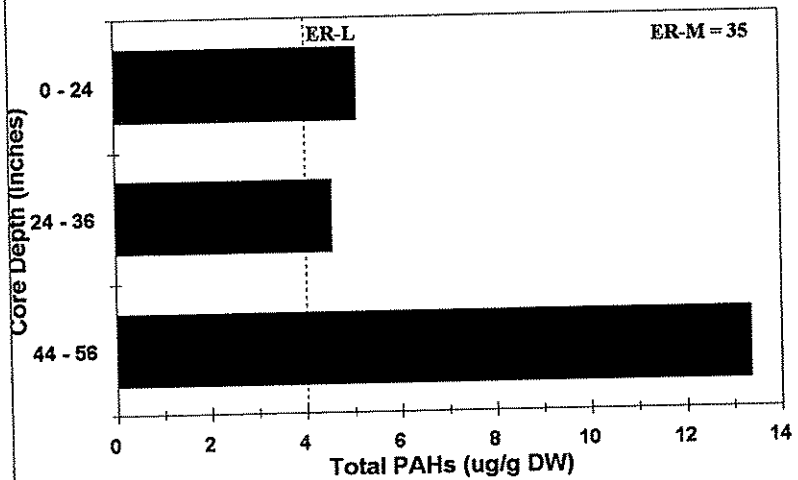


Figure 5.61. Maumee Bay Core Profile for Total PAHs at Station WB119



5.4. Rank Scores of the Samples

Data for the six major contaminants were ranked from least contaminated (rank score = 1) to most contaminated (rank score = 100), and then averaged to produce an overall rank score for each sample. Table 5.4 lists the ten least contaminated samples and the ten most contaminated samples. Overall, the least contaminated area was the Western Maumee Bay and the most contaminated was Swan Creek (Table 5.5). Note that its average rank score was much higher than the next-most contaminated area, Otter Creek. The sample field sheets indicated that oil was observed in the samples of Swan Creek more often than elsewhere in the study area.

Table 5.4
Least and Most Contaminated Samples in the Maumee River AOC, by Rank Score

Least Contaminated	Rank Score		Most Contaminated	Rank Score
WB-18 25-39	1.43		SC-04 39-64 & SC-02 35-54	32.39
WB-118 34-37	1.61		MR-29 0-24	34.50
WB-23 0-17	1.65		MR-12 0-24	36.04
WB-73 24-36	1.69		MR-54 0-24	36.72
WB-03 24-30	1.76		MR-49 42-50	37.23
WB-114 31-38	1.82		MR-54 46-70	37.32
WB-118 29-34	2.03		MR-29 60-72	41.07
WB-107 46-53.5	2.20		OC-01 28-34	44.65
OR-05 0-24	2.26		SC-04 0-24	46.31
WB-19 24-33	2.34		MR-29 40-60	49.71

Table 5.5.
Average Rank Scores for Sub-areas along the Maumee River AOC

Area	Average Rank
Western Maumee Bay	5.82
Eastern Maumee Bay	6.34
Ottawa River	8.19
Duck Creek	8.86
Maumee River	12.27
Otter Creek	12.97
Swan Creek	20.85

Least Contaminated Samples

- Among the 10 least contaminated samples, only two (OR-05 0"-24" and WB-23 0"-17") were surficial. Station WB-23 had no subsurface samples collected. Additionally, half of these 10 least contaminated samples were collected from the lowest layer of a particular station (WB-18 25"-39", WB-118 34"-37", WB-03 24"-30", WB-114 31"-38", and WB-107 46"-53.5").
- Only sample OR-05 0"-24" was not from the Western Maumee Bay, but it was located right at the mouth of the Ottawa River, leading into the Western Maumee Bay (Refer to Appendix D for the complete sample rankings spreadsheet).

Most Contaminated Samples

- Four of the 11 most contaminated samples were surficial (MR-29 0"-24", MR-12 0"-24", MR-54 0"-24", and SC-04 0"-24"). The 11 most contaminated samples occurred in only 7 cores, the majority of which were found in the Maumee River itself. Stations SC-04 and MR-54 each had 2 layers that were among the most contaminated samples. Station MR-29 was the most contaminated station out of the entire AOC; all three layers from this core are listed in Table 5.4. Stations MR-29 and MR-54 are on the left side of the river near a sewage treatment plant, the Toledo Yacht Club, and an old shipyard and armory. Stations MR-49 and MR-12 are both near Toledo Coke.
- It should also be noted that the highest concentrations of chromium, nickel, zinc, and total PCBs in the entire Maumee River AOC were included in these 11 samples.

5.5. Correlation of the Screening Data vs. the Confirmatory Data

Comparison of screening (XRF and EIA) data and confirmatory data (AA and GC) were possible for eight elements (mostly metals), total PCBs, and total PAHs. Correlations were moderate to strong for the metals, and poor for the PCBs and PAHs. Results for each of the ten contaminants are described below. Note that:

- For unknown reasons, the confirmatory lab analyzed 19 samples for metals and 20 samples for PCBs and PAHs. The extra organics sample was WB-85.
- Results for one of the 19 confirmatory metals samples, SC-03, are plotted on the graphs but were not included in the correlation analyses. This sample contained unusually high concentrations of arsenic, lead, mercury, and zinc. The mineralogical matrix of the sample appears to be substantially different than the other samples - statistically, seems to be in a different "population" - and so it was excluded from the linear regressions for the metals.

5.5.1 XRF Metals Data Confirmations

- The XRF data for arsenic exhibited an unexpected negative bias compared to the confirmatory data (Figure 5.62). This may have been due to the moderate concentrations of lead present in the samples, since the fluorescence peak of lead can

partly obscure the arsenic peak. The confirmatory:XRF correlation was only moderately strong ($r^2 = 0.66$). However, from a practical standpoint the two data sets are equivalent; all but one sample was below the ER-L value (33 µg/g DW) in both data sets, and that one sample exceeded the ER-L in both data sets.

- The XRF data for barium exhibited a positive bias compared to the confirmatory data, and a poor correlation ($r^2 = 0.091$; Figure 5.63). Barium is associated with the mineralogical matrix of the sample, however, as opposed to being an environmental contaminant adsorbed to the outside of the sediment particles. Consequently, its release from sediment during the acid digestion of the confirmatory analysis can be variable, which would result in a poor correlation to the "total" barium values produced by XRF. There are no Long and Morgan sediment quality guideline values for barium.
- The XRF data for cadmium exhibited a positive bias, and a poor correlation to the confirmatory data ($r^2 = 0.004$; Figure 5.64). The poor correlation is due to the low concentrations; only one sample exceeded the XRF Method Quantitation Limit. However, from a practical standpoint the two data sets are equivalent; all of the cadmium values were below the ER-M value (9 µg/g DW) in both data sets, and only one sample exhibited an XRF value exceeding the ER-L (5 µg/g DW) when the confirmatory value was less than the ER-L.
- XRF data for chromium exhibited a positive bias, and a strong correlation to the confirmatory data ($r^2 = 0.004$; Figure 5.65). Overall the XRF data were "conservative" when they did not agree with the confirmatory data; they indicate a greater probability for toxic effects than the confirmatory data. Seventeen of 18 confirmatory values were below the ER-L (80 µg/g DW), while only 9 of 18 XRF values were less than the ER-L. Seven of the remaining XRF values were between the ER-L and the ER-M (145 µg/g DW), indicating the potential for moderate toxicity.
- The confirmatory:XRF correlation for copper was very strong ($r^2 = 0.90$; Figure 5.66), and the two data sets were practically equivalent: copper concentrations in 13 of 18 samples were below the ER-L (70 µg/g DW) in both data sets, and 3 of 18 samples were between the ER-L and ER-M (390 µg/g DW) in both data sets. No sample exceeded the ER-M in either data set.
- The confirmatory:XRF correlation for iron was moderately strong ($r^2 = 0.68$; Figure 5.67), and the XRF data exhibited a positive bias. The moderately strong correlation was probably due to the limited range of iron concentrations in these samples (1.5% to 2.5% DW). There are no Long and Morgan sediment quality guidelines for iron.
- The correlations for lead and zinc were very strong ($r^2 = 0.96$ for each; Figures 5.68 and 5.69), partly due to a single, highly contaminated sample. The two data sets are essentially identical for both lead and zinc; both identified the same few samples as nontoxic (< ER-L values), another few samples as highly contaminated (> ER-Ms), and the remaining samples as moderately contaminated.

5.5.2. EIA Organic Contaminant Data Confirmations - PCBs and PAHs.

- Agreement between the EIA data and the confirmatory data for total PCBs was mixed. The correlation between the two data sets was very poor ($r^2 = 0.007$) for two reasons:

Figure 5.62. Correlation of XRF Data vs. Confirmatory Data for Arsenic

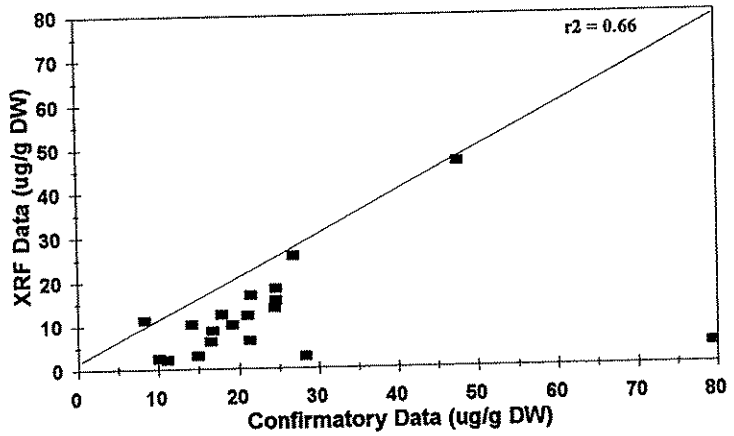


Figure 5.63. Correlation of XRF Data vs. Confirmatory Data for Barium

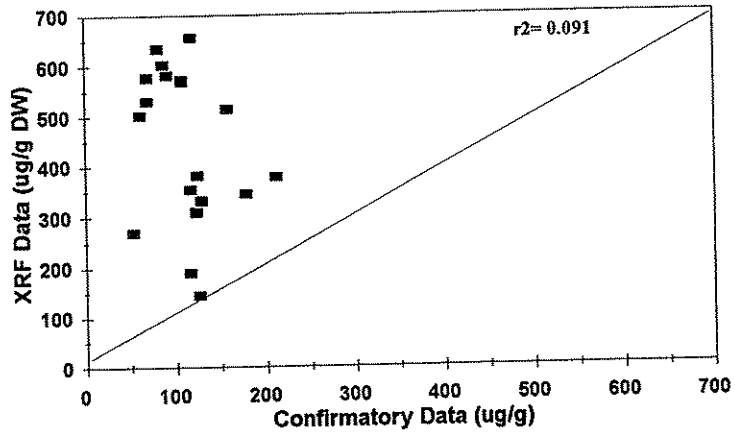


Figure 5.64. Correlation of XRF Data vs. Confirmatory Data for Cadmium

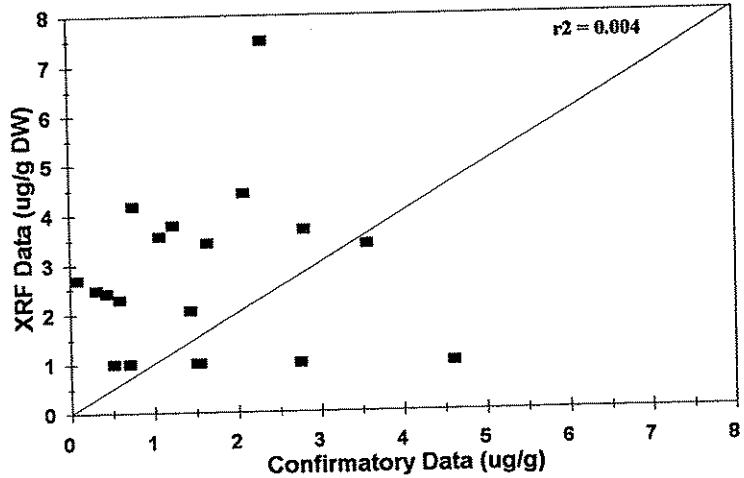


Figure 5.65. Correlation of XRF Data vs. Confirmatory Data for Chromium

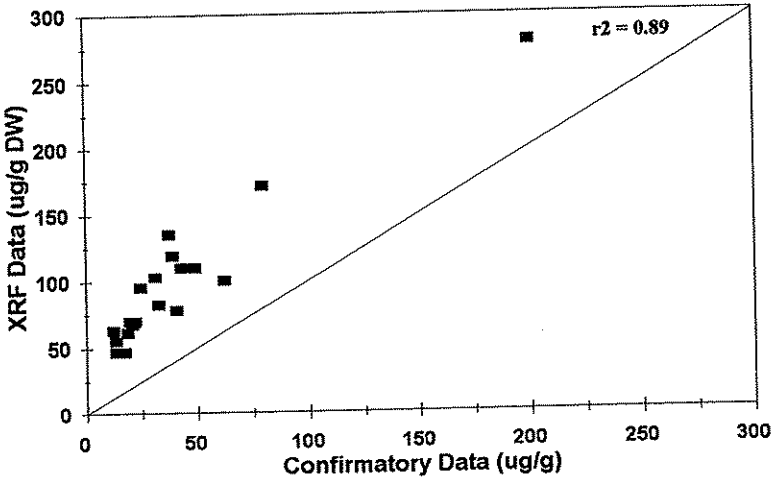


Figure 5.66. Correlation of XRF Data vs. Confirmatory Data for Copper

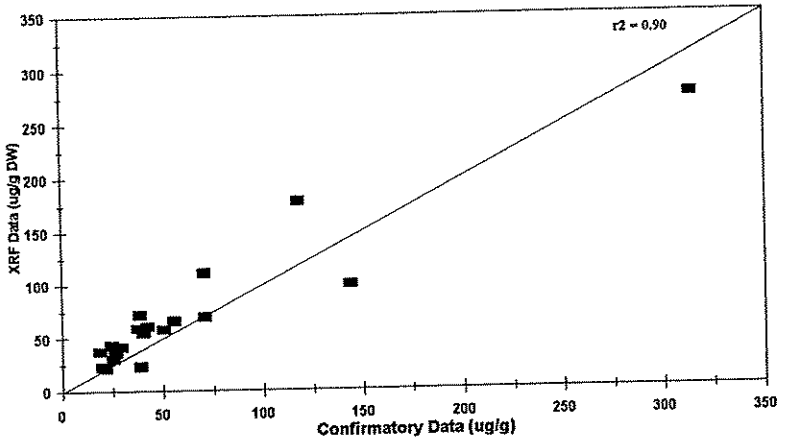


Figure 5.67. Correlation of XRF Data vs. Confirmatory Data for Iron

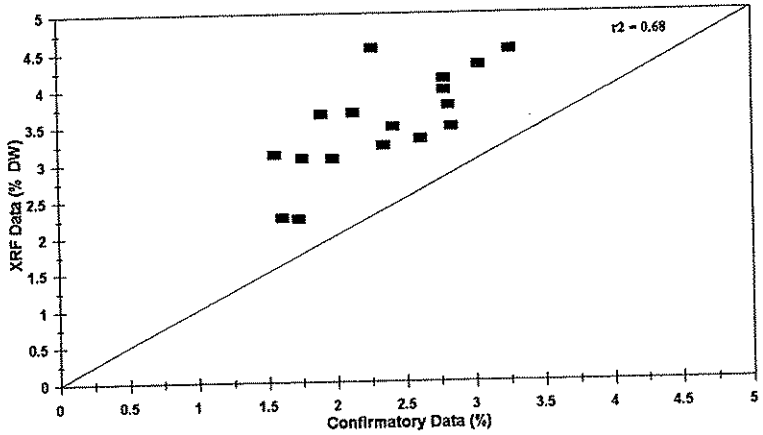


Figure 5.68. Correlation of XRF Data vs. Confirmatory Data for Lead

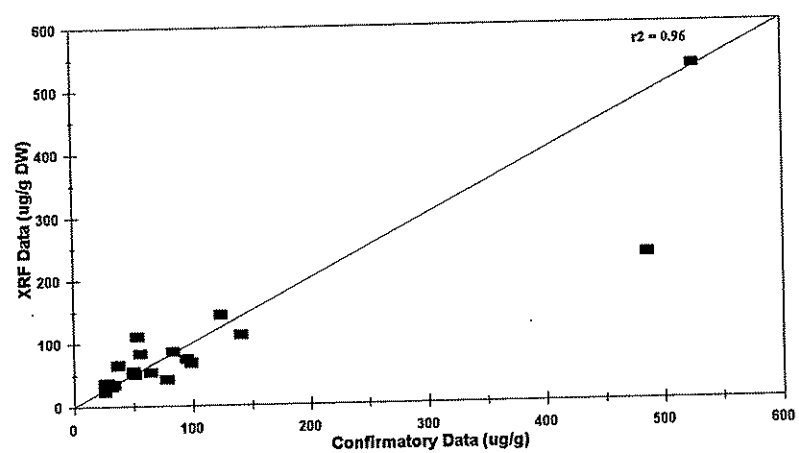
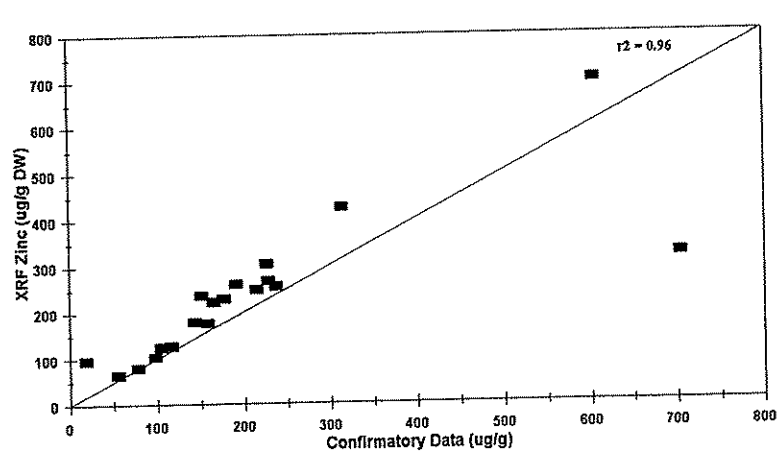


Figure 5.69. Correlation of XRF Data vs. Confirmatory Data for Zinc



(1) PCB concentrations were similar and low, approaching the Method Quantitation Limit of the PCB EIA, and (2) the EIA concentration for a single sample (MR-11) was 27.4 μg/g DW while it was only 0.095 μg/g DW by GC. This particular sample contained an exceptionally high concentration of naphthalene (4,520 μg/g DW) and other PAHs, however, which may have affected the performance of the PCB EIA analysis. (Samples containing higher total PCB concentrations by EIA (≥ 50 μg/g DW) were found in several sediment samples collected in 1996, but none were sent for confirmation analysis.) Nonetheless, PCB concentrations were in generally good agreement except for sample MR-11; 17 of 19 values were less than 5 μg/g DW in both data sets (Figure 5.70). These conflicting observations; poor statistical correlation due to a small concentration range, but good general agreement with only one "outlier" value, make it difficult to judge the performance of the PCB EIA screening analysis. In several previous sediment assessment projects, however, PCB EIA data correlated well with confirmatory GC data (Rathbun et al., 1996). Consequently, the PCB EIA data generated in this study are probably reliable screening-level data.

- Agreement between the EIA data and the confirmatory data for PAHs was very poor ($r^2 = 0.10$; Figure 5.71). The PAH EIA analysis appeared to be very insensitive to changing PAH concentrations, which ranged up to 6,135 μg/g DW according to the confirmatory GC data. The reason(s) for the poor performance of the PAH EIA analysis is unknown, and calls into question all of the PAH screening-level data reported here.
- A relatively rapid, inexpensive screening analysis for total PAHs is still a desirable tool, however, and investigation of other techniques (e.g., UV spectroscopy) might be worthwhile.

Figure 5.70. Correlation of EIA Data vs. Confirmatory Data for Total PCBs

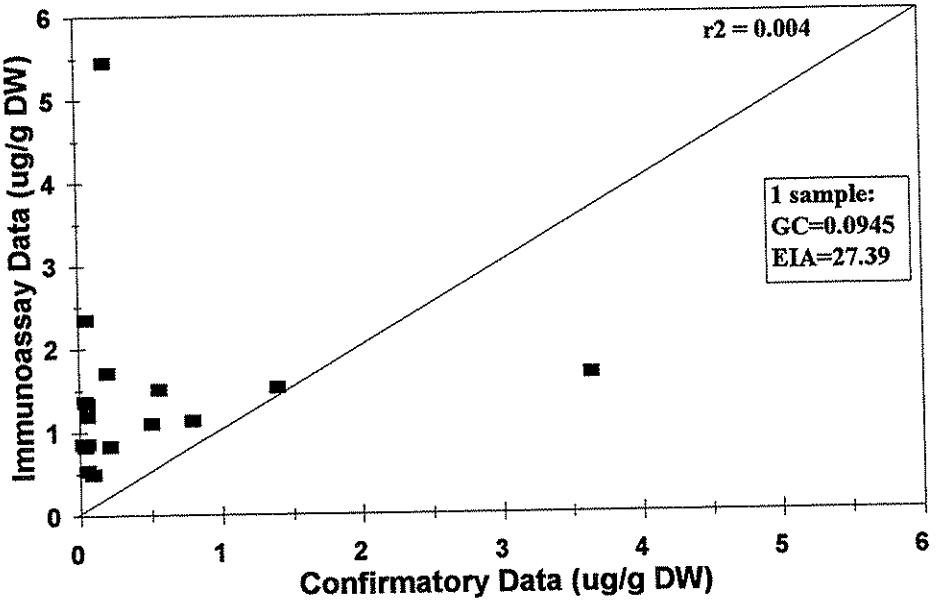
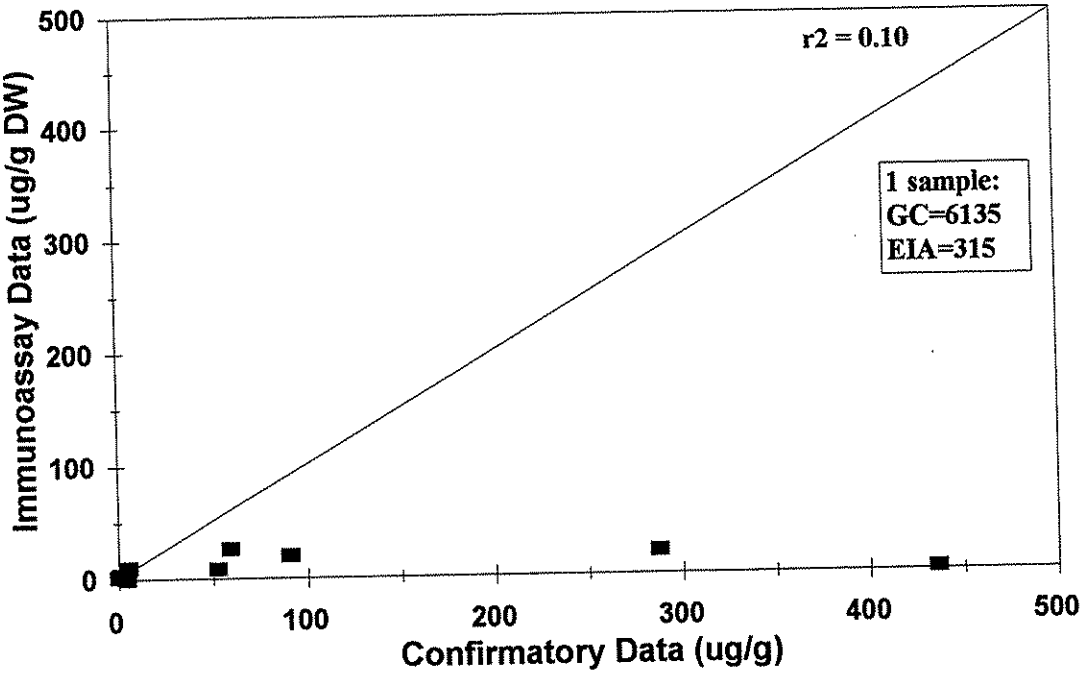


Figure 5.71. Correlation of EIA Data vs. Confirmatory Data for Total PAHs



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Appendix A.

Screening Analysis Results:

Metals by X-Ray Fluorescence Spectroscopy

Sediment Screening Survey - COMPLETE DATA SET FOR XRF METAL ANALYSES

AScI Corporation (ESD); 30427 West Eight Mile Road, Livonia, MI 48152

Analysis Date	Sample Number	K % DW	Remark	Ca % DW	Remark	Ti ug/g DW	Remark	Cr ug/g DW	Remark	Mn ug/g DW	Remark	Fe % DW	Remark
11-25-96	DC07 24-29	2.52		7.46		4270		63.7		532		3.08	
12-06-96	DC07 0-24	2.44		13.8		3120		96.2		549		3.25	
12/15/95	DC-01/0-14.25	2.09		15.3		3460		79.6		645		3.70	
11-25-96	DC06 26-42	1.73		7.08		2800		31.7		385		2.13	
12-02-96	DC06 0-26	1.84		15.3		3370		79.1		650		3.68	
12/29/95	DC-02/41-47A	1.84		7.88		3210		61		453		2.51	
12/29/95	DC-02/24-36A	2.15		8.62		3860		80.2		560		3.33	
12/29/95	DC-02/0-24A	1.85		19.1		3330		119		583		3.66	
12-09-96	DC05 0-24	1.92		10.7		3390		102		561		3.55	
12-04-96	DC05 24-39	2.41		8.32		3880		86.7		581		3.57	
12-02-96	DC04 0-24	1.79		19.9		3120		80.0		589		3.30	
11-22-96	DC04 24-36	1.70		18.0		3090		73.4		484		3.18	
11-25-96	DC04 36-56	2.12		5.34		3570		98.2		489		3.87	
12/29/95	DC-03/0-24	2.33		10.1		3980		101		680		4.37	
12/29/95	DC-03/38-44	1.97		6.97		3720		126		713		4.08	
12/29/95	DC-03/65-77	2.49		4.71		4220		172		603		4.65	
5/24/96	MR06 24-31	1.98		4.93		4650		99.9		446		3.36	
5/24/96	MR06 0-24	2.38		4.26		4330		72.0		535		4.02	
5/24/96	MR06 34.5-42	1.79		5.33		4120		121		413		3.40	
5/28/96	MR05 0-24	2.39		4.21		4090		95.4		588		4.14	
5/23/96	MR04 0-24	2.33		4.12		3870		91.7		556		4.41	

Sample Number	Ni ug/g DW	Remark	Cu ug/g DW	Remark	Pb ug/g DW	Remark	Hg ug/g DW	Remark	Ag ug/g DW	Remark	Cd ug/g DW	Remark
DC07 24-29	43.3	MQL	26.8		14.0	MQL	ND		2.13	MQL	ND	
DC07 0-24	37.1	MQL	31.5		40.7		8.65	MQL	ND		3.87	MQL
DC-01/0-14.25	55.4		57.2		76.3		< 4	MDL	2.88	MQL	2.93	MQL
DC06 26-42	MDL		23.1		16.2		ND		ND		ND	
DC06 0-26	68.4		57.6		75.2		ND		< 2	MDL	< 2	MDL
DC-02/41-47A	31.7	MQL	25.3		21.5		ND		< 2	MDL	ND	
DC-02/24-36A	79.7		43.9		38.7		< 4	MDL	< 2	MDL	< 2	MDL
DC-02/0-24A	86.7		71.9		68.2		ND		6.66		4.42	MQL
DC05 0-24	< 15	MDL	48.0		78.0		< 4	MDL	ND		2.80	MQL
DC05 24-39	52.5		41.2		21.4		ND		< 2	MDL	ND	
DC04 0-24	89.5		55.4		64.0		ND		< 2	MDL	4.02	MQL
DC04 24-36	63.4		48.9		42.4		ND		< 2	MDL	3.26	MQL
DC04 36-56	66.7		68.0		70.1		< 4	MDL	4.49	MQL	2.96	MQL
DC-03/0-24	73.5		59.4		58.4		ND		ND		< 2	MDL
DC-03/38-44	62.7		60.6		62.1		ND		3.54	MQL	2.84	MQL
DC-03/65-77	113		110		83.3		ND		< 2	MDL	2.91	MQL
MR06 24-31	58.0		49.6		78.1		ND		ND		3.25	MQL
MR06 0-24	40.0	MQL	34.9		32.4		ND		ND		4.43	MQL
MR06 34.5-42	89.8		80.8		119		ND		<2	MDL	5.88	MQL
MR05 0-24	50.2		41.2		33.8		ND		<2	MDL	2.69	MQL
MR04 0-24	52.6		62.6		87.6		ND		<2	MDL	3.94	MQL

Sample Number	Sb ug/g DW	Remark	Ba ug/g DW	Remark	Zn ug/g DW	Remark	As ug/g DW	Remark	Se ug/g DW	Remark	Br ug/g DW	Remark
DC07 24-29	4.00	MQL	492		77.2		12.5		ND		ND	
DC07 0-24	4.48	MQL	462		182		23.2		< 5	MDL	< 9	MDL
DC-01/0-14.25	ND		499		260		51.9		< 5	MDL	< 9	MDL
DC06 26-42	3.05	MQL	471		65.3		5.51	MQL	< 5	MDL	< 9	MDL
DC06 0-26	< 2	MDL	437		268		37.8		6.37	MQL	< 9	MDL
DC-02/41-47A	ND		426		73		8.17	MQL	ND		< 9	MDL
DC-02/24-36A	2.88	MQL	455		128		7.16	MQL	< 5	MDL	< 9	MDL
DC-02/0-24A	ND		331		262		46.7		< 5	MDL	< 9	MDL
DC05 0-24	< 2	MDL	395		268		16.2	MQL	< 5	MDL	< 9	MDL
DC05 24-39	3.63	MQL	531		112		17.4		ND		< 9	MDL
DC04 0-24	< 2	MDL	469		279		27.3		< 5	MDL	< 9	MDL
DC04 24-36	ND		424		183		37.4		< 5	MDL	< 9	MDL
DC04 36-56	ND		547		247		10.4	MQL	ND		< 9	MDL
DC-03/0-24	ND		470		353		22.4		< 5	MDL	< 9	MDL
DC-03/38-44	< 2	MDL	393		197		19.4		< 5	MDL	< 9	MDL
DC-03/65-77	2.16	MQL	243		355		20.2		ND		< 9	MDL
MR06 24-31	2.34	MQL	675		109		43.4		<5	MDL	< 9	MDL
MR06 0-24	3.80	MQL	578		253		19.3		ND		< 9	MDL
MR06 34.5-42	5.59	MQL	709		111		117		<5	MDL	< 9	MDL
MR05 0-24	<2	MDL	655		304		12.4	MQL	ND		< 9	MDL
MR04 0-24	ND		612		207		17.7	MQL	ND		< 9	MDL

Analysis Date	Sample Number	K % DW	Remark	Ca % DW	Remark	Ti ug/g DW	Remark	Cr ug/g DW	Remark	Mn ug/g DW	Remark	Fe % DW	Remark
5/24/96	MR07 24-31	2.16		5.53		4010		65.0		598		3.26	
5/24/96	MR07 0-24	2.44		4.34		3680		70.7		638		4.12	
12/26/95	MR-08/0-24	2.48		4.52		4250		98.3		545		4.04	
12/26/95	MR-08/24-34	2.34		4.57		4030		52.6		578		3.85	
5/24/96	MR10 0-26	2.30		4.71		3750		65.1		602		4.10	
5/24/96	MR09 0-24	2.19		4.76		4440		61.9		530		3.43	
5/23/96	MR09 24-28.5	2.23		5.45		4020		62.1		544		3.36	
12/28/95	MR-22/0-24	2.46		4.01		4290		83.5		533		4.23	
12/28/95	MR-22/24-40	2.32		4.99		4150		93.7		593		3.99	
12/28/95	MR-22/40-58	2.44		3.63		4380		111		518		4.23	
5/22/96	MR28 0-18	1.98		4.92		3990		52.4		455		2.92	
12/27/95	MR-17/0-24	2.41		4.16		4370		85.9		570		4.43	
12/27/95	MR-17/24-36	2.18		5.09		4010		92.0		465		3.75	
12/27/95	MR-17/52-58	1.92		5.38		3600		32.6	MQL	436		2.48	
12/27/95	MR-16/0-24	2.17		4.88		3970		84.4		502		3.83	
12/27/95	MR-16/24-40	1.86		4.78		4040		86.6		471		5.61	
12/27/95	MR-16/72-84	2.10		4.14		4300		109		513		8.22	
5/23/96	MR21 0-24	2.27		4.60		3990		81.5		529		3.86	
5/24/96	MR21 24-36	1.96		5.63		4240		85.2		507		3.57	
5/24/96	MR21 36-52	2.29		4.72		4260		61.5		547		3.71	
12-04-96	MR047A 0-24	2.31		4.39		3960		96.6		510		4.00	
12-04-96	MR047A 24-43	2.33		3.99		4040		85.6		534		4.40	
12-13-96	MR047A 43-78	2.32		3.91		4220		68.1		572		3.79	

Sample Number	Ni ug/g DW	Remark	Cu ug/g DW	Remark	Pb ug/g DW	Remark	Hg ug/g DW	Remark	Ag ug/g DW	Remark	Cd ug/g DW	Remark
MR07 24-31	29.1	MQL	30.0		25.5		5.37	MQL	ND		ND	
MR07 0-24	23.1	MQL	50.7		20.6		<4	MDL	2.52	MQL	<2	MDL
MR-08/0-24	35.3	MQL	46.9		30.2		ND		ND		< 2	MDL
MR-08/24-34	23.7	MQL	52.1		72.2		ND		< 2	MDL	ND	
MR10 0-26	35.7	MQL	226		54.9		<4	MDL	ND		2.43	MQL
MR09 0-24	27.7	MQL	35.7		86.9		ND		ND		<2	MDL
MR09 24-28.5	28.5	MQL	32.0		35.1		ND		4.27	MQL	<2	MDL
MR-22/0-24	74.1		51.7		28.8		ND		< 2	MDL	< 2	MDL
MR-22/24-40	79.6		63.7		55.3		ND		2.05	MQL	3.22	MQL
MR-22/40-58	75.2		51.2		44.6		ND		< 2	MDL	4.19	MQL
MR28 0-18	33.0	MQL	107		201		ND		ND		2.73	MQL
MR-17/0-24	56.6		50.4		30.4		ND		< 2	MDL	< 2	MDL
MR-17/24-36	54.0		53.9		59.4		ND		< 2	MDL	< 2	MDL
MR-17/52-58	41.2	MQL	20.8		15.8		< 4	MDL	< 2	MDL	< 2	MDL
MR-16/0-24	42.9	MQL	46.5		46.2		< 4	MDL	3.12	MQL	< 2	MDL
MR-16/24-40	66.5		66.1		55.8		ND		< 2	MDL	3.86	MQL
MR-16/72-84	60.5		82		38.4		< 4	MDL	3.26	MQL	2.41	MQL
MR21 0-24	46.3		45.5		42.2		ND		<2	MDL	ND	
MR21 24-36	55.4		46.9		52.5		<4	MDL	<2	MDL	4.17	MQL
MR21 36-52	23.3	MQL	39.8		36.6		ND		<2	MDL	ND	
MR047A 0-24	80.3		47.9		44.4		ND		ND		3.70	MQL
MR047A 24-43	76.7		43.2		45.2		ND		< 2	MDL	< 2	MDL
MR047A 43-78	63.6		32.3		29.2		ND		3.99	MQL	< 2	MDL

Sample Number	Sb ug/g DW	Remark	Ba ug/g DW	Remark	Zn ug/g DW	Remark	As ug/g DW	Remark	Se ug/g DW	Remark	Br ug/g DW	Remark
MR07 24-31	2.04	MQL	603		140		5.65	MQL	<5	MDL	< 9	MDL
MR07 0-24	6.49		644		154		13.2		<5	MDL	< 9	MDL
MR-08/0-24	ND		340		199		22.9		ND		< 9	MDL
MR-08/24-34	< 2.0	MDL	265		237		34.5		< 5	MDL	< 9	MDL
MR10 0-26	2.56	MQL	725		256		7.81	MQL	<5	MDL	< 9	MDL
MR09 0-24	<2	MDL	571		155		12.7	MQL	ND		< 9	MDL
MR09 24-28.5	<2	MDL	526		140		18.6		<5	MDL	< 9	MDL
MR-22/0-24	ND		268		228		15.8		ND		< 9	MDL
MR-22/24-40	3.82	MQL	316		191		7.2	MQL	ND		< 9	MDL
MR-22/40-58	4.56	MQL	309		197		14.3	MQL	< 5	MDL	< 9	MDL
MR28 0-18	3.97	MQL	559		272		ND		<5	MDL	< 9	MDL
MR-17/0-24	ND		305		251		15.5		< 5	MDL	< 9	MDL
MR-17/24-36	2.55	MQL	341		174		21.2		< 5	MDL	< 9	MDL
MR-17/52-58	ND		385		62.7		< 3.96	MDL	ND		< 9	MDL
MR-16/0-24	7.83		415		173		< 5.25	MDL	ND		< 9	MDL
MR-16/24-40	< 2.0	MDL	488		155		19.3		< 5	MDL	< 9	MDL
MR-16/72-84	3.93	MQL	522		213		31.1		< 5	MDL	< 9	MDL
MR21 0-24	<2	MDL	601		190		7.17	MQL	ND		< 9	MDL
MR21 24-36	8.02		572		166		11.4	MQL	ND		< 9	MDL
MR21 36-52	ND		569		167		21.3		<5	MDL	< 9	MDL
MR047A 0-24	6.00	MQL	460		217		19.3		ND		< 9	MDL
MR047A 24-43	6.29		519		236		29.4		ND		< 9	MDL
MR047A 43-78	ND		531		131		18.8		< 5	MDL	< 9	MDL

Analysis Date	Sample Number	K % DW	Remark	Ca % DW	Remark	Ti ug/g DW	Remark	Cr ug/g DW	Remark	Mn ug/g DW	Remark	Fe % DW	Remark
11-19-96	MR048 0-24	2.27		3.46		3830		74.3		516		4.45	
11-20-96	MR048 24-48	2.46		3.36		4180		86.1		502		4.59	
11-19-96	MR048 48-82	2.21		3.79		3920		58.4		557		4.50	
12/26/95	MR-15/0-24	2.33		5.51		4240		105		584		4.64	
12/26/95	MR-15/24-46	2.48		4.08		4310		71.7		625		5.38	
12/26/95	MR-15/58-71	2.43		3.88		4240		103		610		5.48	
5/24/96	MR20 0-24	1.71		6.95		4210		46.9		402		2.98	
5/24/96	MR20 24-36	1.79		6.79		4000		76.2		608		3.26	
5/24/96	MR20 36-57	2.25		4.27		3660		114		596		4.62	
5/24/96	MR27 0-24	2.58		3.69		3000		90.0		581		4.68	
5/28/96	MR27 24-36	2.38		4.40		3880		92.0		557		4.17	
11-19-96	MR045 0-14	2.00		5.92		3270		51.7		493		3.49	
11-19-96	MR044 0-24	2.41		3.47		4070		104		512		4.77	
11-27-96	MR044 24-57	2.26		3.70		3910		120		515		5.35	
11-20-96	MR044 57-61	2.05		3.68		3650		112		476		5.66	
12/27/95	MR-13/0-24	2.17		4.47		3680		131		525		5.75	
12/27/95	MR-13/24-35	2.22		4.62		3840		152		522		6.91	
12/27/95	MR-13/35-42.5	2.27		5.73		4070		113		618		3.83	
11-21-96	MR046 0-17	2.25		3.87		3690		80.5		485		3.46	
12-04-96	MR033 0-24	2.54		3.43		4220		93.3		598		4.60	
11-27-96	MR033 24-40	2.36		3.85		4180		117		704		4.85	
11-27-96	MR033 40-55	2.20		4.54		3850		130		1550		9.66	
11-20-96	MR049 0-24	2.04		3.26		3590		110		1310		9.71	
11-19-96	MR049 24-42	2.07		3.35		3660		101		1700		12.4	
12-09-96	MR049 42-50	1.63		4.14		2790		165		2470		17.7	
12-06-96	MR049 50-63	2.12		3.73		3770		128		1260		12.0	

Sample Number	Ni ug/g DW	Remark	Cu ug/g DW	Remark	Pb ug/g DW	Remark	Hg ug/g DW	Remark	Ag ug/g DW	Remark	Cd ug/g DW	Remark
MR048 0-24	27.3	MQL	42.0		78.9		ND		< 2	MDL	3.17	MQL
MR048 24-48	37.8	MQL	47.6		85.0		ND		2.47	MQL	< 2	MDL
MR048 48-82	17.1	MQL	41.3		68.1		ND		2.21	MQL	ND	
MR-15/0-24	31.7	MQL	58.1		81.4		ND		ND		2.15	MQL
MR-15/24-46	57.5		65.5		121		ND		2.79	MQL	< 2	MDL
MR-15/58-71	37.4	MQL	47.2		60.3		ND		< 2	MDL	< 2	MDL
MR20 0-24	29.1	MQL	30.8		41.0		ND		ND		ND	
MR20 24-36	43.3	MQL	62.0		88.3		ND		<2	MDL	3.91	MQL
MR20 36-57	38.2	MQL	98.5		191		ND		<2	MDL	4.27	MQL
MR27 0-24	48.9		47.1		62.9		ND		ND		<2	MDL
MR27 24-36	56.9		43.9		66.8		ND		<2	MDL	<2	MDL
MR045 0-14	ND		29.3		48.8		ND		< 2	MDL	<2	MDL
MR044 0-24	ND		57.5		92.4		ND		< 2	MDL	2.20	MQL
MR044 24-57	82.3		67.8		98.2		ND		ND		6.37	
MR044 57-61	58.5		83.2		136		ND		3.58	MQL	4.62	MQL
MR-13/0-24	86.0		77.2		126		ND		< 2	MDL	4.41	MQL
MR-13/24-35	72.7		115		229		ND		2.10	MQL	5.49	MQL
MR-13/35-42.5	67.0		60.2		51.6		ND		ND		3.47	MQL
MR046 0-17	74.9		38.7		23.7		ND		2.14	MQL	2.55	MQL
MR033 0-24	67.6		49.3		42.4		ND		2.08	MQL	< 2	MDL
MR033 24-40	53.8		66.8		76.7		ND		ND		5.69	MQL
MR033 40-55	ND		89.6		109		ND		< 2	MDL	3.38	MQL
MR049 0-24	ND		55.4		65.3		5.32	MQL	2.65	MQL	< 2	MDL
MR049 24-42	ND		44.3		86.3		ND		ND		3.14	MQL
MR049 42-50	292		96.3		152		ND		< 2	MDL	5.47	MQL
MR049 50-63	ND		43.0		133		ND		< 2	MDL	4.03	MQL

Sample Number	Sb ug/g DW	Remark	Ba ug/g DW	Remark	Zn ug/g DW	Remark	As ug/g DW	Remark	Se ug/g DW	Remark	Br ug/g DW	Remark
MR048 0-24	2.85	MQL	535		277		12.2	MQL	ND		< 9	MDL
MR048 24-48	ND		576		268		18.0	MQL	< 5	MDL	< 9	MDL
MR048 48-82	ND		539		188		14.9	MQL	ND		< 9	MDL
MR-15/0-24	ND		422		308		17.7	MQL	< 5	MDL	< 9	MDL
MR-15/24-46	ND		426		396		21.6	MQL	< 5	MDL	< 9	MDL
MR-15/58-71	< 2.0	MDL	460		250		30.1		< 5	MDL	< 9	MDL
MR20 0-24	<2	MDL	481		99.8		9.84	MQL	ND		< 9	MDL
MR20 24-36	<2	MDL	540		187		12.6	MQL	ND		< 9	MDL
MR20 36-57	20.0		638		352		2.99	MQL	ND		< 9	MDL
MR27 0-24	ND		634		208		6.43	MQL	<5	MDL	< 9	MDL
MR27 24-36	<2	MDL	608		246		<5.92	MDL	<5	MDL	< 9	MDL
MR045 0-14	< 2	MDL	506		154		MDL		ND		< 9	MDL
MR044 0-24	2.42	MQL	490		298		ND		ND		< 9	MDL
MR044 24-57	ND		492		328		20.3	MQL	< 5	MDL	< 9	MDL
MR044 57-61	ND		577		318		10.7	MQL	< 5	MDL	< 9	MDL
MR-13/0-24	< 2.0	MDL	244		338		19.1	MQL	< 5	MDL	< 9	MDL
MR-13/24-35	2.97	MQL	338		483		11.5	MQL	< 5	MDL	< 9	MDL
MR-13/35-42.5	ND		330		186		12.6	MQL	< 5	MDL	< 9	MDL
MR046 0-17	ND		519		141		12.0	MQL	< 5	MDL	< 9	MDL
MR033 0-24	ND		664		188		10.6	MQL	< 5	MDL	< 9	MDL
MR033 24-40	5.26	MQL	594		237		6.99	MQL	< 5	MDL	< 9	MDL
MR033 40-55	3.62	MQL	678		433		23.2		< 5	MDL	< 9	MDL
MR049 0-24	7.05		543		376		13.8	MQL	ND		< 9	MDL
MR049 24-42	< 2	MDL	605		600		20.4	MQL	< 5	MDL	< 9	MDL
MR049 42-50	3.48	MQL	413		1020		73.9		< 5	MDL	< 9	MDL
MR049 50-63	10.9		409		530		21.7	MQL	< 5	MDL	< 9	MDL

Analysis Date	Sample Number	K % DW	Remark	Ca % DW	Remark	Ti ug/g DW	Remark	Cr ug/g DW	Remark	Mn ug/g DW	Remark	Fe % DW	Remark
12/27/95	MR-14/24-36	2.18		5.02		3870		103		593		4.49	
12/27/95	MR-14/60-77	2.06		5.95		3730		135		728		5.15	
12/28/95	MR11/0-24AR	2.25		4.19		4040		135		848		5.78	
12/28/95	MR-11/24-43A	2.27		4.86		4190		109		848		5.20	
12/28/95	MR11/43-52.5A	2.49		3.62		4280		93.1		830		5.05	
11-27-96	MR032 0-26	2.12		3.45		3680		107		657		4.76	
12-11-96	MR032 46-51	1.15		2.54		2130		79.8		586		3.64	
12-10-96	MR032 51-66	1.92		4.37		3310		134		1620		10.7	
12-10-96	MR031 46-61	1.98		3.23		3420		140		1620		12.3	
11-26-96	MR031 24-46	2.07		3.44		3760		105		1830		13.6	
11-19-96	MR031 0-24	1.87		3.30		3320		131		1930		16.8	
12/28/95	MR-12/0-24	2.05		3.86		3470		148		2390		18.2	
12/28/95	MR-12/34-46	2.38		3.78		4070		126		1040		10.3	
12/28/95	MR-12/24-34	2.17		3.63		3850		130		1780		13.5	
5/28/96	MR25 0-27	2.04		5.32		4220		94.8		476		3.62	
5/28/96	MR25 27-40	2.17		4.37		4310		58.5		520		3.18	
11-26-96	MR030 0-24	1.96		4.42		3340		114		1220		9.22	
12-06-96	MR030 24-39	2.08		5.29		3390		81.3		747		5.20	
11-26-96	MR030 39-54	2.09		4.35		3610		118		1220		10.2	
5/09/96	MR03 0-17	1.87		4.35		3930		27.8	MQL	376		2.33	
5/24/96	MR19 0-24	2.53		3.58		3190		69.9		593		4.54	
5/24/96	MR19 24-36	2.41		4.04		4230		103		576		4.35	
5/24/96	MR19 47-59.5	2.43		3.81		4290		110		526		4.45	
11-27-96	MR056 0-24	2.39		3.80		3990		89.5		672		5.95	
11-20-96	MR056 24-40	2.14		3.47		3890		78.9		574		4.76	
11-21-96	MR056 40-60	2.25		3.76		3920		65.0		615		3.61	

Sample Number	Ni ug/g DW	Remark	Cu ug/g DW	Remark	Pb ug/g DW	Remark	Hg ug/g DW	Remark	Ag ug/g DW	Remark	Cd ug/g DW	Remark
MR-14/24-36	85.1		65.7		72.7		< 4	MDL	3.18	MQL	4.46	MQL
MR-14/60-77	72.9		74.4		76.5		< 4	MDL	< 2	MDL	ND	
MR11/0-24AR	62.1		69.3		83		ND		< 2	MDL	< 2	MDL
MR-11/24-43A	81.1		69.3		65.1		ND		< 2	MDL	< 2	MDL
MR11/43-52.5A	89.1		68.0		75.3		< 4	MDL	2.36	MQL	< 2	MDL
MR032 0-26	41.9	MQL	61.6		68.7		ND		< 2	MDL	4.88	MQL
MR032 46-51	31.6	MQL	79.1		74.2		< 4	MDL	< 2	MDL	< 2	MDL
MR032 51-66	71.0		70.2		95.3		< 4	MDL	< 2	MDL	4.50	MQL
MR031 46-61	67.0		66.7		155		ND		3.50	MQL	4.51	MQL
MR031 24-46	ND		89.0		165		< 4	MDL	5.23	MQL	2.05	MQL
MR031 0-24	ND		72.3		140		ND		< 2	MDL	4.72	MQL
MR-12/0-24	69.3		98.5		260		ND		4.13	MQL	ND	
MR-12/34-46	36.4	MQL	66.6		404		ND		ND		4.03	MQL
MR-12/24-34	65.8		69.7		276		ND		< 2	MDL	3.07	MQL
MR25 0-27	34.1	MQL	36.0		58.8		ND		ND		6.02	
MR25 27-40	22.9	MQL	37.0		56.6		<4	MDL	<2	MDL	3.87	MQL
MR030 0-24	95.9		61.1		131		ND		< 2	MDL	< 2	MDL
MR030 24-39	18.3	MQL	46.6		122		ND		ND		< 2	MDL
MR030 39-54	92.0		57.2		269		ND		< 2	MDL	< 2	MDL
MR03 0-17	23.1	MQL	17.8		20.6		ND		ND		2.96	MQL
MR19 0-24	40.6	MQL	42.8		111		ND		<2	MDL	ND	
MR19 24-36	48.8		59.5		134		ND		ND		3.06	MQL
MR19 47-59.5	33.5	MQL	66.6		115		ND		ND		2.69	MQL
MR056 0-24	92.0		52.8		664		< 4	MDL	< 2	MDL	< 2	MDL
MR056 24-40	38.3	MQL	41.9		350		ND		3.11	MQL	< 2	MDL
MR056 40-60	65.2		35.2		48.8		ND		2.08	MQL	ND	

Sample Number	Sb ug/g DW	Remark	Ba ug/g DW	Remark	Zn ug/g DW	Remark	As ug/g DW	Remark	Se ug/g DW	Remark	Br ug/g DW	Remark
MR-14/24-36	2.13	MQL	387		264		14.6	MQL	ND		< 9	MDL
MR-14/60-77	8.57		348		282		22.0		< 5	MDL	< 9	MDL
MR11/0-24AR	< 2	MDL	344		229		16.9	MQL	< 5	MDL	< 9	MDL
MR-11/24-43A	4.54	MQL	365		240		22.2		< 5	MDL	< 9	MDL
MR11/43-52.5A	< 2	MDL	316		251		12.6	MQL	< 5	MDL	< 9	MDL
MR032 0-26	< 2	MDL	499		219		7.81	MQL	< 5	MDL	< 9	MDL
MR032 46-51	< 2	MDL	127		198		21.8		< 5	MDL	< 9	MDL
MR032 51-66	5.62	MQL	502		450		23.9		< 5	MDL	< 9	MDL
MR031 46-61	7.05		517		751		32.3		< 5	MDL	< 9	MDL
MR031 24-46	4.82	MQL	651		747		32.3		< 5	MDL	ND	
MR031 0-24	< 2	MDL	560		708		19.3	MQL	ND		< 9	MDL
MR-12/0-24	4.05	MQL	528		1340		55.2		< 5	MDL	< 9	MDL
MR-12/34-46	5.10	MQL	318		943		47.1		ND		< 9	MDL
MR-12/24-34	4.94	MQL	435		1110		26.4	MQL	< 5	MDL	< 9	MDL
MR25 0-27	4.96	MQL	613		181		9.10	MQL	<5	MDL	< 9	MDL
MR25 27-40	ND		587		116		3.58	MQL	<5	MDL	< 9	MDL
MR030 0-24	< 2	MDL	587		585		39.1		ND		< 9	MDL
MR030 24-39	5.49	MQL	565		285		13.5	MQL	< 5	MDL	ND	
MR030 39-54	4.56	MQL	614		907		41.8		< 5	MDL	< 9	MDL
MR03 0-17	ND		551		57.5		<3.95	MDL	<5	MDL	< 9	MDL
MR19 0-24	4.50	MQL	602		237		10.2	MQL	ND		< 9	MDL
MR19 24-36	ND		614		182		7.67	MQL	<5	MDL	< 9	MDL
MR19 47-59.5	<2	MDL	662		206		8.67	MQL	ND		< 9	MDL
MR056 0-24	ND		521		453		21.0	MQL	< 5	MDL	< 9	MDL
MR056 24-40	ND		526		217		MDL		ND		< 9	MDL
MR056 40-60	4.58	MQL	519		95.9		10.2	MQL	ND		< 9	MDL

Analysis Date	Sample Number	K % DW	Remark	Ca % DW	Remark	Ti ug/g DW	Remark	Cr ug/g DW	Remark	Mn ug/g DW	Remark	Fe % DW	Remark
11-20-96	MR057 0-24	2.37		3.43		3810		87.8		554		4.31	
11-21-96	MR057 24-38	2.26		3.79		3810		94.7		514		3.97	
11-21-96	MR057 38-79	2.24		4.00		3890		88.3		535		4.02	
12/27/95	MR-01/0-24	2.43		4.08		4160		103		599		4.32	
12/27/95	MR-01/38-48	2.49		5.28		4200		220		621		4.81	
12/27/95	MR-01/60-66.5	2.41		5.25		4150		147		696		4.89	
12-10-96	MR055 0-24	2.10		4.17		3740		63.7		415		2.97	
11-20-96	MR055 24-35	1.97		4.58		3640		65.3		554		2.91	
5/23/96	MR26 0-24	2.06		5.45		3980		460		506		4.09	
5/28/96	MR26 24-36	2.43		3.84		3880		77.7		577		4.48	
12-06-96	MR041A 0-24	2.02		4.54		3670		252		447		4.07	
12-09-96	MR041A 24-39	1.97		4.79		3760		45.6		474		2.68	
12/29/95	MR-02/0-24AR	2.21		4.69		3970		171		610		5.16	
12/29/95	MR-02/25-38A	2.05		4.96		3800		68.8		553		4.45	
12/29/95	MR-02/40-53A	2.38		3.75		4280		55.3		564		4.32	
11-26-96	MR054 0-24	2.25		3.23		3940		352		489		6.59	
11-21-96	MR054 24-46	2.21		3.34		3800		345		476		5.04	
11-20-96	MR054 46-70	2.20		3.27		140		456		540		5.96	
12/27/95	MR-29/0-24	2.27		3.87		4080		403		553		5.71	
12/27/95	MR-29/40-60	2.18		3.72		4320		622		576		6.77	
12/28/95	MR-29/60-72	2.27		2.94		4060		524		533		6.82	
11-25-96	MR042 0-24	2.02		4.98		3840		323		667		5.30	
11-25-96	MR042 24-57	2.23		3.89		4080		293		579		5.32	
12/28/95	MR-24/0-24	2.81		2.20		4390		152		505		5.19	
12/28/95	MR-24/24-40	2.50		3.45		4220		155		495		4.44	
12/28/95	MR-24/40-52	2.17		3.99		4120		83.9		559		3.45	

Sample Number	Ni ug/g DW	Remark	Cu ug/g DW	Remark	Pb ug/g DW	Remark	Hg ug/g DW	Remark	Ag ug/g DW	Remark	Cd ug/g DW	Remark
MR057 0-24	49.3		41.0		35.8		ND		ND		< 2	MDL
MR057 24-38	86.7		48.0		49.9		ND		< 2	MDL	< 2	MDL
MR057 38-79	106		67.9		47.2		ND		4.69	MQL	2.79	MQL
MR-01/0-24	76.8		58.9		42.4		ND		< 2	MDL	3.78	MQL
MR-01/38-48	98.9		103		104		< 4	MDL	4.72	MQL	3.81	MQL
MR-01/60-66.5	61.5		84.9		131		4.05	MQL	< 2	MDL	5.08	MQL
MR055 0-24	< 15	MDL	24.9		32.9		< 4	MDL	ND		< 2	MDL
MR055 24-35	36.4	MQL	25.7		25.0		ND		ND		< 2	MDL
MR26 0-24	141		213.7		176		ND		9.70		15.8	
MR26 24-36	56.4		51.8		130		ND		<2	MDL	ND	
MR041A 0-24	78.0		138		143		ND		5.25	MQL	9.39	
MR041A 24-39	80.8		24.5		< 5	MDL	ND		ND		ND	
MR-02/0-24AR	116		111		144		ND		3.30	MQL	3.67	MQL
MR-02/25-38A	90.9		78.1		183		6.15	MQL	< 2	MDL	2.43	MQL
MR-02/40-53A	78.5		59.6		84.4		ND		4.19	MQL	< 2	MDL
MR054 0-24	227		145		110		ND		16.6		4.77	MQL
MR054 24-46	197		134		121		ND		12.2		5.81	MQL
MR054 46-70	205		231		248		ND		12.3		7.50	
MR-29/0-24	222		146		127		ND		5.62	MQL	2.54	MQL
MR-29/40-60	284		329		298		ND		9.71		11.2	
MR-29/60-72	255		247		210		ND		4.08	MQL	4.31	MQL
MR042 0-24	157		121		136		ND		8.63		9.59	
MR042 24-57	138		143		149		ND		9.71		11.7	
MR-24/0-24	81.5		132		102		ND		3.01	MQL	3.68	MQL
MR-24/24-40	65.3		117		118		ND		< 2	MDL	< 2	MDL
MR-24/40-52	41.1	MQL	49.3		61.5		ND		ND		2.56	MQL

Sample Number	Sb ug/g DW	Remark	Ba ug/g DW	Remark	Zn ug/g DW	Remark	As ug/g DW	Remark	Se ug/g DW	Remark	Br ug/g DW	Remark
MR057 0-24	2.49	MQL	577		271		10.8	MQL	ND		< 9	MDL
MR057 24-38	ND		448		164		15.2	MQL	ND		< 9	MDL
MR057 38-79	ND		465		201		15.7	MQL	< 5	MDL	< 9	MDL
MR-01/0-24	< 2	MDL	309		268		13.9	MQL	< 5	MDL	< 9	MDL
MR-01/38-48	ND		289		403		18.6	MQL	< 5	MDL	< 9	MDL
MR-01/60-66.5	4.80	MQL	386		298		15.5	MQL	ND		< 9	MDL
MR055 0-24	ND		473		109		7.96	MQL	ND		< 9	MDL
MR055 24-35	ND		503		74.2		MDL		< 5	MDL	< 9	MDL
MR26 0-24	<2	MDL	654		752		6.09	MQL	ND		< 9	MDL
MR26 24-36	5.21	MQL	592		228		20.6	MQL	<5	MDL	< 9	MDL
MR041A 0-24	< 2	MDL	613		507		MDL		< 5	MDL	< 9	MDL
MR041A 24-39	3.20	MQL	199		74		13.2		ND		< 9	MDL
MR-02/0-24AR	5.26	MQL	353		425		25.7		< 5	MDL	< 9	MDL
MR-02/25-38A	2.50	MQL	380		474		27.5		< 5	MDL	< 9	MDL
MR-02/40-53A	ND		316		283		33.5		< 5	MDL	< 9	MDL
MR054 0-24	2.47	MQL	710		1120		24.9		< 5	MDL	< 9	MDL
MR054 24-46	3.46	MQL	611		617		21.2	MQL	< 5	MDL	9.39	
MR054 46-70	6.86		889		975		ND		< 5	MDL	< 9	MDL
MR-29/0-24	6.52		284		918		16.7	MQL	< 5	MDL	9.406	MQL
MR-29/40-60	5.23	MQL	479		1310		16.3	MQL	8.12	MQL	10.688	MQL
MR-29/60-72	2.23	MQL	258		1012		10.6	MQL	< 5	MDL	9.783	MQL
MR042 0-24	6.33		766		611		10.4	MQL	< 5	MDL	< 9	MDL
MR042 24-57	6.34		749		624		MDL		< 5	MDL	< 9	MDL
MR-24/0-24	2.31	MQL	306		343		7.95	MQL	< 5	MDL	< 9	MDL
MR-24/24-40	ND		192		297		11.6	MQL	< 5	MDL	< 9	MDL
MR-24/40-52	< 2	MDL	443		153		10.7	MQL	< 5	MDL	< 9	MDL

Analysis Date	Sample Number	K % DW	Remark	Ca % DW	Remark	Ti ug/g DW	Remark	Cr ug/g DW	Remark	Mn ug/g DW	Remark	Fe % DW	Remark
5/28/96	MR23 0-24	2.35		3.91		3590		124		527		4.48	
5/23/96	MR23 24-37.5	2.21		4.70		4500		67.3		517		3.49	
11-19-96	MR051 0-24	2.36		3.50		4030		80.9		550		4.22	
12-04-96	MR051 24-55	2.37		3.75		3980		98.7		535		4.22	
12-04-96	MR051 55-73	2.42		3.76		4230		90.1		559		4.14	
11-21-96	MR050 0-24	2.49		4.18		4020		85.3		549		4.46	
11-25-96	MR050 24-48	2.42		5.66		4420		133		539		4.29	
11-20-96	MR050 48-72	2.18		4.18		3820		170		514		4.11	
11-19-96	MR052 0-24	2.01		5.44		3600		75.0		515		3.21	
12-04-96	MR052 24-33	2.16		5.20		3940		30.0	MQL	544		3.23	
11-20-96	MR053 0-24	2.15		4.39		3670		112		529		3.96	
11-19-96	MR053 24-52	2.20		5.61		3890		131		586		4.10	
12-06-96	MR34 DA 0-24	2.28		5.73		3970		139		581		4.20	
12-10-96	MR034 DA 24-44	1.99		11.6		3620		198		562		3.96	
12-10-96	MR034 DA 44-59	2.06		7.30		3710		155		550		3.91	
5/24/96	MR18 0-24-DAR	2.82		1.51		4110		106		663		5.06	
5/23/96	MR18 24-57-DA	2.86		1.87		3860		111		583		5.05	
5/23/96	MR18 57-67-RA	2.19		12.40		4000		251		594		4.29	
11-20-96	MR039 0-24	2.43		2.76		3770		98.5		551		4.66	
1-11-96	MR039 24-30	2.45		3.82		3880		96.5		543		4.58	
11-19-96	MR039 30-54	2.16		9.80		3720		188		523		4.04	
12-13-96	MR039 54-108	2.31		7.42		4040		184		578		4.36	
12-03-96	MR040 0-14	2.13		6.25		3590		58.3		533		3.61	
12-13-96	MR038 0-24	1.95		6.63		3300		106		452		3.12	
12-09-96	MR038 31-49	2.37		0.487		3460		77.0		177		3.15	

Sample Number	Ni ug/g DW	Remark	Cu ug/g DW	Remark	Pb ug/g DW	Remark	Hg ug/g DW	Remark	Ag ug/g DW	Remark	Cd ug/g DW	Remark
MR23 0-24	70.8		72.9		119		ND		<2	MDL	2.54	MQL
MR23 24-37.5	47.1		54.9		78.9		<4	MDL	ND		<2	MDL
MR051 0-24	29.1	MQL	45.3		34.8		ND		< 2	MDL	2.48	MQL
MR051 24-55	103		53.7		34.2		ND		< 2	MDL	< 2	MDL
MR051 55-73	84.1		44.0		37.2		ND		< 2	MDL	< 2	MDL
MR050 0-24	73.4		49.0		36.3		ND		< 2	MDL	< 2	MDL
MR050 24-48	57.6		58.5		61.3		ND		ND		5.86	MQL
MR050 48-72	69.8		82.4		77.8		ND		6.17		5.30	MQL
MR052 0-24	18.1	MQL	30.6		30.2		ND		ND		< 2	MDL
MR052 24-33	65.5		29.7		30.5		ND		ND		< 2	MDL
MR053 0-24	60.7		59.2		48.0		ND		ND		3.52	MQL
MR053 24-52	41.4	MQL	76.0		82.6		ND		< 2	MDL	4.88	MQL
MR34 DA 0-24	33.4	MQL	76.7		44.2		ND		ND		< 2	MDL
MR034 DA 24-44	41.7	MQL	139		78.1		ND		ND		4.45	MQL
MR034 DA 44-59	53.4		92.1		74.7		ND		< 2	MDL	3.34	MQL
MR18 0-24-DAR	56.3		42.2		32.5		ND		<2	MDL	ND	
MR18 24-57-DA	53.2		56.7		31.8		ND		<2	MDL	ND	
MR18 57-67-RA	75.5		127		96.0		<4	MDL	<2	MDL	<2	MDL
MR039 0-24	76.0		44.4		18.3		ND		ND		2.38	MQL
MR039 24-30	36.3	MQL	51.3		45.8		ND		2.73	MQL	3.97	MQL
MR039 30-54	ND		132		92.1		ND		< 2	MDL	2.97	MQL
MR039 54-108	73.4		123		96.0		ND		ND		3.41	MQL
MR040 0-14	65.8		48.1		30.0		ND		2.18	MQL	ND	
MR038 0-24	41.1	MQL	70.8		66.6		ND		ND		< 2	MDL
MR038 31-49	46.6		60.6		21.2		ND		< 2	MDL	< 2	MDL

Sample Number	Sb ug/g DW	Remark	Ba ug/g DW	Remark	Zn ug/g DW	Remark	As ug/g DW	Remark	Se ug/g DW	Remark	Br ug/g DW	Remark
MR23 0-24	4.05	MQL	621		315		14.0	MQL	ND		< 9	MDL
MR23 24-37.5	ND		575		193		16.3	MQL	ND		< 9	MDL
MR051 0-24	2.44	MQL	548		168		MDL		ND		< 9	MDL
MR051 24-55	ND		492		227		13.6	MQL	ND		< 9	MDL
MR051 55-73	< 2	MDL	529		177		11.4	MQL	ND		< 9	MDL
MR050 0-24	ND		566		227		12.7	MQL	< 5	MDL	< 9	MDL
MR050 24-48	ND		622		242		18.2		< 5	MDL	< 9	MDL
MR050 48-72	ND		529		301		9.45	MQL	< 5	MDL	< 9	MDL
MR052 0-24	< 2	MDL	530		103		11.9	MQL	ND		< 9	MDL
MR052 24-33	ND		403		96.8		14.6		< 5	MDL	< 9	MDL
MR053 0-24	ND		502		209		14.4	MQL	< 5	MDL	< 9	MDL
MR053 24-52	5.17	MQL	538		228		MDL		ND		< 9	MDL
MR34 DA 0-24	ND		572		245		14.6	MQL	< 5	MDL	< 9	MDL
MR034 DA 24-44	6.83		539		197		13.2	MQL	< 5	MDL	< 9	MDL
MR034 DA 44-59	3.05	MQL	544		183		7.30	MQL	< 5	MDL	ND	
MR18 0-24-DAR	2.08	MQL	654		195		9.84	MQL	<5	MDL	< 9	MDL
MR18 24-57-DA	<2	MDL	664		208		11.1	MQL	ND		< 9	MDL
MR18 57-67-RA	3.52	MQL	600		299		6.67	MQL	<5	MDL	< 9	MDL
MR039 0-24	2.44	MQL	517		203		19.1		ND		< 9	MDL
MR039 24-30	4.83	MQL	565		297		7.61	MQL	< 5	MDL	< 9	MDL
MR039 30-54	3.53	MQL	345		221		8.29	MQL	ND		< 9	MDL
MR039 54-108	6.03		548		234		12.7	MQL	< 5	MDL	< 9	MDL
MR040 0-14	ND		504		121		MDL		< 5	MDL	< 9	MDL
MR038 0-24	ND		548		147		14.8	MQL	< 5	MDL	< 9	MDL
MR038 31-49	< 2	MDL	546		139		11.2	MQL	ND		< 9	MDL

Analysis Date	Sample Number	K % DW	Remark	Ca % DW	Remark	Ti ug/g DW	Remark	Cr ug/g DW	Remark	Mn ug/g DW	Remark	Fe % DW	Remark
12-13-96	MR037 0-24	2.47		4.10		4040		98.0		564		4.55	
11-27-96	MR037 40-50	2.24		8.46		3730		167		480		4.07	
12-04-96	MR037 50-76	2.05		10.5		3710		219		545		3.88	
12-10-96	MR036 0-24	2.65		2.94		4120		111		608		4.88	
12-04-96	MR036 30-46	2.32		7.34		4010		155		570		4.38	
11-27-96	MR036 56-87	2.15		10.5		3720		258		579		4.17	
12-06-96	MR043A 0-24	2.49		3.54		3210		112		612		4.47	
12-10-96	MR043A 24-55	2.36		6.40		4070		91.1		550		4.17	
12-11-96	MR043A 55-73	2.12		11.0		3710		117		517		3.93	
12-13-96	MR035 0-24	2.37		3.64		3930		114		595		4.33	
11-25-96	MR035 24-38	2.17		3.91		3650		97.4		518		4.01	
12-13-96	MR035 38-72	2.25		4.48		4020		102		559		4.08	
11-26-96	MR058 0-11	2.21		2.08		5850		125		348		7.21	
11-20-96	MR059 0-24	2.37		3.07		3860		79.8		583		4.44	
11-20-96	MR059 24-48	2.27		3.15		4930		106		430		5.02	
11-20-96	MR059 48-76	2.21		3.77		3900		93.4		483		4.19	
11-19-96	OC04 0-26	1.07		40.2		1760		295		482		2.07	
11-19-96	OC04 26-46	1.70		16.1		3290		409		380		3.14	
11-20-96	OC04 46-60	1.94		3.45		3580		55.2		342		3.28	
11-26-96	OC05 0-24	2.02		16.3		3480		411		518		3.73	
11-26-96	OC05 24-46	1.07		37.9		1970		339		483		2.09	
11-27-96	OC06 0-24	1.63		17.4		3290		471		491		3.57	
11-19-96	OC06 24-36	2.00		4.09		4210		60.2		362		2.82	
11-19-96	OC07 0-24	1.96		6.69		3940		129		452		3.36	
11-19-96	OC07 24-60	2.02		3.51		4050		52.2		342		2.92	

Sample Number	Ni ug/g DW	Remark	Cu ug/g DW	Remark	Pb ug/g DW	Remark	Hg ug/g DW	Remark	Ag ug/g DW	Remark	Cd ug/g DW	Remark
MR037 0-24	59.0		47.2		40.6		< 4	MDL	< 2	MDL	2.79	MQL
MR037 40-50	65.7		86.6		52.7		ND		< 2	MDL	6.41	
MR037 50-76	90.2		131		63.6		ND		< 2	MDL	2.64	MQL
MR036 0-24	36.6	MQL	55.4		31.5		< 4	MDL	< 2	MDL	< 2	MDL
MR036 30-46	87.2		68.0		40.1		ND		4.131	MQL	ND	
MR036 56-87	57.6		124		99.0		ND		ND		4.97	MQL
MR043A 0-24	ND		48.9		38.9		ND		< 2	MDL	< 2	MDL
MR043A 24-55	43.8	MQL	61.7		50.1		ND		2.25	MQL	< 2	MDL
MR043A 55-73	72.6		61.3		50.0		ND		4.68	MQL	< 2	MDL
MR035 0-24	41.4	MQL	48.3		25.0		ND		3.69	MQL	< 2	MDL
MR035 24-38	68.4		63.2		25.6		ND		ND		ND	
MR035 38-72	44.5	MQL	58.6		50.7		ND		< 2	MDL	2.92	MQL
MR058 0-11	97.9		117		40.6		< 4	MDL	2.05	MQL	ND	
MR059 0-24	60.9		50.2		33.2		ND		< 2	MDL	< 2	MDL
MR059 24-48	92.3		83.2		38.1		MDL		MDL		3.75	
MR059 48-76	89.4		56.1		32.1		ND		ND		4.43	
OC04 0-26	51.2		98.0		112		< 4	MDL	3.31	MQL	2.20	MQL
OC04 26-46	ND		180		183		ND		< 2	MDL	< 2	MDL
OC04 46-60	73.4		47.9		8.73	MQL	ND		< 2	MDL	ND	
OC05 0-24	53.5		176		82.4		< 4	MDL	2.24	MQL	ND	
OC05 24-46	23.4	MQL	117		94.1		< 4	MDL	4.75	MQL	3.31	MQL
OC06 0-24	76.5		248		104		ND		ND		ND	
OC06 24-36	23.8	MQL	26.9		18.4		ND		< 2	MDL	< 2	MDL
OC07 0-24	< 15	MDL	171		131		ND		2.85	MQL	ND	
OC07 24-60	ND		36.5		20.1		ND		ND		ND	

Sample Number	Sb ug/g DW	Remark	Ba ug/g DW	Remark	Zn ug/g DW	Remark	As ug/g DW	Remark	Se ug/g DW	Remark	Br ug/g DW	Remark
MR037 0-24	4.46	MQL	585		227		9.43	MQL	ND		< 9	MDL
MR037 40-50	< 2	MDL	592		221		13.3	MQL	< 5	MDL	< 9	MDL
MR037 50-76	3.29	MQL	459		204		25.6		< 5	MDL	< 9	MDL
MR036 0-24	< 2	MDL	661		203		14.8		ND		< 9	MDL
MR036 30-46	< 2	MDL	576		249		18.7		< 5	MDL	< 9	MDL
MR036 56-87	< 2	MDL	506		234		MDL		< 5	MDL	< 9	MDL
MR043A 0-24	3.48	MQL	523		199		6.51	MQL	< 5	MDL	< 9	MDL
MR043A 24-55	ND		572		215		MDL		< 5	MDL	< 9	MDL
MR043A 55-73	2.71	MQL	522		216		9.88	MQL	< 5	MDL	< 9	MDL
MR035 0-24	< 2	MDL	609		188		15.6		< 5	MDL	< 9	MDL
MR035 24-38	4.06	MQL	472		211		18.3		< 5	MDL	< 9	MDL
MR035 38-72	5.51	MQL	595		187		7.82	MQL	< 5	MDL	< 9	MDL
MR058 0-11	< 2	MDL	856		158		74.1		< 5	MDL	< 9	MDL
MR059 0-24	3.58	MQL	562		213		16.1	MQL	ND		< 9	MDL
MR059 24-48	ND		655		168		62.5		6.38	MQL	< 9	MDL
MR059 48-76	3.06		512		198		19.3		< 5	MDL	< 9	MDL
OC04 0-26	ND		310		234		15.2	MQL	< 5	MDL	9.25	MQL
OC04 26-46	ND		319		151		MDL		< 5	MDL	< 9	MDL
OC04 46-60	< 2	MDL	295		89.6		11.0	MQL	< 5	MDL	21.3	MQL
OC05 0-24	2.13	MQL	518		341		15.8	MQL	5.85	MQL	< 9	MDL
OC05 24-46	7.84		366		200		MDL		< 5	MDL	< 9	MDL
OC06 0-24	< 2	MDL	376		353		16.5	MQL	< 5	MDL	< 9	MDL
OC06 24-36	ND		373		68.7		5.25	MQL	< 5	MDL	< 9	MDL
OC07 0-24	6.20		372		159		ND		< 5	MDL	< 9	MDL
OC07 24-60	ND		363		71.1		MDL		< 5	MDL	< 9	MDL

Analysis Date	Sample Number	K % DW	Remark	Ca % DW	Remark	Ti ug/g DW	Remark	Cr ug/g DW	Remark	Mn ug/g DW	Remark	Fe % DW	Remark
12-06-96	**OC08A 0-24**	1.99		7.19		3790		95.0		448		3.26	
11-26-96	**OC08A 24-51**	2.05		6.65		3860		56.4		471		3.04	
12-03-96	**OC09 0-24**	1.95		12.5		3530		190		549		3.75	
12-03-96	**OC09 24-40**	1.32		24.1		2600		485		466		3.10	
12-03-96	**OC10 0-24**	1.85		8.61		3470		168		475		3.58	
12-10-96	**OC10 24-29**	1.91		6.11		3950		34.3	MQL	447		2.77	
12-03-96	**OC10 29-50**	1.90		4.81		3660		45.3		383		2.43	
12-09-96	**OC11 0-24**	1.78		19.6		3340		319		568		3.47	
12-03-96	**OC11 24-35**	2.02		7.10		3670		276		643		4.40	
12-03-96	**OC11 35-48**	2.08		4.20		3410		86.8		388		4.04	
11-26-96	**OC12 0-26**	1.83		13.2		3490		219		510		3.31	
11-26-96	**OC12 26-50**	1.91		5.80		3690		51.0		418		2.70	
12/27/95	**OC-01/0-24 ARP**	1.74		17.8		3270		279		547		3.67	
12/27/95	**OC-01/28-34A**	2.03		4.38		3390		102		390		3.50	
12/27/95	**OC-01/45-60A**	2.17		0.725		3030		55.6		189		2.95	
12/26/95	**OC-02/0-24**	1.80		17.2		3620		208		638		3.67	
12/26/95	**OC-02/35-43**	1.74		9.18		3220		300		438		3.23	
12/26/95	**OC-02/43-48**	2.83		0.659		3620		88.6		225		3.55	
12/26/95	**OC-03/0-8**	2.02		11.7		3450		142		641		3.58	
5/28/96	**OR01 0-24**	2.09		5.87		3670		226		593		3.93	
5/28/96	**OR01 24-35**	1.90		7.17		3830		120		432		3.34	
5/28/96	**OR01 40-60**	1.15		3.52		3930		50.1		314		3.61	
5/28/96	**OR02 0-24**	2.07		5.63		4020		197		547		3.84	
5/28/96	**OR02 24-36**	2.13		6.19		3730		207		436		3.70	
5/28/96	**OR02 64-76**	1.80		6.84		3960		52.2		380		2.82	

Sample Number	Ni ug/g DW	Remark	Cu ug/g DW	Remark	Pb ug/g DW	Remark	Hg ug/g DW	Remark	Ag ug/g DW	Remark	Cd ug/g DW	Remark
OC08A 0-24	ND		81.3		146		ND		ND		< 2	MDL
OC08A 24-51	27.4	MQL	32.4		40.9		ND		ND		2.03	MQL
OC09 0-24	32.6	MQL	132		82.7		ND		ND		< 2	MDL
OC09 24-40	39.9	MQL	281		224		< 4	MDL	ND		2.43	MQL
OC10 0-24	70.8		259		1240		< 4	MDL	ND		ND	
OC10 24-29	< 15	MDL	23.2		29.4		ND		ND		ND	
OC10 29-50	35.7	MQL	25.6		9.38	MQL	ND		ND		< 2	MDL
OC11 0-24	46.0		144		101		ND		< 2	MDL	ND	
OC11 24-35	70.9		381		352		ND		< 2	MDL	< 2	MDL
OC11 35-48	70.3		419		593		ND		2.77	MQL	< 2	MDL
OC12 0-26	44.2	MQL	119		306		ND		ND		3.41	MQL
OC12 26-50	15.8	MQL	29.5		23.1		ND		ND		ND	
OC-01/0-24 ARP	63.1		178		112		5.02	MQL	ND		3.42	MQL
OC-01/28-34A	62.6		314		989		< 4	MDL	< 2	MDL	< 2	MDL
OC-01/45-60A	63.2		33.5		11.9	MQL	ND		< 2	MDL	< 2	MDL
OC-02/0-24	44.0	MQL	102		57.8		ND		< 2	MDL	6.20	
OC-02/35-43	29.4	MQL	217		470		ND		< 2	MDL	ND	
OC-02/43-48	73.2		70.3		35		ND		3.70	MQL	2.22	MQL
OC-03/0-8	40.5	MQL	81.2		49.0		ND		< 2	MDL	< 2	MDL
OR01 0-24	119		102		131		ND		<2	MDL	4.91	MQL
OR01 24-35	62.4		54.6		58.3		<4	MDL	ND		3.60	MQL
OR01 40-60	66.8		60.3		6.41	MQL	ND		<2	MDL	ND	
OR02 0-24	124		109		127		ND		<2	MDL	4.06	MQL
OR02 24-36	78.6		110		110		ND		<2	MDL	2.77	MQL
OR02 64-76	47.3		30.7		<5	MDL	ND		<2	MDL	ND	

Sample Number	Sb ug/g DW	Remark	Ba ug/g DW	Remark	Zn ug/g DW	Remark	As ug/g DW	Remark	Se ug/g DW	Remark	Br ug/g DW	Remark
OC08A 0-24	ND		418		197		ND		< 5	MDL	< 9	MDL
OC08A 24-51	< 2	MDL	533		83.9		10.2	MQL	ND		< 9	MDL
OC09 0-24	4.70	MQL	535		238		12.2	MQL	< 5	MDL	< 9	MDL
OC09 24-40	ND		395		177		21.5	MQL	ND		< 9	MDL
OC10 0-24	4.29	MQL	459		200		MDL		< 5	MDL	< 9	MDL
OC10 24-29	ND		486		61.3		7.13	MQL	ND		< 9	MDL
OC10 29-50	ND		544		69.8		MDL		< 5	MDL	< 9	MDL
OC11 0-24	7.44		498		224		MDL		< 5	MDL	< 9	MDL
OC11 24-35	3.38	MQL	511		233		25.1	MQL	< 5	MDL	< 9	MDL
OC11 35-48	4.30	MQL	443		227		MDL		ND		< 9	MDL
OC12 0-26	2.91	MQL	483		166		ND		ND		< 9	MDL
OC12 26-50	2.30	MQL	546		75.1		8.50	MQL	< 5	MDL	< 9	MDL
OC-01/0-24 ARP	4.49	MQL	381		223		15.5	MQL	< 5	MDL	< 9	MDL
OC-01/28-34A	< 2	MDL	313		165		< 18.1	MDL	< 5	MDL	< 9	MDL
OC-01/45-60A	ND		256		97.4		8.89	MQL	ND		< 9	MDL
OC-02/0-24	ND		306		198		18.4	MQL	< 5	MDL	< 9	MDL
OC-02/35-43	< 2	MDL	472		121		< 13.5	MDL	ND		< 9	MDL
OC-02/43-48	ND		368		174		7.49	MQL	< 5	MDL	< 9	MDL
OC-03/0-8	3.40	MQL	424		179		16.7	MQL	ND		< 9	MDL
OR01 0-24	5.00	MQL	598		313		24.4		< 5	MDL	< 9	MDL
OR01 24-35	3.47	MQL	472		159		7.47	MQL	< 5	MDL	9.51	MQL
OR01 40-60	4.31	MQL	111		60.2		25.0		< 5	MDL	66.1	
OR02 0-24	ND		554		305		13.2	MQL	ND		< 9	MDL
OR02 24-36	< 2	MDL	478		304		15.9	MQL	< 5	MDL	< 9	MDL
OR02 64-76	ND		322		72.7		7.81	MQL	< 5	MDL	16.6	MQL

Analysis Date	Sample Number	K % DW	Remark	Ca % DW	Remark	Ti ug/g DW	Remark	Cr ug/g DW	Remark	Mn ug/g DW	Remark	Fe % DW	Remark
11-26-96	OR06 0-24	2.13		6.09		3950		96.7		527		3.84	
11-21-96	OR06 24-40	2.08		3.98		4050		111		353		3.31	
11-21-96	OR06 40-53	2.03		3.22		3990		85.3		268		3.27	
12-02-96	OR07A 0-24	2.14		5.94		3920		113		572		3.84	
11-26-96	OR07A 30-57	1.58		3.99		3620		38.1	MQL	252		2.84	
11-26-96	OR07A 57-78	1.43		11.3		3320		50.7		322		3.25	
12-10-96	OR08A 0-24	2.15		5.23		3850		147		558		3.93	
12-04-96	OR08A 24-54	1.92		4.70		3750		50.8		442		3.42	
12-09-96	OR08A 54-90	1.44		6.45		3910		44.3	MQL	286		2.78	
5/28/96	OR03 0-24	2.03		6.21		3450		158		524		3.67	
5/28/96	OR03 24-36	1.61		7.78		3480		49.3		359		2.82	
5/28/96	OR03 54-67	1.71		6.10		3550		69.1		355		2.89	
11-26-96	OR09A 0-24	1.86		7.40		3630		94.6		527		3.37	
11-25-96	OR09A 24-60	1.49		10.5		3090		32.9	MQL	391		2.84	
11-25-96	OR09A 60-83	1.43		11.4		3070		31.1	MQL	306		2.75	
5/28/96	OR04 0-24	1.95		5.10		3470		49.7		395		3.21	
5/28/96	OR04 24-36	1.60		8.95		4370		33.7	MQL	409		2.70	
5/29/96	OR04 56-62	1.64		5.51		3340		40.9	MQL	325		2.93	
11-26-96	OR05 0-24	1.49		5.23		2680		39.9	MQL	289		2.02	
12-10-96	OR05 24-40	1.40		4.50		2670		31.5	MQL	256		1.82	
12-02-96	SC04A 0-24	1.85		4.39		3740		829		498		3.42	
12-02-96	SC04A 24-39	2.07		4.68		4290		80.5		461		3.77	
12-09-96	SC04A 39-64	2.16		4.51		3860		76.0		433		4.20	
12-09-96	SC04A 64-81	2.04		4.16		3750		66.2		414		4.05	
12-10-96	SC04A 81-88	2.04		4.58		3860		58.0		440		3.70	

Sample Number	Ni ug/g DW	Remark	Cu ug/g DW	Remark	Pb ug/g DW	Remark	Hg ug/g DW	Remark	Ag ug/g DW	Remark	Cd ug/g DW	Remark
OR06 0-24	72.8		77.8		152		ND		< 2	MDL	ND	
OR06 24-40	97.3		67.4		123		ND		2.97	MQL	ND	
OR06 40-53	99.2		62.0		73.7		ND		2.52	MQL	< 2	MDL
OR07A 0-24	81.9		81.2		108		ND		< 2	MDL	4.25	MQL
OR07A 30-57	22.1	MQL	23.6		16.4		ND		ND		< 2	MDL
OR07A 57-78	38.2	MQL	33.3		10.2	MQL	ND		ND		< 2	MDL
OR08A 0-24	53.4		78.2		129		ND		2.90	MQL	ND	
OR08A 24-54	80.3		44.5		32.1		ND		ND		< 2	MDL
OR08A 54-90	46.2		24.8		9.78	MQL	ND		< 2	MDL	ND	
OR03 0-24	94.0		71.8		91.4		ND		2.65	MQL	<2	MDL
OR03 24-36	43.0	MQL	28.8		5.26	MQL	ND		<2	MDL	<2	MDL
OR03 54-67	40.0	MQL	36.7		17.6		ND		<2	MDL	2.09	MQL
OR09A 0-24	45.9		40.2		47.8		< 4	MDL	3.348	MQL	4.01	MQL
OR09A 24-60	50.7		23.4		< 5	MDL	ND		ND		< 2	MDL
OR09A 60-83	55.9		22.3		5.74	MQL	ND		< 2	MDL	ND	
OR04 0-24	67.7		60.2		53.4		ND		ND		3.70	MQL
OR04 24-36	49.9		18.0		11.2	MQL	ND		ND		<2	MDL
OR04 56-62	29.6	MQL	23.6		<5	MDL	ND		ND		ND	
OR05 0-24	MDL		14.3	MQL	12.7	MQL	ND		< 2	MDL	ND	
OR05 24-40	18.3	MQL	14.3	MQL	11.8	MQL	ND		< 2	MDL	ND	
SC04A 0-24	92.7		508		841		ND		2.05	MQL	4.86	MQL
SC04A 24-39	46.2		173		507		ND		3.80	MQL	3.88	MQL
SC04A 39-64	88.8		266		713		< 4	MDL	14.8		< 2	MDL
SC04A 64-81	87.1		260		456		ND		7.59		3.59	MQL
SC04A 81-88	60.6		178		351		ND		4.82	MQL	< 2	MDL

Sample Number	Sb ug/g DW	Remark	Ba ug/g DW	Remark	Zn ug/g DW	Remark	As ug/g DW	Remark	Se ug/g DW	Remark	Br ug/g DW	Remark
OR06 0-24	3.93	MQL	464		295		9.43	MQL	< 5	MDL	< 9	MDL
OR06 24-40	2.38	MQL	339		241		19.1	MQL	ND		10.1	
OR06 40-53	< 2	MDL	336		207		23.3		< 5	MDL	12.5	
OR07A 0-24	7.96		560		266		12.5	MQL	< 5	MDL	< 9	MDL
OR07A 30-57	< 2	MDL	332		60.9		MDL		< 5	MDL	13.7	
OR07A 57-78	4.42	MQL	280		65.0		5.06	MQL	ND		16.2	
OR08A 0-24	ND		508		284		ND		< 5	MDL	< 9	MDL
OR08A 24-54	ND		203		113		8.34	MQL	< 5	MDL	10.6	
OR08A 54-90	2.45	MQL	299		51.1		3.97	MQL	ND		10.6	
OR03 0-24	4.07	MQL	516		215		<6.68	MDL	<5	MDL	< 9	MDL
OR03 24-36	< 2	MDL	308		54.3		9.08	MQL	ND		14.3	MQL
OR03 54-67	3.22	MQL	351		70.1		<4.14	MDL	ND		17.2	MQL
OR09A 0-24	ND		450		154		7.12	MQL	< 5	MDL	11.1	
OR09A 24-60	< 2	MDL	230		64.6		8.22	MQL	< 5	MDL	11.9	
OR09A 60-83	< 2	MDL	261		52.6		5.69	MQL	< 5	MDL	11.2	
OR04 0-24	ND		455		175		16.8		< 5	MDL	10.5	MQL
OR04 24-36	ND		328		63.4		<4.15	MDL	ND		15.1	MQL
OR04 56-62	<2	MDL	351		64.9		6.24	MQL	< 5	MDL	15.4	MQL
OR05 0-24	< 2	MDL	425		39.2		MDL		ND		< 9	MDL
OR05 24-40	< 2	MDL	404		36.7		ND		ND		< 9	MDL
SC04A 0-24	88.9		610		982		ND		5.90	MQL	ND	
SC04A 24-39	17.4		622		630		15.91	MQL	< 5	MDL	ND	
SC04A 39-64	10.2		646		1150		251		ND		< 9	MDL
SC04A 64-81	3.91	MQL	576		1040		132		< 5	MDL	< 9	MDL
SC04A 81-88	7.79		587		753		71.2		< 5	MDL	< 9	MDL

Analysis Date	Sample Number	K % DW	Remark	Ca % DW	Remark	Ti ug/g DW	Remark	Cr ug/g DW	Remark	Mn ug/g DW	Remark	Fe % DW	Remark
12-02-96	SC05 0-24	1.80		4.59		3390		95.2		387		2.96	
11-19-96	SC05 24-53	2.13		4.13		3940		81.2		471		3.87	
11-21-96	SC05 53-65	2.00		4.09		3570		58.5		444		3.13	
11-21-96	SC06A 0-24	1.76		4.30		3260		253		447		2.90	
11-22-96	SC06A 36-61	2.00		4.63		3740		112		461		3.78	
11-22-96	SC06A 61-79	1.88		4.23		3600		57.0		420		3.91	
12/29/95	SC-02/0-24	1.92		4.31		3700		82.1		496		3.11	
12/29/95	SC-02/24-35	2.07		4.87		3930		81.8		476		3.47	
12/29/95	SC-02/35-54	2.10		4.67		3830		86.6		435		3.93	
12/29/95	SC-02/54-63	2.13		4.14		4110		67.8		480		3.92	
12/26/95	SC-01/0-24	2.29		4.83		3880		82.7		566		3.93	
12/26/95	SC-01/24-34	2.18		4.78		3710		67.6		449		3.13	
12/26/95	SC-01/34-44.5	2.16		5.67		3930		88.2		476		3.13	
12-10-96	SC07 0-24	1.90		4.20		3510		140		431		2.88	
12-11-96	SC07 24-50	2.07		4.12		3920		69.2		467		3.71	
11-22-96	SC07 50-83	1.82		3.81		3180		71.7		384		2.89	
12/26/95	SC-03/0-23	2.20		4.73		3840		67.2		595		3.48	
12/26/95	SC-03/23-33	2.06		4.68		3820		52.5		451		3.60	
12/28/95	EB-01/0-25	2.38		7.96		3980		71.1		561		3.32	
12/21/95	EB-03/0-23	2.16		4.98		4170		45.9		565		3.13	
12/21/95	EB-06/0-24DPA Rep.	2.24		6.13		3980		51.7		560		3.33	
12/21/95	EB-07/0-9	2.22		6.06		4010		70.9		600		3.01	
12/28/95	EB-12/0-16	2.23		5.70		4010		61.1		576		3.36	

Sample Number	Ni ug/g DW	Remark	Cu ug/g DW	Remark	Pb ug/g DW	Remark	Hg ug/g DW	Remark	Ag ug/g DW	Remark	Cd ug/g DW	Remark
SC05 0-24	34.6	MQL	139		365		ND		< 2	MDL	3.19	MQL
SC05 24-53	30.7	MQL	192		425		ND		< 2	MDL	< 2	MDL
SC05 53-65	56.7		128		159		ND		< 2	MDL	ND	
SC06A 0-24	80.3		265		468		ND		ND		6.17	
SC06A 36-61	55.9		212		496		ND		4.14	MQL	5.23	MQL
SC06A 61-79	65.6		249		746		ND		8.64		3.76	MQL
SC-02/0-24	58.5		275		532		< 4	MDL	2.65	MQL	3.38	MQL
SC-02/24-35	63.8		198		491		ND		5.83	MQL	2.04	MQL
SC-02/35-54	103		235		563		4.03	MQL	7.98		< 2	MDL
SC-02/54-63	107		209		339		ND		5.89	MQL	ND	
SC-01/0-24	42.9	MQL	55.2		51.1		ND		< 2	MDL	ND	
SC-01/24-34	25.5	MQL	58.9		90		< 4	MDL	< 2	MDL	5.13	MQL
SC-01/34-44.5	44.1	MQL	55		64.7		ND		ND		< 2	MDL
SC07 0-24	53.3		206		436		ND		2.84	MQL	5.19	MQL
SC07 24-50	46.0		164		405		ND		< 2	MDL	1.89	MQL
SC07 50-83	60.7		107		151		ND		3.26	MQL	2.60	MQL
SC-03/0-23	28.6	MQL	99.2		233		ND		3.28	MQL	2.05	MQL
SC-03/23-33	46.2		173		451		ND		5.27	MQL	2.54	MQL
EB-01/0-25	44.6	MQL	27.9		31.7		ND		ND		< 2	MDL
EB-03/0-23	< 15	MDL	24.6		32.1		< 4	MDL	< 2	MDL	ND	
EB-06/0-24DPA Rep.	15.3	MQL	25.3		33.6		ND		ND		< 2	MDL
EB-07/0-9	33.8	MQL	21.7		17.7		< 4	MDL	ND		< 2	MDL
EB-12/0-16	37.2	MQL	35.5		26.5		ND		< 2	MDL	3.1	MQL

Sample Number	Sb ug/g DW	Remark	Ba ug/g DW	Remark	Zn ug/g DW	Remark	As ug/g DW	Remark	Se ug/g DW	Remark	Br ug/g DW	Remark
SC05 0-24	21.0		616		459		ND		< 5	MDL	< 9	MDL
SC05 24-53	6.30		581		843		47.3		< 5	MDL	< 9	MDL
SC05 53-65	5.62	MQL	525		361		15.6	MQL	ND		< 9	MDL
SC06A 0-24	37.4		567		609		36.8	MQL	< 5	MDL	< 9	MDL
SC06A 36-61	20.8		657		735		69.6		< 5	MDL	< 9	MDL
SC06A 61-79	10.1		505		1080		363		< 5	MDL	< 9	MDL
SC-02/0-24	12.6		514		701		ND		< 5	MDL	< 9	MDL
SC-02/24-35	24.7		560		619		43.4		< 5	MDL	< 9	MDL
SC-02/35-54	5.28	MQL	442		994		221		< 5	MDL	< 9	MDL
SC-02/54-63	ND		404		806		121		ND		< 9	MDL
SC-01/0-24	ND		302		191		9.52	MQL	< 5	MDL	< 9	MDL
SC-01/24-34	< 2.0	MDL	390		157		ND		ND		< 9	MDL
SC-01/34-44.5	2.44	MQL	352		184		< 5.80	MDL	< 5	MDL	< 9	MDL
SC07 0-24	40.9		635		515		ND		< 5	MDL	< 9	MDL
SC07 24-50	11.1		653		866		63.9		< 5	MDL	< 9	MDL
SC07 50-83	ND		456		373		12.5	MQL	< 5	MDL	< 9	MDL
SC-03/0-23	8.46		378		322		< 9.36	MDL	< 5	MDL	< 9	MDL
SC-03/23-33	3.73	MQL	428		730		72		< 5	MDL	< 9	MDL
EB-01/0-25	ND		367		96.7		6.8	MQL	ND		< 9	MDL
EB-03/0-23	5.32	MQL	335		99.9		12.5	MQL	ND		< 9	MDL
EB-06/0-24DPA Rep.	ND		423		116		7.27	MQL	< 5	MDL	< 9	MDL
EB-07/0-9	ND		550		78.7		10.3	MQL	ND		< 9	MDL
EB-12/0-16	< 2	MDL	389		110		14.7		< 5	MDL	< 9	MDL

Analysis Date	Sample Number	K % DW	Remark	Ca % DW	Remark	Ti ug/g DW	Remark	Cr ug/g DW	Remark	Mn ug/g DW	Remark	Fe % DW	Remark
12/28/95	EB-24/0-24	2.23		5.49		3860		68.1		581		3.66	
12/28/95	EB-24/24-39.5	1.84		5.58		3460		18.7	MQL	522		2.25	
5/28/96	EB32 0-24	2.93		1.73		3870		113		503		5.22	
5/28/96	EB32 24-36	2.89		1.90		3870		87.1		614		5.17	
12/15/95	EB-32/57-66	2.57		3.88		4280		128		622		4.69	
12/21/95	EB-41/0-24	2.69		3.36		4370		109		675		4.87	
12/21/95	EB-41/36-48	2.53		4.06		4350		117		645		4.61	
5/20/96	WB01 0-24	2.12		2.88		3980		71.9		439		3.12	
5/20/96	WB01 24-40	2.07		2.97		3540		85.1		420		3.15	
5/20/96	WB01 40-48	1.97		3.60		3640		84.3		376		2.96	
5/20/96	WB01 57-62	1.94		3.62		3660		49.9		340		2.76	
5/20/96	WB02 3-27	2.16		3.41		3910		69.8		461		3.19	
5/20/96	WB02 27-40	2.02		3.76		3960		96.4		395		3.08	
5/20/96	WB02 50-57	2.14		4.10		3560		105		444		3.17	
5/20/96	WB03 0-24	1.90		4.57		3000		77.4		322		2.77	
5/20/96	WB03 24-30	1.60		2.36		3670		30.3	MQL	248		2.30	
5/20/96	WB04 0-23	1.90		8.15		4330		59.0		426		2.74	
5/20/96	WB05 24-37	2.43		4.09		4290		74.8		565		4.05	
12/28/95	WB-11/0-24	1.64		5.37		3160		63.0		308		2.26	
12/15/95	WB-16/0-24	1.68		5.06		2700		17.5	MQL	430		1.89	
12/15/95	WB-16/24-44.5	1.82		5.12		2960		58.6		451		2.32	
5/20/96	WB18 3-25	2.00		3.33		3680		56.7		411		2.74	
5/20/96	WB18 25-39	1.60		2.54		2960		17.3	MQL	224		1.90	

Sample Number	Ni ug/g DW	Remark	Cu ug/g DW	Remark	Pb ug/g DW	Remark	Hg ug/g DW	Remark	Ag ug/g DW	Remark	Cd ug/g DW	Remark
EB-24/0-24	52.0		34.5		48.4		ND		< 2	MDL	ND	
EB-24/24-39.5	26.8	MQL	15.3		11.9	MQL	ND		< 2	MDL	< 2	MDL
EB32 0-24	66.8		44.8		24.5		ND		ND		ND	
EB32 24-36	59.5		48.6		32.0		<4	MDL	2.98	MQL	<2	MDL
EB-32/57-66	64.7		50.1		37		ND		3.22	MQL	< 2	MDL
EB-41/0-24	50.2		53.3		37.9		ND		< 2	MDL	2.65	MQL
EB-41/36-48	27.8	MQL	54.5		48.2		ND		ND		< 2	MDL
WB01 0-24	44.7	MQL	34.6		35.4		ND		ND		<2	MDL
WB01 24-40	66.0		50.6		48.9		ND		ND		<2	MDL
WB01 40-48	44.6	MQL	44.8		41.6		ND		2.36	MQL	<2	MDL
WB01 57-62	43.4	MQL	24.8		31.8		<4	MDL	ND		<2	MDL
WB02 3-27	48.3		51.8		47.4		ND		<2	MDL	<2	MDL
WB02 27-40	38.2	MQL	47.2		40.5		ND		<2	MDL	ND	
WB02 50-57	61.1		52.6		36.5		ND		ND		<2	MDL
WB03 0-24	21.2	MQL	35.5		27.0		ND		2.82	MQL	<2	MDL
WB03 24-30	ND		9.90	MQL	12.2	MQL	ND		<2	MDL	<2	MDL
WB04 0-23	23.0	MQL	35.1		33.4		ND		ND		3.39	MQL
WB05 24-37	31.7	MQL	35.5		43.5		ND		<2	MDL	2.04	MQL
WB-11/0-24	35.1	MQL	22.9		9.81	MQL	ND		ND		< 2	MDL
WB-16/0-24	23.5	MQL	21.3		22.6		ND		< 2	MDL	2.1	MQL
WB-16/24-44.5	32.1	MQL	27.3		20.3		ND		< 2	MDL	2.38	MQL
WB18 3-25	42.2	MQL	33.1		33.3		ND		ND		ND	
WB18 25-39	<15	MDL	22.7		8.52	MQL	ND		<2	MDL	ND	

Sample Number	Sb ug/g DW	Remark	Ba ug/g DW	Remark	Zn ug/g DW	Remark	As ug/g DW	Remark	Se ug/g DW	Remark	Br ug/g DW	Remark
EB-24/0-24	ND		240		179		9.38	MQL	ND		< 9	MDL
EB-24/24-39.5	ND		441		57.9		9.17	MQL	ND		< 9	MDL
EB32 0-24	ND		667		187		13.9	MQL	< 5	MDL	< 9	MDL
EB32 24-36	ND		637		206		11.2	MQL	< 5	MDL	< 9	MDL
EB-32/57-66	ND		553		291		11.8	MQL	< 5	MDL	< 9	MDL
EB-41/0-24	ND		316		210		9.73	MQL	ND		< 9	MDL
EB-41/36-48	ND		414		227		7.57	MQL	< 5	MDL	< 9	MDL
WB01 0-24	ND		595		124		12.1	MQL	ND		< 9	MDL
WB01 24-40	ND		516		125		<5	MDL	< 5	MDL	< 9	MDL
WB01 40-48	< 2	MDL	494		99.4		<4.67	MDL	< 5	MDL	< 9	MDL
WB01 57-62	< 2	MDL	470		97.8		7.22	MQL	ND		< 9	MDL
WB02 3-27	5.43	MQL	559		131		5.54	MQL	< 5	MDL	< 9	MDL
WB02 27-40	5.11	MQL	501		127		7.00	MQL	< 5	MDL	< 9	MDL
WB02 50-57	< 2	MDL	527		127		7.54	MQL	< 5	MDL	< 9	MDL
WB03 0-24	3.83	MQL	432		89.8		10.2	MQL	< 5	MDL	< 9	MDL
WB03 24-30	ND		416		39.4		<3.42	MDL	< 5	MDL	< 9	MDL
WB04 0-23	5.22	MQL	462		103		<4.89	MDL	< 5	MDL	< 9	MDL
WB05 24-37	< 2	MDL	589		171		<5.2	MDL	< 5	MDL	< 9	MDL
WB-11/0-24	< 2	MDL	269		65.2		11.2		< 5	MDL	< 9	MDL
WB-16/0-24	< 2	MDL	511		57.1		< 3.96	MDL	< 5	MDL	< 9	MDL
WB-16/24-44.5	ND		510		88.2		9.9	MQL	ND		< 9	MDL
WB18 3-25	< 2	MDL	484		110		9.24	MQL	< 5	MDL	< 9	MDL
WB18 25-39	< 2	MDL	349		38.4		5.32	MQL	ND		< 9	MDL

Analysis Date	Sample Number	K % DW	Remark	Ca % DW	Remark	Ti ug/g DW	Remark	Cr ug/g DW	Remark	Mn ug/g DW	Remark	Fe % DW	Remark
12/15/95	**WB-19/0-24**	1.82		3.10		3200		84.4		323		2.72	
5/21/96	**WB19 24-33**	1.62		2.35		3680		30.3	MQL	197		2.03	
12/15/95	**WB-19/33-47**	2.06		1.62		3990		56.9		636		2.76	
5/21/96	**WB22 0-22**	2.07		4.40		4130		67.2		464		3.13	
11/13/95	**WB22 24-33**	2.24		3.40		4130		39.5		440		3.2	
5/24/96	**WB22 33-44**	1.75		4.54		4280		46.2		347		2.67	
5/23/96	**WB23 0-17**	1.57		5.19		4300		<15	MDL	373		1.83	
5/23/96	**WB24 0-21**	1.58		5.20		3000		41.9	MQL	330		1.87	
5/23/96	**WB25R 0-24-DA**	1.76		5.17		3000		46.8		468		2.24	
11/15/95	**WB25 24-36**	1.78		4.97		3100		83.1		471		2.49	
5/23/96	**WB25 51-56.5 D1**	1.74		5.58		2810		58.0		437		2.08	
12/21/95	**WB-26/0-24**	2.14		4.21		4140		130		489		3.33	
5/23/96	**WB26 24-34**	2.06		3.01		2970		123		378		3.23	
5/23/96	**WB28 0-17**	1.96		4.29		3870		53.0		415		2.91	
5/23/96	**WB33R 0-24-DA**	2.12		5.13		3520		78.0		595		3.77	
5/22/96	**WB33 24-34-DA**	2.02		3.92		4160		139		420		3.43	
5/22/96	**WB33 40-68-DA**	1.64		2.20		4030		38.6	MQL	217		2.42	
5/22/96	**WB35 0-22**	1.95		4.39		3690		58.1		384		2.61	
5/22/96	**WB36 0-11**	1.84		4.60		3540		49.9		399		2.41	
5/23/96	**WB56 0-22**	1.79		3.94		3800		49.5		383		2.21	
12/28/95	**WB-70/0-24**	2.18		5.50		3990		79.9		529		3.25	
12/28/95	**WB-70/24-32.5**	1.59		5.23		2940		29.8	MQL	330		1.79	

Sample Number	Ni ug/g DW	Remark	Cu ug/g DW	Remark	Pb ug/g DW	Remark	Hg ug/g DW	Remark	Ag ug/g DW	Remark	Cd ug/g DW	Remark
WB-19/0-24	50.7		39.2		34.6		ND		ND		< 2	MDL
WB19 24-33	18.8	MQL	16.2		6.09	MQL	<4	MDL	ND		<2	MDL
WB-19/33-47	32.6	MQL	20.2		7.25	MQL	ND		< 2	MDL	< 2	MDL
WB22 0-22	29.0	MQL	47.8		68.6		<4	MDL	<2	MDL	ND	
WB22 24-33	18.2	MQL	29		26.8		ND		ND		2.77	MQL
WB22 33-44	ND		23.0		15.4		ND		<2	MDL	ND	
WB23 0-17	<15	MDL	27.7		17.8		ND		ND		<2	MDL
WB24 0-21	42.7	MQL	16.3		26.2		ND		<2	MDL	<2	MDL
WB25R 0-24-DA	33.8	MQL	21.6		22.6		ND		ND		4.17	MQL
WB25 24-36	28	MQL	38		24.1		ND		ND		<2	MDL
WB25 51-56.5 D1	17.8	MQL	31.1		16.5		ND		<2	MDL	<2	MDL
WB-26/0-24	78.8		56.7		66		ND		< 2	MDL	2	MQL
WB26 24-34	111		95.6		42.4		ND		ND		3.51	MQL
WB28 0-17	42.8	MQL	42.7		43.9		ND		ND		<2	MDL
WB33R 0-24-DA	56.1		60.9		55.0		ND		<2	MDL	<2	MDL
WB33 24-34-DA	118		79.6		55.1		ND		<2	MDL	<2	MDL
WB33 40-68-DA	32.3	MQL	26.2		<5	MDL	ND		<2	MDL	ND	
WB35 0-22	27.6	MQL	38.9		27.1		ND		<2	MDL	3.89	MQL
WB36 0-11	38.6	MQL	36.4		26.3		<4	MDL	<2	MDL	2.60	MQL
WB56 0-22	16.1	MQL	14.2	MQL	26.6		<4	MDL	3.51	MQL	<2	MDL
WB-70/0-24	29.6	MQL	31.8		33		ND		< 2	MDL	< 2	MDL
WB-70/24-32.5	23.4	MQL	16.9		12.4	MQL	ND		< 2	MDL	2.23	

Sample Number	Sb ug/g DW	Remark	Ba ug/g DW	Remark	Zn ug/g DW	Remark	As ug/g DW	Remark	Se ug/g DW	Remark	Br ug/g DW	Remark
WB-19/0-24	ND		430		99.4		< 4.42	MDL	< 5	MDL	< 9	MDL
WB19 24-33	ND		365		40.9		6.08	MQL	ND		< 9	MDL
WB-19/33-47	2.51	MQL	516		64.6		15.3		ND		< 9	MDL
WB22 0-22	2.56	MQL	522		162		6.70	MQL	ND		< 9	MDL
WB22 24-33	2.42	MQL	545		90.7		4.75	MQL	< 5	MDL	< 9	MDL
WB22 33-44	2.19	MQL	357		62.4		<3.81	MDL	ND		< 9	MDL
WB23 0-17	ND		507		55.5		<3.79	MDL	ND		< 9	MDL
WB24 0-21	ND		502		50.6		<4.22	MDL	ND		< 9	MDL
WB25R 0-24-DA	ND		503		80.6		<4.26	MDL	< 5	MDL	< 9	MDL
WB25 24-36	< 2	MDL	548		99.7		8.19	MQL	< 5	MDL	< 9	MDL
WB25 51-56.5 D1	3.85	MQL	471		77.2		7.92		ND		< 9	MDL
WB-26/0-24	ND		288		169		< 5.64	MDL	< 5	MDL	< 9	MDL
WB26 24-34	ND		485		138		13.5	MQL	< 5	MDL	< 9	MDL
WB28 0-17	< 2	MDL	538		135		6.94	MQL	ND		< 9	MDL
WB33R 0-24-DA	6.21		572		179		12.2	MQL	ND		< 9	MDL
WB33 24-34-DA	6.12		498		166		10.4	MQL	< 5	MDL	< 9	MDL
WB33 40-68-DA	ND		298		52.2		5.39	MQL	< 5	MDL	13.3	MQL
WB35 0-22	ND		540		91.9		6.74	MQL	< 5	MDL	< 9	MDL
WB36 0-11	< 2	MDL	501		88.2		8.15	MQL	ND		< 9	MDL
WB56 0-22	< 2	MDL	532		65.7		7.31	MQL	ND		< 9	MDL
WB-70/0-24	4.74	MQL	296		108		11.5	MQL	< 5	MDL	< 9	MDL
WB-70/24-32.5	< 2	MDL	360		38.7		< 3.51	MDL	< 5	MDL	ND	

Analysis Date	Sample Number	K % DW	Remark	Ca % DW	Remark	Ti ug/g DW	Remark	Cr ug/g DW	Remark	Mn ug/g DW	Remark	Fe % DW	Remark
5/22/96	WB71 0-26	2.07		5.29		3070		54.8		526		3.23	
5/22/96	WB73 0-24	1.93		4.77		3880		64.6		463		2.68	
5/22/96	WB73 24-36	1.50		5.34		3580		40.6	MQL	287		1.49	
5/22/96	WB73 36-49	1.57		5.41		2540		33.5	MQL	303		1.51	
5/22/96	WB84 0-17.5	2.05		5.09		2800		60.6		510		2.92	
5/22/96	WB85R 0-22-DA	1.99		5.29		3780		61.3		479		2.89	
12/21/95	WB-87/0-24	2.34		5.17		4160		78.6		527		3.91	
12/21/95	WB-87/24-27	2.25		4.61		4230		69.6		681		3.44	
12/26/95	WB-87/50-62	2.07		4.87		3880		60.3		554		3.18	
5/22/96	WB90 0-25-DA (Rep)	2.03		4.98		3570		47.0		554		3.06	
5/22/96	WB91R 0-24-DA	2.13		4.88		4330		61.5		539		3.31	
5/22/96	WB91 24-40-DA	2.26		3.85		3840		69.4		599		3.39	
5/11/96	WB94 0-24 DUP	2.13		4.70		3960		69.4		495		3.23	
5/11/96	WB94 24-36 DP	2.06		4.32		4390		59.9		545		2.93	
5/21/96	WB96 0-22	2.19		5.83		3970		50.2		602		3.47	
5/21/96	WB98 0-26	2.04		5.35		3970		51.0		532		2.99	
12/28/95	WB-101/0-24	2.21		4.83		4050		113		584		3.85	
12/28/95	WB-101/24-30	2.11		4.33		3820		60.7		515		3.13	
5/11/96	WB102 0-22	2.08		4.82		4110		89.8		492		3.54	
5/21/96	WB105 0-24	2.13		5.96		3770		85.2		605		3.52	
5/21/96	WB105 24-28.75	2.06		5.11		4090		38.1	MQL	492		2.95	
12/21/95	WB-107/0-24	2.08		6.12		3880		110		569		3.48	

Sample Number	Ni ug/g DW	Remark	Cu ug/g DW	Remark	Pb ug/g DW	Remark	Hg ug/g DW	Remark	Ag ug/g DW	Remark	Cd ug/g DW	Remark
WB71 0-26	35.8	MQL	39.3		32.6		ND		ND		2.53	MQL
WB73 0-24	35.6	MQL	22.5		29.6		ND		<2	MDL	2.50	MQL
WB73 24-36	<15	MDL	11.0	MQL	<5	MDL	ND		ND		<2	MDL
WB73 36-49	20.5	MQL	14.9	MQL	7.64	MQL	<4	MDL	<2	MDL	ND	
WB84 0-17.5	26.9	MQL	29.9		28.4		ND		2.89	MQL	<2	MDL
WB85R 0-22-DA	41.6	MQL	32.0		19.7		ND		<2	MDL	<2	MDL
WB-87/0-24	34.9	MQL	46.6		69.8		ND		< 2	MDL	ND	
WB-87/24-27	41.2	MQL	40.3		50.8		ND		ND		< 2	MDL
WB-87/50-62	30.2	MQL	40.8		39.8		ND		< 2	MDL	ND	
WB90 0-25-DA (Rep)	24.5	MQL	37.2		36.8		ND		<2	MDL	2.41	MQL
WB91R 0-24-DA	22.1	MQL	30.3		50.6		ND		<2	MDL	2.29	MQL
WB91 24-40-DA	33.2	MQL	21.7		18.1		ND		ND		<2	MDL
WB94 0-24 DUP	21.7	MQL	35.4		36.3		ND		ND		3.56	MQL
WB94 24-36 DP	25.2	MQL	16.3		11.6	MQL	<4	MDL	ND		<2	MDL
WB96 0-22	28.2	MQL	34.3		49.0		ND		3.19	MQL	ND	
WB98 0-26	35.0	MQL	28.3		36.7		ND		<2	MDL	<2	MDL
WB-101/0-24	74.7		45.7		49.3		ND		2.00	MQL	ND	
WB-101/24-30	43.2	MQL	39.7		64.6		< 4	MDL	< 2	MDL	< 2	MDL
WB102 0-22	48.0		53.7		48.1		ND		<2	MDL	<2	MDL
WB105 0-24	<15	MDL	27.3		46.2		ND		ND		<2	MDL
WB105 24-28.75	29.0	MQL	28.6		25.8		ND		<2	MDL	2.27	MQL
WB-107/0-24	ND		54.5		53.6		< 4	MDL	ND		< 2	MDL

Sample Number	Sb ug/g DW	Remark	Ba ug/g DW	Remark	Zn ug/g DW	Remark	As ug/g DW	Remark	Se ug/g DW	Remark	Br ug/g DW	Remark
WB71 0-26	ND		570		120		14.3	MQL	< 5	MDL	< 9	MDL
WB73 0-24	ND		558		97.9		4.19	MQL	ND		< 9	MDL
WB73 24-36	< 2	MDL	521		29.8		7.03	MQL	ND		< 9	MDL
WB73 36-49	2.64	MQL	543		35.3		<3.37	MDL	ND		< 9	MDL
WB84 0-17.5	ND		570		101		5.28	MQL	< 5	MDL	< 9	MDL
WB85R 0-22-DA	< 2	MDL	565		102		10.9	MQL	ND		< 9	MDL
WB-87/0-24	3.96	MQL	329		182		7.93	MQL	< 5	MDL	< 9	MDL
WB-87/24-27	2.74	MQL	345		106		8.15	MQL	ND		< 9	MDL
WB-87/50-62	< 2	MDL	351		111		10.2	MQL	< 5	MDL	< 9	MDL
WB90 0-25-DA (Rep)	ND		577		104		<4.89	MDL	ND		< 9	MDL
WB91R 0-24-DA	ND		581		128		6.36	MQL	ND		< 9	MDL
WB91 24-40-DA	4.20	MQL	601		97.7		10.8	MQL	ND		< 9	MDL
WB94 0-24 DUP	< 2	MDL	634		125		8.71	MQL	ND		< 9	MDL
WB94 24-36 DP	5.36	MQL	551		74.6		6.40	MQL	ND		< 9	MDL
WB96 0-22	3.86	MQL	577		134		9.36	MQL	< 5	MDL	< 9	MDL
WB98 0-26	4.66	MQL	475		107		5.06	MQL	< 5	MDL	< 9	MDL
WB-101/0-24	ND		264		205		17.9		< 5	MDL	< 9	MDL
WB-101/24-30	ND		289		112		12.5	MQL	< 5	MDL	< 9	MDL
WB102 0-22	5.84	MQL	595		188		8.20	MQL	< 5	MDL	< 9	MDL
WB105 0-24	11.7		581		132		10.5	MQL	ND		< 9	MDL
WB105 24-28.75	< 2	MDL	595		87.2		8.23	MQL	ND		< 9	MDL
WB-107/0-24	< 2	MDL	144		176		< 5.43	MDL	< 5	MDL	< 9	MDL

Analysis Date	Sample Number	K % DW	Remark	Ca % DW	Remark	Ti ug/g DW	Remark	Cr ug/g DW	Remark	Mn ug/g DW	Remark	Fe % DW	Remark
12/21/95	WB-107/24-36	2.01		4.69		3890		48.3		460		2.80	
12/21/95	WB-107/46-53.5	1.67		1.16		3200		43.4	MQL	316		2.62	
5/11/96	WB108 0-24	2.06		5.21		3630		86.3		615		3.90	
5/11/96	WB108 24-36	2.22		5.16		3800		86.7		524		3.74	
5/21/96	WB110 0-24	2.37		4.38		3960		89.4		579		4.06	
5/21/96	WB110 24-36	2.17		5.21		4080		69.4		517		3.42	
5/21/96	WB110 36-46	2.23		4.97		3730		106		527		3.84	
5/21/96	WB111 0-24	2.19		5.59		3410		90.7		558		3.52	
5/21/96	WB111 24-46	2.33		4.26		3890		108		571		4.11	
5/10/96	WB112 0-17	2.21		5.48		3760		125		626		4.18	
5/08/96	WB113 0-24	2.31		5.18		3830		131		592		4.15	
12/21/95	WB-114/0-24	2.44		4.37		4140		112		609		4.45	
12/21/95	WB-114/24-31	2.12		4.40		4030		45	MQL	440		2.81	
12/21/95	WB-114/31-38	1.51		5.54		2840		32.9	MQL	321		1.62	
5/08/96	WB115 0-24	2.02		4.16		3480		55.3		550		3.05	
5/28/96	WB116 0-25	1.91		5.25		4120		43.4	MQL	534		2.90	
5/10/96	WB118 0-24	2.14		5.08		3730		100		602		3.98	
5/10/96	WB118 29-34	1.68		4.78		3240		43.1	MQL	406		1.96	
5/10/96	WB118 34-37	1.57		4.72		3870		33.9	MQL	328		1.62	
5/21/96	WB119 0-24	2.32		4.48		3760		106		608		5.23	
11/13/95	WB119 24-36	2.37		4.81		4110		97.5		595		4.26	
5/11/96	WB119 44-56	2.28		4.40		3940		73.6		635		5.00	
12/28/95	WB-121/0-24	2.27		4.49		3810		110		578		4.52	
12/28/95	WB-121/24-30	2.17		5.38		3820		101		666		3.96	
12/28/95	WB-121/30-42	2.24		5.22		4050		72.4		667		3.91	

Sample Number	Ni ug/g DW	Remark	Cu ug/g DW	Remark	Pb ug/g DW	Remark	Hg ug/g DW	Remark	Ag ug/g DW	Remark	Cd ug/g DW	Remark
WB-107/24-36	15.4	MQL	27.5		41.1		ND		< 2	MDL	2.61	MQL
WB-107/46-53.5	ND		19.2		18.3		ND		ND		< 2	MDL
WB108 0-24	48.0		51.0		48.8		ND		3.61	MQL	ND	
WB108 24-36	30.5	MQL	40.2		60.6		ND		3.04	MQL	<2	MDL
WB110 0-24	46.9		46.6		36.7		ND		<2	MDL	<2	MDL
WB110 24-36	27.3	MQL	36.0		45.4		<4	MDL	ND		<2	MDL
WB110 36-46	54.8		56.0		47.4		ND		<2	MDL	<2	MDL
WB111 0-24	37.1	MQL	53.6		49.1		<4	MDL	ND		<2	MDL
WB111 24-46	53.1		46.0		33.7		<4	MDL	ND		<2	MDL
WB112 0-17	60.8		72.7		72.0		ND		2.05	MQL	4.87	MQL
WB113 0-24	58.0		67.9		79.3		ND		2.02	MQL	5.61	MQL
WB-114/0-24	ND		71		85.3		ND		4.39	MQL	ND	
WB-114/24-31	ND		27.9		28.1		ND		< 2	MDL	ND	
WB-114/31-38	ND		5.39	MQL	13	MQL	ND		ND		ND	
WB115 0-24	34.1	MQL	22.8		31.0		ND		ND		2.48	MQL
WB116 0-25	24.0	MQL	27.8		26.6		ND		ND		<2	MDL
WB118 0-24	43.6	MQL	57.7		85.8		<4	MDL	2.51	MQL	7.49	
WB118 29-34	<15	MDL	15.3		12.5	MQL	<4	MDL	<2	MDL	<2	MDL
WB118 34-37	<15	MDL	6.95		5.13	MQL	<4	MDL	ND		ND	
WB119 0-24	33.4	MQL	77.7		116.4		ND		<2	MDL	5.22	MQL
WB119 24-36	42.2	MQL	56.4		88.6		ND		<2	MDL	ND	
WB119 44-56	53.7		74.8		136		<4	MDL	4.32	MQL	6.94	
WB-121/0-24	68.4		65.7		73.4		ND		4.18	MQL	< 2	MDL
WB-121/24-30	76.0		54.2		83.3		ND		< 2	MDL	< 2	MDL
WB-121/30-42	69.1		51.6		63.9		ND		ND		< 2	MDL

Sample Number	Sb ug/g DW	Remark	Ba ug/g DW	Remark	Zn ug/g DW	Remark	As ug/g DW	Remark	Se ug/g DW	Remark	Br ug/g DW	Remark
WB-107/24-36	3.32	MQL	440		99.8		9.02	MQL	< 5	MDL	< 9	MDL
WB-107/46-53.5	< 2	MDL	173		49		26.8		< 5	MDL	12.7	MQL
WB108 0-24	2.91	MQL	547		199		11.9	MQL	ND		< 9	MDL
WB108 24-36	5.48	MQL	571		169		8.90	MQL	ND		ND	
WB110 0-24	ND		605		215		8.59	MQL	< 5	MDL	< 9	MDL
WB110 24-36	3.84	MQL	601		136		<5.15	MDL	< 5	MDL	< 9	MDL
WB110 36-46	ND		605		188		7.83	MQL	< 5	MDL	< 9	MDL
WB111 0-24	3.66	MQL	610		166		6.58	MQL	ND		< 9	MDL
WB111 24-46	ND		570		185		11.0	MQL	< 5	MDL	< 9	MDL
WB112 0-17	5.76	MQL	536		253		10.8	MQL	< 5	MDL	< 9	MDL
WB113 0-24	9.92		587		247		11.2	MQL	ND		< 9	MDL
WB-114/0-24	5.20	MQL	425		283		< 6.73	MDL	< 5	MDL	< 9	MDL
WB-114/24-31	< 2	MDL	384		82.8		ND		ND		< 9	MDL
WB-114/31-38	3.98	MQL	311		31.5		ND		ND		< 9	MDL
WB115 0-24	< 2	MDL	531		97.3		6.25	MQL	ND		< 9	MDL
WB116 0-25	ND		589		91.1		<4.37	MDL	ND		< 9	MDL
WB118 0-24	< 2	MDL	569		249		10.0	MQL	ND		< 9	MDL
WB118 29-34	3.42		462		42.1		3.89	MQL	< 5	MDL	< 9	MDL
WB118 34-37	< 2	MDL	578		31.9		5.54	MQL	< 5	MDL	< 9	MDL
WB119 0-24	6.39		655		293		13.6	MQL	ND		< 9	MDL
WB119 24-36	< 2	MDL	577		224		9.92	MQL	< 5	MDL	< 9	MDL
WB119 44-56	6.72		602		368		11.3	MQL	< 5	MDL	< 9	MDL
WB-121/0-24	3.18	MQL	190		256		18.4	MQL	ND		< 9	MDL
WB-121/24-30	5.70	MQL	218		219		20.3		< 5	MDL	< 9	MDL
WB-121/30-42	< 2	MDL	270		196		32.6		< 5	MDL	< 9	MDL

Appendix B.

Screening Analysis Results:

Total PCBs by Enzyme Immunoassay

Sediment Screening Survey
COMPLETE DATA SET FOR TOTAL PCBs ENZYME IMMUNOASSAYS ANALYSES

AScI Corporation (ESD); 30427 West Eight Mile Road, Livonia, MI 48152

Analysis Date	EIA Batch ID	Extract. Batch ID	Sample ID	Dry conc. (ug/g)	Comments
1-27-97	10	10	DC07 0-24	3.94	MQL
1-24-97	5	5	DC07 24-29	2.31	MQL
09/28/95	8	8	DC-01/0-14.25	0.48	
1-24-97	5	5	DC06 0-26	3.95	MQL
1-24-97	5	5	DC06 26-42	2	MQL
09/21/95	3	3	DC-02-DUP.A/0-24	1.13	
09/21/95	3	3	DC-02-DUP.A/24-36	0.51	
09/21/95	3	3	DC-02-DUP.A/41-47	0.27	MQL
1-27-97	11	11	DC05 0-24	6.21	
1-27-97	8	8	DC05 24-39	2.3	MQL
1-27-97	9	9	DC04 0-24	2.65	MQL
1-27-97	9	9	DC04 24-36	2.75	MQL
1-24-97	5	5	DC04 36-56	6.75	
09/21/95	3	3	DC-03/0-24	0.58	
09/21/95	3	3	DC-03/38-44	0.59	
09/21/95	3	3	DC-03/65-77	2.1	
04/05/96	11	9	MR-06/0-24	1.75	
04/05/96	11	9	MR-06/24-31	2.14	
04/05/96	11	9	MR-06/34-42	3.19	
04/03/96	6	6	MR-05/0-24	0.86	MQL
04/05/96	10	9	MR-04/0-24	4.91	
04/05/96	10	9	MR-07/0-24	1.15	
04/05/96	10	9	MR-07/24-31	1.59	
09/25/95	5	5	MR-08/0-24	0.26	MQL
09/25/95	5	5	MR-08/24-34	0.25	MQL
04/05/96	10	9	MR-10/0-26	2.23	
04/05/96	10	9	MR-09/0-24	1.52	
04/05/96	10	9	MR-09/24-28.5	1.17	

Analysis Date	EIA Batch ID	Extract. Batch ID	Sample ID	Dry conc. (ug/g)	Comments
09/19/95	1	1	MR-22/0-24	0.74	
09/19/95	1	1	MR-22/24-40	0.61	
09/19/95	1	1	MR-22/40-58	0.65	
04/02/96	5	5	MR-28/0-18	2.07	
09/27/95	7	7	MR-17/0-24	0.31	MQL
09/27/95	7	7	MR-17/24-36	0.3	MQL
09/27/95	7	7	MR-17/52-58	0.18	MQL
09/27/95	7	7	MR-16/0-24	0.21	MQL
09/27/95	7	7	MR-16/24-40	0.49	
09/27/95	7	7	MR-16/72-84	0.25	MQL
04/04/96	8	8	MR-21/0-24	1.17	
04/04/96	8	8	MR-21/24-36	1.15	
04/04/96	8	8	MR-21/36-52	0.78	MQL
1-27-97	8	8	MR047A 0-24	1.83	MQL
1-27-97	8	8	MR047A 24-43	1.77	MQL
1-27-97	13	13	MR047A 43-78	2.73	MQL
12-30-96	1	1	MR048 0-24	12.2	
12-30-96	1	1	MR048 24-48	11	
12-30-96	1	1	MR048 48-82	8.57	
09/25/95	5	5	MR-15/0-24	0.26	MQL
09/25/95	5	5	MR-15/24-46	0.45	
09/25/95	5	5	MR-15/58-71	0.21	MQL
04/05/96	10	9	MR-20/0-24	1.68	
04/05/96	10	9	MR-20/24-36	1.74	
04/05/96	10	9	MR-20/36-57	2.21	
04/04/96	8	8	MR-27/0-24	1.39	
04/04/96	8	8	MR-27/24-36	0.95	
12-30-96	1	1	MR045 0-14	5.28	
12-30-96	2	2	MR044 0-24	6.51	
1-24-97	4	4	MR044 24-57	4.07	
1-24-97	5	5	MR044 57-61	5.39	
09/22/95	4	4	MR-13/0-24	0.44	
09/22/95	4	4	MR-13/24-35	0.7	
09/22/95	4	4	MR-13/35-42.5	0.28	MQL
1-24-97	7	7	MR046 0-17	2.16	MQL

Analysis Date	EIA Batch ID	Extract. Batch ID	Sample ID	Dry conc. (ug/g)	Comments
1-27-97	8	8	MR033 0-24	2.96	MQL
1-24-97	7	7	MR033 24-40	7.95	
1-24-97	7	7	MR033 40-55	6.15	
12-30-96	1	1	MR049 0-24	17.9	
12-30-96	1	1	MR049 24-42	14.9	
1-27-97	11	11	MR049 42-50	37.9	
1-27-97	10	10	MR049 50-62	22.9	
09/27/95	7	7	MR-14/0-24	0.23	MQL
09/27/95	7	7	MR-14/24-36	0.42	
09/27/95	7	7	MR-14/60-77	0.55	
09/19/95	1	1	MR-11-DUP.A/0-24	27.39	
09/19/95	1	1	MR-11-DUP.A/24-43	2.36	
09/19/95	1	1	MR-11-DUP.A/43-52.5	1.48	
1-24-97	7	7	MR032 0-26	34.3	
1-27-97	12	12	MR032 46-51	348	
1-27-97	12	12	MR032 51-66	55	
12-30-96	2	2	MR031 0-24	42.1	
12-31-96	3	3	MR031 24-46	73.8	
1-27-97	12	12	MR031 46-61	54.5	
09/26/95	6	6	MR-12/0-24	17.37	
09/26/95	6	6	MR-12/24-34	5.29	
09/26/95	6	6	MR-12/34-46	2.27	
04/03/96	6	6	MR-25/0-27	3.78	
04/03/96	6	6	MR-25/27-40	0.83	MQL
1-24-97	4	4	MR030 0-24	24.6	
1-27-97	10	10	MR030 24-39	6.97	
1-24-97	7	7	MR030 34-54	16.1	
04/04/96	8	8	MR-03/0-17	0.78	MQL
04/04/96	8	8	MR-19/0-24	2.35	
04/04/96	8	8	MR-19/24-36	128.99	
04/04/96	8	8	MR-19/47-59.5	1.19	
1-24-97	7	7	MR056 0-24	16.5	
1-24-97	5	5	MR056 24-40	4.98	
1-24-97	7	7	MR056 40-60	4.47	
1-24-97	5	5	MR057 0-24	3.21	
1-24-97	5	5	MR057 24-38	3.62	
1-24-97	7	7	MR057 38-79	3.42	

Analysis Date	EIA Batch ID	Extract. Batch ID	Sample ID	Dry conc. (ug/g)	Comments
09/27/95	7	7	MR-01/0-24	0.83	
09/27/95	7	7	MR-01/38-48	1.38	
09/27/95	7	7	MR-01/60-66.5	0.89	
1-27-97	12	12	MR055 0-24	6.73	
12-30-96	1	1	MR055 24-35	9.56	
04/04/96	9	8	MR-26/0-24	11.88	
04/04/96	9	8	MR-26/24-36	1.55	
1-27-97	10	10	MR041A 0-24	13.4	
1-27-97	11	11	MR041A 24-39	5.23	
09/21/95	3	3	MR-02-DUP.A/0-24	1.1	
09/21/95	3	3	MR-02-DUP.A/25-38	0.97	
09/21/95	3	3	MR-02-DUP.A/40-53	0.66	
1-24-97	7	7	MR054 0-24	13	
1-24-97	7	7	MR054 24-46	5.97	
1-24-97	7	7	MR054 46-70	10.3	
09/22/95	4	4	MR-29/0-24	0.53	
09/22/95	4	4	MR-29/40-60	0.8	
09/22/95	4	4	MR-29/60-72	0.97	
12-31-96	3	3	MR042 0-24	8.28	
12-31-96	3	3	MR042 24-57	14.7	
09/26/95	6	6	MR-24/0-24	0.78	
09/26/95	6	6	MR-24/24-40	0.59	
09/26/95	6	6	MR-24/40-52	0.3	MQL
04/05/96	10	9	MR-23/0-24	3.26	
04/05/96	10	9	MR-23/24-37.5	1.94	
12-30-96	1	1	MR051 0-24	11.4	
1-27-97	8	8	MR051 24-55	2.01	MQL
1-27-97	8	8	MR051 55-73	1.65	MQL
1-24-97	7	7	MR050 0-24	3.34	
1-24-97	7	7	MR050 24-48	4.17	
12-30-96	1	1	MR050 48-72	17.7	
12-30-96	1	1	MR052 0-24	7.8	
1-27-97	8	8	MR052 24-33	8.6	
12-30-96	1	1	MR053 0-24	11.1	
12-30-96	1	1	MR053 24-52	10.6	

Analysis Date	EIA Batch ID	Extract. Batch ID	Sample ID	Dry conc. (ug/g)	Comments
1-27-97	10	10	MR034 0-24 DA	6.97	
1-27-97	12	12	MR034 24-44 DA	17.8	
1-27-97	12	12	MR034 44-59 DA	14.5	
04/04/96	8	8	MR-18/0-24/DUP.A	1.63	
04/04/96	8	8	MR-18/24-57/DUP.A	2.01	
04/04/96	8	8	MR-18/57-67/DUP.A	11.7	
1-24-97	5	5	MR039 0-24	3.37	
1-27-97	13	13	MR039 24-30	3.77	
12-30-96	2	2	MR039 30-54	25.4	
1-27-97	13	13	MR039 54-108	10.5	
1-24-97	6	6	MR040 0-14	2.52	MQL
1-27-97	13	13	MR038 0-24	8.19	
1-27-97	11	11	MR038 31-49	5.23	
1-27-97	13	13	MR037 0-24	4.03	
1-24-97	4	4	MR037 40-50	6.12	
1-27-97	8	8	MR037 50-76	11.6	
1-27-97	12	12	MR036 0-24	10.6	
1-27-97	8	8	MR036 30-46	3.28	
1-24-97	4	4	MR036 56-87	9.92	
1-27-97	10	10	MR043A 0-24	6.75	
1-27-97	12	12	MR043A 24-55	8.63	
1-27-97	11	11	MR043A 55-73	7.06	
1-27-97	13	13	MR035 0-24	3.77	
1-27-97	9	9	MR035 24-38	3.14	
1-27-97	13	13	MR035 38-72	3.79	
1-27-97	9	9	MR058 0-11	2.22	MQL
12-30-96	2	2	MR059 0-24	16.8	
1-24-97	5	5	MR059 24-48	2.39	MQL
1-27-97	9	9	MR059 48-76	3.06	MQL
12-30-96	2	2	OC04 0-26	14.2	
12-30-96	2	2	OC04 26-46	12	
12-30-96	2	2	OC04 46-60	8.68	
12-31-96	3	3	OC05 0-24	8.43	
12-31-96	3	3	OC05 24-46	6.01	
1-24-97	4	4	OC06 0-24	19.6	
12-30-96	2	2	OC06 24-36	7.61	

Analysis Date	EIA Batch ID	Extract. Batch ID	Sample ID	Dry conc. (ug/g)	Comments
12-30-96	2	2	OC07 0-24	15.3	
12-30-96	2	2	OC07 24-60	7.24	
1-27-97	9	9	OC08A 0-24	6.94	
12-31-96	3	3	OC08A 24-51	12.3	
1-24-97	6	6	OC09 0-24	15.5	
1-24-97	6	6	OC09 24-40	31.4	
1-24-97	6	6	OC10 0-24	57.6	
1-27-97	12	12	OC10 24-29	10.7	
1-24-97	6	6	OC10 29-50	1.98	MQL
1-27-97	10	10	OC11 0-24	15.4	
1-24-97	6	6	OC11 24-35	58.8	
1-24-97	6	6	OC11 35-48	57.3	
12-31-96	3	3	OC12 0-26	4.55	
12-31-96	3	3	OC12 26-50	1.74	MQL
09/22/95	4	4	OC-01-DUP.A/0-24	1.52	
09/22/95	4	4	OC-01-DUP.A/28-34	717.18	
09/22/95	4	4	OC-01-DUP.A/45-60	0.12	MQL
09/25/95	5	5	OC-02/0-24	1.1	
09/25/95	5	5	OC-02/35-43	3.4	
09/25/95	5	5	OC-02/43-48	0.15	MQL
09/20/95	2	2	OC-03/0-8	0.84	
04/03/96	6	6	OR-01/0-24	2.65	
04/03/96	6	6	OR-01/24-35	1.01	
04/03/96	6	6	OR-01/40-60	3.14	
04/03/96	6	6	OR-02/0-24	2.33	
04/03/96	6	6	OR-02/24-36	1.31	
04/03/96	6	6	OR-02/64-76	1.23	
1-27-97	9	9	OR06 0-24	4.81	
12-31-96	3	3	OR06 24-40	4.31	
1-27-97	9	9	OR06 40-53	3.13	MQL
1-24-97	4	4	OR07A 0-24	5.07	
12-31-96	3	3	OR07A 30-57	3.38	
12-31-96	3	3	OR07A 57-78	3.24	
1-27-97	12	12	OR08A 0-24	5.3	
1-27-97	8	8	OR08A 24-54	8.56	
1-27-97	11	11	OR08A 54-90	3.6	

Analysis Date	EIA Batch ID	Extract. Batch ID	Sample ID	Dry conc. (ug/g)	Comments
04/03/96	6	6	OR-03/0-24	1.35	
04/03/96	6	6	OR-03/24-36	0.88	
04/03/96	6	6	OR-03/54-67	1.18	
12-31-96	3	3	OR09A 0-24	3.91	
1-27-97	9	9	OR09A 24-60	2.71	MQL
1-27-97	9	9	OR09A 60-83	2.92	MQL
04/03/96	6	6	OR-04/0-24	1	
04/03/96	6	6	OR-04/24-36	0.94	
04/03/96	7	6	OR-04/50-62	1.72	
12-31-96	3	3	OR05 0-24	2.47	MQL
1-27-97	12	12	OR05 24-40	1.78	MQL
1-24-97	4	4	SC04A 0-24	7.38	
1-24-97	4	4	SC04A 24-39	7.77	
1-27-97	11	11	SC04A 39-64	16.8	
1-27-97	11	11	SC04A 64-81	19	
1-27-97	11	11	SC04A 81-88	15.5	
1-24-97	4	4	SC05 0-24	7.06	
12-30-96	2	2	SC05 24-53	14.4	
12-30-96	2	2	SC05 53-65	14.2	
1-24-97	5	5	SC06A 0-24	6.12	
1-24-97	5	5	SC06A 36-61	8.45	
1-24-97	5	5	SC06A 61-79	18.3	
09/21/95	3	3	SC-02/0-24	1.67	
09/21/95	3	3	SC-02/24-35	1.35	
09/21/95	3	3	SC-02/35-54	3.24	
09/21/95	3	3	SC-02/54-63	2.59	
09/25/95	5	5	SC-01/0-24	0.37	
09/25/95	5	5	SC-01/24-34	0.55	
09/25/95	5	5	SC-01/34-44.5	0.42	
1-27-97	10	10	SC07 0-24	15	
1-27-97	10	10	SC07 24-50	18.9	
1-27-97	9	9	SC07 50-83	4.83	
09/20/95	2	2	SC-03/0-23	1.73	
09/20/95	2	2	SC-03/23-33	2.92	
03/28/96	2	2	WB-01/0-24	1.4	
03/28/96	2	2	WB-01/24-40	1.73	
03/28/96	2	2	WB-01/40-48	1.49	
03/28/96	2	2	WB-01/57-62	1.52	

Analysis Date	EIA Batch ID	Extract. Batch ID	Sample ID	Dry conc. (ug/g)	Comments
03/29/96	3	3	WB-02/3-27	1.54	
03/27/96	1	1	WB-02/27-40	2.14	
03/29/96	3	3	WB-02/50-57	1.2	
04/02/96	5	5	WB-03/0-24	1.4	
04/02/96	5	5	WB-03/24-30	0.98	
04/01/96	4	4	WB-04/0-23	1.16	
04/01/96	4	4	WB-05/24-37	1.05	no surf. sample
09/19/95	1	1	WB-11/0-24	0.54	
09/28/95	8	8	WB-16/0-24	0.26	MQL
09/28/95	8	8	WB-16/24-44.5	0.28	MQL
04/01/96	4	4	WB-18/3-25	1.2	
04/01/96	4	4	WB-18/25-39	0.65	MQL
09/28/95	8	8	WB-19/0-24	0.37	
04/01/96	4	4	WB-19/23-33	1.08	
09/28/95	8	8	WB-19/33-47	0.26	MQL
03/27/96	1	1	WB-22/0-24	1.7	
04/02/96	5	5	WB-22/24-33	1.07	
04/02/96	5	5	WB-22/33-44	1.12	
03/27/96	1	1	WB-23/0-17	1.52	
04/02/96	5	5	WB-24/0-21	0.77	MQL
04/01/96	4	4	WB-25/0-24/DUP.A	1.35	
03/27/96	1	1	WB-25/24-36/DUP.A	1.44	
03/27/96	1	1	WB-25/51-56.5/DUP.A	1.46	
09/28/95	8	8	WB-26/0-24	0.36	
04/02/96	5	5	WB-26/24-34	1.17	
04/01/96	4	4	WB-28/0-17	1.28	
03/28/96	2	2	WB-33/0-24/DUP.A	1.71	
03/28/96	2	2	WB-33/24-34/DUP.A	1.62	
03/28/96	2	2	WB-33/40-68/DUP.A	1.11	
04/01/96	4	4	WB-35/0-22	1.69	
04/01/96	4	4	WB-36/0-11	1.02	
04/05/96	10	9	WB-56/0-22	1.19	

Analysis Date	EIA Batch ID	Extract. Batch ID	Sample ID	Dry conc. (ug/g)	Comments
09/26/95	6	6	WB-70/0-24	0.24	MQL
09/26/95	6	6	WB-70/24-32.5	0.18	MQL
03/27/96	1	1	WB-71/0-26	1.9	
03/29/96	3	3	WB-73/0-24	0.94	
03/29/96	3	3	WB-73/24-36	0.6	MQL
03/29/96	3	3	WB-73/36-49	0.63	MQL
03/27/96	1	1	WB-84/0-17.5	1	
03/27/96	1	1	WB-85/0-22/DUP.A	1.19	
09/20/95	2	2	WB-87/0-24	0.84	
09/20/95	2	2	WB-87/24-27	0.7	
09/20/95	2	2	WB-87/50-62	0.68	
03/29/96	3	3	WB-90/0-26/DUP.A	0.86	MQL
03/27/96	1	1	WB-91/0-24/DUP.A	1.37	
03/27/96	1	1	WB-91/24-40/DUP.A	1.26	
04/02/96	5	5	WB-94/0-24/DUP.A	1.31	
04/02/96	5	5	WB-94/24-36/DUP.A	1.02	
04/01/96	4	4	WB-96/0-22	0.8	MQL
04/01/96	4	4	WB-98/0-26	0.94	
09/19/95	1	1	WB-101/0-24	0.52	
09/19/95	1	1	WB-101/24-30	2.88	
03/29/96	3	3	WB-102/0-22	1.04	
04/01/96	4	4	WB-105/0-24	0.99	
04/01/96	4	4	WB-105/24-28.75	1.02	
09/20/95	2	2	WB-107/0-24	5.45	
09/20/95	2	2	WB-107/24-36	3.83	
09/20/95	2	2	WB-107/46-53.5	1.12	
03/27/96	1	1	WB-108/0-24	1.89	
03/27/96	1	1	WB-108/24-36	2.01	
03/28/96	2	2	WB-110/0-24	0.83	MQL
03/28/96	2	2	WB-110/24-36	0.84	MQL
03/28/96	2	2	WB-110/36-46	0.97	
04/02/96	5	5	WB-111/0-24	1.99	
04/02/96	5	5	WB-111/24-46	1.12	

Analysis Date	EIA Batch ID	Extract. Batch ID	Sample ID	Dry conc. (ug/g)	Comments
03/27/96	1	1	WB-112/0-17	3.07	
03/29/96	3	3	WB-113/0-24	1.49	
09/20/95	2	2	WB-114/0-24	7.56	
09/20/95	2	2	WB-114/24-31	6.06	
09/20/95	2	2	WB-114/31-38	6.22	
03/29/96	3	3	WB-115/0-24	0.83	MQL
04/04/96	9	8	WB-116/0-25	0.83	MQL
03/28/96	2	2	WB-118/0-24	1.51	
03/28/96	2	2	WB-118/29-34	0.51	MQL
03/28/96	2	2	WB-118/34-37	0.4	MQL
04/02/96	5	5	WB-119/0-24	1.96	
04/02/96	5	5	WB-119/24-36	1.69	
04/02/96	5	5	WB-119/44-56	2.6	
09/19/95	1	1	WB-121/0-24	0.5	
09/19/95	1	1	WB-121/24-30	0.51	
09/19/95	1	1	WB-121/30-42	0.86	
09/26/95	6	6	EB-01/0-25	0.24	MQL
09/28/95	8	8	EB-03/0-23	0.29	MQL
09/28/95	8	8	EB-06-DUP.A/0-24	0.28	MQL
09/28/95	8	8	EB-07/0-9	0.25	MQL
09/26/95	6	6	EB-12/0-16	0.38	
09/26/95	6	6	EB-24/0-24	0.27	MQL
09/26/95	6	6	EB-24/24-39.5	0.28	MQL
03/29/96	3	3	EB-32/0-24	1.59	
03/29/96	3	3	EB-32/24-36	1.26	
09/28/95	8	8	EB-32/57-66	0.3	MQL
09/28/95	8	8	EB-41/0-24	0.4	
09/28/95	8	8	EB-41/36-48	0.35	

Appendix C.

Screening Analysis Results:

Total PAHs by Enzyme Immunoassay

Sediment Screening Survey
COMPLETE DATA SET FOR TOTAL PAHs ENZYME IMMUNOASSAYS ANALYSES

ASci Corporation (ESD); 30427 West Eight Mile Road, Livonia, MI 48152

Analysis Date	EIA Batch ID	Extract. Batch ID	Sample ID	Dry conc. (ug/g)
10/20/95	20	6	EB-01/0-25	0.05
10/23/95	22	8	EB-03/0-23	0.37
10/23/95	22	8	EB-06-DUP.A/0-24	0.42
10/23/95	22	8	EB-07/0-9	0.18
10/20/95	20	6	EB-12/0-16	0.15
10/20/95	20	6	EB-24/0-24	0.53
10/20/95	20	6	EB-24/24-39.5	0.03
04/11/96	15	3	EB-32/0-24	0.82
04/11/96	15	3	EB-32/24-36	0.69
10/23/95	22	8	EB-32/57-66	0.81
10/23/95	22	8	EB-41/0-24	0.31
10/23/95	22	8	EB-41/36-48	0.67
04/11/96	14	2	WB-01/0-24	0.45
04/11/96	14	2	WB-01/24-40	0.46
04/11/96	14	2	WB-01/40-48	0.48
04/11/96	14	2	WB-01/57-62	0.5
04/11/96	15	3	WB-02/3-27	0.55
04/10/96	13	1	WB-02/27-40	2.45
04/11/96	15	3	WB-02/50-57	0.73
04/17/96	17	5	WB-03/0-24	0.85
04/17/96	17	5	WB-03/24-30	0.52
04/17/96	16	4	WB-04/0-23	1
04/17/96	16	4	WB-05/24-37	1.38
10/16/95	12	1	WB-11/0-24	0.18
10/23/95	22	8	WB-16/0-24	0.17
10/23/95	22	8	WB-16/24-44.5	0.1
04/17/96	16	4	WB-18/3-25	1.28
04/17/96	16	4	WB-18/25-39	0.56

Analysis Date	EIA Batch ID	Extract. Batch ID	Sample ID	Dry conc. (ug/g)
10/23/95	22	8	WB-19/0-24	0.27
04/17/96	17	4	WB-19/23-33	0.4
10/23/95	22	8	WB-19/33-47	0.1
04/10/96	13	1	WB-22/0-24	3.61
04/18/96	18	5	WB-22/24-33	1.91
04/18/96	18	5	WB-22/33-44	1.26
04/10/96	13	1	WB-23/0-17	1.8
04/18/96	18	5	WB-24/0-21	1.24
04/17/96	16	4	WB-25/0-24/DUP.A	0.6
04/10/96	13	1	WB-25/24-36/DUP.A	1.38
04/10/96	13	1	WB-25/51-56.5/DUP.A	1.73
10/23/95	22	8	WB-26/0-24	0.25
04/18/96	18	5	WB-26/24-34	2.86
04/17/96	16	4	WB-28/0-17	2.35
04/11/96	14	2	WB-33/0-24/DUP.A	0.7
04/11/96	15	2	WB-33/24-34/DUP.A	1.24
04/11/96	15	2	WB-33/40-68/DUP.A	0.66
04/17/96	16	4	WB-35/0-22	2
04/17/96	16	4	WB-36/0-11	1.61
05/01/96	21	9	WB-56/0-22	1.39
10/20/95	20	6	WB-70/0-24	0.36
10/20/95	20	6	WB-70/24-32.5	0.06
04/10/96	13	1	WB-71/0-26	5.5
04/11/96	15	3	WB-73/0-24	0.55
04/11/96	15	3	WB-73/24-36	0.23
04/17/96	16	3	WB-73/36-49	0.63
04/10/96	13	1	WB-84/0-17.5	1.24
04/10/96	13	1	WB-85/0-22/DUP.A	2.41
10/18/95	16	2	WB-87/0-24	2.64
10/18/95	16	2	WB-87/24-27	1
10/18/95	16	2	WB-87/50-62	2.35
04/11/96	15	3	WB-90/0-26/DUP.A	1.13

Analysis Date	EIA Batch ID	Extract. Batch ID	Sample ID	Dry conc. (ug/g)
04/10/96	13	1	WB-91/0-24/DUP.A	4.15
04/10/96	13	1	WB-91/24-40/DUP.A	2.62
04/17/96	17	5	WB-94/0-24/DUP.A	1.94
04/17/96	17	5	WB-94/24-36/DUP.A	0.62
04/17/96	17	4	WB-96/0-22	3.55
04/17/96	17	4	WB-98/0-26	2
10/17/95	14	1	WB-101/0-24	8.82
10/25/95	28	1	WB-101/24-30	210.79
04/17/96	16	3	WB-102/0-22	4.46
04/17/96	16	4	WB-105/0-24	2.38
04/17/96	17	4	WB-105/24-28.75	2.19
10/18/95	16	2	WB-107/0-24	1.23
10/18/95	16	2	WB-107/24-36	1.76
10/17/95	13	2	WB-107/46-53.5	0.16
04/10/96	13	1	WB-108/0-24	4.39
04/10/96	13	1	WB-108/24-36	9.69
04/11/96	14	2	WB-110/0-24	0.65
04/11/96	14	2	WB-110/24-36	0.65
04/11/96	14	2	WB-110/36-46	0.69
04/17/96	17	5	WB-111/0-24	4.29
04/18/96	18	5	WB-111/24-46	2.41
04/10/96	13	1	WB-112/0-17	6.79
04/17/96	16	3	WB-113/0-24	5.35
10/18/95	16	2	WB-114/0-24	2.98
10/18/95	16	2	WB-114/24-31	0.79
10/17/95	13	2	WB-114/31-38	0.08
04/11/96	15	3	WB-115/0-24	1.04
05/01/96	20	8	WB-116/0-25	1.86
04/11/96	14	2	WB-118/0-24	2.52
04/11/96	14	2	WB-118/29-34	0.37
04/11/96	14	2	WB-118/34-37	0.14

Analysis Date	EIA Batch ID	Extract. Batch ID	Sample ID	Dry conc. (ug/g)
04/17/96	17	5	WB-119/0-24	5.09
04/17/96	17	5	WB-119/24-36	4.55
04/17/96	17	5	WB-119/44-56	13.35
10/17/95	14	1	WB-121/0-24	3.93
10/17/95	14	1	WB-121/24-30	2.95
10/17/95	14	1	WB-121/30-42	2.4
05/01/96	21	9	MR-06/0-24	0.94
05/01/96	21	9	MR-06/24-31	3.02
05/01/96	21	9	MR-06/34.5-42	0.61
04/18/96	18	6	MR-05/0-24	2.67
05/01/96	21	9	MR-04/0-24	3.59
05/01/96	20	9	MR-07/0-24	0.78
05/01/96	20	9	MR-07/24-31	0.7
10/20/95	19	5	MR-08/0-24	0.05
10/20/95	19	5	MR-08/24-34	0.65
05/01/96	21	9	MR-10/0-26	1.94
05/01/96	21	9	MR-09/0-24	2.52
05/01/96	21	9	MR-09/24-28.5	2.16
10/16/95	12	1	MR-22/0-24	0.47
10/16/95	12	1	MR-22/24-40	0.73
10/16/95	12	1	MR-22/40-58	0.55
04/18/96	18	5	MR-28/0-18	14.96
10/23/95	21	7	MR-17/0-24	0.49
10/23/95	21	7	MR-17/24-36	1.48
10/23/95	21	7	MR-17/52-58	0.52
10/23/95	21	7	MR-16/0-24	0.4
10/23/95	21	7	MR-16/24-40	0.59
10/23/95	21	7	MR-16/72-84	0.35
04/30/96	19	8	MR-21/0-24	0.89
05/01/96	20	8	MR-21/24-36	1.11
05/01/96	20	8	MR-21/36-52	1.34
03-11-97	4	8	MR047A 0-24	0.3
03-11-97	4	8	MR047A 24-43	0.3
03-18-97	7	13	MR047A 43-78	11

Analysis Date	EIA Batch ID	Extract. Batch ID	Sample ID	Dry conc. (ug/g)
02-26-97	1	1	MR048 0-24	16.9
02-26-97	1	1	MR048 24-48	26.9
02-26-97	1	1	MR048 48-82	20.7
10/20/95	19	5	MR-15/0-24	0.88
10/20/95	19	5	MR-15/24-46	1.62
10/30/95	30	5	MR-15/58-71	0.33
05/01/96	21	9	MR-20/0-24	3.6
05/01/96	21	9	MR-20/24-36	5.87
05/01/96	21	9	MR-20/36-57	6.83
04/30/96	19	8	MR-27/0-24	0.75
04/30/96	19	8	MR-27/24-36	0.74
02-26-97	1	1	MR045 0-14	22.1
03-07-97	2	2	MR044 0-24	13.5
03-07-97	2	4	MR044 24-57	13
03-10-97	3	5	MR044 57-61	43.4
10/30/95	30	4	MR-13/0-24	0.85
10/30/95	30	4	MR-13/24-35	3.4
10/30/95	30	4	MR-13/35-42.5	0.84
03-11-97	4	7	MR046 0-17	5.6
03-11-97	4	8	MR033 0-24	0.6
03-11-97	4	7	MR033 24-40	7.4
03-11-97	4	7	MR033 40-55	7
02-26-97	1	1	MR049 0-24	40.3
02-26-97	1	1	MR049 24-42	0
03-17-97	6	11	MR049 42-50	23.8
03-12-97	5	10	MR049 50-62	11.7
10/23/95	21	7	MR-14/0-24	0.59
10/23/95	21	7	MR-14/24-36	1.16
10/23/95	21	7	MR-14/60-77	5.41
10/25/95	1		MR-11-DUP.A/0-24	315.08
10/24/95	25	1	MR-11-DUP.A/24-43	27.6
10/17/95	14	1	MR-11-DUP.A/43-52.5	17.75
03-11-97	4	7	MR032 0-26	8
03-17-97	6	12	MR032 46-51	0
03-17-97	6	12	MR032 51-66	20.6

Analysis Date	EIA Batch ID	Extract. Batch ID	Sample ID	Dry conc. (ug/g)
03-07-97	2	2	MR031 0-24	9.7
03-07-97	2	3	MR031 24-46	12.4
03-17-97	6	12	MR031 46-61	25.8
10/25/95	27	6	MR-12/0-24	158.65
10/24/95	25	6	MR-12/24-34	90.65
10/24/95	24	6	MR-12/34-46	37.4
04/18/96	18	6	MR-25/0-27	5.63
04/18/96	18	6	MR-25/27-40	3.75
03-07-97	2	4	MR030 0-24	8.3
03-12-97	5	10	MR030 24-39	7.9
03-11-97	4	7	MR030 34-54	5.9
05/01/96	20	8	MR-03/0-17	0.55
05/01/96	20	8	MR-19/0-24	1.46
05/01/96	20	8	MR-19/24-36	1.58
05/01/96	20	8	MR-19/47-59.5	1.77
03-11-97	4	7	MR056 0-24	7.1
03-10-97	3	5	MR056 24-40	46.9
03-11-97	4	7	MR056 40-60	5.6
03-10-97	3	5	MR057 0-24	32.3
03-10-97	3	5	MR057 24-38	12.4
03-11-97	4	7	MR057 38-79	5.4
10/23/95	21	7	MR-01/0-24	9.58
10/23/95	21	7	MR-01/38-48	6.89
10/23/95	21	7	MR-01/60-66.5	8.74
03-17-97	6	12	MR055 0-24	14.6
02-26-97	1	1	MR055 24-35	11.9
05/01/96	20	8	MR-26/0-24	14.43
05/01/96	20	8	MR-26/24-36	8.94
03-12-97	5	10	MR041A 0-24	9.6
03-17-97	6	11	MR041A 24-39	14.1
10/24/95	23	3	MR-02-DUP.A/0-24	10.23
10/24/95	23	3	MR-02-DUP.A/25-38	13.84
10/30/95	30	3	MR-02-DUP-A/40-53	3.16
03-11-97	4	7	MR054 0-24	12.2
03-11-97	4	7	MR054 24-46	8.1
03-11-97	4	7	MR054 46-70	8.5

Analysis Date	EIA Batch ID	Extract. Batch ID	Sample ID	Dry conc. (ug/g)
10/30/95	30	4	MR-29/0-24	5.01
10/30/95	30	4	MR-29/40-60	4.84
10/30/95	30	4	MR-29/60-72	3.57
03-07-97	2	3	MR042 0-24	13.6
03-07-97	2	3	MR042 24-57	0
10/20/95	20	6	MR-24/0-24	0.79
10/20/95	20	6	MR-24/24-40	1.42
10/20/95	20	6	MR-24/40-52	0.63
05/01/96	20	9	MR-23/0-24	7.58
05/01/96	20	9	MR-23/24-37.5	5.54
02-26-97	1	1	MR051 0-24	0.1
03-11-97	4	8	MR051 24-55	0.4
03-11-97	4	8	MR051 55-73	0.3
03-11-97	4	7	MR050 0-24	0.1
03-11-97	4	7	MR050 24-48	6.4
02-26-97	1	1	MR050 48-72	25.9
02-26-97	1	1	MR052 0-24	12.1
03-11-97	4	8	MR052 24-33	1.6
02-26-97	1	1	MR053 0-24	23.6
02-26-97	1	1	MR053 24-52	23.4
03-12-97	5	10	MR034 0-24 DA	12.4
03-17-97	6	12	MR034 24-44 DA	21.3
03-17-97	6	12	MR034 44-59 DA	20.9
04/30/96	19	8	MR-18/0-24/DUP.A	1.24
04/30/96	19	8	MR-18/24-57/DUP.A	1.34
05/02/96	23	8	MR-18/57-67/DUP.A	88.39
03-10-97	3	5	MR039 0-24	12.5
03-18-97	7	13	MR039 24-30	14.9
03-07-97	2	2	MR039 30-54	11.4
03-18-97	7	13	MR039 54-108	13.8
03-10-97	3	6	MR040 0-14	6.6
03-18-97	7	13	MR038 0-24	11.9
03-17-97	6	11	MR038 31-49	21.2
03-18-97	7	13	MR037 0-24	16.7
03-07-97	2	4	MR037 40-50	14.4
03-11-97	4	8	MR037 50-76	2.2

Analysis Date	EIA Batch ID	Extract. Batch ID	Sample ID	Dry conc. (ug/g)
03-17-97	6	12	MR036 0-24	20.6
03-11-97	4	8	MR036 30-46	0.6
03-07-97	2	4	MR036 56-87	2.7
03-12-97	5	10	MR043A 0-24	10.3
03-17-97	6	12	MR043A 24-55	10.2
03-17-97	6	11	MR043A 55-73	18.9
03-18-97	7	13	MR035 0-24	13.3
03-12-97	5	9	MR035 24-38	8.6
03-18-97	7	13	MR035 38-72	13.4
03-12-97	5	9	MR058 0-11	5.1
03-07-97	2	2	MR059 0-24	41.7
03-10-97	3	5	MR059 24-48	9.3
03-12-97	5	9	MR059 48-76	7.8
04/18/96	18	6	OR-01/0-24	5.43
04/18/96	18	6	OR-01/24-35	3.12
04/18/96	18	6	OR-01/40-60	4.23
04/18/96	18	6	OR-02/0-24	4.52
04/18/96	18	6	OR-02/24-36	4.88
04/30/96	19	6	OR-02/64-76	0.75
03-12-97	5	9	OR06 0-24	12.4
03-07-97	2	3	OR06 24-40	11.2
03-12-97	5	9	OR06 40-53	11.9
03-07-97	2	4	OR07A 0-24	13
03-07-97	2	3	OR07A 30-57	8.6
03-07-97	2	3	OR07A 57-78	10.1
03-17-97	6	12	OR08A 0-24	23.4
03-11-97	4	8	OR08A 24-54	1.6
03-17-97	6	11	OR08A 54-90	0
04/30/96	19	6	OR-03/0-24	2.28
04/30/96	19	6	OR-03/24-36	0.54
04/30/96	19	6	OR-03/54-67	0.69
03-07-97	2	3	OR09A 0-24	12.9
03-12-97	5	9	OR09A 24-60	7.1
03-12-97	5	9	OR09A 60-83	6
04/30/96	19	6	OR-04/0-24	1.09
04/30/96	19	6	OR-04/24-36	0.55
04/30/96	19	6	OR-04/50-62	0.43

Analysis Date	EIA Batch ID	Extract. Batch ID	Sample ID	Dry conc. (ug/g)
03-07-97	2	3	OR05 0-24	5.7
03-17-97	6	12	OR05 24-40	7.6
03-07-97	2	2	OC04 0-26	15.2
03-07-97	2	2	OC04 26-46	9.6
03-07-97	2	2	OC04 46-60	17.6
03-07-97	2	3	OC05 0-24	16
03-07-97	2	3	OC05 24-46	15.3
03-07-97	2	4	OC06 0-24	17.7
03-07-97	2	2	OC06 24-36	5.7
03-07-97	2	2	OC07 0-24	12
03-07-97	2	2	OC07 24-60	10
03-12-97	5	9	OC08A 0-24	9.5
03-07-97	2	3	OC08A 24-51	8.5
03-10-97	3	6	OC09 0-24	16.7
03-10-97	3	6	OC09 24-40	16.4
03-10-97	3	6	OC10 0-24	8.1
03-17-97	6	12	OC10 24-29	12.3
03-10-97	3	6	OC10 29-50	2.7
03-12-97	5	10	OC11 0-24	12.4
03-10-97	3	6	OC11 24-35	14.5
03-10-97	3	6	OC11 35-48	15.6
03-07-97	2	3	OC12 0-26	10.3
03-07-97	2	3	OC12 26-50	6.4
10/30/95	31	4	OC-01-DUP.A/0-24	26.59
10/31/95	33	4	OC-01-DUP.A/28-34	137.41
10/19/95	17	4	OC-01-DUP.A/45-60	0.23
10/20/95	19	5	OC-02/0-24	14.07
10/25/95	26	5	OC-02/35-43	52.81
10/20/95	19	5	OC-02/43-48	0.07
10/18/95	16	2	OC-03/0-8	7.81
03-07-97	2	4	SC04A 0-24	10
03-07-97	2	4	SC04A 24-39	9.5
03-17-97	6	11	SC04A 39-64	25.4
03-17-97	6	11	SC04A 64-81	22.2
03-17-97	6	11	SC04A 81-88	18.5

Analysis Date	EIA Batch ID	Extract. Batch ID	Sample ID	Dry conc. (ug/g)
03-07-97	2	4	SC05 0-24	10.2
03-07-97	2	2	SC05 24-53	12.2
03-07-97	2	2	SC05 53-65	6.4
03-10-97	3	5	SC06A 0-24	1.3
03-10-97	3	5	SC06A 36-61	10.6
03-10-97	3	5	SC06A 61-79	10.8
10/24/95	23	3	SC-02/0-24	19.87
10/25/95	26	3	SC-02/24-35	51.73
10/25/95	27	3	SC-02/35-54	87.4
10/25/95	26	3	SC-02/54-63	88.98
10/20/95	19	5	SC-01/0-24	1.43
10/20/95	19	5	SC-01/24-34	1.33
10/20/95	19	5	SC-01/34-44.5	0.58
03-12-97	5	10	SC07 0-24	8.9
03-12-97	5	10	SC07 24-50	9.2
03-12-97	5	9	SC07 50-83	9
10/24/95	23	2	SC-03/0-23	20.72
10/25/95	26	2	SC-03/23-33	52.93
03-12-97	5	10	DC07 0-24	11.4
03-10-97	3	5	DC07 24-29	0.6
10/23/95	22	8	DC-01/0-14.25	0.57
03-10-97	3	5	DC06 0-26	11.2
03-10-97	3	5	DC06 26-42	8.4
10/18/95	15	3	DC-02-DUP.A/0-24	1.18
10/19/95	18	3	DC-02-DUP.A/24-36	2.54
10/19/95	18	3	DC-02-DUP.A/41-47	1.1
03-17-97	6	11	DC05 0-24	16.7
03-11-97	4	8	DC05 24-39	0.4
03-12-97	5	9	DC04 0-24	3.9
03-12-97	5	9	DC04 24-36	7.1
03-10-97	3	5	DC04 36-56	8.6
10/18/95	15	3	DC-03/0-24	1.27
10/19/95	18	3	DC-03/38-44	3.93
10/19/95	18	3	DC-03/65-77	4.95

Appendix D.

Results of Sample Ranking Calculations

OVERALL RANKINGS OF CONTAMINATION IN SAMPLES THROUGHOUT MAUMEE RIVER AREA OF CONCERN
ASci Corporation (ESD); 30427 West Eight Mile Road, Livonia, MI 48152

Sample Number	Cr ug/g DW	Cr Rank	Pb ug/g DW	Pb Rank	Ni ug/g DW	Ni Rank	Zn ug/g DW	Zn Rank	Total PCB (ug/g) DW	PCB Rank	Total PAH (ug/g) DW	PAH Rank	Overall Rank
WB18 25-39	17.3	2.2	8.52	1.5	7.5	1.0	38.4	1.6	0.65	1.1	0.56	1.2	1.43
WB118 34-37	33.9	4.2	5.13	1.2	7.5	1.0	31.9	1.2	0.4	1.0	0.14	1.0	1.61
WB23 0-17	7.5	1.0	17.8	2.2	7.5	1.0	55.5	2.9	1.52	1.2	1.8	1.6	1.65
WB73 24-36	40.6	5.0	2.5	1.0	7.5	1.0	29.8	1.0	0.6	1.1	0.23	1.1	1.69
WB03 24-30	30.3	3.7	12.2	1.8	7.5	1.0	39.4	1.7	0.98	1.1	0.52	1.2	1.76
WB-114/31-38	32.9	4.1	13	1.8	7.5	1.0	31.5	1.1	6.22	1.8	0.08	1.0	1.82
WB118 29-34	43.1	5.3	12.5	1.8	7.5	1.0	42.1	1.9	0.51	1.1	0.37	1.1	2.03
WB-107/46-53.5	43.4	5.3	18.3	2.3	7.5	1.0	49	2.5	1.12	1.1	0.16	1.1	2.2
OR05 0-24	39.9	4.9	12.7	1.8	7.5	1.0	39.2	1.7	2.47	1.3	5.7	2.8	2.26
WB19 24-33	30.3	3.7	6.09	1.3	18.8	4.9	40.9	1.8	1.08	1.1	0.4	1.1	2.34
WB22 33-44	46.2	5.7	15.4	2.0	7.5	1.0	62.4	3.5	1.12	1.1	1.26	1.4	2.45
WB73 36-49	33.5	4.1	7.64	1.4	20.5	5.5	35.3	1.4	0.63	1.1	0.63	1.2	2.46
DC06 26-42	31.7	3.9	16.2	2.1	7.5	1.0	65.3	3.7	2	1.3	8.4	3.6	2.6
WB-70/24-32.5	29.8	3.7	12.4	1.8	23.4	6.5	38.7	1.7	0.18	1.0	0.06	1.0	2.62
WB-16/0-24	17.5	2.2	22.6	2.6	23.5	6.6	57.1	3.1	0.26	1.0	0.17	1.1	2.75
OR05 24-40	31.5	3.9	11.8	1.7	18.3	4.8	36.7	1.5	1.78	1.2	7.6	3.4	2.76
EB-24/24-39.5	18.7	2.3	11.9	1.8	26.8	7.7	57.9	3.1	0.28	1.0	0.03	1.0	2.83
WB-114/24-31	45	5.5	28.1	3.0	7.5	1.0	82.8	5.0	6.06	1.8	0.79	1.2	2.94
MR03 0-17	27.8	3.4	20.6	2.4	23.1	6.4	57.5	3.1	0.78	1.1	0.55	1.2	2.95
EB-03/0-23	45.9	5.6	32.1	3.4	7.5	1.0	99.9	6.3	0.29	1.0	0.37	1.1	3.07
OC10 24-29	34.3	4.2	29.4	3.2	7.5	1.0	61.3	3.4	10.7	2.5	12.3	4.9	3.18
WB56 0-22	49.5	6.1	26.6	2.9	16.1	4.0	65.7	3.7	1.19	1.1	1.39	1.4	3.21
OC07 24-60	52.2	6.4	20.1	2.4	7.5	1.0	71.1	4.1	7.24	2.0	10	4.1	3.34
WB33 40-68-DA	38.6	4.7	2.5	1.0	32.3	9.6	52.2	2.7	1.11	1.1	0.66	1.2	3.4
OR04 56-62	40.9	5.0	2.5	1.0	29.6	8.7	64.9	3.7	1.72	1.2	0.43	1.1	3.45
WB22 24-33	39.5	4.9	26.8	2.9	18.2	4.7	90.7	5.6	1.07	1.1	1.91	1.6	3.48
WB25 51-56.5 D1	58.0	7.1	16.5	2.1	17.8	4.6	77.2	4.6	1.46	1.2	1.73	1.5	3.52
OR07A 30-57	38.1	4.7	16.4	2.1	22.1	6.1	60.9	3.4	3.38	1.5	8.6	3.7	3.56
OC12 26-50	51.0	6.2	23.1	2.6	15.8	3.9	75.1	4.4	1.74	1.2	6.4	3.0	3.57
WB94 24-36 DP	59.9	7.3	11.6	1.7	25.2	7.2	74.6	4.4	1.02	1.1	0.62	1.2	3.82
WB-107/24-36	48.3	5.9	41.1	4.1	15.4	3.7	99.8	6.3	3.83	1.5	1.76	1.6	3.85
EB-06/0-24DPA Rep.	51.7	6.3	33.6	3.5	15.3	3.7	116	7.5	0.28	1.0	0.42	1.1	3.87

Sample Number	Cr ug/g DW	Cr Rank	Pb ug/g DW	Pb Rank	Ni ug/g DW	Ni Rank	Zn ug/g DW	Zn Rank	Total PCB (ug/g) DW	PCB Rank	Total PAH (ug/g) DW	PAH Rank	Overall Rank
WB116 0-25	43.4	5.3	26.6	2.9	24.0	6.7	91.1	5.6	0.83	1.1	1.86	1.6	3.89
WB-19/33-47	56.9	7.0	7.25	1.4	32.6	9.7	64.6	3.6	0.26	1.0	0.1	1.0	3.96
WB105 24-28.75	38.1	4.7	25.8	2.9	29.0	8.5	87.2	5.3	1.02	1.1	2.19	1.7	4.03
MR-17/52-58	32.6	4.0	15.8	2.1	41.2	12.7	62.7	3.5	0.18	1.0	0.52	1.2	4.08
OC06 24-36	60.2	7.3	18.4	2.3	23.8	6.7	68.7	3.9	7.61	2.0	5.7	2.8	4.17
OC10 29-50	45.3	5.6	9.38	1.6	35.7	10.8	69.8	4.0	1.98	1.3	2.7	1.8	4.17
WB90 0-25-DA (Rep)	47.0	5.8	36.8	3.7	24.5	6.9	104	6.6	0.86	1.1	1.13	1.4	4.25
WB-11/0-24	63	7.7	9.81	1.6	35.1	10.6	65.2	3.7	0.54	1.1	0.18	1.1	4.28
WB25R 0-24-DA	46.8	5.7	22.6	2.6	33.8	10.2	80.6	4.8	1.35	1.2	0.6	1.2	4.28
OR03 24-36	49.3	6.0	5.26	1.2	43.0	13.4	54.3	2.9	0.88	1.1	0.54	1.2	4.29
DC-02/41-47A	61	7.4	21.5	2.5	31.7	9.4	73	4.3	0.27	1.0	1.1	1.3	4.34
WB04 0-23	59.0	7.2	33.4	3.5	23.0	6.4	103	6.5	1.16	1.1	1	1.3	4.34
WB03 0-24	77.4	9.4	27.0	3.0	21.2	5.8	89.8	5.5	1.4	1.2	0.85	1.3	4.35
WB24 0-21	41.9	5.1	26.2	2.9	42.7	13.2	50.6	2.6	0.77	1.1	1.24	1.4	4.39
OR08A 54-90	44.3	5.4	9.78	1.6	46.2	14.5	51.1	2.6	3.6	1.5	0	1.0	4.43
WB35 0-22	58.1	7.1	27.1	3.0	27.6	8.0	91.9	5.7	1.69	1.2	2	1.6	4.43
MR055 0-24	63.7	7.8	32.9	3.4	7.5	1.0	109	7.0	6.73	1.9	14.6	5.6	4.44
WB-16/24-44.5	58.6	7.2	20.3	2.4	32.1	9.6	88.2	5.4	0.28	1.0	0.1	1.0	4.43
WB84 0-17.5	60.6	7.4	28.4	3.1	26.9	7.8	101	6.4	1	1.1	1.24	1.4	4.52
WB105 0-24	85.2	10.4	46.2	4.5	7.5	1.0	132	8.7	0.99	1.1	2.38	1.7	4.57
OR04 24-36	33.7	4.2	11.2	1.7	49.9	15.8	63.4	3.5	0.94	1.1	0.55	1.2	4.57
EB-07/0-9	70.9	8.6	17.7	2.2	33.8	10.2	78.7	4.7	0.25	1.0	0.18	1.1	4.63
MR20 0-24	46.9	5.7	41.0	4.1	29.1	8.5	99.8	6.3	1.68	1.2	3.6	2.1	4.66
OR07A 57-78	50.7	6.2	10.2	1.6	38.2	11.7	65.0	3.7	3.24	1.4	10.1	4.2	4.8
OR02 64-76	52.2	6.4	2.5	1.0	47.3	14.8	72.7	4.2	1.23	1.2	0.75	1.2	4.81
WB115 0-24	55.3	6.8	31.0	3.3	34.1	10.3	97.3	6.1	0.83	1.1	1.04	1.3	4.8
WB36 0-11	49.9	6.1	26.3	2.9	38.6	11.8	88.2	5.4	1.02	1.1	1.61	1.5	4.81
WB94 0-24 DUP	69.4	8.5	36.3	3.7	21.7	5.9	125	8.2	1.31	1.2	1.94	1.6	4.85
OR03 54-67	69.1	8.4	17.6	2.2	40.0	12.3	70.1	4.0	1.18	1.1	0.69	1.2	4.89
OR09A 24-60	32.9	4.1	2.5	1.0	50.7	16.0	64.6	3.6	2.71	1.4	7.1	3.2	4.88
MR25 27-40	58.5	7.1	56.6	5.3	22.9	6.4	116	7.5	0.83	1.1	3.75	2.2	4.94
WB91 24-40-DA	69.4	8.5	18.1	2.2	33.2	9.9	97.7	6.1	1.26	1.2	2.62	1.8	4.96
WB25 24-36	83.1	10.1	24.1	2.7	28	8.1	99.7	6.3	1.44	1.2	1.38	1.4	4.98
OR09A 60-83	31.1	3.8	5.74	1.3	55.9	17.8	52.6	2.7	2.92	1.4	6	2.9	4.99

Sample Number	Cr ug/g DW	Cr Rank	Pb ug/g DW	Pb Rank	Ni ug/g DW	Ni Rank	Zn ug/g DW	Zn Rank	Total PCB (ug/g) DW	PCB Rank	Total PAH (ug/g) DW	PAH Rank	Overall Rank
WB98 0-26	51.0	6.2	36.7	3.7	35.0	10.6	107	6.8	0.94	1.1	2	1.6	5.02
WB-87/50-62	60.3	7.4	39.8	4.0	30.2	8.9	111	7.1	0.68	1.1	2.35	1.7	5.03
DC07 24-29	63.7	7.8	14.0	1.9	43.3	13.5	77.2	4.6	2.31	1.3	0.6	1.2	5.04
WB73 0-24	64.6	7.9	29.6	3.2	35.6	10.8	97.9	6.1	0.94	1.1	0.55	1.2	5.04
MR07 0-24	70.7	8.6	20.6	2.4	23.1	6.4	154	10.4	1.15	1.1	0.78	1.2	5.04
WB91R 0-24-DA	61.5	7.5	50.6	4.8	22.1	6.1	128	8.4	1.37	1.2	4.15	2.3	5.06
OC08A 24-51	56.4	6.9	40.9	4.1	27.4	7.9	83.9	5.1	12.3	2.7	8.5	3.7	5.06
MR052 0-24	75.0	9.1	30.2	3.2	18.1	4.7	103	6.6	7.8	2.1	12.1	4.8	5.08
EB-12/0-16	61.1	7.5	26.5	2.9	37.2	11.3	110	7.1	0.38	1.0	0.15	1.0	5.14
WB-70/0-24	79.9	9.7	33	3.4	29.6	8.7	108	6.9	0.24	1.0	0.36	1.1	5.15
MR07 24-31	65.0	7.9	25.5	2.8	29.1	8.5	140	9.3	1.59	1.2	0.7	1.2	5.17
WB96 0-22	50.2	6.1	49.0	4.7	28.2	8.2	134	8.9	0.8	1.1	3.55	2.1	5.19
WB01 57-62	49.9	6.1	31.8	3.3	43.4	13.5	97.8	6.1	1.52	1.2	0.5	1.2	5.24
MR21 36-52	61.5	7.5	36.6	3.7	23.3	6.5	167	11.4	0.78	1.1	1.34	1.4	5.27
MR09 24-28.5	62.1	7.6	35.1	3.6	28.5	8.3	140	9.3	1.17	1.1	2.16	1.7	5.27
WB85R 0-22-DA	61.3	7.5	19.7	2.4	41.6	12.9	102	6.5	1.19	1.1	2.41	1.8	5.35
WB110 24-36	69.4	8.5	45.4	4.4	27.3	7.9	136	9.0	0.84	1.1	0.65	1.2	5.35
MR045 0-14	51.7	6.3	48.8	4.7	7.5	1.0	154	10.4	5.28	1.7	22.1	7.9	5.35
WB71 0-26	54.8	6.7	32.6	3.4	35.8	10.8	120	7.8	1.9	1.2	5.5	2.7	5.46
WB18 3-25	56.7	6.9	33.3	3.5	42.2	13.1	110	7.1	1.2	1.1	1.28	1.4	5.51
MR055 24-35	65.3	8.0	25.0	2.8	36.4	11.1	74.2	4.4	9.56	2.3	11.9	4.7	5.54
EB-01/0-25	71.1	8.7	31.7	3.3	44.6	13.9	96.7	6.1	0.24	1.0	0.05	1.0	5.67
WB-107/0-24	110	13.4	53.6	5.1	7.5	1.0	176	12.0	5.45	1.7	1.23	1.4	5.77
WB-87/24-27	69.6	8.5	50.8	4.9	41.2	12.7	106	6.8	0.7	1.1	1	1.3	5.87
WB28 0-17	53.0	6.5	43.9	4.3	42.8	13.3	135	8.9	1.28	1.2	2.35	1.7	5.99
OR01 40-60	50.1	6.1	6.41	1.3	66.8	21.6	60.2	3.3	3.14	1.4	4.23	2.3	6.02
SC-01/24-34	67.6	8.2	90	8.0	25.5	7.3	157	10.6	0.55	1.1	1.33	1.4	6.1
WB01 0-24	71.9	8.8	35.4	3.6	44.7	13.9	124	8.1	1.4	1.2	0.45	1.1	6.13
MR09 0-24	61.9	7.6	86.9	7.8	27.7	8.0	155	10.5	1.52	1.2	2.52	1.8	6.13
WB01 40-48	84.3	10.3	41.6	4.1	44.6	13.9	99.4	6.3	1.49	1.2	0.48	1.2	6.15
MR051 0-24	80.9	9.8	34.8	3.6	29.1	8.5	168	11.4	11.4	2.6	0.1	1.0	6.16
WB05 24-37	74.8	9.1	43.5	4.3	31.7	9.4	171	11.7	1.05	1.1	1.38	1.4	6.17
OC-01/45-60A	55.6	6.8	11.9	1.8	63.2	20.4	97.4	6.1	0.12	1.0	0.23	1.1	6.19
WB22 0-24	67.2	8.2	68.6	6.3	29.0	8.5	162	11.0	1.7	1.2	3.61	2.1	6.22
MR052 24-33	30.0	3.7	30.5	3.2	65.5	21.2	96.8	6.1	8.6	2.2	1.6	1.5	6.31

Sample Number	Cr ug/g DW	Cr Rank	Pb ug/g DW	Pb Rank	Ni ug/g DW	Ni Rank	Zn ug/g DW	Zn Rank	Total PCB (ug/g) DW	PCB Rank	Total PAH (ug/g) DW	PAH Rank	Overall Rank
WB-19/0-24	84.4	10.3	34.6	3.6	50.7	16.0	99.4	6.3	0.37	1.0	0.27	1.1	6.37
MR043A 0-24	112	13.6	38.9	3.9	7.5	1.0	199	13.8	6.75	1.9	10.3	4.2	6.4
MR-08/24-34	52.6	6.4	72.2	6.6	23.7	6.6	237	16.7	0.25	1.0	0.65	1.2	6.42
WB02 27-40	96.4	11.7	40.5	4.0	38.2	11.7	127	8.3	2.14	1.3	2.45	1.8	6.47
WB02 3-27	69.8	8.5	47.4	4.6	48.3	15.2	131	8.6	1.54	1.2	0.55	1.2	6.55
DC05 24-39	86.7	10.5	21.4	2.5	52.5	16.7	112	7.2	2.3	1.3	0.4	1.1	6.56
MR048 48-82	58.4	7.1	68.1	6.3	17.1	4.4	188	12.9	8.57	2.2	20.7	7.5	6.72
MR-24/40-52	83.9	10.2	61.5	5.7	41.1	12.7	153	10.3	0.3	1.0	0.63	1.2	6.86
MR-08/0-24	98.3	11.9	30.2	3.2	35.3	10.7	199	13.8	0.26	1.0	0.05	1.0	6.94
WB-87/0-24	78.6	9.6	69.8	6.4	34.9	10.5	182	12.5	0.84	1.1	2.64	1.8	6.99
WB111 0-24	90.7	11.0	49.1	4.7	37.1	11.3	166	11.3	1.99	1.3	4.29	2.3	6.99
WB108 24-36	86.7	10.5	60.6	5.6	30.5	9.0	169	11.5	2.01	1.3	9.69	4.0	7
MR-16/0-24	84.4	10.3	46.2	4.5	42.9	13.3	173	11.8	0.21	1.0	0.4	1.1	7.01
SC-01/0-24	82.7	10.1	51.1	4.9	42.9	13.3	191	13.2	0.37	1.0	1.43	1.4	7.32
MR040 0-14	58.3	7.1	30.0	3.2	65.8	21.3	121	7.9	2.52	1.3	6.6	3.1	7.32
EB-24/0-24	68.1	8.3	48.4	4.7	52	16.5	179	12.3	0.27	1.0	0.53	1.2	7.32
MR25 0-27	94.8	11.5	58.8	5.5	34.1	10.3	181	12.4	3.78	1.5	5.63	2.8	7.33
MR056 40-60	65.0	7.9	48.8	4.7	65.2	21.1	95.9	6.0	4.47	1.6	5.6	2.8	7.35
MR21 0-24	81.5	9.9	42.2	4.2	46.3	14.5	190	13.1	1.17	1.1	0.89	1.3	7.35
MR041A 24-39	45.6	5.6	MDL	0.8	80.8	26.5	74	4.4	5.23	1.7	14.1	5.4	7.4
OC08A 0-24	95.0	11.5	146	12.5	7.5	1.0	197	13.6	6.94	1.9	9.5	4.0	7.43
MR06 0-24	72.0	8.8	32.4	3.4	40.0	12.3	253	17.9	1.75	1.2	0.94	1.3	7.48
MR10 0-26	65.1	7.9	54.9	5.2	35.7	10.8	256	18.1	2.23	1.3	1.94	1.6	7.49
MR038 31-49	77.0	9.4	21.2	2.5	46.6	14.6	139	9.2	5.23	1.7	21.2	7.7	7.51
EB-41/36-48	117	14.2	48.2	4.7	27.8	8.1	227	15.9	0.35	1.0	0.67	1.2	7.51
SC-01/34-44.5	88.2	10.7	64.7	6.0	44.1	13.7	184	12.7	0.42	1.0	0.58	1.2	7.55
DC07 0-24	96.2	11.7	40.7	4.1	37.1	11.3	182	12.5	3.94	1.5	11.4	4.6	7.6
WB-114/0-24	112	13.6	85.3	7.6	7.5	1.0	283	20.1	7.56	2.0	2.98	1.9	7.72
MR047A 43-78	68.1	8.3	29.2	3.1	63.6	20.5	131	8.6	2.73	1.4	11	4.5	7.73
OC04 46-60	55.2	6.7	8.73	1.5	73.4	23.9	89.6	5.5	8.68	2.2	17.6	6.5	7.73
OC07 0-24	129	15.6	131	11.3	7.5	1.0	159	10.8	15.3	3.1	12	4.8	7.75
WB110 0-24	89.4	10.9	36.7	3.7	46.9	14.7	215	15.0	0.83	1.1	0.65	1.2	7.77
WB02 50-57	105	12.7	36.5	3.7	61.1	19.7	127	8.3	1.2	1.1	0.73	1.2	7.81
OR08A 24-54	50.8	6.2	32.1	3.4	80.3	26.3	113	7.3	8.56	2.2	1.6	1.5	7.81
MR21 24-36	85.2	10.4	52.5	5.0	55.4	17.7	166	11.3	1.15	1.1	1.11	1.3	7.8

Sample Number	Cr ug/g DW	Cr Rank	Pb ug/g DW	Pb Rank	Ni ug/g DW	Ni Rank	Zn ug/g DW	Zn Rank	Total PCB (ug/g) DW	PCB Rank	Total PAH (ug/g) DW	PAH Rank	Overall Rank
WB01 24-40	85.1	10.4	48.9	4.7	66.0	21.4	125	8.2	1.73	1.2	0.46	1.1	7.83
WB102 0-22	89.8	10.9	48.1	4.6	48.0	15.1	188	13.0	1.04	1.1	4.46	2.4	7.86
OC-03/0-8	142	17.2	49.0	0.8	40.5	12.5	179	12.3	0.84	1.1	7.81	3.5	7.89
WB33R 0-24-DA	78.0	9.5	55.0	5.2	56.1	17.9	179	12.3	1.71	1.2	0.7	1.2	7.89
MR23 24-37.5	67.3	8.2	78.9	7.1	47.1	14.8	193	13.3	1.94	1.3	5.54	2.7	7.9
OR09A 0-24	94.6	11.5	47.8	4.6	45.9	14.4	154	10.4	3.91	1.5	12.9	5.1	7.91
OR04 0-24	49.7	6.1	53.4	5.1	67.7	21.9	175	12.0	1	1.1	1.09	1.3	7.92
MR20 24-36	76.2	9.3	88.3	7.9	43.3	13.5	187	12.9	1.74	1.2	5.87	2.8	7.92
DC05 0-24	102	12.4	78.0	7.0	7.5	1.0	268	19.0	6.21	1.8	16.7	6.2	7.93
WB108 10-24	86.3	10.5	48.8	4.7	48.0	15.1	199	13.8	1.89	1.2	4.39	2.4	7.95
MR06 24-31	99.9	12.1	78.1	7.0	58.0	18.6	109	7.0	2.14	1.3	3.02	1.9	7.99
MR-17/24-36	92	11.2	59.4	5.6	54	17.2	174	11.9	0.3	1.0	1.48	1.5	8.05
MR038 0-24	106	12.9	66.6	6.1	41.1	12.7	147	9.8	8.19	2.1	11.9	4.7	8.06
MR27 0-24	90.0	10.9	62.9	5.8	48.9	15.4	208	14.5	1.39	1.2	0.75	1.2	8.18
WB111 24-?	108	13.1	33.7	3.5	53.1	16.9	185	12.7	1.12	1.1	2.41	1.8	8.18
MR035 0-24	114	13.9	25.0	2.8	41.4	12.8	188	13.0	3.77	1.5	13.3	5.2	8.19
MR-15/58-71	103	12.5	60.3	5.6	37.4	11.4	250	17.6	0.21	1.0	0.33	1.1	8.22
EB-41/0-24	109	13.2	37.9	3.8	50.2	15.9	210	14.6	0.4	1.0	0.31	1.1	8.28
EB32 24-36	87.1	10.6	32.0	3.4	59.5	19.1	206	14.3	1.26	1.2	0.69	1.2	8.29
MR-16/24-40	86.6	10.5	55.8	5.3	66.5	21.5	155	10.5	0.49	1.1	0.59	1.2	8.34
MR19 0-24	69.9	8.5	111	9.7	40.6	12.5	237	16.7	2.35	1.3	1.46	1.5	8.36
MR044 0-24	104	12.6	92.4	8.2	7.5	1.0	298	21.2	6.51	1.9	13.5	5.2	8.36
WB110 36-46	106	12.9	47.4	4.6	54.8	17.5	188	13.0	0.97	1.1	0.69	1.2	8.37
MR18 0-24-DAR	106	12.9	32.5	3.4	56.3	18.0	195	13.5	1.63	1.2	1.24	1.4	8.39
MR19 47-59.5	110	13.4	115	10.0	33.5	10.0	206	14.3	1.19	1.1	1.77	1.6	8.4
MR046 0-17	80.5	9.8	23.7	2.7	74.9	24.5	141	9.4	2.16	1.3	5.6	2.8	8.4
MR035 38-72	102	12.4	50.7	4.9	44.5	13.9	187	12.9	3.79	1.5	13.4	5.2	8.46
DC04 24-36	73.4	8.9	42.4	4.2	63.4	20.4	183	12.5	2.75	1.4	7.1	3.2	8.45
MR043A 24-55	91.1	11.1	50.1	4.8	43.8	13.6	215	15.0	8.63	2.2	10.2	4.2	8.48
MR18 24-57-DA	111	13.5	31.8	3.3	53.2	16.9	208	14.5	2.01	1.3	1.34	1.4	8.48
MR030 24-39	81.3	9.9	122	10.5	18.3	4.7	285	20.3	6.97	1.9	7.9	3.5	8.49
DC-02/24-36A	80.2	9.8	38.7	3.9	79.7	26.1	128	8.4	0.51	1.1	2.54	1.8	8.51
MR-17/0-24	85.9	10.4	30.4	3.2	56.6	18.1	251	17.7	0.31	1.0	0.49	1.2	8.61
OC-02/0-24	208	25.2	57.8	5.4	7.5	1.0	198	13.7	1.1	1.1	14.07	5.4	8.64
MR036 0-24	111	13.5	31.5	3.3	36.6	11.1	203	14.1	10.6	2.4	20.6	7.5	8.66

Sample Number	Cr ug/g DW	Cr Rank	Pb ug/g DW	Pb Rank	Ni ug/g DW	Ni Rank	Zn ug/g DW	Zn Rank	Total PCB (ug/g) DW	PCB Rank	Total PAH (ug/g) DW	PAH Rank	Overall Rank
WB119 24-36	97.5	11.8	88.6	7.9	42.2	13.1	224	15.7	1.69	1.2	4.55	2.4	8.69
OC-02/43-48	88.6	10.8	35	3.6	73.2	23.9	174	11.9	0.15	1.0	0.07	1.0	8.69
MR048 0-24	74.3	9.1	78.9	7.1	27.3	7.9	277	19.7	12.2	2.7	16.9	6.3	8.78
MR033 0-24	93.3	11.3	42.4	4.2	67.6	21.9	188	13.0	2.96	1.4	0.6	1.2	8.83
EB32 0-24	113	13.7	24.5	2.8	66.8	21.6	187	12.9	1.59	1.2	0.82	1.3	8.91
MR-16/72-84	109	13.2	38.4	3.9	60.5	19.4	213	14.8	0.25	1.0	0.35	1.1	8.92
WB-121/30-42	72.4	8.8	63.9	5.9	69.1	22.4	196	13.6	0.86	1.1	2.4	1.8	8.93
MR-15/0-24	105	12.7	81.4	7.3	31.7	9.4	308	22.0	0.26	1.0	0.88	1.3	8.97
MR04 0-24	91.7	11.1	87.6	7.8	52.6	16.7	207	14.4	4.91	1.7	3.59	2.1	8.97
WB118 0-24	100	12.1	85.8	7.7	43.6	13.6	249	17.6	1.51	1.2	2.52	1.8	8.99
OR01 24-35	120	14.6	58.3	5.5	62.4	20.1	159	10.8	1.01	1.1	3.12	2.0	9
MR-14/0-24	84.1	10.2	48.9	4.7	55.7	17.8	270	19.1	0.23	1.0	0.59	1.2	9.01
DC-01/0-14.25	79.6	9.7	76.3	6.9	55.4	17.7	260	18.4	0.48	1.0	0.57	1.2	9.15
MR27 24-36	92.0	11.2	66.8	6.1	56.9	18.2	246	17.3	0.95	1.1	0.74	1.2	9.2
MR34 DA 0-24	139	16.8	44.2	4.3	33.4	10.0	245	17.3	6.97	1.9	12.4	4.9	9.21
MR-13/35-42.5	113	13.7	51.6	4.9	67	21.7	186	12.8	0.28	1.0	0.84	1.3	9.24
MR039 24-30	96.5	11.7	45.8	4.5	36.3	11.0	297	21.2	3.77	1.5	14.9	5.7	9.26
MR05 0-24	95.4	11.6	33.8	3.5	50.2	15.9	304	21.7	0.86	1.1	2.67	1.8	9.27
MR-22/0-24	83.5	10.2	28.8	3.1	74.1	24.2	228	16.0	0.74	1.1	0.47	1.1	9.27
MR039 30-54	188	22.7	92.1	8.2	7.5	1.0	221	15.4	25.4	4.5	11.4	4.6	9.4
MR050 0-24	85.3	10.4	36.3	3.7	73.4	23.9	227	15.9	3.34	1.4	0.1	1.0	9.39
MR035 24-38	97.4	11.8	25.6	2.8	68.4	22.2	211	14.7	3.14	1.4	8.6	3.7	9.45
MR051 55-73	90.1	11.0	37.2	3.8	84.1	27.7	177	12.1	1.65	1.2	0.3	1.1	9.47
MR032 0-26	107	13.0	68.7	6.3	41.9	13.0	219	15.3	34.3	5.7	8	3.5	9.47
WB119 0-24	106	12.9	116.4	10.1	33.4	10.0	293	20.9	1.96	1.3	5.09	2.6	9.62
DC-03/38-44	126	15.3	62.1	5.8	62.7	20.2	197	13.6	0.59	1.1	3.93	2.2	9.7
MR-22/24-40	93.7	11.4	55.3	5.2	79.6	26.1	191	13.2	0.61	1.1	0.73	1.2	9.7
MR-22/40-58	111	13.5	44.6	4.4	75.2	24.6	197	13.6	0.65	1.1	0.55	1.2	9.71
MR037 0-24	98.0	11.9	40.6	4.0	59.0	18.9	227	15.9	4.03	1.5	16.7	6.2	9.77
MR047A 24-43	85.6	10.4	45.2	4.4	76.7	25.1	236	16.6	1.77	1.2	0.3	1.1	9.81
MR28 0-18	52.4	6.4	201	16.9	33.0	9.9	272	19.3	2.07	1.3	14.96	5.7	9.91
MR039 0-24	98.5	12.0	18.3	2.3	76.0	24.8	203	14.1	3.37	1.4	12.5	4.9	9.92
MR26 24-36	77.7	9.5	130	11.2	56.4	18.0	228	16.0	1.55	1.2	8.94	3.8	9.94
MR047A 0-24	96.6	11.7	44.4	4.4	80.3	26.3	217	15.1	1.83	1.2	0.3	1.1	9.99
MR033 24-40	117	14.2	76.7	6.9	53.8	17.1	237	16.7	7.95	2.1	7.4	3.3	10.06

Sample Number	Cr ug/g DW	Cr Rank	Pb ug/g DW	Pb Rank	Ni ug/g DW	Ni Rank	Zn ug/g DW	Zn Rank	Total PCB (ug/g) DW	PCB Rank	Total PAH (ug/g) DW	PAH Rank	Overall Rank
MR048 24-48	86.1	10.5	85.0	7.6	37.8	11.6	268	19.0	11	2.5	26.9	9.5	10.09
WB-26/0-24	130	15.8	66	6.1	78.8	25.8	169	11.5	0.36	1.0	0.25	1.1	10.21
MR057 0-24	87.8	10.7	35.8	3.7	49.3	15.6	271	19.2	3.21	1.4	32.3	11.1	10.28
MR050 24-48	133	16.1	61.3	5.7	57.6	18.4	242	17.0	4.17	1.6	6.4	3.0	10.3
WB-101/0-24	113	13.7	49.3	4.7	74.7	24.4	205	14.2	0.52	1.1	8.82	3.8	10.32
MR057 24-38	94.7	11.5	49.9	4.8	86.7	28.5	164	11.1	3.62	1.5	12.4	4.9	10.39
MR033 40-55	130	15.7	109	9.5	7.5	1.0	433	31.4	6.15	1.8	7	3.2	10.46
MR059 48-76	93.4	11.4	32.1	3.4	89.4	29.5	198	13.7	3.06	1.4	7.8	3.5	10.46
WB113 0-24	131	15.9	79.3	7.1	58.0	18.6	247	17.4	1.49	1.2	5.35	2.7	10.48
MR053 24-52	131	15.9	82.6	7.4	41.4	12.8	228	15.9	10.6	2.4	23.4	8.4	10.47
WB-121/24-30	101	12.3	83.3	7.5	76	24.8	219	15.3	0.51	1.1	2.95	1.9	10.47
DC04 36-56	98.2	11.9	70.1	6.4	66.7	21.6	247	17.4	6.75	1.9	8.6	3.7	10.5
MR-02/40-53A	55.3	6.8	84.4	7.6	78.5	25.7	283	20.1	0.66	1.1	3.16	2.0	10.54
MR053 0-24	112	13.6	48.0	4.6	60.7	19.5	209	14.5	11.1	2.5	23.6	8.4	10.54
EB-32/57-66	128	15.5	37	3.8	64.7	20.9	291	20.7	0.3	1.0	0.81	1.3	10.53
WB-121/0-24	110	13.4	73.4	6.7	68.4	22.2	256	18.1	0.5	1.1	3.93	2.2	10.6
DC06 0-26	79.1	9.6	75.2	6.8	68.4	22.2	268	19.0	3.95	1.5	11.2	4.5	10.61
WB112 10-17	125	15.2	72.0	6.6	60.8	19.5	253	17.9	3.07	1.4	6.79	3.1	10.61
MR059 24-48	106	12.9	38.1	3.8	92.3	30.5	168	11.4	2.39	1.3	9.3	3.9	10.65
MR06 34.5-42	121	14.7	119	10.3	89.8	29.6	111	7.1	3.19	1.4	0.61	1.2	10.73
MR049 0-24	110	13.3	65.3	6.0	7.5	1.0	376	27.2	17.9	3.5	40.3	13.7	10.77
MR059 0-24	79.8	9.7	33.2	3.5	60.9	19.6	213	14.9	16.8	3.3	41.7	14.1	10.84
MR034 DA 44-59	155	18.8	74.7	6.8	53.4	17.0	183	12.6	14.5	3.0	20.9	7.6	10.94
MR-01/0-24	103	12.5	42.4	4.2	76.8	25.1	268	19.0	0.83	1.1	9.58	4.0	10.99
OC09 0-24	190	23.0	82.7	7.4	32.6	9.7	238	16.8	15.5	3.1	16.7	6.2	11.05
MR058 0-11	125	15.2	40.6	4.0	97.9	32.5	158	10.7	2.22	1.3	5.1	2.6	11.06
MR043A 55-73	117	14.2	50.0	4.8	72.6	23.7	216	15.1	7.06	2.0	18.9	6.9	11.1
SC-03/0-23	67.2	8.2	233	19.4	28.6	8.3	322	23.1	1.73	1.2	20.72	7.5	11.3
MR051 24-55	98.7	12.0	34.2	3.5	103	34.1	227	15.9	2.01	1.3	0.4	1.1	11.31
MR-14/24-36	103	12.5	72.7	6.6	85.1	28.0	264	18.7	0.42	1.0	1.16	1.4	11.37
WB26 24-34	123	14.9	42.4	4.2	111	37.0	138	9.2	1.17	1.1	2.86	1.9	11.39
DC04 0-24	80.0	9.7	64.0	5.9	89.5	29.5	279	19.8	2.65	1.3	3.9	2.2	11.43
MR057 38-79	88.3	10.7	47.2	4.6	106	35.2	201	13.9	3.42	1.5	5.4	2.7	11.44
MR034 DA 24-44	198	24.0	78.1	7.0	41.7	12.9	197	13.7	17.8	3.4	21.3	7.7	11.45
MR-15/24-46	71.7	8.7	121	10.5	57.5	18.4	396	28.7	0.45	1.0	1.62	1.5	11.47

Sample Number	Cr ug/g DW	Cr Rank	Pb ug/g DW	Pb Rank	Ni ug/g DW	Ni Rank	Zn ug/g DW	Zn Rank	Total PCB (ug/g) DW	PCB Rank	Total PAH (ug/g) DW	PAH Rank	Overall Rank
MR049 24-42	101	12.3	86.3	7.7	7.5	1.0	600	44.1	14.9	3.0	0	1.0	11.53
MR037 40-50	167	20.3	52.7	5.0	65.7	21.2	221	15.5	6.12	1.8	14.4	5.5	11.56
DC-03/0-24	101	12.3	58.4	5.5	73.5	24.0	353	25.4	0.58	1.1	1.27	1.4	11.6
DC-02/0-24A	119	14.4	68.2	6.3	86.7	28.6	262	18.5	1.13	1.1	1.18	1.4	11.72
OR06 40-53	85.3	10.4	73.7	6.7	99.2	32.9	207	14.4	3.13	1.4	11.9	4.7	11.75
SC05 53-65	58.5	7.1	159	13.5	56.7	18.1	361	26.0	14.2	2.9	6.4	3.0	11.8
MR-14/60-77	135	16.4	76.5	6.9	72.9	23.8	282	20.1	0.55	1.1	5.41	2.7	11.81
WB119 44-56	73.6	9.0	136	11.7	53.7	17.1	368	26.6	2.6	1.3	13.35	5.2	11.8
MR20 36-57	114	13.8	191	16.1	38.2	11.7	352	25.3	2.21	1.3	6.83	3.1	11.9
MR036 30-46	155	18.8	40.1	4.0	87.2	28.7	249	17.6	3.28	1.4	0.6	1.2	11.95
MR19 24-36	103	12.5	134	11.5	48.8	15.4	182	12.5	128.99	18.8	1.58	1.5	12.03
MR11/43-52.5A	93.1	11.3	75.3	6.8	89.1	29.4	251	17.7	1.48	1.2	17.75	6.6	12.17
SC07 50-83	71.7	8.7	151	12.9	60.7	19.5	373	26.9	4.83	1.7	9	3.8	12.26
MR-11/24-43A	109	13.2	65.1	6.0	81.1	26.6	240	16.9	2.36	1.3	27.6	9.7	12.29
MR-24/24-40	155	18.8	118	10.2	65.3	21.1	297	21.2	0.59	1.1	1.42	1.4	12.3
MR-01/60-66.5	147	17.8	131	11.3	61.5	19.8	298	21.3	0.89	1.1	6.89	3.2	12.4
WB33 24-34-DA	139	16.8	55.1	5.2	118	39.5	166	11.3	1.62	1.2	1.24	1.4	12.57
MR049 50-63	128	15.5	133	11.5	7.5	1.0	530	38.8	22.9	4.1	11.7	4.7	12.6
OR07A 0-24	113	13.8	108	9.5	81.9	26.9	266	18.8	5.07	1.7	13	5.1	12.61
MR23 0-24	124	15.0	119	10.3	70.8	23.0	315	22.5	3.26	1.4	7.58	3.4	12.63
OR06 0-24	96.7	11.8	152	12.9	72.8	23.7	295	21.0	4.81	1.6	12.4	4.9	12.67
OR08A 0-24	147	17.8	129	11.1	53.4	17.0	284	20.2	5.3	1.7	23.4	8.4	12.68
OR03 0-24	158	19.1	91.4	8.1	94.0	31.1	215	15.0	1.35	1.2	2.28	1.7	12.7
OC05 24-46	339	41.0	94.1	8.3	23.4	6.5	200	13.9	6.01	1.8	15.3	5.8	12.89
MR039 54-108	184	22.2	96.0	8.5	73.4	23.9	234	16.4	10.5	2.4	13.8	5.3	13.14
MR036 56-87	258	31.1	99.0	8.7	57.6	18.4	234	16.4	9.92	2.4	2.7	1.8	13.16
OR06 24-40	111	13.4	123	10.6	97.3	32.3	241	17.0	4.31	1.6	11.2	4.5	13.23
MR044 24-57	120	14.6	98.2	8.7	82.3	27.0	328	23.5	4.07	1.5	13	5.1	13.39
MR037 50-76	219	26.5	63.6	5.9	90.2	29.8	204	14.2	11.6	2.6	2.2	1.7	13.44
MR-24/0-24	152	18.4	102	9.0	81.5	26.8	343	24.7	0.78	1.1	0.79	1.2	13.52
MR-13/0-24	131	15.9	126	10.9	86	28.3	338	24.3	0.44	1.0	0.85	1.3	13.61
OC12 0-26	219	26.4	306	25.3	44.2	13.8	166	11.3	4.55	1.6	10.3	4.2	13.76
OC04 26-46	409	49.4	183	15.5	7.5	1.0	151	10.1	12	2.6	9.6	4.0	13.78
MR056 24-40	78.9	9.6	350	28.8	38.3	11.7	217	15.1	4.98	1.7	46.9	15.7	13.77
MR044 57-61	112	13.6	136	11.7	58.5	18.7	318	22.8	5.39	1.7	43.4	14.6	13.87

Sample Number	Cr ug/g DW	Cr Rank	Pb ug/g DW	Pb Rank	Ni ug/g DW	Ni Rank	Zn ug/g DW	Zn Rank	Total PCB (ug/g) DW	PCB Rank	Total PAH (ug/g) DW	PAH Rank	Overall Rank
MR050 48-72	170	20.6	77.8	7.0	69.8	22.7	301	21.5	17.7	3.4	25.9	9.1	14.05
OC11 0-24	319	38.6	101	8.9	46.0	14.4	224	15.7	15.4	3.1	12.4	4.9	14.25
OR02 24-36	207	25.0	110	9.6	78.6	25.7	304	21.7	1.31	1.2	4.88	2.5	14.3
OC04 0-26	295	35.7	112	9.8	51.2	16.2	234	16.4	14.2	2.9	15.2	5.8	14.46
MR032 46-51	79.8	9.7	74.2	6.7	31.6	9.4	198	13.7	348	49.0	0	1.0	14.93
OC-01/0-24 ARP	279	33.7	112	9.8	63.1	20.3	223	15.6	1.52	1.2	26.59	9.4	15
SC05 0-24	95.2	11.6	365	30.0	34.6	10.4	459	33.4	7.06	2.0	10.2	4.2	15.26
MR031 0-24	131	15.9	140	12.0	7.5	1.0	708	52.2	42.1	6.8	9.7	4.0	15.32
MR-02/25-38A	68.8	8.4	183	15.4	90.9	30.0	474	34.6	0.97	1.1	13.84	5.3	15.81
DC-03/65-77	172	20.8	83.3	7.5	113	37.7	355	25.6	2.1	1.3	4.95	2.6	15.9
MR032 51-66	134	16.2	95.3	8.4	71.0	23.1	450	32.8	55	8.6	20.6	7.5	16.1
MR031 24-46	105	12.8	165	14.0	7.5	1.0	747	55.2	73.8	11.2	12.4	4.9	16.51
MR-13/24-35	152	18.4	229	19.1	72.7	23.7	483	35.2	0.7	1.1	3.4	2.1	16.6
OR02 0-24	197	23.8	127	11.0	124	41.5	305	21.8	2.33	1.3	4.52	2.4	16.98
MR-01/38-48	220	26.6	104	9.1	98.9	32.8	403	29.2	1.38	1.2	8.74	3.7	17.11
WB-101/24-30	60.7	7.4	64.6	6.0	43.2	13.4	112	7.2	2.88	1.4	210.79	67.2	17.1
OR01 0-24	226	27.3	131	11.3	119	39.8	313	22.4	2.65	1.3	5.43	2.7	17.48
OC05 0-24	411	49.6	82.4	7.4	53.5	17.0	341	24.5	8.43	2.1	16	6.0	17.78
MR030 0-24	114	13.9	131	11.3	95.9	31.8	585	42.9	24.6	4.4	8.3	3.6	17.98
MR-02/0-24AR	171	20.7	144	12.3	116	38.8	425	30.9	1.1	1.1	10.23	4.2	18
OC-02/35-43	300	36.2	470	38.4	29.4	8.6	121	7.9	3.4	1.5	52.81	17.6	18.37
MR041A 0-24	252	30.5	143	12.2	78.0	25.5	507	37.0	13.4	2.8	9.6	4.0	18.68
OC11 35-48	86.8	10.6	593	48.2	70.3	22.8	227	15.9	57.3	8.9	15.6	5.9	18.71
OC09 24-40	485	58.5	224	18.7	39.9	12.3	177	12.1	31.4	5.3	16.4	6.2	18.84
SC07 0-24	140	17.0	436	35.7	53.3	16.9	515	37.7	15	3.1	8.9	3.8	19.02
MR18 57-67-RA	251	30.3	96.0	8.5	75.5	24.7	299	21.3	11.7	2.6	88.39	28.8	19.37
OC11 24-35	276	33.3	352	29.0	70.9	23.1	233	16.3	58.8	9.1	14.5	5.6	19.4
SC04A 24-39	80.5	9.8	507	41.3	46.2	14.4	630	46.4	7.77	2.1	9.5	4.0	19.66
SC04A 81-88	58.0	7.1	351	28.9	60.6	19.5	753	55.6	15.5	3.1	18.5	6.8	20.18
SC05 24-53	81.2	9.9	425	34.8	30.7	9.1	843	62.4	14.4	3.0	12.2	4.8	20.67
MR031 46-61	140	16.9	155	13.2	67.0	21.7	751	55.5	54.5	8.5	25.8	9.1	20.82
OC06 0-24	471	56.8	104	9.1	76.5	25.0	353	25.4	19.6	3.7	17.7	6.6	21.1
SC07 24-50	69.2	8.4	405	33.2	46.0	14.4	866	64.2	18.9	3.6	9.2	3.9	21.29
SC-03/23-33	52.5	6.4	451	36.9	46.2	14.5	730	53.9	2.92	1.4	52.93	17.6	21.78
SC-02/0-24	82.1	10.0	532	43.4	58.5	18.7	701	51.7	1.67	1.2	19.87	7.2	22.05

Sample Number	Cr ug/g DW	Cr Rank	Pb ug/g DW	Pb Rank	Ni ug/g DW	Ni Rank	Zn ug/g DW	Zn Rank	Total PCB (ug/g) DW	PCB Rank	Total PAH (ug/g) DW	PAH Rank	Overall Rank
SC06A 36-61	112	13.6	496	40.5	55.9	17.8	735	54.3	8.45	2.2	10.6	4.3	**22.12**
SC-02/24-35	81.8	10.0	491	40.1	63.8	20.6	619	45.5	1.35	1.2	51.73	17.3	**22.43**
MR056 0-24	89.5	10.9	664	53.9	92.0	30.4	453	33.0	16.5	3.3	7.1	3.2	**22.44**
MR030 39-54	118	14.3	269	22.3	92.0	30.4	907	67.3	16.1	3.2	5.9	2.9	**23.4**
SC06A 0-24	253	30.5	468	38.2	80.3	26.3	609	44.8	6.12	1.8	1.3	1.4	**23.85**
MR-12/34-46	126	15.3	404	33.1	36.4	11.1	943	70.0	2.27	1.3	37.4	12.8	**23.92**
MR042 24-57	293	35.4	149	12.7	138	46.5	624	45.9	14.7	3.0	0	1.0	**24.09**
MR042 0-24	323	39.1	136	11.7	157	53.2	611	44.9	8.28	2.1	13.6	5.3	**26.04**
SC-02/54-63	67.8	8.3	339	27.9	107	35.6	806	59.7	2.59	1.3	88.98	29.0	**26.96**
SC04A 64-81	66.2	8.1	456	37.3	87.1	28.7	1040	77.3	19	3.6	22.2	8.0	**27.16**
MR11/0-24AR	135	16.4	83	7.4	62.1	20.0	229	16.1	27.39	4.8	*315.08*	100.0	**27.44**
OC10 0-24	168	20.3	*1240*	100.0	70.8	23.0	200	13.8	57.6	8.9	8.1	3.5	**28.28**
MR054 24-46	345	41.7	121	10.5	197	66.9	617	45.3	5.97	1.8	8.1	3.5	**28.3**
MR-12/24-34	130	15.8	276	22.9	65.8	21.3	1110	82.6	5.29	1.7	90.65	29.5	**28.96**
SC06A 61-79	57.0	7.0	746	60.5	65.6	21.2	1080	80.4	18.3	3.5	10.8	4.4	**29.49**
MR26 0-24	460	55.5	176	14.9	141	47.5	752	55.6	11.88	2.6	14.43	5.5	**30.27**
SC-02/35-54	86.6	10.5	563	45.8	103	34.2	994	73.9	3.24	1.4	87.4	28.5	**32.39**
SC04A 39-64	76.0	9.3	713	57.9	88.8	29.3	1150	85.6	16.8	3.3	25.4	9.0	**32.39**
MR-29/0-24	403	48.7	127	11.0	222	75.6	918	68.1	0.53	1.1	5.01	2.6	**34.5**
MR-12/0-24	148	17.9	260	21.6	69.3	22.5	*1340*	100.0	17.37	3.4	158.65	50.8	**36.04**
MR054 0-24	352	42.5	110	9.6	227	77.3	1120	83.4	13	2.8	12.2	4.8	**36.72**
MR049 42-50	165	20.0	152	12.9	292	99.9	1020	75.8	37.9	6.2	23.8	8.5	**37.23**
MR054 46-70	456	55.0	248	20.6	205	69.8	975	72.4	10.3	2.4	8.5	3.7	**37.32**
MR-29/60-72	524	63.2	210	17.6	255	87.1	1012	75.2	0.97	1.1	3.57	2.1	**41.07**
OC-01/28-34A	102	12.4	989	79.9	62.6	20.2	165	11.2	*717.18*	100.0	137.41	44.2	**44.65**
SC04A 0-24	*829*	100.0	841	68.1	92.7	30.7	982	73.0	7.38	2.0	10	4.1	**46.31**
MR-29/40-60	622	75.1	298	24.6	284	97.2	1310	97.7	0.8	1.1	4.84	2.5	**49.71**
Minimum	**7.5**		**2.5**		**7.5**		**29.8**		**0.12**		**0**		
Maximum	**829**		**1240**		**292**		**1340**		**717**		**315**		

Appendix E.

Screening vs. Confirmatory Data Comparisons

Metals Correlation of Screeing Analyses vs. Confirmatory Data
AScI Corporation (ESD); 30427 West Eight Mile Road, Livonia, MI 48152

Sample	Metal	Lab Result mg/Kg	XRF Result
DC02	As	47.6	46.7
MR01	As	24.5	13.9
MR02	As	26.9	25.7
MR05	As	17.9	12.4
MR11	As	21.5	16.9
MR19	As	14.2	10.2
OC01	As	24.6	15.5
SC02	As	14.9	2.99
WB107	As	28.3	2.72
WB11	As	8.33	11.2
WB115	As	16.5	6.25
WB118	As	19.2	10
WB121	As	24.6	18.4
WB25	As	11.2	2.13
WB33	As	21.1	12.2
WB90	As	10.1	2.45
WB91	As	21.3	6.36
WB94	As	16.8	8.71
SC03	As	79.4	4.68

Regression Output:

Constant	-7.4896341
Std Err of Y Est	6.3240771
R Squared	0.6646367
No. of Observations	18
Degrees of Freedom	16
X Coefficient(s)	0.97292077
Std Err of Coef.	0.17277588

Sample	Metal	Lab Result mg/Kg	XRF Result
DC02	Ba	129	331
MR01	Ba	123	309
MR02	Ba	117	353
MR05	Ba	119	655
MR11	Ba	178	344
MR19	Ba	87.5	602
OC01	Ba	125	381
SC02	Ba	158	514
WB107	Ba	126	144
WB11	Ba	53.1	269
WB115	Ba	69.6	531
WB118	Ba	108	569
WB121	Ba	116	190
WB25	Ba	62.1	503
WB33	Ba	108	572
WB90	Ba	69.8	577
WB91	Ba	91.6	581
WB94	Ba	81.9	634
SC03	Ba	212	378

Regression Output:

Constant	603.684096
Std Err of Y Est	155.929755
R Squared	0.09135427
No. of Observations	18
Degrees of Freedom	16
X Coefficient(s)	-1.4601653
Std Err of Coef.	1.15126393

Sample	Metal	Lab Result mg/Kg	XRF Result
DC02	Cd	2.09	4.42
MR01	Cd	1.24	3.78
MR02	Cd	2.8	3.67
MR05	Cd	0.08	2.69
MR11	Cd	1.52	1
MR19	Cd	0.708	1
OC01	Cd	1.65	3.42
SC02	Cd	3.57	3.38
WB107	Cd	2.75	1
WB11	Cd	0.516	1
WB115	Cd	0.318	2.48
WB118	Cd	2.32	7.49
WB121	Cd	4.61	1
WB25	Cd	0.763	4.17
WB33	Cd	1.55	1
WB90	Cd	0.443	2.41
WB91	Cd	0.592	2.29
WB94	Cd	1.08	3.56
SC03	Cd	1.44	2.05

Regression Output:

Constant	2.62111564
Std Err of Y Est	1.75439959
R Squared	0.00425335
No. of Observations	18
Degrees of Freedom	16
X Coefficient(s)	0.09020694
Std Err of Coef.	0.34505551

Metals Correlation of Screeing Analyses vs. Confirmatory Data
AScI Corporation (ESD); 30427 West Eight Mile Road, Livonia, MI 48152

Sample	Metal	Lab Result mg/Kg	XRF Result
DC02	Cr	39.1	119
MR01	Cr	31.2	103
MR02	Cr	79.7	171
MR05	Cr	24.5	95.4
MR11	Cr	37.7	135
MR19	Cr	19.9	69.9
OC01	Cr	200	279
SC02	Cr	32.8	82.1
WB107	Cr	43.1	110
WB11	Cr	12.2	63
WB115	Cr	13.3	55.3
WB118	Cr	62.5	100
WB121	Cr	49	110
WB25	Cr	17.2	46.8
WB33	Cr	40.9	78
WB90	Cr	13.5	47
WB91	Cr	18.5	61.5
WB94	Cr	21.9	69.4
SC03	Cr	21.1	67.2

Regression Output:

Constant	49.144047
Std Err of Y Est	18.947234
R Squared	0.8896078
No. of Observations	18
Degrees of Freedom	16
X Coefficient(s)	1.2031799
Std Err of Coef.	0.1059596

Sample	Metal	Lab Result mg/Kg	XRF Result
DC02	Cu	38.4	71.9
MR01	Cu	37.5	58.9
MR02	Cu	70.2	111
MR05	Cu	29.1	41.2
MR11	Cu	70.8	69.3
MR19	Cu	24.4	42.8
OC01	Cu	118	178
SC02	Cu	314	275
WB107	Cu	40.3	54.5
WB11	Cu	38.8	22.9
WB115	Cu	20	22.8
WB118	Cu	50.2	57.7
WB121	Cu	55.5	65.7
WB25	Cu	21.4	21.6
WB33	Cu	42.1	60.9
WB90	Cu	18.6	37.2
WB91	Cu	25.3	30.3
WB94	Cu	26.4	35.4
SC03	Cu	144	99.2

Regression Output:

Constant	18.94658
Std Err of Y Est	20.21724
R Squared	0.9041043
No. of Observations	18
Degrees of Freedom	16
X Coefficient(s)	0.8799823
Std Err of Coef.	0.071648

Sample	Metal	Lab Result % DW	XRF Result % DW
DC02	Fe	1.9	3.66
MR01	Fe	3.04	4.32
MR02	Fe	2.88	5.16
MR05	Fe	2.79	4.14
MR11	Fe	3.85	5.78
MR19	Fe	2.27	4.54
OC01	Fe	2.13	3.67
SC02	Fe	1.56	3.11
WB107	Fe	2.84	3.48
WB11	Fe	1.61	2.26
WB115	Fe	1.98	3.05
WB118	Fe	2.79	3.98
WB121	Fe	3.26	4.52
WB25	Fe	1.73	2.24
WB33	Fe	2.82	3.77
WB90	Fe	1.76	3.06
WB91	Fe	2.62	3.31
WB94	Fe	2.35	3.23
SC03	Fe	2.42	3.48

Regression Output:

Constant	0.82254791
Std Err of Y Est	0.53653313
R Squared	0.67747963
No. of Observations	18
Degrees of Freedom	16
X Coefficient(s)	1.1877351
Std Err of Coef.	0.2048755

Metals Correlation of Screeing Analyses vs. Confirmatory Data
AScI Corporation (ESD); 30427 West Eight Mile Road, Livonia, MI 48152

Sample	Metal	Lab Result mg/Kg	XRF Result
DC02	Pb	98.6	68.2
MR01	Pb	78.4	42.4
MR02	Pb	124	144
MR05	Pb	33.6	33.8
MR11	Pb	55.9	83
MR19	Pb	53.1	111
OC01	Pb	141	112
SC02	Pb	526	532
WB107	Pb	64.6	53.6
WB11	Pb	37.3	65.2
WB115	Pb	31.5	31
WB118	Pb	83.6	85.8
WB121	Pb	94.6	73.4
WB25	Pb	25.9	22.6
WB33	Pb	49.8	55
WB90	Pb	27.8	36.8
WB91	Pb	51.2	50.6
WB94	Pb	26.4	36.3
SC03	Pb	486	233

Regression Output:

Constant	3.26298728
Std Err of Y Est	23.7669763
R Squared	0.95963169
No. of Observations	18
Degrees of Freedom	16
X Coefficient(s)	0.984199
Std Err of Coef.	0.0504651

Sample	Metal	Lab Result mg/Kg	XRF Result
DC02	Hg	0.0641	2
MR01	Hg	0.025	2
MR02	Hg	0.521	2
MR05	Hg	0.195	2
MR11	Hg	0.386	2
MR19	Hg	0.0878	2
OC01	Hg	0.164	5.02
SC02	Hg	0.806	2
WB107	Hg	0.337	2
WB11	Hg	0.234	2
WB115	Hg	0.025	2
WB118	Hg	0.286	2
WB121	Hg	0.414	2
WB25	Hg	0.272	2
WB33	Hg	0.331	2
WB90	Hg	0.134	2
WB91	Hg	0.236	2
WB94	Hg	0.477	2
SC03	Hg	3.79	2

Regression Output:

Constant	2.31010842
Std Err of Y Est	0.72620195
R Squared	0.02040964
No. of Observations	18
Degrees of Freedom	16
X Coefficient(s)	-0.512913
Std Err of Coef.	0.8883594

Sample	Metal	Lab Result mg/Kg	XRF Result
DC02	Ni	47.2	86.7
MR01	Ni	46.7	76.8
MR02	Ni	49.5	116
MR05	Ni	31.5	50.2
MR11	Ni	34	62.1
MR19	Ni	26	40.6
OC01	Ni	38.1	63.1
SC02	Ni	32.8	58.5
WB107	Ni	48.3	7.5
WB11	Ni	24.1	35.1
WB115	Ni	27.5	34.1
WB118	Ni	47.6	43.6
WB121	Ni	45.2	68.4
WB25	Ni	26	33.8
WB33	Ni	54.1	56.1
WB90	Ni	22.4	24.5
WB91	Ni	32.9	22.1
WB94	Ni	34.3	21.7
SC03	Ni	33.6	28.6

Regression Output:

Constant	1.29455223
Std Err of Y Est	23.815188
R Squared	0.24938359
No. of Observations	18
Degrees of Freedom	16
X Coefficient(s)	1.3133763
Std Err of Coef.	0.569645

Metals Correlation of Screeing Analyses vs. Confirmatory Data
AScI Corporation (ESD); 30427 West Eight Mile Road, Livonia, MI 48152

Sample	Metal	Lab Result mg/Kg	XRF Result
DC02	Zn	191	262
MR01	Zn	228	268
MR02	Zn	314	425
MR05	Zn	227	304
MR11	Zn	177	229
MR19	Zn	151	237
OC01	Zn	165	223
SC02	Zn	605	701
WB107	Zn	158	176
WB11	Zn	55.7	65.2
WB115	Zn	18.2	97.3
WB118	Zn	215	249
WB121	Zn	237	256
WB25	Zn	78.6	80.6
WB33	Zn	143	179
WB90	Zn	97.7	104
WB91	Zn	117	128
WB94	Zn	105	125
SC03	Zn	704	322

Regression Output:

Constant	19.619546
Std Err of Y Est	29.521672
R Squared	0.9631881
No. of Observations	18
Degrees of Freedom	16
X Coefficient(s)	1.1439901
Std Err of Coef.	0.0559114

Total PCBs Correlation of Screeing Analyses vs. Confirmatory Data
AScI Corporation (ESD); 30427 West Eight Mile Road, Livonia, MI 48152

Sample	Lab Result (ug/kg)	Lab Result (ug/g)		EIA Result (ug/g)
DC02	800	0.8		1.13
MR01	210	0.21		0.83
MR02	510	0.51		1.1
MR05	ND	0.0525		0.86
MR11	ND	0.0945		27.39
MR19	ND	0.0525		2.35
OC01	1400	1.4	AVG	1.52
SC02	3640	3.64		1.67
WB107	209	0.209		5.45
WB11	54	0.054	AVG.	0.54
WB115	ND	0.0405		0.83
WB118	565	0.565		1.51
WB121	93	0.093		0.5
WB25	58	0.058		1.35
WB33	200	0.2		1.71
WB85	58	0.058		1.19
WB90	ND	0.025		0.86
WB91	ND	0.0435		1.37
WB94	79	0.079		1.02
SC03	ND	0.072		1.73

Regression Output:

Constant	1.413318
Std Err of Y Est	1.101198
R Squared	0.004222
No. of Observations	19
Degrees of Freedom	17
X Coefficient(s)	0.0817153
Std Err of Coef.	0.3043672

Total PAHs Correlation of Screeing Analyses vs. Confirmatory Data
AScI Corporation (ESD); 30427 West Eight Mile Road, Livonia, MI 48152

Sample	Lab Result (ug/g)	Lab Reps	Lab Result avg. (ug/g)	EIA Result (ug/g)	
OC01	65.2	54.1	59.7	26.6	
WB115	ND		4.55	1.04	
MR01	52.9		52.9	8.74	
MR02	5.7		5.7	10.2	
WB107	ND		4.55	1.23	
WB118	3.6		3.6	2.52	
DC02	ND		4.55	1.18	
WB121	5.1		5.1	3.93	
WB94	0.6		0.6	1.94	
WB11	ND	ND	4.55	0.18	
WB33	ND		4.55	0.7	
WB91	1.3		1.3	4.15	
WB25	ND		4.55	0.6	
WB05	ND		4.55	1.38	not surficial
WB90	0.6	ND	4.55	1.13	
SC03	287.7	8/16/95 X5 DIL	287.7	20.7	
WB85	4.6		436	2.41	
MR19	ND		4.55	1.46	
SC02	90.9		90.9	19.9	
MR11	6131.1	6138.7	6135	315	**excluded from regression analysis

Regression Output:

Constant		4.62883196
Std Err of Y Est		7.73017774
R Squared		0.10461306
No. of Observations		19
Degrees of Freedom		17
X Coefficient(s)	0.02239036285	
Std Err of Coef.	0.01588726356	

DATA EVALUATION REPORT
FOR
DUCK AND OTTER CREEKS CONFLUENCE SEDIMENT INVESTIGATION
TOLEDO, LUCAS COUNTY, OHIO

REVISION 1

Prepared for:

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Great Lakes National Program Office
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ACRONYMS AND ABBREVIATIONS

34 PAH	Extended list (34) polycyclic aromatic hydrocarbons
∑	Sum
µmole	Micromole
µmole/g	Micromole per gram
AOC	Area of Concern
ARCS	Assessment and Remediation of Contaminated Sediments
AVS	Acid volatile sulfide
BERA	Baseline Ecological Risk Assessment
BEC	BEC Laboratories, Inc.
BHEP	bis(2-ethylhexyl)phthalate
bss	Below sediment surface
BTAG	Biological Technical Assistance Group
CAS	Columbia Analytical Services
CCME	Canadian Council of Ministers of the Environment
C. dilutus	*Chironomus dilutus*
CLP	Contract Laboratory Program
COPC	Chemical of potential concern
DDT	Dichlorodiphenyltrichloroethane
DOC	Dissolved organic carbon
DRO	Diesel-range organics
EERC	Energy and Environmental Research Center
EqP	Equilibrium partitioning
ERA	Ecological Risk Assessment
ERL	Ecological Risk Level
ERDC	Engineer Research and Development Center
ESB	Equilibrium partitioning sediment benchmark
ESBTU	Equilibrium partitioning sediment benchmark toxic unit
ETC	Environmental Testing and Certification Corporation
FAV	Final acute value
FCV	Final chronic value
foc	Fraction organic carbon
FS	Feasibility Study
FSP	Field Sampling Plan
g	Gram
GLLA	Great Lakes Legacy Act
GLNPO	Great Lakes National Program Office
goc	Grams organic carbon

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ACRONYMS AND ABBREVIATIONS (CONTINUED)

GRO	Gasoline-range organics
H. azteca	Hyalella azteca
HHRA	Human Health Risk Assessment
HHRL	Human Health Risk Level
ISQG	Interim sediment quality guideline
IWTU	Interstitial Water Toxic Unit
K_{ow}	Water partitioning coefficient
LC50	Lethal concentration 50
LEL	Lowest effect level
mg/kg	Milligram per kilogram
MDEP	Massachusetts Department of Environmental Protection
NEC	No effect concentration
oc	Organic carbon
OEPA	Ohio Environmental Protection Agency
%	Percent
PAH	Polycyclic aromatic hydrocarbon
PCB	Polychlorinated biphenyl
PEC	Probable effect concentration
PEC-Q	Mean probable effect concentration quotient
PEL	Probable effect level
PTRL	PTRL Environmental Services, Inc.
QAPP	Quality Assurance Project Plan
RRO	Residual-range organics
RCRA	Resource Conservation and Recovery Act
R/V	Research Vessel
SEL	Severe effect level
SEM	Simultaneously extracted metals
SLERA	Screening level ecological risk assessment
SQAG	Sediment quality assessment guideline
SQG	Sediment quality guideline
START	Superfund Technical Assistance and Response Team
SQIRT	Sediment quick reference table

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ACRONYMS AND ABBREVIATIONS (CONTINUED)

SVOC	Semivolatile organic compound
TDD	Technical Direction Document
TA	Test America
TEC	Threshold effect concentration
TEL	Threshold effect level
TOC	Total organic carbon
TTL	Toledo Testing Laboratory, Inc.
U.S. EPA	United States Environmental Protection Agency
WDNR	Wisconsin Department of Natural Resources
WESTON	Weston Solutions, Inc.
WQC	Water quality criterion

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EXECUTIVE SUMMARY

Weston Solutions, Inc. (WESTON®) has prepared this data evaluation report for sediment investigation activities performed within the confluences of Duck and Otter Creeks with the Maumee River in Toledo, Lucas County, Ohio. This report summarizes the investigation tasks, sample analyses, sample results, and evaluates the lines of evidence applicable to determining contaminants of concern for identifying future remedial needs.

The biological communities of Duck and Otter Creeks have been identified as impaired in the Maumee River AOC. These creeks and others in the region were modified during the draining of the Great Black Swamp in the late Nineteenth Century, and have had a complex history of urban industrial and residential land uses. Previous investigations have determined that several chemical constituents are present in the sediments of these creeks at concentrations that exceed benchmarks for aquatic life.

Based on previous studies, it was not possible to fully determine the extent to which the physical stressors resulting from habitat modification and the chemical stressors resulting from contamination were contributing to the biological impairments unless additional data was collected. The United States Environmental Protection Agency (U.S. EPA) Great Lakes National Program Office (GLNPO) and The Duck and Otter Creek Industrial Partners identified several data gaps for these creeks and entered into a project agreement under the Great Lakes Legacy Act (GLLA) to conduct an investigation. The data gaps field investigation was completed in 2010 and consisted of the following:

- Collection of surface sediment for chemical analyses and toxicity testing
- Collection of subsurface sediment for chemical analyses
- Habitat evaluation
- Benthic macroinvertebrates taxonomic identification study
- Collection of benthic macroinvertebrate tissue for chemical analyses
- Collection of fish tissue for chemical analyses (as collected by the U.S. Fish and Wildlife Service)

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U.S. EPA GLNPO also acknowledged previous studies did not include evaluation of potential contaminant conditions in the confluence of Duck and Otter Creeks with the Maumee River, resulting in additional data gaps. Therefore, U.S. EPA GLNPO determined a sediment investigation was necessary in the confluence areas, concurrent with the 2010 data gaps investigation.

The U.S. EPA objectives for the confluence sampling were to:

- Determine the extent of contamination in both surface and subsurface sediments
- Further evaluate sediment toxicity and identify cause(s), to the extent practicable
- Collect data to support development of a Feasibility Study (FS) (evaluation of remedial and restoration options to protect human health and the environment and to advance progress toward delisting of beneficial use impairments), if one is found to be necessary

The confluence sampling was conducted during two sampling events: November 2010 and May 2011. The field sampling teams collected sediment samples from a total of 31 Vibracore and Ponar sampling locations (11 from Duck Creek and 20 from Otter Creek) during the two sampling events. A total of 103 samples (not including duplicates and field split samples) were collected from the 31 sampling locations. Surface sediment samples were analyzed for polychlorinated biphenyls (PCB), acid volatile sulfide/simultaneously extracted metals (AVS/SEM), 34 polycyclic aromatic hydrocarbons (34 PAH), semivolatile organic compounds (SVOC), metals, total organic carbon (TOC), and grain size distribution. Pore water (collected as sediment) was also analyzed from each surface sample location for metals, 34 PAHs, dissolved organic carbon (DOC), pH, hardness, and ammonia. Subsurface samples were analyzed for SVOCs, TOC, PCBs, and metals. A subset of the surface samples was also tested for toxicity using *Chironomus dilutus* (*C. dilutus*) for a 10-day exposure period.

Data Evaluation

Evaluation of the Duck and Otter Creeks confluence chemical data included comparison of contaminants in sediment and pore water to established probable effect concentrations (PEC) and other available benchmarks. For mixtures of compounds such as PAHs, PCBs and AVS/SEM divalent metals, WESTON calculated sediment quality metrics including mean probable effect

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concentration quotients (PEC-Q) and equilibrium partitioning sediment benchmarks (ESB). These metrics results were compared to established thresholds for predicting adverse biological effects in sediment.

Weight of Evidence Evaluation

A weight-of-evidence evaluation was conducted to further determine the contaminants of concern in the confluence of Otter Creek. The evaluation focused on the sediments of the Otter Creek confluence as toxicity was observed in only one of eight Duck Creek confluence sediments; and wide-spread concentrations above individual PECs and PEC-Qs were limited to PCBs that were in deeper subsurface sediment. The evaluation included comparison of observed toxic effects to sediment quality metrics results and pore water benchmarks, performance of a Spearman-Rank Correlation Test to compare all chemical data to toxicity data, and plotting of correlation results.

Conclusions

The following are conclusions based on evaluation of the chemical and toxicity data collected from the Duck and Otter Creeks confluence during November 2010 and May 2011:

Duck Creek Confluence

PCBs are identified as the primary contaminant of concern in the confluence of Duck Creek based on the wide-spread incidence of concentrations over the total PCB PEC and the PEC-Q_{PCB}. The vertical extent of PCB contamination in the Duck Creek confluence has not been defined as PEC and PEC-Q_{PCB} exeedances were present in the deepest sampling intervals of DC-13, DC-16, DC-17, and DC-19. The horizontal extent of contamination is potentially defined to the north at DC-14; however, there were no additional samples to the north. PCB concentrations above the PEC of 676 micrograms per kilogram (µg/kg) ranged from 860 µg/kg at DC-13-03 to 6,500 µg/kg at DC-17-05.

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Although the distribution of elevated PCB concentrations is wide-spread in the Duck Creek confluence, there are no incidences of elevated PCB concentrations in the shallow sediment (0 to 6 inches). The highest concentrations occur at 24 inches below sediment surface (bss) or deeper and in many cases, concentrations increase with depth. This concentration stratification indicates PCBs are most likely not available to the benthic community. Further, toxicity was observed in only one of eight sediment samples (DC-25) that is most proximal to the mouth of Duck Creek.

Otter Creek Confluence

PAHs are identified as the primary contaminant of concern in the confluence of Otter Creek based on the wide-spread incidence of concentrations over the total PAH PEC, the PEC-$Q_{PAH,}$ and the PAH equilibrium partitioning sediment benchmark toxic unit – final chronic value ($\sum ESBTU_{FCV}$) that are present in shallow sediment, as well as the sum of PAH Interstitial Water Toxic Unit ($\sum IWTU$) values above 1 in pore water. The vertical extent of PAH contamination in the Otter Creek confluence appears to be predominantly limited to the upper 24 inches of sediment; although locations OC-34, OC-44, and OC-45 contained elevated PAHs in the deepest sampling interval. However, in many cases, the sediment core retrieval was limited to two to three samples due to encountered refusal; and therefore the vertical extent of contamination may be defined by the substrate causing refusal below the available sediment.

The horizontal extent of PAH contamination appears defined to the west and northwest within the confluence at locations OC-33, OC-31, and OC-41. However, the horizontal extent is not defined to the north and northeast of locations OC-28, OC-29, and OC-32 between the mouth of Otter Creek and the boundary of the shipping channel.

Weight-of-Evidence

Toxic effects were observed for sediment sampling locations OC-26, OC-27, OC-30, OC-42, and OC-44 for both survival and growth. All samples resulted in PAH $\sum ESBTU_{FCV}$ values of greater than 5 and $\sum IWTU$ greater than 1, indicating a pattern of PAH $\sum ESBTU_{FCV}$ and $\sum IWTU$ values to predict toxicity for the Otter Creek confluence sediments.

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There are numerous PAHs negatively correlated to survival and growth, both in the sediment and pore water. Using a survival threshold proportion of 0.7, the correlation plots indicate a possible relationship between the reduction in proportional survival of *C. dilutus* at locations OC-26, OC-27, OC-29, OC-30, OC-42, and OC-44.

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1. INTRODUCTION

Weston Solutions, Inc. (WESTON®) has prepared this data evaluation report for sediment investigation activities performed within the confluences of Duck and Otter Creeks with the Maumee River in Toledo, Lucas County, Ohio. This report summarizes the investigation tasks, sample analyses, sample results, and evaluates the lines of evidence applicable to determining contaminants of concern for identifying future remedial needs.

All investigation activities were conducted in accordance with the *Quality Assurance Project Plan (QAPP) for the 2010 Duck & Otter Creeks Data Gaps Investigation* (WESTON 2010), the *Field Sampling Plan (FSP), Duck and Otter Creeks Confluence Investigation* (WESTON 2010), and subsequent three FSP and two QAPP addendums (WESTON 2010 and 2011). The investigation was conducted under the Superfund Technical Assistance and Response Team (START) contract, Technical Directive Document (TDD) No. S05-0008-1010-036, in response to a request from the United States Environmental Protection Agency (U.S. EPA) Region V Great Lakes National Program Office (GLNPO).

The following sections discuss the site description, site history and report organization.

1.1 SITE DESCRIPTION

Duck Creek (approximately 3.6 miles) and Otter Creek (approximately 9.5 miles) are urban creeks located in the cities of Toledo and Oregon, Ohio (**Figure 1-1**). Both creeks flow northward and ultimately discharge to the Maumee River, and are located within the Maumee River Area of Concern (AOC). However, there is a historically-observed seiche effect, whereby surface water backflows/rises in the creeks as a result of conditions in the Maumee River. The focus of this study consists of the most downstream portions and confluences of Duck and Otter Creeks with the Maumee River (**Figure 1-2)**.

The biological communities of Duck and Otter Creeks have been identified as impaired in the Maumee River AOC. These creeks and others in the region were modified during the draining of the Great Black Swamp in the late Nineteenth Century, and have had a complex history of

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urban industrial and residential land uses. Previous investigations have determined that several chemical constituents are present in the sediments of these creeks at concentrations that exceed benchmarks for aquatic life.

1.2 SITE HISTORY

Previous studies completed by others include but are not limited to the following:

- Sediment Quality Assessment for Duck and Otter Creeks (ChemRisk, March 31, 1999)
- Investigations of industrial operations along Duck and Otter Creeks (PTRL 1997a and 1997b; ENVIRON and Mannik and Smith 2003)
- Spill reports prepared by the City of Oregon (City of Oregon 2003, 2004a, 2004b, 2005a, 2005b, and 2005c)
- Investigation of a release from the City of Toledo wastewater treatment plant lime sludge ponds (City of Toledo 1988)
- Investigations of Hecklinger Pond (BEC 1998, 2003, and 2004; ETC 1989; Ohio Environmental Protection Agency (OEPA) 2003b; TTL 1988; City of Toledo 1989a, 1989b, and 1991; and WSU 1991)
- Biological and Water Quality Study of the Portage River Basin, Select Lake Erie Tributaries, and Select Maumee River Tributaries, 2006-2008 (OEPA, 2010)
- Screening and Baseline Ecological Risk Assessment for Duck and Otter Creeks (Tetra Tech EM, Inc., December 21, 2008)
- Human Health Risk Assessment for Duck and Otter Creeks (Tetra Tech EM, Inc., December, 2008)
- Wetlands Identification and Restoration Plan for Duck and Otter Creeks Watersheds (Mannick & Smith Group)
- Duck and Otter Creeks Great Lakes Legacy Act Data Gaps Investigation (U.S. EPA GLNPO, Duck and Otter Creek Industrial Partners, 2010)

Many previous investigations at Duck and Otter Creeks have been conducted by the OEPA. The OEPA studies are typically part of an evaluation of the Maumee River AOC and include overall stream quality (OEPA 1994 and 1998, 1992 to 1998, and 1995; AScI 1997) and stream quality in the vicinity of specific disposal or industrial operations along Duck and Otter Creeks (OEPA1997a, 1997b, 1997c, and 1998).

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Sediment in Duck and Otter Creeks has been sampled at a number of locations over the past 18 years. Prior to 2007, analytes and sampling locations were highly variable, however. The results of studies and investigations conducted prior to 2007 were briefly summarized in a data gap analysis technical memorandum prepared by Tetra Tech EM Inc. (Tetra Tech 2005b). The technical memorandum identified likely chemicals of potential concern (COPC) for sediment and data gaps that were identified for the creeks. The data gaps identified included:

- The majority of data available for the creeks were more than 10 years old; and were of limited value because of the length of time since some were collected. The concern was that conditions may have changed significantly since those sediment samples were collected.
- Most sediment samples were analyzed using routine analytical techniques; however, some samples were analyzed using screening analytical procedures, such as immunoassay tests. A sediment quality assessment notes a poor correlation between results from the immunoassay tests and the fixed laboratory (ChemRisk 1999).
- More current data were needed, especially in the southern portions of the watershed.
- Limited chemical data were available on the sediments that would help evaluate the bioavailability of metals and contamination by non-polar organic compounds. The collection of data for acid volatile sulfide (AVS)/ simultaneously extracted divalent metal (SEM) and total organic carbon (TOC) analyses and whole sediment toxicity were recommended for the additional investigation by SulTRAC.

SulTRAC collected additional sediment samples at the site in April 2007 to address the data gaps identified above. Based on the April 2007 sediment data, SulTRAC concluded the following:

- Polycyclic aromatic hydrocarbons (PAH) and metals concentrations detected in samples collected from Duck Creek exceeded Ecological Risk Levels (ERL) and Human Health Risk Levels (HHRL) at locations throughout the length of Duck Creek.
- Individual polychlorinated biphenyl (PCB) Aroclor concentrations in samples collected from Duck Creek also exceeded HHRLs at the mouth of the creek and at the sampling locations in Hecklinger Pond; total PCB concentrations exceeded the ERL in exposure areas DC-A, DC-B, and DC-E.
- PAH and metals concentrations detected in samples collected from Otter Creek exceeded ERLs and HHRLs at locations throughout the length of the creek.
- Individual PCB Aroclor concentrations in samples collected from Otter Creek also exceeded HHRLs at several locations; total PCB concentrations exceeded the ERL throughout the length of the creek.

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- The highest total PAH concentrations detected in samples collected from Duck Creek were in the sediment sample collected from the east end of Hecklinger Pond.
- The highest total PAH concentrations detected in samples collected from Otter Creek were located in samples collected near Navarre Avenue, Pickle Road, and Oakdale Avenue, as well as other scattered locations.
- The highest total lead concentrations detected in samples collected from Duck Creek were located in a sample collected downstream (DC-04) and from the wetland area (DC-12). Cadmium, chromium, and mercury concentrations detected in DC-12 were also high. Arsenic exceeded its HHRL at all sampling locations. Additional metals exceedances of the ERLs and HHRLs were detected from samples located throughout the length of Duck Creek with no discernable trends.
- Metals exceedances, including arsenic, cadmium, chromium, lead and mercury, of the ERLs and HHRLs were detected from samples located throughout the length of Otter Creek with no discernable trends.
- A seiche effect (approximately 6-inch rise in water level) was observed during the sampling event on Otter Creek near location OC-04. Contaminated sediment may be transported upstream by this seiche effect.
- Toxicity was observed in eight of nine samples from Otter Creek; only the sample at the mouth of the creek did not exhibit toxicity greater than the control.
- For Duck Creek, toxicity was observed in only three of seven samples.
- The AVS/SEM data ratios were less than 1, indicating that sulfide concentrations in the sediment may be limiting the bioavailability of the metals in the sediments.
- There was no general trend of higher TOC or sediment percent solids values closer to the mouth of Otter Creek or Duck Creek than upstream, as may be expected with sedimentation of finer particles nearer the mouth of the creek where water velocity would be expected to be the slowest. Based on grain size analysis, a higher percent silt/clay content was more consistently found in the downstream samples collected in Otter Creek than the downstream samples collected in Duck Creek.

The Partners for Clean Streams implemented a two-phase human health and ecological risk assessment (HHRA/ERA) study for Duck and Otter Creeks. The overall purpose of the study was "to determine whether sediment contaminants pose a significant risk to human health or the environment, and if so, to identify specific chemicals contributing to toxicity and define the spatial extent (where risks are located) of risks (to human and ecological receptors)." As part of the assessment, a Tier 1 screening level ecological risk assessment (SLERA) for benthic receptors directly exposed to sediment and fish exposed to surface waters, and a Tier 2 Baseline

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Ecological Risk Assessment (BERA) for benthic macroinvertebrates and mammalian and avian receptors exposed indirectly to sediments in Duck and Otter Creeks were performed.

Tier 1 SLERA Results

To identify the COPCs, frequency of detection were reviewed and only compounds detected in 5% of the samples were used in the risk assessment. The following contaminants were identified as COPCs for Duck and Otter Creeks:

- Metals – Arsenic, barium, cadmium, chromium, copper, lead, manganese, mercury, selenium, and zinc
- Pesticides – Dichlorodiphenyltrichloroethane (DDT) and its metabolites, and heptachlor and its metabolites
- Total PCBs (Aroclor 1254 and 1260)
- PAH – 2-methylnaphthalene, acenaphthene, acenaphthylene, anthracene, benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(g,h,i)perylene, benzo(k)fluoranthene, chrysene, dibenzo(a,h)anthracene, fluoranthene, fluorene, indeno(1,2,3-c,d)pyrene, naphthalene, phenanthrene, pyrene, C1-chrysene/benzo(a)anthracene, C1-fluorenes, C1-fluoranthenes/pyrenes, C1-naphthalenes, C1-phenanthrenes/anthracenes, C2-chrysene/benzo(a)anthracene, C2-fluorenes, C2-naphthalenes, C2-phenanthrenes/anthracenes, C3-chrysene/benzo(a)anthracene, C3-fluorenes, C3-naphthalenes, C3-phenanthrenes/anthracenes, C4-chrysene/benzo(a)anthracene, C4-naphthalenes, and C4-phenanthrenes/anthracenes

HHRA Results

Data used for the final HHRA included (1) April 2007 sediment sampling data obtained from sampling Duck and Otter Creeks for the U.S. EPA GLNPO and (2) August and October 2007 sediment sampling data obtained from sampling Otter Creek in association with the Envirosafe Landfill. COPCs were identified using a conservative process that helped ensure no potentially significant chemicals were overlooked. COPCs identified for the final HHRA included: metals; volatile organic compounds; semivolatile organic compounds, including PAHs that are typically associated with incomplete combustion; pesticides; and PCBs.

The exposure assessment looked at where, how, and which people may be exposed to COPCs in Duck and Otter Creeks. Specifically, the exposure assessment examined the following:

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- **Where:** Duck and Otter Creek were each divided into five different segments called exposure areas, and exposures were calculated for each area.
- **How:** The final HHRA looked at ingestion of and direct contact with sediment and ingestion of fish tissue. Fish ingestion was considered only in Hecklinger Pond, the upstream-most segment of Duck Creek (exposure area DC-E).
- **Who:** The final HHRA looked at adults, youths (age 7 to 18), and children (age 1 to 6). Because of security and reduced access, the children were not considered and a reduced exposure frequency was used for youths and adults for the most downstream segments of both creeks (exposure areas OC-A and DC-A).

Exposures were calculated using equations and input values recommended by U.S. EPA and OEPA. The input values were selected to generate a reasonable maximum exposure-that is, the highest reasonably expected exposure.

Risks represent the probability of an individual developing cancer. A risk of 1E-04 (or 1 x 10-4) represents 1 additional cancer in an exposed population of 10,000 people. Calculated risks were compared to EPA's acceptable risk range of 1E-06 to 1E-04. Risks were also compared to OEPA's statewide goal of 1E-05 for total additive carcinogenic risk. Hazards are calculated as a ratio of the calculated exposure and an acceptable exposure associated with no adverse effects. Hazards were compared to a value of 1, which represents OEPA's statewide goal for additive non-carcinogenic risk.

The results of the risk characterization are summarized as follows:

- All hazards associated with potential exposure to COPCs in sediment were less than 1.
- Risks calculated for all sediment exposure areas in both creeks exceeded U.S. EPA's point of departure (1E-06) in all exposure areas except for pathway and receptor-specific adult and youth dermal contact risks in exposure area OC-A, youth dermal contact risks in exposure area DC-A and child dermal contact risks in exposure area DC-C.
- Total risks associated with potential exposure to COPCs in sediment was lowest in the down stream-most exposure areas in each creek (DC-A and OC-A). Total risks (based on adult exposure only– children are assumed to have no exposure in these exposure areas) in DC-A (5E-06) and OC-A (2E-06) exceeded U.S. EPA's point of departure (1E-06), but were less than OEPA's statewide goal of 1E-05 for total additive risk.

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- Total risks (calculated as modified adult [adultmod] plus child risks) associated with potential exposure to COPCs in sediment equaled OEPA's statewide goal of 1E-05 for total additive risk in exposure areas DC-C and OC-B.
- Total risks (calculated as adultmod plus child risks) associated with potential exposure to COPCs in sediment exceed OEPA's statewide goal of 1E-05 for total additive risk, but were less than the upper end of EPA's acceptable risk range (1E-04) in exposure areas DC-B (2E-05), DC-D (3E-05), OC-C (2E-05), OC-D (5E-05), and OC-E (5E-05).
- Total risk (calculated as adultmod plus child risks) associated with potential exposure to COPCs in sediment exceeded the upper end of EPA's risk range (1E-04) in exposure area DC-E (2E-04).
- Sediment risks are driven primarily by potential exposure to PAHs in all exposure areas except DC-A and OC-A (primarily benzo[a]pyrene, as well as exposure to other carcinogenic PAHs) and arsenic (all exposure areas). Also, Aroclor-1254 was a risk driver in ES-4 exposure areas DC-E and OC-C, and Aroclor-1260, 4,4'-DDD, and 4,4'-DDE are risk drivers in exposure area DC-E.
- Total risks are lowest in the downstream-most exposure area in each creek (DC-A and OC-A) and increase toward the upstream exposure areas in each creek (DC-E and OC-E). This is due in part to reduced exposure frequencies assumed in the downstream-most exposure areas, but is primarily due to PAH concentrations that increase from downstream to upstream exposure areas in both creeks.
- Risks calculated for fish ingestion in Hecklinger Pond exceeded OEPA's statewide goal of 1E-05, as well as the high end of EPA's risk range of 1E-04. Adult, youth, and child risks were calculated as 8E-03, 3E-03, and 3E-03, respectively, for a total risk of 1E-02. These risks are driven by potential exposure to PAHs—particularly benzo(a)pyrene, and to a lesser extent to potential exposure to Aroclor-1254, Aroclor-1260, 4,4'-DDD, and 4,4'-DDE. The risks were not based on chemical concentrations measured in fish, but modeled from concentrations measured in sediments.
- Hazards associated with potential exposure to COPCs in fish tissue are greater than 1. Adult, youth, and child hazards were calculated.

2010 Data Gaps Investigation

Based on previous studies, it was not possible to fully determine the extent to which the physical stressors resulting from habitat modification and the chemical stressors resulting from contamination were contributing to the biological impairments unless additional data was collected. U.S. EPA GLNPO and The Duck and Otter Creek Industrial Partners identified several data gaps for these creeks and entered into a project agreement under the Great Lakes

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Legacy Act (GLLA) to conduct an investigation. The data gaps field investigation was completed in 2010 and consisted of the following:

- Collection of surface sediment for chemical analyses and toxicity testing
- Collection of subsurface sediment for chemical analyses
- Habitat evaluation
- Benthic macroinvertebrates taxonomic identification study
- Collection of benthic macroinvertebrate tissue for chemical analyses
- Collection of fish tissue for chemical analyses (as collected by the U.S. Fish and Wildlife Service)

At this time of this report, the data interpretation and reporting for the 2010 Data Gaps Investigation were on-going.

U.S. EPA GLNPO also acknowledged previous studies did not include evaluation of potential contaminant conditions in the confluence of Duck and Otter Creeks with the Maumee River, resulting in additional data gaps. Therefore, U.S. EPA GLNPO determined a sediment investigation was necessary in the confluence areas, concurrent with the 2010 Data Gaps Investigation.

1.3 PROJECT OBJECTIVES

The U.S. EPA objectives for the confluence sampling were to:

- Determine the extent of contamination in both surface and subsurface sediments
- Further evaluate sediment toxicity and identify cause(s), to the extent practicable
- Collect data to support development of a Feasibility Study (FS) (evaluation of remedial and restoration options to protect human health and the environment and to advance progress toward delisting of beneficial use impairments), if one is found to be necessary

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1.4 REPORT ORGANIZATION

This report consists of the following sections:

- Executive Summary
- Section 1: Introduction
- Section 2: Study Area Investigation and Data Completeness
- Section 3: Analytical Results
- Section 4: Weight-of-Evidence Evaluation
- Section 5: Conclusions
- Section 6: References

Tables and figures are provided after Section 6 except for Sections 2 and 4, where some tables are embedded in text; and Section 4 where figures are embedded in text. In addition, this report contains the following appendices:

- Appendix A: Photographic Log
- Appendix B: Analytical Data
- Appendix C: Sediment Toxicity Test Reports
- Appendix D: Data Validation Reports

2. STUDY AREA INVESTIGATION AND DATA COMPLETENESS

This section discusses the sediment sampling and laboratory analysis of samples collected during the confluence investigation.

2.1 SEDIMENT INVESTIGATION

Sediment in the most downstream portions of both Duck and Otter Creeks and their confluence with the Maumee River were sampled for chemical analyses to determine the nature and extent of contamination.

Figures 2-1 and **2-2** show all the sediment sampling locations for the confluences of Duck and Otter Creek, respectively. Sediment sampling was completed during two sampling events in November 2010 and May 2011. The November 2010 sampling event was conducted using the research vessel *(R/V) Mudpuppy 2*. The May 2011 sampling event was conducted using a pontoon vessel equipped with a vibracore sampler operated by Affiliated Researchers so that

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areas of shallow water could be accessed (previously inaccessible by the *R/V Mudpuppy 2* for sample collection). Depending on field conditions such as sediment thickness, various depth intervals were sampled at each location. **Table 2-1** presents the depth of water to the sediment surface, Vibracore sediment retrieval information, and the latitude and longitude for each sampling location. Representative photographs from the November 2010 and May 2011 sampling events are provided in **Appendix A**.

The sampling location strategy was to attempt to delineate the nature and extent of contamination, if present, at the confluence of each creek with Maumee Bay. The sampling locations proposed in the FSP and subsequent amendment were chosen to evaluate potential chemical contaminants spatially across the confluence areas while remaining south of the navigation channel that is routinely dredged. Adjustments to proposed locations were made in the field, as necessary, based on the availability of sufficient water depth and sediment depths.

The following sections discuss sediment sampling, sediment toxicity testing, data completeness, and QAPP data quality objectives.

2.1.1 Sediment Sampling

The field sampling teams collected sediment samples from a total of 31 Vibracore and Ponar sampling locations (11 from Duck Creek and 20 from Otter Creek).

The U.S. EPA's *R/V Mudpuppy 2* (November 2010) and Affiliated Researcher's pontoon vessel (May 2011) were used to deploy the Ponar and Vibracore samplers. A Ponar sampler was used to retrieve the upper 6 inches of sediment at each sampling location to collect sediment from the biologically active zone for toxicity testing and/or other chemical analyses. The Vibracore sampler was advanced to various sampling depths based a depth to refusal with up to seven samples collected from each core. These samples were sent to off-site laboratories for chemical analyses. A total of 103 samples (not including duplicates and field split samples) were collected from the 31 sampling locations. Subsection 2.2 discusses the laboratory analyses performed on each sample.

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All samples were collected in accordance with the methodologies and procedures discussed in the QAPP (WESTON 2010). While the QAPP was prepared for the 2010 Data Gaps Investigation GLLA project, it was formally adopted for the confluence investigation as the laboratory procedures and project personnel remained the same.

2.1.2 Sediment Toxicity Testing

The 10-day growth and survival tests for the midge *Chironomus dilutus (C. dilutus)* were used to evaluate sediment toxicity within the biologically active zone. Toxicity testing procedures followed U.S. EPA's "Methods for Measuring the Toxicity and Bioaccumulation of Sediment-associated Contaminants with Fresh Water Invertebrates," Second Edition (U.S. EPA/600/R-99/064). Table 2-2 summarizes the sampling locations tested for toxicity that are also shown on **Figures 2-1 and 2-2**.

TABLE 2-2
SUMMARY OF SAMPLING LOCATIONS TESTED FOR TOXICITY

Duck Creek	Otter Creek
DC-13	OC-26
DC-14	OC-27
DC-16	OC-28
DC-17	OC-29
DC-19	OC-30
DC-22	OC-31
DC-23	OC-35
DC-25	OC-38
	OC-40
	OC-41
	OC-42
	OC-44
	OC-45
	OC-46

For solid-phase testing, eight replicates per sediment sample were set up for *C. dilutus* exposures. Test acceptability was based on greater than 70% survival for midges in the reference samples. Growth (weight gain) also indicated an acceptable test.

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2.1.3 Data Completeness

The FSP (WESTON 2010) completed for the November 2010 sampling event proposed eight sampling stations in the Duck Creek confluence and 18 in the Otter Creek confluence. However, a total of five stations were sampled for Duck Creek and eight stations were sampled for Otter Creek due to low water conditions making it difficult for the *R/V Mudpuppy 2* to access stations located in shallow water. The FSP Amendment #1 (April 2011) completed for the May 2011 sampling event proposed five to six sampling stations in the Duck Creek confluence and 10 to 12 sampling stations in the Otter Creek confluence. Samples from a total of six stations in the Duck Creek confluence and 12 in the Otter Creek confluence were collected. Samples collected from each location were analyzed for the parameters specified in the FSP (WESTON 2010) and using the laboratory protocols specified in the QAPP (WESTON 2010). All data were evaluated for usability and found to be usable. The data met and exceeded the 90% completeness goal established in the QAPP.

2.1.4 QAPP Data Quality Objectives

The data were compared to applicable sediment screening benchmarks as detailed in the data quality objectives portion of the QAPP (WESTON 2010). Section 3 of this report discusses the findings. In addition, Sections 3 and 4 of this report discuss the extent of contaminants in sediment above individual sediment screening benchmarks; the mean probable effect concentration (PEC) and PEC quotients (PEC-Q) for PAHs, metals, and PCBs; the equilibrium partitioning sediment benchmarks (ESB) and ESB toxic unit – final chronic value ($ESBTU_{FCV}$) for PAHs and ESB for AVS/SEM metals; the extent of acute toxicity in surficial sediments, and the correlation between values and sediment toxicity. Data from multiple sampling locations and multiple depths were collected and deemed usable; therefore, conclusions could be made regarding vertical and horizontal extents of contamination could be. While the extent of contamination is not fully defined for all chemicals, the data do provide useful information on the nature and extent of contamination within the confluence areas.

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2.2 LABORATORY ANALYSIS

A maximum of eight sediment samples were collected at each sampling station for laboratory analysis. Sediment cores were driven to the depth of refusal, or the entire length of the core, whichever came first. The number of samples collected with depth was determined based on the amount of sediment retrieved within a given core. Samples were grouped into the following zones to aid in the evaluation of the extent of contamination:

- 0 to 6 inches below sediment surface (bss); collected to characterize contaminants in biologically active zone and to evaluate sediment toxicity
- 0 to 2 ft bss; 2 to 4 ft bss; 4 to 6 ft bss; 6 to 8 ft bss; 8 to 10 ft bss; 10 to 12 ft bss; and 12 to 14 ft bss; collected to determine vertical extent and spatial distribution of contaminants

The sediment samples were analyzed for the following parameters by the laboratories indicated in the following table:

TABLE 2-3
SUMMARY OF SEDIMENT AND PORE WATER SAMPLES AND ANALYSES

Sample Type	No. From Duck Creek [1]	No. from Otter Creek [1]	Parameter	Laboratory
Surface sediment (0 to 6 inches)	11	20	34 PAHs	CLP
			TOC	CAS
			GRO/DRO/RRO	CAS
			SVOCs	CLP
			PCBs	CLP
			Metals	CLP
			Grain Size	TA
			AVS/SEM	CAS
			Toxicity [2]	ERDC
Pore water (collected as sediment)	11	20	34 PAHs	EERC
			Metals	CAS
			Hardness	CAS
			DOC	CAS
			Ammonia	CAS
			pH	CAS
Subsurface sediment	40	32	SVOCs	CLP
			PCBs	CLP
			Metals	CLP
			GRO/DRO/RRO	CAS
			TOC	CAS

Notes:
1 Does not include duplicate or split samples
2 Only the locations indicated in Subsection 2.1.2 were tested for toxicity
AVS/SEM = Acid volatile sulfides/simultaneously extracted metals

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CAS	=	Columbia Analytical Services, Kelso, Washington
CLP	=	Contract Laboratory Program
DOC	=	Dissolved organic carbon
DRO	=	Diesel-range organics
EERC	=	University of North Dakota Energy and Environmental Research Center
ERDC	=	U.S. Army Corps of Engineers Engineer Research and Development Center
GRO	=	Gasoline-range organics
PAH	=	Polycyclic aromatic hydrocarbon
PCB	=	Polychlorinated biphenyl
RRO	=	Residual-range organics
SVOC	=	Semivolatile organic compound
TA	=	Test America, Burlington, Vermont

3. ANALYTICAL RESULTS

Sediment chemistry and toxicity test results for the sediment samples collected from the confluences of Duck and Otter Creeks are summarized in this section. This discussion includes the data evaluation methodology, sediment analytical results, and sediment toxicity test results.

3.1 DATA EVALUATION METHODOLOGY

Several sediment quality metrics including PEC-Q calculations, AVS/SEM evaluation, and ESB determinations; established benchmarks (i.e PECs); and multiple lines of evidence are used to determine contaminants of concern in each confluence. Surface and subsurface samples are evaluated independently to determine the risk associated with the most biologically active zone (i.e. surface sediment) and risk associated with contamination at depth (i.e subsurface sediment). The spatial distribution of the current data sets (November 2010 and May 2011) is also evaluated, and delineation of the horizontal and vertical extent of contamination is made, where possible.

3.1.1 PEC Comparison, Alternative Benchmarks, and PEC-Q Calculation

Consensus-based sediment quality guidelines (SQG) (MacDonald and others 2000) have been developed that represent the geometric mean of published SQGs from a variety of sources. These SQGs are called PECs and threshold effects concentrations (TEC). PECs are intended to identify contaminant concentrations above which harmful effects on sediment-dwelling organisms are expected. TECs are intended to identify contaminant concentrations below which

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harmful effects on sediment-dwelling organisms are not expected. Individual analytes were compared to their respective PEC to determine contaminants of potential concern.

For chemicals lacking PECs, alternative sediment benchmarks were obtained from various other sources, including:

- EPA (1996) Assessment and Remediation of Contaminated Sediments (ARCS) program PEC and no effects concentration (NEC) benchmarks. ARCS calculated representative NECs, TECs, and PECs for *Hyalella azteca* (*H. azteca*) and *Chironomus riparius* in primarily freshwater sediments. Concentrations above the TEC may result in adverse effects to these organisms; concentrations below the TEC are unlikely to result in adverse effects. A concentration greater than the PEC is likely to result in adverse effects to these organisms.
- EPA Region 3 Biological Technical Assistance Group (BTAG), freshwater sediment screening benchmarks. The Region III BTAG developed freshwater sediment screening benchmarks to evaluate sampling data at Superfund sites. These values facilitate consistency in screening level ecological risk assessments throughout Region III. These values are available at http://www.epa.gov/reg3hwmd/risk/eco/index.htm.
- Ontario (Persaud et al., 1993) low effect level (LEL). Environment Ontario developed a LEL and severe effect level (SEL) for various chemical substances in sediment. The LEL corresponds to concentrations above which adverse biological effects are frequently found. The SEL corresponds to concentrations above which adverse biological effects are found.
- EPA Region 5 (2003) ESL for sediment. The EPA Region 5 developed media-specific (soil, water, sediment, and air) for RCRA Appendix IX hazardous constituents. The ESLs are initial screening levels with which the site contaminant concentrations can be compared. The ESLs help to focus the investigation on those areas and chemicals that are most likely to pose an unacceptable risk to the environment. The ESLs (formerly EDQL) are available at http://www.epa.gov/reg5rcra/ca/ESL.pdf
- EPA Region 4 (1995) ecological screening values for sediment. The values are the higher of the EPA Contract Laboratory Program Practical Quantitation Limit and the Effects Value, which is the lower of the ER-L and the TEL. These values are possible effects benchmarks.
- Florida (MacDonald, 1994) probable effects levels (PEL). The State of Florida developed sediment quality assessment guidelines (SQAG) for 34 priority substances, including a threshold effect levels (TEL) and PELs. These SQAGs defined three ranges of contaminant concentrations, including a minimal effects range, a possible effects range, and a probable effects range.

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- Canadian (Environment Canada, 2002) Interim Sediment Quality Guidelines (ISQG). The Water Quality Guidelines Task Group of the Canadian Council of Ministers of the Environment (CCME) developed chemical concentrations recommended to support and maintain aquatic life associated with bed sediments. The ISQG corresponds to threshold level effects below which adverse biological effects are not expected. These values are available at Environment Canada's Canadian Environmental Quality Guidelines web page at http://www.ec.gc.ca/ceqg-rcqe/English/Ceqg/Sediment/default.cfm as well as http://www.ccme.ca/assets/pdf/e1_06.pdf. Updated 2002.

- The Massachusetts Department of Environmental Protection (MDEP) has developed sediment benchmarks for petroleum hydrocarbon fractions, with values of 1,591 mg/kg_{oc} for C5 through C8 aliphatic hydrocarbons, 3,167 mg/kg_{oc} for C9 through C18 aliphatic hydrocarbons and 9,883 mg/kg_{oc} for C19 through C36 aliphatic hydrocarbons (MDEP 2007). The GRO analysis measures less than C10 hydrocarbon assemblages, DRO analysis measures C10 through C24 hydrocarbon assemblages and the RRO analysis measures less than C24 hydrocarbon assemblages. Refined petroleum products are complex variable mixtures of hundreds or thousands of organic chemicals. While estimation of ecological risk of petroleum products in sediments based on three fractions with similar chemical and toxicological properties improves the ability to more accurately estimate the potential for ecological risk of the weathered petroleum product in sediments, exceedance of a benchmark does not indicate risk. Concentrations below these benchmarks indicate that the fraction does not contribute significantly to the chemical toxicity of oil-contaminated sediments.

To predict the toxicity for mixtures of various contaminants in sediments, PEC-Q values can be determined. PEC-Q values for mixtures of chemicals (metals, PAHs, and PCBs) were determined using methods adopted from Ingersoll and others (2000 and 2001). Based on existing databases, the reliability for predicting toxicity is greatest for organic compound groups of total PAHs and total PCBs and for the metals cadmium, copper, lead, nickel, silver and zinc. Inclusion of other compounds or metals that have PEC values when insufficient data are available to evaluate predictive reliability (such as for mercury, dieldrin, DDT, endrin, and lindane) into the overall PEC-Q calculation may result in an overall PEC-Q value with lower predictive ability (Wisconsin Department of Natural Resources [WDNR] 2003).

In the case of metals, a PEC-Q_{metals} value was calculated by summing the PEC-Q value for each individual metal for which a reliable PEC is available and dividing by the number of metals included in the calculation. Mercury was not included in the PEC-Q_{metals} calculations because its

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PEC is not considered reliable. For total PAHs, the concentration in sediment first was normalized to 1 percent (%) organic carbon to agree with the PEC. Total PAH concentrations were calculated using three methods and all are presented in the associated PEC-Q_{PAHs} tables:

- Total 16 Priority PAHs: the sum of detected concentrations of priority pollutant PAHs rounded to two significant figures from the 34 PAH analysis.
- Total Parent PAHs: the sum of detected concentrations of priority pollutant PAHs multiplied by a correction factor of 1.7 from the SVOC analysis.
- Total PAHs: the sum of detected expanded list (34) PAHs rounded to two significant figures.

A PEC-Q_{PAHs} and a PEC-Q_{PCBs} value was calculated by dividing the total PAH concentration and the total PCB concentration by the PEC for total PAHs and total PCBs, respectively.

The mean PEC-Q then was calculated for the three main classes of chemicals, as the mean of the average PEC-Q for metals, the PEC-Q for PAHs, and the PEC-Q for PCBs. Ingersoll and others (2001) observed an overall increase in the incidence of toxicity with an increase in the mean quotients in toxicity tests and a consistent increase in toxicity at a mean quotient of greater than 0.5. Similarly, McDonald et al. (1999a) report an incidence of toxicity of >85% at a mean PEC-Q above 0.5 for a variety of freshwater sediment tests. However, in the Ingersoll study, the overall incidence of toxicity was greater in long-term tests (28 days) using the amphipod *H. azteca* when compared to short-term tests. In studies by MacDonald and others 2000, the incidence of toxicity percentages correlated with calculated mean PEC-Q of 0.5, 1.0, and 5.0 are 40, 64, and 100%, respectively, in their datasets. In 10- to 14-day sediment tests evaluated by U.S. EPA (2000), the incidence of toxicity to amphipods was greater than 50% when mean PEC-Qs > 4.0 in sediment samples.

3.1.2 AVS/SEM Evaluation

Measurement of AVS and SEM concentrations associated with AVS extraction can provide insight into the bioavailability of metals in anaerobic (anoxic) sediments (U.S. EPA 2001). A model for predicting toxicity from divalent trace metals is based on the binding of these metals to

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AVS. When the sum of the moles of the SEM (including silver, cadmium, copper, nickel, lead, and zinc) is exceeded by the molar concentration of AVS, the metals are considered insoluble and largely unavailable to biota. However, if the AVS is less than the SEM, metals may or may not be toxic due to other controlling factors (such as TOC content) (U.S. EPA 2001) as discussed below for the ESB determination.

3.1.3 ESB Determination

ESBs are mechanistic sediment quality metrics that use the theories of equilibrium partitioning (EqP) to derive sediment-specific predictions of available contaminant exposures. U.S. EPA has derived ESBs for PAHs and a suite of divalent metals as discussed below.

PAH ESBs

There are potentially more than 1,000 PAH configurations. Initially, U.S. EPA identified 13 PAHs as parameters of concern. The National Oceanic and Atmospheric Administration began to quantify 10 additional PAHs in sediments, bringing the total number of PAHs measured to 23. More recently, the U.S. EPA Environmental Monitoring and Assessment Program has increased the number of PAHs measured from 23 to 34 by quantifying the C1 through C4 alkylated series for some patent PAHs, where the "C" number indicates an alkyl group substitution (U.S. EPA 2003). Because alkylated PAHs are often more abundant in fresh petroleum products than their un-substituted parent compounds and because the proportion of alkylated PAHs to parent compound PAHs increases as oil ages, it is important to analyze for alkylated PAHs when biological effects are a concern (National Park Service 1997). U.S. EPA currently recommends that a minimum of 34 configurations (18 parents and 16 alkylated PAHs) be used to assess "total PAH" concentrations in sediment (U.S. EPA 2003).

ESBTU values have been derived for the 34 PAHs to predict aqueous concentrations of each PAH in sediment with a known TOC content. This concentration is then normalized by its water-only FCV, which was derived using National Water Quality Criteria (WQC) guidelines. The FCV is used as the toxicity endpoint for this ESB, and the FCV is intended to be the concentration of a chemical in water that is protective of the presence of aquatic life. The individual

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ESBTU of all 34 PAHs (including specific non-alkylated and generic alkylated forms) are summed to derive an ESBTU based on FCV ($\sum ESBTU_{FCV}$) for a sampling location. Benthic organisms should be acceptably protected from the narcotic effects of PAH mixtures in freshwater and saltwater sediments if the $\sum ESBTU_{FCV}$ is less than or equal to 1.0 (U.S. EPA 2003). If the $\sum ESBTU_{FCV}$ is greater than 1.0, sensitive benthic organisms may be adversely affected.

Metals ESBs

ESB Metals values are derived based on two lines of evidence to evaluate metal toxicity: the concentrations of sediment-associated metals in excess of the AVS concentration and dissolved metals concentrations in interstitial water (U.S. EPA 2005). Both are considered for this evaluation as AVS/SEM analyses were conducted for surface sediments and metals concentrations were measured in pore water.

AVS ESB values can provide a more accurate prediction of toxicity because the presence of organic carbon (oc) is considered along with AVS using the following equation:

$$\left(\sum SEM - AVS\right) / \; foc \Big/ \left(\sum \frac{SEM - AVS}{foc}\right)$$

where

SEM	=	Simultaneously extracted divalent metal (micromoles [µmole])
AVS	=	Acid volatile sulfides (micromole per gram [µmole/g])
foc	=	Fraction oc (grams [g])

For the multiple metals (cadmium, copper, lead, nickel, silver and zinc), the assumptions summarized below are useful to derive a benchmark (U.S. EPA 2005).

- Any sediment with an AVS > 0.0 will not cause adverse biological effects due to chromium or silver.
- SEM-AVS/foc < 130 µmole/grams organic carbon (goc): metals (cadmium, copper, lead, nickel, or zinc) should pose a low risk for adverse biological effects.
- SEM-AVS/foc > 130 µmole/goc < 3,000 µmole/goc: metals (cadmium, copper, lead, nickel, or zinc) may have adverse biological effects.

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- SEM-AVS/foc > 3,000 µmole/goc: metals (cadmium, copper, lead, nickel, or zinc) are expected to cause adverse biological effects.

Pore Water Concentrations

Similar to bulk sediment benchmark comparisons, pore water chemistry data are used for comparisons with water quality benchmarks to assess the potential for toxicity of a sample. The advantage of pore water benchmarks over sediment benchmarks is that they tend to reflect location-specific sediment characteristics (e.g., TOC and AVS concentrations) that may increase/decrease the proportion of contaminants available for uptake from sediment pore water.

Pore water data were compared to State of Ohio WQC and Lake Erie basin criteria. For chemicals lacking Ohio-specific values, alternative sources of ambient WQC values included State of Michigan WQC, U.S. EPA national WQC, and National Ocean and Atmospheric Administration Screening Quick Reference Tables (SQUIRTS) for surface water benchmarks. Exceedance of these values indicates potential adverse biological effects.

In the absence of a water-quality benchmark for PAHs, pore water benchmarks derived by U.S. EPA (2003) were used. U.S. EPA (2003) derived individual PAH-specific FCVs using the slope of the water partitioning (K_{OW})-toxicity relationship for all narcotic chemical classes, the EqP approach of DiToro et al. (2003a, as cited in U.S. EPA 2003), and the U.S. EPA National WQC (Stephan et al., 1985, as cited in U.S. EPA, 2003). Pore water concentrations less than surface water benchmarks should not cause direct toxicity to benthic organisms. A total interstitial water toxic unit ($\Sigma IWTU_{FCV}$) is calculated for each sample location by dividing the dissolved interstitial water concentration by the FCV and summing the individual toxic units. Pore water containing <1.0 $\Sigma IWTU_{FCV}$ of the mixture of the PAHs are acceptable for the protection of benthic organisms, and if the $\Sigma IWTU_{FCV}$ is greater than 1.0, sensitive benthic organisms may be unacceptably affected (U.S. EPA, 2003).

3.2 SEDIMENT ANALYTICAL RESULTS

Data tables are provided for the analytical results for sediment samples collected from the confluences of Duck and Otter Creeks. **Appendix B** provides all analytical data. **Table 3-1**

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presents the overall mean PEC-Q values and ESBs for each sampling location in the confluences of Duck and Otter Creeks. Sediment analytical results and evaluations for each creek are included below.

3.2.1 Duck Creek

Tables 3-2 through **3-7** summarize the analytical results for inorganic analytes, PCBs, petroleum hydrocarbons, PAHs, SVOCs, and grain size collected from the Duck Creek confluence, respectively. **Tables 3-8** through **3-11** summarize the analytical results for PEC-Q_{metals} and PEC-Q_{PAHs}; AVS/SEM data, and the 34 PAHs, respectively. **Table 3-12A and Table 3-12B** present the pore water data for the Duck Creek confluence. **Figures 3-1** through **3-9** graphically depict inorganic analytes above screening benchmarks, PCB PEC and PEC-Q results, petroleum hydrocarbons above screening benchmarks, PAH results above PECs, SVOC results above screening benchmarks, PEC-Q_{metals} results, PEC-Q_{PAH} results, AVS/SEM results, and PAH $\sum ESBTU_{FCV}$ results, respectively. The text below provides summary descriptions of the results.

Individual Benchmark/PEC Exceedances

Metals

Table 3-2 summarizes Duck Creek confluence metals results and **Figures 3-1** show the metals PEC exceedances. Individual metal PEC exceedances within Duck Creek were identified for arsenic, cadmium, chromium, mercury, lead and nickel, with concentrations exceeding PECs in only a few samples. Alternative sediment benchmarks for iron, selenium, and silver were also exceeded.

PCBs

Table 3-3 summarizes Duck Creek confluence PCB results and **Figure 3-2** shows the PCB PEC exceedances. Total PCB PEC exceedances in the Duck Creek confluence were identified at depth (predominantly deeper than 24 inches bss) in multiple intervals at six of 11 sample locations (DC-13, DC-16, DC-17, DC-19, DC-21, and DC-25).

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Petroleum Hydrocarbons

Table 3-4 summarizes Duck Creek confluence total petroleum hydrocarbon results and **Figure 3-3** shows the total petroleum hydrocarbon results above screening benchmarks. No PEC or TEC criteria are available for DROs, GROs, and OROs. However, all of the samples from the Duck Creek confluence contained detected concentrations of DROs, GROs, and OROs. The DRO values ranged from 210 to 3,800 mg/kg. The GRO values ranged from 2.8 to 62 mg/kg, with highest concentration detected at depth in DC-14-05. The RRO values ranged from 650 to 5,900 mg/kg. The highest DRO and RRO concentrations were detected in the deepest interval at DC-19-04. At sample core locations DC-14, DC-16, DC-17, DC-19, and DC-21, DRO and ORO concentrations increased with depth from the upper to the bottom sample intervals.

The GRO concentration at one location (DC-14-05) exceeds the highest of the MDEP benchmarks. Note that exceedance of a benchmark does not indicate risk. Rather, concentrations below these benchmarks indicate that the fraction does not contribute significantly to the chemical toxicity of oil-contaminated sediments.

PAHs

Tables 3-5A and 3-5B summarize PAH results for November 2010 and May 2011, respectively, in the Duck Creek confluence, and **Figure 3-4** shows the PAH PEC exceedances. Individual PAH PEC exceedances within the Duck Creek confluence were identified mostly in deeper sample intervals, though individual PEC exceedances were identified in shallow samples at DC-13, DC-16, DC-17, DC-20 and DC-24. The vertical extent of individual PAHs has not been defined at all locations within Duck Creek, such as DC-16 and DC-17.

SVOCs

Tables 3-6A and 3-6B summarize SVOC results for November 2010 and May 2011, respectively, in the Duck Creek confluence in comparison to alternative sediment benchmarks. **Figure 3-5** shows SVOC concentrations above the benchmarks. SVOCs detected in sediments included 1,1-biphenyl, 4-methylphenol, acetophenone, benzaldehyde, bis(2-ethylhexyl)phthalate

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(BEHP), carbazole, dibenzofuran, di-n-butylphthalate, n-nitrosodiphenylamine, nitrobenzene, and phenol. Primarily BEHP, a common laboratory contaminant, exceeded alternative sediment benchmarks. However, in aqueous exposures, BEHP is not toxic to aquatic organisms at concentrations up to the solubility limit (Call et al. 2001; Rhodes et al. 1995). Sediment spiked with 3,000,000 µg/kg BEHP had no effect on either survival or growth of midges and amphipods (Call et al. 2001). The maximum detected BEHP concentration (3,300 ug/kg at DC-25-2) does not exceed this concentration. Thus, measured BEHP concentrations were not high enough to be considered a contaminant of concern.

Mean PEC-Q Threshold Exceedances

Table 3-1 summarizes the individual and mean PEC-Q values calculated for each sample within the Duck Creek confluence and **Figure 3-2, Figure 3-6, and Figure 3-7** show the Duck Creek confluence mean PEC-Q exceedances for PCBs, metals, and PAHs, respectively. Mean PAH, PCB, and metals PEC-Q values provide an understanding of the greatest contributor to each calculated mean PEC-Q values. Calculation of mean PEC-Q values is provided in **Tables 3-3 for PCBs, Table 3-8** for metals, and **Tables 3-9A and 3-9B** for PAHs.

The mean PEC-Q threshold value of 1.0 was exceeded in the deeper intervals at DC-16, DC-17, DC-19, and DC-21, with the highest mean PEC-Q value of 3.56 at DC-17-05. These exceedances of the mean PEC-Q threshold value of 1.0 indicate that PCBs are the primary contributor to the potential risk for biological effects, with some contribution to the mean PEC-Q from metals (with $PEC\text{-}Q_{metals} > 0.5$) at locations DC-16 and DC-17.

Physical Properties

Table 3-7 summarizes the Duck Creek confluence grain size analysis. The geotechnical results for the 11 samples collected from the Duck Creek confluence indicate that the material sampled consisted primarily of silt mixed with some very fine sand and clay.

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AVS ESB

Table 3-10 summarizes the derivation of the Duck Creek confluence AVS/SEM values. The metals ESB values ([Sum SEM – AVS]/foc) for all Duck Creek samples yielded results less than 130 µmole/goc, indicating low risk of adverse biological effects from metals. This conclusion is also supported by the AVS/SEM ratios, which are also less than 1.

PAH ESBTU

Tables 3-11A and 3-11B summarize the derivation of Duck Creek confluence ESBTUs for EPAHs. The PAH $\sum ESBTU_{FCV}$ did not exceed the threshold of 1 at any surface sample location within Duck Creek, suggesting that PAHs in surface sediment are not a primary contaminant of concern as adverse effects from PAHs are not likely.

3.2.2 Otter Creek

Tables 3-13 through 3-18, summarize the Otter Creek confluence analytical results for inorganic analytes, PCBs, petroleum hydrocarbons, PAHs, SVOCs, and grain size collected from the Duck Creek confluence, respectively. **Table 3-14, Table 3-19, and Tables 3-20A and 3-20B** present the PEC-$Q_{PCBs,}$ PEC-Q_{metals} and PEC-Q_{PAHs} results, respectively. **Table 3-21** summarizes the AVS/SEM results. **Tables 3-22A and 3-22B** present the expanded list of PAHs (EPAH) for November 2010 and May 2011 sampling results. **Table 3-23** presents the pore water data for the Otter Creek confluence. **Figures 3-10** through **3-18** graphically depict inorganic analytes above screening benchmarks, PCB PEC and PEC-Q results, petroleum hydrocarbons above screening benchmarks, PAH results above PECs, SVOC results above screening benchmarks, PEC-Q_{metals} results, PEC-Q_{PAH} results, AVS/SEM results, and PAH $\sum ESBTU_{FCV}$ results, respectively. The text below provides summary descriptions of the results.

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Individual Benchmark/PEC Exceedances

Metals

Table 3-13 summarizes Otter Creek confluence metals results and **Figure 3-10** shows the metals PEC exceedances. Individual metal PEC exceedances within the Otter Creek confluence were identified for arsenic, chromium, copper, lead, mercury and nickel, with exceedances measured at sample locations OC-34, OC-41, OC-42, OC-44, and OC-45. Alternative sediment benchmarks for iron, selenium, and silver were also exceeded.

PCBs

Table 3-14 summarizes Otter Creek PCB results and **Figure 3-11** shows the PCB PEC exceedances. Total PCB PEC exceedances within the Otter Creek confluence were identified at depth at three sampling locations (OC-35, OC-45 and OC-48).

Petroleum Hydrocarbons

Table 3-15 summarizes the Otter Creek confluence petroleum hydrocarbon results and **Figure 3-12** shows the petroleum hydrocarbons over the screening benchmark. No PEC or TEC criteria are available for GROs, DROs, and RROs. However, most of the samples from the Otter Creek confluence contained detected concentrations of GROs, DROs and RROs. The GRO values ranged from 12 to 1,900 mg/kg. The highest concentration was detected in the deeper interval at OC-45-02. The DRO values ranged from 26 to 60,000 mg/kg. The highest concentration was detected in the deeper interval at OC-44-02. The RRO values ranged from 39 to 64,000 mg/kg. The highest concentration was detected in the deeper interval at OC-44-02.

Numerous locations contained GRO, DRO and RRO concentrations exceeding the highest of the MDEP benchmarks. Note that exceedance of a benchmark does not indicate risk. Rather, concentrations below these benchmarks indicate that the fraction does not contribute significantly to the chemical toxicity of oil-contaminated sediments.

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PAHs

Tables 3-16A and 3-16B summarize the Otter Creek confluence PAH results for November 2010 and May 2011, respectively; and **Figure 3-13** shows the total PAH PEC exceedances. Individual PAH PEC exceedances within Otter Creek were identified at locations OC-26 through OC-30, OC-32, OC-42, and OC-44 within the upper sample intervals (0 to 6 inches and 0 to 2 feet bss). Exceedance of individual PAH PECs was found in deeper interval samples at OC-31, OC-34, OC-44, and OC-45.

SVOCs

Table 3-17A and 3-17B summarize the Otter Creek confluence SVOC results in comparison to alternative sediment benchmarks for the November 2010 and May 2011 sampling events, respectively. **Figure 3-14** shows SVOCs detected above the benchmarks. SVOCs detected in sediments included 1,1-biphenyl, 4-methylphenol, acetophenone, benzaldehyde, BEHP, carbazole, dibenzofurna, di-n-butylphthalate, n-nitrosodiphenylamine, nitrobenzene, and phenol.

Mean PEC-Q Threshold Exceedances

Table 3-1 summarizes the mean PEC-Q values calculated for each sample within the Otter Creek confluence and **Figures 3-11, 3-15, and 3-16** show the Otter Creek confluence PEC-Q_{PCBs}, PEC-Q_{metals}, and PEC-Q_{PAHs} values, respectively. Mean PAH, PCB, and metals PEC-Q values provide an understanding of the greatest contributor to each calculated mean PEC-Q values. Calculation of mean PEC-Q values is provided in **Tables 3-14** for PCBs, **Table 3-19** for metals, and **Tables 3-20A and 3-20B** for PAHs.

The mean PEC-Q threshold value of 1.0 was exceeded at 1 location in Otter Creek (OC-44-02), with the PEC-Q for metals, PCBs, and PAHs exceeding a threshold of 0.5. The mean PEC-Q threshold value of 0.5 was exceeded at nine surface and subsurface locations (OC-26, OC-29, OC-31-02, OC-34-02, OC-35-02, OC-42-01, OC-44-01, OC-45-02, and OC-48-04). The PAH PEC-Q exceeded 1.0 at locations OC-26, OC-32, OC-42 (DP), OC-44-02 and OC-45-02 **(Table 3-1);** with exceedances of 0.5 in eleven other samples**.** PAHs appear to be a primary contributor

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to the potential risk for biological effects, with a contribution from metals at OC-44-02 and a contribution from PCBs at OC-35-02 to the respective mean PEC-Q.

Physical Properties

Table 3-18 summarizes the Otter Creek confluence grain size results. The geotechnical results for the samples collected from the Otter Creek confluence indicates the material sampled consisted primarily of silt and clay material mixed with some very fine sand.

AVS ESB

Table 3-21 summarizes the derivation of the Otter Creek confluence AVS/SEM values. **Figure 3-17** shows the AVS/SEM results for the Otter Creek confluence. In contrast to PAH ESBTUs, the Otter Creek metals ESB values ([Sum SEM – AVS]/foc) for all samples yielded results less than 130 μmole/goc, indicating low risk of adverse biological effects from metals. This result is also supported by the AVS/SEM ratios for these samples, which are less than 1.

PAH ESBTU

Tables 3-22A and 3-22B summarize the derivation of Otter Creek confluence ESBTUs for EPAHs. **Figure 3-18** shows the PAH ∑ESBTUFCV results. The PAH $\sum ESBTU_{FCV}$ exceeded the threshold of 1 at OC-26 through OC-30, OC-32, OC-34, OC-42, an OC-44, which indicates that benthic organisms may be adversely impacted by PAHs in shallow sediment.

3.3 PORE WATER ANALYTICAL RESULTS

Tables 3-12A/B and 3-23A/B provide the analytical results for sediment pore water samples collected from the Duck and Otter Creek confluences, respectively. **Figures 3-19 and 3-20** show pore water concentrations above applied benchmarks. Pore water evaluations for each creek are provided below.

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3.3.1 Duck Creek

Tables 3-12A and 3-12B summarize the pore water results for surface sediment samples collected from the Duck Creek confluence. In relation to WQC, ammonia concentrations were elevated in 10 of 11 samples. Measurable concentrations of ammonia are common in the pore water of many types of sediment and have been found to be a common cause of toxicity in pore water (ASTM, 2005). Four-day LC50 values for *Lumbriculusvariegatus* ranged from 390 to 6.6 mg/L total ammonia as pH was increased from 6.3 to 8.6. Over a similar same pH range, 4-day lethal concentration 50 (LC50) values for *C. dilutus* ranged from 370 to 82 mg/L total ammonia. In soft reconstituted water, toxicity of ammonia to *H. azteca* was not pH dependent, with 4-day LC50 values of about 20 mg/L (ASTM, 2005). Ammonia in Duck Creek ranged from 1.81 mg/L at DC-20 (pH = 7.76) to 17 mg/L at DC-13 (pH = 7.31).

Barium slightly exceeded chronic water quality criteria in one sample (DC-21) and manganese exceeded chronic water quality criteria in several samples. Barium and manganese did not exceed acute criteria. The State of Michigan has developed hardness-based FCVs (analogous to Ohio's Outside Mixing Zone Average) for barium and manganese using the Great Lakes Initiative methodology. The hardness listed for sample DC-21 was quite high (1,050 mg/L as CaCO3), and barium toxicity is known to decrease with increasing hardness. At this hardness, the calculated FCV for barium is 5,300 µg/L. A hardness of 300 mg/L as CaCO3 (typical of pore water hardness in this study) yields a calculated manganese FCV of 5,100 µg/L. The maximum manganese pore water concentration was 1,990 µg/L at DC-14. Thus, the measured barium and manganese concentrations in this study do not exceed these levels and are unlikely to cause adverse biological effects.

C4-Naphthalene was elevated in one sample (DC-25). The $\Sigma IWTU_{FCV}$ at this location also exceeded the threshold of 1 (**Table 3-12A**).

3.3.2 Otter Creek

Tables 3-23A and 3-23B summarize the pore water results for surface sediment samples collected from the Otter Creek confluence. In relation to WQC, ammonia concentrations were

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elevated in 11 of 19 samples. Measurable concentrations of ammonia are common in the pore water of many types of sediment and have been found to be a common cause of toxicity in pore water (ASTM, 2005). Four-day LC50 values for *Lumbriculusvariegatus* ranged from 390 to 6.6 mg/L total ammonia as pH was increased from 6.3 to 8.6. Over a similar same pH range, 4-day LC50 values For *C. dilutus* ranged from 370 to 82 mg/L total ammonia. In soft reconstituted water, toxicity of ammonia to *H. azteca* was not pH dependent, with 4-day LC50 values of about 20 mg/L (ASTM, 2005). Ammonia in Otter Creek ranged from 0.252 mg/L at OC-41 (pH = 7.75) to 18.5 mg/L at OC-44 (pH = 7.31).

Manganese exceeded acute criteria in two samples (OC-47 and OC-48), and manganese exceeded chronic WQC in all samples. The State of Michigan has developed hardness-based FCVs (analogous to Ohio's Outside Mixing Zone Average) for manganese using the Great Lakes Initiative methodology. A hardness of 300 mg/L as CaCO3 (typical of pore water hardness in this study) yields a FCV of 5,100 µg/L. The maximum manganese pore water concentration was 4,210 µg/L at OC-47. Thus, the measured manganese concentrations in this study do not exceed these levels and are unlikely to cause adverse biological effects.

Numerous PAHs were elevated in 9 of 18 samples (OC-26 through OC-30, OC-32, OC42, OC44, and OC-45). The $\Sigma IWTU_{FCV}$ at 10 locations (OC-26 through OC-30, OC-32, OC-35, OC42, OC44, and OC-45) exceeded the threshold of 1 (**Table 3-23A**).

3.4 SEDIMENT TOXICITY TEST RESULTS

The Army Engineer Research and Development Center (ERDC) conducted acute toxicity testing on sediments from the Duck and Otter Creek confluences at the request of GLNPO as part of its GLLA initiative. Twenty-two whole sediment samples were evaluated using the midge *C. dilutus*. Toxicity tests were conducted in basic accordance with guidance provided in "Methods for Measuring the Toxicity and Bioaccumulation of Sediment-associated Contaminants with Freshwater Invertebrates" (U.S. EPA 2000). Testing conducted for samples collected during the November 2010 sampling event was initiated on November 19, 2010 and completed on December 23, 2010. The evaluation was conducted blind, in that the ERDC was unaware of the

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amounts or types of contaminants in the sediment samples and where they were collected (ERDC, 2011). Testing conducted for samples collected during the May 2011 sampling event was initiated on September 6, 2011 and was completed on September 16, 2011.

Water quality parameters for all bioassays were within the acceptability ranges specified by U.S. EPA (2000) testing guidance. Survival in the negative control exceeded 78% and 88% for the November 2010 and May 2011 samples, respectively, in all tests and met the 70% minimum survival requirement indicated in U.S. EPA (2000) testing guidance (ERDC, 2011).

Table 3-24 summarizes the survival and growth results for *C. dilutus* after exposure to confluence sediment. Upon observation of results presented by ERDC, percent survival, ash-free biomass, and ash-free growth of *C. dilutus* at stations OC-28, OC-29 and OC-30 (November 2010 samples) and DC-25, OC-35, OC-38, OC-41, OC-44, and OC-45 (May 2011 samples) had noticeable variation among test replicates, mean values appeared low compared to test controls, and/or inconsistent results across all endpoints were reported.

The outcomes of statistically different determination were updated by WESTON after re-evaluation of the statistics using ToxCalc software. Both ERDC (SigmaStat) and WESTON (Toxcalc) used comparison procedures for data sets that were both normally and not normally distributed. Both methods are acceptable statistical approaches, however Kruskal–Wallis One-Way ANOVAs on ranks (followed by Dunnett's or Dunn's mean comparisons) performed by ERDC were not as sensitive to differences compared to Wilcoxon Rank Sum Tests and Steel's Many-One Rank Tests performed by WESTON.

Statistically different survival and growth results for several samples changed compared to results initially reported by ERDC. **Table 3-24** summarizes the original ERDC results and WESTON-updated statistically different outcomes. **Appendix C** presents the sediment toxicity test reports in full and the WESTON statistical results.

Significant reduction in survival was detected in OC-26, OC-27, OC-42, and OC-44 sediment samples. Significant reductions in ash-free biomass per initial organism were detected for sediment samples OC-26, OC-28, OC-29, OC-30, DC-25, OC-35, OC-38, OC-41, OC-42, OC-

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44, OC-45, and OC-46. A significant reduction in ash-free dry weight per surviving organism was observed for sediment samples OC-26, OC-28, OC-29, OC-30, OC-31, DC-25, OC-35, OC-38, OC-42, OC-44, OC-45, and OC-46. No significant effects on survival or biomass were detected for the remaining sediment samples evaluated.

4. WEIGHT-OF-EVIDENCE EVALUATION

A weight-of-evidence evaluation was conducted to further determine the contaminants of concern in the confluence of Otter Creek. The evaluation focuses on the sediments of the Otter Creek confluence as toxicity was observed in only one of eight Duck Creek confluence sediments; and wide-spread concentrations above individual PECs and PEC-Q were limited to PCBs that were in deeper subsurface sediment.

The weight-of-evidence evaluation examined patterns and correlations between sediment and pore water contaminants and groups of contaminants in relation to observed toxicity. **Table 4-1** below summarizes the PEC quotients, ESTBU, and SEM/AVS ratios with comparison to survival and growth results.

TABLE 4-1
SUMMARY OF PEC QUOTIENTS, ESBTU, AND SEM/AVS RATIOS WITH TOXICITY RESULTS

Sample No.	Metals PEC-Q	PCB PEC-Q	Total Parent PAH PEC-Q	Overall Mean PEC Quotient	(Sum SEM - AVS)/foc (µmole/goc)	PAH ESTBU FCV	Measured Toxic Effects – Survival	Measured Toxic Effects - Growth
DC-13	0.335	0	0.068	0.201	-21	0.385	No	No
DC-14	0.289	0	0.042	0.166	-78	0.214	No	No
DC-16	0.364	0	0.040	0.202	-33	0.234	No	No
DC-17	0.338	0	0.068	0.203	5	0.358	No	No
DC-19	0.366	0	0.010	0.188	-68	0.052	No	No
DC-22	0.237	0	0.097	0.167	-31	0.494	No	No
DC-23	0.298	0	0.025	0.161	-72	0.120	No	No
DC-25	0.381	0.138	0.028	0.182	-238	0.218	No	Yes
OC-26	0.419	0.562	**1.18**	0.721	-235	**15.1**	Yes	Yes
OC-27	0.308	0.148	0.179	0.212	-188	**7.46**	Yes	Yes
OC-28	0.321	0.033	0.180	0.178	-91	**1.28**	No	Yes

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Sample No.	Metals PEC-Q	PCB PEC-Q	Total Parent PAH PEC-Q	Overall Mean PEC Quotient	(Sum SEM - AVS)/foc (µmole/goc)	PAH ESTBU FCV	Measured Toxic Effects – Survival	Measured Toxic Effects - Growth
OC-29	0.348	0	0.783	0.566	-903	**4.46**	No	Yes
OC-30	0.297	0	0.553	0.425	-229	**5.76**	Yes	Yes
OC-31	0.218	0	0.045	0.132	-134	0.247	No	Yes
OC-35	0.305	0.185	0.040	0.177	-126	0.255	No	Yes
OC-38	0.242	0	0.008	0.125	6.1	0.091	No	Yes
OC-40	0.183	0	0.025	0.104	4.3	0.189	No	No
OC-41	0.505	0	0.048	0.277	17	0.314	No	Yes
OC-42	0.489/0.697	0.114/0.139	0.576/1.22	0.393/0.687	-143/-45	**4.93/9.89**	Yes	Yes
OC-44	0.800	0.251	0.643	0.565	-91	**8.41**	Yes	Yes
OC-45	0.395	0.254	0.073	0.241	-141	0.584	No	Yes
OC-46	0.195	0	0.018	0.106	-82	0.063	No	Yes

Notes:
PEC-Q ratios exceeding 0.5 (expected toxicity outcome = 40% for 28+ day tests) but less than 1 are highlighted in yellow
PEC-Q ratios exceeding 1 (expected toxicity outcome = 64% for 28+ day tests) but less than 5 are highlighted in orange.
PEC-Q ratios exceeding 5 (expected toxicity outcome = 100% for 28+ day tests) are highlighted in red.
PAH ESTBU values less than or equal to 1 are not predicted to cause toxicity. ESTBU values exceeding 1 are highlighted in red.
Sum (SEM - AVS)/foc µmole/goc ratios less than 130 are not predicted to cause toxicity.
NA - Not applicable
Observed toxic effects as represented by significantly different survival, growth (ash free dry weight), and/or replicate ash-free bioamass/initial organism

To summarize the results in **Table 4-1**, sediment sampling locations OC-26, OC-27, OC-30, OC-42, and OC-44 showed toxicity for both survival and growth. All samples resulted in PAH $\sum ESBTU_{FCV}$ values of greater than 5, indicating a pattern of PAH $\sum ESBTU_{FCV}$ concentrations over 5.0 to predict toxicity for the Otter Creek confluence sediments.

Table 4-2 below summarizes the pore water concentrations exceeding applied benchmarks with comparison to observed toxicity.

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TABLE 4-2
SUMMARY OF PORE WATER CONCENTRATIONS ABOVE SCREENING VALUES WITH TOXICITY RESULTS

Sample No.	Mn Above Acute Value	Mn Above Chronic Values	PAHs Above Acute Values	PAHs Above Chronic Values	PAH IWTU Above 1	Ammonia Above Chronic Values	Measured Toxic Effects – Survival	Measured Toxic Effects - Growth
DC-13		X				X	No	No
DC-14		X				X	No	No
DC-16		X				X	No	No
DC-17		X				X	No	No
DC-19		X				X	No	No
DC-22		X				X	No	No
DC-23		X				X	No	No
DC-25	X	X			X	X	No	Yes
OC-26		X		X	X	X	Yes	Yes
OC-27		X		X	X		Yes	Yes
OC-28		X		X	X	X	No	Yes
OC-29		X		X	X	X	No	Yes
OC-30		X		X	X	X	Yes	Yes
OC-31		X					No	Yes
OC-35		X		X	X	X	No	Yes
OC-38		X					No	Yes
OC-40		X					No	No
OC-41		X					No	Yes
OC-42		X	X	X	X		Yes	Yes
OC-44	X	X		X	X	X	Yes	Yes
OC-45		X		X	X	X	No	Yes
OC-46		X				X	No	Yes

Mn – Manganese

To summarize the results in **Table 4-2**, sediment sampling locations OC-26, OC-27, OC-30, OC-42, and OC-44 showed toxic effects for both survival and growth, and all samples resulted in pore water concentrations above PAH and metals screening values. However, the hardness values for the Otter Creek confluence resulted in a calculated manganese FCV (5,100 ug/L) that is higher than the benchmarks applied for manganese. None of the manganese concentrations in pore water exceed the hardness-specific FCV, therefore manganese is precluded as a contaminant of concern in pore water.

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Ammonia exceeded chronic water benchmarks in almost all samples tested for toxicity, but a pattern of ammonia with observed toxic effects does not appear to be present as several samples contained elevated ammonia that did not result in any toxic effects. Further, the ammonia concentrations detected in Otter Creek confluence pore water do not exceed established LC50 values for *C. dilutus* or *H. azteca*.

A Spearman-Rank correlation was conducted for the Otter Creek confluence using all available chemical and toxicity data. This method is based on ranks instead of the magnitude of individual sample results (in contrast to a Pearson correlation), and is used in the case where data do not meet assumptions of normality. A spearman correlation coefficient is generated as a result of the test, and the closer the result is to 1 or -1, the higher the correlation. Significance is determined based on a critical value, which is based on the sample size. Significant correlation results are highlighted in **Table 4-3** and are greater than the absolute value of the critical value.

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TABLE 4-3
SIGNIFICANT NEGATIVE CORRELATION RESULTS

Contaminant	10-Day Survival	10-Day Replicate Total Ash-Free/Initial Organism	10-Day Individual Ash-Free Dry Weight
Number of Samples	14	14	14
Critical Value	0.538	0.538	0.538
Sediment Metals			
Aluminum	-0.430	-0.561	-0.559
Barium	-0.529	-0.585	-0.592
Copper	-0.790	-0.648	-0.666
Lead	-0.726	-0.613	-0.640
Sediment Acid Volatile Sulfide (AVS) Metals			
Cadmium – AVS	-0.625	-0.660	-0.717
Lead-AVS	-0.506	-0.525	-0.600
Sulfide – AVS	-0.515	-0.591	-0.648
Pore Water Metals			
Arsenic, Dissolved	-0.555	-0.629	-0.620
Cadmium, Dissolved	-0.668	-0.282	-0.302
Cobalt, Dissolved	0.574	0.464	0.367
Iron, Dissolved	-0.475	-0.574	-0.560
Lead, Dissolved	-0.825	-0.788	-0.788
Manganese, Dissolved	-0.262	-0.548	-0.592
Zinc, Dissolved	-0.559	-0.270	-0.222
Sediment Polycyclic Aromatic Hydrocarbons			
1-Methylnaphthalene	-0.634	-0.516	-0.556
Anthracene	-0.756	-0.686	-0.704
Acenaphthene	-0.796	-0.758	-0.745
Benzo(a)anthracene	-0.722	-0.679	-0.697
Benzo (a)pyrene	-0.717	-0.684	-0.705
Benzo(b)Fluoranthene	-0.687	-0.669	-0.691
Benzo(e)pyrene	-0.832	-0.736	-0.754
Benzo(g,h,i)perylene	-0.733	-0.679	-0.710
Benzo(k)fluoranthene	-0.642	-0.627	-0.660
C11 Chrysenes	-0.847	-0.745	-0.754
C1- Fluoranthenes/Pyrenes	-0.851	-0.754	-0.763
C1- Fluorenes	-0.856	-0.727	-0.736
C1-Naphthalenes	-0.691	-0.565	-0.596
C1- Phenanthrenes/anthracenes	-0.831	-0.750	-0.765
C2- Chrysenes	-0.836	-0.732	-0.749
C2- Fluoranthenes/Pyrenes	-0.847	-0.745	-0.754
C2 – Fluorenes	-0.865	-0.749	-0.758
C2- Naphthalenes	-0.791	-0.638	-0.653
C2-Phenanthrenes/anthracenes	-0.832	-0.714	-0.723
C3-Chrysenes	-0.819	-0.744	-0.770
C3-Fluoranthenes/Pyrenes	-0.814	-0.714	-0.741
C3-Fluorenes	-0.823	-0.723	-0.732
C3-Naphthalenes	-0.862	-0.771	-0.771

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Contaminant	10-Day Survival	10-Day Replicate Total Ash-Free/Initial Organism	10-Day Individual Ash-Free Dry Weight
C3- Phenanthrenes/anthracenes	-0.836	-0.741	-0.749
C4-Naphthalenes	-0.862	-0.771	-0.771
C4- Phenanthrenes/anthracenes	-0.794	-0.714	-0.714
Chrysene	-0.717	-0.692	-0.710
Dibenz(a,h)anthracene	-0.740	-0.704	-0.730
Fluoranthene	-0.724	-0.710	-0.736
Fluorene	-0.678	-0.538	-0.547
Indeno(1,2,3-CD)pyrene	-0.695	-0.771	-0.789
Perylene	-0.785	-0.719	-0.719
Phenanthrene	-0.645	-0.566	-0.593
Pyrene	-0.726	-0.662	-0.679
Diesel Range Organics (DRO)	-0.695	-0.700	-0.748
Residual Range Organics (RRO)	-0.728	-0.815	-0.851
Gasoline Range Organics (GRO)	-0.708	-0.736	-0.785
16 PPAH PEC-Quotient	-0.886	-0.600	-0.600
Sum Total of PAH ESBTU FCVi	-0.847	-0.692	-0.705
TOTAL 16 PPAH (Calculated by lab)	-0.886	-0.600	-0.600
TOTAL PAH (Calculated by lab)	-0.886	-0.600	-0.600
Total PAHs PEC-Quotient	-0.865	-0.741	-0.727
Total Parent PAHs (Sum of detections x 1.7)	-0.744	-0.692	-0.714
Pore Water PAHs			
C2- Naphthalenes	-0.568	-0.591	-0.662
Pyrene	-0.675	-0.705	-0.760
Total Parent PAHs (Sum of detections x 1.7)	-0.609	-0.618	-0.692
Total PAHs	-0.635	-0.626	-0.637
Pore Water General Chemistry			
Dissolved Organic Carbon	-0.616	-0.477	-0.446

Shading indicates negative correlation over critical value.

Metals

The results of the correlation show that copper and lead in sediment were negatively correlated to both *C. dilutus* survival and growth. AVS cadmium showed a strong negative correlation for both survival and growth with *C. dilutus.* Dissolved lead in pore water also showed a strong negative correlation to survival and growth in *C. dilutus*. Correlation plots for metals and AVS metals in sediment are shown on **Figure 4-1**. Correlation plots for metals in pore water are shown on **Figure 4-2**. The correlation plots indicate a trend between metals and reduction in proportional survival of *C. dilutus* at location OC-26, OC-27, OC-42, and OC-44.

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FIGURE 4-1
METALS AND AVS METALS IN SEDIMENT CORRELATION PLOTS FOR OTTER CREEK CONFLUENCE

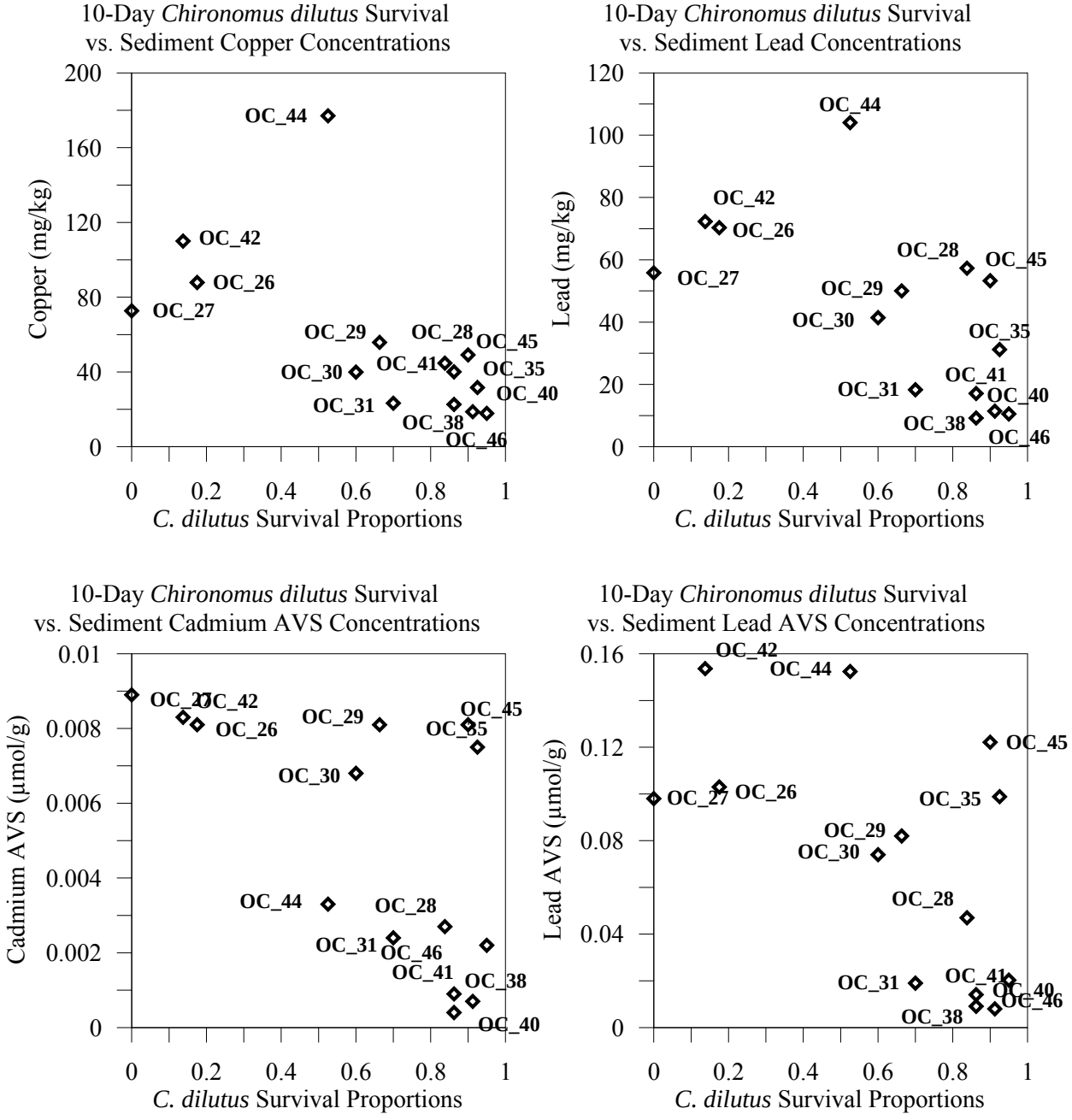

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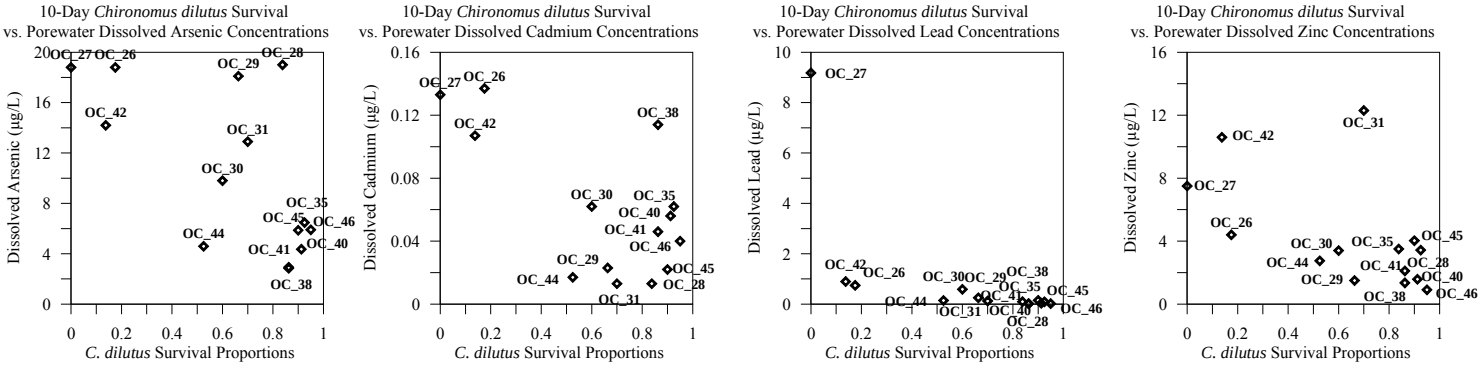
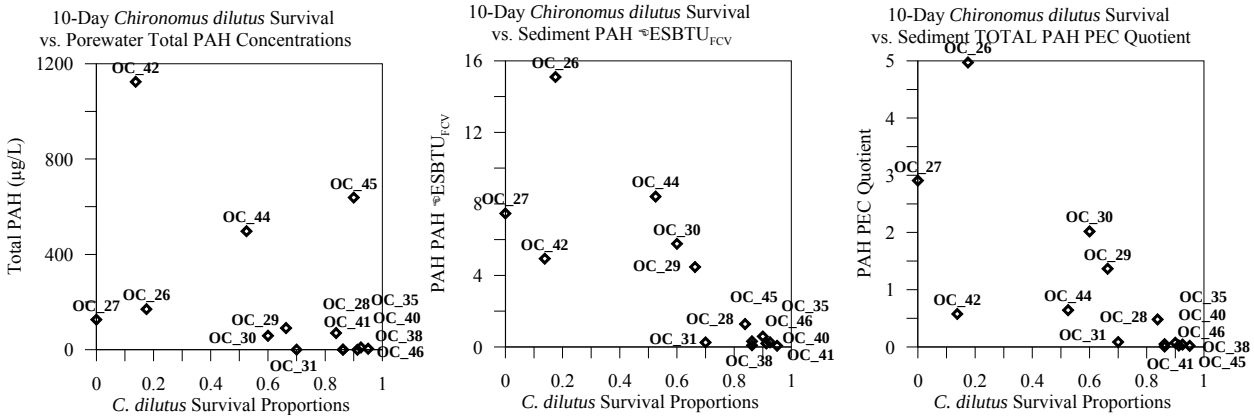
FIGURE 4-2
METALS IN PORE WATER CORRELATION PLOTS FOR OTTER CREEK CONFLUENCE



PAHs

There are numerous PAHs negatively correlated to survival and growth, both in the sediment and pore water. To illustrate the correlations, survival results were graphed with sediment PAH $\sum$ESTBU$_{FCV}$, total PAH PEC-Q, and pore water total 34 PAH results. Correlation plots for PAHs in sediment and pore water are shown on **Figure 4-3**. Using a survival threshold proportion of 0.7, the correlation plots indicate a trend between PAHs and the reduction in proportional survival of *C. dilutus* at locations OC-26, OC-27, OC-29, OC-30, OC-42, and OC-44.

FIGURE 4-3
PAHS IN SEDIMENT AND PORE WATER CORRELATION PLOTS FOR OTTER CREEK CONFLUENCE



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5. CONCLUSIONS

This section summarizes the data collected, results, and interpretation that support the project objectives that included:

- Determine the extent of contamination in both surface and subsurface sediments
- Further evaluate sediment toxicity and identify cause(s), to the extent practicable
- Collect data to support development of a FS (evaluation of remedial and restoration options to protect human health and the environment and to advance progress toward delisting of beneficial use impairments), if one is found to be necessary

Conclusions drawn to address these specific objectives are discussed below.

5.1 EXTENT OF CONTAMINANTS OF CONCERN

Duck Creek Confluence

PCBs are identified as the primary contaminant of concern in the confluence of Duck Creek based on the wide-spread incidence of concentrations over the total PCB PEC and the PEC-Q_{PCB}. The vertical extent of PCB contamination in the Duck Creek confluence has not been defined as PEC and PEC-Q_{PCB} exeedances were present in the deepest intervals of DC-13, DC-16, DC-17, and DC-19. The horizontal extent of contamination is potentially defined to the north at DC-14; however, there were no additional samples to the north. PCB concentrations above the PEC of 676 µg/kg ranged from 860 µg/kg at DC-13-03 to 6,500 µg/kg at DC-17-05.

Although the distribution of elevated PCB concentrations is wide-spread in the Duck Creek confluence, there are no incidences of elevated PCB concentrations in the shallow sediment (0 to 6 inches). The highest concentrations occur at 24 inches bss or deeper and in many cases, concentrations increase with depth. This concentration stratification indicates PCBs are most likely not available to the benthic community. Further, toxicity was observed in only one of eight sediment samples (DC-25) that is most proximal to the mouth of Duck Creek.

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Otter Creek Confluence

PAHs are identified as the primary contaminant of concern in the confluence of Otter Creek based on the wide-spread incidence of concentrations over the total PAH PEC, the PEC-$Q_{PAH,}$ the PAH $\sum ESBTU_{FCV}$ that are present in shallow sediment, as well as the elevated PAH concentrations in pore water. The vertical extent of PAH contamination in the Otter Creek confluence appears to be predominantly limited to the upper 24 inches of sediment; although locations OC-34, OC-44, and OC-45 contained elevated PAHs in the deepest sampling interval. However, in many cases, the sediment core retrieval was limited to two to three samples due to encountered refusal; and therefore the vertical extent of contamination may be defined by the substrate causing refusal below the available sediment.

The horizontal extent of PAH contamination appears defined to the west and northwest within the confluence at locations OC-33, OC-31, and OC-41. However, the horizontal extent is not defined to the north and northeast of locations OC-28, OC-29, and OC-32 between the mouth of Otter Creek and the boundary of the shipping channel.

5.2 WEIGHT-OF-EVIDENCE

A weight-of-evidence evaluation was conducted to further determine the contaminants of concern in the confluence of Otter Creek. The evaluation focused on the sediments of the Otter Creek confluence as toxicity was observed in only one of eight Duck Creek confluence sediments; and wide-spread concentrations above individual PECs and PEC-Q were limited to PCBs that were in deeper subsurface sediment.

Toxic effects were observed for sediment sampling locations OC-26, OC-27, OC-30, OC-42, and OC-44 for both survival and growth. All these samples resulted in PAH $\sum ESBTU_{FCV}$ values of greater than 5 and $\sum IWTU$ greater than 1, indicating a pattern of PAH $\sum ESBTU_{FCV}$ and $\sum IWTU$ values to predict toxicity for the Otter Creek confluence sediments.

All samples with observed toxic effects for survival and growth resulted in pore water concentrations above PAH and metals screening values (manganese). However, the hardness

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values for the Otter Creek confluence resulted in a calculated manganese FCV (5,100 ug/L) that is higher than the benchmarks applied for manganese. None of the manganese concentrations in pore water exceed the hardness-specific FCV, therefore manganese is precluded as a contaminant of concern in pore water.

Ammonia exceeded chronic water benchmarks in almost all samples tested for toxicity, but a pattern of ammonia with observed toxic effects does not appear to be present as several samples contained elevated ammonia that did not result in any toxic effects. Further, the ammonia concentrations detected in Otter Creek confluence pore water do not exceed established LC50 values for *C. dilutus* or *H. azteca*.

A Spearman-Rank correlation was conducted for the Otter Creek confluence using all available chemical and toxicity data. The results of the correlation show that copper and lead in sediment were negatively correlated to both *C. dilutus* survival and growth. AVS cadmium showed a strong negative correlation for both survival and growth with *C. dilutus.* Dissolved lead in pore water also showed a strong negative correlation to survival and growth in *C. dilutus*. The correlation plots indicated a possible relationship between metals and proportional survival of *C. dilutus* at locations OC-26, OC-27, OC-42, and OC-44.

There are numerous PAHs negatively correlated to survival and growth, both in the sediment and pore water. Using a survival threshold proportion of 0.7, the correlation plots indicate a possible relationship between PAHs and proportional survival of *C. dilutus* at locations OC-26, OC-27, OC-29, OC-30, OC-42, and OC-44.

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TABLES

Table 2-1
Sampling Location Water Depth and Core Retrieval
Duck and Otter Creeks Confluence Investigation
Toledo, Lucas County, Ohio

Creek	Location	Latitude	Longitude	Sediment Core Retrieval	Depth of Water
Duck Creek	DC-13	-83.46547218	41.68944147	96 inches	2.3 feet
	DC-14	-83.46500348	41.69089092	122 inches	6.5 feet
	DC-16	-83.46545788	41.68949225	167 inches	5.1 feet
	DC-17	-83.46538108	41.69023508	179 inches	5.8 feet
	DC-19	-83.46531517	41.69066627	127 inches	7.1 feet
	DC-20	-83.46578	41.68982	36 inches	5.5 feet
	DC-21	-83.46566	41.68913	21 inches	4.0 feet
	DC-22	-83.46516	41.68937	39 inches	4.8 feet
	DC-23	-83.4649	41.6898	67 inches	7.4 feet
	DC-24	-83.46473	41.69026	53 inches	8.0 feet
	DC-25	-83.46575	41.68876	39 inches	3.6 feet
Otter Creek	OC-26	-83.45342778	41.69850608	49 inches	1.8 feet
	OC-27	-83.45396522	41.6985494	50 inches	1.8 feet
	OC-28	-83.45323035	41.69898648	62 inches	2.5 feet
	OC-29	-83.45394893	41.69876452	52 inches	2.5 feet
	OC-30	-83.45444522	41.69901982	42 inches	3.0 feet
	OC-31	-83.45525148	41.69898575	48 inches	3.3 feet
	OC-32	-83.45425897	41.69937967	30 inches	3.3 feet
	OC-33	-83.45477942	41.69976717	39 inches	3.8 feet
	OC-34	-83.4532	41.69742	26 inches	3.3 feet
	OC-35	-83.4532	41.69778	24 inches	4.5 feet
	OC-36	-83.4537	41.69768	15 inches	2.5 feet
	OC-38	-83.45469	41.6979	NA	2.1 feet
	OC-40	-83.45482	41.69844	23 inches	3.9 feet
	OC-41	-83.45432	41.69829	23 inches	3.2 feet
	OC-42	-83.45379	41.69817	26 inches	3.6 feet
	OC-44	-83.45336	41.69676	27 inches	4.3 feet
	OC-45	-83.45358	41.69611	34 inches	3.9 feet
	OC-46	-83.45575	41.69858	24 inches	5.0 feet
	OC-47	-83.45636	41.69863	64 inches	5.4 feet
	OC-48	-83.45692	41.69859	74 inches	5.7 feet

Note:
NA = Insufficient sediment present to collect core sample

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Table 3-1
Overall Mean PEC-Qs and ESBs
Duck and Otter Creeks Confluence Investigation
Toledo, Lucas County, Ohio

	PEC-Q				ESB	
Field Sample ID	**Metals**	**Total PCBs**	**Total Parent PAHs [1]**	**Overall Mean Quotient**	**(Sum SEM - AVS)/foc (µmol/goc)**	**PAH ESBTU**
Duck Creek						
DC-13	0.335	0	0.068	0.201	-21	0.385
DC-13-01	0.401	0.710	0.003	0.371	--	--
DC-13-02	0.151	**1.86**	0.001	0.672	--	--
DC-13-03	0.210	**1.27**	0.020	0.501	--	--
DC-13-04	0.203	**2.44**	0.100	0.915	--	--
DC-14	0.289	0	0.042	0.166	-78	0.214
DC-14-01	0.303	0	0.066	0.185	--	--
DC-14-02	0.292	0	0.051	0.172	--	--
DC-14-03	0.313	0	0.105	0.209	--	--
DC-14-04	0.553	0.047	0.148	0.250	--	--
DC-14-05	0.803	0.158	0.286	0.416	--	--
DC-16	0.364	0	0.040	0.202	-33	0.234
DC-16-01	0.302	0.518	0.117	0.312	--	--
DC-16-02	0.329	0.459	0.042	0.277	--	--
DC-16-03	0.243	0	0.015	0.129	--	--
DC-16-04	0.355	**5.92**	0.315	**2.20**	--	--
DC-16-05	0.291	**5.62**	0.277	**2.06**	--	--
DC-16-06	0.637	**4.44**	0.425	**1.83**	--	--
DC-16-07	0.647	**4.73**	0.415	**1.93**	--	--
DC-17	0.338	0	0.068	0.203	5	0.358
DC-17-01	0.352	0	0.167	0.260	--	--
DC-17-02	0.364	0.793	0.093	0.417	--	--
DC-17-03	0.309	**1.464**	0.110	0.628	--	--
DC-17-04	0.606	**8.284**	0.271	**3.05**	--	--
DC-17-05	0.632	**9.615**	0.437	**3.56**	--	--
DC-17-06	0.609	**5.621**	0.237	**2.16**	--	--
DC-17-07	0.640	**4.438**	0.171	**1.75**	--	--
DC-19	0.366	0	0.010	0.188	-68	0.052
DC-19-01	0.396	0	0	0.198	--	--
DC-19-01FS	0.348	0.355	0.110	0.271	--	--
DC-19-02	0.283	**1.302**	0.170	0.585	--	--
DC-19-02FS	0.222	0.962	0.128	0.437	--	--
DC-19-03	0.307	**2.544**	0.306	**1.05**	--	--
DC-19-03FS	0.197	**2.929**	0.283	**1.14**	--	--
DC-19-04	0.365	**8.876**	0.314	**3.18**	--	--
DC-19-05	0.407	**5.325**	0.229	**1.99**	--	--
DC-19-05FS	0.392	**5.917**	0.005	**2.10**	--	--
DC-19FS	0.348	0	0.026	0.187	-52	0.129
DC-19-04FS	0.430	**7.84**	0.011	**2.76**	--	--
DC-20-01	0.367	0	0.048	0.208	NA	0.269
DC-20-02	0.495	0.198	0.025	0.239	--	--
DC-20-03	0.564	0.158	0.021	0.247	--	--
DC-21-01	0.247	0.399	0.031	0.226	-1262	0.167
DC-21-02	0.427	**2.559**	0.032	**1.01**	--	--
DC-22-01	0.237	0	0.097	0.167	-31	0.494
DC-22-02	0.317	0.033	0.018	0.122	--	--
DC-22-03	0.384	0.034	0.012	0.143	--	--
DC-23-01	0.298	0	0.025	0.161	-72	0.120
DC-23-02	0.279	0.164	0.036	0.160	--	--
DC-23-03	0.291	0.364	0.035	0.230	--	--
DC-23-04	0.244	0.194	0.031	0.156	--	--
DC-24-01	0.464	0.108	0.129	0.234	-44	0.551
DC-24-02	0.360	0.070	0.033	0.154	--	--
DC-24-03	0.280	0.917	0.004	0.400	--	--
DC-25-01	0.381	0.138	0.028	0.182	-238	0.218
DC-25-01-DP	0.748	0	0.019	0.384	-875	0.083
DC-25-02	0.759	**1.36**	0.043	0.721	--	--
DC-25-02-DP	0.368	0.587	0.038	0.331	--	--
DC-25-03	0.422	0.278	0.034	0.245	--	--

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Table 3-1
Overall Mean PEC-Qs and ESBs
Duck and Otter Creeks Confluence Investigation
Toledo, Lucas County, Ohio

	PEC-Q				ESB	
Field Sample ID	**Metals**	**Total PCBs**	**Total Parent PAHs [1]**	**Overall Mean Quotient**	**(Sum SEM - AVS)/foc (µmol/goc)**	**PAH ESBTU**
Otter Creek						
OC-26	0.419	0.562	**1.18**	0.721	-235	**15.1**
OC-26-01	0.248	0.370	0.220	0.279	--	--
OC-26-01DP	0.304	0.124	0.530	0.319	--	--
OC-26-02	0.127	0	0.113	0.120	--	--
OC-26-02DP	0.170	0	0.621	0.395	--	--
OC-27	0.308	0.148	0.179	0.212	-188	**7.46**
OC-27-01	0.285	0	0.168	0.227	--	--
OC-27-02	0.157	0	0.033	0.095	--	--
OC-27DP	0.381	0.098	0.526	0.335	-1036	**7.74**
OC-28	0.321	0.033	0.180	0.178	-91	**1.28**
OC-28-01	0.398	0.034	0.171	0.201	--	--
OC-28-02	0.206	0.009	0.312	0.176	--	--
OC-28-03	0.131	0	0.016	0.074	--	--
OC-29	0.348	0	0.783	0.566	-903	**4.46**
OC-29-01	0.264	0	0.603	0.434	--	--
OC-29-02	0.176	0	0.180	0.178	--	--
OC-30	0.297	0	0.553	0.425	-229	**5.76**
OC-30-01	0.194	0	0.707	0.450	--	--
OC-30-02	0.221	0	0.085	0.153	--	--
OC-30DP	0.425	0	0.402	0.414	-158	**3.56**
OC-31	0.218	0	0.045	0.132	-134	0.247
OC-31-01	0.225	0	0.026	0.126	--	--
OC-31-02	0.179	0	0.885	0.532	--	--
OC-31DP	0.213	0	0.024	0.118	-67	0.159
OC-32	0.359	0	0.118	0.238	-38	0.874
OC-32-01	0.191	0	**1.37**	0.780	--	--
OC-32-02	0.119	0	0.147	0.133	--	--
OC-32DP	0.335	0	0.194	0.265	-133	1.30
OC-33	0.220	0	0.037	0.128	-65	0.162
OC-33-01	0.200	0	0.175	0.188	--	--
OC-33-02	0.179	0	0.000	0.090	--	--
OC-34-01	0.186	0.114	0.105	0.135	-12	**1.32**
OC-34-02	0.581	0.385	0.751	0.572	--	--
OC-35-01	0.305	0.185	0.040	0.177	-126	0.255
OC-35-02	0.313	**1.29**	0.105	0.568	--	--
OC-36-01	0.172	0	0.018	0.095	-7.1	0.130
OC-36-02	0.194	0	0.001	0.098	--	--
OC-38	0.242	0	0.008	0.125	6.1	0.091
OC-40-01	0.183	0	0.025	0.104	4.3	0.189
OC-40-02	0.200	0	0.106	0.153	--	--
OC-41-01	0.505	0	0.048	0.277	17	0.314
OC-41-02	0.210	0	0.019	0.115	--	--
OC-42-01	0.489	0.114	0.576	0.393	-143	**4.93**
OC-42-01-DP	0.697	0.139	**1.22**	0.687	-45	**9.89**
OC-42-02	0.255	0.043	0.118	0.139	--	--
OC-42-02-DP	0.294	0	0.197	0.246	--	--
OC-44-01	0.800	0.251	0.643	0.565	-91	**8.41**
OC-44-02	**2.348**	0.562	**1.25**	**1.39**	--	--
OC-45-01	0.395	0.254	0.073	0.241	-141	0.584
OC-45-02	0.907	0.503	**1.08**	0.829	--	--
OC-46-01	0.195	0	0.018	0.106	-82	0.063
OC-46-02	0.227	0.050	0.058	0.112	--	--
OC-47-01	0.180	0	0.028	0.104	0.48	0.066
OC-47-02	0.202	0	0.024	0.113	--	--
OC-47-03	0.248	0.043	0.033	0.108	--	--
OC-47-04	0.256	0.306	0.036	0.200	--	--
OC-48-01	0.176	0	0.055	0.115	-127	0.149
OC-48-02	0.204	0	0.011	0.107	--	--
OC-48-03	0.205	0.136	0.057	0.133	--	--

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Table 3-1
Overall Mean PEC-Qs and ESBs
Duck and Otter Creeks Confluence Investigation
Toledo, Lucas County, Ohio

	PEC-Q				ESB	
Field Sample ID	**Metals**	**Total PCBs**	**Total Parent PAHs [1]**	**Overall Mean Quotient**	**(Sum SEM - AVS)/foc (µmol/goc)**	**PAH ESBTU**
Otter Creek						
OC-48-04	0.268	**1.32**	0.056	0.547	--	--

Notes:

Bold result equals or exceeds threshold of 1

-- = Value not calculated

µmol/g_{oc} = Micromole per gram organic carbon

AVS = Acid volatile sulfide

DP = Duplicate

ESB = Equilibrium partitioning sediment benchmark

ESBTU = Equilibrium partitioning sediment benchmark toxic unit

foc = Fraction organic carbon

ID = Identification

NA = Not applicable

PAH = Polycyclic aromatic hydrocarbon

PCB = Polychlorinated biphenyl

PEC-Q = Probable effect concentration quotient

Source: MacDonald, D.D., and others. 2000. "Development and Evaluation of Consensus-based Sediment Quality Guidelines for Freshwater Ecosystems." *Archives of Environmental Contamination and Toxicology.* 39: 20-31.

Incidence of adverse biological effects = 40% when mean PEC-Q > 0.5

Incidence of adverse biological effects = 64% when mean PEC-Q > 1.0

Incidence of adverse biological effects - 100% when mean PEC-Q > 5.0

1 Total Parent PAHs is the sum of detected PAHs x 1.7 (organic carbon normalized)

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Table 3-2
Comparison of Inorganic Concentrations to Sediment Benchmarks - Duck Creek Confluence Sediment Samples
Duck and Otter Creeks Confluence Investigation
Toledo, Lucas County, Ohio

Field Sample ID			DC-13	DC-13-01	DC-13-02	DC-13-03	DC-13-04	DC-14	DC-14-01	DC-14-02	DC-14-03	DC-14-04	DC-14-05	DC-16	DC-16-01	DC-16-02
Sampling Date	Sediment Benchmark		11/2/2010	11/2/2010	11/2/2010	11/2/2010	11/2/2010	11/3/2010	11/3/2010	11/3/2010	11/3/2010	11/3/2010	11/3/2010	11/2/2010	11/2/2010	11/2/2010
Inorganics (mg/kg)																
ALUMINUM	58,000	ARCS PEC	5,670	13,700	3,430	5,710	2,990	15,300	16,500	13,800	14,500	14,100	16,000	12,200	13,500	9,140
ANTIMONY	PQL	R4	11.8 UJ	13.3 UJ	7.7 UJ	9.8 UJ	7.4 UJ	10.9 UJ	10 UJ	11.1 UJ	12 UJ	8.6 UJ	8.6 UJ	11.2 UJ	9.1 UJ	11.4 UJ
ARSENIC	33	Consensus PEC	9.3	19.5	17.8	16.9	10.4	8.5	9.3	10.2	10.5	14	13.2	11	12.7	22.7
BARIUM	NA		82.6	114 J	55.4 J	65.2 J	34.9 J	110	114	96.3 J	109	118	154	108	90.6	109
BERYLLIUM	NA		0.55 J	0.73 J	0.15 J	0.28 J	0.33 J	0.82 J	0.85	0.74 J	0.79 J	0.77	0.87	0.74 J	0.71 J	0.59 J
CADMIUM	4.98	Consensus PEC	0.8 J	1.1 J	0.2 J	0.62 J	0.67 J	0.94	1	1.1 J	1.2	3.9	**6.3**	1.3	1.1	1
CALCIUM	--		44,700	90,800	159,000	134,000	42,100	33,400	30,900	49,000	38,200	46,300	33,800	53,700	74,700	183,000
CHROMIUM	111	Consensus PEC	15	30.3	7	13.9	14.7	24.6	26.7	27.4	26.3	69.8	**119**	24.8	25.9	20.1
COBALT	50	R5 ESL	4.3 J	6.8 J	0.98 J	2.3 J	4.2 J	8.3 J	8.8	7.6 J	8.1 J	8.3	9.1	6.7 J	6.7 J	5.6 J
COPPER	149	Consensus PEC	24.5	35.9	9.2	17.7	24.7	32.3	32.8	28.1	32.1	54.9	81.2	34.9	28	23.3
IRON	20,000	Ontario LEL	13,400	**21,200**	4,230	9,170	11,400	**26,100**	**27,200**	**21,300**	**25,600**	**25,400**	**28,200**	**21,600**	**20,300**	11,700
LEAD	126	Consensus PEC	21.5	40.9 J	9.1 J	20.2 J	32.6 J	22.1	25.9	27.7 J	28.3	55.6	83.2	33.4	29.1	29.9
MAGNESIUM	--		10,800	12,800	7,910	11,100	8,640	9,540	9,220	8,230	8,920	9,660	8,740	14,000	13,600	13,800
MANGANESE	819	ARCS NEC	309	408	130	246	239	393 J	406 J	368	425 J	428 J	441 J	335	351	331
NICKEL	48.6	Consensus PEC	**54.9**	34.4 J	10 J	14.7 J	15.1 J	33.3	32.9	29.2 J	30	39.6	**51.5**	42	27.2	29.3
POTASSIUM	--		1,110 J-	2,500 J-	493 J-	950 J-	691 J-	2,490 J-	2,570 J-	3,000 J-	2,230 J-	2,650 J-	2,430 J-	2,530 J-	3,000 J-	1,920 J-
SELENIUM	2	R3 BTAG	**6 J**	**6.1 J**	4.5 UJ	5.7 UJ	**3.2 J**	**7 J**	**7.7 J**	**6.4 J**	**7.3 J**	**6.6 J**	**7.9 J**	**8.4**	**7.5**	**6.3 J**
SILVER	0.5	R5 ESL	2 U	2.2 U	1.3 U	1.6 U	**0.68 J**	1.8 U	1.7 U	1.9 U	2 U	**1.5**	**2.8**	1.9 U	1.5 U	1.9 U
SODIUM	--		981 UJ	112 J-	209 J-	135 J-	67.8 J-	71 J-	107 J-	97 J-	98.5 J-	67.4 J-	65.6 J-	79.3 J-	84.7 J-	169 J-
THALLIUM	NA		4.9 UJ	5.6 UJ	3.2 UJ	4.1 UJ	3.1 UJ	4.5 UJ	4.2 UJ	4.6 UJ	5 UJ	3.6 UJ	3.6 UJ	4.7 UJ	3.8 UJ	4.8 UJ
VANADIUM	NA		162	49 J	10.1 J	12.8 J	10.7 J	43.8	36	29.7 J	29.2	28.1	30.1	106	46.2	30.9
ZINC	459	Consensus PEC	138	206 J	35.7 J	59.4 J	49.1 J	129 J	137 J	118 J	156 J	188 J	285 J	168	135	109
MERCURY	1.06	Consensus PEC	0.068 J	0.065 J	0.031 J	0.12 J	0.065 J	0.066 J	0.067 J	0.095 J	0.075 J	0.25	0.49	0.074 J	0.061 J	0.046 J

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Table 3-2
Comparison of Inorganic Concentrations to Sediment Benchmarks - Duck Creek Confluence Sediment Samples
Duck and Otter Creeks Confluence Investigation
Toledo, Lucas County, Ohio

Field Sample ID			DC-16-03	DC-16-04	DC-16-05	DC-16-06	DC-16-07	DC-17	DC-17-01	DC-17-02	DC-17-03	DC-17-04	DC-17-05	DC-17-06	DC-17-07	DC-19
Sampling Date	Sediment Benchmark		11/2/2010	11/2/2010	11/2/2010	11/2/2010	11/2/2010	11/2/2010	11/2/2010	11/2/2010	11/2/2010	11/2/2010	11/2/2010	11/2/2010	11/2/2010	11/2/2010
Inorganics (mg/kg)																
ALUMINUM	58,000	ARCS PEC	4,760	10,400	9,210	12,000 J-	14,500 J-	15,400	16,000	12,200	9,260	15,800	17,300	15,600	12,800	19,700
ANTIMONY	PQL	R4	9.1 UJ	7.7 UJ	8.2 UJ	7.9 UJ	8.6 UJ	13.2 UJ	10.2 UJ	8.2 UJ	7.1 UJ	8.3 UJ	9.9 UJ	9.4 UJ	7.5 UJ	14.4 UJ
ARSENIC	33	Consensus PEC	18.9	15.9	9.4	11.9 J-	12.5 J-	8.8	12.4	17.4	15.4	13.9	11.8	13.7	11.6	10.4
BARIUM	NA		98.1	113	67.7	110 J-	126 J-	106 J	111 J	92.9 J	87.1 J	133 J	140 J	129 J	123	131
BERYLLIUM	NA		0.38 J	0.56 J	0.45 J	0.66 J-	0.77 J-	0.78 J	0.79 J	0.72 J	0.5 J	0.81 J	0.86 J	0.8 J	0.73	0.99 J
CADMIUM	4.98	Consensus PEC	0.74 J	2.1	1.9	4.7 J-	**5.1 J-**	0.72 J	1.1 J	1.6 J	1.5 J	4.2 J	4.8 J	4.3 J	**5.1**	1.4
CALCIUM	--		214,000	111,000	22,100	39,600 J-	39,600 J-	36,700	53,900	79,800	65,800	52,000	39,800	40,700	38,800	36,900
CHROMIUM	111	Consensus PEC	13.5	35.6	35.2	89.3 J-	87.6 J-	25	29.2	30	26	81.8	84.9	81.9	86.8	30.7
COBALT	50	R5 ESL	3.6 J	5.4 J	4.5 J	7.7 J-	8.6 J-	7.1 J	7.6 J	7.4 J	4.5 J	8.3 J	8.7 J	8.4 J	8.3	9.7 J
COPPER	149	Consensus PEC	24.9	31.8	26.7	65.7 J-	65.6 J-	32.4	32	32.5	27.9	60.6	61.6	60.5	65.6	36.2
IRON	20,000	Ontario LEL	8,390	14,200	13,900	**23,700 J-**	**25,900 J-**	**24,600**	**24,500**	18,600	14,500	**26,200**	**28,100**	**26,800**	**26,800**	**29,800**
LEAD	126	Consensus PEC	20.6	34.4	29.7	72.7 J-	65.7 J-	26.6 J	39.4 J	37 J	33.3 J	61.3 J	63.4 J	61.8 J	65.7	26.5
MAGNESIUM	--		9,490	7,880	5,510	9,430 J-	9,550 J-	10,200	10,000	8,780	6,450	9,970	9,800	10,000	9,520	10,800
MANGANESE	819	ARCS NEC	280	272	212	435 J-	446 J-	378	393	335	278	435	448	437	431 J	435
NICKEL	48.6	Consensus PEC	17.6	25.4	20.7	43.1 J-	44.1 J-	48 J	33.6 J	29.9 J	23.1 J	43 J	45.9 J	43.5 J	43.4	44.5
POTASSIUM	--		962 J-	2,420 J-	1,820 J-	1,940 J-	2,260 J-	2,940 J-	3,060 J-	2,730 J-	1,780 J-	2,680 J-	2,920 J-	2,700 J-	1,780 J-	3,790 J-
SELENIUM	2	R3 BTAG	5.3 U	**4.6**	**5.2**	**6.2 J-**	**7.1 J-**	**6.2 J**	**6.8 J**	**5.3 J**	**3.7 J**	**6.9 J**	**7.5 J**	**7.2 J**	**6.3 J**	**10.4**
SILVER	0.5	R5 ESL	1.5 U	**0.67 J**	**0.82 J**	**2.1 J-**	**2.1 J-**	2.2 U	**0.59 J**	0.53 J	0.52 J	**1.7**	**1.8**	**1.8**	**2**	2.4 U
SODIUM	--		151 J-	112 J-	685 UJ	127 J-	55.7 J-	79.8 J-	99 J-	105 J-	85.6 J-	99 J-	76.4 J-	83.7 J-	64.3 J-	1,200 UJ
THALLIUM	NA		3.8 UJ	3.2 UJ	3.4 UJ	3.3 UJ	3.6 UJ	5.5 UJ	4.3 UJ	3.4 UJ	3 UJ	3.5 UJ	4.1 UJ	3.9 UJ	3.1 UJ	6 UJ
VANADIUM	NA		19	27	20.1	25.6 J-	29 J-	92.2 J	43.5 J	32 J	20.7 J	31.8 J	33 J	30.4 J	24.5	72.5
ZINC	459	Consensus PEC	75.3	117	97.4	205 J-	216 J-	143 J	178 J	139 J	107 J	211 J	220 J	209 J	215 J	148
MERCURY	1.06	Consensus PEC	0.033 J	0.15 J	0.33	0.47 J-	0.45 J-	0.062 J	0.07 J	0.11 J	0.14 J	0.37	0.28	0.29	0.38	0.072 J

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Table 3-2
Comparison of Inorganic Concentrations to Sediment Benchmarks - Duck Creek Confluence Sediment Samples
Duck and Otter Creeks Confluence Investigation
Toledo, Lucas County, Ohio

Field Sample ID			DC-19-01	DC-19-01FS	DC-19-02	DC-19-02FS	DC-19-03	DC-19-03FS	DC-19-04	DC-19-05	DC-19-05FS	DC-19FS	DC-19-04FS	DC-20-01	DC-20-02	DC-20-03
Sampling Date	**Sediment Benchmark**		**11/2/2010**	**11/2/2010**	**11/2/2010**	**11/2/2010**	**11/2/2010**	**11/2/2010**	**11/2/2010**	**11/2/2010**	**11/2/2010**	**11/2/2010**	**11/3/2010**	**5/11/2011**	**5/11/2011**	**5/11/2011**
Inorganics (mg/kg)																
ALUMINUM	58,000	ARCS PEC	20,400	20,500	11,000	9,330	11,000	6,560	9,450	11,500	11,400	19,400	10,900	3,630 J-	20,000 J-	10,400 J-
ANTIMONY	PQL	R4	10 UJ	9.5 UJ	8.1 UJ	7.6 UJ	7.6 UJ	7.5 UJ	9.8 UJ	10.3 UJ	7.2 UJ	11.3 UJ	10.2 UJ	9.1 R	13 R	12 R
ARSENIC	33	Consensus PEC	12.7	10.4	11.8	9.3	9.8	6.6	6.7	8.6	8.2	10.2	8.2	3.6 J-	18.9 J-	21.7 J-
BARIUM	NA		120	125	70.8	58.5	78.6	47.6	72.1	83.9	82.4	127	84.1	32.2 J-	121 J-	110 J-
BERYLLIUM	NA		0.99	0.96	0.52 J	0.44 J	0.54 J	0.33 J	0.45 J	0.56 J	0.53 J	0.95	0.51 J	0.15 J-	0.89 J-	0.52 J-
CADMIUM	4.98	Consensus PEC	2	1.4	1.6	1.2	2	1.3	2.8	3.2	3	1.3	3.4	0.76 U	1.8 J-	1.4 J-
CALCIUM	--		38,800	34,500	31,300	25,800	29,200	23,900	16,200	26,400	22,300	35,200	19,400	18,100 J-	82,200 J-	154,000 J-
CHROMIUM	111	Consensus PEC	36	30.8	26.9	21.2	32.8	20.7	55.5	54.7	54.1	29.7	62.1	7.4 J-	39.3 J-	24.8 J-
COBALT	50	R5 ESL	9.9	9.2	5.1 J	4.3 J	5.4 J	3.5 J	4.4 J	5.7 J	5.6 J	9.4 J	5.1 J	3.1 J-	11.3 J-	7.4 J-
COPPER	149	Consensus PEC	36.4	34.1	24.9	19.1	28.7	17.8	35.7	39.4	37.2	34.6	41.6	9.3 J-	41.9 J-	28.1 J-
IRON	20,000	Ontario LEL	**30,500**	**28,200**	15,500	13,100	17,300	11,900	14,200	17,800	17,200	**28,700**	16,800	6,340 J-	**29,000** J-	16,000 J-
LEAD	126	Consensus PEC	35.3	24.6	26.9	21.1	31.6	20.4	35.5	39	36.9	23.9	42.8	13.1 J-	63.9 J-	**158 J-**
MAGNESIUM	--		9,030	10,100	5,680	4,560	6,610	5,380	4,550	6,660	5,960	10,300	5,380	3,830 J-	13,100 J-	10,900 J-
MANGANESE	819	ARCS NEC	409	402	235	190	265	213	202	293	259	423	248	102 J-	436 J-	343 J-
NICKEL	48.6	Consensus PEC	38.8	40.4	22.6	18.4	23.6	15.1	24	28.8	28.2	42	28.1	**77.8 J-**	44.3 J-	48.2 J-
POTASSIUM	--		4,480 J-	4,200 J-	2,460 J-	2,130 J-	2,110 J-	1,310 J-	1,650 J-	2,170 J-	2,030 J-	3,620 J-	1,910 J-	1,190 J-	6,650 J-	3,690 J-
SELENIUM	2	R3 BTAG	**9.9**	**10.2**	**5.8**	**5**	**5.4**	**4.3 J**	**5.7 J**	**7.3**	**6.1**	**9.5**	**6.6**	5.3 R	1.3 J-	**3.6 J-**
SILVER	0.5	R5 ESL	**0.78 J**	**0.58 J**	**0.57 J**	0.46 J	**0.66 J**	0.52 J	**1.3 J**	**1.3 J**	**1.2**	**0.64 J**	**1.5 J**	1.5 R	**2.6 J-**	2 U
SODIUM	--		154 J-	141 J-	72.3 J-	49.7 J-	46.8 J-	625 UJ	819 UJ	862 UJ	601 UJ	92.7 J-	852 UJ	274 J-	984 J-	885 J-
THALLIUM	NA		4.1 UJ	4 UJ	3.4 UJ	3.2 UJ	3.2 UJ	3.1 UJ	4.1 UJ	4.3 UJ	3 UJ	4.7 UJ	4.3 UJ	3.8 R	5.6 U	5 R
VANADIUM	NA		47.4	65.7	24.1	20.1	22.8	14.1	19	23.4	22.5	66.7	21.6	199 J-	66.1 J-	86.6 J-
ZINC	459	Consensus PEC	155	142	97	76.1	105	63.3	127	133	129	143	147	48.4 J-	218 J-	160 J-
MERCURY	1.06	Consensus PEC	0.074 J	0.066 J	0.15 J	0.14 J	0.19	0.16	0.46	0.31	0.37	0.059 J	0.55	0.0027 J-	0.22 R	0.0095 J-

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Table 3-2
Comparison of Inorganic Concentrations to Sediment Benchmarks - Duck Creek Confluence Sediment Samples
Duck and Otter Creeks Confluence Investigation
Toledo, Lucas County, Ohio

Field Sample ID			DC-21-01	DC-21-02	DC-22-01	DC-22-02	DC-22-03	DC-23-01	DC-23-02	DC-23-03	DC-23-04	DC-24-01	DC-24-02	DC-24-03	DC-25-01	DC-25-01-DP
Sampling Date	Sediment Benchmark		5/11/2011	5/11/2011	5/11/2011	5/11/2011	5/11/2011	5/11/2011	5/11/2011	5/11/2011	5/11/2011	5/11/2011	5/11/2011	5/11/2011	5/11/2011	5/11/2011
Inorganics (mg/kg)																
ALUMINUM	58,000	ARCS PEC	6,140 J-	11,200 J-	4,480 J-	11,700 J-	12,100 J-	9,460 J-	10,500 J-	9,230 J-	8,840 J-	12,700 J-	19,800 J-	8,250 J-	8,500	15,200
ANTIMONY	PQL	R4	7.3 R	9.4 R	7.7 R	11 R	11 UJ	16 UJ	13 UJ	11 UJ	9.7 UJ	16 R	12 R	9.3 UJ	0.77 J-	1 J-
ARSENIC	33	Consensus PEC	10.5 J-	15.1 J-	11.9 J-	15.5 J-	26 J-	6.2 J-	7.6 J-	14 J-	12.4 J-	8.5 J-	10.5 J-	9.4 J-	**41.8**	**83.2**
BARIUM	NA		44.2 J-	79.9 J-	31.2 J-	86.5 J-	118 J-	74.8 J-	79.4 J-	72.2 J-	68 J-	93.1 J-	125 J-	65 J-	133 J	153 J
BERYLLIUM	NA		0.41 J-	0.54 J-	0.27 J-	0.54 J-	0.56 J-	0.45 J-	0.47 J-	0.43 J-	0.36 J-	0.61 J-	0.85 J-	0.38 J-	0.33 J	0.58 J
CADMIUM	4.98	Consensus PEC	0.64 J-	2.5 J-	0.64 U	1.1 J-	1.6 J-	1.4 U	1.1 U	1.3 J-	1.2 J-	1.3 U	1.2 J-	1.6 J-	1.1	2.5
CALCIUM	--		58,400 J-	64,800 J-	106,000 J-	92,600 J-	191,000 J-	29,600 J-	36,900 J-	47,100 J-	55,900 J-	42,800 J-	58,000 J-	33,500 J-	237,000	154,000
CHROMIUM	111	Consensus PEC	12.9 J-	46.2 J-	9 J-	21.9 J-	25.6 J-	17.2 J-	18.7 J-	24.7 J-	20.6 J-	22.9 J-	31 J-	28.6 J-	18.8	38.1
COBALT	50	R5 ESL	5.6 J-	8.6 J-	5.7 J-	7.9 J-	8.4 J-	5.6 J-	6.1 J-	6 J-	4.9 J-	9 J-	11.7 J-	5.7 J-	10 U	10 U
COPPER	149	Consensus PEC	27.4 J-	41.2 J-	18.8 J-	28.3 J-	27.4 J-	27.4 J-	22.4 J-	26.3 J-	21.2 J-	30.7 J-	37 J-	26.6 J-	20	35.6
IRON	20,000	Ontario LEL	16,200 J-	**22,000** J-	14,500 J-	**20,100** J-	16,900 J-	15,100 J-	16,300 J-	15,200 J-	13,100 J-	**21,700 J-**	**29,700 J-**	14,100 J-	11,000	18,400
LEAD	126	Consensus PEC	24.4 J-	38.2 J-	14.9 J-	28.7 J-	34.6 J-	22.6 J-	21.5 J-	29.5 J-	23.4 J-	25.9 J-	31.5 J-	31.6 J-	29.7	84.3
MAGNESIUM	--		12,000 J-	14,200 J-	25,100 J-	13,700 J-	11,700 J-	8,080 J-	8,080 J-	7,170 J-	6,080 J-	11,300 J-	14,900 J-	7,150 J-	10,500	12,900
MANGANESE	819	ARCS NEC	265 J-	477 J-	354 J-	395 J-	355 J-	240 J-	266 J-	257 J-	210 J-	355 J-	459 J-	233 J-	388 J-	459 J-
NICKEL	48.6	Consensus PEC	25.7 J-	33.9 J-	22.6 J-	29.1 J-	30.3 J-	27.2 J-	23.1 J-	23.6 J-	20.1 J-	**66.6 J-**	39.9 J-	22.3 J-	22.4	29.6
POTASSIUM	--		1,270 J-	2,770 J-	1,050 J-	2,160 J-	1,980 J-	1,940 J-	2,020 J-	1,500 J-	1,330 J-	2,460 J-	3,430 J-	1,430 J-	1,010 J	1,780
SELENIUM	2	R3 BTAG	1.1 J-	5.5 R	0.94 J-	1.1 J-	**3.5 J-**	9.5 R	7.7 R	**6.3 J-**	0.33 J-	9.1 R	7 R	5.4 R	**3.8 J**	**4.6 J**
SILVER	0.5	R5 ESL	**1.3 J-**	**2.5 J-**	1.3 U	**1.9 J-**	1.8 U	**0.91 J-**	**0.91 J-**	**1.3 J-**	**1 J-**	2.6 U	**2.7 J-**	**1.5 J-**	**0.71 J**	**1.2 J**
SODIUM	--		247 J-	876 J-	257 J-	317 J-	348 J-	300 J-	248 J-	216 J-	199 J-	371 J-	323 J-	190 J-	442 J	447 J
THALLIUM	NA		3 R	3.9 U	3.2 R	4.4 R	4.4 R	6.8 R	5.5 U	4.5 U	4.1 R	6.5 R	5 R	3.9 R	5.1 U	5.1 U
VANADIUM	NA		65 J-	31.4 J-	29.7 J-	38.2 J-	33.7 J-	55.4 J-	33.2 J-	20.5 J-	17 J-	135 J-	52.1 J-	17.9 J-	23.8	51.7
ZINC	459	Consensus PEC	119 J-	155 J-	65.1 J-	145 J-	123 J-	111 J-	118 J-	108 J-	76.6 J-	127 J-	166 J-	96.2 J-	83.3 J	162 J
MERCURY	1.06	Consensus PEC	0.015 J-	0.12 J-	0.0093 J-	0.039 J-	0.036 J-	0.1 J-	0.11 J-	0.25 J-	1.2 J-	0.028 J-	0.044 J-	0.21 J-	0.2 U	0.21 U

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Table 3-2
Comparison of Inorganic Concentrations to Sediment Benchmarks - Duck Creek Confluence Sediment Samples
Duck and Otter Creeks Confluence Investigation
Toledo, Lucas County, Ohio

Field Sample ID			DC-25-02	DC-25-02-DP	DC-25-03
Sampling Date	Sediment Benchmark		5/11/2011	5/11/2011	5/11/2011
Inorganics (mg/kg)					
ALUMINUM	58,000	ARCS PEC	18,400	9,530 J-	13,000
ANTIMONY	PQL	R4	0.61 J-	12 UJ	0.8 J-
ARSENIC	33	Consensus PEC	**42.7**	13.5 J-	12.5
BARIUM	NA		173 J	83.7 J-	131 J
BERYLLIUM	NA		0.75 J	0.43 J-	0.68 J
CADMIUM	4.98	Consensus PEC	4.4	2.3 J-	2.1
CALCIUM	--		130,000	50,400 J-	72,400
CHROMIUM	111	Consensus PEC	80.7	44.5 J-	41.9
COBALT	50	R5 ESL	11 U	5.7 J-	10.8
COPPER	149	Consensus PEC	61.1	34.1 J-	44.5
IRON	20,000	Ontario LEL	**26,100**	14,700 J-	**26,100**
LEAD	126	Consensus PEC	67.7	36.7 J-	47.2
MAGNESIUM	--		12,700	6,940 J-	19,100
MANGANESE	819	ARCS NEC	471 J-	250 J-	501 J-
NICKEL	48.6	Consensus PEC	47.4	25.2 J-	37.1
POTASSIUM	--		2,600	1,600 J-	2,550
SELENIUM	2	R3 BTAG	1.8 J	7 R	5.8 U
SILVER	0.5	R5 ESL	**3.3**	**1.8 J-**	**2.4**
SODIUM	--		735 J	509 J-	1,030
THALLIUM	NA		5.3 U	5 R	4.1 U
VANADIUM	NA		39.9	18.8 J-	30.4
ZINC	459	Consensus PEC	224 J	122 J-	157 J
MERCURY	1.06	Consensus PEC	0.21 U	0.61 J-	0.16 U

Notes:
Bold result exceeds sediment benchmark
-- = Criterion or value not available
ARCS PEC = U.S. EPA Assessment and Remediation of Contaminated Sediments Program probable effect concentration from U.S. EPA 1996
ARCS NEC = U.S. EPA Assessment and Remediation of Contaminated Sediments Program no effects concentration from U.S. EPA 1996
Consensus PEC = Probable effect concentration from MacDonald and others 2000
ID = Identification
J = Estimated value; concentration below RL or exceeded RL, but one or more quality control parameters were outside control limits
J+ = Likely to have a high bias
J- = Likely to have a low bias
mg/kg = Milligram per kilogram
NA = Not available
Ontario LEL = Ontario low-effect level from Persaud and
PQL = Practical quantitation limit
R = Data rejected because of quality control deficiencies
R3 BTAG = U.S. EPA Region 3 Biological Technical Assistance Group Freshwater Sediment Screening Benchmarks from
R4 = U.S EPA Region IV ecological screening value from U.S. EPA 1995
R5 ESL = U.S. EPA Region 5 ecological screening level from U.S. EPA 2003
RL = Reporting limit
U = Not detected above RL
UJ = Not detected above RL; however, RL approximate

Sources:

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Table 3-3
PECs and PEC-Qs for Total PCBs - Duck Creek Confluence Sediment Samples
Duck and Otter Creeks Confluence Investigation
Toledo, Lucas County, Ohio

Field Sample ID		DC-13	DC-13-01	DC-13-02	DC-13-03	DC-13-04	DC-14	DC-14-01	DC-14-02	DC-14-03	DC-14-04	DC-14-05	DC-16	DC-16-01
Sampling Date	**PEC**	**11/2/2010**	**11/2/2010**	**11/2/2010**	**11/2/2010**	**11/2/2010**	**11/3/2010**	**11/3/2010**	**11/3/2010**	**11/3/2010**	**11/3/2010**	**11/3/2010**	**11/2/2010**	**11/2/2010**
PCBs (µg/kg)														
PCB-1016	NA	63 U	62 U	56 U	51 U	41 U	83 U	75 U	60 U	67 U	59 U	56 U	73 U	56 U
PCB-1221	NA	63 U	62 U	56 U	51 U	41 U	83 U	75 U	60 U	67 U	59 U	56 U	73 U	56 U
PCB-1232	NA	63 U	62 U	56 U	51 U	41 U	83 U	75 U	60 U	67 U	59 U	56 U	73 U	56 U
PCB-1242	NA	63 U	62 U	56 U	51 U	41 U	83 U	75 U	60 U	67 U	59 U	56 U	73 U	56 U
PCB-1248	NA	63 U	220 J	270	440	880	83 U	75 U	60 U	67 U	32 J	77	73 U	150 NJ
PCB-1254	NA	63 U	260 J	740	420 J	770	83 U	75 U	60 U	67 U	59 U	30 J	73 U	200 NJ
PCB-1260	NA	63 U	62 U	250 J	51 U	41 U	83 U	75 U	60 U	67 U	59 U	56 U	73 U	56 U
PCB-1262	NA	63 U	62 U	56 U	51 U	41 U	83 U	75 U	60 U	67 U	59 U	56 U	73 U	56 U
PCB-1268	NA	63 U	62 U	56 U	51 U	41 U	83 U	75 U	60 U	67 U	59 U	56 U	73 U	56 U
TOTAL PCBs (Sum of detections)	**676**	0 U	480	**1,260**	**860**	**1,650**	0 U	0 U	0 U	0 U	32	107	0 U	350
PEC-Q		0	0.71	**1.86**	**1.27**	**2.44**	0	0	0	0	0.05	0.16	0	0.52

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Table 3-3
PECs and PEC-Qs for Total PCBs - Duck Creek Confluence Sediment Samples
Duck and Otter Creeks Confluence Investigation
Toledo, Lucas County, Ohio

Field Sample ID		DC-16-02	DC-16-03	DC-16-04	DC-16-05	DC-16-06	DC-16-07	DC-17	DC-17-01	DC-17-02	DC-17-03	DC-17-04	DC-17-05	DC-17-06
Sampling Date	PEC	11/2/2010	11/2/2010	11/2/2010	11/2/2010	11/2/2010	11/2/2010	11/2/2010	11/2/2010	11/2/2010	11/2/2010	11/2/2010	11/2/2010	11/2/2010
PCBs (µg/kg)														
PCB-1016	NA	62 U	61 U	58 U	57 U	57 U	55 U	85 U	75 U	58 U	59 U	60 U	59 U	57 U
PCB-1221	NA	62 U	61 U	58 U	57 U	57 U	55 U	85 U	75 U	58 U	59 U	60 U	59 U	57 U
PCB-1232	NA	62 U	61 U	58 U	57 U	57 U	55 U	85 U	75 U	58 U	59 U	60 U	59 U	57 U
PCB-1242	NA	62 U	61 U	58 U	57 U	57 U	55 U	85 U	75 U	58 U	59 U	60 U	59 U	57 U
PCB-1248	NA	200 J	61 U	2,600 J	2,400 J	1,600 J	1,800 J	85 U	75 U	190 J	440	3,700	3,900	2,200
PCB-1254	NA	62 U	61 U	1,400	1,400	1,400	1,400	85 U	75 U	260 J	390 NJ	1,900	2,600	1,600
PCB-1260	NA	110 J	61 U	58 U	57 U	57 U	55 U	85 U	75 U	86 J	160	60 U	59 U	57 U
PCB-1262	NA	62 U	61 U	58 U	57 U	57 U	55 U	85 U	75 U	58 U	59 U	60 U	59 U	57 U
PCB-1268	NA	62 U	61 U	58 U	57 U	57 U	55 U	85 U	75 U	58 U	59 U	60 U	59 U	57 U
TOTAL PCBs (Sum of detections)	**676**	310	0 U	**4,000**	**3,800**	**3,000**	**3,200**	0 U	0 U	536	**990**	**5,600**	**6,500**	**3,800**
PEC-Q		0.46	0.00	**5.92**	**5.62**	**4.44**	**4.73**	0	0	0.79	**1.46**	**8.28**	**9.62**	**5.62**

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Table 3-3
PECs and PEC-Qs for Total PCBs - Duck Creek Confluence Sediment Samples
Duck and Otter Creeks Confluence Investigation
Toledo, Lucas County, Ohio

Field Sample ID		DC-17-07	DC-19	DC-19-01	DC-19-01FS	DC-19-02	DC-19-02FS	DC-19-03	DC-19-03FS	DC-19-04	DC-19-05	DC-19-05FS	DC-19FS	DC-19-04FS
Sampling Date	PEC	11/2/2010	11/2/2010	11/2/2010	11/2/2010	11/2/2010	11/2/2010	11/2/2010	11/2/2010	11/2/2010	11/2/2010	11/2/2010	11/2/2010	11/3/2010
PCBs (µg/kg)														
PCB-1016	NA	58 U	88 U	73 U	72 U	56 U	57 U	52 U	52 U	57 U	58 U	56 U	86 U	55 U
PCB-1221	NA	58 U	88 U	73 U	72 U	56 U	57 U	52 U	52 U	57 U	58 U	56 U	86 U	55 U
PCB-1232	NA	58 U	88 U	73 U	72 U	56 U	57 U	52 U	52 U	57 U	58 U	56 U	86 U	55 U
PCB-1242	NA	58 U	88 U	73 U	72 U	56 U	57 U	52 U	52 U	57 U	58 U	56 U	86 U	55 U
PCB-1248	NA	1,600	88 U	73 U	120 J	460 J	320	1,100 J	1,300 J	4,000 J	2,000 J	2,300	86 U	3,500
PCB-1254	NA	1,400	88 U	73 U	120	420 J	330 J	620 J	680	2,000 J	1,600	1,700	86 U	1,800 J
PCB-1260	NA	58 U	88 U	73 U	72 U	56 U	57 U	52 U	52 U	57 U	58 U	56 U	86 U	55 U
PCB-1262	NA	58 U	88 U	73 U	72 U	56 U	57 U	52 U	52 U	57 U	58 U	56 U	86 U	55 U
PCB-1268	NA	58 U	88 U	73 U	72 U	56 U	57 U	52 U	52 U	57 U	58 U	56 U	86 U	55 U
TOTAL PCBs (Sum of detections)	**676**	**3,000**	0 U	0 U	240	**880**	650	**1,720**	**1,980**	**6,000**	**3,600**	**4,000**	0 U	**5,300**
PEC-Q		**4.44**	0	0	0.36	**1.30**	0.96	**2.54**	**2.93**	**8.88**	**5.33**	**5.92**	0	**7.84**

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Table 3-3
PECs and PEC-Qs for Total PCBs - Duck Creek Confluence Sediment Samples
Duck and Otter Creeks Confluence Investigation
Toledo, Lucas County, Ohio

Field Sample ID		DC-20-01	DC-20-02	DC-20-03	DC-21-01	DC-21-02	DC-22-01	DC-22-02	DC-22-03	DC-23-01	DC-23-02
Sampling Date	PEC	5/11/2011	5/11/2011	5/11/2011	5/11/2011	5/11/2011	5/11/2011	5/11/2011	5/11/2011	5/11/2011	5/11/2011
PCBs (µg/kg)											
PCB-1016	NA	61 U	75 U	67 U	58 U	48 U	46 U	60 UJ	64 UJ	89 U	81 U
PCB-1221	NA	61 U	75 U	67 U	58 U	48 U	46 U	60 UJ	64 UJ	89 U	81 U
PCB-1232	NA	61 U	75 U	67 U	58 U	48 U	46 U	60 UJ	64 UJ	89 U	81 U
PCB-1242	NA	61 U	75 U	67 U	58 U	640 J	46 U	60 UJ	64 UJ	89 U	81 U
PCB-1248	NA	61 U	38 J	37 J	120 R	600	46 U	60 UJ	64 UJ	89 U	47 J
PCB-1254	NA	61 U	64 J	70 J	270	350 J	46 U	22 JP	23 JP	89 U	64 J
PCB-1260	NA	61 U	32 J	67 U	58 U	140 NJ	46 U	60 UJ	64 UJ	89 U	81 U
PCB-1262	NA	61 U	75 U	67 U	58 U	48 U	46 U	60 UJ	64 UJ	89 U	81 U
PCB-1268	NA	61 U	75 U	67 U	58 U	48 U	46 U	60 UJ	64 UJ	89 U	81 U
TOTAL PCBs (Sum of detections)	**676**	0 U	134 J	107 J	270	**1,730** NJ	0 U	22 J	23 J	0 U	111
PEC-Q		0	0.20	0.16	0.40	**2.56**	0	0.03	0.03	0	0.16

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Table 3-3
PECs and PEC-Qs for Total PCBs - Duck Creek Confluence Sediment Samples
Duck and Otter Creeks Confluence Investigation
Toledo, Lucas County, Ohio

Field Sample ID		DC-23-03	DC-23-04	DC-24-01	DC-24-02	DC-24-03	DC-25-01	DC-25-01-DP	DC-25-02	DC-25-02-DP	DC-25-03
Sampling Date	PEC	5/11/2011	5/11/2011	5/11/2011	5/11/2011	5/11/2011	5/11/2011	5/11/2011	5/11/2011	5/11/2011	5/11/2011
PCBs (µg/kg)											
PCB-1016	NA	62 UJ	57 UJ	87 U	49 U	54 U	71 U	70 U	68 UJ	70 UJ	52 UJ
PCB-1221	NA	62 UJ	57 UJ	87 U	49 U	54 U	71 U	70 U	68 UJ	70 UJ	52 UJ
PCB-1232	NA	62 UJ	57 UJ	87 U	49 U	54 U	71 U	70 U	68 UJ	70 UJ	52 UJ
PCB-1242	NA	62 UJ	57 UJ	87 U	49 U	54 U	71 U	70 U	68 UJ	70 UJ	52 UJ
PCB-1248	NA	72 PJ	59 J	87 U	49 U	270	93	70 U	520 J	220 PJ	89 J
PCB-1254	NA	120 J	49 JP	87 U	47 J	250	160 R	70 U	280 PJ	120 PJ	99 PJ
PCB-1260	NA	54 J	23 JP	73 J	49 UJ	100 NJ	71 U	70 U	120 PJ	57 JP	52 UJ
PCB-1262	NA	62 UJ	57 UJ	87 U	49 U	54 U	71 U	70 U	68 UJ	70 UJ	52 UJ
PCB-1268	NA	62 UJ	57 UJ	87 U	49 U	54 U	71 U	70 U	68 UJ	70 UJ	52 UJ
TOTAL PCBs (Sum of detections)	**676**	246 J	131 J	73 J	47 J	620	93	0 U	**920** J	397 J	188 J
PEC-Q		0.36	0.19	0.11	0.07	0.92	0.14	0	**1.36**	0.59	0.28

Notes:

Bold result exceeds PEC criterion

µg/kg = Microgram per kilogram

ID = Identification

J = Estimated value; concentration below RL or exceeded RL, but one or more quality control parameters were outside control limits

NA = Not available

NJ = Analyte "tentatively identified"; associated numerical value represents approximate concentration

P = Flag used for pesticide and Aroclor target compounds when difference of detected concentrations between two GC columns (see Form X) exceeds 25%; lower of the two values reported on Form I and flagged "P"; "P" flag not used unless a compound is identified on both columns

PCB = Polychlorinated biphenyl

PEC = Probable effect concentration

PEC-Q = Probable effect concentration quotient = Total PCBs/PEC

RL = Reporting limit

Total PCBs = Sum of detected Aroclors

U = Not detected above RL

UJ = Not detected above RL; however, RL approximate

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Table 3-4
Comparison of Petroleum Hydrocarbon Fractions to Sediment Benchmarks - Duck Creek Confluence Sediment Samples
Duck and Otter Creek Confluences Investigation
Toledo, Lucas County, Ohio

Location ID	Koc	FCV (mg/L)	DC-13	DC-13	DC-13	DC-13	DC-13	DC-14	DC-14	DC-14	DC-14	DC-14	DC-14	DC-16	DC-16
Field Sample ID			**DC-13**	**DC-13-01**	**DC-13-02**	**DC-13-03**	**DC-13-04**	**DC-14**	**DC-14-01**	**DC-14-02**	**DC-14-03**	**DC-14-04**	**DC-14-05**	**DC-16**	**DC-16-01**
Sampling Date			**11/2/2010**	**11/2/2010**	**11/2/2010**	**11/2/2010**	**11/2/2010**	**11/3/2010**	**11/3/2010**	**11/3/2010**	**11/3/2010**	**11/3/2010**	**11/3/2010**	**11/2/2010**	**11/2/2010**
TOC (%)			33.6	5.49	3.05	6.25	10.7	9.05	4.98	2.51	3.56	3.6	3.53	18.8	4.0
foc			0.336	0.0549	0.0305	0.0625	0.107	0.0905	0.0498	0.0251	0.0356	0.036	0.0353	0.188	0.04
Aliphatic: $C_5 - C_8$ Benchmark (mg/kg) [1]	7,240	0.218	530	87	48	99	169	143	79	40	56	57	56	297	63
Aromatic: $C_9 - C_{10}$ Benchmark (mg/kg) [1]	3,980	0.0594	79	13	7.2	15	25	21	12	5.9	8.4	8.5	8.3	44	9.5
GROs			7.9 J	7.9 J	**11 J**	9.9 J	11	16 UJ	16 UJ	13 UJ	11 UJ	**47**	**62**	15 UJ	12 UJ
Alihphatic: $C_9 - C_{18}$ Benchmark (mg/kg) [1]	7,410,000	0.0004	996	163	90	185	317	268	148	74	106	107	105	557	119
Aromatic: $C_{11} - C_{22}$ Benchmark (mg/kg) [1]	33,100	0.0028	31	5.1	2.8	5.8	10	8.4	4.6	2.3	3.3	3.3	3.3	17.4	3.7
DROs			**630**	**640**	**730**	**420**	**630 J**	**210**	**230**	**310**	**420**	**1,900**	**3,200**	**510**	**390**
Aliphatic: $C_{19} - C_{36}$ Benchmark (mg/kg) [1,2]	8.32E+10	0.0000001	2,796	457	254	520	890	753	414	209	296	300	294	1,564	333
RROs			**3,600**	**1,800**	**1,000**	**780**	**1,500**	**890**	**960**	**720**	**910**	**3,100**	**5,000 D**	**2,600**	**1,200**

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Table 3-4
Comparison of Petroleum Hydrocarbon Fractions to Sediment Benchmarks - Duck Creek Confluence Sediment Samples
Duck and Otter Creek Confluences Investigation
Toledo, Lucas County, Ohio

Location ID	Koc	FCV (mg/L)	DC-16	DC-16	DC-16	DC-16	DC-16	DC-16	DC-17	DC-17	DC-17	DC-17	DC-17	DC-17	DC-17
Field Sample ID			DC-16-02	DC-16-03	DC-16-04	DC-16-05	DC-16-06	DC-16-07	DC-17	DC-17-01	DC-17-02	DC-17-03	DC-17-04	DC-17-05	DC-17-06
Sampling Date			11/2/2010	11/2/2010	11/2/2010	11/2/2010	11/2/2010	11/2/2010	11/2/2010	11/2/2010	11/2/2010	11/2/2010	11/2/2010	11/2/2010	11/2/2010
TOC (%)			3.36	4.16	3.15	2.55	3.65	2.88	14.4	3.62	3.34	2.04	2.45	2.73	2.79
foc			0.0336	0.0416	0.0315	0.0255	0.0365	0.0288	0.144	0.0362	0.0334	0.0204	0.0245	0.0273	0.0279
Aliphatic: $C_5 - C_8$ Benchmark (mg/kg) [1]	7,240	0.218	53	66	50	40	58	45	227	57	53	32	39	43	44
Aromatic: $C_9 - C_{10}$ Benchmark (mg/kg) [1]	3,980	0.0594	7.9	10	7.4	6.0	8.6	6.8	34	8.6	7.9	4.8	5.8	6.5	6.6
GROs			13 UJ	12 UJ	**16**	**26**	**41**	43	16 UJ	15 UJ	12 UJ	**7.3 J**	**25**	**31**	**25**
Alihphatic: $C_9 - C_{18}$ Benchmark (mg/kg) [1]	7,410,000	0.0004	100	123	93	76	108	85	427	107	99	60	73	81	83
Aromatic: $C_{11} - C_{22}$ Benchmark (mg/kg) [1]	33,100	0.0028	3.1	3.9	2.9	2.4	3.4	2.7	13	3.4	3.1	1.9	2.3	2.5	2.6
DROs			**600**	**600**	**2,700**	**2,500**	**2,500**	**2,700**	**460**	**300**	**620**	**820**	**2,800**	**2,800**	**2,600**
Aliphatic: $C_{19} - C_{36}$ Benchmark (mg/kg) [1,2]	8.32E+10	0.0000001	280	346	262	212	304	240	1198	301	278	170	204	227	232
RROs			**1,200**	**890**	**4,300 D**	**3,200 D**	**3,800 D**	**4,100 D**	**2,300**	**1,000**	**1,200**	**1,300**	**3,700 D**	**3,700 D**	**3,500 D**

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Table 3-4
Comparison of Petroleum Hydrocarbon Fractions to Sediment Benchmarks - Duck Creek Confluence Sediment Samples
Duck and Otter Creek Confluences Investigation
Toledo, Lucas County, Ohio

Location ID	Koc	FCV (mg/L)	DC-17	DC-19	DC-19	DC-19	DC-19	DC-19	DC-19	DC-19	DC-19	DC-19	DC-19	DC-19	DC-19
Field Sample ID			**DC-17-07**	**DC-19**	**DC-19-01**	**DC-19-01FS**	**DC-19-02**	**DC-19-02FS**	**DC-19-03**	**DC-19-03FS**	**DC-19-04**	**DC-19-05**	**DC-19-05FS**	**DC-19FS**	**DC-19-04FS**
Sampling Date			**11/2/2010**	**11/2/2010**	**11/2/2010**	**11/2/2010**	**11/2/2010**	**11/2/2010**	**11/2/2010**	**11/2/2010**	**11/2/2010**	**11/2/2010**	**11/2/2010**	**11/2/2010**	**11/3/2010**
TOC (%)			2.88	9.86	4.77	5.66	2.48	2.42	2.74	2.61	4.41	3.44	2.57	9.32	2.85
foc			0.0288	0.0986	0.0477	0.0566	0.0248	0.0242	0.0274	0.0261	0.0441	0.0344	0.0257	0.0932	0.0285
Aliphatic: $C_5 - C_8$ Benchmark (mg/kg) [1]	7,240	0.218	45	156	75	89	39	38	43	41	70	54	41	147	45
Aromatic: $C_9 - C_{10}$ Benchmark (mg/kg) [1]	3,980	0.0594	6.8	23	11	13	5.9	5.7	6.5	6.2	10	8.1	6.1	22	6.7
GROs			**30**	4.8 U	3.5 U	3.6 U	11 UJ	11 UJ	**7.4 J**	**8.5** J	**19**	**28**	**28**	4.6 U	**38**
Alihphatic: $C_9 - C_{18}$ Benchmark (mg/kg) [1]	7,410,000	0.0004	85	292	141	168	74	72	81	77	131	102	76	276	84
Aromatic: $C_{11} - C_{22}$ Benchmark (mg/kg) [1]	33,100	0.0028	2.7	9.1	4.4	5.2	2.3	2.2	2.5	2.4	4.1	3.2	2.4	8.6	2.6
DROs			**3,000**	**290**	**340**	**370**	**990**	**800**	**1,600**	**2,200**	**3,800**	**2,600**	**2,500**	**300**	**3,800**
Aliphatic: $C_{19} - C_{36}$ Benchmark (mg/kg) [1,2]	8.32E+10	0.0000001	240	820	397	471	206	201	228	217	367	286	214	775	237
RROs			**3,800 D**	**1,400**	**1,100**	**1,200**	**1,800**	**1,500**	**2,500**	**3,400 D**	**5,900 D**	**3,800 D**	**3,500 D**	**1,400**	**5,300 D**

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Table 3-4
Comparison of Petroleum Hydrocarbon Fractions to Sediment Benchmarks - Duck Creek Confluence Sediment Samples
Duck and Otter Creek Confluences Investigation
Toledo, Lucas County, Ohio

Location ID			DC-20	DC-20	DC-20	DC-21	DC-21	DC-22	DC-22	DC-22	DC-23	DC-23	DC-23	DC-23	DC-24
Field Sample ID			DC-20-01	DC-20-02	DC-20-03	DC-21-01	DC-21-02	DC-22-01	DC-22-02	DC-22-03	DC-23-01	DC-23-02	DC-23-03	DC-23-04	DC-24-01
Sampling Date	Koc	FCV (mg/L)	5/11/2011	5/11/2011	5/11/2011	5/11/2011	5/11/2011	5/11/2011	5/11/2011	5/11/2011	5/11/2011	5/11/2011	5/11/2011	5/11/2011	5/11/2011
TOC (%)			64.9	6.56	15.1	4.98	3.05	7.28	4.62	3.2	13.9	7.26	2.85	3.47	15.9
foc			0.649	0.0656	0.151	0.0498	0.0305	0.0728	0.0462	0.032	0.139	0.0726	0.0285	0.0347	0.159
Aliphatic: $C_5 - C_8$ Benchmark (mg/kg) [1]	7,240	0.218	153	16	36	12	7	17	11	8	33	17	7	8	38
Aromatic: $C_9 - C_{10}$ Benchmark (mg/kg) [1]	3,980	0.0594	0	0	0	0	0	0	0	0	0	0	0	0	0
GROs			5.6 J	4.8 J	4.3 J	3.7 J	6 J	2.8 J	3.8 J	4.4 J	5.8 J	5.8 J	5.8 J	7.6 J	5.3 J
Alihphatic: $C_9 - C_{18}$ Benchmark (mg/kg) [1]	7,410,000	0.0004	60	6	14	5	3	7	4	3	13	7	3	3	15
Aromatic: $C_{11} - C_{22}$ Benchmark (mg/kg) [1]	33,100	0.0028	0	0	0	0	0	0	0	0	0	0	0	0	0
DROs			**270**	**550**	**980**	**250**	**1,100**	**300**	**290**	**330**	**520**	**460**	**510**	**450**	**490**
Aliphatic: $C_{19} - C_{36}$ Benchmark (mg/kg) [1,2]	8.32E+10	0.0000001	0	0	0	0	0	0	0	0	0	0	0	0	0
RROs			1,700	**1,600**	**2,600**	**880**	**1,600**	**800**	**840**	**640**	**2,800**	**1,700**	**1,000**	**650**	**2,700**

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Table 3-4
Comparison of Petroleum Hydrocarbon Fractions to Sediment Benchmarks - Duck Creek Confluence Sediment Samples
Duck and Otter Creek Confluences Investigation
Toledo, Lucas County, Ohio

Location ID			DC-24	DC-24	DC-25	DC-25	DC-25	DC-25	DC-25
Field Sample ID			DC-24-02	DC-24-03	DC-25-01	DC-25-01-DP	DC-25-02	DC-25-02-DP	DC-25-03
Sampling Date	Koc	FCV (mg/L)	5/11/2011	5/11/2011	5/11/2011	5/11/2011	5/11/2011	5/11/2011	5/11/2011
TOC (%)			5.61	26.6	9.35	3.71	2.92	3.48	1.93
foc			0.0561	0.266	0.0935	0.0371	0.0292	0.0348	0.0193
Aliphatic: $C_5 - C_8$ Benchmark (mg/kg) [1]	7,240	0.218	13	63	22	9	7	8	5
Aromatic: $C_9 - C_{10}$ Benchmark (mg/kg) [1]	3,980	0.0594	0	0	0	0	0	0	0
GROs			5 J	9.3 J	12 J	6.5 J	**35**	**16**	**8.7 J**
Alihphatic: $C_9 - C_{18}$ Benchmark (mg/kg) [1]	7,410,000	0.0004	5	25	9	3	3	3	2
Aromatic: $C_{11} - C_{22}$ Benchmark (mg/kg) [1]	33,100	0.0028	0	0	0	0	0	0	0
DROs			**290**	**890**	**1,300**	**1,100**	**2,200**	**2,000**	**2,200**
Aliphatic: $C_{19} - C_{36}$ Benchmark (mg/kg) [1,2]	8.32E+10	0.0000001	0	0	0	0	0	0	0
RROs			**960**	1,400	**2,400**	**1,800**	**3,000**	**2,600**	**1,900**

Notes:
Bold result exceeds low benchmark
Shaded result exceeds high benchmark
DRO = Diesel-range organics
FCV = Final chronic value
foc = Fraction organic carbon
GRO = Gasoline-range organics
ID = Identification
J = Estimated value
Koc = Organic carbon water partitioning coefficient
mg/kg = Milligram per kilogram
mg/L = Milligram per liter
RRO = Residual-range organics
TOC = Total organic carbon
U = Analyte not detected

1 The area under the chromatogram (including both aromatic and aliphatic hydrocarbons) between C6 and C10 is defined as GROs. The area under the chromatogram between C10 and C24 is defined as DROs. The area under the chromatogram less than C24 is defined as RROs (MDEP 2007).

2 The fraction is not likely toxic because mean LC_{50} exceeds mean aqueous solubility; on-line source: http://www.mass.gov/dep/cleanup/laws/tphbat.pdf

Sediment Benchmark (mg/kg) = Koc x FCV x foc (0.001)

Source:
Massachusetts Department of Environmental Protection (MDEP). 2007. Sediment Toxicity of Petroleum Hydrocarbon Fractions. September.

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Table 3-5A
Comparison of Priority Pollutant PAH Concentrations to Sediment Benchmarks - November 2010 Duck Creek Confluence Sediment Samples
Duck and Otter Creeks Confluence Investigation
Toledo, Lucas County, Ohio

Location ID	Sediment PEC Benchmark (at 1% TOC)		DC-13	DC-13	DC-13	DC-13	DC-13	DC-14	DC-14	DC-14	DC-14	DC-14	DC-14
Field Sample ID			DC-13	DC-13-01	DC-13-02	DC-13-03	DC-13-04	DC-14	DC-14-01	DC-14-02	DC-14-03	DC-14-04	DC-14-05
Sampling Date			11/2/2010	11/2/2010	11/2/2010	11/2/2010	11/2/2010	11/3/2010	11/3/2010	11/3/2010	11/3/2010	11/3/2010	11/3/2010
PAHs (µg/kg)													
1-METHYLNAPHTHALENE	NA		1,000 J	NA	NA	NA	NA	150	NA	NA	NA	NA	NA
2-METHYLNAPHTHALENE	201	CCME 1999	**2,400**	8.5	3.5 J	51 U	**750**	**370**	**290**	75 J	**340**	**230**	**240**
ACENAPHTHENE	89	CCME 1999	1,200 U	5.8 U	5.2 U	28 J	**260**	82 U	140 U	32 J	59 J	**130 J**	**340**
ACENAPHTHYLENE	128	CCME 1999	1,200 U	5.8 U	5.2 U	51 U	97 J	82 U	140 U	120 U	130 U	42 J	94 J
ANTHRACENE	845	CBSQG 2000	**900** J	3.6 J	5.2 U	68	510	97	87 J	36 J	99 J	170 J	420
PHENANTHRENE	1,170	CBSQG 2000	**3,000**	12	4.2 J	200	**2,200**	330	310	140	440	800	**1,700**
BENZO[A]ANTHRACENE	1,050	CBSQG 2000	**3,000**	20	3.9 J	150	**1,100**	430	400	84 J	340	530	880
BENZO[A]PYRENE	1,450	CBSQG 2000	**2,900**	25	3.3 J	120	810	650	510	78 J	340	450	690
BENZO[E]PYRENE	1450	1	**3,500**	NA	NA	NA	NA	760	NA	NA	NA	NA	NA
BENZO[B]FLUORANTHENE	13,400	2	2,800	21	5.6	170	1,200	460	400	130	480	670	1,000
BENZO[G,H,I]PERYLENE	3,200	Ontario 1993	2,000	20	2.6 J	61	360	590	410	56 J	240	270	380
BENZO[K]FLUORANTHENE	13,400	Ontario 1993	610 J	4.4 J	1.7 J	53	330	110	72 J	30 J	110 J	150 J	290
CHRYSENE	1,290	CBSQG 2000	**4,200**	26	4.9 J	160	1,100	610	560	100 J	490	740	1,100
DIBENZ(A,H)ANTHRACENE	135	WDNR 2003	**1,400**	7.7	5.2 U	22 J	**150**	**260**	**140 J**	120 U	81 J	110 J	**140 J**
FLUORANTHENE	2,230	CBSQG 2000	1,700	10	8.7	290	2,000	250	280	180	540	810	1,900
FLUORENE	536	CBSQG 2000	**560 J**	1.4 J	5.2 U	23 J	350	48 J	48 J	31 J	88 J	140 J	**300**
INDENO[1,2,3-CD]PYRENE	3,200	WDNR 2003	900 J	10	2.3 J	69	410	230	180	43 J	190	220	380
NAPHTHALENE	561	CBSQG 2000	**1,800**	6.4	5.2 U	51 U	**950**	220	180	510	520	**700**	**1,900**
PERYLENE	3,200	3	530 J	NA	NA	NA	NA	290	NA	NA	NA	NA	NA
PYRENE	1,520	CBSQG 2000	**2,500**	23	11	240	**1,800**	470	550	200	660	1,000	**1,800**

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Table 3-5A
Comparison of Priority Pollutant PAH Concentrations to Sediment Benchmarks - November 2010 Duck Creek Confluence Sediment Samples
Duck and Otter Creeks Confluence Investigation
Toledo, Lucas County, Ohio

Location ID	Sediment PEC Benchmark (at 1% TOC)		DC-16	DC-16	DC-16	DC-16	DC-16	DC-16	DC-16	DC-16	DC-17	DC-17	DC-17
Field Sample ID			DC-16	DC-16-01	DC-16-02	DC-16-03	DC-16-04	DC-16-05	DC-16-06	DC-16-07	DC-17	DC-17-01	DC-17-02
Sampling Date			11/2/2010	11/2/2010	11/2/2010	11/2/2010	11/2/2010	11/2/2010	11/2/2010	11/2/2010	11/2/2010	11/2/2010	11/2/2010
PAHs (µg/kg)													
1-METHYLNAPHTHALENE	NA		440 J	NA	NA	NA	NA	NA	NA	NA	540	NA	NA
2-METHYLNAPHTHALENE	201	CCME 1999	**1,000**	**610**	**240**	**300**	**530**	**440**	**480**	**360**	**1,600**	**700**	150
ACENAPHTHENE	89	CCME 1999	690 U	41 J	61 J	43 J	**270**	**160 J**	**210**	**250**	77 J	42	63
ACENAPHTHYLENE	128	CCME 1999	690 U	170 U	180 U	170 U	90 J	71 J	**170**	100 J	160 U	18 J	19 J
ANTHRACENE	845	CBSQG 2000	280 J	170 U	180 U	170 U	330	210	570	520	320	160	79
PHENANTHRENE	1,170	CBSQG 2000	970	560	180 U	170 U	**1,500**	1,100	**1,700**	**1,800**	940	650	430
BENZO[A]ANTHRACENE	1,050	CBSQG 2000	930	540	66 J	170 U	710	580	**1,500**	**1,100**	**1,200**	720	270
BENZO[A]PYRENE	1,450	CBSQG 2000	950	590	60 J	170 U	560	440	**1,500**	940	**1,500**	790	230
BENZO[E]PYRENE	1,450	1	1,200	NA	NA	NA	NA	NA	NA	NA	**1,500**	NA	NA
BENZO[B]FLUORANTHENE	13,400	2	950	520	92 J	170 U	910	810	2,000	1,400	980	760	390
BENZO[G,H,I]PERYLENE	3,200	Ontario 1993	690	450	54 J	170 U	400	290	730	440	1,200	620	150
BENZO[K]FLUORANTHENE	13,400	Ontario 1993	690 U	110 J	180 U	170 U	250	180	600	330	210	150 J	110
CHRYSENE	1,290	CBSQG 2000	**1,300**	740	87 J	170 U	970	950	**1,800**	**1,300**	**1,600**	940	320
DIBENZ(A,H)ANTHRACENE	135	WDNR 2003	**390 J**	**190**	180 U	170 U	130 J	110 J	**280**	**180**	**540**	**200 J**	49 J
FLUORANTHENE	2,230	CBSQG 2000	640 J	390	180 U	170 U	1,500	1,000	2,200	1,900	490	700	780
FLUORENE	536	CBSQG 2000	690 U	82 J	52 J	170 U	310	210	310	330	120 J	79	70
INDENO[1,2,3-CD]PYRENE	3,200	WDNR 2003	220 J	220	180 U	170 U	340	220	770	470	530	270 J	130
NAPHTHALENE	561	CBSQG 2000	**840**	490	**1,200**	490	**2,900**	**1,500**	**3,800**	**2,700**	**630**	330	220
PERYLENE	3,200	3	210 J	NA	NA	NA	NA	NA	NA	NA	310 J	NA	NA
PYRENE	1,520	CBSQG 2000	990	730	180 U	170 U	**1,600**	1,200	**2,200**	**1,900**	1,200	970	710

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Table 3-5A
Comparison of Priority Pollutant PAH Concentrations to Sediment Benchmarks - November 2010 Duck Creek Confluence Sediment Samples
Duck and Otter Creeks Confluence Investigation
Toledo, Lucas County, Ohio

Location ID	Sediment PEC Benchmark (at 1% TOC)		DC-17	DC-17	DC-17	DC-17	DC-17	DC-19	DC-19	DC-19	DC-19	DC-19	DC-19
Field Sample ID			DC-17-03	DC-17-04	DC-17-05	DC-17-06	DC-17-07	DC-19	DC-19-01	DC-19-01FS	DC-19-02	DC-19-02FS	DC-19-03
Sampling Date			11/2/2010	11/2/2010	11/2/2010	11/2/2010	11/2/2010	11/2/2010	11/2/2010	11/2/2010	11/2/2010	11/2/2010	11/2/2010
PAHs (µg/kg)													
1-METHYLNAPHTHALENE	NA		NA	NA	NA	NA	NA	15 J	NA	NA	NA	NA	NA
2-METHYLNAPHTHALENE	201	CCME 1999	110	130	190	160 J	150 J	66 U	220 U	**650**	**270**	190	**760**
ACENAPHTHENE	89	CCME 1999	47 J	**160**	**360**	**140 J**	**120 J**	66 U	220 U	210 U	**120 J**	**92 J**	**150**
ACENAPHTHYLENE	128	CCME 1999	21 J	52 J	94 J	58 J	45 J	66 U	220 U	210 U	160 U	170 U	73 J
ANTHRACENE	845	CBSQG 2000	69	190	390	190	170	48 J	220 U	210 U	160 U	170 U	290
PHENANTHRENE	1,170	CBSQG 2000	340	1,000	**2,200**	1,000	770	160	220 U	580	730	530	**1,300**
BENZO[A]ANTHRACENE	1,050	CBSQG 2000	200	690	1,000	700	490	130	220 U	770	310	230	830
BENZO[A]PYRENE	1,450	CBSQG 2000	160	520	770	550	370	150	220 U	1,000	270	190	670
BENZO[E]PYRENE	1,450	1	NA	NA	NA	NA	NA	200	NA	NA	NA	NA	NA
BENZO[B]FLUORANTHENE	13,400	2	310	910	1,500	940	600	120	220 U	610	480	320	970
BENZO[G,H,I]PERYLENE	3,200	Ontario 1993	84	280	410	330	220	140	220 U	970	73 J	150 J	420
BENZO[K]FLUORANTHENE	13,400	Ontario 1993	79	250	350	220	170	22 J	220 U	130 J	110 J	85 J	230
CHRYSENE	1,290	CBSQG 2000	270	1,000	**1,400**	1,100	640	190	220 U	970	400	280	1,100
DIBENZ(A,H)ANTHRACENE	135	WDNR 2003	30 J	120	**150**	**160 J**	95 J	58 J	220 U	**280**	56 J	43 J	**160**
FLUORANTHENE	2,230	CBSQG 2000	490	1,200	**2,500**	1,000	850	100	220 U	380	890	630	1,100
FLUORENE	536	CBSQG 2000	61	140	360	170	140 J	26 J	220 U	110 J	160 J	110 J	230
INDENO[1,2,3-CD]PYRENE	3,200	WDNR 2003	80	270	440	310	220	44 J	220 U	330	150 J	110 J	360
NAPHTHALENE	561	CBSQG 2000	180	**600**	**1,500**	**640**	**660**	66 U	220 U	500	**770**	**610**	**1,300**
PERYLENE	3,200	3	NA	NA	NA	NA	NA	64 J	NA	NA	NA	NA	NA
PYRENE	1,520	CBSQG 2000	490	1,400	**2400**	1,200	900	180	220 U	1,100	850	580	1,300

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Table 3-5A
Comparison of Priority Pollutant PAH Concentrations to Sediment Benchmarks - November 2010 Duck Creek Confluence Sediment Samples
Duck and Otter Creeks Confluence Investigation
Toledo, Lucas County, Ohio

Location ID	Sediment PEC Benchmark (at 1% TOC)		DC-19	DC-19	DC-19	DC-19	DC-19	DC-19
Field Sample ID			DC-19-03FS	DC-19-04	DC-19-05	DC-19-05FS	DC-19FS	DC-19-04FS
Sampling Date			11/2/2010	11/2/2010	11/2/2010	11/2/2010	11/2/2010	11/3/2010
PAHs (µg/kg)								
1-METHYLNAPHTHALENE	NA		NA	NA	NA	NA	160	NA
2-METHYLNAPHTHALENE	201	CCME 1999	**670**	**430**	**290**	5.6 U	**370**	26 U
ACENAPHTHENE	89	CCME 1999	**120 J**	**340**	**130 J**	2.7 J	42 J	10 J
ACENAPHTHYLENE	128	CCME 1999	70 J	110 J	68 J	1.4 J	84 U	26 U
ANTHRACENE	845	CBSQG 2000	230	510	270	4.7 J	71 J	12 J
PHENANTHRENE	1,170	CBSQG 2000	1,100	**2,100**	1,100	19	240	48
BENZO[A]ANTHRACENE	1,050	CBSQG 2000	700	**1,300**	760	13	220	31
BENZO[A]PYRENE	1,450	CBSQG 2000	590	1,100	630	11	310	27
BENZO[E]PYRENE	1450	1	NA	NA	NA	NA	370	NA
BENZO[B]FLUORANTHENE	13,400	2	930	1,500	920	15	230	35
BENZO[G,H,I]PERYLENE	3,200	Ontario 1993	330	650	380	7.5	270	18 J
BENZO[K]FLUORANTHENE	13,400	Ontario 1993	200	380	220	3.5 J	56 J	12 J
CHRYSENE	1,290	CBSQG 2000	980	**1,700**	1,000	20	300	40
DIBENZ(A,H)ANTHRACENE	135	WDNR 2003	**140 J**	**220**	**150 J**	2.8 J	120	7.3 J
FLUORANTHENE	2,230	CBSQG 2000	940	**2,300**	1,000	20	140	53
FLUORENE	536	CBSQG 2000	200	340	190	2.7 J	46 J	9.2 J
INDENO[1,2,3-CD]PYRENE	3,200	WDNR 2003	310	570	340	7.1	79 J	18 J
NAPHTHALENE	561	CBSQG 2000	**1,300**	**2,700**	**1,800**	15	460	22 J
PERYLENE	3,200	3	NA	NA	NA	NA	120	NA
PYRENE	1,520	CBSQG 2000	1,100	**2,300**	1,300	27	310	60

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Table 3-5A
Comparison of Priority Pollutant PAH Concentrations to Sediment Benchmarks - November 2010 Duck Creek Confluence Sediment Samples
Duck and Otter Creeks Confluence Investigation
Toledo, Lucas County, Ohio

Notes:
Bold result exceeds sediment benchmark
µg/kg = Microgram per kilogram
CBSQG 2000 = Consensus-based sediment quality guideline from MacDonald and others 2000
CCME 1999 = Canadian sediment quality guideline for the protection of aquatic life from CCME 1999
ID = Identification
J = Estimated value; concentration below RL or exceeded RL, but one or more quality control parameters were outside control limits
NA = Criterion or value not available
Ontario 1993 = Guideline for the protection and management of aquatic sediment from Peraud and others 1993
PAH = Polycyclic aromatic hydrocarbon
PEC = Probable effect concentration
RL = Reporting limit
U = Analyte not detected
WDNR 2003 = Consensus-based sediment quality guideline from WDNR 2003
1 No guideline values for benzo(e)pyrene, so value for benzo(a)pyrene used
2 No guideline values for benzo(b)fluoranthene, so value for benzo(b)fluoranthene used
3 No guideline values for perylene, so value for benzo(g,h,i)perylene used
Sources:
MacDonald, D.D. , and others. 2000. "Development and Evaluation of Consensus-based Sediment Quality Guidelines for Freshwater Ecosystems." Arch. Environ. Contam. Toxicol. 39: 20-31.
Canadian Council of Ministers of the Environment (CCME). 1999. Canadian Sediment Quality Guidelines for the Protection of Aquatic Life: Summary Tables. *Canadian Environmental Quality Guidelines.*
Persaud, D., and others. 1993. "Guidelines for the Protection and Management of Aquatic Sediment Quality in Ontario." Ontario Ministry of the Environment and Energy. August. ISBN 0-7729-9248-7.
On-line Address: http://www.ene.gov.on.ca/envision/gp/B1_3.pdf
Wisconsin Department of Natural Resources (WDNR). 2003. Consensus-based Sediment Quality Guidelines, Recommendations for Use and Application, Interim Guidance. Contaminated Sediments Standing Team. WT-732 2003. December.

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Table 3-5B
Comparison of Priority Pollutant PAH Concentrations to Sediment Benchmarks - May 2011 Duck Creek Confluence Sediment Samples
Duck and Otter Creeks Confluence Investigation
Toledo, Lucas County, Ohio

Analytical Method	Location ID / Field Sample ID / Depth Interval / Sampling Date	Sediment PEC Benchmark (at 1% TOC)		DC-20 DC-20-01 0- 6 5/11/2011	DC-20 DC-20-02 0- 24 5/11/2011	DC-20 DC-20-03 24- 36 5/11/2011	DC-21 DC-21-01 0- 6 5/11/2011	DC-21 DC-21-02 0- 19 5/11/2011	DC-22 DC-22-01 0- 6 5/11/2011	DC-22 DC-22-02 0- 24 5/11/2011
PAHs (µg/kg)										
MC SVOA(SIMS)	1-METHYLNAPHTHALENE	NA		1,800	NA	NA	52	NA	350	NA
MC SVOA(LS)	2-METHYLNAPHTHALENE	201	CCME 1999	**3,700**	NA	NA	NA	NA	NA	NA
MC SVOA(SIMS)	2-METHYLNAPHTHALENE	201	CCME 1999	NA	130	**340**	95	11	**730**	48
MC SVOA(LS)	ACENAPHTHENE	89	CCME 1999	NA	NA	NA	NA	NA	NA	NA
MC SVOA(SIMS)	ACENAPHTHENE	89	CCME 1999	69	7.5 U	13	14	11	37	6 U
MC SVOA(SIMS)	ACENAPHTHYLENE	128	CCME 1999	6.1 U	7.5 U	6.7 U	27	13	14	7.5
MC SVOA(LS)	ANTHRACENE	845	CBSQG 2000	**1,300**	NA	NA	NA	NA	NA	NA
MC SVOA(SIMS)	ANTHRACENE	845	CBSQG 2000	NA	41	120	83	23	230	29
MC SVOA(SIMS)	BENZO[A]ANTHRACENE	1,050	CBSQG 2000	NA	180	370	190	170	NA	120 J
MC SVOA(LS)	BENZO[A]ANTHRACENE	1,050	CBSQG 2000	**3,800**	NA	NA	NA	NA	870 J	NA
MC SVOA(LS)	BENZO[A]PYRENE	1,450	CBSQG 2000	**6,000**	NA	NA	NA	NA	970 J	NA
MC SVOA(SIMS)	BENZO[A]PYRENE	1,450	CBSQG 2000	NA	280	440	220	200	NA	130 J
MC SVOA(LS)	BENZO[B]FLUORANTHENE	13,400	2	1,100	NA	NA	NA	NA	NA	NA
MC SVOA(SIMS)	BENZO[B]FLUORANTHENE	13,400	2	NA	120	210	96	130	620 J	28
MC SVOA(SIMS)	BENZO[E]PYRENE	1,450	1	**5,000**	NA	NA	170	NA	1,100 J	NA
MC SVOA(LS)	BENZO[G,H,I]PERYLENE	3,200	Ontario 1993	**4,400**	NA	NA	NA	NA	860 J	NA
MC SVOA(SIMS)	BENZO[G,H,I]PERYLENE	3,200	Ontario 1993	NA	270	500	300	97	NA	58 J
MC SVOA(LS)	BENZO[K]FLUORANTHENE	13,400	Ontario 1993	1,200	NA	NA	NA	NA	NA	NA
MC SVOA(SIMS)	BENZO[K]FLUORANTHENE	13,400	Ontario 1993	NA	86	120	73	31	320	46
MC SVOA(LS)	CHRYSENE	1,290	CBSQG 2000	**6,400**	NA	NA	NA	NA	**1,300 J**	NA
MC SVOA(SIMS)	CHRYSENE	1,290	CBSQG 2000	NA	250	520	200	170	NA	170 J
MC SVOA(LS)	DIBENZ(A,H)ANTHRACENE	135	WDNR 2003	**2,500**	NA	NA	NA	NA	NA	NA
MC SVOA(SIMS)	DIBENZ(A,H)ANTHRACENE	135	WDNR 2003	NA	130	**210**	110	26	**680**	36
MC SVOA(LS)	FLUORANTHENE	2,230	CBSQG 2000	1,100	NA	NA	NA	NA	NA	NA
MC SVOA(SIMS)	FLUORANTHENE	2,230	CBSQG 2000	NA	98	150	120	150	310	88 J
MC SVOA(LS)	FLUORENE	536	CBSQG 2000	NA	NA	NA	NA	NA	NA	NA
MC SVOA(SIMS)	FLUORENE	536	CBSQG 2000	300	17	34	34	27	110	14
MC SVOA(SIMS)	INDENO[1,2,3-CD]PYRENE	3,200	WDNR 2003	NA	95	160	140	36	460	42 J
MC SVOA(LS)	INDENO[1,2,3-CD]PYRENE	3,200	WDNR 2003	1,200	NA	NA	NA	NA	NA	NA
MC SVOA(LS)	NAPHTHALENE	561	CBSQG 2000	**1,900**	NA	NA	NA	NA	NA	NA
MC SVOA(SIMS)	NAPHTHALENE	561	CBSQG 2000	NA	100	190	50 J	23	380	31
MC SVOA(SIMS)	PERYLENE	3,200	3	420 J	NA	NA	25	NA	150	NA
MC SVOA(SIMS)	PHENANTHRENE	1,170	CBSQG 2000	NA	140	300	160	37	710	86
MC SVOA(LS)	PHENANTHRENE	1,170	CBSQG 2000	**3,100**	NA	NA	NA	NA	NA	NA
MC SVOA(SIMS)	PYRENE	1,520	CBSQG 2000	NA	240	490	180	150	NA	160 J
MC SVOA(LS)	PYRENE	1,520	CBSQG 2000	**4,000**	NA	NA	NA	NA	880 J	NA

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Table 3-5B
Comparison of Priority Pollutant PAH Concentrations to Sediment Benchmarks - May 2011 Duck Creek Confluence Sediment Samples
Duck and Otter Creeks Confluence Investigation
Toledo, Lucas County, Ohio

Analytical Method	Location ID / Field Sample ID / Depth Interval / Sampling Date	Sediment PEC Benchmark (at 1% TOC)		DC-22 DC-22-03 24- 39 5/11/2011	DC-23 DC-23-01 0- 6 5/11/2011	DC-23 DC-23-02 0- 24 5/11/2011	DC-23 DC-23-03 24- 48 5/11/2011	DC-23 DC-23-04 48- 67 5/11/2011	DC-24 DC-24-01 0- 6 5/11/2011	DC-24 DC-24-02 0- 24 5/11/2011
PAHs (µg/kg)										
MC SVOA(SIMS)	1-METHYLNAPHTHALENE	NA		NA	160	NA	NA	NA	920	NA
MC SVOA(LS)	2-METHYLNAPHTHALENE	201	CCME 1999	NA	NA	NA	NA	NA	NA	NA
MC SVOA(SIMS)	2-METHYLNAPHTHALENE	201	CCME 1999	26	**310**	190	33	30	**1,100**	120
MC SVOA(LS)	ACENAPHTHENE	89	CCME 1999	NA	NA	NA	NA	NA	NA	NA
MC SVOA(SIMS)	ACENAPHTHENE	89	CCME 1999	6.4 U	12	7.7 J	10	12	43	7.1
MC SVOA(SIMS)	ACENAPHTHYLENE	128	CCME 1999	6.4 U	9.7	9.3	21	11	31	5.3
MC SVOA(LS)	ANTHRACENE	845	CBSQG 2000	NA	NA	NA	NA	NA	NA	NA
MC SVOA(SIMS)	ANTHRACENE	845	CBSQG 2000	13	74	62	35	25	860 U	44
MC SVOA(SIMS)	BENZO[A]ANTHRACENE	1,050	CBSQG 2000	47	400	350	130	100	**2,800**	220
MC SVOA(LS)	BENZO[A]ANTHRACENE	1,050	CBSQG 2000	NA	NA	NA	NA	NA	NA	NA
MC SVOA(LS)	BENZO[A]PYRENE	1,450	CBSQG 2000	NA	NA	NA	NA	NA	NA	NA
MC SVOA(SIMS)	BENZO[A]PYRENE	1,450	CBSQG 2000	49	540	390	190	140	**3,900**	320
MC SVOA(LS)	BENZO[B]FLUORANTHENE	13,400	2	NA	NA	NA	NA	NA	NA	NA
MC SVOA(SIMS)	BENZO[B]FLUORANTHENE	13,400	2	30	250 J	170	48	64	1,700 J	120
MC SVOA(SIMS)	BENZO[E]PYRENE	1,450	1	NA	520 J	NA	NA	NA	**3,400 J**	NA
MC SVOA(LS)	BENZO[G,H,I]PERYLENE	3,200	Ontario 1993	NA	NA	NA	NA	NA	NA	NA
MC SVOA(SIMS)	BENZO[G,H,I]PERYLENE	3,200	Ontario 1993	35 J	610	460	44 J	140 J	**4,600**	380
MC SVOA(LS)	BENZO[K]FLUORANTHENE	13,400	Ontario 1993	NA	NA	NA	NA	NA	NA	NA
MC SVOA(SIMS)	BENZO[K]FLUORANTHENE	13,400	Ontario 1993	23	130	130	55	75	1,200	79
MC SVOA(LS)	CHRYSENE	1,290	CBSQG 2000	NA	NA	NA	NA	NA	NA	NA
MC SVOA(SIMS)	CHRYSENE	1,290	CBSQG 2000	60	580	510	180	160	**3,300**	310
MC SVOA(LS)	DIBENZ(A,H)ANTHRACENE	135	WDNR 2003	NA	NA	NA	NA	NA	NA	NA
MC SVOA(SIMS)	DIBENZ(A,H)ANTHRACENE	135	WDNR 2003	24	**330**	**180**	30	33	**1,900**	120
MC SVOA(LS)	FLUORANTHENE	2,230	CBSQG 2000	NA	NA	NA	NA	NA	NA	NA
MC SVOA(SIMS)	FLUORANTHENE	2,230	CBSQG 2000	41	140	160	160	130	1,000	110
MC SVOA(LS)	FLUORENE	536	CBSQG 2000	NA	NA	NA	NA	NA	NA	NA
MC SVOA(SIMS)	FLUORENE	536	CBSQG 2000	9.9	39	27	21	25	860 U	23
MC SVOA(SIMS)	INDENO[1,2,3-CD]PYRENE	3,200	WDNR 2003	28 J	190	150	44 J	140 J	1,300	110
MC SVOA(LS)	INDENO[1,2,3-CD]PYRENE	3,200	WDNR 2003	NA	NA	NA	NA	NA	NA	NA
MC SVOA(LS)	NAPHTHALENE	561	CBSQG 2000	NA	NA	NA	NA	NA	NA	NA
MC SVOA(SIMS)	NAPHTHALENE	561	CBSQG 2000	33	230	120	42	47	860 U	69
MC SVOA(SIMS)	PERYLENE	3,200	3	NA	48	NA	NA	NA	860 U	NA
MC SVOA(SIMS)	PHENANTHRENE	1,170	CBSQG 2000	33	280	230	100	94	**1,800**	140
MC SVOA(LS)	PHENANTHRENE	1,170	CBSQG 2000	NA	NA	NA	NA	NA	NA	NA
MC SVOA(SIMS)	PYRENE	1,520	CBSQG 2000	58	470	380	200	200	**2,900**	280
MC SVOA(LS)	PYRENE	1,520	CBSQG 2000	NA	NA	NA	NA	NA	NA	NA

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Table 3-5B
Comparison of Priority Pollutant PAH Concentrations to Sediment Benchmarks - May 2011 Duck Creek Confluence Sediment Samples
Duck and Otter Creeks Confluence Investigation
Toledo, Lucas County, Ohio

Analytical Method	Location ID / Field Sample ID / Depth Interval / Sampling Date	Sediment PEC Benchmark (at 1% TOC)		DC-24 / DC-24-03 / 24- 53 / 5/11/2011	DC-25 / DC-25-01 / 0- 6 / 5/11/2011	DC-25 / DC-25-01-DP / 0- 6 / 5/11/2011	DC-25 / DC-25-02 / 0- 24 / 5/11/2011	DC-25 / DC-25-02-DP / 0- 24 / 5/11/2011	DC-25 / DC-25-03 / 24- 39 / 5/11/2011
PAHs (µg/kg)									
MC SVOA(SIMS)	1-METHYLNAPHTHALENE	NA		NA	99	12 J	NA	NA	NA
MC SVOA(LS)	2-METHYLNAPHTHALENE	201	CCME 1999	NA	NA	NA	NA	NA	NA
MC SVOA(SIMS)	2-METHYLNAPHTHALENE	201	CCME 1999	41	200	23 J	17	16	13
MC SVOA(LS)	ACENAPHTHENE	89	CCME 1999	NA	NA	NA	NA	NA	NA
MC SVOA(SIMS)	ACENAPHTHENE	89	CCME 1999	13	17	7.8 J	34 J	29	21
MC SVOA(SIMS)	ACENAPHTHYLENE	128	CCME 1999	12	7.2 U	11 J	15	17	8.1
MC SVOA(LS)	ANTHRACENE	845	CBSQG 2000	NA	NA	NA	NA	NA	NA
MC SVOA(SIMS)	ANTHRACENE	845	CBSQG 2000	28	96	22 J	57	51	19
MC SVOA(SIMS)	BENZO[A]ANTHRACENE	1,050	CBSQG 2000	100	360	85 J	150	140	67
MC SVOA(LS)	BENZO[A]ANTHRACENE	1,050	CBSQG 2000	NA	NA	NA	NA	NA	NA
MC SVOA(LS)	BENZO[A]PYRENE	1,450	CBSQG 2000	NA	NA	NA	NA	NA	NA
MC SVOA(SIMS)	BENZO[A]PYRENE	1,450	CBSQG 2000	92	360	120 J	120	160	32
MC SVOA(LS)	BENZO[B]FLUORANTHENE	13,400	2	NA	NA	NA	NA	NA	NA
MC SVOA(SIMS)	BENZO[B]FLUORANTHENE	13,400	2	84	200	57 J	64	44	32
MC SVOA(SIMS)	BENZO[E]PYRENE	1,450	1	NA	350	58 J	NA	NA	NA
MC SVOA(LS)	BENZO[G,H,I]PERYLENE	3,200	Ontario 1993	NA	NA	NA	NA	NA	NA
MC SVOA(SIMS)	BENZO[G,H,I]PERYLENE	3,200	Ontario 1993	90	380	64 J	37 J	43 J	21 J
MC SVOA(LS)	BENZO[K]FLUORANTHENE	13,400	Ontario 1993	NA	NA	NA	NA	NA	NA
MC SVOA(SIMS)	BENZO[K]FLUORANTHENE	13,400	Ontario 1993	74	98	42 J	46	55	19
MC SVOA(LS)	CHRYSENE	1,290	CBSQG 2000	NA	NA	NA	NA	NA	NA
MC SVOA(SIMS)	CHRYSENE	1,290	CBSQG 2000	150	470	86 J	230	230	110
MC SVOA(LS)	DIBENZ(A,H)ANTHRACENE	135	WDNR 2003	NA	NA	NA	NA	NA	NA
MC SVOA(SIMS)	DIBENZ(A,H)ANTHRACENE	135	WDNR 2003	54 U	**230**	27 J	24	32	14
MC SVOA(LS)	FLUORANTHENE	2,230	CBSQG 2000	NA	NA	NA	NA	NA	NA
MC SVOA(SIMS)	FLUORANTHENE	2,230	CBSQG 2000	200	190	120 J	230	200	110
MC SVOA(LS)	FLUORENE	536	CBSQG 2000	NA	NA	NA	NA	NA	NA
MC SVOA(SIMS)	FLUORENE	536	CBSQG 2000	33	54	14 J	40	130	53
MC SVOA(SIMS)	INDENO[1,2,3-CD]PYRENE	3,200	WDNR 2003	65	160	52 J	36 J	42 J	18 J
MC SVOA(LS)	INDENO[1,2,3-CD]PYRENE	3,200	WDNR 2003	NA	NA	NA	NA	NA	NA
MC SVOA(LS)	NAPHTHALENE	561	CBSQG 2000	NA	NA	NA	NA	NA	NA
MC SVOA(SIMS)	NAPHTHALENE	561	CBSQG 2000	72	100	27 J	99	54	21
MC SVOA(SIMS)	PERYLENE	3,200	3	NA	32	17 J	NA	NA	NA
MC SVOA(SIMS)	PHENANTHRENE	1,170	CBSQG 2000	140	250	81 J	200	230	170
MC SVOA(LS)	PHENANTHRENE	1,170	CBSQG 2000	NA	NA	NA	NA	NA	NA
MC SVOA(SIMS)	PYRENE	1,520	CBSQG 2000	200	320	120 J	NA	320	140
MC SVOA(LS)	PYRENE	1,520	CBSQG 2000	NA	NA	NA	270 J	NA	NA

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Table 3-5B
Comparison of Priority Pollutant PAH Concentrations to Sediment Benchmarks - May 2011 Duck Creek Confluence Sediment Samples
Duck and Otter Creeks Confluence Investigation
Toledo, Lucas County, Ohio

Notes:
Bold result exceeds sediment benchmark
µg/kg = Microgram per kilogram
CBSQG 2000 = Consensus-based sediment quality guideline from MacDonald and others 2000
CCME 1999 = Canadian sediment quality guideline for the protection of aquatic life from CCME 1999
ID = Identification
J = Estimated value; concentration below RL or exceeded RL, but one or more quality control parameters were outside control limits
LS = Low soil

NA = Criterion or value not available
Ontario 1993 = Guideline for the protection and management of aquatic sediment from Peraud and others 1993
PAH = Polycyclic aromatic hydrocarbon
PEC = Probable effect concentration
RL = Reporting lmit
SIMS = Selective ion monitoring
SVOA = Semivolatile organic analysis
U = Analyte not detected
WDNR 2003 = Consensus-based sediment quality guideline from WDNR 2003
1 No guideline values for benzo(e)pyrene, so value for benzo(a)pyrene used
2 No guideline values for benzo(b)fluoranthene, so value for benzo(b)fluoranthene used
3 No guideline values for perylene, so value for benzo(g,h,i)perylene used
Sources:
MacDonald, D.D. , and others. 2000. "Development and Evaluation of Consensus-based Sediment Quality Guidelines for Freshwater Ecosystems." Arch. Environ. Contam. Toxicol. 39: 20-31.
Canadian Council of Ministers of the Environment (CCME). 1999. Canadian Sediment Quality Guidelines for the Protection of Aquatic Life: Summary Tables. *Canadian Environmental Quality Guidelines.*
Persaud, D., and others. 1993. "Guidelines for the Protection and Management of Aquatic Sediment Quality in Ontario." Ontario Ministry of the Environment and Energy. August. ISBN 0-772
On-line Address: http://www.ene.gov.on.ca/envision/gp/B1_3.pdf
Wisconsin Department of Natural Resources (WDNR). 2003. Consensus-based Sediment Quality Guidelines, Recommendations for Use and Application, Interim Guidance. Contaminated Standing Team. WT-732 2003. December.

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Table 3-6A
Comparison of SVOC Concentrations to Sediment Benchmarks - November 2010 Duck Creek Confluence Sediment Samples
Duck and Otter Creeks Confluence Investigation
Toledo, Lucas County, Ohio

Location ID	Sediment Screening Benchmark [1]			DC-13	DC-13	DC-13	DC-13	DC-13	DC-14	DC-14	DC-14	DC-14	DC-14	DC-14
Field Sample ID				DC-13	DC-13-01	DC-13-02	DC-13-03	DC-13-04	DC-14	DC-14-01	DC-14-02	DC-14-03	DC-14-04	DC-14-05
Sampling Date	Low	High	Source	11/2/2010	11/2/2010	11/2/2010	11/2/2010	11/2/2010	11/3/2010	11/3/2010	11/3/2010	11/3/2010	11/3/2010	11/3/2010
SVOCs (µg/kg)														
4-METHYLPHENOL	182	2,647	FDEP TEL/PEL	**930 J**	300 U	270 U	1,300 U	4,200 U	2,100 U	1,900 U	**440 J**	1,600 U	1,500 U	1,400 U
BENZALDEHYDE	--	--	--	2,900 U	300 U	270 U	1,300 U	4,200 U	2,100 U	1,900 U	1,500 U	1,600 U	1,500 U	1,400 U
BIS(2-ETHYLHEXYL)PHTHALATE	20.2	670	R5 ESL / R3 BTAG Freshwater	2,900 U	300 U	270 U	1,300 U	4,200 U	2,100 U	1,900 U	1,500 U	1,600 U	**6,500**	**13,000**
NITROBENZENE	145	--	R5 ESL	2,900 U	300 U	270 U	1,300 U	4,200 U	2,100 U	1,900 U	1,500 U	1,600 U	1,500 U	1,400 U

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Table 3-6A
Comparison of SVOC Concentrations to Sediment Benchmarks - November 2010 Duck Creek Confluence Sediment Samples
Duck and Otter Creeks Confluence Investigation
Toledo, Lucas County, Ohio

Location ID	Sediment Screening Benchmark [1]			DC-16	DC-16	DC-16	DC-16	DC-16	DC-16	DC-16	DC-16	DC-17	DC-17	DC-17
Field Sample ID				DC-16	DC-16-01	DC-16-02	DC-16-03	DC-16-04	DC-16-05	DC-16-06	DC-16-07	DC-17	DC-17-01	DC-17-02
Sampling Date	Low	High	Source	11/2/2010	11/2/2010	11/2/2010	11/2/2010	11/2/2010	11/2/2010	11/2/2010	11/2/2010	11/2/2010	11/2/2010	11/2/2010
SVOCs (µg/kg)														
4-METHYLPHENOL	182	2,647	FDEP TEL/PEL	3,400 U	1,400 U	**1,400 J**	**5,700**	**1,100 J**	1,400 U	2,800 U	2,700 U	8,400 U	1,900 U	2,900 U
BENZALDEHYDE	--	--	--	3,400 U	1,400 U	1,600 U	**530 J**	2,900 U	1,400 U	2,800 U	2,700 U	8,400 U	1,900 U	2,900 U
BIS(2-ETHYLHEXYL)PHTHALATE	20.2	670	R5 ESL / R3 BTAG Freshwater	3,400 U	1,400 U	1,600 U	1,400 U	**8,100**	**6,200**	**7,900**	**12,000**	8,400 U	1,900 U	2,900 U
NITROBENZENE	145	--	R5 ESL	3,400 U	1,400 U	**1,100 J**	**760 J**	2,900 U	1,400 U	2,800 U	2,700 U	8,400 U	1,900 U	2,900 U

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Table 3-6A
Comparison of SVOC Concentrations to Sediment Benchmarks - November 2010 Duck Creek Confluence Sediment Samples
Duck and Otter Creeks Confluence Investigation
Toledo, Lucas County, Ohio

Location ID	Sediment Screening Benchmark [1]			DC-17	DC-17	DC-17	DC-17	DC-17	DC-19	DC-19	DC-19	DC-19	DC-19	DC-19
Field Sample ID				DC-17-03	DC-17-04	DC-17-05	DC-17-06	DC-17-07	DC-19	DC-19-01	DC-19-01FS	DC-19-02	DC-19-02FS	DC-19-03
Sampling Date	Low	High	Source	11/2/2010	11/2/2010	11/2/2010	11/2/2010	11/2/2010	11/2/2010	11/2/2010	11/2/2010	11/2/2010	11/2/2010	11/2/2010
SVOCs (µg/kg)														
4-METHYLPHENOL	182	2,647	FDEP TEL/PEL	3,000 U	2,700 U	5,800 U	5,800 U	5,500 U	4,400 U	1,900 UJ	3,600 U	**490 J**	**680 J**	1,200 U
BENZALDEHYDE	--	--	--	3,000 U	2,700 U	5,800 U	5,800 U	5,500 U	4,400 U	1,900 UJ	3,600 U	1,400 U	1,400 U	1,200 U
BIS(2-ETHYLHEXYL)PHTHALATE	20.2	670	R5 ESL / R3 BTAG Freshwater	**1,700 J**	**11,000**	**16,000**	**8,100**	**6,300**	4,400 U	1,900 U	3,600 U	**1,300 J**	**850 J**	**2,500**
NITROBENZENE	145	--	R5 ESL	3,000 U	2,700 U	5,800 U	5,800 U	5,500 U	4,400 U	1,900 UJ	3,600 U	1,400 U	1,400 U	1,200 U

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Table 3-6A
Comparison of SVOC Concentrations to Sediment Benchmarks - November 2010 Duck Creek Confluence Sediment Samples
Duck and Otter Creeks Confluence Investigation
Toledo, Lucas County, Ohio

Location ID	Sediment Screening Benchmark [1]			DC-19	DC-19	DC-19	DC-19	DC-19	DC-19
Field Sample ID				DC-19-03FS	DC-19-04	DC-19-05	DC-19-05FS	DC-19FS	DC-19-04FS
Sampling Date	Low	High	Source	11/2/2010	11/2/2010	11/2/2010	11/2/2010	11/2/2010	11/3/2010
SVOCs (µg/kg)									
4-METHYLPHENOL	182	2,647	FDEP TEL/PEL	1,200 U	2,800 U	1,400 U	290 U	4,200 U	1,300 U
BENZALDEHYDE	--	--	--	1,200 U	2,800 U	1,400 U	290 U	4,200 U	1,300 U
BIS(2-ETHYLHEXYL)PHTHALATE	20.2	670	R5 ESL / R3 BTAG Freshwater	**2,600**	**31,000**	**6,400**	**210 J**	4,200 U	1,300 U
NITROBENZENE	145	--	R5 ESL	1,200 U	2,800 U	1,400 U	290 U	4,200 U	1,300 U

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Table 3-6A
Comparison of SVOC Concentrations to Sediment Benchmarks - November 2010 Duck Creek Confluence Sediment Samples
Duck and Otter Creeks Confluence Investigation
Toledo, Lucas County, Ohio

Notes:
Bold result exceeds low sediment benchmark
Shaded result exceeds high benchmark
-- = Criterion or value not available
µg/kg = Microgram per kilogram
FDEP TEL/PEL = Florida Department of Enviornmental Protection threshold effect level/probable effect level
ID = Identification
J = Estimated value; concentration below RL or exceeded RL, but one or more quality control parameters were outside control limits
R3 BTAG = U.S. EPA Region 3 Biological Technical Assistance Group Freshwater Sediment Screening Benchmarks
R5 ESL = U.S. EPA Region 5 ecological screening level for sediment
RL = Reporting limit
SVOC = Semivolatile organic compound
U = Not detected above RL
UJ = Not detected above RL; however, RL approximate
U.S. EPA = U.S. Environmental Protection Agency
[1] Sediment screening benchmarks from Oak Ridge National Laboratory (ORNL) Risk Assessment Information System (RAIS) (http://rais.ornl.gov/tools/eco_search.php); accessed on 7/24/2011

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Table 3-6B
Comparison of SVOC Concentrations to Sediment Benchmarks - May 2011 Duck Creek Confluence Sediment Samples
Duck and Otter Creeks Confluence Investigation
Toledo, Lucas County, Ohio

Field Sample ID	Sediment Screening Benchmark [1]			DC-20-01	DC-20-02	DC-20-03	DC-21-01	DC-21-02	DC-22-01	DC-22-02	DC-22-03	DC-23-01	DC-23-02
Sampling Date	Low	High	Source	5/11/2011	5/11/2011	5/11/2011	5/11/2011	5/11/2011	5/11/2011	5/11/2011	5/11/2011	5/11/2011	5/11/2011
SVOCs (µg/kg)													
1,1-BIPHENYL	--	60	R4	**170 J**	390 U	340 U	300 U	250 U	240 U	310 U	330 U	460 U	410 U
4-METHYLPHENOL	182	2,647	FDEP TEL/PEL	**410 J**	390 U	**340 J**	**190 J**	250 U	240 U	310 U	190 J	460 U	410 U
ACETOPHENONE	--	300	R5 ESL	320 U	390 U	340 U	300 U	250 U	240 U	310 U	330 U	460 U	410 U
BIS(2-ETHYLHEXYL)PHTHALATE	20.2	670	R5 ESL / R3 BTAG Freshwater	**490 J**	**220 J**	**120 J**	**770 J**	**940 J**	**170 J**	**280 J**	**260 J**	**210 J**	**210 J**
CARBAZOLE	--	--	--	380 J	390 U	280 J	300 U	250 U	240 U	310 U	330 U	460 U	410 U
DIBENZOFURAN	--	--	--	180 J	390 U	340 U	300 U	250 U	240 U	310 U	330 U	460 U	410 U
DI-N-BUTYLPHTHALATE	0.15	200	R5 ESL / R4	320 U	390 U	340 U	**120 J**	250 U	240 U	310 U	330 U	460 U	410 U
N-NITROSODIPHENYLAMINE	0.545	20	R5 ESL / R4	320 U	390 U	340 U	300 U	250 U	240 U	310 U	330 U	460 U	410 U
PHENOL	0.05	120	R4 / R5 ESL	320 U	**220 J**	**360 J**	300 U	250 U	240 U	310 U	330 U	460 U	410 U

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Table 3-6B
Comparison of SVOC Concentrations to Sediment Benchmarks - May 2011 Duck Creek Confluence Sediment Samples
Duck and Otter Creeks Confluence Investigation
Toledo, Lucas County, Ohio

Field Sample ID	Sediment Screening Benchmark [1]			DC-23-03	DC-23-04	DC-24-01	DC-24-02	DC-24-03	DC-25-01	DC-25-01-DP	DC-25-02	DC-25-02-DP	DC-25-03
Sampling Date	Low	High	Source	5/11/2011	5/11/2011	5/11/2011	5/11/2011	5/11/2011	5/11/2011	5/11/2011	5/11/2011	5/11/2011	5/11/2011
SVOCs (µg/kg)													
1,1-BIPHENYL	--	60	R4	320 U	290 U	440 U	250 U	280 U	370 U	360 U	350 U	360 U	270 U
4-METHYLPHENOL	182	2,647	FDEP TEL/PEL	320 U	290 U	**290 J**	250 U	280 U	**590 J**	360 U	350 U	360 U	270 U
ACETOPHENONE	--	300	R5 ESL	320 U	290 U	440 U	250 U	280 U	370 U	360 U	350 U	360 U	270 U
BIS(2-ETHYLHEXYL)PHTHALATE	20.2	670	R5 ESL / R3 BTAG Freshwater	**470 J**	**820 J**	**310 J**	**160 J**	**510 J**	**1,200 J**	**260 J**	**3,300 J**	**2,000 J**	**550 J**
CARBAZOLE	--	--	--	320 U	290 U	440 U	250 U	280 U	370 U	360 U	350 U	360 U	270 U
DIBENZOFURAN	--	--	--	320 U	290 U	440 U	250 U	280 U	370 U	360 U	350 U	360 U	270 U
DI-N-BUTYLPHTHALATE	0.15	200	R5 ESL / R4	320 U	290 U	440 U	250 U	280 U	370 U	360 U	350 U	360 U	270 U
N-NITROSODIPHENYLAMINE	0.545	20	R5 ESL / R4	320 U	290 U	440 U	250 U	280 U	370 U	360 U	350 U	360 U	270 U
PHENOL	0.05	120	R4 / R5 ESL	320 U	290 U	440 U	250 U	280 U	370 U	360 U	350 U	360 U	270 U

Notes:
Bold result exceeds low sediment benchmark
Shaded result exceeds high benchmark
-- = Criterion or value not available
µg/kg = Microgram per kilogram
FDEP TEL/PEL = Florida Department of Enviornmental Protection threshold effect level/probable effect level
ID = Identification
J = Estimated value; concentration below RL or exceeded RL, but one or more quality control parameters were outside control limits
R3 BTAG = U.S. EPA Region 3 Biological Technical Assistance Group Freshwater Sediment Screening Benchmarks
R4 = U.S EPA Region IV ecological screening value from U.S. EPA 2001
R5 ESL = U.S. EPA Region 5 ecological screening level for sediment
RL = Reporting limit
SVOC = Semivolatile organic compound
U = Not detected above RL
UJ = Not detected above RL; however, RL approximate
U.S. EPA = U.S. Environmental Protection Agency
[1] Sediment screening benchmarks from Oak Ridge National Laboratory (ORNL) Risk Assessment Information System (RAIS) (http://rais.ornl.gov/tools/eco_search.php); accessed on

Source:
U.S. EPA. 2001. "Supplemental Guidance to RAGS: Region 4 Bulletins, Ecological Risk Assessment."

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Table 3-7
Grain Size Analysis - Duck Creek Confluence Sediment Samples
Duck and Otter Creeks Confluence Investigation
Toledo, Lucas County, Ohio

Grain Size	Field Sample ID	DC-13	DC-14	DC-16	DC-17	DC-19	DC-19FS	DC-20-01	DC-21-01	DC-22-01	DC-23-01	DC-24-01	DC-25-01
	Sampling Date	11/2/2010	11/3/2010	11/2/2010	11/2/2010	11/2/2010	11/2/2010	5/11/2011	5/11/2011	5/11/2011	5/11/2011	5/11/2011	5/11/2011
Analytical Method D422	**Unit**												
GRAVEL	%	1.2	0	0.2	0	0	0	7.2	12.3	6	0.1	0.5	13.1
SAND	%	61.2	2.4	29.4	5.7	4.6	5.8	69	65.8	82.5	12.5	19	27.8
COARSE SAND	%	2.4	0	1.2	0	0	0	18.3	11.9	8.3	0.5	0.7	5.7
MEDIUM SAND	%	13.1	0.6	5	0.8	1.8	2.3	37.2	23.7	33.9	2	1.1	7.7
FINE SAND	%	45.7	1.8	23.2	4.9	2.8	3.5	13.5	30.2	40.3	10	17.2	14.4
SILT	%	26.4	43.7	46.6	45.6	44.5	45.1	12.8	17.9	4.5	54	43	39.3
CLAY	%	11.2	53.9	23.8	48.7	50.9	49.1	11	4	7	33.4	37.5	19.8
SIEVE SIZE 3 INCH - PERCENT FINER	% PASSED	100	100	100	100	100	100	100	100	100	100	100	100
SIEVE SIZE 2 INCH - PERCENT FINER	% PASSED	100	100	100	100	100	100	100	100	100	100	100	100
SIEVE SIZE 1.5 INCH - PERCENT FINER	% PASSED	100	100	100	100	100	100	100	100	100	100	100	100
SIEVE SIZE 1 INCH - PERCENT FINER	% PASSED	100	100	100	100	100	100	100	100	100	100	100	100
SIEVE SIZE 0.75 INCH - PERCENT FINER	% PASSED	100	100	100	100	100	100	95.7	100	100	100	100	100
SIEVE SIZE 0.375 INCH - PERCENT FINER	% PASSED	99.5	100	100	100	100	100	94.3	96.8	98.1	100	100	91.3
SIEVE SIZE #4 - PERCENT FINER	% PASSED	98.8	100	99.8	100	100	100	74.5	75.8	85.7	99.4	98.8	81.2
SIEVE SIZE #10 - PERCENT FINER	% PASSED	96.4	100	98.6	100	100	100	29.3	28.7	15.6	94.1	91.9	62.9
SIEVE SIZE #20 - PERCENT FINER	% PASSED	93.2	99.7	96.6	99.6	99.2	98.7	44.9	63.5	73.2	98.3	98.2	77.5
SIEVE SIZE #40 - PERCENT FINER	% PASSED	83.3	99.4	93.6	99.2	98.2	97.7	23.8	21.9	11.5	87.4	80.5	59.1
SIEVE SIZE #60 - PERCENT FINER	% PASSED	72	99	89.2	98.5	97.6	96.6	92.8	87.7	94	99.9	99.5	86.9
SIEVE SIZE #80 - PERCENT FINER	% PASSED	61.7	98.7	84.6	97.9	96.9	96	37.3	52.1	51.8	97.4	97.7	73.5
SIEVE SIZE #100 - PERCENT FINER	% PASSED	55.4	98.5	81.8	97.5	96.7	95.7	33.5	41.5	27.9	96.1	96.4	68.1
SIEVE SIZE #200 - PERCENT FINER	% PASSED	37.6	97.6	70.4	94.3	95.4	94.2	30.9	33.4	18.5	95	94.2	64.6
HYDROMETER READING 1 - PERCENT FINER	% PASSED	22.3	92	47.4	79.9	85.6	85	23.4	17.5	12	68.1	67	48.5
HYDROMETER READING 2 - PERCENT FINER	% PASSED	18.2	78.2	43.2	73.7	76.9	76.4	21.2	13.6	11.4	60.2	58.2	44.8
HYDROMETER READING 3 - PERCENT FINER	% PASSED	15.2	64.3	32.1	61.2	65.4	64.9	15.4	5.2	10.1	47.6	52.3	33.7
HYDROMETER READING 4 - PERCENT FINER	% PASSED	13.2	57.4	29.4	53.4	56.7	56.3	12.4	4.6	8.9	42.9	44.9	25.3
HYDROMETER READING 5 - PERCENT FINER	% PASSED	11.2	53.9	23.8	48.7	50.9	49.1	11	4	7	33.4	37.5	19.8
HYDROMETER READING 6 - PERCENT FINER	% PASSED	7.2	43.6	19.6	37.8	39.3	39	8.8	3.3	5.8	27.1	30.1	14.2
HYDROMETER READING 7 - PERCENT FINER	% PASSED	4	29.7	13.9	23.7	27.7	27.5	7.4	2.7	4.5	19.2	22.4	8.6

Notes:
% = Percent
ID = Identification

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Table 3-8
PEC and PEC-Qs for Metals - Duck Creek Confluence Sediment Samples
Duck and Otter Creeks Confluence Investigation
Toledo, Lucas County, Ohio

Field Sample ID	Consensus-Based PEC	DC-13		DC-13-01		DC-13-02		DC-13-03		DC-13-04		DC-14		DC-14-01	
Sampling Date		11/2/2010		11/2/2010		11/2/2010		11/2/2010		11/2/2010		11/3/2010		11/3/2010	
Metals [1]		Result (mg/kg)	PEC-Q	Result (mg/kg)	PEC-Q	Result (mg/kg)	PEC-Q	Result (mg/kg)	PEC-Q	Result (mg/kg)	PEC-Q	Result (mg/kg)	PEC-Q	Result (mg/kg)	PEC-Q
ARSENIC	33	9.3	0.282	19.5	**0.591**	17.8	**0.539**	16.9	**0.512**	10.4	0.315	8.5	0.258	9.3	0.282
CADMIUM	4.98	0.8 J	0.161	1.1 J	0.221	0.2 J	0.040	0.62 J	0.124	0.67 J	0.135	0.94	0.189	1	0.201
CHROMIUM	111	15	0.135	30.3	0.273	7	0.063	13.9	0.125	14.7	0.132	24.6	0.222	26.7	0.241
COPPER	149	24.5	0.164	35.9	0.241	9.2	0.062	17.7	0.119	24.7	0.166	32.3	0.217	32.8	0.220
LEAD	126	21.5	0.171	40.9 J	0.325	9.1 J	0.072	20.2 J	0.160	32.6 J	0.259	22.1	0.175	25.9	0.206
NICKEL	48.6	54.9	**1.130**	34.4 J	**0.708**	10 J	0.206	14.7 J	0.302	15.1 J	0.311	33.3	**0.685**	32.9	**0.677**
ZINC	459	138	0.301	206 J	0.449	35.7 J	0.078	59.4 J	0.129	49.1 J	0.107	129 J	0.281	137 J	0.298
MERCURY	1.06	0.068 J	0.064	0.065 J	0.061	0.031 J	0.029	0.12 J	0.113	0.065 J	0.061	0.066 J	0.062	0.067 J	0.063
Mean PEC-Q			0.33		0.40		0.15		0.21		0.20		0.29		0.30

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Table 3-8
PEC and PEC-Qs for Metals - Duck Creek Confluence Sediment Samples
Duck and Otter Creeks Confluence Investigation
Toledo, Lucas County, Ohio

Field Sample ID	Consensus-Based PEC	DC-14-02		DC-14-03		DC-14-04		DC-14-05		DC-16		DC-16-01		DC-16-02	
Sampling Date		11/3/2010		11/3/2010		11/3/2010		11/3/2010		11/2/2010		11/2/2010		11/2/2010	
Metals [1]		Result (mg/kg)	PEC-Q	Result (mg/kg)	PEC-Q	Result (mg/kg)	PEC-Q	Result (mg/kg)	PEC-Q	Result (mg/kg)	PEC-Q	Result (mg/kg)	PEC-Q	Result (mg/kg)	PEC-Q
ARSENIC	33	10.2	0.309	10.5	0.318	14	0.424	13.2	0.400	11	0.333	12.7	0.385	22.7	**0.688**
CADMIUM	4.98	1.1 J	0.221	1.2	0.241	3.9	**0.783**	6.3	1.265	1.3	0.261	1.1	0.221	1	0.201
CHROMIUM	111	27.4	0.247	26.3	0.237	69.8	**0.629**	119	1.072	24.8	0.223	25.9	0.233	20.1	0.181
COPPER	149	28.1	0.189	32.1	0.215	54.9	0.368	81.2	**0.545**	34.9	0.234	28	0.188	23.3	0.156
LEAD	126	27.7 J	0.220	28.3	0.225	55.6	0.441	83.2	**0.660**	33.4	0.265	29.1	0.231	29.9	0.237
NICKEL	48.6	29.2 J	**0.601**	30	**0.617**	39.6	**0.815**	51.5	**1.060**	42	**0.864**	27.2	**0.560**	29.3	**0.603**
ZINC	459	118 J	0.257	156 J	0.340	188 J	0.410	285 J	**0.621**	168	0.366	135	0.294	109	0.237
MERCURY	1.06	0.095 J	0.090	0.075 J	0.071	0.25	0.236	0.49	0.462	0.074 J	0.070	0.061 J	0.058	0.046 J	0.043
Mean PEC-Q			0.29		0.31		**0.55**		**0.80**		0.36		0.30		0.33

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Table 3-8
PEC and PEC-Qs for Metals - Duck Creek Confluence Sediment Samples
Duck and Otter Creeks Confluence Investigation
Toledo, Lucas County, Ohio

Field Sample ID	Consensus-Based PEC	DC-16-03		DC-16-04		DC-16-05		DC-16-06		DC-16-07		DC-17		DC-17-01	
Sampling Date		11/2/2010		11/2/2010		11/2/2010		11/2/2010		11/2/2010		11/2/2010		11/2/2010	
Metals [1]		Result (mg/kg)	PEC-Q	Result (mg/kg)	PEC-Q	Result (mg/kg)	PEC-Q	Result (mg/kg)	PEC-Q	Result (mg/kg)	PEC-Q	Result (mg/kg)	PEC-Q	Result (mg/kg)	PEC-Q
ARSENIC	33	18.9	**0.573**	15.9	0.482	9.4	0.285	11.9 J-	0.361	12.5 J-	0.379	8.8	0.267	12.4	0.376
CADMIUM	4.98	0.74 J	0.149	2.1	0.422	1.9	0.382	4.7 J-	**0.944**	5.1 J-	**1.024**	0.72 J	0.145	1.1 J	0.221
CHROMIUM	111	13.5	0.122	35.6	0.321	35.2	0.317	89.3 J-	**0.805**	87.6 J-	**0.789**	25.3	0.228	29.2	0.263
COPPER	149	24.9	0.167	31.8	0.213	26.7	0.179	65.7 J-	0.441	65.6 J-	0.440	32.4	0.217	32	0.215
LEAD	126	20.6	0.163	34.4	0.273	29.7	0.236	72.7 J-	**0.577**	65.7 J-	**0.521**	26.6 J	0.211	39.4 J	0.313
NICKEL	48.6	17.6	0.362	25.4	**0.523**	20.7	0.426	43.1 J-	**0.887**	44.1 J-	**0.907**	48 J	**0.988**	33.6 J	**0.691**
ZINC	459	75.3	0.164	117	0.255	97.4	0.212	205 J-	0.447	216 J-	0.471	143 J	0.312	178 J	0.388
MERCURY	1.06	0.033 J	0.031	0.15 J	0.142	0.33	0.311	0.47 J-	0.443	0.45 J-	0.425	0.062 J	0.058	0.07 J	0.066
Mean PEC-Q			0.24		0.36		0.29		**0.64**		**0.65**		0.34		0.35

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Table 3-8
PEC and PEC-Qs for Metals - Duck Creek Confluence Sediment Samples
Duck and Otter Creeks Confluence Investigation
Toledo, Lucas County, Ohio

Field Sample ID	Consensus-Based PEC	DC-17-02		DC-17-03		DC-17-04		DC-17-05		DC-17-06		DC-17-07		DC-19	
Sampling Date		11/2/2010		11/2/2010		11/2/2010		11/2/2010		11/2/2010		11/2/2010		11/2/2010	
Metals [1]		Result (mg/kg)	PEC-Q	Result (mg/kg)	PEC-Q	Result (mg/kg)	PEC-Q	Result (mg/kg)	PEC-Q	Result (mg/kg)	PEC-Q	Result (mg/kg)	PEC-Q	Result (mg/kg)	PEC-Q
ARSENIC	33	17.4	**0.527**	15.4	0.467	13.9	0.421	11.8	0.358	13.7	0.415	11.6	0.352	10.4	0.315
CADMIUM	4.98	1.6 J	0.321	1.5 J	0.301	4.2 J	**0.843**	4.8 J	**0.964**	4.3 J	**0.863**	5.1	**1.024**	1.4	0.281
CHROMIUM	111	29.9	0.269	26	0.234	81.8	**0.737**	84.9	**0.765**	81.9	**0.738**	86.8	**0.782**	30.7	0.277
COPPER	149	32.5	0.218	27.9	0.187	60.6	0.407	61.6	0.413	60.5	0.406	65.6	0.440	36.2	0.243
LEAD	126	37 J	0.294	33.3 J	0.264	61.3 J	0.487	63.4 J	**0.503**	61.8 J	0.490	65.7	**0.521**	26.5	0.210
NICKEL	48.6	29.9 J	**0.615**	23.1 J	0.475	43 J	**0.885**	45.9 J	**0.944**	43.5 J	**0.895**	43.4	**0.893**	44.5	**0.916**
ZINC	459	139 J	0.303	107 J	0.233	211 J	0.460	220 J	0.479	209 J	0.455	215 J	0.468	148	0.322
MERCURY	1.06	0.11 J	0.104	0.14 J	0.132	0.37	0.349	0.28	0.264	0.29	0.274	0.38	0.358	0.072 J	0.068
Mean PEC-Q			0.36		0.31		**0.61**		**0.63**		**0.61**		**0.64**		0.37

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Table 3-8
PEC and PEC-Qs for Metals - Duck Creek Confluence Sediment Samples
Duck and Otter Creeks Confluence Investigation
Toledo, Lucas County, Ohio

Field Sample ID	Consensus-Based PEC	DC-19-01		DC-19-01FS		DC-19-02		DC-19-02FS		DC-19-03		DC-19-03FS		DC-19-04	
Sampling Date		11/2/2010		11/2/2010		11/2/2010		11/2/2010		11/2/2010		11/2/2010		11/2/2010	
Metals [1]		Result (mg/kg)	PEC-Q	Result (mg/kg)	PEC-Q	Result (mg/kg)	PEC-Q	Result (mg/kg)	PEC-Q	Result (mg/kg)	PEC-Q	Result (mg/kg)	PEC-Q	Result (mg/kg)	PEC-Q
ARSENIC	33	12.7	0.385	10.4	0.315	11.8	0.358	9.3	0.282	9.8	0.297	6.6	0.200	6.7	0.203
CADMIUM	4.98	2	0.402	1.4	0.281	1.6	0.321	1.2	0.241	2	0.402	1.3	0.261	2.8	**0.562**
CHROMIUM	111	36	0.324	30.8	0.277	26.9	0.242	21.2	0.191	32.8	0.295	20.7	0.186	55.5	**0.500**
COPPER	149	36.4	0.244	34.1	0.229	24.9	0.167	19.1	0.128	28.7	0.193	17.8	0.119	35.7	0.240
LEAD	126	35.3	0.280	24.6	0.195	26.9	0.213	21.1	0.167	31.6	0.251	20.4	0.162	35.5	0.282
NICKEL	48.6	38.8	**0.798**	40.4	**0.831**	22.6	0.465	18.4	0.379	23.6	0.486	15.1	0.311	24	0.494
ZINC	459	155	0.338	142	0.309	97	0.211	76.1	0.166	105	0.229	63.3	0.138	127	0.277
MERCURY	1.06	0.074 J	0.070	0.066 J	0.062	0.15 J	0.142	0.14 J	0.132	0.19	0.179	0.16	0.151	0.46	0.434
Mean PEC-Q			0.40		0.35		0.28		0.22		0.31		0.20		0.37

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Table 3-8
PEC and PEC-Qs for Metals - Duck Creek Confluence Sediment Samples
Duck and Otter Creeks Confluence Investigation
Toledo, Lucas County, Ohio

Field Sample ID	Consensus-Based PEC	DC-19-05		DC-19-05FS		DC-19FS		DC-19-04FS		DC-20-01		DC-20-02		DC-20-03	
Sampling Date		11/2/2010		11/2/2010		11/2/2010		11/3/2010		5/11/2011		5/11/2011		5/11/2011	
Metals [1]		Result (mg/kg)	PEC-Q	Result (mg/kg)	PEC-Q	Result (mg/kg)	PEC-Q	Result (mg/kg)	PEC-Q	Result (mg/kg)	PEC-Q	Result (mg/kg)	PEC-Q	Result (mg/kg)	PEC-Q
ARSENIC	33	8.6	0.261	8.2	0.248	10.2	0.309	8.2	0.248	3.6 J-	0.109	18.9 J-	**0.573**	21.7 J-	**0.658**
CADMIUM	4.98	3.2	**0.643**	3	**0.602**	1.3	0.261	3.4	**0.683**	0.76 U	0.153	1.8 J-	0.361	1.4 J-	0.281
CHROMIUM	111	54.7	0.493	54.1	0.487	29.7	0.268	62.1	**0.559**	7.4 J-	0.067	39.3 J-	0.354	24.8 J-	0.223
COPPER	149	39.4	0.264	37.2	0.250	34.6	0.232	41.6	0.279	9.3 J-	0.062	41.9 J-	0.281	28.1 J-	0.189
LEAD	126	39	0.310	36.9	0.293	23.9	0.190	42.8	0.340	13.1 J-	0.104	63.9 J-	**0.507**	158 J-	**1.254**
NICKEL	48.6	28.8	**0.593**	28.2	**0.580**	42	**0.864**	28.1	**0.578**	77.8 J-	**1.601**	44.3 J-	**0.912**	48.2 J-	**0.992**
ZINC	459	133	0.290	129	0.281	143	0.312	147	0.320	48.4 J-	0.105	218 J-	0.475	160 J-	0.349
MERCURY	1.06	0.31	0.292	0.37	0.349	0.059 J	0.056	0.55	**0.519**	0.0027 J-	0.003	0.22 R	0.208	0.0095 J-	0.009
Mean PEC-Q			0.41		0.39		0.35		0.43		0.37		0.49		**0.56**

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Table 3-8
PEC and PEC-Qs for Metals - Duck Creek Confluence Sediment Samples
Duck and Otter Creeks Confluence Investigation
Toledo, Lucas County, Ohio

Field Sample ID	Consensus-Based PEC	DC-21-01		DC-21-02		DC-22-01		DC-22-02		DC-22-03		DC-23-01		DC-23-02	
Sampling Date		5/11/2011		5/11/2011		5/11/2011		5/11/2011		5/11/2011		5/11/2011		5/11/2011	
Metals [1]		Result (mg/kg)	PEC-Q	Result (mg/kg)	PEC-Q	Result (mg/kg)	PEC-Q	Result (mg/kg)	PEC-Q	Result (mg/kg)	PEC-Q	Result (mg/kg)	PEC-Q	Result (mg/kg)	PEC-Q
ARSENIC	33	10.5 J-	0.318	15.1 J-	0.458	11.9 J-	0.361	15.5 J-	0.470	26 J-	**0.788**	6.2 J-	0.188	7.6 J-	0.230
CADMIUM	4.98	0.64 J-	0.129	2.5 J-	**0.502**	0.64 U	0.129	1.1 J-	0.221	1.6 J-	0.321	1.4 U	0.281	1.1 U	0.221
CHROMIUM	111	12.9 J-	0.116	46.2 J-	0.416	9 J-	0.081	21.9 J-	0.197	25.6 J-	0.231	17.2 J-	0.155	18.7 J-	0.168
COPPER	149	27.4 J-	0.184	41.2 J-	0.277	18.8 J-	0.126	28.3 J-	0.190	27.4 J-	0.184	27.4 J-	0.184	22.4 J-	0.150
LEAD	126	24.4 J-	0.194	38.2 J-	0.303	14.9 J-	0.118	28.7 J-	0.228	34.6 J-	0.275	22.6 J-	0.179	21.5 J-	0.171
NICKEL	48.6	25.7 J-	**0.529**	33.9 J-	**0.698**	22.6 J-	0.465	29.1 J-	**0.599**	30.3 J-	**0.623**	27.2 J-	**0.560**	23.1 J-	0.475
ZINC	459	119 J-	0.259	155 J-	0.338	65.1 J-	0.142	145 J-	0.316	123 J-	0.268	111 J-	0.242	118 J-	0.257
MERCURY	1.06	0.015 J-	0.014	0.12 J-	0.113	0.0093 J-	0.009	0.039 J-	0.037	0.036 J-	0.034	0.1 J-	0.094	0.11 J-	0.104
Mean PEC-Q			0.25		0.43		0.24		0.32		0.38		0.30		0.28

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Table 3-8
PEC and PEC-Qs for Metals - Duck Creek Confluence Sediment Samples
Duck and Otter Creeks Confluence Investigation
Toledo, Lucas County, Ohio

Field Sample ID / Sampling Date / Metals [1]	Consensus-Based PEC	DC-23-03 5/11/2011		DC-23-04 5/11/2011		DC-24-01 5/11/2011		DC-24-02 5/11/2011		DC-24-03 5/11/2011	
		Result (mg/kg)	PEC-Q	Result (mg/kg)	PEC-Q	Result (mg/kg)	PEC-Q	Result (mg/kg)	PEC-Q	Result (mg/kg)	PEC-Q
ARSENIC	33	14 J-	0.424	12.4 J-	0.376	8.5 J-	0.258	10.5 J-	0.318	9.4 J-	0.285
CADMIUM	4.98	1.3 J-	0.261	1.2 J-	0.241	1.3 U	0.261	1.2 J-	0.241	1.6 J-	0.321
CHROMIUM	111	24.7 J-	0.223	20.6 J-	0.186	22.9 J-	0.206	31 J-	0.279	28.6 J-	0.258
COPPER	149	26.3 J-	0.177	21.2 J-	0.142	30.7 J-	0.206	37 J-	0.248	26.6 J-	0.179
LEAD	126	29.5 J-	0.234	23.4 J-	0.186	25.9 J-	0.206	31.5 J-	0.250	31.6 J-	0.251
NICKEL	48.6	23.6 J-	0.486	20.1 J-	0.414	66.6 J-	**1.370**	39.9 J-	**0.821**	22.3 J-	0.459
ZINC	459	108 J-	0.235	76.6 J-	0.167	127 J-	0.277	166 J-	0.362	96.2 J-	0.210
MERCURY	1.06	0.25 J-	0.236	1.2 J-	**1.132**	0.028 J-	0.026	0.044 J-	0.042	0.21 J-	0.198
Mean PEC-Q			0.29		0.24		0.46		0.36		0.28

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Table 3-8
PEC and PEC-Qs for Metals - Duck Creek Confluence Sediment Samples
Duck and Otter Creeks Confluence Investigation
Toledo, Lucas County, Ohio

Field Sample ID	Consensus-Based PEC	DC-25-01		DC-25-01-DP		DC-25-02		DC-25-02-DP		DC-25-03	
Sampling Date		5/11/2011		5/11/2011		5/11/2011		5/11/2011		5/11/2011	
Metals [1]		Result (mg/kg)	PEC-Q	Result (mg/kg)	PEC-Q	Result (mg/kg)	PEC-Q	Result (mg/kg)	PEC-Q	Result (mg/kg)	PEC-Q
ARSENIC	33	41.8	**1.267**	83.2	**2.521**	42.7	**1.294**	13.5 J-	0.409	12.5	0.379
CADMIUM	4.98	1.1	0.221	2.5	**0.502**	4.4	**0.884**	2.3 J-	0.462	2.1	0.422
CHROMIUM	111	18.8	0.169	38.1	0.343	80.7	**0.727**	44.5 J-	0.401	41.9	0.377
COPPER	149	20	0.134	35.6	0.239	61.1	0.410	34.1 J-	0.229	44.5	0.299
LEAD	126	29.7	0.236	84.3	**0.669**	67.7	**0.537**	36.7 J-	0.291	47.2	0.375
NICKEL	48.6	22.4	0.461	29.6	**0.609**	47.4	**0.975**	25.2 J-	**0.519**	37.1	**0.763**
ZINC	459	83.3 J	0.181	162 J	0.353	224 J	0.488	122 J-	0.266	157 J	0.342
MERCURY	1.06	0.2 U	0.189	0.21 U	0.198	0.21 U	0.198	0.61 J-	**0.575**	0.16 U	0.151
Mean PEC-Q			0.38		**0.75**		**0.76**		0.37		0.42

Notes:

Bold result exceeds PEC-Q of 0.5

ID = Identification

J = Estimated value; concentration below RL or exceeded RL, but one or more quality control parameters were outside control limits

J+ = Likely to have a high bias

J- = Likely to have a low bias

Mean PEC-Q = Sum(PEC-Q) / No. of inorganics positively detected

mg/kg = Milligram per kilogram

R = Data rejected because of quality control deficiencies

RL = Report limit

PEC = Probable effect concentration from Ingersoll and others 2000

PEC-Q = Result / PEC

U = Not detected above RL

1 Only arsenic, cadmium, chromium, copper, lead, nickel, and zinc were used to determine the metals PEC-Q.

Source:

Ingersoll, C.G., and others. 2000. “Prediction of Toxicity Using Consensus-based Freshwater Sediment Quality Guidelines.” U.S. Environmental Protection Agency (U.S. EPA) Great Lakes National Program Office (GLNPO). EPA-905/R-00/007.

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Table 3-9A
PEC and PEC-Qs for Total PAHs - November 2010 Duck Creek Confluence Sediment Samples
Duck and Otter Creeks Confluence Investigation
Toledo, Lucas County, Ohio

Location ID		DC-13	DC-13	DC-13	DC-13	DC-13	DC-14	DC-14	DC-14	DC-14	DC-14	DC-14	DC-16
Field Sample ID		**DC-13**	**DC-13-01**	**DC-13-02**	**DC-13-03**	**DC-13-04**	**DC-14**	**DC-14-01**	**DC-14-02**	**DC-14-03**	**DC-14-04**	**DC-14-05**	**DC-16**
Sampling Date		**11/2/2010**	**11/2/2010**	**11/2/2010**	**11/2/2010**	**11/2/2010**	**11/3/2010**	**11/3/2010**	**11/3/2010**	**11/3/2010**	**11/3/2010**	**11/3/2010**	**11/2/2010**
TOC (%)	**Consensus PEC**	33.6	5.49	3.05	6.25	10.7	9.05	4.98	2.51	3.56	3.6	3.53	18.8
PAHs (µg/kg)													
TOTAL 16 PPAHs (calculated by laboratory) [1]	22,800	**28,000** J	NA	NA	NA	NA	4,800 J	NA	NA	NA	NA	NA	9,400 J
TOC normalized Total PAH (PAH/%TOC)		833	NA	NA	NA	NA	530	NA	NA	NA	NA	NA	500
PEC-Q (16 PPAHs) [1,2]		***0.04***	NA	NA	NA	NA	***0.02***	NA	NA	NA	NA	NA	***0.02***
TOTAL PAHs (calculated by laboratory)	22,800	**97,000** J	NA	NA	NA	NA	15,000 J	NA	NA	NA	NA	NA	31,000 J
TOC normalized Total PAH (PAH/%TOC)		2,887	NA	NA	NA	NA	1,657	NA	NA	NA	NA	NA	1,649
PEC-Q (Total PAHs) [2]		***0.13***	NA	NA	NA	NA	***0.07***	NA	NA	NA	NA	NA	***0.07***
Total Parent PAHs (Sum of detections x 1.7)	22,800	**52,139**	338.3	87.89	2,811.80	**24,440.90**	8,712.50	7,508.90	2,932.50	8,528.90	12,175.40	**23,041.80**	17,255
TOC normalized Total PAH (PAH/%TOC)		1,552	**62**	**29**	**450**	**2,284**	**963**	**1,508**	**1,168**	**2,396**	**3,382**	**6,527**	**918**
PEC-Q (Total Parent PAHs) [2]		***0.07***	***0.003***	***0.001***	***0.02***	***0.10***	***0.04***	***0.07***	***0.05***	***0.11***	***0.15***	***0.29***	***0.04***

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Table 3-9A
PEC and PEC-Qs for Total PAHs - November 2010 Duck Creek Confluence Sediment Samples
Duck and Otter Creeks Confluence Investigation
Toledo, Lucas County, Ohio

Location ID		DC-16	DC-16	DC-16	DC-16	DC-16	DC-16	DC-16	DC-17	DC-17	DC-17	DC-17	DC-17
Field Sample ID		**DC-16-01**	**DC-16-02**	**DC-16-03**	**DC-16-04**	**DC-16-05**	**DC-16-06**	**DC-16-07**	**DC-17**	**DC-17-01**	**DC-17-02**	**DC-17-03**	**DC-17-04**
Sampling Date		**11/2/2010**	**11/2/2010**	**11/2/2010**	**11/2/2010**	**11/2/2010**	**11/2/2010**	**11/2/2010**	**11/2/2010**	**11/2/2010**	**11/2/2010**	**11/2/2010**	**11/2/2010**
TOC (%)	**Consensus PEC**	4	3.36	4.16	3.15	2.55	3.65	2.88	14.4	3.62	3.34	2.04	2.45
PAHs (µg/kg)													
TOTAL 16 PPAHs (calculated by laboratory) [1]	22,800	NA	NA	NA	NA	NA	NA	NA	11,000 J	NA	NA	NA	NA
TOC normalized Total PAH (PAH/%TOC)		NA	NA	NA	NA	NA	NA	NA	764	NA	NA	NA	NA
PEC-Q (16 PPAHs) [1,2]		NA	NA	NA	NA	NA	NA	NA	***0.03***	NA	NA	NA	NA
TOTAL PAHs (calculated by laboratory)	22,800	NA	NA	NA	NA	NA	NA	NA	**36,000** J	NA	NA	NA	NA
TOC normalized Total PAH (PAH/%TOC)		NA	NA	NA	NA	NA	NA	NA	2,500	NA	NA	NA	NA
PEC-Q (Total PAHs) [2]		NA	NA	NA	NA	NA	NA	NA	***0.11***	NA	NA	NA	NA
Total Parent PAHs (Sum of detections x 1.7)	22,800	10,647.10	3,250.40	1,416.10	22,610	16,100.70	**35,394**	**27,234**	22,332.90	13,768.30	7,089	5,135.70	15,150.40
TOC normalized Total PAH (PAH/%TOC)		**2,662**	**967**	**340**	**7,178**	**6,314**	**9,697**	**9,456**	**1,551**	**3,803**	**2,122**	**2,518**	**6,184**
PEC-Q (Total Parent PAHs) [2]		***0.12***	***0.04***	***0.01***	***0.31***	***0.28***	***0.43***	***0.41***	***0.07***	***0.17***	***0.09***	***0.11***	***0.27***

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Table 3-9A
PEC and PEC-Qs for Total PAHs - November 2010 Duck Creek Confluence Sediment Samples
Duck and Otter Creeks Confluence Investigation
Toledo, Lucas County, Ohio

Location ID		DC-17	DC-17	DC-17	DC-19	DC-19	DC-19	DC-19	DC-19	DC-19	DC-19	DC-19
Field Sample ID		DC-17-05	DC-17-06	DC-17-07	DC-19	DC-19-01	DC-19-01FS	DC-19-02	DC-19-02FS	DC-19-03	DC-19-03FS	DC-19-04
Sampling Date		11/2/2010	11/2/2010	11/2/2010	11/2/2010	11/2/2010	11/2/2010	11/2/2010	11/2/2010	11/2/2010	11/2/2010	11/2/2010
TOC (%)	**Consensus PEC**	2.73	2.79	2.88	9.86	4.77	5.66	2.48	2.42	2.74	2.61	4.41
PAHs (µg/kg)												
TOTAL 16 PPAHs (calculated by laboratory) [1]	22,800	NA	NA	NA	1,400 J	NA	NA	NA	NA	NA	NA	NA
TOC normalized Total PAH (PAH/%TOC)		NA	NA	NA	142	NA	NA	NA	NA	NA	NA	NA
PEC-Q (16 PPAHs) [1,2]		NA	NA	NA	***0.01***	NA	NA	NA	NA	NA	NA	NA
TOTAL PAHs (calculated by laboratory)	22,800	NA	NA	NA	4300 J	NA	NA	NA	NA	NA	NA	NA
TOC normalized Total PAH (PAH/%TOC)		NA	NA	NA	436	NA	NA	NA	NA	NA	NA	NA
PEC-Q (Total PAHs) [2]		NA	NA	NA	***0.02***	NA	NA	NA	NA	NA	NA	NA
Total Parent PAHs (Sum of detections x 1.7)	22,800	**27,223.80**	15,075.60	11,237	2,325.60	0 U	14,246	9,586.30	7,055	19,113.10	16,847	**31,535**
TOC normalized Total PAH (PAH/%TOC)		**9,972**	**5,403**	**3,902**	**236**	**0**	**2,517**	**3,865**	**2,915**	**6,976**	**6,455**	**7,151**
PEC-Q (Total Parent PAHs) [2]		***0.44***	***0.24***	***0.17***	***0.01***	***0.00***	***0.11***	***0.17***	***0.13***	***0.31***	***0.28***	***0.31***

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Table 3-9A
PEC and PEC-Qs for Total PAHs - November 2010 Duck Creek Confluence Sediment Samples
Duck and Otter Creeks Confluence Investigation
Toledo, Lucas County, Ohio

Location ID		DC-19	DC-19	DC-19	DC-19
Field Sample ID		DC-19-05	DC-19-05FS	DC-19FS	DC-19-04FS
Sampling Date		11/2/2010	11/2/2010	11/2/2010	11/3/2010
TOC (%)	**Consensus PEC**	3.44	2.57	9.32	2.85
PAHs (µg/kg)					
TOTAL 16 PPAHs (calculated by laboratory) [1]	22,800	NA	NA	2,900 J	NA
TOC normalized Total PAH (PAH/%TOC)		NA	NA	311	NA
PEC-Q (16 PPAHs) [1,2]		NA	NA	***0.01***	NA
TOTAL PAHs (calculated by laboratory)	22,800	NA	NA	9,000 J	NA
TOC normalized Total PAH (PAH/%TOC)		NA	NA	966	NA
PEC-Q (Total PAHs) [2]		NA	NA	***0.04***	NA
Total Parent PAHs (Sum of detections x 1.7)	22,800	17,931.60	293.08	5,548.80	684.25
TOC normalized Total PAH (PAH/%TOC)		**5,213**	**114**	**595**	**240**
PEC-Q (Total Parent PAHs) [2]		***0.23***	***0.01***	***0.03***	***0.01***

Notes:
Shading indicated PEC exceedance
µg/kg - Microgram per kilogram
ID = Identification
J = Estimated value; concentration below RL or exceeded RL, but one or more quality control parameters were outside control limits
NA = Criterion or value not available
PAH = Polycyclic aromatic hydrocarbon
PEC = Probable effect concentration
PEC-Q = Probable effect concentration quotient
PPAH = Priority pollutant PAH
RL = Reporting limit
TOC = Total organic carbon
U = Not detected above RL
1 16 PPAHs include acenaphthene, acenaphthylene, anthracene, fluorene, naphthalene, phenanathrene, benzo(a)anthracene, benzo(a)pyrene, benzo(ghi)perylene, benzo(b)fluoranthene, benzo(k)fluoranthene, chrysene, dibenzo(ah)anthracene, indeno(1,2,3-cd)pyrene, fluoranthene, and pyrene.
2 For PAHs, the PEC-Q is normalized to 1% organic carbon by dividing the site concentration by the percent TOC.

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Table 3-9B
PEC and PEC-Qs for Total PAHs - May 2011 Duck Creek Confluence Sediment Samples
Duck and Otter Creeks Confluence Investigation
Toledo, Lucas County, Ohio

Location ID		DC-20	DC-20	DC-20	DC-21	DC-21	DC-22	DC-22	DC-22	DC-23	DC-23	DC-23	DC-23	DC-24	DC-24
Field Sample ID		DC-20-01	DC-20-02	DC-20-03	DC-21-01	DC-21-02	DC-22-01	DC-22-02	DC-22-03	DC-23-01	DC-23-02	DC-23-03	DC-23-04	DC-24-01	DC-24-02
Depth Interval	Consensus	0- 6	0- 24	24- 36	0- 6	0- 19	0- 6	0- 24	24- 39	0- 6	0- 24	24- 48	48- 67	0- 6	0- 24
Sampling Date	PEC	5/11/2011	5/11/2011	5/11/2011	5/11/2011	5/11/2011	5/11/2011	5/11/2011	5/11/2011	5/11/2011	5/11/2011	5/11/2011	5/11/2011	5/11/2011	5/11/2011
TOC (%)		64.9	6.56	15.1	4.98	3.05	7.28	4.62	3.2	13.9	7.26	2.85	3.47	15.9	5.61
Total Parent PAHs (Sum of detections x 1.7) (µg/kg)															
MC SVOA (SIMS)	22,800	NA	3,700.90	7,083.90	3,556.40	2,218.50	16,117.70	1,858.95	866.83	7,810.99	5,994.20	2,283.10	2,424.20	**46,875.80**	**4,177.58**
TOC normalized Total PAH (PAH/%TOC)		NA	564	469	714	727	2,214	402	271	562	826	801	699	2,948	745
PEC-Q (SIMS PAHs) [1]		NA	***0.02***	***0.02***	***0.03***	***0.03***	***0.10***	***0.02***	***0.01***	***0.02***	***0.04***	***0.04***	***0.03***	***0.13***	***0.03***
MC SVOA (LS)	22,800	**71,517.30**													
TOC normalized Total PAH (PAH/%TOC)		1,102													
PEC-Q (LS PAHs) [1]		***0.05***													

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Table 3-9B
PEC and PEC-Qs for Total PAHs - May 2011 Duck Creek Confluence Sediment Samples
Duck and Otter Creeks Confluence Investigation
Toledo, Lucas County, Ohio

Location ID		DC-24	DC-25	DC-25	DC-25	DC-25	DC-25
Field Sample ID		DC-24-03	DC-25-01	DC-25-01-DP	DC-25-02	DC-25-02-DP	DC-25-03
Depth Interval	Consensus	24- 53	0- 6	0- 6	0- 24	0- 24	24- 39
Sampling Date	PEC	5/11/2011	5/11/2011	5/11/2011	5/11/2011	5/11/2011	5/11/2011
TOC (%)		26.6	9.35	3.71	2.92	3.48	1.93
Total Parent PAHs (Sum of detections x 1.7) (µg/kg)							
MC SVOA (SIMS)	22,800	2,369.80	5,924.50	1,629.96	2,837.30	3,048.10	1,475.77
TOC normalized Total PAH (PAH/%TOC)		89	634	439	972	876	765
PEC-Q (SIMS PAHs) [1]		***0.004***	***0.03***	***0.02***	***0.04***	***0.04***	***0.03***
MC SVOA (LS)	22,800						
TOC normalized Total PAH (PAH/%TOC)							
PEC-Q (LS PAHs) [1]							

Notes:
Shading indicates PEC exceedance
µg/kg - Microgram per kilogram
ID = Identification
J = Estimated value; concentration below RL or exceeded RL, but one or more quality control parameters were outside control limits
NA = Criterion or value not available
PAH = Polycyclic aromatic hydrocarbon
PEC = Probable effect concentration
PEC-Q = Probable effect concentration quotient
PPAH = Priority pollutant PAH
RL = Reporting limit
SIMS = Secondary Ions Mass Spectrometry
SVOA = Semivolatile organic analysis
TOC = Total organic carbon
U = Not detected above RL
1 For PAHs, the PEC-Q is normalized to 1% organic carbon by dividing the site concentration by the percent TOC.

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Table 3-10
Derivation of AVS/SEM Metrics for Sediment - Duck Creek Confluence Sediment Samples
Duck and Otter Creeks Confluence Investigation
Toledo, Lucas County, Ohio

Field Sample ID	DC-13	DC-14	DC-16	DC-17	DC-19	DC-19FS	DC-21-01	DC-22-01	DC-23-01	DC-24-01	DC-25-01	DC-25-01-DP
Sampling Date	**11/2/2010**	**11/3/2010**	**11/2/2010**	**11/2/2010**	**11/2/2010**	**11/2/2010**	**5/11/2011**	**5/11/2011**	**5/11/2011**	**5/11/2011**	**5/11/2011**	**5/11/2011**
AVS/SEM (µmole/g)												
Sulfide-AVS	8.3	7.7	6.9	1.29	7.2	5.3	64.6	2.65	11.5	7.62	24.1	34
Cadmium, AVS	0.0034	0.0049	0.003	0.0031	0.0035	0.0033	0.0039	0.0016	0.0063	0.0031	0.0066	0.0058
Copper, AVS	0.0263	0.0185	0.0146	0.0066	0.0087	0.0168	0.0242	0.0461	0.077	0.0161	0.0025 U	0.005 J
Lead, AVS	0.044	0.044	0.032	0.032	0.031	0.027	0.1078	0.0221	0.0876	0.0401	0.1796	0.1262
Nickel, AVS	0.042	0.06	0.033	0.038	0.043	0.04	0.1022	0.0199	0.0983	0.0504	0.2065	0.1867
Silver, AVS	0.003 U	0.0031 U	0.0029 U	0.0031 U	0.0034 U	0.0033 U	0.0024 U	0.0018 U	0.0041 U	0.0032 U	0.0029 U	0.0032 U
Zinc, AVS	0.984	0.543	0.621	0.43	0.396	0.385	1.49131	0.3276	1.25389	0.5306	1.44659	1.19918
Sum (SEM) (µmole/g)	1.100	0.670	0.704	0.510	0.482	0.472	1.729	0.417	1.523	0.640	1.839	1.523
Ratio of Sum (SEM) / AVS (s.u.)	0.1325	0.0871	0.1020	0.3951	0.0670	0.0891	0.0268	0.1575	0.1324	0.0840	0.0763	0.0448
Sum SEM - AVS (µmole/g)	-7.20	-7.03	-6.20	-0.78	-6.72	-4.83	-62.87	-2.23	-9.98	-6.98	-22.26	-32.48
TOC (%)	33.6	9.05	18.8	14.4	9.86	9.32	4.98	7.28	13.9	15.9	9.35	3.71
TOC (g/g)	0.336	0.0905	0.188	0.144	0.0986	0.0932	0.0498	0.0728	0.139	0.159	0.0935	0.0371
(Sum SEM - AVS)/foc (µmole/goc)	-21	-78	-33	-5	-68	-52	-1262	-31	-72	-44	-238	-875

Notes:
µmole/g = Micromole per gram
AVS = Acid volatile sulfide
foc = Fraction organic carbon
g/g = Gram per gram
goc = gram organic carbon
ID = Identification
J = Estimated value
RL = Reporting limit
SEM = Simultaneously extracted metals
s.u. = Standard unit
TOC = Total organic carbon
U = Not detected above RL
If SEM/AVS ratio < 1, the sediments are not toxic.
If AVS ≥ SEM (cadmium, copper, lead, nickel, silver, and zinc/2), then no biological effects from metals in sediment.
Molecular weights: sulfur, 32.06; nickel, 58.7; zinc, 65.4; cadmium, 112; lead, 207; copper, 63.5; silver, 108
Any sediment in which (SEM-AVS)/foc < 130 µmole/goc should pose low risk of adverse biological effects from cadmium copper, lead, nickel, and zinc.
Any sediment in which 130 µmole/goc < (SEM-AVS) /foc < 3,000 µmole/goc may have adverse biological effects from cadmium copper, lead, nickel, and zinc.
Any sediment in which (SEM-AVS)/foc > 3,000 µmole/goc may have adverse biological effects from cadmium copper, lead, nickel, and zinc.
Any sediment with AVS > 0.0 will not cause adverse biological effects from chromium or silver.
Source:
U.S. Environmental Protection Agency (U.S. EPA). 2005. "Procedures for the Derivation of Equilibrium Partitioning Sediment Benchmarks (ESBs) for the Protection of Benthic Organisms: Metal Mixtures (Cadmium, Copper, Lead, Nickel, Silver, and Zinc)." EPA/600/R-02/011. January.

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Table 3-11A
Derivation of Total PAH ESBs - November 2010 Duck Creek Confluence Sediment Samples
Duck and Otter Creeks Confluence Investigation
Toledo, Lucas County, Ohio

			DC-13					DC-14				
Location ID												
Sampling Date			11/2/2010					11/3/2010				
	Coc, PAHi, FCVi [1] (µg/goc)	**Coc, PAHi, Maxi [1] (µg/goc)**	**Conc (µg/kg dry wt)**	**Conc (µg/g)**	**Coc (µg/goc)**	**Final Coc [2] (µg/goc)**	**ESBTU FCVi**	**Conc (µg/kg dry wt)**	**Conc (µg/g)**	**Coc (µg/goc)**	**Final Coc [2] (µg/goc)**	**ESBTU FCVi**
TOC (%)			33.6					9.05				
foc			0.336					0.0905				
Chemical Name												
C2-FLUORANTHENES/PYRENES	NA	NA	3,400 J	3.4	10.119	10.11904762	0	600 J	0.6	6.630	6.629834254	0
NAPHTHALENE	385	61,700	1,800	1.8	5.357	5.36	0.0139	220	0.22	2.431	2.43	0.0063
C1-NAPHTHALENES	444	--	3,200 J	3.2	9.524	9.52	0.0215	510 J	0.51	5.635	5.64	0.0127
1-METHYLNAPHTHALENE	446	165,700	1,000 J	1	2.976	2.98	0.0067	150	0.15	1.657	1.66	0.0037
2-METHYLNAPHTHALENE	447	154,800	2,400	2.4	7.143	7.14	0.0160	370	0.37	4.088	4.09	0.0091
ACENAPHTHYLENE	452	24,000	1,200 U	0	0.000	0.00	0.0000	82 U	0	0.000	0.00	0.0000
ACENAPHTHENE	491	33,400	1,200 U	0	0.000	0.00	0.0000	82 U	0	0.000	0.00	0.0000
C2-NAPHTHALENES	510	--	2,700 J	2.7	8.036	8.04	0.0158	390 J	0.39	4.309	4.31	0.0084
FLUORENE	538	26,000	560 J	0.56	1.667	1.67	0.0031	48 J	0.048	0.530	0.53	0.0010
C3-NAPHTHALENES	581	--	3,700 J	3.7	11.012	11.01	0.0190	430 J	0.43	4.751	4.75	0.0082
ANTHRACENE	594	1,300	900 J	0.9	2.679	2.68	0.0045	97	0.097	1.072	1.07	0.0018
PHENANTHRENE	596	34,300	3,000	3	8.929	8.93	0.0150	330	0.33	3.646	3.65	0.0061
C1-FLUORENES	611	--	1,300 J	1.3	3.869	3.87	0.0063	140 J	0.14	1.547	1.55	0.0025
C4-NAPHTHALENES	657	--	2,700 J	2.7	8.036	8.04	0.0122	210 J	0.21	2.320	2.32	0.0035
C1-PHENANTHRENES/ANTHRACENES	670	--	4,700 J	4.7	13.988	13.99	0.0209	610 J	0.61	6.740	6.74	0.0101
C2-FLUORENES	686	--	1,800 J	1.8	5.357	5.36	0.0078	330 J	0.33	3.646	3.65	0.0053
PYRENE	697	9,090	2,500	2.5	7.440	7.44	0.0107	470	0.47	5.193	5.19	0.0075
FLUORANTHENE	707	23,870	1,700	1.7	5.060	5.06	0.0072	250	0.25	2.762	2.76	0.0039
C2-PHENANTHRENES/ANTHRACENES	746	--	4,300 J	4.3	12.798	12.80	0.0172	690 J	0.69	7.624	7.62	0.0102
C3-FLUORENES	769	--	1,300 J	1.3	3.869	3.87	0.0050	290 J	0.29	3.204	3.20	0.0042
C1-FLUORANTHENES/PYRENES	770	--	3,400 J	3.4	10.119	10.12	0.0131	630 J	0.63	6.961	6.96	0.0090
C3-PHENANTHRENES/ANTHRACENES	829	--	2,900 J	2.9	8.631	8.63	0.0104	400 J	0.4	4.420	4.42	0.0053
BENZO[A]ANTHRACENE	841	4,153	3,000	3	8.929	8.93	0.0106	430	0.43	4.751	4.75	0.0056
CHRYSENE	844	826	4,200	4.2	12.500	12.50	0.0148	610	0.61	6.740	6.74	0.0080
C4-PHENANTHRENES/ANTHRACENES	913	--	8,500 J	8.5	25.298	25.30	0.0277	710 J	0.71	7.845	7.85	0.0086
C1-CHRYSENES	929	--	9,300 J	9.3	27.679	27.68	0.0298	1,300 J	1.3	14.365	14.36	0.0155
C3-FLUORANTHENES/PYRENES	949	--	3,100 J	3.1	9.226	9.23	0.0097	450 J	0.45	4.972	4.97	0.0052
BENZO[A]PYRENE	965	3,840	2,900	2.9	8.631	8.63	0.0089	650	0.65	7.182	7.18	0.0074
BENZO[E]PYRENE	967	4,300	3,500	3.5	10.417	10.42	0.0108	760	0.76	8.398	8.40	0.0087
PERYLENE	967	431	530 J	0.53	1.577	1.58	0.0016	290	0.29	3.204	3.20	0.0033
BENZO[B]FLUORANTHENE	979	2,169	2,800	2.8	8.333	8.33	0.0085	460	0.46	5.083	5.08	0.0052
BENZO[K]FLUORANTHENE	981	1,220	610 J	0.61	1.815	1.82	0.0019	110	0.11	1.215	1.22	0.0012
C2-CHRYSENES	1,008	--	6,100 J	6.1	18.155	18.15	0.0180	1,100 J	1.1	12.155	12.15	0.0121
BENZO[G,H,I]PERYLENE	1,095	648	2,000	2	5.952	5.95	0.0054	590	0.59	6.519	6.52	0.0060
C3-CHRYSENES	1,112	--	1,800 J	1.8	5.357	5.36	0.0048	370 J	0.37	4.088	4.09	0.0037
INDENO[1,2,3-CD]PYRENE	1,115	--	900 J	0.9	2.679	2.68	0.0024	230	0.23	2.541	2.54	0.0023
DIBENZ(A,H)ANTHRACENE	1,123	2,389	1,400	1.4	4.167	4.17	0.0037	260	0.26	2.873	2.87	0.0026
C4-CHRYSENES	1,214	--	1,200 U	0	0.000	0.00	0.0000	82 U	0	0.000	0.00	0.0000
Sum Total of ESBTU FCVi [3]							0.3849					0.2143

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Table 3-11A
Derivation of Total PAH ESBs - November 2010 Duck Creek Confluence Sediment Samples
Duck and Otter Creeks Confluence Investigation
Toledo, Lucas County, Ohio

			DC-16					DC-17				
Location ID												
Sampling Date			11/2/2010					11/2/2010				
	Coc, PAHi, FCVi [1] (µg/goc)	**Coc, PAHi, Maxi [1] (µg/goc)**	**Conc (µg/kg dry wt)**	**Conc (µg/g)**	**Coc (µg/goc)**	**Final Coc [2] (µg/goc)**	**ESBTU FCVi**	**Conc (µg/kg dry wt)**	**Conc (µg/g)**	**Coc (µg/goc)**	**Final Coc [2] (µg/goc)**	**ESBTU FCVi**
TOC (%)			18.8					14.4				
foc			0.188					0.144				
Chemical Name												
C2-FLUORANTHENES/PYRENES	NA	NA	1,000 J	1	5.319	5.319148936	0	1,500 J	1.5	10.417	10.41666667	0
NAPHTHALENE	385	61,700	840	0.84	4.468	4.47	0.0116	630	0.63	4.375	4.38	0.0114
C1-NAPHTHALENES	444	--	1,500 J	1.5	7.979	7.98	0.0180	1,700 J	1.7	11.806	11.81	0.0266
1-METHYLNAPHTHALENE	446	165,700	440 J	0.44	2.340	2.34	0.0052	540	0.54	3.750	3.75	0.0084
2-METHYLNAPHTHALENE	447	154,800	1,000	1	5.319	5.32	0.0119	1,600	1.6	11.111	11.11	0.0249
ACENAPHTHYLENE	452	24,000	690 U	0	0.000	0.00	0.0000	160 U	0	0.000	0.00	0.0000
ACENAPHTHENE	491	33,400	690 U	0	0.000	0.00	0.0000	77 J	0.077	0.535	0.53	0.0011
C2-NAPHTHALENES	510	--	1,200 J	1.2	6.383	6.38	0.0125	1,500 J	1.5	10.417	10.42	0.0204
FLUORENE	538	26,000	690 U	0	0.000	0.00	0.0000	120 J	0.12	0.833	0.83	0.0015
C3-NAPHTHALENES	581	--	880 J	0.88	4.681	4.68	0.0081	960 J	0.96	6.667	6.67	0.0115
ANTHRACENE	594	1,300	280 J	0.28	1.489	1.49	0.0025	320	0.32	2.222	2.22	0.0037
PHENANTHRENE	596	34,300	970	0.97	5.160	5.16	0.0087	940	0.94	6.528	6.53	0.0110
C1-FLUORENES	611	--	320 J	0.32	1.702	1.70	0.0028	320 J	0.32	2.222	2.22	0.0036
C4-NAPHTHALENES	657	--	520 J	0.52	2.766	2.77	0.0042	530 J	0.53	3.681	3.68	0.0056
C1-PHENANTHRENES/ANTHRACENES	670	--	1,600 J	1.6	8.511	8.51	0.0127	1,900 J	1.9	13.194	13.19	0.0197
C2-FLUORENES	686	--	420 J	0.42	2.234	2.23	0.0033	520 J	0.52	3.611	3.61	0.0053
PYRENE	697	9,090	990	0.99	5.266	5.27	0.0076	1,200	1.2	8.333	8.33	0.0120
FLUORANTHENE	707	23,870	640 J	0.64	3.404	3.40	0.0048	490	0.49	3.403	3.40	0.0048
C2-PHENANTHRENES/ANTHRACENES	746	--	1,800 J	1.8	9.574	9.57	0.0128	1,900 J	1.9	13.194	13.19	0.0177
C3-FLUORENES	769	--	480 J	0.48	2.553	2.55	0.0033	590 J	0.59	4.097	4.10	0.0053
C1-FLUORANTHENES/PYRENES	770	--	1,300 J	1.3	6.915	6.91	0.0090	1,400 J	1.4	9.722	9.72	0.0126
C3-PHENANTHRENES/ANTHRACENES	829	--	1,000 J	1	5.319	5.32	0.0064	1,100 J	1.1	7.639	7.64	0.0092
BENZO[A]ANTHRACENE	841	4,153	930	0.93	4.947	4.95	0.0059	1,200	1.2	8.333	8.33	0.0099
CHRYSENE	844	826	1,300	1.3	6.915	6.91	0.0082	1,600	1.6	11.111	11.11	0.0132
C4-PHENANTHRENES/ANTHRACENES	913	--	2,600 J	2.6	13.830	13.83	0.0151	1,800 J	1.8	12.500	12.50	0.0137
C1-CHRYSENES	929	--	2,500 J	2.5	13.298	13.30	0.0143	3,100 J	3.1	21.528	21.53	0.0232
C3-FLUORANTHENES/PYRENES	949	--	720 J	0.72	3.830	3.83	0.0040	1,400 J	1.4	9.722	9.72	0.0102
BENZO[A]PYRENE	965	3,840	950	0.95	5.053	5.05	0.0052	1,500	1.5	10.417	10.42	0.0108
BENZO[E]PYRENE	967	4,300	1,200	1.2	6.383	6.38	0.0066	1,500	1.5	10.417	10.42	0.0108
PERYLENE	967	431	210 J	0.21	1.117	1.12	0.0012	310 J	0.31	2.153	2.15	0.0022
BENZO[B]FLUORANTHENE	979	2,169	950	0.95	5.053	5.05	0.0052	980	0.98	6.806	6.81	0.0070
BENZO[K]FLUORANTHENE	981	1,220	690 U	0.69	3.670	3.67	0.0037	210	0.21	1.458	1.46	0.0015
C2-CHRYSENES	1,008	--	1,900 J	1.9	10.106	10.11	0.0100	2,600 J	2.6	18.056	18.06	0.0179
BENZO[G,H,I]PERYLENE	1,095	648	690	0.69	3.670	3.67	0.0034	1,200	1.2	8.333	8.33	0.0076
C3-CHRYSENES	1,112	--	640 J	0.64	3.404	3.40	0.0031	1,100 J	1.1	7.639	7.64	0.0069
INDENO[1,2,3-CD]PYRENE	1,115	--	220 J	0.22	1.170	1.17	0.0010	530	0.53	3.681	3.68	0.0033
DIBENZ(A,H)ANTHRACENE	1,123	2,389	390 J	0.39	2.074	2.07	0.0018	540	0.54	3.750	3.75	0.0033
C4-CHRYSENES	1,214	--	690 U	0	0.000	0.00	0.0000	420 U	0	0.000	0.00	0.0000
Sum Total of ESBTU FCVi [3]							0.2341					0.3577

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Table 3-11A
Derivation of Total PAH ESBs - November 2010 Duck Creek Confluence Sediment Samples
Duck and Otter Creeks Confluence Investigation
Toledo, Lucas County, Ohio

			DC-19					DC-19				
Location ID												
Sampling Date			11/2/2010					11/2/2010				
	Coc, PAHi, FCVi [1] (µg/goc)	**Coc, PAHi, Maxi [1] (µg/goc)**	**Conc (µg/kg dry wt)**	**Conc (µg/g)**	**Coc (µg/goc)**	**Final Coc [2] (µg/goc)**	**ESBTU FCVi**	**Conc (µg/kg dry wt)**	**Conc (µg/g)**	**Coc (µg/goc)**	**Final Coc [2] (µg/goc)**	**ESBTU FCVi**
TOC (%)			9.86					9.32				
foc			0.0986					0.0932				
Chemical Name												
C2-FLUORANTHENES/PYRENES	NA	NA	180 J	0.18	1.826	1.825557809	0	330 J	0.33	3.541	3.540772532	0
NAPHTHALENE	385	61,700	66 U	0	0.000	0.00	0.0000	460	0	0.000	0.00	0.0000
C1-NAPHTHALENES	444	--	40 J	0.04	0.406	0.41	0.0009	540 J	0.54	5.794	5.79	0.0130
1-METHYLNAPHTHALENE	446	165,700	15 J	0.015	0.152	0.15	0.0003	160	0.16	1.717	1.72	0.0038
2-METHYLNAPHTHALENE	447	154,800	66 U	0	0.000	0.00	0.0000	370	0.37	3.970	3.97	0.0089
ACENAPHTHYLENE	452	24,000	66 U	0	0.000	0.00	0.0000	84 U	0	0.000	0.00	0.0000
ACENAPHTHENE	491	33,400	66 U	0	0.000	0.00	0.0000	42 J	0.042	0.451	0.45	0.0009
C2-NAPHTHALENES	510	--	80 J	0.08	0.811	0.81	0.0016	350 J	0.35	3.755	3.76	0.0074
FLUORENE	538	26,000	26 J	0.026	0.264	0.26	0.0005	46 J	0.046	0.494	0.49	0.0009
C3-NAPHTHALENES	581	--	80 J	0.08	0.811	0.81	0.0014	390 J	0.39	4.185	4.18	0.0072
ANTHRACENE	594	1,300	48 J	0.048	0.487	0.49	0.0008	71 J	0.071	0.762	0.76	0.0013
PHENANTHRENE	596	34,300	160	0.16	1.623	1.62	0.0027	240	0.24	2.575	2.58	0.0043
C1-FLUORENES	611	--	78 J	0.078	0.791	0.79	0.0013	120 J	0.12	1.288	1.29	0.0021
C4-NAPHTHALENES	657	--	68 J	0.068	0.690	0.69	0.0010	94 J	0.094	1.009	1.01	0.0015
C1-PHENANTHRENES/ANTHRACENES	670	--	250 J	0.25	2.535	2.54	0.0038	400 J	0.4	4.292	4.29	0.0064
C2-FLUORENES	686	--	79 J	0.079	0.801	0.80	0.0012	230 J	0.23	2.468	2.47	0.0036
PYRENE	697	9,090	180	0.18	1.826	1.83	0.0026	310	0.31	3.326	3.33	0.0048
FLUORANTHENE	707	23,870	100	0.1	1.014	1.01	0.0014	140	0.14	1.502	1.50	0.0021
C2-PHENANTHRENES/ANTHRACENES	746	--	230 J	0.23	2.333	2.33	0.0031	460 J	0.46	4.936	4.94	0.0066
C3-FLUORENES	769	--	68 J	0.068	0.690	0.69	0.0009	100 J	0.1	1.073	1.07	0.0014
C1-FLUORANTHENES/PYRENES	770	--	240 J	0.24	2.434	2.43	0.0032	370 J	0.37	3.970	3.97	0.0052
C3-PHENANTHRENES/ANTHRACENES	829	--	120 J	0.12	1.217	1.22	0.0015	200 J	0.2	2.146	2.15	0.0026
BENZO[A]ANTHRACENE	841	4,153	130	0.13	1.318	1.32	0.0016	220	0.22	2.361	2.36	0.0028
CHRYSENE	844	826	190	0.19	1.927	1.93	0.0023	300	0.3	3.219	3.22	0.0038
C4-PHENANTHRENES/ANTHRACENES	913	--	210 J	0.21	2.130	2.13	0.0023	320 J	0.32	3.433	3.43	0.0038
C1-CHRYSENES	929	--	360 J	0.36	3.651	3.65	0.0039	600 J	0.6	6.438	6.44	0.0069
C3-FLUORANTHENES/PYRENES	949	--	160 J	0.16	1.623	1.62	0.0017	280 J	0.28	3.004	3.00	0.0032
BENZO[A]PYRENE	965	3,840	150	0.15	1.521	1.52	0.0016	310	0.31	3.326	3.33	0.0034
BENZO[E]PYRENE	967	4,300	200	0.2	2.028	2.03	0.0021	370	0.37	3.970	3.97	0.0041
PERYLENE	967	431	64 J	0.064	0.649	0.65	0.0007	120	0.12	1.288	1.29	0.0013
BENZO[B]FLUORANTHENE	979	2,169	120	0.12	1.217	1.22	0.0012	230	0.23	2.468	2.47	0.0025
BENZO[K]FLUORANTHENE	981	1,220	22 J	0.022	0.223	0.22	0.0002	56 J	0.056	0.601	0.60	0.0006
C2-CHRYSENES	1,008	--	290 J	0.29	2.941	2.94	0.0029	560 J	0.56	6.009	6.01	0.0060
BENZO[G,H,I]PERYLENE	1,095	648	140	0.14	1.420	1.42	0.0013	270	0.27	2.897	2.90	0.0026
C3-CHRYSENES	1,112	--	110 J	0.11	1.116	1.12	0.0010	180 J	0.18	1.931	1.93	0.0017
INDENO[1,2,3-CD]PYRENE	1,115	--	44 J	0.044	0.446	0.45	0.0004	79 J	0.079	0.848	0.85	0.0008
DIBENZ(A,H)ANTHRACENE	1,123	2,389	58 J	0.058	0.588	0.59	0.0005	120	0.12	1.288	1.29	0.0011
C4-CHRYSENES	1,214	--	66 U	0	0.000	0.00	0.0000	38 J	0	0.000	0.00	0.0000
Sum Total of ESBTU FCVi [3]							0.0521					0.1288

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Table 3-11A
Derivation of Total PAH ESBs - November 2010 Duck Creek Confluence Sediment Samples
Duck and Otter Creeks Confluence Investigation
Toledo, Lucas County, Ohio

Notes:
-- = Criterion or value not available
µg/g = Microgram per gram
µg/goc = Microgram per gram organic carbon
µg/kg = Microgram per kilogram
Coc = Concentration organic carbon
Conc = Concentration
ESB = Equilibrium partitioning sediment benchmark
ESBTU = Equilibrium partitioning sediment benchmark toxic unit
FCVi = Final chronic value for individual PAH
foc = Fraction organic carbon
ID = Identification
J = Estimated value; concentration below RL or exceeded RL, but one or more quality control parameters were outside control limits
Maxi = Maximum individual PAH
NA = Criterion or value not available
PAH = Polycyclic aromatic hydrocarbon
PAHi = Individual PAH
RL = Reporting limit
TOC = Total organic carbon
U = Coded data omitted from ESB calculations
wt = Weight
1 PAHs and corresponding Coc PAHi, FCVi, Coc PAHi, and Maxi values are from Table 3-4 in U.S. EPA 2003; example calculations provided in Table 6-3 in U.S. EPA 2003
2 Because COC exceeds COC, PAHi, Maxi , COC, PAHi, Maxi is substituted for COC to calculate ESBTU FCVi (see text).
3 Sum of Total ESBTU FCVi = Sum of Coc, PAH_i / Coc, PAH_i, $FV_{i;\,i}$f Sum of Total ESBTU FCVi exceeds one, the mixture of PAHs in sediment may not be acceptable for the protection of benthic organisms.

Source:
U.S. Environmental Protection Agency (U.S. EPA). 2003. "Procedures for the Derivation of Equilibrium Partitioning Sediment Benchmarks (ESBs) for the Protection of Benthic Organisms: PAH Mixtures." EPA/600/R-02/013. November.

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Table 3-11B
Derivation of Total PAH ESBs - May 2011 Duck Creek Sediment Samples
Duck and Otter Creeks Confluence Investigation
Toledo, Lucas County, Ohio

		Location ID		DC-20					DC-21				
		Field Sample ID		DC-20-01					DC-21-01				
		Depth Interval		0- 6					0- 6				
		Sampling Date		5/11/2011					5/11/2011				
Analytical Method	Chemical Name	Coc, PAHi, FCVi [1] (µg/goc)	Coc, PAHi, Maxi [2] (µg/goc)	Conc (µg/kg dry wt)	Conc (µg/g)	Coc (µg/goc)	Final Coc [2] (µg/goc)	ESBTU FCVi	Conc (µg/kg dry wt)	Conc (µg/g)	Coc (µg/goc)	Final Coc [2] (µg/goc)	ESBTU FCVi
		TOC (%)		64.9					4.98				
		foc		0.649					0.0498				
MC SVOA(SIMS)	C2-FLUORANTHENES/PYRENES	NA		9,200 J	9.2	14.176	0.000	0.000	280 J	0.28	5.622	0.000	0.000
MC SVOA(LS)	NAPHTHALENE	385	61,700	1,900	1.9	2.928	2.928	0.0076		0	0.000	0.000	0.0000
MC SVOA(SIMS)	NAPHTHALENE	385	61,700		0	0.000	0.000	0.0000	50 J	0.05	1.004	1.004	0.0026
MC SVOA(SIMS)	C1-NAPHTHALENES	444	--	3,600 J	3.6	5.547	5.547	0.0125	120 J	0.12	2.410	2.410	0.0054
MC SVOA(SIMS)	1-METHYLNAPHTHALENE	446	165,700	1,800	1.8	2.773	2.773	0.0062	52	0.052	1.044	1.044	0.0023
MC SVOA(LS)	2-METHYLNAPHTHALENE	447	154,800	3,700	3.7	5.701	5.701	0.0128		0	0.000	0.000	0.0000
MC SVOA(SIMS)	2-METHYLNAPHTHALENE	447	154,800		0	0.000	0.000	0.0000	95	0.095	1.908	1.908	0.0043
MC SVOA(SIMS)	ACENAPHTHYLENE	452	24,000	6 U	0	0.000	0.000	0.0000	27	0.027	0.542	0.542	0.0012
MC SVOA(LS)	ACENAPHTHENE	491	33,400		0	0.000	0.000	0.0000		0	0.000	0.000	0.0000
MC SVOA(SIMS)	ACENAPHTHENE	491	33,400	69	0.069	0.106	0.106	0.0002	14	0.014	0.281	0.281	0.0006
MC SVOA(SIMS)	C2-NAPHTHALENES	510	--	3,600 J	3.6	5.547	5.547	0.0109	200 J	0.2	4.016	4.016	0.0079
MC SVOA(LS)	FLUORENE	538	26,000		0	0.000	0.000	0.0000		0	0.000	0.000	0.0000
MC SVOA(SIMS)	FLUORENE	538	26,000	300	0.3	0.462	0.462	0.0009	34	0.034	0.683	0.683	0.0013
MC SVOA(SIMS)	C3-NAPHTHALENES	581	--	2,600 J	2.6	4.006	4.006	0.0069	350 J	0.35	7.028	7.028	0.0121
MC SVOA(LS)	ANTHRACENE	594	1,300	1,300	1.3	2.003	2.003	0.0034		0	0.000	0.000	0.0000
MC SVOA(SIMS)	ANTHRACENE	594	1,300		0	0.000	0.000	0.0000	83	0.083	1.667	1.667	0.0028
MC SVOA(SIMS)	PHENANTHRENE	596	34,300		0	0.000	0.000	0.0000	160	0.16	3.213	3.213	0.0054
MC SVOA(LS)	PHENANTHRENE	596	34,300	3,100	3.1	4.777	4.777	0.0080		0	0.000	0.000	0.0000
MC SVOA(SIMS)	C1-FLUORENES	611	--	720 J	0.72	1.109	1.109	0.0018	60 J	0.06	1.205	1.205	0.0020
MC SVOA(SIMS)	C4-NAPHTHALENES	657	--	1,100 J	1.1	1.695	1.695	0.0026	230 J	0.23	4.618	4.618	0.0070
MC SVOA(SIMS)	C1-PHENANTHRENES/ANTHRACENES	670	--	8,200 J	8.2	12.635	12.635	0.0189	390 J	0.39	7.831	7.831	0.0117
MC SVOA(SIMS)	C2-FLUORENES	686	--	1,500 J	1.5	2.311	2.311	0.0034	120 J	0.12	2.410	2.410	0.0035
MC SVOA(SIMS)	PYRENE	697	9,090		0	0.000	0.000	0.0000	180	0.18	3.614	3.614	0.0052
MC SVOA(LS)	PYRENE	697	9,090	4,000	4	6.163	6.163	0.0088		0	0.000	0.000	0.0000
MC SVOA(LS)	FLUORANTHENE	707	23,870	1,100	1.1	1.695	1.695	0.0024		0	0.000	0.000	0.0000
MC SVOA(SIMS)	FLUORANTHENE	707	23,870		0	0.000	0.000	0.0000	120	0.12	2.410	2.410	0.0034
MC SVOA(SIMS)	C2-PHENANTHRENES/ANTHRACENES	746	--	7,600 J	7.6	11.710	11.710	0.0157	360 J	0.36	7.229	7.229	0.0097
MC SVOA(SIMS)	C3-FLUORENES	769	--	2,000 J	2	3.082	3.082	0.0040	130 J	0.13	2.610	2.610	0.0034
MC SVOA(SIMS)	C1-FLUORANTHENES/PYRENES	770	--	10,000 J	10	15.408	15.408	0.0200	320 J	0.32	6.426	6.426	0.0083
MC SVOA(SIMS)	C3-PHENANTHRENES/ANTHRACENES	829	--	4,800 J	4.8	7.396	7.396	0.0089	280 J	0.28	5.622	5.622	0.0068
MC SVOA(SIMS)	BENZO[A]ANTHRACENE	841	4,153		0	0.000	0.000	0.0000	190	0.19	3.815	3.815	0.0045
MC SVOA(LS)	BENZO[A]ANTHRACENE	841	4,153	3,800	3.8	5.855	5.855	0.0070		0	0.000	0.000	0.0000
MC SVOA(LS)	CHRYSENE	844	826	6,400	6.4	9.861	9.861	0.0117		0	0.000	0.000	0.0000
MC SVOA(SIMS)	CHRYSENE	844	826		0	0.000	0.000	0.0000	200	0.2	4.016	4.016	0.0048
MC SVOA(SIMS)	C4-PHENANTHRENES/ANTHRACENES	913	--	6 U	0	0.000	0.000	0.0000	5.7 U	0	0.000	0.000	0.0000
MC SVOA(SIMS)	C1-CHRYSENES	929	--	13,000 J	13	20.031	20.031	0.0216	440 J	0.44	8.835	8.835	0.0095
MC SVOA(SIMS)	C3-FLUORANTHENES/PYRENES	949	--	8,400 J	8.4	12.943	12.943	0.0136	300 J	0.3	6.024	6.024	0.0063
MC SVOA(LS)	BENZO[A]PYRENE	965	3,840	6,000	6	9.245	9.245	0.0096		0	0.000	0.000	0.0000
MC SVOA(SIMS)	BENZO[A]PYRENE	965	3,840		0	0.000	0.000	0.0000	220	0.22	4.418	4.418	0.0046
MC SVOA(SIMS)	BENZO[E]PYRENE	967	4,300	5,000	5	7.704	7.704	0.0080	170	0.17	3.414	3.414	0.0035
MC SVOA(SIMS)	PERYLENE	967	431	420 J	0.42	0.647	0.647	0.0007	25	0.025	0.502	0.502	0.0005
MC SVOA(LS)	BENZO[B]FLUORANTHENE	979	2,169	1,100	1.1	1.695	1.695	0.0017		0	0.000	0.000	0.0000
MC SVOA(SIMS)	BENZO[B]FLUORANTHENE	979	2,169		0	0.000	0.000	0.0000	96	0.096	1.928	1.928	0.0020
MC SVOA(LS)	BENZO[K]FLUORANTHENE	981	1,220	1,200	1.2	1.849	1.849	0.0019		0	0.000	0.000	0.0000
MC SVOA(SIMS)	BENZO[K]FLUORANTHENE	981	1,220		0	0.000	0.000	0.0000	73	0.073	1.466	1.466	0.0015
MC SVOA(SIMS)	C2-CHRYSENES	1,008	--	9,500 J	9.5	14.638	14.638	0.0145	410 J	0.41	8.233	8.233	0.0082
MC SVOA(LS)	BENZO[G,H,I]PERYLENE	1,095	648	4,400	4.4	6.780	6.780	0.0062		0	0.000	0.000	0.0000
MC SVOA(SIMS)	BENZO[G,H,I]PERYLENE	1,095	648		0	0.000	0.000	0.0000	300	0.3	6.024	6.024	0.0055
MC SVOA(SIMS)	C3-CHRYSENES	1,112	--	5,900 J	5.9	9.091	9.091	0.0082	270 J	0.27	5.422	5.422	0.0049
MC SVOA(SIMS)	INDENO[1,2,3-CD]PYRENE	1,115	--		0	0.000	0.000	0.0000	140	0.14	2.811	2.811	0.0025
MC SVOA(LS)	INDENO[1,2,3-CD]PYRENE	1,115	--	1,200	1.2	1.849	1.849	0.0017		0	0.000	0.000	0.0000
MC SVOA(LS)	DIBENZ(A,H)ANTHRACENE	1,123	2,389	2,500	2.5	3.852	3.852	0.0034		0	0.000	0.000	0.0000
MC SVOA(SIMS)	DIBENZ(A,H)ANTHRACENE	1,123	2,389		0	0.000	0.000	0.0000	110	0.11	2.209	2.209	0.0020
MC SVOA(SIMS)	C4-CHRYSENES	1,214	--	2,800 J	2.8	4.314	4.314	0.0036	5.7 U	0	0.000	0.000	0.0000
Sum Total of ESBTU FCVi [3]								0.2690					0.1671

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Table 3-11B
Derivation of Total PAH ESBs - May 2011 Duck Creek Sediment Samples
Duck and Otter Creeks Confluence Investigation
Toledo, Lucas County, Ohio

		Location ID		DC-22					DC-23					
		Field Sample ID		DC-22-01					DC-23-01					
		Depth Interval		0- 6					0- 6					
		Sampling Date		5/11/2011					5/11/2011					
		Coc, PAHi, FCVi [1] (µg/goc)	Coc, PAHi, Maxi [2] (µg/goc)	Conc (µg/kg dry wt)	Conc (µg/g)	Coc (µg/goc)	Final Coc [2] (µg/goc)	ESBTU FCVi	Conc (µg/kg dry wt)		Conc (µg/g)	Coc (µg/goc)	Final Coc [2] (µg/goc)	ESBTU FCVi
			TOC (%)	7.28					13.9					
Analytical Method	**Chemical Name**		foc	0.0728					0.139					
MC SVOA(SIMS)	C2-FLUORANTHENES/PYRENES	NA		1,500 J	1.5	20.604	0.000	0.000	680	J	0.68	4.892	0.000	0.000
MC SVOA(LS)	NAPHTHALENE	385	61,700		0	0.000	0.000	0.0000			0	0.000	0.000	0.0000
MC SVOA(SIMS)	NAPHTHALENE	385	61,700	380	0.38	5.220	5.220	0.0136	230		0.23	1.655	1.655	0.0043
MC SVOA(SIMS)	C1-NAPHTHALENES	444	--	600 J	0.6	8.242	8.242	0.0186	310	J	0.31	2.230	2.230	0.0050
MC SVOA(SIMS)	1-METHYLNAPHTHALENE	446	165,700	350	0.35	4.808	4.808	0.0108	160		0.16	1.151	1.151	0.0026
MC SVOA(LS)	2-METHYLNAPHTHALENE	447	154,800		0	0.000	0.000	0.0000			0	0.000	0.000	0.0000
MC SVOA(SIMS)	2-METHYLNAPHTHALENE	447	154,800	730	0.73	10.027	10.027	0.0224	310		0.31	2.230	2.230	0.0050
MC SVOA(SIMS)	ACENAPHTHYLENE	452	24,000	14	0.014	0.192	0.192	0.0004	10		0.0097	0.070	0.070	0.0002
MC SVOA(LS)	ACENAPHTHENE	491	33,400		0	0.000	0.000	0.0000			0	0.000	0.000	0.0000
MC SVOA(SIMS)	ACENAPHTHENE	491	33,400	37	0.037	0.508	0.508	0.0010	12		0.012	0.086	0.086	0.0002
MC SVOA(SIMS)	C2-NAPHTHALENES	510	--	750 J	0.75	10.302	10.302	0.0202	280	J	0.28	2.014	2.014	0.0039
MC SVOA(LS)	FLUORENE	538	26,000		0	0.000	0.000	0.0000			0	0.000	0.000	0.0000
MC SVOA(SIMS)	FLUORENE	538	26,000	110	0.11	1.511	1.511	0.0028	39		0.039	0.281	0.281	0.0005
MC SVOA(SIMS)	C3-NAPHTHALENES	581	--	1,000 J	1	13.736	13.736	0.0236	280	J	0.28	2.014	2.014	0.0035
MC SVOA(LS)	ANTHRACENE	594	1,300		0	0.000	0.000	0.0000			0	0.000	0.000	0.0000
MC SVOA(SIMS)	ANTHRACENE	594	1,300	230	0.23	3.159	3.159	0.0053	74		0.074	0.532	0.532	0.0009
MC SVOA(SIMS)	PHENANTHRENE	596	34,300	710	0.71	9.753	9.753	0.0164	280		0.28	2.014	2.014	0.0034
MC SVOA(LS)	PHENANTHRENE	596	34,300		0	0.000	0.000	0.0000			0	0.000	0.000	0.0000
MC SVOA(SIMS)	C1-FLUORENES	611	--	170 J	0.17	2.335	2.335	0.0038	74	J	0.074	0.532	0.532	0.0009
MC SVOA(SIMS)	C4-NAPHTHALENES	657	--	760 J	0.76	10.440	10.440	0.0159	130	J	0.13	0.935	0.935	0.0014
MC SVOA(SIMS)	C1-PHENANTHRENES/ANTHRACENES	670	--	1,600 J	1.6	21.978	21.978	0.0328	640	J	0.64	4.604	4.604	0.0069
MC SVOA(SIMS)	C2-FLUORENES	686	--	300 J	0.3	4.121	4.121	0.0060	130	J	0.13	0.935	0.935	0.0014
MC SVOA(SIMS)	PYRENE	697	9,090		0	0.000	0.000	0.0000	470		0.47	3.381	3.381	0.0049
MC SVOA(LS)	PYRENE	697	9,090	880 J	0.88	12.088	12.088	0.0173			0	0.000	0.000	0.0000
MC SVOA(LS)	FLUORANTHENE	707	23,870		0	0.000	0.000	0.0000			0	0.000	0.000	0.0000
MC SVOA(SIMS)	FLUORANTHENE	707	23,870	310	0.31	4.258	4.258	0.0060	140		0.14	1.007	1.007	0.0014
MC SVOA(SIMS)	C2-PHENANTHRENES/ANTHRACENES	746	--	1,400 J	1.4	19.231	19.231	0.0258	580	J	0.58	4.173	4.173	0.0056
MC SVOA(SIMS)	C3-FLUORENES	769	--	380 J	0.38	5.220	5.220	0.0068	170	J	0.17	1.223	1.223	0.0016
MC SVOA(SIMS)	C1-FLUORANTHENES/PYRENES	770	--	1,600 J	1.6	21.978	21.978	0.0285	770	J	0.77	5.540	5.540	0.0072
MC SVOA(SIMS)	C3-PHENANTHRENES/ANTHRACENES	829	--	1,100 J	1.1	15.110	15.110	0.0182	390	J	0.39	2.806	2.806	0.0034
MC SVOA(SIMS)	BENZO[A]ANTHRACENE	841	4,153		0	0.000	0.000	0.0000	400		0.4	2.878	2.878	0.0034
MC SVOA(LS)	BENZO[A]ANTHRACENE	841	4,153	870 J	0.87	11.951	11.951	0.0142			0	0.000	0.000	0.0000
MC SVOA(LS)	CHRYSENE	844	826	1,300 J	1.3	17.857	17.857	0.0212			0	0.000	0.000	0.0000
MC SVOA(SIMS)	CHRYSENE	844	826		0	0.000	0.000	0.0000	580		0.58	4.173	4.173	0.0049
MC SVOA(SIMS)	C4-PHENANTHRENES/ANTHRACENES	913	--	5 U	0	0.000	0.000	0.0000	9	U	0	0.000	0.000	0.0000
MC SVOA(SIMS)	C1-CHRYSENES	929	--	2,100 J	2.1	28.846	28.846	0.0311	1,300	J	1.3	9.353	9.353	0.0101
MC SVOA(SIMS)	C3-FLUORANTHENES/PYRENES	949	--	1,400 J	1.4	19.231	19.231	0.0203	570	J	0.57	4.101	4.101	0.0043
MC SVOA(LS)	BENZO[A]PYRENE	965	3,840	970 J	0.97	13.324	13.324	0.0138			0	0.000	0.000	0.0000
MC SVOA(SIMS)	BENZO[A]PYRENE	965	3,840		0	0.000	0.000	0.0000	540		0.54	3.885	3.885	0.0040
MC SVOA(SIMS)	BENZO[E]PYRENE	967	4,300	1,100 J	1.1	15.110	15.110	0.0156	520	J	0.52	3.741	3.741	0.0039
MC SVOA(SIMS)	PERYLENE	967	431	150	0.15	2.060	2.060	0.0021	48		0.048	0.345	0.345	0.0004
MC SVOA(LS)	BENZO[B]FLUORANTHENE	979	2,169		0	0.000	0.000	0.0000			0	0.000	0.000	0.0000
MC SVOA(SIMS)	BENZO[B]FLUORANTHENE	979	2,169	620 J	0.62	8.516	8.516	0.0087	250	J	0.25	1.799	1.799	0.0018
MC SVOA(LS)	BENZO[K]FLUORANTHENE	981	1,220		0	0.000	0.000	0.0000			0	0.000	0.000	0.0000
MC SVOA(SIMS)	BENZO[K]FLUORANTHENE	981	1,220	320	0.32	4.396	4.396	0.0045	130		0.13	0.935	0.935	0.0010
MC SVOA(SIMS)	C2-CHRYSENES	1,008	--	1,600 J	1.6	21.978	21.978	0.0218	1,100	J	1.1	7.914	7.914	0.0079
MC SVOA(LS)	BENZO[G,H,I]PERYLENE	1,095	648	860 J	0.86	11.813	11.813	0.0108			0	0.000	0.000	0.0000
MC SVOA(SIMS)	BENZO[G,H,I]PERYLENE	1,095	648		0	0.000	0.000	0.0000	610		0.61	4.388	4.388	0.0040
MC SVOA(SIMS)	C3-CHRYSENES	1,112	--	1,100 J	1.1	15.110	15.110	0.0136	830	J	0.83	5.971	5.971	0.0054
MC SVOA(SIMS)	INDENO[1,2,3-CD]PYRENE	1,115	--	460	0.46	6.319	6.319	0.0057	190		0.19	1.367	1.367	0.0012
MC SVOA(LS)	INDENO[1,2,3-CD]PYRENE	1,115	--		0	0.000	0.000	0.0000			0	0.000	0.000	0.0000
MC SVOA(LS)	DIBENZ(A,H)ANTHRACENE	1,123	2,389		0	0.000	0.000	0.0000			0	0.000	0.000	0.0000
MC SVOA(SIMS)	DIBENZ(A,H)ANTHRACENE	1,123	2,389	680	0.68	9.341	9.341	0.0083	330		0.33	2.374	2.374	0.0021
MC SVOA(SIMS)	C4-CHRYSENES	1,214	--	510 J	0.51	7.005	7.005	0.0058	250	J	0.25	1.799	1.799	0.0015
Sum Total of ESBTU FCVi [3]								0.4937						0.1199

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Table 3-11B
Derivation of Total PAH ESBs - May 2011 Duck Creek Sediment Samples
Duck and Otter Creeks Confluence Investigation
Toledo, Lucas County, Ohio

		Location ID		DC-24					DC-25					
		Field Sample ID		DC-24-01					DC-25-01					
		Depth Interval		0- 6					0- 6					
		Sampling Date		5/11/2011					5/11/2011					
		Coc, PAHi, FCVi [1] (µg/goc)	Coc, PAHi, Maxi [2] (µg/goc)	Conc (µg/kg dry wt)	Conc (µg/g)	Coc (µg/goc)	Final Coc [2] (µg/goc)	ESBTU FCVi	Conc (µg/kg dry wt)		Conc (µg/g)	Coc (µg/goc)	Final Coc [2] (µg/goc)	ESBTU FCVi
			TOC (%)	15.9					9.35					
Analytical Method	**Chemical Name**		foc	0.159					0.0935					
MC SVOA(SIMS)	C2-FLUORANTHENES/PYRENES	NA		4,400 J	4.4	27.673	0.000	0.000	590	J	0.59	6.310	0.000	0.000
MC SVOA(LS)	NAPHTHALENE	385	61,700		0	0.000	0.000	0.0000			0	0.000	0.000	0.0000
MC SVOA(SIMS)	NAPHTHALENE	385	61,700	860 U	0	0.000	0.000	0.0000	100		0.1	1.070	1.070	0.0028
MC SVOA(SIMS)	C1-NAPHTHALENES	444	--	1,200 J	1.2	7.547	7.547	0.0170	220	J	0.22	2.353	2.353	0.0053
MC SVOA(SIMS)	1-METHYLNAPHTHALENE	446	165,700	920	0.92	5.786	5.786	0.0130	99		0.099	1.059	1.059	0.0024
MC SVOA(LS)	2-METHYLNAPHTHALENE	447	154,800		0	0.000	0.000	0.0000			0	0.000	0.000	0.0000
MC SVOA(SIMS)	2-METHYLNAPHTHALENE	447	154,800	1,100	1.1	6.918	6.918	0.0155	200		0.2	2.139	2.139	0.0048
MC SVOA(SIMS)	ACENAPHTHYLENE	452	24,000	31	0.031	0.195	0.195	0.0004	7	U	0	0.000	0.000	0.0000
MC SVOA(LS)	ACENAPHTHENE	491	33,400		0	0.000	0.000	0.0000			0	0.000	0.000	0.0000
MC SVOA(SIMS)	ACENAPHTHENE	491	33,400	43	0.043	0.270	0.270	0.0006	17		0.017	0.182	0.182	0.0004
MC SVOA(SIMS)	C2-NAPHTHALENES	510	--	1,000 J	1	6.289	6.289	0.0123	450	J	0.45	4.813	4.813	0.0094
MC SVOA(LS)	FLUORENE	538	26,000		0	0.000	0.000	0.0000			0	0.000	0.000	0.0000
MC SVOA(SIMS)	FLUORENE	538	26,000	860 U	0	0.000	0.000	0.0000	54		0.054	0.578	0.578	0.0011
MC SVOA(SIMS)	C3-NAPHTHALENES	581	--	730 J	0.73	4.591	4.591	0.0079	1,300	J	1.3	13.904	13.904	0.0239
MC SVOA(LS)	ANTHRACENE	594	1,300		0	0.000	0.000	0.0000			0	0.000	0.000	0.0000
MC SVOA(SIMS)	ANTHRACENE	594	1,300	860 U	0	0.000	0.000	0.0000	96		0.096	1.027	1.027	0.0017
MC SVOA(SIMS)	PHENANTHRENE	596	34,300	1,800	1.8	11.321	11.321	0.0190	250		0.25	2.674	2.674	0.0045
MC SVOA(LS)	PHENANTHRENE	596	34,300		0	0.000	0.000	0.0000			0	0.000	0.000	0.0000
MC SVOA(SIMS)	C1-FLUORENES	611	--	330 J	0.33	2.075	2.075	0.0034	180	J	0.18	1.925	1.925	0.0032
MC SVOA(SIMS)	C4-NAPHTHALENES	657	--	9 U	0	0.000	0.000	0.0000	1,200	J	1.2	12.834	12.834	0.0195
MC SVOA(SIMS)	C1-PHENANTHRENES/ANTHRACENES	670	--	2,900 J	2.9	18.239	18.239	0.0272	750	J	0.75	8.021	8.021	0.0120
MC SVOA(SIMS)	C2-FLUORENES	686	--	580 J	0.58	3.648	3.648	0.0053	380	J	0.38	4.064	4.064	0.0059
MC SVOA(SIMS)	PYRENE	697	9,090	2,900	2.9	18.239	18.239	0.0262	320		0.32	3.422	3.422	0.0049
MC SVOA(LS)	PYRENE	697	9,090		0	0.000	0.000	0.0000			0	0.000	0.000	0.0000
MC SVOA(LS)	FLUORANTHENE	707	23,870		0	0.000	0.000	0.0000			0	0.000	0.000	0.0000
MC SVOA(SIMS)	FLUORANTHENE	707	23,870	1,000	1	6.289	6.289	0.0089	190		0.19	2.032	2.032	0.0029
MC SVOA(SIMS)	C2-PHENANTHRENES/ANTHRACENES	746	--	2,900 J	2.9	18.239	18.239	0.0244	820	J	0.82	8.770	8.770	0.0118
MC SVOA(SIMS)	C3-FLUORENES	769	--	650 J	0.65	4.088	4.088	0.0053	440	J	0.44	4.706	4.706	0.0061
MC SVOA(SIMS)	C1-FLUORANTHENES/PYRENES	770	--	4,600 J	4.6	28.931	28.931	0.0376	680	J	0.68	7.273	7.273	0.0094
MC SVOA(SIMS)	C3-PHENANTHRENES/ANTHRACENES	829	--	1,900 J	1.9	11.950	11.950	0.0144	950	J	0.95	10.160	10.160	0.0123
MC SVOA(SIMS)	BENZO[A]ANTHRACENE	841	4,153	2,800	2.8	17.610	17.610	0.0209	360		0.36	3.850	3.850	0.0046
MC SVOA(LS)	BENZO[A]ANTHRACENE	841	4,153		0	0.000	0.000	0.0000			0	0.000	0.000	0.0000
MC SVOA(LS)	CHRYSENE	844	826		0	0.000	0.000	0.0000			0	0.000	0.000	0.0000
MC SVOA(SIMS)	CHRYSENE	844	826	3,300	3.3	20.755	20.755	0.0246	470		0.47	5.027	5.027	0.0060
MC SVOA(SIMS)	C4-PHENANTHRENES/ANTHRACENES	913	--	9 U	0	0.000	0.000	0.0000	560	J	0.56	5.989	5.989	0.0066
MC SVOA(SIMS)	C1-CHRYSENES	929	--	7,900 J	7.9	49.686	49.686	0.0535	950	J	0.95	10.160	10.160	0.0109
MC SVOA(SIMS)	C3-FLUORANTHENES/PYRENES	949	--	3,900 J	3.9	24.528	24.528	0.0258	750	J	0.75	8.021	8.021	0.0085
MC SVOA(LS)	BENZO[A]PYRENE	965	3,840		0	0.000	0.000	0.0000			0	0.000	0.000	0.0000
MC SVOA(SIMS)	BENZO[A]PYRENE	965	3,840	3,900	3.9	24.528	24.528	0.0254	360		0.36	3.850	3.850	0.0040
MC SVOA(SIMS)	BENZO[E]PYRENE	967	4,300	3,400 J	3.4	21.384	21.384	0.0221	350		0.35	3.743	3.743	0.0039
MC SVOA(SIMS)	PERYLENE	967	431	860 U	0	0.000	0.000	0.0000	32		0.032	0.342	0.342	0.0004
MC SVOA(LS)	BENZO[B]FLUORANTHENE	979	2,169		0	0.000	0.000	0.0000			0	0.000	0.000	0.0000
MC SVOA(SIMS)	BENZO[B]FLUORANTHENE	979	2,169	1,700 J	1.7	10.692	10.692	0.0109	200		0.2	2.139	2.139	0.0022
MC SVOA(LS)	BENZO[K]FLUORANTHENE	981	1,220		0	0.000	0.000	0.0000			0	0.000	0.000	0.0000
MC SVOA(SIMS)	BENZO[K]FLUORANTHENE	981	1,220	1,200	1.2	7.547	7.547	0.0077	98		0.098	1.048	1.048	0.0011
MC SVOA(SIMS)	C2-CHRYSENES	1,008	--	6,600 J	6.6	41.509	41.509	0.0412	910	J	0.91	9.733	9.733	0.0097
MC SVOA(LS)	BENZO[G,H,I]PERYLENE	1,095	648		0	0.000	0.000	0.0000			0	0.000	0.000	0.0000
MC SVOA(SIMS)	BENZO[G,H,I]PERYLENE	1,095	648	4,600	4.6	28.931	28.931	0.0264	380		0.38	4.064	4.064	0.0037
MC SVOA(SIMS)	C3-CHRYSENES	1,112	--	4,400 J	4.4	27.673	27.673	0.0249	640	J	0.64	6.845	6.845	0.0062
MC SVOA(SIMS)	INDENO[1,2,3-CD]PYRENE	1,115	--	1,300	1.3	8.176	8.176	0.0073	160		0.16	1.711	1.711	0.0015
MC SVOA(LS)	INDENO[1,2,3-CD]PYRENE	1,115	--		0	0.000	0.000	0.0000			0	0.000	0.000	0.0000
MC SVOA(LS)	DIBENZ(A,H)ANTHRACENE	1,123	2,389		0	0.000	0.000	0.0000			0	0.000	0.000	0.0000
MC SVOA(SIMS)	DIBENZ(A,H)ANTHRACENE	1,123	2,389	1,900	1.9	11.950	11.950	0.0106	230		0.23	2.460	2.460	0.0022
MC SVOA(SIMS)	C4-CHRYSENES	1,214	--	2,200 J	2.2	13.836	13.836	0.0114	280	J	0.28	2.995	2.995	0.0025
Sum Total of ESBTU FCVi [3]								0.5513						0.2179

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Table 3-11B
Derivation of Total PAH ESBs - May 2011 Duck Creek Sediment Samples
Duck and Otter Creeks Confluence Investigation
Toledo, Lucas County, Ohio

Analytical Method	Chemical Name	Location ID		DC-25				
		Field Sample ID		DC-25-01-DP				
		Depth Interval		0- 6				
		Sampling Date		5/11/2011				
		Coc, PAHi, FCVi [1] (µg/goc)	Coc, PAHi, Maxi [2] (µg/goc)	Conc (µg/kg dry wt)	Conc (µg/g)	Coc (µg/goc)	Final Coc [2] (µg/goc)	ESBTU FCVi
			TOC (%)	3.71				
			foc	0.0371				
MC SVOA(SIMS)	C2-FLUORANTHENES/PYRENES	NA		65 J	0.065	1.752	0.000	0.000
MC SVOA(LS)	NAPHTHALENE	385	61,700		0	0.000	0.000	0.0000
MC SVOA(SIMS)	NAPHTHALENE	385	61,700	27 J	0.027	0.728	0.728	0.0019
MC SVOA(SIMS)	C1-NAPHTHALENES	444	--	26 J	0.026	0.701	0.701	0.0016
MC SVOA(SIMS)	1-METHYLNAPHTHALENE	446	165,700	12 J	0.012	0.323	0.323	0.0007
MC SVOA(LS)	2-METHYLNAPHTHALENE	447	154,800		0	0.000	0.000	0.0000
MC SVOA(SIMS)	2-METHYLNAPHTHALENE	447	154,800	23 J	0.023	0.620	0.620	0.0014
MC SVOA(SIMS)	ACENAPHTHYLENE	452	24,000	11 J	0.011	0.296	0.296	0.0007
MC SVOA(LS)	ACENAPHTHENE	491	33,400		0	0.000	0.000	0.0000
MC SVOA(SIMS)	ACENAPHTHENE	491	33,400	7.8 J	0.0078	0.210	0.210	0.0004
MC SVOA(SIMS)	C2-NAPHTHALENES	510	--	72 J	0.072	1.941	1.941	0.0038
MC SVOA(LS)	FLUORENE	538	26,000		0	0.000	0.000	0.0000
MC SVOA(SIMS)	FLUORENE	538	26,000	14 J	0.014	0.377	0.377	0.0007
MC SVOA(SIMS)	C3-NAPHTHALENES	581	--	170 J	0.17	4.582	4.582	0.0079
MC SVOA(LS)	ANTHRACENE	594	1,300		0	0.000	0.000	0.0000
MC SVOA(SIMS)	ANTHRACENE	594	1,300	22 J	0.022	0.593	0.593	0.0010
MC SVOA(SIMS)	PHENANTHRENE	596	34,300	81 J	0.081	2.183	2.183	0.0037
MC SVOA(LS)	PHENANTHRENE	596	34,300		0	0.000	0.000	0.0000
MC SVOA(SIMS)	C1-FLUORENES	611	--	7 UJ	0	0.000	0.000	0.0000
MC SVOA(SIMS)	C4-NAPHTHALENES	657	--	180 J	0.18	4.852	4.852	0.0074
MC SVOA(SIMS)	C1-PHENANTHRENES/ANTHRACENES	670	--	110 J	0.11	2.965	2.965	0.0044
MC SVOA(SIMS)	C2-FLUORENES	686	--	7 UJ	0	0.000	0.000	0.0000
MC SVOA(SIMS)	PYRENE	697	9,090	120 J	0.12	3.235	3.235	0.0046
MC SVOA(LS)	PYRENE	697	9,090		0	0.000	0.000	0.0000
MC SVOA(LS)	FLUORANTHENE	707	23,870		0	0.000	0.000	0.0000
MC SVOA(SIMS)	FLUORANTHENE	707	23,870	120 J	0.12	3.235	3.235	0.0046
MC SVOA(SIMS)	C2-PHENANTHRENES/ANTHRACENES	746	--	120 J	0.12	3.235	3.235	0.0043
MC SVOA(SIMS)	C3-FLUORENES	769	--	14 J	0.014	0.377	0.377	0.0005
MC SVOA(SIMS)	C1-FLUORANTHENES/PYRENES	770	--	97 J	0.097	2.615	2.615	0.0034
MC SVOA(SIMS)	C3-PHENANTHRENES/ANTHRACENES	829	--	130 J	0.13	3.504	3.504	0.0042
MC SVOA(SIMS)	BENZO[A]ANTHRACENE	841	4,153	85 J	0.085	2.291	2.291	0.0027
MC SVOA(LS)	BENZO[A]ANTHRACENE	841	4,153		0	0.000	0.000	0.0000
MC SVOA(LS)	CHRYSENE	844	826		0	0.000	0.000	0.0000
MC SVOA(SIMS)	CHRYSENE	844	826	86 J	0.086	2.318	2.318	0.0027
MC SVOA(SIMS)	C4-PHENANTHRENES/ANTHRACENES	913	--	85 J	0.085	2.291	2.291	0.0025
MC SVOA(SIMS)	C1-CHRYSENES	929	--	72 J	0.072	1.941	1.941	0.0021
MC SVOA(SIMS)	C3-FLUORANTHENES/PYRENES	949	--	59 J	0.059	1.590	1.590	0.0017
MC SVOA(LS)	BENZO[A]PYRENE	965	3,840		0	0.000	0.000	0.0000
MC SVOA(SIMS)	BENZO[A]PYRENE	965	3,840	120 J	0.12	3.235	3.235	0.0034
MC SVOA(SIMS)	BENZO[E]PYRENE	967	4,300	58 J	0.058	1.563	1.563	0.0016
MC SVOA(SIMS)	PERYLENE	967	431	17 J	0.017	0.458	0.458	0.0005
MC SVOA(LS)	BENZO[B]FLUORANTHENE	979	2,169		0	0.000	0.000	0.0000
MC SVOA(SIMS)	BENZO[B]FLUORANTHENE	979	2,169	57 J	0.057	1.536	1.536	0.0016
MC SVOA(LS)	BENZO[K]FLUORANTHENE	981	1,220		0	0.000	0.000	0.0000
MC SVOA(SIMS)	BENZO[K]FLUORANTHENE	981	1,220	42 J	0.042	1.132	1.132	0.0012
MC SVOA(SIMS)	C2-CHRYSENES	1,008	--	50 J	0.05	1.348	1.348	0.0013
MC SVOA(LS)	BENZO[G,H,I]PERYLENE	1,095	648		0	0.000	0.000	0.0000
MC SVOA(SIMS)	BENZO[G,H,I]PERYLENE	1,095	648	64 J	0.064	1.725	1.725	0.0016
MC SVOA(SIMS)	C3-CHRYSENES	1,112	--	49 J	0.049	1.321	1.321	0.0012
MC SVOA(SIMS)	INDENO[1,2,3-CD]PYRENE	1,115	--	52 J	0.052	1.402	1.402	0.0013
MC SVOA(LS)	INDENO[1,2,3-CD]PYRENE	1,115	--		0	0.000	0.000	0.0000
MC SVOA(LS)	DIBENZ(A,H)ANTHRACENE	1,123	2,389		0	0.000	0.000	0.0000
MC SVOA(SIMS)	DIBENZ(A,H)ANTHRACENE	1,123	2,389	27 J	0.027	0.728	0.728	0.0006
MC SVOA(SIMS)	C4-CHRYSENES	1,214	--	7 UJ	0	0.000	0.000	0.0000
Sum Total of ESBTU FCVi [3]								0.0831

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Table 3-11B
Derivation of Total PAH ESBs - May 2011 Duck Creek Sediment Samples
Duck and Otter Creeks Confluence Investigation
Toledo, Lucas County, Ohio

-- = Criterion or value not available
µg/g = Microgram per gram
µg/goc = Microgram per gram organic carbon
µg/kg = Microgram per kilogram

Coc = Concentration organic carbon
Conc = Concentration

FCVi = Final chronic value for individual PAH
foc = Fraction organic carbon
ID = Identification
J = Estimated value; concentration below RL or exceeded RL, but one or more quality control parameters were outside control limits
LS = Low soil
Maxi = Maximum individual PAH

NA = Criterion or value not available
PAH = Polycyclic aromatic hydrocarbon
PAHi = Individual PAH
RL = Reporting limit
SIMS = Selective ion monitoring
SVOA = Semivolatile organic analysis
TOC = Total organic carbon
U = Coded data omitted from ESB calculations
wt = Weight
1 PAHs and corresponding Coc PAHi, FCVi, Coc PAHi, and Maxi values are from Table 3-4 in U.S. EPA 2003; example calculations provided in Table 6-3 in U.S. EPA 2003
2 Because COC exceeds COC, PAHi, Maxi , COC, PAHi, Maxi is substituted for COC to calculate ESBTU FCVi (see text).
3 Sum of Total ESBTU FCVi = Sum of Coc, PAH_i / Coc, PAH_i, $FV_{i;}$ if Sum of Total ESBTU FCVi exceeds one, the mixture of PAHs in sediment may not be acceptable for the protection of benthic organisms.
Source:
U.S. Environmental Protection Agency (U.S. EPA). 2003. "Procedures for the Derivation of Equilibrium Partitioning Sediment Benchmarks (ESBs) for the Protection of Benthic Organisms: PAH Mixtures." EPA/600/R-02/013. November.

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Table 3-12A
Pore Water PAH Concentrations Compared to Surface Water Benchmarks - Duck Creek Confluence Sediment Samples
Duck and Otter Creeks Confluences Investigation
Toledo, Lucas County, Ohio

Chemical Name	PAH Specific FCVa (ug/L)	DC-13 11/2/2010 Cporewater	DC-13 11/2/2010 $IWTU_{FCV}$	DC-14 11/3/2010 Cporewater	DC-14 11/3/2010 $IWTU_{FCV}$	DC-16 11/2/2010 Cporewater	DC-16 11/2/2010 $IWTU_{FCV}$	DC-17 11/2/2010 Cporewater	DC-17 11/2/2010 $IWTU_{FCV}$	DC-19 11/2/2010 Cporewater	DC-19 11/2/2010 $IWTU_{FCV}$
PAHs (ng/g = ug/L, at water density of 1 g/mL)											
1-METHYLNAPHTHALENE	75.37	U	0.0000	U	0.0000	U	0.0000	U	0.0000	U	0.0000
2-METHYLNAPHTHALENE	72.16	U	0.0000	U	0.0000	U	0.0000	U	0.0000	U	0.0000
ACENAPHTHENE	55.85	U	0.0000	U	0.0000	U	0.0000	U	0.0000	U	0.0000
ACENAPHTHYLENE	306.9	U	0.0000	U	0.0000	U	0.0000	U	0.0000	U	0.0000
ANTHRACENE	20.73	U	0.0000	U	0.0000	U	0.0000	U	0.0000	U	0.0000
BENZO[A]ANTHRACENE	2.227	U	0.0000	U	0.0000	U	0.0000	U	0.0000	U	0.0000
BENZO[A]PYRENE	0.9573	U	0.0000	U	0.0000	U	0.0000	U	0.0000	U	0.0000
BENZO[B+K]FLUORANTHENE	0.6145	U	0.0000	U	0.0000	U	0.0000	U	0.0000	U	0.0000
BENZO[E]PYRENE	0.9008	U	0.0000	U	0.0000	U	0.0000	U	0.0000	U	0.0000
BENZO[G,H,I]PERYLENE	0.4391	U	0.0000	U	0.0000	U	0.0000	U	0.0000	U	0.0000
C1-CHRYSENES	0.8557	U	0.0000	U	0.0000	U	0.0000	U	0.0000	U	0.0000
C1-FLUORANTHENES/PYRENES	4.887	U	0.0000	U	0.0000	U	0.0000	U	0.0000	U	0.0000
C1-FLUORENES	13.99	U	0.0000	U	0.0000	0.04	0.0029	U	0.0000	0.03	0.0021
C1-PHENANTHRENES/ANTHRACENES	7.436	U	0.0000	U	0.0000	U	0.0000	U	0.0000	U	0.0000
C2-CHRYSENES	0.4827	U	0.0000	U	0.0000	U	0.0000	U	0.0000	U	0.0000
C2-FLUORENES	5.305	U	0.0000	U	0.0000	U	0.0000	U	0.0000	U	0.0000
C2-NAPHTHALENES	30.24	U	0.0000	U	0.0000	0.28	0.0093	0.25	0.0083	0.24	0.0079
C2-PHENANTHRENES/ANTHRACENES	3.199	U	0.0000	U	0.0000	U	0.0000	U	0.0000	U	0.0000
C3-CHRYSENES	0.1675	U	0.0000	U	0.0000	U	0.0000	U	0.0000	U	0.0000
C3-FLUORENES	1.916	U	0.0000	U	0.0000	U	0.0000	U	0.0000	U	0.0000
C3-NAPHTHALENES	11.1	U	0.0000	U	0.0000	U	0.0000	U	0.0000	U	0.0000
C3-PHENANTHRENES/ANTHRACENES	1.256	U	0.0000	U	0.0000	U	0.0000	U	0.0000	U	0.0000
C4-CHRYSENES	0.07062	U	0.0000	U	0.0000	U	0.0000	U	0.0000	U	0.0000
C4-NAPHTHALENES	4.048	U	0.0000	U	0.0000	U	0.0000	U	0.0000	U	0.0000
C4-PHENANTHRENES/ANTHRACENES	0.5594	U	0.0000	U	0.0000	U	0.0000	U	0.0000	U	0.0000
CHRYSENE	2.042	U	0.0000	U	0.0000	U	0.0000	U	0.0000	U	0.0000
DIBENZ(A,H)ANTHRACENE	0.2825	U	0.0000	U	0.0000	U	0.0000	U	0.0000	U	0.0000
FLUORANTHENE	7.109	U	0.0000	U	0.0000	U	0.0000	U	0.0000	U	0.0000
FLUORENE	39.3	U	0.0000	U	0.0000	U	0.0000	U	0.0000	U	0.0000
INDENO[1,2,3-CD]PYRENE	0.275	U	0.0000	U	0.0000	U	0.0000	U	0.0000	U	0.0000
NAPHTHALENE	193.5	U	0.0000	U	0.0000	0.16	0.0008	0.15	0.0008		0.0000
PERYLENE	0.9008	U	0.0000	U	0.0000	U	0.0000	U	0.0000	U	0.0000
PHENANTHRENE	19.13	U	0.0000	U	0.0000	U	0.0000	U	0.0000	U	0.0000
PYRENE	10.11	0.01	0.0010	0.01	0.0010	0.01	0.0010	0.01	0.0010	0.01	0.0010
Sum IWTU			0.0010		0.001		0.014		0.010		0.011

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Table 3-12A
Pore Water PAH Concentrations Compared to Surface Water Benchmarks - Duck Creek Confluence Sediment Samples
Duck and Otter Creeks Confluences Investigation
Toledo, Lucas County, Ohio

Chemical Name	PAH Specific FCVa (ug/L)	DC-19FS 11/2/2010 Cporewater	DC-19FS 11/2/2010 $IWTU_{FCV}$	DC-20-01 5/11/2011 Cporewater	DC-20-01 5/11/2011 $IWTU_{FCV}$	DC-21-01 5/11/2011 Cporewater	DC-21-01 5/11/2011 $IWTU_{FCV}$	DC-22-01 5/11/2011 Cporewater	DC-22-01 5/11/2011 $IWTU_{FCV}$
PAHs (ng/g = ug/L, at water density of 1 g/mL)									
1-METHYLNAPHTHALENE	75.37	U	0.0000	U	0.0000	U	0.0000	U	0.0000
2-METHYLNAPHTHALENE	72.16	U	0.0000	U	0.0000	U	0.0000	U	0.0000
ACENAPHTHENE	55.85	U	0.0000	U	0.0000	U	0.0000	U	0.0000
ACENAPHTHYLENE	306.9	U	0.0000	U	0.0000	U	0.0000	U	0.0000
ANTHRACENE	20.73	U	0.0000	U	0.0000	U	0.0000	U	0.0000
BENZO[A]ANTHRACENE	2.227	U	0.0000	U	0.0000	0.001 J	0.0004	U	0.0000
BENZO[A]PYRENE	0.9573	U	0.0000	U	0.0000	U	0.0000	U	0.0000
BENZO[B+K]FLUORANTHENE	0.6145	U	0.0000	U	0.0000	U	0.0000	U	0.0000
BENZO[E]PYRENE	0.9008	U	0.0000	U	0.0000	U	0.0000	U	0.0000
BENZO[G,H,I]PERYLENE	0.4391	U	0.0000	U	0.0000	U	0.0000	U	0.0000
C1-CHRYSENES	0.8557	U	0.0000	U	0.0000	U	0.0000	U	0.0000
C1-FLUORANTHENES/PYRENES	4.887	U	0.0000	U	0.0000	U	0.0000	U	0.0000
C1-FLUORENES	13.99	U	0.0000	U	0.0000	U	0.0000	U	0.0000
C1-PHENANTHRENES/ANTHRACENES	7.436	U	0.0000	U	0.0000	U	0.0000	U	0.0000
C2-CHRYSENES	0.4827	U	0.0000	U	0.0000	U	0.0000	U	0.0000
C2-FLUORENES	5.305	U	0.0000	U	0.0000	U	0.0000	U	0.0000
C2-NAPHTHALENES	30.24	U	0.0000	U	0.0000	U	0.0000	U	0.0000
C2-PHENANTHRENES/ANTHRACENES	3.199	U	0.0000	U	0.0000	U	0.0000	U	0.0000
C3-CHRYSENES	0.1675	U	0.0000	U	0.0000	U	0.0000	U	0.0000
C3-FLUORENES	1.916	U	0.0000	U	0.0000	U	0.0000	U	0.0000
C3-NAPHTHALENES	11.1	U	0.0000	U	0.0000	U	0.0000	U	0.0000
C3-PHENANTHRENES/ANTHRACENES	1.256	U	0.0000	U	0.0000	U	0.0000	U	0.0000
C4-CHRYSENES	0.07062	U	0.0000	U	0.0000	U	0.0000	U	0.0000
C4-NAPHTHALENES	4.048	U	0.0000	U	0.0000	U	0.0000	U	0.0000
C4-PHENANTHRENES/ANTHRACENES	0.5594	U	0.0000	U	0.0000	U	0.0000	U	0.0000
CHRYSENE	2.042	U	0.0000	U	0.0000	U	0.0000	U	0.0000
DIBENZ(A,H)ANTHRACENE	0.2825	U	0.0000	U	0.0000	U	0.0000	U	0.0000
FLUORANTHENE	7.109	U	0.0000	U	0.0000	0.012 J	0.0017	0.01 J	0.0014
FLUORENE	39.3	U	0.0000	U	0.0000	U	0.0000	U	0.0000
INDENO[1,2,3-CD]PYRENE	0.275	U	0.0000	U	0.0000	U	0.0000	U	0.0000
NAPHTHALENE	193.5	U	0.0000	U	0.0000	U	0.0000	U	0.0000
PERYLENE	0.9008	U	0.0000	U	0.0000	U	0.0000	U	0.0000
PHENANTHRENE	19.13	U	0.0000	U	0.0000	U	0.0000	U	0.0000
PYRENE	10.11	0.01	0.0010	U	0.0000	U	0.0000	U	0.0000
Sum IWTU			0.001		0.0		0.002		0.001

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Table 3-12A
Pore Water PAH Concentrations Compared to Surface Water Benchmarks - Duck Creek Confluence Sediment Samples
Duck and Otter Creeks Confluences Investigation
Toledo, Lucas County, Ohio

		DC-23-01		DC-24-01		DC-25-01	
	PAH Specific FCVa	5/11/2011		5/11/2011		5/11/2011	
Chemical Name	(ug/L)	Cporewater	$IWTU_{FCV}$	Cporewater	$IWTU_{FCV}$	Cporewater	$IWTU_{FCV}$
PAHs (ng/g = ug/L, at water density of 1 g/mL)							
1-METHYLNAPHTHALENE	75.37	U	0.0000	U	0.0000	U	0.0000
2-METHYLNAPHTHALENE	72.16	U	0.0000	U	0.0000	U	0.0000
ACENAPHTHENE	55.85	U	0.0000	U	0.0000	U	0.0000
ACENAPHTHYLENE	306.9	U	0.0000	U	0.0000	U	0.0000
ANTHRACENE	20.73	U	0.0000	U	0.0000	U	0.0000
BENZO[A]ANTHRACENE	2.227	0.002 J	0.0009	U	0.0000	U	0.0000
BENZO[A]PYRENE	0.9573	U	0.0000	U	0.0000	U	0.0000
BENZO[B+K]FLUORANTHENE	0.6145	U	0.0000	U	0.0000	U	0.0000
BENZO[E]PYRENE	0.9008	U	0.0000	U	0.0000	U	0.0000
BENZO[G,H,I]PERYLENE	0.4391	U	0.0000	U	0.0000	U	0.0000
C1-CHRYSENES	0.8557	U	0.0000	U	0.0000	U	0.0000
C1-FLUORANTHENES/PYRENES	4.887	U	0.0000	U	0.0000	U	0.0000
C1-FLUORENES	13.99	U	0.0000	U	0.0000	0.124 J	0.0089
C1-PHENANTHRENES/ANTHRACENES	7.436	U	0.0000	U	0.0000	0.13 J	0.0175
C2-CHRYSENES	0.4827	U	0.0000	U	0.0000	U	0.0000
C2-FLUORENES	5.305	U	0.0000	U	0.0000	0.21 J	0.0396
C2-NAPHTHALENES	30.24	U	0.0000	0.24 J	0.0079	0.66 J	0.0218
C2-PHENANTHRENES/ANTHRACENES	3.199	U	0.0000	U	0.0000	U	0.0000
C3-CHRYSENES	0.1675	U	0.0000	U	0.0000	U	0.0000
C3-FLUORENES	1.916	U	0.0000	U	0.0000	U	0.0000
C3-NAPHTHALENES	11.1	U	0.0000	U	0.0000	3.77 J	0.3396
C3-PHENANTHRENES/ANTHRACENES	1.256	U	0.0000	U	0.0000	U	0.0000
C4-CHRYSENES	0.07062	U	0.0000	U	0.0000	U	0.0000
C4-NAPHTHALENES	4.048	U	0.0000	U	0.0000	**4.24 J**	1.0474
C4-PHENANTHRENES/ANTHRACENES	0.5594	U	0.0000	U	0.0000	U	0.0000
CHRYSENE	2.042	0.003 J	0.0015	U	0.0000	U	0.0000
DIBENZ(A,H)ANTHRACENE	0.2825	U	0.0000	U	0.0000	U	0.0000
FLUORANTHENE	7.109	**0.062 J**	0.0087	0.012 J	0.0017	0.02 J	0.0028
FLUORENE	39.3	U	0.0000	U	0.0000	U	0.0000
INDENO[1,2,3-CD]PYRENE	0.275	U	0.0000	U	0.0000	U	0.0000
NAPHTHALENE	193.5	0.12 J	0.0006	U	0.0000	U	0.0000
PERYLENE	0.9008	U	0.0000	U	0.0000	U	0.0000
PHENANTHRENE	19.13	U	0.0000	U	0.0000	U	0.0000
PYRENE	10.11	0.092 J	0.0091	0.01 J	0.0010	0.02 J	0.0020
Sum IWTU			0.02		0.01		1.48

Notes:

Shaded results exceed sum of $IWTU_{FCV}$ greater than 1.0

Cporewater - concentration of porewater

FCV - final chronic value

g/ML - gram per milliliter

IWTU - interstitial water toxic unit

J - Estimated value. Concentration is below the reporting limit or it was found to exceed the reporting limit, but one or more quality control parameters were outside control limits.

µg/L - microgram per liter

ng/g - nanogram per gram

U - Not detected above the reporting limit.

a From Table 3-4. EPA (2003). Procedures for the Derivation of Equilibrium Partitioning Sediment Benchmarks (ESBs) for the Protection of Benthic Organisms: PAH Mixtures. EPA/600/R-02/013. Nov. 2003.

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Table 3-12B
Pore Water Metals and General Chemistry Concentrations Compared to Surface Water Benchmarks - Duck Creek Confluence Sediment Samples
Duck and Otter Creeks Confluences Investigation
Toledo, Lucas County, Ohio

	Ohio Administrative Code (OAC) 3745-1 Water use designations and statewide criteria[a]			DC-13	DC-14	DC-16	DC-17	DC-19
				11/2/2010	11/3/2010	11/2/2010	11/2/2010	11/2/2010
Chemical Name	**IMZM**	**OMZM (Acute)**	**OMZA (Chronic)**					
HARDNESS (AS CACO3) (mg/L)	--	--	--	417	342	332	330	299
DISSOLVED ORGANIC CARBON (mg/L)	--	--	--	79.7	63	59.8	57.8	50.4
PH (s.u.)	--	--	6.5 - 9.0	7.31	7.39	7.36	7.64	7.32
NITROGEN, AMMONIA (AS N) (mg/L)	--	--	0.7 - 2.3	**17**	**11.3**	**11.1**	**9.47**	**8.12**
Inorganics (ug/L) (total recoverable)								
CALCIUM	--	--	--	111000	91000	83300	86100	78500
IRON	--	--	1000 c	98.4	36.2	427	75.5	25.8
MAGNESIUM	--	--	--	33800	27800	30200	27900	25000
POTASSIUM	--	--	--	8080	7440	9210	6300	5680
SODIUM	--	--	--	32500	40200	37900	36500	45300
ALUMINUM	--	750 (CMC) b	87 (CCC) b	8.8	2.1	18.8	3.7	8.4
ANTIMONY	1800 d	900 d	190 d	0.547	0.057	0.227	0.121	0.099
ARSENIC	680	340	150	2.4	11.9	7.5	4.5	6.7
BARIUM	4000 d	2000 d	220 d	81.7	31.7	48.9	31.3	24.4
BERYLLIUM	1100 a, d	540 a,d	64 a, d	0.006 U	0.006 U	0.006 U	0.006 U	0.006 U
CADMIUM	31 a	16 a	5.8 a	0.005 U	0.005 U	0.013 J	0.005 U	0.005 U
CHROMIUM	8900 a	4400 a	210 a	1.13	0.57	0.93	0.4	0.4
COBALT	440 d	220 d	24 d	0.278	0.74	0.502	0.718	0.622
COPPER	79 a	39 a	24 a	3.06	0.65	2.55	0.99	1.14
LEAD	990 a	500 a	26 a	0.129	0.046	0.264	0.019 J	0.011 J
MANGANESE	--	2300 c	80 c	2.95	**1990**	**1140**	**1650**	**1670**
NICKEL	2400 a	1200 a	130 a	3.48	1.65	2.01	1.81	1.58
SELENIUM	--	13 - 186 c	5	0.6 J	0.7 J	0.6 J	0.6 J	0.7 J
SILVER	21 a,d	11 a,d	1.3 d	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U
THALLIUM	160 d	79 d	17 d	0.024	0.005 U	0.008 J	0.01 J	0.006 UJ
VANADIUM	300 d	150 d	44 d	2.31	0.2 J	0.65	0.22	0.2 J
ZINC	610 a	300 a	300 a	4.3	0.9	3	1.1	0.6
MERCURY	3.4	1.7	0.91	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U

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Table 3-12B
Pore Water Metals and General Chemistry Concentrations Compared to Surface Water Benchmarks - Duck Creek Confluence Sediment Samples
Duck and Otter Creeks Confluences Investigation
Toledo, Lucas County, Ohio

	Ohio Administrative Code (OAC) 3745-1 Water use designations and statewide criteria[a]			DC-19FS	DC-20-01	DC-21-01	DC-22-01
				11/2/2010	5/11/2011	5/11/2011	5/11/2011
Chemical Name	**IMZM**	**OMZM (Acute)**	**OMZA (Chronic)**				
HARDNESS (AS CACO3) (mg/L)	--	--	--	309	1050	622	330
DISSOLVED ORGANIC CARBON (mg/L)	--	--	--	40.6	13.7	10.2	8.21
PH (s.u.)	--	--	6.5 - 9.0	7.39	7.97	7.76	7.81
NITROGEN, AMMONIA (AS N) (mg/L)	--	--	0.7 - 2.3	**8.53**	**8**	1.81	**4.18**
Inorganics (ug/L) (total recoverable)							
CALCIUM	--	--	--	81000	163000	139000	84300
IRON	--	--	1000 c	25.6	22.1	22.6 U	44.7
MAGNESIUM	--	--	--	26000	156000	67000	29000
POTASSIUM	--	--	--	6130	245000	17000	6090
SODIUM	--	--	--	45200	195000	519000	36200
ALUMINUM	--	750 (CMC) b	87 (CCC) b	6.6	5	7 U	6.4
ANTIMONY	1800 d	900 d	190 d	0.08	0.24	0.52	0.22
ARSENIC	680	340	150	6.1	8.58	3.12	2.68
BARIUM	4000 d	2000 d	220 d	19.3	**261**	120	61.3
BERYLLIUM	1100 a, c	540 a,d	64 a, d	0.006 U	0.006 U	0.004 J	0.006 J
CADMIUM	31 a	16 a	5.8 a	0.006 J	0.049	0.109	0.029
CHROMIUM	8900 a	4400 a	210 a	0.41	0.87	0.68	0.26
COBALT	440 d	220 d	24 d	0.612	0.783	0.477	0.395
COPPER	79 a	39 a	24 a	0.98	3.78	1.65	2.75
LEAD	990 a	500 a	26 a	0.019 J	0.079	0.039	0.065
MANGANESE	--	2300 c	80 c	**1730**	**257**	110	**222**
NICKEL	2400 a	1200 a	130 a	1.49	7.38	7.22	4.12
SELENIUM	--	13 - 186 c	5	0.5 J	2.5	0.8 J	0.6 J
SILVER	21 a,d	11 a,d	1.3 d	0.004 U	0.008 U	0.004 U	0.01 J
THALLIUM	160 d	79 d	17 d	0.005 U	0.008 J	0.009 J	0.01 J
VANADIUM	300 d	150 d	44 d	0.15 J	6.45	2.9	0.44
ZINC	610 a	300 a	300 a	1.5	3.31	3.31	2.3
MERCURY	3.4	1.7	0.91	0.02 U	0.02 U	0.02 U	0.02 U

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Table 3-12B
Pore Water Metals and General Chemistry Concentrations Compared to Surface Water Benchmarks - Duck Creek Confluence Sediment Samples
Duck and Otter Creeks Confluences Investigation
Toledo, Lucas County, Ohio

	Ohio Administrative Code (OAC) 3745-1 Water use designations and statewide criteria[a]			DC-23-01	DC-24-01	DC-25-01	DC-25-01-DP
				5/11/2011	5/11/2011	5/11/2011	5/11/2011
Chemical Name	**IMZM**	**OMZM (Acute)**	**OMZA (Chronic)**				
HARDNESS (AS CACO3) (mg/L)	--	--	--	283	296	428	681
DISSOLVED ORGANIC CARBON (mg/L)	--	--	--	133	346	18.8	45.1
PH (s.u.)	--	--	6.5 - 9.0	7.81	7.66	7.78	7.9
NITROGEN, AMMONIA (AS N) (mg/L)	--	--	0.7 - 2.3	**6.07**	**4.75**	**6.95**	**17.1**
Inorganics (ug/L) (total recoverable)							
CALCIUM	--	--	--	72900	79000	74100	73400
IRON	--	--	1000 c	27.5	44.5	16.1	31.4
MAGNESIUM	--	--	--	24600	24000	58900	121000
POTASSIUM	--	--	--	6200	6160	6590	7840
SODIUM	--	--	--	39300	36300	81700	129000
ALUMINUM	--	750 (CMC) b	87 (CCC) b	4.1	2.7	27.7	25.4
ANTIMONY	1800 d	900 d	190 d	0.11	0.07 J	0.53	0.47
ARSENIC	680	340	150	9.16	9.7	62.6	101
BARIUM	4000 d	2000 d	220 d	43.3	49	105	110
BERYLLIUM	1100 a, d	540 a,d	64 a, d	0.007 J	0.005 J	0.004 J	0.007 J
CADMIUM	31 a	16 a	5.8 a	0.02	0.114	0.065	0.079
CHROMIUM	8900 a	4400 a	210 a	2.19	5.3	0.74	1.32
COBALT	440 d	220 d	24 d	0.606	0.548	0.734	2.08
COPPER	79 a	39 a	24 a	1.23	0.73	4.77	6.06
LEAD	990 a	500 a	26 a	0.026	0.033	0.297	0.178
MANGANESE	--	2300 c	80 c	**870**	**1120**	**164**	**140**
NICKEL	2400 a	1200 a	130 a	3.84	4.14	7.75	11.3
SELENIUM	--	13 - 186 c	5	0.6 J	0.7 J	2.5	2.8
SILVER	21 a,d	11 a,d	1.3 d	0.004 U	0.004 U	0.004 U	0.004 U
THALLIUM	160 d	79 d	17 d	0.004 J	0.002 U	0.059	0.059
VANADIUM	300 d	150 d	44 d	1.6	1.83	6.66	6.21
ZINC	610 a	300 a	300 a	2.6	0.98	3.49	6.31
MERCURY	3.4	1.7	0.91	0.02 U	0.02 U	0.02 U	0.02 U

Notes:

Bold indicates most stringent criteria is exceeded; shading indicates least stringent criteria is exceeded.

OMZM - Outside mixing zone maximum

IMZM- Inside mixing zone maximum

IMZA - Inside mixing zone average

CMC = Criteria maximum concentration

CCC = Criteria chronic concentration

U - Not detected above the RL.

J - Estimated value. Concentration is below the reporting limit or it was found to exceed the reporting limit, but one or more quality control parameters were outside control limits.

mg/L - milligram per liter

SU - standard unit

a Used criteria for 300 mg/L hardness; average site hardness is 341 mg/L.

b National ambient water quality criteria (http://water.epa.gov/scitech/swguidance/standards/current/upload/nrwqc-2009.pdf)

WA. Office of Response and Restoration Division, National Oceanic and Atmospheric Administration. 34 pages.

Values presented are acute and chronic freshcwater values

(http://response.restoration.noaa.gov/book_shelf/122_NEW-SQuiRTs.pdf)

d Lake Erie Basin Aquatic Life and Human Health Tier I Criteria, Tier II Values and Screening Values (SV)

contained in and developed pursuant to Chapters 3745-1 and 3745-2 of the Ohio Administrative Code (OAC).

Table numbers within this table refer to Chapter 3745-1 of the OAC.

Ohio EPA, Division of Surface Water. 10/20/09

http://www.epa.ohio.gov/portals/35/wqs/Erieval13.pdf.

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Table 3-13
Comparison of Inorganic Concentrations to Sediment Benchmarks - Otter Creek Confluence Sediment Samples
Duck and Otter Creeks Confluence Investigation
Toledo, Lucas County, Ohio

Field Sample ID	Sediment Benchmark		OC-26	OC-26-01	OC-26-01DP	OC-26-02	OC-26-02DP	OC-27	OC-27-01	OC-27-02	OC-27DP	OC-28	OC-28-01	OC-28-02	OC-28-03	OC-29	OC-29-01
Sampling Date			11/3/2010	11/3/2010	11/3/2010	11/3/2010	11/3/2010	11/3/2010	11/3/2010	11/3/2010	11/3/2010	11/3/2010	11/3/2010	11/3/2010	11/3/2010	11/4/2010	11/4/2010
Inorganics (mg/kg)																	
ALUMINUM	58000	ARCS PEC	9860	7880	8200	8470	10800	10500	8840	6860	11600	7590	6240	9250	6900	12200	8930
ANTIMONY	PQL	R4	9.7 UJ	5.7 UJ	6.5 UJ	5.9 UJ	7.4 UJ	9.2 UJ	7.8 UJ	6.1 UJ	7.4 UJ	8 UJ	10.2 UJ	7.6 UJ	7 UJ	11.2 UJ	8.6 UJ
ARSENIC	33	Consensus PEC	11.9	7.6	7.9	3.3	5.1	7.6	11.4	7.5	9.1	8.5	6.9	3.9	3.6	8.9	8.5
BARIUM	NA		74.2 J	54.7 J	60.3 J	58 J	80.4 J	70.4	71.7 J	40.7 J	95.2 J	63.1	82.8	184	51.3	91.4	66.6
BERYLLIUM	NA		0.52 J	0.41 J	0.45 J	0.46 J	0.59 J	0.48 J	0.5 J	0.39 J	0.62 J	0.44 J	0.34 J	0.57 J	0.39 J	0.63 J	0.5 J
CADMIUM	4.98	Consensus PEC	1.8 J	0.87 J	0.67 J	0.21 J	0.31 J	1.3	0.93 J	0.4 J	1.7 J	0.67	0.84 J	1	0.38 J	1.5	1
CALCIUM	--		45800	50900	47800	39000	35500	21600	48100	56000	37900	60400	122000	7040	21400	47400	41300
CHROMIUM	111	Consensus PEC	32.7	20.3	16	14	17.6	22.7	18.6	11.8	28.7	55.9	111	18.1	11.3	32.2	17.5
COBALT	50	R5 ESL	6 J	5.7 J	6.2 J	5.8 J	7.9 J	4.6 J	8.3 J	6.6 J	7.1 J	5.2 J	3.8 J	13.8	5.5 J	7.1 J	6.8 J
COPPER	149	Consensus PEC	87.8	35.3	30.7	15.9	18.2	72.7	41.8	16.2	77.6	44.7	57.7	11.6	15.7	55.8	29.7
IRON	20000	Ontario LEL	**21100**	16400	17700	14500	19400	16000	**20300**	18800	**21900**	14800	11600	**23700**	12800	**22600**	19600
LEAD	126	Consensus PEC	70.3 J	45.3 J	105 J	9.6 J	14.3 J	55.8	36.3 J	10.4 J	59.3 J	57.3	46	11	7.5	50	51.8
MAGNESIUM	--		9670	13100	11200	16000	12400	6360	12500	12100	10200	8980	7620	4080	9820	11900	11900
MANGANESE	819	ARCS NEC	362	367	367	320	473	205	361	556	339	309 J	275 J	435 J	192 J	393 J	377 J
NICKEL	48.6	Consensus PEC	23.7 J	19 J	19.9 J	17.4 J	23.2 J	17.1	26 J	19.3 J	26 J	18.8	20.2	29.3	16.4	25.9	20.8
POTASSIUM	--		1730 J-	1380 J-	1600 J-	1630 J-	2200 J-	2000 J-	1750 J-	1600 J-	1830 J-	1200 J-	826 J-	1170 J-	996 J-	2050 J-	1590 J-
SELENIUM	2	R3 BTAG	**5.3 J**	**3.7 J**	**4.4 J**	**3.4 J**	**4.3 J**	**5.6**	**5.2 J**	**4.3 J**	**5.8 J**	**4.9 J**	**3.1 J**	**6 J**	**3.6 J**	**6.7 J**	**4.6 J**
SILVER	0.5	R5 ESL	**0.7 J**	0.95 U	1.1 U	0.99 U	1.2 U	0.51 J	0.5 J	**0.82 J**	0.55 J	**1.7**	1.7 U	1.3 U	1.2 U	1.9 U	1.4 U
SODIUM	--		69 J-	83.7 J-	73.3 J-	59.9 J-	52 J-	770 UJ	76.1 J-	95.2 J-	84 J-	60.5 J-	55.6 J-	637 UJ	584 UJ	934 UJ	718 UJ
THALLIUM	NA		4 UJ	2.4 UJ	2.7 UJ	2.5 UJ	3.1 UJ	3.8 UJ	3.3 UJ	2.5 UJ	3.1 UJ	3.3 UJ	4.2 UJ	3.2 UJ	2.9 UJ	4.7 UJ	3.6 UJ
VANADIUM	NA		19.7 J	16.3 J	17.9 J	19.4 J	23.1 J	22.2	19.4 J	15.9 J	22.7 J	15.4	14.4	18.7	12.2	25.5	20.6
ZINC	459	Consensus PEC	129 J	73 J	73.1 J	37.3 J	47.3 J	82	87.6 J	43.9 J	123 J	94.7 J	109 J	89.6 J	60 J	124 J	88.7 J
MERCURY	1.06	Consensus PEC	0.24	0.2	0.16	0.024 J	0.019 J	0.44	0.17	0.03 J	0.21	0.17	0.23	0.038 J	0.017 J	0.28	0.13 J

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Table 3-13
Comparison of Inorganic Concentrations to Sediment Benchmarks - Otter Creek Confluence Sediment Samples
Duck and Otter Creeks Confluence Investigation
Toledo, Lucas County, Ohio

Field Sample ID	Sediment Benchmark		OC-29-02	OC-30	OC-30-01	OC-30-02	OC-30DP	OC-31	OC-31-01	OC-31-02	OC-31DP	OC-32	OC-32-01	OC-32-02	OC-32DP	OC-33	OC-33-01
Sampling Date			**11/4/2010**	**11/4/2010**	**11/4/2010**	**11/4/2010**	**11/4/2010**	**11/4/2010**	**11/4/2010**	**11/4/2010**	**11/4/2010**	**11/4/2010**	**11/4/2010**	**11/4/2010**	**11/4/2010**	**11/4/2010**	**11/4/2010**
Inorganics (mg/kg)																	
ALUMINUM	58000	ARCS PEC	9900	10100	6810	14800	11900	10400	11100	5670	10500	11400	6920	5370	10600	10900	8260
ANTIMONY	PQL	R4	6.1 UJ	9.7 UJ	8.2 UJ	8.2 UJ	7.7 UJ	10.4 UJ	6.6 UJ	5.4 UJ	11.3 UJ	6.9 UJ	5.6 UJ	5.2 UJ	10 UJ	12 UJ	9.5 UJ
ARSENIC	33	Consensus PEC	6.9	7.9	7.8	6.7	10.2	8.3	6.1 J	7.4 J	5.6 J	10.3 J	6.4 J	3.5 J	10.4 J	6.2 J	7 J
BARIUM	NA		52	74.4	49	126	88.8	68.6	126	46.6	81.7	103	49.8	48.8	83.4	80.1	61.4
BERYLLIUM	NA		0.54	0.54 J	0.39 J	0.77	0.64 J	0.54 J	0.69 U	0.45 U	0.94 U	0.86 U	0.46 U	0.43 U	0.83 U	1 U	0.79 U
CADMIUM	4.98	Consensus PEC	0.44 J	1.7	0.61 J	0.46 J	2.6	0.77 J	0.69 U	0.65 U	0.94 U	1.6	0.69 U	0.61 U	1.2	1 U	0.79 U
CALCIUM	--		22600	37100	46200	24300	28200	48800	37200	53500	33900	35800	41900	49600	38400	32600	33600
CHROMIUM	111	Consensus PEC	16	24.3	12.6	24.7	34.2	18.1	17.5	10	18.3	26.7	12.1	9.9	24.1	19.5	14.7
COBALT	50	R5 ESL	8.1	6.3 J	5.9 J	12.2	7.5	7.6 J	10.1	5.8	9.4 U	7.8	6.1	5.3	8.3 U	10.2 U	7.9 U
COPPER	149	Consensus PEC	19	39.9	20.2	20.9	69.1	23.3	23.7	13.9	23.8	38.2	16.4	12.9	31.5	22.6	18.6
IRON	20000	Ontario LEL	19000	**21500**	16400	**23800**	**28100**	**20900**	**20900** J	14300 J	19600 J	31900 J	15600 J	12900 J	**27500** J	19500 J	17100 J
LEAD	126	Consensus PEC	10.5	41.4	31.8	10.3	63.4	18.3	12.1	27.2	17.6	62.1 J	31.8	8.1	68	18.6	24
MAGNESIUM	--		9740	10500	13000	12300	8700	13000	13700	16300	10100	9860	11800	18300	10600	9750	10600
MANGANESE	819	ARCS NEC	470 J	316 J	353 J	359 J	342 J	362 J	542	433	329	437	368	358	405	329	333
NICKEL	48.6	Consensus PEC	22.9	21.6	17.3	33.5	24.5	23.2	30.7	16.4	22	26.9	17.5	14.5	25.9	21.7	18.8
POTASSIUM	--		1800 J-	1670 J-	1250 J-	3320 J-	1910 J-	1910 J-	2380	1100	1730	1790	1230	1120	1810	1830	1380
SELENIUM	2	R3 BTAG	**4.9 J**	**5.9 J**	**4.1 J**	**6.1 J**	**7.2 J**	**5.8 J**	**5.4 J**	**3.4 J**	**5.7 J**	**7.4 J**	**3.8 J**	**3.1 J**	**7.4 J**	**5.3 J**	**4.7 J**
SILVER	0.5	R5 ESL	1 U	**1.6 J**	1.4 U	1.4 U	1.3 U	1.7 U	1.1 UJ	0.9 UJ	1.9 UJ	**0.6 J**	0.93 UJ	0.86 UJ	0.61 J	2 UJ	1.6 UJ
SODIUM	--		36 J-	806 UJ	687 UJ	61.2 J-	49.3 J-	870 UJ	694 U	649 U	943 U	862 U	694 U	610 U	833 U	1000 U	794 U
THALLIUM	NA		2.5 UJ	4 UJ	3.4 UJ	3.4 UJ	3.2 UJ	4.3 UJ	2.8 U	2.2 U	4.7 U	2.9 U	2.3 U	2.1 U	4.2 U	5 U	4 U
VANADIUM	NA		22.4	22.9	16.7	31.2	26.3	23.6	23.1	14.9	20.7	25.5	17.5	15.9	24.9	22.2	18.6
ZINC	459	Consensus PEC	50.7 J	111 J	64.4 J	52.8 J	168 J	81.6 J	55.5	52.6	86.7	154	56.1	32.1	133	95.6	70.1
MERCURY	1.06	Consensus PEC	0.022 J	0.15 J	0.063 J	0.014 J	0.23	0.059 J	0.14 U	0.13 U	0.19 U	0.17 U	0.14 U	0.13 J	0.17 U	0.2 U	0.16 U

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Table 3-13
Comparison of Inorganic Concentrations to Sediment Benchmarks - Otter Creek Confluence Sediment Samples
Duck and Otter Creeks Confluence Investigation
Toledo, Lucas County, Ohio

Field Sample ID	Sediment Benchmark		OC-33-02	OC-34-01	OC-34-02	OC-35-01	OC-35-02	OC-36-01	OC-36-02	OC-38	OC-40-01	OC-40-02	OC-41-01	OC-41-02	OC-42-01	OC-42-01-DP
Sampling Date			11/4/2010	5/10/2011	5/10/2011	5/12/2011	5/12/2011	5/10/2011	5/10/2011	5/11/2011	5/11/2011	5/11/2011	5/10/2011	5/10/2011	5/11/2011	5/11/2011
Inorganics (mg/kg)																
ALUMINUM	58000	ARCS PEC	8610	3770	6090	10600 J-	9000 J-	6620	9160	9830	9250	7440	9170	11200	10600	11100
ANTIMONY	PQL	R4	5.9 UJ	7.4 UJ	11 UJ	11 UJ	11 UJ	7.8 UJ	7.2 UJ	0.1 J-	10 UJ	7.8 UJ	8.7 UJ	7.9 U	9.6 UJ	11 UJ
ARSENIC	33	Consensus PEC	8.2 J	16.1 J	17.1 J	6 J-	6.9 J-	8.6 J	9.2 J	8.4	8.5 J	9.3 J	**37.4 J**	9.2 J	13.2 J	14 J
BARIUM	NA		61.5	28.7 J	89.8 J	70.4 J-	70.3 J-	46.3 J	108 J	72.3 J	65.2 J	72.7 J	59 J	86.1 J	88.2 J	123 J
BERYLLIUM	NA		0.49 U	0.28 J	0.31 J	0.46 J-	0.37 J-	0.32 J	0.46 J	0.43 J	0.42 J	0.36 J	0.49 J	0.52 J	0.5 J	0.53 J
CADMIUM	4.98	Consensus PEC	0.65 U	0.39 J	0.9 J	1.9 J-	1.6 J-	0.47 J	0.38 J	0.66 U	0.51 J	0.51 J	0.9	0.39 J	1.9	1.6
CALCIUM	--		39100	156000	166000	30800 J-	50200 J-	91900	105000	75800	70600	82300	67600	96100	68900	90900
CHROMIUM	111	Consensus PEC	13.6	7.1	**191**	37.3 J-	45.1 J-	12.2	15.4	16.3	16	13	15.4	18.3	53.5	**160**
COBALT	50	R5 ESL	6.8	5.4 J	5.4 J	6.5 J-	5.4 J-	6.8	10	10.1	6.8 J	8.2	26.7	10.7	8.5	7.9 J
COPPER	149	Consensus PEC	16.9	19.8	103	31.7 J-	38.8 J-	19.4	20.7	22.6	18.7	19.7	40.1	22.7	110	**179**
IRON	20000	Ontario LEL	18900 J	16900	16800	17100 J-	14400 J-	16300	19600	**21500**	17900	17800	**29100**	**22300**	**22400**	**20800**
LEAD	126	Consensus PEC	10	11	55.3	31.2 J-	39.6 J-	10.4	10.5	9.2	11.4	20.5	17.1	10.7	72.3	60.9
MAGNESIUM	--		16200	22400	11200	8310 J-	7340 J-	16800	25100	16400	13700	17300	17900	18400	14200	12200
MANGANESE	819	ARCS NEC	436	329	473	337 J-	273 J-	367	435	443 J-	382	460	370	468	369	366
NICKEL	48.6	Consensus PEC	20.2	17.7	17.7	26.6 J-	22.5 J-	18.7	26.2	28	19.3	21.4	**66.9**	28.4	25.6	28.8
POTASSIUM	--		1350	1190	1110	1810 J-	1530 J-	1500	2290	2390	1860	1520	1960	2860	1910	2070
SELENIUM	2	R3 BTAG	**4.9 J**	**2.6 J**	**3 J**	6.6 R	6.3 R	1.7 J	1.8 J	4.6 U	1.7 J	1.8 J	1.7 J	1.9 J	1.8 J	**2.5 J**
SILVER	0.5	R5 ESL	0.98 UJ	1.2 U	1.8 U	**1.5 J-**	**1.2 J-**	1.3 U	**1.6**	**1.7**	1.7 U	**1.5**	**2**	**1.4**	**2.1**	**2**
SODIUM	--		649 U	260 J	361 J	212 J-	220 J-	250 J	262 J	239 J	268 J	232 J	261 J	294 J	268 J	321 J
THALLIUM	NA		2.5 U	0.26 J	4.5 U	4.7 R	4.5 R	3.2 U	3 U	3.3 U	4.2 U	3.2 U	1.8 J	3.3 U	4 U	4.4 U
VANADIUM	NA		20.4	11.7	14.5	22 J-	20.5 J-	18.2	21.8	23	22.4	19.7	19.5	27.8	25.2	25.2
ZINC	459	Consensus PEC	44.5	39	71.2	105 J-	99.2 J-	65.3	46.7	53.6 J	75.4	74.8	139	57.4	146	190
MERCURY	1.06	Consensus PEC	0.13 U	0.12 UJ	0.29 J+	0.37 J-	0.38 J-	0.13 UJ	0.12 UJ	0.13 U	0.17 UJ	0.13 UJ	0.15 UJ	0.13 UJ	0.31 J+	0.25 J+

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Table 3-13
Comparison of Inorganic Concentrations to Sediment Benchmarks - Otter Creek Confluence Sediment Samples
Duck and Otter Creeks Confluence Investigation
Toledo, Lucas County, Ohio

Field Sample ID	Sediment Benchmark		OC-42-02	OC-42-02-DP	OC-44-01	OC-44-02	OC-45-01	OC-45-02	OC-46-01	OC-46-02	OC-47-01	OC-47-02	OC-47-03	OC-47-04	OC-48-01	OC-48-02	OC-48-03	OC-48-04
Sampling Date			**5/11/2011**	**5/11/2011**	**5/10/2011**	**5/10/2011**	**5/10/2011**	**5/10/2011**	**5/12/2011**	**5/12/2011**	**5/12/2011**	**5/12/2011**	**5/12/2011**	**5/12/2011**	**5/12/2011**	**5/12/2011**	**5/12/2011**	**5/12/2011**
Inorganics (mg/kg)																		
ALUMINUM	58000	ARCS PEC	9150	10800	12300	22900	9340	12500	9900 J-	9980 J-	8500 J-	11400 J-	11000 J-	8250 J-	8490 J-	10400 J-	10700 J-	9370 J-
ANTIMONY	PQL	R4	0.32 J-	0.29 J-	14 UJ	16 UJ	8.8 UJ	12 U	14 UJ	12 UJ	12 UJ	12 UJ	11 UJ	10 UJ	13 UJ	12 UJ	10 UJ	10 UJ
ARSENIC	33	Consensus PEC	7.1	9.9	15.4 J	19.2 J	11.5 J	20.2 J	4.1 J-	5.3 J-	3.6 J-	4.2 J-	4.6 J-	5.7 J-	3.9 J-	4.6 J-	4.5 J-	5.3 J-
BARIUM	NA		75.6 J	76.1 J	110 J	174 J	81.8 J	118 J	62.9 J-	69.4 J-	58.8 J-	68.2 J-	74.2 J-	64.1 J-	55.1 J-	66.6 J-	70.6 J-	68.1 J-
BERYLLIUM	NA		0.4 J	0.46 J	0.58 J	0.8 J	0.53 J	0.58 J	0.43 J-	0.44 J-	0.36 J-	0.44 J-	0.46 J-	0.36 J-	0.39 J-	0.44 J-	0.46 J-	0.42 J-
CADMIUM	4.98	Consensus PEC	0.64 U	0.67 U	0.93 J	1.6	2.1	1.9	1.2 U	1.1 J-	1 U	1 U	0.88 U	1.6 J-	1.1 U	0.97 U	0.9 J-	1.9 J-
CALCIUM	--		65500	58900	69000	67400	61400	135000	23500 J-	30300 J-	26300 J-	20100 J-	19000 J-	31400 J-	25200 J-	20900 J-	17900 J-	23300 J-
CHROMIUM	111	Consensus PEC	18.5	18	**223**	55.6	43.4	**205**	14.7 J-	28.5 J-	13.4 J-	16.6 J-	19 J-	27.9 J-	12.9 J-	16 J-	20.3 J-	27.3 J-
COBALT	50	R5 ESL	9.6	10.1	9.5 J	10.7 J	8.5	8 J	5.7 J-	6.1 J-	5.5 J-	6.1 J-	6.3 J-	5.5 J-	5.3 J-	6 J-	5.9 J-	6.1 J-
COPPER	149	Consensus PEC	23.6	24.5	**177**	**775**	49.1	**202**	17.8 J-	23.4 J-	17.1 J-	20.9 J-	21.1 J-	27.2 J-	15.6 J-	18.6 J-	20.6 J-	26 J-
IRON	20000	Ontario LEL	18900	**22000**	**24300**	**31800**	**28700**	**25200**	14600 J-	15100 J-	13300 J-	15300 J-	16400 J-	14000 J-	13200 J-	15300 J-	15900 J-	15100 J-
LEAD	126	Consensus PEC	16.3	38.1	104	**1080**	53.3	**159**	10.5 J-	18.9 J-	10.4 J-	11 J-	17.3 J-	25.5 J-	9.2 J-	12 J-	24.6 J-	26.7 J-
MAGNESIUM	--		13500	16300	11200	9820	15500	10300	7800 J-	6310 J-	7790 J-	6500 J-	5890 J-	6950 J-	7630 J-	6550 J-	5540 J-	6640 J-
MANGANESE	819	ARCS NEC	444 J-	519 J-	439	427	596	441	257 J-	251 J-	245 J-	231 J-	232 J-	272 J-	262 J-	255 J-	221 J-	270 J-
NICKEL	48.6	Consensus PEC	24.5	25.9	30.5	38.5	27.3	28.2	16.5 J-	21.4 J-	15.6 J-	17.8 J-	21.4 J-	22.8 J-	14.9 J-	18.4 J-	21 J-	24.2 J-
POTASSIUM	--		2040	2050	1860	3010	1590	2010	1860 J-	1640 J-	1570 J-	2120 J-	1730 J-	1340 J-	1600 J-	1770 J-	1660 J-	1450 J-
SELENIUM	2	R3 BTAG	4.5 U	4.7 U	1.9 J	**2.2 J**	1.9 J	**2.7 J**	8.2 R	6.8 R	7.3 R	7 R	6.1 R	6 R	7.7 R	6.8 R	5.8 R	5.9 R
SILVER	0.5	R5 ESL	**1.4**	**1.7**	2.3 U	**3.1**	**2.4**	**2.6**	**1 J-**	**1.2 J-**	**0.84 J-**	**1.1 J-**	**1.3 J-**	**1.4 J-**	**0.94 J-**	**1.2 J-**	**1.3 J-**	**1.3 J-**
SODIUM	--		199 J	205 J	397 J	499 J	283 J	409 J	217 J-	175 J-	228 J-	228 J-	191 J-	184 J-	225 J-	211 J-	155 J-	162 J-
THALLIUM	NA		3.2 U	3.4 U	5.6 U	6.6 U	3.7 U	4.8 U	5.8 R	4.9 R	5.2 R	5 R	4.4 U	4.3 R	5.5 R	4.9 U	4.2 U	4.2 R
VANADIUM	NA		22.6	26.8	24.6	38.3	24.4	28.4	20 J-	19.9 J-	17.2 J-	22.8 J-	20.5 J-	16.5 J-	17.5 J-	20.2 J-	19.9 J-	18.6 J-
ZINC	459	Consensus PEC	105 J	78 J	137	213	132	143	60.6 J-	92.4 J-	60 J-	65.7 J-	130 J-	89.4 J-	52.4 J-	68.1 J-	78.9 J-	93.2 J-
MERCURY	1.06	Consensus PEC	0.13 U	0.13 U	0.25 J+	**1.8 J+**	0.16 J+	0.46 J+	0.12 J-	0.19 J-	0.093 J-	0.13 J-	0.25 J-	0.29 J-	0.18 J-	0.14 J-	0.17 J-	0.32 J-

Notes:

Bold result exceeds sediment benchmark

-- = Criterion or value not available
ARCS PEC = U.S. EPA
ARCS NEC = U.S. EPA
Consensus PEC = Probable effect concentration from MacDonald and others 2000
ID = Identification
J = Estimated value; concentration below RL or exceeded RL, but one or more quality control parameters were outside control limits
J+ = Likely to have a high bias
J- = Likely to have a low bias
mg/kg = Milligram per kilogram
NA = Not available
Ontario LEL = Ontario low-effect level from Persaud and others 1993
PQL = Practical quantitation limit
R = Data rejected because of quality control deficiencies
R3 BTAG = U.S. EPA Region 3 Biological Technical Assistance Group Freshwater Sediment Screening Benchmarks from http://www.epa.gov/reg3hwmd/risk/eco/index.htm
R4 = U.S
R5 ESL =
RL = Reporting limit
U = Not detected above RL
UJ = Not detected above RL; however, RL approximate

Sources:

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Table 3-14
PEC and PEC-Q for Total PCBs - Otter Creek Confluence Sediment Samples
Duck and Otter Creeks Confluence Investigation
Toledo, Lucas County, Ohio

Field Sample ID		OC-26	OC-26-01	OC-26-01DP	OC-26-02	OC-26-02DP	OC-27	OC-27-01	OC-27-02	OC-27DP	OC-28	OC-28-01	OC-28-02	OC-28-03	OC-29	OC-29-01	
Sampling Date	PEC	11/3/2010	11/3/2010	11/3/2010	11/3/2010	11/3/2010	11/3/2010	11/3/2010	11/3/2010	11/3/2010	11/3/2010	11/3/2010	11/3/2010	11/3/2010	11/4/2010	11/4/2010	
PCBs/(µg/kg)																	
PCB-1016	NA	52 U	56 U	38 U	43 U	42 U	53 U	41 U	42 U	57 U	54 U	43 U	46 U	42 U	59 UJ	35	UJ
PCB-1221	NA	52 U	56 U	38 U	43 U	42 U	53 U	41 U	42 U	57 U	54 U	43 U	46 U	42 U	59 UJ	35	UJ
PCB-1232	NA	52 U	56 U	38 U	43 U	42 U	53 U	41 U	42 U	57 U	54 U	43 U	46 U	42 U	59 UJ	35	UJ
PCB-1242	NA	52 U	56 U	38 U	43 U	42 U	53 U	41 U	42 U	57 U	54 U	43 U	46 U	42 U	59 UJ	35	UJ
PCB-1248	NA	52 U	56 U	38 U	43 U	42 U	53 U	41 U	42 U	57 U	54 U	43 U	46 U	42 U	59 UJ	35	UJ
PCB-1254	NA	380 J	250 J	84 J	43 U	42 U	100 J	41 U	42 U	66 J	22 J	23 J	6.9 J	42 U	59 UJ	35	UJ
PCB-1260	NA	52 U	56 U	38 U	43 U	42 U	53 U	41 U	42 U	57 U	54 U	43 U	46 U	42 U	59 UJ	35	UJ
PCB-1262	NA	52 U	56 U	38 U	43 U	42 U	53 U	41 U	42 U	57 U	54 U	43 U	46 U	42 U	59 UJ	35	UJ
PCB-1268	NA	52 U	56 U	38 U	43 U	42 U	53 U	41 U	42 U	57 U	54 U	43 U	46 U	42 U	59 UJ	35	UJ
TOTAL PCBs (Sum of detections)	**676**	380	250	84	0 U	0 U	100	0 U	0 U	66	22	23	6.0	0 U	0 U	0	U
PEC-Q		**0.56**	0.37	0.12	0	0	0.15	0	0	0.10	0.03	0.03	0.01	0	0	0	

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Table 3-14
PEC and PEC-Q for Total PCBs - Otter Creek Confluence Sediment Samples
Duck and Otter Creeks Confluence Investigation
Toledo, Lucas County, Ohio

Field Sample ID		OC-29-02	OC-30	OC-30-01	OC-30-02	OC-30DP	OC-31	OC-31-01	OC-31-02	OC-31DP	OC-32	OC-32-01	OC-32-02	OC-32DP	OC-33
Sampling Date	PEC	11/4/2010	11/4/2010	11/4/2010	11/4/2010	11/4/2010	11/4/2010	11/4/2010	11/4/2010	11/4/2010	11/4/2010	11/4/2010	11/4/2010	11/4/2010	11/4/2010
PCBs/(µg/kg)															
PCB-1016	NA	63 UJ	46 UJ	63 UJ	63 UJ	35 UJ	44 UJ	59 UJ	54 UJ	40 UJ	55 UJ	44 UJ	39 UJ	53 UJ	64 UJ
PCB-1221	NA	63 UJ	46 UJ	63 UJ	63 UJ	35 UJ	44 UJ	59 UJ	54 UJ	40 UJ	55 UJ	44 UJ	39 UJ	53 UJ	64 UJ
PCB-1232	NA	63 UJ	46 UJ	63 UJ	63 UJ	35 UJ	44 UJ	59 UJ	54 UJ	40 UJ	55 UJ	44 UJ	39 UJ	53 UJ	64 UJ
PCB-1242	NA	63 UJ	46 UJ	63 UJ	63 UJ	35 UJ	44 UJ	59 UJ	54 UJ	40 UJ	55 UJ	44 UJ	39 UJ	53 UJ	64 UJ
PCB-1248	NA	63 UJ	46 UJ	63 UJ	63 UJ	35 UJ	44 UJ	59 UJ	54 UJ	40 UJ	55 UJ	44 UJ	39 UJ	53 UJ	64 UJ
PCB-1254	NA	63 UJ	46 UJ	63 UJ	63 UJ	35 UJ	44 UJ	59 UJ	54 UJ	40 UJ	55 UJ	44 UJ	39 UJ	53 UJ	64 UJ
PCB-1260	NA	63 UJ	46 UJ	63 UJ	63 UJ	35 UJ	44 UJ	59 UJ	54 UJ	40 UJ	55 UJ	44 UJ	39 UJ	53 UJ	64 UJ
PCB-1262	NA	63 UJ	46 UJ	63 UJ	63 UJ	35 UJ	44 UJ	59 UJ	54 UJ	40 UJ	55 UJ	44 UJ	39 UJ	53 UJ	64 UJ
PCB-1268	NA	63 UJ	46 UJ	63 UJ	63 UJ	35 UJ	44 UJ	59 UJ	54 UJ	40 UJ	55 UJ	44 UJ	39 UJ	53 UJ	64 UJ
TOTAL PCBs (Sum of detections)	**676**	0 U	0 U	0 U	0 U	0 U	0 U	0 U	0 U	0 U	0 U	0 U	0 U	0 U	0 U
PEC-Q		0	0	0	0	0	0	0	0	0	0	0	0	0	0

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Table 3-14
PEC and PEC-Q for Total PCBs - Otter Creek Confluence Sediment Samples
Duck and Otter Creeks Confluence Investigation
Toledo, Lucas County, Ohio

Field Sample ID / Sampling Date	PEC	OC-33-01 11/4/2010	OC-33-02 11/4/2010	OC-34-01 5/10/2011	OC-34-02 5/10/2011	OC-35-01 5/12/2011	OC-35-02 5/12/2011	OC-36-01 5/10/2011	OC-36-02 5/10/2011	OC-38 5/11/2011	OC-40-01 5/11/2011	OC-40-02 5/11/2011	OC-41-01 5/10/2011	OC-41-02 5/10/2011
PCBs/(µg/kg)														
PCB-1016	NA	48 UJ	42 UJ	39 U	51 U	63 U	61 U	43 U	39 U	42 U	35 U	42 U	44 U	42 U
PCB-1221	NA	48 UJ	42 UJ	39 U	51 U	63 U	61 U	43 U	39 U	42 U	35 U	42 U	44 U	42 U
PCB-1232	NA	48 UJ	42 UJ	39 U	51 U	63 U	61 U	43 U	39 U	42 U	35 U	42 U	44 U	42 U
PCB-1242	NA	48 UJ	42 UJ	39 U	51 U	63 U	300 J	43 U	39 U	42 U	35 U	42 U	44 U	42 U
PCB-1248	NA	48 UJ	42 UJ	39 U	51 U	87	300	43 U	39 U	42 U	35 U	42 U	44 U	42 U
PCB-1254	NA	48 UJ	42 UJ	77 J	260 J	65 R	190 J	43 U	39 U	42 U	35 U	42 U	44 U	42 U
PCB-1260	NA	48 UJ	42 UJ	39 U	51 U	38 J	79 NJ	43 U	39 U	42 U	35 U	42 U	44 U	42 U
PCB-1262	NA	48 UJ	42 UJ	39 U	51 U	63 U	61 U	43 U	39 U	42 U	35 U	42 U	44 U	42 U
PCB-1268	NA	48 UJ	42 UJ	39 U	51 U	63 U	61 U	43 U	39 U	42 U	35 U	42 U	44 U	42 U
TOTAL PCBs (Sum of detections)	**676**	0 U	0 U	77 J	260 J	125	**869**	0 U	0 U	0 U	0 U	0 U	0 U	0 U
PEC-Q		0	0	0.11	0.38	0.18	**1.29**	0	0	0	0	0	0	0

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Table 3-14
PEC and PEC-Q for Total PCBs - Otter Creek Confluence Sediment Samples
Duck and Otter Creeks Confluence Investigation
Toledo, Lucas County, Ohio

Field Sample ID		OC-42-01	OC-42-01-DP	OC-42-02	OC-42-02-DP	OC-44-01	OC-44-02	OC-45-01	OC-45-02	OC-46-01	OC-46-02	OC-47-01	OC-47-02	OC-47-03
Sampling Date	PEC	5/11/2011	5/11/2011	5/11/2011	5/11/2011	5/10/2011	5/10/2011	5/10/2011	5/10/2011	5/12/2011	5/12/2011	5/12/2011	5/12/2011	5/12/2011
PCBs/(µg/kg)														
PCB-1016	NA	47 U	51 U	42 U	44 U	130 U	63 U	44 U	68 U	73 U	64 U	74 U	65 UJ	57 UJ
PCB-1221	NA	47 U	51 U	42 U	44 U	130 U	63 U	44 U	68 U	73 U	64 U	74 U	65 UJ	57 UJ
PCB-1232	NA	47 U	51 U	42 U	44 U	130 U	63 U	44 U	68 U	73 U	64 U	74 U	65 UJ	57 UJ
PCB-1242	NA	47 U	51 U	42 U	44 U	130 U	63 U	44 U	68 U	73 U	64 U	74 U	65 UJ	57 UJ
PCB-1248	NA	47 U	51 U	42 U	44 U	130 U	63 U	100 NJ	68 U	73 U	64 U	74 U	65 UJ	57 UJ
PCB-1254	NA	130 R	180 R	29 J	44 U	290 R	380 J	180 R	340 J	73 U	34 J	74 U	65 UJ	29 JP
PCB-1260	NA	77 J	94 J	42 U	44 U	170 NJ	63 U	72 NJ	68 U	73 U	64 U	74 U	65 UJ	57 UJ
PCB-1262	NA	47 U	51 U	42 U	44 U	130 U	63 U	44 U	68 U	73 U	64 U	74 U	65 UJ	57 UJ
PCB-1268	NA	47 U	51 U	42 U	44 U	130 U	63 U	44 U	68 U	73 U	64 U	74 U	65 UJ	57 UJ
TOTAL PCBs (Sum of detections)	**676**	77	94	29	0 U	170	380 J	172	340 J	0 U	34	0 U	0 UJ	29
PEC-Q		0.11	0.14	0.04	0	0.25	**0.56**	0.25	0.50	0	0.05	0	0	0.04

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Table 3-14
PEC and PEC-Q for Total PCBs - Otter Creek Confluence Sediment Samples
Duck and Otter Creeks Confluence Investigation
Toledo, Lucas County, Ohio

Field Sample ID		OC-47-04	OC-48-01	OC-48-02	OC-48-03	OC-48-04
Sampling Date	PEC	5/12/2011	5/12/2011	5/12/2011	5/12/2011	5/12/2011
PCBs/(µg/kg)						
PCB-1016	NA	57 UJ	73 U	63 UJ	51 U	58 U
PCB-1221	NA	57 UJ	73 U	63 UJ	51 U	58 U
PCB-1232	NA	57 UJ	73 U	63 UJ	51 U	58 U
PCB-1242	NA	57 UJ	73 U	63 UJ	51 U	330 J
PCB-1248	NA	89 J	73 U	63 UJ	52 J	290
PCB-1254	NA	78 PJ	73 U	63 UJ	40 J	160 J
PCB-1260	NA	40 JP	73 U	63 UJ	51 U	110
PCB-1262	NA	57 UJ	73 U	63 UJ	51 U	58 U
PCB-1268	NA	57 UJ	73 U	63 UJ	51 U	58 U
TOTAL PCBs (Sum of detections)	**676**	207 J	0 U	0 UJ	92	**890**
PEC-Q		0.31	0	0	0.14	**1.32**

Notes:

Bold result exceeds PEC criterion

µg/kg = Microgram per kilogram

ID = Identification

J = Estimated value; concentration below RL or exceeded RL, but one or more quality control parameters were outside control limits

NA = Not available

NJ = Analyte "tentatively identified"; associated numerical value represents approximate concentration

P = Flag used for pesticide and Aroclor target compounds when difference of detected concentrations between two GC columns (see Form X) exceeds 25%; lower of the two values reported on Form I and flagged "P"; "P" flag not used unless a compound is identified on both columns

PCB = Polychlorinated biphenyl

PEC = Probable effect concentration

PEC-Q = Probable effect concentration quotient = Total PCBs/PEC

RL = Reporting limit

Total PCBs = Sum of detected Aroclors

U = Not detected above RL

UJ = Not detected above RL; however, RL approximate

UJ = Not detected above RL; however, RL approximate

Table 3-15
Comparison of Petroleum Hydrocarbon Fractions to Sediment Benchmarks - Otter Creek Confluence Sediment Samples
Duck and Otter Creeks Confluence Investigation
Toledo, Lucas County, Ohio

Location ID			OC-26	OC-26	OC-26	OC-26	OC-26	OC-27	OC-27	OC-27	OC-27	OC-28	OC-28	OC-28
Field Sample ID			OC-26	OC-26-01	OC-26-01DP	OC-26-02	OC-26-02DP	OC-27	OC-27-01	OC-27-02	OC-27-DP	OC-28	OC-28-01	OC-28-02
Sample Date	Koc	FCV (mg/L)	11/3/2010	11/3/2010	11/3/2010	11/3/2010	11/3/2010	11/3/2010	11/3/2010	11/3/2010	11/3/2010	11/3/2010	11/3/2010	11/3/2010
TOTAL ORGANIC CARBON (%)			2.47	1.71	1.74	0.824	0.553	3.47	1.74	0.848	4.03	5.67	8.27	0.539
TOTAL ORGANIC CARBON (fraction)			0.0247	0.0171	0.0174	0.00824	0.00553	0.0347	0.0174	0.00848	0.0403	0.0567	0.0827	0.00539
Aliphatic: $C_5 - C_8$ Benchmark (mg/kg)	7240	0.218	39	27	27	13	9	55	27	13	64	89	131	9
Aromatic: $C_9 - C_{10}$ Benchmark (mg/kg)	3980	0.0594	5.8	4.0	4.1	1.9	1.3	8.2	4.1	2.0	10	13	20	1.3
GASOLINE RANGE ORGANICS (GRO)			**180**	**100**	**140**	7.5 UJ	7.4 UJ	**220**	**63**	7.1 UJ	**270**	**51**	**970**	7.7 UJ
Alihphatic: $C_9 - C_{18}$ Benchmark (mg/kg)	7410000	0.0004	73	51	52	24	16	103	52	25	119	168	245	16
Aromatic: $C_{11} - C_{22}$ Benchmark (mg/kg)	33100	0.0028	2.3	1.6	1.6	0.76	0.51	3.2	1.6	0.79	3.7	5.3	7.7	0.50
DIESEL RANGE ORGANICS (DRO)			**3300**	**2900**	**2900**	**60**	**67**	**11000**	**700**	**61**	**14000**	**2900**	**7700**	**760**
Aliphatic: $C_{19} - C_{36}$ Benchmark (mg/kg)[b]	8.32E+10	0.0000001	206	142	145	69	46	289	145	71	335	472	688	45
RESIDUAL RANGE ORGANICS (RRO)			**3600 D**	**3200 D**	**3500 D**	**95**	**88**	**11000 D**	**760**	**73**	**12000 D**	**3900 D**	**7200 D**	**810**

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Table 3-15
Comparison of Petroleum Hydrocarbon Fractions to Sediment Benchmarks - Otter Creek Confluence Sediment Samples
Duck and Otter Creeks Confluence Investigation
Toledo, Lucas County, Ohio

Location ID			OC-28	OC-29	OC-29	OC-29	OC-30	OC-30	OC-30	OC-30	OC-31	OC-31	OC-31	OC-31
Field Sample ID			OC-28-03	OC-29	OC-29-01	OC-29-02	OC-30	OC-30-01	OC-30-02	OC-30DP	OC-31	OC-31-01	OC-31-02	OC-31DP
Sample Date	Koc	FCV (mg/L)	11/3/2010	11/4/2010	11/4/2010	11/4/2010	11/4/2010	11/4/2010	11/4/2010	11/4/2010	11/4/2010	11/4/2010	11/4/2010	11/4/2010
TOTAL ORGANIC CARBON (%)			0.636	3.05	2.08	0.93	2.39	1.41	0.51	2.27	1.77	0.528	1.1	1.9
TOTAL ORGANIC CARBON (fraction)			0.00636	0.0305	0.0208	0.0093	0.0239	0.0141	0.0051	0.0227	0.0177	0.00528	0.011	0.019
Aliphatic: $C_5 - C_8$ Benchmark (mg/kg)	7240	0.218	10	48	33	15	38	22	8	36	28	8	17	30
Aromatic: $C_9 - C_{10}$ Benchmark (mg/kg)	3980	0.0594	1.5	7.2	4.9	2.2	5.7	3.3	1.2	5.4	4.2	1.2	2.6	4.5
GASOLINE RANGE ORGANICS (GRO)			7.7 UJ	**140**	**75**	7.3 UJ	**360 J**	**24**	7.4 UJ	**130**	12 UJ	6.8 UJ	7.5 U	11 UJ
Alihphatic: $C_9 - C_{18}$ Benchmark (mg/kg)	7410000	0.0004	19	90	62	28	71	42	15	67	52	16	33	56
Aromatic: $C_{11} - C_{22}$ Benchmark (mg/kg)	33100	0.0028	0.59	2.8	1.9	0.86	2.2	1.3	0.47	2	2	0.49	1.02	1.76
DIESEL RANGE ORGANICS (DRO)			**45**	**6200**	**2500**	**110**	**5300**	**910**	**41**	**3000**	**150**	**44**	**460**	**420**
Aliphatic: $C_{19} - C_{36}$ Benchmark (mg/kg)[b]	8.32E+10	0.0000001	53	254	173	77	199	117	42	189	147	44	92	158
RESIDUAL RANGE ORGANICS (RRO)			**69**	**6400 D**	**2900 D**	**150**	**5100 D**	**1100**	**60**	**3500 D**	**380**	**57**	**570**	**760**

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Table 3-15
Comparison of Petroleum Hydrocarbon Fractions to Sediment Benchmarks - Otter Creek Confluence Sediment Samples
Duck and Otter Creeks Confluence Investigation
Toledo, Lucas County, Ohio

Location ID			OC-32	OC-32	OC-32	OC-32	OC-33	OC-33	OC-33	OC-34	OC-34	OC-35	OC-35	OC-36
Field Sample ID			OC-32	OC-32-01	OC-32-02	OC-32DP	OC-33	OC-33-01	OC-33-02	OC-34-01	OC-34-02	OC-35-01	OC-35-02	OC-36-01
Sample Date	Koc	FCV (mg/L)	11/4/2010	11/4/2010	11/4/2010	11/4/2010	11/4/2010	11/4/2010	11/4/2010	5/10/2011	5/10/2011	5/12/2011	5/12/2011	5/10/2011
TOTAL ORGANIC CARBON (%)			3.67	1.29	0.425	2.14	1.87	1.66	0.458	1.27	2.1	5.35	2.75	3.94
TOTAL ORGANIC CARBON (fraction)			0.0367	0.0129	0.00425	0.0214	0.0187	0.0166	0.00458	0.0127	0.021	0.0535	0.0275	0.0394
Aliphatic: $C_5 - C_8$ Benchmark (mg/kg)	7240	0.218	58	20	7	34	30	26	7	3	5	13	7	9
Aromatic: $C_9 - C_{10}$ Benchmark (mg/kg)	3980	0.0594	8.7	3.0	1.0	5.1	4.4	3.9	1.1	0	0	0	0	0
GASOLINE RANGE ORGANICS (GRO)			**29**	**19**	6.8 UJ	**12**	11 UJ	9.2 UJ	7.3 UJ	2.9 J	**850**	45	**1000**	3 J
Alihphatic: $C_9 - C_{18}$ Benchmark (mg/kg)	7410000	0.0004	109	38	13	63	55	49	14	1	2	5	3	4
Aromatic: $C_{11} - C_{22}$ Benchmark (mg/kg)	33100	0.0028	3.40	1.20	0.39	1.98	1.73	1.54	0.42	0	0	0	0	0
DIESEL RANGE ORGANICS (DRO)			**2100**	**250**	**26 J**	**2100**	**230**	**250**	33 UJ	**120**	**8500**	**1200**	**3500**	**220**
Aliphatic: $C_{19} - C_{36}$ Benchmark (mg/kg)[b]	8.32E+10	0.0000001	305	107	35	178	156	138	38	0	0	0	0	0
RESIDUAL RANGE ORGANICS (RRO)			**2700**	**370**	**39**	**2700**	**470**	**440**	25 J	91	**5100 D**	**1800**	**2600**	310

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Table 3-15
Comparison of Petroleum Hydrocarbon Fractions to Sediment Benchmarks - Otter Creek Confluence Sediment Samples
Duck and Otter Creeks Confluence Investigation
Toledo, Lucas County, Ohio

Location ID			OC-36	OC-38	OC-40	OC-40	OC-41	OC-41	OC-42	OC-42	OC-42	OC-42	OC-44	OC-44
Field Sample ID			OC-36-02	OC-38	OC-40-01	OC-40-02	OC-41-01	OC-41-02	OC-42-01	OC-42-01-DP	OC-42-02	OC-42-02-DP	OC-44-01	OC-44-02
Sample Date	Koc	FCV (mg/L)	5/10/2011	5/11/2011	5/11/2011	5/11/2011	5/10/2011	5/10/2011	5/11/2011	5/11/2011	5/11/2011	5/11/2011	5/10/2011	5/10/2011
TOTAL ORGANIC CARBON (%)			1.06	2.09	1.44	0.855	1.01	1.19	4.53	4.96	1.68	0.971	7.24	10.2
TOTAL ORGANIC CARBON (fraction)			0.0106	0.0209	0.0144	0.00855	0.0101	0.0119	0.0453	0.0496	0.0168	0.00971	0.0724	0.102
Aliphatic: $C_5 - C_8$ Benchmark (mg/kg)	7240	0.218	3	5	3	2	2	3	11	12	4	2	17	24
Aromatic: $C_9 - C_{10}$ Benchmark (mg/kg)	3980	0.0594	0	0	0	0	0	0	0	0	0	0	0	0
GASOLINE RANGE ORGANICS (GRO)			2.2 J	2.9 J	2.4 J	2.5 J	2.6 J	2.6 J	**490**	**500**	**24**	**20**	**980**	**1400**
Alihphatic: $C_9 - C_{18}$ Benchmark (mg/kg)	7410000	0.0004	1	2	1	1	1	1	4	5	2	1	7	9
Aromatic: $C_{11} - C_{22}$ Benchmark (mg/kg)	33100	0.0028	0	0	0	0	0	0	0	0	0	0	0	0
DIESEL RANGE ORGANICS (DRO)			**150**	**120**	**180**	**220**	**190**	**160**	**13000**	**17000**	**410**	**940**	**4200**	**60000 D**
Aliphatic: $C_{19} - C_{36}$ Benchmark (mg/kg)[b]	8.32E+10	0.0000001	0	0	0	0	0	0	0	0	0	0	0	0
RESIDUAL RANGE ORGANICS (RRO)			**140**	110	**230**	**300**	**250**	**160**	**13000 D**	**15000** D	**310**	**1300**	**6200 D**	**64000 D**

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Table 3-15
Comparison of Petroleum Hydrocarbon Fractions to Sediment Benchmarks - Otter Creek Confluence Sediment Samples
Duck and Otter Creeks Confluence Investigation
Toledo, Lucas County, Ohio

Location ID			OC-45	OC-45	OC-46	OC-46	OC-47	OC-47	OC-47	OC-47	OC-48	OC-48	OC-48	OC-48
Field Sample ID			OC-45-01	OC-45-02	OC-46-01	OC-46-02	OC-47-01	OC-47-02	OC-47-03	OC-47-04	OC-48-01	OC-48-02	OC-48-03	OC-48-04
Sample Date	Koc	FCV (mg/L)	5/10/2011	5/10/2011	5/12/2011	5/12/2011	5/12/2011	5/12/2011	5/12/2011	5/12/2011	5/12/2011	5/12/2011	5/12/2011	5/12/2011
TOTAL ORGANIC CARBON (%)			3.64	4.41	2.25	2.26	2.07	2.13	1.78	2.17	2.01	2.05	2.21	2.3
TOTAL ORGANIC CARBON (fraction)			0.0364	0.0441	0.0225	0.0226	0.0207	0.0213	0.0178	0.0217	0.0201	0.0205	0.0221	0.023
Aliphatic: $C_5 - C_8$ Benchmark (mg/kg)	7240	0.218	9	10	5	5	5	5	4	5	5	5	5	5
Aromatic: $C_9 - C_{10}$ Benchmark (mg/kg)	3980	0.0594	0	0	0	0	0	0	0	0	0	0	0	0
GASOLINE RANGE ORGANICS (GRO)			**170**	**1900**	3.8 J	**5.9 J**	4.3 J	3.8 J	4 J	**26**	3.7 J	3.6 J	5 J	**39**
Alihphatic: $C_9 - C_{18}$ Benchmark (mg/kg)	7410000	0.0004	3	4	2	2	2	2	2	2	2	2	2	2
Aromatic: $C_{11} - C_{22}$ Benchmark (mg/kg)	33100	0.0028	0	0	0	0	0	0	0	0	0	0	0	0
DIESEL RANGE ORGANICS (DRO)			**5500**	**15000**	**120**	**500**	**110**	**81**	**180**	**490**	**110**	**160**	**330**	**340**
Aliphatic: $C_{19} - C_{36}$ Benchmark (mg/kg)[b]	8.32E+10	0.0000001	0	0	0	0	0	0	0	0	0	0	0	0
RESIDUAL RANGE ORGANICS (RRO)			**4600 D**	**14000 D**	**370**	**830**	**380**	**220**	**350**	**660**	**370**	**470**	**580**	**550**

Notes:

Bold result exceeds low benchmark

Shaded result exceeds high benchmark

DRO = Diesel-range organics

FCV = Final chronic value

foc = Fraction organic carbon

GRO = Gasoline-range organics

ID = Identification

J = Estimated value

Koc = Organic carbon water partitioning coefficient

mg/kg = Milligram per kilogram

mg/L = Milligram per liter

RRO = Residual-range organics

TOC = Total organic carbon

U = Analyte not detected

1 The area under the chromatogram (including both aromatic and aliphatic hydrocarbons) between C6 and C10 is defined as GROs. The area under the chromatogram between C10 and C24 is defined as DROs. The area under the chromatogram less than C24 is defined as RROs (MDEP 2007).

2 The fraction is not likely toxic because mean LC_{50} exceeds mean aqueous solubility; on-line source: http://www.mass.gov/dep/cleanup/laws/tphbat.pdf

Sediment Benchmark (mg/kg) = Koc x FCV x foc (0.001)

Source:

Massachusetts Department of Environmental Protection (MDEP). 2007. Sediment Toxicity of Petroleum Hydrocarbon Fractions. September.

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Table 3-16A
Comparison of Priority Pollutant PAH Concentrations to Sediment Benchmarks - November 2010 Otter Creek Confluence Sediment Samples
Duck and Otter Creeks Confluence Investigation
Toledo, Lucas County, Ohio

Location ID	Sediment PEC Benchmark (at 1% TOC)		OC-26	OC-26	OC-26	OC-26	OC-26	OC-27	OC-27	OC-27	OC-27	OC-28	OC-28	OC-28	OC-28	OC-29
Field Sample ID			OC-26	OC-26-01	OC-26-01DP	OC-26-02	OC-26-02DP	OC-27	OC-27-01	OC-27-02	OC-27DP	OC-28	OC-28-01	OC-28-02	OC-28-03	OC-29
Sampling Date			11/3/2010	11/3/2010	11/3/2010	11/3/2010	11/3/2010	11/3/2010	11/3/2010	11/3/2010	11/3/2010	11/3/2010	11/3/2010	11/3/2010	11/3/2010	11/4/2010
PAHs /(µg/kg)																
1-METHYLNAPHTHALENE	NA		470 J	NA	NA	NA	NA	230 J	NA	NA	180 J	360	NA	NA	NA	150 J
2-METHYLNAPHTHALENE	201	CCME 1999	1,600 U	170 U	72 J	44 U	130 U	110 J	120 U	4.5	1,700 U	**510**	**650**	52 J	9.4	**390**
ACENAPHTHENE	89	CCME 1999	**410 J**	52 J	**170**	12 J	41 J	**110 J**	52 J	3.2 J	1,700 U	71	**170**	86 U	3.2 J	**260**
ACENAPHTHYLENE	128	CCME 1999	1,600 U	170 U	82 J	44 U	130 U	150 U	31 J	2.3 J	1,700 U	54 U	55 J	86 U	4 U	68 J
ANTHRACENE	845	CBSQG 2000	**1,800**	160 J	500	38 J	130	380	160	11	**1,300 J**	210	280	26 J	3.1 J	**1,100**
PHENANTHRENE	1,170	CBSQG 2000	**4,200**	500	**1,800**	130	490	99 J	220	24	950 J	940	**1,300**	140	13	450
BENZO[A]ANTHRACENE	1,050	CBSQG 2000	**5,000**	770	**1,500**	140	500	**1,300**	580	39	**4,200**	**1,500**	**1,800**	240	8.5	**5,100**
BENZO[A]PYRENE	1,450	CBSQG 2000	**3,600**	470	1,000	110	370	810	350	30	**3,100**	1,200	1,300	170	6.9	**3,000**
BENZO[E]PYRENE	1,450	1	**5,300**	NA	NA	NA	NA	**6,600**	NA	NA	**4,900**	**2,500**	NA	NA	NA	**2,600**
BENZO[B]FLUORANTHENE	13,400	2	3,600	400	1,000	120	420	730	320	33	2,300	1,500	1,900	240	12	3,000
BENZO[G,H,I]PERYLENE	3,200	Ontario 1993	2,000	280	520	68	250	400	180	16	1,800	690	860	120	12	1,500
BENZO[K]FLUORANTHENE	13,400	Ontario 1993	620 J	56 J	190	24 J	110 J	100 J	71 J	9.9	460 J	280	250	31 J	1.6 J	490
CHRYSENE	1,290	CBSQG 2000	**6,700**	1,000	**1,700**	170	570	**2,000**	770	42	**6,400**	**2,600**	**4,700**	620	29	**8,100**
DIBENZ(A,H)ANTHRACENE	135	WDNR 2003	**1,700**	**240**	**370**	39 J	100 J	**360**	**140**	5.9	**1,600 J**	**450**	**530**	67 J	2.8 J	**1,200**
FLUORANTHENE	2,230	CBSQG 2000	**2,400**	200	1,100	140	620	390	260	62	1,700	870	1,000	100	6.8	1,400
FLUORENE	536	CBSQG 2000	**1,100 J**	93 J	220	16 J	42 J	41 J	87 J	3.5 J	1,700 U	130	260	86 U	1.9 J	180
INDENO[1,2,3-CD]PYRENE	3,200	WDNR 2003	900 J	160 J	440	55	220	320	120	15	810 J	470	440	56 J	3.3 J	1,100
NAPHTHALENE	561	CBSQG 2000	1,600 U	170 U	110 J	44 U	130 U	150 U	120 U	5.9	1,700 U	270	270	86 U	6.4	310
PERYLENE	3,200	3	580 J	NA	NA	NA	NA	530 J	NA	NA	360 J	270	NA	NA	NA	250 J
PYRENE	1,520	CBSQG 2000	**5,100**	660	1,600	190	740	1,200	590	65	**3,800**	**2,000**	**3,200**	390	20	**4,400**

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Table 3-16A
Comparison of Priority Pollutant PAH Concentrations to Sediment Benchmarks - November 2010 Otter Creek Confluence Sediment Samples
Duck and Otter Creeks Confluence Investigation
Toledo, Lucas County, Ohio

Location ID	Sediment PEC Benchmark (at 1% TOC)		OC-29	OC-29	OC-30	OC-30	OC-30	OC-30	OC-31	OC-31	OC-31	OC-31	OC-32	OC-32	OC-32	OC-32
Field Sample ID			OC-29-01	OC-29-02	OC-30	OC-30-01	OC-30-02	OC-30DP	OC-31	OC-31-01	OC-31-02	OC-31DP	OC-32	OC-32-01	OC-32-02	OC-32DP
Sample Date			11/4/2010	11/4/2010	11/4/2010	11/4/2010	11/4/2010	11/4/2010	11/4/2010	11/4/2010	11/4/2010	11/4/2010	11/4/2010	11/4/2010	11/4/2010	11/4/2010
PAHs/(µg/kg)																
1-METHYLNAPHTHALENE	NA		NA	NA	75 J	NA	NA	51 J	29 J	NA	NA	24 J	48 J	NA	NA	49 J
2-METHYLNAPHTHALENE	201	CCME 1999	140	190 U	450 U	190 U	190 U	350 U	86 U	170 U	**220**	81 U	270 U	160	110 U	270 U
ACENAPHTHENE	89	CCME 1999	**140**	190 U	**130 J**	**220**	190 U	350 U	86 U	170 U	**390**	81 U	270 U	**210**	110 U	270 U
ACENAPHTHYLENE	128	CCME 1999	65 J	190 U	450 U	80 J	190 U	350 U	86 U	170 U	**110 J**	81 U	270 U	**140**	110 U	270 U
ANTHRACENE	845	CBSQG 2000	480	74 J	610	450	190 U	370	27 J	170 U	590	81 U	210 J	770	38 J	190 J
PHENANTHRENE	1,170	CBSQG 2000	320	100 J	940	**1,300**	78 J	670	88	80 J	**2,400**	53 J	230 J	1,100	87 J	270
BENZO[A]ANTHRACENE	1,050	CBSQG 2000	**2,400**	260	**2,200**	**1,600**	58 J	**1,600**	90	170 U	910	49 J	730	**3,100**	87 J	640
BENZO[A]PYRENE	1,450	CBSQG 2000	**1,600**	200	**1,700**	1,100	190 U	1,200	95	170 U	670	51 J	540	**2,400**	67 J	500
BENZO[E]PYRENE	1,450	1	NA	NA	**3,100**	NA	NA	**2,300**	120	NA	NA	72 J	910	NA	NA	800
BENZO[B]FLUORANTHENE	13,400	2	1,500	220	1,900	1,100	62 J	1,500	140	170 U	800	96	610	2,400	81 J	670
BENZO[G,H,I]PERYLENE	3,200	Ontario 1993	970	110 J	830	600	51 J	730	64 J	170 U	340	39 J	270 J	1,200	43 J	280
BENZO[K]FLUORANTHENE	13,400	Ontario 1993	270	65 J	430 J	280	190 U	250 J	45 J	170 U	240	24 J	160 J	550	110 U	130 J
CHRYSENE	1,290	CBSQG 2000	**3,200**	250	**3,400**	**2,000**	120 J	**2,500**	130	48 J	930	67 J	1,000	**3,200**	83 J	1,000
DIBENZ(A,H)ANTHRACENE	135	WDNR 2003	**590**	46 J	**780**	**330**	190 U	**610**	30 J	170 U	100 J	16 J	**210 J**	**630**	110 U	**210 J**
FLUORANTHENE	2,230	CBSQG 2000	1,400	410	1,300	1,300	81 J	700	160	59 J	2,000	97	520	2,200	160	600
FLUORENE	536	CBSQG 2000	89 J	190 U	420 J	240	190 U	180 J	86 U	170 U	490	81 U	69 J	280	110 U	270 U
INDENO[1,2,3-CD]PYRENE	3,200	WDNR 2003	700	110 J	390 J	470	190 U	330 J	57 J	170 U	350	28 J	160 J	920	40 J	170 J
NAPHTHALENE	561	CBSQG 2000	170	190 U	450 U	200	190 U	350 U	86 U	170 U	**610**	81 U	270 U	520	110 U	270 U
PERYLENE	3,200	3	NA	NA	240 J	NA	NA	230 J	150	NA	NA	130	150 J	NA	NA	170 J
PYRENE	1,520	CBSQG 2000	**2,800**	400	**2,700**	**2,100**	130 J	**1,600**	150	170 U	1,900	91	1,100	**3,900**	150	910

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Table 3-16A
Comparison of Priority Pollutant PAH Concentrations to Sediment Benchmarks - November 2010 Otter Creek Confluence Sediment Samples
Duck and Otter Creeks Confluence Investigation
Toledo, Lucas County, Ohio

Location ID	Sediment PEC Benchmark (at 1% TOC)		OC-33	OC-33	OC-33
Field Sample ID			OC-33	OC-33-01	OC-33-02
Sample Date			11/4/2010	11/4/2010	11/4/2010
PAHs /(µg/kg)					
1-METHYLNAPHTHALENE	NA		20 J	NA	NA
2-METHYLNAPHTHALENE	201	CCME 1999	30 J	150 U	120 U
ACENAPHTHENE	89	CCME 1999	8.1 J	**92 J**	120 U
ACENAPHTHYLENE	128	CCME 1999	32 U	150 U	120 U
ANTHRACENE	845	CBSQG 2000	21 J	140 J	120 U
PHENANTHRENE	1,170	CBSQG 2000	62	550	120 U
BENZO[A]ANTHRACENE	1,050	CBSQG 2000	70	300	120 U
BENZO[A]PYRENE	1,450	CBSQG 2000	73	270	120 U
BENZO[E]PYRENE	1,450	1	90	NA	NA
BENZO[B]FLUORANTHENE	13,400	2	120	340	120 U
BENZO[G,H,I]PERYLENE	3,200	Ontario 1993	52	150 J	120 U
BENZO[K]FLUORANTHENE	13,400	Ontario 1993	35	110 J	120 U
CHRYSENE	1,290	CBSQG 2000	100	320	120 U
DIBENZ(A,H)ANTHRACENE	135	WDNR 2003	22 J	41 J	120 U
FLUORANTHENE	2,230	CBSQG 2000	100	600	120 U
FLUORENE	536	CBSQG 2000	14 J	110 J	120 U
INDENO[1,2,3-CD]PYRENE	3,200	WDNR 2003	49	140 J	120 U
NAPHTHALENE	561	CBSQG 2000	63	120 J	120 U
PERYLENE	3,200	3	100	NA	NA
PYRENE	1,520	CBSQG 2000	100	620	120 U

Notes:
Bold = Sediment benchmark is exceeded
µg/kg = Microgram per kilogram
% = Percent
CBSQG 2000 = Consensus-based sediment quality guideline from MacDonald and others 2000
CCME 1999 = Canadian sediment quality guideline for the protection of aquatic life from CCME 1999
ID = Identification
J = Estimated value; concentration below RL or exceeded RL, but one or more quality control parameters were outside control limits
NA = A criterion or value is not available
Ontario 1993 = Guideline for the protection and management of aquatic sediment from Peraud and others 1993
PAH = Polycyclic aromatic hydrocarbon
PEC = Probable effect concentration
RL = Reporting limit
TOC = Total organic carbon
U = Analyte not detected
WDNR 2003 = Consensus-based sediment quality guideline from WDNR 2003
[1] There are no guideline values for Benzo(e)pyrene.; used value for benzo(a)pyrene
[2] There are no guideline values for Benzo(b)fluoranthene; used value for benzo(b)fluoranthene
[3] There are no guideline values for perylene; used value for benzo(ghi)perylene

Sources:
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Persaud, D., and others. 1993. "Guidelines for the Protection and Management of Aquatic Sediment Quality in Ontario." Ontario Ministry of the Environment and Energy. August. ISBN 0-7729-9248-7.
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Table 3-16B
Comparison of Priority Pollutant PAH Concentrations to Sediment Benchmarks - May 2011 Otter Creek Confluence Sediment Samples
Duck and Otter Creeks Confluence Investigation
Toledo, Lucas County, Ohio

Analytical Method	Location ID / Field Sample ID / Depth Interval / Sampling Date	Sediment PEC Benchmark (at 1% TOC)		OC-34 / OC-34-01 / 0- 6 / 5/10/2011	OC-34 / OC-34-02 / 0- 29 / 5/10/2011	OC-35 / OC-35-01 / 0- 6 / 5/12/2011	OC-35 / OC-35-02 / 0- 24 / 5/12/2011	OC-36 / OC-36-01 / 0- 6 / 5/10/2011	OC-36 / OC-36-02 / 0- 15 / 5/10/2011	OC-38 / OC-38 / 0- 6 / 5/11/2011	OC-40 / OC-40-01 / 0- 6 / 5/11/2011	OC-40 / OC-40-02 / 0- 23 / 5/11/2011	OC-41 / OC-41-01 / 0- 6 / 5/10/2011
Polycyclic Aromatic Hydrocarbons (PAHs) / (µg/kg)													
MC SVOA(SIMS)	1-METHYLNAPHTHALENE	NA		170	NA	79	NA	60	NA	7.2	19	NA	20
MC SVOA(LS)	2-METHYLNAPHTHALENE	201	CCME 1999	NA	**8,900** J	NA	NA	NA	NA	NA	NA	NA	NA
MC SVOA(SIMS)	2-METHYLNAPHTHALENE	201	CCME 1999	**250**	NA	130	35	82	3.9 U	13	33	4.2 U	38
MC SVOA(LS)	ACENAPHTHENE	89	CCME 1999	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MC SVOA(SIMS)	ACENAPHTHENE	89	CCME 1999	16	**410**	10	34	11	3.9 U	4.2 U	3.6	12	4.5
MC SVOA(SIMS)	ACENAPHTHYLENE	128	CCME 1999	3.9 U	**210**	20	26	4.3 U	3.9 U	4.2 U	3.5 U	37	4.4 U
MC SVOA(LS)	ANTHRACENE	845	CBSQG 2000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MC SVOA(SIMS)	ANTHRACENE	845	CBSQG 2000	52	410	54	130	22	3.9 U	5.5	14	65	13
MC SVOA(SIMS)	BENZO[A]ANTHRACENE	1,050	CBSQG 2000	110	NA	220	340	73	3.9 U	15	46	130	53
MC SVOA(LS)	BENZO[A]ANTHRACENE	1,050	CBSQG 2000	NA	990 J	NA	NA	NA	NA	NA	NA	NA	NA
MC SVOA(LS)	BENZO[A]PYRENE	1,450	CBSQG 2000	NA	830	NA	NA	NA	NA	NA	NA	NA	NA
MC SVOA(SIMS)	BENZO[A]PYRENE	1,450	CBSQG 2000	72	NA	310	380	55	3.9 U	13	30	120	52
MC SVOA(LS)	BENZO[B]FLUORANTHENE	13,400	2	NA	510	NA	NA	NA	NA	NA	NA	NA	NA
MC SVOA(SIMS)	BENZO[B]FLUORANTHENE	13,400	2	88	NA	310	300	65	3.9 U	5.9	22	74	46
MC SVOA(SIMS)	BENZO[E]PYRENE	1,450	1	130	NA	330	NA	87	NA	17	43	NA	79
MC SVOA(LS)	BENZO[G,H,I]PERYLENE	3,200	Ontario 1993	NA	680	NA	NA	NA	NA	NA	NA	NA	NA
MC SVOA(SIMS)	BENZO[G,H,I]PERYLENE	3,200	Ontario 1993	130	NA	240	260	79	3.9 U	23	24	41	65
MC SVOA(LS)	BENZO[K]FLUORANTHENE	13,400	Ontario 1993	NA	370	NA	NA	NA	NA	NA	NA	NA	NA
MC SVOA(SIMS)	BENZO[K]FLUORANTHENE	13,400	Ontario 1993	28	NA	130	NA	24	3.9 U	4.4	13	89	28
MC SVOA(LS)	CHRYSENE	1,290	CBSQG 2000	NA	**1,700 J**	NA	560	NA	NA	NA	NA	NA	NA
MC SVOA(SIMS)	CHRYSENE	1,290	CBSQG 2000	220	NA	420	NA	120	5.5	31	75	170	100
MC SVOA(LS)	DIBENZ(A,H)ANTHRACENE	135	WDNR 2003	NA	**570**	NA	NA	NA	NA	NA	NA	NA	NA
MC SVOA(SIMS)	DIBENZ(A,H)ANTHRACENE	135	WDNR 2003	31	NA	**150**	120	34 J	3.9 U	16 J	13 J	15	32 J
MC SVOA(LS)	FLUORANTHENE	2,230	CBSQG 2000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MC SVOA(SIMS)	FLUORANTHENE	2,230	CBSQG 2000	110	330	170	NA	48	3.9 U	7.4	34	180	37
MC SVOA(LS)	FLUORENE	536	CBSQG 2000	NA	**1,300**	NA	NA	NA	NA	NA	NA	NA	NA
MC SVOA(SIMS)	FLUORENE	536	CBSQG 2000	32	NA	33	NA	21	3.9 U	5.1	8.5	15	8.6
MC SVOA(SIMS)	INDENO[1,2,3-CD]PYRENE	3,200	WDNR 2003	24	340 J	140	170	30	3.9 U	23	11	40	20
MC SVOA(LS)	INDENO[1,2,3-CD]PYRENE	3,200	WDNR 2003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MC SVOA(LS)	NAPHTHALENE	561	CBSQG 2000	NA	**1,200**	NA	NA	NA	NA	NA	NA	NA	NA
MC SVOA(SIMS)	NAPHTHALENE	561	CBSQG 2000	47	NA	56 J	44	33	3.9 U	4.2 U	18	4.7	17
MC SVOA(SIMS)	PERYLENE	3,200	3	12	NA	35 J	NA	11	NA	4.2 U	6.7	NA	9.1
MC SVOA(SIMS)	PHENANTHRENE	1,170	CBSQG 2000	NA	NA	180	NA	110	9.4	35	44 J	48	44
MC SVOA(LS)	PHENANTHRENE	1,170	CBSQG 2000	310	**1,200**	NA	NA	NA	NA	NA	NA	NA	NA
MC SVOA(SIMS)	PYRENE	1,520	CBSQG 2000	270	NA	300	NA	120	6.3	18	89	180	92
MC SVOA(LS)	PYRENE	1,520	CBSQG 2000	NA	1,200 J	NA	420 J	NA	NA	NA	NA	NA	NA

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Table 3-16B
Comparison of Priority Pollutant PAH Concentrations to Sediment Benchmarks - May 2011 Otter Creek Confluence Sediment Samples
Duck and Otter Creeks Confluence Investigation
Toledo, Lucas County, Ohio

Analytical Method	Location ID / Field Sample ID / Depth Interval / Sample Date	Sediment PEC Benchmark (at 1% TOC)		OC-41 OC-41-02 0- 23 5/10/2011	OC-42 OC-42-01 0- 6 5/11/2011	OC-42 OC-42-01-DP 0- 6 5/11/2011	OC-42 OC-42-02 0- 23 5/11/2011	OC-42 OC-42-02-DP 0- 23 5/11/2011	OC-44 OC-44-01 0- 6 5/10/2011	OC-44 OC-44-02 0- 27 5/10/2011	OC-45 OC-45-01 0- 6 5/10/2011	OC-45 OC-45-02 0- 25 5/10/2011	OC-46 OC-46-01 0- 6 5/12/2011
Polycyclic Aromatic Hydrocarbons (PAHs) / (µg/kg)													
MC SVOA(SIMS)	1-METHYLNAPHTHALENE	NA		NA	520	2,300	NA	NA	5,100	NA	440	NA	12
MC SVOA(LS)	2-METHYLNAPHTHALENE	201	CCME 1999	NA	**380**	**1,100**	NA	NA	**6,800**	**4,100**	**500**	**15,000 J**	NA
MC SVOA(SIMS)	2-METHYLNAPHTHALENE	201	CCME 1999	4.2 J	NA	NA	22	9.5	NA	NA	NA	NA	23
MC SVOA(LS)	ACENAPHTHENE	89	CCME 1999	NA	NA	NA	NA	NA	NA	2,400	NA	1,100	NA
MC SVOA(SIMS)	ACENAPHTHENE	89	CCME 1999	4.2 U	**230**	**920**	18	33	**680**	NA	65	NA	7.3 U
MC SVOA(SIMS)	ACENAPHTHYLENE	128	CCME 1999	8.8	4.7 U	5.2 U	25	27	13 U	**600 J**	53	**650**	7.8
MC SVOA(LS)	ANTHRACENE	845	CBSQG 2000	NA	**1,100**	**2,200**	NA	NA	NA	**4,300**	NA	**2,100**	NA
MC SVOA(SIMS)	ANTHRACENE	845	CBSQG 2000	18	NA	NA	83	120	1,900	NA	48 J	NA	11
MC SVOA(SIMS)	BENZO[A]ANTHRACENE	1,050	CBSQG 2000	25	NA	NA	240	280	NA	NA	230	NA	40
MC SVOA(LS)	BENZO[A]ANTHRACENE	1,050	CBSQG 2000	NA	**3,300**	**6,600**	NA	NA	**6,700**	**24,000**	NA	**4,000**	NA
MC SVOA(LS)	BENZO[A]PYRENE	1,450	CBSQG 2000	NA	**2,500**	**4,600**	NA	NA	**4,500**	**16,000**	NA	**3,600**	NA
MC SVOA(SIMS)	BENZO[A]PYRENE	1,450	CBSQG 2000	20	NA	NA	240	200	NA	NA	180	NA	42
MC SVOA(LS)	BENZO[B]FLUORANTHENE	13,400	2	NA	1,500	3,100	NA	NA	2,200	13,000	NA	2,400	NA
MC SVOA(SIMS)	BENZO[B]FLUORANTHENE	13,400	2	13	NA	NA	190	140	NA	NA	170	NA	43 J
MC SVOA(SIMS)	BENZO[E]PYRENE	1,450	1	NA	**4,200 J**	**10,000**	NA	NA	**7,600**	NA	240	NA	33 J
MC SVOA(LS)	BENZO[G,H,I]PERYLENE	3,200	Ontario 1993	NA	1,800	**3,300**	NA	NA	3,100	**11,000**	NA	2,300	NA
MC SVOA(SIMS)	BENZO[G,H,I]PERYLENE	3,200	Ontario 1993	15	NA	NA	150	120	NA	NA	310	NA	46
MC SVOA(LS)	BENZO[K]FLUORANTHENE	13,400	Ontario 1993	NA	1,200	3,100	NA	NA	NA	6,400 J	NA	1,200	NA
MC SVOA(SIMS)	BENZO[K]FLUORANTHENE	13,400	Ontario 1993	15	NA	NA	79	86	1,600	NA	140	NA	28
MC SVOA(LS)	CHRYSENE	1,290	CBSQG 2000	NA	**6,800 J**	**15,000 J**	480	NA	**10,000**	**36,000**	NA	**8,300 J**	NA
MC SVOA(SIMS)	CHRYSENE	1,290	CBSQG 2000	33	NA	NA	NA	430	NA	NA	240	NA	44
MC SVOA(LS)	DIBENZ(A,H)ANTHRACENE	135	WDNR 2003	NA	**1,500**	**3,700**	NA	NA	**3,200**	**10,000**	NA	**2,400**	NA
MC SVOA(SIMS)	DIBENZ(A,H)ANTHRACENE	135	WDNR 2003	6.8	NA	NA	98	96	NA	NA	**150 J**	NA	19
MC SVOA(LS)	FLUORANTHENE	2,230	CBSQG 2000	NA	1,800	**4,100**	NA	NA	**2,700**	**2,600**	NA	**2,500**	NA
MC SVOA(SIMS)	FLUORANTHENE	2,230	CBSQG 2000	58	NA	NA	170	190	NA	NA	180	NA	63
MC SVOA(LS)	FLUORENE	536	CBSQG 2000	NA	**870**	**2,200**	NA	NA	NA	**5,000**	NA	**2,300**	NA
MC SVOA(SIMS)	FLUORENE	536	CBSQG 2000	4.2 U	NA	NA	48	67	1,700	NA	190	NA	7.6
MC SVOA(SIMS)	INDENO[1,2,3-CD]PYRENE	3,200	WDNR 2003	10	NA	NA	83	75	2,400	NA	190	NA	36
MC SVOA(LS)	INDENO[1,2,3-CD]PYRENE	3,200	WDNR 2003	NA	1,000	2,500	NA	NA	NA	**4,600**	NA	1,500	NA
MC SVOA(LS)	NAPHTHALENE	561	CBSQG 2000	NA	NA	NA	NA	NA	NA	**1,800**	NA	**1,200**	NA
MC SVOA(SIMS)	NAPHTHALENE	561	CBSQG 2000	4.2 U	200	500	5.8	6.3	**810**	NA	360	NA	22
MC SVOA(SIMS)	PERYLENE	3,200	3	NA	260	470 J	NA	NA	680	NA	28	NA	15
MC SVOA(SIMS)	PHENANTHRENE	1,170	CBSQG 2000	23	NA	NA	380	290	NA	NA	320	NA	39
MC SVOA(LS)	PHENANTHRENE	1,170	CBSQG 2000	NA	**6,700**	**19,000**	NA	NA	**7,000**	**13,000**	NA	**8,800 J**	NA
MC SVOA(SIMS)	PYRENE	1,520	CBSQG 2000	57	NA	NA	340	400	NA	NA	230	NA	58
MC SVOA(LS)	PYRENE	1,520	CBSQG 2000	NA	**4,100**	**9,500**	NA	NA	**7,100**	**16,000**	NA	**4,300**	NA

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Table 3-16B
Comparison of Priority Pollutant PAH Concentrations to Sediment Benchmarks - May 2011 Otter Creek Confluence Sediment Samples
Duck and Otter Creeks Confluence Investigation
Toledo, Lucas County, Ohio

Analytical Method	Location ID / Field Sample ID / Depth Interval / Sample Date	Sediment PEC Benchmark (at 1% TOC)		OC-46 OC-46-02 0- 24 5/12/2011	OC-47 OC-47-01 0- 6 5/12/2011	OC-47 OC-47-02 0- 24 5/12/2011	OC-47 OC-47-03 24- 48 5/12/2011	OC-47 OC-47-04 48- 62 5/12/2011	OC-48 OC-48-01 0- 6 5/12/2011	OC-48 OC-48-02 0- 24 5/12/2011	OC-48 OC-48-03 24- 48 5/12/2011	OC-48 OC-48-04 48- 60 5/12/2011
Polycyclic Aromatic Hydrocarbons (PAHs) / (µg / kg)												
MC SVOA(SIMS)	1-METHYLNAPHTHALENE	NA		NA	7.3 UJ	NA	NA	NA	13	NA	NA	NA
MC SVOA(LS)	2-METHYLNAPHTHALENE	201	CCME 1999	NA	NA	NA	NA	NA	NA	NA	NA	NA
MC SVOA(SIMS)	2-METHYLNAPHTHALENE	201	CCME 1999	8.2	7.3 UJ	6.4 U	9.5	20	25	6.3 U	6	9.8
MC SVOA(LS)	ACENAPHTHENE	89	CCME 1999	NA	NA	NA	NA	NA	NA	NA	NA	NA
MC SVOA(SIMS)	ACENAPHTHENE	89	CCME 1999	6.4 U	7.3 UJ	6.4 U	7.9	13	8.8	6.3 U	6.7	7
MC SVOA(SIMS)	ACENAPHTHYLENE	128	CCME 1999	10	6.7 J	6.4 U	8	11	22	6.3 U	32	18
MC SVOA(LS)	ANTHRACENE	845	CBSQG 2000	NA	NA	NA	NA	NA	NA	NA	NA	NA
MC SVOA(SIMS)	ANTHRACENE	845	CBSQG 2000	46	17 J	15	27	35	32	10	26	22
MC SVOA(SIMS)	BENZO[A]ANTHRACENE	1,050	CBSQG 2000	200	62 J	49	73	82	110	27	190	160
MC SVOA(LS)	BENZO[A]ANTHRACENE	1,050	CBSQG 2000	NA	NA	NA	NA	NA	NA	NA	NA	NA
MC SVOA(LS)	BENZO[A]PYRENE	1,450	CBSQG 2000	NA	NA	NA	NA	NA	NA	NA	NA	NA
MC SVOA(SIMS)	BENZO[A]PYRENE	1,450	CBSQG 2000	170	64 J	43	42	55	150	23	220	160
MC SVOA(LS)	BENZO[B]FLUORANTHENE	13,400	2	NA	NA	NA	NA	NA	NA	NA	NA	NA
MC SVOA(SIMS)	BENZO[B]FLUORANTHENE	13,400	2	110	67 J	47	24	55	150	14	150	140
MC SVOA(SIMS)	BENZO[E]PYRENE	1,450	1	NA	50 J	NA	NA	NA	120	NA	NA	NA
MC SVOA(LS)	BENZO[G,H,I]PERYLENE	3,200	Ontario 1993	NA	NA	NA	NA	NA	NA	NA	NA	NA
MC SVOA(SIMS)	BENZO[G,H,I]PERYLENE	3,200	Ontario 1993	120	60 J	27 J	24 J	29 J	240	17 J	110	46
MC SVOA(LS)	BENZO[K]FLUORANTHENE	13,400	Ontario 1993	NA	NA	NA	NA	NA	NA	NA	NA	NA
MC SVOA(SIMS)	BENZO[K]FLUORANTHENE	13,400	Ontario 1993	34	45 J	33	25	35	54	12	180	37
MC SVOA(LS)	CHRYSENE	1,290	CBSQG 2000	NA	NA	NA	NA	NA	NA	NA	NA	NA
MC SVOA(SIMS)	CHRYSENE	1,290	CBSQG 2000	490	67 J	97	110	150	110	41	180	320
MC SVOA(LS)	DIBENZ(A,H)ANTHRACENE	135	WDNR 2003	NA	NA	NA	NA	NA	NA	NA	NA	NA
MC SVOA(SIMS)	DIBENZ(A,H)ANTHRACENE	135	WDNR 2003	42	22 J	19	16	19	34	12	23	21
MC SVOA(LS)	FLUORANTHENE	2,230	CBSQG 2000	NA	NA	NA	NA	NA	NA	NA	NA	NA
MC SVOA(SIMS)	FLUORANTHENE	2,230	CBSQG 2000	110	130 J	130	120	100	150	40	190	200
MC SVOA(LS)	FLUORENE	536	CBSQG 2000	NA	NA	NA	NA	NA	NA	NA	NA	NA
MC SVOA(SIMS)	FLUORENE	536	CBSQG 2000	12	7.3 UJ	8.1	15	22	18	6.3 U	14	16
MC SVOA(SIMS)	INDENO[1,2,3-CD]PYRENE	3,200	WDNR 2003	37	49 J	29 J	25 J	29 J	70	17 J	100	32
MC SVOA(LS)	INDENO[1,2,3-CD]PYRENE	3,200	WDNR 2003	NA	NA	NA	NA	NA	NA	NA	NA	NA
MC SVOA(LS)	NAPHTHALENE	561	CBSQG 2000	NA	NA	NA	NA	NA	NA	NA	NA	NA
MC SVOA(SIMS)	NAPHTHALENE	561	CBSQG 2000	6.5	7.3 UJ	6.4 J	21	26	66	6.3 U	20	11
MC SVOA(SIMS)	PERYLENE	3,200	3	NA	26 J	NA	NA	NA	27	NA	NA	NA
MC SVOA(SIMS)	PHENANTHRENE	1,170	CBSQG 2000	120	45 J	47	85	170	85	25	84	210
MC SVOA(LS)	PHENANTHRENE	1,170	CBSQG 2000	NA	NA	NA	NA	NA	NA	NA	NA	NA
MC SVOA(SIMS)	PYRENE	1,520	CBSQG 2000	250	130 J	140	150	200	150	51	160	320
MC SVOA(LS)	PYRENE	1,520	CBSQG 2000	NA	NA	NA	NA	NA	NA	NA	NA	NA

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Table 3-16B
Comparison of Priority Pollutant PAH Concentrations to Sediment Benchmarks - May 2011 Otter Creek Confluence Sediment Samples
Duck and Otter Creeks Confluence Investigation
Toledo, Lucas County, Ohio

Notes:
Bold = Sediment benchmark is exceeded
µg/kg = Microgram per kilogram
% = Percent
CBSQG 2000 = Consensus-based sediment quality guideline from MacDonald and others 2000
CCME 1999 = Canadian sediment quality guideline for the protection of aquatic life from CCME 1999
ID = Identification
J = Estimated value; concentration below RL or exceeded RL, but one or more quality control parameters were outside control limits

NA = A criterion or value is not available
Ontario 1993 = Guideline for the protection and management of aquatic sediment from Peraud and others 1993
PAH = Polycyclic aromatic hydrocarbon
PEC = Probable effect concentration
RL = Reporting limit
TOC = Total organic carbon
U = Analyte not detected
WDNR 2003 = Consensus-based sediment quality guideline from WDNR 2003
[1] There are no guideline values for Benzo(e)pyrene.; used value for benzo(a)pyrene
[2] There are no guideline values for Benzo(b)fluoranthene; used value for benzo(b)fluoranthene
[3] There are no guideline values for perylene; used value for benzo(ghi)perylene
Sources:
MacDonald, D.D. , and others. 2000. "Development and Evaluation of Consensus-based Sediment Quality Guidelines for Freshwater Ecosystems." Arch. Environ. Contam. Toxicol. 39: 20-31.
Canadian Council of Ministers of the Environment (CCME). 1999. Canadian Sediment Quality Guidelines for the Protection of Aquatic Life: Summary Tables. Canadian Environmental Quality Guidelines.
Persaud, D., and others. 1993. "Guidelines for the Protection and Management of Aquatic Sediment Quality in Ontario." Ontario Ministry of the Environment and Energy. August. ISBN 0-7729-9248-7.
On-line Address: http://www.ene.gov.on.ca/envision/gp/B1_3.pdf
Wisconsin Department of Natural Resources (WDNR). 2003. Consensus-based Sediment Quality Guidelines, Recommendations for Use and Application, Interim Guidance. Contaminated Sediments Standing Team. WT-732 2003. December.

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Table 3-17A
Comparison of SVOCs to Sediment Benchmarks - November 2010 Otter Creek Sediment Samples
Duck and Otter Creeks Confluence Investigation
Toledo, Lucas County, Ohio

Location ID	Sediment Screening Benchmark[1]			OC-26	OC-26	OC-26	OC-26	OC-26	OC-27	OC-27	OC-27	OC-27	OC-28	OC-28	OC-28	OC-28	OC-29	OC-29
Field Sample ID				OC-26	OC-26-01	OC-26-01DP	OC-26-02	OC-26-02DP	OC-27	OC-27-01	OC-27-02	OC-27DP	OC-28	OC-28-01	OC-28-02	OC-28-03	OC-29	OC-29-01
Sampling Date	Low	High	Source	11/3/2010	11/3/2010	11/3/2010	11/3/2010	11/3/2010	11/3/2010	11/3/2010	11/3/2010	11/3/2010	11/3/2010	11/3/2010	11/3/2010	11/3/2010	11/4/2010	11/4/2010
SVOCs/(µg/kg)																		
4-METHYLPHENOL	182	2,647	FDEP TEL/PEL	1,300 U	1,400 U	1,000 U	220 U	220 U	1,300 U	1,000 U	220 U	1,400 U	**540 J**	**570 J**	1,100 U	1,000 U	3,000 U	910 U
BENZALDEHYDE	--	--	--	1,300 U	1,400 U	1,000 U	**110 J**	**130 J**	1,300 U	1,000 U	**130 J**	1,400 U	1,400 U	**410 J**	1,100 U	1,000 U	3,000 U	910 U
BIS(2-ETHYLHEXYL)PHTHALATE	20.2	670	R5 ESL/R3 BTAG Freshwater	1,300 U	1,400 U	1,000 U	220 U	220 U	1,300 U	1,000 U	220 U	1,400 U	1,400 U	1,100 U	1,100 U	1,000 U	3,000 U	910 U
NITROBENZENE	145	--	R5 ESL	1,300 U	1,400 U	1,000 U	220 U	220 U	1,300 U	1,000 U	220 U	1,400 U	1,400 U	1,100 U	1,100 U	1,000 U	3,000 U	910 U

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Table 3-17A
Comparison of SVOCs to Sediment Benchmarks - November 2010 Otter Creek Sediment Samples
Duck and Otter Creeks Confluence Investigation
Toledo, Lucas County, Ohio

Location ID	Sediment Screening Benchmark[1]			OC-29	OC-30	OC-30	OC-30	OC-30	OC-31	OC-31	OC-31	OC-31	OC-32	OC-32	OC-32	OC-32	OC-33	OC-33	OC-33
Field Sample ID				OC-29-02	OC-30	OC-30-01	OC-30-02	OC-30DP	OC-31	OC-31-01	OC-31-02	OC-31DP	OC-32	OC-32-01	OC-32-02	OC-32DP	OC-33	OC-33-01	OC-33-02
Sampling Date	Low	High	Source	11/4/2010	11/4/2010	11/4/2010	11/4/2010	11/4/2010	11/4/2010	11/4/2010	11/4/2010	11/4/2010	11/4/2010	11/4/2010	11/4/2010	11/4/2010	11/4/2010	11/4/2010	11/4/2010
SVOCs/(µg/kg)																			
4-METHYLPHENOL	182	2,647	FDEP TEL/PEL	1,600 U	2,400 U	1,600 U	1,700 U	920 U	1,100 UJ	1,500 U	1,400 U	1,000 U	2,900 U	2,300 U	980 U	2,800 U	1,600 U	1,300 U	1,100 U
BENZALDEHYDE	--	--	--	1,600 U	2,400 U	1,600 U	1,700 U	920 U	1,100 UJ	1,500 U	1,400 U	1,000 U	2,900 U	2,300 U	980 U	2,800 U	1,600 U	1,300 U	1,100 U
BIS(2-	20.2	670	R5 ESL/R3	1,600 U	2,400 U	1,600 U	1,700 U	920 U	1,100 UJ	1,500 U	1,400 U	1,000 U	2,900 U	2,300 U	980 U	2,800 U	1,600 U	1,300 U	1,100 U
NITROBENZENE	145	--	R5 ESL	1,600 U	2,400 U	1,600 U	1,700 U	920 U	1,100 UJ	1,500 U	1,400 U	1,000 U	2,900 U	2,300 U	980 U	2,800 U	1,600 U	1,300 U	1,100 U

Notes:
Bold result exceeds low sediment benchmark
Shaded result exceeds high benchmark
-- = Criterion or value not available
µg/kg = Microgram per kilogram
FDEP TEL/PEL = Florida Department of Enviornmental Protection threshold effect level/probable effect level
ID = Identification
J = Estimated value; concentration below RL or exceeded RL, but one or more quality control parameters were outside control limits
R3 BTAG = U.S. EPA Region 3 Biological Technical Assistance Group Freshwater Sediment Screening Benchmarks
R5 ESL = U.S. EPA Region 5 ecological screening level for sediment
RL = Reporting limit
SVOC = Semivolatile organic compound
U = Not detected above RL
UJ = Not detected above RL; however, RL approximate

U.S. EPA = U.S. Environmental Protection Agency
[1] Sediment screening benchmarks from Oak Ridge National Laboratory (ORNL) Risk Assessment Information System (RAIS) (http://rais.ornl.gov/tools/eco_search.php); accessed on 7/24/2011

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Table 3-17B
Comparison of SVOCs to Sediment Benchmarks - May 2011 Otter Creek Confluence Sediment Samples
Duck and Otter Creeks Confluence Investigation
Toledo, Lucas County, Ohio

Field Sample ID	Sediment Screening Benchmark[1]			OC-34-01	OC-34-02	OC-35-01	OC-35-02	OC-36-01	OC-36-02	OC-38	OC-40-01	OC-40-02
Sampling Date	**Low**	**High**	**Source**	**5/10/2011**	**5/10/2011**	**5/12/2011**	**5/12/2011**	**5/10/2011**	**5/10/2011**	**5/11/2011**	**5/11/2011**	**5/11/2011**
SVOCs (µg/kg)												
1,1-BIPHENYL	--	60	R4	200 U	**550 J**	330 U	310 U	220 U	200 U	220 U	180 U	220 U
4-METHYLPHENOL	182	2,647	FDEP TEL/PEL	200 U	**190 J**	330 U	310 U	220 U	200 U	220 U	180 U	220 U
ACETOPHENONE	--	300	R5 ESL	200 U	**750 J**	330 U	310 U	220 U	200 U	220 U	180 U	220 U
BIS(2-ETHYLHEXYL)PHTHALATE	20.2	670	R5 ESL/R3 BTAG Freshwater	**86 J**	270 U	**380 J**	**400 J**	**120 J**	**110 J**	**210 J**	**72 J**	220 U
CARBAZOLE	--	--	--	200 U	270 U	330 U	310 U	220 U	200 U	220 U	180 U	220 U
DIBENZOFURAN	--	--	--	200 U	280 J	330 U	310 U	220 U	200 U	220 U	180 U	220 U
DI-N-BUTYLPHTHALATE	0.15	200	R5 ESL/R4	200 U	270 U	330 U	310 U	220 U	200 U	220 U	180 U	220 U
N-NITROSODIPHENYLAMINE	0.545	20	R5 ESL/R4	200 U	270 U	330 U	310 U	220 U	200 U	220 U	180 U	220 U
PHENOL	0.05	120	R4/R5 ESL	200 U	270 U	330 U	310 U	220 U	200 U	220 U	180 U	220 U

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Table 3-17B
Comparison of SVOCs to Sediment Benchmarks - May 2011 Otter Creek Confluence Sediment Samples
Duck and Otter Creeks Confluence Investigation
Toledo, Lucas County, Ohio

Field Sample ID	Sediment Screening Benchmark[1]			OC-41-01	OC-41-02	OC-42-01	OC-42-01-DP	OC-42-02	OC-42-02-DP	OC-44-01	OC-44-02	OC-45-01	OC-45-02	OC-46-01
Sampling Date	Low	High	Source	5/10/2011	5/10/2011	5/11/2011	5/11/2011	5/11/2011	5/11/2011	5/10/2011	5/10/2011	5/10/2011	5/10/2011	5/12/2011
SVOCs (µg/kg)														
1,1-BIPHENYL	--	60	R4	230 U	220 U	240 U	260 U	220 U	230 U	680 U	330 U	260 U	350 U	380 U
4-METHYLPHENOL	182	2,647	FDEP TEL/PEL	230 U	220 U	240 U	260 UJ	220 U	230 U	**590 J**	330 U	260 U	1,700 U	380 U
ACETOPHENONE	--	300	R5 ESL	230 U	220 U	240 U	260 U	220 U	230 U	680 U	330 U	260 U	1,700 U	380 U
BIS(2-ETHYLHEXYL)PHTHALATE	20.2	670	R5 ESL/R3 BTAG Freshwater	**120 J**	**87 J**	**430 J**	**580 J**	220 U	230 U	**570 J**	330 U	930 J	350 U	**300 J**
CARBAZOLE	--	--	--	230 U	220 U	240 U	260 U	220 U	230 U	680 U	330 U	260 U	350 U	380 U
DIBENZOFURAN	--	--	--	230 U	220 U	210 J	490 J	220 U	230 U	680 U	330 U	260 U	440 J	380 U
DI-N-BUTYLPHTHALATE	0.15	200	R5 ESL/R4	230 U	220 U	240 U	260 U	220 U	230 U	680 U	330 U	260 U	350 U	**180 J**
N-NITROSODIPHENYLAMINE	0.545	20	R5 ESL/R4	230 U	220 U	**240**	**260**	220 U	230 U	**680**	330 U	260 U	**2,200 J**	380 U
PHENOL	0.05	120	R4/R5 ESL	230 U	220 U	240 UJ	260 UJ	220 U	230 U	680 U	330 U	260 U	1,700 U	380 U

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Table 3-17B
Comparison of SVOCs to Sediment Benchmarks - May 2011 Otter Creek Confluence Sediment Samples
Duck and Otter Creeks Confluence Investigation
Toledo, Lucas County, Ohio

Field Sample ID	Sediment Screening Benchmark[1]			OC-46-02	OC-47-01	OC-47-02	OC-47-03	OC-47-04	OC-48-01	OC-48-02	OC-48-03	OC-48-04
Sampling Date	Low	High	Source	5/12/2011	5/12/2011	5/12/2011	5/12/2011	5/12/2011	5/12/2011	5/12/2011	5/12/2011	5/12/2011
SVOCs (µg/kg)												
1,1-BIPHENYL	--	60	R4	330 U	380 U	330 U	300 U	290 U	380 U	330 U	260 U	300 U
4-METHYLPHENOL	182	2,647	FDEP TEL/PEL	330 U	380 U	330 U	300 U	290 U	380 U	330 U	260 U	300 U
ACETOPHENONE	--	300	R5 ESL	330 U	380 U	330 U	300 U	290 U	380 U	330 U	260 U	300 U
BIS(2-ETHYLHEXYL)PHTHALATE	20.2	670	R5 ESL/R3 BTAG Freshwater	**140 J**	380 U	330 U	**190 J**	**220 J**	**250 J**	330 U	**120 J**	**270 J**
CARBAZOLE	--	--	--	330 U	380 U	330 U	300 U	290 U	380 U	330 U	260 U	300 U
DIBENZOFURAN	--	--	--	330 U	380 U	330 U	300 U	290 U	380 U	330 U	260 U	300 U
DI-N-BUTYLPHTHALATE	0.15	200	R5 ESL/R4	330 U	380 U	330 U	300 U	290 U	380 U	330 U	260 U	300 U
N-NITROSODIPHENYLAMINE	0.545	20	R5 ESL/R4	330 U	380 U	330 U	300 U	290 U	380 U	330 U	260 U	300 U
PHENOL	0.05	120	R4/R5 ESL	330 U	380 U	330 U	300 U	290 U	380 U	330 U	260 U	300 U

Notes:
Bold result exceeds low sediment benchmark
Shaded result exceeds high benchmark
-- = Criterion or value not available
µg/kg = Microgram per kilogram
FDEP TEL/PEL = Florida Department of Enviornmental Protection threshold effect level/probable effect level
ID = Identification
J = Estimated value; concentration below RL or exceeded RL, but one or more quality control parameters were outside control limits
R3 BTAG = U.S. EPA Region 3 Biological Technical Assistance Group Freshwater Sediment Screening Benchmarks
R4 = U.S EPA Region IV ecological screening value from U.S. EPA 2001
R5 ESL = U.S. EPA Region 5 ecological screening level for sediment
RL = Reporting limit
SVOC = Semivolatile organic compound
U = Not detected above RL
UJ = Not detected above RL; however, RL approximate
U.S. EPA = U.S. Environmental Protection Agency
[1] Sediment screening benchmarks from Oak Ridge National Laboratory (ORNL) Risk Assessment Information System (RAIS)
Source:
U.S. EPA. 2001. "Supplemental Guidance to RAGS: Region 4 Bulletins, Ecological Risk Assessment."

Table 3-18
Grain Size Analysis - Otter Creek Confluence Sediment Samples
Duck and Otter Creeks Confluence Investigation
Toledo, Lucas County, Ohio

Grain Size	Field Sample ID	OC-26	OC-27	OC-28	OC-29	OC-30	OC-31	OC-32	OC-33	OC-34-01	OC-35-01	OC-36-01
	Sampling Date	11/3/2010	11/3/2010	11/3/2010	11/4/2010	11/4/2010	11/4/2010	11/4/2010	11/4/2010	5/10/2011	5/12/2011	5/10/2011
Analytical Method D422	**Unit**											
GRAVEL	%	1.5	0.1	0.2	0	0	0.2	0	0	23.6	0.6	6.5
SAND	%	28.2	18.2	48.3	16.7	9.8	11.5	19.3	17.9	20.4	0.9	5.4
COARSE SAND	%	1.7	0.5	0.6	1.5	0.2	0.2	0.5	0.2	46	0.5	11.9
MEDIUM SAND	%	5	2.1	5	2.9	1.3	0.7	3	0.8	75.6	6.6	47.8
FINE SAND	%	21.5	15.6	42.7	12.3	8.3	10.6	15.8	16.9	9.1	5.2	30.5
SILT	%	31.9	57.1	37.1	52	53.3	46.3	40.7	43.1	0.4	44.4	26.7
CLAY	%	38.4	24.6	14.4	31.3	36.9	42	40	39	0.5	48.4	19
SIEVE SIZE 3 INCH - PERCENT FINER	% PASSED	100	100	100	100	100	100	100	100	100	100	100
SIEVE SIZE 2 INCH - PERCENT FINER	% PASSED	100	100	100	100	100	100	100	100	100	100	100
SIEVE SIZE 1.5 INCH - PERCENT FINER	% PASSED	100	100	100	100	100	100	100	100	100	100	100
SIEVE SIZE 1 INCH - PERCENT FINER	% PASSED	100	100	100	100	100	100	100	100	100	100	100
SIEVE SIZE 0.75 INCH - PERCENT FINER	% PASSED	100	100	100	100	100	100	100	100	100	100	100
SIEVE SIZE 0.375 INCH - PERCENT FINER	% PASSED	100	100	100	100	100	100	100	100	90.9	100	97.5
SIEVE SIZE #4 - PERCENT FINER	% PASSED	98.5	99.9	99.8	100	100	99.8	100	100	56	98.5	88.1
SIEVE SIZE #10 - PERCENT FINER	% PASSED	96.8	99.4	99.2	98.5	99.8	99.6	99.5	99.8	0.8	96.5	64.4
SIEVE SIZE #20 - PERCENT FINER	% PASSED	94.6	98.5	97.9	97.1	99.5	99.2	98.9	99.6	28.9	98.2	81.7
SIEVE SIZE #40 - PERCENT FINER	% PASSED	91.8	97.3	94.2	95.6	98.5	98.9	96.5	99	0.8	92.8	45.7
SIEVE SIZE #60 - PERCENT FINER	% PASSED	89.4	95.7	89	93.6	97.2	98.6	93.6	98.3	76.4	99.4	93.5
SIEVE SIZE #80 - PERCENT FINER	% PASSED	82.2	93.4	72.3	91	95.1	97.7	89.6	95.9	10	98	76.2
SIEVE SIZE #100 - PERCENT FINER	% PASSED	79.7	90.9	65.9	89.3	94.4	97.1	88.5	94.3	2	97.6	70.7
SIEVE SIZE #200 - PERCENT FINER	% PASSED	70.3	81.7	51.5	83.3	90.2	88.3	80.7	82.1	0.9	97	67.1
HYDROMETER READING 1 - PERCENT FINER	% PASSED	62.1	61.8	33.6	67.1	69.7	66.9	64.7	59.7	0.5	80.2	30.8
HYDROMETER READING 2 - PERCENT FINER	% PASSED	58	55.9	27.7	59.9	60.9	61.9	57.9	55.1	0.5	72.7	26.7
HYDROMETER READING 3 - PERCENT FINER	% PASSED	49.7	43.2	21.1	45.6	49.9	53.1	48.9	48.1	0.5	60.7	23.2
HYDROMETER READING 4 - PERCENT FINER	% PASSED	43.5	31.5	17.7	36	42.4	47.1	44.6	43.6	0.5	53.1	20.4
HYDROMETER READING 5 - PERCENT FINER	% PASSED	38.4	24.6	14.4	31.3	36.9	42	40	39	0.5	48.4	19
HYDROMETER READING 6 - PERCENT FINER	% PASSED	30.1	20.7	11	26.3	29.5	34.9	31.4	32.6	0.5	37.8	14.8
HYDROMETER READING 7 - PERCENT FINER	% PASSED	22.9	16.8	7.7	19.1	21.1	25.3	22.7	23.5	0.4	28.8	10.6

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Table 3-18
Grain Size Analysis - Otter Creek Confluence Sediment Samples
Duck and Otter Creeks Confluence Investigation
Toledo, Lucas County, Ohio

Grain Size	Field Sample ID / Sampling Date	OC-38 5/11/2011	OC-40-01 5/11/2011	OC-41-01 5/10/2011	OC-42-01 5/11/2011	OC-44-01 5/10/2011	OC-45-01 5/10/2011	OC-46-01 5/12/2011	OC-47-01 5/12/2011	OC-48-01 5/12/2011
Analytical Method D422	**Unit**									
GRAVEL	%	5	9.3	3.5	2.1	10.1	0	0	0	0
SAND	%	6	9	5.4	0.3	11.9	0	0	0	0
COARSE SAND	%	8.7	15.4	11	1.4	26.3	0.2	1.2	0.4	0.5
MEDIUM SAND	%	32.6	54.5	39.1	26.4	61.6	4.5	8.6	15.7	21.3
FINE SAND	%	17.9	30.1	22.7	24.7	23.4	4.3	7.4	15.3	20.8
SILT	%	26.8	14.2	24.8	44	16.6	65.4	49	50.9	40.5
CLAY	%	35.6	22	32.6	27.5	11.7	30.1	42.4	33.4	38.2
SIEVE SIZE 3 INCH - PERCENT FINER	% PASSED	100	100	100	100	100	100	100	100	100
SIEVE SIZE 2 INCH - PERCENT FINER	% PASSED	100	100	100	100	100	100	100	100	100
SIEVE SIZE 1.5 INCH - PERCENT FINER	% PASSED	100	100	100	100	100	100	100	100	100
SIEVE SIZE 1 INCH - PERCENT FINER	% PASSED	100	100	100	100	100	100	100	100	100
SIEVE SIZE 0.75 INCH - PERCENT FINER	% PASSED	100	100	100	100	100	100	100	100	100
SIEVE SIZE 0.375 INCH - PERCENT FINER	% PASSED	100	96	100	100	97.3	100	100	100	100
SIEVE SIZE #4 - PERCENT FINER	% PASSED	89	81.7	91.1	97.6	78	100	100	100	100
SIEVE SIZE #10 - PERCENT FINER	% PASSED	69.3	43.5	65.8	90.6	32.5	98.9	97.9	98.5	96.1
SIEVE SIZE #20 - PERCENT FINER	% PASSED	84.5	74.2	85.4	96.9	66.4	99.8	99.1	99.7	99.6
SIEVE SIZE #40 - PERCENT FINER	% PASSED	62.4	36.2	57.4	71.5	28.3	95.5	91.4	84.3	78.7
SIEVE SIZE #60 - PERCENT FINER	% PASSED	95	90.7	96.5	97.9	89.9	100	100	100	100
SIEVE SIZE #80 - PERCENT FINER	% PASSED	80.3	66.3	80.1	96.2	51.7	99.8	98.8	99.6	99.5
SIEVE SIZE #100 - PERCENT FINER	% PASSED	75.1	53.6	73.5	95	37.8	99.5	98.4	99.5	99.4
SIEVE SIZE #200 - PERCENT FINER	% PASSED	71.5	46.5	68.6	93.3	33.6	99.2	98.2	99.4	98.7
HYDROMETER READING 1 - PERCENT FINER	% PASSED	53.4	33.1	50.4	51.7	21.1	71	63.5	56	57.8
HYDROMETER READING 2 - PERCENT FINER	% PASSED	48.6	30.2	46.5	44.6	18.2	58.4	58.5	49.3	52.9
HYDROMETER READING 3 - PERCENT FINER	% PASSED	43.7	27.3	40.6	35.6	16	44.3	52.3	41.4	45.6
HYDROMETER READING 4 - PERCENT FINER	% PASSED	38.9	25.8	37.5	32.5	13.9	36.4	47.4	38.7	41.9
HYDROMETER READING 5 - PERCENT FINER	% PASSED	35.6	22	32.6	27.5	11.7	30.1	42.4	33.4	38.2
HYDROMETER READING 6 - PERCENT FINER	% PASSED	28.4	17.6	26.7	21.5	8.8	22.3	35	26.8	30.9
HYDROMETER READING 7 - PERCENT FINER	% PASSED	21.1	12.5	19.8	14.4	5.2	14.4	23.8	20.1	23.5

Notes:
% = Percent
ID = Identification

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Table 3-19
PEC-Q for Metals - Otter Creek Confluence Sediment Samples
Duck and Otter Creeks Confluence Investigation
Toledo, Lucas County, Ohio

Field Sample ID	Consensus-Based PEC	OC-26		OC-26-01		OC-26-01DP		OC-26-02		OC-26-02DP		OC-27	
Sampling Date		11/3/2010		11/3/2010		11/3/2010		11/3/2010		11/3/2010		11/3/2010	
Metals[1]		Result (mg/kg)	PEC-Q	Result (mg/kg)	PEC-Q	Result (mg/kg)	PEC-Q	Result (mg/kg)	PEC-Q	Result (mg/kg)	PEC-Q	Result (mg/kg)	PEC-Q
ARSENIC	33	11.9	0.361	7.6	0.230	7.9	0.239	3.3	0.100	5.1	0.155	7.6	0.230
CADMIUM	4.98	1.8 J	0.361	0.87 J	0.175	0.67 J	0.135	0.21 J	0.042	0.31 J	0.062	1.3	0.261
CHROMIUM	111	32.7	0.295	20.3	0.183	16	0.144	14	0.126	17.6	0.159	22.7	0.205
COPPER	149	87.8	**0.589**	35.3	0.237	30.7	0.206	15.9	0.107	18.2	0.122	72.7	0.488
LEAD	126	70.3 J	**0.558**	45.3 J	0.360	105 J	**0.833**	9.6 J	0.076	14.3 J	0.113	55.8	0.443
NICKEL	48.6	23.7 J	0.488	19 J	0.391	19.9 J	0.409	17.4 J	0.358	23.2 J	0.477	17.1	0.352
ZINC	459	129 J	0.281	73 J	0.159	73.1 J	0.159	37.3 J	0.081	47.3 J	0.103	82	0.179
MERCURY	1.06	0.24	0.226	0.2	0.189	0.16	0.151	0.024 J	0.023	0.019 J	0.018	0.44	0.415
Mean PEC-Q			0.42		0.25		0.30		0.13		0.17		0.31

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Table 3-19
PEC-Q for Metals - Otter Creek Confluence Sediment Samples
Duck and Otter Creeks Confluence Investigation
Toledo, Lucas County, Ohio

Field Sample ID		OC-27-01		OC-27-02		OC-27DP		OC-28		OC-28-01		OC-28-02		OC-28-03	
Sampling Date		11/3/2010		11/3/2010		11/3/2010		11/3/2010		11/3/2010		11/3/2010		11/3/2010	
Metals[1]	Consensus-Based PEC	Result (mg/kg)	PEC-Q	Result (mg/kg)	PEC-Q	Result (mg/kg)	PEC-Q	Result (mg/kg)	PEC-Q	Result (mg/kg)	PEC-Q	Result (mg/kg)	PEC-Q	Result (mg/kg)	PEC-Q
ARSENIC	33	11.4	0.345	7.5	0.227	9.1	0.276	8.5	0.258	6.9	0.209	3.9	0.118	3.6	0.109
CADMIUM	4.98	0.93 J	0.187	0.4 J	0.080	1.7 J	0.341	0.67	0.135	0.84 J	0.169	1	0.201	0.38 J	0.076
CHROMIUM	111	18.6	0.168	11.8	0.106	28.7	0.259	55.9	**0.504**	111	**1.000**	18.1	0.163	11.3	0.102
COPPER	149	41.8	0.281	16.2	0.109	77.6	**0.521**	44.7	0.300	57.7	0.387	11.6	0.078	15.7	0.105
LEAD	126	36.3 J	0.288	10.4 J	0.083	59.3 J	0.471	57.3	0.455	46	0.365	11	0.087	7.5	0.060
NICKEL	48.6	26 J	**0.535**	19.3 J	0.397	26 J	**0.535**	18.8	0.387	20.2	0.416	29.3	**0.603**	16.4	0.337
ZINC	459	87.6 J	0.191	43.9 J	0.096	123 J	0.268	94.7 J	0.206	109 J	0.237	89.6 J	0.195	60 J	0.131
MERCURY	1.06	0.17	0.160	0.03 J	0.028	0.21	0.198	0.17	0.160	0.23	0.217	0.038 J	0.036	0.017 J	0.016
Mean PEC-Q			0.28		0.16		0.38		0.32		0.40		0.21		0.13

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Table 3-19
PEC-Q for Metals - Otter Creek Confluence Sediment Samples
Duck and Otter Creeks Confluence Investigation
Toledo, Lucas County, Ohio

Field Sample ID		OC-29		OC-29-01		OC-29-02		OC-30		OC-30-01		OC-30-02		OC-30DP	
Sampling Date		11/4/2010		11/4/2010		11/4/2010		11/4/2010		11/4/2010		11/4/2010		11/4/2010	
Metals[1]	Consensus-Based PEC	Result (mg/kg)	PEC-Q	Result (mg/kg)	PEC-Q	Result (mg/kg)	PEC-Q	Result (mg/kg)	PEC-Q	Result (mg/kg)	PEC-Q	Result (mg/kg)	PEC-Q	Result (mg/kg)	PEC-Q
ARSENIC	33	8.9	0.270	8.5	0.258	6.9	0.209	7.9	0.239	7.8	0.236	6.7	0.203	10.2	0.309
CADMIUM	4.98	1.5	0.301	1	0.201	0.44 J	0.088	1.7	0.341	0.61 J	0.122	0.46 J	0.092	2.6	**0.522**
CHROMIUM	111	32.2	0.290	17.5	0.158	16	0.144	24.3	0.219	12.6	0.114	24.7	0.223	34.2	0.308
COPPER	149	55.8	0.374	29.7	0.199	19	0.128	39.9	0.268	20.2	0.136	20.9	0.140	69.1	0.464
LEAD	126	50	0.397	51.8	0.411	10.5	0.083	41.4	0.329	31.8	0.252	10.3	0.082	63.4	**0.503**
NICKEL	48.6	25.9	**0.533**	20.8	0.428	22.9	0.471	21.6	0.444	17.3	0.356	33.5	**0.689**	24.5	**0.504**
ZINC	459	124 J	0.270	88.7 J	0.193	50.7 J	0.110	111 J	0.242	64.4 J	0.140	52.8 J	0.115	168 J	0.366
MERCURY	1.06	0.28	0.264	0.13 J	0.123	0.022 J	0.021	0.15 J	0.142	0.063 J	0.059	0.014 J	0.013	0.23	0.217
Mean PEC-Q			0.35		0.26		0.18		0.30		0.19		0.22		0.43

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Table 3-19
PEC-Q for Metals - Otter Creek Confluence Sediment Samples
Duck and Otter Creeks Confluence Investigation
Toledo, Lucas County, Ohio

Field Sample ID		OC-31		OC-31-01		OC-31-02		OC-31DP		OC-32		OC-32-01		OC-32-02	
Sampling Date		11/4/2010		11/4/2010		11/4/2010		11/4/2010		11/4/2010		11/4/2010		11/4/2010	
Metals[1]	Consensus-Based PEC	Result (mg/kg)	PEC-Q	Result (mg/kg)	PEC-Q	Result (mg/kg)	PEC-Q	Result (mg/kg)	PEC-Q	Result (mg/kg)	PEC-Q	Result (mg/kg)	PEC-Q	Result (mg/kg)	PEC-Q
ARSENIC	33	8.3	0.252	6.1 J	0.185	7.4 J	0.224	5.6 J	0.170	10.3 J	0.312	6.4 J	0.194	3.5 J	0.106
CADMIUM	4.98	0.77 J	0.155	0.69 U	0	0.65 U	0	0.94 U	0	1.6	0.321	0.69 U	0	0.61 U	0
CHROMIUM	111	18.1	0.163	17.5	0.158	10	0.090	18.3	0.165	26.7	0.241	12.1	0.109	9.9	0.089
COPPER	149	23.3	0.156	23.7	0.159	13.9	0.093	23.8	0.160	38.2	0.256	16.4	0.110	12.9	0.087
LEAD	126	18.3	0.145	12.1	0.096	27.2	0.216	17.6	0.140	62.1 J	0.493	31.8	0.252	8.1	0.064
NICKEL	48.6	23.2	0.477	30.7	**0.632**	16.4	0.337	22	0.453	26.9	**0.553**	17.5	0.360	14.5	0.298
ZINC	459	81.6 J	0.178	55.5	0.121	52.6	0.115	86.7	0.189	154	0.336	56.1	0.122	32.1	0.070
MERCURY	1.06	0.059 J	0.056	0.14 U	0	0.13 U	0	0.19 U	0	0.17 U	0	0.14 U	0	0.13 J	0.123
Mean PEC-Q			0.22		0.23		0.18		0.21		0.36		0.19		0.12

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Table 3-19
PEC-Q for Metals - Otter Creek Confluence Sediment Samples
Duck and Otter Creeks Confluence Investigation
Toledo, Lucas County, Ohio

Field Sample ID / Sampling Date / Metals[1]	Consensus-Based PEC	OC-32DP 11/4/2010		OC-33 11/4/2010		OC-33-01 11/4/2010		OC-33-02 11/4/2010		OC-34-01 5/10/2011		OC-34-02 5/10/2011		OC-35-01 5/12/2011	
		Result (mg/kg)	PEC-Q	Result (mg/kg)	PEC-Q	Result (mg/kg)	PEC-Q	Result (mg/kg)	PEC-Q	Result (mg/kg)	PEC-Q	Result (mg/kg)	PEC-Q	Result (mg/kg)	PEC-Q
ARSENIC	33	10.4 J	0.315	6.2 J	0.188	7 J	0.212	8.2 J	0.248	16.1 J	0.488	17.1 J	**0.518**	6 J-	0.182
CADMIUM	4.98	1.2	0.241	1 U	0	0.79 U	0	0.65 U	0	0.39 J	0.078	0.9 J	0.181	1.9 J-	0.382
CHROMIUM	111	24.1	0.217	19.5	0.176	14.7	0.132	13.6	0.123	7.1	0.064	191	1.721	37.3 J-	0.336
COPPER	149	31.5	0.211	22.6	0.152	18.6	0.125	16.9	0.113	19.8	0.133	103	**0.691**	31.7 J-	0.213
LEAD	126	68	**0.540**	18.6	0.148	24	0.190	10	0.079	11	0.087	55.3	0.439	31.2 J-	0.248
NICKEL	48.6	25.9	**0.533**	21.7	0.447	18.8	0.387	20.2	0.416	17.7	0.364	17.7	0.364	26.6 J-	**0.547**
ZINC	459	133	0.290	95.6	0.208	70.1	0.153	44.5	0.097	39	0.085	71.2	0.155	105 J-	0.229
MERCURY	1.06	0.17 U	0	0.2 U	0	0.16 U	0	0.13 U	0	0.12 U	0.113	0.29 J+	0.274	0.37 J-	0.349
Mean PEC-Q			0.34		0.22		0.20		0.18		0.19		**0.58**		0.31

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Table 3-19
PEC-Q for Metals - Otter Creek Confluence Sediment Samples
Duck and Otter Creeks Confluence Investigation
Toledo, Lucas County, Ohio

Field Sample ID		OC-35-02		OC-36-01		OC-36-02		OC-38		OC-40-01		OC-40-02		OC-41-01	
Sampling Date		5/12/2011		5/10/2011		5/10/2011		5/11/2011		5/11/2011		5/11/2011		5/10/2011	
Metals[1]	Consensus-Based PEC	Result (mg/kg)	PEC-Q	Result (mg/kg)	PEC-Q	Result (mg/kg)	PEC-Q	Result (mg/kg)	PEC-Q	Result (mg/kg)	PEC-Q	Result (mg/kg)	PEC-Q	Result (mg/kg)	PEC-Q
ARSENIC	33	6.9 J-	0.209	8.6 J	0.261	9.2 J	0.279	8.4	0.255	8.5 J	0.258	9.3 J	0.282	37.4 J	**1.133**
CADMIUM	4.98	1.6 J-	0.321	0.47 J	0.094	0.38 J	0.076	0.66 U	0.133	0.51 J	0.102	0.51 J	0.102	0.9	0.181
CHROMIUM	111	45.1 J-	0.406	12.2	0.110	15.4	0.139	16.3	0.147	16	0.144	13	0.117	15.4	0.139
COPPER	149	38.8 J-	0.260	19.4	0.130	20.7	0.139	22.6	0.152	18.7	0.126	19.7	0.132	40.1	0.269
LEAD	126	39.6 J-	0.314	10.4	0.083	10.5	0.083	9.2	0.073	11.4	0.090	20.5	0.163	17.1	0.136
NICKEL	48.6	22.5 J-	0.463	18.7	0.385	26.2	**0.539**	28	**0.576**	19.3	0.397	21.4	0.440	66.9	**1.377**
ZINC	459	99.2 J-	0.216	65.3	0.142	46.7	0.102	53.6 J	0.117	75.4	0.164	74.8	0.163	139	0.303
MERCURY	1.06	0.38 J-	0.358	0.13 U	0.123	0.12 U	0.113	0.13 U	0.123	0.17 U	0.160	0.13 U	0.123	0.15 U	0.142
Mean PEC-Q			0.31		0.17		0.19		0.24		0.18		0.20		0.51

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Table 3-19
PEC-Q for Metals - Otter Creek Confluence Sediment Samples
Duck and Otter Creeks Confluence Investigation
Toledo, Lucas County, Ohio

Field Sample ID		OC-41-02		OC-42-01		OC-42-01-DP		OC-42-02		OC-42-02-DP		OC-44-01		OC-44-02	
Sampling Date		5/10/2011		5/11/2011		5/11/2011		5/11/2011		5/11/2011		5/10/2011		5/10/2011	
Metals[1]	Consensus-Based PEC	Result (mg/kg)	PEC-Q	Result (mg/kg)	PEC-Q	Result (mg/kg)	PEC-Q	Result (mg/kg)	PEC-Q	Result (mg/kg)	PEC-Q	Result (mg/kg)	PEC-Q	Result (mg/kg)	PEC-Q
ARSENIC	33	9.2 J	0.279	13.2 J	0.400	14 J	0.424	7.1	0.215	9.9	0.300	15.4 J	0.467	19.2 J	**0.582**
CADMIUM	4.98	0.39 J	0.078	1.9	0.382	1.6	0.321	0.64 U	0.129	0.67 U	0.135	0.93 J	0.187	1.6	0.321
CHROMIUM	111	18.3	0.165	53.5	0.482	160	**1.441**	18.5	0.167	18	0.162	223	**2.009**	55.6	**0.501**
COPPER	149	22.7	0.152	110	**0.738**	179	**1.201**	23.6	0.158	24.5	0.164	177	**1.188**	775	**5.201**
LEAD	126	10.7	0.085	72.3	**0.574**	60.9	0.483	16.3	0.129	38.1	0.302	104	**0.825**	1080	**8.571**
NICKEL	48.6	28.4	**0.584**	25.6	**0.527**	28.8	**0.593**	24.5	**0.504**	25.9	**0.533**	30.5	**0.628**	38.5	**0.792**
ZINC	459	57.4	0.125	146	0.318	190	0.414	105 J	0.229	78 J	0.170	137	0.298	213	0.464
MERCURY	1.06	0.13 U	0.123	0.31 J+	0.292	0.25 J+	0.236	0.13 U	0.123	0.13 U	0.123	0.25 J+	0.236	1.8 J+	**1.698**
Mean PEC-Q			0.21		0.49		**0.70**		0.26		0.29		**0.80**		**2.35**

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Table 3-19
PEC-Q for Metals - Otter Creek Confluence Sediment Samples
Duck and Otter Creeks Confluence Investigation
Toledo, Lucas County, Ohio

Field Sample ID		OC-45-01		OC-45-02		OC-46-01		OC-46-02		OC-47-01		OC-47-02		OC-47-03	
Sampling Date		5/10/2011		5/10/2011		5/12/2011		5/12/2011		5/12/2011		5/12/2011		5/12/2011	
Metals[1]	Consensus-Based PEC	Result (mg/kg)	PEC-Q	Result (mg/kg)	PEC-Q	Result (mg/kg)	PEC-Q	Result (mg/kg)	PEC-Q	Result (mg/kg)	PEC-Q	Result (mg/kg)	PEC-Q	Result (mg/kg)	PEC-Q
ARSENIC	33	11.5 J	0.348	20.2 J	**0.612**	4.1 J-	0.124	5.3 J-	0.161	3.6 J-	0.109	4.2 J-	0.127	4.6 J-	0.139
CADMIUM	4.98	2.1	0.422	1.9	0.382	1.2 U	0.241	1.1 J-	0.221	1 U	0.201	1 U	0.201	0.88 U	0.177
CHROMIUM	111	43.4	0.391	205	**1.847**	14.7 J-	0.132	28.5 J-	0.257	13.4 J-	0.121	16.6 J-	0.150	19 J-	0.171
COPPER	149	49.1	0.330	202	**1.356**	17.8 J-	0.119	23.4 J-	0.157	17.1 J-	0.115	20.9 J-	0.140	21.1 J-	0.142
LEAD	126	53.3	0.423	159	**1.262**	10.5 J-	0.083	18.9 J-	0.150	10.4 J-	0.083	11 J-	0.087	17.3 J-	0.137
NICKEL	48.6	27.3	**0.562**	28.2	**0.580**	16.5 J-	0.340	21.4 J-	0.440	15.6 J-	0.321	17.8 J-	0.366	21.4 J-	0.440
ZINC	459	132	0.288	143	0.312	60.6 J-	0.132	92.4 J-	0.201	60 J-	0.131	65.7 J-	0.143	130 J-	0.283
MERCURY	1.06	0.16 J+	0.151	0.46 J+	0.434	0.12 J-	0.113	0.19 J-	0.179	0.093 J-	0.088	0.13 J-	0.123	0.25 J-	0.236
Mean PEC-Q			0.39		**0.91**		0.20		0.23		0.18		0.20		0.25

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Table 3-19
PEC-Q for Metals - Otter Creek Confluence Sediment Samples
Duck and Otter Creeks Confluence Investigation
Toledo, Lucas County, Ohio

Field Sample ID		OC-47-04		OC-48-01		OC-48-02		OC-48-03		OC-48-04	
Sampling Date		5/12/2011		5/12/2011		5/12/2011		5/12/2011		5/12/2011	
Metals[1]	Consensus-Based PEC	Result (mg/kg)	PEC-Q	Result (mg/kg)	PEC-Q	Result (mg/kg)	PEC-Q	Result (mg/kg)	PEC-Q	Result (mg/kg)	PEC-Q
ARSENIC	33	5.7 J-	0.173	3.9 J-	0.118	4.6 J-	0.139	4.5 J-	0.136	5.3 J-	0.161
CADMIUM	4.98	1.6 J-	0.321	1.1 U	0.221	0.97 U	0.195	0.9 J-	0.181	1.9 J-	0.382
CHROMIUM	111	27.9 J-	0.251	12.9 J-	0.116	16 J-	0.144	20.3 J-	0.183	27.3 J-	0.246
COPPER	149	27.2 J-	0.183	15.6 J-	0.105	18.6 J-	0.125	20.6 J-	0.138	26 J-	0.174
LEAD	126	25.5 J-	0.202	9.2 J-	0.073	12 J-	0.095	24.6 J-	0.195	26.7 J-	0.212
NICKEL	48.6	22.8 J-	0.469	14.9 J-	0.307	18.4 J-	0.379	21 J-	0.432	24.2 J-	0.498
ZINC	459	89.4 J-	0.195	52.4 J-	0.114	68.1 J-	0.148	78.9 J-	0.172	93.2 J-	0.203
MERCURY	1.06	0.29 J-	0.274	0.18 J-	0.170	0.14 J-	0.132	0.17 J-	0.160	0.32 J-	0.302
Mean PEC-Q			0.26		0.18		0.20		0.21		0.27

Notes:
Bold result exceeds PEC-Q threshold of 0.5
ID = Identification
J = Estimated value; concentration below RL or exceeded RL, but one or more quality control parameters were outside control limits
J+ = Likely to have a high bias
J- = Likely to have a low bias
Mean PEC-Q = Sum(PEC-Q) / No. of inorganics positively detected
mg/kg = Milligram per kilogram
R = Data rejected because of quality control deficiencies
RL = Report limit
PEC = Probable effect concentration from Ingersoll and others 2000
PEC-Q = Result / PEC
U = Not detected above RL
1 Only arsenic, cadmium, chromium, copper, lead, nickel, and zinc were used to determine the metals PEC-Q.

Source:
Ingersoll, C.G., and others. 2000. “Prediction of Toxicity Using Consensus-based Freshwater Sediment Quality Guidelines.” U.S. Environmental Protection Agency (U.S. EPA) Great Lakes National Program Office (GLNPO). EPA-905/R-00/007.

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Table 3-20A
PEC-Q for Total PAHs - November 2010 Otter Creek Confluence Sediment Samples
Duck and Otter Creeks Confluence Investigation
Toledo, Lucas County, Ohio

Location ID		OC-26	OC-26	OC-26	OC-26	OC-26	OC-27	OC-27	OC-27	OC-27	OC-28	OC-28	OC-28	OC-28	OC-29	OC-29
Field Sample ID		**OC-26**	**OC-26-01**	**OC-26-01DP**	**OC-26-02**	**OC-26-02DP**	**OC-27**	**OC-27-01**	**OC-27-02**	**OC-27DP**	**OC-28**	**OC-28-01**	**OC-28-02**	**OC-28-03**	**OC-29**	**OC-29-01**
Sampling Date	**Consensus**	**11/3/2010**	**11/3/2010**	**11/3/2010**	**11/3/2010**	**11/3/2010**	**11/3/2010**	**11/3/2010**	**11/3/2010**	**11/3/2010**	**11/3/2010**	**11/3/2010**	**11/3/2010**	**11/3/2010**	**11/4/2010**	**11/4/2010**
TOC %	**PEC**	2.47	1.71	1.74	0.824	0.553	3.47	1.74	0.848	4.03	5.67	8.27	0.539	0.636	3.05	2.08
PAHs/(µg/kg)																
TOTAL 16 PPAHs (calculated by laboratory) [1]	22,800	40,000 J	NA	NA	NA	NA	35,000 J	NA	NA	29,000 J	14,000 J	NA	NA	NA	17,000 J	NA
TOC normalized Total PAH (PAH/%TOC)		16,194	NA	NA	NA	NA	10,086	NA	NA	7,196	2,469	NA	NA	NA	5,574	NA
PEC-Q (16 PPAHs) [1,2]		***0.71***	NA	NA	NA	NA	***0.44***	NA	NA	***0.32***	***0.11***	NA	NA	NA	***0.24***	NA
TOTAL PAH (calculated by laboratory)	22,800	280,000 J	NA	NA	NA	NA	230,000 J	NA	NA	210,000 J	62,000 J	NA	NA	NA	95,000 J	NA
TOC normalized Total PAH (PAH/%TOC)		113,360	NA	NA	NA	NA	66,282	NA	NA	52,109	10,935	NA	NA	NA	31,148	NA
PEC-Q (Total PAHs) [2]		***4.97***	NA	NA	NA	NA	***2.91***	NA	NA	***2.29***	***0.48***	NA	NA	NA	***1.37***	NA
Total Parent PAHs (Sum of detections x 1.7)	22,800	66,521	8,569.7	21,035.8	2,128.4	7,825.1	14,195	6,682.7	632.74	48,314	23,274.7	32,240.5	3,828.4	237.83	54,481.6	28,617.8
TOC normalized Total PAH (PAH/%TOC)		**26,932**	**5,012**	**12,090**	**2,583**	**14,150**	**4,091**	**3,841**	**746**	**11,989**	**4,105**	**3,898**	**7,103**	**374**	**17,863**	**13,759**
PEC-Q (Total Parent PAHs) [2]		***1.18***	***0.22***	***0.53***	***0.11***	***0.62***	***0.18***	***0.17***	***0.03***	***0.53***	***0.18***	***0.17***	***0.31***	***0.02***	***0.78***	***0.60***

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Table 3-20A
PEC-Q for Total PAHs - November 2010 Otter Creek Confluence Sediment Samples
Duck and Otter Creeks Confluence Investigation
Toledo, Lucas County, Ohio

Location ID		OC-29	OC-30	OC-30	OC-30	OC-30	OC-31	OC-31	OC-31	OC-31	OC-32	OC-32	OC-32	OC-32	OC-33	OC-33	OC-33
Field Sample ID		**OC-29-02**	**OC-30**	**OC-30-01**	**OC-30-02**	**OC-30DP**	**OC-31**	**OC-31-01**	**OC-31-02**	**OC-31DP**	**OC-32**	**OC-32-01**	**OC-32-02**	**OC-32DP**	**OC-33**	**OC-33-01**	**OC-33-02**
Sampling Date	**Consensus**	**11/4/2010**	**11/4/2010**	**11/4/2010**	**11/4/2010**	**11/4/2010**	**11/4/2010**	**11/4/2010**	**11/4/2010**	**11/4/2010**	**11/4/2010**	**11/4/2010**	**11/4/2010**	**11/4/2010**	**11/4/2010**	**11/4/2010**	**11/4/2010**
TOC %	**PEC**	0.93	2.39	1.41	0.51	2.27	1.77	0.528	1.1	1.9	3.67	1.29	0.425	2.14	1.87	1.66	0.458
PAHs/(µg/kg)																	
TOTAL 16 PPAHs (calculated by laboratory) [1]	22,800	NA	18,000 J	NA	NA	13,000 J	1,200 J	NA	NA	680 J	6,000 J	NA	NA	5,800 J	890 J	NA	NA
TOC normalized Total PAH (PAH/%TOC)		NA	7,531	NA	NA	5,727	678	NA	NA	358	1,635	NA	NA	2,710	476	NA	NA
PEC-Q (16 PPAHs) [1,2]		NA	***0.33***	NA	NA	***0.25***	***0.03***	NA	NA	***0.02***	***0.07***	NA	NA	***0.12***	***0.02***	NA	NA
TOTAL PAH (calculated by laboratory)	22,800	NA	110,000 J	NA	NA	65,000 J	3,400 J	NA	NA	2,100 J	26,000 J	NA	NA	23,000 J	2,300 J	NA	NA
TOC normalized Total PAH (PAH/%TOC)		NA	46,025	NA	NA	28,634	1,921	NA	NA	1,105	7,084	NA	NA	10,748	1,230	NA	NA
PEC-Q (Total PAHs) [2]		NA	***2.02***	NA	NA	***1.26***	***0.08***	NA	NA	***0.05***	***0.31***	NA	NA	***0.47***	***0.05***	NA	NA
Total Parent PAHs (Sum of detections x 1.7)	22,800	3,816.5	30,141	22,729	986	20,808	1,829.20	317.9	22,185	1,038.7	9,875.3	40,256	1,421.2	9,469	1,562.47	6,635.1	0 U
TOC normalized Total PAH (PAH/%TOC)		**4,104**	**12,611**	**16,120**	**1,933**	**9,167**	**1,033**	**602**	**20,168**	**547**	**2,691**	**31,206**	**3,344**	**4,425**	**836**	**3,997**	**0**
PEC-Q (Total Parent PAHs) [2]		***0.18***	***0.55***	***0.71***	***0.08***	***0.40***	***0.05***	***0.03***	***0.88***	***0.02***	***0.12***	***1.37***	***0.15***	***0.19***	***0.04***	***0.18***	***0.00***

Notes:
µg/kg - Microgram per kilogram
ID = Identification
J = Estimated value; concentration below RL or exceeded RL, but one or more quality control parameters were outside control limits
NA = Criterion or value not available
PAH = Polycyclic aromatic hydrocarbon
PEC = Probable effect concentration
PEC-Q = Probable effect concentration quotient
PPAH = Priority pollutant PAH
RL = Reporting limit
TOC = Total organic carbon
U = Not detected above RL

1 16 PPAHs include acenaphthene, acenaphthylene, anthracene, fluorene, naphthalene, phenanathrene, benzo(a)anthracene, benzo(a)pyrene, benzo(ghi)perylene, benzo(b)fluoranthene, benzo(k)fluoranthene, chrysene, dibenzo(ah)anthracene, indeno(1,2,3-cd)pyrene, fluoranthene, and pyrene.
2 For PAHs, the PEC-Q is normalized to 1% organic carbon by dividing the site concentration by the percent TOC.

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Table 3-20B
PEC-Q for Total PAHs - May 2011 Otter Creek Sediment Samples
Duck and Otter Creeks Confluence Investigation
Toledo, Lucas County, Ohio

Location ID		OC-34	OC-34	OC-35	OC-35	OC-36	OC-36	OC-38	OC-40	OC-40
Field Sample ID		OC-34-01	OC-34-02	OC-35-01	OC-35-02	OC-36-01	OC-36-02	OC-38	OC-40-01	OC-40-02
Depth Interval		0- 6	0- 29	0- 6	0- 24	0- 6	0- 15	0- 6	0- 6	0- 23
Sampling Date	Consensus PEC	5/10/2011	5/10/2011	5/12/2011	5/12/2011	5/10/2011	5/10/2011	5/11/2011	5/11/2011	5/11/2011
TOC %		1.27	2.1	5.35	2.75	3.94	1.06	2.09	1.44	0.855
Total Parent PAHs (Sum of detections x 1.7)/µg/kg										
MC SVOA(SIMS)	22,800	NA	NA	4,884.1	6,562	1,575.9	36.04	366.01	812.77	2,075.19
TOC normalized Total PAH (PAH/%TOC)		NA	NA	913	2,386	400	34	175	564	2,427
PEC-Q (SIMS PAHs) [1]		NA	NA	***0.04***	***0.10***	***0.02***	***0.001***	***0.01***	***0.02***	***0.11***
MC SVOA(LS)	22,800	3,043	35,955							
TOC normalized Total PAH (PAH/%TOC)		2,396	17,121							
PEC-Q (LS PAHs) [1]		***0.11***	***0.75***							

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Table 3-20B
PEC-Q for Total PAHs - May 2011 Otter Creek Sediment Samples
Duck and Otter Creeks Confluence Investigation
Toledo, Lucas County, Ohio

Location ID		OC-41	OC-41	OC-42	OC-42	OC-42	OC-42	OC-44	OC-44	OC-45	OC-45
Field Sample ID		OC-41-01	OC-41-02	OC-42-01	OC-42-01-DP	OC-42-02	OC-42-02-DP	OC-44-01	OC-44-02	OC-45-01	OC-45-02
Depth Interval	Consensus	0- 6	0- 23	0- 6	0- 6	0- 23	0- 23	0- 6	0- 27	0- 6	0- 25
Sampling Date	PEC	5/10/2011	5/10/2011	5/11/2011	5/11/2011	5/11/2011	5/11/2011	5/10/2011	5/10/2011	5/10/2011	5/10/2011
TOC %		1.01	1.19	4.53	4.96	1.68	0.971	7.24	10.2	3.64	4.41
Total Parent PAHs (Sum of detections x 1.7)/µg/kg											
MC SVOA(SIMS)	22,800	1,105.17	521.56	NA	NA	4508.06	4368.66	NA	NA	6045.2	NA
TOC normalized Total PAH (PAH/%TOC)		1,094	438	NA	NA	2,683	4,499	NA	NA	1,661	NA
PEC-Q (SIMS PAHs) [1]		***0.05***	***0.02***	NA	NA	***0.12***	***0.20***	NA	NA	***0.07***	NA
MC SVOA(LS)	22,800			59,466	138,414			106,063	290,360		108,205
TOC normalized Total PAH (PAH/%TOC)				13,127	27,906			14,650	28,467		24,536
PEC-Q (LS PAHs) [1]				***0.58***	***1.22***			***0.64***	***1.25***		***1.08***

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Table 3-20B
PEC-Q for Total PAHs - May 2011 Otter Creek Sediment Samples
Duck and Otter Creeks Confluence Investigation
Toledo, Lucas County, Ohio

Location ID		OC-46	OC-46	OC-47	OC-47	OC-47	OC-47	OC-48	OC-48	OC-48	OC-48
Field Sample ID		OC-46-01	OC-46-02	OC-47-01	OC-47-02	OC-47-03	OC-47-04	OC-48-01	OC-48-02	OC-48-03	OC-48-04
Depth Interval		0- 6	0- 24	0- 6	0- 24	24- 48	48- 62	0- 6	0- 24	24- 48	48- 60
Sampling Date	Consensus PEC	5/12/2011	5/12/2011	5/12/2011	5/12/2011	5/12/2011	5/12/2011	5/12/2011	5/12/2011	5/12/2011	5/12/2011
TOC %		2.25	2.26	2.07	2.13	1.78	2.17	2.01	2.05	2.21	2.3
Total Parent PAHs (Sum of detections x 1.7)/µg/kg											
MC SVOA(SIMS)	22,800	899.98	3,001.69	1,299.99	1,173.85	1,330.08	1,786.7	2,507.16	491.3	2,875.89	2,940.66
TOC normalized Total PAH (PAH/%TOC)		400	1,328	628	551	747	823	1,247	240	1,301	1,279
PEC-Q (SIMS PAHs) [1]		***0.02***	***0.06***	***0.03***	***0.02***	***0.03***	***0.04***	***0.05***	***0.01***	***0.06***	***0.06***
MC SVOA(LS)	22,800										
TOC normalized Total PAH (PAH/%TOC)											
PEC-Q (LS PAHs) [1]											

Notes:
µg/kg - Microgram per kilogram
ID = Identification
J = Estimated value; concentration below RL or exceeded RL, but one or more quality control parameters were outside control limits
NA = Criterion or value not available
PAH = Polycyclic aromatic hydrocarbon
PEC = Probable effect concentration

PEC-Q = Probable effect concentration quotient
PPAH = Priority pollutant PAH
RL = Reporting limit
SIMS = Secondary Ions Mass Spectrometry
SVOA = Semivolatile organic analysis
TOC = Total organic carbon
U = Not detected above RL
1 For PAHs, the PEC-Q is normalized to 1% organic carbon by dividing the site concentration by the percent TOC.

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Table 3-21
Derivation of AVS/SEM Metrics - Otter Creek Confluence Sediment Samples
Duck and Otter Creeks Confluence Investigation
Toledo, Lucas County, Ohio

Field Sample ID	OC-26	OC-27	OC-27-DP	OC-28	OC-29	OC-30	OC-30DP	OC-31	OC-31DP	OC-32	OC-32DP	OC-33	OC-34-01	OC-35-01
Sampling Date	**11/3/2010**	**11/3/2010**	**11/3/2010**	**11/3/2010**	**11/4/2010**	**11/4/2010**	**11/4/2010**	**11/4/2010**	**11/4/2010**	**11/4/2010**	**11/4/2010**	**11/4/2010**	**5/10/2011**	**5/12/2011**
AVS/SEM (µmole/g)														
SULFIDE-AV	6.49	7.29	36.8	5.62	28.2	6.09	4.17	2.62	1.53	1.81	3.35	1.57	0.232	7.84
CADMIUM, AVS	0.0081	0.0089	0.0104	0.0027	0.0081	0.0068	0.0055	0.0024	0.0024	0.0039	0.0046	0.0019	0.0006	0.0075
COPPER, AVS	0.032	0.0039 U	0.0039 U	0.0034	0.0041 U	0.0498	0.0527	0.0125	0.0299	0.015	0.0337	0.0224	0.019	0.0843
LEAD, AVS	0.103	0.098	0.113	0.047	0.082	0.074	0.085	0.019	0.02	0.055	0.071	0.016	0.0044	0.0988
NICKEL, AVS	0.045	0.049	0.056	0.032	0.05	0.039	0.039	0.026	0.025	0.028	0.03	0.022	0.0066	0.0977
SILVER, AVS	0.0019 U	0.0023 U	0.0023 U	0.0017 U	0.0024 U	0.0018 U	0.0022 U	0.0025 U	0.0019 U	0.0022 U	0.002 U	0.0022 U	0.0011 U	0.0025 U
ZINC, AVS	0.503	0.618	0.66	0.362	0.52	0.448	0.41	0.189	0.177	0.316	0.368	0.285	0.0483	0.8072
Sum(SEM), µmol/g	0.691	0.774	0.839	0.447	0.660	0.618	0.592	0.249	0.254	0.418	0.507	0.347	0.079	1.096
Ratio of Sum(SEM)/AVS (s.u.)	0.1065	0.1062	0.0228	0.0796	0.0234	0.1014	0.1420	0.0950	0.1662	0.2309	0.1514	0.2212	0.3401	0.1397
SumSEM - AVS (µmol/g)	-5.80	-6.52	-35.96	-5.17	-27.54	-5.47	-3.58	-2.37	-1.28	-1.39	-2.84	-1.22	-0.15	-6.74
Total organic carbon (%)	2.47	3.47	3.47	5.67	3.05	2.39	2.27	1.77	1.9	3.67	2.14	1.87	1.27	5.35
Total organic carbon (g/g)	0.0247	0.0347	0.0347	0.0567	0.0305	0.0239	0.0227	0.0177	0.019	0.0367	0.0214	0.0187	0.0127	0.0535
(Sum SEM - AVS)/foc (µmols/g_{oc})	-235	-188	-1036	-91	-903	-229	-158	-134	-67	-38	-133	-65	-12	-126

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Table 3-21
Derivation of AVS/SEM Metrics - Otter Creek Confluence Sediment Samples
Duck and Otter Creeks Confluence Investigation
Toledo, Lucas County, Ohio

Field Sample ID	OC-36-01	OC-38	OC-40-01	OC-41-01	OC-42-01	OC-42-01-DP	OC-44-01	OC-45-01	OC-46-01
Sampling Date	5/10/2011	5/11/2011	5/11/2011	5/10/2011	5/11/2011	5/11/2011	5/10/2011	5/10/2011	5/12/2011
AVS/SEM (µmole/g)									
SULFIDE-AV	0.489	0.005 U	0.059	0.006 U	7.6	3.4	7.7	6.1	2.15
CADMIUM, AVS	0.0009	0.0004 J	0.0007	0.0009	0.0083	0.0062	0.0033	0.0081	0.0022
COPPER, AVS	0.0431	0.0434	0.0232	0.0426	0.1044	0.2356	0.1713	0.0649	0.0252
LEAD, AVS	0.0189	0.0091	0.008	0.0141	0.1536	0.1066	0.1524	0.1221	0.0203
NICKEL, AVS	0.0238	0.0296	0.0152	0.0219	0.0729	0.0771	0.0801	0.0824	0.0346
SILVER, AVS	0.0013 U	0.0011 U	0.0014 U	0.0012 U	0.0023 U	0.0023 U	0.0023 U	0.0023 U	0.0022 U
ZINC, AVS	0.1222	0.0442	0.0738	0.0934	0.798	0.7397	0.71	0.6934	0.2144
Sum(SEM), µmol/g	0.209	0.127	0.121	0.173	1.137	1.165	1.117	0.971	0.297
Ratio of Sum(SEM)/AVS (s.u.)	0.4272	0	2.0492	0	0.1496	0.3427	0.1451	0.1592	0.1380
SumSEM - AVS (µmol/g)	-0.28	0.13	0.06	0.17	-6.46	-2.23	-6.58	-5.13	-1.85
Total organic carbon (%)	3.94	2.09	1.44	1.01	4.53	4.96	7.24	3.64	2.25
Total organic carbon (g/g)	0.0394	0.0209	0.0144	0.0101	0.0453	0.0496	0.0724	0.0364	0.0225
(Sum SEM - AVS)/foc (µmols/g_{oc})	-7	6	4	17	-143	-45	-91	-141	-82

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Table 3-21
Derivation of AVS/SEM Metrics - Otter Creek Confluence Sediment Samples
Duck and Otter Creeks Confluence Investigation
Toledo, Lucas County, Ohio

Field Sample ID	OC-47-01	OC-48-01
Sampling Date	5/12/2011	5/12/2011
AVS/SEM (µmole/g)		
SULFIDE-AV	0.42	3.2
CADMIUM, AVS	0.0026	0.0039
COPPER, AVS	0.0873	0.1117
LEAD, AVS	0.0271	0.0415
NICKEL, AVS	0.0414	0.0706
SILVER, AVS	0.0026 U	0.0029 U
ZINC, AVS	0.2715	0.4216
Sum(SEM), µmol/g	0.430	0.649
Ratio of Sum(SEM)/AVS (s.u.)	1.0236	0.2029
SumSEM - AVS (µmol/g)	0.01	-2.55
Total organic carbon (%)	2.07	2.01
Total organic carbon (g/g)	0.0207	0.0201
(Sum SEM - AVS)/foc (µmols/g_{oc})	0.5	-127

Notes:
µmole/g = Micromole per gram
AVS = Acid volatile sulfide
foc = Fraction organic carbon
g/g = Gram per gram
goc = gram organic carbon
ID = Identification
J = Estimated value
RL = Reporting limit
SEM = Simultaneously extracted metals
s.u. = Standard unit
TOC = Total organic carbon
U = Not detected above RL
If SEM/AVS ratio < 1, the sediments are not toxic.
If AVS ≥ SEM (cadmium, copper, lead, nickel, silver, and zinc/2), then no biological effects from metals in sediment.

X(µg/mol) = X mg/kg / molecular weight
Molecular weights: sulfur, 32.06; nickel, 58.7; zinc, 65.4; cadmium, 112; lead, 207; copper, 63.5; silver, 108
Any sediment in which (SEM-AVS)/foc < 130 µmole/goc should pose low risk of adverse biological effects from cadmium copper, lead, nickel, and zinc.
Any sediment in which 130 µmole/goc < (SEM-AVS) /foc < 3,000 µmole/goc may have adverse biological effects from cadmium copper, lead, nickel, and zinc.
Any sediment in which (SEM-AVS)/foc > 3,000 µmole/goc may have adverse biological effects from cadmium copper, lead, nickel, and zinc.
Any sediment with AVS > 0.0 will not cause adverse biological effects from chromium or silver.
Source:
U.S. Environmental Protection Agency (U.S. EPA). 2005. "Procedures for the Derivation of Equilibrium Partitioning Sediment Benchmarks (ESBs) for the Protection of Benthic Organisms: Metal Mixtures (Cadmium, Copper, Lead, Nickel, Silver, and Zinc)." EPA/600/R-02/011. January.

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Table 3-22A
Derivation of Total PAH ESB - November 2010 Otter Creek Confluence Sediment Samples
Duck and Otter Creeks Confluence Investigation
Toledo, Lucas County, Ohio

			Location ID	**OC-26**				**OC-27**				
			Field Sample ID	**OC-26**				**OC-27**				
			Sampling Date	**11/3/2010**				**11/3/2010**				
	Coc, PAHi, FCVi[1] (µg/goc)	**Coc, PAHi, Maxi[1] (µg/goc)**	**Conc µg/kg Dry wt**	**Conc µg/g**	**Coc µg/g Oc**	**Final Coc[2] µg/g Oc**	**ESBTU FCVi**	**Conc µg/kg Dry wt**	**Conc µg/g**	**Coc µg/g Oc**	**Final Coc[2] µg/g Oc**	**ESBTU FCVi**
TOC (%)			2.47					3.47				
Fraction organic carbon			0.0247					0.0347				
Chemical Name												
C2-FLUORANTHENES/PYRENES	NA	NA	9,100 J	9.1	368.421	368.4210526	0	10,000 J	10	288.184	288.184438	0
NAPHTHALENE	385	61,700	1,600 U	0	0.000	0.00	0.0000	150 U	0	0.000	0.00	0.0000
C1-NAPHTHALENES	444	--	1,300 J	1.3	52.632	52.63	0.1185	910 J	0.91	26.225	26.22	0.0591
1-METHYLNAPHTHALENE	446	165,700	470 J	0.47	19.028	19.03	0.0427	230 J	0.23	6.628	6.63	0.0149
2-METHYLNAPHTHALENE	447	154,800	1,600 U	0	0.000	0.00	0.0000	110 J	0.11	3.170	3.17	0.0071
ACENAPHTHYLENE	452	24,000	1,600 U	0	0.000	0.00	0.0000	150 U	0	0.000	0.00	0.0000
ACENAPHTHENE	491	33,400	410 J	0.41	16.599	16.60	0.0338	110 J	0.11	3.170	3.17	0.0065
C2-NAPHTHALENES	510	--	9,800 J	9.8	396.761	396.76	0.7780	3,200 J	3.2	92.219	92.22	0.1808
FLUORENE	538	26,000	1,100 J	1.1	44.534	44.53	0.0828	41 J	0.041	1.182	1.18	0.0022
C3-NAPHTHALENES	581	--	40,000 J	40	1619.433	1619.43	2.7873	20,000 J	20	576.369	576.37	0.9920
ANTHRACENE	594	1,300	1,800	1.8	72.874	72.87	0.1227	380	0.38	10.951	10.95	0.0184
PHENANTHRENE	596	34,300	4,200	4.2	170.040	170.04	0.2853	99 J	0.099	2.853	2.85	0.0048
C1-FLUORENES	611	--	6,900 J	6.9	279.352	279.35	0.4572	4,900 J	4.9	141.210	141.21	0.2311
C4-NAPHTHALENES	657	--	31,000 J	31	1255.061	1255.06	1.9103	29,000 J	29	835.735	835.73	1.2720
C1-PHENANTHRENES/ANTHRACENES	670	--	15,000 J	15	607.287	607.29	0.9064	5,500 J	5.5	158.501	158.50	0.2366
C2-FLUORENES	686	--	9,400 J	9.4	380.567	380.57	0.5548	9,900 J	9.9	285.303	285.30	0.4159
PYRENE	697	9,090	5,100	5.1	206.478	206.48	0.2962	1,200	1.2	34.582	34.58	0.0496
FLUORANTHENE	707	23,870	2,400	2.4	97.166	97.17	0.1374	390	0.39	11.239	11.24	0.0159
C2-PHENANTHRENES/ANTHRACENES	746	--	22,000 J	22	890.688	890.69	1.1940	18,000 J	18	518.732	518.73	0.6954
C3-FLUORENES	769	--	16,000 J	16	647.773	647.77	0.8424	11,000 J	11	317.003	317.00	0.4122
C1-FLUORANTHENES/PYRENES	770	--	8,400 J	8.4	340.081	340.08	0.4417	9,200 J	9.2	265.130	265.13	0.3443
C3-PHENANTHRENES/ANTHRACENES	829	--	17,000 J	17	688.259	688.26	0.8302	20,000 J	20	576.369	576.37	0.6953
BENZO[A]ANTHRACENE	841	4,153	5,000	5	202.429	202.43	0.2407	1,300	1.3	37.464	37.46	0.0445
CHRYSENE	844	826	6,700	6.7	271.255	271.26	0.3214	2,000	2	57.637	57.64	0.0683
C4-PHENANTHRENES/ANTHRACENES	913	--	12,000 J	12	485.830	485.83	0.5321	10,000 J	10	288.184	288.18	0.3156
C1-CHRYSENES	929	--	14,000 J	14	566.802	566.80	0.6101	15,000 J	15	432.277	432.28	0.4653
C3-FLUORANTHENES/PYRENES	949	--	7,300 J	7.3	295.547	295.55	0.3114	7,700 J	7.7	221.902	221.90	0.2338
BENZO[A]PYRENE	965	3,840	3,600	3.6	145.749	145.75	0.1510	810	0.81	23.343	23.34	0.0242
BENZO[E]PYRENE	967	4,300	5,300	5.3	214.575	214.57	0.2219	6,600	6.6	190.202	190.20	0.1967
PERYLENE	967	431	580 J	0.58	23.482	23.48	0.0243	530 J	0.53	15.274	15.27	0.0158
BENZO[B]FLUORANTHENE	979	2,169	3,600	3.6	145.749	145.75	0.1489	730	0.73	21.037	21.04	0.0215
BENZO[K]FLUORANTHENE	981	1,220	620 J	0.62	25.101	25.10	0.0256	100 J	0.1	2.882	2.88	0.0029
C2-CHRYSENES	1,008	--	9,800 J	9.8	396.761	396.76	0.3936	10,000 J	10	288.184	288.18	0.2859
BENZO[G,H,I]PERYLENE	1,095	648	2,000	2	80.972	80.97	0.0739	400	0.4	11.527	11.53	0.0105
C3-CHRYSENES	1,112	--	3,500 J	3.5	141.700	141.70	0.1274	4,100 J	4.1	118.156	118.16	0.1063
INDENO[1,2,3-CD]PYRENE	1,115	--	900 J	0.9	36.437	36.44	0.0327	320	0.32	9.222	9.22	0.0083
DIBENZ(A,H)ANTHRACENE	1,123	2,389	1,700	1.7	68.826	68.83	0.0613	360	0.36	10.375	10.37	0.0092
C4-CHRYSENES	1,214	--	1,600 U	0	0.000	0.00	0.0000	2,100 U	0	0.000	0.00	0.0000
Sum Total of ESBTU FCVi[3]							**15.0980**					**7.4630**

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Table 3-22A
Derivation of Total PAH ESB - November 2010 Otter Creek Confluence Sediment Samples
Duck and Otter Creeks Confluence Investigation
Toledo, Lucas County, Ohio

			Location ID	**OC-27**				**OC-28**				
			Field Sample ID	**OC-27DP**				**OC-28**				
			Sample Date	**11/3/2010**				**11/3/2010**				
	Coc, PAHi, FCVi[a] (µg/goc)	**Coc, PAHi, Maxi[a] (µg/goc)**	**Conc µg/kg Dry wt**	**Conc µg/g**	**Coc µg/g Oc**	**Final Coc[b] µg/g Oc**	**ESBTU FCVi**	**Conc µg/kg Dry wt**	**Conc µg/g**	**Coc µg/g Oc**	**Final Coc[b] µg/g Oc**	**ESBTU FCVi**
TOTAL ORGANIC CARBON (%)			3.47					5.67				
Fraction organic carbon			0.0347					0.0567				
Chemical Name												
C2-FLUORANTHENES/PYRENES	NA	NA	8,000 J	8	230.548	230.5475504	0	2,900 J	2.9	51.146	51.14638448	0
NAPHTHALENE	385	61,700	1,700 U	0	0.000	0.00	0.0000	270	0	0.000	0.00	0.0000
C1-NAPHTHALENES	444	--	710 J	0.71	20.461	20.46	0.0461	860 J	0.86	15.168	15.17	0.0342
1-METHYLNAPHTHALENE	446	165,700	180 J	0.18	5.187	5.19	0.0116	360	0.36	6.349	6.35	0.0142
2-METHYLNAPHTHALENE	447	154,800	1,700 U	0	0.000	0.00	0.0000	510	0.51	8.995	8.99	0.0201
ACENAPHTHYLENE	452	24,000	1,700 U	0	0.000	0.00	0.0000	54 U	0	0.000	0.00	0.0000
ACENAPHTHENE	491	33,400	1,700 U	0	0.000	0.00	0.0000	71	0.071	1.252	1.25	0.0026
C2-NAPHTHALENES	510	--	2,400 J	2.4	69.164	69.16	0.1356	1,800 J	1.8	31.746	31.75	0.0622
FLUORENE	538	26,000	1,700 U	0	0.000	0.00	0.0000	130	0.13	2.293	2.29	0.0043
C3-NAPHTHALENES	581	--	17,000 J	17	489.914	489.91	0.8432	3,300 J	3.3	58.201	58.20	0.1002
ANTHRACENE	594	1,300	1,300 J	1.3	37.464	37.46	0.0631	210	0.21	3.704	3.70	0.0062
PHENANTHRENE	596	34,300	950 J	0.95	27.378	27.38	0.0459	940	0.94	16.578	16.58	0.0278
C1-FLUORENES	611	--	5,400 J	5.4	155.620	155.62	0.2547	690 J	0.69	12.169	12.17	0.0199
C4-NAPHTHALENES	657	--	27,000 J	27	778.098	778.10	1.1843	3,200 J	3.2	56.437	56.44	0.0859
C1-PHENANTHRENES/ANTHRACENES	670	--	7,200 J	7.2	207.493	207.49	0.3097	1,900 J	1.9	33.510	33.51	0.0500
C2-FLUORENES	686	--	9,800 J	9.8	282.421	282.42	0.4117	1,300 J	1.3	22.928	22.93	0.0334
PYRENE	697	9,090	3,800	3.8	109.510	109.51	0.1571	2,000	2	35.273	35.27	0.0506
FLUORANTHENE	707	23,870	1,700	1.7	48.991	48.99	0.0693	870	0.87	15.344	15.34	0.0217
C2-PHENANTHRENES/ANTHRACENES	746	--	16,000 J	16	461.095	461.10	0.6181	3,600 J	3.6	63.492	63.49	0.0851
C3-FLUORENES	769	--	15,000 J	15	432.277	432.28	0.5621	1,800 J	1.8	31.746	31.75	0.0413
C1-FLUORANTHENES/PYRENES	770	--	7,100 J	7.1	204.611	204.61	0.2657	2,600 J	2.6	45.855	45.86	0.0596
C3-PHENANTHRENES/ANTHRACENES	829	--	17,000 J	17	489.914	489.91	0.5910	3,800 J	3.8	67.019	67.02	0.0808
BENZO[A]ANTHRACENE	841	4,153	4,200	4.2	121.037	121.04	0.1439	1,500	1.5	26.455	26.46	0.0315
CHRYSENE	844	826	6,400	6.4	184.438	184.44	0.2185	2,600	2.6	45.855	45.86	0.0543
C4-PHENANTHRENES/ANTHRACENES	913	--	8,900 J	8.9	256.484	256.48	0.2809	3,300 J	3.3	58.201	58.20	0.0637
C1-CHRYSENES	929	--	13,000 J	13	374.640	374.64	0.4033	4,000 J	4	70.547	70.55	0.0759
C3-FLUORANTHENES/PYRENES	949	--	8,300 J	8.3	239.193	239.19	0.2520	2,300 J	2.3	40.564	40.56	0.0427
BENZO[A]PYRENE	965	3,840	3,100	3.1	89.337	89.34	0.0926	1,200	1.2	21.164	21.16	0.0219
BENZO[E]PYRENE	967	4,300	4,900	4.9	141.210	141.21	0.1460	2,500	2.5	44.092	44.09	0.0456
PERYLENE	967	431	360 J	0.36	10.375	10.37	0.0107	270	0.27	4.762	4.76	0.0049
BENZO[B]FLUORANTHENE	979	2,169	2,300	2.3	66.282	66.28	0.0677	1,500	1.5	26.455	26.46	0.0270
BENZO[K]FLUORANTHENE	981	1,220	460 J	0.46	13.256	13.26	0.0135	280	0.28	4.938	4.94	0.0050
C2-CHRYSENES	1,008	--	11,000 J	11	317.003	317.00	0.3145	3,100 J	3.1	54.674	54.67	0.0542
BENZO[G,H,I]PERYLENE	1,095	648	1,800	1.8	51.873	51.87	0.0474	690	0.69	12.169	12.17	0.0111
C3-CHRYSENES	1,112	--	3,800 J	3.8	109.510	109.51	0.0985	1,500 J	1.5	26.455	26.46	0.0238
INDENO[1,2,3-CD]PYRENE	1,115	--	810 J	0.81	23.343	23.34	0.0209	470	0.47	8.289	8.29	0.0074
DIBENZ(A,H)ANTHRACENE	1,123	2,389	1,600 J	1.6	46.110	46.11	0.0411	450	0.45	7.937	7.94	0.0071
C4-CHRYSENES	1,214	--	680 J	0.68	19.597	19.60	0.0161	700 J	0	0.000	0.00	0.0000
Sum Total of ESBTU FCVi[3]							**7.7370**					**1.2765**

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Table 3-22A
Derivation of Total PAH ESB - November 2010 Otter Creek Confluence Sediment Samples
Duck and Otter Creeks Confluence Investigation
Toledo, Lucas County, Ohio

			Location ID	**OC-29**				**OC-30**				
			Field Sample ID	**OC-29**				**OC-30**				
			Sample Date	**11/4/2010**				**11/4/2010**				
	Coc, PAHi, FCVi[a] (µg/goc)	**Coc, PAHi, Maxi[a] (µg/goc)**	**Conc µg/kg Dry wt**	**Conc µg/g**	**Coc µg/g Oc**	**Final Coc[b] µg/g Oc**	**ESBTU FCVi**	**Conc µg/kg Dry wt**	**Conc µg/g**	**Coc µg/g Oc**	**Final Coc[b] µg/g Oc**	**ESBTU FCVi**
TOTAL ORGANIC CARBON (%)			3.05					2.39				
Fraction organic carbon			0.0305					0.0239				
Chemical Name												
C2-FLUORANTHENES/PYRENES	NA	NA	4,300 J	4.3	140.984	140.9836066	0	3,900 J	3.9	163.180	163.1799163	0
NAPHTHALENE	385	61,700	310	0.31	10.164	10.16	0.0264	450 U	0	0.000	0.00	0.0000
C1-NAPHTHALENES	444	--	390 J	0.39	12.787	12.79	0.0288	290 J	0.29	12.134	12.13	0.0273
1-METHYLNAPHTHALENE	446	165,700	150 J	0.15	4.918	4.92	0.0110	75 J	0.075	3.138	3.14	0.0070
2-METHYLNAPHTHALENE	447	154,800	390	0.39	12.787	12.79	0.0286	450 U	0	0.000	0.00	0.0000
ACENAPHTHYLENE	452	24,000	68 J	0.068	2.230	2.23	0.0049	450 U	0	0.000	0.00	0.0000
ACENAPHTHENE	491	33,400	260	0.26	8.525	8.52	0.0174	130 J	0.13	5.439	5.44	0.0111
C2-NAPHTHALENES	510	--	1,200 J	1.2	39.344	39.34	0.0771	1,300 J	1.3	54.393	54.39	0.1067
FLUORENE	538	26,000	180	0.18	5.902	5.90	0.0110	420 J	0.42	17.573	17.57	0.0327
C3-NAPHTHALENES	581	--	5,900 J	5.9	193.443	193.44	0.3329	11,000 J	11	460.251	460.25	0.7922
ANTHRACENE	594	1,300	1,100	1.1	36.066	36.07	0.0607	610	0.61	25.523	25.52	0.0430
PHENANTHRENE	596	34,300	450	0.45	14.754	14.75	0.0248	940	0.94	39.331	39.33	0.0660
C1-FLUORENES	611	--	1,700 J	1.7	55.738	55.74	0.0912	2,700 J	2.7	112.971	112.97	0.1849
C4-NAPHTHALENES	657	--	8,200 J	8.2	268.852	268.85	0.4092	11,000 J	11	460.251	460.25	0.7005
C1-PHENANTHRENES/ANTHRACENES	670	--	3,200 J	3.2	104.918	104.92	0.1566	5,500 J	5.5	230.126	230.13	0.3435
C2-FLUORENES	686	--	3,600 J	3.6	118.033	118.03	0.1721	4,100 J	4.1	171.548	171.55	0.2501
PYRENE	697	9,090	4,400	4.4	144.262	144.26	0.2070	2,700	2.7	112.971	112.97	0.1621
FLUORANTHENE	707	23,870	1,400	1.4	45.902	45.90	0.0649	1,300	1.3	54.393	54.39	0.0769
C2-PHENANTHRENES/ANTHRACENES	746	--	7,200 J	7.2	236.066	236.07	0.3164	9,100 J	9.1	380.753	380.75	0.5104
C3-FLUORENES	769	--	5,800 J	5.8	190.164	190.16	0.2473	5,200 J	5.2	217.573	217.57	0.2829
C1-FLUORANTHENES/PYRENES	770	--	4,000 J	4	131.148	131.15	0.1703	4,200 J	4.2	175.732	175.73	0.2282
C3-PHENANTHRENES/ANTHRACENES	829	--	7,100 J	7.1	232.787	232.79	0.2808	7,000 J	7	292.887	292.89	0.3533
BENZO[A]ANTHRACENE	841	4,153	5,100	5.1	167.213	167.21	0.1988	2,200	2.2	92.050	92.05	0.1095
CHRYSENE	844	826	8,100	8.1	265.574	265.57	0.3147	3,400	3.4	142.259	142.26	0.1686
C4-PHENANTHRENES/ANTHRACENES	913	--	2,900 J	2.9	95.082	95.08	0.1041	3,800 J	3.8	158.996	159.00	0.1741
C1-CHRYSENES	929	--	7,300 J	7.3	239.344	239.34	0.2576	7,000 J	7	292.887	292.89	0.3153
C3-FLUORANTHENES/PYRENES	949	--	4,400 J	4.4	144.262	144.26	0.1520	3,700 J	3.7	154.812	154.81	0.1631
BENZO[A]PYRENE	965	3,840	3,000	3	98.361	98.36	0.1019	1,700	1.7	71.130	71.13	0.0737
BENZO[E]PYRENE	967	4,300	2,600	2.6	85.246	85.25	0.0882	3,100	3.1	129.707	129.71	0.1341
PERYLENE	967	431	250 J	0.25	8.197	8.20	0.0085	240 J	0.24	10.042	10.04	0.0104
BENZO[B]FLUORANTHENE	979	2,169	3,000	3	98.361	98.36	0.1005	1,900	1.9	79.498	79.50	0.0812
BENZO[K]FLUORANTHENE	981	1,220	490	0.49	16.066	16.07	0.0164	430 J	0.43	17.992	17.99	0.0183
C2-CHRYSENES	1,008	--	6,400 J	6.4	209.836	209.84	0.2082	4,700 J	4.7	196.653	196.65	0.1951
BENZO[G,H,I]PERYLENE	1,095	648	1,500	1.5	49.180	49.18	0.0449	830	0.83	34.728	34.73	0.0317
C3-CHRYSENES	1,112	--	2,100 J	2.1	68.852	68.85	0.0619	1,600 J	1.6	66.946	66.95	0.0602
INDENO[1,2,3-CD]PYRENE	1,115	--	1,100	1.1	36.066	36.07	0.0323	390 J	0.39	16.318	16.32	0.0146
DIBENZ(A,H)ANTHRACENE	1,123	2,389	1,200	1.2	39.344	39.34	0.0350	780	0.78	32.636	32.64	0.0291
C4-CHRYSENES	1,214	--	580 U	0	0.000	0.00	0.0000	210 J	0.21	8.787	8.79	0.0072
Sum Total of ESBTU FCVi[3]							**4.4646**					**5.7650**

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Table 3-22A
Derivation of Total PAH ESB - November 2010 Otter Creek Confluence Sediment Samples
Duck and Otter Creeks Confluence Investigation
Toledo, Lucas County, Ohio

			Location ID	**OC-30**				**OC-31**				
			Field Sample ID	**OC-30DP**				**OC-31**				
			Sample Date	**11/4/2010**				**11/4/2010**				
	Coc, PAHi, FCVi[a] (µg/goc)	**Coc, PAHi, Maxi[a] (µg/goc)**	**Conc µg/kg Dry wt**	**Conc µg/g**	**Coc µg/g Oc**	**Final Coc[b] µg/g Oc**	**ESBTU FCVi**	**Conc µg/kg Dry wt**	**Conc µg/g**	**Coc µg/g Oc**	**Final Coc[b] µg/g Oc**	**ESBTU FCVi**
TOTAL ORGANIC CARBON (%)			2.27					1.77				
Fraction organic carbon			0.0227					0.0177				
Chemical Name												
C2-FLUORANTHENES/PYRENES	NA	NA	2,600 J	2.6	114.537	114.5374449	0	110 J	0.11	6.215	6.214689266	0
NAPHTHALENE	385	61,700	350 U	0	0.000	0.00	0.0000	86 U	0	0.000	0.00	0.0000
C1-NAPHTHALENES	444	--	170 J	0.17	7.489	7.49	0.0169	77 J	0.077	4.350	4.35	0.0098
1-METHYLNAPHTHALENE	446	165,700	51 J	0.051	2.247	2.25	0.0050	29 J	0.029	1.638	1.64	0.0037
2-METHYLNAPHTHALENE	447	154,800	350 U	0	0.000	0.00	0.0000	86 U	0	0.000	0.00	0.0000
ACENAPHTHYLENE	452	24,000	350 U	0	0.000	0.00	0.0000	86 U	0	0.000	0.00	0.0000
ACENAPHTHENE	491	33,400	350 U	0	0.000	0.00	0.0000	86 U	0	0.000	0.00	0.0000
C2-NAPHTHALENES	510	--	740 J	0.74	32.599	32.60	0.0639	200 J	0.2	11.299	11.30	0.0222
FLUORENE	538	26,000	180 J	0.18	7.930	7.93	0.0147	86 U	0	0.000	0.00	0.0000
C3-NAPHTHALENES	581	--	5,400 J	5.4	237.885	237.89	0.4094	250 J	0.25	14.124	14.12	0.0243
ANTHRACENE	594	1,300	370	0.37	16.300	16.30	0.0274	27 J	0.027	1.525	1.53	0.0026
PHENANTHRENE	596	34,300	670	0.67	29.515	29.52	0.0495	88	0.088	4.972	4.97	0.0083
C1-FLUORENES	611	--	1,200 J	1.2	52.863	52.86	0.0865	66 J	0.066	3.729	3.73	0.0061
C4-NAPHTHALENES	657	--	5,400 J	5.4	237.885	237.89	0.3621	180 J	0.18	10.169	10.17	0.0155
C1-PHENANTHRENES/ANTHRACENES	670	--	2,600 J	2.6	114.537	114.54	0.1710	100 J	0.1	5.650	5.65	0.0084
C2-FLUORENES	686	--	2,000 J	2	88.106	88.11	0.1284	67 J	0.067	3.785	3.79	0.0055
PYRENE	697	9,090	1,600	1.6	70.485	70.48	0.1011	150	0.15	8.475	8.47	0.0122
FLUORANTHENE	707	23,870	700	0.7	30.837	30.84	0.0436	160	0.16	9.040	9.04	0.0128
C2-PHENANTHRENES/ANTHRACENES	746	--	5,300 J	5.3	233.480	233.48	0.3130	160 J	0.16	9.040	9.04	0.0121
C3-FLUORENES	769	--	3,500 J	3.5	154.185	154.19	0.2005	87 J	0.087	4.915	4.92	0.0064
C1-FLUORANTHENES/PYRENES	770	--	2,600 J	2.6	114.537	114.54	0.1487	150 J	0.15	8.475	8.47	0.0110
C3-PHENANTHRENES/ANTHRACENES	829	--	3,500 J	3.5	154.185	154.19	0.1860	120 J	0.12	6.780	6.78	0.0082
BENZO[A]ANTHRACENE	841	4,153	1,600	1.6	70.485	70.48	0.0838	90	0.09	5.085	5.08	0.0060
CHRYSENE	844	826	2,500	2.5	110.132	110.13	0.1305	130	0.13	7.345	7.34	0.0087
C4-PHENANTHRENES/ANTHRACENES	913	--	2,500 J	2.5	110.132	110.13	0.1206	73 J	0.073	4.124	4.12	0.0045
C1-CHRYSENES	929	--	4,900 J	4.9	215.859	215.86	0.2324	160 J	0.16	9.040	9.04	0.0097
C3-FLUORANTHENES/PYRENES	949	--	2,500 J	2.5	110.132	110.13	0.1161	67 J	0.067	3.785	3.79	0.0040
BENZO[A]PYRENE	965	3,840	1,200	1.2	52.863	52.86	0.0548	95	0.095	5.367	5.37	0.0056
BENZO[E]PYRENE	967	4,300	2,300	2.3	101.322	101.32	0.1048	120	0.12	6.780	6.78	0.0070
PERYLENE	967	431	230 J	0.23	10.132	10.13	0.0105	150	0.15	8.475	8.47	0.0088
BENZO[B]FLUORANTHENE	979	2,169	1,500	1.5	66.079	66.08	0.0675	140	0.14	7.910	7.91	0.0081
BENZO[K]FLUORANTHENE	981	1,220	250 J	0.25	11.013	11.01	0.0112	45 J	0.045	2.542	2.54	0.0026
C2-CHRYSENES	1,008	--	4,000 J	4	176.211	176.21	0.1748	94 J	0.094	5.311	5.31	0.0053
BENZO[G,H,I]PERYLENE	1,095	648	730	0.73	32.159	32.16	0.0294	64 J	0.064	3.616	3.62	0.0033
C3-CHRYSENES	1,112	--	1,200 J	1.2	52.863	52.86	0.0475	86 U	0	0.000	0.00	0.0000
INDENO[1,2,3-CD]PYRENE	1,115	--	330 J	0.33	14.537	14.54	0.0130	57 J	0.057	3.220	3.22	0.0029
DIBENZ(A,H)ANTHRACENE	1,123	2,389	610	0.61	26.872	26.87	0.0239	30 J	0.03	1.695	1.69	0.0015
C4-CHRYSENES	1,214	--	180 J	0.18	7.930	7.93	0.0065	86 U	0	0.000	0.00	0.0000
Sum Total of ESBTU FCVi[3]							**3.5552**					0.2470

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Table 3-22A
Derivation of Total PAH ESB - November 2010 Otter Creek Confluence Sediment Samples
Duck and Otter Creeks Confluence Investigation
Toledo, Lucas County, Ohio

			Location ID	**OC-31**				**OC-32**				
			Field Sample ID	**OC-31DP**				**OC-32**				
			Sample Date	**11/4/2010**				**11/4/2010**				
	Coc, PAHi, FCVi[a] (µg/goc)	**Coc, PAHi, Maxi[a] (µg/goc)**	**Conc µg/kg Dry wt**	**Conc µg/g**	**Coc µg/g Oc**	**Final Coc[b] µg/g Oc**	**ESBTU FCVi**	**Conc µg/kg Dry wt**	**Conc µg/g**	**Coc µg/g Oc**	**Final Coc[b] µg/g Oc**	**ESBTU FCVi**
TOTAL ORGANIC CARBON (%)			1.9					3.67				
Fraction organic carbon			0.019					0.0367				
Chemical Name												
C2-FLUORANTHENES/PYRENES	NA	NA	66 J	0.066	3.474	3.473684211	0	1,300 J	1.3	35.422	35.42234332	0
NAPHTHALENE	385	61,700	81 U	0	0.000	0.00	0.0000	270 U	0	0.000	0.00	0.0000
C1-NAPHTHALENES	444	--	56 J	0.056	2.947	2.95	0.0066	120 J	0.12	3.270	3.27	0.0074
1-METHYLNAPHTHALENE	446	165,700	24 J	0.024	1.263	1.26	0.0028	48 J	0.048	1.308	1.31	0.0029
2-METHYLNAPHTHALENE	447	154,800	81 U	0	0.000	0.00	0.0000	270 U	0	0.000	0.00	0.0000
ACENAPHTHYLENE	452	24,000	81 U	0	0.000	0.00	0.0000	270 U	0	0.000	0.00	0.0000
ACENAPHTHENE	491	33,400	81 U	0	0.000	0.00	0.0000	270 U	0	0.000	0.00	0.0000
C2-NAPHTHALENES	510	--	54 J	0.054	2.842	2.84	0.0056	280 J	0.28	7.629	7.63	0.0150
FLUORENE	538	26,000	81 U	0.081	4.263	4.26	0.0079	69 J	0.069	1.880	1.88	0.0035
C3-NAPHTHALENES	581	--	200 J	0.2	10.526	10.53	0.0181	1,700 J	1.7	46.322	46.32	0.0797
ANTHRACENE	594	1,300	81 U	0.081	4.263	4.26	0.0072	210 J	0.21	5.722	5.72	0.0096
PHENANTHRENE	596	34,300	53 J	0.053	2.789	2.79	0.0047	230 J	0.23	6.267	6.27	0.0105
C1-FLUORENES	611	--	49 J	0.049	2.579	2.58	0.0042	590 J	0.59	16.076	16.08	0.0263
C4-NAPHTHALENES	657	--	110 J	0.11	5.789	5.79	0.0088	1,600 J	1.6	43.597	43.60	0.0664
C1-PHENANTHRENES/ANTHRACENES	670	--	72 J	0.072	3.789	3.79	0.0057	660 J	0.66	17.984	17.98	0.0268
C2-FLUORENES	686	--	30 J	0.03	1.579	1.58	0.0023	750 J	0.75	20.436	20.44	0.0298
PYRENE	697	9,090	91	0.091	4.789	4.79	0.0069	1,100	1.1	29.973	29.97	0.0430
FLUORANTHENE	707	23,870	97	0.097	5.105	5.11	0.0072	520	0.52	14.169	14.17	0.0200
C2-PHENANTHRENES/ANTHRACENES	746	--	110 J	0.11	5.789	5.79	0.0078	1,600 J	1.6	43.597	43.60	0.0584
C3-FLUORENES	769	--	31 J	0.031	1.632	1.63	0.0021	1,600 J	1.6	43.597	43.60	0.0567
C1-FLUORANTHENES/PYRENES	770	--	100 J	0.1	5.263	5.26	0.0068	1,500 J	1.5	40.872	40.87	0.0531
C3-PHENANTHRENES/ANTHRACENES	829	--	86 J	0.086	4.526	4.53	0.0055	1,600 J	1.6	43.597	43.60	0.0526
BENZO[A]ANTHRACENE	841	4,153	49 J	0.049	2.579	2.58	0.0031	730	0.73	19.891	19.89	0.0237
CHRYSENE	844	826	67 J	0.067	3.526	3.53	0.0042	1,000	1	27.248	27.25	0.0323
C4-PHENANTHRENES/ANTHRACENES	913	--	81 J	0.081	4.263	4.26	0.0047	1,200 J	1.2	32.698	32.70	0.0358
C1-CHRYSENES	929	--	75 J	0.075	3.947	3.95	0.0042	1,800 J	1.8	49.046	49.05	0.0528
C3-FLUORANTHENES/PYRENES	949	--	36 J	0.036	1.895	1.89	0.0020	1,000 J	1	27.248	27.25	0.0287
BENZO[A]PYRENE	965	3,840	51 J	0.051	2.684	2.68	0.0028	540	0.54	14.714	14.71	0.0152
BENZO[E]PYRENE	967	4,300	72 J	0.072	3.789	3.79	0.0039	910	0.91	24.796	24.80	0.0256
PERYLENE	967	431	130	0.13	6.842	6.84	0.0071	150 J	0.15	4.087	4.09	0.0042
BENZO[B]FLUORANTHENE	979	2,169	96	0.096	5.053	5.05	0.0052	610	0.61	16.621	16.62	0.0170
BENZO[K]FLUORANTHENE	981	1,220	24 J	0.024	1.263	1.26	0.0013	160 J	0.16	4.360	4.36	0.0044
C2-CHRYSENES	1,008	--	50 J	0.05	2.632	2.63	0.0026	1,600 J	1.6	43.597	43.60	0.0433
BENZO[G,H,I]PERYLENE	1,095	648	39 J	0.039	2.053	2.05	0.0019	270 J	0.27	7.357	7.36	0.0067
C3-CHRYSENES	1,112	--	81 U	0.081	4.263	4.26	0.0038	530 J	0.53	14.441	14.44	0.0130
INDENO[1,2,3-CD]PYRENE	1,115	--	28 J	0.028	1.474	1.47	0.0013	160 J	0.16	4.360	4.36	0.0039
DIBENZ(A,H)ANTHRACENE	1,123	2,389	16 J	0.016	0.842	0.84	0.0007	210 J	0.21	5.722	5.72	0.0051
C4-CHRYSENES	1,214	--	81 U	0	0.000	0.00	0.0000	270 U	0	0.000	0.00	0.0000
Sum Total of ESBTU FCVi[3]							0.1590					0.8735

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Table 3-22A
Derivation of Total PAH ESB - November 2010 Otter Creek Confluence Sediment Samples
Duck and Otter Creeks Confluence Investigation
Toledo, Lucas County, Ohio

		Location ID	**OC-32**					**OC-33**				
		Field Sample ID	**OC-32DP**					**OC-33**				
		Sample Date	**11/4/2010**					**11/4/2010**				
	Coc, PAHi, FCVi[a] (µg/goc)	**Coc, PAHi, Maxi[a] (µg/goc)**	**Conc µg/kg Dry wt**	**Conc µg/g**	**Coc µg/g Oc**	**Final Coc[b] µg/g Oc**	**ESBTU FCVi**	**Conc µg/kg Dry wt**	**Conc µg/g**	**Coc µg/g Oc**	**Final Coc2 µg/g Oc**	**ESBTU FCVi**
TOTAL ORGANIC CARBON (%)			2.14					1.87				
Fraction organic carbon			0.0214					0.0187				
Chemical Name												
C2-FLUORANTHENES/PYRENES	NA	NA	980 J	0.98	45.794	45.79439252	0	76 J	0.076	4.064	4.064171123	0
NAPHTHALENE	385	61,700	270 U	0	0.000	0.00	0.0000	63	0.063	3.369	3.37	0.0088
C1-NAPHTHALENES	444	--	130 J	0.13	6.075	6.07	0.0137	46 J	0.046	2.460	2.46	0.0055
1-METHYLNAPHTHALENE	446	165,700	49 J	0.049	2.290	2.29	0.0051	20 J	0.02	1.070	1.07	0.0024
2-METHYLNAPHTHALENE	447	154,800	270 U	0	0.000	0.00	0.0000	30 J	0.03	1.604	1.60	0.0036
ACENAPHTHYLENE	452	24,000	270 U	0	0.000	0.00	0.0000	32 U	0.032	1.711	1.71	0.0038
ACENAPHTHENE	491	33,400	270 U	0	0.000	0.00	0.0000	8.1 J	0.0081	0.433	0.43	0.0009
C2-NAPHTHALENES	510	--	290 J	0.29	13.551	13.55	0.0266	45 J	0.045	2.406	2.41	0.0047
FLUORENE	538	26,000	270 U	0	0.000	0.00	0.0000	14 J	0.014	0.749	0.75	0.0014
C3-NAPHTHALENES	581	--	1,400 J	1.4	65.421	65.42	0.1126	68 J	0.068	3.636	3.64	0.0063
ANTHRACENE	594	1,300	190 J	0.19	8.879	8.88	0.0149	21 J	0.021	1.123	1.12	0.0019
PHENANTHRENE	596	34,300	270	0.27	12.617	12.62	0.0212	62	0.062	3.316	3.32	0.0056
C1-FLUORENES	611	--	440 J	0.44	20.561	20.56	0.0337	48 J	0.048	2.567	2.57	0.0042
C4-NAPHTHALENES	657	--	1,500 J	1.5	70.093	70.09	0.1067	87 J	0.087	4.652	4.65	0.0071
C1-PHENANTHRENES/ANTHRACENES	670	--	630 J	0.63	29.439	29.44	0.0439	70 J	0.07	3.743	3.74	0.0056
C2-FLUORENES	686	--	790 J	0.79	36.916	36.92	0.0538	33 J	0.033	1.765	1.76	0.0026
PYRENE	697	9,090	910	0.91	42.523	42.52	0.0610	100	0.1	5.348	5.35	0.0077
FLUORANTHENE	707	23,870	600	0.6	28.037	28.04	0.0397	100	0.1	5.348	5.35	0.0076
C2-PHENANTHRENES/ANTHRACENES	746	--	1,100 J	1.1	51.402	51.40	0.0689	95 J	0.095	5.080	5.08	0.0068
C3-FLUORENES	769	--	1,100 J	1.1	51.402	51.40	0.0668	34 J	0.034	1.818	1.82	0.0024
C1-FLUORANTHENES/PYRENES	770	--	1,100 J	1.1	51.402	51.40	0.0668	110 J	0.11	5.882	5.88	0.0076
C3-PHENANTHRENES/ANTHRACENES	829	--	1,200 J	1.2	56.075	56.07	0.0676	92 J	0.092	4.920	4.92	0.0059
BENZO[A]ANTHRACENE	841	4,153	640	0.64	29.907	29.91	0.0356	70	0.07	3.743	3.74	0.0045
CHRYSENE	844	826	1,000	1	46.729	46.73	0.0554	100	0.1	5.348	5.35	0.0063
C4-PHENANTHRENES/ANTHRACENES	913	--	1,300 J	1.3	60.748	60.75	0.0665	90 J	0.09	4.813	4.81	0.0053
C1-CHRYSENES	929	--	1,700 J	1.7	79.439	79.44	0.0855	110 J	0.11	5.882	5.88	0.0063
C3-FLUORANTHENES/PYRENES	949	--	840 J	0.84	39.252	39.25	0.0414	51 J	0.051	2.727	2.73	0.0029
BENZO[A]PYRENE	965	3,840	500	0.5	23.364	23.36	0.0242	73	0.073	3.904	3.90	0.0040
BENZO[E]PYRENE	967	4,300	800	0.8	37.383	37.38	0.0387	90	0.09	4.813	4.81	0.0050
PERYLENE	967	431	170 J	0.17	7.944	7.94	0.0082	100	0.1	5.348	5.35	0.0055
BENZO[B]FLUORANTHENE	979	2,169	670	0.67	31.308	31.31	0.0320	120	0.12	6.417	6.42	0.0066
BENZO[K]FLUORANTHENE	981	1,220	130 J	0.13	6.075	6.07	0.0062	35	0.035	1.872	1.87	0.0019
C2-CHRYSENES	1,008	--	1,200 J	1.2	56.075	56.07	0.0556	80 J	0.08	4.278	4.28	0.0042
BENZO[G,H,I]PERYLENE	1,095	648	280	0.28	13.084	13.08	0.0119	52	0.052	2.781	2.78	0.0025
C3-CHRYSENES	1,112	--	440 J	0.44	20.561	20.56	0.0185	29 J	0.029	1.551	1.55	0.0014
INDENO[1,2,3-CD]PYRENE	1,115	--	170 J	0.17	7.944	7.94	0.0071	49	0.049	2.620	2.62	0.0024
DIBENZ(A,H)ANTHRACENE	1,123	2,389	210 J	0.21	9.813	9.81	0.0087	22 J	0.022	1.176	1.18	0.0010
C4-CHRYSENES	1,214	--	83 J	0	0.000	0.00	0.0000	32 U	0	0.000	0.00	0.0000
Sum Total of ESBTU FCVi[3]							**1.2985**					0.1620

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Table 3-22A
Derivation of Total PAH ESB - November 2010 Otter Creek Confluence Sediment Samples
Duck and Otter Creeks Confluence Investigation
Toledo, Lucas County, Ohio

Notes:

% = Percent
µg/g = Microgram per gram
µg/g Oc = Microgram per gram organic carbon
µg/kg = Micrograms per kilograms
Coc = Concentration organic carbon
Conc = Concentration
ESB = Equilibrium partitioning sediment benchmark
ESBTU = Equilibrium partitioning sediment benchmark toxic unit
FCVi = Final chronic value for individual PAH
foc = Fraction organic carbon
ID = Identification
J = Estimated value; concentration below RL or exceeded RL, but one or more quality control parameters were outside control limits
Maxi = Maximum individual PAH
MC =
NA = Criterion or value not available
PAH = Polycyclic aromatic hydrocarbon
PAHi = Individual PAH
RL = Reporting limit
TOC = Total organic carbon
U = Coded data omitted from ESB calculations
wt = Weight

[1] PAHs and corresponding Coc PAHi, FCVi and Coc PAHi, Maxi values are from Table 3-4 in EPA, 2003. Example calculations provided in Table 6-3 in EPA, 2003.

[2] Because COC exceeds COC,PAHi,Maxi , COC,PAHi,Maxi is substituted for COC to calculate ESBTUFCVi (see text).

[3] Sum of Total ESBTU FCVi = Sum of Coc, PAH_i / Coc, PAH_i, $FV_{i;}$. If Sum of Total ESBTU FCVi exceeds one, the mixture of PAHs in sediemtn may not be acceptable for the protection of benthic organisms.

Source:

U.S. Environmental Protection Agency (U.S. EPA). 2003. "Procedures for the Derivation of Equilibrium Partitioning Sediment Benchmarks (ESBs) for the Protection of Benthic Organisms: PAH Mi
EPA/600/R-02/013. November.

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Table 3-22B
Derivation of Total PAH ESB - May 2011 Otter Creek Sediment Samples
Duck and Otter Creeks Confluence Investigation
Toledo, Lucas County, Ohio

		Location ID		OC-34						OC-35					
		Field Sample ID		OC-34-01						OC-35-01					
		Depth Interval		0- 6						0					
		Sampling Date		5/10/2011						5/12/2011					
		Coc, PAHi, FCVi[a] (µg/goc)	Coc, PAHi, Maxi[a] (µg/goc)	Conc µg/kg Dry wt		Conc µg/g	Coc µg/g Oc	Final Coc[b] µg/g Oc	ESBTU FCVi	Conc µg/kg Dry wt		Conc µg/g	Coc µg/g Oc	Final Coc[b] µg/g Oc	ESBTU FCVi
		TOC (%)		1.27						5.35					
Analytical Method	Chemical Name	foc		0.0127						0.0535					
MC SVOA(SIMS)	C2-FLUORANTHENES/PYRENES	NA	NA	280	J	0.28	22.047	22.047	0.000	700	J	0.7	13.084	13.084	0.000
MC SVOA(LS)	NAPHTHALENE	385	61,700			0	0.000	0.000	0.0000			0	0.000	0.000	0.0000
MC SVOA(SIMS)	NAPHTHALENE	385	61,700	47		0.047	3.701	3.701	0.0096	56	J	0.056	1.047	1.047	0.0027
MC SVOA(SIMS)	C1-NAPHTHALENES	444	--	260	J	0.26	20.472	20.472	0.0461	140	J	0.14	2.617	2.617	0.0059
MC SVOA(SIMS)	1-METHYLNAPHTHALENE	446	165,700	170		0.17	13.386	13.386	0.0300	79		0.079	1.477	1.477	0.0033
MC SVOA(LS)	2-METHYLNAPHTHALENE	447	154,800			0	0.000	0.000	0.0000			0	0.000	0.000	0.0000
MC SVOA(SIMS)	2-METHYLNAPHTHALENE	447	154,800	250		0.25	19.685	19.685	0.0440	130		0.13	2.430	2.430	0.0054
MC SVOA(SIMS)	ACENAPHTHYLENE	452	24,000	3.9	U	0	0.000	0.000	0.0000	20		0.02	0.374	0.374	0.0008
MC SVOA(LS)	ACENAPHTHENE	491	33,400			0	0.000	0.000	0.0000			0	0.000	0.000	0.0000
MC SVOA(SIMS)	ACENAPHTHENE	491	33,400	16		0.016	1.260	1.260	0.0026	10		0.01	0.187	0.187	0.0004
MC SVOA(SIMS)	C2-NAPHTHALENES	510	--	910	J	0.91	71.654	71.654	0.1405	220	J	0.22	4.112	4.112	0.0081
MC SVOA(LS)	FLUORENE	538	26,000			0	0.000	0.000	0.0000			0	0.000	0.000	0.0000
MC SVOA(SIMS)	FLUORENE	538	26,000	32		0.032	2.520	2.520	0.0047	33		0.033	0.617	0.617	0.0011
MC SVOA(SIMS)	C3-NAPHTHALENES	581	--	1,800	J	1.8	141.732	141.732	0.2439	400	J	0.4	7.477	7.477	0.0129
MC SVOA(LS)	ANTHRACENE	594	1,300			0	0.000	0.000	0.0000			0	0.000	0.000	0.0000
MC SVOA(SIMS)	ANTHRACENE	594	1,300	52		0.052	4.094	4.094	0.0069	54		0.054	1.009	1.009	0.0017
MC SVOA(SIMS)	PHENANTHRENE	596	34,300			0	0.000	0.000	0.0000	180		0.18	3.364	3.364	0.0056
MC SVOA(LS)	PHENANTHRENE	596	34,300	310		0.31	24.409	24.409	0.0410			0	0.000	0.000	0.0000
MC SVOA(SIMS)	C1-FLUORENES	611	--	170	J	0.17	13.386	13.386	0.0219	69	J	0.069	1.290	1.290	0.0021
MC SVOA(SIMS)	C4-NAPHTHALENES	657	--	1,400	J	1.4	110.236	110.236	0.1678	400	J	0.4	7.477	7.477	0.0114
MC SVOA(SIMS)	C1-PHENANTHRENES/ANTHRACENES	670	--	760	J	0.76	59.843	59.843	0.0893	490	J	0.49	9.159	9.159	0.0137
MC SVOA(SIMS)	C2-FLUORENES	686	--	290	J	0.29	22.835	22.835	0.0333	190	J	0.19	3.551	3.551	0.0052
MC SVOA(SIMS)	PYRENE	697	9,090	270		0.27	21.260	21.260	0.0305	300		0.3	5.607	5.607	0.0080
MC SVOA(LS)	PYRENE	697	9,090			0	0.000	0.000	0.0000			0	0.000	0.000	0.0000
MC SVOA(LS)	FLUORANTHENE	707	23,870			0	0.000	0.000	0.0000			0	0.000	0.000	0.0000
MC SVOA(SIMS)	FLUORANTHENE	707	23,870	110		0.11	8.661	8.661	0.0123	170		0.17	3.178	3.178	0.0045
MC SVOA(SIMS)	C2-PHENANTHRENES/ANTHRACENES	746	--	740	J	0.74	58.268	58.268	0.0781	660	J	0.66	12.336	12.336	0.0165
MC SVOA(SIMS)	C3-FLUORENES	769	--	360	J	0.36	28.346	28.346	0.0369	290	J	0.29	5.421	5.421	0.0070
MC SVOA(SIMS)	C1-FLUORANTHENES/PYRENES	770	--	340	J	0.34	26.772	26.772	0.0348	670	J	0.67	12.523	12.523	0.0163
MC SVOA(SIMS)	C3-PHENANTHRENES/ANTHRACENES	829	--	580	J	0.58	45.669	45.669	0.0551	790	J	0.79	14.766	14.766	0.0178
MC SVOA(SIMS)	BENZO[A]ANTHRACENE	841	4,153	110		0.11	8.661	8.661	0.0103	220		0.22	4.112	4.112	0.0049
MC SVOA(LS)	BENZO[A]ANTHRACENE	841	4,153			0	0.000	0.000	0.0000			0	0.000	0.000	0.0000
MC SVOA(LS)	CHRYSENE	844	826			0	0.000	0.000	0.0000			0	0.000	0.000	0.0000
MC SVOA(SIMS)	CHRYSENE	844	826	220		0.22	17.323	17.323	0.0205	420		0.42	7.850	7.850	0.0093
MC SVOA(SIMS)	C4-PHENANTHRENES/ANTHRACENES	913	--	420	J	0.42	33.071	33.071	0.0362	510	J	0.51	9.533	9.533	0.0104
MC SVOA(SIMS)	C1-CHRYSENES	929	--	270	J	0.27	21.260	21.260	0.0229	650	J	0.65	12.150	12.150	0.0131
MC SVOA(SIMS)	C3-FLUORANTHENES/PYRENES	949	--	330	J	0.33	25.984	25.984	0.0274	730	J	0.73	13.645	13.645	0.0144
MC SVOA(LS)	BENZO[A]PYRENE	965	3,840			0	0.000	0.000	0.0000			0	0.000	0.000	0.0000
MC SVOA(SIMS)	BENZO[A]PYRENE	965	3,840	72		0.072	5.669	5.669	0.0059	310		0.31	5.794	5.794	0.0060
MC SVOA(SIMS)	BENZO[E]PYRENE	967	4,300	130		0.13	10.236	10.236	0.0106	330		0.33	6.168	6.168	0.0064
MC SVOA(SIMS)	PERYLENE	967	431	12		0.012	0.945	0.945	0.0010	35	J	0.035	0.654	0.654	0.0007
MC SVOA(LS)	BENZO[B]FLUORANTHENE	979	2,169			0	0.000	0.000	0.0000			0	0.000	0.000	0.0000
MC SVOA(SIMS)	BENZO[B]FLUORANTHENE	979	2,169	88		0.088	6.929	6.929	0.0071	310		0.31	5.794	5.794	0.0059
MC SVOA(LS)	BENZO[K]FLUORANTHENE	981	1,220			0	0.000	0.000	0.0000			0	0.000	0.000	0.0000
MC SVOA(SIMS)	BENZO[K]FLUORANTHENE	981	1,220	28		0.028	2.205	2.205	0.0022	130		0.13	2.430	2.430	0.0025
MC SVOA(SIMS)	C2-CHRYSENES	1,008	--	240	J	0.24	18.898	18.898	0.0187	590	J	0.59	11.028	11.028	0.0109
MC SVOA(LS)	BENZO[G,H,I]PERYLENE	1,095	648			0	0.000	0.000	0.0000			0	0.000	0.000	0.0000
MC SVOA(SIMS)	BENZO[G,H,I]PERYLENE	1,095	648	130		0.13	10.236	10.236	0.0093	240		0.24	4.486	4.486	0.0041
MC SVOA(SIMS)	C3-CHRYSENES	1,112	--	170	J	0.17	13.386	13.386	0.0120	470	J	0.47	8.785	8.785	0.0079
MC SVOA(SIMS)	INDENO[1,2,3-CD]PYRENE	1,115	--	24		0.024	1.890	1.890	0.0017	140		0.14	2.617	2.617	0.0023
MC SVOA(LS)	INDENO[1,2,3-CD]PYRENE	1,115	--			0	0.000	0.000	0.0000			0	0.000	0.000	0.0000
MC SVOA(LS)	DIBENZ(A,H)ANTHRACENE	1,123	2,389			0	0.000	0.000	0.0000			0	0.000	0.000	0.0000
MC SVOA(SIMS)	DIBENZ(A,H)ANTHRACENE	1,123	2,389	31		0.031	2.441	2.441	0.0022	150		0.15	2.804	2.804	0.0025
MC SVOA(SIMS)	C4-CHRYSENES	1,214	--	86	J	0.086	6.772	6.772	0.0056	200	J	0.2	3.738	3.738	0.0031
Sum Total of ESBTU FCVi[3]									**1.3228**						0.2549

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Table 3-22B
Derivation of Total PAH ESB - May 2011 Otter Creek Sediment Samples
Duck and Otter Creeks Confluence Investigation
Toledo, Lucas County, Ohio

		OC-36						OC-38					
		OC-36-01						OC-38					
		0- 6						0- 6					
		5/10/2011						5/11/2011					
Analytical Method	Chemical Name	Conc µg/kg Dry wt		Conc µg/g	Coc µg/g Oc	Final Coc[b] µg/g Oc	ESBTU FCVi	Conc µg/kg Dry wt		Conc µg/g	Coc µg/g Oc	Final Coc[2] µg/g Oc	ESBTU FCVi
		3.94						2.09					
		0.0394						0.0209					
MC SVOA(SIMS)	C2-FLUORANTHENES/PYRENES	140	J	0.14	3.553	3.553	0.000	43	J	0.043	2.057	2.057	0.000
MC SVOA(LS)	NAPHTHALENE			0	0.000	0.000	0.0000			0	0.000	0.000	0.0000
MC SVOA(SIMS)	NAPHTHALENE	33		0.033	0.838	0.838	0.0022	4.2	U	0	0.000	0.000	0.0000
MC SVOA(SIMS)	C1-NAPHTHALENES	92	J	0.092	2.335	2.335	0.0053	16	J	0.016	0.766	0.766	0.0017
MC SVOA(SIMS)	1-METHYLNAPHTHALENE	60		0.06	1.523	1.523	0.0034	7.2		0.0072	0.344	0.344	0.0008
MC SVOA(LS)	2-METHYLNAPHTHALENE			0	0.000	0.000	0.0000			0	0.000	0.000	0.0000
MC SVOA(SIMS)	2-METHYLNAPHTHALENE	82		0.082	2.081	2.081	0.0047	13		0.013	0.622	0.622	0.0014
MC SVOA(SIMS)	ACENAPHTHYLENE	4.3	U	0	0.000	0.000	0.0000	4.2	U	0	0.000	0.000	0.0000
MC SVOA(LS)	ACENAPHTHENE			0	0.000	0.000	0.0000			0	0.000	0.000	0.0000
MC SVOA(SIMS)	ACENAPHTHENE	11		0.011	0.279	0.279	0.0006	4.2	U	0	0.000	0.000	0.0000
MC SVOA(SIMS)	C2-NAPHTHALENES	180	J	0.18	4.569	4.569	0.0090	59	J	0.059	2.823	2.823	0.0055
MC SVOA(LS)	FLUORENE			0	0.000	0.000	0.0000			0	0.000	0.000	0.0000
MC SVOA(SIMS)	FLUORENE	21		0.021	0.533	0.533	0.0010	5.1		0.0051	0.244	0.244	0.0005
MC SVOA(SIMS)	C3-NAPHTHALENES	310	J	0.31	7.868	7.868	0.0135	190	J	0.19	9.091	9.091	0.0156
MC SVOA(LS)	ANTHRACENE			0	0.000	0.000	0.0000			0	0.000	0.000	0.0000
MC SVOA(SIMS)	ANTHRACENE	22		0.022	0.558	0.558	0.0009	5.5		0.0055	0.263	0.263	0.0004
MC SVOA(SIMS)	PHENANTHRENE	110		0.11	2.792	2.792	0.0047	35		0.035	1.675	1.675	0.0028
MC SVOA(LS)	PHENANTHRENE			0	0.000	0.000	0.0000			0	0.000	0.000	0.0000
MC SVOA(SIMS)	C1-FLUORENES	62	J	0.062	1.574	1.574	0.0026	19	J	0.019	0.909	0.909	0.0015
MC SVOA(SIMS)	C4-NAPHTHALENES	250	J	0.25	6.345	6.345	0.0097	170	J	0.17	8.134	8.134	0.0124
MC SVOA(SIMS)	C1-PHENANTHRENES/ANTHRACENES	190	J	0.19	4.822	4.822	0.0072	100	J	0.1	4.785	4.785	0.0071
MC SVOA(SIMS)	C2-FLUORENES	100	J	0.1	2.538	2.538	0.0037	42	J	0.042	2.010	2.010	0.0029
MC SVOA(SIMS)	PYRENE	120		0.12	3.046	3.046	0.0044	18		0.018	0.861	0.861	0.0012
MC SVOA(LS)	PYRENE			0	0.000	0.000	0.0000			0	0.000	0.000	0.0000
MC SVOA(LS)	FLUORANTHENE			0	0.000	0.000	0.0000			0	0.000	0.000	0.0000
MC SVOA(SIMS)	FLUORANTHENE	48		0.048	1.218	1.218	0.0017	7.4		0.0074	0.354	0.354	0.0005
MC SVOA(SIMS)	C2-PHENANTHRENES/ANTHRACENES	200	J	0.2	5.076	5.076	0.0068	92	J	0.092	4.402	4.402	0.0059
MC SVOA(SIMS)	C3-FLUORENES	100	J	0.1	2.538	2.538	0.0033	52	J	0.052	2.488	2.488	0.0032
MC SVOA(SIMS)	C1-FLUORANTHENES/PYRENES	160	J	0.16	4.061	4.061	0.0053	57	J	0.057	2.727	2.727	0.0035
MC SVOA(SIMS)	C3-PHENANTHRENES/ANTHRACENES	160	J	0.16	4.061	4.061	0.0049	82	J	0.082	3.923	3.923	0.0047
MC SVOA(SIMS)	BENZO[A]ANTHRACENE	73		0.073	1.853	1.853	0.0022	15		0.015	0.718	0.718	0.0009
MC SVOA(LS)	BENZO[A]ANTHRACENE			0	0.000	0.000	0.0000			0	0.000	0.000	0.0000
MC SVOA(LS)	CHRYSENE			0	0.000	0.000	0.0000			0	0.000	0.000	0.0000
MC SVOA(SIMS)	CHRYSENE	120		0.12	3.046	3.046	0.0036	31		0.031	1.483	1.483	0.0018
MC SVOA(SIMS)	C4-PHENANTHRENES/ANTHRACENES	88	J	0.088	2.234	2.234	0.0024	65	J	0.065	3.110	3.110	0.0034
MC SVOA(SIMS)	C1-CHRYSENES	180	J	0.18	4.569	4.569	0.0049	42	J	0.042	2.010	2.010	0.0022
MC SVOA(SIMS)	C3-FLUORANTHENES/PYRENES	150	J	0.15	3.807	3.807	0.0040	55	J	0.055	2.632	2.632	0.0028
MC SVOA(LS)	BENZO[A]PYRENE			0	0.000	0.000	0.0000			0	0.000	0.000	0.0000
MC SVOA(SIMS)	BENZO[A]PYRENE	55		0.055	1.396	1.396	0.0014	13		0.013	0.622	0.622	0.0006
MC SVOA(SIMS)	BENZO[E]PYRENE	87		0.087	2.208	2.208	0.0023	17		0.017	0.813	0.813	0.0008
MC SVOA(SIMS)	PERYLENE	11		0.011	0.279	0.279	0.0003	4.2	U	0	0.000	0.000	0.0000
MC SVOA(LS)	BENZO[B]FLUORANTHENE			0	0.000	0.000	0.0000			0	0.000	0.000	0.0000
MC SVOA(SIMS)	BENZO[B]FLUORANTHENE	65		0.065	1.650	1.650	0.0017	5.9		0.0059	0.282	0.282	0.0003
MC SVOA(LS)	BENZO[K]FLUORANTHENE			0	0.000	0.000	0.0000			0	0.000	0.000	0.0000
MC SVOA(SIMS)	BENZO[K]FLUORANTHENE	24		0.024	0.609	0.609	0.0006	4.4		0.0044	0.211	0.211	0.0002
MC SVOA(SIMS)	C2-CHRYSENES	190	J	0.19	4.822	4.822	0.0048	33	J	0.033	1.579	1.579	0.0016
MC SVOA(LS)	BENZO[G,H,I]PERYLENE			0	0.000	0.000	0.0000			0	0.000	0.000	0.0000
MC SVOA(SIMS)	BENZO[G,H,I]PERYLENE	79		0.079	2.005	2.005	0.0018	23		0.023	1.100	1.100	0.0010
MC SVOA(SIMS)	C3-CHRYSENES	130	J	0.13	3.299	3.299	0.0030	34	J	0.034	1.627	1.627	0.0015
MC SVOA(SIMS)	INDENO[1,2,3-CD]PYRENE	30		0.03	0.761	0.761	0.0007	23		0.023	1.100	1.100	0.0010
MC SVOA(LS)	INDENO[1,2,3-CD]PYRENE			0	0.000	0.000	0.0000			0	0.000	0.000	0.0000
MC SVOA(LS)	DIBENZ(A,H)ANTHRACENE			0	0.000	0.000	0.0000			0	0.000	0.000	0.0000
MC SVOA(SIMS)	DIBENZ(A,H)ANTHRACENE	34	J	0.034	0.863	0.863	0.0008	16	J	0.016	0.766	0.766	0.0007
MC SVOA(SIMS)	C4-CHRYSENES	49	J	0.049	1.244	1.244	0.0010	4.2	U	0	0.000	0.000	0.0000
Sum Total of ESBTU FCVi3							0.1303						0.0905

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Table 3-22B
Derivation of Total PAH ESB - May 2011 Otter Creek Sediment Samples
Duck and Otter Creeks Confluence Investigation
Toledo, Lucas County, Ohio

		OC-40					OC-41				
		OC-40-01					OC-41-01				
		0- 6					0- 6				
		5/11/2011					5/10/2011				
		Conc µg/kg Dry wt	Conc µg/g	Coc µg/g Oc	Final Coc[2] µg/g Oc	ESBTU FCVi	Conc µg/kg Dry wt	Conc µg/g	Coc µg/g Oc	Final Coc[2] µg/g Oc	ESBTU FCVi
		1.44					1.01				
Analytical Method	Chemical Name	0.0144					0.0101				
MC SVOA(SIMS)	C2-FLUORANTHENES/PYRENES	84 J	0.084	5.833	5.833	0.000	98 J	0.098	9.703	9.703	0.000
MC SVOA(LS)	NAPHTHALENE		0	0.000	0.000	0.0000		0	0.000	0.000	0.0000
MC SVOA(SIMS)	NAPHTHALENE	18	0.018	1.250	1.250	0.0032	17	0.017	1.683	1.683	0.0044
MC SVOA(SIMS)	C1-NAPHTHALENES	38 J	0.038	2.639	2.639	0.0059	44 J	0.044	4.356	4.356	0.0098
MC SVOA(SIMS)	1-METHYLNAPHTHALENE	19	0.019	1.319	1.319	0.0030	20	0.02	1.980	1.980	0.0044
MC SVOA(LS)	2-METHYLNAPHTHALENE		0	0.000	0.000	0.0000		0	0.000	0.000	0.0000
MC SVOA(SIMS)	2-METHYLNAPHTHALENE	33	0.033	2.292	2.292	0.0051	38	0.038	3.762	3.762	0.0084
MC SVOA(SIMS)	ACENAPHTHYLENE	3.5 U	0.0035	0.243	0.243	0.0005	4.4 U	0	0.000	0.000	0.0000
MC SVOA(LS)	ACENAPHTHENE		0	0.000	0.000	0.0000		0	0.000	0.000	0.0000
MC SVOA(SIMS)	ACENAPHTHENE	3.6	0.0036	0.250	0.250	0.0005	4.5	0.0045	0.446	0.446	0.0009
MC SVOA(SIMS)	C2-NAPHTHALENES	83 J	0.083	5.764	5.764	0.0113	90 J	0.09	8.911	8.911	0.0175
MC SVOA(LS)	FLUORENE		0	0.000	0.000	0.0000		0	0.000	0.000	0.0000
MC SVOA(SIMS)	FLUORENE	8.5	0.0085	0.590	0.590	0.0011	8.6	0.0086	0.851	0.851	0.0016
MC SVOA(SIMS)	C3-NAPHTHALENES	160 J	0.16	11.111	11.111	0.0191	180 J	0.18	17.822	17.822	0.0307
MC SVOA(LS)	ANTHRACENE		0	0.000	0.000	0.0000		0	0.000	0.000	0.0000
MC SVOA(SIMS)	ANTHRACENE	14	0.014	0.972	0.972	0.0016	13	0.013	1.287	1.287	0.0022
MC SVOA(SIMS)	PHENANTHRENE	44 J	0.044	3.056	3.056	0.0051	44	0.044	4.356	4.356	0.0073
MC SVOA(LS)	PHENANTHRENE		0	0.000	0.000	0.0000		0	0.000	0.000	0.0000
MC SVOA(SIMS)	C1-FLORENES	30 J	0.03	2.083	2.083	0.0034	31 J	0.031	3.069	3.069	0.0050
MC SVOA(SIMS)	C4-NAPHTHALENES	130 J	0.13	9.028	9.028	0.0137	160 J	0.16	15.842	15.842	0.0241
MC SVOA(SIMS)	C1-PHENANTHRENES/ANTHRACENES	100 J	0.1	6.944	6.944	0.0104	100 J	0.1	9.901	9.901	0.0148
MC SVOA(SIMS)	C2-FLUORENES	59 J	0.059	4.097	4.097	0.0060	63 J	0.063	6.238	6.238	0.0091
MC SVOA(SIMS)	PYRENE	89	0.089	6.181	6.181	0.0089	92	0.092	9.109	9.109	0.0131
MC SVOA(LS)	PYRENE		0	0.000	0.000	0.0000		0	0.000	0.000	0.0000
MC SVOA(LS)	FLUORANTHENE		0	0.000	0.000	0.0000		0	0.000	0.000	0.0000
MC SVOA(SIMS)	FLUORANTHENE	34	0.034	2.361	2.361	0.0033	37	0.037	3.663	3.663	0.0052
MC SVOA(SIMS)	C2-PHENANTHRENES/ANTHRACENES	120 J	0.12	8.333	8.333	0.0112	100 J	0.1	9.901	9.901	0.0133
MC SVOA(SIMS)	C3-FLUORENES	61 J	0.061	4.236	4.236	0.0055	60 J	0.06	5.941	5.941	0.0077
MC SVOA(SIMS)	C1-FLUORANTHENES/PYRENES	110 J	0.11	7.639	7.639	0.0099	120 J	0.12	11.881	11.881	0.0154
MC SVOA(SIMS)	C3-PHENANTHRENES/ANTHRACENES	110 J	0.11	7.639	7.639	0.0092	97 J	0.097	9.604	9.604	0.0116
MC SVOA(SIMS)	BENZO[A]ANTHRACENE	46	0.046	3.194	3.194	0.0038	53	0.053	5.248	5.248	0.0062
MC SVOA(LS)	BENZO[A]ANTHRACENE		0	0.000	0.000	0.0000		0	0.000	0.000	0.0000
MC SVOA(LS)	CHRYSENE		0	0.000	0.000	0.0000		0	0.000	0.000	0.0000
MC SVOA(SIMS)	CHRYSENE	75	0.075	5.208	5.208	0.0062	100	0.1	9.901	9.901	0.0117
MC SVOA(SIMS)	C4-PHENANTHRENES/ANTHRACENES	63 J	0.063	4.375	4.375	0.0048	49 J	0.049	4.851	4.851	0.0053
MC SVOA(SIMS)	C1-CHRYSENES	99 J	0.099	6.875	6.875	0.0074	140 J	0.14	13.861	13.861	0.0149
MC SVOA(SIMS)	C3-FLUORANTHENES/PYRENES	82 J	0.082	5.694	5.694	0.0060	100 J	0.1	9.901	9.901	0.0104
MC SVOA(LS)	BENZO[A]PYRENE		0	0.000	0.000	0.0000		0	0.000	0.000	0.0000
MC SVOA(SIMS)	BENZO[A]PYRENE	30	0.03	2.083	2.083	0.0022	52	0.052	5.149	5.149	0.0053
MC SVOA(SIMS)	BENZO[E]PYRENE	43	0.043	2.986	2.986	0.0031	79	0.079	7.822	7.822	0.0081
MC SVOA(SIMS)	PERYLENE	6.7	0.0067	0.465	0.465	0.0005	9.1	0.0091	0.901	0.901	0.0009
MC SVOA(LS)	BENZO[B]FLUORANTHENE		0	0.000	0.000	0.0000		0	0.000	0.000	0.0000
MC SVOA(SIMS)	BENZO[B]FLUORANTHENE	22	0.022	1.528	1.528	0.0016	46	0.046	4.554	4.554	0.0047
MC SVOA(LS)	BENZO[K]FLUORANTHENE		0	0.000	0.000	0.0000		0	0.000	0.000	0.0000
MC SVOA(SIMS)	BENZO[K]FLUORANTHENE	13	0.013	0.903	0.903	0.0009	28	0.028	2.772	2.772	0.0028
MC SVOA(SIMS)	C2-CHRYSENES	88 J	0.088	6.111	6.111	0.0061	140 J	0.14	13.861	13.861	0.0138
MC SVOA(LS)	BENZO[G,H,I]PERYLENE		0	0.000	0.000	0.0000		0	0.000	0.000	0.0000
MC SVOA(SIMS)	BENZO[G,H,I]PERYLENE	24	0.024	1.667	1.667	0.0015	65	0.065	6.436	6.436	0.0059
MC SVOA(SIMS)	C3-CHRYSENES	63 J	0.063	4.375	4.375	0.0039	96 J	0.096	9.505	9.505	0.0085
MC SVOA(SIMS)	INDENO[1,2,3-CD]PYRENE	11	0.011	0.764	0.764	0.0007	20	0.02	1.980	1.980	0.0018
MC SVOA(LS)	INDENO[1,2,3-CD]PYRENE		0	0.000	0.000	0.0000		0	0.000	0.000	0.0000
MC SVOA(LS)	DIBENZ(A,H)ANTHRACENE		0	0.000	0.000	0.0000		0	0.000	0.000	0.0000
MC SVOA(SIMS)	DIBENZ(A,H)ANTHRACENE	13 J	0.013	0.903	0.903	0.0008	32 J	0.032	3.168	3.168	0.0028
MC SVOA(SIMS)	C4-CHRYSENES	28 J	0.028	1.944	1.944	0.0016	53 J	0.053	5.248	5.248	0.0043
Sum Total of ESBTU FCVi3						0.1891					0.3140

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Table 3-22B
Derivation of Total PAH ESB - May 2011 Otter Creek Sediment Samples
Duck and Otter Creeks Confluence Investigation
Toledo, Lucas County, Ohio

		OC-42					OC-42				
		OC-42-01					OC-42-01-DP				
		0- 6					0- 6				
		5/11/2011					5/11/2011				
		Conc µg/kg Dry wt	Conc µg/g	Coc µg/g Oc	Final Coc[2] µg/g Oc	ESBTU FCVi	Conc µg/kg Dry wt	Conc µg/g	Coc µg/g Oc	Final Coc[2] µg/g Oc	ESBTU FCVi
		4.53					4.96				
Analytical Method	Chemical Name	0.0453					0.0496				
MC SVOA(SIMS)	C2-FLUORANTHENES/PYRENES	6,900 J	6.9	152.318	152.318	0.000	15,000 J	15	302.419	302.419	0.000
MC SVOA(LS)	NAPHTHALENE		0	0.000	0.000	0.0000		0	0.000	0.000	0.0000
MC SVOA(SIMS)	NAPHTHALENE	200	0.2	4.415	4.415	0.0115	500	0.5	10.081	10.081	0.0262
MC SVOA(SIMS)	C1-NAPHTHALENES	570 J	0.57	12.583	12.583	0.0283	1,700 J	1.7	34.274	34.274	0.0772
MC SVOA(SIMS)	1-METHYLNAPHTHALENE	520	0.52	11.479	11.479	0.0257	2,300	2.3	46.371	46.371	0.1040
MC SVOA(LS)	2-METHYLNAPHTHALENE	380	0.38	8.389	8.389	0.0188	1,100	1.1	22.177	22.177	0.0496
MC SVOA(SIMS)	2-METHYLNAPHTHALENE		0	0.000	0.000	0.0000		0	0.000	0.000	0.0000
MC SVOA(SIMS)	ACENAPHTHYLENE	4.7 U	0	0.000	0.000	0.0000	5 U	0	0.000	0.000	0.0000
MC SVOA(LS)	ACENAPHTHENE		0	0.000	0.000	0.0000		0	0.000	0.000	0.0000
MC SVOA(SIMS)	ACENAPHTHENE	230	0.23	5.077	5.077	0.0103	920	0.92	18.548	18.548	0.0378
MC SVOA(SIMS)	C2-NAPHTHALENES	5,400 J	5.4	119.205	119.205	0.2337	14,000 J	14	282.258	282.258	0.5534
MC SVOA(LS)	FLUORENE	870	0.87	19.205	19.205	0.0357	2,200	2.2	44.355	44.355	0.0824
MC SVOA(SIMS)	FLUORENE		0	0.000	0.000	0.0000		0	0.000	0.000	0.0000
MC SVOA(SIMS)	C3-NAPHTHALENES	18,000 J	18	397.351	397.351	0.6839	41,000 J	41	826.613	826.613	1.4227
MC SVOA(LS)	ANTHRACENE	1,100	1.1	24.283	24.283	0.0409	2,200	2.2	44.355	44.355	0.0747
MC SVOA(SIMS)	ANTHRACENE		0	0.000	0.000	0.0000		0	0.000	0.000	0.0000
MC SVOA(SIMS)	PHENANTHRENE		0	0.000	0.000	0.0000		0	0.000	0.000	0.0000
MC SVOA(LS)	PHENANTHRENE	6,700	6.7	147.903	147.903	0.2482	19,000	19	383.065	383.065	0.6427
MC SVOA(SIMS)	C1-FLUORENES	2,300 J	2.3	50.773	50.773	0.0831	4,400 J	4.4	88.710	88.710	0.1452
MC SVOA(SIMS)	C4-NAPHTHALENES	12,000 J	12	264.901	264.901	0.4032	26,000 J	26	524.194	524.194	0.7979
MC SVOA(SIMS)	C1-PHENANTHRENES/ANTHRACENES	16,000 J	16	353.201	353.201	0.5272	39,000 J	39	786.290	786.290	1.1736
MC SVOA(SIMS)	C2-FLUORENES	4,000 J	4	88.300	88.300	0.1287	7,500 J	7.5	151.210	151.210	0.2204
MC SVOA(SIMS)	PYRENE		0	0.000	0.000	0.0000		0	0.000	0.000	0.0000
MC SVOA(LS)	PYRENE	4,100	4.1	90.508	90.508	0.1299	9,500	9.5	191.532	191.532	0.2748
MC SVOA(LS)	FLUORANTHENE	1,800	1.8	39.735	39.735	0.0562	4,100	4.1	82.661	82.661	0.1169
MC SVOA(SIMS)	FLUORANTHENE		0	0.000	0.000	0.0000		0	0.000	0.000	0.0000
MC SVOA(SIMS)	C2-PHENANTHRENES/ANTHRACENES	13,000 J	13	286.976	286.976	0.3847	32,000 J	32	645.161	645.161	0.8648
MC SVOA(SIMS)	C3-FLUORENES	3,900 J	3.9	86.093	86.093	0.1120	6,300 J	6.3	127.016	127.016	0.1652
MC SVOA(SIMS)	C1-FLUORANTHENES/PYRENES	9,800 J	9.8	216.336	216.336	0.2810	22,000 J	22	443.548	443.548	0.5760
MC SVOA(SIMS)	C3-PHENANTHRENES/ANTHRACENES	8,000 J	8	176.600	176.600	0.2130	15,000 J	15	302.419	302.419	0.3648
MC SVOA(SIMS)	BENZO[A]ANTHRACENE		0	0.000	0.000	0.0000		0	0.000	0.000	0.0000
MC SVOA(LS)	BENZO[A]ANTHRACENE	3,300	3.3	72.848	72.848	0.0866	6,600	6.6	133.065	133.065	0.1582
MC SVOA(LS)	CHRYSENE	6,800 J	6.8	150.110	150.110	0.1779	15,000 J	15	302.419	302.419	0.3583
MC SVOA(SIMS)	CHRYSENE		0	0.000	0.000	0.0000		0	0.000	0.000	0.0000
MC SVOA(SIMS)	C4-PHENANTHRENES/ANTHRACENES	3,000 J	3	66.225	66.225	0.0725	3,800 J	3.8	76.613	76.613	0.0839
MC SVOA(SIMS)	C1-CHRYSENES	10,000 J	10	220.751	220.751	0.2376	15,000 J	15	302.419	302.419	0.3255
MC SVOA(SIMS)	C3-FLUORANTHENES/PYRENES	6,100 J	6.1	134.658	134.658	0.1419	11,000 J	11	221.774	221.774	0.2337
MC SVOA(LS)	BENZO[A]PYRENE	2,500	2.5	55.188	55.188	0.0572	4,600	4.6	92.742	92.742	0.0961
MC SVOA(SIMS)	BENZO[A]PYRENE		0	0.000	0.000	0.0000		0	0.000	0.000	0.0000
MC SVOA(SIMS)	BENZO[E]PYRENE	4,200 J	4.2	92.715	92.715	0.0959	10,000	10	201.613	201.613	0.2085
MC SVOA(SIMS)	PERYLENE	260	0.26	5.740	5.740	0.0059	470 J	0.47	9.476	9.476	0.0098
MC SVOA(LS)	BENZO[B]FLUORANTHENE	1,500	1.5	33.113	33.113	0.0338	3,100	3.1	62.500	62.500	0.0638
MC SVOA(SIMS)	BENZO[B]FLUORANTHENE		0	0.000	0.000	0.0000		0	0.000	0.000	0.0000
MC SVOA(LS)	BENZO[K]FLUORANTHENE	1,200	1.2	26.490	26.490	0.0270	3,100	3.1	62.500	62.500	0.0637
MC SVOA(SIMS)	BENZO[K]FLUORANTHENE		0	0.000	0.000	0.0000		0	0.000	0.000	0.0000
MC SVOA(SIMS)	C2-CHRYSENES	6,600 J	6.6	145.695	145.695	0.1445	9,300 J	9.3	187.500	187.500	0.1860
MC SVOA(LS)	BENZO[G,H,I]PERYLENE	1,800	1.8	39.735	39.735	0.0363	3,300	3.3	66.532	66.532	0.0608
MC SVOA(SIMS)	BENZO[G,H,I]PERYLENE		0	0.000	0.000	0.0000		0	0.000	0.000	0.0000
MC SVOA(SIMS)	C3-CHRYSENES	4,100 J	4.1	90.508	90.508	0.0814	6,000 J	6	120.968	120.968	0.1088
MC SVOA(SIMS)	INDENO[1,2,3-CD]PYRENE		0	0.000	0.000	0.0000		0	0.000	0.000	0.0000
MC SVOA(LS)	INDENO[1,2,3-CD]PYRENE	1,000	1	22.075	22.075	0.0198	2,500	2.5	50.403	50.403	0.0452
MC SVOA(LS)	DIBENZ(A,H)ANTHRACENE	1,500	1.5	33.113	33.113	0.0295	3,700	3.7	74.597	74.597	0.0664
MC SVOA(SIMS)	DIBENZ(A,H)ANTHRACENE		0	0.000	0.000	0.0000		0	0.000	0.000	0.0000
MC SVOA(SIMS)	C4-CHRYSENES	1,600 J	1.6	35.320	35.320	0.0291	3,300 J	3.3	66.532	66.532	0.0548
	Sum Total of ESBTU FCVi3					**4.9328**					**9.8940**

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Table 3-22B
Derivation of Total PAH ESB - May 2011 Otter Creek Sediment Samples
Duck and Otter Creeks Confluence Investigation
Toledo, Lucas County, Ohio

		OC-44					OC-45				
		OC-44-01					OC-45-01				
		0- 6					0- 6				
		5/10/2011					5/10/2011				
Analytical Method	Chemical Name	Conc µg/kg Dry wt	Conc µg/g	Coc µg/g Oc	Final Coc[2] µg/g Oc	ESBTU FCVi	Conc µg/kg Dry wt	Conc µg/g	Coc µg/g Oc	Final Coc[2] µg/g Oc	ESBTU FCVi
		7.24					3.64				
		0.0724					0.0364				
MC SVOA(SIMS)	C2-FLUORANTHENES/PYRENES	20,000 J	20	276.243	276.243	0.000	470 J	0.47	12.912	12.912	0.000
MC SVOA(LS)	NAPHTHALENE		0	0.000	0.000	0.0000		0	0.000	0.000	0.0000
MC SVOA(SIMS)	NAPHTHALENE	810	0.81	11.188	11.188	0.0291	360	0.36	9.890	9.890	0.0257
MC SVOA(SIMS)	C1-NAPHTHALENES	11,000 J	11	151.934	151.934	0.3422	720 J	0.72	19.780	19.780	0.0446
MC SVOA(SIMS)	1-METHYLNAPHTHALENE	5,100	5.1	70.442	70.442	0.1579	440	0.44	12.088	12.088	0.0271
MC SVOA(LS)	2-METHYLNAPHTHALENE	6,800	6.8	93.923	93.923	0.2101	500	0.5	13.736	13.736	0.0307
MC SVOA(SIMS)	2-METHYLNAPHTHALENE		0	0.000	0.000	0.0000		0	0.000	0.000	0.0000
MC SVOA(SIMS)	ACENAPHTHYLENE	13 U	0	0.000	0.000	0.0000	53	0.053	1.456	1.456	0.0032
MC SVOA(LS)	ACENAPHTHENE		0	0.000	0.000	0.0000		0	0.000	0.000	0.0000
MC SVOA(SIMS)	ACENAPHTHENE	680	0.68	9.392	9.392	0.0191	65	0.065	1.786	1.786	0.0036
MC SVOA(SIMS)	C2-NAPHTHALENES	41,000 J	41	566.298	566.298	1.1104	1,300 J	1.3	35.714	35.714	0.0700
MC SVOA(LS)	FLUORENE		0	0.000	0.000	0.0000		0	0.000	0.000	0.0000
MC SVOA(SIMS)	FLUORENE	1,700	1.7	23.481	23.481	0.0436	190	0.19	5.220	5.220	0.0097
MC SVOA(SIMS)	C3-NAPHTHALENES	53,000 J	53	732.044	732.044	1.2600	1,800 J	1.8	49.451	49.451	0.0851
MC SVOA(LS)	ANTHRACENE		0	0.000	0.000	0.0000		0	0.000	0.000	0.0000
MC SVOA(SIMS)	ANTHRACENE	1,900	1.9	26.243	26.243	0.0442	48 J	0.048	1.319	1.319	0.0022
MC SVOA(SIMS)	PHENANTHRENE		0	0.000	0.000	0.0000	320	0.32	8.791	8.791	0.0148
MC SVOA(LS)	PHENANTHRENE	7,000	7	96.685	96.685	0.1622		0	0.000	0.000	0.0000
MC SVOA(SIMS)	C1-FLUORENES	3,000 J	3	41.436	41.436	0.0678	190 J	0.19	5.220	5.220	0.0085
MC SVOA(SIMS)	C4-NAPHTHALENES	33,000 J	33	455.801	455.801	0.6938	790 J	0.79	21.703	21.703	0.0330
MC SVOA(SIMS)	C1-PHENANTHRENES/ANTHRACENES	22,000 J	22	303.867	303.867	0.4535	530 J	0.53	14.560	14.560	0.0217
MC SVOA(SIMS)	C2-FLUORENES	6,000 J	6	82.873	82.873	0.1208	270 J	0.27	7.418	7.418	0.0108
MC SVOA(SIMS)	PYRENE		0	0.000	0.000	0.0000	230	0.23	6.319	6.319	0.0091
MC SVOA(LS)	PYRENE	7,100	7.1	98.066	98.066	0.1407		0	0.000	0.000	0.0000
MC SVOA(LS)	FLUORANTHENE	2,700	2.7	37.293	37.293	0.0527		0	0.000	0.000	0.0000
MC SVOA(SIMS)	FLUORANTHENE		0	0.000	0.000	0.0000	180	0.18	4.945	4.945	0.0070
MC SVOA(SIMS)	C2-PHENANTHRENES/ANTHRACENES	28,000 J	28	386.740	386.740	0.5184	650 J	0.65	17.857	17.857	0.0239
MC SVOA(SIMS)	C3-FLUORENES	9,800 J	9.8	135.359	135.359	0.1760	350 J	0.35	9.615	9.615	0.0125
MC SVOA(SIMS)	C1-FLUORANTHENES/PYRENES	18,000 J	18	248.619	248.619	0.3229	410 J	0.41	11.264	11.264	0.0146
MC SVOA(SIMS)	C3-PHENANTHRENES/ANTHRACENES	26,000 J	26	359.116	359.116	0.4332	610 J	0.61	16.758	16.758	0.0202
MC SVOA(SIMS)	BENZO[A]ANTHRACENE		0	0.000	0.000	0.0000	230	0.23	6.319	6.319	0.0075
MC SVOA(LS)	BENZO[A]ANTHRACENE	6,700	6.7	92.541	92.541	0.1100		0	0.000	0.000	0.0000
MC SVOA(LS)	CHRYSENE	10,000	10	138.122	138.122	0.1637		0	0.000	0.000	0.0000
MC SVOA(SIMS)	CHRYSENE		0	0.000	0.000	0.0000	240	0.24	6.593	6.593	0.0078
MC SVOA(SIMS)	C4-PHENANTHRENES/ANTHRACENES	17,000 J	17	234.807	234.807	0.2572	390 J	0.39	10.714	10.714	0.0117
MC SVOA(SIMS)	C1-CHRYSENES	24,000 J	24	331.492	331.492	0.3568	370 J	0.37	10.165	10.165	0.0109
MC SVOA(SIMS)	C3-FLUORANTHENES/PYRENES	20,000 J	20	276.243	276.243	0.2911	380 J	0.38	10.440	10.440	0.0110
MC SVOA(LS)	BENZO[A]PYRENE	4,500	4.5	62.155	62.155	0.0644		0	0.000	0.000	0.0000
MC SVOA(SIMS)	BENZO[A]PYRENE		0	0.000	0.000	0.0000	180	0.18	4.945	4.945	0.0051
MC SVOA(SIMS)	BENZO[E]PYRENE	7,600	7.6	104.972	104.972	0.1086	240	0.24	6.593	6.593	0.0068
MC SVOA(SIMS)	PERYLENE	680	0.68	9.392	9.392	0.0097	28	0.028	0.769	0.769	0.0008
MC SVOA(LS)	BENZO[B]FLUORANTHENE	2,200	2.2	30.387	30.387	0.0310		0	0.000	0.000	0.0000
MC SVOA(SIMS)	BENZO[B]FLUORANTHENE		0	0.000	0.000	0.0000	170	0.17	4.670	4.670	0.0048
MC SVOA(LS)	BENZO[K]FLUORANTHENE		0	0.000	0.000	0.0000		0	0.000	0.000	0.0000
MC SVOA(SIMS)	BENZO[K]FLUORANTHENE	1,600	1.6	22.099	22.099	0.0225	140	0.14	3.846	3.846	0.0039
MC SVOA(SIMS)	C2-CHRYSENES	20,000 J	20	276.243	276.243	0.2741	360 J	0.36	9.890	9.890	0.0098
MC SVOA(LS)	BENZO[G,H,I]PERYLENE	3,100	3.1	42.818	42.818	0.0391		0	0.000	0.000	0.0000
MC SVOA(SIMS)	BENZO[G,H,I]PERYLENE		0	0.000	0.000	0.0000	310	0.31	8.516	8.516	0.0078
MC SVOA(SIMS)	C3-CHRYSENES	13,000 J	13	179.558	179.558	0.1615	270 J	0.27	7.418	7.418	0.0067
MC SVOA(SIMS)	INDENO[1,2,3-CD]PYRENE	2,400	2.4	33.149	33.149	0.0297	190	0.19	5.220	5.220	0.0047
MC SVOA(LS)	INDENO[1,2,3-CD]PYRENE		0	0.000	0.000	0.0000		0	0.000	0.000	0.0000
MC SVOA(LS)	DIBENZ(A,H)ANTHRACENE	3,200	3.2	44.199	44.199	0.0394		0	0.000	0.000	0.0000
MC SVOA(SIMS)	DIBENZ(A,H)ANTHRACENE		0	0.000	0.000	0.0000	150 J	0.15	4.121	4.121	0.0037
MC SVOA(SIMS)	C4-CHRYSENES	8,100 J	8.1	111.878	111.878	0.0922	140 J	0.14	3.846	3.846	0.0032
	Sum Total of ESBTU FCVi3					**8.4096**					0.5844

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Table 3-22B
Derivation of Total PAH ESB - May 2011 Otter Creek Sediment Samples
Duck and Otter Creeks Confluence Investigation
Toledo, Lucas County, Ohio

		OC-46					OC-47				
		OC-46-01					OC-47-01				
		0- 6					0- 6				
		5/12/2011					5/12/2011				
Analytical Method	Chemical Name	Conc µg/kg Dry wt	Conc µg/g	Coc µg/g Oc	Final Coc[2] µg/g Oc	ESBTU FCVi	Conc µg/kg Dry wt	Conc µg/g	Coc µg/g Oc	Final Coc[2] µg/g Oc	ESBTU FCVi
		2.25					2.07				
		0.0225					0.0207				
MC SVOA(SIMS)	C2-FLUORANTHENES/PYRENES	29 J	0.029	1.289	1.289	0.000	36 J	0.036	1.739	1.739	0.000
MC SVOA(LS)	NAPHTHALENE		0	0.000	0.000	0.0000		0	0.000	0.000	0.0000
MC SVOA(SIMS)	NAPHTHALENE	22	0.022	0.978	0.978	0.0025	7.3 UJ	0	0.000	0.000	0.0000
MC SVOA(SIMS)	C1-NAPHTHALENES	25 J	0.025	1.111	1.111	0.0025	7.3 UJ	0	0.000	0.000	0.0000
MC SVOA(SIMS)	1-METHYLNAPHTHALENE	12	0.012	0.533	0.533	0.0012	7.3 UJ	0	0.000	0.000	0.0000
MC SVOA(LS)	2-METHYLNAPHTHALENE		0	0.000	0.000	0.0000		0	0.000	0.000	0.0000
MC SVOA(SIMS)	2-METHYLNAPHTHALENE	23	0.023	1.022	1.022	0.0023	7.3 UJ	0	0.000	0.000	0.0000
MC SVOA(SIMS)	ACENAPHTHYLENE	7.8	0.0078	0.347	0.347	0.0008	6.7 J	0.0067	0.324	0.324	0.0007
MC SVOA(LS)	ACENAPHTHENE		0	0.000	0.000	0.0000		0	0.000	0.000	0.0000
MC SVOA(SIMS)	ACENAPHTHENE	7.3 U	0.0073	0.324	0.324	0.0007	7.3 UJ	0	0.000	0.000	0.0000
MC SVOA(SIMS)	C2-NAPHTHALENES	30 J	0.03	1.333	1.333	0.0026	7.3 UJ	0	0.000	0.000	0.0000
MC SVOA(LS)	FLUORENE		0	0.000	0.000	0.0000		0	0.000	0.000	0.0000
MC SVOA(SIMS)	FLUORENE	7.6	0.0076	0.338	0.338	0.0006	7.3 UJ	0	0.000	0.000	0.0000
MC SVOA(SIMS)	C3-NAPHTHALENES	36 J	0.036	1.600	1.600	0.0028	7.3 UJ	0	0.000	0.000	0.0000
MC SVOA(LS)	ANTHRACENE		0	0.000	0.000	0.0000		0	0.000	0.000	0.0000
MC SVOA(SIMS)	ANTHRACENE	11	0.011	0.489	0.489	0.0008	17 J	0.017	0.821	0.821	0.0014
MC SVOA(SIMS)	PHENANTHRENE	39	0.039	1.733	1.733	0.0029	45 J	0.045	2.174	2.174	0.0036
MC SVOA(LS)	PHENANTHRENE		0	0.000	0.000	0.0000		0	0.000	0.000	0.0000
MC SVOA(SIMS)	C1-FLUORENES	7.3 U	0.0073	0.324	0.324	0.0005	7.3 UJ	0	0.000	0.000	0.0000
MC SVOA(SIMS)	C4-NAPHTHALENES	24 J	0.024	1.067	1.067	0.0016	7.3 UJ	0	0.000	0.000	0.0000
MC SVOA(SIMS)	C1-PHENANTHRENES/ANTHRACENES	35 J	0.035	1.556	1.556	0.0023	38 J	0.038	1.836	1.836	0.0027
MC SVOA(SIMS)	C2-FLORENES	7.3 U	0.0073	0.324	0.324	0.0005	7.3 UJ	0	0.000	0.000	0.0000
MC SVOA(SIMS)	PYRENE	58	0.058	2.578	2.578	0.0037	130 J	0.13	6.280	6.280	0.0090
MC SVOA(LS)	PYRENE		0	0.000	0.000	0.0000		0	0.000	0.000	0.0000
MC SVOA(LS)	FLUORANTHENE		0	0.000	0.000	0.0000		0	0.000	0.000	0.0000
MC SVOA(SIMS)	FLUORANTHENE	63	0.063	2.800	2.800	0.0040	130 J	0.13	6.280	6.280	0.0089
MC SVOA(SIMS)	C2-PHENANTHRENES/ANTHRACENES	29 J	0.029	1.289	1.289	0.0017	38 J	0.038	1.836	1.836	0.0025
MC SVOA(SIMS)	C3-FLUORENES	7.3 U	0.0073	0.324	0.324	0.0004	7.3 UJ	0	0.000	0.000	0.0000
MC SVOA(SIMS)	C1-FLUORANTHENES/PYRENES	43 J	0.043	1.911	1.911	0.0025	57 J	0.057	2.754	2.754	0.0036
MC SVOA(SIMS)	C3-PHENANTHRENES/ANTHRACENES	24 J	0.024	1.067	1.067	0.0013	37 J	0.037	1.787	1.787	0.0022
MC SVOA(SIMS)	BENZO[A]ANTHRACENE	40	0.04	1.778	1.778	0.0021	62 J	0.062	2.995	2.995	0.0036
MC SVOA(LS)	BENZO[A]ANTHRACENE		0	0.000	0.000	0.0000		0	0.000	0.000	0.0000
MC SVOA(LS)	CHRYSENE		0	0.000	0.000	0.0000		0	0.000	0.000	0.0000
MC SVOA(SIMS)	CHRYSENE	44	0.044	1.956	1.956	0.0023	67 J	0.067	3.237	3.237	0.0038
MC SVOA(SIMS)	C4-PHENANTHRENES/ANTHRACENES	7.3 U	0.0073	0.324	0.324	0.0004	7.3 UJ	0	0.000	0.000	0.0000
MC SVOA(SIMS)	C1-CHRYSENES	36 J	0.036	1.600	1.600	0.0017	45 J	0.045	2.174	2.174	0.0023
MC SVOA(SIMS)	C3-FLUORANTHENES/PYRENES	23 J	0.023	1.022	1.022	0.0011	32 J	0.032	1.546	1.546	0.0016
MC SVOA(LS)	BENZO[A]PYRENE		0	0.000	0.000	0.0000		0	0.000	0.000	0.0000
MC SVOA(SIMS)	BENZO[A]PYRENE	42	0.042	1.867	1.867	0.0019	64 J	0.064	3.092	3.092	0.0032
MC SVOA(SIMS)	BENZO[E]PYRENE	33 J	0.033	1.467	1.467	0.0015	50 J	0.05	2.415	2.415	0.0025
MC SVOA(SIMS)	PERYLENE	15	0.015	0.667	0.667	0.0007	26 J	0.026	1.256	1.256	0.0013
MC SVOA(LS)	BENZO[B]FLUORANTHENE		0	0.000	0.000	0.0000		0	0.000	0.000	0.0000
MC SVOA(SIMS)	BENZO[B]FLUORANTHENE	43 J	0.043	1.911	1.911	0.0020	67 J	0.067	3.237	3.237	0.0033
MC SVOA(LS)	BENZO[K]FLUORANTHENE		0	0.000	0.000	0.0000		0	0.000	0.000	0.0000
MC SVOA(SIMS)	BENZO[K]FLUORANTHENE	28	0.028	1.244	1.244	0.0013	45 J	0.045	2.174	2.174	0.0022
MC SVOA(SIMS)	C2-CHRYSENES	30 J	0.03	1.333	1.333	0.0013	35 J	0.035	1.691	1.691	0.0017
MC SVOA(LS)	BENZO[G,H,I]PERYLENE		0	0.000	0.000	0.0000		0	0.000	0.000	0.0000
MC SVOA(SIMS)	BENZO[G,H,I]PERYLENE	46	0.046	2.044	2.044	0.0019	60 J	0.06	2.899	2.899	0.0026
MC SVOA(SIMS)	C3-CHRYSENES	55 J	0.055	2.444	2.444	0.0022	7.3 UJ	0	0.000	0.000	0.0000
MC SVOA(SIMS)	INDENO[1,2,3-CD]PYRENE	36	0.036	1.600	1.600	0.0014	49 J	0.049	2.367	2.367	0.0021
MC SVOA(LS)	INDENO[1,2,3-CD]PYRENE		0	0.000	0.000	0.0000		0	0.000	0.000	0.0000
MC SVOA(LS)	DIBENZ(A,H)ANTHRACENE		0	0.000	0.000	0.0000		0	0.000	0.000	0.0000
MC SVOA(SIMS)	DIBENZ(A,H)ANTHRACENE	19	0.019	0.844	0.844	0.0008	22 J	0.022	1.063	1.063	0.0009
MC SVOA(SIMS)	C4-CHRYSENES	60 J	0.06	2.667	2.667	0.0022	7.3 UJ	0	0.000	0.000	0.0000
	Sum Total of ESBTU FCVi3					0.0629					0.0659

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1269-2A-AUIK

Table 3-22B
Derivation of Total PAH ESB - May 2011 Otter Creek Sediment Samples
Duck and Otter Creeks Confluence Investigation
Toledo, Lucas County, Ohio

		OC-48				
		OC-48-01				
		0- 6				
		5/12/2011				
Analytical Method	Chemical Name	Conc µg/kg Dry wt	Conc µg/g	Coc µg/g Oc	Final Coc[2] µg/g Oc	ESBTU FCVi
		2.01				
		0.0201				
MC SVOA(SIMS)	C2-FLUORANTHENES/PYRENES	57 J	0.057	2.836	2.836	0.000
MC SVOA(LS)	NAPHTHALENE		0	0.000	0.000	0.0000
MC SVOA(SIMS)	NAPHTHALENE	66	0.066	3.284	3.284	0.0085
MC SVOA(SIMS)	C1-NAPHTHALENES	28 J	0.028	1.393	1.393	0.0031
MC SVOA(SIMS)	1-METHYLNAPHTHALENE	13	0.013	0.647	0.647	0.0015
MC SVOA(LS)	2-METHYLNAPHTHALENE		0	0.000	0.000	0.0000
MC SVOA(SIMS)	2-METHYLNAPHTHALENE	25	0.025	1.244	1.244	0.0028
MC SVOA(SIMS)	ACENAPHTHYLENE	22	0.022	1.095	1.095	0.0024
MC SVOA(LS)	ACENAPHTHENE		0	0.000	0.000	0.0000
MC SVOA(SIMS)	ACENAPHTHENE	8.8	0.0088	0.438	0.438	0.0009
MC SVOA(SIMS)	C2-NAPHTHALENES	33 J	0.033	1.642	1.642	0.0032
MC SVOA(LS)	FLUORENE		0	0.000	0.000	0.0000
MC SVOA(SIMS)	FLUORENE	18	0.018	0.896	0.896	0.0017
MC SVOA(SIMS)	C3-NAPHTHALENES	44 J	0.044	2.189	2.189	0.0038
MC SVOA(LS)	ANTHRACENE		0	0.000	0.000	0.0000
MC SVOA(SIMS)	ANTHRACENE	32	0.032	1.592	1.592	0.0027
MC SVOA(SIMS)	PHENANTHRENE	85	0.085	4.229	4.229	0.0071
MC SVOA(LS)	PHENANTHRENE		0	0.000	0.000	0.0000
MC SVOA(SIMS)	C1-FLUORENES	7.3 U	0	0.000	0.000	0.0000
MC SVOA(SIMS)	C4-NAPHTHALENES	34 J	0.034	1.692	1.692	0.0026
MC SVOA(SIMS)	C1-PHENANTHRENES/ANTHRACENES	75 J	0.075	3.731	3.731	0.0056
MC SVOA(SIMS)	C2-FLUORENES	7.3 U	0	0.000	0.000	0.0000
MC SVOA(SIMS)	PYRENE	150	0.15	7.463	7.463	0.0107
MC SVOA(LS)	PYRENE		0	0.000	0.000	0.0000
MC SVOA(LS)	FLUORANTHENE		0	0.000	0.000	0.0000
MC SVOA(SIMS)	FLUORANTHENE	150	0.15	7.463	7.463	0.0106
MC SVOA(SIMS)	C2-PHENANTHRENES/ANTHRACENES	59 J	0.059	2.935	2.935	0.0039
MC SVOA(SIMS)	C3-FLUORENES	7.3 U	0	0.000	0.000	0.0000
MC SVOA(SIMS)	C1-FLUORANTHENES/PYRENES	110 J	0.11	5.473	5.473	0.0071
MC SVOA(SIMS)	C3-PHENANTHRENES/ANTHRACENES	51 J	0.051	2.537	2.537	0.0031
MC SVOA(SIMS)	BENZO[A]ANTHRACENE	110	0.11	5.473	5.473	0.0065
MC SVOA(LS)	BENZO[A]ANTHRACENE		0	0.000	0.000	0.0000
MC SVOA(LS)	CHRYSENE		0	0.000	0.000	0.0000
MC SVOA(SIMS)	CHRYSENE	110	0.11	5.473	5.473	0.0065
MC SVOA(SIMS)	C4-PHENANTHRENES/ANTHRACENES	7.3 U	0	0.000	0.000	0.0000
MC SVOA(SIMS)	C1-CHRYSENES	67 J	0.067	3.333	3.333	0.0036
MC SVOA(SIMS)	C3-FLUORANTHENES/PYRENES	52 J	0.052	2.587	2.587	0.0027
MC SVOA(LS)	BENZO[A]PYRENE		0	0.000	0.000	0.0000
MC SVOA(SIMS)	BENZO[A]PYRENE	150	0.15	7.463	7.463	0.0077
MC SVOA(SIMS)	BENZO[E]PYRENE	120	0.12	5.970	5.970	0.0062
MC SVOA(SIMS)	PERYLENE	27	0.027	1.343	1.343	0.0014
MC SVOA(LS)	BENZO[B]FLUORANTHENE		0	0.000	0.000	0.0000
MC SVOA(SIMS)	BENZO[B]FLUORANTHENE	150	0.15	7.463	7.463	0.0076
MC SVOA(LS)	BENZO[K]FLUORANTHENE		0	0.000	0.000	0.0000
MC SVOA(SIMS)	BENZO[K]FLUORANTHENE	54	0.054	2.687	2.687	0.0027
MC SVOA(SIMS)	C2-CHRYSENES	57 J	0.057	2.836	2.836	0.0028
MC SVOA(LS)	BENZO[G,H,I]PERYLENE		0	0.000	0.000	0.0000
MC SVOA(SIMS)	BENZO[G,H,I]PERYLENE	240	0.24	11.940	11.940	0.0109
MC SVOA(SIMS)	C3-CHRYSENES	46 J	0.046	2.289	2.289	0.0021
MC SVOA(SIMS)	INDENO[1,2,3-CD]PYRENE	70	0.07	3.483	3.483	0.0031
MC SVOA(LS)	INDENO[1,2,3-CD]PYRENE		0	0.000	0.000	0.0000
MC SVOA(LS)	DIBENZ(A,H)ANTHRACENE		0	0.000	0.000	0.0000
MC SVOA(SIMS)	DIBENZ(A,H)ANTHRACENE	34	0.034	1.692	1.692	0.0015
MC SVOA(SIMS)	C4-CHRYSENES	63 J	0.063	3.134	3.134	0.0026
Sum Total of ESBTU FCVi3						0.1491

Notes:
% = Percent
-- = A criterion or value is not available
µg/g = Microgram per gram
µg/g Oc = Microgram per gram organic carbon
µg/kg = Micrograms per kilograms
Coc = Concentration
Conc = Concentration
ESB = Equilibrium partitioning sediment benchmark
ESBTU = Equilibrium partitioning sediment benchmark toxic unit
FCVi = Final chronic value for individual PAH
foc = Fraction organic carbon
ID = Identification
J = Estimated value; concentration below RL or exceeded RL, but one or more quality control parameters
were outside control limits
LS = Low soil
MC =
Maxi = Maximum individual PAH
NA = Criterion or value not available
PAH = Polycyclic aromatic hydrocarbon
PAHi = Individual PAH
RL = Reporting limit
SIMS = Selective ion monitoring
SOVA = Semi volatile organic analysis
TOC = Total organic carbon
U = Coded data omitted from ESB calculations
wt = Weight
[1] PAHs and corresponding Coc PAHi, FCVi and Coc PAHi, Maxi values are from Table 3-4 in EPA, 2003. Example
[2] Because COC exceeds COC, PAHi, Maxi , COC, PAHi, Maxi is substituted for COC to calculate ESBTU FCVi (see text).
3 Sum of Total ESBTU FCVi = Sum of Coc, PAHi /Coc, PAHi, FVi;. If Sum of Total ESBTU FCVi exceeds one, the mixture of PAHs in sediment may not be acceptable for the protection of benthic organisms.
Source:
EPA. 2003. Procedures for the Derivation of Equilibrium Partitioning Sediment Benchmarks (ESBs) for the Protection of Benthic Organisms: PAH Mixtures. EPA/600/R-02/013. November 2003.

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Table 3-23A
Pore Water PAH Concentrations Compared to Surface Water Benchmarks - Otter Creek Confluence Sediment Samples
Duck and Otter Creeks Confluences Investigation
Toledo, Lucas County, Ohio

Chemical Name	PAH Specific (ug/L)	OC-26 11/3/2010		OC-27 11/3/2010		OC-28 11/3/2010		OC-29 11/4/2010		OC-30 11/4/2010	
		Cporewater	$IWTU_{FCV}$	Cporewater	$IWTU_{FCV}$	Cporewater	$IWTU_{FCV}$	Cporewater	$IWTU_{FCV}$	Cporewater	$IWTU_{FCV}$
PAHs (ng/g = ug/L, at water density of 1 g/mL)											
1-METHYLNAPHTHALENE	75.37	0.22	0.0029	0.16	0.0021	0.39	0.0052	0.12	0.0016	0.07	0.0009
2-METHYLNAPHTHALENE	72.16	0.1	0.0014	0.07	0.0010	0.08	0.0011	0.05	0.0007	U	0.0000
ACENAPHTHENE	55.85	0.93	0.0167	0.9	0.0161	0.25	0.0045	0.71	0.0127	0.36	0.0064
ACENAPHTHYLENE	306.9	0.31	0.0010	0.42	0.0014	0.2 U	0.0007	0.23	0.0007	U	0.0000
ANTHRACENE	20.73	0.52	0.0251	0.7	0.0338	0.2	0.0096	0.58	0.0280	0.23	0.0111
BENZO[A]ANTHRACENE	2.227	**0.12**	0.0539	**0.19**	0.0853	**0.14**	0.0629	**0.36**	0.1617	**0.06**	0.0269
BENZO[A]PYRENE	0.9573	**0.08**	0.0836	**0.12**	0.1254	**0.1**	0.1045	**0.08**	0.0836	U	0.0000
BENZO[B+K]FLUORANTHENE	0.6145	0.03	0.0488	0.04	0.0651	0.02	0.0325	0.16	0.2604	U	0.0000
BENZO[E]PYRENE	0.9008	0.04	0.0444	0.06	0.0666	0.05	0.0555	0.07	0.0777	U	0.0000
BENZO[G,H,I]PERYLENE	0.4391	0.001 U		U		U	0.0000	U	0.0000	U	0.0000
C1-CHRYSENES	0.8557	0.18	0.2104	0.32	0.3740	0.24	0.2805	0.45	0.5259	0.1	0.1169
C1-FLUORANTHENES/PYRENES	4.887	0.9	0.1842	1.37	0.2803	1.03	0.2108	1.82	0.3724	0.45	0.0921
C1-FLUORENES	13.99	4.5	0.3217	4.52	0.3231	1.56	0.1115	3.59	0.2566	1.91	0.1365
C1-PHENANTHRENES/ANTHRACENES	7.436	5.91	0.7948	1.54	0.2071	2.11	0.2838	1.13	0.1520	1.63	0.2192
C2-CHRYSENES	0.4827	0.18	0.3729	0.27	0.5594	0.01 U	0.0207	U	0.0000	U	0.0000
C2-FLUORENES	5.305	4.64	0.8746	7.31	1.3779	2.92	0.5504	**5.81**	1.0952	2.08	0.3921
C2-NAPHTHALENES	30.24	17.37	0.5744	4.59	0.1518	5.92	0.1958	2.12	0.0701	2.55	0.0843
C2-PHENANTHRENES/ANTHRACENES	3.199	**5.83**	1.8224	**6.25**	1.9537	**4**	1.2504	**5.69**	1.7787	2.06	0.6440
C3-CHRYSENES	0.1675	0.01 U	0.0597	0.01 U		U	0.0000	U	0.0000	0.01 U	0.0597
C3-FLUORENES	1.916	**3.55**	1.8528	**6.1**	3.1837	**3.4**	1.7745	**5.94**	3.1002	1.55	0.8090
C3-NAPHTHALENES	11.1	**80.56**	7.2577	**33.69**	3.0351	**22.23**	2.0027	**19.55**	1.7613	**26.38**	2.3766
C3-PHENANTHRENES/ANTHRACENES	1.256	**2.09**	1.6640	**3.97**	3.1608	**2.13**	1.6959	**3.46**	2.7548	0.81	0.6449
C4-CHRYSENES	0.07062	U		U		U	0.0000	U	0.0000	U	0.0000
C4-NAPHTHALENES	4.048	**36.46**	9.0069	**49.31**	12.1813	**20.15**	4.9778	**33.79**	8.3473	**16.01**	3.9550
C4-PHENANTHRENES/ANTHRACENES	0.5594	**1.11**	1.9843	**2.18**	3.8970	**0.91**	1.6267	**2.81**	5.0232	0.39	0.6972
CHRYSENE	2.042	0.18	0.0881	0.32	0.1567	0.27	0.1322	0.44	0.2155	0.11	0.0539
DIBENZ(A,H)ANTHRACENE	0.2825	U		U		U	0.0000	U	0.0000	U	0.0000
FLUORANTHENE	7.109	0.01	0.0014	**0.25**	0.0352	**0.2**	0.0281	**0.28**	0.0394	**0.16**	0.0225
FLUORENE	39.3	1.4	0.0356	0.24	0.0061	0.24	0.0061	0.17	0.0043	0.71	0.0181
INDENO[1,2,3-CD]PYRENE	0.275	U		U		U	0.0000	U	0.0000	U	0.0000
NAPHTHALENE	193.5	0.41	0.0021	0.43	0.0022	0.13	0.0007	0.35	0.0018	0.11	0.0006
PERYLENE	0.9008	U		U		0.03	0.0333	0.02	0.0222	U	0.0000
PHENANTHRENE	19.13	1.86	0.0972	0.12	0.0063	0.44	0.0230	0.13	0.0068	0.44	0.0230
PYRENE	10.11	**0.68**	0.0673	**0.88**	0.0870	**0.74**	0.0732	**0.92**	0.0910	**0.52**	0.0514
Sum IWTU			28		31		16		26		10

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Table 3-23A
Pore Water PAH Concentrations Compared to Surface Water Benchmarks - Otter Creek Confluence Sediment Samples
Duck and Otter Creeks Confluences Investigation
Toledo, Lucas County, Ohio

Chemical Name	PAH Specific (ug/L)	OC-31 11/4/2010		OC-32 11/4/2010		OC-33 11/4/2010		OC-34-01 5/10/2011		OC-35-01 5/12/2011	
		Cporewater	$IWTU_{FCV}$	Cporewater	$IWTU_{FCV}$	Cporewater	$IWTU_{FCV}$	Cporewater	$IWTU_{FCV}$	Cporewater	$IWTU_{FCV}$
PAHs (ng/g = ug/L, at water density of 1 g/mL)											
1-METHYLNAPHTHALENE	75.37	U	0.0000	U	0.0000	U	0.0000	U	0.0000	U	0.0000
2-METHYLNAPHTHALENE	72.16	U	0.0000	U	0.0000	U	0.0000	U	0.0000	U	0.0000
ACENAPHTHENE	55.85	U	0.0000	0.24	0.0043	U	0.0000	U	0.0000	0.133 J	0.0024
ACENAPHTHYLENE	306.9	U	0.0000	U	0.0000	U	0.0000	U	0.0000	U	0.0000
ANTHRACENE	20.73	U	0.0000	0.26	0.0125	U	0.0000	U	0.0000	U	0.0000
BENZO[A]ANTHRACENE	2.227	0	0.0000	0.1	0.0449	0.003	0.0013	U	0.0000	0.001 J	0.0004
BENZO[A]PYRENE	0.9573	U	0.0000	U	0.0000	U	0.0000	U	0.0000	U	0.0000
BENZO[B+K]FLUORANTHENE	0.6145	U	0.0000	U	0.0000	U	0.0000	U	0.0000	U	0.0000
BENZO[E]PYRENE	0.9008	U	0.0000	U	0.0000	U	0.0000	U	0.0000	U	0.0000
BENZO[G,H,I]PERYLENE	0.4391	U	0.0000	U	0.0000	U	0.0000	U	0.0000	U	0.0000
C1-CHRYSENES	0.8557	U	0.0000	0.16	0.1870	U	0.0000	U	0.0000	U	0.0000
C1-FLUORANTHENES/PYRENES	4.887	0.03	0.0061	0.7	0.1432	U	0.0000	0.01 J	0.0020	0.13 J	0.0266
C1-FLUORENES	13.99	U	0.0000	1.25	0.0893	U	0.0000	U	0.0000	0.144 J	0.0103
C1-PHENANTHRENES/ANTHRACENES	7.436	0.04	0.0054	0.67	0.0901	U	0.0000	U	0.0000	0.184 J	0.0247
C2-CHRYSENES	0.4827	U	0.0000	U	0.0000	U	0.0000	U	0.0000	U	0.0000
C2-FLUORENES	5.305	U	0.0000	2.05	0.3864	U	0.0000	U	0.0000	0.277 J	0.0522
C2-NAPHTHALENES	30.24	0.16	0.0053	1.36	0.0450	0.17	0.0056	U	0.0000	0.885 J	0.0293
C2-PHENANTHRENES/ANTHRACENES	3.199	0.23	0.0719	1.64	0.5127	U	0.0000	U	0.0000	0.507 J	0.1585
C3-CHRYSENES	0.1675	U	0.0000	U	0.0000	U	0.0000	U	0.0000	U	0.0000
C3-FLUORENES	1.916	U	0.0000	U	0.0000	U	0.0000	U	0.0000	U	0.0000
C3-NAPHTHALENES	11.1	U	0.0000	10.55	0.9505	U	0.0000	U	0.0000	3.734 J	0.3364
C3-PHENANTHRENES/ANTHRACENES	1.256	0.11	0.0876	1.16	0.9236	U	0.0000	U	0.0000	0.262 J	0.2086
C4-CHRYSENES	0.07062	U	0.0000	U	0.0000	U	0.0000	U	0.0000	U	0.0000
C4-NAPHTHALENES	4.048	U	0.0000	**11.45**	2.8286	U	0.0000	U	0.0000	2.898 J	0.7159
C4-PHENANTHRENES/ANTHRACENES	0.5594	U	0.0000	0.61	1.0905	U	0.0000	U	0.0000	U	0.0000
CHRYSENE	2.042	0.01	0.0049	0.14	0.0686	0.003	0.0015	U	0.0000	0.01 J	0.0049
DIBENZ(A,H)ANTHRACENE	0.2825	U	0.0000	U	0.0000	U	0.0000	U	0.0000	U	0.0000
FLUORANTHENE	7.109	U	0.0000	**0.3**	0.0422	U	0.0000	U	0.0000	**0.07 J**	0.0098
FLUORENE	39.3	U	0.0000	0.23	0.0059	U	0.0000	U	0.0000	0.083 J	0.0021
INDENO[1,2,3-CD]PYRENE	0.275	U	0.0000	U	0.0000	U	0.0000	U	0.0000	U	0.0000
NAPHTHALENE	193.5	U	0.0000	0.14	0.0007	U	0.0000	U	0.0000	U	0.0000
PERYLENE	0.9008	U	0.0000	U	0.0000	U	0.0000	U	0.0000	U	0.0000
PHENANTHRENE	19.13	U	0.0000	0.17	0.0089	U	0.0000	U	0.0000	U	0.0000
PYRENE	10.11	0.01	0.0010	**0.68**	0.0673	0.02	0.0020	0.02 J	0.0020	0.16 J	0.0158
Sum IWTU			0.2		8		0.010		0.004		2

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Table 3-23A
Pore Water PAH Concentrations Compared to Surface Water Benchmarks - Otter Creek Confluence Sediment Samples
Duck and Otter Creeks Confluences Investigation
Toledo, Lucas County, Ohio

Chemical Name	PAH Specific (ug/L)	OC-36-01 5/10/2011		OC-38 5/11/2011		OC-40-01 5/10/2011		OC-41-01 5/10/2011		OC-42-01 5/11/2011	
		Cporewater	$IWTU_{FCV}$	Cporewater	$IWTU_{FCV}$	Cporewater	$IWTU_{FCV}$	Cporewater	$IWTU_{FCV}$	Cporewater	$IWTU_{FCV}$
PAHs (ng/g = ug/L, at water density of 1 g/mL)											
1-METHYLNAPHTHALENE	75.37	0.08 J	0.0011	U	0.0000	U	0.0000	U	0.0000	**7.41**	0.0983
2-METHYLNAPHTHALENE	72.16	0.08 J	0.0011	U	0.0000	U	0.0000	U	0.0000	0.453 J	0.0063
ACENAPHTHENE	55.85	U	0.0000	U	0.0000	U	0.0000	U	0.0000	4.464	0.0799
ACENAPHTHYLENE	306.9	U	0.0000	U	0.0000	U	0.0000	U	0.0000	2.874	0.0094
ANTHRACENE	20.73	U	0.0000	U	0.0000	U	0.0000	U	0.0000	3.482	0.1680
BENZO[A]ANTHRACENE	2.227	0.001 J	0.0004	U	0.0000	U	0.0000	U	0.0000	0.129	0.0579
BENZO[A]PYRENE	0.9573	U	0.0000	U	0.0000	U	0.0000	U	0.0000	**0.02 J**	0.0209
BENZO[B+K]FLUORANTHENE	0.6145	U	0.0000	U	0.0000	U	0.0000	U	0.0000	0.03 J	0.0488
BENZO[E]PYRENE	0.9008	U	0.0000	U	0.0000	U	0.0000	U	0.0000	0.046 J	0.0511
BENZO[G,H,I]PERYLENE	0.4391	U	0.0000	U	0.0000	U	0.0000	U	0.0000	0.005 J	0.0114
C1-CHRYSENES	0.8557	U	0.0000	U	0.0000	U	0.0000	U	0.0000	0.188	0.2197
C1-FLUORANTHENES/PYRENES	4.887	0.024 J	0.0049	U	0.0000	U	0.0000	0.02 J	0.0041	**7.999**	1.6368
C1-FLUORENES	13.99	0.03 J	0.0021	U	0.0000	U	0.0000	U	0.0000	**27.62**	1.9743
C1-PHENANTHRENES/ANTHRACENES	7.436	0.079 J	0.0106	U	0.0000	U	0.0000	U	0.0000	**59.97**	8.0648
C2-CHRYSENES	0.4827	U	0.0000	U	0.0000	U	0.0000	U	0.0000	0.127 J	0.2631
C2-FLUORENES	5.305	0.1 J	0.0189	U	0.0000	U	0.0000	U	0.0000	**27.455**	5.1753
C2-NAPHTHALENES	30.24	0.278 J	0.0092	0.285 J	0.0094	U	0.0000	0.433 J	0.0143	**130.716**	4.3226
C2-PHENANTHRENES/ANTHRACENES	3.199	0.166 J	0.0519	U	0.0000	U	0.0000	U	0.0000	**37.959**	11.8659
C3-CHRYSENES	0.1675	U	0.0000	U	0.0000	U	0.0000	U	0.0000	0.01 U	0.0597
C3-FLUORENES	1.916	U	0.0000	U	0.0000	U	0.0000	U	0.0000	**20.479**	10.6884
C3-NAPHTHALENES	11.1	0.771 J	0.0695	U	0.0000	U	0.0000	U	0.0000	**476.228**	42.9034
C3-PHENANTHRENES/ANTHRACENES	1.256	U	0.0000	U	0.0000	U	0.0000	U	0.0000	**10.549**	8.3989
C4-CHRYSENES	0.07062	U	0.0000	U	0.0000	U	0.0000	U	0.0000	U	0.0000
C4-NAPHTHALENES	4.048	0.586 J	0.1448	U	0.0000	U	0.0000	U	0.0000	**241.073**	59.5536
C4-PHENANTHRENES/ANTHRACENES	0.5594	U	0.0000	U	0.0000	U	0.0000	U	0.0000	**5.943 J**	10.6239
CHRYSENE	2.042	0.001 J	0.0005	U	0.0000	U	0.0000	0.001 J	0.0005	0.28	0.1371
DIBENZ(A,H)ANTHRACENE	0.2825	U	0.0000	U	0.0000	U	0.0000	U	0.0000	U	0.0000
FLUORANTHENE	7.109	0.016 J	0.0023	U	0.0000	0.01 J	0.0014	0.01 J	0.0014	**2.074**	0.2917
FLUORENE	39.3	U	0.0000	U	0.0000	U	0.0000	U	0.0000	**8.84**	0.2249
INDENO[1,2,3-CD]PYRENE	0.275	U	0.0000	U	0.0000	U	0.0000	U	0.0000	0.001 J	0.0036
NAPHTHALENE	193.5	0.26 J	0.0013	0.12 J	0.0006	U	0.0000	0.145 J	0.0007	**2.467 J**	0.0127
PERYLENE	0.9008	U	0.0000	U	0.0000	U	0.0000	U	0.0000	U	0.0000
PHENANTHRENE	19.13	U	0.0000	U	0.0000	U	0.0000	U	0.0000	**37.173**	1.9432
PYRENE	10.11	0.037 J	0.0037	U	0.0000	0.02 J	0.0020	0.02 J	0.0020	8.166	0.8077
Sum IWTU			0.32		0.01		0.003		0.02		170

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Table 3-23A
Pore Water PAH Concentrations Compared to Surface Water Benchmarks - Otter Creek Confluence Sediment Samples
Duck and Otter Creeks Confluences Investigation
Toledo, Lucas County, Ohio

Chemical Name	PAH Specific (ug/L)	OC-42-01-DP 5/11/2011		OC-44-01 5/10/2011		OC-45-01 5/10/2011		OC-46-01 5/12/2011		OC-47-01 5/12/2011		OC-48-01 5/12/2011	
		Cporewater	$IWTU_{FCV}$	Cporewater	$IWTU_{FCV}$	Cporewater	$IWTU_{FCV}$	Cporewater	$IWTU_{FCV}$	Cporewater	$IWTU_{FCV}$	Cporewater	$IWTU_{FCV}$
PAHs (ng/g = ug/L, at water density of 1 g/mL)													
1-METHYLNAPHTHALENE	75.37		0.0000	**20.568**	0.2729	0.352 J	0.0047	0.066 J	0.0009	0.06 J	0.0008	0.06 J	0.0008
2-METHYLNAPHTHALENE	72.16		0.0000	19.995	0.2771	0.274 J	0.0038	0.06 J	0.0008	0.06 J	0.0008	U	0.0000
ACENAPHTHENE	55.85		0.0000	1.354	0.0242	2.213	0.0396	U	0.0000	U	0.0000	U	0.0000
ACENAPHTHYLENE	306.9		0.0000	1.056	0.0034	2.064	0.0067	U	0.0000	U	0.0000	U	0.0000
ANTHRACENE	20.73		0.0000	0.398	0.0192	0.404	0.0195	U	0.0000	U	0.0000	U	0.0000
BENZO[A]ANTHRACENE	2.227		0.0000	0.019 J	0.0085	0.085 J	0.0382	U	0.0000	U	0.0000	U	0.0000
BENZO[A]PYRENE	0.9573		0.0000	0.01 J	0.0104	U	0.0000	U	0.0000	U	0.0000	U	0.0000
BENZO[B+K]FLUORANTHENE	0.6145		0.0000	U	0.0000	U	0.0000	U	0.0000	U	0.0000	U	0.0000
BENZO[E]PYRENE	0.9008		0.0000	U	0.0000	U	0.0000	U	0.0000	U	0.0000	U	0.0000
BENZO[G,H,I]PERYLENE	0.4391		0.0000	U	0.0000	U	0.0000	U	0.0000	U	0.0000	U	0.0000
C1-CHRYSENES	0.8557		0.0000	0.044 J	0.0514	0.165	0.1928	U	0.0000	U	0.0000	U	0.0000
C1-FLUORANTHENES/PYRENES	4.887		0.0000	1.605	0.3284	1.035	0.2118	U	0.0000	U	0.0000	U	0.0000
C1-FLUORENES	13.99		0.0000	4.83	0.3452	7.696	0.5501	U	0.0000	U	0.0000	U	0.0000
C1-PHENANTHRENES/ANTHRACENES	7.436		0.0000	7.034	0.9459	**7.567**	1.0176	U	0.0000	U	0.0000	U	0.0000
C2-CHRYSENES	0.4827		0.0000	0.066 J	0.1367	U	0.0000	U	0.0000	U	0.0000	U	0.0000
C2-FLUORENES	5.305		0.0000	**5.802**	1.0937	**9.12**	1.7191	U	0.0000	U	0.0000	U	0.0000
C2-NAPHTHALENES	30.24		0.0000	**143.513**	4.7458	**107.717**	3.5621	0.718 J	0.0237	0.557 J	0.0184	0.365 J	0.0121
C2-PHENANTHRENES/ANTHRACENES	3.199		0.0000	**10.185**	3.1838	**11.205**	3.5027	U	0.0000	U	0.0000	U	0.0000
C3-CHRYSENES	0.1675		0.0000	U	0.0000	U	0.0000	U	0.0000	U	0.0000	U	0.0000
C3-FLUORENES	1.916		0.0000	**5.627**	2.9368	U	0.0000	U	0.0000	U	0.0000	U	0.0000
C3-NAPHTHALENES	11.1		0.0000	**178.456**	16.0771	**340.683**	30.6922	3.58 J	0.3225	0.44 J	0.0396	0.366 J	0.0330
C3-PHENANTHRENES/ANTHRACENES	1.256		0.0000	**4.895 J**	3.8973	**6.24**	4.9682	U	0.0000	U	0.0000	U	0.0000
C4-CHRYSENES	0.07062		0.0000	U	0.0000	U	0.0000	U	0.0000	U	0.0000	U	0.0000
C4-NAPHTHALENES	4.048		0.0000	**82.536**	20.3893	**129.439**	31.9760	U	0.0000	U	0.0000	U	0.0000
C4-PHENANTHRENES/ANTHRACENES	0.5594		0.0000	**3.55 J**	6.3461	**4.594 J**	8.2124	U	0.0000	U	0.0000	U	0.0000
CHRYSENE	2.042		0.0000	0.04 J	0.0196	0.129	0.0632	U	0.0000	U	0.0000	U	0.0000
DIBENZ(A,H)ANTHRACENE	0.2825		0.0000	U	0.0000	U	0.0000	U	0.0000	U	0.0000	U	0.0000
FLUORANTHENE	7.109		0.0000	**0.239 J**	0.0336	**0.18 J**	0.0253	0.02 J	0.0028	U	0.0000	U	0.0000
FLUORENE	39.3		0.0000	1.452	0.0369	3	0.0763	0.05 J	0.0013	U	0.0000	U	0.0000
INDENO[1,2,3-CD]PYRENE	0.275		0.0000	U	0.0000	U	0.0000	U	0.0000	U	0.0000	U	0.0000
NAPHTHALENE	193.5		0.0000	0.851 J	0.0044	**1.362 J**	0.0070	U	0.0000	0.1 J	0.0005	0.1 J	0.0005
PERYLENE	0.9008		0.0000	U	0.0000	U	0.0000	U	0.0000	U	0.0000	U	0.0000
PHENANTHRENE	19.13		0.0000	2.025	0.1059	2.225	0.1163	U	0.0000	U	0.0000	U	0.0000
PYRENE	10.11		0.0000	0.926	0.0916	0.533	0.0527	0.015 J	0.0015	0.01 J	0.0010	0.01 J	0.0010
Sum IWTU			0.0		61		87		0.4		0.1		0.05

Notes:

Shaded results exceed sum of $IWTU_{FCV}$

Cporewater - concentration of porewater

FCV - final chronic value

g/ML - gram per milliliter

IWTU - interstitial water toxic unit

J - Estimated value. Concentration is below the reporting limit or it was found to exceed the reporting limit, but one or more quality control parameters were outside control limits.

µg/L - microgram per liter

ng/g - nanogram per gram

U - Not detected above the reporting limit.

a From Table 3-4. EPA (2003). Procedures for the Derivation of Equilibrium Partitioning Sediment Benchmarks (ESBs) for the Protection of Benthic Organisms: PAH Mixtures. EPA/600/R-02/013. Nov. 2003.

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Table 3-23B
Pore Water Metals and General Chemistry Concentrations Compared to Surface Water Benchmarks - Otter Creek Confluence Sediment Samples
Duck and Otter Creeks Confluences Investigation
Toledo, Lucas County, Ohio

	Ohio Administrative Code (OAC) 3745-1 Water use designations and statewide criteria[a]			OC-26	OC-27	OC-28	OC-29	OC-30
				11/3/2010	11/3/2010	11/3/2010	11/4/2010	11/4/2010
Chemical Name	**IMZM**	**OMZM (Acute)**	**OMZA (Chronic)**					
HARDNESS (AS CACO3) (mg/L)	--	--	--	277	461	532	576	230
DISSOLVED ORGANIC CARBON (mg/L)	--	--	--	133	157	77.7	58.9	44.4
PH (s.u.)	--	--	6.5 - 9.0	7.68	7.84	7.6	7.98	7.99
NITROGEN, AMMONIA (AS N) (mg/L)	--	--	0.7 - 2.3	**6.18**	1.89	**5.43**	**3.35**	**2.85**
Inorganics (ug/L) (total recoverable)								
CALCIUM	--	--	--	72200	116000	131000	148000	64700
IRON	--	--	1000 c	97.9	226	44.4	41.8	108
MAGNESIUM	--	--	--	23600	41200	49500	50400	16600
POTASSIUM	--	--	--	3950	4060	5260	3630	3360
SODIUM	--	--	--	36500	35500	35300	31700	31000
ALUMINUM	--	750 (CMC) b	87 (CCC) b	10	50.4	7.9	3.5	19.6
ANTIMONY	1800 d	900 d	190 d	0.213	0.221	0.203	0.114	0.253
ARSENIC	680	340	150	18.8	18.8	19	18.1	9.8
BARIUM	4000 d	2000 d	220 d	36.1	53.7	49.2	54.9	46.3
BERYLLIUM	1100 a, d	540 a,d	64 a, d	0.006 U	0.006 U	0.006 U	0.006 U	0.006 U
CADMIUM	31 a	16 a	5.8 a	0.137	0.133	0.013 J	0.023	0.062
CHROMIUM	8900 a	4400 a	210 a	1.25	1.41	1.46	0.65	1.08
COBALT	440 d	220 d	24 d	0.624	0.398	0.528	0.497	0.469
COPPER	79 a	39 a	24 a	9.26	8.71	2.67	1.51	2.74
LEAD	990 a	500 a	26 a	0.744	9.18	0.097	0.25	0.587
MANGANESE	--	2300 c	80 c	**985**	**1160**	**1440**	**1830**	**1140**
NICKEL	2400 a	1200 a	130 a	3.04	2.58	2.84	2.36	2.32
SELENIUM	--	13 - 186 c	5	0.7 J	0.4 J	0.8 J	0.6 J	0.9 J
SILVER	21 a,d	11 a,d	1.3 d	0.005 J	0.007 J	0.004 U	0.004 U	0.008 J
THALLIUM	160 d	79 d	17 d	0.012 J	0.008 J	0.006 J	0.005 J	0.024
VANADIUM	300 d	150 d	44 d	0.6	2.44	1.48	1.34	0.31
ZINC	610 a	300 a	300 a	4.4	7.5	3.5	1.5	3.4
MERCURY	3.4	1.7	0.91	0.02 U	0.02 UJ	0.02 U	0.02 U	0.02 U

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Table 3-23B
Pore Water Metals and General Chemistry Concentrations Compared to Surface Water Benchmarks - Otter Creek Confluence Sediment Samples
Duck and Otter Creeks Confluences Investigation
Toledo, Lucas County, Ohio

	Ohio Administrative Code (OAC) 3745-1 Water use designations and statewide criteria[a]			OC-31	OC-32	OC-33	OC-35-01
				11/4/2010	11/4/2010	11/4/2010	5/12/2011
Chemical Name	**IMZM**	**OMZM (Acute)**	**OMZA (Chronic)**				
HARDNESS (AS CACO3) (mg/L)	--	--	--	212	243	216	261
DISSOLVED ORGANIC CARBON (mg/L)	--	--	--	67.1	120	35.2	10.5
PH (s.u.)	--	--	6.5 - 9.0	8.08	7.97	7.69	7.72
NITROGEN, AMMONIA (AS N) (mg/L)	--	--	0.7 - 2.3	2.19	**2.6**	2.31	**10.8**
Inorganics (ug/L) (total recoverable)							
CALCIUM	--	--	--	59100	68900	59800	59100
IRON	--	--	1000 c	70.2	86.6	57	38.4
MAGNESIUM	--	--	--	15800	17100	16200	27500
POTASSIUM	--	--	--	3740	4400	3720	3800
SODIUM	--	--	--	32200	32600	32600	52300
ALUMINUM	--	750 (CMC) b	87 (CCC) b	7.4	16	8.6	4.9
ANTIMONY	1800 d	900 d	190 d	0.111	0.344	0.111	0.21
ARSENIC	680	340	150	12.9	7.4	14.5	6.47
BARIUM	4000 d	2000 d	220 d	30.1	58.4	29.2	49.8
BERYLLIUM	1100 a, d	540 a,d	64 a, d	0.006 U	0.006 U	0.006 U	0.007 J
CADMIUM	31 a	16 a	5.8 a	0.013 J	0.055	0.015 J	0.062
CHROMIUM	8900 a	4400 a	210 a	0.76	2.02	1.7	1.11
COBALT	440 d	220 d	24 d	0.334	0.382	0.337	0.678
COPPER	79 a	39 a	24 a	2.53	3.6	1.89	2.95
LEAD	990 a	500 a	26 a	0.125	0.877	0.118	0.093
MANGANESE	--	2300 c	80 c	**908**	**584**	**971**	**612**
NICKEL	2400 a	1200 a	130 a	1.73	2.7	2.31	5.13
SELENIUM	--	13 - 186 c	5	0.6 J	0.5 J	0.6 J	0.9 J
SILVER	21 a,d	11 a,d	1.3 d	0.004 U	0.007 J	0.004 U	0.004 U
THALLIUM	160 d	79 d	17 d	0.006 J	0.014 J	0.005 U	0.006 J
VANADIUM	300 d	150 d	44 d	1.09	1.18	1.01	0.93
ZINC	610 a	300 a	300 a	12.3	2.5	1.6	3.43
MERCURY	3.4	1.7	0.91	0.02 U	0.02 UJ	0.02 U	0.02 U

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Table 3-23B
Pore Water Metals and General Chemistry Concentrations Compared to Surface Water Benchmarks - Otter Creek Confluence Sediment Samples
Duck and Otter Creeks Confluences Investigation
Toledo, Lucas County, Ohio

	Ohio Administrative Code (OAC) 3745-1 Water use designations and statewide criteria[a]			OC-36-01	OC-38	OC-40-01	OC-41-01	OC-42-01
				5/10/2011	5/11/2011	5/10/2011	5/10/2011	5/11/2011
Chemical Name	**IMZM**	**OMZM (Acute)**	**OMZA (Chronic)**					
HARDNESS (AS CACO3) (mg/L)	--	--	--	303	427	512	384	257
DISSOLVED ORGANIC CARBON (mg/L)	--	--	--	33	6.08	9.89	26.4	14.2
PH (s.u.)	--	--	6.5 - 9.0	7.85	8.03	8.01	7.75	7.78
NITROGEN, AMMONIA (AS N) (mg/L)	--	--	0.7 - 2.3	1.11	1.75	1.29	0.252	1.98
Inorganics (ug/L) (total recoverable)								
CALCIUM	--	--	--	86800	109000	130000	108000	68500
IRON	--	--	1000 c	20.6	7.4 J	15.1	5.5 J	38.7
MAGNESIUM	--	--	--	21000	38000	45600	27900	20900
POTASSIUM	--	--	--	4150	5920	4900	3400	3360
SODIUM	--	--	--	35600	32000	25700	25800	41600
ALUMINUM	--	750 (CMC) b	87 (CCC) b	3.2	2.2	3	1.5 J	4.7
ANTIMONY	1800 d	900 d	190 d	0.4	0.54	0.31	0.38	0.21
ARSENIC	680	340	150	4.83	2.93	4.36	2.85	14.2
BARIUM	4000 d	2000 d	220 d	83.2	70.9	74.2	62.2	56.9
BERYLLIUM	1100 a, c	540 a,d	64 a, d	0.003 U	0.003 U	0.005 J	0.003 U	0.003 U
CADMIUM	31 a	16 a	5.8 a	0.004 J	0.114	0.056	0.046	0.107
CHROMIUM	8900 a	4400 a	210 a	4.05	0.46	0.36	0.76	1.35
COBALT	440 d	220 d	24 d	0.469	0.814	0.812	0.681	0.656
COPPER	79 a	39 a	24 a	1.58	2.86	3.68	2.37	3.6
LEAD	990 a	500 a	26 a	0.047	0.02	0.032	0.013 J	0.896
MANGANESE	--	2300 c	80 c	**344**	**210**	**616**	**487**	**799**
NICKEL	2400 a	1200 a	130 a	5.43	8.64	7.66	7.07	6.29
SELENIUM	--	13 - 186 c	5	0.4 J	0.7 J	1.1	0.6 J	0.6 J
SILVER	21 a,d	11 a,d	1.3 d	0.004 U	0.004 U	0.004 U	0.004 U	0.004 U
THALLIUM	160 d	79 d	17 d	0.019 J	0.111	0.012 J	0.022	0.012 J
VANADIUM	300 d	150 d	44 d	0.61	0.33	0.8	0.62	0.5
ZINC	610 a	300 a	300 a	2.91	1.35	1.58	2.11	10.6
MERCURY	3.4	1.7	0.91	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U

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Table 3-23B
Pore Water Metals and General Chemistry Concentrations Compared to Surface Water Benchmarks - Otter Creek Confluence Sediment Samples
Duck and Otter Creeks Confluences Investigation
Toledo, Lucas County, Ohio

	Ohio Administrative Code (OAC) 3745-1 Water use designations and statewide criteria[a]			OC-42-01-DP	OC-44-01	OC-45-01	OC-46-01	OC-47-01	OC-48-01
				5/11/2011	5/10/2011	5/10/2011	5/12/2011	5/12/2011	5/12/2011
Chemical Name	**IMZM**	**OMZM (Acute)**	**OMZA (Chronic)**						
HARDNESS (AS CACO3) (mg/L)	--	--	--	258	552	384	321	532	517
DISSOLVED ORGANIC CARBON (mg/L)	--	--	--	14.3	47	57	11.3	19.1	20.3
PH (s.u.)	--	--	6.5 - 9.0	7.77	7.31	7.5	7.65	7.67	7.8
NITROGEN, AMMONIA (AS N) (mg/L)	--	--	0.7 - 2.3	2.02	**18.5**	**11.1**	**4.47**	**6.5**	**8.15**
Inorganics (ug/L) (total recoverable)									
CALCIUM	--	--	--	68200	148000	82700	87100	147000	143000
IRON	--	--	1000 c	45.3	29.3	32.5	44.8	219	93.9
MAGNESIUM	--	--	--	21200	44500	43000	25100	39900	38800
POTASSIUM	--	--	--	3580	8940	5900	5430	6650	6540
SODIUM	--	--	--	38100	63900	58000	30100	31000	30100
ALUMINUM	--	750 (CMC) b	87 (CCC) b	7.1	3.8	4.1	2.4	2.5	2.3
ANTIMONY	1800 d	900 d	190 d	0.25	0.32	0.51	0.18	0.22	0.21
ARSENIC	680	340	150	10.6	4.59	5.86	5.9	6.31	5.02
BARIUM	4000 d	2000 d	220 d	59.6	119	53.8	49.2	43.5	52.8
BERYLLIUM	1100 a, d	540 a,d	64 a, d	0.004 J	0.004 J	0.003 J	0.006 J	0.007 J	0.006 J
CADMIUM	31 a	16 a	5.8 a	0.172	0.017 J	0.022	0.04	0.056	0.23
CHROMIUM	8900 a	4400 a	210 a	1.2	1.62	3.45	0.39	0.41	0.5
COBALT	440 d	220 d	24 d	0.654	1.04	1.37	1.06	2.86	2.56
COPPER	79 a	39 a	24 a	3.96	3.04	2.64	1.77	1.54	2
LEAD	990 a	500 a	26 a	1.02	0.142	0.147	0.02 J	0.063	0.01 J
MANGANESE	--	2300 c	80 c	**805**	**1160**	**964**	**1580**	**4210**	**3960**
NICKEL	2400 a	1200 a	130 a	6.02	8.98	8.79	6.47	11	10.5
SELENIUM	--	13 - 186 c	5	0.8 J	1.4	0.9 J	1.1	1.8	1.5
SILVER	21 a,d	11 a,d	1.3 d	0.004 U	0.004 U	0.004 U	0.004 U	0.007 J	0.01 J
THALLIUM	160 d	79 d	17 d	0.011 J	0.004 J	0.005 J	0.004 J	0.005 J	0.006 J
VANADIUM	300 d	150 d	44 d	1.06	0.79	0.86	0.69	0.47	0.43
ZINC	610 a	300 a	300 a	9.64	2.75	4.03	0.91	1.31	1.6
MERCURY	3.4	1.7	0.91	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.06 J

Notes:

Bold indicates most stringent criteria is exceeded; shading indicates least stringent criteria is exceeded.

OMZM - Outside mixing zone maximum

IMZM- Inside mixing zone maximum

IMZA - Inside mixing zone average

CMC = Criteria maximum concentration

CCC = Criteria chronic concentration

U - Not detected above the RL.

J - Estimated value. Concentration is below the reporting limit or it was found to exceed the reporting limit, but one or more quality control parameters were outside control limits.

mg/L - milligram per liter

SU - standard unit

a Used criteria for 300 mg/L hardness; average site hardness is 341 mg/L.

b National ambient water quality criteria (http://water.epa.gov/scitech/swguidance/standards/current/upload/nrwqc-2009.pdf)

c Buchman, M.F. 2008. NOAA Screening Quick Reference Table (SQUIRTs) NOAA OR&R Report 08-1, Seattle, WA. Office of Response and Restoration Division, National Oceanic and Atmospheric Administration. 34 pages. Values presented are acute and chronic freshcwater values (http://response.restoration.noaa.gov/book_shelf/122_NEW-SQuiRTs.pdf)

d Lake Erie Basin Aquatic Life and Human Health Tier I Criteria, Tier II Values and Screening Values (SV) contained in and developed pursuant to Chapters 3745-1 and 3745-2 of the Ohio Administrative Code (OAC). Table numbers within this table refer to Chapter 3745-1 of the OAC. Ohio EPA, Division of Surface Water. 10/20/09 http://www.epa.ohio.gov/portals/35/wqs/Erieval13.pdf.

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Table 3-24
Summary of Toxicity Testing Results
Duck and Otter Creeks Confluences Investigation
Toledo, Lucas County, Ohio

November 2010 Samples						
	ERDC			WESTON		
Sample	% Survival	Ash-free biomass	Ash-free growth	% Survival	Ash-free biomass	Ash-free growth
Control	87.5	2.84	3.1	87.5	2.84	3.1
DC-13	87.5	2.59	2.92	NC	NC	NC
Control	81.3	1.76	2.39	81.3	1.759	2.388
DC-14	81.3	1.68	2.04	NC	NC	NC
DC-16	83.8	1.93	2.35	NC	NC	NC
DC-17	83.8	1.86	2.24	NC	NC	NC
DC-19	73.8	1.78	2.41	NC	NC	NC
OC-26	*17.5	*0.15	*0.46	*17.5	*0.077(1)	*0.458
Control	78.8	1.17	1.45	78.8	1.169	1.455
OC-27	0.0	NA	NA	NC	NC	NC
OC-28	83.8	0.46	*0.54	83.8	*0.462	*0.542
OC-29	66.3	*0.09	*0.15	66.3	*0.095	*0.146
OC-30	60.0	*0.11	*0.19	*60	*0.113	*0.193
OC-31	70.0	0.68	0.90	70.0	0.683	*0.904

May 2011 Samples						
	ERDC			WESTON		
Sample	% Survival	Ash-free biomass	Ash-free growth	% Survival	Ash-free biomass	Ash-free growth
Control	88.8	0.947	1.077	88.8	0.947	1.077
DC-22	95.0	0.937	0.980	95.0	0.937	0.989
DC-23	95.0	0.864	0.916	95.0	0.864	0.916
DC-25	88.8	*0.655	0.744	88.8	*0.655	*0.744
OC-35	92.5	0.764	0.847	92.5	*0.764	*0.847
OC-38	86.3	*0.645	0.761	86.3	*0.645	*0.761
OC-40	91.3	0.993	1.095	91.3	0.993	1.095
OC-41	86.3	0.810	0.968	86.3	*0.81	0.968
OC-42	*13.8	*0.016	*0.122	*13.8	*0.017	*0.122
OC-44	52.5	*0.256	*0.445	*52.5	*0.256	*0.445
OC-45	90.0	0.731	0.825	90.0	*0.731	*0.825
OC-46	95.0	*0.653	*0.689	95.0	*0.653	*0.689

Notes:

* (asterisk) and shading indicates statistically different results compared to control

% - percent

ERDC - Engineer Research and Development Center, United States Army Corps of Engineers

NA - not calculated due to zero percent survival

NC - original statistical evaluation was correct based on initial review, therefore there was no reason to re-run the statistical evaluation

(1) - value different than ERDC value

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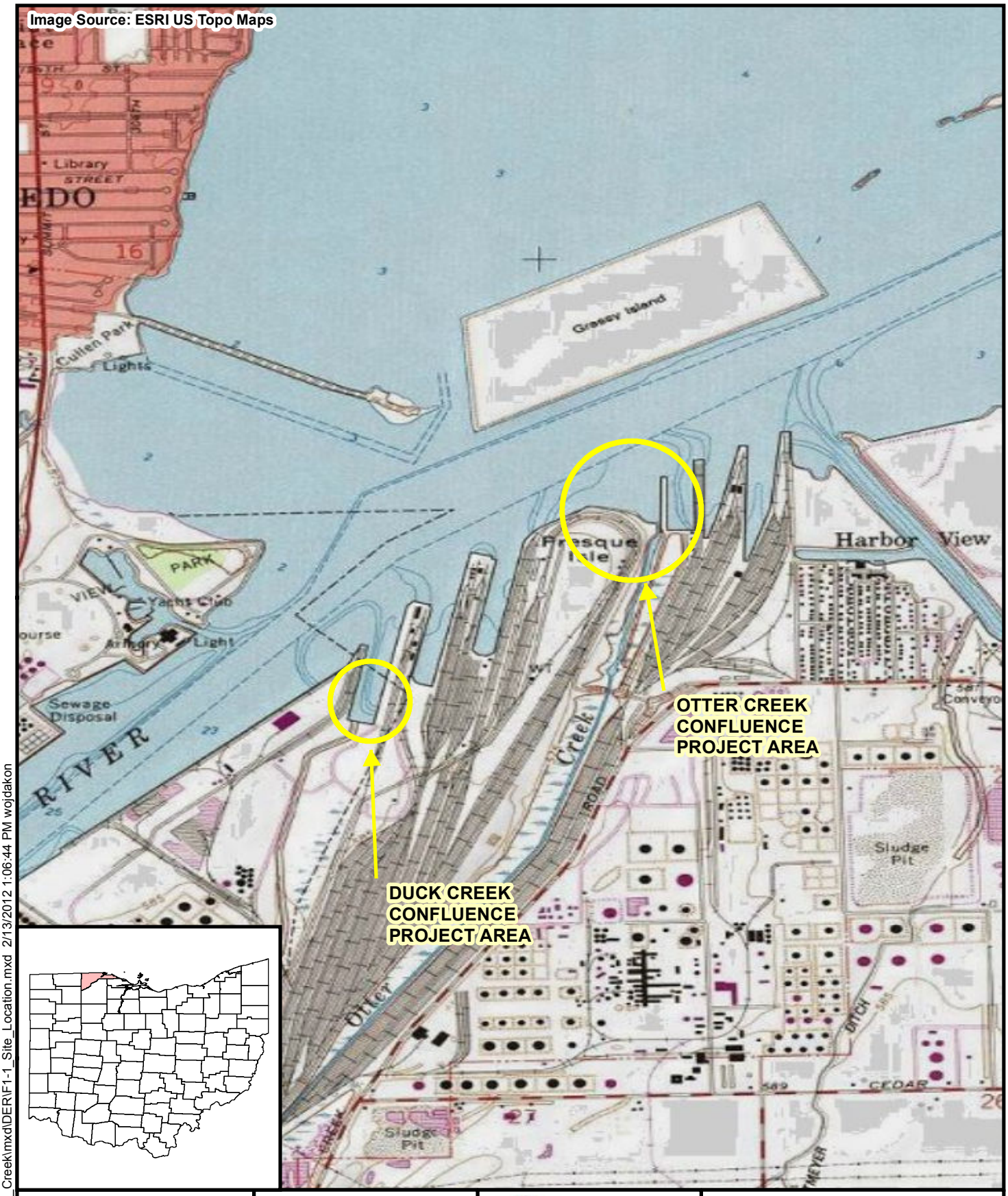
FIGURES



Prepared for:
U.S. EPA REGION V

Contract No.: EP-S5-06-04
TDD: S05-0008-1010-036
DCN: 1269-2A-AUIK

Prepared By:
WESTON SOLUTIONS, INC
360 E Maple
Suite R
Troy, Michigan 48083

FIGURE 1-1
Site Location Map
Duck and Otter Creeks
Confluence Investigation
Toledo, Lucas County, Ohio

FILE: D:\Duck_Otter_Creek\mxd\DER\F1-1_Site_Location.mxd 2/13/2012 1:06:44 PM wojdakon



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Legend

0 2,000 Feet

N

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Contract No.: EP-S5-06-04
TDD: S05-0008-1010-036
DCN: 1269-2A-AUIK

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Troy, Michigan 48083

FIGURE 2-2
Site Detail Map
Duck and Otter Creeks
Confluence Investigation
Toledo, Lucas County, Ohio



FILE: D:\Duck_Otter_Creek\mxd\DER\F2-1_DC_Locations.mxd 2/13/2012 1:07:18 PM wojdakon

Legend

Sampling Locations

- Not Tested for Toxicity
- Tested for Toxicity
- Shipping Channel

N

0 300 Feet

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FIGURE 2-1
Sampling Locations –
Duck Creek Confluence
Duck and Otter Creeks Confluence Investigation
Toledo, Lucas County, Ohio

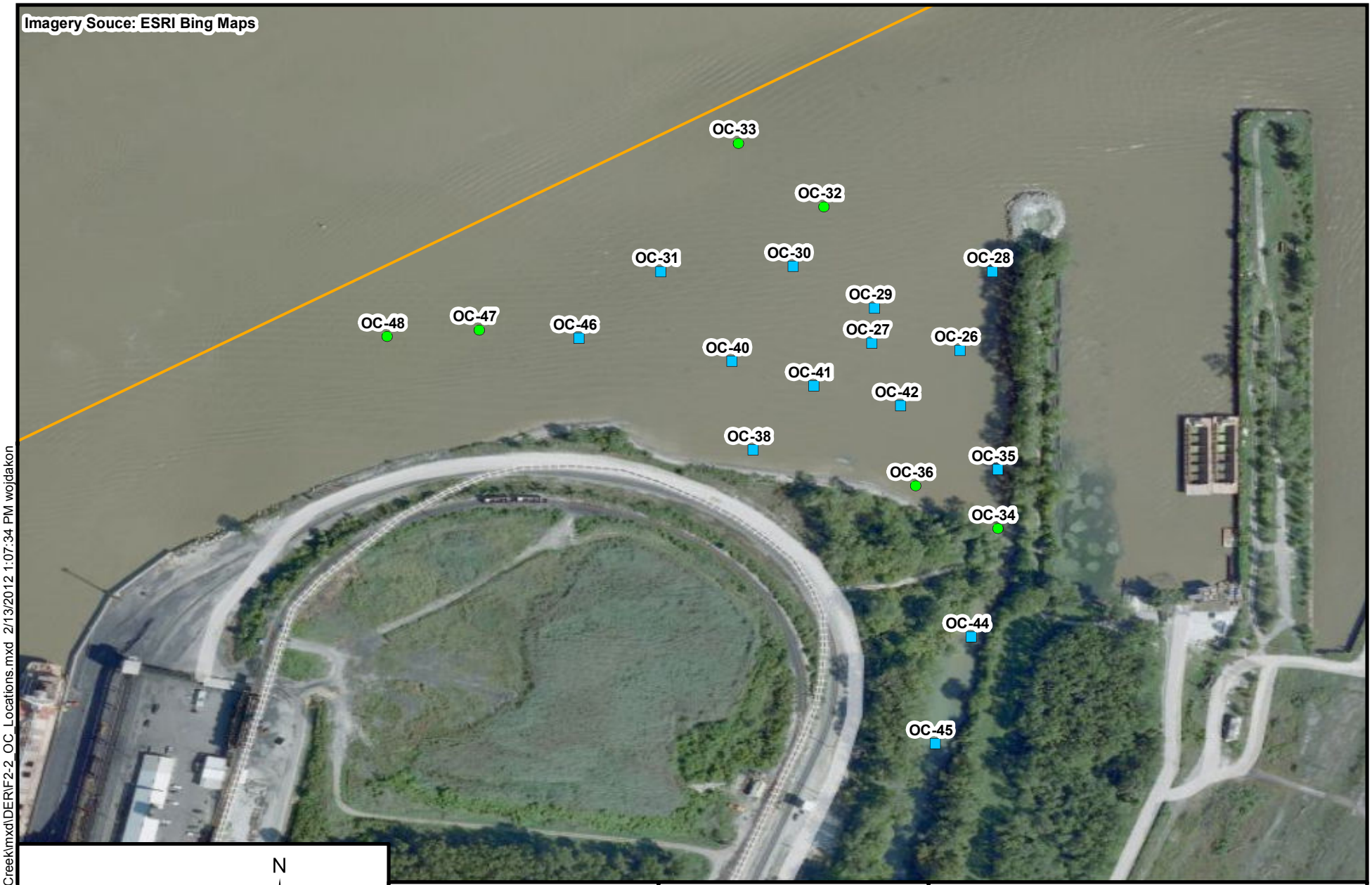

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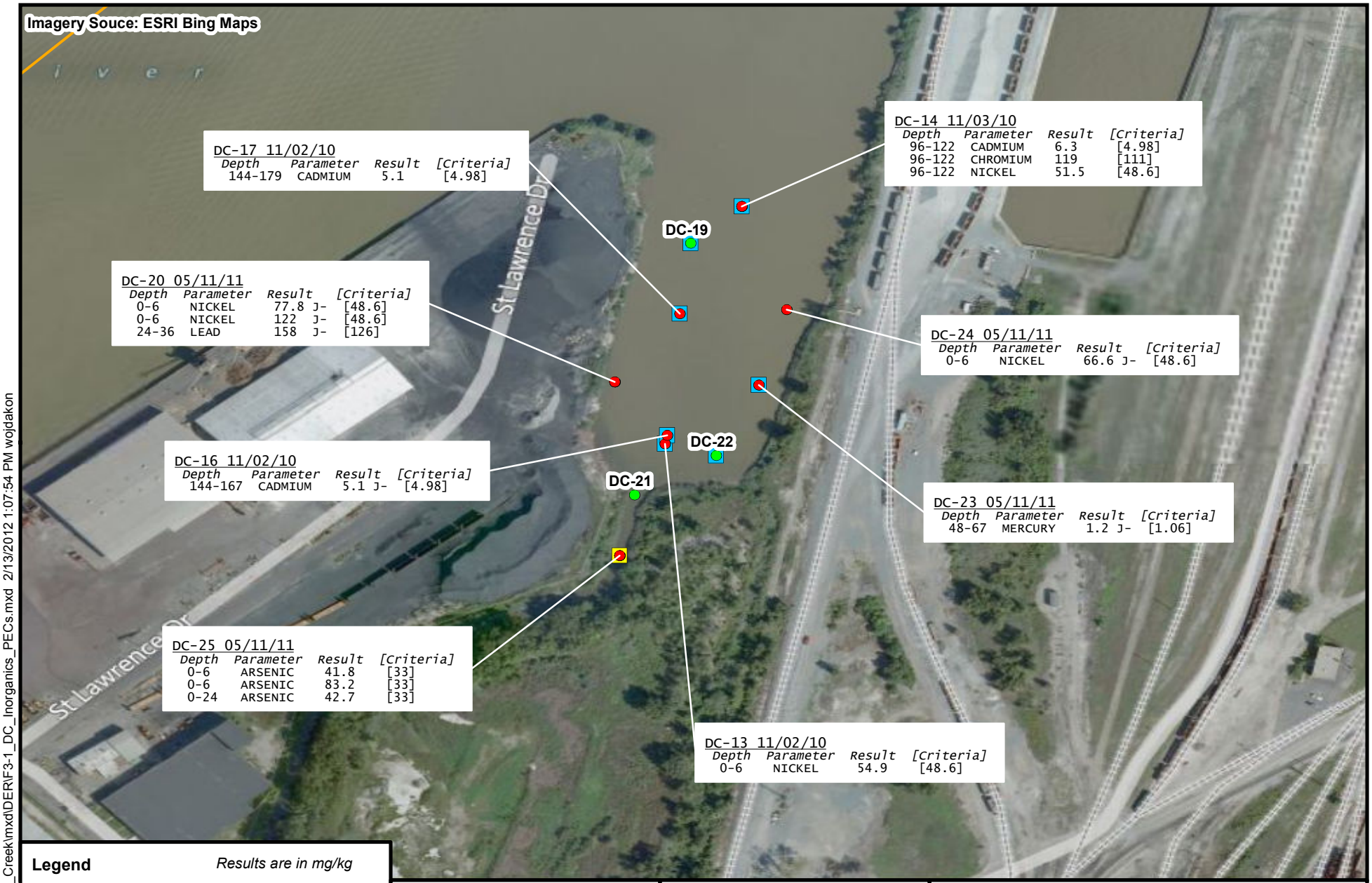
FIGURE 2-2
Sampling Locations –
Otter Creek Confluence
Duck and Otter Creeks Confluence Investigation
Toledo, Lucas County, Ohio



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DCN: 1269-2A-AUIK

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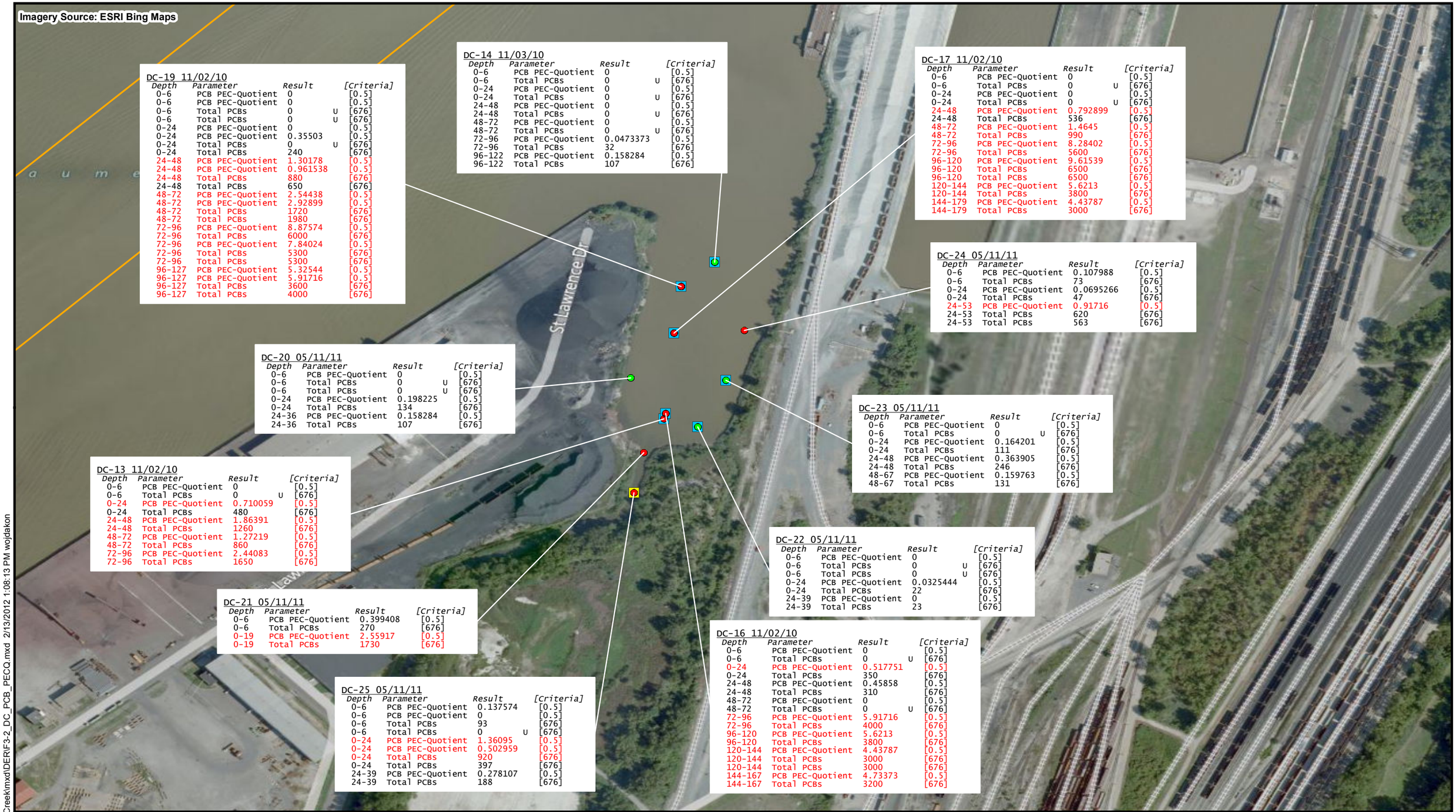
FIGURE 3-1
Inorganic Analytes above PECs
Duck Creek Confluence
Duck and Otter Creeks Confluence Investigation
Toledo, Lucas County, Ohio



DC-19 11/02/10

Depth	Parameter	Result		[Criteria]
0-6	PCB PEC-Quotient	0		[0.5]
0-6	PCB PEC-Quotient	0		[0.5]
0-6	Total PCBs	0	U	[676]
0-6	Total PCBs	0	U	[676]
0-24	PCB PEC-Quotient	0		[0.5]
0-24	PCB PEC-Quotient	0.35503		[0.5]
0-24	Total PCBs	0	U	[676]
0-24	Total PCBs	240		[676]
24-48	PCB PEC-Quotient	1.30178		[0.5]
24-48	PCB PEC-Quotient	0.961538		[0.5]
24-48	Total PCBs	880		[676]
24-48	Total PCBs	650		[676]
48-72	PCB PEC-Quotient	2.54438		[0.5]
48-72	PCB PEC-Quotient	2.92899		[0.5]
48-72	Total PCBs	1720		[676]
48-72	Total PCBs	1980		[676]
72-96	PCB PEC-Quotient	8.87574		[0.5]
72-96	Total PCBs	6000		[676]
72-96	PCB PEC-Quotient	7.84024		[0.5]
72-96	Total PCBs	5300		[676]
72-96	Total PCBs	5300		[676]
96-127	PCB PEC-Quotient	5.32544		[0.5]
96-127	PCB PEC-Quotient	5.91716		[0.5]
96-127	Total PCBs	3600		[676]
96-127	Total PCBs	4000		[676]

DC-14 11/03/10

Depth	Parameter	Result		[Criteria]
0-6	PCB PEC-Quotient	0		[0.5]
0-6	Total PCBs	0	U	[676]
0-24	PCB PEC-Quotient	0		[0.5]
0-24	Total PCBs	0	U	[676]
24-48	PCB PEC-Quotient	0		[0.5]
24-48	Total PCBs	0	U	[676]
48-72	PCB PEC-Quotient	0		[0.5]
48-72	Total PCBs	0	U	[676]
72-96	PCB PEC-Quotient	0.0473373		[0.5]
72-96	Total PCBs	32		[676]
96-122	PCB PEC-Quotient	0.158284		[0.5]
96-122	Total PCBs	107		[676]

DC-17 11/02/10

Depth	Parameter	Result		[Criteria]
0-6	PCB PEC-Quotient	0		[0.5]
0-6	Total PCBs	0	U	[676]
0-24	PCB PEC-Quotient	0		[0.5]
0-24	Total PCBs	0	U	[676]
24-48	PCB PEC-Quotient	0.792899		[0.5]
24-48	Total PCBs	536		[676]
48-72	PCB PEC-Quotient	1.4645		[0.5]
48-72	Total PCBs	990		[676]
72-96	PCB PEC-Quotient	8.28402		[0.5]
72-96	Total PCBs	5600		[676]
96-120	PCB PEC-Quotient	9.61539		[0.5]
96-120	Total PCBs	6500		[676]
96-120	Total PCBs	6500		[676]
120-144	PCB PEC-Quotient	5.6213		[0.5]
120-144	Total PCBs	3800		[676]
144-179	PCB PEC-Quotient	4.43787		[0.5]
144-179	Total PCBs	3000		[676]

DC-24 05/11/11

Depth	Parameter	Result		[Criteria]
0-6	PCB PEC-Quotient	0.107988		[0.5]
0-6	Total PCBs	73		[676]
0-24	PCB PEC-Quotient	0.0695266		[0.5]
0-24	Total PCBs	47		[676]
24-53	PCB PEC-Quotient	0.91716		[0.5]
24-53	Total PCBs	620		[676]
24-53	Total PCBs	563		[676]

DC-20 05/11/11

Depth	Parameter	Result		[Criteria]
0-6	PCB PEC-Quotient	0		[0.5]
0-6	Total PCBs	0	U	[676]
0-6	Total PCBs	0	U	[676]
0-24	PCB PEC-Quotient	0.198225		[0.5]
0-24	Total PCBs	134		[676]
24-36	PCB PEC-Quotient	0.158284		[0.5]
24-36	Total PCBs	107		[676]

DC-23 05/11/11

Depth	Parameter	Result		[Criteria]
0-6	PCB PEC-Quotient	0		[0.5]
0-6	Total PCBs	0	U	[676]
0-24	PCB PEC-Quotient	0.164201		[0.5]
0-24	Total PCBs	111		[676]
24-48	PCB PEC-Quotient	0.363905		[0.5]
24-48	Total PCBs	246		[676]
48-67	PCB PEC-Quotient	0.159763		[0.5]
48-67	Total PCBs	131		[676]

DC-13 11/02/10

Depth	Parameter	Result		[Criteria]
0-6	PCB PEC-Quotient	0		[0.5]
0-6	Total PCBs	0	U	[676]
0-24	PCB PEC-Quotient	0.710059		[0.5]
0-24	Total PCBs	480		[676]
24-48	PCB PEC-Quotient	1.86391		[0.5]
24-48	Total PCBs	1260		[676]
48-72	PCB PEC-Quotient	1.27219		[0.5]
48-72	Total PCBs	860		[676]
72-96	PCB PEC-Quotient	2.44083		[0.5]
72-96	Total PCBs	1650		[676]

DC-22 05/11/11

Depth	Parameter	Result		[Criteria]
0-6	PCB PEC-Quotient	0		[0.5]
0-6	Total PCBs	0	U	[676]
0-6	Total PCBs	0	U	[676]
0-24	PCB PEC-Quotient	0.0325444		[0.5]
0-24	Total PCBs	22		[676]
24-39	PCB PEC-Quotient	0		[0.5]
24-39	Total PCBs	23		[676]

DC-21 05/11/11

Depth	Parameter	Result	[Criteria]
0-6	PCB PEC-Quotient	0.399408	[0.5]
0-6	Total PCBs	270	[676]
0-19	PCB PEC-Quotient	2.55917	[0.5]
0-19	Total PCBs	1730	[676]

DC-16 11/02/10

Depth	Parameter	Result		[Criteria]
0-6	PCB PEC-Quotient	0		[0.5]
0-6	Total PCBs	0	U	[676]
0-24	PCB PEC-Quotient	0.517751		[0.5]
0-24	Total PCBs	350		[676]
24-48	PCB PEC-Quotient	0.45858		[0.5]
24-48	Total PCBs	310		[676]
48-72	PCB PEC-Quotient	0		[0.5]
48-72	Total PCBs	0	U	[676]
72-96	PCB PEC-Quotient	5.91716		[0.5]
72-96	Total PCBs	4000		[676]
96-120	PCB PEC-Quotient	5.6213		[0.5]
96-120	Total PCBs	3800		[676]
120-144	PCB PEC-Quotient	4.43787		[0.5]
120-144	Total PCBs	3000		[676]
120-144	Total PCBs	3000		[676]
144-167	PCB PEC-Quotient	4.73373		[0.5]
144-167	Total PCBs	3200		[676]

DC-25 05/11/11

Depth	Parameter	Result		[Criteria]
0-6	PCB PEC-Quotient	0.137574		[0.5]
0-6	PCB PEC-Quotient	0		[0.5]
0-6	Total PCBs	93		[676]
0-6	Total PCBs	0	U	[676]
0-24	PCB PEC-Quotient	1.36095		[0.5]
0-24	PCB PEC-Quotient	0.502959		[0.5]
0-24	Total PCBs	920		[676]
0-24	Total PCBs	397		[676]
24-39	PCB PEC-Quotient	0.278107		[0.5]
24-39	Total PCBs	188		[676]

Legend

Tested for Toxicity
- No Toxicity Observed
- Toxicity Observed
- Shipping Channel

Sampling Locations
- No Exceedances
- At Least One Exceedance

Total PCB results are in ug/kg

Results above criteria are shown in red

0 300 Feet

N

Prepared For:
US EPA Region V
Contract No.: EP-S5-06-04
TDD: S05-0008-1010-036
DCN: 1269-2A-AUIK

Prepared By:
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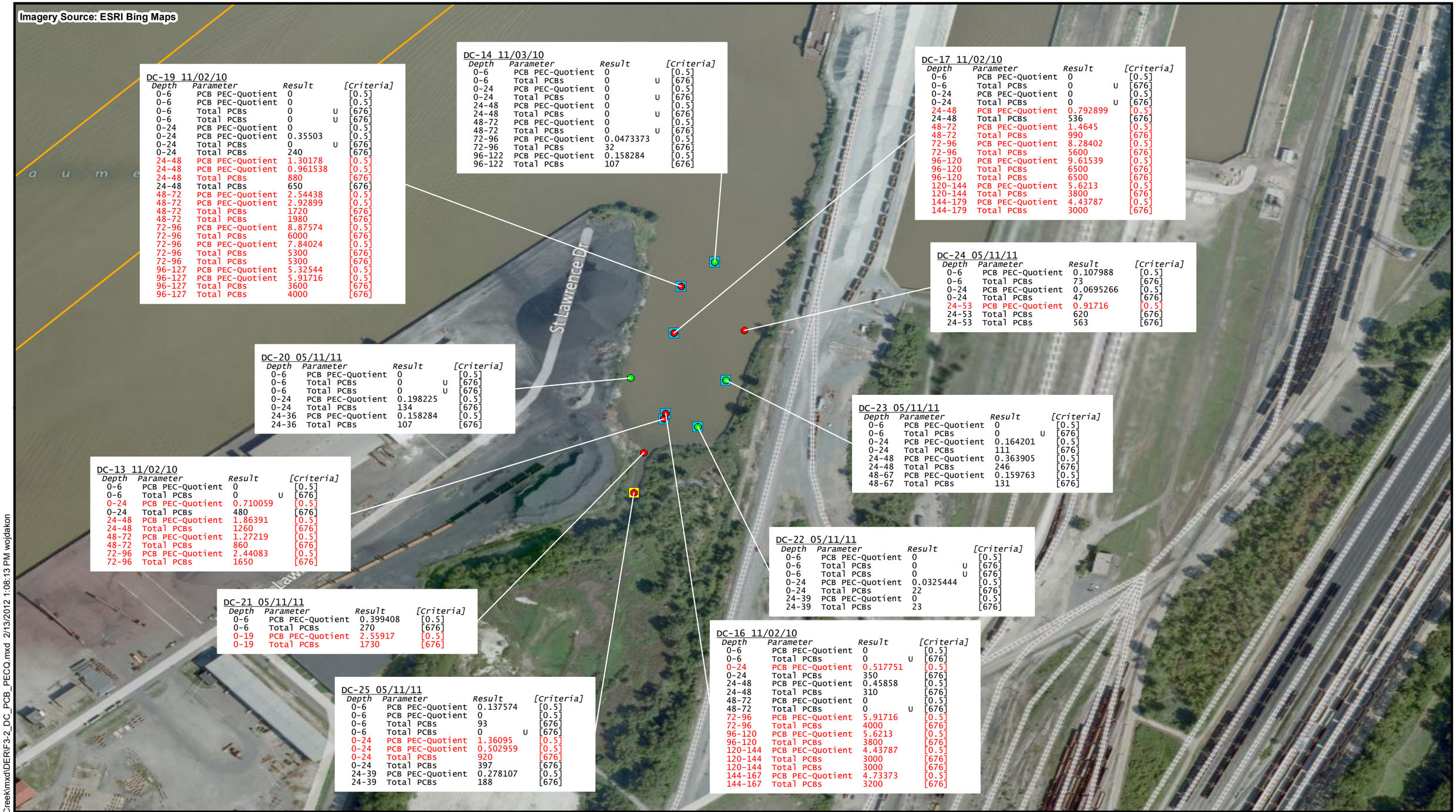
FIGURE 3-2
PCB PEC-Q and Concentrations above PECs
Duck Creek Confluence
Duck and Otter Creeks Confluence Investigation
Toledo, Lucas County, Ohio

FILE: D:\Duck_Otter_Creek\mxd\DER\F3-2_DC_PCB_PECQ.mxd 2/13/2012 1:08:13 PM wojdakon



DC-19 11/02/10

Depth	Parameter	Result		[Criteria]
0-6	PCB PEC-Quotient	0		[0.5]
0-6	PCB PEC-Quotient	0		[0.5]
0-6	Total PCBs	0	U	[676]
0-6	Total PCBs	0	U	[676]
0-24	PCB PEC-Quotient	0		[0.5]
0-24	PCB PEC-Quotient	0.35503		[0.5]
0-24	Total PCBs	0	U	[676]
0-24	Total PCBs	240		[676]
24-48	PCB PEC-Quotient	1.30178		[0.5]
24-48	PCB PEC-Quotient	0.961538		[0.5]
24-48	Total PCBs	880		[676]
24-48	Total PCBs	650		[676]
48-72	PCB PEC-Quotient	2.54438		[0.5]
48-72	PCB PEC-Quotient	2.92899		[0.5]
48-72	Total PCBs	1720		[676]
48-72	Total PCBs	1980		[676]
72-96	PCB PEC-Quotient	8.87574		[0.5]
72-96	Total PCBs	6000		[676]
72-96	PCB PEC-Quotient	7.84024		[0.5]
72-96	Total PCBs	5300		[676]
72-96	Total PCBs	5300		[676]
96-127	PCB PEC-Quotient	5.32544		[0.5]
96-127	PCB PEC-Quotient	5.91716		[0.5]
96-127	Total PCBs	3600		[676]
96-127	Total PCBs	4000		[676]

DC-14 11/03/10

Depth	Parameter	Result		[Criteria]
0-6	PCB PEC-Quotient	0		[0.5]
0-6	Total PCBs	0	U	[676]
0-24	PCB PEC-Quotient	0		[0.5]
0-24	Total PCBs	0	U	[676]
24-48	PCB PEC-Quotient	0		[0.5]
24-48	Total PCBs	0	U	[676]
48-72	PCB PEC-Quotient	0		[0.5]
48-72	Total PCBs	0	U	[676]
72-96	PCB PEC-Quotient	0.0473373		[0.5]
72-96	Total PCBs	32		[676]
96-122	PCB PEC-Quotient	0.158284		[0.5]
96-122	Total PCBs	107		[676]

DC-17 11/02/10

Depth	Parameter	Result		[Criteria]
0-6	PCB PEC-Quotient	0		[0.5]
0-6	Total PCBs	0	U	[676]
0-24	PCB PEC-Quotient	0		[0.5]
0-24	Total PCBs	0	U	[676]
24-48	PCB PEC-Quotient	0.792899		[0.5]
24-48	Total PCBs	536		[676]
48-72	PCB PEC-Quotient	1.4645		[0.5]
48-72	Total PCBs	990		[676]
72-96	PCB PEC-Quotient	8.28402		[0.5]
72-96	Total PCBs	5600		[676]
96-120	PCB PEC-Quotient	9.61539		[0.5]
96-120	Total PCBs	6500		[676]
96-120	Total PCBs	6500		[676]
120-144	PCB PEC-Quotient	5.6213		[0.5]
120-144	Total PCBs	3800		[676]
144-179	PCB PEC-Quotient	4.43787		[0.5]
144-179	Total PCBs	3000		[676]

DC-24 05/11/11

Depth	Parameter	Result		[Criteria]
0-6	PCB PEC-Quotient	0.107988		[0.5]
0-6	Total PCBs	73		[676]
0-24	PCB PEC-Quotient	0.0695266		[0.5]
0-24	Total PCBs	47		[676]
24-53	PCB PEC-Quotient	0.91716		[0.5]
24-53	Total PCBs	620		[676]
24-53	Total PCBs	563		[676]

DC-20 05/11/11

Depth	Parameter	Result		[Criteria]
0-6	PCB PEC-Quotient	0		[0.5]
0-6	Total PCBs	0	U	[676]
0-6	Total PCBs	0	U	[676]
0-24	PCB PEC-Quotient	0.198225		[0.5]
0-24	Total PCBs	134		[676]
24-36	PCB PEC-Quotient	0.158284		[0.5]
24-36	Total PCBs	107		[676]

DC-23 05/11/11

Depth	Parameter	Result		[Criteria]
0-6	PCB PEC-Quotient	0		[0.5]
0-6	Total PCBs	0	U	[676]
0-24	PCB PEC-Quotient	0.164201		[0.5]
0-24	Total PCBs	111		[676]
24-48	PCB PEC-Quotient	0.363905		[0.5]
24-48	Total PCBs	246		[676]
48-67	PCB PEC-Quotient	0.159763		[0.5]
48-67	Total PCBs	131		[676]

DC-13 11/02/10

Depth	Parameter	Result		[Criteria]
0-6	PCB PEC-Quotient	0		[0.5]
0-6	Total PCBs	0	U	[676]
0-24	PCB PEC-Quotient	0.710059		[0.5]
0-24	Total PCBs	480		[676]
24-48	PCB PEC-Quotient	1.86391		[0.5]
24-48	Total PCBs	1260		[676]
48-72	PCB PEC-Quotient	1.27219		[0.5]
48-72	Total PCBs	860		[676]
72-96	PCB PEC-Quotient	2.44083		[0.5]
72-96	Total PCBs	1650		[676]

DC-22 05/11/11

Depth	Parameter	Result		[Criteria]
0-6	PCB PEC-Quotient	0		[0.5]
0-6	Total PCBs	0	U	[676]
0-6	Total PCBs	0	U	[676]
0-24	PCB PEC-Quotient	0.0325444		[0.5]
0-24	Total PCBs	22		[676]
24-39	PCB PEC-Quotient	0		[0.5]
24-39	Total PCBs	23		[676]

DC-21 05/11/11

Depth	Parameter	Result	[Criteria]
0-6	PCB PEC-Quotient	0.399408	[0.5]
0-6	Total PCBs	270	[676]
0-19	PCB PEC-Quotient	2.55917	[0.5]
0-19	Total PCBs	1730	[676]

DC-16 11/02/10

Depth	Parameter	Result		[Criteria]
0-6	PCB PEC-Quotient	0		[0.5]
0-6	Total PCBs	0	U	[676]
0-24	PCB PEC-Quotient	0.517751		[0.5]
0-24	Total PCBs	350		[676]
24-48	PCB PEC-Quotient	0.45858		[0.5]
24-48	Total PCBs	310		[676]
48-72	PCB PEC-Quotient	0		[0.5]
48-72	Total PCBs	0	U	[676]
72-96	PCB PEC-Quotient	5.91716		[0.5]
72-96	Total PCBs	4000		[676]
96-120	PCB PEC-Quotient	5.6213		[0.5]
96-120	Total PCBs	3800		[676]
120-144	PCB PEC-Quotient	4.43787		[0.5]
120-144	Total PCBs	3000		[676]
120-144	Total PCBs	3000		[676]
144-167	PCB PEC-Quotient	4.73373		[0.5]
144-167	Total PCBs	3200		[676]

DC-25 05/11/11

Depth	Parameter	Result		[Criteria]
0-6	PCB PEC-Quotient	0.137574		[0.5]
0-6	PCB PEC-Quotient	0		[0.5]
0-6	Total PCBs	93		[676]
0-6	Total PCBs	0	U	[676]
0-24	PCB PEC-Quotient	1.36095		[0.5]
0-24	PCB PEC-Quotient	0.502959		[0.5]
0-24	Total PCBs	920		[676]
0-24	Total PCBs	397		[676]
24-39	PCB PEC-Quotient	0.278107		[0.5]
24-39	Total PCBs	188		[676]

Legend

Tested for Toxicity
- No Toxicity Observed
- Toxicity Observed
- Shipping Channel

Sampling Locations
- No Exceedances
- At Least One Exceedance

Total PCB results are in ug/kg

Results above criteria are shown in red

0 300 Feet

N

Prepared For:
US EPA Region V
Contract No.: EP-S5-06-04
TDD: S05-0008-1010-036
DCN: 1269-2A-AUIK

Prepared By:
WESTON SOLUTIONS, INC.
360 E Maple, Suite R
Troy, Michigan 48083

FIGURE 3-2
PCB PEC-Q and Concentrations above PECs
Duck Creek Confluence
Duck and Otter Creeks Confluence Investigation
Toledo, Lucas County, Ohio

FILE: D:\Duck_Otter_Creek\mxd\DER\F3-2_DC_PCB_PECQ.mxd 2/13/2012 1:08:13 PM wojdakon

Imagery Source: ESRI Bing Maps

DC-19 11/02/10

Depth	Parameter	Result		[Criteria]
0-6	DIESEL RANGE ORGANICS (DRO)	300		[276.245]
0-6	RESIDUAL RANGE ORGANICS (RRO)	1400		[820.352]
0-6	RESIDUAL RANGE ORGANICS (RRO)	1400		[775.424]
0-24	DIESEL RANGE ORGANICS (DRO)	340		[141.383]
0-24	DIESEL RANGE ORGANICS (DRO)	370		[167.762]
0-24	RESIDUAL RANGE ORGANICS (RRO)	1100		[396.864]
0-24	RESIDUAL RANGE ORGANICS (RRO)	1200		[470.912]
24-48	DIESEL RANGE ORGANICS (DRO)	990		[73.5072]
24-48	DIESEL RANGE ORGANICS (DRO)	800		[71.7288]
24-48	RESIDUAL RANGE ORGANICS (RRO)	1800		[206.336]
24-48	RESIDUAL RANGE ORGANICS (RRO)	1500		[201.344]
48-72	DIESEL RANGE ORGANICS (DRO)	1600		[81.2136]
48-72	DIESEL RANGE ORGANICS (DRO)	2200		[77.3604]
48-72	RESIDUAL RANGE ORGANICS (RRO)	2500		[227.968]
48-72	RESIDUAL RANGE ORGANICS (RRO)	3400	D	[217.152]
72-96	DIESEL RANGE ORGANICS (DRO)	3800		[130.712]
72-96	RESIDUAL RANGE ORGANICS (RRO)	5900	D	[366.912]
72-96	DIESEL RANGE ORGANICS (DRO)	3800		[84.474]
72-96	RESIDUAL RANGE ORGANICS (RRO)	5300	D	[237.12]
96-127	DIESEL RANGE ORGANICS (DRO)	2600		[101.962]
96-127	DIESEL RANGE ORGANICS (DRO)	2500		[76.1748]
96-127	RESIDUAL RANGE ORGANICS (RRO)	3800	D	[286.208]
96-127	RESIDUAL RANGE ORGANICS (RRO)	3500	D	[213.824]

DC-14 11/03/10

Depth	Parameter	Result		[Criteria]
0-6	RESIDUAL RANGE ORGANICS (RRO)	890		[752.96]
0-24	DIESEL RANGE ORGANICS (DRO)	230		[147.607]
0-24	RESIDUAL RANGE ORGANICS (RRO)	960		[414.336]
24-48	DIESEL RANGE ORGANICS (DRO)	310		[74.3964]
24-48	RESIDUAL RANGE ORGANICS (RRO)	720		[208.832]
48-72	DIESEL RANGE ORGANICS (DRO)	420		[105.518]
48-72	RESIDUAL RANGE ORGANICS (RRO)	910		[296.192]
72-96	DIESEL RANGE ORGANICS (DRO)	1900		[106.704]
72-96	RESIDUAL RANGE ORGANICS (RRO)	3100		[299.52]
96-122	DIESEL RANGE ORGANICS (DRO)	3200		[104.629]
96-122	GASOLINE RANGE ORGANICS (GRO)	62		[55.7147]
96-122	RESIDUAL RANGE ORGANICS (RRO)	5000	D	[293.696]

DC-24 05/11/11

Depth	Parameter	Result	[Criteria]
0-6	DIESEL RANGE ORGANICS (DRO)	490	[14.7361]
0-24	DIESEL RANGE ORGANICS (DRO)	290	[5.19935]
24-53	DIESEL RANGE ORGANICS (DRO)	890	[24.6529]

DC-17 11/02/10

Depth	Parameter	Result		[Criteria]
0-6	DIESEL RANGE ORGANICS (DRO)	460		[426.816]
0-6	RESIDUAL RANGE ORGANICS (RRO)	2300		[1198.08]
0-24	DIESEL RANGE ORGANICS (DRO)	300		[107.297]
0-24	RESIDUAL RANGE ORGANICS (RRO)	1000		[301.184]
24-48	DIESEL RANGE ORGANICS (DRO)	620		[98.9976]
24-48	RESIDUAL RANGE ORGANICS (RRO)	1200		[277.888]
48-72	DIESEL RANGE ORGANICS (DRO)	820		[60.4656]
48-72	RESIDUAL RANGE ORGANICS (RRO)	1300		[169.728]
72-96	DIESEL RANGE ORGANICS (DRO)	2800		[72.618]
72-96	RESIDUAL RANGE ORGANICS (RRO)	3700	D	[203.84]
96-120	DIESEL RANGE ORGANICS (DRO)	2800		[80.9172]
96-120	RESIDUAL RANGE ORGANICS (RRO)	3700	D	[227.136]
120-144	DIESEL RANGE ORGANICS (DRO)	2600		[82.6956]
120-144	RESIDUAL RANGE ORGANICS (RRO)	3500	D	[232.128]
144-179	DIESEL RANGE ORGANICS (DRO)	3000		[85.3632]
144-179	RESIDUAL RANGE ORGANICS (RRO)	3800	D	[239.616]

DC-23 05/11/11

Depth	Parameter	Result	[Criteria]
0-6	DIESEL RANGE ORGANICS (DRO)	520	[12.8825]
0-24	DIESEL RANGE ORGANICS (DRO)	460	[6.72857]
24-48	DIESEL RANGE ORGANICS (DRO)	510	[2.64138]
48-67	DIESEL RANGE ORGANICS (DRO)	450	[3.216]

DC-20 05/11/11

Depth	Parameter	Result	[Criteria]
0-6	DIESEL RANGE ORGANICS (DRO)	270	[60.1493]
0-24	DIESEL RANGE ORGANICS (DRO)	550	[6.07981]
24-36	DIESEL RANGE ORGANICS (DRO)	980	[13.9947]

DC-22 05/11/11

Depth	Parameter	Result	[Criteria]
0-6	DIESEL RANGE ORGANICS (DRO)	300	[6.7471]
0-24	DIESEL RANGE ORGANICS (DRO)	290	[4.28182]
24-39	DIESEL RANGE ORGANICS (DRO)	330	[2.96576]

DC-21 05/11/11

Depth	Parameter	Result	[Criteria]
0-6	DIESEL RANGE ORGANICS (DRO)	250	[4.61546]
0-19	DIESEL RANGE ORGANICS (DRO)	1100	[2.82674]

DC-25 05/11/11

Depth	Parameter	Result		[Criteria]
0-6	DIESEL RANGE ORGANICS (DRO)	1300	J	[8.66558]
0-6	DIESEL RANGE ORGANICS (DRO)	1100		[3.43843]
0-24	DIESEL RANGE ORGANICS (DRO)	2200		[2.70626]
0-24	DIESEL RANGE ORGANICS (DRO)	2000		[3.22526]
0-24	GASOLINE RANGE ORGANICS (GRO)	35		[6.90323]
0-24	GASOLINE RANGE ORGANICS (GRO)	16		[8.22714]
24-39	DIESEL RANGE ORGANICS (DRO)	2200		[1.78872]
24-39	GASOLINE RANGE ORGANICS (GRO)	8.7	J	[4.56275]

DC-16 11/02/10

Depth	Parameter	Result		[Criteria]
0-6	RESIDUAL RANGE ORGANICS (RRO)	2600		[1564.16]
0-24	DIESEL RANGE ORGANICS (DRO)	390		[118.56]
0-24	RESIDUAL RANGE ORGANICS (RRO)	1200		[332.8]
24-48	DIESEL RANGE ORGANICS (DRO)	600		[99.5904]
24-48	RESIDUAL RANGE ORGANICS (RRO)	1200		[279.552]
48-72	DIESEL RANGE ORGANICS (DRO)	600		[123.302]
48-72	RESIDUAL RANGE ORGANICS (RRO)	890		[346.112]
72-96	DIESEL RANGE ORGANICS (DRO)	2700		[93.366]
72-96	RESIDUAL RANGE ORGANICS (RRO)	4300	D	[262.08]
96-120	DIESEL RANGE ORGANICS (DRO)	2500		[75.582]
96-120	RESIDUAL RANGE ORGANICS (RRO)	3200	D	[212.16]
120-144	DIESEL RANGE ORGANICS (DRO)	2500		[108.186]
120-144	RESIDUAL RANGE ORGANICS (RRO)	3800	D	[303.68]
144-167	DIESEL RANGE ORGANICS (DRO)	2700		[85.3632]
144-167	RESIDUAL RANGE ORGANICS (RRO)	4100	D	[239.616]

DC-13 11/02/10

Depth	Parameter	Result		[Criteria]
0-6	RESIDUAL RANGE ORGANICS (RRO)	3600		[2795.52]
0-24	DIESEL RANGE ORGANICS (DRO)	640		[162.724]
0-24	RESIDUAL RANGE ORGANICS (RRO)	1800		[456.768]
24-48	DIESEL RANGE ORGANICS (DRO)	730		[90.402]
24-48	RESIDUAL RANGE ORGANICS (RRO)	1000		[253.76]
48-72	DIESEL RANGE ORGANICS (DRO)	420		[185.25]
48-72	RESIDUAL RANGE ORGANICS (RRO)	780		[520]
72-96	DIESEL RANGE ORGANICS (DRO)	630	J	[317.148]
72-96	RESIDUAL RANGE ORGANICS (RRO)	1500		[890.24]

St Lawrence Dr

Legend

Tested for Toxicity
- No Toxicity Observed
- Toxicity Observed
- Shipping Channel

Sampling Locations
- At Least One Exceedance
- No Exceedances

Total PCB results are in mg/kg

0 300 Feet

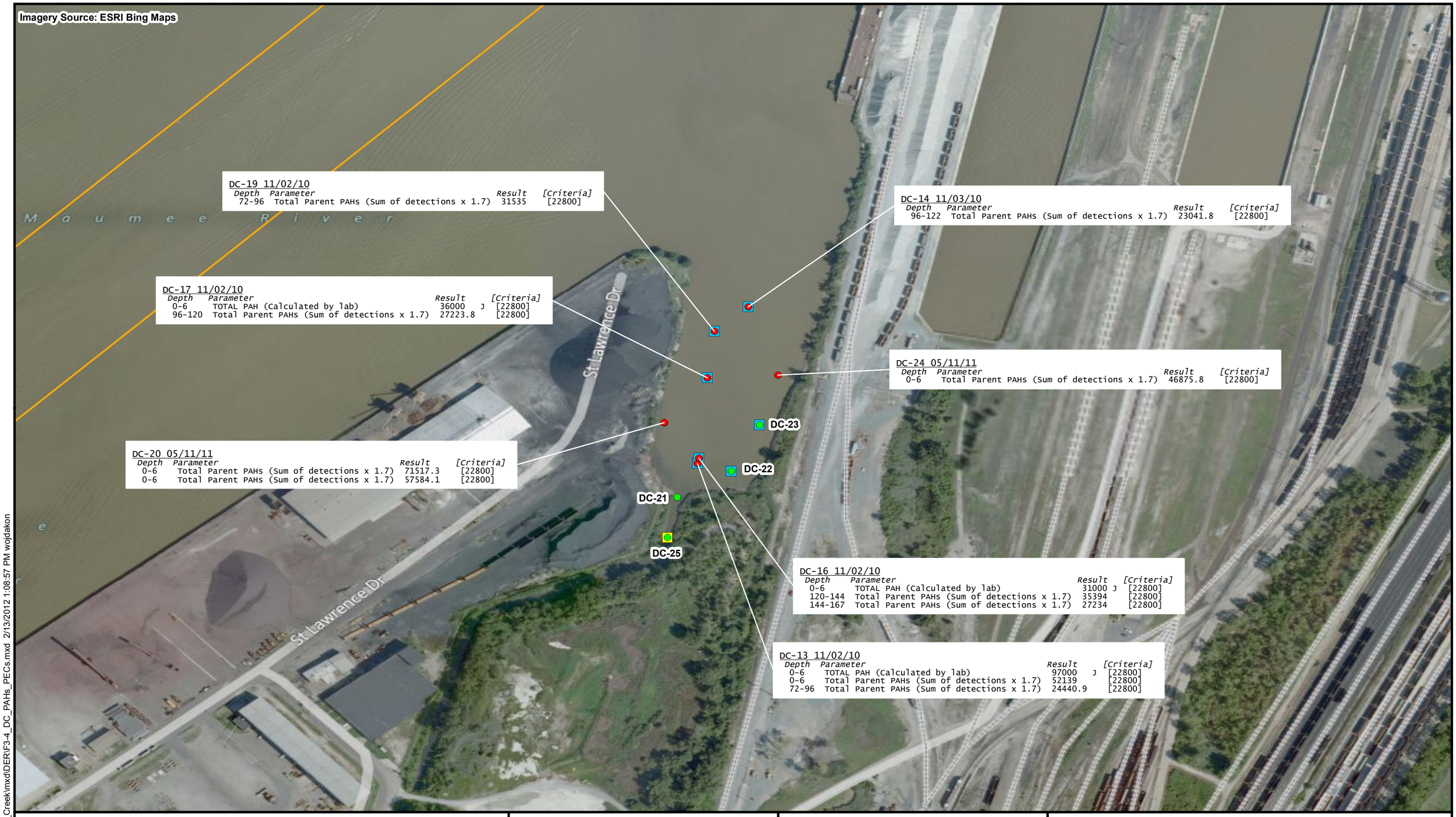
N

Prepared For:
US EPA Region V
Contract No.: EP-S5-06-04
TDD: S05-0008-1010-036
DCN: 1269-2A-AUIK

Prepared By:
WESTON SOLUTIONS, INC.
360 E Maple, Suite R
Troy, Michigan 48083

FIGURE 3-3
Petroleum Hydrocarbons above Screening Benchmarks
Duck Creek Confluence
Duck and Otter Creeks Confluence Investigation
Toledo, Lucas County, Ohio

FILE: D:\Duck_Otter_Creek\mxd\DER\F3-3_DC_Petro.mxd 2/13/2012 1:08:36 PM wojdakon



Legend

Tested for Toxicity
- No Toxicity Observed
- Toxicity Observed
- Shipping Channel

Sampling Locations
- At Least One Exceedances
- No Exceedances

Total PCB results are in ug/kg

0 300 Feet

N

Prepared For:
US EPA Region V
Contract No.: EP-S5-06-04
TDD: S05-0008-1010-036
DCN: 1269-2A-AUIK

Prepared By:
WESTON SOLUTIONS, INC.
360 E Maple, Suite R
Troy, Michigan 48083

FIGURE 3-4
Total PAH Concentrations above PECs
Duck Creek Confluence
Duck and Otter Creeks Confluence Investigation
Toledo, Lucas County, Ohio

FILE: D:\Duck_Otter_Creek\mxd\DERIF3-4_DC_PAHs_PECs.mxd 2/13/2012 1:08:57 PM wojdakon

Imagery Source: ESRI Bing Maps

Maumee River

St Lawrence Dr

DC-19 11/02/10

Depth	Parameter	Result		[Criteria]
24-48	BIS(2-ETHYLHEXYL)PHTHALATE	1300	J	[670]
24-48	BIS(2-ETHYLHEXYL)PHTHALATE	850	J	[670]
48-72	BIS(2-ETHYLHEXYL)PHTHALATE	2500		[670]
48-72	BIS(2-ETHYLHEXYL)PHTHALATE	2600		[670]
72-96	BIS(2-ETHYLHEXYL)PHTHALATE	31000		[670]
96-127	BIS(2-ETHYLHEXYL)PHTHALATE	6400		[670]

DC-17 11/02/10

Depth	Parameter	Result		[Criteria]
48-72	BIS(2-ETHYLHEXYL)PHTHALATE	1700	J	[670]
72-96	BIS(2-ETHYLHEXYL)PHTHALATE	11000		[670]
96-120	BIS(2-ETHYLHEXYL)PHTHALATE	16000		[670]
120-144	BIS(2-ETHYLHEXYL)PHTHALATE	8100		[670]
144-179	BIS(2-ETHYLHEXYL)PHTHALATE	6300		[670]

DC-14 11/03/10

Depth	Parameter	Result	[Criteria]
72-96	BIS(2-ETHYLHEXYL)PHTHALATE	6500	[670]
96-122	BIS(2-ETHYLHEXYL)PHTHALATE	13000	[670]

DC-20 05/11/11

Depth	Parameter	Result		[Criteria]
0-6	1,1-BIPHENYL	170	J	[60]
0-24	PHENOL	220	J	[120]
24-36	PHENOL	360		[120]

DC-24

DC-22

DC-13

DC-23 05/11/11

Depth	Parameter	Result	[Criteria]
48-67	BIS(2-ETHYLHEXYL)PHTHALATE	820	[670]

DC-21 05/11/11

Depth	Parameter	Result	[Criteria]
0-6	BIS(2-ETHYLHEXYL)PHTHALATE	770	[670]
0-19	BIS(2-ETHYLHEXYL)PHTHALATE	940	[670]

St Lawrence Dr

DC-25 05/11/11

Depth	Parameter	Result	[Criteria]
0-6	BIS(2-ETHYLHEXYL)PHTHALATE	1200	[670]
0-24	BIS(2-ETHYLHEXYL)PHTHALATE	3300	[670]
0-24	BIS(2-ETHYLHEXYL)PHTHALATE	2000	[670]

DC-16 11/02/10

Depth	Parameter	Result		[Criteria]
24-48	NITROBENZENE	1100	J	[145]
48-72	4-METHYLPHENOL	5700		[2647]
48-72	NITROBENZENE	760	J	[145]
72-96	BIS(2-ETHYLHEXYL)PHTHALATE	8100		[670]
96-120	BIS(2-ETHYLHEXYL)PHTHALATE	6200		[670]
120-144	BIS(2-ETHYLHEXYL)PHTHALATE	7900		[670]
144-167	BIS(2-ETHYLHEXYL)PHTHALATE	12000		[670]

Legend

Tested for Toxicity
- No Toxicity Observed
- Toxicity Observed
- Shipping Channel

Sampling Locations
- At Least One Exceedance
- No Exceedances

Total PCB results are in ug/kg

0 300 Feet

N

Prepared For:
US EPA Region V
Contract No.: EP-S5-06-04
TDD: S05-0008-1010-036
DCN: 1269-2A-AUIK

Prepared By:
WESTON SOLUTIONS, INC.
360 E Maple, Suite R
Troy, Michigan 48083

FIGURE 3-5
SVOC Concentrations above Screening Benchmarks
Duck Creek Confluence
Duck and Otter Creeks Confluence Investigation
Toledo, Lucas County, Ohio

FILE: D:\Duck_Otter_CreekMxd\DER\F3-5_DC_SVOC_HSB.mxd 2/13/2012 1:09:16 PM wojdakon

Imagery Source: ESRI Bing Maps

m e e R i v e r

St Lawrence Dr

St Lawrence Dr

DC-19 11/02/10

Depth	Result
0-6	0.366314
0-6	0.347906
0-24	0.395897
0-24	0.348356
24-48	0.282594
24-48	0.221974
48-72	0.307405
48-72	0.196787
72-96	0.365305
72-96	0.429715
96-127	0.407468
96-127	0.391728

DC-14 11/03/10

Depth	Result
0-6	0.28948
0-24	0.303469
24-48	0.29188
48-72	0.313325
72-96	0.552904
96-122	0.803286

DC-17 11/02/10

Depth	Result
0-6	0.338134
0-24	0.352332
24-48	0.363965
48-72	0.308866
72-96	0.605601
96-120	0.632377
120-144	0.609051
144-179	0.640101

DC-24 05/11/11

Depth	Result
0-6	0.46393
0-24	0.359913
24-53	0.28022

DC-20 05/11/11

Depth	Result
0-6	0.366837
0-24	0.494721
24-36	0.563577

DC-23 05/11/11

Depth	Result
0-6	0.298119
0-24	0.278836
24-48	0.291334
48-67	0.244395

DC-22 05/11/11

Depth	Result
0-6	0.236913
0-24	0.31718
24-39	0.384246

DC-16 11/02/10

Depth	Result
0-6	0.363903
0-24	0.301675
24-48	0.329113
48-72	0.24282
72-96	0.355457
96-120	0.290932
120-144	0.637181
144-167	0.647395

DC-13 11/02/10

Depth	Result
0-6	0.334706
0-24	0.40099
24-48	0.151446
48-72	0.210405
72-96	0.203471

DC-21 05/11/11

Depth	Result
0-6	0.246932
0-19	0.427244

DC-25 05/11/11

Depth	Result
0-6	0.381321
0-6	0.748062
0-24	0.759314
0-24	0.36804
24-39	0.422376

Legend

Tested for Toxicity
- No Toxicity Observed
- Toxicity Observed
- Shipping Channel

Sampling Locations
- No Exceedances
- At Least One Exceedance

Results above threshold of 0.5 are shown in red

0 250 Feet

N

Prepared For:
US EPA Region V
Contract No.: EP-S5-06-04
TDD: S05-0008-1010-036
DCN: 1269-2A-AUIK

Prepared By:
WESTON SOLUTIONS, INC.
360 E Maple, Suite R
Troy, Michigan 48083

FIGURE 3-6
PEC-Q Results for Metals
Duck Creek Confluence
Duck and Otter Creeks Confluence Investigation
Toledo, Lucas County, Ohio

FILE: D:\Duck_Otter_Creek\mxd\DER\F3-6_DC_Metals_PECQ.mxd 2/13/2012 1:09:39 PM wojdakon

Imagery Source: ESRI Bing Maps

DC-19 11/02/10

Depth	Parameter	Result
0-6	16 PPAH PEC-Quotient	0.00622754
0-6	16 PPAH PEC-Quotient	0.0136473
0-6	Total PAHs PEC-Quotient	0.0191274
0-6	Total PAHs PEC-Quotient	0.0423537
0-6	Total Parent PAHs PEC-Quotient	0.0103448
0-6	Total Parent PAHs PEC-Quotient	0.0261125
0-24	Total Parent PAHs PEC-Quotient	0
0-24	Total Parent PAHs PEC-Quotient	0.110393
24-48	Total Parent PAHs PEC-Quotient	0.169537
24-48	Total Parent PAHs PEC-Quotient	0.127864
48-72	Total Parent PAHs PEC-Quotient	0.305947
48-72	Total Parent PAHs PEC-Quotient	0.283105
72-96	Total Parent PAHs PEC-Quotient	0.313631
72-96	Total Parent PAHs PEC-Quotient	0.0105302
96-127	Total Parent PAHs PEC-Quotient	0.228626
96-127	Total Parent PAHs PEC-Quotient	0.00500171

DC-14 11/03/10

Depth	Parameter	Result
0-6	16 PPAH PEC-Quotient	0.0232626
0-6	Total PAHs PEC-Quotient	0.0726956
0-6	Total Parent PAHs PEC-Quotient	0.042224
0-24	Total Parent PAHs PEC-Quotient	0.0661321
24-48	Total Parent PAHs PEC-Quotient	0.0512424
48-72	Total Parent PAHs PEC-Quotient	0.105077
72-96	Total Parent PAHs PEC-Quotient	0.148336
96-122	Total Parent PAHs PEC-Quotient	0.28629

DC-17 11/02/10

Depth	Parameter	Result
0-6	16 PPAH PEC-Quotient	0.0335039
0-6	Total PAHs PEC-Quotient	0.109649
0-6	Total Parent PAHs PEC-Quotient	0.0680217
0-24	Total Parent PAHs PEC-Quotient	0.166816
24-48	Total Parent PAHs PEC-Quotient	0.0930901
48-72	Total Parent PAHs PEC-Quotient	0.110417
72-96	Total Parent PAHs PEC-Quotient	0.271221
96-120	Total Parent PAHs PEC-Quotient	0.437372
120-144	Total Parent PAHs PEC-Quotient	0.236993
144-179	Total Parent PAHs PEC-Quotient	0.171129

DC-20 05/11/11

Depth	Parameter	Result
0-6	Total PAHs PEC-Quotient	0.0483316
0-24	Total PAHs PEC-Quotient	0.0247439
24-36	Total PAHs PEC-Quotient	0.020576

DC-24 05/11/11

Depth	Parameter	Result
0-6	Total PAHs PEC-Quotient	0.129305
0-24	Total PAHs PEC-Quotient	0.0326608
24-53	Total PAHs PEC-Quotient	0.00390747

DC-16 11/02/10

Depth	Parameter	Result
0-6	16 PPAH PEC-Quotient	0.0219298
0-6	Total PAHs PEC-Quotient	0.0723218
0-6	Total Parent PAHs PEC-Quotient	0.0402552
0-24	Total Parent PAHs PEC-Quotient	0.116745
24-48	Total Parent PAHs PEC-Quotient	0.042429
48-72	Total Parent PAHs PEC-Quotient	0.0149302
72-96	Total Parent PAHs PEC-Quotient	0.314815
96-120	Total Parent PAHs PEC-Quotient	0.27693
120-144	Total Parent PAHs PEC-Quotient	0.425306
144-167	Total Parent PAHs PEC-Quotient	0.414748

DC-23 05/11/11

Depth	Parameter	Result
0-6	Total PAHs PEC-Quotient	0.0246466
0-24	Total PAHs PEC-Quotient	0.0362126
24-48	Total PAHs PEC-Quotient	0.0351354
48-67	Total PAHs PEC-Quotient	0.0306411

DC-21 05/11/11

Depth	Parameter	Result
0-6	Total PAHs PEC-Quotient	0.0313218
0-19	Total PAHs PEC-Quotient	0.0319025

DC-22 05/11/11

Depth	Parameter	Result
0-6	Total PAHs PEC-Quotient	0.0971039
0-24	Total PAHs PEC-Quotient	0.0176478
24-39	Total PAHs PEC-Quotient	0.0118809

DC-25 05/11/11

Depth	Parameter	Result
0-6	Total PAHs PEC-Quotient	0.0277911
0-6	Total PAHs PEC-Quotient	0.0192694
0-24	Total PAHs PEC-Quotient	0.0426175
0-24	Total PAHs PEC-Quotient	0.0384163
24-39	Total PAHs PEC-Quotient	0.0335372

DC-13 11/02/10

Depth	Parameter	Result
0-6	16 PPAH PEC-Quotient	0.0365497
0-6	Total PAHs PEC-Quotient	0.126619
0-6	Total Parent PAHs PEC-Quotient	0.0680595
0-24	Total Parent PAHs PEC-Quotient	0.00270268
24-48	Total Parent PAHs PEC-Quotient	0.00126388
48-72	Total Parent PAHs PEC-Quotient	0.0197319
72-96	Total Parent PAHs PEC-Quotient	0.100184

Legend

Tested for Toxicity
- No Toxicity Observed
- Toxicity Observed
- Shipping Channel

Sampling Locations
- No Exceedances

No results are above the threshold of 0.5

0 300 Feet

N

Prepared For:
US EPA Region V
Contract No.: EP-S5-06-04
TDD: S05-0008-1010-036
DCN: 1269-2A-AUIK

Prepared By:
WESTON SOLUTIONS, INC.
360 E Maple, Suite R
Troy, Michigan 48083

FIGURE 3-7
PEC-Q Results for PAH
Duck Creek Confluence
Duck and Otter Creeks Confluence Investigation
Toledo, Lucas County, Ohio

FILE: D:\Duck_Otter_Creek\mxd\DERIF3-7_DC_PAH_PECQ.mxd 2/13/2012 1:09:59 PM wojdakon

Imagery Source: ESRI Bing Maps

M a u m e e R i v e r

St Lawrence Dr

DC-19 11/02/10

Depth	Parameter	Result
0-6	(Sum SEM - AVS)/foc (µmols/goc)	-68
0-6	(Sum SEM - AVS)/foc (µmols/goc)	-52

DC-14 11/03/10

Depth	Parameter	Result
0-6	(Sum SEM - AVS)/foc (µmols/goc)	-78

DC-24 05/11/11

Depth	Parameter	Result
0-6	(Sum SEM - AVS)/foc (µmols/goc)	-44

DC-17 11/02/10

Depth	Parameter	Result
0-6	(Sum SEM - AVS)/foc (µmols/goc)	-5

DC-23 05/11/11

Depth	Parameter	Result
0-6	(Sum SEM - AVS)/foc (µmols/goc)	-72

DC-21 05/11/11

Depth	Parameter	Result
0-6	(Sum SEM - AVS)/foc (µmols/goc)	-1262

DC-25 05/11/11

Depth	Parameter	Result
0-6	(Sum SEM - AVS)/foc (µmols/goc)	-238
0-6	(Sum SEM - AVS)/foc (µmols/goc)	-875

DC-22 05/11/11

Depth	Parameter	Result
0-6	(Sum SEM - AVS)/foc (µmols/goc)	-31

DC-16 11/02/10

Depth	Parameter	Result
0-6	(Sum SEM - AVS)/foc (µmols/goc)	-33

DC-13 11/02/10

Depth	Parameter	Result
0-6	(Sum SEM - AVS)/foc (µmols/goc)	-21

Legend

Tested for Toxicity
- No Toxicity Observed
- Toxicity Observed
- Shipping Channel

Sampling Locations
- No Exceedances

No results are above the threshold of 130

0 300 Feet

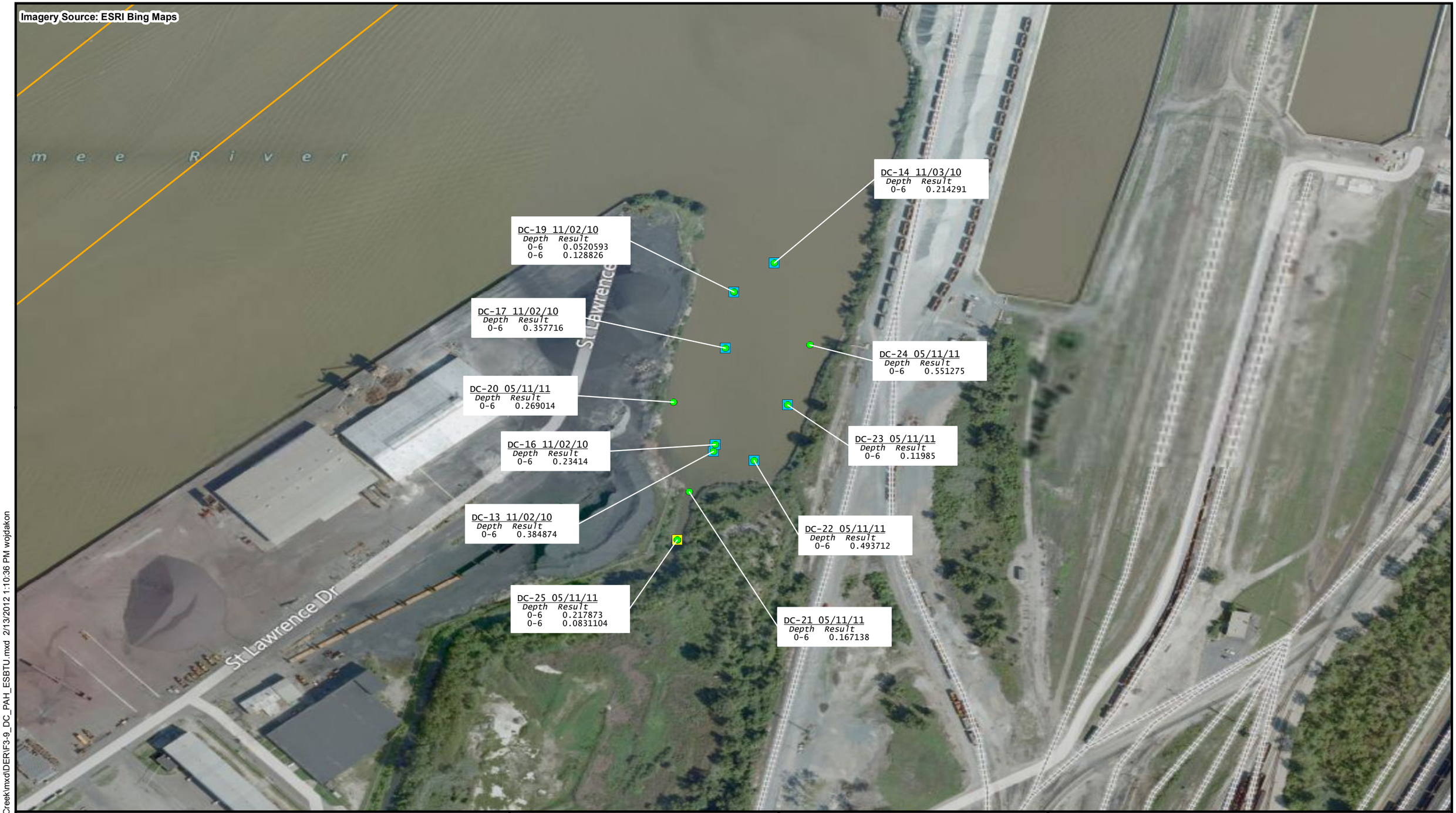
N

Prepared For:
US EPA Region V
Contract No.: EP-S5-06-04
TDD: S05-0008-1010-036
DCN: 1269-2A-AUIK

Prepared By:
WESTON SOLUTIONS, INC.
360 E Maple, Suite R
Troy, Michigan 48083

FIGURE 3-8
AVS/SEM ESBTU Results
Duck Creek Confluence
Duck and Otter Creeks Confluence Investigation
Toledo, Lucas County, Ohio

FILE: D:\Duck_Otter_Creek\mxd\DERF3-8_DC_AVS_ESBTU.mxd 2/13/2012 1:10:18 PM wojdakon



Legend

Tested for Toxicity
- No Toxicity Observed
- Toxicity Observed
- Shipping Channel

Sampling Locations
- No Exceedances

No results are above the threshold of 1

0 250 Feet

N

Prepared For:
US EPA Region V
Contract No.: EP-S5-06-04
TDD: S05-0008-1010-036
DCN: 1269-2A-AUIK

Prepared By:
WESTON SOLUTIONS, INC.
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Troy, Michigan 48083

FIGURE 3-9
PAH ESBTU Results
Duck Creek Confluence
Duck and Otter Creeks Confluence Investigation
Toledo, Lucas County, Ohio

FILE: D:\Duck_Otter_Creek\mxd\DER\F3-9_DC_PAH_ESBTU.mxd 2/13/2012 1:10:36 PM wojdakon

Imagery Source: ESRI Bing Maps

OC-41 05/10/11

Depth	Parameter	Result	[Criteria]
0-6	ARSENIC	37.4 J	[33]
0-6	NICKEL	66.9	[48.6]

OC-42 05/11/11

Depth	Parameter	Result	[Criteria]
0-6	CHROMIUM	160	[111]
0-6	COPPER	179	[149]

OC-34 05/10/11

Depth	Parameter	Result	[Criteria]
0-29	CHROMIUM	191	[111]

OC-44 05/10/11

Depth	Parameter	Result		[Criteria]
0-6	CHROMIUM	223		[111]
0-6	COPPER	177		[149]
0-27	COPPER	775		[149]
0-27	LEAD	1080		[126]
0-27	MERCURY	1.8	J+	[1.06]

OC-45 05/10/11

Depth	Parameter	Result	[Criteria]
0-25	CHROMIUM	205	[111]
0-25	CHROMIUM	203	[111]
0-25	COPPER	202	[149]
0-25	COPPER	204	[149]
0-25	LEAD	159	[126]
0-25	LEAD	271	[126]

OC-33 OC-32 OC-31 OC-30 OC-28 OC-29 OC-47 OC-46 OC-48 OC-26 OC-27 OC-40 OC-38 OC-35 OC-36

Lakeview

Legend

Toxicity Locations
- No Toxicity Observed
- Toxicity Observed
- Shipping Channel

Sampling Locations
- At Least One Exceedance
- No Exceedances

Results are in mg/kg

0 300 Feet

N

Prepared For:
US EPA Region V
Contract No.: EP-S5-06-04
TDD: S05-0008-1010-036
DCN: 1269-2A-AUIK

Prepared By:
WESTON SOLUTIONS, INC.
360 E Maple, Suite R
Troy, Michigan 48083

FIGURE 3-10
Inorganic Analytes above PECs
Otter Creek Confluence
Duck and Otter Creeks Confluence Investigation
Toledo, Lucas County, Ohio

FILE: D:\Duck_Otter_Creek\mxd\DER\F3-10_OC_Inorganics_PECs.mxd 2/13/2012 1:10:55 PM wojdakon

Imagery Source: ESRI Bing Maps

OC-32 11/04/10

Depth	Parameter	Result		[Criteria]
0-6	PCB PEC-Quotient	0		[0.5]
0-6	PCB PEC-Quotient	0		[0.5]
0-6	Total PCBs	0	U	[676]
0-6	Total PCBs	0	U	[676]
0-24	PCB PEC-Quotient	0		[0.5]
0-24	Total PCBs	0	U	[676]
24-30	PCB PEC-Quotient	0		[0.5]
24-30	Total PCBs	0	U	[676]

OC-29 11/04/10

Depth	Parameter	Result		[Criteria]
0-6	PCB PEC-Quotient	0		[0.5]
0-6	Total PCBs	0	U	[676]
0-24	PCB PEC-Quotient	0		[0.5]
0-24	Total PCBs	0	U	[676]
24-52	PCB PEC-Quotient	0		[0.5]
24-52	Total PCBs	0	U	[676]

OC-33 11/04/10

Depth	Parameter	Result		[Criteria]
0-6	PCB PEC-Quotient	0		[0.5]
0-6	Total PCBs	0	U	[676]
0-24	PCB PEC-Quotient	0		[0.5]
0-24	Total PCBs	0	U	[676]
24-39	PCB PEC-Quotient	0		[0.5]
24-39	Total PCBs	0	U	[676]

OC-27 11/03/10

Depth	Parameter	Result		[Criteria]
0-6	PCB PEC-Quotient	0.147929		[0.5]
0-6	PCB PEC-Quotient	0.0976331		[0.5]
0-6	Total PCBs	100		[676]
0-6	Total PCBs	66		[676]
0-24	PCB PEC-Quotient	0		[0.5]
0-24	Total PCBs	0	U	[676]
24-50	PCB PEC-Quotient	0		[0.5]
24-50	Total PCBs	0	U	[676]

OC-30 11/04/10

Depth	Parameter	Result		[Criteria]
0-6	PCB PEC-Quotient	0		[0.5]
0-6	PCB PEC-Quotient	0		[0.5]
0-6	Total PCBs	0	U	[676]
0-6	Total PCBs	0	U	[676]
0-24	PCB PEC-Quotient	0		[0.5]
0-24	Total PCBs	0	U	[676]
24-42	PCB PEC-Quotient	0		[0.5]
24-42	Total PCBs	0	U	[676]

OC-28 11/03/10

Depth	Parameter	Result		[Criteria]
0-6	PCB PEC-Quotient	0.0325444		[0.5]
0-6	Total PCBs	22		[676]
0-24	PCB PEC-Quotient	0.0340237		[0.5]
0-24	Total PCBs	23		[676]
24-48	PCB PEC-Quotient	8.87574E-03		[0.5]
24-48	Total PCBs	6		[676]
48-52	PCB PEC-Quotient	0		[0.5]
48-52	Total PCBs	0	U	[676]

OC-26 11/03/10

Depth	Parameter	Result		[Criteria]
0-6	PCB PEC-Quotient	0.56213		[0.5]
0-6	Total PCBs	380		[676]
0-24	PCB PEC-Quotient	0.369822		[0.5]
0-24	PCB PEC-Quotient	0.12426		[0.5]
0-24	Total PCBs	250		[676]
0-24	Total PCBs	84		[676]
24-47	PCB PEC-Quotient	0		[0.5]
24-47	Total PCBs	0	U	[676]
24-49	PCB PEC-Quotient	0		[0.5]
24-49	Total PCBs	0	U	[676]

OC-46 05/12/11

Depth	Parameter	Result		[Criteria]
0-6	PCB PEC-Quotient	0		[0.5]
0-6	Total PCBs	0	U	[676]
0-24	PCB PEC-Quotient	0.0502959		[0.5]
0-24	Total PCBs	34		[676]

OC-48 05/12/11

Depth	Parameter	Result		[Criteria]
0-6	PCB PEC-Quotient	0		[0.5]
0-6	Total PCBs	0	U	[676]
0-24	PCB PEC-Quotient	0		[0.5]
0-24	Total PCBs	0	U	[676]
24-48	PCB PEC-Quotient	0.136095		[0.5]
24-48	Total PCBs	92		[676]
48-60	PCB PEC-Quotient	1.31657		[0.5]
48-60	Total PCBs	890		[676]

OC-42 05/11/11

Depth	Parameter	Result		[Criteria]
0-6	PCB PEC-Quotient	0.113905		[0.5]
0-6	PCB PEC-Quotient	0.139053		[0.5]
0-6	Total PCBs	77		[676]
0-6	Total PCBs	94		[676]
0-23	PCB PEC-Quotient	0.0428994		[0.5]
0-23	PCB PEC-Quotient	0		[0.5]
0-23	Total PCBs	29		[676]
0-23	Total PCBs	0	U	[676]

OC-47 05/12/11

Depth	Parameter	Result		[Criteria]
0-6	PCB PEC-Quotient	0		[0.5]
0-6	Total PCBs	0	U	[676]
0-24	PCB PEC-Quotient	0		[0.5]
0-24	Total PCBs	0	U	[676]
24-48	PCB PEC-Quotient	0		[0.5]
24-48	Total PCBs	29		[676]
48-62	PCB PEC-Quotient	0.247041		[0.5]
48-62	Total PCBs	207		[676]

OC-35 05/12/11

Depth	Parameter	Result	[Criteria]
0-6	PCB PEC-Quotient	0.184911	[0.5]
0-6	Total PCBs	125	[676]
0-24	PCB PEC-Quotient	1.2855	[0.5]
0-24	Total PCBs	869	[676]

OC-31 11/04/10

Depth	Parameter	Result		[Criteria]
0-6	PCB PEC-Quotient	0		[0.5]
0-6	PCB PEC-Quotient	0		[0.5]
0-6	Total PCBs	0	U	[676]
0-6	Total PCBs	0	U	[676]
0-24	PCB PEC-Quotient	0		[0.5]
0-24	Total PCBs	0	U	[676]
24-48	PCB PEC-Quotient	0		[0.5]
24-48	Total PCBs	0	U	[676]

OC-34 05/10/11

Depth	Parameter	Result	[Criteria]
0-6	PCB PEC-Quotient	0.113905	[0.5]
0-6	Total PCBs	77	[676]
0-29	PCB PEC-Quotient	0.384615	[0.5]
0-29	Total PCBs	260	[676]

OC-36 05/10/11

Depth	Parameter	Result		[Criteria]
0-6	PCB PEC-Quotient	0		[0.5]
0-6	Total PCBs	0	U	[676]
0-15	PCB PEC-Quotient	0		[0.5]
0-15	Total PCBs	0	U	[676]

OC-40 05/11/11

Depth	Parameter	Result		[Criteria]
0-6	PCB PEC-Quotient	0		[0.5]
0-6	Total PCBs	0	U	[676]
0-23	PCB PEC-Quotient	0		[0.5]
0-23	Total PCBs	0	U	[676]

OC-44 05/10/11

Depth	Parameter	Result	[Criteria]
0-6	PCB PEC-Quotient	0.251479	[0.5]
0-6	Total PCBs	170	[676]
0-27	PCB PEC-Quotient	0.56213	[0.5]
0-27	Total PCBs	380	[676]

OC-41 05/10/11

Depth	Parameter	Result		[Criteria]
0-6	PCB PEC-Quotient	0		[0.5]
0-6	Total PCBs	0	U	[676]
0-23	PCB PEC-Quotient	0		[0.5]
0-23	Total PCBs	0	U	[676]

OC-45 05/10/11

Depth	Parameter	Result	[Criteria]
0-6	PCB PEC-Quotient	0.254438	[0.5]
0-6	Total PCBs	172	[676]
0-25	PCB PEC-Quotient	0.502959	[0.5]
0-25	Total PCBs	340	[676]
0-25	Total PCBs	840	[676]

OC-38 05/11/11

Depth	Parameter	Result		[Criteria]
0-6	PCB PEC-Quotient	0		[0.5]
0-6	Total PCBs	0	U	[676]

Legend

Tested For Toxicity
- No Toxicity Observed
- Toxicity Observed
- Shipping Channel

Sampling Locations
- At Least One Exceedance
- No Exceedances

Total PCB results are in ug/kg

Results above criteria are shown in red

0 450 Feet

N

Prepared For:
US EPA Region V
Contract No.: EP-S5-06-04
TDD: S05-0008-1010-036
DCN: 1269-2A-ARTA

Prepared By:
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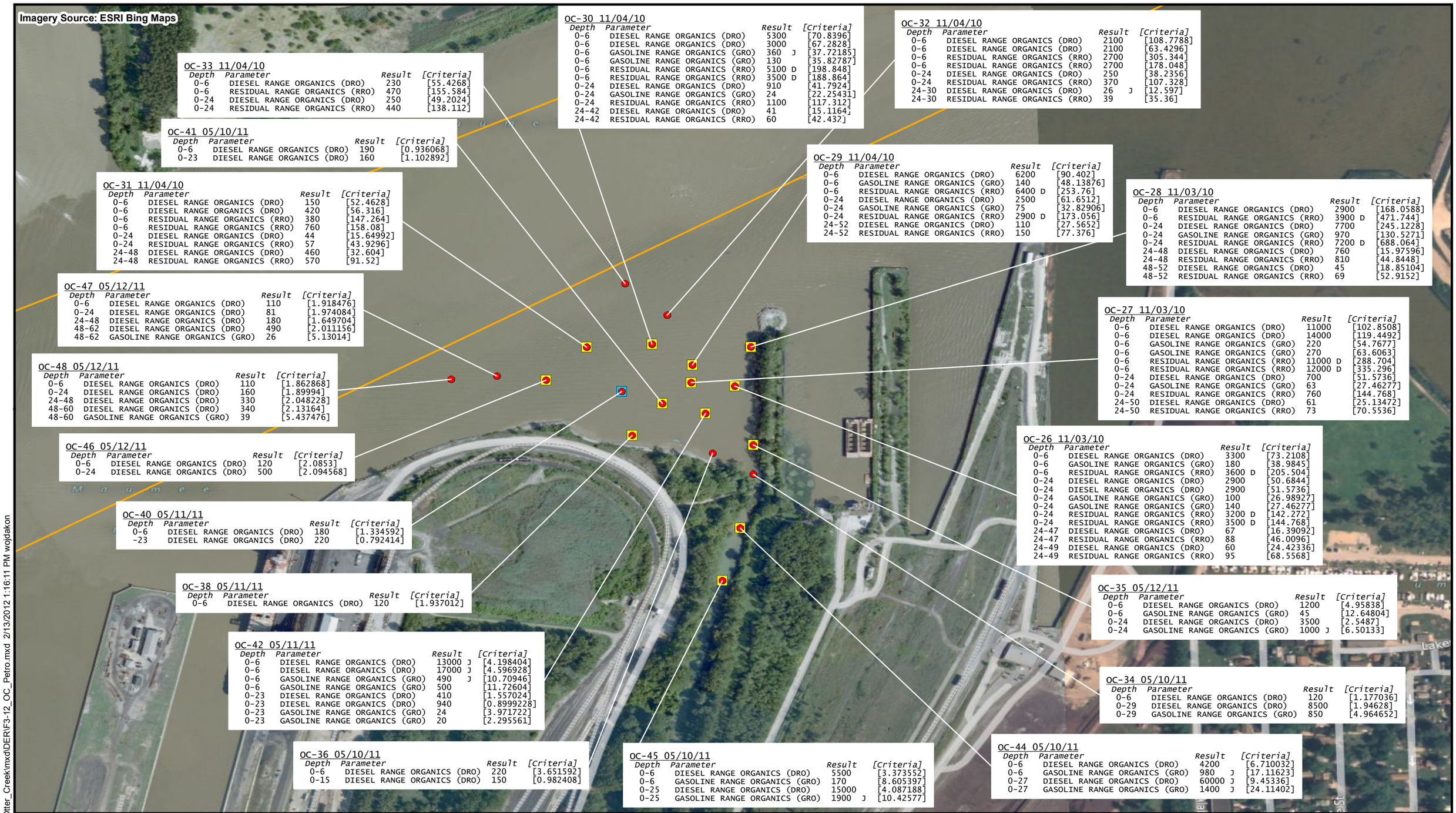
FIGURE 3-11
PCB PEC-Q and Concentrations above PECs
Otter Creek Confluence
Duck and Otter Creeks Confluence Investigation
Toledo, Lucas County, Ohio

FILE: D:\Duck_Otter_Creek\mxd\DERIF3-11_OC_PCB_PECQ.mxd 2/13/2012 3:53:00 PM wojdakon


Imagery Source: ESRI Bing Maps
OC-30 11/04/10
Depth Parameter Result [Criteria]
0-6 DIESEL RANGE ORGANICS (DRO) 5300 [70.8396]
0-6 DIESEL RANGE ORGANICS (DRO) 3000 [67.2828]
0-6 GASOLINE RANGE ORGANICS (GRO) 360 J [37.72185]
0-6 GASOLINE RANGE ORGANICS (GRO) 130 [35.82787]
0-6 RESIDUAL RANGE ORGANICS (RRO) 5100 D [198.848]
0-6 RESIDUAL RANGE ORGANICS (RRO) 3500 D [188.864]
0-24 DIESEL RANGE ORGANICS (DRO) 910 [41.7924]
0-24 GASOLINE RANGE ORGANICS (GRO) 24 [22.25431]
0-24 RESIDUAL RANGE ORGANICS (RRO) 1100 [117.312]
24-42 DIESEL RANGE ORGANICS (DRO) 41 [15.1164]
24-42 RESIDUAL RANGE ORGANICS (RRO) 60 [42.432]
OC-32 11/04/10
Depth Parameter Result [Criteria]
0-6 DIESEL RANGE ORGANICS (DRO) 2100 [108.7788]
0-6 DIESEL RANGE ORGANICS (DRO) 2100 [63.4296]
0-6 RESIDUAL RANGE ORGANICS (RRO) 2700 [305.344]
0-6 RESIDUAL RANGE ORGANICS (RRO) 2700 [178.048]
0-24 DIESEL RANGE ORGANICS (DRO) 250 [38.2356]
0-24 RESIDUAL RANGE ORGANICS (RRO) 370 [107.328]
24-30 DIESEL RANGE ORGANICS (DRO) 26 J [12.597]
24-30 RESIDUAL RANGE ORGANICS (RRO) 39 [35.36]
OC-33 11/04/10
Depth Parameter Result [Criteria]
0-6 DIESEL RANGE ORGANICS (DRO) 230 [55.4268]
0-6 RESIDUAL RANGE ORGANICS (RRO) 470 [155.584]
0-24 DIESEL RANGE ORGANICS (DRO) 250 [49.2024]
0-24 RESIDUAL RANGE ORGANICS (RRO) 440 [138.112]
OC-41 05/10/11
Depth Parameter Result [Criteria]
0-6 DIESEL RANGE ORGANICS (DRO) 190 [0.936068]
0-23 DIESEL RANGE ORGANICS (DRO) 160 [1.102892]
OC-29 11/04/10
Depth Parameter Result [Criteria]
0-6 DIESEL RANGE ORGANICS (DRO) 6200 [90.402]
0-6 GASOLINE RANGE ORGANICS (GRO) 140 [48.13876]
0-6 RESIDUAL RANGE ORGANICS (RRO) 6400 D [253.76]
0-24 DIESEL RANGE ORGANICS (DRO) 2500 [61.6512]
0-24 GASOLINE RANGE ORGANICS (GRO) 75 [32.82906]
0-24 RESIDUAL RANGE ORGANICS (RRO) 2900 D [173.056]
24-52 DIESEL RANGE ORGANICS (DRO) 110 [27.5652]
24-52 RESIDUAL RANGE ORGANICS (RRO) 150 [77.376]
OC-28 11/03/10
Depth Parameter Result [Criteria]
0-6 DIESEL RANGE ORGANICS (DRO) 2900 [168.0588]
0-6 RESIDUAL RANGE ORGANICS (RRO) 3900 D [471.744]
0-24 DIESEL RANGE ORGANICS (DRO) 7700 [245.1228]
0-24 GASOLINE RANGE ORGANICS (GRO) 970 [130.5271]
0-24 RESIDUAL RANGE ORGANICS (RRO) 7200 D [688.064]
24-48 DIESEL RANGE ORGANICS (DRO) 760 [15.97596]
24-48 RESIDUAL RANGE ORGANICS (RRO) 810 [44.8448]
48-52 DIESEL RANGE ORGANICS (DRO) 45 [18.85104]
48-52 RESIDUAL RANGE ORGANICS (RRO) 69 [52.9152]
OC-31 11/04/10
Depth Parameter Result [Criteria]
0-6 DIESEL RANGE ORGANICS (DRO) 150 [52.4628]
0-6 DIESEL RANGE ORGANICS (DRO) 420 [56.316]
0-6 RESIDUAL RANGE ORGANICS (RRO) 380 [147.264]
0-6 RESIDUAL RANGE ORGANICS (RRO) 760 [158.08]
0-24 DIESEL RANGE ORGANICS (DRO) 44 [15.64992]
0-24 RESIDUAL RANGE ORGANICS (RRO) 57 [43.9296]
24-48 DIESEL RANGE ORGANICS (DRO) 460 [32.604]
24-48 RESIDUAL RANGE ORGANICS (RRO) 570 [91.52]
OC-47 05/12/11
Depth Parameter Result [Criteria]
0-6 DIESEL RANGE ORGANICS (DRO) 110 [1.918476]
0-24 DIESEL RANGE ORGANICS (DRO) 81 [1.974084]
24-48 DIESEL RANGE ORGANICS (DRO) 180 [1.649704]
48-62 DIESEL RANGE ORGANICS (DRO) 490 [2.011156]
48-62 GASOLINE RANGE ORGANICS (GRO) 26 [5.13014]
OC-27 11/03/10
Depth Parameter Result [Criteria]
0-6 DIESEL RANGE ORGANICS (DRO) 11000 [102.8508]
0-6 DIESEL RANGE ORGANICS (DRO) 14000 [119.4492]
0-6 GASOLINE RANGE ORGANICS (GRO) 220 [54.7677]
0-6 GASOLINE RANGE ORGANICS (GRO) 270 [63.6063]
0-6 RESIDUAL RANGE ORGANICS (RRO) 11000 D [288.704]
0-6 RESIDUAL RANGE ORGANICS (RRO) 12000 D [335.296]
0-24 DIESEL RANGE ORGANICS (DRO) 700 [51.5736]
0-24 GASOLINE RANGE ORGANICS (GRO) 63 [27.46277]
0-24 RESIDUAL RANGE ORGANICS (RRO) 760 [144.768]
24-50 DIESEL RANGE ORGANICS (DRO) 61 [25.13472]
24-50 RESIDUAL RANGE ORGANICS (RRO) 73 [70.5536]
OC-48 05/12/11
Depth Parameter Result [Criteria]
0-6 DIESEL RANGE ORGANICS (DRO) 110 [1.862868]
0-24 DIESEL RANGE ORGANICS (DRO) 160 [1.89994]
24-48 DIESEL RANGE ORGANICS (DRO) 330 [2.048228]
48-60 DIESEL RANGE ORGANICS (DRO) 340 [2.13164]
48-60 GASOLINE RANGE ORGANICS (GRO) 39 [5.437476]
OC-26 11/03/10
Depth Parameter Result [Criteria]
0-6 DIESEL RANGE ORGANICS (DRO) 3300 [73.2108]
0-6 GASOLINE RANGE ORGANICS (GRO) 180 [38.9845]
0-6 RESIDUAL RANGE ORGANICS (RRO) 3600 D [205.504]
0-24 DIESEL RANGE ORGANICS (DRO) 2900 [50.6844]
0-24 DIESEL RANGE ORGANICS (DRO) 2900 [51.5736]
0-24 GASOLINE RANGE ORGANICS (GRO) 100 [26.98927]
0-24 GASOLINE RANGE ORGANICS (GRO) 140 [27.46277]
0-24 RESIDUAL RANGE ORGANICS (RRO) 3200 D [142.272]
0-24 RESIDUAL RANGE ORGANICS (RRO) 3500 D [144.768]
24-47 DIESEL RANGE ORGANICS (DRO) 67 [16.39092]
24-47 RESIDUAL RANGE ORGANICS (RRO) 88 [46.0096]
24-49 DIESEL RANGE ORGANICS (DRO) 60 [24.42336]
24-49 RESIDUAL RANGE ORGANICS (RRO) 95 [68.5568]
OC-46 05/12/11
Depth Parameter Result [Criteria]
0-6 DIESEL RANGE ORGANICS (DRO) 120 [2.0853]
0-24 DIESEL RANGE ORGANICS (DRO) 500 [2.094568]
OC-40 05/11/11
Depth Parameter Result [Criteria]
0-6 DIESEL RANGE ORGANICS (DRO) 180 [1.334592]
-23 DIESEL RANGE ORGANICS (DRO) 220 [0.792414]
OC-35 05/12/11
Depth Parameter Result [Criteria]
0-6 DIESEL RANGE ORGANICS (DRO) 1200 [4.95838]
0-6 GASOLINE RANGE ORGANICS (GRO) 45 [12.64804]
0-24 DIESEL RANGE ORGANICS (DRO) 3500 [2.5487]
0-24 GASOLINE RANGE ORGANICS (GRO) 1000 J [6.50133]
OC-38 05/11/11
Depth Parameter Result [Criteria]
0-6 DIESEL RANGE ORGANICS (DRO) 120 [1.937012]
OC-42 05/11/11
Depth Parameter Result [Criteria]
0-6 DIESEL RANGE ORGANICS (DRO) 13000 J [4.198404]
0-6 DIESEL RANGE ORGANICS (DRO) 17000 J [4.596928]
0-6 GASOLINE RANGE ORGANICS (GRO) 490 J [10.70946]
0-6 GASOLINE RANGE ORGANICS (GRO) 500 [11.72604]
0-23 DIESEL RANGE ORGANICS (DRO) 410 [1.557024]
0-23 DIESEL RANGE ORGANICS (DRO) 940 [0.8999228]
0-23 GASOLINE RANGE ORGANICS (GRO) 24 [3.971722]
0-23 GASOLINE RANGE ORGANICS (GRO) 20 [2.295561]
OC-34 05/10/11
Depth Parameter Result [Criteria]
0-6 DIESEL RANGE ORGANICS (DRO) 120 [1.177036]
0-29 DIESEL RANGE ORGANICS (DRO) 8500 [1.94628]
0-29 GASOLINE RANGE ORGANICS (GRO) 850 [4.964652]
OC-36 05/10/11
Depth Parameter Result [Criteria]
0-6 DIESEL RANGE ORGANICS (DRO) 220 [3.651592]
0-15 DIESEL RANGE ORGANICS (DRO) 150 [0.982408]
OC-45 05/10/11
Depth Parameter Result [Criteria]
0-6 DIESEL RANGE ORGANICS (DRO) 5500 [3.373552]
0-6 GASOLINE RANGE ORGANICS (GRO) 170 [8.605397]
0-25 DIESEL RANGE ORGANICS (DRO) 15000 [4.087188]
0-25 GASOLINE RANGE ORGANICS (GRO) 1900 J [10.42577]
OC-44 05/10/11
Depth Parameter Result [Criteria]
0-6 DIESEL RANGE ORGANICS (DRO) 4200 [6.710032]
0-6 GASOLINE RANGE ORGANICS (GRO) 980 J [17.11623]
0-27 DIESEL RANGE ORGANICS (DRO) 60000 J [9.45336]
0-27 GASOLINE RANGE ORGANICS (GRO) 1400 J [24.11402]
Legend
Toxicity Locations
No Toxicity Observed
Toxicity Observed
Shipping Channel
Sampling Locations
At Least One Exceedance
No Exceedances
Results are in mg/kg
0
400
Feet
N
Prepared For:
US EPA Region V
Contract No.: EP-S5-06-04
TDD: S05-0008-1010-036
DCN: 1269-2A-AUIK
Prepared By:
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360 E Maple, Suite R
Troy, Michigan 48083
FIGURE 3-12
Petroleum Hydrocarbons above Screening Benchmarks
Otter Creek Confluence
Duck and Otter Creeks Confluence Investigation
Toledo, Lucas County, Ohio
FILE: D:\Duck_Otter_Creek\mxd\DER\F3-12_OC_Petro.mxd 2/13/2012 1:16:11 PM wojdakon

Imagery Source: ESRI Bing Maps

OC-32 11/04/10

Depth	Parameter	Result	[Criteria]
0-6	TOTAL PAH (Calculated by lab)	26000 J	[22800]
0-6	TOTAL PAH (Calculated by lab)	23000 J	[22800]
0-24	Total Parent PAHs (Sum of detections x 1.7)	40256	[22800]

OC-29 11/04/10

Depth	Parameter	Result	[Criteria]
0-6	TOTAL PAH (Calculated by lab)	95000 J	[22800]
0-6	Total Parent PAHs (Sum of detections x 1.7)	54481.6	[22800]
0-24	Total Parent PAHs (Sum of detections x 1.7)	28617.8	[22800]

OC-30 11/04/10

Depth	Parameter	Result	[Criteria]
0-6	TOTAL PAH (Calculated by lab)	110000 J	[22800]
0-6	TOTAL PAH (Calculated by lab)	65000 J	[22800]
0-6	Total Parent PAHs (Sum of detections x 1.7)	30141	[22800]

OC-28 11/03/10

Depth	Parameter	Result	[Criteria]
0-6	TOTAL PAH (Calculated by lab)	62000 J	[22800]
0-6	Total Parent PAHs (Sum of detections x 1.7)	23274.7	[22800]
0-6	Total Parent PAHs (Sum of detections x 1.7)	23274.7	[22800]
0-24	Total Parent PAHs (Sum of detections x 1.7)	32240.5	[22800]

OC-26 11/03/10

Depth	Parameter	Result	[Criteria]
0-6	TOTAL PAH (Calculated by lab)	280000 J	[22800]
0-6	Total Parent PAHs (Sum of detections x 1.7)	66521	[22800]

OC-42 05/11/11

Depth	Parameter	Result	[Criteria]
0-6	Total Parent PAHs (Sum of detections x 1.7)	59466	[22800]
0-6	Total Parent PAHs (Sum of detections x 1.7)	138414	[22800]

OC-27 11/03/10

Depth	Parameter	Result	[Criteria]
0-6	TOTAL PAH (Calculated by lab)	230000 J	[22800]
0-6	TOTAL PAH (Calculated by lab)	210000 J	[22800]
0-6	Total Parent PAHs (Sum of detections x 1.7)	48314	[22800]

OC-34 05/10/11

Depth	Parameter	Result	[Criteria]
0-29	Total Parent PAHs (Sum of detections x 1.7)	35955	[22800]

OC-44 05/10/11

Depth	Parameter	Result	[Criteria]
0-6	Total Parent PAHs (Sum of detections x 1.7)	106063	[22800]
0-27	Total Parent PAHs (Sum of detections x 1.7)	290360	[22800]

OC-45 05/10/11

Depth	Parameter	Result	[Criteria]
0-25	Total Parent PAHs (Sum of detections x 1.7)	108205	[22800]
0-25	Total Parent PAHs (Sum of detections x 1.7)	88349	[22800]

OC-33 OC-31 OC-47 OC-46 OC-48 OC-40 OC-41 OC-38 OC-36 OC-35

Maumee Bay

Lakeview Ave

Alabama

Mississippi St

Legend

Toxicity Locations
- No Toxicity Observed
- Toxicity Observed
- Shipping Channel

Sampling Locations
- At Least One Exceedance
- No Exceedances

Results are in ug/kg

0 400 Feet

N

Prepared For:
US EPA Region V
Contract No.: EP-S5-06-04
TDD: S05-0008-1010-036
DCN: 1269-2A-AUIK

Prepared By:
WESTON SOLUTIONS, INC.
360 E Maple, Suite R
Troy, Michigan 48083

FIGURE 3-13
PAH Concentrations above Screening Benchmarks
Otter Creek Confluence
Duck and Otter Creeks Confluence Investigation
Toledo, Lucas County, Ohio

FILE: D:\Duck_Otter_Creek\mxd\DER\F3-13_OC_TPAH_PEC.mxd 2/13/2012 1:21:52 PM wojdakon

Imagery Source: ESRI Bing Maps

OC-33
OC-32
OC-31
OC-30
OC-28
OC-29
OC-48
OC-47
OC-46
OC-27
OC-26
OC-40
OC-41
OC-42
OC-38
OC-35
OC-36
OC-44

OC-34 05/10/11

Depth	Parameter	Result
0-29	1,1-BIPHENYL	550
0-29	ACETOPHENONE	750

OC-45 05/10/11

Depth	Parameter	Result
0-6	BIS(2-ETHYLHEXYL)PHTHALATE	930
0-25	N-NITROSODIPHENYLAMINE	2200
0-25	N-NITROSODIPHENYLAMINE	2500

Legend

Toxicity Locations
- No Toxicity Observed
- Toxicity Observed
- Shipping Channel

Sampling Locations
- At Least One Exceedance
- No Exceedances

Results are in mg/kg

0 300 Feet

N

Prepared For:
US EPA Region V
Contract No.: EP-S5-06-04
TDD: S05-0008-1010-036
DCN: 1269-2A-AUIK

Prepared By:
WESTON SOLUTIONS, INC.
360 E Maple, Suite R
Troy, Michigan 48083

FIGURE 3-14
SVOC Concentrations above Screening Benchmarks
Otter Creek Confluence
Duck and Otter Creeks Confluence Investigation
Toledo, Lucas County, Ohio

FILE: D:\Duck_Otter_Creek\mxd\DER\F3-14_OC_SVOC_HSB.mxd 2/13/2012 1:23:07 PM wojdakon

Imagery Source: ESRI Bing Maps

Maumee Bay

OC-30 11/04/10

Depth	Result
0-6	0.297473
0-6	0.425193
0-24	0.193799
24-42	0.22061

OC-33 11/04/10

Depth	Result
0-6	0.219605
0-24	0.199903
24-39	0.179397

OC-32 11/04/10

Depth	Result
0-6	0.358884
0-6	0.335287
0-24	0.191283
24-30	0.119067

OC-28 11/03/10

Depth	Result
0-6	0.320518
0-24	0.397601
24-48	0.20647
48-52	0.131465

OC-40 05/11/11

Depth	Result
0-6	0.183071
0-23	0.199936

OC-29 11/04/10

Depth	Result
0-6	0.347913
0-24	0.263958
24-52	0.176298

OC-31 11/04/10

Depth	Result
0-6	0.217994
0-6	0.21259
0-24	0.225033
24-48	0.179257

OC-27 11/03/10

Depth	Result
0-6	0.308161
0-6	0.381439
0-24	0.28489
24-50	0.156847

OC-26 11/03/10

Depth	Result
0-6	0.418935
0-24	0.247758
0-24	0.303739
24-47	0.170201
24-49	0.127212

OC-48 05/12/11

Depth	Result
0-6	0.175624
0-24	0.204226
24-48	0.205351
48-60	0.267925

OC-42 05/11/11

Depth	Result
0-6	0.488629
0-6	0.696883
0-23	0.25516
0-23	0.294395

OC-47 05/12/11

Depth	Result
0-6	0.179938
0-24	0.202431
24-48	0.24829
48-62	0.256315

OC-35 05/12/11

Depth	Result
0-6	0.305119
0-24	0.312922

OC-46 05/12/11

Depth	Result
0-6	0.195328
0-24	0.226704

OC-34 05/10/11

Depth	Result
0-6	0.185644
0-29	0.581301

OC-38 05/11/11

Depth	Result
0-6	0.241921

OC-44 05/10/11

Depth	Result
0-6	0.800255
0-27	2.34757

OC-41 05/10/11

Depth	Result
0-6	0.505287
0-23	0.209807

OC-36 05/10/11

Depth	Result
0-6	0.172096
0-15	0.193847

OC-45 05/10/11

Depth	Result
0-6	0.394717
0-25	0.907128

Legend

Toxicity Locations
- No Toxicity Observed
- Toxicity Observed
- Shipping Channel

Sampling Locations
- No Exceedances
- At Least One Exceedance

Results above threshold of 0.5 are shown in red

0 300 Feet

N

Prepared For:
US EPA Region V
Contract No.: EP-S5-06-04
TDD: S05-0008-1010-036
DCN: 1269-2A-AUIK

Prepared By:
WESTON SOLUTIONS, INC.
360 E Maple, Suite R
Troy, Michigan 48083

FIGURE 3-15
PEC-Q Results for Metals
Otter Creek Confluence
Duck and Otter Creeks Confluence Investigation
Toledo, Lucas County, Ohio

FILE: D:\Duck_Otter_Creek\mxd\DER\F3-15_OC_Metals_PECQ.mxd 2/13/2012 1:23:28 PM wojdakon

Imagery Source: ESRI Bing Maps

OC-33 11/04/10

Depth	Parameter	Result
0-6	16 PPAH PEC-Quotient	0.0208744
0-6	Total PAHs PEC-Quotient	0.053945
0-6	Total Parent PAHs PEC-Quotient	0.0366467
0-24	Total Parent PAHs PEC-Quotient	0.175309
24-39	Total Parent PAHs PEC-Quotient	0

OC-32 11/04/10

Depth	Parameter	Result
0-6	16 PPAH PEC-Quotient	0.0717051
0-6	16 PPAH PEC-Quotient	0.118872
0-6	Total PAHs PEC-Quotient	0.310722
0-6	Total PAHs PEC-Quotient	0.471389
0-6	Total Parent PAHs PEC-Quotient	0.118018
0-6	Total Parent PAHs PEC-Quotient	0.194069
0-24	Total Parent PAHs PEC-Quotient	1.36869
24-30	Total Parent PAHs PEC-Quotient	0.146667

OC-30 11/04/10

Depth	Parameter	Result
0-6	16 PPAH PEC-Quotient	0.330324
0-6	16 PPAH PEC-Quotient	0.251179
0-6	Total PAHs PEC-Quotient	2.01865
0-6	Total PAHs PEC-Quotient	1.25589
0-6	Total Parent PAHs PEC-Quotient	0.553127
0-6	Total Parent PAHs PEC-Quotient	0.40204
0-24	Total Parent PAHs PEC-Quotient	0.707011
24-42	Total Parent PAHs PEC-Quotient	0.0847953

OC-29 11/04/10

Depth	Parameter	Result
0-6	16 PPAH PEC-Quotient	0.244464
0-6	Total PAHs PEC-Quotient	1.36612
0-6	Total Parent PAHs PEC-Quotient	0.783457
0-24	Total Parent PAHs PEC-Quotient	0.603446
24-52	Total Parent PAHs PEC-Quotient	0.17999

OC-31 11/04/10

Depth	Parameter	Result
0-6	16 PPAH PEC-Quotient	0.0297354
0-6	16 PPAH PEC-Quotient	0.0156971
0-6	Total PAHs PEC-Quotient	0.0842502
0-6	Total PAHs PEC-Quotient	0.0484765
0-6	Total Parent PAHs PEC-Quotient	0.0453266
0-6	Total Parent PAHs PEC-Quotient	0.0239774
0-24	Total Parent PAHs PEC-Quotient	0.0264072
24-48	Total Parent PAHs PEC-Quotient	0.884569

OC-28 11/03/10

Depth	Parameter	Result
0-6	16 PPAH PEC-Quotient	0.108295
0-6	Total PAHs PEC-Quotient	0.479594
0-6	Total Parent PAHs PEC-Quotient	0.180039
0-24	Total Parent PAHs PEC-Quotient	0.170986
24-48	Total Parent PAHs PEC-Quotient	0.311526
48-52	Total Parent PAHs PEC-Quotient	0.0164012

OC-27 11/03/10

Depth	Parameter	Result
0-6	16 PPAH PEC-Quotient	0.442388
0-6	16 PPAH PEC-Quotient	0.315615
0-6	Total PAHs PEC-Quotient	2.90712
0-6	Total PAHs PEC-Quotient	2.28549
0-6	Total Parent PAHs PEC-Quotient	0.17942
0-6	Total Parent PAHs PEC-Quotient	0.525815
0-24	Total Parent PAHs PEC-Quotient	0.168449
24-50	Total Parent PAHs PEC-Quotient	0.0327261

OC-47 05/12/11

Depth	Parameter	Result
0-6	Total PAHs PEC-Quotient	0.0275445
0-24	Total PAHs PEC-Quotient	0.0241712
24-48	Total PAHs PEC-Quotient	0.0327735
48-62	Total PAHs PEC-Quotient	0.0361125

OC-26 11/03/10

Depth	Parameter	Result
0-6	16 PPAH PEC-Quotient	0.710278
0-6	Total PAHs PEC-Quotient	4.97194
0-6	Total Parent PAHs PEC-Quotient	1.18121
0-24	Total Parent PAHs PEC-Quotient	0.219804
0-24	Total Parent PAHs PEC-Quotient	0.530243
24-47	Total Parent PAHs PEC-Quotient	0.620626
24-49	Total Parent PAHs PEC-Quotient	0.11329

OC-48 05/12/11

Depth	Parameter	Result
0-6	Total PAHs PEC-Quotient	0.054708
0-24	Total PAHs PEC-Quotient	0.0105113
24-48	Total PAHs PEC-Quotient	0.0570749
48-60	Total PAHs PEC-Quotient	0.0560767

OC-46 05/12/11

Depth	Parameter	Result
0-6	Total PAHs PEC-Quotient	0.0175435
0-24	Total PAHs PEC-Quotient	0.0582536

OC-35 05/12/11

Depth	Parameter	Result
0-6	Total PAHs PEC-Quotient	0.0400402
0-24	Total PAHs PEC-Quotient	0.104657

OC-40 05/11/11

Depth	Parameter	Result
0-6	Total PAHs PEC-Quotient	0.0247554
0-23	Total PAHs PEC-Quotient	0.106453

OC-36 05/10/11

Depth	Parameter	Result
0-6	Total PAHs PEC-Quotient	0.0175427
0-15	Total PAHs PEC-Quotient	0.00149123

OC-38 05/11/11

Depth	Parameter	Result
0-6	Total PAHs PEC-Quotient	0.00768089

OC-34 05/10/11

Depth	Parameter	Result
0-6	Total PAHs PEC-Quotient	0.10509
0-29	Total PAHs PEC-Quotient	0.75094

OC-41 05/10/11

Depth	Parameter	Result
0-6	Total PAHs PEC-Quotient	0.0479924
0-23	Total PAHs PEC-Quotient	0.0192231

OC-44 05/10/11

Depth	Parameter	Result
0-6	Total PAHs PEC-Quotient	0.642526
0-27	Total PAHs PEC-Quotient	1.24854

OC-42 05/11/11

Depth	Parameter	Result
0-6	Total PAHs PEC-Quotient	0.575752
0-6	Total PAHs PEC-Quotient	1.22395
0-23	Total PAHs PEC-Quotient	0.117692
0-23	Total PAHs PEC-Quotient	0.19733

OC-45 05/10/11

Depth	Parameter	Result
0-6	Total PAHs PEC-Quotient	0.0728408
0-25	Total PAHs PEC-Quotient	1.07615

Legend

Toxicity Locations
- No Toxicity Observed
- Toxicity Observed
- Shipping Channel

Sampling Locations
- No Exceedances
- At Least One Exceedance

Results above threshold of 0.5 are shown in red

0 300 Feet

N

Prepared For:
US EPA Region V
Contract No.: EP-S5-06-04
TDD: S05-0008-1010-036
DCN: 1269-2A-AUIK

Prepared By:
WESTON SOLUTIONS, INC.
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Troy, Michigan 48083

FIGURE 3-16
PEC-Q Results for PAH
Otter Creek Confluence
Duck and Otter Creeks Confluence Investigation
Toledo, Lucas County, Ohio

FILE: D:\Duck_Otter_Creek\mxd\DER\F3-16_OC_PAHs_PECQ.mxd 2/13/2012 1:23:48 PM wojdakon

Imagery Source: ESRI Bing Maps

M a u m e e B a y

OC-30 11/04/10
Depth Result
0-6 -229
0-6 -158

OC-33 11/04/10
Depth Result
0-6 -65

OC-32 11/04/10
Depth Result
0-6 -38
0-6 -133

OC-31 11/04/10
Depth Result
0-6 -134
0-6 -67

OC-29 11/04/10
Depth Result
0-6 -903

OC-28 11/03/10
Depth Result
0-6 -91

OC-47 05/12/11
Depth Result
0-6 0.5

OC-27 11/03/10
Depth Result
0-6 -188
0-6 -1036

OC-48 05/12/11
Depth Result
0-6 -127

OC-26 11/03/10
Depth Result
0-6 -235

OC-46 05/12/11
Depth Result
0-6 -82

OC-42 05/11/11
Depth Result
0-6 -143
0-6 -45

OC-40 05/11/11
Depth Result
0-6 4

OC-35 05/12/11
Depth Result
0-6 -126

OC-38 05/11/11
Depth Result
0-6 6

OC-34 05/10/11
Depth Result
0-6 -12

OC-44 05/10/11
Depth Result
0-6 -91

OC-41 05/10/11
Depth Result
0-6 17

OC-36 05/10/11
Depth Result
0-6 -7

OC-45 05/10/11
Depth Result
0-6 -141

Legend

Toxicity Locations
- No Toxicity Observed
- Toxicity Observed
- Shipping Channel

Sampling Locations
- No Exceedances

No results are above the threshold of 130

0 300 Feet

N

Prepared For:
US EPA Region V
Contract No.: EP-S5-06-04
TDD: S05-0008-1010-036
DCN: 1269-2A-AUIK

Prepared By:
WESTON SOLUTIONS, INC.
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Troy, Michigan 48083

FIGURE 3-17
AVS/SEM ESBTU Results
Otter Creek Confluence
Duck and Otter Creeks Confluence Investigation
Toledo, Lucas County, Ohio

FILE: D:\Duck_Otter_Creek\mxd\DER\F3-17_OC_AVS_ESBTU.mxd 2/13/2012 1:24:10 PM wojdakon

Imagery Source: ESRI Bing Maps

OC-33 11/04/10
Depth Result
0-6 0.16205

OC-32 11/04/10
Depth Result
0-6 0.873529
0-6 1.29853

OC-29 11/04/10
Depth Result
0-6 4.46458

OC-30 11/04/10
Depth Result
0-6 5.765
0-6 3.55522

OC-27 11/03/10
Depth Result
0-6 7.46296
0-6 7.73701

OC-31 11/04/10
Depth Result
0-6 0.246977
0-6 0.158978

OC-46 05/12/11
Depth Result
0-6 0.0629248

OC-28 11/03/10
Depth Result
0-6 1.27653

OC-48 05/12/11
Depth Result
0-6 0.149099

OC-26 11/03/10
Depth Result
0-6 15.098

OC-35 05/12/11
Depth Result
0-6 0.254933

OC-47 05/12/11
Depth Result
0-6 0.0658546

OC-40 05/11/11
Depth Result
0-6 0.189099

OC-34 05/10/11
Depth Result
0-6 1.32285

OC-38 05/11/11
Depth Result
0-6 0.0905081

OC-41 05/10/11
Depth Result
0-6 0.31399

OC-44 05/10/11
Depth Result
0-6 8.40963

OC-42 05/11/11
Depth Result
0-6 4.93285
0-6 9.89397

OC-45 05/10/11
Depth Result
0-6 0.58442

OC-36 05/10/11
Depth Result
0-6 0.13026

Legend

Toxicity Locations
- No Toxicity Observed
- Toxicity Observed
- Shipping Channel

Sampling Locations
- No Exceedances
- At Least One Exceedance

Results above the threshold of 1 are shown in red

0 300 Feet

N

Prepared For:
US EPA Region V
Contract No.: EP-S5-06-04
TDD: S05-0008-1010-036
DCN: 1269-2A-AUIK

Prepared By:
WESTON SOLUTIONS, INC.
360 E Maple, Suite R
Troy, Michigan 48083

FIGURE 3-18
PAH ESBTU Results
Otter Creek Confluence
Duck and Otter Creeks Confluence Investigation
Toledo, Lucas County, Ohio

FILE: D:\Duck_Otter_Creek\mxd\DERIF3-18_OC_PAH_ESBTU.mxd 2/13/2012 1:24:28 PM wojdakon

Imagery Source: ESRI Bing Maps

DC-14 11/03/10

Parameter	Result	Units	[Criteria]
MANGANESE	1990	UG/L	[2]
NITROGEN, AMMONIA (AS N)	11.3	MG/L	[2]

DC-19 11/02/10

Parameter	Result	Units	[Criteria]
MANGANESE	1670	UG/L	[2]
MANGANESE	1730	UG/L	[2]
NITROGEN, AMMONIA (AS N)	8.12	MG/L	[2]
NITROGEN, AMMONIA (AS N)	8.53	MG/L	[2]

DC-24 05/11/11

Parameter	Result	Units	[Criteria]
MANGANESE	1120	ug/l	[2]
NITROGEN, AMMONIA (AS N)	4.75	mg/l	[2]

DC-17 11/02/10

Parameter	Result	Units	[Criteria]
MANGANESE	1650	UG/L	[2]
NITROGEN, AMMONIA (AS N)	9.47	MG/L	[2]

DC-23 05/11/11

Parameter	Result	Units	[Criteria]
MANGANESE	870	ug/l	[2]
NITROGEN, AMMONIA (AS N)	6.07	mg/l	[2]

DC-20 05/11/11

Parameter	Result	Units	[Criteria]
BARIUM	247	ug/l	[2]
BARIUM	261	ug/l	[2]
MANGANESE	535	ug/l	[2]
MANGANESE	257	ug/l	[2]
NITROGEN, AMMONIA (AS N)	7.81	mg/l	[2]
NITROGEN, AMMONIA (AS N)	8	mg/l	[2]

DC-22 05/11/11

Parameter	Result	Units	[Criteria]
ALUMINUM	222	ug/l	[2]
IRON	3100	ug/l	[2]
MANGANESE	1330	ug/l	[2]
MANGANESE	222	ug/l	[2]
NITROGEN, AMMONIA (AS N)	3.36	mg/l	[2]
NITROGEN, AMMONIA (AS N)	4.18	mg/l	[2]

DC-21 05/11/11

Parameter	Result	Units	[Criteria]
MANGANESE	110	ug/l	[2]

DC-25 05/11/11

Parameter	Result	Units	[Criteria]
MANGANESE	140	ug/l	[2]
MANGANESE	164	ug/l	[2]
NITROGEN, AMMONIA (AS N)	17.1	mg/l	[2]
NITROGEN, AMMONIA (AS N)	6.95	mg/l	[2]
Sum IWTU	1.48	s.u.	[1]

DC-16 11/02/10

Parameter	Result	Units	[Criteria]
MANGANESE	1140	UG/L	[2]
NITROGEN, AMMONIA (AS N)	11.1	MG/L	[2]

DC-13 11/02/10

Parameter	Result	Units	[Criteria]
NITROGEN, AMMONIA (AS N)	17	MG/L	[2]

Criteria:
1 = IWTU
2 = OMZA-Chronic
3 = OMZM-Acute
4 = IMZM

Legend
- Locations with no exceedances
- Locations with at least one exceedance
- Shipping Channel

0 300 Feet

N

Prepared For:
US EPA Region V
Contract No.: EP-S5-06-04
TDD: S05-0008-1010-036
DCN: 1269-2A-AUIK

Prepared By:
WESTON SOLUTIONS, INC.
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Troy, Michigan 48083

FIGURE 3-19
Porewater Concentrations Above Benchmarks -
Duck Creek Confluence
Duck and Otter Creeks Confluence Investigation
Toledo, Lucas County, Ohio

FILE: D:\Duck_Otter_Creek\mxd\DER\F3-19_DC_PW_Exceeds.mxd 2/13/2012 1:25:53 PM wojdakon

Imagery Source: ESRI Bing Maps

Maumee Bay

OC-33 11/04/10

Parameter	Result	Units	[Criteria]
MANGANESE	971	UG/L	[2]
NITROGEN, AMMONIA (AS N)	2.31	MG/L	[2]

OC-32 11/04/10

Parameter	Result	Units	[Criteria]
MANGANESE	584	UG/L	[2]
NITROGEN, AMMONIA (AS N)	2.6	MG/L	[2]
Sum IWTU	7.5	s.u.	[1]

OC-30 11/04/10

Parameter	Result	Units	[Criteria]
MANGANESE	1140	UG/L	[2]
NITROGEN, AMMONIA (AS N)	2.85	MG/L	[2]
Sum IWTU	10	s.u.	[1]

OC-29 11/04/10

Parameter	Result	Units	[Criteria]
MANGANESE	1830	UG/L	[2]
NITROGEN, AMMONIA (AS N)	3.35	MG/L	[2]
Sum IWTU	26	s.u.	[1]

OC-31 11/04/10

Parameter	Result	Units	[Criteria]
MANGANESE	908	UG/L	[2]

OC-27 11/03/10

Parameter	Result	Units	[Criteria]
MANGANESE	1160	UG/L	[2]
Sum IWTU	31	s.u.	[1]

OC-28 11/03/10

Parameter	Result	Units	[Criteria]
MANGANESE	1440	UG/L	[2]
NITROGEN, AMMONIA (AS N)	5.43	MG/L	[2]
Sum IWTU	16	s.u.	[1]

OC-47 05/12/11

Parameter	Result	Units	[Criteria]
MANGANESE	4210	ug/l	[23]
NITROGEN, AMMONIA (AS N)	6.5	mg/l	[2]

OC-26 11/03/10

Parameter	Result	Units	[Criteria]
MANGANESE	985	UG/L	[2]
NITROGEN, AMMONIA (AS N)	6.18	MG/L	[2]
Sum IWTU	28	s.u.	[1]

OC-42 05/11/11

Parameter	Result	Units	[Criteria]
MANGANESE	805	ug/l	[2]
MANGANESE	799	ug/l	[2]
Sum IWTU	170	s.u.	[1]

OC-48 05/12/11

Parameter	Result	Units	[Criteria]
MANGANESE	3960	ug/l	[23]
NITROGEN, AMMONIA (AS N)	8.15	mg/l	[2]

OC-35 05/12/11

Parameter	Result	Units	[Criteria]
MANGANESE	612	ug/l	[2]
NITROGEN, AMMONIA (AS N)	10.8	mg/l	[2]
Sum IWTU	1.6	s.u.	[1]

OC-46 05/12/11

Parameter	Result	Units	[Criteria]
MANGANESE	1580	ug/l	[2]
NITROGEN, AMMONIA (AS N)	4.47	mg/l	[2]

OC-34

OC-40 05/10/11

Parameter	Result	Units	[Criteria]
MANGANESE	616	ug/l	[2]

OC-36 05/10/11

Parameter	Result	Units	[Criteria]
MANGANESE	344	ug/l	[2]

OC-38 05/11/11

Parameter	Result	Units	[Criteria]
MANGANESE	210	ug/l	[2]

OC-44 05/10/11

Parameter	Result	Units	[Criteria]
MANGANESE	1160	ug/l	[2]
NITROGEN, AMMONIA (AS N)	18.5	mg/l	[2]
Sum IWTU	61	s.u.	[1]

OC-41 05/10/11

Parameter	Result	Units	[Criteria]
MANGANESE	487	ug/l	[2]
NITROGEN, AMMONIA (AS N)	0.252	mg/l	[2]

OC-45 05/10/11

Parameter	Result	Units	[Criteria]
MANGANESE	964	ug/l	[2]
NITROGEN, AMMONIA (AS N)	11.1	mg/l	[2]
Sum IWTU	87	s.u.	[1]

Criteria:
1 = IWTU
2 = OMZA-Chronic
3 = OMZM-Acute
4 = IMZM

Legend
- Locations with no exceedances
- Locations with at least one exceedance
- Shipping Channel

0 300 Feet

N

Prepared For:
US EPA Region V
Contract No.: EP-S5-06-04
TDD: S05-0008-1010-036
DCN: 1269-2A-AUIK

Prepared By:
WESTON SOLUTIONS, INC.
360 E Maple, Suite R
Troy, Michigan 48083

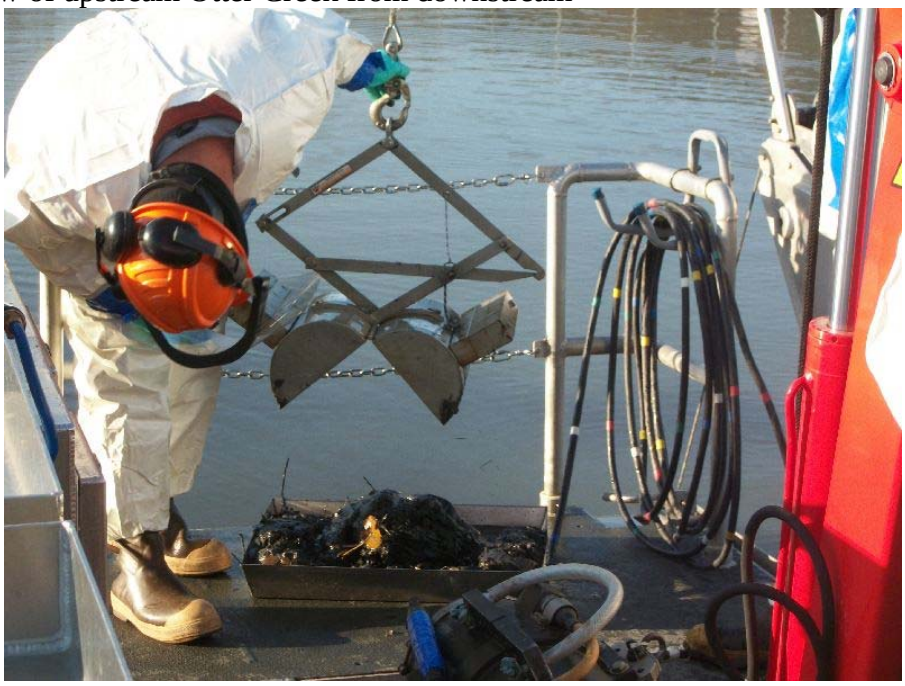
FIGURE 3-20
Porewater Concentrations Above Benchmarks -
Otter Creek Confluence
Duck and Otter Creeks Confluence Investigation
Toledo, Lucas County, Ohio

FILE: D:\Duck_Otter_Creek\mxd\DERF3-20_OC_PW_Exceeds.mxd 2/13/2012 1:26:36 PM wojdakon

APPENDIX A
PHOTOGRAPHIC LOG



Site: Duck and Otter Creeks Confluences
Photo Number: 1 **Date:** 5/10/11
Direction: South **Photographer:** M. Beer
Subject: View of upstream Otter Creek from downstream



Site: Duck and Otter Creeks Confluences
Photo Number: 2 **Date:** 11/2/10
Direction: southwest **Photographer:** M. Beer
Subject: Collecting ponar sample aboard the R/V Mudpuppy 2

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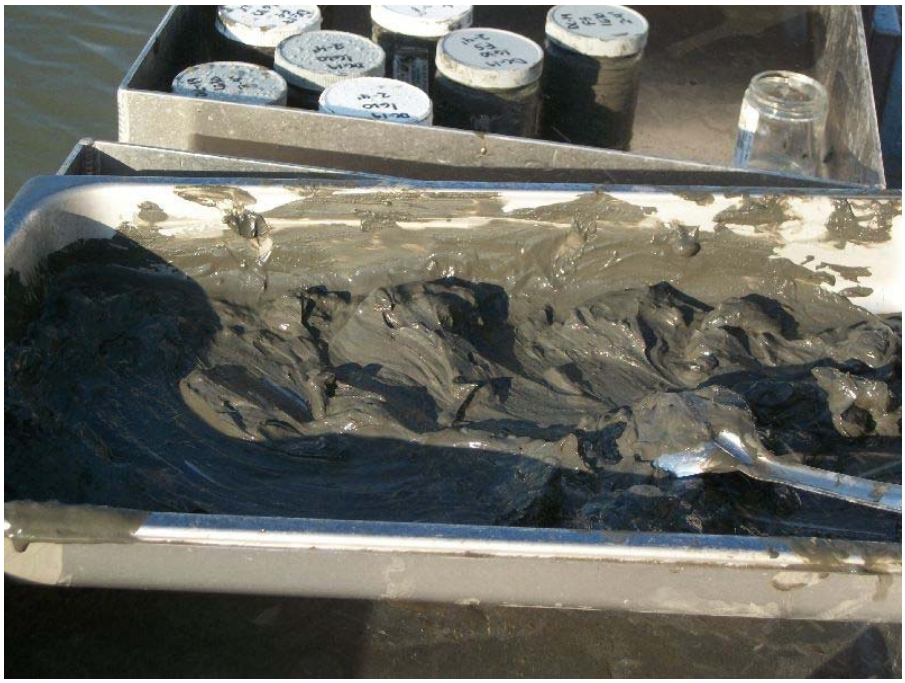
Site: Duck and Otter Creeks Confluences
Photo Number: 3 **Date:** 11/2/10
Direction: southwest **Photographer:** M. Beer
Subject: Deck crew member removing sediment from bottom of vibra-core lexan tube



Site: Duck and Otter Creeks Confluences
Photo Number: 4 **Date:** 11/2/10
Direction: Down **Photographer:** M. Beer
Subject: Sample DC-17, 0-24 inch interval

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Site: Duck and Otter Creeks Confluences
Photo Number: 5 **Date:** 11/3/10
Direction: Down **Photographer:** M. Beer
Subject: View of surface sediment retrieved from OC-27; note sheen striations on sediment



Site: Duck and Otter Creeks Confluences
Photo Number: 6 **Date:** 11/3/10
Direction: Down **Photographer:** M. Beer
Subject: Sheen on surface water when anchoring in Otter Creek confluence at OC-27

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Site: Duck and Otter Creeks Confluences
Photo Number: 7 **Date:** 5/10/11
Direction: Down **Photographer:** M. Beer
Subject: Preparation to collect samples from pontoon vessel



Site: Duck and Otter Creeks Confluences
Photo Number: 8 **Date:** 5/11/11
Direction: Down **Photographer:** M. Beer
Subject: Surface sediment collected from OC-42; note sheen on water

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Site: Duck and Otter Creeks Confluences
Photo Number: 9 **Date:** 5/11/11
Direction: Down **Photographer:** M. Beer
Subject: Surface sediment collected from OC-42 after decanting excess water

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APPENDIX B
ANALYTICAL DATA – ALL DATA IS AVAILABLE IN THE GLSED DATABASE

APPENDIX C
SEDIMENT TOXICITY TEST RESULTS AND WESTON STATISTICAL UPDATES

Acute Toxicity Evaluation of Duck and Otter Creek Sediments with C*hironomus dilutus* (Confluence Site Investigation)

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EXECUTIVE SUMMARY

The Great Lakes National Program Office (GLNPO) requested the Army Engineer Research and Development Center (ERDC) to conduct acute toxicity testing on sediments from Duck and Otter Creeks as part of its Great Lakes Legacy Act initiative. Eleven (11) sediments were evaluated using the midge *Chironomus dilutus*. This report summarizes the biological testing of sediment collected from Duck and Otter Creeks confluence sites conducted in basic accordance with guidance provided in "Methods for Measuring the Toxicity and Bioaccumulation of Sediment-associated Contaminants with Freshwater Invertebrates" (USEPA 2000). Three separate experiments were conducted. Significant reduction in survival was detected in OC-26 and OC-27 sediment samples. Significant reductions in ash-free biomass per initial organism and ash-free dry weight per surviving organism were detected for sediment samples OC-26, OC-29 and OC-30. A significant reduction in ash-free dry weight per surviving organism was observed for sediment sample OC-28 (Tables 2-4). No significant effects on survival or biomass were detected for the remaining sediment samples evaluated.

INTRODUCTION

At the request of the USEPA Great Lakes National Program Office (GLNPO), the US Army Engineer Research and Development Center (ERDC) conducted sediment toxicity tests of bottom sediment collected from sites at the confluence of Duck and Otter Creeks. Duck and Otter Creeks are located in an industrialized area of Northwest Ohio. The creeks are part of the Maumee River watershed which empties into Lake Erie. The evaluations were conducted under the Great Lakes Legacy Act with support from the GLNPO. The evaluation consisted of whole sediment acute toxicity tests with the midge *Chironomus dilutus*. Studies were conducted in basic accordance with the guidance provided in "Methods for Measuring the Toxicity and Bioaccumulation of Sediment-associated Contaminants with Freshwater Invertebrates" (USEPA 2000). The evaluation was conducted blind, in that the ERDC was unaware of the amounts or types of contaminants in the sediment samples and where they were collected.

TEST SEDIMENTS

Eleven (11) sediments were received by the ERDC in two (2) separate shipments. Shipments were received the 5th and 8th of November 2010. Sediments were immediately inspected, logged and placed in cold storage at 4°C where they remained until test initiation. Chain of custody sheets are provided in Appendix D. A list of sediment samples evaluated is provided in Table 1.

Table 1. Summary of the test sediments and sediment identification

Sample Name	Customer ID
DC-13	DC-13
DC-14	DC-14
DC-16	DC-16
DC-17	DC-17
DC-19	DC-19
OC-26	OC-26
OC-27	OC-27
OC-28	OC-28
OC-29	OC-29
OC-30	OC-30
OC-31	OC-31

METHODS

Chironomus dilutus whole sediment toxicity bioassay

Chironomus dilutus 10-day sediment exposures were conducted in basic accordance with guidance provided in "Methods for Measuring the Toxicity and Bioaccumulation of Sediment-associated Contaminants with Freshwater Invertebrates" (USEPA 2000). Due to logistics related to the number of samples tested, the study was divided into 3 separate experiments. Testing was initiated on the 19th of November 2010 and was completed on 23rd December 2010.

Egg masses were obtained from Environmental Consulting and Testing (Superior, WI) and maintained in culture until the correct age (~ 10 days old) organisms were available to initiate testing. On the day prior to test initiation, approximately 75 mL of each sediment was added to eight (8) replicate 300 mL beakers. Sediment from the University of Mississippi field station, (Oxford, MS) was included as a negative control. Beakers were placed in a temperature controlled water bath or environmental chamber at 23 °C and allowed to equilibrate over night. Pore water ammonia measurements were taken on sediments prior to addition to beakers. Pore water was collected by centrifuging 50 mL of each sediment at 3000 RPM for 15 minutes. Pore water analysis was performed on the supernatant of the centrifuged sediment. All pore water total ammonia concentrations were below the 20 mg/L guidance for freshwater organisms provided in the Inland Testing Manual (USEPA /USACE 1998) (Appendix B; Table B1).

Overlying water quality (temperature, pH, dissolved oxygen, hardness, alkalinity, conductivity and ammonia) was recorded for each replicate beaker at test initiation. Ten organisms were added to each replicate and 1 mL of a Tetrafin® food mixture was provided. Initial weights of all organisms added were within the 0.08 to 0.23 mg/individual dry weight range indicative of the correct developmental stage (USEPA 2000). Temperature and dissolved oxygen were measured daily on a single replicate of each sediment throughout the exposure period. Animals were fed 1 mL of a Tetrafin® food mixture and two full water renewals were conducted daily. Water renewals were conducted using a modified Zumwalt water renewal system (USEPA 2000) (Appendix A; Photo A1 and A2). To maintain dissolved oxygen levels, aeration was provided to each replicate.

On day 10, overlying water quality was measured and each replicate beaker was terminated by passing the sediment through a 425 µm screen. Surviving organisms were recovered and enumerated. Following enumeration organisms from each replicate were placed on pre-weighed pans and placed in a drying oven for 24 hours at 60 °C. Following the drying period, pans were removed from the oven and dry mass for each replicate was recorded. Pans were then placed in a muffle furnace at 550 °C for 2 hours. After 2 hours, pans were removed from the furnace allowed to cool and ash-free mass was recorded for each replicate.

Water quality parameters

The water quality during bioassay testing was measured using a Thermo Scientific Orion 4Star meter (Thermo Scientific**,** Beverly, MA) for electrical conductivity, a model 315i meter (WTW; Weilheim, Germany) for pH, and a model Oxi 330 meter (WTW; Weilheim, Germany) for dissolved oxygen (D.O.). Total overlying water ammonia, hardness and alkalinity were measured using LeMotte titration kits (Chestertown, MD, USA). Total pore water ammonia was measured using a 720A ion-selective electrode (ISE) meter (Thermo Orion Electron Corp., Beverly, MA) equipped with a 95-12 ammonia-sensitive electrode (Thermo Orion Electron Corp., Beverly, MA).

Statistical analysis

Data normality (Kolmogorov–Smirnov test), homogeneity (Levene's Test), and sediment differences compared to the control were conducted using SigmaStat software (Version 3.5, SPSS, Chicago, IL). Statistical significance was determined at $\alpha = 0.05$. Survival data were arcsine-square-root transformed prior to analysis. Where data were normal and homogenous, a One Way ANOVA was conducted followed by means comparison to the control using the Dunnett's mean comparison method. When normality was not achieved, the Kruskal–Wallis one-way ANOVA on ranks was applied followed by means comparison to the control using the Dunn's mean comparison procedure. Data endpoints analyzed were survival, weight per initial organism, ash-free weight per initial organism, dry weight per surviving organism and ash-free weight per surviving organism.

RESULTS

Water quality parameters for all bioassays were within the acceptability ranges specified by testing guidance (US EPA 2000) (Appendix B; Tables B2-B4). Survival in the negative control exceeded 78% in all tests and met the 70% minimum performance requirement indicated in testing guidance (US EPA 2000) (Tables 2-4).

Survival ranged from 0% to 87.5% in the sediment samples tested. Statistically significant reductions in survival relative to the control were detected in OC-26 and OC-27 sediments (Tables 3 and 4). Significant effects on ash-free biomass per initial organism were detected for sediments OC-26, OC-29 and OC-30. A significant reduction in ash-free dry weight per surviving organism was observed for sediment sample OC-28 (Tables 3 and 4). No significant effects on survival or the biomass endpoints examined were detected for sediments DC-13, DC-14, DC-16, DC-17, DC-19 and OC-31 (Tables 2-4).

Significant reductions in ash-free biomass per initial organism and ash-free dry weight per surviving organism were detected for sediment samples OC-26, OC-29 and OC-30. A significant reduction in ash-free dry weight per surviving organism was observed for sediment

sample OC-28 (Tables 2-4). No significant effects on survival or biomass were detected for the remaining sediment samples evaluated.

Table 2. Test 1 *Chironomus dilutus* mean survival and mass (± one standard deviation). Asterisks denote a statistically significant reduction in survival or mass relative to the control sediment.

Sample Name	(% Survival)	Ash-free Biomass per Initial Organism (mg)	Ash-free Dry weight per Surviving organism (mg)
Control	87.5 ± 14.9	2.84 ± 1.40	3.10 ± 1.12
DC-13	87.5 ± 16.7	2.59 ± 1.02	2.92 ± 0.89

Table 3. Test 2 *Chironomus dilutus* mean survival and mass (± one standard deviation). Asterisks denote a statistically significant reduction in survival or mass relative to the control sediment.

Sample Name	(% Survival)	Ash-free Biomass per Initial Organism (mg)	Ash-free Dry weight per Surviving organism (mg)
Control	81.3 ± 6.4	1.76 ± 0.64	2.39 ± 0.81
DC-14	81.3 ± 19.6	1.68 ± 0.79	2.04 ± 0.68
DC-16	83.8 ± 16.0	1.93 ± 0.42	2.35 ± 0.58
DC-17	83.8 ± 14.1	1.86 ± 0.57	2.24 ± 0.68
DC-19	73.8 ± 16.0	1.78 ± 0.58	2.41 ± 0.45
OC-26	*17.5 ±20.5	*0.35 ± 0.05	*0.46 ± 0.09

Table 4. Test 3 *Chironomus dilutus* mean survival and mass (± one standard deviation). Asterisks denote a statistically significant reduction in survival or mass relative to the control sediment.

Sample Name	(% Survival)	Ash-free Biomass per Initial Organism (mg)	Ash-free Dry weight per Surviving organism (mg)
Control	78.8 ± 9.9	1.17 ± 0.51	1.45 ± 0.48
OC-27	*0 ± 0	N/A	N/A
OC-28	83.8 ± 14.1	0.46 ± 0.18	*0.54 ± 0.16
OC-29	66.3 ± 13.0	*0.09 ± 0.01	*0.15 ± 0.02
OC-30	60.0 ± 21.4	*0.11 ± 0.05	*0.19 ± 0.06
OC-31	70.0 ± 28.3	0.68 ± 0.37	0.90 ± 0.25

REFERENCES

US Environmental Protection Agency / US Army Corps of Engineers (US EPA / USACE). 1998. Evaluation of Material Proposed for Discharge to Waters of the U.S. - Testing Manual (Inland Testing Manual). EPA-823-B-98-004, Office of Water, Washington DC.

US Environmental Protection Agency. 2000. Methods for Measuring the Toxicity and Bioaccumulation of Sediment-associated Contaminants with Freshwater Invertebrates, Second Edition. EPA 600/R-99/064, Office of Water, Washington, D.C.

Appendix A. Photos from *Chironomus dilutus* bioassays



Photo A1. Zumwalt Water Delivery System used during Bioassay Testing.



Photo A2. Close-up of Zumwalt Water Delivery System and Exposure Chambers used during Bioassay Testing.

Appendix B. Water quality parameters for *Chironomus dilutus* bioassays

Table B1. Total pore water ammonia concentrations at test initiation.

Treatment	Total Ammonia (mg/L)	Unionized Ammonia (mg/L)	pH (SU)	Temperature (°C)
DC-13	5.38	0.175	7.83	23.1
DC-14	11.0	0.133	7.40	22.8
DC-16	7.41	0.154	7.63	23.1
DC-17	7.29	0.098	7.44	23.0
DC-19	9.77	0.134	7.45	23.0
OC-26	5.38	0.072	7.44	23.0
OC-27	2.80	0.057	7.62	23.1
OC-28	9.92	0.208	7.64	22.9
OC-29	4.12	0.095	7.68	23.0
OC-30	4.18	0.071	7.54	23.1
OC-31	3.86	0.081	7.64	22.9

Table B2. Test 1 overlying water quality parameters. Means and one standard deviation from the mean are indicated, with the minimum and maximum range of the data provided in parentheses.

Treatment	Temperature (° C)	pH (SU)	Dissolved oxygen (mg/L)	Conductivity (µS/cm)	*Maximum Ammonia (mg/L)	*Alkalinity (mg/L)	*Hardness (mg/L)
Control	23.3 ± 0.2 (23.1 - 23.6)	7.4 ± 0.2 (7.1 - 7.7)	7.7 ± 0.4 (6.9 - 8.6)	230 ± 7 (221 - 245)	<1	35 ± 7 (30 - 40)	78 ± 4 (75 - 80)
DC-13	23.0 ± 0.2 (22.7 - 23.2)	8.0 ± 0.1 (7.9 - 8.1)	7.3 ± 0.4 (6.7 - 8.0)	386 ± 20 (360 - 420)	<1	105 ± 21.2 (90 -120)	125 ± 7.1 (120 - 130)

*Measurement taken on composite sample; concentrations <1 are below method detection limit

Table B3. Test 2 overlying water quality parameters. Means and one standard deviation from the mean are indicated, with the minimum and maximum range of the data provided in parentheses.

Treatment	Temperature (° C)	pH (SU)	Dissolved oxygen (mg/L)	Conductivity (µS/cm)	*Maximum Ammonia (mg/L)	*Alkalinity (mg/L)	*Hardness (mg/L)
Control	23.6 ± 0.2 (23.3 - 24.0)	7.7 ± 0.6 (6.3 – 8.4)	8.5 ± 0.2 (8.2 – 8.9)	238 ± 9 (225 - 256)	3	42 ± 2.8 (40 - 44)	60 ± 0 (60-60)
DC-14	23.4 ± 0.2 (23.2 - 23.7)	8.3 ± 0.4 (6.8 – 8.5)	8.6 ± 0.2 (8.3 – 8.8)	208 ± 9.4 (195 - 231)	1	74 ± 20 (60 - 88)	107 ± 52 (70 - 144)
DC-16	23.4 ± 0.2 (23.1 - 23.7)	8.3 ± 0.3 (7.3 - 8.5)	8.2 ± 0.8 (6.3 - 8.9)	349 ± 11 (325 – 369)	1	92 ± 12 (83 -100)	105 ± 35 (80 - 130)
DC-17	23.4 ± 0.2 (23.1 - 23.7)	8.3 ± 0.1 (8.2 - 8.4)	8.2 ± 0.5 (7.4 – 8.7)	347 ± 14 (327 - 368)	1	80 ± 0 (80 -80)	102 ± 32 (80 - 125)
DC-19	23.3 ± 0.2 (23.1 – 23.7)	8.2 ± 0.4 (7.1 - 8.5)	8.4 ± 0.4 (7.7 – 8.9)	365 ± 12 (349 - 380)	1	90 ± 0.7 (89 - 90)	98 ± 39 (70 - 125)
OC-26	23.4 ± 0.3 (23.1 - 23.8)	8.4 ± 0.1 (8.2 - 8.6)	8.6 ± 0.2 (8.1 – 8.8)	325 ± 17 (298 - 343)	1	96 ± 7.8 (90 - 101)	111 ± 44 (80 - 142)

*Measurement taken on composite sample; concentrations <1 are below method detection limit

Table B4. Test 3 overlying water quality parameters. Means and one standard deviation from the mean are indicated, with the minimum and maximum range of the data provided in parentheses.

Treatment	Temperature (° C)	pH (SU)	Dissolved oxygen (mg/L)	Conductivity (µS/cm)	*Maximum Ammonia (mg/L)	*Alkalinity (mg/L)	*Hardness (mg/L)
Control	23.3 ± 0.4 (22.9 - 23.8)	7.1 ± 0.3 (6.7 - 7.7)	6.9 ± 0.5 (6.6 - 8.1)	206 ± 28 (166 - 270)	2	60 ± 0 (60 - 60)	68 ± 11 (60 - 75)
OC-27	23.3 ± 0.4 (22.9 – 24.1)	7.9 ± 0.1 (7.7 - 8.0)	6.3 ± 1.2 (5.0 - 7.8)	418 ± 42 (343 - 463)	<1	114 ± 20 (100 -128)	120 ± 0 (120 - 120)
OC-28	23.1 ± 0.3 (22.8 – 23.7)	8.1 ± 0.1 (8.0 – 8.3)	6.4 ± 1.0 (5.2 - 7.5)	406 ± 45.5 (322 - 456)	<1	129 ± 13 (120 - 138)	139 ± 1.4 (138 - 140)
OC-29	23.2 ± 0.4 (22.9 - 23.8)	8.1 ± 0.1 (8.0 - 8.2)	6.7 ± 0.8 (5.8 – 7.7)	461 ± 53 (333 - 550)	1	135 ± 21 (120 -140)	130 ± 14 (120 - 140)
OC-30	23.1 ± 0.4 (22.3 – 23.7)	7.8 ± 0.3 (7.5 - 8.1)	6.3 ± 0.7 (5.5 – 7.7)	359 ± 41 (303 - 420)	1	110 ± 14 (100 - 120)	115 ± 7.1 (110 – 120)
OC-31	23.2 ± 0.4 (22.4 – 23.8)	7.7 ± 0.5 (7.1 - 8.2)	6.9 ± 0.6 (6.2 – 7.7)	360 ± 29 (316 - 412)	<1	100 ± 0 (100 - 100)	108 ± 3.5 (105 - 110)

*Measurement taken on composite sample; concentrations <1 are below method detection limit

Appendix C. Survival and Growth Endpoint data for *Chironomus dilutus* bioassays

Table 1. GLNPO Duck and Otter Creeks *Chironomus dilutus* Test 1 Data Summary

Sediment	Replicate	Organisms recovered	Replicate % Survival	# Animals on Pan	Pan Ash Weight (mg)	Pan & Animal Dry Weight (mg)	Total Dry Biomass (mg)	Individual Dry Weight (mg)	Pan & Animal Ash Weight (mg)	Total Ash-free Biomass (mg)	Individual Ash free Dry Weight (mg)	Dry biomass (mg)/Intial Organism	Ash-free Dry biomass (mg)/Initial Organism	Survival		Ash Free Dry Biomass (mg)/ Initial Organism		Individual Ash free Dry Weight (mg)	
Control	A	7	70%	7	125.836	145.600	19.764	2.823	131.580	14.020	2.003	1.976	1.402	mean	87.5%	mean	2.84	mean	3.10
Control	B	10	100%	10	122.650	172.550	49.900	4.990	135.037	37.513	3.751	4.990	3.751	S.D.	14.9%	S.D.	1.40	S.D.	1.12
Control	C	10	100%	10	135.345	193.756	58.411	5.841	149.877	43.879	4.388	5.841	4.388	C.V.	17.0%	C.V.	49.2%	C.V.	36.1%
Control	D	7	70%	7	147.756	167.086	19.330	2.761	153.598	13.488	1.927	1.933	1.349	n	8	n	8	n	8
Control	E	10	100%	10	121.134	178.242	57.108	5.711	134.551	43.691	4.369	5.711	4.369						
Control	F	10	100%	10	144.266	196.818	52.552	5.255	156.975	39.843	3.984	5.255	3.984						
Control	G	9	90%	9	150.327	177.162	26.835	2.982	158.057	19.105	2.123	2.684	1.911						
Control	H	7	70%	7	139.589	160.250	20.661	2.952	144.559	15.691	2.242	2.066	1.569						
DC-13	A	9	90%	9	153.762	191.354	37.592	4.177	163.229	28.125	3.125	3.759	2.812	mean	87.5%	mean	2.59	mean	2.92
DC-13	B	8	80%	8	145.600	168.329	22.729	2.841	152.834	15.495	1.937	2.273	1.549	S.D.	16.7%	S.D.	1.02	S.D.	0.89
DC-13	C	9	90%	9	162.892	215.716	52.824	5.869	174.008	41.708	4.634	5.282	4.171	C.V.	19.1%	C.V.	39.5%	C.V.	30.7%
DC-13	D	10	100%	10	162.376	205.984	43.608	4.361	174.459	31.525	3.152	4.361	3.152	n	8	n	8	n	8
DC-13	E	10	100%	10	152.467	194.464	41.997	4.200	162.402	32.062	3.206	4.200	3.206						
DC-13	F	10	100%	10	142.622	182.362	39.740	3.974	152.052	30.310	3.031	3.974	3.031						
DC-13	G	9	90%	9	145.917	169.142	23.225	2.581	153.077	16.065	1.785	2.323	1.606						
DC-13	H	5	50%	5	147.838	163.536	15.698	3.140	151.283	12.253	2.451	1.570	1.225						

Replicate contained one or more indigenous organisms
Significantly different from Control

Table 2. GLNPO Duck and Otter Creeks *Chironomus dilutus* Test 2 Data Summary

Sediment	Replicate	Organisms recovered	Replicate % Survival	# Animals on Pan	Pan Ash Weight (mg)	Pan & Animal Dry Weight (mg)	Total Dry Biomass (mg)	Individual Dry Weight (mg)	Pan & Animal Ash Weight (mg)	Total Ash-free Biomass (mg)	Individual Ash free Dry Weight (mg)	Dry biomass (mg)/Intial Organism	Ash-free Dry biomass (mg)/Initial Organism	Survival		Ash-Free Dry Biomass (mg)/ Initial Organism		Individual Ash-free Dry Weight (mg)	
Control	A	8	80%	8	113.602	139.976	26.374	3.297	123.488	16.488	2.061	2.637	1.649	mean	81.3%	mean	1.76	mean	2.39
Control	B	7	70%	6	110.982	129.064	18.082	3.014	117.709	11.355	1.892	1.808	1.135	S.D.	6.4%	S.D.	0.64	S.D.	0.81
Control	C	9	90%	9	99.999	122.876	22.877	2.542	106.266	16.610	1.846	2.288	1.661	C.V.	7.9%	C.V.	36.3%	C.V.	34.0%
Control	D	8	80%	8	109.818	150.004	40.186	5.023	121.730	28.274	3.534	4.019	2.827	n	8	n	8	n	8
Control	E	8	80%	8	114.372	132.632	18.260	2.283	120.697	11.935	1.492	1.826	1.194						
Control	F	9	90%	7	107.379	141.056	33.677	4.811	116.170	24.886	3.555	3.368	2.489						
Control	G	8	80%	6	101.844	117.984	16.140	2.690	106.740	11.244	1.874	1.614	1.124						
Control	H	8	80%	7	106.620	135.288	28.668	4.095	115.333	19.955	2.851	2.867	1.995						
DC-14	A	9	90%	9	106.102	126.280	20.178	2.242	110.756	15.524	1.725	2.018	1.552	mean	81.3%	mean	1.68	mean	2.04
DC-14	B	7	70%	7	113.032	137.240	24.208	3.458	121.379	15.861	2.266	2.421	1.586	S.D.	19.6%	S.D.	0.79	S.D.	0.68
DC-14	C	8	80%	8	126.132	158.554	32.422	4.053	137.876	20.678	2.585	3.242	2.068	C.V.	24.1%	C.V.	47.1%	C.V.	33.2%
DC-14	D	4	40%	4	119.766	131.187	11.421	2.855	123.273	7.914	1.978	1.142	0.791	n	8	n	8	n	8
DC-14	E	9	90%	9	120.289	138.764	18.475	2.053	125.514	13.250	1.472	1.848	1.325						
DC-14	F	10	100%	10	108.997	136.976	27.979	2.798	117.965	19.011	1.901	2.798	1.901						
DC-14	G	10	100%	10	119.772	171.900	52.128	5.213	138.862	33.038	3.304	5.213	3.304						
DC-14	H	8	80%	8	116.620	129.664	13.044	1.631	120.646	9.018	1.127	1.304	0.902						
DC-16	A	10	100%	10	118.360	152.160	33.800	3.380	129.749	22.411	2.241	3.380	2.241	mean	83.8%	mean	1.93	mean	2.35
DC-16	B	10	100%	10	115.236	145.516	30.280	3.028	124.554	20.962	2.096	3.028	2.096	S.D.	16.0%	S.D.	0.42	S.D.	0.58
DC-16	C	10	100%	10	109.700	137.232	27.532	2.753	116.977	20.255	2.026	2.753	2.026	C.V.	19.1%	C.V.	21.8%	C.V.	24.9%
DC-16	D	6	60%	6	111.938	141.222	29.284	4.881	122.335	18.887	3.148	2.928	1.889	n	8	n	8	n	8
DC-16	E	8	80%	8	121.574	157.309	35.735	4.467	131.166	26.143	3.268	3.574	2.614						
DC-16	F	7	70%	7	122.638	150.252	27.614	3.945	132.940	17.312	2.473	2.761	1.731						
DC-16	G	7	70%	7	110.482	131.640	21.158	3.023	118.901	12.739	1.820	2.116	1.274						
DC-16	H	9	90%	9	117.438	141.172	23.734	2.637	125.882	15.290	1.699	2.373	1.529						
DC-17	A	9	90%	9	63.250	87.876	24.626	2.736	71.819	16.057	1.784	2.463	1.606	mean	83.8%	mean	1.86	mean	2.24
DC-17	B	10	100%	10	56.714	88.014	31.300	3.130	64.211	23.803	2.380	3.130	2.380	S.D.	14.1%	S.D.	0.57	S.D.	0.68
DC-17	C	10	100%	10	138.444	159.266	20.822	2.082	145.358	13.908	1.391	2.082	1.391	C.V.	16.8%	C.V.	30.8%	C.V.	30.4%
DC-17	D	6	60%	6	118.032	138.900	20.868	3.478	123.460	15.440	2.573	2.087	1.544	n	8	n	8	n	8
DC-17	E	8	80%	8	83.906	115.710	31.804	3.976	94.738	20.972	2.621	3.180	2.097						
DC-17	F	9	90%	9	73.028	108.704	35.676	3.964	87.282	21.422	2.380	3.568	2.142						
DC-17	G	8	80%	8	112.344	150.996	38.652	4.832	123.856	27.140	3.392	3.865	2.714						
DC-17	H	7	70%	7	129.000	144.154	15.154	2.165	134.292	9.862	1.409	1.515	0.986						

Table 2. GLNPO Duck and Otter Creeks *Chironomus dilutus* Test 2 Data Summary

Sediment	Replicate	Organisms recovered	Replicate % Survival	# Animals on Pan	Pan Ash Weight (mg)	Pan & Animal Dry Weight (mg)	Total Dry Biomass (mg)	Individual Dry Weight (mg)	Pan & Animal Ash Weight (mg)	Total Ash-free Biomass (mg)	Individual Ash-free Dry Weight (mg)	Dry biomass (mg)/Intial Organism	Ash-free Dry biomass (mg)/Initial Organism	Survival		Ash-Free Dry Biomass (mg)/ Initial Organism		Individual Ash-free Dry Weight (mg)	
DC-19	A	7	70%	7	113.024	132.908	19.884	2.841	119.259	13.649	1.950	1.988	1.365	mean	73.8%	mean	1.78	mean	2.41
DC-19	B	7	70%	7	115.848	136.238	20.390	2.913	121.616	14.622	2.089	2.039	1.462	S.D.	16.0%	S.D.	0.58	S.D.	0.45
DC-19	C	7	70%	7	128.218	154.570	26.352	3.765	135.176	19.394	2.771	2.635	1.939	C.V.	21.7%	C.V.	32.5%	C.V.	18.9%
DC-19	D	9	90%	9	96.898	138.954	42.056	4.673	112.524	26.430	2.937	4.206	2.643	n	8	n	8	n	8
DC-19	E	4	40%	4	116.529	131.584	15.055	3.764	121.483	10.101	2.525	1.506	1.010						
DC-19	F	8	80%	8	139.708	161.144	21.436	2.680	147.945	13.199	1.650	2.144	1.320						
DC-19	G	8	80%	8	121.172	150.704	29.532	3.692	129.315	21.389	2.674	2.953	2.139						
DC-19	H	9	90%	9	74.694	110.984	36.290	4.032	86.979	24.005	2.667	3.629	2.401						
OC-26	A	0	0%	0										mean	[illegible]	mean	[illegible]	mean	[illegible]
OC-26	B	0	0%	0										S.D.	20.5%	S.D.	0.05	S.D.	0.09
OC-26	C	3	30%	3	115.187	117.590	2.403	0.801	116.086	1.504	0.501	0.240	0.150	C.V.	117.3%	C.V.	33.2%	C.V.	19.9%
OC-26	D	5	50%	5	124.322	127.820	3.498	0.700	125.544	2.276	0.455	0.350	0.228	n	8	n	4	n	4
OC-26	E	0	0%	0															
OC-26	F	4	40%	4	112.672	114.426	1.754	0.439	113.097	1.329	0.332	0.175	0.133						
OC-26	G	2	20%	2	107.530	109.252	1.722	0.861	108.166	1.086	0.543	0.172	0.109						
OC-26	H	0	0%	0															

Replicate contained one or more indigenous organisms
Significantly different from Control

Table 3. GLNPO Duck and Otter Creeks *Chironomus dilutus* Test 3 Data Summary

Sediment	Replicate	Organisms recovered	Replicate % Survival	Pan #	# Animals on Pan	Pan Ash Weight (mg)	Pan & Animal Dry Weight (mg)	Total Dry Biomass (mg)	Individual Dry Weight (mg)	Pan & Animal Ash Weight (mg)	Total Ash-free Biomass (mg)	Individual Ash free Dry Weight (mg)	Dry biomass (mg)/Intial Organism	Ash-free Dry biomass (mg)/Initial Organism	Survival		Ash-Free Dry Biomass (mg)/ Initial Organism		Individual Ash-free Dry Weight (mg)	
Control	A	9	90%	1	9	113.920	128.514	14.594	1.622	117.826	10.688	1.188	1.459	1.069	mean	78.8%	mean	1.17	mean	1.45
Control	B	9	90%	2	9	114.848	145.993	31.145	3.461	122.903	23.090	2.566	3.115	2.309	S.D.	9.9%	S.D.	0.51	S.D.	0.48
Control	C	7	70%	3	7	111.258	121.077	9.819	1.403	113.716	7.361	1.052	0.982	0.736	C.V.	12.6%	C.V.	43.5%	C.V.	33.3%
Control	D	8	80%	4	8	117.234	133.783	16.549	2.069	121.064	12.719	1.590	1.655	1.272	n	8	n	8	n	8
Control	E	7	70%	5	7	105.999	118.917	12.918	1.845	109.397	9.520	1.360	1.292	0.952						
Control	F	7	70%	3	7	107.762	119.241	11.479	1.640	110.488	8.753	1.250	1.148	0.875						
Control	G	9	90%	4	9	120.890	139.241	18.351	2.039	125.809	13.432	1.492	1.835	1.343						
Control	H	7	70%	5	7	99.644	110.002	10.358	1.480	102.029	7.973	1.139	1.036	0.797						
OC-27	A	0	0%	1	0										mean	[redacted]	mean	N/A	mean	N/A
OC-27	B	0	0%	2	0										S.D.	0.0%	S.D.	N/A	S.D.	N/A
OC-27	C	0	0%	3	0										C.V.	N/A	C.V.	N/A	C.V.	N/A
OC-27	D	0	0%	4	0										n	8	n	0	n	0
OC-27	E	0	0%	5	0															
OC-27	F	0	0%	3	0															
OC-27	G	0	0%	4	0															
OC-27	H	0	0%	5	0															
OC-28	A	8	80%	1	8	95.852	102.126	6.274	0.784	97.407	4.719	0.590	0.627	0.472	mean	83.8%	mean	0.46	mean	[redacted]
OC-28	B	9	90%	2	9	108.600	115.753	7.153	0.795	110.306	5.447	0.605	0.715	0.545	S.D.	14.1%	S.D.	0.18	S.D.	0.16
OC-28	C	6	60%	3	6	123.148	125.977	2.829	0.472	123.876	2.101	0.350	0.283	0.210	C.V.	16.8%	C.V.	38.8%	C.V.	29.2%
OC-28	D	10	100%	4	10	105.580	116.309	10.729	1.073	108.473	7.836	0.784	1.073	0.784	n	8	n	8	n	8
OC-28	E	8	80%	5	8	113.838	120.386	6.548	0.819	115.511	4.875	0.609	0.655	0.487						
OC-28	F	9	90%	3	9	100.794	104.202	3.408	0.379	101.658	2.544	0.283	0.341	0.254						
OC-28	G	7	70%	4	7	101.898	107.449	5.551	0.793	103.346	4.103	0.586	0.555	0.410						
OC-28	H	10	100%	5	10	106.734	113.874	7.140	0.714	108.550	5.324	0.532	0.714	0.532						
OC-29	A	6	60%	1	6	99.960	101.324	1.364	0.227	100.299	1.025	0.171	0.136	0.103	mean	66.3%	mean	[redacted]	mean	[redacted]
OC-29	B	7	70%	2	7	116.720	118.221	1.501	0.214	117.070	1.151	0.164	0.150	0.115	S.D.	13.0%	S.D.	0.01	S.D.	0.02
OC-29	C	5	50%	3	5	101.888	103.117	1.229	0.246	102.215	0.902	0.180	0.123	0.090	C.V.	19.7%	C.V.	14.3%	C.V.	15.9%
OC-29	D	8	80%	4	8	91.740	93.119	1.379	0.172	92.080	1.039	0.130	0.138	0.104	n	8	n	8	n	8
OC-29	E	9	90%	5	9	105.724	107.092	1.368	0.152	106.047	1.045	0.116	0.137	0.104						
OC-29	F	6	60%	3	6	114.954	115.966	1.012	0.169	115.204	0.762	0.127	0.101	0.076						
OC-29	G	6	60%	4	6	94.120	95.206	1.086	0.181	94.389	0.817	0.136	0.109	0.082						
OC-29	H	6	60%	5	6	108.890	110.030	1.140	0.190	109.182	0.848	0.141	0.114	0.085						

Table 3. GLNPO Duck and Otter Creeks *Chironomus dilutus* Test 3 Data Summary

Sediment	Replicate	Organisms recovered	Replicate % Survival	Pan #	# Animals in Pan	Pan Ash Weight (mg)	Pan & Animal Dry Weight (mg)	Total Dry Biomass (mg)	Individual Dry Weight (mg)	Pan & Animal Ash Weight (mg)	Total Ash-free Biomass (mg)	Individual Ash free Dry Weight (mg)	Dry biomass (mg)/Intial Organism	Ash-free Dry biomass (mg)/Initial Organism	Survival		Ash-Free Dry Biomass (mg)/ Initial Organism		Individual Ash-free Dry Weight (mg)	
OC-30	A	6	60%	1	6	88.878	90.926	2.048	0.341	89.399	1.527	0.255	0.205	0.153	mean	60.0%	mean		mean	
OC-30	B	7	70%	2	7	116.082	118.031	1.949	0.278	116.589	1.442	0.206	0.195	0.144	S.D.	21.4%	S.D.	0.05	S.D.	0.06
OC-30	C	7	70%	3	7	85.862	86.760	0.898	0.128	86.104	0.656	0.094	0.090	0.066	C.V.	35.6%	C.V.	46.8%	C.V.	31.9%
OC-30	D	3	30%	4	3	99.554	100.376	0.822	0.274	99.750	0.626	0.209	0.082	0.063	n	8	n	8	n	8
OC-30	E	10	100%	5	10	97.900	100.678	2.778	0.278	98.549	2.129	0.213	0.278	0.213						
OC-30	F	4	40%	3	4	86.418	87.874	1.456	0.364	86.775	1.099	0.275	0.146	0.110						
OC-30	G	5	50%	4	5	101.830	102.926	1.096	0.219	102.084	0.842	0.168	0.110	0.084						
OC-30	H	6	60%	5	6	92.167	93.160	0.993	0.165	92.418	0.742	0.124	0.099	0.074						
OC-31	A	7	70%	1	7	121.996	133.000	11.004	1.572	124.748	8.252	1.179	1.100	0.825	mean	70.0%	mean	0.68	mean	0.90
OC-31	B	9	90%	2	9	116.956	130.875	13.919	1.547	120.641	10.234	1.137	1.392	1.023	S.D.	28.3%	S.D.	0.37	S.D.	0.25
OC-31	C	1	10%	3	1	105.232	105.911	0.679	0.679	105.393	0.518	0.518	0.068	0.052	C.V.	40.4%	C.V.	53.6%	C.V.	27.8%
OC-31	D	6	60%	4	6	107.846	113.194	5.348	0.891	109.131	4.063	0.677	0.535	0.406	n	8	n	8	n	8
OC-31	E	6	60%	5	6	107.276	112.994	5.718	0.953	108.651	4.343	0.724	0.572	0.434						
OC-31	F	10	100%	3	10	95.822	111.101	15.279	1.528	99.454	11.647	1.165	1.528	1.165						
OC-31	G	8	80%	4	8	94.846	103.989	9.143	1.143	97.039	6.950	0.869	0.914	0.695						
OC-31	H	9	90%	5	9	113.698	125.331	11.633	1.293	116.677	8.654	0.962	1.163	0.865						

Replicate contained one or more indigenous organisms.
Significantly different from Control

Appendix D. Statistical analyses for *Chironomus dilutus* sediment bioassays

TEST 1

Test 1 Survival

One Way Analysis of Variance Sunday, January 09, 2011, 2:43:02 AM

Data source: Data 5 in Notebook 1

Normality Test: Failed (P = <0.001)

Test execution ended by user request, ANOVA on Ranks begun

Kruskal-Wallis One Way Analysis of Variance on Ranks Sunday, January 09, 2011, 2:43:02 AM

Data source: Data 5 in Notebook 1

Group	N	Missing	Median	25%	75%
Control	8	0	1.410	0.991	1.571
DC-6/7	8	0	1.178	1.049	1.571
DC-11/12	8	0	1.249	0.997	1.571
DC-13	8	0	1.249	1.178	1.571
OC-22	8	0	1.410	1.107	1.571
OC-24/25	8	0	1.178	1.049	1.571

H = 1.042 with 5 degrees of freedom. (P = 0.959)

The differences in the median values among the treatment groups are not great enough to exclude the possibility that the difference is due to random sampling variability; there is not a statistically significant difference (P = 0.959)

Test 1 Dry Biomass per Initial Organism

One Way Analysis of Variance Sunday, February 13, 2011, 6:01:15 PM

Data source: Test 3 Dry and Ash-free Biomass per Initial Organism Data in Stats(2-13-11)

Dependent Variable: DBM/IO

Normality Test: Passed (P = 0.877)

Equal Variance Test: Failed (P < 0.050)

Test execution ended by user request, ANOVA on Ranks begun

Kruskal-Wallis One Way Analysis of Variance on Ranks Sunday, February 13, 2011, 6:01:15 PM

Data source: Test 3 Dry and Ash-free Biomass per Initial Organism Data in Stats(2-13-11)

Group	N	Missing	Median	25%	75%
Control	8	0	3.837	2.021	5.483
DC-6/7	8	0	2.636	2.073	2.818
DC-11/12	8	0	1.979	1.770	2.451
DC-13	8	0	3.867	2.298	4.280
OC-22	8	0	3.071	2.780	3.976
OC-24/25	8	0	3.237	2.507	3.881

H = 10.028 with 5 degrees of freedom. (P = 0.074)

The differences in the median values among the treatment groups are not great enough to exclude the possibility that the difference is due to random sampling variability; there is not a statistically significant difference (P = 0.074)

Test 1 Ash-free Biomass per Initial Organism

One Way Analysis of Variance Sunday, February 13, 2011, 6:02:38 PM

Data source: Test 3 Dry and Ash-free Biomass per Initial Organism Data in Stats(2-13-11)

Dependent Variable: ABM/IO

Normality Test: Passed (P = 0.597)

Equal Variance Test: Failed (P < 0.050)

Test execution ended by user request, ANOVA on Ranks begun

Kruskal-Wallis One Way Analysis of Variance on Ranks Sunday, February 13, 2011, 6:02:38 PM

Data source: Test 3 Dry and Ash-free Biomass per Initial Organism Data in Stats(2-13-11)

Group	N	Missing	Median	25%	75%
Control	8	0	2.831	1.486	4.177
DC-6/7	8	0	1.956	1.555	2.071
DC-11/12	8	0	1.431	1.332	1.899
DC-13	8	0	2.922	1.578	3.179
OC-22	8	0	2.374	2.095	2.936
OC-24/25	8	0	2.290	1.895	2.944

H = 8.749 with 5 degrees of freedom. (P = 0.120)

The differences in the median values among the treatment groups are not great enough to exclude the possibility that the difference is due to random sampling variability; there is not a statistically significant difference (P = 0.120)

Test 1 Individual Dry Mass

One Way Analysis of Variance Sunday, January 30, 2011, 8:48:13 PM

Data source: Test 3 Mass Data in Stats

Dependent Variable: D-Mass

Normality Test: Passed (P = 0.153)

Equal Variance Test: Passed (P = 0.202)

Group Name	N	Missing	Mean	Std Dev	SEM
Control	8	0	4.164	1.400	0.495
DC-6/7	8	0	3.263	1.010	0.357
DC-11/12	8	0	2.597	0.915	0.323
DC-13	8	0	3.893	1.049	0.371
OC-22	8	0	3.558	0.743	0.263
OC-24/25	8	0	3.755	0.855	0.302

Source of Variation	DF	SS	MS	F	P
Between Groups	5	12.211	2.442	2.364	0.056
Residual	42	43.396	1.033		
Total	47	55.607			

The differences in the mean values among the treatment groups are not great enough to exclude the possibility that the difference is due to random sampling variability; there is not a statistically significant difference (P = 0.056).

Test 1 Individual Ash-Free Mass

One Way Analysis of Variance Sunday, January 09, 2011, 2:44:01 AM

Data source: Data 6 in Notebook 1

Normality Test: Passed (P > 0.050)

Equal Variance Test: Passed (P = 0.143)

Group Name	N	Missing	Mean	Std Dev	SEM
Control	8	0	3.098	1.118	0.395
DC-6/7	8	0	2.424	0.732	0.259
DC-11/12	8	0	1.921	0.718	0.254
DC-13	8	0	2.915	0.895	0.316
OC-22	8	0	2.642	0.548	0.194
OC-24/25	8	0	2.733	0.582	0.206

Source of Variation	DF	SS	MS	F	P
Between Groups	5	6.845	1.369	2.196	0.073
Residual	42	26.188	0.624		
Total	47	33.033			

The differences in the mean values among the treatment groups are not great enough to exclude the possibility that the difference is due to random sampling variability; there is not a statistically significant difference (P = 0.073).

TEST 2

Test 2 Survival

One Way Analysis of Variance Sunday, January 09, 2011, 2:48:46 AM

Data source: Data 7 in Stats

Normality Test: Passed (P > 0.050)

Equal Variance Test: Failed (P = 0.006)

Test execution ended by user request, ANOVA on Ranks begun

Kruskal-Wallis One Way Analysis of Variance on Ranks Sunday, January 09, 2011, 2:48:46 AM

Data source: Data 7 in Stats

Group	N	Missing	Median	25%	75%
Control	8	0	1.107	1.107	1.178
DC-14	8	0	1.178	1.049	1.410
DC-16	8	0	1.178	0.991	1.571
DC-17	8	0	1.178	1.049	1.410
DC-19	8	0	1.049	0.991	1.178
OC-26	8	0	0.232	0.000	0.632

H = 21.174 with 5 degrees of freedom. (P = <0.001)

The differences in the median values among the treatment groups are greater than would be expected by chance; there is a statistically significant difference (P = <0.001)

To isolate the group or groups that differ from the others use a multiple comparison procedure.

Multiple Comparisons versus Control Group (Dunnett's Method) :

Comparison	Diff of Ranks	q'	P<0.05
OC-26 vs Control	184.000	3.286	Yes
DC-19 vs Control	38.500	0.688	No
DC-17 vs Control	22.000	0.393	Do Not Test
DC-16 vs Control	20.000	0.357	Do Not Test
DC-14 vs Control	18.500	0.330	Do Not Test

Note: The multiple comparisons on ranks do not include an adjustment for ties.

Test 2 Dry Biomass per Initial Organism

One Way Analysis of Variance Sunday, February 13, 2011, 6:06:44 PM

Data source: Test 4 Dry and Ash-free Biomass per Initial Organism Data in Stats(2-13-11)

Dependent Variable: DBM/IO

Normality Test: Passed (P = 0.524)

Equal Variance Test: Passed (P = 0.126)

Group Name	N	Missing	Mean	Std Dev	SEM
Control	8	0	2.553	0.841	0.297
DC-14	8	0	2.498	1.306	0.462
DC-16	8	0	2.864	0.482	0.170
DC-17	8	0	2.736	0.822	0.291
DC-19	8	0	2.637	0.914	0.323
OC-26	4	0	0.234	0.0831	0.0415

Source of Variation	DF	SS	MS	F	P
Between Groups	5	22.041	4.408	5.754	<0.001
Residual	38	29.114	0.766		
Total	43	51.155			

The differences in the mean values among the treatment groups are greater than would be expected by chance; there is a statistically significant difference (P = <0.001).

Multiple Comparisons versus Control Group (Dunnett's Method) :

Comparisons for factor: **Sediment**

Comparison	Diff of Means	q'	P	P<0.050
Control vs. OC-26	2.319	4.326	--	Yes
Control vs. DC-16	0.311	0.710	--	No
Control vs. DC-17	0.183	0.418	--	Do Not Test
Control vs. DC-19	0.0841	0.192	--	Do Not Test
Control vs. DC-14	0.0551	0.126	--	Do Not Test

Note: The P values for Dunnett's and Duncan's tests are currently unavailable except for reporting that the P's are greater or less than the critical values of .05 and .01.

A result of "Do Not Test" occurs for a comparison when no significant difference is found between two means that enclose that comparison. For example, if you had four means sorted in order, and found no difference between means 4 vs. 2, then you would not test 4 vs. 3 and 3 vs. 2, but still test 4 vs. 1 and 3 vs. 1 (4 vs. 3 and 3 vs. 2 are enclosed by 4 vs. 2: 4 3 2 1). Note that not testing the enclosed means is a procedural rule, and a result of Do Not Test should be treated as if there is no significant difference between the means, even though one may appear to exist.

Test 2 Ash-free Biomass Per Initial Organism

One Way Analysis of Variance Sunday, February 13, 2011, 6:08:24 PM

Data source: Test 4 Dry and Ash-free Biomass per Initial Organism Data in Stats(2-13-11)

Dependent Variable: ABM/IO

Normality Test: Passed (P = 0.743)

Equal Variance Test: Passed (P = 0.225)

Group Name	N	Missing	Mean	Std Dev	SEM
Control	8	0	1.759	0.639	0.226
DC-14	8	0	1.679	0.791	0.280
DC-16	8	0	1.925	0.420	0.148
DC-17	8	0	1.858	0.571	0.202
DC-19	8	0	1.785	0.581	0.205
OC-26	4	0	0.155	0.0514	0.0257

Source of Variation	DF	SS	MS	F	P
Between Groups	5	10.139	2.028	5.867	<0.001
Residual	38	13.133	0.346		
Total	43	23.272			

The differences in the mean values among the treatment groups are greater than would be expected by chance; there is a statistically significant difference (P = <0.001).

Multiple Comparisons versus Control Group (Dunnett's Method) :

Comparisons for factor: **Sediment**

Comparison	Diff of Means	q'	P	P<0.050
Control vs. OC-26	1.604	4.457	--	Yes
Control vs. DC-16	0.166	0.564	--	No
Control vs. DC-17	0.0982	0.334	--	Do Not Test
Control vs. DC-14	0.0806	0.274	--	Do Not Test
Control vs. DC-19	0.0255	0.0868	--	Do Not Test

Note: The P values for Dunnett's and Duncan's tests are currently unavailable except for reporting that the P's are greater or less than the critical values of .05 and .01.

A result of "Do Not Test" occurs for a comparison when no significant difference is found between two means that enclose that comparison. For example, if you had four means sorted in order, and found no difference between means 4 vs. 2, then you would not test 4 vs. 3 and 3 vs. 2, but still test 4 vs. 1 and 3 vs. 1 (4 vs. 3 and 3 vs. 2 are enclosed by 4 vs. 2: 4 3 2 1). Note that not testing the enclosed means is a procedural rule, and a result of Do Not Test should be treated as if there is no significant difference between the means, even though one may appear to exist.

Test 2 Individual Dry Mass

One Way Analysis of Variance Sunday, January 30, 2011, 8:46:23 PM

Data source: Test 4 Mass Data in Stats

Dependent Variable: D-Mass

Normality Test: Passed (P = 0.514)

Equal Variance Test: Passed (P = 0.329)

Group Name	N	Missing	Mean	Std Dev	SEM
Control	8	0	3.469	1.050	0.371
DC-14	8	0	3.038	1.172	0.414
DC-16	8	0	3.514	0.828	0.293
DC-17	8	0	3.295	0.956	0.338
DC-19	8	0	3.545	0.684	0.242
OC-26	4	0	0.700	0.187	0.0933

Source of Variation	DF	SS	MS	F	P
Between Groups	5	27.383	5.477	6.523	<0.001
Residual	38	31.906	0.840		
Total	43	59.290			

The differences in the mean values among the treatment groups are greater than would be expected by chance; there is a statistically significant difference (P = <0.001).

Multiple Comparisons versus Control Group (Dunnett's Method) :

Comparisons for factor: **Sediment**

Comparison	Diff of Means	q'	P	P<0.050
Control vs. OC-26	2.769	4.935	--	Yes
Control vs. DC-14	0.432	0.942	--	No
Control vs. DC-17	0.174	0.380	--	Do Not Test
Control vs. DC-19	0.0754	0.165	--	Do Not Test
Control vs. DC-16	0.0448	0.0979	--	Do Not Test

Note: The P values for Dunnett's and Duncan's tests are currently unavailable except for reporting that the P's are greater or less than the critical values of .05 and .01.

A result of "Do Not Test" occurs for a comparison when no significant difference is found between two means that enclose that comparison. For example, if you had four means sorted in order, and found no difference between means 4 vs. 2, then you would not test 4 vs. 3 and 3 vs. 2, but still test 4 vs. 1 and 3 vs. 1 (4 vs. 3 and 3 vs. 2 are enclosed by 4 vs. 2: 4 3 2 1). Note that not testing the enclosed means is a procedural rule, and a result of Do Not Test should be treated as if there is no significant difference between the means, even though one may appear to exist.

Test 2 Individual Ash-free Mass

One Way Analysis of Variance Sunday, January 09, 2011, 2:50:42 AM

Data source: Data 8 in Stats

Normality Test: Passed (P > 0.050)

Equal Variance Test: Passed (P = 0.486)

Group Name	N	Missing	Mean	Std Dev	SEM
Control	8	0	2.388	0.811	0.287
DC-14	8	0	2.045	0.679	0.240
DC-16	8	0	2.346	0.583	0.206
DC-17	8	0	2.241	0.681	0.241
DC-19	8	0	2.408	0.455	0.161
OC-26	4	0	0.458	0.0911	0.0455

Source of Variation	DF	SS	MS	F	P
Between Groups	5	12.861	2.572	6.549	<0.001
Residual	38	14.925	0.393		
Total	43	27.786			

The differences in the mean values among the treatment groups are greater than would be expected by chance; there is a statistically significant difference (P = <0.001).

Multiple Comparisons versus Control Group (Dunnett's Method) :

Comparisons for factor: **Sediment**

Comparison	Diff of Means	q'	P	P<0.050
Control vs. OC-26	1.930	5.030	--	Yes
Control vs. DC-14	0.343	1.096	--	No
Control vs. DC-17	0.147	0.468	--	Do Not Test
Control vs. DC-16	0.0418	0.133	--	Do Not Test
Control vs. DC-19	0.0196	0.0626	--	Do Not Test

Note: The P values for Dunnett's and Duncan's tests are currently unavailable except for reporting that the P's are greater or less than the critical values of .05 and .01.

A result of "Do Not Test" occurs for a comparison when no significant difference is found between two means that enclose that comparison. For example, if you had four means sorted in order, and found no difference between means 4 vs. 2, then you would not test 4 vs. 3 and 3 vs. 2, but still test 4 vs. 1 and 3 vs. 1 (4 vs. 3 and 3 vs. 2 are enclosed by 4 vs. 2: 4 3 2 1). Note that not testing the enclosed means is a procedural rule, and a result of Do Not Test should be treated as if there is no significant difference between the means, even though one may appear to exist.

TEST 3

Test 3 Survival

One Way Analysis of Variance Sunday, January 09, 2011, 2:55:01 AM

Data source: Data 9 in Stats

Normality Test: Passed (P > 0.050)

Equal Variance Test: Passed (P = 0.339)

Group Name	N	Missing	Mean	Std Dev	SEM
Control	8	0	1.102	0.128	0.0451
OC-28	8	0	1.216	0.250	0.0883
OC-29	8	0	0.960	0.150	0.0532
OC-30	8	0	0.922	0.299	0.106
OC-31	8	0	1.033	0.366	0.129

Source of Variation	DF	SS	MS	F	P
Between Groups	4	0.442	0.111	1.701	0.172
Residual	35	2.274	0.0650		
Total	39	2.716			

The differences in the mean values among the treatment groups are not great enough to exclude the possibility that the difference is due to random sampling variability; there is not a statistically significant difference (P = 0.172).

Test 3 Dry Biomass per Initial Organism

One Way Analysis of Variance Sunday, February 13, 2011, 6:11:05 PM

Data source: Test 5 Dry and Ash-free Biomass per Initial Organism Data in Stats(2-13-11)

Dependent Variable: DBM/IO

Normality Test: Failed (P < 0.050)

Test execution ended by user request, ANOVA on Ranks begun

Kruskal-Wallis One Way Analysis of Variance on Ranks Sunday, February 13, 2011, 6:11:05 PM

Data source: Test 5 Dry and Ash-free Biomass per Initial Organism Data in Stats(2-13-11)

Group	N	Missing	Median	25%	75%
Control	8	0	1.376	1.092	1.745
OC-28	8	0	0.641	0.448	0.715
OC-29	8	0	0.130	0.111	0.137
OC-30	8	0	0.128	0.0946	0.200
OC-31	8	0	1.007	0.553	1.278

H = 27.697 with 4 degrees of freedom. (P = <0.001)

The differences in the median values among the treatment groups are greater than would be expected by chance; there is a statistically significant difference (P = <0.001)

To isolate the group or groups that differ from the others use a multiple comparison procedure.

Multiple Comparisons versus Control Group (Dunn's Method) :

Comparison	Diff of Ranks	Q	P<0.05
OC-29 vs Control	25.125	4.298	Yes
OC-30 vs Control	24.875	4.256	Yes
OC-28 vs Control	11.250	1.925	No
OC-31 vs Control	8.750	1.497	Do Not Test

Note: The multiple comparisons on ranks do not include an adjustment for ties.

Test 3 Ash-free Biomass per Initial Organism

One Way Analysis of Variance Sunday, February 13, 2011, 6:12:52 PM

Data source: Test 5 Dry and Ash-free Biomass per Initial Organism Data in Stats(2-13-11)

Dependent Variable: ABM/IO

Normality Test: Failed (P < 0.050)

Test execution ended by user request, ANOVA on Ranks begun

Kruskal-Wallis One Way Analysis of Variance on Ranks Sunday, February 13, 2011, 6:12:52 PM

Data source: Test 5 Dry and Ash-free Biomass per Initial Organism Data in Stats(2-13-11)

Group	N	Missing	Median	25%	75%
Control	8	0	1.010	0.836	1.308
OC-28	8	0	0.480	0.332	0.539
OC-29	8	0	0.0964	0.0833	0.104
OC-30	8	0	0.0970	0.0699	0.148
OC-31	8	0	0.760	0.420	0.944

H = 27.799 with 4 degrees of freedom. (P = <0.001)

The differences in the median values among the treatment groups are greater than would be expected by chance; there is a statistically significant difference (P = <0.001)

To isolate the group or groups that differ from the others use a multiple comparison procedure.

Multiple Comparisons versus Control Group (Dunn's Method) :

Comparison	Diff of Ranks	Q	P<0.05
OC-29 vs Control	25.375	4.341	Yes
OC-30 vs Control	25.000	4.277	Yes
OC-28 vs Control	11.750	2.010	No
OC-31 vs Control	9.125	1.561	Do Not Test

Note: The multiple comparisons on ranks do not include an adjustment for ties.

Test 3 Individual Dry Mass

One Way Analysis of Variance Sunday, January 30, 2011, 8:36:52 PM

Data source: Test 5 Mass Data in Stats

Dependent Variable: D-Mass

Normality Test: Failed (P < 0.050)

Test execution ended by user request, ANOVA on Ranks begun

Kruskal-Wallis One Way Analysis of Variance on Ranks Sunday, January 30, 2011, 8:36:52 PM

Data source: Test 5 Mass Data in Stats

Group	N	Missing	Median	25%	75%
Control	8	0	1.743	1.551	2.054
OC-28	8	0	0.789	0.593	0.807
OC-29	8	0	0.186	0.171	0.221
OC-30	8	0	0.276	0.192	0.310
OC-31	8	0	1.218	0.922	1.537

H = 34.458 with 4 degrees of freedom. (P = <0.001)

The differences in the median values among the treatment groups are greater than would be expected by chance; there is a statistically significant difference (P = <0.001)

To isolate the group or groups that differ from the others use a multiple comparison procedure.

Multiple Comparisons versus Control Group (Dunn's Method) :

Comparison	Diff of Ranks	Q	P<0.05
OC-29 vs Control	29.125	4.983	Yes
OC-30 vs Control	25.375	4.341	Yes
OC-28 vs Control	14.250	2.438	No
OC-31 vs Control	7.500	1.283	Do Not Test

Note: The multiple comparisons on ranks do not include an adjustment for ties.

Test 3 Individual Ash-Free Mass

One Way Analysis of Variance Sunday, January 09, 2011, 3:06:42 AM

Data source: Data 10 in Stats

Normality Test: Failed (P = <0.001)

Test execution ended by user request, ANOVA on Ranks begun

Kruskal-Wallis One Way Analysis of Variance on Ranks Sunday, January 09, 2011, 3:06:42 AM

Data source: Data 10 in Stats

Group	N	Missing	Median	25%	75%
Control	8	0	1.305	1.163	1.541
OC-28	8	0	0.588	0.441	0.607
OC-29	8	0	0.139	0.128	0.168
OC-30	8	0	0.207	0.146	0.234
OC-31	8	0	0.915	0.701	1.151

H = 34.570 with 4 degrees of freedom. (P = <0.001)

The differences in the median values among the treatment groups are greater than would be expected by chance; there is a statistically significant difference (P = <0.001)

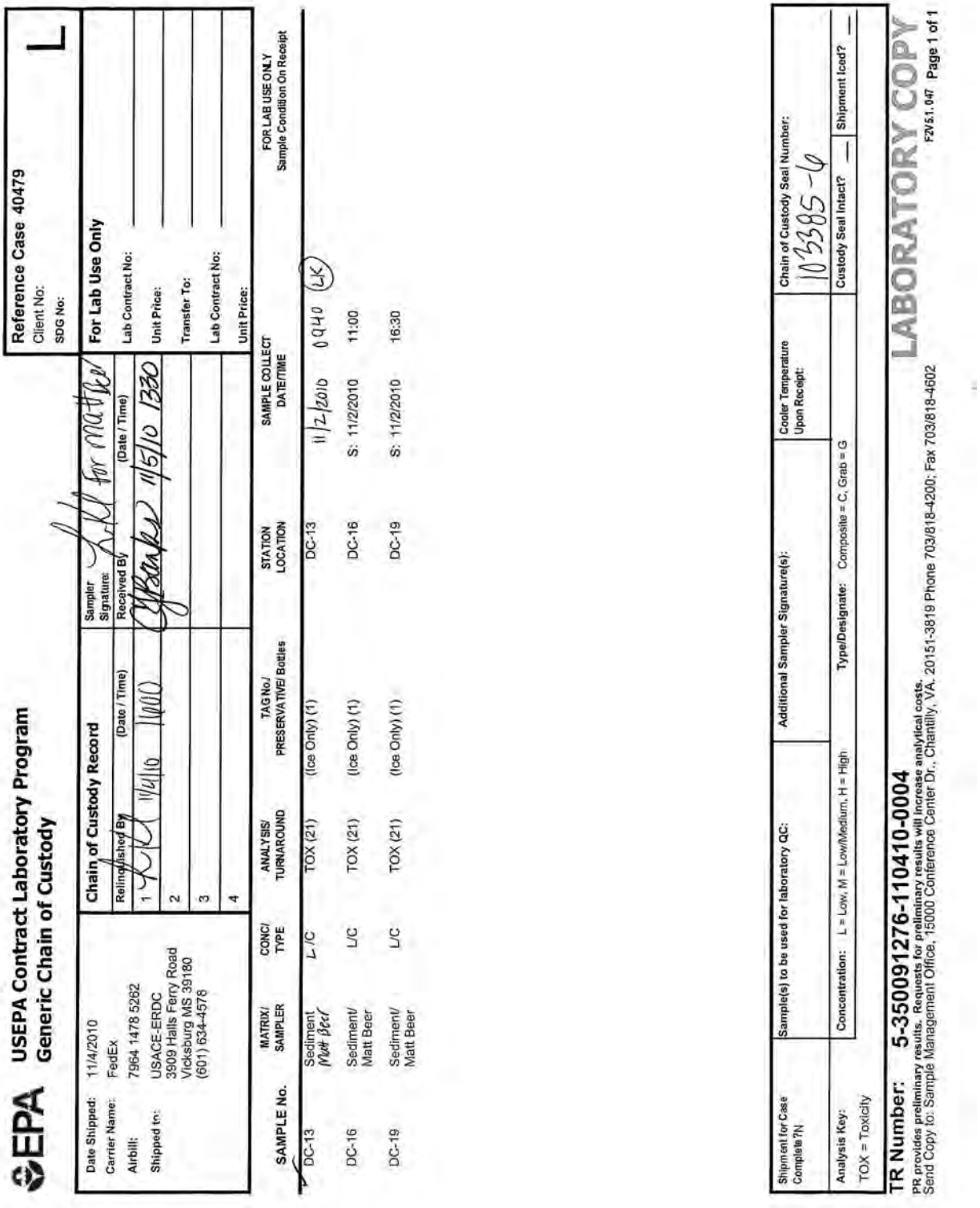
To isolate the group or groups that differ from the others use a multiple comparison procedure.

Multiple Comparisons versus Control Group (Dunnett's Method) :

Comparison	Diff of Ranks	q'	P<0.05
OC-29 vs Control	234.000	5.004	Yes
OC-30 vs Control	204.000	4.363	Yes
OC-28 vs Control	115.000	2.459	Yes
OC-31 vs Control	62.000	1.326	No

Note: The multiple comparisons on ranks do not include an adjustment for ties.

Appendix E. Chain of Custody sheets



EPA USEPA Contract Laboratory Program
Generic Chain of Custody

Reference Case 40479
Client No:
SDG No:
L

Date Shipped: 11/4/2010
Carrier Name: FedEx
Airbill: 7964 1478 5262
Shipped to: USACE-ERDC
3909 Halls Ferry Road
Vicksburg MS 39180
(601) 634-4578

Chain of Custody Record

	Relinquished By	(Date / Time)	Received By	(Date / Time)
1		11/4/10 1000		11/5/10 1330
2				
3				
4				

Sampler Signature:

For Lab Use Only
Lab Contract No:
Unit Price:
Transfer To:
Lab Contract No:
Unit Price:

SAMPLE No.	MATRIX/ SAMPLER	CONC/ TYPE	ANALYSIS/ TURNAROUND	TAG No./ PRESERVATIVE/ Bottles	STATION LOCATION	SAMPLE COLLECT DATE/TIME	FOR LAB USE ONLY Sample Condition On Receipt
DC-13	Sediment Matt Beer	L /C	TOX (21)	(Ice Only) (1)	DC-13	11/2/2010 0940 (LK)	
DC-16	Sediment/ Matt Beer	L/C	TOX (21)	(Ice Only) (1)	DC-16	S: 11/2/2010 11:00	
DC-19	Sediment/ Matt Beer	L/C	TOX (21)	(Ice Only) (1)	DC-19	S: 11/2/2010 16:30	

Shipment for Case Complete?N
Sample(s) to be used for laboratory QC:
Additional Sampler Signature(s):
Cooler Temperature Upon Receipt:
Chain of Custody Seal Number: 103385-0
Analysis Key: TOX = Toxicity
Concentration: L = Low, M = Low/Medium, H = High
Type/Designate: Composite = C, Grab = G
Custody Seal Intact? —
Shipment Iced? —

TR Number: 5-350091276-110410-0004
LABORATORY COPY
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F2V51.047 Page 1 of 1

EPA **USEPA Contract Laboratory Program**
Generic Chain of Custody

Reference Case 40419
Client No: 749 (LK) L
SDG No:

Date Shipped:	11/4/2010
Carrier Name:	FedEx
Airbill:	7964 1549 1690
Shipped to:	USACE-ERDC 3909 Halls Ferry Road Vicksburg MS 39180 (601) 634-4578

Chain of Custody Record

	Relinquished By (Date / Time)	Received By (Date / Time)
1	LK 11/4/10 1700	CBanks 11/5/10 1330
2		
3		
4		

Sampler Signature: LK FOR MATT BEER

For Lab Use Only
Lab Contract No:
Unit Price:
Transfer To:
Lab Contract No:
Unit Price:

SAMPLE No.	MATRIX/ SAMPLER	CONC/ TYPE	ANALYSIS/ TURNAROUND	TAG No./ PRESERVATIVE/ Bottles	STATION LOCATION	SAMPLE COLLECT DATE/TIME		FOR LAB USE ONLY Sample Condition On Receipt
DC-14	Sediment/ Matt Beer	L/C	TOX (21)	(Ice Only) (1)	DC-14	S: 11/3/2010	9:20	
DC-17	Sediment/ Matt Beer	L/C	TOX (21)	(Ice Only) (1)	DC-17	S: 11/2/2010	14:45	

Shipment for Case Complete?N	Sample(s) to be used for laboratory QC:	Additional Sampler Signature(s):	Cooler Temperature Upon Receipt:	Chain of Custody Seal Number: 1033113 103332
Analysis Key: TOX = Toxicity	Concentration: L = Low, M = Low/Medium, H = High	Type/Designate: Composite = C, Grab = G		Custody Seal Intact? __ Shipment Iced? __

TR Number: 5-350091276-110410-0010

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FZV5.1.047 Page 1 of 1

EPA **USEPA Contract Laboratory Program**
Generic Chain of Custody

Reference Case 40749
Client No:
SDG No: L

Date Shipped:	11/4/2010
Carrier Name:	FedEx
Airbill:	7964 1706 1574
Shipped to:	USACE-ERDC 3909 Halls Ferry Road Vicksburg MS 39180 (601) 634-4578

Chain of Custody Record

	Relinquished By (Date / Time)	Received By (Date / Time)
1	11/4/10 1700	GJBanker 11/5/10 1330
2		
3		
4		

Sampler Signature: for Matt Beer

For Lab Use Only
Lab Contract No:
Unit Price:
Transfer To:
Lab Contract No:
Unit Price:

SAMPLE No.	MATRIX/ SAMPLER	CONC/ TYPE	ANALYSIS/ TURNAROUND	TAG No./ PRESERVATIVE/ Bottles	STATION LOCATION	SAMPLE COLLECT DATE/TIME		FOR LAB USE ONLY Sample Condition On Receipt
OC-26	Sediment/ Matt Beer	L/C	TOX (21)	(Ice Only) (1)	OC-26	S: 11/3/2010	11:15	
OC-27	Sediment/ Matt Beer	L/C	TOX (21)	(Ice Only) (1)	OC-27	S: 11/3/2010	15:00	

Shipment for Case Complete?N	Sample(s) to be used for laboratory QC:	Additional Sampler Signature(s):	Cooler Temperature Upon Receipt:	Chain of Custody Seal Number: 103329, 111117
Analysis Key: TOX = Toxicity	Concentration: L = Low, M = Low/Medium, H = High	Type/Designate: Composite = C, Grab = G		Custody Seal Intact? __ Shipment Iced? __

TR Number: 5-350091276-110410-0011

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FZV51.047 Page 1 of 1

USEPA Contract Laboratory Program
Generic Chain of Custody

Client No.
SDG No:

Date Shipped:	11/9/2010	**Chain of Custody Record**	Sampler Signature: FOR Matt BEER	**For Lab Use Only**
Carrier Name:	FedEx	Relinquished By (Date / Time)	Received By (Date / Time)	Lab Contract No:
Airbill:	7940 9727 0258	1 11/9/10 1500	11/8/10	Unit Price:
Shipped to:	USACE-ERDC 3909 Halls Ferry Road Vicksburg MS 39180 (601) 634-4578	2		Transfer To:
		3		Lab Contract No:
		4		Unit Price:

SAMPLE No.	MATRIX/ SAMPLER	CONC/ TYPE	ANALYSIS/ TURNAROUND	TAG No./ PRESERVATIVE/ Bottles	STATION LOCATION	SAMPLE COLLECT DATE/TIME		FOR LAB USE ONLY Sample Condition On Receipt
OC-28	Sediment/ Matt Beer	L/C	TOX (21)	(Ice Only) (1)	OC-28	S: 11/3/2010	16:30	
OC-29	Sediment/ Matt Beer	L/C	TOX (21)	(Ice Only) (1)	OC-29	S: 11/4/2010	9:15	

Shipment for Case Complete?N	Sample(s) to be used for laboratory QC:	Additional Sampler Signature(s):	Cooler Temperature Upon Receipt:	Chain of Custody Seal Number: 111118-9	
Analysis Key: TOX = Toxicity	Concentration: L = Low, M = Low/Medium, H = High	Type/Designate: Composite = C, Grab = G		Custody Seal Intact? ___	Shipment Iced? ___

TR Number: 5-350091276-110910-0003

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F2V5.1.047 Page 1 of 1

USEPA Contract Laboratory Program
Generic Chain of Custody

Reference Case 40749
Client No:
SDG No: L

Date Shipped:	11/9/2010
Carrier Name:	FedEx
Airbill:	7940 9727 5477
Shipped to:	USACE-ERDC 3909 Halls Ferry Road Vicksburg MS 39180 (601) 634-4578

Chain of Custody Record

	Relinquished By (Date / Time)	Received By (Date / Time)
1	11/9/10 1500	for Matt Ba / 11/8/10
2		
3		
4		

Sampler Signature:

For Lab Use Only
Lab Contract No:
Unit Price:
Transfer To:
Lab Contract No:
Unit Price:

SAMPLE No.	MATRIX/ SAMPLER	CONC/ TYPE	ANALYSIS/ TURNAROUND	TAG No./ PRESERVATIVE/ Bottles	STATION LOCATION	SAMPLE COLLECT DATE/TIME		FOR LAB USE ONLY Sample Condition On Receipt
OC-30	Sediment/ Matt Beer	L/C	TOX (21)	(Ice Only) (1)	OC-30	S: 11/4/2010	10:25	
OC-31	Sediment/ Matt Beer	L/C	TOX (21)	(Ice Only) (1)	OC-31	S: 11/4/2010	11:40	

Shipment for Case Complete?N	Sample(s) to be used for laboratory QC:	Additional Sampler Signature(s):	Cooler Temperature Upon Receipt:	Chain of Custody Seal Number: 1111160+103327	
Analysis Key: TOX = Toxicity	Concentration: L = Low, M = Low/Medium, H = High	Type/Designate: Composite = C, Grab = G		Custody Seal Intact? ___	Shipment Iced? ___

TR Number: 5-350091276-110910-0004

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F2V5.1.047 Page 1 of 1

Appendix F. Data Sheets for *Chironomus dilutus* sediment toxicity bioassays

Testing for Duck and Otter Creeks data gap and confluence site investigations were conducted simultaneously. The test number in the data sheets corresponds to when the sediments were evaluated. For the confluence site investigation, tests 1, 2, and 3 described in the report correspond with test 3, 4, and 5 in the data sheets.

TEST 1

Initial Growth Information

Project: GLNPO-Otter and Duck Creek test 3

Day: 0 **Initials of Technician performing masss determinations:** DF

Date: 11-18-10 **Date inial mass determined:** 11-20-10

Replicate	Pan #	No. animals on pan	Pan Weight (g)	Pan & animal dry weight (g)
1	1	10	0.12242	0.12453
2	2	10	0.10289	0.10457

Signature: [signature]

Disclosed and Understood by: [signature]

Final Overlying Water Quality

Project: GLNPO-Otter and Duck Creek test 3

Test Day: ~~10~~ 20 Date: 11-19-10 Time: Am Technician initials: DF

Sediment	Replicate	Temp. (20-26°C)	pH	D.O. (>2.5 mg/L)	*Hardness (PPM $CaCO_3$)	*Alkalinity (PPM $CaCO_3$)	Conductivity (uS)	*Ammonia (PPM)
Control	A	23.1	7.13	7.5	75	40	240	<1
Control	B	23.1	7.18	7.1			225	
Control	C	23.1	7.23	7.7			230	
Control	D	23.2	7.39	7.6			228	
Control	E	23.1	7.28	7.5			227	
Control	F	23.2	7.27	7.3			232	
Control	G	23.2	7.23	6.9			245	
Control	H	23.1	7.26	7.1			226	
DC-6/7	A	23.1	8.01	7.5	150	100	380	<1
DC-6/7	B	23.1	8.03	7.6			375	
DC-6/7	C	23.3	7.98	7.5			365	
DC-6/7	D	23.2	7.92	7.8			372	
DC-6/7	E	23.1	7.91	7.2			373	
DC-6/7	F	23.2	7.93	7.0			381	
DC-6/7	G	23.2	8.02	7.1			366	
DC-6/7	H	23.2	7.88	7.1			373	
DC-11/12	A	23.1	7.86	7.8	75	75	370	<1
DC-11/12	B	23.2	7.85	7.8			365	
DC-11/12	C	23.1	7.89	7.6			355	
DC-11/12	D	23.2	7.79	7.7			360	
DC-11/12	E	23.1	7.81	7.5			362	
DC-11/12	F	23.1	7.85	7.3			371	
DC-11/12	G	23.1	7.76	7.2			365	
DC-11/12	H	23.2	7.79	7.3			366	
DC-13	A	23.1	8.02	7.1	120	90	382	<1
DC-13	B	23.2	8.01	7.1			371	
DC-13	C	23.1	8.03	6.9			360	
DC-13	D	23.2	8.01	6.8			367	
DC-13	E	23.1	8.00	6.7			373	
DC-13	F	23.1	7.85	6.9			371	
DC-13	G	23.2	7.83	7.1			369	
DC-13	H	23.1	7.81	7.0			375	
OC-22	A	23.1	7.98	7.9	170	180	382	<1
OC-22	B	23.2	7.99	7.8			401	
OC-22	C	23.1	8.01	7.8			408	
OC-22	D	23.1	7.85	7.7			416	
OC-22	E	23.1	7.95	7.5			412	
OC-22	F	23.2	7.94	7.6			421	
OC-22	G	23.2	7.93	7.8			408	
OC-22	H	23.2	7.85	7.7			353	

Final Overlying Water Quality

Project: GLNPO-Otter and Duck Creek test 3

Test Day: 10 (DF) Date: 11-19-10 Time: Am Technician initials: DF

Sediment	Replicate	Temp. (20-26°C)	pH	D.O. (>2.5 mg/L)	*Hardness (PPM $CaCO_3$)	*Alkalinity (PPM $CaCO_3$)	Conductivity (uS)	*Ammonia (PPM)
OC-24/25	A	23.2	7.77	6.9	120	96	325	<1
OC-24/25	B	23.2	7.78	7.0			360	
OC-24/25	C	23.2	7.76	7.1			386	
OC-24/25	D	23.2	7.73	7.1			390	
OC-24/25	E	23.2	7.75	6.8			375	
OC-24/25	F	23.2	7.71	6.5			315	
OC-24/25	G	23.2	7.68	6.8			328	
OC-24/25	H	23.2	7.65	6.7			333	

*Measured from a composite of overlying water from all treatment replicates (2-5 mL per replicate).

Signature:

Disclosed and Understood by:

Final Overlying Water Quality

Project: GLNPO-Otter and Duck Creek test 3

Test Day: 10 Date: 11/29/10 Time: 1000 Technician initials: D.H. / AT

Sediment	Replicate	Temp. (20-26°C)	pH	D.O. (>2.5 mg/L)	*Hardness (PPM $CaCO_3$)	*Alkalinity (PPM $CaCO_3$)	Conductivity (uS)	*Ammonia (PPM)
Control	A	23.3	7.10	8.6	80	30	245	<1
Control	B	23.5	7.27	8.1			228	
Control	C	23.6	7.42	8.2			221	
Control	D	23.5	7.55	8.1			226	
Control	E	23.6	7.61	7.6			221	
Control	F	23.5	7.68	7.7			231	
Control	G	23.3	7.71	8.1			225	
Control	H	23.2	7.71	8.1			226	
DC-6/7	A	23.5	8.05	7.5	150	120	460	<1
DC-6/7	B	23.1	7.69	3.0			515	
DC-6/7	C	23.5	8.03	7.1			460	
DC-6/7	D	23.2	8.02	7.8			450	
DC-6/7	E	23.3	8.00	7.9			460	
DC-6/7	F	23.3	7.87	7.3			419	
DC-6/7	G	22.9	8.03	7.1			465	
DC-6/7	H	23.1	7.88	6.9			450	
DC-11/12	A	22.9	7.89	7.6	40	75	370	1
DC-11/12	B	23.1	7.85	7.6			327	
DC-11/12	C	23.1	7.80	7.6			362	
DC-11/12	D	23.2	7.65	7.0			334	
DC-11/12	E	23.0	7.57	5.4			335	
DC-11/12	F	23.1	7.59	6.9			325	
DC-11/12	G	22.9	7.59	7.2			327	
DC-11/12	H	22.7	7.70	7.5			350	
DC-13	A	23.2	8.05	7.7	130	120	370	<1
DC-13	B	23.0	8.00	7.7			348	
DC-13	C	23.0	7.86	7.6			390	
DC-13	D	23.0	7.90	7.8			415	
DC-13	E	22.8	7.95	8.0			420	
DC-13	F	22.8	7.95	7.0			395	
DC-13	G	22.8	7.97	7.8			405	
DC-13	H	22.7	7.87	7.6			415	
OC-22	A	23.0	8.49	8.2	190	170	560	1
OC-22	B	23.0	8.49	8.4			545	
OC-22	C	23.0	8.19	7.7			525	
OC-22	D	23.0	8.42	7.5			535	
OC-22	E	23.0	8.44	7.9			527	
OC-22	F	23.1	8.31	7.8			560	
OC-22	G	23.0	8.35	7.9			555	
OC-22	H	22.9	8.32	8.0			509	

Final Overlying Water Quality

Project: GLNPO-Otter and Duck Creek test 3

Test Day: 10 Date: 11/24 Time: 10:00 Technician initials: JW/pm

Sediment	Replicate	Temp. (20-26°C)	pH	D.O. (>2.5 mg/L)	*Hardness (PPM $CaCO_3$)	*Alkalinity (PPM $CaCO_3$)	Conductivity (uS)	*Ammonia (PPM)
OC-24/25	A	22.8	7.43	4.1	155	100	380	1
OC-24/25	B	22.8	7.87	5.4			415	
OC-24/25	C	22.8	7.95	7.3			470	
OC-24/25	D	22.5	8.30	8.2			460	
OC-24/25	E	22.5	8.20	7.3			435	
OC-24/25	F	22.7	8.29	7.2			399	
OC-24/25	G	22.7	8.31	6.8			450	
OC-24/25	H	22.5	8.48	7.9			540	

*Measured from a composite of overlying water from all treatment replicates (2-5 mL per replicate).

Signature: _____

Disclosed and Understood by: _____

Daily Overlying Water Temperature (°C) and D.O. (mg/L), Feeding and Maintenance Checklist

Test Day	1		2		3		4		5		6		7		8		9	
	Temperature	D.O.	Temperature	D.O.	Temperature	D.O.	Temperature	D.O.	Temperature	D.O.	Temperature	D.O.	Temperature	D.O.	Temperature	D.O.	Temperature	D.O.
Control	22.9	6.93	22.8	6.83	22.6	7.18	22.9	7.12	22.8	7.08	22.5	7.00	22.8	7.11	22.6	7.07	22.8	7.13
DC-6/7	22.7	6.98	22.7	6.85	22.7	7.13	22.5	7.01	22.7	7.09	23.0	7.03	22.6	7.12	22.7	7.12	22.8	7.10
DC-11/12	22.8	6.96	22.8	6.93	22.6	7.25	22.5	7.08	22.8	7.05	22.5	7.09	22.6	7.10	22.7	7.11	22.8	7.11
DC-13	22.5	7.01	22.8	6.87	22.6	7.25	22.5	7.06	22.8	7.08	22.5	7.10	22.6	7.09	22.6	7.12	22.8	7.08
OC-22	22.9	7.01	22.8	6.84	22.6	7.13	22.5	7.08	22.9	7.03	22.3	7.11	22.8	7.11	22.8	7.20	22.8	7.13
OC-24/25	22.6	6.91	22.8	6.73	22.7	7.14	22.5	7.03	22.8	7.03	22.3	7.01	22.8	7.13	22.7	7.19	22.6	7.15
Water Exchanged AM?	—		✓		✓		—		✓		✓		✓				✓	
Water Exchanged PM?	✓		✓		✓		✓		✓		✓		✓				✓	
Fed?	✓		✓		✓		✓		✓		—		✓				✓	
Aeration OK?	✓		✓		✓		✓		✓		—		—				✓	
Zumwalt needles clear?	✓		✓		✓		✓		✓		—		✓				✓	
Timer OK?	✓		✓		—		✓		✓		—		—				✓	
Remcor OK?	✓		✓		✓		✓		✓		—		—				✓	
Daily Observations Recorded?	✓		✓		✓		✓		✓		—		✓				✓	
Technician intials/date	DF / 11/20/10		DF / 11/21/10		DF / 11/22/10		DF / 11/23/10		DF 11/24/10		DF / 11/25/10		DF 11/24/10		11/27/10		DF / 11/28/10	

If temperature falls outside the range of 20-26°C or dissolved oxygen falls below 2.5 mg/L contact the study coordinator

Signature: _____

Disclosed and Understood by: _____

Daily Observations

Day: -1

Date: 11/18/16 **Technician Initials:** DF, DM
Time: PM

Water exchange counter: N/A

Comments: Mixed sediments until homogenous with lightnin mixer. Added sediment to beakers as described in EPA guidance. Sediment descriptions are as follows: DC-11/12 - fine/silty sed. containing gravel & twigs. OC-22 fine silty sediment with little organic matter. DC-6/7 - fine sediment with gravel & twigs. OC-24/25 light in color, sandy. DC-13 sandy. Beakers with bacterial die to D.O. issues encountered in the previous 2 tests. Measured parameter NH_3.

Day: 0

Date: 11/19/16 **Technician Initials:** DF, DM
Time: PM

Water exchange counter: N/A

Comments: Recorded WQ parameters. Added 10 mL/L larvae to each beaker. Test setup as described in EPA guidance document. Initials placed on pre-labeled pens.

Daily Observations

Day: 1

Date: 11/2016 **Technician Initials:** DF

Time: AM/PM

Water exchange counter: N/A

Comments: AM & PM water exchange conducted, aeration adjusted. Daily parameters recorded, Animals fed, Tube building animal behavior appear normal.

Day: 2

Date: 11/21/16 **Technician Initials:** DF

Time: AM/PM

Water exchange counter: N/A

Comments: AM & PM water exchanges conducted. Daily parameters recorded. Animals fed. Aeration adjusted

Daily Observations

Day: 3

Date: 11/22/16 **Technician Initials:** DF

Time: AM/PM

Water exchange counter: N/A

Comments: Water exchange conducted. Daily parameters recorded. Animals fed. Adjusted aeration rate down.

Day: 4

Date: 11/23/16 **Technician Initials:** DF

Time: AM/PM

Water exchange counter: N/A

Comments: Am & Pm water exchange conducted. Daily parameter recorded. Animals fed.

Daily Observations

Day: 5

Date: 11/24/16 **Technician Initials:** DF

Time: AM/PM

Water exchange counter: N/A

Comments: Water exchange conducted, Parameters recorded - Animals fed.

Day: 6

Date: 11-25-10 **Technician Initials:** JS

Time: 7:00

Water exchange counter:

Comments: Water change, aeration good on all beakers. Last feed.

Daily Observations

Day: 7

Date: 11/26/10 **Technician Initials:** DV

Time: 1400

Water exchange counter: N/A

Comments: Water exchange conducted. Daily parameters recorded, animals fed.

Day: 8

Date: 11/27/10 **Technician Initials:** T.F.M.

Time: 1600

Water exchange counter: N/A

Comments: MODULE TEMP. @ 22.2°C, AERATION O.K., TEST FED. Parameters recorded,

Daily Observations

Day: 9

Date: 11/28/16 **Technician Initials:** DF

Time: _____

Water exchange counter: N/A

Comments: Water exchange conducted. Parameters recorded. Animals fed. Animal behavior appears normal

Day: 10

Date: 11/29/16 **Technician Initials:** DF

Time: PM

Water exchange counter: N/A

Comments: Test terminated as described in EPA guidance document.

Signature:

Disclosed and Understood by:

Final Survival and Growth Information

Project: GLNPO-Otter and Duck Creek test 3

Day: 10
Date: 11-29-16 Time: PM

Initials of Technician performing masss determinations: JW, DF

Date dry mass determined: —

Date ash-free dry mass determined: —

Sediment	Replicate	Technician Initials	# live recovered	# animals Weighed	Pan #	Pan Weight (mg)	Pan & animal dry weight (mg)	Pan & animal ash-free dry weight (mg)	Comments
Control	A	JS	7	7	1	125.836	145.600	131.580	
Control	B	DM	10	10	2	122.650	172.550	135.037	
Control	C	DM	10	10	3	135.345	193.756	149.877	
Control	D	DM	7	7	4	147.756	167.086	153.598	
Control	E	JW	10	10	5	121.134	178.242	134.551	
Control	F	JS	10	10	6	144.266	196.818	156.975	
Control	G	JS	9	9	7	150.327	177.162	158.057	
Control	H	JW	7	7	8	139.589	160.250	144.559	
DC-6/7	A	JS	10	10	9	147.078	172.640	153.123	
DC-6/7	B	DM	7	7	10	141.866	169.034	149.295	
DC-6/7	C	DM	9	9	11	148.712	168.670	152.752	
DC-6/7	D	DM	10	10	12	151.212	179.414	157.733	
DC-6/7	E	DF	10	10	13	132.188	160.350	140.746	
DC-6/7	F	JS	8	8	14	150.656	172.018	156.886	
DC-6/7	G	JS	8	8	15	139.650	180.150	150.184	
DC-6/7	H	JS	5	5	16	143.733	163.829	148.047	
DC-11/12	A	JS	6	6	17	158.076	170.667	161.694	
DC-11/12	B	DM	10	10	18	139.948	166.519	146.083	
DC-11/12	C	DM	9	9	19	129.098	149.724	135.758	
DC-11/12	D	DM	9	9	20	134.664	164.930	144.003	
DC-11/12	E	JW	8	8	21	138.117	155.710	143.123	
DC-11/12	F	DF	10	10	22	154.742	173.489	159.032	
DC-11/12	G	DF	10	10	23	142.866	160.667	146.613	
DC-11/12	H	JS	5	5	24	133.869	156.328	138.789	

Final Survival and Growth Information

Project: GLNPO-Otter and Duck Creek test 3

Day: 10
Date: 1-22-10 Time: PM

Initials of Technician performing masss determinations: JW, DF

Date dry mass determined: —

Date ash-free dry mass determined: —

Sediment	Replicate	Technician Initials	# live recovered	# animals Weighed	Pan #	Pan Weight (mg)	Pan & animal dry weight (mg)	Pan & animal ash-free dry weight (mg)	Comments
DC-13	A	JS	9	9	25	153.762	191.354	163.229	
DC-13	B	JS	8	8	26	145.600	168.329	152.834	
DC-13	C	JS	9	9	27	162.892	215.716	174.608	
DC-13	D	PM	10	10	28	162.376	205.984	174.459	
DC-13	E	JW	10	10	29	152.487	194.464	162.402	
DC-13	F	JW	10	10	30	142.622	182.362	152.052	
DC-13	G	JS	9	9	31	145.917	169.142	153.077	
DC-13	H	JS	5	5	32	147.838	163.536	151.283	
OC-22	A	JS	9	9	33	151.422	177.028	158.330	
OC-22	B	DM	10	10	34	149.346	195.574	163.835	
OC-22	C	DM	10	10	35	112.910	156.066	123.410	
OC-22	D	DM	8	8	36	146.158	165.326	151.808	
OC-22	E	DM	8	8	37	146.656	176.784	153.552	
OC-22	F	DM	8	8	38	142.798	172.798	149.603	
OC-22	G	PM	10	10	39	142.698	173.800	149.755	
OC-22	H	JW	10	10	40	138.296	174.656	147.665	
OC-24/25	A	JS	8	8	41	142.390	172.646	151.262	
OC-24/25	B	JW	10	10	42	136.649	174.838	145.833	
OC-24/25	C	JW	9	9	43	143.549	194.340	159.110	
OC-24/25	D	JW	10	10	44	133.870	179.320	149.340	
OC-24/25	E	JW	3	3	45	133.582	141.750	136.082	
OC-24/25	F	JW	7	7	46	125.609	148.547	130.414	
OC-24/25	G	JW	8	8	47	134.740	161.938	142.180	
OC-24/25	H	JW	10	10	48	145.926	184.420	160.056	

Signature: [signature]

Final Survival and Growth Information

Project: GLNPO-Otter and Duck Creek test 3

Day: 10

Initials of Technician performing masss determinations: JW, DF

Date: 11-29-16 Time: PM

Date dry mass determined: —

Date ash-free dry mass determined: —

Sediment	Replicate	Technician Initials	# live recovered	# animals Weighed	Pan #	Pan Weight (mg)	Pan & animal dry weight (mg)	Pan & animal ash-free dry weight (mg)	Comments

Disclosed and Understood by:

TEST 2

Initial Growth Information

Project: GLNPO-Otter and Duck Creek test 4

Day: 0 **Initials of Technician performing masss determinations:** JW

Date: 12/10/10 **Date inial mass determined:** _____

Replicate	Pan #	No. animals on pan	Pan Weight (g)	Pan & animal dry weight (g)
1	1	10	191.078	0.19312
2	2	10	182.112	0.18426

Signature: _____

Disclosed and Understood by: _____

Initial Overlying Water Quality

Project: GLNPO-Otter and Duck Creek test 4

Test Day: 0 Date: 12/10/10 Time: 0900 Technician initials: [illegible]/D.H.

Sediment	Replicate	Temp. (20-26°C)	pH	D.O. (>2.5 mg/L)	*Hardness (PPM $CaCO_3$)	*Alkalinity (PPM $CaCO_3$)	Conductivity (uS)	*Ammonia (PPM)
Control	A	23.8	8.41	8.8	60	40	228	<1
Control	B	23.5	8.00	8.2			256	
Control	C	23.9	6.87	8.7			235	
Control	D	23.7	6.81	8.2			238	
Control	E	23.6	7.16	8.3			227	
Control	F	24.0	6.78	8.9			225	
Control	G	23.7	8.31	8.6			232	
Control	H	23.4	8.37	8.7			228	
DC-14	A	23.2	8.28	8.8	70	60	208	1
DC-14	B	23.6	8.34	8.7			212	
DC-14	C	23.3	8.35	8.6			212	
DC-14	D	23.7	6.80	8.5			210	
DC-14	E	23.5	8.35	8.8			221	
DC-14	F	23.6	8.25	8.6			231	
DC-14	G	23.2	8.34	8.8			198	
DC-14	H	23.5	8.27	8.6			208	
DC-16	A	23.7	7.34	8.6	80	100	328	1
DC-16	B	23.5	8.38	8.8			341	
DC-16	C	23.7	8.21	8.6			346	
DC-16	D	23.5	8.37	8.7			362	
DC-16	E	23.4	8.26	8.6			355	
DC-16	F	23.5	8.35	8.8			358	
DC-16	G	23.5	8.31	8.8			333	
DC-16	H	23.7	8.28	8.6			342	
DC-17	A	23.6	8.33	8.6	80	80	338	1
DC-17	B	23.4	8.32	8.6			329	
DC-17	C	23.5	8.35	8.6			343	
DC-17	D	23.7	8.33	8.6			328	
DC-17	E	23.6	8.37	8.7			327	
DC-17	F	23.6	8.36	8.6			341	
DC-17	G	23.6	8.32	8.7			333	
DC-17	H	23.5	8.34	8.6			337	
DC-19	A	23.6	8.12	8.8	70	90	362	1
DC-19	B	23.5	7.63	5.6			318	
DC-19	C	23.4	8.32	8.8			349	
DC-19	D	23.5	8.33	8.8			356	
DC-19	E	23.3	7.56	8.9			357	
DC-19	F	23.4	7.98	8.7			355	
DC-19	G	23.7	8.28	8.7			351	
DC-19	H	23.6	7.06	8.1			349	

Initial Overlying Water Quality

Project: GLNPO-Otter and Duck Creek test 4

Test Day: 0 Date:_____ Time:_____ Technician initials:_____

Sediment	Replicate	Temp. (20-26°C)	pH	D.O. (>2.5 mg/L)	*Hardness (PPM $CaCO_3$)	*Alkalinity (PPM $CaCO_3$)	Conductivity (uS)	*Ammonia (PPM)
OC-26	A	23.6	8.34	8.8	80	90	298	1
OC-26	B	23.8	8.19	8.7			296	
OC-26	C	23.7	8.36	8.1			308	
OC-26	D	23.8	8.34	8.7			317	
OC-26	E	23.6	8.31	8.7			321	
OC-26	F	23.5	8.32	8.6			299	
OC-26	G	23.6	8.22	8.7			321	
OC-26	H	23.5	8.34	8.3			321	

*Measured from a composite of overlying water from all treatment replicates (2-5 mL per replicate).

Signature:_____

Disclosed and Understood by:_____

Final Overlying Water Quality

Project: GLNPO-Otter and Duck Creek test 4

Test Day: 10 Date: 12/20/10 Time: 1300 Technician initials: NM/MM

Sediment	Replicate	Temp. (20-26°C)	pH	D.O. (>2.5 mg/L)	*Hardness (PPM $CaCO_3$)	*Alkalinity (PPM $CaCO_3$)	Conductivity (uS)	*Ammonia (PPM)
Control	A	23.4	7.95	8.6	60	44	237	3
Control	B	23.5	7.69	8.6			239	
Control	C	23.4	7.96	8.5			247	
Control	D	23.5	7.98	8.4			241	
Control	E	23.5	7.87	8.7			239.4	
Control	F	23.6	7.61	8.4			246	
Control	G	23.6	7.80	8.3			246	
Control	H	23.3	7.92	8.4			245	
DC-14	A	23.3	8.41	8.4	144	88	197	<1
DC-14	B	23.2	8.48	8.6			206	
DC-14	C	23.3	8.37	8.7			210	
DC-14	D	23.4	8.26	8.3			208	
DC-14	E	23.4	8.38	8.3			209	
DC-14	F	23.2	8.50	8.4			195	
DC-14	G	23.2	8.40	8.5			205	
DC-14	H	23.3	8.54	8.5			196	
DC-16	A	23.2	8.17	6.3	130	83	345	1
DC-16	B	23.2	8.24	7.9			348	
DC-16	C	23.3	8.53	8.4			347	
DC-16	D	23.3	8.53	8.9			345	
DC-16	E	23.2	8.41	6.5			353	
DC-16	F	23.1	8.53	8.3			341	
DC-16	G	23.2	8.47	7.0			355	
DC-16	H	23.3	8.47	8.2			369	
DC-17	A	23.2	8.26	7.9	125	80	366	1
DC-17	B	23.2	8.30	8.0			358	
DC-17	C	23.2	8.26	7.4			355	
DC-17	D	23.1	8.20	7.9			359	
DC-17	E	23.1	8.16	7.7			316	
DC-17	F	23.2	8.18	8.0			366	
DC-17	G	23.1	8.28	7.6			363	
DC-17	H	23.2	8.24	7.5			368	
DC-19	A	23.2	8.32	7.7	125	89	378	<1
DC-19	B	23.1	8.34	7.9			380	
DC-19	C	23.2	8.49	8.4			375	
DC-19	D	23.2	8.28	8.0			372	
DC-19	E	23.1	8.43	8.6			370	
DC-19	F	23.1	8.47	8.2			376	
DC-19	G	23.1	8.39	8.5			374	
DC-19	H	23.1	8.51	8.3			380	

Final Overlying Water Quality

Project: GLNPO-Otter and Duck Creek test 4

Test Day: 10 Date: 12/20/10 Time: 1330 Technician initials: DM/MA

Sediment	Replicate	Temp. (20-26°C)	pH	D.O. (>2.5 mg/L)	*Hardness (PPM $CaCO_3$)	*Alkalinity (PPM $CaCO_3$)	Conductivity (uS)	*Ammonia (PPM)
OC-26	A	23.1	8.56	8.5	142	101	339	1
OC-26	B	23.2	8.47	8.7			338	
OC-26	C	23.1	8.35	8.7			341	
OC-26	D	23.1	8.39	8.7			343	
OC-26	E	23.1	8.37	8.3			346	
OC-26	F	23.2	8.33	8.6			335	
OC-26	G	23.1	8.34	8.4			336	
OC-26	H	23.1	8.40	8.6			339	

*Measured from a composite of overlying water from all treatment replicates (2-5 mL per replicate).

Signature: _____

Disclosed and Understood by: _____

Daily Overlying Water Temperature (°C) and D.O. (mg/L), Feeding and Maintenance Checklist

Test Day	1		2		3		4		5		6		7		8		9	
	Temperature	D.O.	Temperature	D.O.	Temperature	D.O.	Temperature	D.O.	Temperature	D.O.	Temperature	D.O.	Temperature	D.O.	Temperature	D.O.	Temperature	D.O.
Control	22.1	7.08	22.2	7.05	23.0	7.13	22.7	7.11	22.8	7.05	23.0	7.13	22.7	7.13	23.0	7.08	22.6	7.31
DC-14	22.1	7.02	22.2	7.09	23.0	7.10	22.7	7.13	22.9	7.01	23.1	7.09	22.8	7.17	23.1	7.13	22.6	7.20
DC-16	22.1	7.05	22.2	7.08	22.9	7.08	22.7	7.12	22.8	7.08	23.1	7.08	22.8	7.15	23.1	7.19	22.7	7.23
DC-17	22.2	7.13	22.2	7.13	22.8	7.09	22.7	7.08	22.7	7.09	23.1	7.13	22.8	7.06	23.1	7.20	22.7	7.25
DC-19	22.1	7.11	22.2	7.16	22.9	7.11	22.7	7.11	22.7	7.01	22.9	7.16	22.8	7.13	23.0	7.21	22.6	7.20
OC-26	22.1	7.05	22.2	7.05	22.8	7.13	22.6	7.09	22.6	7.06	23.0	7.15	22.0	7.05	22.8	7.19	22.7	7.18
Water Exchanged AM?	✓		✓		✓		✓		✓		✓		✓		✓		✓	
Water Exchanged PM?	✓		✓		✓		✓		✓		✓		✓		✓		✓	
Fed?	✓		✓		✓		✓		✓		✓		✓		✓		✓	
Aeration OK?	✓		✓		✓		✓		✓		✓		✓		✓		✓	
Zumwalt needles clear?	✓		✓		✓		✓		✓		✓		✓		✓		✓	
Timer OK?	✓		✓		✓		✓		✓		✓		✓		✓		✓	
Remcor OK?	✓		✓		✓		✓		✓		✓		✓		✓		✓	
Daily Observations Recorded?	✓		✓		✓		✓		✓		✓		✓		✓		✓	
Technician intials/date	DF 12/11/16		DF 12/12/16		DF 12/13/16		DF 12/14/16		DF 12/15/16		DF 12/16/16		DF 12/17/16		DF 12/18/16		DF 12/19/16	

If temperature falls outside the range of 20-26°C or dissolved oxygen falls below 2.5 mg/L contact the study coordinator

Signature: _____

Disclosed and Understood by: _____

Daily Observations

Day: -1

Date: 12/7/11 (DF) **Technician Initials:** DF, DM
Time: ~~Arctic~~ AM

Water exchange counter: N/A

Comments: Added Sediment to 2 week exposure Chambers. Chambers placed in water bath at 23°C. Aeration provided to each chamber. All sediments smelt without odor except OC-26 which had a strong Chemical smell

Day: 0

Date: 12/10/11. **Technician Initials:** DK, JW
Time: AM/PM

Water exchange counter: N/A

Comments: Test organisms added to each exposure Chamber. Filtering WQ parameters; Organisms collected for initial WQ measurements ~~Chamber placed~~ (DF) Water exchange conducted prior to WQ measurements & addition of organisms. Organisms fed. Test setup as described in EPA Guidance.

Daily Observations

Day: 1

Date: 12/11/16 **Technician Initials:** DF

Time: ~~AM~~ PM AM/PM

Water exchange counter: N/A

Comments: AM & PM water changes conducted. Organisms fed. Daily WQ recorded, Aeration adjusted.

Day: 2

Date: 12/12/16 **Technician Initials:** DF

Time: AM/PM

Water exchange counter: N/A

Comments: AM & PM water exchange conducted. Daily WQ parameters recorded. Organisms fed. Aeration adjusted.

Daily Observations

Day: 3

Date: 12/13/16 **Technician Initials:** DF

Time: AM/PM

Water exchange counter: N/A

Comments: Daily water exchanges conducted. Water Quality parameters recorded. Animals fed. No unusual animal behavior observed.

Day: 4

Date: 12/14/16 **Technician Initials:** DF

Time: AM/PM

Water exchange counter: N/A

Comments: Daily water quality parameters recorded. Daily water exchanges conducted & Animals fed.

Daily Observations

Day: 5

Date: 12/15/16 **Technician Initials:** DF

Time: AM/PM

Water exchange counter: N/A

Comments: AM & PM water exchange conducted. Daily parameters recorded. Animals fed.

Day: 6

Date: 12/16/16 **Technician Initials:** DF

Time: AM/PM

Water exchange counter: N/A

Comments: AM & PM water exchange conducted. Daily parameters recorded. Animals fed. Control beakers cloudy.

Daily Observations

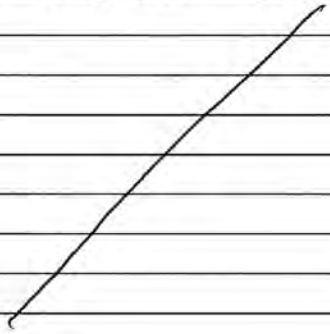
Day: 7

Date: 12/17/10 **Technician Initials:** DF

Time: Am/Pm

Water exchange counter: N/A

Comments: Water exchanger conducted (Am/Pm). Daily parameters recorded. Animals fed. Aeration observed



Day: 8

Date: 12/18/10 **Technician Initials:** DF

Time: Am/Pm

Water exchange counter: N/A

Comments: Am & Pm water exchanges Cond-dail. Daily parameters recorded. Animals fed. Aeration ok.



Daily Observations

Day: 9

Date: 12/19/10 **Technician Initials:** DF

Time: AM/PM

Water exchange counter: N/A

Comments: Water exchanges conducted. Daily WQ recorded. Animals fed.

Day: 10

Date: 12/20/10 **Technician Initials:** DF, JL, JS

Time: AM

Water exchange counter: NA

Comments: WQ Parameter recorded on all beakers. TCH broken down as described in EPA Sediment document. No problems encountered.

Signature:

Disclosed and Understood by:

Final Survival and Growth Information

Project: GLNPO-Otter and Duck Creek test 4

Day: 10 Initials of Technician performing masss determinations: JW, DF

Date: 12-20-10 Time: PM Date dry mass determined: — Date ash-free dry mass determined: —

Sediment	Replicate	Technician Initials	# live recovered	# animals Weighed	Pan #	Pan Weight (mg)	Pan & animal dry weight (mg)	Pan & animal ash-free dry weight (mg)	Comments
Control	A	DF	8	8	25	113.602	139.976	123.488	
Control	B	DF	7	6	26	110.982	129.064	117.709	1 pupae
Control	C	DF	9	9	27	99.999	122.876	106.266	
Control	D	DF	8	8	28	109.818	150.004	121.730	
Control	E	DF	8	8	29	114.372	132.632	120.697	
Control	F	DF	9	7	30	107.379	141.056	116.170	2 pupae
Control	G	DF	8	6	31	101.844	117.984	106.740	2 pupae
Control	H	DF	8	7	32	106.620	135.288	115.333	1 pupae
DC-14	A	AH	9	9	33	106.102	126.280	110.756	
DC-14	B	MA	7	7	34	113.032	137.240	121.379	
DC-14	C	AH	8	8	35	126.132	158.554	137.876	
DC-14	D	NM	4	4	36	119.766	131.187	123.273	
DC-14	E	NM	9	9	37	120.289	138.764	125.514	
DC-14	F	MA	10	10	38	108.997	136.976	117.965	
DC-14	G	MA	10	10	39	115.772	171.300	138.862	
DC-14	H	AH	8	8	40	116.620	129.664	120.646	
DC-16	A	NM	10	10	41	118.360	152.160	129.749	
DC-16	B	NM	10	10	42	115.236	145.516	124.554	
DC-16	C	NM	10	10	43	109.700	137.232	116.977	
DC-16	D	NM	6	6	44	111.938	141.222	122.335	
DC-16	E	NM	8	8	45	121.574	157.309	131.166	
DC-16	F	NM	7	7	46	122.638	150.252	132.940	
DC-16	G	NM	7	7	47	110.482	131.640	118.201	
DC-16	H	NM	9	9	48	117.438	141.172	125.882	

Final Survival and Growth Information

Project: GLNPO-Otter and Duck Creek test 4

Day: 10 Initials of Technician performing masss determinations: JW/DF

Date: 12-20-10 Time: PM Date dry mass determined: — Date ash-free dry mass determined: —

Sediment	Replicate	Technician Initials	# live recovered	# animals Weighed	Pan #	Pan Weight (mg)	Pan & animal dry weight (mg)	Pan & animal ash-free dry weight (mg)	Comments
DC-17	A	AH	9	9	1	63.250	87.876	71.819	
DC-17	B	MA	10	10	2	56.714	88.014	64.211	
DC-17	C	AH	10	10	3	138.444	159.266	145.358	
DC-17	D	AH	6	6	4	118.032	138.900	123.460	
DC-17	E	NM	8	8	5	83.906	115.710	94.738	
DC-17	F	MA	9	9	6	73.628	108.704	87.282	
DC-17	G	MA	8	8	7	112.344	150.996	123.856	
DC-17	H	MA	7	7	8	129.00	144.154	134.292	
DC-19	A	DF	7	7	9	113.024	132.908	119.259	
DC-19	B	DF	7	7	10	115.848	136.238	121.616	
DC-19	C	AH	7	7	11	128.218	154.570	135.176	
DC-19	D	DF	9	9	12	96.898	138.754	112.524	
DC-19	E	DF	4	4	13	116.523	131.584	121.483	
DC-19	F	DF	8	8	14	139.708	161.144	147.945	
DC-19	G	MA	8	8	15	121.172	150.704	129.315	
DC-19	H	MA	9	9	16	74.694	110.984	86.579	
OC-26	A	NM	0	0	17	—	—	—	Strong odor
OC-26	B	AH	0	0	18	—	—	—	odor
OC-26	C	DF	3	3	19	115.187	117.590	116.086	Small organisms, odor
OC-26	D	MA	5	5	20	124.322	127.820	125.544	Small organisms, odor
OC-26	E	DF	0	0	21	—	—	—	odor
OC-26	F	AH	4	4	22	112.672	114.426	113.087	Small organisms, odor
OC-26	G	MA	2	2	23	107.530	109.252	108.166	Small organisms
OC-26	H	AH	0	0	24	—	—	—	odor

Final Survival and Growth Information

Project: GLNPO-Otter and Duck Creek test 4

Day: 10 نوفمبر 10 Initials of Technician performing masss determinations: JW, DF

Date: 12 Time: pm Date dry mass determined: — Date ash-free dry mass determined: —

Sediment	Replicate	Technician Initials	# live recovered	# animals Weighed	Pan #	Pan Weight (mg)	Pan & animal dry weight (mg)	Pan & animal ash-free dry weight (mg)	Comments

Signature: [signature]

Disclosed and Understood by: [signature]

TEST 3

Initial Growth Information

Project: GLNPO-Otter and Duck Creek test 5

Day: 0 **Initials of Technician performing masss determinations:** DI

Date: 12/13/10 **Date inial mass determined:** 12/14/10

Replicate	Pan #	No. animals on pan	Pan Weight (g)	Pan & animal dry weight (g)
1	1	10	0.122832	0.124332
2	3	10	0.121637	0.123237

Signature:

Disclosed and Understood by:

Initial Overlying Water Quality

Project: GLNPO-Otter and Duck Creek test 5

Test Day: 0 Date: 12/13/10 Time: 11:30 Technician initials: JS

Sediment	Replicate	Temp. (20-26°C)	pH	D.O. (>2.5 mg/L)	*Hardness (PPM $CaCO_3$)	*Alkalinity (PPM $CaCO_3$)	Conductivity (uS)	*Ammonia (PPM)
Control	A	23.7	7.72	6.7	75	60	202	<1
Control	B	23.7	7.58	6.7			179	
Control	C	23.8	7.38	6.6			181	
Control	D	23.4	7.36	6.6			177	
Control	E	23.8	7.32	6.6			204	
Control	F	23.8	7.36	6.6			166	
Control	G	23.6	7.27	6.6			188	
Control	H	23.6	7.25	6.6			186	
OC-27	A	24.1	7.81	5.2	120	100	422	<1
OC-27	B	24.0	7.81	5.0			452	
OC-27	C	23.7	7.81	5.2			452	
OC-27	D	23.2	7.83	5.2			448	
OC-27	E	23.1	7.68	5.2			445	
OC-27	F	23.1	7.80	5.3			456	
OC-27	G	23.4	7.86	5.2			463	
OC-27	H	23.7	7.86	5.2			462	
OC-28	A	23.7	8.26	5.2	140	120	428	<1
OC-28	B	22.8	8.16	5.3			448	
OC-28	C	23.1	8.21	5.6			435	
OC-28	D	23.2	8.21	5.6			441	
OC-28	E	23.3	8.25	5.8			454	
OC-28	F	23.7	8.17	5.2			406	
OC-28	G	23.7	8.15	5.6			459	
OC-28	H	23.5	8.16	5.4			456	
OC-29	A	23.0	8.22	6.2	120	120	452	<1
OC-29	B	23.3	8.14	6.2			470	
OC-29	C	23.7	8.18	5.9			481	
OC-29	D	23.5	8.20	5.9			440	
OC-29	E	23.5	8.19	5.9			439	
OC-29	F	23.8	8.19	5.9			449	
OC-29	G	23.7	8.18	5.8			450	
OC-29	H	23.7	8.15	5.8			449	
OC-30	A	22.5	8.08	6.1	120	100	380	<1
OC-30	B	22.3	8.07	6.1			400	
OC-30	C	23.1	8.06	6.1			420	
OC-30	D	23.5	8.03	5.8			405	
OC-30	E	23.1	8.07	5.8			406	
OC-30	F	23.7	8.05	5.7			382	
OC-30	G	23.5	8.04	5.7			372	
OC-30	H	23.7	8.03	5.8			400	

Initial Overlying Water Quality

Project: GLNPO-Otter and Duck Creek test 5

Test Day: 0 Date: 12/13/16 Time: AM Technician initials: JS

Sediment	Replicate	Temp. (20-26°C)	pH	D.O. (>2.5 mg/L)	*Hardness (PPM $CaCO_3$)	*Alkalinity (PPM $CaCO_3$)	Conductivity (uS)	*Ammonia (PPM)
OC-31	A	23.7	8.16	6.3	101	100	323	<1
OC-31	B	23.7	8.13	6.2			394	
OC-31	C	23.8	8.13	6.2			412	
OC-31	D	22.4	8.06	6.3			372	
OC-31	E	23.6	8.10	6.2			406	
OC-31	F	23.5	8.21	6.5			376	
OC-31	G	23.4	8.08	6.5			380	
OC-31	H	23.4	8.20	6.4			378	

*Measured from a composite of overlying water from all treatment replicates (2-5 mL per replicate).

Signature: [signature]

Disclosed and Understood by: [signature]

Final Overlying Water Quality

Project: GLNPO-Otter and Duck Creek test 5

Test Day: 10 Date: 12/23/10 DO 55 Time: 7:30 Temp 33 Technician initials: AH/JS/M/N/

Sediment	Replicate	~~Temp. (20-26°C)~~	pH	~~D.O. (>2.5 mg/L)~~	*Hardness (PPM $CaCO_3$)	*Alkalinity (PPM $CaCO_3$)	Conductivity (uS)	*Ammonia (PPM)
Control	A	7.2	6.85	22.1	60	60	270	2
Control	B	6.6	6.81	22.5			205	
Control	C	6.6	6.89	22.9			224	
Control	D	7.4	6.89	23.0			202	
Control	E	6.9	6.91	23.0			229	
Control	F	8.0	6.74	23.0			216	
Control	G	8.1	6.71	23.0			226	
Control	H	7.1	6.82	22.1			244	
OC-27	A	7.1	7.93	22.5	120	128	440	<1
OC-27	B	7.2	7.88	23.0			403	
OC-27	C	7.5	7.94	23.0			343	
OC-27	D	7.6	7.94	23.0			388	
OC-27	E	7.3	7.98	23.0			348	
OC-27	F	7.7	7.95	23.0			371	
OC-27	G	7.3	7.85	23.0			372	
OC-27	H	7.8	8.02	22.5			419	
OC-28	A	7.1	8.14	23.0	138	138	362	<1
OC-28	B	~~7.5~~ 7.8 JS	8.08	22.1			345	
OC-28	C	7.3	8.14	22.5			355	
OC-28	D	7.3	8.03	22.5			407	
OC-28	E	7.3	8.10	22.5			322	
OC-28	F	7.2	8.11	22.5			383	
OC-28	G	7.2	8.14	22.5			440	
OC-28	H	7.4	8.07	22.8			355	
OC-29	A	7.7	8.35	23.0	140	150	391	1
OC-29	B	7.6	8.32	23.0			469	
OC-29	C	7.6	8.15	22.1			465	
OC-29	D	7.4	8.20	22.7			500	
OC-29	E	7.5	8.33	23.0			549	
OC-29	F	7.5	8.26	22.5			550	
OC-29	G	7.4	8.23	22.5			333	
OC-29	H	7.5	8.36	22.9			496	
OC-30	A	6.8	7.55	22.5	110	120	334	1
OC-30	B	5.5	7.58	22.9			342	
OC-30	C	6.1	7.53	22.1			303	
OC-30	D	6.9	7.62	22.9			358	
OC-30	E	5.7	7.58	22.5			305	
OC-30	F	7.4	7.52	23.0			312	
OC-30	G	7.7	7.51	23.0			325	
OC-30	H	7.7	7.53	22.9			308	

Final Overlying Water Quality

Project: GLNPO-Otter and Duck Creek test 5

Test Day: 10 Date: DO 55 Time: 7:38 Temp 55 Technician initials:

Sediment	Replicate	~~Temp.~~ (20-26°C)	pH	~~D.O.~~ (>2.5 mg/L)	*Hardness (PPM $CaCO_3$)	*Alkalinity (PPM $CaCO_3$)	Conductivity (uS)	*Ammonia (PPM)
OC-31	A	7.5	7.15	22.9	105	100	338	<1
OC-31	B	7.5	7.42	23.0			350	
OC-31	C	7.3	7.30	23.0			342	
OC-31	D	6.9	7.06	22.9			346	
OC-31	E	7.3	7.38	23.0			343	
OC-31	F	7.2	7.08	22.9			356	
OC-31	G	7.4	7.25	22.9			333	
OC-31	H	7.7	7.42	23.0			316	

*Measured from a composite of overlying water from all treatment replicates (2-5 mL per replicate).

Signature:

Disclosed and Understood by:

Daily Overlying Water Temperature (°C) and D.O. (mg/L), Feeding and Maintenance Checklist

Test Day	1		2		3		4		5		6		7		8		9	
	Temperature	D.O.	Temperature	D.O.	Temperature	D.O.	Temperature	D.O.	Temperature	D.O.	Temperature	D.O.	Temperature	D.O.	Temperature	D.O.	Temperature	D.O.
Control	22.9	7.32	23.1	7.21	23.0	7.18	22.8	7.08	23.1	7.24	22.7	7.13	23.0	7.21	22.9	7.17	23.1	7.18
OC-27	22.9	7.29	23.1	7.23	22.9	7.12	22.9	7.11	23.1	7.28	22.6	7.10	23.0	7.24	22.9	7.18	23.2	7.17
OC-28	22.9	7.31	23.1	7.21	22.9	7.19	22.9	7.17	23.1	7.26	22.7	7.08	23.0	7.26	22.9	7.28	23.3	7.13
OC-29	22.8	7.28	22.9	7.28	22.9	7.16	22.8	7.15	23.0	7.27	22.7	7.11	23.0	7.26	22.8	7.26	23.2	7.13
OC-30	22.9	7.19	23.0	7.27	23.0	7.13	22.8	7.21	23.1	7.29	22.7	7.13	23.1	7.21	22.8	7.21	23.2	7.16
OC-31	22.9	7.13	23.0	7.17	22.9	7.28	22.8	7.20	23.1	7.28	22.9	7.13	23.0	7.16	22.8	7.23	23.2	7.18
Water Exchanged AM?	✓		✓		✓		✓		✓		✓		✓		✓		✓	
Water Exchanged PM?	✓		✓		✓		✓		✓		✓		✓		✓		✓	
Fed?	✓		✓		✓		✓		✓		✓		✓		✓		✓	
Aeration OK?	✓		✓		✓		✓		✓		✓		✓		✓		✓	
Zumwalt needles clear?	✓		✓		✓		✓		✓		✓		✓		✓		✓	
Timer OK?	✓		✓		✓		✓		✓		✓		✓		✓		✓	
Remcor OK?	✓		✓		✓		✓		✓		✓		✓		✓		✓	
Daily Observations Recorded?	✓		✓		✓		✓		✓		✓		✓		✓		✓	
Technician intials/date	DF 12/14/10		DF 12/15/10		DF 12/16/10		DF 12/17/10		DF 12/18/10		DF 12/19/10		DF 12/20/10		DF 12/21/10		DF 12/22/10	

If temperature falls outside the range of 20-26°C or dissolved oxygen falls below 2.5 mg/L contact the study coordinator

Signature: _____

Disclosed and Understood by: _____

Daily Observations

Day: -1

Date: 12/12/10 **Technician Initials:** DF
Time: AM

Water exchange counter: N/A

Comments: Sediment added to beakers (75ml per beaker), Dechlorinated water added to each beaker. Beakers placed in water bath at 23°C and placed on air to equilibrate overnight. Temp ref at 23°C.

Day: 0

Date: 12/13/10 **Technician Initials:** DF
Time: AM

Water exchange counter: N/A

Comments: Water exchange conducted on all beakers WQ parameters recorded. Ten chironomid larvae added to each beaker.

Daily Observations

Day: 1

Date: 12/14/16 **Technician Initials:** DF

Time: AM/PM

Water exchange counter: N/A

Comments: Conducted AM & PM water exchange. Recorded daily parameters. Fed animals

Day: 2

Date: 12/15/16 **Technician Initials:** DF

Time: AM/PM

Water exchange counter: N/A

Comments: Recorded daily WQ Parameters. Performed AM & PM water exchanges fed organisms. additional aeration.

Daily Observations

Day: 3

Date: 12/16/16 **Technician Initials:** DF

Time: Am/Pm

Water exchange counter: N/A

Comments: Daily water quality parameters recorded, water exchanges conducted. Animals fed.

Day: 4

Date: 12/17/16 **Technician Initials:** DF

Time: AM/PM

Water exchange counter: N/A

Comments: Daily WQ recorded, water exchanges (AM/PM) conducted. Organisms fed.

Daily Observations

Day: 5

Date: 12/16/16 **Technician Initials:** DK

Time: Am/Pm

Water exchange counter: N/A

Comments: Recorded daily WQ parameters. Performed twice daily water exchanges. Organisms fed, cultures adjusted.

Day: 6

Date: 12/17/16 **Technician Initials:** DF

Time: Am/Pm

Water exchange counter: N/A

Comments: Daily WQ recorded Am & Pm water exchanges Conducted, organisms fed,

Daily Observations

Day: 7

Date: 12/20/16 **Technician Initials:** DF

Time: AM/PM

Water exchange counter: N/A

Comments: Recorded daily WQ parameters. Performed AM & PM water exchanges. Fed organisms. Control beakers cloudy.

Day: 8

Date: 12/21/16 **Technician Initials:** DF

Time: AM/PM

Water exchange counter: N/A

Comments: Daily WQ recorded. Water exchanges conducted. Organisms fed.

Daily Observations

Day: 9

Date: 12/22/16 **Technician Initials:** DF

Time: AM/PM

Water exchange counter: N/A

Comments: Recorded Daily WQ parameters. Water exchanges conducted. Animals fed.

Day: 10

Date: 12/23/16 **Technician Initials:** DF

Time: AM

Water exchange counter: N/A

Comments: Final water quality recorded for all beakers. Test broken down as described in EPA guidance. No problems encountered.

Signature:

Disclosed and Understood by:

Final Survival and Growth Information

Project: GLNPO-Otter and Duck Creek test 5

Day: 10
Date: 12-22-16 Time: AM

Initials of Technician performing masss determinations: JW, DF

Date dry mass determined: —

Date ash-free dry mass determined: —

Sediment	Replicate	Technician Initials	# live recovered	# animals Weighed	Pan #	Pan Weight (mg)	Pan & animal dry weight (mg)	Pan & animal ash-free dry weight (mg)	Comments
Control	A	JS	9	9	1	113,920	128.514	117.826	
Control	B	JS	9	9	2	114.848	145.993	122 903	
Control	C	JS	7	7	3	111.258	121.077	113.716	
Control	D	JS	8	8	4	117.234	133.783	121.064	
Control	E	JS	7	7	5	105.999	118.917	109.397	
Control	F	JS	7	7	6	107.762	119.241	110.488	
Control	G	JS	9	9	7	120.890	139.241	125.809	
Control	H	JS	7	7	8	99.644	110.002	102.029	
OC-27	A	JW	0	0	9	—	—	—	Strong odor, sheen
OC-27	B	JW	0	0	10	—	—	—	
OC-27	C	JW	0	0	11	—	—	—	
OC-27	D	JW	0	0	12	—	—	—	
OC-27	E	JW	0	0	13	—	—	—	
OC-27	F	JW	0	0	14	—	—	—	
OC-27	G	JW	0	0	15	—	—	—	
OC-27	H	JW	0	0	16	—	—	—	
OC-28	A	JL	8	8	17	95.852	102.126	97.407	
OC-28	B	AH	9	9	18	108.600	115.753	110.306	
OC-28	C	AH	6	6	19	123.148	125.977	123.876	
OC-28	D	JL	10	10	20	105.586	116.309	108.473	
OC-28	E	AH	8	8	21	113.838	120.386	115.511	
OC-28	F	JL	9	9	22	100.794	104.202	101.658	
OC-28	G	JL	7	7	23	101.898	107.449	103 346	
OC-28	H	AH	10	10	24	106.734	113.874	108.550	

Final Survival and Growth Information

Project: GLNPO-Otter and Duck Creek test 5

Day: 10 Initials of Technician performing masss determinations: JW, DF

Date: 12-23-10 Time: AM Date dry mass determined: — Date ash-free dry mass determined: —

Sediment	Replicate	Technician Initials	# live recovered	# animals Weighed	Pan #	Pan Weight (mg)	Pan & animal dry weight (mg)	Pan & animal ash-free dry weight (mg)	Comments
OC-29	A	AH	6	6	25	99.960	101.324	100.299	
OC-29	B	SW	7	7	26	116.720	~~118.324~~ 118.221	117.070	
OC-29	C	JL	5	5	27	101.888	103.117	102.215	
OC-29	D	SW	8	8	28	91.740	93.119	92.080	
OC-29	E	SW	9	9	29	105.724	107.092	106.047	
OC-29	F	SW	6	6	30	114.954	115.966	115.204	
OC-29	G	SW	6	6	31	94.120	95.206	94.389	
OC-29	H	JS	6	6	32	108.880	110.030	109.182	
OC-30	A	MA	6	6	33	88.878	90.926	89.399	
OC-30	B	MA	7	7	34	116.082	118.031	116.589	
OC-30	C	MA	7	7	35	85.862	86.760	86.104	
OC-30	D	MA	3	3	36	99.554	100.376	99.750	
OC-30	E	MA	10	10	37	97.900	100.678	98.549	
OC-30	F	MA	4	4	38	86.418	87.874	86.775	
OC-30	G	JS	5	5	39	101.830	102.926	102.084	
OC-30	H	JS	6	6	40	92.167	93.160	92.418	
OC-31	A	NM	7	7	41	121.996	133.000	124.748	
OC-31	B	NM	9	9	42	116.956	130.875	120.641	
OC-31	C	NM	1	1	43	105.232	105.911	105.393	
OC-31	D	NM	6	6	44	107.846	113.194	109.131	
OC-31	E	NM	6	6	45	107.276	112.984	108.651	
OC-31	F	NM	10	10	46	95.822	111.161	99.454	
OC-31	G	NM	8	8	47	94.846	103.989	97.039	
OC-31	H	NM	9	9	48	113.698	125.331	116.677	

Final Survival and Growth Information

Project: GLNPO-Otter and Duck Creek test 5

Day: 10 Initials of Technician performing masss determinations: JW, DF

Date: 12-23-10 Time: Am Date dry mass determined: — Date ash-free dry mass determined: —

Sediment	Replicate	Technician Initials	# live recovered	# animals Weighed	Pan #	Pan Weight (mg)	Pan & animal dry weight (mg)	Pan & animal ash-free dry weight (mg)	Comments

Signature:

Disclosed and Understood by:

Toxicity Test Review
Duck and Otter Creek Confluences
Brian Mastin, PhD
Weston Solutions, Inc.

Acute Toxicity Evaluation of Duck and Otter Creek Sediments with C*hironomus dilutus* (Confluence Site Investigation, 4-29-11)

- Unusual to break the test into 3 separate events on different dates when all of the samples arrived around the same time.
- Reference toxicant information and test results are not reported.
- Seventy-five milliliters of sediment was used for each test replicate compared to 100-mL identified in the test protocol.
- There was not a section to cover protocol deviations.
- Water quality data sheets don't indicate which replicate the water quality was taken from for Days 1-9.

Acute Toxicity Evaluation of Duck and Otter Creek Sediments with C*hironomus dilutus* (Confluence Site Investigation Part 2, 10-12-11)

- There appears to be a long sample holding time, although not necessarily out of compliance. Sediment samples were received 5/13/11 and testing initiated 9/6/11.
- Reference toxicant information and test results are not reported.
- Seventy-five milliliters of sediment was used for each test replicate compared to 100-mL identified in the test protocol.
- There was not a section to cover protocol deviations.
- Water quality data sheets don't indicate which replicate the water quality was taken from for Days 1-9.
- The water renewal delivery system appears to have changed and looks quite a bit different from each other from the picture in each report.
- The results summary table format is different between reports as thus confusing. A summary table is definitely required for this report.

Statistical analyses:
There are a few discrepancies between the statistical results for survival, growth and biomass using SigmaStat (ERDC) compared to ToxCalc (Weston) for Duck and Otter Creek confluence samples. There also appears to be a discrepancy between results dependent on the number of stations simultaneously evaluated in either program. In this case, the more conservative approach is to compare the results of each station with the appropriate control and minimize the increased variability among stations that clouds the ability of the statistical evaluation to detect differences. Weston re-ran the statistics for all confluence data and presented their findings in comparison to ERDC's.

Solid Phase-Biomass

Start Date:	Test ID: OC-26	Sample ID:	OC-26
End Date:	Lab ID: N/A	Sample Type:	S P-Solid Phase
Sample Date:	Protocol: EPA 00-EPA Freshwater Sed	Test Species:	CT-Chironomus tentans (dilutus)
Comments:			

Conc-%	1	2	3	4	5	6	7	8
Control	1.6488	1.1353	1.6610	2.8274	1.1935	2.4886	1.1244	1.9955
OC-26	0.0000	0.0000	0.1504	0.2276	0.0000	0.1329	0.1086	0.0000

			Transform: Untransformed					1-Tailed		
Conc-%	Mean	N-Mean	Mean	Min	Max	CV%	N	t-Stat	Critical	MSD
Control	1.7593	1.0000	1.7593	1.1244	2.8274	36.351	8			
*OC-26	0.0774	0.0440	0.0774	0.0000	0.2276	115.406	8	7.367	1.895	0.4325

Auxiliary Tests	Statistic		Critical		Skew	Kurt
Shapiro-Wilk's Test indicates normal distribution (p > 0.01)	0.88098		0.844		0.83371	1.56674
F-Test indicates unequal variances (p = 3.49E-05)	51.2107		8.88539			
Hypothesis Test (1-tail, 0.05)	**MSDu**	**MSDp**	**MSB**	**MSE**	**F-Prob**	**df**
Heteroscedastic t Test indicates significant differences	0.43254	0.24586	11.3148	0.20849	3.5E-06	1, 14

Solid Phase-Growth

Start Date:	Test ID: OC-26	Sample ID:	OC-26
End Date:	Lab ID: N/A	Sample Type:	S P-Solid Phase
Sample Date:	Protocol: EPA 00-EPA Freshwater Sed	Test Species:	CT-Chironomus tentans (dilutus)
Comments:			

Conc-%	1	2	3	4	5	6	7	8
Control	2.0610	1.8922	1.8456	3.5343	1.4919	3.5551	1.8740	2.8507
OC-26	0.5013	0.4552	0.3323	0.5430				

			Transform: Untransformed					1-Tailed		
Conc-%	Mean	N-Mean	Mean	Min	Max	CV%	N	t-Stat	Critical	MSD
Control	2.3881	1.0000	2.3881	1.4919	3.5551	33.962	8			
*OC-26	0.4579	0.1918	0.4579	0.3323	0.5430	19.904	4	6.648	1.895	0.5501

Auxiliary Tests	Statistic		Critical		Skew	Kurt
Shapiro-Wilk's Test indicates normal distribution (p > 0.01)	0.90813		0.805		0.80737	-0.0294
F-Test indicates unequal variances (p = 4.26E-03)	79.1754		44.4341			
Hypothesis Test (1-tail, 0.05)	**MSDu**	**MSDp**	**MSB**	**MSE**	**F-Prob**	**df**
Heteroscedastic t Test indicates significant differences	0.55008	0.23034	9.93455	0.46294	9.3E-04	1, 10

Solid Phase-10-Day Survival

Start Date:	Test ID: OC-26	Sample ID:	OC-26
End Date:	Lab ID: N/A	Sample Type:	S P-Solid Phase
Sample Date:	Protocol: EPA 00-EPA Freshwater Sed	Test Species:	CT-Chironomus tentans (dilutus)
Comments:			

Conc-%	1	2	3	4	5	6	7	8
Control	0.8000	0.7000	0.9000	0.8000	0.8000	0.9000	0.8000	0.8000
OC-26	0.0000	0.0000	0.3000	0.5000	0.0000	0.4000	0.2000	0.0000

			Transform: Untransformed					1-Tailed		
Conc-%	Mean	N-Mean	Mean	Min	Max	CV%	N	t-Stat	Critical	MSD
Control	0.8125	1.0000	0.8125	0.7000	0.9000	7.888	8			
*OC-26	0.1750	0.2154	0.1750	0.0000	0.5000	117.307	8	8.384	1.860	0.1414

Auxiliary Tests	Statistic		Critical		Skew	Kurt
Shapiro-Wilk's Test indicates normal distribution (p > 0.01)	0.91287		0.844		0.62849	0.13958
F-Test indicates unequal variances (p = 6.50E-03)	10.2609		8.88539			
Hypothesis Test (1-tail, 0.05)	**MSDu**	**MSDp**	**MSB**	**MSE**	**F-Prob**	**df**
Heteroscedastic t Test indicates significant differences	0.14139	0.17402	1.62563	0.02313	7.9E-07	1, 14

Test: S P-Solid Phase
Species: CT-Chironomus tentans (dilutus)
Sample ID: OC-26
Start Date: End Date:

Test ID: OC-26
Protocol: EPA 00-EPA Freshwater Sediment (Mod)
Sample Type: S P-Solid Phase
Lab ID: N/A

Pos	ID	Rep	Group	Day 0	Day 4	Day 7	Day 10	Day 14	Day 21	Day 28	AFDW	Total Wgt(mg)	Tare Wgt(mg)	Wgt Count	Notes
	1	1	Control	10			8				16.488	139.976	123.488	8	
	2	2	Control	10			7				11.355	129.064	117.7109	6	
	3	3	Control	10			9				16.61	122.876	106.266	9	
	4	4	Control	10			8				28.274	150.004	121.73	8	
	5	5	Control	10			8				11.935	132.632	120.697	8	
	6	6	Control	10			9				24.886	141.056	116.17	7	
	7	7	Control	10			8				11.244	117.984	106.74	6	
	8	8	Control	10			8				19.955	135.288	115.333	7	
	9	1	OC-26	10			0							0	
	10	2	OC-26	10			0							0	
	11	3	OC-26	10			3				1.504	117.59	116.086	3	
	12	4	OC-26	10			5				2.276	127.82	125.544	5	
	13	5	OC-26	10			0							0	
	14	6	OC-26	10			4				1.329	114.426	113.097	4	
	15	7	OC-26	10			2				1.086	109.252	108.166	2	
	16	8	OC-26	10			0							0	

Comments:

Solid Phase-10-Day Survival

Start Date:	Test ID: OC-28-31	Sample ID:	OC-28-31
End Date:	Lab ID: N/A	Sample Type:	S P-Solid Phase
Sample Date:	Protocol: EPA 00-EPA Freshwater Sed	Test Species:	CT-Chironomus tentans (dilutus)
Comments:			

Conc-%	1	2	3	4	5	6	7	8
Control	0.9000	0.9000	0.7000	0.8000	0.7000	0.7000	0.9000	0.7000
OC-28	0.8000	0.9000	0.6000	1.0000	0.8000	0.9000	0.7000	1.0000
OC-29	0.6000	0.7000	0.5000	0.8000	0.9000	0.6000	0.6000	0.6000
OC-30	0.6000	0.7000	0.7000	0.3000	1.0000	0.4000	0.5000	0.6000
OC-31	0.7000	0.9000	0.1000	0.6000	0.6000	1.0000	0.8000	0.9000

			Transform: Untransformed					1-Tailed		
Conc-%	Mean	N-Mean	Mean	Min	Max	CV%	N	t-Stat	Critical	MSD
Control	0.7875	1.0000	0.7875	0.7000	0.9000	12.585	8			
OC-28	0.8375	1.0635	0.8375	0.6000	1.0000	16.811	8	-0.539	2.239	0.2078
OC-29	0.6625	0.8413	0.6625	0.5000	0.9000	19.660	8	1.347	2.239	0.2078
OC-30	0.6000	0.7619	0.6000	0.3000	1.0000	35.635	8	2.020	2.239	0.2078
OC-31	0.7000	0.8889	0.7000	0.1000	1.0000	40.406	8	0.943	2.239	0.2078

Auxiliary Tests	Statistic		Critical		Skew	Kurt
Shapiro-Wilk's Test indicates normal distribution (p > 0.01)	0.95879		0.919		-0.688	2.59425
Bartlett's Test indicates equal variances (p = 0.06)	9.2222		13.2767			
Hypothesis Test (1-tail, 0.05)	**MSDu**	**MSDp**	**MSB**	**MSE**	**F-Prob**	**df**
Dunnett's Test indicates no significant differences	0.20779	0.26386	0.07287	0.03446	0.09977	4, 35

Solid Phase-Growth

Start Date:	Test ID: OC-28-31	Sample ID:	OC-28-31
End Date:	Lab ID: N/A	Sample Type:	S P-Solid Phase
Sample Date:	Protocol: EPA 00-EPA Freshwater Sed	Test Species:	CT-Chironomus tentans (dilutus)
Comments:			

Conc-%	1	2	3	4	5	6	7	8
Control	1.1876	2.5656	1.0516	1.5899	1.3600	1.2504	1.4924	1.1390
OC-28	0.5899	0.6052	0.3502	0.7836	0.6094	0.2827	0.5861	0.5324
OC-29	0.1708	0.1644	0.1804	0.1299	0.1161	0.1270	0.1362	0.1413
OC-30	0.2545	0.2060	0.0937	0.2087	0.2129	0.2747	0.1684	0.1237
OC-31	1.1789	1.1371	0.5180	0.6772	0.7238	1.1647	0.8688	0.9616

			Transform: Untransformed					Rank	1-Tailed
Conc-%	Mean	N-Mean	Mean	Min	Max	CV%	N	Sum	Critical
Control	1.4546	1.0000	1.4546	1.0516	2.5656	33.256	8		
*OC-28	0.5424	0.3729	0.5424	0.2827	0.7836	29.173	8	36.00	47.00
*OC-29	0.1458	0.1002	0.1458	0.1161	0.1804	15.925	8	36.00	47.00
*OC-30	0.1928	0.1326	0.1928	0.0937	0.2747	31.936	8	36.00	47.00
*OC-31	0.9037	0.6213	0.9037	0.5180	1.1789	27.593	8	41.00	47.00

Auxiliary Tests	Statistic	Critical	Skew	Kurt
Shapiro-Wilk's Test indicates non-normal distribution (p <= 0.01)	0.79763	0.919	2.32143	10.9083
Bartlett's Test indicates unequal variances (p = 6.64E-10)	48.7336	13.2767		

Hypothesis Test (1-tail, 0.05)

Steel's Many-One Rank Test indicates significant differences

Solid Phase-Biomass

Start Date:	Test ID: OC-28-31	Sample ID:	OC-28-31
End Date:	Lab ID: N/A	Sample Type:	S P-Solid Phase
Sample Date:	Protocol: EPA 00-EPA Freshwater Sed	Test Species:	CT-Chironomus tentans (dilutus)
Comments:			

Conc-%	1	2	3	4	5	6	7	8
Control	1.0688	2.3090	0.7361	1.2719	0.9520	0.8753	1.3432	0.7973
OC-28	0.4719	0.5447	0.2101	0.7836	0.4875	0.2544	0.4103	0.5324
OC-29	0.1025	0.1151	0.0902	0.1039	0.1045	0.0762	0.0817	0.0848
OC-30	0.1527	0.1442	0.0656	0.0626	0.2129	0.1099	0.0842	0.0742
OC-31	0.8252	1.0234	0.0518	0.4063	0.4343	1.1647	0.6950	0.8654

			Transform: Untransformed					Rank	1-Tailed
Conc-%	Mean	N-Mean	Mean	Min	Max	CV%	N	Sum	Critical
Control	1.1692	1.0000	1.1692	0.7361	2.3090	43.485	8		
*OC-28	0.4619	0.3950	0.4619	0.2101	0.7836	38.834	8	37.00	47.00
*OC-29	0.0949	0.0811	0.0949	0.0762	0.1151	14.294	8	36.00	47.00
*OC-30	0.1133	0.0969	0.1133	0.0626	0.2129	46.780	8	36.00	47.00
OC-31	0.6833	0.5844	0.6833	0.0518	1.1647	53.586	8	49.00	47.00

Auxiliary Tests	Statistic	Critical	Skew	Kurt
Shapiro-Wilk's Test indicates non-normal distribution (p <= 0.01)	0.86148	0.919	1.52161	6.93991
Bartlett's Test indicates unequal variances (p = 3.74E-12)	59.4743	13.2767		
Hypothesis Test (1-tail, 0.05)				
Steel's Many-One Rank Test indicates significant differences				

Test: S P-Solid Phase
Species: CT-Chironomus tentans (dilutus)
Sample ID: OC-28-31
Start Date: End Date:

Test ID: OC-28-31
Protocol: EPA 00-EPA Freshwater Sediment (Mod)
Sample Type: S P-Solid Phase
Lab ID: N/A

pan + animal dry
pan + animal ash

Pos	ID	Rep	Group	Day 0	Day 4	Day 7	Day 10	Day 14	Day 21	Day 28	AFDW	Total Wgt(mg)	Tare Wgt(mg)	Wgt Count	Notes
	1	1	Control	10			9					128.514	117.826	9	
	2	2	Control	10			9					145.993	122.903	9	
	3	3	Control	10			7					121.077	113.716	7	
	4	4	Control	10			8					133.783	121.064	8	
	5	5	Control	10			7					118.917	109.397	7	
	6	6	Control	10			7					119.241	110.488	7	
	7	7	Control	10			9					139.241	125.809	9	
	8	8	Control	10			7					110.002	102.029	7	
	9	1	OC-28	10			8					102.126	97.407	8	
	10	2	OC-28	10			9					115.753	110.306	9	
	11	3	OC-28	10			6					125.977	123.876	6	
	12	4	OC-28	10			10					116.309	108.473	10	
	13	5	OC-28	10			8					120.386	115.511	8	
	14	6	OC-28	10			9					104.202	101.658	9	
	15	7	OC-28	10			7					107.449	103.346	7	
	16	8	OC-28	10			10					113.874	108.55	10	
	17	1	OC-29	10			6					101.324	100.299	6	
	18	2	OC-29	10			7					118.221	117.07	7	
	19	3	OC-29	10			5					103.117	102.215	5	
	20	4	OC-29	10			8					93.119	92.08	8	
	21	5	OC-29	10			9					107.092	106.047	9	
	22	6	OC-29	10			6					115.966	115.204	6	
	23	7	OC-29	10			6					95.206	94.389	6	
	24	8	OC-29	10			6					110.03	109.182	6	
	25	1	OC-30	10			6					90.926	89.399	6	
	26	2	OC-30	10			7					118.031	116.589	7	
	27	3	OC-30	10			7					86.76	86.104	7	
	28	4	OC-30	10			3					100.376	99.75	3	
	29	5	OC-30	10			10					100.678	98.549	10	
	30	6	OC-30	10			4					87.874	86.775	4	
	31	7	OC-30	10			5					102.926	102.084	5	
	32	8	OC-30	10			6					93.16	92.418	6	
	33	1	OC-31	10			7					133	124.748	7	
	34	2	OC-31	10			9					130.875	120.641	9	
	35	3	OC-31	10			1					105.911	105.393	1	
	36	4	OC-31	10			6					113.194	109.131	6	
	37	5	OC-31	10			6					112.994	108.651	6	
	38	6	OC-31	10			10					111.101	99.454	10	

Test: S P-Solid Phase
Species: CT-Chironomus tentans (dilutus)
Sample ID: OC-28-31
Start Date: End Date:

Test ID: OC-28-31
Protocol: EPA 00-EPA Freshwater Sediment (Mod)
Sample Type: S P-Solid Phase
Lab ID: N/A

Pos	ID	Rep	Group	Day 0	Day 4	Day 7	Day 10	Day 14	Day 21	Day 28	AFDW	Total Wgt(mg)	Tare Wgt(mg)	Wgt Count	Notes
	39	7	OC-31	10			8					103.989	97.039	8	
	40	8	OC-31	10			9					125.331	116.677	9	

Comments:

Solid Phase-10-Day Survival

Start Date:	Test ID: OC-22-46	Sample ID:	OC-22-46
End Date:	Lab ID: N/A	Sample Type:	S P-Solid Phase
Sample Date:	Protocol: EPA 00-EPA Freshwater Sed	Test Species:	CT-Chironomus tentans (dilutus)
Comments:			

Conc-%	1	2	3	4	5	6	7	8
Control	0.9000	0.8000	0.8000	0.9000	1.0000	0.9000	0.8000	1.0000
DC-22	0.9000	1.0000	1.0000	1.0000	0.9000	1.0000	0.8000	1.0000
DC-23	1.0000	1.0000	1.0000	1.0000	0.9000	1.0000	0.9000	0.8000
DC-25	0.8000	0.9000	1.0000	0.8000	0.8000	1.0000	0.9000	0.9000
OC-35	1.0000	1.0000	1.0000	1.0000	0.9000	0.7000	0.8000	1.0000
OC-38	1.0000	0.8000	0.9000	0.8000	0.9000	1.0000	0.7000	0.8000
OC-40	1.0000	1.0000	0.8000	1.0000	0.9000	1.0000	0.9000	0.7000
OC-41	1.0000	1.0000	0.8000	1.0000	0.9000	0.6000	0.7000	0.9000
OC-42	0.3000	0.2000	0.0000	0.0000	0.4000	0.0000	0.0000	0.2000
OC-44	0.6000	0.4000	0.3000	0.0000	1.0000	0.6000	0.6000	0.7000
OC-45	0.6000	0.8000	0.9000	1.0000	1.0000	1.0000	0.9000	1.0000
OC-46	0.9000	1.0000	0.9000	0.9000	0.9000	1.0000	1.0000	1.0000

			Transform: Untransformed					Rank	1-Tailed
Conc-%	Mean	N-Mean	Mean	Min	Max	CV%	N	Sum	Critical
Control	0.8875	1.0000	0.8875	0.8000	1.0000	9.403	8		
DC-22	0.9500	1.0704	0.9500	0.8000	1.0000	7.957	8	81.50	47.00
DC-23	0.9500	1.0704	0.9500	0.8000	1.0000	7.957	8	81.50	47.00
DC-25	0.8875	1.0000	0.8875	0.8000	1.0000	9.403	8	68.00	47.00
OC-35	0.9250	1.0423	0.9250	0.7000	1.0000	12.594	8	77.00	47.00
OC-38	0.8625	0.9718	0.8625	0.7000	1.0000	12.298	8	63.50	47.00
OC-40	0.9125	1.0282	0.9125	0.7000	1.0000	12.340	8	74.50	47.00
OC-41	0.8625	0.9718	0.8625	0.6000	1.0000	17.460	8	67.50	47.00
*OC-42	0.1375	0.1549	0.1375	0.0000	0.4000	116.217	8	36.00	47.00
*OC-44	0.5250	0.5915	0.5250	0.0000	1.0000	56.458	8	43.00	47.00
OC-45	0.9000	1.0141	0.9000	0.6000	1.0000	15.713	8	74.50	47.00
OC-46	0.9500	1.0704	0.9500	0.9000	1.0000	5.627	8	82.00	47.00

Auxiliary Tests	Statistic	Critical	Skew	Kurt
Kolmogorov D Test indicates non-normal distribution (p <= 0.01)	1.24211	1.035	-0.4844	3.69444
Bartlett's Test indicates unequal variances (p = 2.99E-04)	34.502	24.725		

Hypothesis Test (1-tail, 0.05)

Wilcoxon Rank Sum Test indicates significant differences

Solid Phase-Biomass

Start Date:	Test ID: OC-22-46	Sample ID:	OC-22-46
End Date:	Lab ID: N/A	Sample Type:	S P-Solid Phase
Sample Date:	Protocol: EPA 00-EPA Freshwater Sed	Test Species:	CT-Chironomus tentans (dilutus)
Comments:			

Conc-%	1	2	3	4	5	6	7	8
Control	0.9334	0.9228	1.1219	0.9635	1.0222	0.9361	0.8817	0.7906
DC-22	1.0647	0.9082	0.8862	1.0046	0.9060	0.9196	0.7894	1.0179
DC-23	0.9276	0.9307	0.8046	0.8178	0.8409	0.9100	0.6711	1.0053
DC-25	0.5622	0.4466	0.6848	0.7200	0.6552	0.6181	0.8540	0.7010
OC-35	0.6200	0.8350	0.6816	0.7758	0.6228	0.9596	0.7555	0.8590
OC-38	0.6088	0.7441	0.7288	0.6041	0.5457	0.7192	0.7860	0.4265
OC-40	1.1331	1.1326	1.1739	0.5369	0.9796	1.3515	0.8986	0.7356
OC-41	0.5853	0.9024	0.7598	0.7736	0.7963	0.7538	0.8543	1.0541
OC-42	0.0260	0.0336	0.0000	0.0000	0.0502	0.0000	0.0000	0.0219
OC-44	0.2743	0.1347	0.0507	0.0000	0.6254	0.3372	0.3056	0.3168
OC-45	0.6556	0.6861	0.7540	0.6085	0.7888	0.8362	0.5598	0.9586
OC-46	0.4816	0.6855	0.7554	0.7136	0.6176	0.6980	0.7202	0.5539

			Transform: Untransformed					Rank	1-Tailed
Conc-%	Mean	N-Mean	Mean	Min	Max	CV%	N	Sum	Critical
Control	0.9465	1.0000	0.9465	0.7906	1.1219	10.269	8		
DC-22	0.9371	0.9900	0.9371	0.7894	1.0647	9.363	8	63.00	47.00
DC-23	0.8635	0.9123	0.8635	0.6711	1.0053	11.905	8	53.00	47.00
*DC-25	0.6552	0.6923	0.6552	0.4466	0.8540	18.262	8	37.00	47.00
*OC-35	0.7637	0.8068	0.7637	0.6200	0.9596	15.651	8	43.00	47.00
*OC-38	0.6454	0.6819	0.6454	0.4265	0.7860	18.778	8	36.00	47.00
OC-40	0.9927	1.0488	0.9927	0.5369	1.3515	26.480	8	76.00	47.00
*OC-41	0.8100	0.8557	0.8100	0.5853	1.0541	16.680	8	47.00	47.00
*OC-42	0.0165	0.0174	0.0165	0.0000	0.0502	117.888	8	36.00	47.00
*OC-44	0.2556	0.2700	0.2556	0.0000	0.6254	77.116	8	36.00	47.00
*OC-45	0.7310	0.7722	0.7310	0.5598	0.9586	17.819	8	42.00	47.00
*OC-46	0.6532	0.6901	0.6532	0.4816	0.7554	14.431	8	36.00	47.00

Auxiliary Tests	Statistic	Critical	Skew	Kurt
Kolmogorov D Test indicates normal distribution (p > 0.01)	0.84383	1.035	-0.1735	1.68058
Bartlett's Test indicates unequal variances (p = 1.04E-04)	37.2746	24.725		

Hypothesis Test (1-tail, 0.05)

Wilcoxon Rank Sum Test indicates significant differences

Solid Phase-Growth

Start Date:	Test ID: OC-22-46	Sample ID:	OC-22-46
End Date:	Lab ID: N/A	Sample Type:	S P-Solid Phase
Sample Date:	Protocol: EPA 00-EPA Freshwater Sed	Test Species:	CT-Chironomus tentans (dilutus)
Comments:			

Conc-%	1	2	3	4	5	6	7	8
Control	1.0371	1.1535	1.4024	1.0706	1.0222	1.0401	1.1021	0.7906
DC-22	1.1830	0.9082	0.8862	1.0046	1.0067	0.9196	0.9867	1.0179
DC-23	0.9276	0.9307	0.8046	0.8178	0.9343	0.9100	0.7457	1.2566
DC-25	0.7028	0.4962	0.6848	0.9000	0.8190	0.6181	0.9489	0.7789
OC-35	0.6200	0.8350	0.6816	0.7758	0.6920	1.3709	0.9444	0.8590
OC-38	0.6088	0.9301	0.8098	0.7551	0.6063	0.7192	1.1229	0.5331
OC-40	1.1331	1.1326	1.4674	0.5369	1.0884	1.3515	0.9984	1.0509
OC-41	0.5853	0.9024	0.9497	0.7736	0.8848	1.2563	1.2204	1.1712
OC-42	0.0867	0.1680	0.1255	0.1095				
OC-44	0.4572	0.3367	0.1690	0.6254	0.5620	0.5093	0.4526	
OC-45	1.0927	0.8576	0.8378	0.6085	0.7888	0.8362	0.6220	0.9586
OC-46	0.5351	0.6855	0.8393	0.7929	0.6862	0.6980	0.7202	0.5539

			Transform: Untransformed					Rank	1-Tailed
Conc-%	Mean	N-Mean	Mean	Min	Max	CV%	N	Sum	Critical
Control	1.0773	1.0000	1.0773	0.7906	1.4024	15.705	8		
DC-22	0.9891	0.9181	0.9891	0.8862	1.1830	9.433	8	50.00	47.00
DC-23	0.9159	0.8502	0.9159	0.7457	1.2566	16.905	8	49.00	47.00
*DC-25	0.7436	0.6902	0.7436	0.4962	0.9489	20.051	8	39.00	47.00
*OC-35	0.8473	0.7865	0.8473	0.6200	1.3709	27.934	8	46.00	47.00
*OC-38	0.7607	0.7061	0.7607	0.5331	1.1229	25.468	8	44.00	47.00
OC-40	1.0949	1.0163	1.0949	0.5369	1.4674	25.134	8	73.00	47.00
OC-41	0.9680	0.8985	0.9680	0.5853	1.2563	24.195	8	60.00	47.00
*OC-42	0.1224	0.1136	0.1224	0.0867	0.1680	28.030	4	10.00	12.00
*OC-44	0.4446	0.4127	0.4446	0.1690	0.6254	34.169	7	28.00	37.00
*OC-45	0.8253	0.7660	0.8253	0.6085	1.0927	19.444	8	45.00	47.00
*OC-46	0.6889	0.6395	0.6889	0.5351	0.8393	15.165	8	38.00	47.00

Auxiliary Tests	Statistic	Critical	Skew	Kurt
Kolmogorov D Test indicates non-normal distribution (p <= 0.01)	1.30385	1.035	0.15897	1.56261
Bartlett's Test indicates equal variances (p = 0.04)	20.1327	24.725		

Hypothesis Test (1-tail, 0.05)

Wilcoxon Rank Sum Test indicates significant differences

Test: S P-Solid Phase
Species: CT-Chironomus tentans (dilutus)
Sample ID: OC-22-46
Start Date: End Date:

Test ID: OC-22-46
Protocol: EPA 00-EPA Freshwater Sediment (Mod)
Sample Type: S P-Solid Phase
Lab ID: N/A

Pan tanima / dry
Pan tanima / ash

Pos	ID	Rep	Group	Day 0	Day 4	Day 7	Day 10	Day 14	Day 21	Day 28	AFDW	Total Wgt(mg)	Tare Wgt(mg)	Wgt Count	Notes
	1	1	Control	10			9					63.738	54.404	9	
	2	2	Control	10			8					60.574	51.346	8	
	3	3	Control	10			8					73.487	62.268	8	
	4	4	Control	10			9					69.186	59.551	9	
	5	5	Control	10			10					60.59	50.368	10	
	6	6	Control	10			9					64.88	55.519	9	
	7	7	Control	10			8					63.789	54.972	8	
	8	8	Control	10			10					69.444	61.538	10	
	9	1	DC-22	10			9					80.254	69.607	9	
	10	2	DC-22	10			10					67.324	58.242	10	
	11	3	DC-22	10			10					58.338	49.476	10	
	12	4	DC-22	10			10					63.382	53.336	10	
	13	5	DC-22	10			9					64.999	55.939	9	
	14	6	DC-22	10			10					59.118	49.922	10	
	15	7	DC-22	10			8					75.356	67.462	8	
	16	8	DC-22	10			10					71.603	61.424	10	
	17	1	DC-23	10			10					77.532	68.256	10	
	18	2	DC-23	10			10					73.488	64.181	10	
	19	3	DC-23	10			10					76.046	68	10	
	20	4	DC-23	10			10					75.518	67.34	10	
	21	5	DC-23	10			9					78.846	70.437	9	
	22	6	DC-23	10			10					70.89	61.79	10	
	23	7	DC-23	10			9					60.999	54.288	9	
	24	8	DC-23	10			8					63.55	53.497	8	
	25	1	DC-25	10			8					60.366	54.744	8	
	26	2	DC-25	10			9					58.062	53.596	9	
	27	3	DC-25	10			10					58.104	51.256	10	
	28	4	DC-25	10			8					60.298	53.098	8	
	29	5	DC-25	10			8					64.4	57.848	8	
	30	6	DC-25	10			10					65.779	59.598	10	
	31	7	DC-25	10			9					54.766	46.226	9	
	32	8	DC-25	10			9					62.64	55.63	9	
	33	1	OC-35	10			10					63.856	57.656	10	
	34	2	OC-35	10			10					72.188	63.838	10	
	35	3	OC-35	10			10					66.422	59.606	10	
	36	4	OC-35	10			10					59.824	52.066	10	
	37	5	OC-35	10			9					59.967	53.739	9	
	38	6	OC-35	10			7					58.594	48.998	7	

Test: S P-Solid Phase
Species: CT-Chironomus tentans (dilutus)
Sample ID: OC-22-46
Start Date: End Date:

Test ID: OC-22-46
Protocol: EPA 00-EPA Freshwater Sediment (Mod)
Sample Type: S P-Solid Phase
Lab ID: N/A

Pos	ID	Rep	Group	Day 0	Day 4	Day 7	Day 10	Day 14	Day 21	Day 28	AFDW	Total Wgt(mg)	Tare Wgt(mg)	Wgt Count	Notes
	39	7	OC-35	10			8					63.699	56.144	8	
	40	8	OC-35	10			10					56.389	47.799	10	
	41	1	OC-38	10			10					61.812	55.724	10	
	42	2	OC-38	10			8					70.47	63.029	8	
	43	3	OC-38	10			9					64.474	57.186	9	
	44	4	OC-38	10			8					78.04	71.999	8	
	45	5	OC-38	10			9					60.997	55.54	9	
	46	6	OC-38	10			10					72.576	65.384	10	
	47	7	OC-38	10			7					61.996	54.136	7	
	48	8	OC-38	10			8					62.464	58.199	8	
	49	1	OC-40	10			10					77.398	66.067	10	
	50	2	OC-40	10			10					77.01	65.684	10	
	51	3	OC-40	10			8					68.318	56.579	8	
	52	4	OC-40	10			10					56.147	50.778	10	
	53	5	OC-40	10			9					64.452	54.656	9	
	54	6	OC-40	10			10					67.999	54.484	10	
	55	7	OC-40	10			9					68.3	59.314	9	
	56	8	OC-40	10			7					76.026	68.67	7	
	57	1	OC-41	10			10					62.982	57.129	10	
	58	2	OC-41	10			10					68.884	59.86	10	
	59	3	OC-41	10			8					71.35	63.752	8	
	60	4	OC-41	10			10					63.36	55.624	10	
	61	5	OC-41	10			9					66.212	58.249	9	
	62	6	OC-41	10			6					59.996	52.458	6	
	63	7	OC-41	10			7					64.98	56.437	7	
	64	8	OC-41	10			9					83.63	73.089	9	
	65	1	OC-42	10			3					47.4	47.14	3	
	66	2	OC-42	10			2					51.36	51.024	2	
	67	3	OC-42	10			0							0	
	68	4	OC-42	10			0							0	
	69	5	OC-42	10			4					50.01	49.508	4	
	70	6	OC-42	10			0							0	
	71	7	OC-42	10			0							0	
	72	8	OC-42	10			2					49.969	49.75	2	
	73	1	OC-44	10			6					55.779	53.036	6	
	74	2	OC-44	10			4					54.126	52.779	4	
	75	3	OC-44	10			3					61.137	60.63	3	
	76	4	OC-44	10			0							0	

Test: S P-Solid Phase							Test ID: OC-22-46								
Species: CT-Chironomus tentans (dilutus)							Protocol: EPA 00-EPA Freshwater Sediment (Mod)								
Sample ID: OC-22-46							Sample Type: S P-Solid Phase								
Start Date:		End Date:					Lab ID: N/A								
Pos	ID	Rep	Group	Day 0	Day 4	Day 7	Day 10	Day 14	Day 21	Day 28	AFDW	Total Wgt(mg)	Tare Wgt(mg)	Wgt Count	Notes
	77	5	OC-44	10			10					69.326	63.072	10	
	78	6	OC-44	10			6					63.986	60.614	6	
	79	7	OC-44	10			6					69.282	66.226	6	
	80	8	OC-44	10			7					59.998	56.83	7	
	81	1	OC-45	10			6					67.142	60.586	6	
	82	2	OC-45	10			8					62.669	55.808	8	
	83	3	OC-45	10			9					62.888	55.348	9	
	84	4	OC-45	10			10					59.682	53.597	10	
	85	5	OC-45	10			10					68.4	60.512	10	
	86	6	OC-45	10			10					62.704	54.342	10	
	87	7	OC-45	10			9					77.348	71.75	9	
	88	8	OC-45	10			10					71.263	61.677	10	
	89	1	OC-46	10			9					60.55	55.734	9	
	90	2	OC-46	10			10					62.094	55.239	10	
	91	3	OC-46	10			9					72.284	64.73	9	
	92	4	OC-46	10			9					72.776	65.64	9	
	93	5	OC-46	10			9					67.738	61.562	9	
	94	6	OC-46	10			10					68.38	61.4	10	
	95	7	OC-46	10			10					68.936	61.734	10	
	96	8	OC-46	10			10					69.828	64.289	10	

Comments:

Acute Toxicity Evaluation of Duck and Otter Creek Sediments with C*hironomus dilutus* (Confluence Site Investigation Part 2)

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EXECUTIVE SUMMARY

The Great Lakes National Program Office (GLNPO) requested the Army Engineer Research and Development Center (ERDC) to conduct acute toxicity testing on sediments from Duck and Otter Creeks as part of its Great Lakes Legacy Act initiative. Eleven (11) sediments were evaluated using the midge *Chironomus dilutus*. This report summarizes the biological testing of sediment collected from Duck and Otter Creeks confluence sites conducted in basic accordance with guidance provided in "Methods for Measuring the Toxicity and Bioaccumulation of Sediment-associated Contaminants with Freshwater Invertebrates" (USEPA 2000). A significant reduction in survival was detected in the OC-42 sediment sample. Significant reductions in total biomass per initial organism were detected for sediment samples DC-25 and OC-38 (Table 2). Significant reductions in total biomass per initial organism and as-free dry weight per surviving organism were detected for sediment samples OC-42, OC-44 and OC-46. No significant effects on survival or biomass/weight were detected for the remaining sediment samples evaluated.

INTRODUCTION

At the request of the USEPA Great Lakes National Program Office (GLNPO), the US Army Engineer Research and Development Center (ERDC) conducted sediment toxicity tests of bottom sediment collected from the Duck and Otter Creek confluence site. This study represents a second series of sediment testing at the confluence site with the initial testing occurring in November and December of 2010. Duck and Otter Creeks are located in an industrialized area of Northwest Ohio. The creeks are part of the Maumee River watershed which empties into Lake Erie. The evaluations were conducted under the Great Lakes Legacy Act with support from the GLNPO. The evaluation consisted of a whole sediment acute toxicity test with the midge *Chironomus dilutus*. The study was conducted in basic accordance with the guidance provided in "Methods for Measuring the Toxicity and Bioaccumulation of Sediment-associated Contaminants with Freshwater Invertebrates" (USEPA 2000).

TEST SEDIMENTS

Eleven (11) sediments were received by the ERDC. All sediments were received 13 May 2011. Sediments were immediately inspected, logged and placed in cold storage at 4°C where they remained until test initiation. Chain of custody sheets are provided in Appendix D. A list of sediment samples evaluated is provided in Table 1.

Table 1. Summary of the test sediments and sediment identification.

Sample Name	Customer ID
DC-22	DC-22-01
DC-23	DC-23-01
DC-25	DC-25-01
OC-35	OC-35-01
OC-38	OC-38
OC-40	OC-40-01
OC-41	OC-41-01
OC-42	OC-42-01
OC-44	OC-44-01
OC-45	OC-45-01
OC-46	OC-46-01

METHODS

Chironomus dilutus 10-day sediment exposures were conducted in basic accordance with guidance provided in "Methods for Measuring the Toxicity and Bioaccumulation of Sediment-

associated Contaminants with Freshwater Invertebrates" (USEPA 2000). Testing was conducted 6-16 September 2011.

Egg masses were obtained from Environmental Consulting and Testing (Superior, WI) and maintained in culture until the correct age (~ 10 days old) organisms were obtained to initiate testing. On test day -4 approximately 75 mL of each sediment was added to eight (8) replicate 300 mL beakers (Appendix A; Photo A2). Sediment from the University of Mississippi field station, (Oxford, MS) was included as a negative control. Overlying water was added and beakers were placed in a temperature controlled environmental chamber at 23 °C and allowed to equilibrate for two days without water exchange. Two daily water exchanges were conducted on test day -1. On test day 0, pore water ammonia measurements were taken on sediments prior to addition of organisms. Pore water was collected by centrifuging 50 mL of each sediment at 3000 RPM for 15 minutes. Pore water analysis was performed on the supernatant of the centrifuged sediment.

Overlying water quality (temperature, pH, dissolved oxygen (DO), hardness, alkalinity, conductivity and ammonia) was recorded for each replicate beaker at test initiation. Ten organisms were randomly added to each replicate and 1 mL of a Tetrafin® food mixture (6 mg Tetrafin/mL) was provided. Initial dry and ash-free dry weights were determined on a subset of 40 organisms not used in testing. Initial weights of midges sampled from the pool of larvae used in testing were within the 0.08 to 0.23 mg/individual dry weight range indicative of the correct developmental stage (USEPA 2000) (Table 2). Temperature and DO were measured daily on a single replicate of each sediment throughout the exposure period. Animals were fed 1 mL of a Tetrafin® food mixture and two full water renewals were conducted daily. Water renewals were conducted using a modified Zumwalt/Brunson water renewal system (USEPA 2000) (Appendix A; Photo A1).

On test day 10, overlying water quality was measured in each replicate beaker and each beaker was terminated by passing the sediment through a 425 µm screen. Surviving organisms were recovered and enumerated. Following enumeration organisms from each replicate were placed on pre-weighed pans and placed in a drying oven for 24 hours at 60 °C. Following the drying period, pans were removed from the oven and dry mass for each replicate was recorded. Pans were then placed in a muffle furnace at 550 °C for 2 hours. After 2 hours, pans were removed from the furnace allowed to cool and ash-free mass was recorded for each replicate.

Water quality parameters

The water quality during bioassay testing was measured using a Thermo Scientific Orion 4Star meter (Thermo Scientific**,** Beverly, MA) for electrical conductivity, a model 315i meter (WTW; Weilheim, Germany) for pH, and a model Oxi 330 meter (WTW; Weilheim, Germany) for DO. Total overlying water ammonia, hardness and alkalinity were measured using LeMotte titration kits (Chestertown, MD, USA). Total pore water ammonia was measured using a 720A ion-selective electrode (ISE) meter (Thermo Orion Electron Corp., Beverly, MA) equipped with a 95-12 ammonia-sensitive electrode (Thermo Orion Electron Corp., Beverly, MA).

Statistical analysis

Data normality (Kolmogorov–Smirnov test), homogeneity (Levene's Test), and sediment differences compared to the control were conducted using SigmaStat software (Version 3.5, SPSS, Chicago, IL). Statistical significance was determined at $\alpha = 0.05$. Survival data were arcsine-square-root transformed prior to analysis. Where data were normal and homogeneous or could be made normal and/or homogeneous through a data transformation a one-way ANOVA was conducted followed by means comparison to the control using the Dunnett's mean comparison method. Where data were not normal and/or homogenous, the Kruskal–Wallis one-way ANOVA on ranks was applied followed by means comparison to the control using the Dunnett's mean comparison procedure. Where sample sizes were unequal the Dunn's mean comparison procedure was utilized. Data endpoints analyzed include survival, ash-free biomass per initial organism, and ash-free dry weight per surviving organism.

RESULTS

Water quality parameters for the *Chironomus dilutus* 10-day bioassay were within the acceptability ranges specified by testing guidance (US EPA 2000) (Appendix B; Table B1). All pore water total ammonia concentrations were below the 20 mg/L guidance for freshwater organisms provided in the Inland Testing Manual (USEPA /USACE 1998) (Appendix B; Table B2).

Survival in the negative control was 88.8% and exceeded the 70% performance requirement indicated in testing guidance (US EPA 2000) (Table 3). The performance criterion of minimum ash-free individual control weight equaling or exceeding 0.48 mg was also met with control individual ash-free dry weight measuring 1.077 mg.

Survival ranged from 13.8% to 95% in the sediment samples tested (Table 3). A significant reduction in survival was detected in sediment sample OC-42. Significant reductions in total biomass per initial organism were detected for sediment samples DC-25 and OC-38 and significant reductions in total biomass per initial organisms and in ash-free dry weight per surviving organism were detected for sediment samples OC-42, OC-44 and OC-46. No significant effects on survival or biomass/weight were detected for the remaining sediment samples evaluated.

Table 2. *Chironomus dilutus* initial individual dry weight. Mean dry weight (± one standard deviation).

Organism	Individual Dry Weight (mg)	Individual Ash-free Dry Weight (mg)
Chironomus dilutus	0.213 ± 0.09	0.239 ± 0.02

Table 3. *Chironomus dilutus* mean survival and mass (± one standard deviation). Asterisks denote a statistically significant reduction in survival or mass relative to the control sediment.

Sample Name	% Survival	Ash-Free Biomass/ Initial Organism (mg)	Ash-free Dry Weight per Surviving Organism (mg)
Control	88.8 ± 8.3	0.947 ± 0.097	1.077 ± 0.169
DC-22	95.0 ± 7.6	0.937 ± 0.088	0.980 ± 0.093
DC-23	95.0 ± 7.6	0.864 ± 0.103	0.916 ± 0.155
DC-25	88.8 ± 8.3	*0.655 ± 0.120	0.744 ± 0.149
OC-35	92.5 ± 11.6	0.764 ± 0.120	0.847 ± 0.237
OC-38	86.3 ± 10.6	*0.645 ± 0.121	0.761 ± 0.194
OC-40	91.3 ± 11.3	0.993 ± 0.263	1.095 ± 0.275
OC-41	86.3 ± 15.1	0.810 ± 0.135	0.968 ± 0.234
OC-42	*13.8 ± 16.0	*0.016 ± 0.019	*0.122 ± 0.034
OC-44	52.5 ± 29.6	*0.256 ± 0.197	*0.445 ± 0.152
OC-45	90.0 ± 14.1	0.731 ± 0.130	0.825 ± 0.160
OC-46	95.0 ± 5.3	*0.653 ± 0.094	*0.689 ± 0.104

REFERENCES

US Environmental Protection Agency / US Army Corps of Engineers (US EPA / USACE). 1998. Evaluation of Material Proposed for Discharge to Waters of the U.S. - Testing Manual (Inland Testing Manual). EPA-823-B-98-004, Office of Water, Washington DC.

US Environmental Protection Agency. 2000. Methods for Measuring the Toxicity and Bioaccumulation of Sediment-associated Contaminants with Freshwater Invertebrates, Second Edition. EPA 600/R-99/064, Office of Water, Washington, D.C.

APPENDICES

Appendix A. Photos from sediment toxicity bioassays



Photo A1. Zumwalt/Brunson water delivery system used during sediment toxicity bioassay testing.



Photo A2. Close-up of exposure chambers used during bioassay testing.

Appendix B. Water quality parameters for sediment bioassays

Table B1. *Chironomus dilutus* 10-d bioassay overlying water quality parameters. Means and one standard deviation from the mean are indicated, with the minimum and maximum range of the data provided in parentheses. <1 indicates below detection limit.

Treatment	Temperature (° C)	pH (SU)	Dissolved oxygen (mg/L)	Conductivity (µS/cm)	*Maximum Ammonia (mg/L)	*Alkalinity (mg/L)	*Hardness (mg/L)
Control	23.2 ± 0.2 (22.9 - 23.5)	7.3 ± 0.55 (6.8 – 8.2)	7.7 ± 0.4 (6.8 – 8.5)	248 ± 9 (220 – 264)	2	96 ± 6 (92 - 100)	78 ± 25 (60 - 96)
DC-22	23.1 ± 0.2 (22.8 - 23.4)	7.5 ± 0.90 (6.5 – 8.7)	7.3 ± 0.5 (6.2 – 7.8)	282 ± 36 (197 - 370)	<1	96 ± 6 (92 - 100)	103 ± 4 (100 - 105)
DC-23	22.8 ± 0.4 (22.3 - 23.4)	7.4 ± 1.0 (6.3 – 8.4)	7.1 ± 0.6 (5.9 – 8.5)	283 ± 6 (272 – 295)	<1	86 ± 20 (72 - 100)	100 ± 6 (96 - 104)
DC-25	22.6 ± 0.4 (22.2 – 23.2)	7.3 ± 1.1 (6.0 – 8.4)	7.0 ± 0.8 (4.4 – 8.0)	279 ± 9 (263 - 294)	<1	88 ± 11 (80 - 96)	102 ± 8 (96 - 108)
OC-35	22.5 ± 0.8 (21.7 - 23.9)	8.0 ± 0.16 (7.8 - 8.3)	7.0 ± 0.6 (6.2 – 8.2)	276 ± 37 (215 - 391)	1	84 ± 6 (80 - 88)	128 ± 45 (96 - 160)
OC-38	22.6 ± 0.6 (22.0 – 23.4)	8.0 ± 0.15 (7.7 – 8.2)	7.3 ± 0.4 (6.2 – 7.7)	273 ± 17 (235 - 320)	<1	98 ± 3 (96 - 100)	106 ± 8 (100 - 112)
OC-40	22.7 ± 0.3 (22.2 – 23.2)	8.1 ± 0.09 (7.9 – 8.2)	7.9 ± 0.4 (7.0 – 8.7)	275 ± 18 (236 – 307)	<1	102 ± 3 (100 - 104)	98 ± 3 (96 - 100)
OC-41	22.8 ± 0.4 (22.2 - 23.6)	8.1 ± 0.09 (8.0 – 8.2)	7.8 ± 0.4 (7.0 – 8.7)	283 ± 30 (261 - 389)	<1	88 ± 6 (84 - 92)	108 ± 17 (96 - 120)
OC-42	22.8 ± 0.2 (22.5 - 23.3)	7.9 ± 0.43 (6.9 – 8.5)	7.6 ± 0.7 (5.9 – 8.4)	278 ± 19 (230 - 318)	<1	86 ± 8 (80 - 92)	104 ± 11 (96 - 112)
OC-44	22.8 ± 0.3 (22.3 - 23.5)	7.9 ± 0.06 (7.8 – 8.0)	7.6 ± 0.5 (6.3 – 8.3)	273 ± 26 (208 – 300)	<1	98 ± 3 (96 - 100)	104 ± 11 (96 - 112)
OC-45	22.8 ± 0.4 (22.3– 23.3)	8.0 ± 0.08 (7.9 – 8.2)	7.5 ± 0.4 (6.5 – 7.9)	261 ± 31 (197 – 307)	<1	100 ± 0 (100 - 100)	100 ± 0 (100 - 100)
OC-46	22.8 ± 0.3 (22.4– 23.3)	8.0 ± 0.13 (7.8 – 8.3)	7.4 ± 0.3 (6.8 – 7.8)	272 ± 28 (230 – 335)	1	98 ± 3 (96 - 100)	106 ± 8 (100 - 112)

*Measurement taken on composite sample

Table B2. Pore water ammonia concentrations at *Chironomus dilutus* 10-day test initiation.

Treatment	Total Ammonia (mg/L)	Unionized Ammonia (mg/L)	pH (SU)	Temperature (°C)
DC-22	4.68	0.0165	6.89	21.9
DC-23	5.60	0.0298	7.13	20.0
DC-25	6.85	0.0688	7.41	19.8
OC-35	11.1	0.163	7.55	20.8
OC-38	1.49	0.00164	6.41	21.1
OC-40	3.02	0.0360	7.43	21.7
OC-41	1.04	0.0158	7.55	21.2
OC-42	2.30	0.00434	6.69	19.6
OC-44	12.3	0.0555	7.07	19.6
OC-45	11.9	0.0475	6.96	21.4
OC-46	5.34	0.0248	7.06	20.3

Appendix C. Endpoint data for Duck and Otter Creeks *Chironomus dilutus* bioassay

Day 10 *Chironomus dilutus* Survival & Biomass Data

Sediment ID	Replicate	# Recovered	# Recovered (Corrected)	% Survival	# Animals on Pan	Pan Weight (mg)	Pan & Animal Dry Weight (mg)	Pan & Animal Ash-free Weight (mg)	Replicate Total Ash-Free-Biomass (mg)	Recovery Based Replicate Total Ash-Free-Biomass (mg)	Recovery Based Replicate Total Ash-Free Biomass/Initial # Organisms (mg)	Mean Individual Ash-free Weight (mg)
Control	A	9	9	90%	9	46.746	63.738	54.404	9.334	9.334	0.933	1.037
Control	B	8	8	80%	8	47.652	60.574	51.346	9.228	9.228	0.923	1.154
Control	C	8	8	80%	8	56.982	73.487	62.268	11.219	11.219	1.122	1.402
Control	D	9	9	90%	9	55.334	69.186	59.551	9.635	9.635	0.964	1.071
Control	E	10	10	100%	10	46.999	60.590	50.368	10.222	10.222	1.022	1.022
Control	F	9	9	90%	9	52.099	64.880	55.519	9.361	9.361	0.936	1.040
Control	G	8	8	80%	8	50.122	63.789	54.972	8.817	8.817	0.882	1.102
Control	H	10	10	100%	10	59.216	69.444	61.538	7.906	7.906	0.791	0.791
DC-22	A	9	9	90%	9	53.660	80.254	69.607	10.647	10.647	1.065	1.183
DC-22	B	10	10	100%	10	51.196	67.324	58.242	9.082	9.082	0.908	0.908
DC-22	C	10	10	100%	10	46.989	58.338	49.476	8.862	8.862	0.886	0.886
DC-22	D	10	10	100%	10	50.336	63.382	53.336	10.046	10.046	1.005	1.005
DC-22	E	9	9	90%	9	48.760	64.999	55.939	9.060	9.060	0.906	1.007
DC-22	F	10	10	100%	10	43.518	59.118	49.922	9.196	9.196	0.920	0.920
DC-22	G	8	8	80%	8	65.238	75.356	67.462	7.894	7.894	0.789	0.987
DC-22	H	10	10	100%	10	57.400	71.603	61.424	10.179	10.179	1.018	1.018
DC-23	A	10	10	100%	10	63.878	77.532	68.256	9.276	9.276	0.928	0.928
DC-23	B	10	10	100%	10	60.472	73.488	64.181	9.307	9.307	0.931	0.931
DC-23	C	10	10	100%	10	63.080	76.046	68.000	8.046	8.046	0.805	0.805
DC-23	D	10	10	100%	10	63.579	75.518	67.340	8.178	8.178	0.818	0.818
DC-23	E	9	9	90%	9	66.680	78.846	70.437	8.409	8.409	0.841	0.934
DC-23	F	10	10	100%	10	57.889	70.890	61.790	9.100	9.100	0.910	0.910
DC-23	G	9	9	90%	9	51.440	60.999	54.288	6.711	6.711	0.671	0.746
DC-23	H	8	8	80%	8	48.988	63.550	53.497	10.053	10.053	1.005	1.257
DC-25	A	8	8	80%	8	48.614	60.366	54.744	5.622	5.622	0.562	0.703
DC-25	B	9	9	90%	9	47.354	58.062	53.596	4.466	4.466	0.447	0.496
DC-25	C	10	10	100%	10	45.079	58.104	51.256	6.848	6.848	0.685	0.685
DC-25	D	8	8	80%	8	53.062	60.298	53.098	7.200	7.200	0.720	0.900
DC-25	E	8	8	80%	8	51.584	64.400	57.848	6.552	6.552	0.655	0.819
DC-25	F	10	10	100%	10	55.648	65.779	59.598	6.181	6.181	0.618	0.618
DC-25	G	9	9	90%	9	41.740	54.766	46.226	8.540	8.540	0.854	0.949
DC-25	H	9	9	90%	9	48.726	62.640	55.630	7.010	7.010	0.701	0.779
OC-35	A	10	10	100%	10	54.372	63.856	57.656	6.200	6.200	0.620	0.620
OC-35	B	10	10	100%	10	59.396	72.188	63.838	8.350	8.350	0.835	0.835
OC-35	C	10	10	100%	10	54.482	66.422	59.606	6.816	6.816	0.682	0.682
OC-35	D	10	10	100%	10	46.759	59.824	52.066	7.758	7.758	0.776	0.776
OC-35	E	9	9	90%	9	49.708	59.967	53.739	6.228	6.228	0.623	0.692
OC-35	F	7	7	70%	7	39.672	58.594	48.998	9.596	9.596	0.960	1.371
OC-35	G	8	8	80%	8	51.689	63.699	56.144	7.555	7.555	0.756	0.944
OC-35	H	10	10	100%	10	42.782	56.389	47.799	8.590	8.590	0.859	0.859
OC-38	A	10	10	100%	10	46.794	61.812	55.724	6.088	6.088	0.609	0.609
OC-38	B	8	8	80%	8	53.079	70.470	63.029	7.441	7.441	0.744	0.930
OC-38	C	9	9	90%	9	52.136	64.474	57.186	7.288	7.288	0.729	0.810
OC-38	D	8	8	80%	8	55.156	78.040	71.999	6.041	6.041	0.604	0.755
OC-38	E	9	9	90%	9	49.502	60.997	55.540	5.457	5.457	0.546	0.606
OC-38	F	10	10	100%	10	50.142	72.576	65.384	7.192	7.192	0.719	0.719
OC-38	G	7	7	70%	7	49.282	61.996	54.136	7.860	7.860	0.786	1.123
OC-38	H	8	8	80%	8	53.690	62.464	58.199	4.265	4.265	0.427	0.533
OC-40	A	10	10	100%	10	58.180	77.398	66.067	11.331	11.331	1.133	1.133
OC-40	B	10	10	100%	10	53.214	77.010	65.684	11.326	11.326	1.133	1.133
OC-40	C	8	8	80%	8	52.209	68.318	56.579	11.739	11.739	1.174	1.467
OC-40	D	10	10	100%	10	47.880	56.147	50.778	5.369	5.369	0.537	0.537
OC-40	E	9	9	90%	9	49.670	64.452	54.656	9.796	9.796	0.980	1.088
OC-40	F	10	10	100%	10	49.878	67.999	54.484	13.515	13.515	1.352	1.352
OC-40	G	9	9	90%	9	51.386	68.300	59.314	8.986	8.986	0.899	0.998
OC-40	H	7	7	70%	7	59.116	76.026	68.670	7.356	7.356	0.736	1.051
OC-41	A	10	10	100%	10	50.840	62.982	57.129	5.853	5.853	0.585	0.585
OC-41	B	10	10	100%	10	54.278	68.884	59.860	9.024	9.024	0.902	0.902
OC-41	C	8	8	80%	8	46.538	71.350	63.752	7.598	7.598	0.760	0.950
OC-41	D	10	10	100%	10	50.272	63.360	55.624	7.736	7.736	0.774	0.774
OC-41	E	9	9	90%	9	49.826	66.212	58.249	7.963	7.963	0.796	0.885
OC-41	F	6	6	60%	6	49.590	59.996	52.458	7.538	7.538	0.754	1.256
OC-41	G	7	7	70%	7	52.588	64.980	56.437	8.543	8.543	0.854	1.220
OC-41	H	9	9	90%	9	56.698	83.630	73.089	10.541	10.541	1.054	1.171
OC-42	A	3	3	30%	3	46.980	47.400	47.140	0.260	0.260	0.026	0.087
OC-42	B	2	2	20%	2	50.879	51.360	51.024	0.336	0.336	0.034	0.168
OC-42	C	0	0	0%	0	58.408			0.000	0.000	0.000	
OC-42	D	0	0	0%	0	56.744			0.000	0.000	0.000	
OC-42	E	4	4	40%	4	49.352	50.010	49.508	0.502	0.502	0.050	0.125
OC-42	F	0	0	0%	0	51.712			0.000	0.000	0.000	
OC-42	G	0	0	0%	0	46.344			0.000	0.000	0.000	
OC-42	H	2	2	20%	2	49.620	49.969	49.750	0.219	0.219	0.022	0.110

Day 10 *Chironomus dilutus* Survival & Biomass Data

Sediment ID	Replicate	# Recovered	# Recovered (Corrected)	% Survival	# Animals on Pan	Pan Weight (mg)	Pan & Animal Dry Weight (mg)	Pan & Animal Ash-free Weight (mg)	Replicate Total Ash-Free-Biomass (mg)	Recovery Based Replicate Total Ash-Free-Biomass (mg)	Recovery Based Replicate Total Ash-Free Biomass/Initial # Organisms (mg)	Mean Individual Ash-free Weight (mg)
OC-44	A	6	6	60%	6	51.850	55.779	53.036	2.743	2.743	0.274	0.457
OC-44	B	4	4	40%	4	52.374	54.126	52.779	1.347	1.347	0.135	0.337
OC-44	C	3	3	30%	3	60.299	61.137	60.630	0.507	0.507	0.051	0.169
OC-44	D	0	0	0%	0	65.306			0.000	0.000	0.000	
OC-44	E	10	10	100%	10	61.900	69.326	63.072	6.254	6.254	0.625	0.625
OC-44	F	6	6	60%	6	55.658	63.986	60.614	3.372	3.372	0.337	0.562
OC-44	G	6	6	60%	6	65.037	69.282	66.226	3.056	3.056	0.306	0.509
OC-44	H	7	7	70%	7	54.688	59.998	56.830	3.168	3.168	0.317	0.453
OC-45	A	6	6	60%	6	57.957	67.142	60.586	6.556	6.556	0.656	1.093
OC-45	B	8	8	80%	8	52.550	62.669	55.808	6.861	6.861	0.686	0.858
OC-45	C	9	9	90%	9	50.904	62.888	55.348	7.540	7.540	0.754	0.838
OC-45	D	10	10	100%	10	50.580	59.682	53.597	6.085	6.085	0.609	0.609
OC-45	E	10	10	100%	10	55.790	68.400	60.512	7.888	7.888	0.789	0.789
OC-45	F	10	10	100%	10	49.098	62.704	54.342	8.362	8.362	0.836	0.836
OC-45	G	9	9	90%	9	66.789	77.348	71.750	5.598	5.598	0.560	0.622
OC-45	H	10	10	100%	10	57.998	71.263	61.677	9.586	9.586	0.959	0.959
OC-46	A	9	9	90%	9	53.630	60.550	55.734	4.816	4.816	0.482	0.535
OC-46	B	10	10	100%	10	51.146	62.094	55.239	6.855	6.855	0.686	0.686
OC-46	C	9	9	90%	9	57.209	72.284	64.730	7.554	7.554	0.755	0.839
OC-46	D	9	9	90%	9	60.282	72.776	65.640	7.136	7.136	0.714	0.793
OC-46	E	9	9	90%	9	59.666	67.738	61.562	6.176	6.176	0.618	0.686
OC-46	F	10	10	100%	10	59.214	68.380	61.400	6.980	6.980	0.698	0.698
OC-46	G	10	10	100%	10	58.726	68.936	61.734	7.202	7.202	0.720	0.720
OC-46	H	10	10	100%	10	59.540	69.828	64.289	5.539	5.539	0.554	0.554

Appendix D. Statistical analyses for Duck and Otter Creeks *Chironomus dilutus* bioassay

Duck and Otter Creek 10-d % Survival

One Way Analysis of Variance Thursday, September 29, 2011, 11:01:57 PM

Data source: Data 1 in Duck and Otter Creek (2011)

Normality Test: Failed (P = <0.001)

Test execution ended by user request, ANOVA on Ranks begun

Kruskal-Wallis One Way Analysis of Variance on Ranks Thursday, September 29, 2011, 11:01:57 PM

Data source: Data 1 in Duck and Otter Creek (2011)

Group	N	Missing	Median	25%	75%
Control	8	0	1.249	1.107	1.410
DC-22	8	0	1.571	1.249	1.571
DC-23	8	0	1.571	1.249	1.571
DC-25	8	0	1.249	1.107	1.410
OC-35	8	0	1.571	1.178	1.571
OC-38	8	0	1.178	1.107	1.410
OC-40	8	0	1.410	1.178	1.571
OC-41	8	0	1.249	1.049	1.571
OC-42	8	0	0.232	0.000	0.522
OC-44	8	0	0.886	0.632	0.939
OC-45	8	0	1.410	1.178	1.571
OC-46	8	0	1.410	1.249	1.571

H = 40.878 with 11 degrees of freedom. (P = <0.001)

The differences in the median values among the treatment groups are greater than would be expected by chance; there is a statistically significant difference (P = <0.001)

To isolate the group or groups that differ from the others use a multiple comparison procedure.

Multiple Comparisons versus Control Group (Dunnett's Method) :

Comparison	Diff of Ranks	q'	P<0.05
OC-42 vs Control	343.000	3.078	Yes
OC-44 vs Control	226.000	2.028	No
DC-23 vs Control	128.000	1.149	Do Not Test
DC-22 vs Control	128.000	1.149	Do Not Test
OC-46 vs Control	117.000	1.050	Do Not Test
OC-35 vs Control	99.000	0.888	Do Not Test
OC-40 vs Control	69.000	0.619	Do Not Test
OC-45 vs Control	64.000	0.574	Do Not Test
OC-38 vs Control	29.000	0.260	Do Not Test
OC-41 vs Control	5.000	0.0449	Do Not Test
DC-25 vs Control	0.000	0.000	Do Not Test

Note: The multiple comparisons on ranks do not include an adjustment for ties.

Duck and Otter Creek 10-d Ash-free Biomass/Initial Organism

One Way Analysis of Variance Thursday, September 29, 2011, 11:06:38 PM

Data source: Data 1 in Duck and Otter Creek (2011)

Normality Test: Failed (P = 0.035)

Test execution ended by user request, ANOVA on Ranks begun

Kruskal-Wallis One Way Analysis of Variance on Ranks Thursday, September 29, 2011, 11:06:38 PM

Data source: Data 1 in Duck and Otter Creek (2011)

Group	N	Missing	Median	25%	75%
Control	8	0	0.935	0.902	0.993
DC-22	8	0	0.914	0.896	1.011
DC-23	8	0	0.875	0.811	0.929
DC-25	8	0	0.670	0.590	0.710
OC-35	8	0	0.766	0.652	0.847
OC-38	8	0	0.664	0.575	0.736
OC-40	8	0	1.056	0.817	1.154
OC-41	8	0	0.785	0.757	0.878
OC-42	8	0	0.0110	0.000	0.0298
OC-44	8	0	0.290	0.0927	0.327
OC-45	8	0	0.720	0.632	0.813
OC-46	8	0	0.692	0.586	0.717

H = 67.088 with 11 degrees of freedom. (P = <0.001)

The differences in the median values among the treatment groups are greater than would be expected by chance; there is a statistically significant difference (P = <0.001)

To isolate the group or groups that differ from the others use a multiple comparison procedure.

Multiple Comparisons versus Control Group (Dunnett's Method) :

Comparison	Diff of Ranks	q'	P<0.05
OC-42 vs Control	589.000	5.286	Yes
OC-44 vs Control	521.000	4.676	Yes
OC-38 vs Control	350.000	3.141	Yes
OC-46 vs Control	348.000	3.123	Yes
DC-25 vs Control	341.000	3.060	Yes
OC-45 vs Control	257.000	2.306	No
OC-35 vs Control	213.000	1.912	Do Not Test
OC-41 vs Control	162.000	1.454	Do Not Test
DC-23 vs Control	89.000	0.799	Do Not Test
OC-40 vs Control	31.000	0.278	Do Not Test
DC-22 vs Control	15.000	0.135	Do Not Test

Note: The multiple comparisons on ranks do not include an adjustment for ties.

Duck and Otter Creek 10-d Individual Ash-free Dry Weight/Surviving Organism

One Way Analysis of Variance Thursday, September 29, 2011, 11:12:29 PM

Data source: Data 2 in Duck and Otter Creek (2011)

Normality Test: Failed (P = <0.001)

Test execution ended by user request, ANOVA on Ranks begun

Kruskal-Wallis One Way Analysis of Variance on Ranks Thursday, September 29, 2011, 11:12:29 PM

Data source: Data 2 in Duck and Otter Creek (2011)

Group	N	Missing	Median	25%	75%
Control	8	0	1.055	1.030	1.128
DC-22	8	0	0.996	0.914	1.012
DC-23	8	0	0.919	0.811	0.933
DC-25	8	0	0.741	0.651	0.860
OC-35	8	0	0.805	0.687	0.902
OC-38	8	0	0.737	0.608	0.870
OC-40	8	0	1.111	1.025	1.242
OC-41	8	0	0.926	0.829	1.196
OC-42	4	0	0.117	0.0981	0.147
OC-44	7	0	0.457	0.366	0.549
OC-45	8	0	0.837	0.705	0.908
OC-46	8	0	0.692	0.620	0.757

H = 51.856 with 11 degrees of freedom. (P = <0.001)

The differences in the median values among the treatment groups are greater than would be expected by chance; there is a statistically significant difference (P = <0.001)

To isolate the group or groups that differ from the others use a multiple comparison procedure.

Multiple Comparisons versus Control Group (Dunn's Method) :

Comparison	Diff of Ranks	Q	P<0.05
OC-42 vs Control	70.000	4.328	Yes
OC-44 vs Control	61.929	4.530	Yes
OC-46 vs Control	44.000	3.332	Yes
DC-25 vs Control	37.375	2.830	No
OC-38 vs Control	36.000	2.726	Do Not Test
OC-35 vs Control	28.125	2.130	Do Not Test
OC-45 vs Control	27.250	2.063	Do Not Test
DC-23 vs Control	17.625	1.335	Do Not Test
OC-41 vs Control	13.250	1.003	Do Not Test
DC-22 vs Control	7.375	0.558	Do Not Test
OC-40 vs Control	1.250	0.0946	Do Not Test

Note: The multiple comparisons on ranks do not include an adjustment for ties.

Appendix E. Chain of Custody sheets

EPA USEPA Contract Laboratory Program
Generic Chain of Custody

Reference Case 41260
Client No:
SDG No: **L**

Date Shipped:	5/12/2011
Carrier Name:	FedEx
Airbill:	858876479395
Shipped to:	USACE-ERDC 3909 Halls Ferry Road Vicksburg MS 39180 (601) 634-4578

Chain of Custody Record

Sampler Signature: Matthew Beer

Relinquished By	(Date / Time)	Received By	(Date / Time)
1 Ralph	5/12/11 / 1700		05.13.11 / 1415
2	05.13.11 / 1415		
3			
4			

For Lab Use Only
Lab Contract No:
Unit Price:
Transfer To:
Lab Contract No:
Unit Price:

SAMPLE No.	MATRIX/ SAMPLER	CONC/ TYPE	ANALYSIS/ TURNAROUND	TAG No./ PRESERVATIVE/ Bottles	STATION LOCATION	SAMPLE COLLECT DATE/TIME		FOR LAB USE ONLY Sample Condition On Receipt
DC-20-01	Sediment/ Matt Beer	L/C	TOX (21)	5C (Ice Only) (1)	DC-20-01	S: 5/11/2011	14:45	
DC-21-01	Sediment/ Matt Beer	L/C	TOX (21)	5C (Ice Only) (1)	DC-21-01	S: 5/11/2011	14:10	
DC-22-01	Sediment/ Matt Beer	L/C	TOX (21)	5C (Ice Only) (1)	DC-22-01	S: 5/11/2011	15:10	
DC-23-01	Sediment/ Matt Beer	L/C	TOX (21)	5C (Ice Only) (1)	DC-23-01	S: 5/11/2011	15:50	
DC-24-01	Sediment/ Matt Beer	L/C	TOX (21)	5C (Ice Only) (1)	DC-24-01	S: 5/11/2011	16:15	
DC-25-01	Sediment/ Matt Beer	L/C	TOX (21)	5C (Ice Only) (1)	DC-25-01	S: 5/11/2011	12:40	
OC-34-01	Sediment/ Matt Beer	L/C	TOX (21)	5C (Ice Only) (1)	OC-34-01	S: 5/10/2011	13:30	
OC-35-01	Sediment/ Matt Beer	L/C	TOX (21)	5C8432 (Ice Only) (1)	OC-35-01	S: 5/12/2011	9:55	
OC-36-01	Sediment/ Matt Beer	L/C	TOX (21)	5C (Ice Only) (1)	OC-36-01	S: 5/10/2011	14:50	
OC-38	Sediment/ Matt Beer	L/C	TOX (21)	5C (Ice Only) (1)	OC-38	S: 5/11/2011	12:05	

Shipment for Case Complete? N Y	Sample(s) to be used for laboratory QC:	Additional Sampler Signature(s): Ralph	Cooler Temperature Upon Receipt: 1-10°C, 2-8°C 3-9°C, 4-12°, 5-11°C	Chain of Custody Seal Number: 115030, 115031, 115032, 115033, 115034
Analysis Key: TOX = Toxicity	Concentration: L = Low, M = Low/Medium, H = High	Type/Designate: Composite = C, Grab = G	Custody Seal Intact? ___	Shipment Iced? ___

TR Number: 5-350091276-051211-0004

LABORATORY COPY

PR provides preliminary results. Requests for preliminary results will increase analytical costs.
Send Copy to: Sample Management Office, 15000 Conference Center Dr., Chantilly, VA. 20151-3819 Phone 703/818-4200; Fax 703/818-4602

EPA **USEPA Contract Laboratory Program**
Generic Chain of Custody

Reference Case 41260
Client No:
SDG No: **L**

Date Shipped:	5/12/2011
Carrier Name:	FedEx
Airbill:	858876479395
Shipped to:	USACE-ERDC 3909 Halls Ferry Road Vicksburg MS 39180 (601) 634-4578

Chain of Custody Record

Relinquished By	(Date / Time)	Received By	(Date / Time)
1 RRL	5/12/11 / 1700		05.13.11/1415
2	05.13.11/1415		
3			
4			

Sampler Signature: Matthew J Beer

For Lab Use Only
Lab Contract No:
Unit Price:
Transfer To:
Lab Contract No:
Unit Price:

SAMPLE No.	MATRIX/ SAMPLER	CONC/ TYPE	ANALYSIS/ TURNAROUND	TAG No./ PRESERVATIVE/ Bottles	STATION LOCATION	SAMPLE COLLECT DATE/TIME		FOR LAB USE ONLY Sample Condition On Receipt
OC-40-01	Sediment/ Matt Beer	L/C	TOX (21)	5C (Ice Only) (1)	OC-40-01	S: 5/11/2011	9:45	
OC-41-01	Sediment/ Matt Beer	L/C	TOX (21)	5C (Ice Only) (1)	OC-41-01	S: 5/10/2011	16:20	
OC-42-01	Sediment/ Matt Beer	L/C	TOX (21)	5C (Ice Only) (1)	OC-42-01	S: 5/11/2011	10:15	
OC-44-01	Sediment/ Matt Beer	L/C	TOX (21)	5C (Ice Only) (1)	OC-44-01	S: 5/10/2011	12:00	
OC-45-01	Sediment/ Matt Beer	L/C	TOX (21)	5C (Ice Only) (1)	OC-45-01	S: 5/10/2011	11:30	
OC-46-01	Sediment/ Matt Beer	L/C	TOX (21)	5C (Ice Only) (1)	OC-46-01	S: 5/12/2011	8:30	
OC-47-01	Sediment/ Matt Beer	L/C	TOX (21)	5C (Ice Only) (1)	OC-47-01	S: 5/12/2011	8:50	
OC-48-01	Sediment/ Matt Beer	L/C	TOX (21)	5C (Ice Only) (1)	OC-48-01	S: 5/12/2011	9:20	

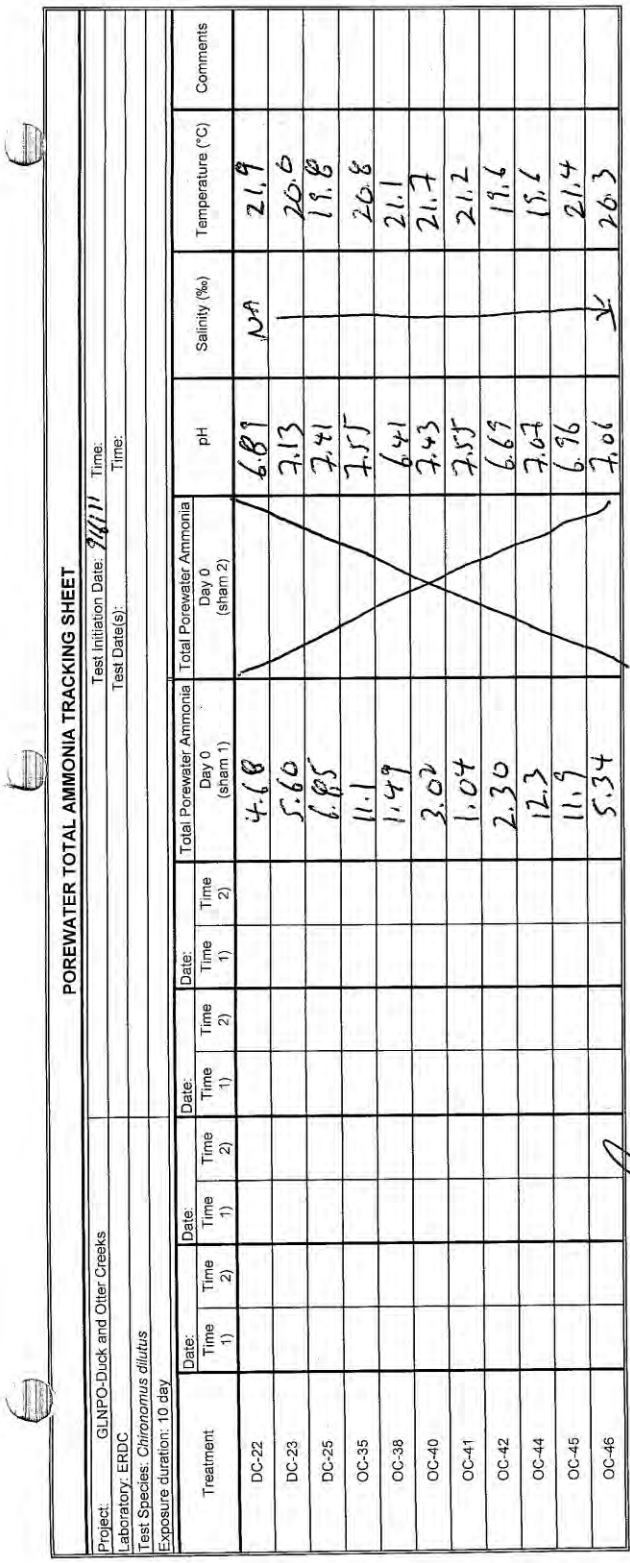
Shipment for Case Complete? ~~N~~ Y	Sample(s) to be used for laboratory QC:	Additional Sampler Signature(s): RRL	Cooler Temperature Upon Receipt: 1-10°C, 2-8°C, 3-9°C, 4-12°C, 5-11°C	Chain of Custody Seal Number: 115030, 115031, 115032, 115033, 115034
Analysis Key: TOX = Toxicity	Concentration: L = Low, M = Low/Medium, H = High	Type/Designate: Composite = C, Grab = G	Custody Seal Intact? ___	Shipment Iced? ___

TR Number: 5-350091276-051211-0004

LABORATORY COPY

PR provides preliminary results. Requests for preliminary results will increase analytical costs.
Send Copy to: Sample Management Office, 15000 Conference Center Dr., Chantilly, VA. 20151-3819 Phone 703/818-4200; Fax 703/818-4602

Appendix F. Laboratory data Sheets for Duck and Otter Creeks *Chironomus dilutus* bioassay



POREWATER TOTAL AMMONIA TRACKING SHEET

Project: GLNPO-Duck and Otter Creeks — Test Initiation Date: 7/6/11 Time:
Laboratory: ERDC — Test Date(s): Time:
Test Species: *Chironomus dilutus*
Exposure duration: 10 day

Treatment	Date: Time 1)	Time 2)	Date: Time 1)	Time 2)	Date: Time 1)	Time 2)	Total Porewater Ammonia Day 0 (sham 1)	Total Porewater Ammonia Day 0 (sham 2)	pH	Salinity (‰)	Temperature (°C)	Comments
DC-22							4.68		6.89	NA	21.9	
DC-23							5.60		7.13		20.6	
DC-25							6.85		7.41		19.8	
OC-35							11.1		7.55		20.8	
OC-38							1.49		6.41		21.1	
OC-40							3.02		7.43		21.7	
OC-41							1.04		7.55		21.2	
OC-42							2.30		6.69		19.6	
OC-44							12.3		7.67		18.2	
OC-45							11.9		6.96		21.4	
OC-46							5.34		7.01		20.3	

Signature: Disclosed and Understood by:

Initial Growth Information

Project: GLNPO-Duck and Otter Creeks (*Chironomus dilutus*)

Day: 0 **Initials of Technician performing masss determinations:** JS

Date: 9.6.4 **Date inial mass determined:**

Replicate	Pan #	No. animals on pan	Pan Weight (DF)	Pan & animal dry weight (DF)	Pan & Ash-free Dry Weight (DF)
1	1	10	(DF) 90.548	91.660	89.346
2	2	10	83.672	85.320	83.132
3	3	10	81.489	84.556	81.950
4	4	10	79.837	82.546	80.084

Signature:

Disclosed and Understood by:

Initial Overlying Water Quality

Project: GLNPO-Duck and Otter Creeks (*Chironomus dilutus*)

Test Day: 0 Date: 9-6-11 Time: 1036 Technician initials: JW/SS

Sediment	Replicate	Temp. (20-26°C)	pH	D.O. (>2.5 mg/L)	*Hardness (PPM $CaCO_3$)	*Alkalinity (PPM $CaCO_3$)	Conductivity (uS)	*Ammonia (PPM)
Control	A	23.4	6.86	7.74	60	92	249	2
Control	B	23.4	6.80	7.50			249	
Control	C	23.3	6.76	6.77			239	
Control	D	23.4	6.83	7.56			248	
Control	E	23.4	6.86	7.52			248	
Control	F	23.5	6.82	7.37			250	
Control	G	23.3	6.77	7.86			252	
Control	H	23.3	6.81	7.57			220	
DC-22	A	23.1	6.68	7.51	105	92	280	<1
DC-22	B	23.0	6.67	7.62			280	
DC-22	C	23.2	6.79	7.77			370	
DC-22	D	23.1	6.61	7.67			285	
DC-22	E	22.8	6.51	7.49			280	
DC-22	F	22.8	6.50	7.70			286	
DC-22	G	23.0	6.52	7.77			282	
DC-22	H	22.9	6.60	7.52			283	
DC-23	A	22.3	6.37	6.86	104	72	283	<1
DC-23	B	22.4	6.33	7.20			276	
DC-23	C	22.5	6.49	6.93			287	
DC-23	D	22.6	6.42	6.93			281	
DC-23	E	22.4	6.41	7.15			284	
DC-23	F	22.5	6.50	7.05			277	
DC-23	G	22.3	6.25	7.13			290	
DC-23	H	22.3	6.33	6.92			279	
DC-25	A	22.2	6.50	7.66	108	80	294	<1
DC-25	B	22.2	6.27	7.31			267	
DC-25	C	22.2	6.42	6.99			263	
DC-25	D	22.2	6.18	6.92			285	
DC-25	E	22.2	6.22	7.01			293	
DC-25	F	22.2	6.15	6.95			288	
DC-25	G	22.2	6.03	6.92			273	
DC-25	H	22.2	6.21	6.96			285	
OC-35	A	21.7	7.91	8.21	160	88	283	1
OC-35	B	21.7	7.90	7.33			288	
OC-35	C	21.8	7.90	7.33			283	
OC-35	D	21.8	7.92	6.95			285	
OC-35	E	21.8	7.93	6.75			391	
OC-35	F	21.9	7.93	6.83			289	
OC-35	G	21.9	7.93	6.79			280	
OC-35	H	21.9	7.93	6.71			287	

Initial Overlying Water Quality

Project: GLNPO-Duck and Otter Creeks (*Chironomus dilutus*)

Test Day: 0 Date: 9.6.11 Time: 1030 Technician initials: JW/SS

Sediment	Replicate	Temp. (20-26°C)	pH	D.O. (>2.5 mg/L)	*Hardness (PPM $CaCO_3$)	*Alkalinity (PPM $CaCO_3$)	Conductivity (uS)	*Ammonia (PPM)
OC-38	A	22.0	7.92	7.48	112	100	276	SS <1
OC-38	B	22.0	7.92	7.32			320	
OC-38	C	22.0	7.90	7.24			285	
OC-38	D	22.0	7.90	7.31			277	
OC-38	E	22.0	7.93	7.58			281	
OC-38	F	22.0	7.93	7.44			264	
OC-38	G	22.1	7.91	7.46			268	
OC-38	H	22.0	7.93	7.50			277	
OC-40	A	22.5	8.05	7.91	100	104	279	SS <1
OC-40	B	22.4	8.07	7.83			258	
OC-40	C	22.5	8.06	7.68			288	
OC-40	D	22.5	7.91	7.71			272	
OC-40	E	22.5	8.01	7.94			307	
OC-40	F	22.2	8.06	7.86			262	
OC-40	G	22.4	8.06	7.77			279	
OC-40	H	22.6	8.01	7.72			276	
OC-41	A	22.4	8.06	7.67	120	SS 112 92	273	SS <1
OC-41	B	22.2	8.04	7.78			265	
OC-41	C	22.6	7.96	7.96			267	
OC-41	D	22.5	7.97	7.89			389	
OC-41	E	22.6	7.96	7.81			277	
OC-41	F	22.3	8.03	7.76			284	
OC-41	G	22.5	7.98	7.17			277	
OC-41	H	22.5	8.03 7.98	7.62			278	
OC-42	A	22.8	7.88	7.74	112	92	267	SS <1
OC-42	B	22.8	7.82	7.63			275	
OC-42	C	22.6	7.86	7.92			230	
OC-42	D	22.6	7.80	7.61			278	
OC-42	E	22.8	7.90	7.62			284	
OC-42	F	22.7	7.90	7.43			288	
OC-42	G	22.6	7.95	8.13			277	
OC-42	H	22.6	7.88	7.80			279	
OC-44	A	22.5	7.90	7.70	SS 116 112	100	286	SS <1
OC-44	B	22.6	7.90	7.76			294	
OC-44	C	22.7	7.93	7.69			293	
OC-44	D	22.6	7.90	7.49			287	
OC-44	E	22.5	7.93	7.43			300	
OC-44	F	22.5	7.91	7.77			222	
OC-44	G	22.7	7.95	7.69			278	
OC-44	H	22.5	7.94	7.57			244	

Initial Overlying Water Quality

Project: GLNPO-Duck and Otter Creeks (*Chironomus dilutus*)

Test Day: 0 Date: 9-6-11 Time: 1030 Technician initials: SW/JS

Sediment	Replicate	Temp. (20-26°C)	pH	D.O. (>2.5 mg/L)	*Hardness (PPM $CaCO_3$)	*Alkalinity (PPM $CaCO_3$)	Conductivity (uS)	*Ammonia (PPM)
OC-45	A	22.4	7.91	7.80	100	100	232	0.81
OC-45	B	22.5	7.97	7.49			307	
OC-45	C	22.6	7.93	7.91			286	
OC-45	D	22.3	7.92	7.77			214	
OC-45	E	22.4	7.92	7.31			197	
OC-45	F	22.3	7.94	7.64			300	
OC-45	G	22.5	7.93	7.94			236	
OC-45	H	22.4	7.95	7.77			290	
OC-46	A	23.3	7.95	6.99	112	100	230	1
OC-46	B	22.6	7.77	7.19			335	
OC-46	C	22.4	7.89	7.36			258	
OC-46	D	22.4	7.92	7.33			296	
OC-46	E	22.4	7.94	7.43			299	
OC-46	F	22.8	8.03	7.71			281	
OC-46	G	22.8	8.16	7.66			245	
OC-46	H	22.7	7.97	7.71			319	

*Measured from a composite of overlying water from all treatment replicates (2-5 mL per replicate).

Signature: _____

Disclosed and Understood by: _____

Daily O[illegible]ng Water Temperature (°C) and D.O. (mg/L), Feeding and Maintenance Check

Project: GLNPO-Duck and Otter Creeks (*Chironomus dilutus*)

Test Day	0		1 (SS)		2 (SS)		3 (SS)		4 (SS)		5 (SS)	
Day	Tuesday		Wednesday		Thursday		Friday		Saturday		Sunday	
Date	9/6/2011		9/7/2011		9/8/2011		9/9/2011		9/10/2011		9/11/2011	
Time					0953	0953			0900	0900	0900	0900
Technician Initials			SS	SS	[illegible]	[illegible]			[illegible]	[illegible]	[illegible]	[illegible]
Water Quality Parameters	Temperature	D.O.	Temperature	D.O.	Temperature	D.O.	Temperature	D.O.	Temperature	D.O.	Temperature	D.O.
Control			23.7	7.98	23.6	8.06	22.7	7.92	22.8	7.83	23.0	6.99
DC-22			22.8	8.63	23.0	7.96	22.7	6.35	22.9	6.47	22.8	7.06
DC-23			22.8	5.78	22.7	6.84	22.8	6.29	22.9	6.17	23.1	6.37
DC-25	Day	Ø	22.9	7.65	23.1	7.88	22.7	6.22	22.9	6.37	22.7	6.69
OC-35			22.8	5.70	22.6	6.90	22.7	6.30	23.0	6.33	22.8	6.84
OC-38			22.9	7.83	22.8	7.17	22.8	6.41	22.7	6.60	22.9	7.09
OC-40			22.8	7.65	22.7	7.66	22.9	6.07	22.9	6.77	23.2	6.93
OC-41			22.8	6.78	22.9	6.91	23.1	6.51	22.9	6.49	23.1	6.88
OC-42			23.7	8.06	23.5	7.84	22.9	6.51	23.1	6.59	22.1	6.60
OC-44			23.1	8.75	23.0	8.59	23.0	6.49	23.2	6.60	23.6	6.51
OC-45			22.8	6.10	22.8	6.74	22.9	6.41	22.8	6.37	22.3	6.92
OC-46			22.8	5.89	22.9	6.09	23.0	6.36	22.9	6.44	22.3	6.85
Organisms Fed?			✓		✓		✓		✓		✓	
Daily Observations Recorded?			✓		✓		✓		✓		✓	
Light and ExchangeTimers OK?			✓		✓		✓		✓		✓	
Beaker Water level OK?			✓		✓		✓		✓		✓	
Exchange System Water Level OK?			✓		✓		✓		✓		✓	
Stoppers/needles In Place?			✓		✓		✓		✓		✓	
Counter Number?			2		5		9		12		16	

If temperature falls outside the range of 20-26°C or dissolved oxygen falls below 2.5 mg/L contact the study coordinator

Daily Overlying Water Temperature (°C) and D.O. (mg/L), Feeding and Maintenance Checklist

Project: GLNPO-Buffalo River (*Chironomus dilutus*)

Test Day	6		7		8		9		10	
Day	Monday		Tuesday		Wednesday		Thursday		Friday	
Date	9/12/2011		9/13/2011		9/14/2011		9/15/2011		9/16/2011	
Time	2115	2115	0937	0937			1001	1001		
Technician Initials	[illegible]	[illegible]	[illegible]	[illegible]			[illegible]	[illegible]		
Water Quality Parameters	Temperature	D.O.	Temperature	D.O.	Temperature	D.O.	Temperature	D.O.	Temperature	D.O.
Control	22.4	6.86	22.7	6.69	21.1	7.56	22.6	7.88		
DC-22	22.8	6.78	22.6	6.93	21.3	7.30	22.3	6.88	Day 10	
DC-23	22.8	7.01	22.9	7.14	21.3	7.17	22.5	6.99		
DC-25	22.9	7.66	22.8	7.36	21.1	7.06	22.1	7.30		
OC-35	22.7	8.29	22.7	6.97	21.4	7.05	22.0	7.11		
OC-38	22.9	8.34	22.8	7.83	21.3	7.00	22.3	6.82		
OC-40	23.0	7.81	23.0	6.44	21.3	7.21	22.0	7.59		
OC-41	23.1	6.49	22.6	7.09	21.4	7.26	21.9	7.42		
OC-42	22.9	6.83	22.7	7.27	21.4	6.70	22.3	6.33		
OC-44	23.1	6.91	22.7	7.01	21.4	6.59	22.0	7.17		
OC-45	22.7	7.11	22.8	7.33	21.4	6.92	21.7	7.58		
OC-46	22.6	7.43	22.7	6.95	21.3	6.90	21.8	7.70		
Organisms Fed?	✓		✓		✓		✓			
Daily Observations Recorded?	✓		✓		✓		✓			
Light and ExchangeTimers OK?	✓		✓		✓		✓			
Beaker Water level OK?	✓		✓		✓		✓			
Exchange System Water Level OK?	✓		✓		✓		✓			
Stoppers/needles In Place?	✓		✓		✓		✓			
Counter Number?	19		22		25		28			

If temperature falls outside the range of 20-26°C or dissolved oxygen falls below 2.5 mg/L contact the study coordinator

Signature: [signature]

Disclosed and Understood by: [signature]

Final Overlying Water Quality

Project: GLNPO-Duck and Otter Creeks (*Chironomus dilutus*)

Test Day: 10 Date: 9-16-11 Time: 0800 Technician initials: JW/SS

Sediment	Replicate	Temp. (20-26°C)	pH	D.O. (>2.5 mg/L)	*Hardness (PPM $CaCO_3$)	*Alkalinity (PPM $CaCO_3$)	Conductivity (uS)	*Ammonia (PPM)
Control	A	23.0	8.01	7.8	100	96	264	<1
Control	B	23.1	8.20	8.5			250	
Control	C	23.0	7.76	8.28 8.05			250	
Control	D	23.0	7.66	7.8			250	
Control	E	23.0	7.86	7.6			245	
Control	F	23.0	7.83	7.8			250	
Control	G	23.1	7.73	7.8			247	
Control	H	22.9	7.67 8.40	7.8			250	
DC-22	A	23.2	8.10	6.4	100	100	243	<1
DC-22	B	23.2	8.11	6.5			197	
DC-22	C	23.3	8.29	6.86 35			283	
DC-22	D	23.4	8.36	7.15			282	
DC-22	E	23.4	8.20	7.3			335	
DC-22	F	23.3	8.17	6.2			272	
DC-22	G	23.4	8.26	8.07.2			280	
DC-22	H	23.0	8.21	7.7			274	
DC-23	A	23.1	8.06	5.9	96	100	272	<1
DC-23	B	22.5	8.35	6.70			287	
DC-23	C	23.3	8.34	7.9			275	
DC-23	D	23.4	8.39	7.0			292	
DC-23	E	23.2	8.33	7.2			276	
DC-23	F	23.0	8.25	8.5			282	
DC-23	G	23.4	8.38	7.6			287	
DC-23	H	23.3	8.28	7.3			285	
DC-25	A	23.2	8.24	7.5	96	96	280	<1
DC-25	B	22.9	8.30	7.35			290	
DC-25	C	22.7	8.33	6.92			270	
DC-25	D	23.2	8.35	8.0			280	
DC-25	E	23.2	8.23	6.9			272	
DC-25	F	23.0	8.41	6.38			273	
DC-25	G	22.8	8.27	7.6			276	
DC-25	H	22.9	8.31	7.6			277	
OC-35	A	23.1	8.15	6.6	90	90	272	<1
OC-35	B	23.2	8.19	7.2			260	
OC-35	C	23.4	7.80	6.0			215	
OC-35	D	23.2	8.10	6.2			227	
OC-35	E	23.1	8.21	7.9			260	
OC-35	F	23.2	8.33	7.3			266	
OC-35	G	22.7	8.18	6.49			270	
OC-35	H	23.9	8.27	7.8			266	

Final Overlying Water Quality

Project: GLNPO-Duck and Otter Creeks (*Chironomus dilutus*)

Test Day: 10 Date: 9-16-11 Time: 0800 Technician initials: JW/JS

Sediment	Replicate	Temp. (20-26°C)	pH	D.O. (>2.5 mg/L)	*Hardness (PPM $CaCO_3$)	*Alkalinity (PPM $CaCO_3$)	Conductivity (uS)	*Ammonia (PPM)
OC-38	A	23.4	7.74	6.2	106	96	235	<1
OC-38	B	23.2	8.11	~~8.1~~ 7.7 JS			270	
OC-38	C	23.2	8.19	7.4			263	
OC-38	D	23.2	8.20	7.5			266	
OC-38	E	22.7	8.11	6.56			270	
OC-38	F	23.0	8.22	7.45			276	
OC-38	G	23.4	8.16	~~7.40~~ 7.7 JS			270	
OC-38	H	23.2	~~8.20~~ 8.20	~~7.8~~ 7.7 JS			278	
OC-40	A	23.0	8.15	8.3	96	100	250	<1
OC-40	B	22.7	8.23	7.97			280	
OC-40	C	23.0	8.07	7.8			307	
OC-40	D	23.2	8.15	8.3			280	
OC-40	E	23.0	8.16	7.9			270	
OC-40	F	22.9	8.07	7.7			282	
OC-40	G	22.6	8.20	8.7			275	
OC-40	H	23.0	7.93	6.7			236	
OC-41	A	23.6	8.16	8.7	96	84	295	<1
OC-41	B	23.0	8.22	8.61			290	
OC-41	C	23.1	8.14	7.6			285	
OC-41	D	23.0	8.12	7.7			280	
OC-41	E	22.9	8.14	~~7.8~~ 7.0 JS			264	
OC-41	F	23.0	8.19	7.31			261	
OC-41	G	23.4	8.21	8.14			263	
OC-41	H	23.0	8.08	7.7			279	
OC-42	A	22.5	6.94	8.4	96	80	268	<1
OC-42	B	23.3	8.09	7.6			301	
OC-42	C	22.5	6.94	8.4			288	
OC-42	D	23.1	8.50	6.02			~~269~~ 269 JS	
OC-42	E	23.1	8.29	5.9			262	
OC-42	F	22.8	8.49	8.09			284	
OC-42	G	23.0	8.02	7.4			279	
OC-42	H	23.1	7.99	8.0			318	
OC-44	A	22.3	7.81	6.9	90	96	276	<1
OC-44	B	22.9	7.87	7.9			276	
OC-44	C	23.3	~~7.8~~ 7.95	6.3			267	
OC-44	D	23.0	7.90	7.4			208	
OC-44	E	23.0	7.96	8.1			292	
OC-44	F	23.1	7.81	8.31			289	
OC-44	G	23.5	8.04	7.2			275	
OC-44	H	23.2	8.01	7.8			281	

Final Overlying Water Quality

Project: GLNPO-Duck and Otter Creeks (*Chironomus dilutus*)

Test Day: 10 Date: 9/6/11 Time: 0800 Technician initials: SW/SS

Sediment	Replicate	Temp. (20-26°C)	pH	D.O. (>2.5 mg/L)	*Hardness (PPM $CaCO_3$)	*Alkalinity (PPM $CaCO_3$)	Conductivity (uS)	*Ammonia (PPM)
OC-45	A	23.3	8.11	7.33	106	100	240	<1
OC-45	B	23.1	8.16	7.24			262	
OC-45	C	23.3	8.05	7.5			277	
OC-45	D	23.0	8.01	6.8			257	
OC-45	E	23.0	7.96	7.8			270	
OC-45	F	22.9	8.07	7.9			270	
OC-45	G	22.8	7.89	6.5			234	
OC-45	H	23.3	8.04	6.9			275	
OC-46	A	23.0	8.02	6.9	110	96	245	<1
OC-46	B	23.0	7.96	7.1			270	
OC-46	C	23.1	7.95	7.7			272	
OC-46	D	23.1	8.30	6.8			258	
OC-46	E	23.1	7.96	7.8			266	
OC-46	F	23.1	8.04	7.6			267	
OC-46	G	22.7	8.19	7.63			259	
OC-46	H	23.0	8.08	7.0			245	

*Measured from a composite of overlying water from all treatment replicates (2-5 mL per replicate).

Signature: _____

Disclosed and Understood by: _____

Daily Observations

Project: GLNPO-Duck and Otter Creeks (*Chironomus dilutus*)

Day: 3 (DT) – 4

Date: 9/2/11 **Technician Initials:** DF

Time: AM

Water exchange counter: N/A

Comments: Sediment added to beakers. Overlying water added and beakers placed in chamber to equilibrate.

Day -1 – 2 water exchanges conducted.

Day: 0

Date: 9-6-11 **Technician Initials:** JW/SS

Time: 1000

Water exchange counter: 3 - later changed to 0

Comments: Parameters taken on all beakers, see sheet. Animals added to beakers completion (1200). Counter on 3, thus later reset to 0. Water exchange witnessed by DF. Test fed. DA SS

Daily Observations

Day: 1

Date: 9-7-11 **Technician Initials:** JW/JS

Time: 1039

Water exchange counter: 2

Comments: Observation of beakers, Worms in beakes 44, appear on top of sediment, Moderate temp 24.3°C, Daily water quality parameters taken, tested

Day: 2

Date: 09.09.11 **Technician Initials:** [illegible]

Time: 1000

Water exchange counter: 5

Comments: CHAMBER TEMPERATURE @ 24.1° C, MODULE TEMPS. @ 24.0°C, TEST CHECKED FOR FLOATERS - NONE FOUND SEDS. 42 AND 44 - ORGANISMS STILL NOT BURROWING. DAILY OBSERVATIONS MADE, PARAMETERS - TEMPERATURE AND D.O TAKEN.

Daily Observations

Day: 3

Date: 9-9-11 **Technician Initials:** JS

Time: 0830

Water exchange counter: 9

Comments: Chamber temp 24.0°C, Worms seen in beaker: 42B; 44-B; 44-D, 42-C 42-A; 42-F; 42-D; 42-E. Daily parameters (see separate sheet)

Day: 4

Date: 09-10-11 **Technician Initials:** TTM

Time: 1151

Water exchange counter: 12

Comments: MODULE TEMP. @ 24.0°C, DAILY WATER EXCHANGE CONFIRMED, WORMS STILL ON SURFACE OF SEDS. 42, 44, DAILY PARAMETERS TAKEN, TEST FED.

Daily Observations

Day: 5

Date: 09.11.11 **Technician Initials:** T.M./J.S.

Time: 2210

Water exchange counter: 16

Comments: CHAMBER TEMP. @ 24.1° C, HANDLE TEMP @ 24.0°, FEW FLOATERS STILL SEEN ON SURFACE OF 42, 44; DAILY PARAMETERS TAKEN - TEMP., D.O. TEST FED.

Day: 6

Date: 09.12.11 **Technician Initials:** T.M./J.S.

Time: 2115

Water exchange counter: 19

Comments: CHAMBER TEMP. @ 23.6° C, WATER EXCHANGE VERIFIED, TEMPS., D.O.'S TAKEN, TEST FED. FEW ORGANISMS STILL VISIBLE ON 42, 44 CEDS SURFACE.

Daily Observations

Day: 7

Date: 09.13.11 **Technician Initials:** J.S./AFW

Time: 0939

Water exchange counter: 22

Comments: CHAMBER TEMP. @ , MODULE TEMP. @ 24.0°C, PARAMETERS - TEMP. AND D.O. TAKEN, SED. 42 REPS. B, F, & HAS MORTALITY. TEST FED.

Day: 8

Date: 9.14.11 **Technician Initials:** JS

Time: 0830

Water exchange counter: 25

Comments: Chamber temp 23.4°C Daily parameters taken (see sheet), Heat seal. Bleached sediment areas seen in beakers 42 and 44

Daily Observations

Day: 9

Date: 09.15.11 **Technician Initials:** [illegible] / J.S.

Time: 0947

Water exchange counter: 28

Comments: CHAMBER TEMP. @ 24.5°C, MODULE TEMP. @ 24.0°C, WATER EXCHANGE VERIFIED, PARAMETERS TAKEN - TEMP., D.O., TEST FED

Day: 10

Date: 9-16-11 **Technician Initials:** JS/JSW

Time: 0900

Water exchange counter: 31

Comments: Test termination, See sheets for survival & weights

Daily Observations

Day: 11

Date:_____ **Technician Initials:**_____
Time:_____

Water exchange counter:_____

Comments:_____

N/A

Signature:_____

Disclosed and Understood by:_____

Final Survival and Growth Information

Project: GLNPO-Duck and Otter Creeks (*Chironomus dilutus*)

Day: 10 Initials of Technician performing masss determinations: [illegible]

Date: 16 SEPT. 2011 Time: 0800 Date dry mass determined: 17 SEPT. 2011 Date ash-free dry mass determined: [illegible]

Sediment	Replicate	Technician Initials	# live recovered	# animals Weighed	Pan #	Pan Weight (mg)	Pan & animal dry weight (mg)	Pan & animal ash-free dry weight (mg)	Comments
Control	A	D.F.	9	9	1	46.746	63.733	54.404	
Control	B	D.F.	8	8	2	47.652	60.574	51.346	
Control	C	D.F.	8	8	3	56.987	73.487	62.268	
Control	D	D.F.	9	9	4	55.334	69.186	59.551	
Control	E	D.F.	10	10	5	46.999	60.590	50.368	
Control	F	D.F.	9	9	6	52.099	64.380	55.519	
Control	G	D.F.	8	8	7	50.122	63.789	54.972	
Control	H	D.F.	10	10	8	59.216	69.444	~~61.50~~ 61.538	
DC-22	A	[illegible]	9	9	9	53.660	80.254	69.607	
DC-22	B	[illegible]	10	10	10	51.196	67.324	58.242	
DC-22	C	[illegible]	10	10	11	46.989	58.338	49.476	
DC-22	D	J.L.	10	10	12	50.336	63.387	55.336	
DC-22	E	J.L.	9	9	13	48.760	64.999	55.939	
DC-22	F	[illegible]	10	10	14	43.518	59.118	49.922	
DC-22	G	J.L.	8	8	15	65.238	75.356	67.462	
DC-22	H	J.L.	10	10	16	57.400	71.603	61.424	
DC-23	A	J.S.	10	10	17	63.878	77.532	68.256	
DC-23	B	[illegible]	10	10	18	60.472	73.488	64.181	
DC-23	C	J.S.	10	10	19	63.080	76.046	68.000	
DC-23	D	J.S.	10	10	20	63.579	75.518	67.340	
DC-23	E	J.S.	9	9	21	66.680	78.846	70.437	
DC-23	F	J.S.	10	10	22	57.889	70.890	61.790	
DC-23	G	J.S.	9	9	23	51.440	60.999	54.288	
DC-23	H	J.S.	8	8	24	48.988	63.550	53.497	

Final Survival and Growth Information

Project: GLNPO-Duck and Otter Creeks (*Chironomus dilutus*)

Day: 10 Initials of Technician performing masss determinations: [illegible]

Date: 16 SEPT. 2011 Time: 0800 Date dry mass determined: 17 SEPT. 2011 Date ash-free dry mass determined: _____

Sediment	Replicate	Technician Initials	# live recovered	# animals Weighed	Pan #	Pan Weight (mg)	Pan & animal dry weight (mg)	Pan & animal ash-free dry weight (mg)	Comments
DC-25	A	J.S.	8	8	25	48.614	60.366	54.744	
DC-25	B	[illegible]	9	9	26	47.354	58.062	53.596	
DC-25	C	[illegible]	10	10	27	45.079	58.104	51.256	
DC-25	D	[illegible]	8	8	28	53.062	60.298	53.098	
DC-25	E	J.S.	8	8	29	51.584	64.400	57.848	
DC-25	F	J.S.	10	10	30	55.648	65.779	59.598	
DC-25	G	J.S.	9	9	31	41.740	54.766	46.226	
DC-25	H	J.S.	9	9	32	48.726	62.640	55.630	
OC-35	A	J.S.	10	10	33	54.372	63.856	57.656	
OC-35	B	J.S.	10	10	34	59.396	72.183	62.838	
OC-35	C	J.S.	10	10	35	54.482	66.422	59.606	
OC-35	D	J.S.	10	10	36	46.759	59.824	52.066	
OC-35	E	J.S.	9	9	37	49.708	59.967	53.739	
OC-35	F	J.S.	7	7	38	39.672	58.594	48.998	
OC-35	G	J.S.	8	8	39	51.689	63.669	56.144	
OC-35	H	J.S.	10	10	40	42.782	56.389	47.799	
OC-38	A	J.S.	10	10	41	46.794	61.812	55.724	
OC-38	B	J.S.	8	8	42	53.079	70.470	63.029	
OC-38	C	J.S.	9	9	43	52.136	64.474	57.186	
OC-38	D	D.F.	8	8	44	55.156	78.040	71.999	
OC-38	E	J.S.	9	9	45	49.502	60.997	55.540	
OC-38	F	JS.	10	10	46	50.142	72.576	65.384	
OC-38	G	D.F.	7	7	47	49.282	61.996 DF	54.136	
OC-38	H	J.S.	8	8	48	~~53~~.690	~~68.469~~ ~~65.479~~ 62.464	58.199	

Final Survival and Growth Information

Project: GLNPO-Duck and Otter Creeks (*Chironomus dilutus*)

Day: 10 Initials of Technician performing masss determinations: [illegible]

Date: 16 SEPT. 2011 Time: 0800 Date dry mass determined: 17 SEPT. 2011 Date ash-free dry mass determined: _____

Sediment	Replicate	Technician Initials	# live recovered	# animals Weighed	Pan #	Pan Weight (mg)	Pan & animal dry weight (mg)	Pan & animal ash-free dry weight (mg)	Comments
OC-40	A	D.F.	10	10	49	58.180	77.398	66.067	
OC-40	B	D.F.	10	10	50	53.214	77.010	65.684	
OC-40	C	D.F.	8	8	51	52.209	68.318	56.579	
OC-40	D	D.F.	10	10	52	47.880	56.147	50.778	
OC-40	E	D.F.	9	9	53	49.670	64.452	54.656	
OC-40	F	D.F.	10	10	54	49.878	67.999	54.484	
OC-40	G	D.F.	9	9	55	51.386	68.300	59.314	
OC-40	H	D.F.	7	7	56	59.116	76.026	68.670	
OC-41	A	D.F.	10	10	57	50.340	62.982	57.129	
OC-41	B	D.F.	10	10	58	54.278	68.884	~~59.~~ 59.960	
OC-41	C	J.S.	8	8	59	46.538	71.350	63.752	
OC-41	D	D.F.	10	10	60	~~50~~.272	63.~~630~~ 360	55.624	
OC-41	E	J.S.	9	9	61	49.826	66.212	58.249	
OC-41	F	D.F.	6	6	62	49.590	59.996	52.458	
OC-41	G	D.F.	7	7	63	52.588	64.980	56.437	
OC-41	H	J.S.	9	9	64	56.698	83.630	73.089	
OC-42	A	J.S.	3	3	65	46.980	47.400	47.140	
OC-42	B	J.S.	2	2	66	50.879	51.360	51.024	
OC-42	C	[illegible]	0	0	67	58.408	———	———	
OC-42	D	[illegible]	0	0	68	56.744	———	———	
OC-42	E	J.L.	4	4	69	49.352	50.010	49.508	
OC-42	F	[illegible]	0	0	70	51.712	———	———	
OC-42	G	[illegible]	0	0	71	46.344	———	———	
OC-42	H	[illegible]	2	2	72	49.620	49.969	49.750	

Final Survival and Growth Information

Project: GLNPO-Duck and Otter Creeks (*Chironomus dilutus*)

Day: 10 Initials of Technician performing masss determinations: [illegible]

Date: 16 SEPT. 2011 Time: 0800 Date dry mass determined: 17 SEPT. 2011 Date ash-free dry mass determined: _____

Sediment	Replicate	Technician Initials	# live recovered	# animals Weighed	Pan #	Pan Weight (mg)	Pan & animal dry weight (mg)	Pan & animal ash-free dry weight (mg)	Comments
OC-44	A	J.S.	6	6	73	51.850	55.779	53.036	
OC-44	B	J.L.	4	4	74	52.374	54.126	52.~~793~~ 799 DP	
OC-44	C	J.L.	3	3	75	60.299	61.137	60.630	
OC-44	D	J.L.	[illegible] X0	0	76	65.306	—	—	
OC-44	E	[illegible]	10	10	77	61.900	69.326	63.072	
OC-44	F	J.L.	6	6	78	55.658	63.986	60.614	
OC-44	G	J.L.	6	6	79	65.037	69.282	66.226	
OC-44	H	J.L.	7	7	80	54.688	59.998	56.830	
OC-45	A	J.L.	6	6	81	57.957	67.142	60.586	
OC-45	B	J.L.	8	8	82	52.550	62.669	55.808	
OC-45	C	[illegible]	9	9	83	50.904	62.888	55.348	
OC-45	D	J.L.	10	10	84	50.580	59.682	53.597	
OC-45	E	J.S.	10	10	85	55.790	68.400	60.512	
OC-45	F	[illegible]	10	10	86	49.098	62.704	54.342	
OC-45	G	J.L.	9	9	87	66.789	77.348	71.750	
OC-45	H	D.F.	10	10	88	57.998	71.263	61.677	
OC-46	A	J.L.	9	9	89	53.630	60.550	55.734	
OC-46	B	J.L.	10	10	90	51.146	62.094	55.239	
OC-46	C	J.L.	9	9	91	57.209	72.284	64.730	
OC-46	D	J.L.	9	9	92	60.282	72.776	65.640	
OC-46	E	J.L.	9	9	93	59.666	67.738	61.562	
OC-46	F	J.L.	10	10	94	59.214	68.380	61.480	
OC-46	G	J.L.	10	10	95	58.726	68.936	61.734	
OC-46	H	J.L.	10	10	96	59.540	69.828	64.289	

Signature: [illegible]

Disclosed and Understood by: [illegible]

APPENDIX D
DATA VALIDATION REPORTS

Weston Solutions, Inc.
20 North Wacker Drive, Suite 1210
Chicago, IL 60606
(312) 424-3300 fax: (312) 424-3330
www.westonsolutions.com

January 19, 2011

Ms. Brenda Jones and Mr. Ajit Vaidya
Great Lakes National Program Office
United States Environmental Protection Agency, Region V
77 West Jackson Boulevard, Mail Code: G-17J
Chicago, Illinois 60604-3507

Re: Data Review of Total Organic Carbon Analyses
For Sediment Samples Collected on November 2-4, 2010
Duck and Otter Creeks 2010 Data Gaps Investigation
Wood and Lucas Counties, Ohio
DCN: 1269-2F-ALFI

Dear Ms. Jones and Mr. Vaidya:

The United States Environmental Protection Agency (U.S. EPA) tasked Weston Solutions, Inc., (WESTON®) to perform data validation for sediment samples collected on November 2-4, 2010, for the Great Lakes National Program Office (GLNPO) Duck and Otter Creeks 2010 Data Gaps Investigation (Duck and Otter) Site. This data review is for total organic carbon (TOC) analysis of 70 sediment samples that includes 6 field splits and 6 field duplicates that were collected by the WESTON Superfund Technical Assessment and Response Team (START). The samples were validated in accordance with the "Quality Assurance Project Plan, Duck and Otter Creeks Data Gaps Investigation" dated September 28, 2010, which includes using the U.S. EPA Contract Laboratory Program National Functional Guidance for Organic and Inorganic Data Review. Table 1 provides a summary of the samples included in this review. All tables are presented at the end of this report.

The samples listed in Table 1 were analyzed by Columbia Analytical Services (CAS) located in Kelso, Washington, under the following six work orders:

- K1012377
- K1012381
- K1012413
- K1012416
- K1012421
- K1012529

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The samples were analyzed for TOC using U.S. EPA SW-846 Method 9060. CAS provided WESTON with a staged electronic data deliverable (SEDD) that was used in conjunction with the Automated Data Review (ADR) software to assist in reviewing the data. All SEDDs were imported into the ADR software for review by the software program and all data was checked for completeness. Five percent of the data was put through a full data validation. Therefore, one of the work orders, K1012377, was selected for the full data validation. Work order K1012377 contained 12 sediment samples, including 6 field splits, for TOC analysis.

Attachment A to this report contains the individual Quality Assurance/Quality Control (QA/QC) Analysis Checklist for Sediment Chemistry Analysis for work order K1012377. Attachment B to this report contains a printed report from ADR that provides a summary of results with qualifiers applied by the laboratory and the ADR program. Attachment C contains the data qualifier definitions. The QC limits utilized were those stated in the QAPP. If there was not a QC limit specified in the QAPP, then the method or laboratory-determined QC limits were used. Below is the data review summary.

SUMMARY OF TOC DATA REVIEW

As stated above, five percent of the data was fully validated. Work order K1012377 was selected for full data validation. In work order K1012377, the holding times, method blanks, calibration standards, calibration blanks, laboratory duplicates, matrix spike (MS), matrix spike duplicate (MSD), and laboratory control samples (LCS) were all within the QC limits. All sample results were based on a dry weight for the TOC analyses.

The QAPP stated that field splits (replicates) and field duplicate samples would be collected at a 10 percent frequency. There were a total of 58 field investigative samples and 6 field duplicates and 6 field splits collected. Therefore, the QAPP-stated frequency was met for the field duplicates and splits. A QC limit for field splits and field duplicates was not stated in the QAPP; therefore, a default QC limit of 50 relative percent difference (RPD) was used to evaluate field split and duplicate results. The RPDs for field split and field duplicate samples were below 50 percent except for one field duplicate which slightly exceeded this limit with an RPD of 52 percent. This one slight exceedance does not affect data usability. Field duplicate and field split results are acceptable. Tables 2 and 3 summarize the field split and field duplicate results, respectively.

Below is a discussion of the data quality indicators.

DATA QUALITY INDICATORS REVIEW

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Many the data quality indicators (sensitivity, precision, accuracy, and completeness) were evaluated through the data validation procedures which are summarized above and discussed in detail in the Attachment.

Sensitivity. The laboratory reporting limit of 0.1 percent TOC as stated in the QAPP was met for all samples. Sensitivity was acceptable.

Precision. Field precision is typically determined by evaluating the RPDs for the field split and field duplicate results. The mean RPD for field splits is 17.0 and for field duplicates is 20.2. The mean field split and duplicate RPDs indicate acceptable field precision. Table 4 summarizes the field precision results.

Laboratory precision was determined by evaluating the RPD values for MS/MSD samples and laboratory duplicates. The mean RPD for the laboratory duplicates is 3.6 and the mean RPD for MS/MSDs is 6.1. The RPDs are within the QAPP stated limits for precision. Table 4 summarizes the laboratory precision results. The laboratory precision is acceptable for the TOC analyses.

Accuracy/Bias. Accuracy is a measure of the agreement between an observed value and an accepted reference value. Laboratory accuracy was evaluated by reviewing the QC criteria for percent recovery for MS/MSD and LCS results. Table 4 summarizes the accuracy estimates for the TOC analyses. The mean percent recovery for the MS/MSD samples is 103.7 percent and for the LCS samples is 85 percent. All mean percent recoveries are within the QAPP specified QC limits. Laboratory accuracy was acceptable.

The mean MS/MSD and LCS recoveries do not indicate a bias (either high or low) for the TOC analyses.

Completeness. Completeness is a measure of the amount of valid data obtained compared to the amount of data that was planned to be collected under normal conditions. All samples results were received.

In summary, all QC indicator samples that were analyzed were mostly within control limits and no data qualifiers were applied.

If there are any questions or comments regarding this report, please do not hesitate to contact WESTON START at 312-424-3300.

Very truly yours,
Weston Solutions, Inc.

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Lisa Graczyk
WESTON START Team

Alex Clark
WESTON START Project Manager

Attachments:
Tables
A - QA/QC Analysis Checklist for TOC for Work Order K1012377
B – Analytical Data Summary Sheets from ADR for TOC
C – Data Qualifier Definitions

cc: project file

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TABLES

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TABLE 1 SAMPLES INCLUDED IN DATA REVIEW			
Sample ID	**Lab ID**	**Date Collected**	**Comment**
DC-19	K1012377-001	11/02/2010	
DC-19-01	K1012377-002	11/02/2010	
DC-19-01FS	K1012377-003	11/02/2010	Field split of DC-19-01
DC-19-02	K1012377-004	11/02/2010	
DC-19-02FS	K1012377-005	11/02/2010	Field split of DC-19-02
DC-19-03	K1012377-006	11/02/2010	
DC-19-03FS	K1012377-007	11/02/2010	Field split of DC-19-03
DC-19-04	K1012377-008	11/02/2010	
DC-19-04FS	K1012377-009	11/02/2010	Field split of DC-19-04
DC-19-05	K1012377-010	11/02/2010	
DC-19-05FS	K1012377-011	11/02/2010	Field split of DC-19-05
DC-19FS	K1012377-012	11/02/2010	Field split of DC-19
DC-13-01	K1012381-001	11/02/2010	
DC-13-02	K1012381-002	11/02/2010	
DC-13-03	K1012381-003	11/02/2010	
DC-13-04	K1012381-004	11/02/2010	
DC-17	K1012381-005	11/02/2010	
DC-17-01	K1012381-006	11/02/2010	
DC-17-02	K1012381-007	11/02/2010	
DC-17-03	K1012381-008	11/02/2010	
DC-17-04	K1012381-009	11/02/2010	
DC-17-05	K1012381-010	11/02/2010	
DC-17-06	K1012381-011	11/02/2010	
DC-17-07	K1012381-012	11/02/2010	
DC-13	K1012413-001	11/02/2010	
DC-16	K1012413-002	11/02/2010	
DC-16-01	K1012413-003	11/02/2010	
DC-16-02	K1012413-004	11/02/2010	
DC-16-03	K1012413-005	11/02/2010	
DC-16-04	K1012413-006	11/02/2010	
DC-16-05	K1012413-007	11/02/2010	
DC-16-06	K1012413-008	11/02/2010	
DC-16-07	K1012413-009	11/02/2010	
OC-26	K1012416-001	11/03/2010	
OC-26-01	K1012416-002	11/03/2010	
OC-26-01DP	K1012416-003	11/03/2010	Field duplicate of OC-26-01
OC-26-02	K1012416-004	11/03/2010	

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TABLE 1
SAMPLES INCLUDED IN DATA REVIEW

Sample ID	Lab ID	Date Collected	Comment
OC-26-02DP	K1012416-005	11/03/2010	Field duplicate of OC-26-02
OC-27	K1012416-006	11/03/2010	
OC-27-01	K1012416-007	11/03/2010	
OC-27-02	K1012416-008	11/03/2010	
OC-27DP	K1012416-009	11/03/2010	Field duplicate of OC-27
DC-14	K1012421-001	11/03/2010	
DC-14-01	K1012421-002	11/03/2010	
DC-14-02	K1012421-003	11/03/2010	
DC-14-03	K1012421-004	11/03/2010	
DC-14-04	K1012421-005	11/03/2010	
DC-14-05	K1012421-006	11/03/2010	
OC-28	K1012421-007	11/03/2010	
OC-28-01	K1012421-008	11/03/2010	
OC-28-02	K1012421-009	11/03/2010	
OC-28-03	K1012421-010	11/03/2010	
OC-31-01	K1012529-001	11/04/2010	
OC-31-02	K1012529-002	11/04/2010	
OC-31DP	K1012529-003	11/04/2010	Field duplicate of OC-31
OC-32	K1012529-004	11/04/2010	
OC-32-01	K1012529-005	11/04/2010	
OC-32-02	K1012529-006	11/04/2010	
OC-32DP	K1012529-007	11/04/2010	Field duplicate of OC-32
OC-33	K1012529-008	11/04/2010	
OC-33-01	K1012529-009	11/04/2010	
OC-33-02	K1012529-010	11/04/2010	
OC-29	K1012529-011	11/04/2010	
OC-29-01	K1012529-012	11/04/2010	
OC-29-02	K1012529-013	11/04/2010	
OC-30	K1012529-014	11/04/2010	
OC-30-01	K1012529-015	11/04/2010	
OC-30-02	K1012529-016	11/04/2010	
OC-30DP	K1012529-017	11/04/2010	Field duplicate of OC-30
OC-31	K1012529-018	11/04/2010	

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TABLE 2
FIELD SPLIT RESULTS

Analyte	Sample: DC-19-01FS			Sample: DC-19-02FS		
	Sample Result (%)	Replicate Result (%)	RPD	Sample Result (%)	Replicate Result (%)	RPD
TOC	4.77	5.66	17.1	2.48	2.42	2.4
Analyte	**Sample: DC-19-03FS**			**Sample: DC-19-04FS**		
	Sample Result (%)	Replicate Result (%)	RPD	Sample Result (mg/kg)	Replicate Result (mg/kg)	RPD
TOC	2.74	2.61	4.9	4.41	2.85	43.0
Analyte	**Sample: DC-19-05FS**			**Sample: DC-19FS**		
	Sample Result (%)	Replicate Result (%)	RPD	Sample Result (mg/kg)	Replicate Result (mg/kg)	RPD
TOC	3.44	2.57	29.0	9.86	9.32	5.6

Notes:

RPD – Relative Percent Difference
TOC – Total Organic Carbon

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TABLE 3
FIELD DUPLICATE RESULTS

Analyte	Sample: OC-26-01DP			Sample: OC-26-02DP		
	Sample Result (%)	Replicate Result (%)	RPD	Sample Result (%)	Replicate Result (%)	RPD
TOC	1.71	1.74	1.7	0.824	0.553	39.4
Analyte	**Sample: OC-27DP**			**Sample: OC-31DP**		
	Sample Result (%)	Replicate Result (%)	RPD	Sample Result (mg/kg)	Replicate Result (mg/kg)	RPD
TOC	3.47	4.03	14.9	1.77	1.9	7.1
Analyte	**Sample: OC-32DP**			**Sample: OC-30DP**		
	Sample Result (%)	Replicate Result (%)	RPD	Sample Result (mg/kg)	Replicate Result (mg/kg)	RPD
TOC	3.67	2.14	52.7	2.39	2.27	5.2

Notes:
Highlighted RPD results indicate and RPD greater than 50 percent.

RPD – Relative Percent Difference
TOC – Total Organic Carbon

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TABLE 4
QUANTITATIVE DATA ASSESSMENT
FOR TOC

	Field Precision		Analytical Precision		Analytical Accuracy/Bias	
Parameter	**Mean Field Split RPD (%) (n=6)**	**Field Duplicate RPD (%) (n=6)**	**MS/MSD RPD (%) (n=7)**	**Mean Laboratory Duplicate RPD (%) (n=7)**	**Mean MS/MSD Recovery (%) (n=14)**	**Mean LCS Recovery (%) (n=14)**
TOC	17.0	20.2	6.1	3.6	103.7	85

Notes:
LCS – Laboratory Control Sample
MS – Matrix Spike
MSD – Matrix Spike Duplicate
RPD – Relative Percent Difference
TOC – Total Organic Carbon

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ATTACHMENT A

QA/QC ANALYSIS CHECKLIST FOR TOC FOR WORK ORDER K1012377

TOC BY SW-846 METHOD 9060

WORK ORDER # K1012377

QA/QC Analysis Checklist for Sediment Chemistry Analysis

GRANT/IAG NUMBER: Not Applicable
PROJECT NAME: GLNPO Duck and Otter Creeks 2010 Data Gaps Investigation
REVIEWER: Lisa Graczyk, WESTON START
DATE: January 19, 2011

1. What sediment chemistry data has been collected (CHECK ALL THAT APPLY)?

Total Metals ____	PCBs _____	pH _____	TOC __X__
Dioxins/Furans _____	PAHs _____	Pesticides _____	DO _____
AVS _____	SEM Metals _____	Particle Size _____	Other _____

2. Were the target detection limits met for each parameter?

Yes X
No _____ (EXPLAIN)

The TOC analysis met the reporting limit stated in the QAPP of 0.05 percent (%).

3. Were the method blanks less than the established MDL for each parameter?

Yes X
No _____ (EXPLAIN)

The method blank did not contain TOC detections above the reporting limit.

4. Did the results of Field Replicate Analysis vary by less than the % RPD specified in the QAPP?

Yes X
No _____ (EXPLAIN)

5. Did the results of the Field Duplicates Analysis vary by less than the % RPD specified in the QAPP?

Yes	Not Applicable	
No		(EXPLAIN)

6. Did the surrogate spike/internal standards recoveries meet the limits set forth in the QAPP?

Yes	Not Applicable	
No		(EXPLAIN)

Surrogates and internal standards do not apply to the TOC analysis.

7. Did the MS/MSD recoveries meet the limits set forth in the QAPP?

Yes	X	
No		(EXPLAIN)

8. Did the RPD (%) of the MS/MSD sample set meet the limits set forth in the QAPP?

Yes	X	
No		(EXPLAIN)

9. Did the LCS recoveries meet the limits set forth in the QAPP?

Yes	X	
No		(EXPLAIN)

An LCS was analyzed with the TOC analysis and the recovery was within the QAPP-specified QC limit.

10. Did the calibration verification standards (ICVs and CCVs) meet the requirements set forth in the QAPP?

Yes	X	
No		(EXPLAIN)

The QAPP did not specify QC limits for the CCV recoveries and method 9060 does not present a QC limit for CCV recoveries. The CCV recoveries were mostly within a QC limit of 90 to 110 percent recovery. A couple of the CCV recoveries were slightly above the 110 percent limit at 111 and 113 percent. No qualification was applied for this minor discrepancy.

11. Did the calibration blanks (ICBs and CCBs) meet the limits set forth in the QAPP?

Yes	X	
No		

The calibration blanks did not contain detections of TOC.

12. Did the interference check samples meet the limits set forth in the QAPP?

Yes	Not Applicable	
No		(EXPLAIN)

ICSs are not applicable to TOC analysis.

13. Did the serial dilution samples meet the limits set forth in the QAPP?

Yes	Not Applicable	
No		(EXPLAIN)

Serial dilutions are not applicable to TOC analysis.

14. Were any level of contaminants detected above the MDL for the trip blanks and storage blanks?

Yes	Not Applicable	
No		(EXPLAIN)

Trip blanks and storage blanks are not applicable to this method.

15. Did all required analyses take place within the required holding time protocols set forth in the QAPP?

Yes	X	
No		(EXPLAIN)

The analyses were performed in the holding time limit of 28 days from collection to analysis.

16. Did the laboratory duplicates vary by less than the % RPD specified in the QAPP?

Yes	X	
No		(EXPLAIN)

17. Are measured dry-weight contaminant concentrations reported?

Yes	X	
No		(EXPLAIN)

Dry weight concentrations were reported.

18. Please provide details for all of the "UNACCEPTABLE" marked above. Include details on the specific analytes affected by any QA/QC discrepancies, and recommendations regarding usability of data.

Any items with “UNACCEPTABLE” marked above are described immediately following the “UNACCEPTABLE” marking in the corresponding item above.

The data are acceptable for use.

Data Validation Report
GLNPO Duck and Otter Creeks 2010 Data Gaps Investigation
Columbia Analytical Services
Laboratory Work Order #: K1012377

ATTACHMENT B

ANALYTICAL DATA SUMMARY SHEETS FROM ADR FOR TOC

Sample Qualification Report (All Analytes)

Client Sample ID : DC-19 **Lab Report Batch :** K1012377 **Lab ID :** CAS_K

Sample Date : 11/02/2010 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1012377-001

Reviewed By / Date : **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 9060M					**Dilution: 1**															
Carbon, Total Organic	9.86		%		YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data revie

Sample Qualification Report (All Analytes)

Client Sample ID : DC-19-01 **Lab Report Batch :** K1012377 **Lab ID :** CAS_K

Sample Date : 11/02/2010 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1012377-002

Reviewed By / Date : **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 9060M					**Dilution: 1**															
Carbon, Total Organic	4.77		%		YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data revie

Sample Qualification Report (All Analytes)

Client Sample ID : DC-19-01FS
Lab Report Batch : K1012377
Lab ID : CAS_K
Sample Date : 11/02/2010
Analysis Type: 1RES
Sample Matrix : SED
Lab Sample ID: K1012377-003

Reviewed By / Date :

Approved By / Date :

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 9060M					**Dilution: 1**															
Carbon, Total Organic	5.66		%		YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data revie

Sample Qualification Report (All Analytes)

Client Sample ID : DC-19-02 **Lab Report Batch :** K1012377 **Lab ID :** CAS_K

Sample Date : 11/02/2010 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1012377-004

Reviewed By / Date : **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 9060M					**Dilution: 1**															
Carbon, Total Organic	2.48		%		YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data revie

Sample Qualification Report (All Analytes)

Client Sample ID : DC-19-02FS
Lab Report Batch : K1012377
Lab ID : CAS_K
Sample Date : 11/02/2010
Analysis Type: 1RES
Sample Matrix : SED
Lab Sample ID: K1012377-005

Reviewed By / Date :

Approved By / Date :

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 9060M					**Dilution: 1**															
Carbon, Total Organic	2.42		%		YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data revie

Sample Qualification Report (All Analytes)

Client Sample ID : DC-19-03 **Lab Report Batch :** K1012377 **Lab ID :** CAS_K

Sample Date : 11/02/2010 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1012377-006

Reviewed By / Date : **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 9060M					**Dilution: 1**															
Carbon, Total Organic	2.74		%		YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data revie

Sample Qualification Report (All Analytes)

Client Sample ID : DC-19-03FS
Lab Report Batch : K1012377
Lab ID : CAS_K
Sample Date : 11/02/2010
Analysis Type: 1RES
Sample Matrix : SED
Lab Sample ID: K1012377-007

Reviewed By / Date :

Approved By / Date :

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 9060M					**Dilution: 1**															
Carbon, Total Organic	2.61		%		YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data revie

Sample Qualification Report (All Analytes)

Client Sample ID : DC-19-04 **Lab Report Batch :** K1012377 **Lab ID :** CAS_K

Sample Date : 11/02/2010 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1012377-008

Reviewed By / Date : **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 9060M					**Dilution: 1**															
Carbon, Total Organic	4.41		%		YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data revie

Sample Qualification Report (All Analytes)

Client Sample ID : DC-19-04FS
Lab Report Batch : K1012377
Lab ID : CAS_K
Sample Date : 11/03/2010
Analysis Type: 1RES
Sample Matrix : SED
Lab Sample ID: K1012377-009

Reviewed By / Date :

Approved By / Date :

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 9060M					**Dilution: 1**															
Carbon, Total Organic	2.85		%		YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data revie

Sample Qualification Report (All Analytes)

Client Sample ID : DC-19-05 **Lab Report Batch :** K1012377 **Lab ID :** CAS_K

Sample Date : 11/02/2010 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1012377-010

Reviewed By / Date : **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 9060M					**Dilution: 1**															
Carbon, Total Organic	3.44		%		YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data revie

Sample Qualification Report (All Analytes)

Client Sample ID : DC-19-05FS
Lab Report Batch : K1012377
Lab ID : CAS_K
Sample Date : 11/02/2010
Analysis Type: 1RES
Sample Matrix : SED
Lab Sample ID: K1012377-011

Reviewed By / Date :

Approved By / Date :

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 9060M					**Dilution: 1**															
Carbon, Total Organic	2.57		%		YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data revie

Sample Qualification Report (All Analytes)

Client Sample ID : DC-19FS
Lab Report Batch : K1012377
Lab ID : CAS_K
Sample Date : 11/02/2010
Analysis Type: 1RES
Sample Matrix : SED
Lab Sample ID: K1012377-012

Reviewed By / Date :

Approved By / Date :

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 9060M					**Dilution: 1**															
Carbon, Total Organic	9.32		%		YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data revie

Sample Qualification Report (All Analytes)

Client Sample ID : DC-13-01 **Lab Report Batch :** K1012381 **Lab ID :** CAS_K

Sample Date : 11/02/2010 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1012381-001

Reviewed By / Date : **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 9060M					**Dilution: 1**															
Carbon, Total Organic	5.49		%		YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data revie

Sample Qualification Report (All Analytes)

Client Sample ID : DC-13-02 **Lab Report Batch :** K1012381 **Lab ID :** CAS_K

Sample Date : 11/02/2010 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1012381-002

Reviewed By / Date : **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 9060M					**Dilution: 1**															
Carbon, Total Organic	3.05		%		YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data revie

Sample Qualification Report (All Analytes)

Client Sample ID : DC-13-03 **Lab Report Batch :** K1012381 **Lab ID :** CAS_K

Sample Date : 11/02/2010 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1012381-003

Reviewed By / Date : **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 9060M					**Dilution: 1**															
Carbon, Total Organic	6.25		%		YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data revie

Sample Qualification Report (All Analytes)

Client Sample ID : DC-13-04 **Lab Report Batch :** K1012381 **Lab ID :** CAS_K

Sample Date : 11/02/2010 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1012381-004

Reviewed By / Date : **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 9060M					**Dilution: 1**															
Carbon, Total Organic	10.7		%		YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data revie

Sample Qualification Report (All Analytes)

Client Sample ID : DC-17 **Lab Report Batch :** K1012381 **Lab ID :** CAS_K

Sample Date : 11/02/2010 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1012381-005

Reviewed By / Date : **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 9060M					**Dilution: 1**															
Carbon, Total Organic	14.4		%		YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data revie

Sample Qualification Report (All Analytes)

Client Sample ID : DC-17-01 **Lab Report Batch :** K1012381 **Lab ID :** CAS_K

Sample Date : 11/02/2010 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1012381-006

Reviewed By / Date : **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 9060M					**Dilution: 1**															
Carbon, Total Organic	3.62		%		YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data revie

Sample Qualification Report (All Analytes)

Client Sample ID : DC-17-02 **Lab Report Batch :** K1012381 **Lab ID :** CAS_K

Sample Date : 11/02/2010 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1012381-007

Reviewed By / Date : **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 9060M					**Dilution: 1**															
Carbon, Total Organic	3.34		%		YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data revie

Sample Qualification Report (All Analytes)

Client Sample ID : DC-17-03 **Lab Report Batch :** K1012381 **Lab ID :** CAS_K

Sample Date : 11/02/2010 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1012381-008

Reviewed By / Date : **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 9060M					**Dilution: 1**															
Carbon, Total Organic	2.04		%		YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data revie

Sample Qualification Report (All Analytes)

Client Sample ID : DC-17-04 **Lab Report Batch :** K1012381 **Lab ID :** CAS_K

Sample Date : 11/02/2010 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1012381-009

Reviewed By / Date : **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 9060M					**Dilution: 1**															
Carbon, Total Organic	2.45		%		YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data revie

Sample Qualification Report (All Analytes)

Client Sample ID : DC-17-05 **Lab Report Batch :** K1012381 **Lab ID :** CAS_K

Sample Date : 11/02/2010 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1012381-010

Reviewed By / Date : **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 9060M					**Dilution: 1**															
Carbon, Total Organic	2.73		%		YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data revie

Sample Qualification Report (All Analytes)

Client Sample ID : DC-17-06 **Lab Report Batch :** K1012381 **Lab ID :** CAS_K

Sample Date : 11/02/2010 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1012381-011

Reviewed By / Date : **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 9060M					**Dilution: 1**															
Carbon, Total Organic	2.79		%		YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data revie

Sample Qualification Report (All Analytes)

Client Sample ID : DC-17-07 **Lab Report Batch :** K1012381 **Lab ID :** CAS_K

Sample Date : 11/02/2010 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1012381-012

Reviewed By / Date : **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 9060M					**Dilution: 1**															
Carbon, Total Organic	2.88		%		YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data revie

Sample Qualification Report (All Analytes)

Client Sample ID : DC-13 **Lab Report Batch :** K1012413 **Lab ID :** CAS_K

Sample Date : 11/02/2010 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1012413-001

Reviewed By / Date : **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 9060M					**Dilution: 1**															
Carbon, Total Organic	33.6		%		YES															

Project Number and Name: **40479 - Duck and Otter Creek** **Library Used:** **Duck and Otter**

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data revie

Sample Qualification Report (All Analytes)

Client Sample ID : DC-16 **Lab Report Batch :** K1012413 **Lab ID :** CAS_K

Sample Date : 11/02/2010 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1012413-002

Reviewed By / Date : **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 9060M					**Dilution: 1**															
Carbon, Total Organic	18.8		%		YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data revie

Sample Qualification Report (All Analytes)

Client Sample ID : DC-16-01 **Lab Report Batch :** K1012413 **Lab ID :** CAS_K

Sample Date : 11/02/2010 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1012413-003

Reviewed By / Date : **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 9060M					**Dilution: 1**															
Carbon, Total Organic	4.00		%		YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data revie

Sample Qualification Report (All Analytes)

Client Sample ID : DC-16-02 **Lab Report Batch :** K1012413 **Lab ID :** CAS_K

Sample Date : 11/02/2010 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1012413-004

Reviewed By / Date : **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 9060M					**Dilution: 1**															
Carbon, Total Organic	3.36		%		YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data revie

Sample Qualification Report (All Analytes)

Client Sample ID : DC-16-03 **Lab Report Batch :** K1012413 **Lab ID :** CAS_K

Sample Date : 11/02/2010 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1012413-005

Reviewed By / Date : **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 9060M					**Dilution: 1**															
Carbon, Total Organic	4.16		%		YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data revie

Sample Qualification Report (All Analytes)

Client Sample ID : DC-16-04 **Lab Report Batch :** K1012413 **Lab ID :** CAS_K

Sample Date : 11/02/2010 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1012413-006

Reviewed By / Date : **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 9060M					**Dilution: 1**															
Carbon, Total Organic	3.15		%		YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data revie

Sample Qualification Report (All Analytes)

Client Sample ID : DC-16-05 **Lab Report Batch :** K1012413 **Lab ID :** CAS_K

Sample Date : 11/02/2010 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1012413-007

Reviewed By / Date : **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 9060M					**Dilution: 1**															
Carbon, Total Organic	2.55		%		YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data revie

Sample Qualification Report (All Analytes)

Client Sample ID : DC-16-06 **Lab Report Batch :** K1012413 **Lab ID :** CAS_K

Sample Date : 11/02/2010 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1012413-008

Reviewed By / Date : **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 9060M					**Dilution: 1**															
Carbon, Total Organic	3.65		%		YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data revie

Sample Qualification Report (All Analytes)

Client Sample ID : DC-16-07 **Lab Report Batch :** K1012413 **Lab ID :** CAS_K

Sample Date : 11/02/2010 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1012413-009

Reviewed By / Date : **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 9060M					**Dilution: 1**															
Carbon, Total Organic	2.88		%		YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data revie

Sample Qualification Report (All Analytes)

Client Sample ID : OC-26 **Lab Report Batch :** K1012416 **Lab ID :** CAS_K

Sample Date : 11/03/2010 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1012416-001

Reviewed By / Date : **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 9060M					**Dilution: 1**															
Carbon, Total Organic	2.47		%		YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data revie

Sample Qualification Report (All Analytes)

Client Sample ID : OC-26-01 **Lab Report Batch :** K1012416 **Lab ID :** CAS_K

Sample Date : 11/03/2010 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1012416-002

Reviewed By / Date : **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 9060M					**Dilution: 1**															
Carbon, Total Organic	1.71		%		YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data revie

Sample Qualification Report (All Analytes)

Client Sample ID : OC-26-01DP
Lab Report Batch : K1012416
Lab ID : CAS_K
Sample Date : 11/03/2010
Analysis Type: 1RES
Sample Matrix : SED
Lab Sample ID: K1012416-003

Reviewed By / Date :

Approved By / Date :

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 9060M					**Dilution: 1**															
Carbon, Total Organic	1.74		%		YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data revie

Sample Qualification Report (All Analytes)

Client Sample ID : OC-26-02 **Lab Report Batch :** K1012416 **Lab ID :** CAS_K

Sample Date : 11/03/2010 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1012416-004

Reviewed By / Date : **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 9060M					**Dilution: 1**															
Carbon, Total Organic	0.824		%		YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data revie

Sample Qualification Report (All Analytes)

Client Sample ID : OC-26-02DP
Lab Report Batch : K1012416
Lab ID : CAS_K
Sample Date : 11/03/2010
Analysis Type: 1RES
Sample Matrix : SED
Lab Sample ID: K1012416-005

Reviewed By / Date :

Approved By / Date :

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 9060M					**Dilution: 1**															
Carbon, Total Organic	0.553		%		YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data revie

Sample Qualification Report (All Analytes)

Client Sample ID : OC-27 **Lab Report Batch :** K1012416 **Lab ID :** CAS_K

Sample Date : 11/03/2010 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1012416-006

Reviewed By / Date : **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 9060M					**Dilution: 1**															
Carbon, Total Organic	3.47		%		YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data revie

Sample Qualification Report (All Analytes)

Client Sample ID : OC-27-01 **Lab Report Batch :** K1012416 **Lab ID :** CAS_K

Sample Date : 11/03/2010 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1012416-007

Reviewed By / Date : **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 9060M					**Dilution: 1**															
Carbon, Total Organic	1.74		%		YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data revie

Sample Qualification Report (All Analytes)

Client Sample ID : OC-27-02 **Lab Report Batch :** K1012416 **Lab ID :** CAS_K

Sample Date : 11/03/2010 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1012416-008

Reviewed By / Date : **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 9060M					**Dilution: 1**															
Carbon, Total Organic	0.848		%		YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data revie

Sample Qualification Report (All Analytes)

Client Sample ID : OC-27-DP
Lab Report Batch : K1012416
Lab ID : CAS_K
Sample Date : 11/03/2010
Analysis Type: 1RES
Sample Matrix : SED
Lab Sample ID: K1012416-009

Reviewed By / Date :

Approved By / Date :

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 9060M					**Dilution: 1**															
Carbon, Total Organic	4.03		%		YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data revie

Sample Qualification Report (All Analytes)

Client Sample ID : DC-14 **Lab Report Batch :** K1012421 **Lab ID :** CAS_K

Sample Date : 11/03/2010 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1012421-001

Reviewed By / Date : **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 9060M					**Dilution: 1**															
Carbon, Total Organic	9.05		%		YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data revie

Sample Qualification Report (All Analytes)

Client Sample ID : DC-14-01 **Lab Report Batch :** K1012421 **Lab ID :** CAS_K

Sample Date : 11/03/2010 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1012421-002

Reviewed By / Date : **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 9060M					**Dilution: 1**															
Carbon, Total Organic	4.98		%		YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data revie

Sample Qualification Report (All Analytes)

Client Sample ID : DC-14-02 **Lab Report Batch :** K1012421 **Lab ID :** CAS_K

Sample Date : 11/03/2010 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1012421-003

Reviewed By / Date : **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 9060M					**Dilution: 1**															
Carbon, Total Organic	2.51		%		YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data revie

Sample Qualification Report (All Analytes)

Client Sample ID : DC-14-03 **Lab Report Batch :** K1012421 **Lab ID :** CAS_K

Sample Date : 11/03/2010 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1012421-004

Reviewed By / Date : **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 9060M					**Dilution: 1**															
Carbon, Total Organic	3.56		%		YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data revie

Sample Qualification Report (All Analytes)

Client Sample ID : DC-14-04 **Lab Report Batch :** K1012421 **Lab ID :** CAS_K

Sample Date : 11/03/2010 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1012421-005

Reviewed By / Date : **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 9060M					**Dilution: 1**															
Carbon, Total Organic	3.6		%		YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data revie

Sample Qualification Report (All Analytes)

Client Sample ID : DC-14-05 **Lab Report Batch :** K1012421 **Lab ID :** CAS_K

Sample Date : 11/03/2010 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1012421-006

Reviewed By / Date : **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 9060M					**Dilution: 1**															
Carbon, Total Organic	3.53		%		YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data revie

Sample Qualification Report (All Analytes)

Client Sample ID : OC-28 **Lab Report Batch :** K1012421 **Lab ID :** CAS_K

Sample Date : 11/03/2010 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1012421-007

Reviewed By / Date : **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 9060M					**Dilution: 1**															
Carbon, Total Organic	5.67		%		YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data revie

Sample Qualification Report (All Analytes)

Client Sample ID : OC-28-01 **Lab Report Batch :** K1012421 **Lab ID :** CAS_K

Sample Date : 11/03/2010 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1012421-008

Reviewed By / Date : **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 9060M					**Dilution: 1**															
Carbon, Total Organic	8.27		%		YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data revie

Sample Qualification Report (All Analytes)

Client Sample ID : OC-28-02 **Lab Report Batch :** K1012421 **Lab ID :** CAS_K

Sample Date : 11/03/2010 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1012421-009

Reviewed By / Date : **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 9060M					**Dilution: 1**															
Carbon, Total Organic	0.539		%		YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data revie

Sample Qualification Report (All Analytes)

Client Sample ID : OC-28-03 **Lab Report Batch :** K1012421 **Lab ID :** CAS_K

Sample Date : 11/03/2010 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1012421-010

Reviewed By / Date : **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 9060M					**Dilution: 1**															
Carbon, Total Organic	0.636		%		YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data revie

Sample Qualification Report (All Analytes)

Client Sample ID : OC-29 **Lab Report Batch :** K1012529 **Lab ID :** CAS_K

Sample Date : 11/04/2010 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1012529-011

Reviewed By / Date : **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 9060M					**Dilution: 1**															
Carbon, Total Organic	3.05		%		YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data revie

Sample Qualification Report (All Analytes)

Client Sample ID : OC-29-01 **Lab Report Batch :** K1012529 **Lab ID :** CAS_K

Sample Date : 11/04/2010 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1012529-012

Reviewed By / Date : **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 9060M					**Dilution: 1**															
Carbon, Total Organic	2.08		%		YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data revie

Sample Qualification Report (All Analytes)

Client Sample ID : OC-29-02 **Lab Report Batch :** K1012529 **Lab ID :** CAS_K

Sample Date : 11/04/2010 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1012529-013

Reviewed By / Date : **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 9060M					**Dilution: 1**															
Carbon, Total Organic	0.930		%		YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data revie

Sample Qualification Report (All Analytes)

Client Sample ID : OC-30 **Lab Report Batch :** K1012529 **Lab ID :** CAS_K

Sample Date : 11/04/2010 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1012529-014

Reviewed By / Date : **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 9060M					**Dilution: 1**															
Carbon, Total Organic	2.39		%		YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data revie

Sample Qualification Report (All Analytes)

Client Sample ID : OC-30-01 **Lab Report Batch :** K1012529 **Lab ID :** CAS_K

Sample Date : 11/04/2010 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1012529-015

Reviewed By / Date : **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 9060M					**Dilution: 1**															
Carbon, Total Organic	1.41		%		YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data revie

Sample Qualification Report (All Analytes)

Client Sample ID : OC-30-02 **Lab Report Batch :** K1012529 **Lab ID :** CAS_K

Sample Date : 11/04/2010 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1012529-016

Reviewed By / Date : **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 9060M					**Dilution: 1**															
Carbon, Total Organic	0.510		%		YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data revie

Sample Qualification Report (All Analytes)

Client Sample ID : OC-30DP
Lab Report Batch : K1012529
Lab ID : CAS_K
Sample Date : 11/04/2010
Analysis Type: 1RES
Sample Matrix : SED
Lab Sample ID: K1012529-017

Reviewed By / Date :

Approved By / Date :

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 9060M					**Dilution: 1**															
Carbon, Total Organic	2.27		%		YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data revie

Sample Qualification Report (All Analytes)

Client Sample ID : OC-31 **Lab Report Batch :** K1012529 **Lab ID :** CAS_K

Sample Date : 11/04/2010 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1012529-018

Reviewed By / Date : **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 9060M					**Dilution: 1**															
Carbon, Total Organic	1.77		%		YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data revie

Sample Qualification Report (All Analytes)

Client Sample ID : OC-31-01 **Lab Report Batch :** K1012529 **Lab ID :** CAS_K

Sample Date : 11/04/2010 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1012529-001

Reviewed By / Date : **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 9060M					**Dilution: 1**															
Carbon, Total Organic	0.528		%		YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data revie

Sample Qualification Report (All Analytes)

Client Sample ID : OC-31-02 **Lab Report Batch :** K1012529 **Lab ID :** CAS_K

Sample Date : 11/04/2010 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1012529-002

Reviewed By / Date : **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 9060M					**Dilution: 1**															
Carbon, Total Organic	1.10		%		YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data revie

Sample Qualification Report (All Analytes)

Client Sample ID : OC-31DP
Lab Report Batch : K1012529
Lab ID : CAS_K
Sample Date : 11/04/2010
Analysis Type: 1RES
Sample Matrix : SED
Lab Sample ID: K1012529-003

Reviewed By / Date :

Approved By / Date :

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 9060M					**Dilution: 1**															
Carbon, Total Organic	1.90		%		YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data revie

Sample Qualification Report (All Analytes)

Client Sample ID : OC-32 **Lab Report Batch :** K1012529 **Lab ID :** CAS_K

Sample Date : 11/04/2010 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1012529-004

Reviewed By / Date : **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 9060M					**Dilution: 1**															
Carbon, Total Organic	3.67		%		YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data revie

Sample Qualification Report (All Analytes)

Client Sample ID : OC-32-01 **Lab Report Batch :** K1012529 **Lab ID :** CAS_K

Sample Date : 11/04/2010 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1012529-005

Reviewed By / Date : **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 9060M					**Dilution: 1**															
Carbon, Total Organic	1.29		%		YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data revie

Sample Qualification Report (All Analytes)

Client Sample ID : OC-32-02 **Lab Report Batch :** K1012529 **Lab ID :** CAS_K

Sample Date : 11/04/2010 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1012529-006

Reviewed By / Date : **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 9060M					**Dilution: 1**															
Carbon, Total Organic	0.425		%		YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data revie

Sample Qualification Report (All Analytes)

Client Sample ID : OC-32DP
Lab Report Batch : K1012529
Lab ID : CAS_K
Sample Date : 11/04/2010
Analysis Type: 1RES
Sample Matrix : SED
Lab Sample ID: K1012529-007

Reviewed By / Date :

Approved By / Date :

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 9060M					**Dilution: 1**															
Carbon, Total Organic	2.14		%		YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data revie

Sample Qualification Report (All Analytes)

Client Sample ID : OC-33 **Lab Report Batch :** K1012529 **Lab ID :** CAS_K

Sample Date : 11/04/2010 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1012529-008

Reviewed By / Date : **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 9060M					**Dilution: 1**															
Carbon, Total Organic	1.87		%		YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data revie

Sample Qualification Report (All Analytes)

Client Sample ID : OC-33-01 **Lab Report Batch :** K1012529 **Lab ID :** CAS_K

Sample Date : 11/04/2010 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1012529-009

Reviewed By / Date : **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 9060M					**Dilution: 1**															
Carbon, Total Organic	1.66		%		YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data revie

Sample Qualification Report (All Analytes)

Client Sample ID : OC-33-02 **Lab Report Batch :** K1012529 **Lab ID :** CAS_K

Sample Date : 11/04/2010 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1012529-010

Reviewed By / Date : **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 9060M					**Dilution: 1**															
Carbon, Total Organic	0.458		%		YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data revie

ATTACHMENT C

DATA QUALIFIER DEFINITIONS

LABORATORY DATA QUALIFIER DEFITIONS

Not Applicable

DATA VALIDATION DATA QUALIFIER DEFITIONS

Not Applicable

Weston Solutions, Inc.
20 North Wacker Drive, Suite 1210
Chicago, IL 60606
(312) 424-3300 fax: (312) 424-3330
www.westonsolutions.com

March 17, 2011

Ms. Brenda Jones and Mr. Ajit Vaidya
Great Lakes National Program Office
United States Environmental Protection Agency, Region V
77 West Jackson Boulevard, Mail Code: G-17J
Chicago, Illinois 60604-3507

Re: Data Review of Semivolatile Organic Compounds (SVOC) Analysis
For Sediment Samples Collected on October 15, 2010
CLP Case No. 40638, SDG No. E01T8
Duck and Otter Creeks 2010 Data Gaps Investigation
Wood and Lucas Counties, Ohio
DCN: 1030-2F-ALGI

Dear Ms. Jones and Mr. Vaidya:

The United States Environmental Protection Agency (U.S. EPA) tasked Weston Solutions, Inc., (WESTON®) to perform data validation for the five percent of the sediment samples collected in October 2010 for the Great Lakes National Program Office (GLNPO) Duck and Otter Creeks 2010 Data Gaps Investigation Site. This data review is for SVOC analyses of five sediment samples that include one field duplicate sample that were collected by WESTON and analyzed under Sample Delivery Group (SDG) number E01T8. The samples were validated in accordance with the "Quality Assurance Project Plan, Duck and Otter Creeks Data Gaps Investigation" dated September 28, 2010, which includes using the U.S. EPA Contract Laboratory Program (CLP) National Functional Guidance for Organic and Inorganic Data Review. Table 1 provides a summary of the samples included in this review. All tables are presented at the end of this report.

The samples listed in Table 1 were analyzed under the U.S. EPA CLP by ALS Laboratory Group (ALS) located in Salt Lake City, Utah, under case number 40638. Because only five percent of data is to be validated, SDG number E01T8 was selected for data validation.

Sediment samples were analyzed for SVOCs using U.S. EPA CLP Statement of Work (SOW) SOM01.2 which utilizes gas chromatography/mass spectrometry (GC/MS). Table 2 provides a list of the SVOCs that were analyzed. ALS did not provide a Staged Electronic Data Deliverable

(SEDD) with the CLP analytical package. Therefore, the Automated Data Review (ADR) software was not utilized to assist in reviewing this data.

Attachment A to this report contains the individual Quality Assurance/Quality Control (QA/QC) Analysis Checklist for Sediment Chemistry Analysis for SDG E01T8. Attachment B to this report contains a printed summary report of sample results with hand-written qualifiers that were applied during the data review. Attachment C to this report contains a list of the data qualifiers associated with the sample results. The QC limits utilized were those stated in the Quality Assurance Project Plan (QAPP). If there was not a QC limit specified in the QAPP, then the method or laboratory-determined QC limits were used. Below is the data review summary.

SUMMARY OF SVOC DATA REVIEW

The holding times, continuing calibration, method blank, surrogates, internal standards, instrument check, matrix spike (MS), and matrix spike duplicate (MSD) were within the QC limits.

The relative percent differences (RPD) calculated for the field duplicate pairs were high. In addition, there was one minor problem with the initial calibration which did not require sample qualification. These issues are discussed in further detail below under Minor Problems.

Below is a review of the minor problems associated with QC failures and a summary of the data quality indicators associated with the SVOC analysis for the sediment samples collected on October 15, 2010.

MINOR PROBLEMS

Minor problems with QC failures are noted below.

Initial Calibration Results. In the initial calibration, pentachlorophenol had a relative standard deviation (RSD) of 30.3 which is above the QC limit of 20 RSD. Because pentachlorophenol was not detected in the samples, no qualifications were required.

Field Duplicate Results. The field duplicates are collected adjacent to an investigative sample and are not of the same homogenized material. One field duplicate pair is associated with the sediment samples collected on October 15, 2010, and SDG E01T8 (see Table 1 for which samples were designated as field duplicates).

Because a QC limit for field duplicates was not stated in the QAPP, a default QC limit of 50 RPD was used to evaluate field duplicate results. The duplicate results were mostly non-detect

and RPDs could not be calculated. For the detected results, two of the RPD values were low but the majority of the RPD values were very high. These very elevated RPDs are most likely due to sample heterogeneity associated with SVOCs in the sediment samples. Table 3 summarizes the field duplicate results and RPDs.

DATA QUALITY INDICATORS REVIEW

Many the data quality indicators (sensitivity, precision, accuracy, and completeness) were evaluated through the data validation procedures which are summarized above and discussed in detail in the Attachment.

Sensitivity. The QAPP stated that method SOM01.2 would achieve a reporting limit of 170 to 330 micrograms per kilogram (µg/kg), dependent on the SVOC compound analyzed. The laboratory achieved the QAPP-stated reporting limits, when adjusted for dilution factor and percent moisture. Sensitivity was adequate for the SVOC analyses of sediment samples collected on October 15, 2010, that are associated with SDG E01T8.

Precision. Field precision is determined by evaluating the RPDs for the field duplicate results. The RPD values for the field duplicates were mostly high. The field duplicate results indicate sample heterogeneity associated with SVOCs in the sediment samples.

Laboratory precision was evaluated by reviewing the RPD values between the MS and MSD results. There was one MS/MSD pair associated with this SDG. The RPDs were within the QAPP-stated QC limits and ranged from 1 to 30 percent. Laboratory precision was acceptable for the SVOC analysis. Table 4 summarizes the laboratory precision results.

Accuracy/Bias. Accuracy is a measure of the agreement between an observed value and an accepted reference value. Laboratory accuracy was evaluated by reviewing the QC criteria for MS/MSD results. The MS/MSD percent recoveries were within the QAPP QC limits. Table 4 summarizes the accuracy estimates for the SVOC analysis. The mean MS/MSD percent recoveries ranged from 54 to 70 percent. Laboratory accuracy was acceptable. The MS/MSD recoveries indicate a low bias associated with the SVOC analyses.

Completeness. Completeness is a measure of the amount of valid data obtained compared to the amount of data that was planned to be collected under normal conditions. All samples results were received.

In summary, the data are usable for comparison to the SVOC screening criteria stated in the QAPP. No qualifications were added to the samples during the data review. Definitions for the laboratory qualifications are included in Attachment C.

If there are any questions or comments regarding this report, please do not hesitate to contact WESTON START at 847-918-4000.

Very truly yours,

Weston Solutions, Inc.



Lisa Graczyk
WESTON START Team

Alex Clark
WESTON START Project Manager

Attachments:
Tables
A- Checklists for SVOC Analytical Data for Case # 40638, SDG # E01T8
B- Analytical Data Summary Sheets with Qualifiers
C- Data Qualifier Definitions

cc: project file

TABLES

TABLE 1
SAMPLES INCLUDED IN DATA REVIEW

Sample ID	Sample Location ID	Date Collected	Comment
E01T8	OC-12/13	10/15/2010	
E01T9	OC-16	10/15/2010	
E01W0	DC-9/10	10/15/2010	
E01W1	DC-7/8DP	10/15/2010	Field duplicate of DC-7/8
E01W2	DC-7/8	10/15/2010	

TABLE 2 SVOC ANALYTES	
CAS #	**Analyte**
100-52-7	Benzaldehyde
108-95-2	Phenol
111-44-4	Bis(2-chloroethyl)ether
95-57-8	2-Chlorophenol
95-48-7	2-Methylphenol
108-60-1	2,2'-Oxybis(1-chloropropane)
98-86-2	Acetophenone
106-44-5	4-Methylphenol
621-64-7	N-Nitroso-di-n-propylamine
67-72-1	Hexachloroethane
98-95-3	Nitrobenzene
78-59-1	Isophorone
88-75-5	2-Nitrophenol
105-67-9	2,4-Dimethylphenol
111-91-1	Bis(2-chloroethoxy)methane
120-83-2	2,4-Dichlorophenol
91-20-3	Naphthalene
106-47-8	4-Chloroaniline
87-68-3	Hexachlorobutadiene
105-60-2	Caprolactam
59-50-7	4-Chloro-3-methylphenol
91-57-6	2-Methylnaphthalene
77-47-4	Hexachlorocyclopentadiene
88-06-2	2,4,6-Trichlorophenol
95-95-4	2,4,5-Trichlorophenol
92-52-4	1,1'-Biphenyl
91-58-7	2-Chloronaphthalene
88-74-4	2-Nitroaniline
131-11-3	Dimethylphthalate
606-20-2	2,6-Dinitrotoluene
208-96-8	Acenaphthylene
99-09-2	3-Nitroaniline
83-32-9	Acenaphthene
51-28-5	2,4-Dinitrophenol
100-02-7	4-Nitrophenol

TABLE 2
SVOC ANALYTES

CAS #	Analyte
132-64-9	Dibenzofuran
121-14-2	2,4-Dinitrotoluene
84-66-2	Diethylphthalate
86-73-7	Fluorene
7005-72-3	4-Chlorophenyl-phenylether
100-01-6	4-Nitroaniline
534-52-1	4,6-Dinitro-2-methylphenol
86-30-6	N-Nitrosodiphenylamine
95-94-3	1,2,4,5-Tetrachlorobenzene
101-55-3	4-Bromophenyl-phenylether
118-74-1	Hexachlorobenzene
1912-24-9	Atrazine
87-86-5	Pentachlorophenol
85-01-8	Phenanthrene
120-12-7	Anthracene
86-74-8	Carbazole
84-74-2	Di-n-butylphthalate
206-44-0	Fluoranthene
129-00-0	Pyrene
85-68-7	Butylbenzylphthalate
91-94-1	3,3'-Dichlorobenzidine
56-55-3	Benzo(a)anthracene
218-01-9	Chrysene
117-81-7	Bis(2-ethylhexyl)phthalate
117-84-0	Di-n-octylphthalate
205-99-2	Benzo(b)fluoranthene
207-08-9	Benzo(k)fluoranthene
50-32-8	Benzo(a)pyrene
193-39-5	Indeno(1,2,3-cd)pyrene
53-70-3	Dibenzo(a,h)anthracene
191-24-2	Benzo(g,h,i)perylene
58-90-2	2,3,4,6-Tetrachlorophenol

Notes:
CAS – Chemical Abstracts Service
SVOC – Semivolatile Organic Compound

TABLE 3
FIELD DUPLICATE RESULTS

Analyte	Sample: DC-7/8DP		
	Sample Result (µg/kg)	Duplicate Result (µg/kg)	RPD
Benzaldehyde	300	330	10
Phenol	22	<1,500	NA
Bis(2-chloroethyl)ether	<420	<1,500	NA
2-Chlorophenol	<420	<1,500	NA
2-Methylphenol	<420	<1,500	NA
2,2'-Oxybis(1-chloropropane)	<420	<1,500	NA
Acetophenone	150	150	0
4-Methylphenol	<420	<1,500	NA
N-Nitroso-di-n-propylamine	<420	<1,500	NA
Hexachloroethane	<420	<1,500	NA
Nitrobenzene	<420	<1,500	NA
Isophorone	<420	<1,500	NA
2-Nitrophenol	<420	<1,500	NA
2,4-Dimethylphenol	<420	<1,500	NA
Bis(2-chloroethoxy)methane	<420	<1,500	NA
2,4-Dichlorophenol	<420	<1,500	NA
Naphthalene	<420	440	NA
4-Chloroaniline	<420	<1,500	NA
Hexachlorobutadiene	<420	<1,500	NA
Caprolactam	<420	<1,500	NA
4-Chloro-3-methylphenol	<420	<1,500	NA
2-Methylnaphthalene	<420	280	NA
Hexachlorocyclopentadiene	<420	<1,500	NA
2,4,6-Trichlorophenol	<420	<1,500	NA
2,4,5-Trichlorophenol	<420	<1,500	NA
1,1'-Biphenyl	<420	<1,500	NA
2-Chloronaphthalene	<420	<1,500	NA
2-Nitroaniline	<820	<2,900	NA
Dimethylphthalate	<420	<1,500	NA
2,6-Dinitrotoluene	<420	<1,500	NA
Acenaphthylene	<420	<1,500	NA

TABLE 3
FIELD DUPLICATE RESULTS

Analyte	Sample: DC-7/8DP		
	Sample Result (µg/kg)	Duplicate Result (µg/kg)	RPD
3-Nitroaniline	<820	<2,900	NA
Acenaphthene	<420	1,500	NA
2,4-Dinitrophenol	<820	<2,900	NA
4-Nitrophenol	<820	<2,900	NA
Dibenzofuran	<420	690	NA
2,4-Dinitrotoluene	<420	<1,500	NA
Diethylphthalate	<420	<1,500	NA
Fluorene	<420	1,400	NA
4-Chlorophenyl-phenylether	<420	<1,500	NA
4-Nitroaniline	<820	<2,900	NA
4,6-Dinitro-2-methylphenol	<820	<2,900	NA
N-Nitrosodiphenylamine	<420	<1,500	NA
1,2,4,5-Tetrachlorobenzene	<420	<1,500	NA
4-Bromophenyl-phenylether	<420	<1,500	NA
Hexachlorobenzene	<420	<1,500	NA
Atrazine	<420	<1,500	NA
Pentachlorophenol	<820	<2,900	NA
Phenanthrene	120	10,000	195
Anthracene	31	3,000	196
Carbazole	18	2,300	197
Di-n-butylphthalate	<420	<1,500	NA
Fluoranthene	180	13,000	195
Pyrene	140	12,000	195
Butylbenzylphthalate	<420	<1,500	NA
3,3'-Dichlorobenzidine	<420	<1,500	NA
Benzo(a)anthracene	84	9,400	196
Chrysene	93	8,300	196
Bis(2-ethylhexyl)phthalate	200	540	92
Di-n-octylphthalate	<420	<1,500	NA
Benzo(b)fluoranthene	120	8,300	194
Benzo(k)fluoranthene	45	2,600	193
Benzo(a)pyrene	98	6,600	194
Indeno(1,2,3-cd)pyrene	55	3,100	193

TABLE 3
FIELD DUPLICATE RESULTS

Analyte	Sample: DC-7/8DP		
	Sample Result (µg/kg)	Duplicate Result (µg/kg)	RPD
Dibenzo(a,h)anthracene	13	1,200	196
Benzo(g,h,i)perylene	90	3,100	189
2,3,4,6-Tetrachlorophenol	<420	<1,500	NA

Notes:
Highlighted RPD values exceed 50 RPD.
µg/kg– Microgram per Kilogram
NA – Not Applicable
RPD – Relative Percent Difference
SIM – Selective Ion Monitoring

TABLE 4
QUANTITATIVE DATA ASSESSMENT

	Analytical Precision	Analytical Accuracy/Bias
Analyte	**MS/MSD RPD (%) (n=1)**	**Mean MS/MSD Recovery (%) (n=2)**
Phenol	10	54
2-Chlorophenol	7	55
N-Nitroso-di-n-propylamine	16	67
4-Chloro-3-methylphenol	1	58
Acenapthene	9	63
4-Nitrophenol	15	65
2,4-Dinitrotoluene	8	70
Pentachlorophenol	18	66
Pyrene	30	68

Notes:
MS – Matrix Spike
MSD – Matrix Spike Duplicate
RPD – Relative Percent Difference

ATTACHMENT A

CHECKLIST FOR SVOC ANALYTICAL DATA FOR CASE # 40638, SDG # E01T8

SVOCs
BY CLP SOW SOM01.2

CASE# 40638
SDG# E01T8

QA/QC Analysis Checklist for Sediment Chemistry Analysis

GRANT/IAG NUMBER: Not Applicable
PROJECT NAME: Duck and Otter Sediment Investigation
REVIEWER: Lisa Graczyk, WESTON START
DATE: March 17, 2011

1. What sediment chemistry data has been collected (CHECK ALL THAT APPLY)?

Total Metals ___	PCBs _____	pH _____	TOC _____
Dioxins/Furans _____	SVOCs __X___	Pesticides _____	DO _____
AVS _____	SEM Metals _____	Particle Size _____	Other _____

2. Were the target detection limits met for each parameter?

Yes	X
No	

When adjusted for dilution factor and percent moisture, the QAPP-stated reporting limits were met for SVOC compounds.

3. Were the method blanks less than the established MDL for each parameter?

Yes	X	
No		(EXPLAIN)

The method blank contained no detections of target analytes.

4. Did the results of Field Replicate Analysis vary by less than the % RPD specified in the QAPP?

Yes	Not Applicable	
No		(EXPLAIN)

There are no field replicates associated with this SDG.

5. Did the results of the Field Duplicates Analysis vary by less than the % RPD specified in the QAPP?

Yes		
No	X	(EXPLAIN)

There is one field duplicate associated with this SDG (identified with a "DP" suffix in the station location designation). The field duplicate were collected adjacent to the associated investigative sample. The field duplicate results and investigative sample results were compared to a standard QC limit of 50 RPD or less. For the detected compounds, most of the RPDs were above the 50 percent QC limit and there was a significant difference between the field duplicate and parent sample in most cases. These elevated RPDs indicate significant sample heterogeneity associated with SVOCs in the sediment samples associated with this site.

6. Did the surrogate spike/internal standards recoveries meet the limits set forth in the QAPP?

Yes	X	
No		(EXPLAIN)

7. Did the MS/MSD recoveries meet the limits set forth in the QAPP?

Yes	X	
No		(EXPLAIN)

8. Did the RPD (%) of the MS/MSD sample set meet the limits set forth in the QAPP?

Yes	X	
No		(EXPLAIN)

9. Did the LCS recoveries meet the limits set forth in the QAPP?

Yes	Not Applicable	
No		(EXPLAIN)

LCSs are not analyzed with SVOC analysis by SOM01.2.

10. Did the calibration verification standards (ICVs and CCVs) meet the requirements set forth in the QAPP?

Yes		
No	X	(EXPLAIN)

There were no QC limits specified in the QAPP; therefore, the QC limits specified in the CLP SOW were used for the initial calibration and continuing calibration verification (CCV) checks. For the initial calibration, pentachlorophenol exceeded the QC limit of 20 RSD. Because pentachlorophenol was not detected in the samples, no qualification was required.

11. Did the calibration blanks (ICBs and CCBs) meet the limits set forth in the QAPP?

Yes	Not Applicable	
No		(EXPLAIN)

12. Did the interference check samples meet the limits set forth in the QAPP?

Yes	Not Applicable	
No		(EXPLAIN)

13. Did the serial dilution samples meet the limits set forth in the QAPP?

Yes	Not Applicable	
No		(EXPLAIN)

Serial dilution is not applicable to SW-846 Method 8270C.

14. Were any level of contaminants detected above the MDL for the trip blanks and storage blanks?

Yes	Not Applicable	
No		(EXPLAIN)

Trip blanks and storage blanks are not applicable to SW-846 Method 8270C.

15. Did all required analyses take place within the required holding time protocols set forth in the QAPP?

Yes	X	
No		(EXPLAIN)

Samples were analyzed within the holding time requirement of 14 days to extraction from sample collection and 40 days to analysis following extraction.

16. Did the laboratory duplicates vary by less than the % RPD specified in the QAPP?

Yes	Not Applicable	
No		(EXPLAIN)

Laboratory duplicates were not analyzed with the samples.

17. Are measured dry-weight contaminant concentrations reported?

Yes	X	
No		(EXPLAIN)

Dry-weight concentrations are reported.

18. Please provide details for all of the "UNACCEPTABLE" marked above. Include details on the specific analytes affected by any QA/QC discrepancies, and recommendations regarding usability of data.

Any items with “UNACCEPTABLE” marked above are described immediately following the “UNACCEPTABLE” marking in the corresponding item above.

In addition, some results were detected below the laboratory reporting limit and were flagged “J” as estimated for this discrepancy. The data are acceptable for use as qualified.

SVOC Checklist
Duck and Otter Sediment Investigation
ALS Laboratory Group
Laboratory SDG#: E01T8

ATTACHMENT B

ANALYTICAL DATA SUMMARY SHEETS WITH QUALIFIERS

1D - FORM I SV-1

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

E01T8

Lab Name: ALS Laboratory Group Contract: EPW05026

Lab Code: DATAC Case No.: 40638 Mod. Ref No.: SDG No.: E01T8

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: 1029331001

Sample wt/vol: 30.1 (g/mL) g Lab File ID: NGR23C01

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 31. Decanted: (Y/N) N Date Received: 10/20/2010

Concentrated Extract Volume: 500. (uL) Date Extracted: 10/29/2010

Injection Volume: 1.0 (uL) GPC Factor: 2.0 Date Analyzed: 11/04/2010

GPC Cleanup: (Y/N) Y pH: 6.8 Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
100-52-7	Benzaldehyde	240	J
108-95-2	Phenol	17.	J
111-44-4	Bis(2-chloroethyl)ether	250	U
95-57-8	2-Chlorophenol	250	U
95-48-7	2-Methylphenol	250	U
108-60-1	2,2'-Oxybis(1-chloropropane)	250	U
98-86-2	Acetophenone	120	J
106-44-5	4-Methylphenol	250	U
621-64-7	N-Nitroso-di-n-propylamine	250	U
67-72-1	Hexachloroethane	250	U
98-95-3	Nitrobenzene	250	U
78-59-1	Isophorone	250	U
88-75-5	2-Nitrophenol	250	U
105-67-9	2,4-Dimethylphenol	250	U
111-91-1	Bis(2-chloroethoxy)methane	250	U
120-83-2	2,4-Dichlorophenol	250	U
91-20-3	Naphthalene	250	U
106-47-8	4-Chloroaniline	250	U
87-68-3	Hexachlorobutadiene	250	U
105-60-2	Caprolactam	250	U
59-50-7	4-Chloro-3-methylphenol	250	U
91-57-6	2-Methylnaphthalene	250	U
77-47-4	Hexachlorocyclopentadiene	250	U
88-06-2	2,4,6-Trichlorophenol	250	U
95-95-4	2,4,5-Trichlorophenol	250	U
92-52-4	1,1'-Biphenyl	250	U
91-58-7	2-Chloronaphthalene	250	U
88-74-4	2-Nitroaniline	480	U
131-11-3	Dimethylphthalate	250	U
606-20-2	2,6-Dinitrotoluene	250	U
208-96-8	Acenaphthylene	250	U
99-09-2	3-Nitroaniline	480	U
83-32-9	Acenaphthene	250	U

1E - FORM I SV-2

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

E01T8

Lab Name: ALS Laboratory Group Contract: EPW05026

Lab Code: DATAC Case No.: 40638 Mod. Ref No.: SDG No.: E01T8

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: 1029331001

Sample wt/vol: 30.1 (g/mL) g Lab File ID: NGR23C01

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 31. Decanted: (Y/N) N Date Received: 10/20/2010

Concentrated Extract Volume: 500. (uL) Date Extracted: 10/29/2010

Injection Volume: 1.0 (uL) GPC Factor: 2.0 Date Analyzed: 11/04/2010

GPC Cleanup: (Y/N) Y pH: 6.8 Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
51-28-5	2,4-Dinitrophenol	480	U
100-02-7	4-Nitrophenol	480	U
132-64-9	Dibenzofuran	250	U
121-14-2	2,4-Dinitrotoluene	250	U
84-66-2	Diethylphthalate	250	U
86-73-7	Fluorene	250	U
7005-72-3	4-Chlorophenyl-phenylether	250	U
100-01-6	4-Nitroaniline	480	U
534-52-1	4,6-Dinitro-2-methylphenol	480	U
86-30-6	N-Nitrosodiphenylamine[1]	250	U
95-94-3	1,2,4,5-Tetrachlorobenzene	250	U
101-55-3	4-Bromophenyl-phenylether	250	U
118-74-1	Hexachlorobenzene	250	U
1912-24-9	Atrazine	250	U
87-86-5	Pentachlorophenol	480	U
85-01-8	Phenanthrene	51.	J
120-12-7	Anthracene	250	U
86-74-8	Carbazole	250	U
84-74-2	Di-n-butylphthalate	250	U
206-44-0	Fluoranthene	99.	J
129-00-0	Pyrene	110	J
85-68-7	Butylbenzylphthalate	250	U
91-94-1	3,3'-Dichlorobenzidine	250	U
56-55-3	Benzo(a)anthracene	55.	J
218-01-9	Chrysene	58.	J
117-81-7	Bis(2-ethylhexyl)phthalate	170	J
117-84-0	Di-n-octylphthalate	250	U
205-99-2	Benzo(b)fluoranthene	70.	J
207-08-9	Benzo(k)fluoranthene	42.	J
50-32-8	Benzo(a)pyrene	66.	J
193-39-5	Indeno(1,2,3-cd)pyrene	46.	J
53-70-3	Dibenzo(a,h)anthracene	15.	J
191-24-2	Benzo(g,h,i)perylene	70.	J
58-90-2	2,3,4,6-Tetrachlorophenol	250	U

[1]Cannot be separated from Diphenylamine

1K - FORM I SV-TIC

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

E01T8

Lab Name: ALS Laboratory Group Contract: EPW05026

Lab Code: DATAC Case No.: 40638 Mod. Ref No.: SDG No.: E01T8

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: 1029331001

Sample wt/vol: 30.1 (g/mL) g Lab File ID: NGR23C01

Level: (TRACE or LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 31. Decanted: (Y/N) N Date Received: 10/20/2010

Concentrated Extract Volume: 500. (uL) Date Extracted: 10/29/2010

Injection Volume: 1.0 (uL) GPC Factor: 2.0 Date Analyzed: 11/04/2010

GPC Cleanup: (Y/N) Y pH: 6.8 Dilution Factor: 1.0

CONCENTRATION UNITS:(ug/L or ug/kg) ug/kg

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
01	243-17-4	11H-Benzo[b]fluorene	12.87	130	JN
02	123-79-5	Hexanedioic acid, dioctyl ester	13.71	260	JN
03	192-65-4	1,2:4,5-Dibenzopyrene	14.48	160	JN
04	203-11-2	Indeno[1,2,3-fg]naphthacene	14.62	440	JN
05	1000141-71-3	1(2H)-Naphthalenone, 8a-chlorooctahydro-	14.77	110	JN
06	1160-78-7	Benzaldehyde, 4-hydroxy-, (2,4-dinitroph	15.00	98.	JN
07	107716-56-3	Coronene, 1,2-dihydro-	15.18	170	JN
08	495-76-1	1,3-Benzodioxole-5-methanol	15.27	130	JN
09	52898-79-0	3-(2,6-Dimethoxyphenyl)-2-methyl-4(3H)-q	16.25	540	JN
10	588-68-1	Benzaldehyde, (phenylmethylene)hydrazone	16.52	100	JN
11	827-60-1	1H-Pyrrole, 1-(4-methylphenyl)-	16.79	130	JN
12	2556-42-5	Thioperoxydicarbonic diamide ([(H2N)C(S)	17.70	120	JN
13	64466-15-5	Rhodium, 2,2,6,6-tetramethylheptan-3,5-d	17.87	120	JN
14	56009-29-1	2-Butenoic acid, 2-methoxy-, methyl este	18.00	240	JN
15	16723-50-5	4H-1-Benzothiopyran-4-one, 2,3-dihydro-3	19.10	630	JN
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					
26					
27					
28					
29					
30					
	E966796[2]	Total Alkanes	N/A	110	J

[2]EPA-designated Registry Number.

1D - FORM I SV-1

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

E01T9

Lab Name: ALS Laboratory Group Contract: EPW05026

Lab Code: DATAC Case No.: 40638 Mod. Ref No.: SDG No.: E01T8

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: 1029331002

Sample wt/vol: 30.2 (g/mL) g Lab File ID: NGR24C02

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 27. Decanted: (Y/N) N Date Received: 10/20/2010

Concentrated Extract Volume: 500. (uL) Date Extracted: 10/29/2010

Injection Volume: 1.0 (uL) GPC Factor: 2.0 Date Analyzed: 11/04/2010

GPC Cleanup: (Y/N) Y pH: 6.9 Dilution Factor: 4.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
100-52-7	Benzaldehyde	180	J
108-95-2	Phenol	930	U
111-44-4	Bis(2-chloroethyl)ether	930	U
95-57-8	2-Chlorophenol	930	U
95-48-7	2-Methylphenol	930	U
108-60-1	2,2'-Oxybis(1-chloropropane)	930	U
98-86-2	Acetophenone	100	J
106-44-5	4-Methylphenol	930	U
621-64-7	N-Nitroso-di-n-propylamine	930	U
67-72-1	Hexachloroethane	930	U
98-95-3	Nitrobenzene	930	U
78-59-1	Isophorone	930	U
88-75-5	2-Nitrophenol	930	U
105-67-9	2,4-Dimethylphenol	930	U
111-91-1	Bis(2-chloroethoxy)methane	930	U
120-83-2	2,4-Dichlorophenol	930	U
91-20-3	Naphthalene	930	U
106-47-8	4-Chloroaniline	930	U
87-68-3	Hexachlorobutadiene	930	U
105-60-2	Caprolactam	930	U
59-50-7	4-Chloro-3-methylphenol	930	U
91-57-6	2-Methylnaphthalene	930	U
77-47-4	Hexachlorocyclopentadiene	930	U
88-06-2	2,4,6-Trichlorophenol	930	U
95-95-4	2,4,5-Trichlorophenol	930	U
92-52-4	1,1'-Biphenyl	930	U
91-58-7	2-Chloronaphthalene	930	U
88-74-4	2-Nitroaniline	1800	U
131-11-3	Dimethylphthalate	930	U
606-20-2	2,6-Dinitrotoluene	930	U
208-96-8	Acenaphthylene	930	U
99-09-2	3-Nitroaniline	1800	U
83-32-9	Acenaphthene	28.	J

1E - FORM I SV-2

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

E01T9

Lab Name: ALS Laboratory Group Contract: EPW05026

Lab Code: DATAC Case No.: 40638 Mod. Ref No.: SDG No.: E01T8

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: 1029331002

Sample wt/vol: 30.2 (g/mL) g Lab File ID: NGR24C02

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 27. Decanted: (Y/N) N Date Received: 10/20/2010

Concentrated Extract Volume: 500. (uL) Date Extracted: 10/29/2010

Injection Volume: 1.0 (uL) GPC Factor: 2.0 Date Analyzed: 11/04/2010

GPC Cleanup: (Y/N) Y pH: 6.9 Dilution Factor: 4.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
51-28-5	2,4-Dinitrophenol	1800	U
100-02-7	4-Nitrophenol	1800	U
132-64-9	Dibenzofuran	930	U
121-14-2	2,4-Dinitrotoluene	930	U
84-66-2	Diethylphthalate	930	U
86-73-7	Fluorene	44.	J
7005-72-3	4-Chlorophenyl-phenylether	930	U
100-01-6	4-Nitroaniline	1800	U
534-52-1	4,6-Dinitro-2-methylphenol	1800	U
86-30-6	N-Nitrosodiphenylamine[1]	930	U
95-94-3	1,2,4,5-Tetrachlorobenzene	930	U
101-55-3	4-Bromophenyl-phenylether	930	U
118-74-1	Hexachlorobenzene	930	U
1912-24-9	Atrazine	930	U
87-86-5	Pentachlorophenol	1800	U
85-01-8	Phenanthrene	670	J
120-12-7	Anthracene	140	J
86-74-8	Carbazole	75.	J
84-74-2	Di-n-butylphthalate	930	U
206-44-0	Fluoranthene	1600	
129-00-0	Pyrene	1300	
85-68-7	Butylbenzylphthalate	930	U
91-94-1	3,3'-Dichlorobenzidine	930	U
56-55-3	Benzo(a)anthracene	660	J
218-01-9	Chrysene	790	J
117-81-7	Bis(2-ethylhexyl)phthalate	380	J
117-84-0	Di-n-octylphthalate	930	U
205-99-2	Benzo(b)fluoranthene	870	J
207-08-9	Benzo(k)fluoranthene	280	J
50-32-8	Benzo(a)pyrene	630	J
193-39-5	Indeno(1,2,3-cd)pyrene	410	J
53-70-3	Dibenzo(a,h)anthracene	130	J
191-24-2	Benzo(g,h,i)perylene	530	J
58-90-2	2,3,4,6-Tetrachlorophenol	930	U

[1]Cannot be separated from Diphenylamine

1K - FORM I SV-TIC

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

E01T9

Lab Name: ALS Laboratory Group | Contract: EPW05026

Lab Code: DATAC | Case No.: 40638 | Mod. Ref No.: | SDG No.: E01T8

Matrix: (SOIL/SED/WATER) SOIL | Lab Sample ID: 1029331002

Sample wt/vol: 30.2 (g/mL) g | Lab File ID: NGR24C02

Level: (TRACE or LOW/MED) LOW | Extraction: (Type) SONC

% Moisture: 27. | Decanted: (Y/N) N | Date Received: 10/20/2010

Concentrated Extract Volume: 500. (uL) | Date Extracted: 10/29/2010

Injection Volume: 1.0 (uL) | GPC Factor: 2.0 | Date Analyzed: 11/04/2010

GPC Cleanup: (Y/N) Y | pH: 6.9 | Dilution Factor: 4.0

CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
01	33543-31-6	Fluoranthene, 2-methyl-	12.87	380	JN
02	38447-22-2	Hexanedioic acid, bis(1-methylpropyl) es	13.72	530	JN
03	522-75-8	Benzo[b]thiophen-3(2H)-one, 2-(3-oxobenz	16.26	590	JN
04	4110-35-4	Benzonitrile, 3,5-dinitro-	20.54	480	JN
05					
06					
07					
08					
09					
10					
11					
12					
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14					
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18					
19					
20					
21					
22					
23					
24					
25					
26					
27					
28					
29					
30					
	E966796[2]	Total Alkanes	N/A		

[2]EPA-designated Registry Number.

1D - FORM I SV-1

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

E01W0

Lab Name: ALS Laboratory Group Contract: EPW05026

Lab Code: DATAC Case No.: 40638 Mod. Ref No.: SDG No.: E01T8

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: 1029331003

Sample wt/vol: 30.4 (g/mL) g Lab File ID: NGR25C03

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 66. Decanted: (Y/N) N Date Received: 10/20/2010

Concentrated Extract Volume: 500. (uL) Date Extracted: 10/29/2010

Injection Volume: 1.0 (uL) GPC Factor: 2.0 Date Analyzed: 11/04/2010

GPC Cleanup: (Y/N) Y pH: 6.8 Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
100-52-7	Benzaldehyde	370	J
108-95-2	Phenol	25.	J
111-44-4	Bis(2-chloroethyl)ether	490	U
95-57-8	2-Chlorophenol	490	U
95-48-7	2-Methylphenol	490	U
108-60-1	2,2'-Oxybis(1-chloropropane)	490	U
98-86-2	Acetophenone	170	J
106-44-5	4-Methylphenol	490	U
621-64-7	N-Nitroso-di-n-propylamine	490	U
67-72-1	Hexachloroethane	490	U
98-95-3	Nitrobenzene	490	U
78-59-1	Isophorone	490	U
88-75-5	2-Nitrophenol	490	U
105-67-9	2,4-Dimethylphenol	490	U
111-91-1	Bis(2-chloroethoxy)methane	490	U
120-83-2	2,4-Dichlorophenol	490	U
91-20-3	Naphthalene	490	U
106-47-8	4-Chloroaniline	490	U
87-68-3	Hexachlorobutadiene	490	U
105-60-2	Caprolactam	490	U
59-50-7	4-Chloro-3-methylphenol	490	U
91-57-6	2-Methylnaphthalene	490	U
77-47-4	Hexachlorocyclopentadiene	490	U
88-06-2	2,4,6-Trichlorophenol	490	U
95-95-4	2,4,5-Trichlorophenol	490	U
92-52-4	1,1'-Biphenyl	490	U
91-58-7	2-Chloronaphthalene	490	U
88-74-4	2-Nitroaniline	960	U
131-11-3	Dimethylphthalate	490	U
606-20-2	2,6-Dinitrotoluene	490	U
208-96-8	Acenaphthylene	490	U
99-09-2	3-Nitroaniline	960	U
83-32-9	Acenaphthene	490	U

1E - FORM I SV-2

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

E01W0

Lab Name: ALS Laboratory Group Contract: EPW05026

Lab Code: DATAC Case No.: 40638 Mod. Ref No.: SDG No.: E01T8

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: 1029331003

Sample wt/vol: 30.4 (g/mL) g Lab File ID: NGR25C03

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 66. Decanted: (Y/N) N Date Received: 10/20/2010

Concentrated Extract Volume: 500. (uL) Date Extracted: 10/29/2010

Injection Volume: 1.0 (uL) GPC Factor: 2.0 Date Analyzed: 11/04/2010

GPC Cleanup: (Y/N) Y pH: 6.8 Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
51-28-5	2,4-Dinitrophenol	960	U
100-02-7	4-Nitrophenol	960	U
132-64-9	Dibenzofuran	490	U
121-14-2	2,4-Dinitrotoluene	490	U
84-66-2	Diethylphthalate	490	U
86-73-7	Fluorene	490	U
7005-72-3	4-Chlorophenyl-phenylether	490	U
100-01-6	4-Nitroaniline	960	U
534-52-1	4,6-Dinitro-2-methylphenol	960	U
86-30-6	N-Nitrosodiphenylamine[1]	490	U
95-94-3	1,2,4,5-Tetrachlorobenzene	490	U
101-55-3	4-Bromophenyl-phenylether	490	U
118-74-1	Hexachlorobenzene	490	U
1912-24-9	Atrazine	490	U
87-86-5	Pentachlorophenol	960	U
85-01-8	Phenanthrene	53.	J
120-12-7	Anthracene	490	U
86-74-8	Carbazole	490	U
84-74-2	Di-n-butylphthalate	490	U
206-44-0	Fluoranthene	140	J
129-00-0	Pyrene	110	J
85-68-7	Butylbenzylphthalate	490	U
91-94-1	3,3'-Dichlorobenzidine	490	U
56-55-3	Benzo(a)anthracene	61.	J
218-01-9	Chrysene	68.	J
117-81-7	Bis(2-ethylhexyl)phthalate	280	J
117-84-0	Di-n-octylphthalate	490	U
205-99-2	Benzo(b)fluoranthene	100	J
207-08-9	Benzo(k)fluoranthene	39.	J
50-32-8	Benzo(a)pyrene	71.	J
193-39-5	Indeno(1,2,3-cd)pyrene	56.	J
53-70-3	Dibenzo(a,h)anthracene	19.	J
191-24-2	Benzo(g,h,i)perylene	64.	J
58-90-2	2,3,4,6-Tetrachlorophenol	490	U

[1]Cannot be separated from Diphenylamine

1K - FORM I SV-TIC

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
E01W0

Lab Name: ALS Laboratory Group Contract: EPW05026
Lab Code: DATAC Case No.: 40638 Mod. Ref No.: SDG No.: E01T8
Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: 1029331003
Sample wt/vol: 30.4 (g/mL) g Lab File ID: NGR25C03
Level: (TRACE or LOW/MED) LOW Extraction: (Type) SONC
% Moisture: 66. Decanted: (Y/N) N Date Received: 10/20/2010
Concentrated Extract Volume: 500. (uL) Date Extracted: 10/29/2010
Injection Volume: 1.0 (uL) GPC Factor: 2.0 Date Analyzed: 11/04/2010
GPC Cleanup: (Y/N) Y pH: 6.8 Dilution Factor: 1.0

CONCENTRATION UNITS:(ug/L or ug/kg) ug/kg

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
01	37682-29-4	Benzene, 1-nitro-2-(octyloxy)-	13.71	510	JN
02	52898-79-0	3-(2,6-Dimethoxyphenyl)-2-methyl-4(3H)-q	16.25	800	JN
03	6137-06-0	2-Heptanone, 4-methyl-	17.99	620	JN
04	1633-22-3	[2.2]Paracyclophane	19.11	920	JN
05	1000131-33-4	Z-11,13-Tetradecadien-1-ol acetate	19.97	310	JN
06					
07					
08					
09					
10					
11					
12					
13					
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26					
27					
28					
29					
30					
	E966796[2]	Total Alkanes	N/A		

[2]EPA-designated Registry Number.

1D - FORM I SV-1

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

E01W1

Lab Name: ALS Laboratory Group Contract: EPW05026

Lab Code: DATAC Case No.: 40638 Mod. Ref No.: SDG No.: E01T8

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: 1029331004

Sample wt/vol: 30.5 (g/mL) g Lab File ID: NGR26C04

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 55. Decanted: (Y/N) N Date Received: 10/20/2010

Concentrated Extract Volume: 500. (uL) Date Extracted: 10/29/2010

Injection Volume: 1.0 (uL) GPC Factor: 2.0 Date Analyzed: 11/04/2010

GPC Cleanup: (Y/N) Y pH: 6.8 Dilution Factor: 4.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
100-52-7	Benzaldehyde	330	J
108-95-2	Phenol	1500	U
111-44-4	Bis(2-chloroethyl)ether	1500	U
95-57-8	2-Chlorophenol	1500	U
95-48-7	2-Methylphenol	1500	U
108-60-1	2,2'-Oxybis(1-chloropropane)	1500	U
98-86-2	Acetophenone	150	J
106-44-5	4-Methylphenol	1500	U
621-64-7	N-Nitroso-di-n-propylamine	1500	U
67-72-1	Hexachloroethane	1500	U
98-95-3	Nitrobenzene	1500	U
78-59-1	Isophorone	1500	U
88-75-5	2-Nitrophenol	1500	U
105-67-9	2,4-Dimethylphenol	1500	U
111-91-1	Bis(2-chloroethoxy)methane	1500	U
120-83-2	2,4-Dichlorophenol	1500	U
91-20-3	Naphthalene	440	J
106-47-8	4-Chloroaniline	1500	U
87-68-3	Hexachlorobutadiene	1500	U
105-60-2	Caprolactam	1500	U
59-50-7	4-Chloro-3-methylphenol	1500	U
91-57-6	2-Methylnaphthalene	280	J
77-47-4	Hexachlorocyclopentadiene	1500	U
88-06-2	2,4,6-Trichlorophenol	1500	U
95-95-4	2,4,5-Trichlorophenol	1500	U
92-52-4	1,1'-Biphenyl	1500	U
91-58-7	2-Chloronaphthalene	1500	U
88-74-4	2-Nitroaniline	2900	U
131-11-3	Dimethylphthalate	1500	U
606-20-2	2,6-Dinitrotoluene	1500	U
208-96-8	Acenaphthylene	1500	U
99-09-2	3-Nitroaniline	2900	U
83-32-9	Acenaphthene	1500	J

1E - FORM I SV-2

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

E01W1

Lab Name: ALS Laboratory Group Contract: EPW05026

Lab Code: DATAC Case No.: 40638 Mod. Ref No.: SDG No.: E01T8

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: 1029331004

Sample wt/vol: 30.5 (g/mL) g Lab File ID: NGR26C04

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 55. Decanted: (Y/N) N Date Received: 10/20/2010

Concentrated Extract Volume: 500. (uL) Date Extracted: 10/29/2010

Injection Volume: 1.0 (uL) GPC Factor: 2.0 Date Analyzed: 11/04/2010

GPC Cleanup: (Y/N) Y pH: 6.8 Dilution Factor: 4.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
51-28-5	2,4-Dinitrophenol	2900	U
100-02-7	4-Nitrophenol	2900	U
132-64-9	Dibenzofuran	690	J
121-14-2	2,4-Dinitrotoluene	1500	U
84-66-2	Diethylphthalate	1500	U
86-73-7	Fluorene	1400	J
7005-72-3	4-Chlorophenyl-phenylether	1500	U
100-01-6	4-Nitroaniline	2900	U
534-52-1	4,6-Dinitro-2-methylphenol	2900	U
86-30-6	N-Nitrosodiphenylamine[1]	1500	U
95-94-3	1,2,4,5-Tetrachlorobenzene	1500	U
101-55-3	4-Bromophenyl-phenylether	1500	U
118-74-1	Hexachlorobenzene	1500	U
1912-24-9	Atrazine	1500	U
87-86-5	Pentachlorophenol	2900	U
85-01-8	Phenanthrene	10000	
120-12-7	Anthracene	3000	
86-74-8	Carbazole	2300	
84-74-2	Di-n-butylphthalate	1500	U
206-44-0	Fluoranthene	13000	
129-00-0	Pyrene	12000	
85-68-7	Butylbenzylphthalate	1500	U
91-94-1	3,3'-Dichlorobenzidine	1500	U
56-55-3	Benzo(a)anthracene	9400	
218-01-9	Chrysene	8300	
117-81-7	Bis(2-ethylhexyl)phthalate	540	J
117-84-0	Di-n-octylphthalate	1500	U
205-99-2	Benzo(b)fluoranthene	8300	
207-08-9	Benzo(k)fluoranthene	2600	
50-32-8	Benzo(a)pyrene	6600	
193-39-5	Indeno(1,2,3-cd)pyrene	3100	
53-70-3	Dibenzo(a,h)anthracene	1200	J
191-24-2	Benzo(g,h,i)perylene	3100	
58-90-2	2,3,4,6-Tetrachlorophenol	1500	U

[1]Cannot be separated from Diphenylamine

1K - FORM I SV-TIC

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

E01W1

Lab Name: ALS Laboratory Group Contract: EPW05026

Lab Code: DATAC Case No.: 40638 Mod. Ref No.: SDG No.: E01T8

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: 1029331004

Sample wt/vol: 30.5 (g/mL) g Lab File ID: NGR26C04

Level: (TRACE or LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 55. Decanted: (Y/N) N Date Received: 10/20/2010

Concentrated Extract Volume: 500. (uL) Date Extracted: 10/29/2010

Injection Volume: 1.0 (uL) GPC Factor: 2.0 Date Analyzed: 11/04/2010

GPC Cleanup: (Y/N) Y pH: 6.8 Dilution Factor: 4.0

CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
01	132-65-0	Dibenzothiophene	9.43	2300	JN
02	613-12-7	Anthracene, 2-methyl-	10.55	2100	JN
03	613-12-7	Anthracene, 2-methyl-	10.60	2000	JN
04	203-64-5	4H-Cyclopenta[def]phenanthrene	10.73	2900	JN
05	35465-71-5	2-Phenylnaphthalene	11.13	1800	JN
06	1576-69-8	Phenanthrene, 2,7-dimethyl-	11.44	870	JN
07	6628-98-4	Pyrene, 4,5-dihydro-	11.62	750	JN
08	200-23-7	Benzo[kl]xanthene	12.49	1500	JN
09	238-84-6	11H-Benzo[a]fluorene	12.68	1200	JN
10	3442-78-2	Pyrene, 2-methyl-	12.87	4700	JN
11	33543-31-6	Fluoranthene, 2-methyl-	12.99	2300	JN
12	3442-78-2	Pyrene, 2-methyl-	13.03	1100	JN
13	959-02-4	Naphthacene, 5,12-dihydro-	13.57	1200	JN
14	243-46-9	Benzo[b]naphtho[2,3-d]thiophene	13.83	770	JN
15	23663-58-3	Purine-6(1H)-thione, 3,7-dimethylseleno-	13.88	1100	JN
16	225-51-4	Benz[c]acridine	13.94	910	JN
17	1000223-08-5	2,3,6,7,8,9-Hexahydro-1H,10H-benzo[4',5'	14.31	900	JN
18	34777-33-8	Benzo(c)carbazole	14.47	1100	JN
19	239-01-0	11H-Benzo[a]carbazole	14.51	930	JN
20	1705-85-7	Chrysene, 6-methyl-	14.70	1100	JN
21	63839-89-4	9H-Fluorene-9-methanol, .alpha.-phenyl-,	15.27	930	JN
22	192-97-2	Benzo[e]pyrene	15.55	2000	JN
23	198-55-0	Perylene	15.76	2800	JN
24	241-28-1	8H-Indeno[2,1-b]phenanthrene	16.17	3700	JN
25	1000126-16-2	3,4-Dihydroisoquinoline, 1-[3-hydroxyben	16.27	1200	JN
26	1000132-07-6	1H-Indene, 2,3-dihydro-1,1,3,3,5-pentame	16.53	1000	JN
27	193-43-1	Indeno[1,2,3-cd]fluoranthene	17.37	780	JN
28	191-26-4	Dibenzo[def,mno]chrysene	18.35	970	JN
29	34668-54-7	9-Aza-bicyclo[4.2.1]nona-2,4-diene-9-car	19.11	850	JN
30	192-65-4	1,2:4,5-Dibenzopyrene	20.81	1900	JN
	E966796[2]	Total Alkanes	N/A		

[2]EPA-designated Registry Number.

1D - FORM I SV-1

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

E01W2

Lab Name: ALS Laboratory Group Contract: EPW05026

Lab Code: DATAC Case No.: 40638 Mod. Ref No.: SDG No.: E01T8

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: 1029331005

Sample wt/vol: 30.0 (g/mL) g Lab File ID: NGR27C05

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 60. Decanted: (Y/N) N Date Received: 10/20/2010

Concentrated Extract Volume: 500. (uL) Date Extracted: 10/29/2010

Injection Volume: 1.0 (uL) GPC Factor: 2.0 Date Analyzed: 11/04/2010

GPC Cleanup: (Y/N) Y pH: 6.8 Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
100-52-7	Benzaldehyde	300	J
108-95-2	Phenol	22.	J
111-44-4	Bis(2-chloroethyl)ether	420	U
95-57-8	2-Chlorophenol	420	U
95-48-7	2-Methylphenol	420	U
108-60-1	2,2'-Oxybis(1-chloropropane)	420	U
98-86-2	Acetophenone	150	J
106-44-5	4-Methylphenol	420	U
621-64-7	N-Nitroso-di-n-propylamine	420	U
67-72-1	Hexachloroethane	420	U
98-95-3	Nitrobenzene	420	U
78-59-1	Isophorone	420	U
88-75-5	2-Nitrophenol	420	U
105-67-9	2,4-Dimethylphenol	420	U
111-91-1	Bis(2-chloroethoxy)methane	420	U
120-83-2	2,4-Dichlorophenol	420	U
91-20-3	Naphthalene	420	U
106-47-8	4-Chloroaniline	420	U
87-68-3	Hexachlorobutadiene	420	U
105-60-2	Caprolactam	420	U
59-50-7	4-Chloro-3-methylphenol	420	U
91-57-6	2-Methylnaphthalene	420	U
77-47-4	Hexachlorocyclopentadiene	420	U
88-06-2	2,4,6-Trichlorophenol	420	U
95-95-4	2,4,5-Trichlorophenol	420	U
92-52-4	1,1'-Biphenyl	420	U
91-58-7	2-Chloronaphthalene	420	U
88-74-4	2-Nitroaniline	820	U
131-11-3	Dimethylphthalate	420	U
606-20-2	2,6-Dinitrotoluene	420	U
208-96-8	Acenaphthylene	420	U
99-09-2	3-Nitroaniline	820	U
83-32-9	Acenaphthene	420	U

1E - FORM I SV-2

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

E01W2

Lab Name: ALS Laboratory Group Contract: EPW05026

Lab Code: DATAC Case No.: 40638 Mod. Ref No.: SDG No.: E01T8

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: 1029331005

Sample wt/vol: 30.0 (g/mL) g Lab File ID: NGR27C05

Level: (LOW/MED) LOW Extraction: (Type) SONC

% Moisture: 60. Decanted: (Y/N) N Date Received: 10/20/2010

Concentrated Extract Volume: 500. (uL) Date Extracted: 10/29/2010

Injection Volume: 1.0 (uL) GPC Factor: 2.0 Date Analyzed: 11/04/2010

GPC Cleanup: (Y/N) Y pH: 6.8 Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
51-28-5	2,4-Dinitrophenol	820	U
100-02-7	4-Nitrophenol	820	U
132-64-9	Dibenzofuran	420	U
121-14-2	2,4-Dinitrotoluene	420	U
84-66-2	Diethylphthalate	420	U
86-73-7	Fluorene	420	U
7005-72-3	4-Chlorophenyl-phenylether	420	U
100-01-6	4-Nitroaniline	820	U
534-52-1	4,6-Dinitro-2-methylphenol	820	U
86-30-6	N-Nitrosodiphenylamine[1]	420	U
95-94-3	1,2,4,5-Tetrachlorobenzene	420	U
101-55-3	4-Bromophenyl-phenylether	420	U
118-74-1	Hexachlorobenzene	420	U
1912-24-9	Atrazine	420	U
87-86-5	Pentachlorophenol	820	U
85-01-8	Phenanthrene	120	J
120-12-7	Anthracene	31.	J
86-74-8	Carbazole	18.	J
84-74-2	Di-n-butylphthalate	420	U
206-44-0	Fluoranthene	180	J
129-00-0	Pyrene	140	J
85-68-7	Butylbenzylphthalate	420	U
91-94-1	3,3'-Dichlorobenzidine	420	U
56-55-3	Benzo(a)anthracene	84.	J
218-01-9	Chrysene	93.	J
117-81-7	Bis(2-ethylhexyl)phthalate	200	J
117-84-0	Di-n-octylphthalate	420	U
205-99-2	Benzo(b)fluoranthene	120	J
207-08-9	Benzo(k)fluoranthene	45.	J
50-32-8	Benzo(a)pyrene	98.	J
193-39-5	Indeno(1,2,3-cd)pyrene	55.	J
53-70-3	Dibenzo(a,h)anthracene	13.	J
191-24-2	Benzo(g,h,i)perylene	90.	J
58-90-2	2,3,4,6-Tetrachlorophenol	420	U

[1]Cannot be separated from Diphenylamine

1K - FORM I SV-TIC

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

E01W2

Lab Name: ALS Laboratory Group | Contract: EPW05026

Lab Code: DATAC | Case No.: 40638 | Mod. Ref No.: | SDG No.: E01T8

Matrix: (SOIL/SED/WATER) SOIL | Lab Sample ID: 1029331005

Sample wt/vol: 30.0 (g/mL) g | Lab File ID: NGR27C05

Level: (TRACE or LOW/MED) LOW | Extraction: (Type) SONC

% Moisture: 60. | Decanted: (Y/N) N | Date Received: 10/20/2010

Concentrated Extract Volume: 500. (uL) | Date Extracted: 10/29/2010

Injection Volume: 1.0 (uL) | GPC Factor: 2.0 | Date Analyzed: 11/04/2010

GPC Cleanup: (Y/N) Y | pH: 6.8 | Dilution Factor: 1.0

CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
01	123-79-5	Hexanedioic acid, dioctyl ester	13.72	330	JN
02	480-39-7	4H-1-Benzopyran-4-one, 2,3-dihydro-5,7-d	14.26	170	JN
03	1000217-32-2	Benzenemethanediol, 2,4,6-trimethyl-.alp	15.48	760	JN
04	52898-79-0	3-(2,6-Dimethoxyphenyl)-2-methyl-4(3H)-q	16.25	1000	JN
05	67095-61-8	Pyrrole, 1-methyl-2-(trifluoromethyl)-	16.87	190	JN
06	6137-06-0	2-Heptanone, 4-methyl-	18.01	290	JN
07	1633-22-3	[2.2]Paracyclophane	19.11	1300	JN
08	21175-12-2	Ornithine, N5-(4,6-dimethyl-2-pyrimidiny	19.60	200	JN
09	7029-09-6	2,11-Dodecanedione	19.96	270	JN
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					
26					
27					
28					
29					
30					
	E966796[2]	Total Alkanes	N/A	800	J

[2]EPA-designated Registry Number.

ATTACHMENT C

DATA QUALIFIER DEFINITIONS

LABORATORY DATA QUALIFIER DEFITIONS

J - The analyte was positively identified and the associated numerical value is the approximate concentration of the analyte in the sample (due either to the quality of the data generated because certain quality control criteria were not met, or the concentration of the analyte was below the quantitation limit).

N – This flag indicates presumptive evidence of a compound and is only used for Tentatively Identified Compounds (TICs), where the identification is based on a mass spectral library search. This flag is used in combination with the J flag.

U - The analyte was not detected above the reporting limit. The reported result is the laboratory reporting limit.

Weston Solutions, Inc.
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Chicago, Il. 60606
(312) 424-3300 fax: (312) 424-3330
www.westonsolutions.com

February 16, 2011

Ms. Brenda Jones and Mr. Ajit Vaidya
Great Lakes National Program Office
United States Environmental Protection Agency, Region V
77 West Jackson Boulevard, Mail Code: G-17J
Chicago, Illinois 60604-3507

Re: Data Review of Dissolved Metals Analysis
For the Pore Water of Sediment Samples Collected on November 2-4, 2010
Duck and Otter Creeks 2010 Data Gaps Investigation
Wood and Lucas Counties, Ohio
DCN: 1269-2F-ALFI

Dear Ms. Jones and Mr. Vaidya:

The United States Environmental Protection Agency (U.S. EPA) tasked Weston Solutions, Inc., (WESTON®) to perform data validation for sediment samples collected on November 2-4, 2010, for the Great Lakes National Program Office (GLNPO) Duck and Otter Creeks 2010 Data Gaps Investigation (Duck and Otter) Site. This data review is for dissolved metals analysis of the pore water of 14 sediment samples including one field split sample that were collected by the WESTON Superfund Technical Assessment and Response Team (START). The samples were validated in accordance with the "Quality Assurance Project Plan, Duck and Otter Creeks Data Gaps Investigation" dated September 28, 2010, which includes using the U.S. EPA Contract Laboratory Program National Functional Guidance for Organic and Inorganic Data Review. Table 1 provides a summary of the samples included in this review. All tables are presented at the end of this report.

The samples listed in Table 1 were analyzed by Columbia Analytical Services (CAS) located in Kelso, Washington, under the following six work orders:

- K1012377
- K1012381
- K1012413
- K1012416
- K1012421
- K1012529

Pore water was extracted from the sediment samples and then the pore water was analyzed for dissolved mercury using SW-846 Method 7470A and for all other dissolved metals using SW-846 Methods 6010B and 6020. Table 2 provides a list of the dissolved metals analytes. CAS provided WESTON with a staged electronic data deliverable (SEDD) that was used in conjunction with the Automated Data Review (ADR) software to assist in reviewing the data. All SEDDs were imported into the ADR software for review by the software program and all

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data was checked for completeness. Five percent of the data was put through a full data validation. Therefore, one of the work orders, K1012377, was selected for the full data validation. Work order K1012377 contained two sediment samples including one field split sample for the dissolved metals analysis of pore water.

Attachment A to this report contains the individual Quality Assurance/Quality Control (QA/QC) Analysis Checklist for Sediment Chemistry Analysis for work order K1012377. Attachment B to this report contains a printed report from ADR that provides a summary of results with qualifiers applied by the laboratory and the ADR program. Attachment C contains the data qualifier definitions. The QC limits utilized were those stated in the QAPP. If there was not a QC limit specified in the QAPP, then the method or laboratory-determined QC limits were used. Below is the data review summary.

SUMMARY OF METALS DATA REVIEW

As stated above, five percent of the data was fully validated. Work order K1012377 was selected for full data validation. In work order K1012377, the holding times, calibration standards, interference check sample, laboratory control sample (LCS), and laboratory control sample duplicate (LCSD) were all within the QC limits.

In work order K1012377, the calibration blank had some metals detected above the method detection limit but below the reporting limit. The sample result for thallium in DC-19 was also below the reporting limit and at a similar concentration as the calibration blank. This result was flagged as not detected. In addition, the serial dilution result for manganese was outside QC limits and required manganese results to be flagged as estimated in this work order.

In accordance with the Field Sampling Plan, field duplicates and field splits were not to be collected for the pore water analyses. However, one field split sample was collected. This split had slightly elevated relative percent difference (RPD) values for lead and zinc. This is discussed below under Minor Problems.

Through full data validation and the ADR program, some minor problems with other quality control indicators were discovered. Specifically, the method blanks contained some minor detections of target analytes which caused a couple of mercury results to be flagged as not detected.

Below are a description of the minor problems with QC failures and a review of the data quality indicators.

MINOR PROBLEMS

Minor problems with QC failures are noted below.

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Method Blanks. The method blanks contained minor detections of some analytes at concentrations below the reporting limit but above the method detection limit. The detected sample results for most of these metals were above the reporting limit and significantly above the method blank concentration and did not require qualification.

The exceptions are mercury in samples OC-27 and OC-32. These mercury results were flagged "U" as not detected due to method blank contamination.

Calibration Blanks. Calibration blanks were assessed in work order K1012377, the work order selected for full data validation (the ADR program does not assess calibration blank data). Some metals were detected in the calibration blanks below the reporting limit. In work order K1012377, the detected result for thallium in sample DC-19 was below the reporting limit and near the calibration blank result. This result for thallium was flagged "U" as not detected, as required, based on calibration blank results. These qualifiers were manually added in the ADR program and can be seen in the "Overall Qualifier" column of the ADR summary report in Attachment B.

Serial Dilution Results. Serial dilutions were assessed in work order K1012377, the work order selected for full data validation (the ADR program does not assess serial dilution results). In work order K1012377, manganese was detected in samples at greater than 50 times the detection limit and had a greater than 10 percent difference in the serial dilution. Therefore, manganese results were flagged "J" as estimated based on serial dilution results for work order K1012377. Data usability is not affected.

Field Split Results. Sample DC-19FS is a field split of sample DC-19. A QC limit for field splits was not stated in the QAPP; therefore, a default QC limit of 50 RPD was used to evaluate field split results. The RPDs are below 50 except for lead and zinc which have and RPDs of 53 and 86 percent, respectively. This likely indicates some heterogeneity associated with lead and zinc in this sample and does not affect data usability. Table 3 summarizes the field split results.

DATA QUALITY INDICATORS REVIEW

Many the data quality indicators (sensitivity, precision, accuracy, and completeness) were evaluated through the data validation procedures which are summarized above and discussed in detail in the attachments.

Sensitivity. The laboratory reporting limits stated in the QAPP were met for all target metals. The laboratory reported those results detected below the reporting limit and flagged these results with a "J" as estimated. Sensitivity was acceptable for the samples associated with the work orders included in this data review for dissolved metals.

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Precision. Field precision was evaluated by evaluating the RPDs for the one field split sample. For the field split, the RPDs ranged from 0 to 86 percent. Although the RPD values for lead and zinc slightly exceeded the QC limits, this does not affect data usability and in general the field split results had excellent correlation to the parent sample results. Field precision was evaluated and found to be acceptable. Table 3 summarizes the field precision results.

Laboratory precision was determined by evaluating the RPD values for the LCS and LCSD pair associated with these work orders. The RPDs for LCS/LCSD were within the QAPP-stated QC limit for all metals. The RPDs ranged from 0 to 3 percent. Laboratory precision was adequate for the dissolved metals analysis. Table 4 summarizes the laboratory precision RPDs.

Accuracy. Accuracy is a measure of the agreement between an observed value and an accepted reference value. Laboratory accuracy was evaluated by reviewing the QC criteria for percent recovery for the LCS/LCSD results. The mean LCS recoveries were within the QAPP-stated QC limits and ranged from 97 to 108 percent. Table 4 summarizes the accuracy estimates for this project. Laboratory accuracy was acceptable.

Based on the mean LCS/LCSD recoveries, there does not appear to be a bias associated with the dissolved metals analyses.

Completeness. Completeness is a measure of the amount of valid data obtained compared to the amount of data that was planned to be collected under normal conditions. All sample results were received.

In summary, the data are acceptable for use and a few data qualifications were applied to the sample results for method blank contamination, calibration blank contamination, and serial dilutions. The ADR Summary Report in Attachment B indicates which sample results were flagged during data validation. The laboratory data qualifiers applied are also indicated on the ADR Summary Report in Attachment B. Attachment C provides data qualifier definitions for those qualifiers applied during data validation and by the laboratory.

If there are any questions or comments regarding this report, please do not hesitate to contact WESTON START at 312-424-3300.

Very truly yours,
Weston Solutions, Inc.

Lisa Graczyk
WESTON START Team

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Alex Clark
WESTON START Project Manager

Attachments:
Tables
A - QA/QC Analysis Checklist for Dissolved Metals for Work Order K1012377
B – ADR Summary Report for Dissolved Metals
C – Data Qualifier Definitions

cc: project file

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TABLES

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TABLE 1
SAMPLES INCLUDED IN DATA REVIEW

Sample ID	Lab ID	Date Collected	Comment
DC-19	K1012377-013	11/02/2010	
DC-19FS	K1012377-014	11/02/2010	Field split of DC-19
DC-17	K1012381-013	11/02/2010	
DC-13	K1012413-010	11/02/2010	
DC-16	K1012413-011	11/02/2010	
OC-26	K1012416-010	11/03/2010	
OC-27	K1012416-011	11/03/2010	
DC-14	K1012421-011	11/03/2010	
OC-28	K1012421-012	11/03/2010	
OC-32	K1012529-019	11/04/2010	
OC-33	K1012529-020	11/04/2010	
OC-29	K1012529-021	11/04/2010	
OC-30	K1012529-022	11/04/2010	
OC-31	K1012529-023	11/04/2010	

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TABLE 2 DISSOLVED METAL ANALYTES	
CAS #	**Analyte**
7440-70-2	Calcium
7439-89-6	Iron
7439-95-4	Magnesium
7440-09-7	Potassium
7440-23-5	Sodium
7429-90-5	Aluminum
7440-36-0	Antimony
7440-38-2	Arsenic
7440-39-3	Barium
7440-41-7	Beryllium
7440-43-9	Cadmium
7440-47-3	Chromium
7440-48-4	Cobalt
7440-50-8	Copper
7439-92-1	Lead
7439-96-5	Manganese
7440-02-0	Nickel
7782-49-2	Selenium
7440-22-4	Silver
7440-28-0	Thallium
7440-62-2	Vanadium
7440-66-6	Zinc
7439-97-6	Mercury

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TABLE 3 FIELD SPLIT RESULTS			
	Sample: DC-19FS		
Analyte	Sample Result (µg/L)	Replicate Result (µg/L)	RPD
Aluminum	8.4	6.6	24
Antimony	0.099	0.08	21
Arsenic	6.7	6.1	9
Barium	24.4	19.3	23
Beryllium	<0.020	<0.020	NA
Cadmium	<0.020	0.006	NA
Calcium	78500	81000	3
Chromium	0.4	0.41	2
Cobalt	0.622	0.612	2
Copper	1.14	0.98	15
Iron	25.8	25.6	1
Lead	0.011	0.019	53
Magnesium	25000	26000	4
Manganese	1670	1730	4
Mercury	<0.20	<0.20	NA
Nickel	1.58	1.49	6
Potassium	5680	6130	8
Selenium	0.7	0.5	33
Silver	<0.020	<0.020	NA
Sodium	45300	45200	0
Thallium	0.006	<0.020	NA
Vanadium	0.2	0.15	29
Zinc	0.6	1.5	86

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TABLE 4
QUANTITATIVE DATA ASSESSMENT

	Analytical Precision	Analytical Accuracy/Bias
Analyte	**LCS/LCSD RPD (%) (n=1)**	**Mean LCS/LCSD Recovery (%) (n=2)**
Calcium	0	108
Iron	0	107
Magnesium	0	104
Potassium	2	105
Sodium	1	104
Aluminum	1	104
Antimony	1	98
Arsenic	0	98
Barium	0	99
Beryllium	0	100
Cadmium	1	98
Chromium	0	98
Cobalt	0	99
Copper	0	99
Lead	1	99
Manganese	1	98
Nickel	1	99
Selenium	3	98
Silver	1	99
Thallium	1	99
Vanadium	0	97
Zinc	1	99
Mercury	2	107

Notes:
LCS – Laboratory Control Sample
LCSS – Laboratory Control Sample Duplicate
RPD – Relative Percent Difference

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ATTACHMENT A

QA/QC ANALYSIS CHECKLIST FOR DISSOLVED METALS FOR WORK ORDER K1012377

DISSOLVED METALS IN PORE WATER

BY SW-846 METHODS 6010B, 6020, AND 7470A

WORK ORDER # K1012377

QA/QC Analysis Checklist for Sediment Chemistry Analysis

GRANT/IAG NUMBER: Not Applicable
PROJECT NAME: Duck and Otter Creeks 2010 Data Gaps Investigation
REVIEWER: Lisa Graczyk, WESTON START
DATE: February 16, 2011

1. What sediment chemistry data has been collected (CHECK ALL THAT APPLY)?

Total Metals (Dissolved Metals) _X___		PCBs _____	pH _____	TOC _____
Dioxins/Furans _____	PAHs _____	Pesticides _____	DO _____	
AVS _____	SEM Metals _____	Particle Size _____	Other _____	

2. Were the target detection limits met for each parameter?

Yes	X	
No		(EXPLAIN)

3. Were the method blanks less than the established MDL for each parameter?

Yes		
No	X	(EXPLAIN)

The method blank contained minor detections of aluminum, calcium, cobalt, copper, magnesium, manganese, and mercury at concentrations below the reporting limit. The detected sample results for these metals were above the reporting limit and significantly above the method blank concentration and did not require qualification.

4. Did the results of Field Replicate Analysis vary by less than the % RPD specified in the QAPP?

Yes		
No	X	(EXPLAIN)

There is one field replicate (split) associated with this work order (identified with an "FS" suffix in the station location designation). The field replicate results and investigative sample results were compared to a standard QC limit of 50 RPD or less.

For the field split pair, DC-19 and DC-19FS, this limit was exceeded for lead and zinc. The RPDs for lead and zinc were 53 and 86 percent, respectively. This shows some minor heterogeneity regarding lead and zinc in this sample matrix.

5. Did the results of the Field Duplicates Analysis vary by less than the % RPD specified in the QAPP?

Yes	Not Applicable	
No		(EXPLAIN)

Field duplicate analyses are not applicable to this work order.

6. Did the surrogate spike/internal standards recoveries meet the limits set forth in the QAPP?

Yes	Not Applicable	
No		(EXPLAIN)

7. Did the MS/MSD recoveries meet the limits set forth in the QAPP?

Yes	Not Applicable	
No		

MS/MSDs were not analyzed with the dissolved metals analysis.

8. Did the RPD (%) of the MS/MSD sample set meet the limits set forth in the QAPP?

Yes	Not Applicable	
No		(EXPLAIN)

An MSD was not analyzed with the dissolved metals analysis.

9. Did the LCS recoveries meet the limits set forth in the QAPP?

Yes	X	
No		(EXPLAIN)

The LCS recoveries were within QC limits.

10. Did the calibration verification standards (ICVs and CCVs) meet the requirements set forth in the QAPP?

Yes	X	
No		(EXPLAIN)

11. Did the calibration blanks (ICBs and CCBs) meet the limits set forth in the QAPP?

Yes		
No	X	(EXPLAIN)

There were detections of some target analytes in the calibration blanks that were below the reporting limit but above the method detection limit. The detected result for thallium in sample DC-19 was below the reporting limit and near the calibration blank result. The result for thallium in sample DC-19 was flagged "U" as not detected based on calibration blank results.

12. Did the interference check samples meet the limits set forth in the QAPP?

Yes	X	
No		(EXPLAIN)

13. Did the serial dilution samples meet the limits set forth in the QAPP?

Yes		
No	X	(EXPLAIN)

Manganese was detected in samples at greater than 50 times the reporting limit and had a greater than 10 percent difference in the serial dilution. Therefore, manganese results were flagged "J" as estimated based on serial dilution results. Data usability is not affected.

14. Were any level of contaminants detected above the MDL for the trip blanks and storage blanks?

Yes	Not Applicable	
No		(EXPLAIN)

Trip blanks and storage blanks are not applicable to this work order.

15. Did all required analyses take place within the required holding time protocols set forth in the QAPP?

Yes	X	
No		(EXPLAIN)

16. Did the laboratory duplicates vary by less than the % RPD specified in the QAPP?

Yes	Not Applicable	
No		(EXPLAIN)

Dissolved Metals Checklist
Duck and Otter Creeks 2010 Data Gaps Investigation
Columbia Analytical Services
Laboratory Work Order #: K1012377

17. Are measured dry-weight contaminant concentrations reported?

Yes	Not Applicable	
No	_____	(EXPLAIN)

18. Please provide details for all of the "UNACCEPTABLE" marked above. Include details on the specific analytes affected by any QA/QC discrepancies, and recommendations regarding usability of data.

Any items with “UNACCEPTABLE” marked above are described immediately following the “UNACCEPTABLE” marking in the corresponding item above.

The data are acceptable for use as qualified.

Dissolved Metals Checklist
Duck and Otter Creeks 2010 Data Gaps Investigation
Columbia Analytical Services
Laboratory Work Order #: K1012377

ATTACHMENT B

ADR SUMMARY REPORT FOR DISSOLVED METALS

Sample Qualification Report (All Analytes)

Client Sample ID : DC-19 **Lab Report Batch :** K1012377 **Lab ID :** CAS_K

Sample Date : 11/02/2010 **Analysis Type: 1RES/DIS** **Sample Matrix :** AQ

Lab Sample ID: K1012377-013DISS

Reviewed By / Date : **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 6010B					**Dilution: 1.0**															
Calcium	78500		ug/L		YES															
Iron	25.8		ug/L		YES															
Magnesium	25000		ug/L		YES															
Potassium	5680		ug/L		YES															
Sodium	45300		ug/L		YES															
Analysis Method : 6020					**Dilution: 1.0**															
Aluminum	8.4		ug/L		YES															
Antimony	0.099		ug/L		YES															
Arsenic	6.7		ug/L		YES															
Barium	24.4		ug/L		YES															
Beryllium	0.020		ug/L	U	YES															
Cadmium	0.020		ug/L	U	YES															
Chromium	0.40		ug/L		YES															
Cobalt	0.622		ug/L		YES															
Copper	1.14		ug/L		YES															
Lead	0.011		ug/L	J	YES	**J**								J						
Manganese	1670		ug/L		YES	**J**														
Nickel	1.58		ug/L		YES															
Selenium	0.7		ug/L	J	YES	**J**								J						
Silver	0.020		ug/L	U	YES															
Thallium	0.006		ug/L	J	YES	**UJ**								J						
Vanadium	0.20		ug/L	J	YES															
Zinc	0.6		ug/L		YES															
Analysis Method : 7470A					**Dilution: 1.0**															
Mercury	0.20		ug/L	U	YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data revie

Sample Qualification Report (All Analytes)

Client Sample ID : DC-19FS **Lab Report Batch :** K1012377 **Lab ID :** CAS_K

Sample Date : 11/02/2010 **Analysis Type: 1RES/DIS** **Sample Matrix :** AQ

Lab Sample ID: K1012377-014DISS

Reviewed By / Date : **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 6010B					**Dilution: 1.0**															
Calcium	81000		ug/L		YES															
Iron	25.6		ug/L		YES															
Magnesium	26000		ug/L		YES															
Potassium	6130		ug/L		YES															
Sodium	45200		ug/L		YES															
Analysis Method : 6020					**Dilution: 1.0**															
Aluminum	6.6		ug/L		YES															
Antimony	0.080		ug/L		YES															
Arsenic	6.1		ug/L		YES															
Barium	19.3		ug/L		YES															
Beryllium	0.020		ug/L	U	YES															
Cadmium	0.006		ug/L	J	YES	**J**								J						
Chromium	0.41		ug/L		YES															
Cobalt	0.612		ug/L		YES															
Copper	0.98		ug/L		YES															
Lead	0.019		ug/L	J	YES	**J**								J						
Manganese	1730		ug/L		YES	**J**														
Nickel	1.49		ug/L		YES															
Selenium	0.5		ug/L	J	YES	**J**								J						
Silver	0.020		ug/L	U	YES															
Thallium	0.020		ug/L	U	YES	**None**														
Vanadium	0.15		ug/L	J	YES	**J**								J						
Zinc	1.5		ug/L		YES															
Analysis Method : 7470A					**Dilution: 1.0**															
Mercury	0.20		ug/L	U	YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data revie

Sample Qualification Report (All Analytes)

Client Sample ID : DC-17 **Lab Report Batch :** K1012381 **Lab ID :** CAS_K

Sample Date : 11/02/2010 **Analysis Type: 1RES/DIS** **Sample Matrix :** AQ

Lab Sample ID: K1012381-013DISS

Reviewed By / Date : **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 6010B					**Dilution: 1.0**															
Calcium	86100		ug/L		YES															
Iron	75.5		ug/L		YES															
Magnesium	27900		ug/L		YES															
Potassium	6300		ug/L		YES															
Sodium	36500		ug/L		YES															
Analysis Method : 6020					**Dilution: 1.0**															
Aluminum	3.7		ug/L		YES															
Antimony	0.121		ug/L		YES															
Arsenic	4.5		ug/L		YES															
Barium	31.3		ug/L		YES															
Beryllium	0.020		ug/L	U	YES															
Cadmium	0.020		ug/L	U	YES															
Chromium	0.40		ug/L		YES															
Cobalt	0.718		ug/L		YES															
Copper	0.99		ug/L		YES															
Lead	0.019		ug/L	J	YES	**J**								J						
Manganese	1650		ug/L		YES															
Nickel	1.81		ug/L		YES															
Selenium	0.6		ug/L	J	YES	**J**								J						
Silver	0.020		ug/L	U	YES															
Thallium	0.010		ug/L	J	YES	**J**								J						
Vanadium	0.22		ug/L		YES															
Zinc	1.1		ug/L		YES															
Analysis Method : 7470A					**Dilution: 1.0**															
Mercury	0.20		ug/L	U	YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data revie

Sample Qualification Report (All Analytes)

Client Sample ID : DC-13 **Lab Report Batch :** K1012413 **Lab ID :** CAS_K

Sample Date : 11/02/2010 **Analysis Type: 1RES/DIS** **Sample Matrix :** AQ

Lab Sample ID: K1012413-010DISS

Reviewed By / Date : **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 6010B					**Dilution: 1.0**															
Calcium	111000		ug/L		YES															
Iron	98.4		ug/L		YES															
Magnesium	33800		ug/L		YES															
Potassium	8080		ug/L		YES															
Sodium	32500		ug/L		YES															
Analysis Method : 6020					**Dilution: 1.0**															
Aluminum	8.8		ug/L		YES															
Antimony	0.547		ug/L		YES															
Arsenic	2.4		ug/L		YES															
Barium	81.7		ug/L		YES															
Beryllium	0.020		ug/L	U	YES															
Cadmium	0.020		ug/L	U	YES															
Chromium	1.13		ug/L		YES															
Cobalt	0.278		ug/L		YES															
Copper	3.06		ug/L		YES															
Lead	0.129		ug/L		YES															
Manganese	2.950		ug/L		YES															
Nickel	3.48		ug/L		YES															
Selenium	0.6		ug/L	J	YES	**J**								J						
Silver	0.020		ug/L	U	YES															
Thallium	0.024		ug/L		YES															
Vanadium	2.31		ug/L		YES															
Zinc	4.3		ug/L		YES															
Analysis Method : 7470A					**Dilution: 1.0**															
Mercury	0.20		ug/L	U	YES															

Project Number and Name: **40479 - Duck and Otter Creek** **Library Used:** **Duck and Otter**

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data revie

Sample Qualification Report (All Analytes)

Client Sample ID : DC-16 **Lab Report Batch :** K1012413 **Lab ID :** CAS_K

Sample Date : 11/02/2010 **Analysis Type: 1RES/DIS** **Sample Matrix :** AQ

Lab Sample ID: K1012413-011DISS

Reviewed By / Date : **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 6010B					**Dilution: 1.0**															
Calcium	83300		ug/L		YES															
Iron	427		ug/L		YES															
Magnesium	30200		ug/L		YES															
Potassium	9210		ug/L		YES															
Sodium	37900		ug/L		YES															
Analysis Method : 6020					**Dilution: 1.0**															
Aluminum	18.8		ug/L		YES															
Antimony	0.227		ug/L		YES															
Arsenic	7.5		ug/L		YES															
Barium	48.9		ug/L		YES															
Beryllium	0.020		ug/L	U	YES															
Cadmium	0.013		ug/L	J	YES	**J**								J						
Chromium	0.93		ug/L		YES															
Cobalt	0.502		ug/L		YES															
Copper	2.55		ug/L		YES															
Lead	0.264		ug/L		YES															
Manganese	1140		ug/L		YES															
Nickel	2.01		ug/L		YES															
Selenium	0.6		ug/L	J	YES	**J**								J						
Silver	0.020		ug/L	U	YES															
Thallium	0.008		ug/L	J	YES	**J**								J						
Vanadium	0.65		ug/L		YES															
Zinc	3.0		ug/L		YES															
Analysis Method : 7470A					**Dilution: 1.0**															
Mercury	0.20		ug/L	U	YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data revie

Sample Qualification Report (All Analytes)

Client Sample ID : OC-26 **Lab Report Batch :** K1012416 **Lab ID :** CAS_K

Sample Date : 11/03/2010 **Analysis Type: 1RES/DIS** **Sample Matrix :** AQ

Lab Sample ID: K1012416-010DISS

Reviewed By / Date : **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 6010B					**Dilution: 1.0**															
Calcium	72200		ug/L		YES															
Iron	97.9		ug/L		YES															
Magnesium	23600		ug/L		YES															
Potassium	3950		ug/L		YES															
Sodium	36500		ug/L		YES															
Analysis Method : 6020					**Dilution: 1.0**															
Aluminum	10.0		ug/L		YES															
Antimony	0.213		ug/L		YES															
Arsenic	18.8		ug/L		YES															
Barium	36.1		ug/L		YES															
Beryllium	0.020		ug/L	U	YES															
Cadmium	0.137		ug/L		YES															
Chromium	1.25		ug/L		YES															
Cobalt	0.624		ug/L		YES															
Copper	9.26		ug/L		YES															
Lead	0.744		ug/L		YES															
Manganese	985		ug/L		YES															
Nickel	3.04		ug/L		YES															
Selenium	0.7		ug/L	J	YES	**J**								J						
Silver	0.005		ug/L	J	YES	**J**								J						
Thallium	0.012		ug/L	J	YES	**J**								J						
Vanadium	0.60		ug/L		YES															
Zinc	4.4		ug/L		YES															
Analysis Method : 7470A					**Dilution: 1.0**															
Mercury	0.20		ug/L	U	YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data revie

Sample Qualification Report (All Analytes)

Client Sample ID : OC-27 **Lab Report Batch :** K1012416 **Lab ID :** CAS_K

Sample Date : 11/03/2010 **Analysis Type: 1RES/DIS** **Sample Matrix :** AQ

Lab Sample ID: K1012416-011DISS

Reviewed By / Date : **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 6010B					**Dilution: 1.0**															
Calcium	116000		ug/L		YES															
Iron	226		ug/L		YES															
Magnesium	41200		ug/L		YES															
Potassium	4060		ug/L		YES															
Sodium	35500		ug/L		YES															
Analysis Method : 6020					**Dilution: 1.0**															
Aluminum	50.4		ug/L		YES															
Antimony	0.221		ug/L		YES															
Arsenic	18.8		ug/L		YES															
Barium	53.7		ug/L		YES															
Beryllium	0.020		ug/L	U	YES															
Cadmium	0.133		ug/L		YES															
Chromium	1.41		ug/L		YES															
Cobalt	0.398		ug/L		YES															
Copper	8.71		ug/L		YES															
Lead	9.180		ug/L		YES															
Manganese	1160		ug/L		YES															
Nickel	2.58		ug/L		YES															
Selenium	0.4		ug/L	J	YES	**J**								J						
Silver	0.007		ug/L	J	YES	**J**								J						
Thallium	0.008		ug/L	J	YES	**J**								J						
Vanadium	2.44		ug/L		YES															
Zinc	7.5		ug/L		YES															
Analysis Method : 7470A					**Dilution: 1.0**															
Mercury	0.02		ug/L	J	YES	**UJ**			U					J						

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data revie

Sample Qualification Report (All Analytes)

Client Sample ID : DC-14 **Lab Report Batch :** K1012421 **Lab ID :** CAS_K

Sample Date : 11/03/2010 **Analysis Type: 1RES/DIS** **Sample Matrix :** AQ

Lab Sample ID: K1012421-011DISS

Reviewed By / Date : **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 6010B					**Dilution: 1.0**															
Calcium	91000		ug/L		YES															
Iron	36.2		ug/L		YES															
Magnesium	27800		ug/L		YES															
Potassium	7440		ug/L		YES															
Sodium	40200		ug/L		YES															
Analysis Method : 6020					**Dilution: 1.0**															
Aluminum	2.1		ug/L		YES															
Antimony	0.057		ug/L		YES															
Arsenic	11.9		ug/L		YES															
Barium	31.7		ug/L		YES															
Beryllium	0.020		ug/L	U	YES															
Cadmium	0.020		ug/L	U	YES															
Chromium	0.57		ug/L		YES															
Cobalt	0.740		ug/L		YES															
Copper	0.65		ug/L		YES															
Lead	0.046		ug/L		YES															
Manganese	1990		ug/L		YES															
Nickel	1.65		ug/L		YES															
Selenium	0.7		ug/L	J	YES	**J**								J						
Silver	0.020		ug/L	U	YES															
Thallium	0.020		ug/L	U	YES															
Vanadium	0.20		ug/L	J	YES															
Zinc	0.9		ug/L		YES															
Analysis Method : 7470A					**Dilution: 1.0**															
Mercury	0.20		ug/L	U	YES															

Project Number and Name: **40479 - Duck and Otter Creek** **Library Used:** **Duck and Otter**

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data revie

Sample Qualification Report (All Analytes)

Client Sample ID : OC-28 **Lab Report Batch :** K1012421 **Lab ID :** CAS_K

Sample Date : 11/03/2010 **Analysis Type: 1RES/DIS** **Sample Matrix :** AQ

Lab Sample ID: K1012421-012DISS

Reviewed By / Date : **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 6010B					**Dilution: 1.0**															
Calcium	131000		ug/L		YES															
Iron	44.4		ug/L		YES															
Magnesium	49500		ug/L		YES															
Potassium	5260		ug/L		YES															
Sodium	35300		ug/L		YES															
Analysis Method : 6020					**Dilution: 1.0**															
Aluminum	7.9		ug/L		YES															
Antimony	0.203		ug/L		YES															
Arsenic	19.0		ug/L		YES															
Barium	49.2		ug/L		YES															
Beryllium	0.020		ug/L	U	YES															
Cadmium	0.013		ug/L	J	YES	**J**								J						
Chromium	1.46		ug/L		YES															
Cobalt	0.528		ug/L		YES															
Copper	2.67		ug/L		YES															
Lead	0.097		ug/L		YES															
Manganese	1440		ug/L		YES															
Nickel	2.84		ug/L		YES															
Selenium	0.8		ug/L	J	YES	**J**								J						
Silver	0.020		ug/L	U	YES															
Thallium	0.006		ug/L	J	YES	**J**								J						
Vanadium	1.48		ug/L		YES															
Zinc	3.5		ug/L		YES															
Analysis Method : 7470A					**Dilution: 1.0**															
Mercury	0.20		ug/L	U	YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data revie

Sample Qualification Report (All Analytes)

Client Sample ID : OC-29 **Lab Report Batch :** K1012529 **Lab ID :** CAS_K

Sample Date : 11/04/2010 **Analysis Type: 1RES/DIS** **Sample Matrix :** AQ

Lab Sample ID: K1012529-021DISS

Reviewed By / Date : **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 6010B					**Dilution: 1.0**															
Calcium	148000		ug/L		YES															
Iron	41.8		ug/L		YES															
Magnesium	50400		ug/L		YES															
Potassium	3630		ug/L		YES															
Sodium	31700		ug/L		YES															
Analysis Method : 6020					**Dilution: 1.0**															
Aluminum	3.5		ug/L		YES															
Antimony	0.114		ug/L		YES															
Arsenic	18.1		ug/L		YES															
Barium	54.9		ug/L		YES															
Beryllium	0.020		ug/L	U	YES															
Cadmium	0.023		ug/L		YES															
Chromium	0.65		ug/L		YES															
Cobalt	0.497		ug/L		YES															
Copper	1.51		ug/L		YES															
Lead	0.250		ug/L		YES															
Nickel	2.36		ug/L		YES															
Selenium	0.6		ug/L	J	YES	**J**								J						
Silver	0.020		ug/L	U	YES															
Thallium	0.005		ug/L	J	YES	**J**								J						
Vanadium	1.34		ug/L		YES															
Zinc	1.5		ug/L		YES															
Analysis Method : 7470A					**Dilution: 1.0**															
Mercury	0.20		ug/L	U	YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data revie

Sample Qualification Report (All Analytes)

Client Sample ID : OC-29 **Lab Report Batch :** K1012529 **Lab ID :** CAS_K

Sample Date : 11/04/2010 **Analysis Type: 2RES/DIS** **Sample Matrix :** AQ

Lab Sample ID: K1012529-021DISS

Reviewed By / Date : **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 6020					**Dilution: 100.0**															
Manganese	1830		ug/L		YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data revie

Sample Qualification Report (All Analytes)

Client Sample ID : OC-30 **Lab Report Batch :** K1012529 **Lab ID :** CAS_K

Sample Date : 11/04/2010 **Analysis Type: 1RES/DIS** **Sample Matrix :** AQ

Lab Sample ID: K1012529-022DISS

Reviewed By / Date : **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 6010B					**Dilution: 1.0**															
Calcium	64700		ug/L		YES															
Iron	108		ug/L		YES															
Magnesium	16600		ug/L		YES															
Potassium	3360		ug/L		YES															
Sodium	31000		ug/L		YES															
Analysis Method : 6020					**Dilution: 1.0**															
Aluminum	19.6		ug/L		YES															
Antimony	0.253		ug/L		YES															
Arsenic	9.8		ug/L		YES															
Barium	46.3		ug/L		YES															
Beryllium	0.020		ug/L	U	YES															
Cadmium	0.062		ug/L		YES															
Chromium	1.08		ug/L		YES															
Cobalt	0.469		ug/L		YES															
Copper	2.74		ug/L		YES															
Lead	0.587		ug/L		YES															
Manganese	1140		ug/L		YES															
Nickel	2.32		ug/L		YES															
Selenium	0.9		ug/L	J	YES	**J**								J						
Silver	0.008		ug/L	J	YES	**J**								J						
Thallium	0.024		ug/L		YES															
Vanadium	0.31		ug/L		YES															
Zinc	3.4		ug/L		YES															
Analysis Method : 7470A					**Dilution: 1.0**															
Mercury	0.20		ug/L	U	YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data revie

Sample Qualification Report (All Analytes)

Client Sample ID : OC-31 **Lab Report Batch :** K1012529 **Lab ID :** CAS_K

Sample Date : 11/04/2010 **Analysis Type: 1RES/DIS** **Sample Matrix :** AQ

Lab Sample ID: K1012529-023DISS

Reviewed By / Date : **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 6010B					**Dilution: 1.0**															
Calcium	59100		ug/L		YES															
Iron	70.2		ug/L		YES															
Magnesium	15800		ug/L		YES															
Potassium	3740		ug/L		YES															
Sodium	32200		ug/L		YES															
Analysis Method : 6020					**Dilution: 1.0**															
Aluminum	7.4		ug/L		YES															
Antimony	0.111		ug/L		YES															
Arsenic	12.9		ug/L		YES															
Barium	30.1		ug/L		YES															
Beryllium	0.020		ug/L	U	YES															
Cadmium	0.013		ug/L	J	YES	**J**								J						
Chromium	0.76		ug/L		YES															
Cobalt	0.334		ug/L		YES															
Copper	2.53		ug/L		YES															
Lead	0.125		ug/L		YES															
Manganese	908		ug/L		YES															
Nickel	1.73		ug/L		YES															
Selenium	0.6		ug/L	J	YES	**J**								J						
Silver	0.020		ug/L	U	YES															
Thallium	0.006		ug/L	J	YES	**J**								J						
Vanadium	1.09		ug/L		YES															
Zinc	12.3		ug/L		YES															
Analysis Method : 7470A					**Dilution: 1.0**															
Mercury	0.20		ug/L	U	YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data revie

Sample Qualification Report (All Analytes)

Client Sample ID : OC-32 **Lab Report Batch :** K1012529 **Lab ID :** CAS_K

Sample Date : 11/04/2010 **Analysis Type: 1RES/DIS** **Sample Matrix :** AQ

Lab Sample ID: K1012529-019DISS

Reviewed By / Date : **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 6010B					**Dilution: 1.0**															
Calcium	68900		ug/L		YES															
Iron	86.6		ug/L		YES															
Magnesium	17100		ug/L		YES															
Potassium	4400		ug/L		YES															
Sodium	32600		ug/L		YES															
Analysis Method : 6020					**Dilution: 1.0**															
Aluminum	16.0		ug/L		YES															
Antimony	0.344		ug/L		YES															
Arsenic	7.4		ug/L		YES															
Barium	58.4		ug/L		YES															
Beryllium	0.020		ug/L	U	YES															
Cadmium	0.055		ug/L		YES															
Chromium	2.02		ug/L		YES															
Cobalt	0.382		ug/L		YES															
Copper	3.60		ug/L		YES															
Lead	0.877		ug/L		YES															
Manganese	584		ug/L		YES															
Nickel	2.70		ug/L		YES															
Selenium	0.5		ug/L	J	YES	**J**								J						
Silver	0.007		ug/L	J	YES	**J**								J						
Thallium	0.014		ug/L	J	YES	**J**								J						
Vanadium	1.18		ug/L		YES															
Zinc	2.5		ug/L		YES															
Analysis Method : 7470A					**Dilution: 1.0**															
Mercury	0.02		ug/L	J	YES	**UJ**			U					J						

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data revie

Sample Qualification Report (All Analytes)

Client Sample ID : OC-33 **Lab Report Batch :** K1012529 **Lab ID :** CAS_K

Sample Date : 11/04/2010 **Analysis Type: 1RES/DIS** **Sample Matrix :** AQ

Lab Sample ID: K1012529-020DISS

Reviewed By / Date : **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 6010B					**Dilution: 1.0**															
Calcium	59800		ug/L		YES															
Iron	57.0		ug/L		YES															
Magnesium	16200		ug/L		YES															
Potassium	3720		ug/L		YES															
Sodium	32600		ug/L		YES															
Analysis Method : 6020					**Dilution: 1.0**															
Aluminum	8.6		ug/L		YES															
Antimony	0.111		ug/L		YES															
Arsenic	14.5		ug/L		YES															
Barium	29.2		ug/L		YES															
Beryllium	0.020		ug/L	U	YES															
Cadmium	0.015		ug/L	J	YES	**J**								J						
Chromium	1.70		ug/L		YES															
Cobalt	0.337		ug/L		YES															
Copper	1.89		ug/L		YES															
Lead	0.118		ug/L		YES															
Manganese	971		ug/L		YES															
Nickel	2.31		ug/L		YES															
Selenium	0.6		ug/L	J	YES	**J**								J						
Silver	0.020		ug/L	U	YES															
Thallium	0.020		ug/L	U	YES															
Vanadium	1.01		ug/L		YES															
Zinc	1.6		ug/L		YES															
Analysis Method : 7470A					**Dilution: 1.0**															
Mercury	0.20		ug/L	U	YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data revie

ATTACHMENT C

DATA QUALIFIER DEFINITIONS

LABORATORY DATA QUALIFIER DEFITIONS

J - The result is an estimated value that was detected outside the quantitation range.

U - The analyte was analyzed for, but not detected at or above the reporting limit.

DATA VALIDATION DATA QUALIFIER DEFITIONS

J - The analyte was positively identified and the associated numerical value is the approximate concentration of the analyte in the sample (due either to the quality of the data generated because certain quality control criteria were not met, or the concentration of the analyte was below the quantitation limit).

U - The analyte was analyzed for, but not detected above the level of the reported sample quantitation limit.

ATTACHMENT C

DATA QUALIFIER DEFINITIONS

LABORATORY DATA QUALIFIER DEFITIONS

J - Estimated Result. The result is less than the laboratory reporting limit.

U - The analyte was not detected above the reporting limit. The reported result is the laboratory reporting limit.

DATA VALIDATION DATA QUALIFIER DEFITIONS

J - The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.

U - The analyte was not detected above the reporting limit or was detected in the blank at a concentration requiring qualification of sample result as not detected. The reported result is the laboratory reporting limit.

Weston Solutions, Inc.
20 North Wacker Drive, Suite 1210
Chicago, Il. 60606
(312) 424-3300 fax: (312) 424-3330
www.westonsolutions.com

March 2, 2011

Ms. Brenda Jones and Mr. Ajit Vaidya
Great Lakes National Program Office
United States Environmental Protection Agency, Region V
77 West Jackson Boulevard, Mail Code: G-17J
Chicago, Illinois 60604-3507

Re: Data Review of Polychlorinated Biphenyls (PCB) Analysis
For Sediment Samples Collected on November 3, 2010
CLP Case No. 40749, SDG No. E0226
Duck and Otter Creeks 2010 Data Gaps Investigation
Wood and Lucas Counties, Ohio
DCN: 1269-2F-ALFI

Dear Ms. Jones and Mr. Vaidya:

The United States Environmental Protection Agency (U.S. EPA) tasked Weston Solutions, Inc., (WESTON®) to perform data validation for the five percent of the sediment samples collected on November 2-4, 2010, for the Great Lakes National Program Office (GLNPO) Duck and Otter Creeks 2010 Data Gaps Investigation Site. This data review is for PCB analyses of nine sediment samples that include three field duplicate samples that were collected by WESTON under Sample Delivery Group (SDG) number E0226. The samples were validated in accordance with the "Quality Assurance Project Plan, Duck and Otter Creeks Data Gaps Investigation" dated September 28, 2010, which includes using the U.S. EPA Contract Laboratory Program (CLP) National Functional Guidance for Organic and Inorganic Data Review. Table 1 provides a summary of the samples included in this review. All tables are presented at the end of this report.

The samples listed in Table 1 were analyzed under the U.S. EPA CLP by ALS Laboratory Group (ALS) located in Salt Lake City, Utah, under case number 40749. There were four SDGs associated with this case number for PCB analyses. Because only five percent of data is to be validated, SDG number E0226 was selected for data validation.

Sediment samples were analyzed for PCBs using U.S. EPA CLP Statement of Work (SOW) SOM01.2. Table 2 provides a list of the PCBs that were analyzed. ALS did not provide a Staged Electronic Data Deliverable (SEDD) with the CLP analytical package. Therefore, the Automated Data Review (ADR) software was not utilized to assist in reviewing this data.

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Attachment A to this report contains the individual Quality Assurance/Quality Control (QA/QC) Analysis Checklist for Sediment Chemistry Analysis for SDG E0226. Attachment B to this report contains a printed summary report of sample results with hand-written qualifiers that were applied during the data review. Attachment C to this report contains a list of the data qualifiers associated with the sample results. The QC limits utilized were those stated in the Quality Assurance Project Plan (QAPP). If there was not a QC limit specified in the QAPP, then the method or laboratory-determined QC limits were used. Below is the data review summary.

SUMMARY OF PCB DATA REVIEW

The holding times, initial calibration, continuing calibration, method blank, surrogates, matrix spike (MS), matrix spike duplicate (MSD), and laboratory control sample (LCS) were within the QC limits.

The relative percent difference (RPD) calculated for one of the field duplicate pairs was somewhat high. This is discussed in further detail below under Minor Problems.

Below is a review of the minor problems associated with QC failures and a summary of the data quality indicators associated with the PCB analysis for the sediment samples collected on November 3, 2010.

MINOR PROBLEMS

Minor problems with QC failures are noted below.

Field Duplicate Results. The field duplicates were collected adjacent to an investigative sample and are not of the same homogenized material. Three field duplicate pairs are associated with the sediment samples collected on November 3, 2010, and SDG E0226 (see Table 1 for which samples were designated as field duplicates).

Because a QC limit for field duplicates was not stated in the QAPP, a default QC limit of 50 RPD was used to evaluate field duplicate results. The duplicate results were non-detect except for Aroclor 1254 in two of the field duplicate pairs. For one of the field duplicate pairs with a detection of Aroclor 1254, the RPD was below 50. For field duplicate pair E0231 and E0233, the RPD for Aroclor 1254 was 99 percent which is greater than 50 RPD. This very elevated RPD is most likely due to sample heterogeneity associated with PCBs. Table 3 summarizes the field duplicate results and RPDs.

DATA QUALITY INDICATORS REVIEW

Many the data quality indicators (sensitivity, precision, accuracy, and completeness) were evaluated through the data validation procedures which are summarized above and discussed in detail in the Attachment.

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Sensitivity. The QAPP stated that modified method SOM01.2 would achieve a reporting limit of 33micrograms per kilogram (µg/kg) for all Aroclor compounds. The laboratory achieved reporting limits that ranged from 38 to 57 µg/kg. These increases over the QAPP-stated reporting limit are mostly due to adjustments for percent moisture in the samples and do not affect data usability as the reporting limits are below human health and ecological reference limits stated in the QAPP. Sensitivity was adequate for the PCB analyses of sediment samples collected on November 3, 2010, that are associated with SDG E0226.

Precision. Field precision is determined by evaluating the RPDs for the field duplicate results. The RPD for the one field duplicate was 99 percent while the other was 41 percent. The field duplicate result with a 99 RPD value indicates sample heterogeneity with PCBs.

Laboratory precision was evaluated by reviewing the RPD values between the MS and MSD results. There was only one MS/MSD pair associated with this SDG for which RPDs could be evaluated. The RPDs for the Aroclor 1016 and 1260 (the PCBs spiked in the MS/MSD) were 15 and 13 percent, respectively. These RPDs are within the QAPP-stated QC limits. Laboratory precision was acceptable for the PCB analysis. Table 4 summarizes the laboratory precision results.

Accuracy/Bias. Accuracy is a measure of the agreement between an observed value and an accepted reference value. Laboratory accuracy was evaluated by reviewing the QC criteria for percent recovery for LCS and MS/MSD results. The LCS and MS/MSD percent recoveries were within the QAPP QC limits. Table 4 summarizes the accuracy estimates for the PCB analysis. The percent recoveries for the LCS are 61 and 81percent for Aroclor 1016 and Aroclor 1260, respectively. The mean MS/MSD percent recoveries are 85 and 85 percent for Aroclor 1016 and Aroclor 1260, respectively. Laboratory accuracy was acceptable. The Aroclor recoveries indicate a low bias associated with the PCB analysis.

Completeness. Completeness is a measure of the amount of valid data obtained compared to the amount of data that was planned to be collected under normal conditions. All samples results were received.

In summary, the data are usable for comparison to the PCB screening criteria stated in the QAPP. No qualifications were added to the samples during the data review. Definitions for the laboratory qualifications are included in Attachment C.

If there are any questions or comments regarding this report, please do not hesitate to contact WESTON START at 847-918-4000.

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Very truly yours,

Weston Solutions, Inc.



Lisa Graczyk
WESTON START Team

Alex Clark
WESTON START Project Manager

Attachments:
Tables
A- Checklists for PCB Analytical Data for Case # 40749, SDG # E0226
B- Analytical Data Summary Sheets with Qualifiers
C- Data Qualifier Definitions

cc: project file

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TABLES

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TABLE 1
SAMPLES INCLUDED IN DATA REVIEW

Sample ID	Sample Location ID	Date Collected	Comment
E0226	OC-27	11/3/2010	
E0227	OC-27DP	11/3/2010	Field duplicate of OC-27
E0228	OC-27-01	11/3/2010	
E0229	OC-27-02	11/3/2010	
E0230	OC-26	11/3/2010	
E0231	OC-26-01	11/3/2010	
E0232	OC-26-02	11/3/2010	
E0233	OC-26-01DP	11/3/2010	Field duplicate of OC-26-01
E0234	OC-26-02DP	11/3/2010	Field duplicate of OC-26-02

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TABLE 2 PCB ANALYTES	
CAS #	**Analyte**
12674-11-2	Aroclor 1016
11104-28-2	Aroclor 1221
11141-16-5	Aroclor 1232
53469-21-9	Aroclor 1242
12672-29-6	Aroclor 1248
11097-69-1	Aroclor 1254
11096-82-5	Aroclor 1260
37324-23-5	Aroclor 1262
11100-14-4	Aroclor 1268

Notes:

CAS – Chemical Abstracts Service
PCB – Polychlorinated Biphenyl

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TABLE 3
FIELD DUPLICATE RESULTS

	Sample: OC27DP			Sample: OC26-01DP		
Analyte	**Sample Result (µg/kg)**	**Replicate Result (µg/kg)**	**RPD**	**Sample Result (µg/kg)**	**Replicate Result (µg/kg)**	**RPD**
Aroclor 1016	<53	<57	NA	<56	<38	NA
Aroclor 1221	<53	<57	NA	<56	<38	NA
Aroclor 1232	<53	<57	NA	<56	<38	NA
Aroclor 1242	<53	<57	NA	<56	<38	NA
Aroclor 1248	<53	<57	NA	<56	<38	NA
Aroclor 1254	100	66	41	250	84	99
Aroclor 1260	<53	<57	NA	<56	<38	NA
Aroclor 1262	<53	<57	NA	<56	<38	NA
Aroclor 1260	<53	<57	NA	<56	<38	NA
	Sample: OC26-02DP			**Sample:**		
Analyte	**Sample Result (µg/kg)**	**Replicate Result (µg/kg)**	**RPD**	**Sample Result (µg/kg)**	**Replicate Result (µg/kg)**	**RPD**
Aroclor 1016	<43	<42	NA			
Aroclor 1221	<43	<42	NA			
Aroclor 1232	<43	<42	NA			
Aroclor 1242	<43	<42	NA			
Aroclor 1248	<43	<42	NA			
Aroclor 1254	<43	<42	NA			
Aroclor 1260	<43	<42	NA			
Aroclor 1262	<43	<42	NA			
Aroclor 1260	<43	<42	NA			

Notes:
µg/kg– Microgram per Kilogram
NA – Not Applicable
RPD – Relative Percent Difference

TABLE 4
QUANTITATIVE DATA ASSESSMENT

	Analytical Precision	Analytical Accuracy/Bias	
Analyte	**MS/MSD RPD (%) (n=1)**	**LCS Recovery (%) (n=1)**	**MS/MSD Recovery (%) (n=2)**
Aroclor 1016	15	61	85
Aroclor 1260	13	80	95

Notes:
LCS – Laboratory Control Sample
MS – Matrix Spike
MSD – Matrix Spike Duplicate
RPD – Relative Percent Difference

ATTACHMENT A

CHECKLISTS FOR PCB ANALYTICAL DATA FOR CASE # 40749, SDG # E0226

PCBs
BY CLP SOW SOM01.2

CASE# 40749
SDG# E0226

QA/QC Analysis Checklist for Sediment Chemistry Analysis

GRANT/IAG NUMBER: Not Applicable
PROJECT NAME: Duck and Otter Sediment Investigation
REVIEWER: Lisa Graczyk, WESTON START
DATE: March 2, 2011

1. What sediment chemistry data has been collected (CHECK ALL THAT APPLY)?

Total Metals ___	PCBs __X___	pH _____	TOC _____
Dioxins/Furans _____	PAHs _____	Pesticides _____	DO _____
AVS _____	SEM Metals _____	Particle Size _____	Other _____

2. Were the target detection limits met for each parameter?

Yes	
No	X

The QAPP stated that modified method SOM01.2 would achieve a reporting limit of 33 micrograms per kilogram (µg/kg) for all Aroclor compounds. The laboratory achieved reporting limits that ranged from 38 to 57 µg/kg. These increases over the QAPP-stated reporting limit are mostly due to adjustments for percent moisture in the samples and do not affect data usability as the reporting limits are below human health and ecological reference limits stated in the QAPP.

3. Were the method blanks less than the established MDL for each parameter?

Yes	X	
No		(EXPLAIN)

The method blank contained no detections of target analytes.

4. Did the results of Field Replicate Analysis vary by less than the % RPD specified in the QAPP?

Yes	Not Applicable	
No		(EXPLAIN)

There are no field replicates associated with this SDG.

5. Did the results of the Field Duplicates Analysis vary by less than the % RPD specified in the QAPP?

Yes		
No	X	(EXPLAIN)

There are three field duplicates associated with this SDG (identified with a "DP" suffix in the station location designation). The field duplicates were collected adjacent to the associated investigative sample. The field duplicate results and investigative sample results were compared to a standard QC limit of 50 RPD or less. The duplicate results were non-detect except for Aroclor 1254 in two of the field duplicate pairs. For field duplicate pair E0231 and E0233, the RPD for Aroclor 1254 was 99 percent which is greater than 50 RPD. This very elevated RPD is most likely due to sample heterogeneity associated with PCBs.

6. Did the surrogate spike/internal standards recoveries meet the limits set forth in the QAPP?

Yes	X	
No		(EXPLAIN)

7. Did the MS/MSD recoveries meet the limits set forth in the QAPP?

Yes	X	
No		(EXPLAIN)

8. Did the RPD (%) of the MS/MSD sample set meet the limits set forth in the QAPP?

Yes	X	
No		(EXPLAIN)

9. Did the LCS recoveries meet the limits set forth in the QAPP?

Yes	X	
No		(EXPLAIN)

The LCS recoveries met the QC limits specified in the QAPP.

10. Did the calibration verification standards (ICVs and CCVs) meet the requirements set forth in the QAPP?

Yes	X	
No		(EXPLAIN)

There were no QC limits specified in the QAPP; therefore, the QC limits specified in the CLP SOW were used for the initial calibration and continuing calibration verification (CCV) checks. The initial calibration and CCVs were within the method QC limits for detected compounds. Note that in one instance, Aroclor 1248 was detected outside the QC limit of less than or equal to 15 percent difference; however, Aroclor 1248 was not detected in the samples and therefore, no qualification was applied.

11. Did the calibration blanks (ICBs and CCBs) meet the limits set forth in the QAPP?

Yes
No
Not Applicable
(EXPLAIN)

12. Did the interference check samples meet the limits set forth in the QAPP?

Yes
No
Not Applicable
(EXPLAIN)

Interference check samples are not applicable to SW-846 Method 8270C.

13. Did the serial dilution samples meet the limits set forth in the QAPP?

Yes
No
Not Applicable
(EXPLAIN)

Serial dilution is not applicable to SW-846 Method 8270C.

14. Were any level of contaminants detected above the MDL for the trip blanks and storage blanks?

Yes
No
Not Applicable
(EXPLAIN)

Trip blanks and storage blanks are not applicable to SW-846 Method 8270C.

15. Did all required analyses take place within the required holding time protocols set forth in the QAPP?

Yes	X	
No		(EXPLAIN)

Samples were analyzed within the holding time requirement of 14 days to extraction from sample collection and 40 days to analysis following extraction.

16. Did the laboratory duplicates vary by less than the % RPD specified in the QAPP?

Yes	Not Applicable	
No		(EXPLAIN)

Laboratory duplicates were not analyzed with the samples.

17. Are measured dry-weight contaminant concentrations reported?

Yes	X	
No		(EXPLAIN)

Dry-weight concentrations are reported.

18. Please provide details for all of the "UNACCEPTABLE" marked above. Include details on the specific analytes affected by any QA/QC discrepancies, and recommendations regarding usability of data.

Any items with “UNACCEPTABLE” marked above are described immediately following the “UNACCEPTABLE” marking in the corresponding item above.

In addition, some results were detected below the laboratory reporting limit and were flagged “J” as estimated for this discrepancy. The data are acceptable for use as qualified.

PCB Checklist
Duck and Otter Sediment Investigation
ALS Laboratory Group
Laboratory SDG#: E0226

ATTACHMENT B

ANALYTICAL DATA SUMMARY SHEETS WITH QUALIFIERS

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

E0226

Lab Name: ALS Laboratory Group Contract: EPW05026

Lab Code: DATAC Case No.: 40749 Mod. Ref No.: SDG No.: E0226

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: 1030957Q01

Sample wt/vol: 31.7 (g/mL) g Lab File ID: 20101117A045,20101117B045

% Moisture: 41. Decanted: (Y/N) N Date Received: 11/05/2010

Extraction: (Type) SONC Date Extracted: 11/06/2010

Concentrated Extract Volume: 5000 (uL) Date Analyzed: 11/18/2010

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 6.9 Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	53.	U
11104-28-2	Aroclor-1221	53.	U
11141-16-5	Aroclor-1232	53.	U
53469-21-9	Aroclor-1242	53.	U
12672-29-6	Aroclor-1248	53.	U
11097-69-1	Aroclor-1254	100	P
11096-82-5	Aroclor-1260	53.	U
37324-23-5	Aroclor-1262	53.	U
11100-14-4	Aroclor-1268	53.	U

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

E0227

Lab Name: ALS Laboratory Group Contract: EPW05026

Lab Code: DATAC Case No.: 40749 Mod. Ref No.: SDG No.: E0226

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: 1030957002

Sample wt/vol: 31.1 (g/mL) g Lab File ID: 20101117A046,20101117B046

% Moisture: 44. Decanted: (Y/N) N Date Received: 11/05/2010

Extraction: (Type) SONC Date Extracted: 11/06/2010

Concentrated Extract Volume: 5000 (uL) Date Analyzed: 11/18/2010

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 6.8 Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	57.	U
11104-28-2	Aroclor-1221	57.	U
11141-16-5	Aroclor-1232	57.	U
53469-21-9	Aroclor-1242	57.	U
12672-29-6	Aroclor-1248	57.	U
11097-69-1	Aroclor-1254	66.	P
11096-82-5	Aroclor-1260	57.	U
37324-23-5	Aroclor-1262	57.	U
11100-14-4	Aroclor-1268	57.	U

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

E0228

Lab Name: ALS Laboratory Group Contract: EPW05026

Lab Code: DATAC Case No.: 40749 Mod. Ref No.: _____ SDG No.: E0226

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: 1030957003

Sample wt/vol: 30.2 (g/mL) g Lab File ID: 20101117A047,20101117B047

% Moisture: 20. Decanted: (Y/N) N Date Received: 11/05/2010

Extraction: (Type) SONC Date Extracted: 11/06/2010

Concentrated Extract Volume: 5000 (uL) Date Analyzed: 11/18/2010

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 6.9 Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	41.	U
11104-28-2	Aroclor-1221	41.	U
11141-16-5	Aroclor-1232	41.	U
53469-21-9	Aroclor-1242	41.	U
12672-29-6	Aroclor-1248	41.	U
11097-69-1	Aroclor-1254	41.	U
11096-82-5	Aroclor-1260	41.	U
37324-23-5	Aroclor-1262	41.	U
11100-14-4	Aroclor-1268	41.	U

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

E0229

Lab Name: ALS Laboratory Group Contract: EPW05026

Lab Code: DATAC Case No.: 40749 Mod. Ref No.: SDG No.: E0226

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: 1030957Q04

Sample wt/vol: 31.5 (g/mL) g Lab File ID: 20101117A048,20101117B048

% Moisture: 25. Decanted: (Y/N) N Date Received: 11/05/2010

Extraction: (Type) SONC Date Extracted: 11/06/2010

Concentrated Extract Volume: 5000 (uL) Date Analyzed: 11/18/2010

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 6.7 Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	42.	U
11104-28-2	Aroclor-1221	42.	U
11141-16-5	Aroclor-1232	42.	U
53469-21-9	Aroclor-1242	42.	U
12672-29-6	Aroclor-1248	42.	U
11097-69-1	Aroclor-1254	42.	U
11096-82-5	Aroclor-1260	42.	U
37324-23-5	Aroclor-1262	42.	U
11100-14-4	Aroclor-1268	42.	U

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

E0230

Lab Name: ALS Laboratory Group Contract: EPW05026

Lab Code: DATAC Case No.: 40749 Mod. Ref No.: SDG No.: E0226

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: 1030957Q07

Sample wt/vol: 31.6 (g/mL) g Lab File ID: 20101117A051,20101117B051

% Moisture: 40. Decanted: (Y/N) N Date Received: 11/05/2010

Extraction: (Type) SONC Date Extracted: 11/06/2010

Concentrated Extract Volume: 5000 (uL) Date Analyzed: 11/18/2010

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 6.8 Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	52.	U
11104-28-2	Aroclor-1221	52.	U
11141-16-5	Aroclor-1232	52.	U
53469-21-9	Aroclor-1242	52.	U
12672-29-6	Aroclor-1248	52.	U
11097-69-1	Aroclor-1254	380	P
11096-82-5	Aroclor-1260	52.	U
37324-23-5	Aroclor-1262	52.	U
11100-14-4	Aroclor-1268	52.	U

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

E0231

Lab Name: ALS Laboratory Group Contract: EPW05026

Lab Code: DATAC Case No.: 40749 Mod. Ref No.: SDG No.: E0226

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: 1030957008

Sample wt/vol: 30.9 (g/mL) g Lab File ID: 20101117A052,20101117B052

% Moisture: 43. Decanted: (Y/N) N Date Received: 11/05/2010

Extraction: (Type) SONC Date Extracted: 11/06/2010

Concentrated Extract Volume: 5000 (uL) Date Analyzed: 11/18/2010

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 6.9 Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	56.	U
11104-28-2	Aroclor-1221	56.	U
11141-16-5	Aroclor-1232	56.	U
53469-21-9	Aroclor-1242	56.	U
12672-29-6	Aroclor-1248	56.	U
11097-69-1	Aroclor-1254	250	P
11096-82-5	Aroclor-1260	56.	U
37324-23-5	Aroclor-1262	56.	U
11100-14-4	Aroclor-1268	56.	U

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

E0232

Lab Name: ALS Laboratory Group Contract: EPW05026

Lab Code: DATAC Case No.: 40749 Mod. Ref No.: _____ SDG No.: E0226

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: 1030957009

Sample wt/vol: 31.7 (g/mL) g Lab File ID: 20101117A053,20101117B053

% Moisture: 28. Decanted: (Y/N) N Date Received: 11/05/2010

Extraction: (Type) SONC Date Extracted: 11/06/2010

Concentrated Extract Volume: 5000 (uL) Date Analyzed: 11/18/2010

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 6.9 Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	43.	U
11104-28-2	Aroclor-1221	43.	U
11141-16-5	Aroclor-1232	43.	U
53469-21-9	Aroclor-1242	43.	U
12672-29-6	Aroclor-1248	43.	U
11097-69-1	Aroclor-1254	43.	U
11096-82-5	Aroclor-1260	43.	U
37324-23-5	Aroclor-1262	43.	U
11100-14-4	Aroclor-1268	43.	U

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

E0233

Lab Name: ALS Laboratory Group Contract: EPW05026

Lab Code: DATAC Case No.: 40749 Mod. Ref No.: SDG No.: E0226

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: 1030957010

Sample wt/vol: 31.0 (g/mL) g Lab File ID: 20101117A054,20101117B054

% Moisture: 16. Decanted: (Y/N) N Date Received: 11/05/2010

Extraction: (Type) SONC Date Extracted: 11/06/2010

Concentrated Extract Volume: 5000 (uL) Date Analyzed: 11/18/2010

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 6.8 Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	38.	U
11104-28-2	Aroclor-1221	38.	U
11141-16-5	Aroclor-1232	38.	U
53469-21-9	Aroclor-1242	38.	U
12672-29-6	Aroclor-1248	38.	U
11097-69-1	Aroclor-1254	84.	P
11096-82-5	Aroclor-1260	38.	U
37324-23-5	Aroclor-1262	38.	U
11100-14-4	Aroclor-1268	38.	U

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

E0234

Lab Name: ALS Laboratory Group Contract: EPW05026

Lab Code: DATAC Case No.: 40749 Mod. Ref No.: _____ SDG No.: E0226

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: 1030957011

Sample wt/vol: 30.9 (g/mL) g Lab File ID: 20101117A055,20101117B055

% Moisture: 24. Decanted: (Y/N) N Date Received: 11/05/2010

Extraction: (Type) SONC Date Extracted: 11/06/2010

Concentrated Extract Volume: 5000 (uL) Date Analyzed: 11/18/2010

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 6.9 Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	42.	U
11104-28-2	Aroclor-1221	42.	U
11141-16-5	Aroclor-1232	42.	U
53469-21-9	Aroclor-1242	42.	U
12672-29-6	Aroclor-1248	42.	U
11097-69-1	Aroclor-1254	42.	U
11096-82-5	Aroclor-1260	42.	U
37324-23-5	Aroclor-1262	42.	U
11100-14-4	Aroclor-1268	42.	U

ATTACHMENT C

DATA QUALIFIER DEFINITIONS

LABORATORY DATA QUALIFIER DEFITIONS

P - There is greater than 25% difference for detected concentrations between the two GC columns. The lower of the two values is reported.

U - The analyte was not detected above the reporting limit. The reported result is the laboratory reporting limit.

Weston Solutions, Inc.
20 North Wacker Drive, Suite 1210
Chicago, IL 60606
(312) 424-3300 fax: (312) 424-3330
www.westonsolutions.com

March 18, 2011

Ms. Brenda Jones and Mr. Ajit Vaidya
Great Lakes National Program Office
United States Environmental Protection Agency, Region V
77 West Jackson Boulevard, Mail Code: G-17J
Chicago, Illinois 60604-3507

Re: Data Review of Polychlorinated Biphenyls (PCB) Analysis
For Sediment Samples Collected on October 15, 2010
CLP Case No. 40638, SDG No. E01T8
Duck and Otter Creeks 2010 Data Gaps Investigation
Wood and Lucas Counties, Ohio
DCN: 1030-2F-ALGI

Dear Ms. Jones and Mr. Vaidya:

The United States Environmental Protection Agency (U.S. EPA) tasked Weston Solutions, Inc., (WESTON®) to perform data validation for the five percent of the sediment samples collected in October 2010 for the Great Lakes National Program Office (GLNPO) Duck and Otter Creeks 2010 Data Gaps Investigation Site. This data review is for PCB analyses of five sediment samples that include one field duplicate sample that were collected by WESTON and analyzed under Sample Delivery Group (SDG) number E01T8. The samples were validated in accordance with the "Quality Assurance Project Plan, Duck and Otter Creeks Data Gaps Investigation" dated September 28, 2010, which includes using the U.S. EPA Contract Laboratory Program (CLP) National Functional Guidance for Organic and Inorganic Data Review. Table 1 provides a summary of the samples included in this review. All tables are presented at the end of this report.

The samples listed in Table 1 were analyzed under the U.S. EPA CLP by ALS Laboratory Group (ALS) located in Salt Lake City, Utah, under case number 40638. Because only five percent of data is to be validated, SDG number E01T8 was selected for data validation.

Sediment samples were analyzed for PCBs using U.S. EPA CLP Statement of Work (SOW) SOM01.2. Table 2 provides a list of the PCBs that were analyzed. ALS did not provide a Staged Electronic Data Deliverable (SEDD) with the CLP analytical package. Therefore, the Automated Data Review (ADR) software was not utilized to assist in reviewing this data.

Attachment A to this report contains the individual Quality Assurance/Quality Control (QA/QC) Analysis Checklist for Sediment Chemistry Analysis for SDG E01T8. Attachment B to this report contains a printed summary report of sample results with hand-written qualifiers that were applied during the data review. Attachment C to this report contains a list of the data qualifiers associated with the sample results. The QC limits utilized were those stated in the Quality

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Assurance Project Plan (QAPP). If there was not a QC limit specified in the QAPP, then the method or laboratory-determined QC limits were used. Below is the data review summary.

SUMMARY OF PCB DATA REVIEW

The holding times, initial calibration, continuing calibration, method blank, surrogates, matrix spike (MS), matrix spike duplicate (MSD), laboratory control sample (LCS), and field duplicate samples were within the QC limits.

Below is a summary of the data quality indicators associated with the PCB analysis for the sediment samples collected on October 15, 2010.

DATA QUALITY INDICATORS REVIEW

Many the data quality indicators (sensitivity, precision, accuracy, and completeness) were evaluated through the data validation procedures which are summarized above and discussed in detail in the Attachment.

Sensitivity. The QAPP stated that modified method SOM01.2 would achieve a reporting limit of 33micrograms per kilogram (µg/kg) for all Aroclor compounds. The laboratory achieved these reporting limits, when adjusted for percent moisture. Sensitivity was adequate for the PCB analyses of sediment samples collected on October 15, 2010, that are associated with SDG E01T8.

Precision. Field precision is determined by evaluating the RPDs for the field duplicate results. The field duplicate results and investigative sample results were both non-detect for PCB compounds indicating good correlation. Field precision was acceptable. Table 3 summarizes the field duplicate results.

Laboratory precision was evaluated by reviewing the RPD values between the MS and MSD results. There was only one MS/MSD pair associated with this SDG for which RPDs could be evaluated. The RPDs for the Aroclor 1016 and 1260 (the PCBs spiked in the MS/MSD) were 1 and 5 percent, respectively. These RPDs are within the QAPP-stated QC limits. Laboratory precision was acceptable for the PCB analysis. Table 4 summarizes the laboratory precision results.

Accuracy/Bias. Accuracy is a measure of the agreement between an observed value and an accepted reference value. Laboratory accuracy was evaluated by reviewing the QC criteria for percent recovery for LCS and MS/MSD results. The LCS and MS/MSD percent recoveries were within the QAPP QC limits. Table 4 summarizes the accuracy estimates for the PCB analysis. The percent recoveries for the LCS are 115 and 113percent for Aroclor 1016 and Aroclor 1260, respectively. The mean MS/MSD percent recoveries are 92 and 110 percent for Aroclor 1016

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and Aroclor 1260, respectively. Laboratory accuracy was acceptable. The Aroclor recoveries in the LCS indicate a slightly high bias associated with the PCB analysis.

Completeness. Completeness is a measure of the amount of valid data obtained compared to the amount of data that was planned to be collected under normal conditions. All samples results were received.

In summary, the data are usable for comparison to the PCB screening criteria stated in the QAPP. No qualifications were added to the samples during the data review. Attachment B contains the data summary sheets. Definitions for the laboratory qualifications are included in Attachment C.

If there are any questions or comments regarding this report, please do not hesitate to contact WESTON START at 847-918-4000.

Very truly yours,
Weston Solutions, Inc.



Lisa Graczyk
WESTON START Team

Alex Clark
WESTON START Project Manager

Attachments:
Tables
A- Checklists for PCB Analytical Data for Case # 40638, SDG # E01T8
B- Analytical Data Summary Sheets with Qualifiers
C- Data Qualifier Definitions

cc: project file

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TABLES

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TABLE 1
SAMPLES INCLUDED IN DATA REVIEW

Sample ID	Sample Location ID	Date Collected	Comment
E01T8	OC-12/13	10/15/2010	
E01T9	OC-16	10/15/2010	
E01W0	DC-9/10	10/15/2010	
E01W1	DC-7/8DP	10/15/2010	Field duplicate of DC-7/8
E01W2	DC-7/8	10/15/2010	

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TABLE 2 PCB ANALYTES	
CAS #	**Analyte**
12674-11-2	Aroclor 1016
11104-28-2	Aroclor 1221
11141-16-5	Aroclor 1232
53469-21-9	Aroclor 1242
12672-29-6	Aroclor 1248
11097-69-1	Aroclor 1254
11096-82-5	Aroclor 1260
37324-23-5	Aroclor 1262
11100-14-4	Aroclor 1268

Notes:

CAS – Chemical Abstracts Service
PCB – Polychlorinated Biphenyl

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TABLE 3 FIELD DUPLICATE RESULTS			
	Sample: DC-7/8DP		
Analyte	**Sample Result (µg/kg)**	**Replicate Result (µg/kg)**	**RPD**
Aroclor 1016	<82	<74	
Aroclor 1221	<82	<74	
Aroclor 1232	<82	<74	
Aroclor 1242	<82	<74	
Aroclor 1248	<82	<74	
Aroclor 1254	<82	<74	
Aroclor 1260	<82	<74	
Aroclor 1262	<82	<74	
Aroclor 1260	<82	<74	

Notes:
µg/kg– Microgram per Kilogram
NA – Not Applicable
RPD – Relative Percent Difference

TABLE 4
QUANTITATIVE DATA ASSESSMENT

	Analytical Precision	Analytical Accuracy/Bias	
Analyte	**MS/MSD RPD (%) (n=1)**	**LCS Recovery (%) (n=1)**	**MS/MSD Recovery (%) (n=2)**
Aroclor 1016	1	115	92
Aroclor 1260	5	113	110

Notes:
LCS – Laboratory Control Sample
MS – Matrix Spike
MSD – Matrix Spike Duplicate
RPD – Relative Percent Difference

ATTACHMENT A

CHECKLISTS FOR PCB ANALYTICAL DATA FOR CASE # 40638, SDG # E01T8

PCBs
BY CLP SOW SOM01.2

CASE# 40638
SDG# E01T8

QA/QC Analysis Checklist for Sediment Chemistry Analysis

GRANT/IAG NUMBER: Not Applicable
PROJECT NAME: Duck and Otter Sediment Investigation
REVIEWER: Lisa Graczyk, WESTON START
DATE: March 18, 2011

1. What sediment chemistry data has been collected (CHECK ALL THAT APPLY)?

Total Metals ___	PCBs __X___	pH _____	TOC _____
Dioxins/Furans _____	PAHs _____	Pesticides _____	DO _____
AVS _____	SEM Metals _____	Particle Size _____	Other _____

2. Were the target detection limits met for each parameter?

Yes	X
No	

The QAPP stated that modified method SOM01.2 would achieve a reporting limit of 33 micrograms per kilogram (µg/kg) for all Aroclor compounds. When adjusted for percent moisture, the laboratory achieved these reporting limits.

3. Were the method blanks less than the established MDL for each parameter?

Yes	X	
No		(EXPLAIN)

The method blank contained no detections of target analytes.

4. Did the results of Field Replicate Analysis vary by less than the % RPD specified in the QAPP?

Yes	Not Applicable	
No		(EXPLAIN)

There are no field replicates associated with this SDG.

5. Did the results of the Field Duplicates Analysis vary by less than the % RPD specified in the QAPP?

Yes	X	
No		(EXPLAIN)

There is one field duplicate associated with this SDG (identified with a "DP" suffix in the station location designation). The field duplicate was collected adjacent to the associated investigative sample. The field duplicate results and investigative sample results were both non-detect for PCB compounds indicating good correlation.

6. Did the surrogate spike/internal standards recoveries meet the limits set forth in the QAPP?

Yes	X	
No		(EXPLAIN)

For the quantification column, all surrogate recoveries were within QC limits.

One of the surrogates in two of the samples, for the confirmation column only, had a high percent recovery. Because this was the confirmation column and because PCBs were not detected in the samples, no qualification was required.

7. Did the MS/MSD recoveries meet the limits set forth in the QAPP?

Yes	X	
No		(EXPLAIN)

The MS/MSD analyzed on the quantification column was within QC limits.

8. Did the RPD (%) of the MS/MSD sample set meet the limits set forth in the QAPP?

Yes	X	
No		(EXPLAIN)

9. Did the LCS recoveries meet the limits set forth in the QAPP?

Yes	X	
No		(EXPLAIN)

The LCS recoveries met the QC limits specified in the QAPP.

10. Did the calibration verification standards (ICVs and CCVs) meet the requirements set forth in the QAPP?

Yes	X	
No		(EXPLAIN)

There were no QC limits specified in the QAPP; therefore, the QC limits specified in the CLP SOW were used for the initial calibration and continuing calibration verification (CCV) checks. The initial calibration and CCVs were within the method QC limits for detected compounds.

11. Did the calibration blanks (ICBs and CCBs) meet the limits set forth in the QAPP?

Yes	Not Applicable	
No		(EXPLAIN)

12. Did the interference check samples meet the limits set forth in the QAPP?

Yes	Not Applicable	
No		(EXPLAIN)

Interference check samples are not applicable to SW-846 Method 8270C.

13. Did the serial dilution samples meet the limits set forth in the QAPP?

Yes	Not Applicable	
No		(EXPLAIN)

Serial dilution is not applicable to SW-846 Method 8270C.

14. Were any level of contaminants detected above the MDL for the trip blanks and storage blanks?

Yes	Not Applicable	
No		(EXPLAIN)

Trip blanks and storage blanks are not applicable to SW-846 Method 8270C.

15. Did all required analyses take place within the required holding time protocols set forth in the QAPP?

Yes	X	
No		(EXPLAIN)

Samples were analyzed within the holding time requirement of 14 days to extraction from sample collection and 40 days to analysis following extraction.

16. Did the laboratory duplicates vary by less than the % RPD specified in the QAPP?

Yes	Not Applicable	
No		(EXPLAIN)

Laboratory duplicates were not analyzed with the samples.

17. Are measured dry-weight contaminant concentrations reported?

Yes	X	
No		(EXPLAIN)

Dry-weight concentrations are reported.

18. Please provide details for all of the "UNACCEPTABLE" marked above. Include details on the specific analytes affected by any QA/QC discrepancies, and recommendations regarding usability of data.

Any items with “UNACCEPTABLE” marked above are described immediately following the “UNACCEPTABLE” marking in the corresponding item above.

In addition, some results were detected below the laboratory reporting limit and were flagged “J” as estimated for this discrepancy. The data are acceptable for use as qualified.

PCB Checklist
Duck and Otter Sediment Investigation
ALS Laboratory Group
Laboratory SDG#: E01T8

ATTACHMENT B

ANALYTICAL DATA SUMMARY SHEETS WITH QUALIFIERS

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

E01T8

Lab Name: ALS Laboratory Group Contract: EPW05026

Lab Code: DATAC Case No.: 40638 Mod. Ref No.: SDG No.: E01T8

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: 1029331001

Sample wt/vol: 30.0 (g/mL) g Lab File ID: 19101028A031,19101028B031

% Moisture: 31. Decanted: (Y/N) N Date Received: 10/20/2010

Extraction: (Type) SONC Date Extracted: 10/20/2010

Concentrated Extract Volume: 5000 (uL) Date Analyzed: 10/29/2010

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 6.8 Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	48.	U
11104-28-2	Aroclor-1221	48.	U
11141-16-5	Aroclor-1232	48.	U
53469-21-9	Aroclor-1242	48.	U
12672-29-6	Aroclor-1248	48.	U
11097-69-1	Aroclor-1254	48.	U
11096-82-5	Aroclor-1260	48.	U
37324-23-5	Aroclor-1262	48.	U
11100-14-4	Aroclor-1268	48.	U

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

E01T9

Lab Name: ALS Laboratory Group Contract: EPW05026

Lab Code: DATAC Case No.: 40638 Mod. Ref No.: _____ SDG No.: E01T8

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: 1029331002

Sample wt/vol: 30.0 (g/mL) g Lab File ID: 19101028A032,19101028B032

% Moisture: 27. Decanted: (Y/N) N Date Received: 10/20/2010

Extraction: (Type) SONC Date Extracted: 10/20/2010

Concentrated Extract Volume: 5000 (uL) Date Analyzed: 10/29/2010

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 6.9 Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	45.	U
11104-28-2	Aroclor-1221	45.	U
11141-16-5	Aroclor-1232	45.	U
53469-21-9	Aroclor-1242	45.	U
12672-29-6	Aroclor-1248	45.	U
11097-69-1	Aroclor-1254	45.	U
11096-82-5	Aroclor-1260	45.	U
37324-23-5	Aroclor-1262	45.	U
11100-14-4	Aroclor-1268	45.	U

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

E01W0

Lab Name: ALS Laboratory Group Contract: EPW05026

Lab Code: DATAC Case No.: 40638 Mod. Ref No.: SDG No.: E01T8

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: 1029331003

Sample wt/vol: 30.0 (g/mL) g Lab File ID: 19101028A033,19101028B033

% Moisture: 66. Decanted: (Y/N) N Date Received: 10/20/2010

Extraction: (Type) SONC Date Extracted: 10/20/2010

Concentrated Extract Volume: 5000 (uL) Date Analyzed: 10/29/2010

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 6.8 Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	97.	U
11104-28-2	Aroclor-1221	97.	U
11141-16-5	Aroclor-1232	97.	U
53469-21-9	Aroclor-1242	97.	U
12672-29-6	Aroclor-1248	97.	U
11097-69-1	Aroclor-1254	97.	U
11096-82-5	Aroclor-1260	97.	U
37324-23-5	Aroclor-1262	97.	U
11100-14-4	Aroclor-1268	97.	U

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

E01W1

Lab Name: ALS Laboratory Group Contract: EPW05026

Lab Code: DATAC Case No.: 40638 Mod. Ref No.: SDG No.: E01T8

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: 1029331004

Sample wt/vol: 30.0 (g/mL) g Lab File ID: 19101028A034,19101028B034

% Moisture: 55. Decanted: (Y/N) N Date Received: 10/20/2010

Extraction: (Type) SONC Date Extracted: 10/20/2010

Concentrated Extract Volume: 5000 (uL) Date Analyzed: 10/29/2010

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 6.8 Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	74.	U
11104-28-2	Aroclor-1221	74.	U
11141-16-5	Aroclor-1232	74.	U
53469-21-9	Aroclor-1242	74.	U
12672-29-6	Aroclor-1248	74.	U
11097-69-1	Aroclor-1254	74.	U
11096-82-5	Aroclor-1260	74.	U
37324-23-5	Aroclor-1262	74.	U
11100-14-4	Aroclor-1268	74.	U

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

E01W2

Lab Name: ALS Laboratory Group Contract: EPW05026

Lab Code: DATAC Case No.: 40638 Mod. Ref No.: _____ SDG No.: E01T8

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: 1029331005

Sample wt/vol: 30.0 (g/mL) g Lab File ID: 19101028A035,19101028B035

% Moisture: 60. Decanted: (Y/N) N Date Received: 10/20/2010

Extraction: (Type) SONC Date Extracted: 10/20/2010

Concentrated Extract Volume: 5000 (uL) Date Analyzed: 10/29/2010

Injection Volume: 2.0 (uL) GPC Factor: 2.0 Dilution Factor: 1.0

GPC Cleanup: (Y/N) Y pH: 6.8 Sulfur Cleanup: (Y/N) Y

Acid Cleanup: (Y/N) Y

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
12674-11-2	Aroclor-1016	82.	U
11104-28-2	Aroclor-1221	82.	U
11141-16-5	Aroclor-1232	82.	U
53469-21-9	Aroclor-1242	82.	U
12672-29-6	Aroclor-1248	82.	U
11097-69-1	Aroclor-1254	82.	U
11096-82-5	Aroclor-1260	82.	U
37324-23-5	Aroclor-1262	82.	U
11100-14-4	Aroclor-1268	82.	U

ATTACHMENT C

DATA QUALIFIER DEFINITIONS

LABORATORY DATA QUALIFIER DEFITIONS

U - The analyte was not detected above the reporting limit. The reported result is the laboratory reporting limit.

Weston Solutions, Inc.
20 North Wacker Drive, Suite 1210
Chicago, Il. 60606
(312) 424-3300 fax: (312) 424-3330
www.westonsolutions.com

February 1, 2011

Ms. Brenda Jones and Mr. Ajit Vaidya
Great Lakes National Program Office
United States Environmental Protection Agency, Region V
77 West Jackson Boulevard, Mail Code: G-17J
Chicago, Illinois 60604-3507

Re: Data Review of Polycyclic Aromatic Hydrocarbons (PAH) Analysis
For the Pore Water of Sediment Samples Collected from October 7 to November 4, 2010
Duck and Otter Creeks 2010 Data Gaps Investigation
Wood and Lucas Counties, Ohio
DCN: 1030-2F-ALGI

Dear Ms. Jones and Mr. Vaidya:

The United States Environmental Protection Agency (U.S. EPA) tasked Weston Solutions, Inc., (WESTON®) to perform data validation for the pore water of sediment samples collected from October 7 to November 4, 2010, for the Great Lakes National Program Office (GLNPO) Duck and Otter Creeks 2010 Data Gaps Investigation Site. This data review is for PAH analysis of pore water of 28 sediment samples including one field split that were collected by the WESTON Superfund Technical Assessment and Response Team (START). The samples were validated in accordance with the "Quality Assurance Project Plan, Duck and Otter Creeks Data Gaps Investigation" dated September 28, 2010, which includes using the U.S. EPA Contract Laboratory Program National Functional Guidance for Organic and Inorganic Data Review. Table 1 provides a summary of the samples included in this review. All tables are presented at the end of this report.

The samples listed in Table 1 were analyzed by Energy and Environmental Research Center (EERC) of the University of North Dakota located in Grand Forks, North Dakota. Table 2 provides a list of the PAH analytes that were tested for.

The samples were analyzed for PAHs using methodology developed by Hawthorne et al., 2005, and ASTM D7363. EERC did not provide WESTON with a staged electronic data deliverable (SEDD) and therefore, the Automated Data Review (ADR) software was not used to assist in reviewing the data. Standard quality control (QC) samples are not applicable to the methodology used for the PAHs including laboratory control samples, matrix spike samples, and laboratory duplicates. Therefore, a Quality Assurance/Quality Control (QA/QC) Analysis Checklist for Sediment Chemistry Analysis was not utilized for data review. Attachment A to this report contains a summary report of results with qualifiers applied by the laboratory. Attachment B contains the data qualifier definitions. The QC limits utilized were those stated in the QAPP. If there was not a QC limit specified in the QAPP, then the method or laboratory-determined QC limits were used. Below is the data review summary.

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SUMMARY OF PAH DATA REVIEW

The blanks water samples were all non-detect for target analytes.

The Field Sampling Plan indicated that field duplicates and field splits were not required for the PAH analyses of the pore water samples. However, one field split sample was collected for this analysis. There was only one PAH compound detected in both samples and the relative percent difference (RPD) between the two results was 7 percent which is acceptable. There were two PAH compounds detected below the reporting limit in the parent sample that were not detected in the field split. This difference of results does not affect data usability because the results in the one sample were below the reporting limit and are considered estimated.

All sample results were analyzed in duplicate in accordance with the ASTM method. It is up to the data user to decide which result to use or whether to use an average of the results. In addition, the results were reported in nanogram per gram which for water samples is the same a s microgram per liter because the density of water is 1 milligram per liter.

Below is a review of the data quality indicators.

DATA QUALITY INDICATORS REVIEW

Many the data quality indicators (sensitivity, precision, accuracy, and completeness) were evaluated through the data validation procedures which are summarized above and discussed in detail in the Attachment.

Sensitivity. The laboratory reporting limits as stated in the QAPP were not met for all PAH compounds. These reporting limits only slightly exceeded the QAPP-stated reporting limit and were below the applicable screening level stated in the QAPP for ambient water quality criteria. Therefore, data usability is not affected. The laboratory flagged some results with a "J" to indicate that the result was detected below the reporting limit and should be considered estimated. Sensitivity was adequate for the PAH analyses of the pore water of sediment samples collected from October 7 to November 4, 2010.

Precision. Precision is a measure of the agreement between multiple measurements of the same property carried out under similar conditions. Field precision is evaluated by reviewing the RPD results for field duplicates and splits. The one field split collected with these results indicates acceptable field precision.

Laboratory precision is typically determined by evaluating the RPD values for laboratory duplicates. Laboratory duplicates were not analyzed with the PAH analyses. However, EERC did analyze each sample in duplicate in accordance with the ASTM method. Although an RPD

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value was not calculated for each detected result, a review of the data indicates excellent correlation between the sample result duplicates. Laboratory precision is acceptable.

Accuracy/Bias. Accuracy is a measure of the agreement between an observed value and an accepted reference value. Laboratory accuracy was not evaluated because QC samples typically analyzed to assess accuracy are not applicable to the analytical method used for the PAH analyses.

Completeness. Completeness is a measure of the amount of valid data obtained compared to the amount of data that was planned to be collected under normal conditions. All samples results were received.

In summary, the data are acceptable for use and some data qualifications were applied to the sample results by the laboratory for results detected below the reporting limit. The Data Summary Report in Attachment a indicates which sample results were qualified by the laboratory. Attachment B provides data qualifier definitions for those qualifiers applied by the laboratory.

If there are any questions or comments regarding this report, please do not hesitate to contact WESTON START at 312-424-3300.

Very truly yours,
Weston Solutions, Inc.



Lisa Graczyk
WESTON START Team

Alex Clark
WESTON START Project Manager

Attachments:
Tables
A - Data Summary Report for PAHs
B – Data Qualifier Definitions

cc: project file

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TABLES

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TABLE 1
SAMPLES INCLUDED IN DATA REVIEW

Sample ID	Lab ID	Date Collected	Comment
OC-4-01	9A-1	10/7/2010	
OC-5a-01	10A-1	10/8/2010	
OC-6/7(2)-01	11A-1	10/11/2010	
OC-9-10	12A-1	10/7/2010	
AD-1	17A-1	10/14/2010	
DC-3	18A-1	10/13/2010	
DC-5	19A-1	10/14/2010	
GC-1	20A-1	10/14/2010	
OC-12/13	21A-1	10/15/2010	
OC-16	22A-1	10/15/2010	
DC-11/12	24A-1	10/19/2010	
DC-6/7	23A-1	10/19/2010	
OC-22	25A-1	10/19/2010	
OC-24/25	26A-1	10/19/2010	
DC-13	27A-1	11/2/2010	
DC-14	28A-1	11/3/2010	
DC-16	29A-1	11/2/2010	
DC-17	30A-1	11/2/2010	
DC-19	31A-1	11/2/2010	
DC-19FS	32A-1	11/2/2010	
OC-26	33A-1	11/3/2010	
OC-27	34A-1	11/3/2010	
OC-28	35A-1	11/3/2010	
OC-29	36A-1	11/4/2010	
OC-30	37A-1	11/4/2010	
OC-31	38A-1	11/4/2010	
OC-32	39A-1	11/4/2010	
OC-33	40A-1	11/4/2010	

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TABLE 2 PAH ANALYTES	
CAS #	**Analyte**
91-20-3	naphthalene
91-57-6	2-methylnaphthalene
90-12-0	1-methylnaphthalene
---	C2 naphthalenes
---	C3 naphthalenes
---	C4 naphthalenes
208-96-8	acenaphthylene
83-32-9	acenaphthene
86-73-7	fluorene
---	C1 fluorenes
---	C2 fluorenes
---	C3 fluorenes
85-01-8	phenanthrene
120-12-7	anthracene
---	C1 phenanthrenes/anthracenes
---	C2 phenanthrenes/anthracenes
---	C3 phenanthrenes/anthracenes
---	C4 phenanthrenes/anthracenes
206-44-0	fluoranthene
129-00-0	pyrene
---	C1 fluoranthenes/pyrenes
56-55-3	benz[a]anthracene
218-01-9	chrysene
---	C1 chrysenes
---	C2 chrysenes
---	C3 chrysenes
	C4 chrysenes
205-99-2 and 207-08-9	benzo[b+k]fluoranthene
192-97-2	benzo[e]pyrene
50-32-8	benzo[a]pyrene
198-55-0	perylene
193-39-5	indeno[1,2,3-cd]pyrene
53-70-3	dibenz[ah]anthracene
191-24-2	benzo[ghi]perylene

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Notes:

--- - There is no CAS number for this compound.
CAS – Chemical Abstracts Service
PAH – Polycyclic Aromatic Hydrocarbon

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ATTACHMENT A

DATA SUMMARY REPORT FOR PAHs

Energy and Environmental Research Center, GC/MS Lab
University of North Dakota, Campus Box 9018
15 North 23rd Street, Grand Forks, ND 58202
701-777-5000

EERC ID	17A-1		17A-2				Target detection limit ng/g	Actual (reporting) detection limit, ng/g
Sample Collection Date								
EERC Sample Receipt Date	10/20/2010		10/20/2010					
EERC Run Date	10/20/2010		10/20/2010		10/20/2010			
EERC Run Number	2590A03.D		2590A04.D		2590A02.D			
					Fiber			
Sample Name	AD1		AD1		Water Blank			
Treatment	Pore Water		Pore Water		Pore Water			
Sample Weight, g	1.51		1.51		1.50			
Matrix	Sediment		Sediment					
Units	ng/g		ng/g		ng/g			
naphthalene	0.20	J	0.17	J	ND		5.7	0.1
2-methylnaphthalene	ND		ND		ND		2.4	0.05
1-methylnaphthalene	ND		ND		ND		2.4	0.05
C2 naphthalenes	ND		ND		ND		0.89	0.15
C3 naphthalenes	0.07	J	0.09	J	ND		0.33	0.05
C4 naphthalenes	ND		ND		ND		0.12	0.15
acenaphthylene	ND		ND		ND		9	0.2
acenaphthene	0.15	J	0.14	J	ND		1.6	0.1
fluorene	0.07	J	0.07	J	ND		1.2	0.04
C1 fluorenes	0.04	J	0.05	J	ND		0.41	0.02
C2 fluorenes	ND		ND		ND		0.16	0.05
C3 fluorenes	ND		ND		ND		0.06	0.06
phenanthrene	ND		ND		ND		0.56	0.1
anthracene	ND		ND		ND		0.61	0.05
C1 phenanthrenes/anthracenes	0.12	J	0.12	J	ND		0.22	0.02
C2 phenanthrenes/anthracenes	0.07	J	0.08	J	ND		0.09	0.05
C3 phenanthrenes/anthracenes	ND		ND		ND		0.04	0.04
C4 phenanthrenes/anthracenes	ND		ND		ND		0.02	0.02
fluoranthene	0.60		0.59		ND		0.21	0.01
pyrene	0.41		0.41		ND		0.3	0.01
C1 fluoranthenes/pyrenes	0.11	J	0.10	J	ND		0.14	0.01
benz[a]anthracene	0.02	J	0.02	J	ND		0.066	0.001
chrysene	0.04	J	0.04	J	ND		0.06	0.001
C1 chrysenes	ND		ND		ND		0.025	0.005
C2 chrysenes	ND		ND		ND		0.014	0.01
C3 chrysenes	ND		ND		ND		0.005	0.01
C4 chrysenes	ND		ND		ND		0.002	0.01
benzo[b+k]fluoranthene	ND		ND		ND		0.019	0.005
benzo[e]pyrene	ND		ND		ND		0.028	0.005
benzo[a]pyrene	ND		ND		ND		0.026	0.008
perylene	ND		ND		ND		0.026	0.004
indeno[1,2,3-cd]pyrene	ND		ND		ND		0.008	0.001
dibenz[ah]anthracene	ND		ND		ND		0.008	0.002
benzo[ghi]perylene	ND		ND		ND		0.013	0.001

Target detection limits are those required by ASTM D7363 (C2 chyrsenes and larger PAHs, not applicable).
Actual experimental detection limits (reporting limits) are determined based on the signal to noise requirements stated in D7363.
ND = not detected.

Energy and Environmental Research Center, GC/MS Lab
University of North Dakota, Campus Box 9018
15 North 23rd Street, Grand Forks, ND 58202
701-777-5000

EERC ID	20A-1		20A-2				Target detection limit ng/g	Actual (reporting) detection limit, ng/g
Sample Collection Date								
EERC Sample Receipt Date	10/20/2010		10/20/2010					
EERC Run Date	10/21/2010		10/21/2010		10/21/2010			
EERC Run Number	2591A07.D		2591A08.D		2591A06.D			
					Fiber			
Sample Name	GC1		GC1		Water Blank			
Treatment	Pore Water		Pore Water		Pore Water			
Sample Weight, g	1.51		1.50		1.50			
Matrix	Sediment		Sediment					
Units	ng/g		ng/g		ng/g			
naphthalene	0.12	J	0.13	J	ND		5.7	0.1
2-methylnaphthalene	ND		ND		ND		2.4	0.05
1-methylnaphthalene	ND		ND		ND		2.4	0.05
C2 naphthalenes	ND		ND		ND		0.89	0.15
C3 naphthalenes	ND		ND		ND		0.33	0.05
C4 naphthalenes	ND		ND		ND		0.12	0.15
acenaphthylene	ND		ND		ND		9	0.2
acenaphthene	ND		ND		ND		1.6	0.1
fluorene	ND		ND		ND		1.2	0.04
C1 fluorenes	ND		ND		ND		0.41	0.02
C2 fluorenes	ND		ND		ND		0.16	0.05
C3 fluorenes	ND		ND		ND		0.06	0.06
phenanthrene	ND		ND		ND		0.56	0.1
anthracene	ND		ND		ND		0.61	0.05
C1 phenanthrenes/anthracenes	0.03	J	0.03	J	ND		0.22	0.02
C2 phenanthrenes/anthracenes	ND		ND		ND		0.09	0.05
C3 phenanthrenes/anthracenes	ND		ND		ND		0.04	0.04
C4 phenanthrenes/anthracenes	ND		ND		ND		0.02	0.02
fluoranthene	0.07	J	0.08	J	ND		0.21	0.01
pyrene	0.05	J	0.05	J	ND		0.3	0.01
C1 fluoranthenes/pyrenes	0.02	J	0.01	J	ND		0.14	0.01
benz[a]anthracene	0.00	J	0.00	J	ND		0.066	0.001
chrysene	0.01	J	0.01	J	ND		0.06	0.001
C1 chrysenes	ND		ND		ND		0.025	0.005
C2 chrysenes	ND		ND		ND		0.014	0.01
C3 chrysenes	ND		ND		ND		0.005	0.01
C4 chrysenes	ND		ND		ND		0.002	0.01
benzo[b+k]fluoranthene	ND		ND		ND		0.019	0.005
benzo[e]pyrene	ND		ND		ND		0.028	0.005
benzo[a]pyrene	ND		ND		ND		0.026	0.008
perylene	ND		ND		ND		0.026	0.004
indeno[1,2,3-cd]pyrene	ND		ND		ND		0.008	0.001
dibenz[ah]anthracene	ND		ND		ND		0.008	0.002
benzo[ghi]perylene	ND		ND		ND		0.013	0.001

Target detection limits are those required by ASTM D7363 (C2 chyrsenes and larger PAHs, not applicable).
Actual experimental detection limits (reporting limits) are determined based on the signal to noise requirements stated in D7363.
ND = not detected.

Energy and Environmental Research Center, GC/MS Lab
University of North Dakota, Campus Box 9018
15 North 23rd Street, Grand Forks, ND 58202
701-777-5000

EERC ID	**18A-1**		**18A-2**					
Sample Collection Date								
EERC Sample Receipt Date	**10/20/2010**		**10/20/2010**					
EERC Run Date	**10/20/2010**		**10/20/2010**		**10/20/2010**			
EERC Run Number	**2590A07.D**		**2590A08.D**		**2590A06.D**			
					Fiber			
Sample Name	**DC3**		**DC3**		**Water Blank**			
Treatment	**Pore Water**		**Pore Water**		**Pore Water**		**Target detection limit ng/g**	**Actual (reporting) detection limit, ng/g**
Sample Weight, g	**1.50**		**1.51**		**1.50**			
Matrix	**Sediment**		**Sediment**					
Units	**ng/g**		**ng/g**		**ng/g**			
naphthalene	0.13	J	0.10	J	ND		5.7	0.1
2-methylnaphthalene	ND		ND		ND		2.4	0.05
1-methylnaphthalene	ND		ND		ND		2.4	0.05
C2 naphthalenes	ND		ND		ND		0.89	0.15
C3 naphthalenes	0.15	J	0.15	J	ND		0.33	0.05
C4 naphthalenes	ND		ND		ND		0.12	0.15
acenaphthylene	ND		ND		ND		9	0.2
acenaphthene	ND		ND		ND		1.6	0.1
fluorene	ND		ND		ND		1.2	0.04
C1 fluorenes	0.02	J	ND		ND		0.41	0.02
C2 fluorenes	ND		ND		ND		0.16	0.05
C3 fluorenes	ND		ND		ND		0.06	0.06
phenanthrene	ND		ND		ND		0.56	0.1
anthracene	ND		ND		ND		0.61	0.05
C1 phenanthrenes/anthracenes	0.05	J	0.04	J	ND		0.22	0.02
C2 phenanthrenes/anthracenes	0.10	J	0.09	J	ND		0.09	0.05
C3 phenanthrenes/anthracenes	ND		ND		ND		0.04	0.04
C4 phenanthrenes/anthracenes	ND		ND		ND		0.02	0.02
fluoranthene	0.02	J	0.02	J	ND		0.21	0.01
pyrene	0.01	J	0.02	J	ND		0.3	0.01
C1 fluoranthenes/pyrenes	ND		ND		ND		0.14	0.01
benz[a]anthracene	ND		0.00	J	ND		0.066	0.001
chrysene	0.00	J	0.00	J	ND		0.06	0.001
C1 chrysenes	ND		ND		ND		0.025	0.005
C2 chrysenes	ND		ND		ND		0.014	0.01
C3 chrysenes	ND		ND		ND		0.005	0.01
C4 chrysenes	ND		ND		ND		0.002	0.01
benzo[b+k]fluoranthene	ND		ND		ND		0.019	0.005
benzo[e]pyrene	ND		ND		ND		0.028	0.005
benzo[a]pyrene	ND		ND		ND		0.026	0.008
perylene	ND		ND		ND		0.026	0.004
indeno[1,2,3-cd]pyrene	ND		ND		ND		0.008	0.001
dibenz[ah]anthracene	ND		ND		ND		0.008	0.002
benzo[ghi]perylene	ND		ND		ND		0.013	0.001

Target detection limits are those required by ASTM D7363 (C2 chyrsenes and larger PAHs, not applicable).
Actual experimental detection limits (reporting limits) are determined based on the signal to noise requirements stated in D7363.
ND = not detected.

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EERC ID	9A-1		9A-2				Target detection limit ng/g	Actual (reporting) detection limit, ng/g
Sample Collection Date								
EERC Sample Receipt Date	10/13/2010		10/13/2010					
EERC Run Date	10/14/2010		10/14/2010		10/14/2010			
EERC Run Number	2587A03.D		2587A04.D		2587A02.D			
					Fiber			
Sample Name	OC4		OC4		Water Blank			
Treatment	Pore Water		Pore Water		Pore Water			
Sample Weight, g	1.50		1.50		1.50			
Matrix	Sediment		Sediment					
Units	ng/g		ng/g		ng/g			
naphthalene	0.89	J	0.85	J	ND		5.7	0.1
2-methylnaphthalene	0.88	J	0.84	J	ND		2.4	0.05
1-methylnaphthalene	3.05		2.95		ND		2.4	0.05
C2 naphthalenes	13.43		12.35		ND		0.89	0.15
C3 naphthalenes	35.52		29.75		ND		0.33	0.05
C4 naphthalenes	30.25		21.19		ND		0.12	0.15
acenaphthylene	0.22	J	ND		ND		9	0.2
acenaphthene	0.39	J	0.33	J	ND		1.6	0.1
fluorene	0.24	J	0.21	J	ND		1.2	0.04
C1 fluorenes	1.30		1.04		ND		0.41	0.02
C2 fluorenes	2.11		1.72		ND		0.16	0.05
C3 fluorenes	2.77		2.07	J	ND		0.06	0.06
phenanthrene	0.24	J	0.22	J	ND		0.56	0.1
anthracene	0.08	J	0.07	J	ND		0.61	0.05
C1 phenanthrenes/anthracenes	1.18	J	1.08	J	ND		0.22	0.02
C2 phenanthrenes/anthracenes	3.13	J	2.85	J	ND		0.09	0.05
C3 phenanthrenes/anthracenes	2.54	J	2.42	J	ND		0.04	0.04
C4 phenanthrenes/anthracenes	1.79	J	1.85	J	ND		0.02	0.02
fluoranthene	ND		ND		ND		0.21	0.01
pyrene	0.12	J	0.12	J	ND		0.3	0.01
C1 fluoranthenes/pyrenes	0.29	J	0.31	J	ND		0.14	0.01
benz[a]anthracene	0.00	J	0.00	J	ND		0.066	0.001
chrysene	0.02	J	0.02	J	ND		0.06	0.001
C1 chrysenes	0.02	J	0.03	J	ND		0.025	0.005
C2 chrysenes	ND		ND		ND		0.014	0.01
C3 chrysenes	ND		ND		ND		0.005	0.01
C4 chrysenes	ND		ND		ND		0.002	0.01
benzo[b+k]fluoranthene	ND		ND		ND		0.019	0.005
benzo[e]pyrene	ND		ND		ND		0.028	0.005
benzo[a]pyrene	ND		ND		ND		0.026	0.008
perylene	ND		ND		ND		0.026	0.004
indeno[1,2,3-cd]pyrene	ND		ND		ND		0.008	0.001
dibenz[ah]anthracene	ND		ND		ND		0.008	0.002
benzo[ghi]perylene	ND		ND		ND		0.013	0.001

Target detection limits are those required by ASTM D7363 (C2 chyrsenes and larger PAHs, not applicable).
Actual experimental detection limits (reporting limits) are determined based on the signal to noise requirements stated in D7363.
ND = not detected.

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EERC ID	**19A-1**		**19A-2**				**Target detection limit ng/g**	**Actual (reporting) detection limit, ng/g**
Sample Collection Date								
EERC Sample Receipt Date	**10/20/2010**		**10/20/2010**					
EERC Run Date	**10/21/2010**		**10/21/2010**		**10/21/2010**			
EERC Run Number	**2591A03.D**		**2591A04.D**		**2591A02.D**			
					Fiber			
Sample Name	**DC5**		**DC5**		**Water Blank**			
Treatment	**Pore Water**		**Pore Water**		**Pore Water**			
Sample Weight, g	**1.50**		**1.51**		**1.50**			
Matrix	**Sediment**		**Sediment**					
Units	**ng/g**		**ng/g**		**ng/g**			
naphthalene	0.11	J	0.11	J	ND		5.7	0.1
2-methylnaphthalene	ND		ND		ND		2.4	0.05
1-methylnaphthalene	ND		ND		ND		2.4	0.05
C2 naphthalenes	ND		ND		ND		0.89	0.15
C3 naphthalenes	ND		ND		ND		0.33	0.05
C4 naphthalenes	ND		ND		ND		0.12	0.15
acenaphthylene	ND		ND		ND		9	0.2
acenaphthene	ND		ND		ND		1.6	0.1
fluorene	ND		ND		ND		1.2	0.04
C1 fluorenes	ND		ND		ND		0.41	0.02
C2 fluorenes	ND		ND		ND		0.16	0.05
C3 fluorenes	ND		ND		ND		0.06	0.06
phenanthrene	ND		ND		ND		0.56	0.1
anthracene	ND		ND		ND		0.61	0.05
C1 phenanthrenes/anthracenes	ND		ND		ND		0.22	0.02
C2 phenanthrenes/anthracenes	ND		ND		ND		0.09	0.05
C3 phenanthrenes/anthracenes	ND		ND		ND		0.04	0.04
C4 phenanthrenes/anthracenes	ND		ND		ND		0.02	0.02
fluoranthene	0.01	J	0.01	J	ND		0.21	0.01
pyrene	0.02	J	0.02	J	ND		0.3	0.01
C1 fluoranthenes/pyrenes	ND		ND		ND		0.14	0.01
benz[a]anthracene	ND		ND		ND		0.066	0.001
chrysene	ND		ND		ND		0.06	0.001
C1 chrysenes	ND		ND		ND		0.025	0.005
C2 chrysenes	ND		ND		ND		0.014	0.01
C3 chrysenes	ND		ND		ND		0.005	0.01
C4 chrysenes	ND		ND		ND		0.002	0.01
benzo[b+k]fluoranthene	ND		ND		ND		0.019	0.005
benzo[e]pyrene	ND		ND		ND		0.028	0.005
benzo[a]pyrene	ND		ND		ND		0.026	0.008
perylene	ND		ND		ND		0.026	0.004
indeno[1,2,3-cd]pyrene	ND		ND		ND		0.008	0.001
dibenz[ah]anthracene	ND		ND		ND		0.008	0.002
benzo[ghi]perylene	ND		ND		ND		0.013	0.001

Target detection limits are those required by ASTM D7363 (C2 chyrsenes and larger PAHs, not applicable).
Actual experimental detection limits (reporting limits) are determined based on the signal to noise requirements stated in D7363.
ND = not detected.

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EERC ID	10A-1		10A-2				Target detection limit ng/g	Actual (reporting) detection limit, ng/g
Sample Collection Date								
EERC Sample Receipt Date	10/13/2010		10/13/2010					
EERC Run Date	10/14/2010		10/14/2010		10/14/2010			
EERC Run Number	2587A07.D		2587A08.D		2587A06.D			
					Fiber			
Sample Name	OC5a		OC5a		Water Blank			
Treatment	Pore Water		Pore Water		Pore Water			
Sample Weight, g	1.51		1.50		1.50			
Matrix	Sediment		Sediment					
Units	ng/g		ng/g		ng/g			
naphthalene	0.78	J	0.74	J	ND		5.7	0.1
2-methylnaphthalene	0.13	J	0.12	J	ND		2.4	0.05
1-methylnaphthalene	0.67	J	0.65	J	ND		2.4	0.05
C2 naphthalenes	3.45		3.28		ND		0.89	0.15
C3 naphthalenes	8.29		7.69		ND		0.33	0.05
C4 naphthalenes	5.39	J	4.60	J	ND		0.12	0.15
acenaphthylene	ND		ND		ND		9	0.2
acenaphthene	0.11	J	0.10	J	ND		1.6	0.1
fluorene	0.06	J	0.06	J	ND		1.2	0.04
C1 fluorenes	0.29	J	0.25	J	ND		0.41	0.02
C2 fluorenes	0.60	J	0.51	J	ND		0.16	0.05
C3 fluorenes	1.19	J	0.86	J	ND		0.06	0.06
phenanthrene	ND		ND		ND		0.56	0.1
anthracene	ND		ND		ND		0.61	0.05
C1 phenanthrenes/anthracenes	0.46	J	0.39	J	ND		0.22	0.02
C2 phenanthrenes/anthracenes	1.64	J	1.28	J	ND		0.09	0.05
C3 phenanthrenes/anthracenes	1.58	J	1.14	J	ND		0.04	0.04
C4 phenanthrenes/anthracenes	1.32	J	0.98	J	ND		0.02	0.02
fluoranthene	ND		ND		ND		0.21	0.01
pyrene	0.08	J	0.08	J	ND		0.3	0.01
C1 fluoranthenes/pyrenes	0.17	J	0.15	J	ND		0.14	0.01
benz[a]anthracene	0.00	J	0.00	J	ND		0.066	0.001
chrysene	0.01	J	0.01	J	ND		0.06	0.001
C1 chrysenes	0.02	J	0.01	J	ND		0.025	0.005
C2 chrysenes	ND		ND		ND		0.014	0.01
C3 chrysenes	ND		ND		ND		0.005	0.01
C4 chrysenes	ND		ND		ND		0.002	0.01
benzo[b+k]fluoranthene	ND		ND		ND		0.019	0.005
benzo[e]pyrene	ND		ND		ND		0.028	0.005
benzo[a]pyrene	ND		ND		ND		0.026	0.008
perylene	ND		ND		ND		0.026	0.004
indeno[1,2,3-cd]pyrene	ND		ND		ND		0.008	0.001
dibenz[ah]anthracene	ND		ND		ND		0.008	0.002
benzo[ghi]perylene	ND		ND		ND		0.013	0.001

Target detection limits are those required by ASTM D7363 (C2 chyrsenes and larger PAHs, not applicable).
Actual experimental detection limits (reporting limits) are determined based on the signal to noise requirements stated in D7363.
ND = not detected.

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EERC ID	23A-1		23A-2				Target detection limit ng/g	Actual (reporting) detection limit, ng/g
Sample Collection Date								
EERC Sample Receipt Date	10/22/2010		10/22/2010					
EERC Run Date	10/25/2010		10/25/2010		10/25/2010			
EERC Run Number	2593A03.D		2593A04.D		2593A02.D			
					Fiber			
Sample Name	DC6-7		DC6-7		Water Blank			
Treatment	Pore Water		Pore Water		Pore Water			
Sample Weight, g	1.51		1.51		1.50			
Matrix	Sediment		Sediment					
Units	ng/g		ng/g		ng/g			
naphthalene	ND		ND		ND		5.7	0.1
2-methylnaphthalene	ND		ND		ND		2.4	0.05
1-methylnaphthalene	ND		ND		ND		2.4	0.05
C2 naphthalenes	ND		ND		ND		0.89	0.15
C3 naphthalenes	ND		ND		ND		0.33	0.05
C4 naphthalenes	ND		ND		ND		0.12	0.15
acenaphthylene	ND		ND		ND		9	0.2
acenaphthene	ND		ND		ND		1.6	0.1
fluorene	ND		ND		ND		1.2	0.04
C1 fluorenes	ND		ND		ND		0.41	0.02
C2 fluorenes	ND		ND		ND		0.16	0.05
C3 fluorenes	ND		ND		ND		0.06	0.06
phenanthrene	ND		ND		ND		0.56	0.1
anthracene	ND		ND		ND		0.61	0.05
C1 phenanthrenes/anthracenes	ND		ND		ND		0.22	0.02
C2 phenanthrenes/anthracenes	ND		ND		ND		0.09	0.05
C3 phenanthrenes/anthracenes	ND		ND		ND		0.04	0.04
C4 phenanthrenes/anthracenes	ND		ND		ND		0.02	0.02
fluoranthene	ND		ND		ND		0.21	0.01
pyrene	0.01	J	0.01	J	ND		0.3	0.01
C1 fluoranthenes/pyrenes	ND		ND		ND		0.14	0.01
benz[a]anthracene	ND		ND		ND		0.066	0.001
chrysene	ND		ND		ND		0.06	0.001
C1 chrysenes	ND		ND		ND		0.025	0.005
C2 chrysenes	ND		ND		ND		0.014	0.01
C3 chrysenes	ND		ND		ND		0.005	0.01
C4 chrysenes	ND		ND		ND		0.002	0.01
benzo[b+k]fluoranthene	ND		ND		ND		0.019	0.005
benzo[e]pyrene	ND		ND		ND		0.028	0.005
benzo[a]pyrene	ND		ND		ND		0.026	0.008
perylene	ND		ND		ND		0.026	0.004
indeno[1,2,3-cd]pyrene	ND		ND		ND		0.008	0.001
dibenz[ah]anthracene	ND		ND		ND		0.008	0.002
benzo[ghi]perylene	ND		ND		ND		0.013	0.001

Target detection limits are those required by ASTM D7363 (C2 chyrsenes and larger PAHs, not applicable).
Actual experimental detection limits (reporting limits) are determined based on the signal to noise requirements stated in D7363.
ND = not detected.

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EERC ID	**11A-1**		**11A-2**					
Sample Collection Date								
EERC Sample Receipt Date	**10/13/2010**		**10/13/2010**					
EERC Run Date	**10/14/2010**		**10/14/2010**		**10/14/2010**			
EERC Run Number	**2587A11.D**		**2587A12.D**		**2587A10.D**			
					Fiber			
Sample Name	**OC6-7**		**OC6-7**		**Water Blank**			
Treatment	**Pore Water**		**Pore Water**		**Pore Water**		**Target detection limit ng/g**	**Actual (reporting) detection limit, ng/g**
Sample Weight, g	**1.51**		**1.50**		**1.50**			
Matrix	**Sediment**		**Sediment**					
Units	**ng/g**		**ng/g**		**ng/g**			
naphthalene	ND		ND		ND		5.7	0.1
2-methylnaphthalene	ND		ND		ND		2.4	0.05
1-methylnaphthalene	ND		ND		ND		2.4	0.05
C2 naphthalenes	ND		ND		ND		0.89	0.15
C3 naphthalenes	0.74	J	0.74	J	ND		0.33	0.05
C4 naphthalenes	2.30	J	2.33	J	ND		0.12	0.15
acenaphthylene	ND		ND		ND		9	0.2
acenaphthene	ND		ND		ND		1.6	0.1
fluorene	ND		ND		ND		1.2	0.04
C1 fluorenes	0.11	J	0.11	J	ND		0.41	0.02
C2 fluorenes	0.41	J	0.44	J	ND		0.16	0.05
C3 fluorenes	0.81	J	1.07	J	ND		0.06	0.06
phenanthrene	ND		ND		ND		0.56	0.1
anthracene	ND		ND		ND		0.61	0.05
C1 phenanthrenes/anthracenes	0.05	J	0.07	J	ND		0.22	0.02
C2 phenanthrenes/anthracenes	0.55	J	0.59	J	ND		0.09	0.05
C3 phenanthrenes/anthracenes	0.89	J	1.16	J	ND		0.04	0.04
C4 phenanthrenes/anthracenes	0.73	J	1.11	J	ND		0.02	0.02
fluoranthene	0.05	J	0.05	J	ND		0.21	0.01
pyrene	0.08	J	0.10	J	ND		0.3	0.01
C1 fluoranthenes/pyrenes	0.12	J	0.15	J	ND		0.14	0.01
benz[a]anthracene	0.00	J	0.01	J	ND		0.066	0.001
chrysene	0.02	J	0.03	J	ND		0.06	0.001
C1 chrysenes	0.01	J	0.02	J	ND		0.025	0.005
C2 chrysenes	ND		ND		ND		0.014	0.01
C3 chrysenes	ND		ND		ND		0.005	0.01
C4 chrysenes	ND		ND		ND		0.002	0.01
benzo[b+k]fluoranthene	ND		ND		ND		0.019	0.005
benzo[e]pyrene	ND		ND		ND		0.028	0.005
benzo[a]pyrene	ND		ND		ND		0.026	0.008
perylene	ND		ND		ND		0.026	0.004
indeno[1,2,3-cd]pyrene	ND		ND		ND		0.008	0.001
dibenz[ah]anthracene	ND		ND		ND		0.008	0.002
benzo[ghi]perylene	ND		ND		ND		0.013	0.001

Target detection limits are those required by ASTM D7363 (C2 chyrsenes and larger PAHs, not applicable).
Actual experimental detection limits (reporting limits) are determined based on the signal to noise requirements stated in D7363.
ND = not detected.

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EERC ID	12A-1		12A-2				Target detection limit ng/g	Actual (reporting) detection limit, ng/g
Sample Collection Date								
EERC Sample Receipt Date	10/13/2010		10/13/2010					
EERC Run Date	10/15/2010		10/15/2010		10/15/2010			
EERC Run Number	2588A03.D		2588A04.D		2588A02.D			
					Fiber			
Sample Name	OC9-10		OC9-10		Water Blank			
Treatment	Pore Water		Pore Water		Pore Water			
Sample Weight, g	1.50		1.51		1.50			
Matrix	Sediment		Sediment					
Units	ng/g		ng/g		ng/g			
naphthalene	0.23	J	0.23	J	ND		5.7	0.1
2-methylnaphthalene	ND		ND		ND		2.4	0.05
1-methylnaphthalene	ND		ND		ND		2.4	0.05
C2 naphthalenes	0.18	J	0.19	J	ND		0.89	0.15
C3 naphthalenes	1.25	J	1.26	J	ND		0.33	0.05
C4 naphthalenes	3.91	J	3.94	J	ND		0.12	0.15
acenaphthylene	ND		ND		ND		9	0.2
acenaphthene	ND		ND		ND		1.6	0.1
fluorene	ND		ND		ND		1.2	0.04
C1 fluorenes	0.33	J	0.33	J	ND		0.41	0.02
C2 fluorenes	1.08	J	1.10	J	ND		0.16	0.05
C3 fluorenes	1.73	J	1.76	J	ND		0.06	0.06
phenanthrene	ND		ND		ND		0.56	0.1
anthracene	ND		ND		ND		0.61	0.05
C1 phenanthrenes/anthracenes	0.16	J	0.18	J	ND		0.22	0.02
C2 phenanthrenes/anthracenes	1.00	J	1.03	J	ND		0.09	0.05
C3 phenanthrenes/anthracenes	1.10	J	1.15	J	ND		0.04	0.04
C4 phenanthrenes/anthracenes	0.42	J	0.43	J	ND		0.02	0.02
fluoranthene	0.13	J	0.13	J	ND		0.21	0.01
pyrene	0.20	J	0.20	J	ND		0.3	0.01
C1 fluoranthenes/pyrenes	0.17	J	0.18	J	ND		0.14	0.01
benz[a]anthracene	0.01	J	0.00	J	ND		0.066	0.001
chrysene	0.02	J	0.02	J	ND		0.06	0.001
C1 chrysenes	0.01	J	0.01	J	ND		0.025	0.005
C2 chrysenes	ND		ND		ND		0.014	0.01
C3 chrysenes	ND		ND		ND		0.005	0.01
C4 chrysenes	ND		ND		ND		0.002	0.01
benzo[b+k]fluoranthene	ND		ND		ND		0.019	0.005
benzo[e]pyrene	ND		ND		ND		0.028	0.005
benzo[a]pyrene	ND		ND		ND		0.026	0.008
perylene	ND		ND		ND		0.026	0.004
indeno[1,2,3-cd]pyrene	ND		ND		ND		0.008	0.001
dibenz[ah]anthracene	ND		ND		ND		0.008	0.002
benzo[ghi]perylene	ND		ND		ND		0.013	0.001

Target detection limits are those required by ASTM D7363 (C2 chyrsenes and larger PAHs, not applicable).
Actual experimental detection limits (reporting limits) are determined based on the signal to noise requirements stated in D7363.
ND = not detected.

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EERC ID	**24A-1**	**24A-2**			
Sample Collection Date					
EERC Sample Receipt Date	**10/22/2010**	**10/22/2010**			
EERC Run Date	**10/25/2010**	**10/25/2010**	**10/25/2010**		
EERC Run Number	**2593A07.D**	**2593A08.D**	**2593A06.D**		
			Fiber		
Sample Name	**DC11-12**	**DC11-12**	**Water Blank**		
Treatment	**Pore Water**	**Pore Water**	**Pore Water**	**Target detection limit ng/g**	**Actual (reporting) detection limit, ng/g**
Sample Weight, g	**1.50**	**1.50**	**1.50**		
Matrix	**Sediment**	**Sediment**			
Units	**ng/g**	**ng/g**	**ng/g**		
naphthalene	ND	ND	ND	5.7	0.1
2-methylnaphthalene	ND	ND	ND	2.4	0.05
1-methylnaphthalene	ND	ND	ND	2.4	0.05
C2 naphthalenes	ND	ND	ND	0.89	0.15
C3 naphthalenes	ND	ND	ND	0.33	0.05
C4 naphthalenes	ND	ND	ND	0.12	0.15
acenaphthylene	ND	ND	ND	9	0.2
acenaphthene	ND	ND	ND	1.6	0.1
fluorene	ND	ND	ND	1.2	0.04
C1 fluorenes	ND	ND	ND	0.41	0.02
C2 fluorenes	ND	ND	ND	0.16	0.05
C3 fluorenes	ND	ND	ND	0.06	0.06
phenanthrene	ND	ND	ND	0.56	0.1
anthracene	ND	ND	ND	0.61	0.05
C1 phenanthrenes/anthracenes	ND	ND	ND	0.22	0.02
C2 phenanthrenes/anthracenes	ND	ND	ND	0.09	0.05
C3 phenanthrenes/anthracenes	ND	ND	ND	0.04	0.04
C4 phenanthrenes/anthracenes	ND	ND	ND	0.02	0.02
fluoranthene	ND	ND	ND	0.21	0.01
pyrene	ND	ND	ND	0.3	0.01
C1 fluoranthenes/pyrenes	ND	ND	ND	0.14	0.01
benz[a]anthracene	ND	ND	ND	0.066	0.001
chrysene	ND	ND	ND	0.06	0.001
C1 chrysenes	ND	ND	ND	0.025	0.005
C2 chrysenes	ND	ND	ND	0.014	0.01
C3 chrysenes	ND	ND	ND	0.005	0.01
C4 chrysenes	ND	ND	ND	0.002	0.01
benzo[b+k]fluoranthene	ND	ND	ND	0.019	0.005
benzo[e]pyrene	ND	ND	ND	0.028	0.005
benzo[a]pyrene	ND	ND	ND	0.026	0.008
perylene	ND	ND	ND	0.026	0.004
indeno[1,2,3-cd]pyrene	ND	ND	ND	0.008	0.001
dibenz[ah]anthracene	ND	ND	ND	0.008	0.002
benzo[ghi]perylene	ND	ND	ND	0.013	0.001

Target detection limits are those required by ASTM D7363 (C2 chyrsenes and larger PAHs, not applicable).
Actual experimental detection limits (reporting limits) are determined based on the signal to noise requirements stated in D7363.
ND = not detected.

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EERC ID	21A-1		21A-2				Target detection limit ng/g	Actual (reporting) detection limit, ng/g
Sample Collection Date								
EERC Sample Receipt Date	10/20/2010		10/20/2010					
EERC Run Date	10/22/2010		10/22/2010		10/22/2010			
EERC Run Number	2592A03.D		2592A04.D		2592A02.D			
					Fiber			
Sample Name	OC12/13		OC12/13		Water Blank			
Treatment	Pore Water		Pore Water		Pore Water			
Sample Weight, g	1.51		1.50		1.50			
Matrix	Sediment		Sediment					
Units	ng/g		ng/g		ng/g			
naphthalene	ND		0.11	J	ND		5.7	0.1
2-methylnaphthalene	ND		ND		ND		2.4	0.05
1-methylnaphthalene	ND		ND		ND		2.4	0.05
C2 naphthalenes	ND		ND		ND		0.89	0.15
C3 naphthalenes	0.21	J	0.19	J	ND		0.33	0.05
C4 naphthalenes	0.34	J	0.34	J	ND		0.12	0.15
acenaphthylene	ND		ND		ND		9	0.2
acenaphthene	ND		ND		ND		1.6	0.1
fluorene	ND		ND		ND		1.2	0.04
C1 fluorenes	0.04	J	0.04	J	ND		0.41	0.02
C2 fluorenes	0.08	J	0.07	J	ND		0.16	0.05
C3 fluorenes	ND		ND		ND		0.06	0.06
phenanthrene	ND		ND		ND		0.56	0.1
anthracene	ND		ND		ND		0.61	0.05
C1 phenanthrenes/anthracenes	0.02	J	0.03	J	ND		0.22	0.02
C2 phenanthrenes/anthracenes	0.07	J	0.10	J	ND		0.09	0.05
C3 phenanthrenes/anthracenes	0.06	J	0.08	J	ND		0.04	0.04
C4 phenanthrenes/anthracenes	ND		ND		ND		0.02	0.02
fluoranthene	0.11	J	0.11	J	ND		0.21	0.01
pyrene	0.11	J	0.11	J	ND		0.3	0.01
C1 fluoranthenes/pyrenes	0.04	J	0.04	J	ND		0.14	0.01
benz[a]anthracene	0.00	J	0.00	J	ND		0.066	0.001
chrysene	0.01	J	0.01	J	ND		0.06	0.001
C1 chrysenes	ND		ND		ND		0.025	0.005
C2 chrysenes	ND		ND		ND		0.014	0.01
C3 chrysenes	ND		ND		ND		0.005	0.01
C4 chrysenes	ND		ND		ND		0.002	0.01
benzo[b+k]fluoranthene	ND		ND		ND		0.019	0.005
benzo[e]pyrene	ND		ND		ND		0.028	0.005
benzo[a]pyrene	ND		ND		ND		0.026	0.008
perylene	ND		ND		ND		0.026	0.004
indeno[1,2,3-cd]pyrene	ND		ND		ND		0.008	0.001
dibenz[ah]anthracene	ND		ND		ND		0.008	0.002
benzo[ghi]perylene	ND		ND		ND		0.013	0.001

Target detection limits are those required by ASTM D7363 (C2 chyrsenes and larger PAHs, not applicable).
Actual experimental detection limits (reporting limits) are determined based on the signal to noise requirements stated in D7363.
ND = not detected.

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EERC ID	**22A-1**		**22A-2**					
Sample Collection Date								
EERC Sample Receipt Date	**10/20/2010**		**10/20/2010**					
EERC Run Date	**10/22/2010**		**10/22/2010**		**10/22/2010**			
EERC Run Number	**2592A07.D**		**2592A08.D**		**2592A06.D**			
					Fiber			
Sample Name	**OC16**		**OC16**		**Water Blank**			
Treatment	**Pore Water**		**Pore Water**		**Pore Water**		**Target detection limit ng/g**	**Actual (reporting) detection limit, ng/g**
Sample Weight, g	**1.51**		**1.50**		**1.50**			
Matrix	**Sediment**		**Sediment**					
Units	**ng/g**		**ng/g**		**ng/g**			
naphthalene	ND		ND		ND		5.7	0.1
2-methylnaphthalene	ND		ND		ND		2.4	0.05
1-methylnaphthalene	ND		ND		ND		2.4	0.05
C2 naphthalenes	ND		ND		ND		0.89	0.15
C3 naphthalenes	0.25	J	0.29	J	ND		0.33	0.05
C4 naphthalenes	0.53	J	0.60	J	ND		0.12	0.15
acenaphthylene	ND		ND		ND		9	0.2
acenaphthene	ND		ND		ND		1.6	0.1
fluorene	ND		ND		ND		1.2	0.04
C1 fluorenes	0.04	J	0.05	J	ND		0.41	0.02
C2 fluorenes	0.11	J	0.14	J	ND		0.16	0.05
C3 fluorenes	ND		ND		ND		0.06	0.06
phenanthrene	ND		ND		ND		0.56	0.1
anthracene	ND		ND		ND		0.61	0.05
C1 phenanthrenes/anthracenes	0.08	J	0.08	J	ND		0.22	0.02
C2 phenanthrenes/anthracenes	0.13	J	0.17	J	ND		0.09	0.05
C3 phenanthrenes/anthracenes	0.20	J	0.21	J	ND		0.04	0.04
C4 phenanthrenes/anthracenes	0.07	J	0.11	J	ND		0.02	0.02
fluoranthene	0.07	J	0.07	J	ND		0.21	0.01
pyrene	0.10	J	0.10	J	ND		0.3	0.01
C1 fluoranthenes/pyrenes	0.05	J	0.05	J	ND		0.14	0.01
benz[a]anthracene	0.00	J	0.00	J	ND		0.066	0.001
chrysene	0.01	J	0.01	J	ND		0.06	0.001
C1 chrysenes	ND		ND		ND		0.025	0.005
C2 chrysenes	ND		ND		ND		0.014	0.01
C3 chrysenes	ND		ND		ND		0.005	0.01
C4 chrysenes	ND		ND		ND		0.002	0.01
benzo[b+k]fluoranthene	ND		ND		ND		0.019	0.005
benzo[e]pyrene	ND		ND		ND		0.028	0.005
benzo[a]pyrene	ND		ND		ND		0.026	0.008
perylene	ND		ND		ND		0.026	0.004
indeno[1,2,3-cd]pyrene	ND		ND		ND		0.008	0.001
dibenz[ah]anthracene	ND		ND		ND		0.008	0.002
benzo[ghi]perylene	ND		ND		ND		0.013	0.001

Target detection limits are those required by ASTM D7363 (C2 chyrsenes and larger PAHs, not applicable).
Actual experimental detection limits (reporting limits) are determined based on the signal to noise requirements stated in D7363.
ND = not detected.

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EERC ID	25A-1		25A-2				Target detection limit ng/g	Actual (reporting) detection limit, ng/g
Sample Collection Date								
EERC Sample Receipt Date	10/22/2010		10/22/2010					
EERC Run Date	10/26/2010		10/26/2010		10/26/2010			
EERC Run Number	2594A03.D		2594A04.D		2594A02.D			
					Fiber			
Sample Name	OC22		OC22		Water Blank			
Treatment	Pore Water		Pore Water		Pore Water			
Sample Weight, g	1.50		1.51		1.50			
Matrix	Sediment		Sediment					
Units	ng/g		ng/g		ng/g			
naphthalene	ND		ND		ND		5.7	0.1
2-methylnaphthalene	ND		ND		ND		2.4	0.05
1-methylnaphthalene	ND		ND		ND		2.4	0.05
C2 naphthalenes	ND		ND		ND		0.89	0.15
C3 naphthalenes	0.10	J	0.11	J	ND		0.33	0.05
C4 naphthalenes	0.18	J	0.16	J	ND		0.12	0.15
acenaphthylene	ND		ND		ND		9	0.2
acenaphthene	ND		ND		ND		1.6	0.1
fluorene	ND		ND		ND		1.2	0.04
C1 fluorenes	0.04	J	0.04	J	ND		0.41	0.02
C2 fluorenes	0.06	J	0.06	J	ND		0.16	0.05
C3 fluorenes	ND		ND		ND		0.06	0.06
phenanthrene	ND		ND		ND		0.56	0.1
anthracene	ND		ND		ND		0.61	0.05
C1 phenanthrenes/anthracenes	ND		ND		ND		0.22	0.02
C2 phenanthrenes/anthracenes	0.09	J	0.12	J	ND		0.09	0.05
C3 phenanthrenes/anthracenes	ND		0.04	J	ND		0.04	0.04
C4 phenanthrenes/anthracenes	ND		ND		ND		0.02	0.02
fluoranthene	0.19	J	0.19	J	ND		0.21	0.01
pyrene	0.16	J	0.16	J	ND		0.3	0.01
C1 fluoranthenes/pyrenes	0.04	J	0.04	J	ND		0.14	0.01
benz[a]anthracene	0.01	J	0.01	J	ND		0.066	0.001
chrysene	0.01	J	0.01	J	ND		0.06	0.001
C1 chrysenes	ND		ND		ND		0.025	0.005
C2 chrysenes	ND		ND		ND		0.014	0.01
C3 chrysenes	ND		ND		ND		0.005	0.01
C4 chrysenes	ND		ND		ND		0.002	0.01
benzo[b+k]fluoranthene	ND		ND		ND		0.019	0.005
benzo[e]pyrene	ND		ND		ND		0.028	0.005
benzo[a]pyrene	ND		ND		ND		0.026	0.008
perylene	ND		ND		ND		0.026	0.004
indeno[1,2,3-cd]pyrene	ND		ND		ND		0.008	0.001
dibenz[ah]anthracene	ND		ND		ND		0.008	0.002
benzo[ghi]perylene	ND		ND		ND		0.013	0.001

Target detection limits are those required by ASTM D7363 (C2 chyrsenes and larger PAHs, not applicable).
Actual experimental detection limits (reporting limits) are determined based on the signal to noise requirements stated in D7363.
ND = not detected.

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EERC ID	26A-1		26A-2				Target detection limit ng/g	Actual (reporting) detection limit, ng/g
Sample Collection Date								
EERC Sample Receipt Date	10/22/2010		10/22/2010					
EERC Run Date	10/26/2010		10/26/2010		10/26/2010			
EERC Run Number	2594A07.D		2594A08.D		2594A06.D			
					Fiber			
Sample Name	OC24-25		OC24-25		Water Blank			
Treatment	Pore Water		Pore Water		Pore Water			
Sample Weight, g	1.50		1.51		1.50			
Matrix	Sediment		Sediment					
Units	ng/g		ng/g		ng/g			
naphthalene	ND		ND		ND		5.7	0.1
2-methylnaphthalene	ND		ND		ND		2.4	0.05
1-methylnaphthalene	ND		ND		ND		2.4	0.05
C2 naphthalenes	ND		ND		ND		0.89	0.15
C3 naphthalenes	0.07	J	0.06	J	ND		0.33	0.05
C4 naphthalenes	ND		ND		ND		0.12	0.15
acenaphthylene	ND		ND		ND		9	0.2
acenaphthene	ND		ND		ND		1.6	0.1
fluorene	ND		ND		ND		1.2	0.04
C1 fluorenes	ND		ND		ND		0.41	0.02
C2 fluorenes	ND		ND		ND		0.16	0.05
C3 fluorenes	ND		ND		ND		0.06	0.06
phenanthrene	ND		ND		ND		0.56	0.1
anthracene	ND		ND		ND		0.61	0.05
C1 phenanthrenes/anthracenes	ND		ND		ND		0.22	0.02
C2 phenanthrenes/anthracenes	ND		ND		ND		0.09	0.05
C3 phenanthrenes/anthracenes	ND		ND		ND		0.04	0.04
C4 phenanthrenes/anthracenes	ND		ND		ND		0.02	0.02
fluoranthene	0.01	J	0.01	J	ND		0.21	0.01
pyrene	0.01	J	0.01	J	ND		0.3	0.01
C1 fluoranthenes/pyrenes	ND		ND		ND		0.14	0.01
benz[a]anthracene	ND		ND		ND		0.066	0.001
chrysene	ND		ND		ND		0.06	0.001
C1 chrysenes	ND		ND		ND		0.025	0.005
C2 chrysenes	ND		ND		ND		0.014	0.01
C3 chrysenes	ND		ND		ND		0.005	0.01
C4 chrysenes	ND		ND		ND		0.002	0.01
benzo[b+k]fluoranthene	ND		ND		ND		0.019	0.005
benzo[e]pyrene	ND		ND		ND		0.028	0.005
benzo[a]pyrene	ND		ND		ND		0.026	0.008
perylene	ND		ND		ND		0.026	0.004
indeno[1,2,3-cd]pyrene	ND		ND		ND		0.008	0.001
dibenz[ah]anthracene	ND		ND		ND		0.008	0.002
benzo[ghi]perylene	ND		ND		ND		0.013	0.001

Target detection limits are those required by ASTM D7363 (C2 chyrsenes and larger PAHs, not applicable).
Actual experimental detection limits (reporting limits) are determined based on the signal to noise requirements stated in D7363.
ND = not detected.

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EERC ID	27A-1		27A-2				Target detection limit ng/g	Actual (reporting) detection limit, ng/g
Sample Collection Date								
EERC Sample Receipt Date	11/5/2010		11/5/2010					
EERC Run Date	11/8/2010		11/8/2010		11/8/2010			
EERC Run Number	2596A09.D		2596A10.D		2596A08.D			
					Fiber			
Sample Name	DC13		DC13		Water Blank			
Treatment	Pore Water		Pore Water		Pore Water			
Sample Weight, g	1.50		1.51		1.50			
Matrix	Sediment		Sediment					
Units	ng/g		ng/g		ng/g			
naphthalene	ND		ND		ND		5.7	0.1
2-methylnaphthalene	ND		ND		ND		2.4	0.05
1-methylnaphthalene	ND		ND		ND		2.4	0.05
C2 naphthalenes	ND		ND		ND		0.89	0.15
C3 naphthalenes	ND		ND		ND		0.33	0.05
C4 naphthalenes	ND		ND		ND		0.12	0.15
acenaphthylene	ND		ND		ND		9	0.2
acenaphthene	ND		ND		ND		1.6	0.1
fluorene	ND		ND		ND		1.2	0.04
C1 fluorenes	ND		ND		ND		0.41	0.02
C2 fluorenes	ND		ND		ND		0.16	0.05
C3 fluorenes	ND		ND		ND		0.06	0.06
phenanthrene	ND		ND		ND		0.56	0.1
anthracene	ND		ND		ND		0.61	0.05
C1 phenanthrenes/anthracenes	ND		ND		ND		0.22	0.02
C2 phenanthrenes/anthracenes	ND		ND		ND		0.09	0.05
C3 phenanthrenes/anthracenes	ND		ND		ND		0.04	0.04
C4 phenanthrenes/anthracenes	ND		ND		ND		0.02	0.02
fluoranthene	ND		ND		ND		0.21	0.01
pyrene	0.01	J	0.01	J	ND		0.3	0.01
C1 fluoranthenes/pyrenes	ND		ND		ND		0.14	0.01
benz[a]anthracene	ND		ND		ND		0.066	0.001
chrysene	ND		ND		ND		0.06	0.001
C1 chrysenes	ND		ND		ND		0.025	0.005
C2 chrysenes	ND		ND		ND		0.014	0.01
C3 chrysenes	ND		ND		ND		0.005	0.01
C4 chrysenes	ND		ND		ND		0.002	0.01
benzo[b+k]fluoranthene	ND		ND		ND		0.019	0.005
benzo[e]pyrene	ND		ND		ND		0.028	0.005
benzo[a]pyrene	ND		ND		ND		0.026	0.008
perylene	ND		ND		ND		0.026	0.004
indeno[1,2,3-cd]pyrene	ND		ND		ND		0.008	0.001
dibenz[ah]anthracene	ND		ND		ND		0.008	0.002
benzo[ghi]perylene	ND		ND		ND		0.013	0.001

Target detection limits are those required by ASTM D7363 (C2 chyrsenes and larger PAHs, not applicable).
Actual experimental detection limits (reporting limits) are determined based on the signal to noise requirements stated in D7363.
ND = not detected.

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EERC ID	28A-1		28A-2				Target detection limit ng/g	Actual (reporting) detection limit, ng/g
Sample Collection Date								
EERC Sample Receipt Date	11/5/2010		11/5/2010					
EERC Run Date	11/8/2010		11/8/2010		11/8/2010			
EERC Run Number	2596A13.D		2596A14.D		2596A12.D			
					Fiber			
Sample Name	DC14		DC14		Water Blank			
Treatment	Pore Water		Pore Water		Pore Water			
Sample Weight, g	1.50		1.51		1.50			
Matrix	Sediment		Sediment					
Units	ng/g		ng/g		ng/g			
naphthalene	ND		ND		ND		5.7	0.1
2-methylnaphthalene	ND		ND		ND		2.4	0.05
1-methylnaphthalene	ND		ND		ND		2.4	0.05
C2 naphthalenes	ND		ND		ND		0.89	0.15
C3 naphthalenes	ND		ND		ND		0.33	0.05
C4 naphthalenes	ND		ND		ND		0.12	0.15
acenaphthylene	ND		ND		ND		9	0.2
acenaphthene	ND		ND		ND		1.6	0.1
fluorene	ND		ND		ND		1.2	0.04
C1 fluorenes	ND		ND		ND		0.41	0.02
C2 fluorenes	ND		ND		ND		0.16	0.05
C3 fluorenes	ND		ND		ND		0.06	0.06
phenanthrene	ND		ND		ND		0.56	0.1
anthracene	ND		ND		ND		0.61	0.05
C1 phenanthrenes/anthracenes	ND		ND		ND		0.22	0.02
C2 phenanthrenes/anthracenes	ND		ND		ND		0.09	0.05
C3 phenanthrenes/anthracenes	ND		ND		ND		0.04	0.04
C4 phenanthrenes/anthracenes	ND		ND		ND		0.02	0.02
fluoranthene	ND		ND		ND		0.21	0.01
pyrene	0.01	J	0.01	J	ND		0.3	0.01
C1 fluoranthenes/pyrenes	ND		ND		ND		0.14	0.01
benz[a]anthracene	ND		ND		ND		0.066	0.001
chrysene	ND		ND		ND		0.06	0.001
C1 chrysenes	ND		ND		ND		0.025	0.005
C2 chrysenes	ND		ND		ND		0.014	0.01
C3 chrysenes	ND		ND		ND		0.005	0.01
C4 chrysenes	ND		ND		ND		0.002	0.01
benzo[b+k]fluoranthene	ND		ND		ND		0.019	0.005
benzo[e]pyrene	ND		ND		ND		0.028	0.005
benzo[a]pyrene	ND		ND		ND		0.026	0.008
perylene	ND		ND		ND		0.026	0.004
indeno[1,2,3-cd]pyrene	ND		ND		ND		0.008	0.001
dibenz[ah]anthracene	ND		ND		ND		0.008	0.002
benzo[ghi]perylene	ND		ND		ND		0.013	0.001

Target detection limits are those required by ASTM D7363 (C2 chyrsenes and larger PAHs, not applicable).
Actual experimental detection limits (reporting limits) are determined based on the signal to noise requirements stated in D7363.
ND = not detected.

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EERC ID	**29A-1**		**29A-2**					
Sample Collection Date								
EERC Sample Receipt Date	**11/5/2010**		**11/5/2010**					
EERC Run Date	**11/9/2010**		**11/9/2010**		**11/9/2010**			
EERC Run Number	**2597A03.D**		**2597A04.D**		**2597A02.D**			
					Fiber			
Sample Name	**DC16**		**DC16**		**Water Blank**			
Treatment	**Pore Water**		**Pore Water**		**Pore Water**		**Target detection limit ng/g**	**Actual (reporting) detection limit, ng/g**
Sample Weight, g	**1.50**		**1.51**		**1.50**			
Matrix	**Sediment**		**Sediment**					
Units	**ng/g**		**ng/g**		**ng/g**			
naphthalene	0.15	J	0.17	J	ND		5.7	0.1
2-methylnaphthalene	ND		ND		ND		2.4	0.05
1-methylnaphthalene	ND		ND		ND		2.4	0.05
C2 naphthalenes	0.28	J	0.28	J	ND		0.89	0.15
C3 naphthalenes	ND		ND		ND		0.33	0.05
C4 naphthalenes	ND		ND		ND		0.12	0.15
acenaphthylene	ND		ND		ND		9	0.2
acenaphthene	ND		ND		ND		1.6	0.1
fluorene	ND		ND		ND		1.2	0.04
C1 fluorenes	0.04	J	0.04	J	ND		0.41	0.02
C2 fluorenes	ND		ND		ND		0.16	0.05
C3 fluorenes	ND		ND		ND		0.06	0.06
phenanthrene	ND		ND		ND		0.56	0.1
anthracene	ND		ND		ND		0.61	0.05
C1 phenanthrenes/anthracenes	ND		ND		ND		0.22	0.02
C2 phenanthrenes/anthracenes	ND		ND		ND		0.09	0.05
C3 phenanthrenes/anthracenes	ND		ND		ND		0.04	0.04
C4 phenanthrenes/anthracenes	ND		ND		ND		0.02	0.02
fluoranthene	ND		ND		ND		0.21	0.01
pyrene	0.01	J	0.01	J	ND		0.3	0.01
C1 fluoranthenes/pyrenes	ND		ND		ND		0.14	0.01
benz[a]anthracene	ND		ND		ND		0.066	0.001
chrysene	ND		ND		ND		0.06	0.001
C1 chrysenes	ND		ND		ND		0.025	0.005
C2 chrysenes	ND		ND		ND		0.014	0.01
C3 chrysenes	ND		ND		ND		0.005	0.01
C4 chrysenes	ND		ND		ND		0.002	0.01
benzo[b+k]fluoranthene	ND		ND		ND		0.019	0.005
benzo[e]pyrene	ND		ND		ND		0.028	0.005
benzo[a]pyrene	ND		ND		ND		0.026	0.008
perylene	ND		ND		ND		0.026	0.004
indeno[1,2,3-cd]pyrene	ND		ND		ND		0.008	0.001
dibenz[ah]anthracene	ND		ND		ND		0.008	0.002
benzo[ghi]perylene	ND		ND		ND		0.013	0.001

Target detection limits are those required by ASTM D7363 (C2 chyrsenes and larger PAHs, not applicable).
Actual experimental detection limits (reporting limits) are determined based on the signal to noise requirements stated in D7363.
ND = not detected.

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EERC ID	30A-1		30A-2				Target detection limit ng/g	Actual (reporting) detection limit, ng/g
Sample Collection Date								
EERC Sample Receipt Date	11/5/2010		11/5/2010					
EERC Run Date	11/9/2010		11/9/2010		11/9/2010			
EERC Run Number	2597A07.D		2597A08.D		2597A06.D			
					Fiber			
Sample Name	DC17		DC17		Water Blank			
Treatment	Pore Water		Pore Water		Pore Water			
Sample Weight, g	1.50		1.50		1.50			
Matrix	Sediment		Sediment					
Units	ng/g		ng/g		ng/g			
naphthalene	0.14	J	0.17	J	ND		5.7	0.1
2-methylnaphthalene	ND		ND		ND		2.4	0.05
1-methylnaphthalene	ND		ND		ND		2.4	0.05
C2 naphthalenes	0.29	J	0.20	J	ND		0.89	0.15
C3 naphthalenes	ND		ND		ND		0.33	0.05
C4 naphthalenes	ND		ND		ND		0.12	0.15
acenaphthylene	ND		ND		ND		9	0.2
acenaphthene	ND		ND		ND		1.6	0.1
fluorene	ND		ND		ND		1.2	0.04
C1 fluorenes	ND		ND		ND		0.41	0.02
C2 fluorenes	ND		ND		ND		0.16	0.05
C3 fluorenes	ND		ND		ND		0.06	0.06
phenanthrene	ND		ND		ND		0.56	0.1
anthracene	ND		ND		ND		0.61	0.05
C1 phenanthrenes/anthracenes	ND		ND		ND		0.22	0.02
C2 phenanthrenes/anthracenes	ND		ND		ND		0.09	0.05
C3 phenanthrenes/anthracenes	ND		ND		ND		0.04	0.04
C4 phenanthrenes/anthracenes	ND		ND		ND		0.02	0.02
fluoranthene	ND		ND		ND		0.21	0.01
pyrene	0.01	J	0.01	J	ND		0.3	0.01
C1 fluoranthenes/pyrenes	ND		ND		ND		0.14	0.01
benz[a]anthracene	ND		ND		ND		0.066	0.001
chrysene	ND		ND		ND		0.06	0.001
C1 chrysenes	ND		ND		ND		0.025	0.005
C2 chrysenes	ND		ND		ND		0.014	0.01
C3 chrysenes	ND		ND		ND		0.005	0.01
C4 chrysenes	ND		ND		ND		0.002	0.01
benzo[b+k]fluoranthene	ND		ND		ND		0.019	0.005
benzo[e]pyrene	ND		ND		ND		0.028	0.005
benzo[a]pyrene	ND		ND		ND		0.026	0.008
perylene	ND		ND		ND		0.026	0.004
indeno[1,2,3-cd]pyrene	ND		ND		ND		0.008	0.001
dibenz[ah]anthracene	ND		ND		ND		0.008	0.002
benzo[ghi]perylene	ND		ND		ND		0.013	0.001

Target detection limits are those required by ASTM D7363 (C2 chyrsenes and larger PAHs, not applicable).
Actual experimental detection limits (reporting limits) are determined based on the signal to noise requirements stated in D7363.
ND = not detected.

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EERC ID	**31A-1**		**31A-2**					
Sample Collection Date								
EERC Sample Receipt Date	**11/5/2010**		**11/5/2010**					
EERC Run Date	**11/9/2010**		**11/9/2010**		**11/9/2010**			
EERC Run Number	**2597A11.D**		**2597A12.D**		**2597A10.D**			
					Fiber			
Sample Name	**DC19**		**DC19**		**Water Blank**			
Treatment	**Pore Water**		**Pore Water**		**Pore Water**		**Target detection limit ng/g**	**Actual (reporting) detection limit, ng/g**
Sample Weight, g	**1.50**		**1.51**		**1.50**			
Matrix	**Sediment**		**Sediment**					
Units	**ng/g**		**ng/g**		**ng/g**			
naphthalene	ND		ND		ND		5.7	0.1
2-methylnaphthalene	ND		ND		ND		2.4	0.05
1-methylnaphthalene	ND		ND		ND		2.4	0.05
C2 naphthalenes	0.22	J	0.26	J	ND		0.89	0.15
C3 naphthalenes	ND		ND		ND		0.33	0.05
C4 naphthalenes	ND		ND		ND		0.12	0.15
acenaphthylene	ND		ND		ND		9	0.2
acenaphthene	ND		ND		ND		1.6	0.1
fluorene	ND		ND		ND		1.2	0.04
C1 fluorenes	0.03	J	0.03	J	ND		0.41	0.02
C2 fluorenes	ND		ND		ND		0.16	0.05
C3 fluorenes	ND		ND		ND		0.06	0.06
phenanthrene	ND		ND		ND		0.56	0.1
anthracene	ND		ND		ND		0.61	0.05
C1 phenanthrenes/anthracenes	ND		ND		ND		0.22	0.02
C2 phenanthrenes/anthracenes	ND		ND		ND		0.09	0.05
C3 phenanthrenes/anthracenes	ND		ND		ND		0.04	0.04
C4 phenanthrenes/anthracenes	ND		ND		ND		0.02	0.02
fluoranthene	ND		ND		ND		0.21	0.01
pyrene	0.01	J	0.01	J	ND		0.3	0.01
C1 fluoranthenes/pyrenes	ND		ND		ND		0.14	0.01
benz[a]anthracene	ND		ND		ND		0.066	0.001
chrysene	ND		ND		ND		0.06	0.001
C1 chrysenes	ND		ND		ND		0.025	0.005
C2 chrysenes	ND		ND		ND		0.014	0.01
C3 chrysenes	ND		ND		ND		0.005	0.01
C4 chrysenes	ND		ND		ND		0.002	0.01
benzo[b+k]fluoranthene	ND		ND		ND		0.019	0.005
benzo[e]pyrene	ND		ND		ND		0.028	0.005
benzo[a]pyrene	ND		ND		ND		0.026	0.008
perylene	ND		ND		ND		0.026	0.004
indeno[1,2,3-cd]pyrene	ND		ND		ND		0.008	0.001
dibenz[ah]anthracene	ND		ND		ND		0.008	0.002
benzo[ghi]perylene	ND		ND		ND		0.013	0.001

Target detection limits are those required by ASTM D7363 (C2 chyrsenes and larger PAHs, not applicable).
Actual experimental detection limits (reporting limits) are determined based on the signal to noise requirements stated in D7363.
ND = not detected.

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EERC ID	32A-1		32A-2				Target detection limit ng/g	Actual (reporting) detection limit, ng/g
Sample Collection Date								
EERC Sample Receipt Date	11/5/2010		11/5/2010					
EERC Run Date	11/10/2010		11/10/2010		11/10/2010			
EERC Run Number	2598A03.D		2598A04.D		2598A02.D			
					Fiber			
Sample Name	DC19FS		DC19FS		Water Blank			
Treatment	Pore Water		Pore Water		Pore Water			
Sample Weight, g	1.50		1.50		1.50			
Matrix	Sediment		Sediment					
Units	ng/g		ng/g		ng/g			
naphthalene	ND		ND		ND		5.7	0.1
2-methylnaphthalene	ND		ND		ND		2.4	0.05
1-methylnaphthalene	ND		ND		ND		2.4	0.05
C2 naphthalenes	ND		ND		ND		0.89	0.15
C3 naphthalenes	ND		ND		ND		0.33	0.05
C4 naphthalenes	ND		ND		ND		0.12	0.15
acenaphthylene	ND		ND		ND		9	0.2
acenaphthene	ND		ND		ND		1.6	0.1
fluorene	ND		ND		ND		1.2	0.04
C1 fluorenes	ND		ND		ND		0.41	0.02
C2 fluorenes	ND		ND		ND		0.16	0.05
C3 fluorenes	ND		ND		ND		0.06	0.06
phenanthrene	ND		ND		ND		0.56	0.1
anthracene	ND		ND		ND		0.61	0.05
C1 phenanthrenes/anthracenes	ND		ND		ND		0.22	0.02
C2 phenanthrenes/anthracenes	ND		ND		ND		0.09	0.05
C3 phenanthrenes/anthracenes	ND		ND		ND		0.04	0.04
C4 phenanthrenes/anthracenes	ND		ND		ND		0.02	0.02
fluoranthene	ND		ND		ND		0.21	0.01
pyrene	0.01	J	0.01	J	ND		0.3	0.01
C1 fluoranthenes/pyrenes	ND		ND		ND		0.14	0.01
benz[a]anthracene	ND		ND		ND		0.066	0.001
chrysene	ND		ND		ND		0.06	0.001
C1 chrysenes	ND		ND		ND		0.025	0.005
C2 chrysenes	ND		ND		ND		0.014	0.01
C3 chrysenes	ND		ND		ND		0.005	0.01
C4 chrysenes	ND		ND		ND		0.002	0.01
benzo[b+k]fluoranthene	ND		ND		ND		0.019	0.005
benzo[e]pyrene	ND		ND		ND		0.028	0.005
benzo[a]pyrene	ND		ND		ND		0.026	0.008
perylene	ND		ND		ND		0.026	0.004
indeno[1,2,3-cd]pyrene	ND		ND		ND		0.008	0.001
dibenz[ah]anthracene	ND		ND		ND		0.008	0.002
benzo[ghi]perylene	ND		ND		ND		0.013	0.001

Target detection limits are those required by ASTM D7363 (C2 chyrsenes and larger PAHs, not applicable).
Actual experimental detection limits (reporting limits) are determined based on the signal to noise requirements stated in D7363.
ND = not detected.

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EERC ID	33A-1		33A-2				Target detection limit ng/g	Actual (reporting) detection limit, ng/g
Sample Collection Date								
EERC Sample Receipt Date	11/5/2010		11/5/2010					
EERC Run Date	11/10/2010		11/10/2010		11/10/2010			
EERC Run Number	2598A07.D		2598A08.D		2598A06.D			
					Fiber			
Sample Name	OC26		OC26		Water Blank			
Treatment	Pore Water		Pore Water		Pore Water			
Sample Weight, g	1.50		1.51		1.50			
Matrix	Sediment		Sediment					
Units	ng/g		ng/g		ng/g			
naphthalene	0.43	J	0.39	J	ND		5.7	0.1
2-methylnaphthalene	0.10	J	0.10	J	ND		2.4	0.05
1-methylnaphthalene	0.23	J	0.22	J	ND		2.4	0.05
C2 naphthalenes	17.20		17.54		ND		0.89	0.15
C3 naphthalenes	78.22		82.89		ND		0.33	0.05
C4 naphthalenes	34.44		38.49		ND		0.12	0.15
acenaphthylene	0.31	J	0.30	J	ND		9	0.2
acenaphthene	0.93	J	0.92	J	ND		1.6	0.1
fluorene	1.42		1.38		ND		1.2	0.04
C1 fluorenes	4.48		4.53		ND		0.41	0.02
C2 fluorenes	4.55		4.73		ND		0.16	0.05
C3 fluorenes	3.17		3.92		ND		0.06	0.06
phenanthrene	1.83		1.89		ND		0.56	0.1
anthracene	0.48		0.56		ND		0.61	0.05
C1 phenanthrenes/anthracenes	5.84		5.98		ND		0.22	0.02
C2 phenanthrenes/anthracenes	5.67		5.99		ND		0.09	0.05
C3 phenanthrenes/anthracenes	1.96	J	2.23	J	ND		0.04	0.04
C4 phenanthrenes/anthracenes	1.06	J	1.16	J	ND		0.02	0.02
fluoranthene	0.01	J	0.01	J	ND		0.21	0.01
pyrene	0.67		0.69		ND		0.3	0.01
C1 fluoranthenes/pyrenes	0.89		0.91		ND		0.14	0.01
benz[a]anthracene	0.12	J	0.11	J	ND		0.066	0.001
chrysene	0.18		0.18		ND		0.06	0.001
C1 chrysenes	0.18		0.18		ND		0.025	0.005
C2 chrysenes	0.17	J	0.19	J	ND		0.014	0.01
C3 chrysenes	ND		ND		ND		0.005	0.01
C4 chrysenes	ND		ND		ND		0.002	0.01
benzo[b+k]fluoranthene	0.03	J	0.03	J	ND		0.019	0.005
benzo[e]pyrene	0.04	J	0.04	J	ND		0.028	0.005
benzo[a]pyrene	0.07		0.09		ND		0.026	0.008
perylene	ND		ND		ND		0.026	0.004
indeno[1,2,3-cd]pyrene	ND		ND		ND		0.008	0.001
dibenz[ah]anthracene	ND		ND		ND		0.008	0.002
benzo[ghi]perylene	ND		ND		ND		0.013	0.001

Target detection limits are those required by ASTM D7363 (C2 chyrsenes and larger PAHs, not applicable).
Actual experimental detection limits (reporting limits) are determined based on the signal to noise requirements stated in D7363.
ND = not detected.

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EERC ID	34A-1		34A-2				Target detection limit ng/g	Actual (reporting) detection limit, ng/g
Sample Collection Date								
EERC Sample Receipt Date	11/5/2010		11/5/2010					
EERC Run Date	11/10/2010		11/10/2010		11/10/2010			
EERC Run Number	2598A11.D		2598A12.D		2598A10.D			
					Fiber			
Sample Name	OC27		OC27		Water Blank			
Treatment	Pore Water		Pore Water		Pore Water			
Sample Weight, g	1.51		1.51		1.50			
Matrix	Sediment		Sediment					
Units	ng/g		ng/g		ng/g			
naphthalene	0.45	J	0.40	J	ND		5.7	0.1
2-methylnaphthalene	0.07	J	0.07	J	ND		2.4	0.05
1-methylnaphthalene	0.17	J	0.16	J	ND		2.4	0.05
C2 naphthalenes	4.70		4.49		ND		0.89	0.15
C3 naphthalenes	34.03		33.35		ND		0.33	0.05
C4 naphthalenes	49.30		49.31		ND		0.12	0.15
acenaphthylene	0.44	J	0.41	J	ND		9	0.2
acenaphthene	0.90	J	0.91	J	ND		1.6	0.1
fluorene	0.24	J	0.24	J	ND		1.2	0.04
C1 fluorenes	4.47		4.56		ND		0.41	0.02
C2 fluorenes	7.21		7.41		ND		0.16	0.05
C3 fluorenes	5.83		6.38		ND		0.06	0.06
phenanthrene	0.11	J	0.12	J	ND		0.56	0.1
anthracene	0.62		0.79		ND		0.61	0.05
C1 phenanthrenes/anthracenes	1.48	J	1.61	J	ND		0.22	0.02
C2 phenanthrenes/anthracenes	5.77		6.73		ND		0.09	0.05
C3 phenanthrenes/anthracenes	3.46	J	4.47	J	ND		0.04	0.04
C4 phenanthrenes/anthracenes	1.89	J	2.47	J	ND		0.02	0.02
fluoranthene	0.24	J	0.26	J	ND		0.21	0.01
pyrene	0.87		0.90		ND		0.3	0.01
C1 fluoranthenes/pyrenes	1.28		1.46		ND		0.14	0.01
benz[a]anthracene	0.18		0.19		ND		0.066	0.001
chrysene	0.32		0.32		ND		0.06	0.001
C1 chrysenes	0.30		0.34		ND		0.025	0.005
C2 chrysenes	0.27		0.26		ND		0.014	0.01
C3 chrysenes	ND		ND		ND		0.005	0.01
C4 chrysenes	ND		ND		ND		0.002	0.01
benzo[b+k]fluoranthene	0.04	J	0.04	J	ND		0.019	0.005
benzo[e]pyrene	0.06	J	0.06	J	ND		0.028	0.005
benzo[a]pyrene	0.13		0.11		ND		0.026	0.008
perylene	ND		ND		ND		0.026	0.004
indeno[1,2,3-cd]pyrene	ND		ND		ND		0.008	0.001
dibenz[ah]anthracene	ND		ND		ND		0.008	0.002
benzo[ghi]perylene	ND		ND		ND		0.013	0.001

Target detection limits are those required by ASTM D7363 (C2 chyrsenes and larger PAHs, not applicable).
Actual experimental detection limits (reporting limits) are determined based on the signal to noise requirements stated in D7363.
ND = not detected.

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EERC ID	35A-1		35A-2				Target detection limit ng/g	Actual (reporting) detection limit, ng/g
Sample Collection Date								
EERC Sample Receipt Date	11/5/2010		11/5/2010					
EERC Run Date	11/10/2010		11/10/2010		11/10/2010			
EERC Run Number	2598A15.D		2598A16.D		2598A14.D			
					Fiber			
Sample Name	OC28		OC28		Water Blank			
Treatment	Pore Water		Pore Water		Pore Water			
Sample Weight, g	1.50		1.50		1.50			
Matrix	Sediment		Sediment					
Units	ng/g		ng/g		ng/g			
naphthalene	0.13	J	0.14	J	ND		5.7	0.1
2-methylnaphthalene	0.08	J	0.09	J	ND		2.4	0.05
1-methylnaphthalene	0.39	J	0.40	J	ND		2.4	0.05
C2 naphthalenes	5.92		5.92		ND		0.89	0.15
C3 naphthalenes	22.50		21.96		ND		0.33	0.05
C4 naphthalenes	20.77		19.54		ND		0.12	0.15
acenaphthylene	ND		ND		ND		9	0.2
acenaphthene	0.25	J	0.26	J	ND		1.6	0.1
fluorene	0.23	J	0.25	J	ND		1.2	0.04
C1 fluorenes	1.54		1.59		ND		0.41	0.02
C2 fluorenes	2.94		2.89		ND		0.16	0.05
C3 fluorenes	3.40		3.40		ND		0.06	0.06
phenanthrene	0.41	J	0.46	J	ND		0.56	0.1
anthracene	0.19		0.22		ND		0.61	0.05
C1 phenanthrenes/anthracenes	2.03	J	2.18	J	ND		0.22	0.02
C2 phenanthrenes/anthracenes	3.90	J	4.10	J	ND		0.09	0.05
C3 phenanthrenes/anthracenes	2.14	J	2.11	J	ND		0.04	0.04
C4 phenanthrenes/anthracenes	0.94	J	0.87	J	ND		0.02	0.02
fluoranthene	0.18	J	0.23	J	ND		0.21	0.01
pyrene	0.69		0.80		ND		0.3	0.01
C1 fluoranthenes/pyrenes	0.95		1.12		ND		0.14	0.01
benz[a]anthracene	0.13	J	0.14	J	ND		0.066	0.001
chrysene	0.26		0.29		ND		0.06	0.001
C1 chrysenes	0.23		0.25		ND		0.025	0.005
C2 chrysenes	ND		ND		ND		0.014	0.01
C3 chrysenes	ND		ND		ND		0.005	0.01
C4 chrysenes	ND		ND		ND		0.002	0.01
benzo[b+k]fluoranthene	0.02	J	0.02	J	ND		0.019	0.005
benzo[e]pyrene	0.05	J	0.05	J	ND		0.028	0.005
benzo[a]pyrene	0.09		0.10		ND		0.026	0.008
perylene	0.03	J	0.03		ND		0.026	0.004
indeno[1,2,3-cd]pyrene	ND		ND		ND		0.008	0.001
dibenz[ah]anthracene	ND		ND		ND		0.008	0.002
benzo[ghi]perylene	ND		ND		ND		0.013	0.001

Target detection limits are those required by ASTM D7363 (C2 chyrsenes and larger PAHs, not applicable).
Actual experimental detection limits (reporting limits) are determined based on the signal to noise requirements stated in D7363.
ND = not detected.

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EERC ID	36A-1		36A-2				Target detection limit ng/g	Actual (reporting) detection limit, ng/g
Sample Collection Date								
EERC Sample Receipt Date	11/10/2010		11/10/2010					
EERC Run Date	11/17/2010		11/17/2010		11/17/2010			
EERC Run Number	2599A03.D		2599A04.D		2599A02.D			
					Fiber			
Sample Name	OC29		OC29		Water Blank			
Treatment	Pore Water		Pore Water		Pore Water			
Sample Weight, g	1.50		1.50		1.50			
Matrix	Sediment		Sediment					
Units	ng/g		ng/g		ng/g			
naphthalene	0.35	J	0.35	J	ND		5.7	0.1
2-methylnaphthalene	ND		0.05	J	ND		2.4	0.05
1-methylnaphthalene	0.11	J	0.12	J	ND		2.4	0.05
C2 naphthalenes	2.23	J	2.01	J	ND		0.89	0.15
C3 naphthalenes	20.27		18.84		ND		0.33	0.05
C4 naphthalenes	32.59		34.99		ND		0.12	0.15
acenaphthylene	0.23	J	0.23	J	ND		9	0.2
acenaphthene	0.71	J	0.71	J	ND		1.6	0.1
fluorene	0.17	J	0.18	J	ND		1.2	0.04
C1 fluorenes	3.32		3.86		ND		0.41	0.02
C2 fluorenes	4.87		6.74		ND		0.16	0.05
C3 fluorenes	4.96		6.91		ND		0.06	0.06
phenanthrene	0.14	J	0.13	J	ND		0.56	0.1
anthracene	0.54		0.62		ND		0.61	0.05
C1 phenanthrenes/anthracenes	0.96	J	1.30	J	ND		0.22	0.02
C2 phenanthrenes/anthracenes	4.51	J	6.86		ND		0.09	0.05
C3 phenanthrenes/anthracenes	2.57	J	4.36	J	ND		0.04	0.04
C4 phenanthrenes/anthracenes	2.37	J	3.26	J	ND		0.02	0.02
fluoranthene	0.25	J	0.31	J	ND		0.21	0.01
pyrene	0.79		1.05		ND		0.3	0.01
C1 fluoranthenes/pyrenes	1.51		2.13		ND		0.14	0.01
benz[a]anthracene	0.29		0.42		ND		0.066	0.001
chrysene	0.37		0.52		ND		0.06	0.001
C1 chrysenes	0.36		0.54		ND		0.025	0.005
C2 chrysenes	ND		ND		ND		0.014	0.01
C3 chrysenes	ND		ND		ND		0.005	0.01
C4 chrysenes	ND		ND		ND		0.002	0.01
benzo[b+k]fluoranthene	0.15		0.18		ND		0.019	0.005
benzo[e]pyrene	0.06	J	0.08		ND		0.028	0.005
benzo[a]pyrene	0.08		0.07		ND		0.026	0.008
perylene	0.02	J	0.02	J	ND		0.026	0.004
indeno[1,2,3-cd]pyrene	ND		ND		ND		0.008	0.001
dibenz[ah]anthracene	ND		ND		ND		0.008	0.002
benzo[ghi]perylene	ND		ND		ND		0.013	0.001

Target detection limits are those required by ASTM D7363 (C2 chyrsenes and larger PAHs, not applicable).
Actual experimental detection limits (reporting limits) are determined based on the signal to noise requirements stated in D7363.
ND = not detected.

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701-777-5000

EERC ID	**37A-1**		**37A-2**					
Sample Collection Date								
EERC Sample Receipt Date	**11/10/2010**		**11/10/2010**					
EERC Run Date	**11/17/2010**		**11/17/2010**		**11/17/2010**			
EERC Run Number	**2599A07.D**		**2599A08.D**		**2599A06.D**			
					Fiber			
Sample Name	**OC30**		**OC30**		**Water Blank**			
Treatment	**Pore Water**		**Pore Water**		**Pore Water**		**Target detection limit ng/g**	**Actual (reporting) detection limit, ng/g**
Sample Weight, g	**1.50**		**1.51**		**1.50**			
Matrix	**Sediment**		**Sediment**					
Units	**ng/g**		**ng/g**		**ng/g**			
naphthalene	0.11	J	0.11	J	ND		5.7	0.1
2-methylnaphthalene	ND		ND		ND		2.4	0.05
1-methylnaphthalene	0.07	J	0.07	J	ND		2.4	0.05
C2 naphthalenes	2.57	J	2.53	J	ND		0.89	0.15
C3 naphthalenes	26.54		26.23		ND		0.33	0.05
C4 naphthalenes	16.12		15.90		ND		0.12	0.15
acenaphthylene	ND		ND		ND		9	0.2
acenaphthene	0.35	J	0.37	J	ND		1.6	0.1
fluorene	0.69	J	0.73	J	ND		1.2	0.04
C1 fluorenes	1.84		1.98		ND		0.41	0.02
C2 fluorenes	1.99		2.17		ND		0.16	0.05
C3 fluorenes	1.58	J	1.52	J	ND		0.06	0.06
phenanthrene	0.40	J	0.48	J	ND		0.56	0.1
anthracene	0.21		0.26		ND		0.61	0.05
C1 phenanthrenes/anthracenes	1.55	J	1.72	J	ND		0.22	0.02
C2 phenanthrenes/anthracenes	1.93	J	2.20	J	ND		0.09	0.05
C3 phenanthrenes/anthracenes	0.75	J	0.86	J	ND		0.04	0.04
C4 phenanthrenes/anthracenes	0.38	J	0.41	J	ND		0.02	0.02
fluoranthene	0.15	J	0.17	J	ND		0.21	0.01
pyrene	0.48		0.55		ND		0.3	0.01
C1 fluoranthenes/pyrenes	0.41	J	0.48		ND		0.14	0.01
benz[a]anthracene	0.06	J	0.07	J	ND		0.066	0.001
chrysene	0.10		0.12		ND		0.06	0.001
C1 chrysenes	0.08	J	0.12		ND		0.025	0.005
C2 chrysenes	ND		ND		ND		0.014	0.01
C3 chrysenes	ND		ND		ND		0.005	0.01
C4 chrysenes	ND		ND		ND		0.002	0.01
benzo[b+k]fluoranthene	ND		ND		ND		0.019	0.005
benzo[e]pyrene	ND		ND		ND		0.028	0.005
benzo[a]pyrene	ND		ND		ND		0.026	0.008
perylene	ND		ND		ND		0.026	0.004
indeno[1,2,3-cd]pyrene	ND		ND		ND		0.008	0.001
dibenz[ah]anthracene	ND		ND		ND		0.008	0.002
benzo[ghi]perylene	ND		ND		ND		0.013	0.001

Target detection limits are those required by ASTM D7363 (C2 chyrsenes and larger PAHs, not applicable).
Actual experimental detection limits (reporting limits) are determined based on the signal to noise requirements stated in D7363.
ND = not detected.

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EERC ID	**38A-1**		**38A-2**					
Sample Collection Date								
EERC Sample Receipt Date	**11/10/2010**		**11/10/2010**					
EERC Run Date	**11/17/2010**		**11/17/2010**		**11/17/2010**			
EERC Run Number	**2599A11.D**		**2599A12.D**		**2599A10.D**			
					Fiber			
Sample Name	**OC31**		**OC31**		**Water Blank**			
Treatment	**Pore Water**		**Pore Water**		**Pore Water**		**Target detection limit ng/g**	**Actual (reporting) detection limit, ng/g**
Sample Weight, g	**1.50**		**1.51**		**1.50**			
Matrix	**Sediment**		**Sediment**					
Units	**ng/g**		**ng/g**		**ng/g**			
naphthalene	ND		ND		ND		5.7	0.1
2-methylnaphthalene	ND		ND		ND		2.4	0.05
1-methylnaphthalene	ND		ND		ND		2.4	0.05
C2 naphthalenes	0.15	J	0.18	J	ND		0.89	0.15
C3 naphthalenes	ND		ND		ND		0.33	0.05
C4 naphthalenes	ND		ND		ND		0.12	0.15
acenaphthylene	ND		ND		ND		9	0.2
acenaphthene	ND		ND		ND		1.6	0.1
fluorene	ND		ND		ND		1.2	0.04
C1 fluorenes	ND		ND		ND		0.41	0.02
C2 fluorenes	ND		ND		ND		0.16	0.05
C3 fluorenes	ND		ND		ND		0.06	0.06
phenanthrene	ND		ND		ND		0.56	0.1
anthracene	ND		ND		ND		0.61	0.05
C1 phenanthrenes/anthracenes	0.04	J	0.04	J	ND		0.22	0.02
C2 phenanthrenes/anthracenes	0.23	J	0.24	J	ND		0.09	0.05
C3 phenanthrenes/anthracenes	0.12	J	0.10	J	ND		0.04	0.04
C4 phenanthrenes/anthracenes	ND		ND		ND		0.02	0.02
fluoranthene	ND		ND		ND		0.21	0.01
pyrene	0.01	J	0.01	J	ND		0.3	0.01
C1 fluoranthenes/pyrenes	0.03	J	0.03	J	ND		0.14	0.01
benz[a]anthracene	0.002	J	0.002	J	ND		0.066	0.001
chrysene	0.00	J	0.01	J	ND		0.06	0.001
C1 chrysenes	ND		ND		ND		0.025	0.005
C2 chrysenes	ND		ND		ND		0.014	0.01
C3 chrysenes	ND		ND		ND		0.005	0.01
C4 chrysenes	ND		ND		ND		0.002	0.01
benzo[b+k]fluoranthene	ND		ND		ND		0.019	0.005
benzo[e]pyrene	ND		ND		ND		0.028	0.005
benzo[a]pyrene	ND		ND		ND		0.026	0.008
perylene	ND		ND		ND		0.026	0.004
indeno[1,2,3-cd]pyrene	ND		ND		ND		0.008	0.001
dibenz[ah]anthracene	ND		ND		ND		0.008	0.002
benzo[ghi]perylene	ND		ND		ND		0.013	0.001

Target detection limits are those required by ASTM D7363 (C2 chyrsenes and larger PAHs, not applicable).
Actual experimental detection limits (reporting limits) are determined based on the signal to noise requirements stated in D7363.
ND = not detected.

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EERC ID	39A-1		39A-2				Target detection limit ng/g	Actual (reporting) detection limit, ng/g
Sample Collection Date								
EERC Sample Receipt Date	11/10/2010		11/10/2010					
EERC Run Date	11/18/2010		11/18/2010		11/18/2010			
EERC Run Number	2600A03.D		2600A04.D		2600A02.D			
					Fiber			
Sample Name	OC32		OC32		Water Blank			
Treatment	Pore Water		Pore Water		Pore Water			
Sample Weight, g	1.51		1.50		1.50			
Matrix	Sediment		Sediment					
Units	ng/g		ng/g		ng/g			
naphthalene	0.14	J	0.13	J	ND		5.7	0.1
2-methylnaphthalene	ND		ND		ND		2.4	0.05
1-methylnaphthalene	ND		ND		ND		2.4	0.05
C2 naphthalenes	1.35	J	1.37	J	ND		0.89	0.15
C3 naphthalenes	10.43		10.68		ND		0.33	0.05
C4 naphthalenes	10.86		12.04		ND		0.12	0.15
acenaphthylene	ND		ND		ND		9	0.2
acenaphthene	0.24	J	0.24	J	ND		1.6	0.1
fluorene	0.23	J	0.24	J	ND		1.2	0.04
C1 fluorenes	1.19		1.31		ND		0.41	0.02
C2 fluorenes	1.97		2.13		ND		0.16	0.05
C3 fluorenes	ND		ND		ND		0.06	0.06
phenanthrene	0.20	J	0.15	J	ND		0.56	0.1
anthracene	0.25		0.28		ND		0.61	0.05
C1 phenanthrenes/anthracenes	0.63	J	0.72	J	ND		0.22	0.02
C2 phenanthrenes/anthracenes	1.45	J	1.84	J	ND		0.09	0.05
C3 phenanthrenes/anthracenes	1.03	J	1.28	J	ND		0.04	0.04
C4 phenanthrenes/anthracenes	0.57	J	0.65	J	ND		0.02	0.02
fluoranthene	0.27	J	0.32	J	ND		0.21	0.01
pyrene	0.61		0.76		ND		0.3	0.01
C1 fluoranthenes/pyrenes	0.61		0.80		ND		0.14	0.01
benz[a]anthracene	0.08	J	0.11	J	ND		0.066	0.001
chrysene	0.12		0.16		ND		0.06	0.001
C1 chrysenes	0.14		0.18		ND		0.025	0.005
C2 chrysenes	ND		ND		ND		0.014	0.01
C3 chrysenes	ND		ND		ND		0.005	0.01
C4 chrysenes	ND		ND		ND		0.002	0.01
benzo[b+k]fluoranthene	ND		ND		ND		0.019	0.005
benzo[e]pyrene	ND		ND		ND		0.028	0.005
benzo[a]pyrene	ND		ND		ND		0.026	0.008
perylene	ND		ND		ND		0.026	0.004
indeno[1,2,3-cd]pyrene	ND		ND		ND		0.008	0.001
dibenz[ah]anthracene	ND		ND		ND		0.008	0.002
benzo[ghi]perylene	ND		ND		ND		0.013	0.001

Target detection limits are those required by ASTM D7363 (C2 chyrsenes and larger PAHs, not applicable).
Actual experimental detection limits (reporting limits) are determined based on the signal to noise requirements stated in D7363.
ND = not detected.

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EERC ID	**40A-1**		**40A-2**					
Sample Collection Date								
EERC Sample Receipt Date	**11/10/2010**		**11/10/2010**					
EERC Run Date	**11/18/2010**		**11/18/2010**		**11/18/2010**			
EERC Run Number	**2600A07.D**		**2600A08.D**		**2600A06.D**			
					Fiber			
Sample Name	**OC33**		**OC33**		**Water Blank**			
Treatment	**Pore Water**		**Pore Water**		**Pore Water**		**Target detection limit ng/g**	**Actual (reporting) detection limit, ng/g**
Sample Weight, g	**1.51**		**1.51**		**1.50**			
Matrix	**Sediment**		**Sediment**					
Units	**ng/g**		**ng/g**		**ng/g**			
naphthalene	ND		ND		ND		5.7	0.1
2-methylnaphthalene	ND		ND		ND		2.4	0.05
1-methylnaphthalene	ND		ND		ND		2.4	0.05
C2 naphthalenes	0.16	J	0.17	J	ND		0.89	0.15
C3 naphthalenes	ND		ND		ND		0.33	0.05
C4 naphthalenes	ND		ND		ND		0.12	0.15
acenaphthylene	ND		ND		ND		9	0.2
acenaphthene	ND		ND		ND		1.6	0.1
fluorene	ND		ND		ND		1.2	0.04
C1 fluorenes	ND		ND		ND		0.41	0.02
C2 fluorenes	ND		ND		ND		0.16	0.05
C3 fluorenes	ND		ND		ND		0.06	0.06
phenanthrene	ND		ND		ND		0.56	0.1
anthracene	ND		ND		ND		0.61	0.05
C1 phenanthrenes/anthracenes	ND		ND		ND		0.22	0.02
C2 phenanthrenes/anthracenes	ND		ND		ND		0.09	0.05
C3 phenanthrenes/anthracenes	ND		ND		ND		0.04	0.04
C4 phenanthrenes/anthracenes	ND		ND		ND		0.02	0.02
fluoranthene	ND		ND		ND		0.21	0.01
pyrene	0.01	J	0.02	J	ND		0.3	0.01
C1 fluoranthenes/pyrenes	ND		ND		ND		0.14	0.01
benz[a]anthracene	0.003	J	0.004	J	ND		0.066	0.001
chrysene	0.003	J	0.004	J	ND		0.06	0.001
C1 chrysenes	ND		ND		ND		0.025	0.005
C2 chrysenes	ND		ND		ND		0.014	0.01
C3 chrysenes	ND		ND		ND		0.005	0.01
C4 chrysenes	ND		ND		ND		0.002	0.01
benzo[b+k]fluoranthene	ND		ND		ND		0.019	0.005
benzo[e]pyrene	ND		ND		ND		0.028	0.005
benzo[a]pyrene	ND		ND		ND		0.026	0.008
perylene	ND		ND		ND		0.026	0.004
indeno[1,2,3-cd]pyrene	ND		ND		ND		0.008	0.001
dibenz[ah]anthracene	ND		ND		ND		0.008	0.002
benzo[ghi]perylene	ND		ND		ND		0.013	0.001

Target detection limits are those required by ASTM D7363 (C2 chyrsenes and larger PAHs, not applicable).
Actual experimental detection limits (reporting limits) are determined based on the signal to noise requirements stated in D7363.
ND = not detected.

ATTACHMENT B

DATA QUALIFIER DEFINITIONS

LABORATORY DATA QUALIFIER DEFITIONS

J - Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

ND - Indicates the analyte was analyzed for but not detected.

Weston Solutions, Inc.
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March 18, 2011

Ms. Brenda Jones and Mr. Ajit Vaidya
Great Lakes National Program Office
United States Environmental Protection Agency, Region V
77 West Jackson Boulevard, Mail Code: G-17J
Chicago, Illinois 60604-3507

Re: Data Review of Polynuclear Aromatic Hydrocarbon (PAH) Analysis
For Sediment Samples Collected on October 15, 2010
CLP Case No. 40638, SDG No. E01T8
Duck and Otter Creeks 2010 Data Gaps Investigation
Wood and Lucas Counties, Ohio
DCN: 1030-2F-ALGI

Dear Ms. Jones and Mr. Vaidya:

The United States Environmental Protection Agency (U.S. EPA) tasked Weston Solutions, Inc., (WESTON®) to perform data validation for the five percent of the sediment samples collected in October 2010 for the Great Lakes National Program Office (GLNPO) Duck and Otter Creeks 2010 Data Gaps Investigation Site. This data review is of the analysis of PAH compounds for five sediment samples that include one field duplicate sample that were collected by WESTON and analyzed under Sample Delivery Group (SDG) number E01T8. The samples were validated in accordance with the "Quality Assurance Project Plan, Duck and Otter Creeks Data Gaps Investigation" dated September 28, 2010, which includes using the U.S. EPA Contract Laboratory Program (CLP) National Functional Guidance for Organic and Inorganic Data Review. Table 1 provides a summary of the samples included in this review. All tables are presented at the end of this report.

The samples listed in Table 1 were analyzed under the U.S. EPA CLP by ALS Laboratory Group (ALS) located in Salt Lake City, Utah, under case number 40638. Because only five percent of data is to be validated, SDG number E01T8 was selected for data validation.

Sediment samples were analyzed for PAHs using U.S. EPA CLP Statement of Work (SOW) SOM01.2 by gas chromatography/mass spectrometry (GC/MS) Selective Ion Monitoring (SIM) methodology. Table 2 provides a list of the PAHs that were analyzed. ALS did not provide a

Staged Electronic Data Deliverable (SEDD) with the CLP analytical package. Therefore, the Automated Data Review (ADR) software was not utilized to assist in reviewing this data.

Attachment A to this report contains the individual Quality Assurance/Quality Control (QA/QC) Analysis Checklist for Sediment Chemistry Analysis for SDG E01T8. Attachment B to this report contains a printed summary report of sample results with hand-written qualifiers that were applied during the data review. Attachment C to this report contains a list of the data qualifiers associated with the sample results. The QC limits utilized were those stated in the Quality Assurance Project Plan (QAPP). If there was not a QC limit specified in the QAPP, then the method or laboratory-determined QC limits were used. Below is the data review summary.

SUMMARY OF PAH DATA REVIEW

The holding times, initial calibration, continuing calibration, method blank, surrogates, and internal standards were within the QC limits.

The matrix spike (MS) and matrix spike duplicate (MSD) results were outside QC limits for percent recoveries and relative percent difference (RPD). RPDs were calculated for the field duplicate results all RPDs were outside QC limits. These QC exceedances as described below under Minor Problems.

Below is a review of the minor problems associated with QC failures and a summary of the data quality indicators associated with the PAH analysis for the sediment samples collected on November 2-4, 2010.

MINOR PROBLEMS

Minor problems with QC failures are noted below.

MS and MSD Results. There was one MS/MSD pair associated with the sample for this SDG and it included two spiked compounds. The percent recoveries were outside QC limits (one was high and one was low) and one of the RPDs was outside QC limits. Because the surrogates in all samples were within QC limits (surrogate recoveries can also indicate matrix interference), the results in the parent sample only were flagged. In sample E01W2, detected results were flagged "J" and the quantitation limits for non-detected results were flagged "UJ" as estimated based on potential matrix interference.

Field Duplicate Results. There is one field duplicate associated with this SDG (identified with a "DP" suffix in the station location designation). The field duplicate was collected adjacent to the associated investigative sample. The field duplicate results and investigative sample results

were compared to a standard QC limit of 50 RPD or less. All the RPD values were above the 50 percent QC limit and there was a significant difference between the field duplicate and parent sample in most cases. The field duplicate sample was approximately 50 to 100 times the concentration of the parent sample. Because field duplicates are collected adjacent to the parent sample, these elevated RPDs indicate significant sample heterogeneity associated with PAHs in the sediment samples associated with this site. Table 3 presents the field duplicate results.

DATA QUALITY INDICATORS REVIEW

Many the data quality indicators (sensitivity, precision, accuracy, and completeness) were evaluated through the data validation procedures which are summarized above and discussed in detail in the Attachment.

Sensitivity. The CLP Contract Required Quantitation Limits (CRQL) for PAH compounds is 3.3 micrograms per kilogram (µg/kg). When adjusted for dilution factor and percent moisture, the laboratory achieved these reporting limits. Sensitivity was adequate for the PAH analyses of sediment samples collected on October 15, 2010, that are associated with SDG E01T8.

The laboratory reported results that were below the reporting limit but above the method detection limit. These results were flagged with a "J" by the laboratory and are considered estimated results.

Precision. Field precision is determined by evaluating the RPDs for the field duplicate results. The RPD values for the field duplicates were very high. The field duplicate results indicate sample heterogeneity associated with PAHs in the sediment samples.

Laboratory precision could not be evaluated as the MSD results were not valid due to the matrix spike amount being much lower than the sample concentrations and no other laboratory duplicates were analyzed.

Accuracy/Bias. Accuracy is a measure of the agreement between an observed value and an accepted reference value. Laboratory accuracy is usually evaluated by reviewing the percent recovery results for laboratory controls samples and MS/MSD results. Because LCS samples are not applicable to SOM01.2 and because of the matrix interference associated with the MS/MSD results, laboratory accuracy could not be evaluated by theses means. However, the continuing calibration verification results were all within their QC limits of less than 25 percent difference which indicates that laboratory accuracy is acceptable.

Completeness. Completeness is a measure of the amount of valid data obtained compared to the amount of data that was planned to be collected under normal conditions. All samples results were received.

In summary, the data are usable for comparison to the PAH screening criteria stated in the QAPP. Qualifications were added to the samples during the data review due to matrix interference in one of the samples. Attachment B includes the data summary sheets that show the hand-written data qualifications applied during data validation and the laboratory data qualifications. Definitions for the validation qualifiers applied and the laboratory qualifiers are included in Attachment C.

If there are any questions or comments regarding this report, please do not hesitate to contact WESTON START at 847-918-4000.

Very truly yours,

Weston Solutions, Inc.

Lisa Graczyk
WESTON START Team

Alex Clark
WESTON START Project Manager

Attachments:
Tables
A- Checklists for PAH Analytical Data for Case # 40638, SDG # E01T8
B- Analytical Data Summary Sheets with Qualifiers
C- Data Qualifier Definitions

cc: project file

TABLES

TABLE 1
SAMPLES INCLUDED IN DATA REVIEW

Sample ID	Sample Location ID	Date Collected	Comment
E01T8	OC-12/13	10/15/2010	
E01T9	OC-16	10/15/2010	
E01W0	DC-9/10	10/15/2010	
E01W1	DC-7/8DP	10/15/2010	Field duplicate of DC-7/8
E01W2	DC-7/8	10/15/2010	

TABLE 2 PAH ANALYTES	
CAS #	**Analyte**
90-12-0	1-Methylnaphthalene
91-57-6	2-Methylnaphthalene
83-32-9	Acenaphthene
208-96-8	Acenaphthylene
120-12-7	Anthracene
56-55-3	Benzo[a]anthracene
50-32-8	Benzo[a]pyrene
205-99-2	Benzo[b]fluoranthene
192-97-2	Benzo[e]pyrene
191-24-2	Benzo[g,h,i]perylene
207-08-9	Benzo[k]fluoranthene
218-01-9	Chrysene
---	C1-Chrysenes
---	C2-Chrysenes
---	C3-Chrysenes
---	C4-Chrysenes
53-70-3	Dibenz[a,h]anthracene
206-44-0	Fluoranthene
---	C1-Fluoranthenes/Pyrenes
---	C2-Fluoranthenes/Pyrenes
---	C3-Fluoranthenes/Pyrenes
86-73-7	Fluorene
---	C1-Fluorenes
---	C2-Fluorenes
---	C3-Fluorenes
193-39-5	Indeno(1,2,3-c,d)pyrene
91-20-3	Naphthalene
---	C1-Naphthalenes
---	C2-Naphthalenes
---	C3-Naphthalenes
---	C4-Naphthalenes
85-01-8	Phenanthrene
---	C1-Phenanthrenes/Anthracenes
---	C2-Phenanthrenes/Anthracenes
---	C3-Phenanthrenes/Anthracenes

TABLE 2 PAH ANALYTES	
CAS #	**Analyte**
---	C4-Phenanthrenes/Anthracenes
129-00-0	Pyrene
198-55-0	Perylene
---	Total 16 PAHs
---	Total PAHs

Notes:
--- - There is no CAS number for this compound
CAS – Chemical Abstracts Service
PAH – Polynuclear Aromatic Hydrocarbon

TABLE 3
FIELD DUPLICATE RESULTS

Analyte	Sample: DC-7/8DP		
	Sample Result (µg/kg)	Split Result (µg/kg)	RPD
1-Methylnaphthalene	<82	150	NA
2-Methylnaphthalene	<82	240	NA
Naphthalene	<82	400	NA
C1-Naphthalenes	<82	380	NA
C2-Naphthalenes	<82	270	NA
C3-Naphthalenes	<82	390	NA
C4-Naphthalenes	<82	140	NA
Acenaphthylene	<82	<72	NA
Acenaphthene	<82	1,200	NA
Fluorene	<82	1,400	NA
C1-Fluorenes	<82	620	NA
C2-Fluorenes	<82	390	NA
C3-Fluorenes	<82	490	NA
Phenanthrene	110	11,000	196
Anthracene	25	3,100	197
C1-Phenanthrenes/Anthracenes	47	4,200	196
C2-Phenanthrenes/Anthracenes	31	210	149
C3-Phenanthrenes/Anthracenes	<82	890	NA
C4-Phenanthrenes/Anthracenes	<82	2,200	NA
Fluoranthene	190	14,000	195
Pyrene	140	10,000	194
C1-Fluoranthenes/Pyrenes	78	6,100	195
C2-Fluoranthenes/Pyrenes	42	3,200	195
C3-Fluoranthenes/Pyrenes	<82	1,100	NA
Benzo(a)anthracene	93	7,900	195
Chrysene	100	7,800	195
C1 Chrysenes	74	5,000	194
C2 Chrysenes	<82	2,000	NA
C3 Chrysenes	<82	720	NA
C4 Chrysenes	<82	360	NA
Benzo(b)fluoranthene	130	8,800	194
Benzo(k)fluoranthene	47	3,100	194
Benzo(e)pyrene	75	5,100	194
Benzo(a)pyrene	93	6,700	195
Perylene	30	1,900	194
Indeno(1,2,3-cd)pyrene	51	3,700	195
Dibenzo(a,h)anthracene	16	1,200	195
Benzo(g,h,i)perylene	68	3,100	191

Notes:
Highlighted RPD values exceed 50 RPD.
µg/kg– Microgram per Kilogram
NA – Not Applicable
RPD – Relative Percent Difference

ATTACHMENT A

CHECKLIST FOR PAH ANALYTICAL DATA FOR CASE # 40638, SDG # E01T8

PAHs
BY CLP SOW SOM01.2

CASE# 40638
SDG# E01T8

QA/QC Analysis Checklist for Sediment Chemistry Analysis

GRANT/IAG NUMBER: Not Applicable
PROJECT NAME: Duck and Otter Sediment Investigation
REVIEWER: Lisa Graczyk, WESTON START
DATE: March 10, 2011

1. What sediment chemistry data has been collected (CHECK ALL THAT APPLY)?

Total Metals ___	PCBs _____	pH _____	TOC _____
Dioxins/Furans _____	PAHs ___X___	Pesticides _____	DO _____
AVS _____	SEM Metals _____	Particle Size _____	Other _____

2. Were the target detection limits met for each parameter?

Yes	X
No	

The CLP CRQL for PAH compounds by GC/MS SIM is 3.3 micrograms per kilogram (µg/kg). When adjusted for dilution factor and percent moisture, the laboratory achieved these reporting limits.

3. Were the method blanks less than the established MDL for each parameter?

Yes	X	
No		(EXPLAIN)

The method blank contained no detections of target analytes.

4. Did the results of Field Replicate Analysis vary by less than the % RPD specified in the QAPP?

	Not Applicable	
Yes		
No	X	(EXPLAIN)

There are no field replicates associated with this SDG.

5. Did the results of the Field Duplicates Analysis vary by less than the % RPD specified in the QAPP?

Yes		
No	X	(EXPLAIN)

There is one field duplicate associated with this SDG (identified with a "DP" suffix in the station location designation). The field duplicate was collected adjacent to the associated investigative sample. The field duplicate results and investigative sample results were compared to a standard QC limit of 50 RPD or less. All the RPD values were above the 50 percent QC limit and there was a significant difference between the field duplicate and parent sample in most cases. The field duplicate sample was approximately 50 to 100 times the concentration of the parent sample. Because field duplicates are collected adjacent to the parent sample, these elevated RPDs indicate significant sample heterogeneity associated with SVOCs in the sediment samples associated with this site.

6. Did the surrogate spike/internal standards recoveries meet the limits set forth in the QAPP?

Yes	X	
No		(EXPLAIN)

7. Did the MS/MSD recoveries meet the limits set forth in the QAPP?

Yes		
No	X	(EXPLAIN)

There was one MS/MSD pair associated with the sample for this SDG. The percent recoveries were outside QC limits (one was high and one was low). Because the surrogates in all samples were within QC limits (surrogate recoveries can also indicate matrix interference) and because there are not enough MS/MSD samples to determine if problem is wide spread, the results in the parent sample only were flagged. Detected results in sample E01W2 were flagged "J" and the quantitation limits for non-detected results were flagged "UJ" as estimated based on potential matrix interference.

8. Did the RPD (%) of the MS/MSD sample set meet the limits set forth in the QAPP?

Yes		
No	X	(EXPLAIN)

There was one MS/MSD pair associated with the sample for this SDG. One of the RPDs was outside QC limits. Detected results in the parent sample, E01W2, were flagged "J" as estimated.

9. Did the LCS recoveries meet the limits set forth in the QAPP?

Yes	Not Applicable	
No		(EXPLAIN)

LCSs are not analyzed with PAH analysis by SOM01.2.

10. Did the calibration verification standards (ICVs and CCVs) meet the requirements set forth in the QAPP?

Yes	X	
No		(EXPLAIN)

There were no QC limits specified in the QAPP; therefore, the QC limits specified in the CLP SOW were used for the initial calibration and continuing calibration verification (CCV) checks.

11. Did the calibration blanks (ICBs and CCBs) meet the limits set forth in the QAPP?

Yes	Not Applicable	
No		(EXPLAIN)

12. Did the interference check samples meet the limits set forth in the QAPP?

Yes	Not Applicable	
No		(EXPLAIN)

13. Did the serial dilution samples meet the limits set forth in the QAPP?

Yes	Not Applicable	
No		(EXPLAIN)

Serial dilution is not applicable to SW-846 Method 8270C.

14. Were any level of contaminants detected above the MDL for the trip blanks and storage blanks?

Yes	Not Applicable	
No		(EXPLAIN)

Trip blanks and storage blanks are not applicable to SW-846 Method 8270C.

15. Did all required analyses take place within the required holding time protocols set forth in the QAPP?

Yes	X	
No		(EXPLAIN)

Samples were analyzed within the holding time requirement of 14 days to extraction from sample collection and 40 days to analysis following extraction.

16. Did the laboratory duplicates vary by less than the % RPD specified in the QAPP?

Yes	Not Applicable	
No		(EXPLAIN)

Laboratory duplicates were not analyzed with the samples.

17. Are measured dry-weight contaminant concentrations reported?

Yes	X	
No		(EXPLAIN)

Dry-weight concentrations are reported.

18. Please provide details for all of the "UNACCEPTABLE" marked above. Include details on the specific analytes affected by any QA/QC discrepancies, and recommendations regarding usability of data.

Any items with “UNACCEPTABLE” marked above are described immediately following the “UNACCEPTABLE” marking in the corresponding item above.

In addition, some results were detected below the laboratory reporting limit and were flagged “J” as estimated for this discrepancy. The data are acceptable for use as qualified.

SVOC Checklist
Duck and Otter Sediment Investigation
ALS Laboratory Group
Laboratory SDG#: E01T8

ATTACHMENT B

ANALYTICAL DATA SUMMARY SHEETS WITH QUALIFIERS

1F - FORM I SV-SIM

SEMIVOLATILE SIM ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

E01T8

Lab Name: ALS Laboratory Group Contract: EPW05026

Lab Code: DATAC Case No.: 40638 Mod. Ref No.: 1734.2 SDG No.: E01T8

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: 1029331001

Sample wt/vol: 30.1 (g/mL) g Lab File ID: APE06C01

Extraction: (Type) SONC

% Moisture: 31. Decanted: (Y/N) N Date Received: 10/20/2010

Concentrated Extract Volume: 500. (uL) Date Extracted: 10/29/2010

Injection Volume: 1.0 (uL) GPC Factor: 2.0 Date Analyzed: 11/02/2010

GPC Cleanup: (Y/N) Y pH: 6.8 Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
90-12-0	1-Methylnaphthalene	1.8	J
91-57-6	2-Methylnaphthalene	2.7	J
91-20-3	Naphthalene	2.9	J
C1NAPH	C1-Naphthalenes	4.6	J
C2NAPH	C2-Naphthalenes	7.3	
C3NAPH	C3-Naphthalenes	130	
C4NAPH	C4-Naphthalenes	23.	
208-96-8	Acenaphthylene	0.77	J
83-32-9	Acenaphthene	1.4	J
86-73-7	Fluorene	2.5	J
C1FLUOR	C1-Fluorenes	8.1	
C2FLUOR	C2-Fluorenes	6.7	
C3FLUOR	C3-Fluorenes	12.	
85-01-8	Phenanthrene	47.	
120-12-7	Anthracene	7.3	
C1PHAN	C1-Phenanthrenes/Anthracenes	20.	
C2PHAN	C2-Phenanthrenes/Anthracenes	20.	
C3PHAN	C3-Phenanthrenes/Anthracenes	25.	
C4PHAN	C4-Phenanthrenes/Anthracenes	29.	
206-44-0	Fluoranthene	110	E
129-00-0	Pyrene	99.	E
C1FLPY	C1-Fluoranthenes/Pyrenes	43.	
C2FLPY	C2-Fluoranthenes/Pyrenes	34.	
C3FLPY	C3-Fluoranthenes/Pyrenes	22.	
56-55-3	Benzo(a)anthracene	45.	
218-01-9	Chrysene	62.	E
C1CHRYS	C1-Chrysenes	28.	
C2CHRYS	C2-Chrysenes	15.	
C3CHRYS	C3-Chrysenes	14.	
C4CHRYS	C4-Chrysenes	6.5	

1F - FORM I SV-SIM

SEMIVOLATILE SIM ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

E01T8

Lab Name: ALS Laboratory Group Contract: EPW05026

Lab Code: DATAC Case No.: 40638 Mod. Ref No.: 1734.2 SDG No.: E01T8

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: 1029331001

Sample wt/vol: 30.1 (g/mL) g Lab File ID: APE06C01

Extraction: (Type) SONC

% Moisture: 31. Decanted: (Y/N) N Date Received: 10/20/2010

Concentrated Extract Volume: 500. (uL) Date Extracted: 10/29/2010

Injection Volume: 1.0 (uL) GPC Factor: 2.0 Date Analyzed: 11/02/2010

GPC Cleanup: (Y/N) Y pH: 6.8 Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
205-99-2	Benzo(b)fluoranthene	77.	E
207-08-9	Benzo(k)fluoranthene	26.	
192-97-2	Benzo(e)pyrene	49.	E
50-32-8	Benzo(a)pyrene	56.	
198-55-0	Perylene	15.	
193-39-5	Indeno(1,2,3-cd)pyrene	37.	
53-70-3	Dibenzo(a,h)anthracene	8.3	
191-24-2	Benzo(g,h,i)perylene	34.	
TPPAH	Total 16 PPAH	620	
TPAH	Total PAH	1100	

1F - FORM I SV-SIM

SEMIVOLATILE SIM ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

E01T8DL

Lab Name: ALS Laboratory Group Contract: EPW05026

Lab Code: DATAC Case No.: 40638 Mod. Ref No.: 1734.2 SDG No.: E01T8

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: 1029331001DL

Sample wt/vol: 30.1 (g/mL) g Lab File ID: APF03C01

Extraction: (Type) SONC

% Moisture: 31. Decanted: (Y/N) N Date Received: 10/20/2010

Concentrated Extract Volume: 500. (uL) Date Extracted: 10/29/2010

Injection Volume: 1.0 (uL) GPC Factor: 2.0 Date Analyzed: 11/03/2010

GPC Cleanup: (Y/N) Y pH: 6.8 Dilution Factor: 4.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
90-12-0	1-Methylnaphthalene	19.	U
91-57-6	2-Methylnaphthalene	19.	U
91-20-3	Naphthalene	3.5	JD
C1NAPH	C1-Naphthalenes	19.	U
C2NAPH	C2-Naphthalenes	8.2	JD
C3NAPH	C3-Naphthalenes	12.	JD
C4NAPH	C4-Naphthalenes	25.	D
208-96-8	Acenaphthylene	19.	U
83-32-9	Acenaphthene	19.	U
86-73-7	Fluorene	3.7	JD
C1FLUOR	C1-Fluorenes	11.	JD
C2FLUOR	C2-Fluorenes	19.	U
C3FLUOR	C3-Fluorenes	19.	U
85-01-8	Phenanthrene	49.	D
120-12-7	Anthracene	7.5	JD
C1PHAN	C1-Phenanthrenes/Anthracenes	22.	D
C2PHAN	C2-Phenanthrenes/Anthracenes	23.	D
C3PHAN	C3-Phenanthrenes/Anthracenes	29.	D
C4PHAN	C4-Phenanthrenes/Anthracenes	39.	D
206-44-0	Fluoranthene	110	D
129-00-0	Pyrene	98.	D
C1FLPY	C1-Fluoranthenes/Pyrenes	47.	D
C2FLPY	C2-Fluoranthenes/Pyrenes	33.	D
C3FLPY	C3-Fluoranthenes/Pyrenes	19.	JD
56-55-3	Benzo(a)anthracene	43.	D
218-01-9	Chrysene	58.	D
C1CHRYS	C1-Chrysenes	28.	D
C2CHRYS	C2-Chrysenes	16.	JD
C3CHRYS	C3-Chrysenes	19.	U
C4CHRYS	C4-Chrysenes	19.	U

1F - FORM I SV-SIM

SEMIVOLATILE SIM ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

E01T8DL

Lab Name: ALS Laboratory Group Contract: EPW05026

Lab Code: DATAC Case No.: 40638 Mod. Ref No.: 1734.2 SDG No.: E01T8

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: 1029331001DL

Sample wt/vol: 30.1 (g/mL) g Lab File ID: APF03C01

Extraction: (Type) SONC

% Moisture: 31. Decanted: (Y/N) N Date Received: 10/20/2010

Concentrated Extract Volume: 500. (uL) Date Extracted: 10/29/2010

Injection Volume: 1.0 (uL) GPC Factor: 2.0 Date Analyzed: 11/03/2010

GPC Cleanup: (Y/N) Y pH: 6.8 Dilution Factor: 4.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
205-99-2	Benzo(b)fluoranthene	78.	D
207-08-9	Benzo(k)fluoranthene	28.	D
192-97-2	Benzo(e)pyrene	51.	D
50-32-8	Benzo(a)pyrene	51.	D
198-55-0	Perylene	15.	JD
193-39-5	Indeno(1,2,3-cd)pyrene	32.	D
53-70-3	Dibenzo(a,h)anthracene	8.7	JD
191-24-2	Benzo(g,h,i)perylene	32.	D
TPPAH	Total 16 PPAH	610	
TPAH	Total PAH	980	

1F - FORM I SV-SIM

SEMIVOLATILE SIM ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

E01T9

Lab Name: ALS Laboratory Group Contract: EPW05026

Lab Code: DATAC Case No.: 40638 Mod. Ref No.: 1734.2 SDG No.: E01T8

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: 1029331002

Sample wt/vol: 30.2 (g/mL) g Lab File ID: APE07C02

Extraction: (Type) SONC

% Moisture: 27. Decanted: (Y/N) N Date Received: 10/20/2010

Concentrated Extract Volume: 500. (uL) Date Extracted: 10/29/2010

Injection Volume: 1.0 (uL) GPC Factor: 2.0 Date Analyzed: 11/02/2010

GPC Cleanup: (Y/N) Y pH: 6.9 Dilution Factor: 10.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
90-12-0	1-Methylnaphthalene	45.	U
91-57-6	2-Methylnaphthalene	45.	U
91-20-3	Naphthalene	45.	U
C1NAPH	C1-Naphthalenes	45.	U
C2NAPH	C2-Naphthalenes	16.	J
C3NAPH	C3-Naphthalenes	140	
C4NAPH	C4-Naphthalenes	55.	
208-96-8	Acenaphthylene	45.	U
83-32-9	Acenaphthene	24.	J
86-73-7	Fluorene	34.	J
C1FLUOR	C1-Fluorenes	53.	
C2FLUOR	C2-Fluorenes	50.	
C3FLUOR	C3-Fluorenes	170	
85-01-8	Phenanthrene	780	E
120-12-7	Anthracene	130	
C1PHAN	C1-Phenanthrenes/Anthracenes	200	
C2PHAN	C2-Phenanthrenes/Anthracenes	190	
C3PHAN	C3-Phenanthrenes/Anthracenes	230	
C4PHAN	C4-Phenanthrenes/Anthracenes	380	
206-44-0	Fluoranthene	1700	E
129-00-0	Pyrene	1400	E
C1FLPY	C1-Fluoranthenes/Pyrenes	500	
C2FLPY	C2-Fluoranthenes/Pyrenes	340	
C3FLPY	C3-Fluoranthenes/Pyrenes	190	
56-55-3	Benzo(a)anthracene	620	E
218-01-9	Chrysene	740	E
C1CHRYS	C1-Chrysenes	340	
C2CHRYS	C2-Chrysenes	140	
C3CHRYS	C3-Chrysenes	100	
C4CHRYS	C4-Chrysenes	76.	

1F - FORM I SV-SIM

SEMIVOLATILE SIM ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

E01T9

Lab Name: ALS Laboratory Group Contract: EPW05026

Lab Code: DATAC Case No.: 40638 Mod. Ref No.: 1734.2 SDG No.: E01T8

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: 1029331002

Sample wt/vol: 30.2 (g/mL) g Lab File ID: APE07C02

Extraction: (Type) SONC

% Moisture: 27. Decanted: (Y/N) N Date Received: 10/20/2010

Concentrated Extract Volume: 500. (uL) Date Extracted: 10/29/2010

Injection Volume: 1.0 (uL) GPC Factor: 2.0 Date Analyzed: 11/02/2010

GPC Cleanup: (Y/N) Y pH: 6.9 Dilution Factor: 10.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
205-99-2	Benzo(b)fluoranthene	1000	E
207-08-9	Benzo(k)fluoranthene	360	
192-97-2	Benzo(e)pyrene	620	E
50-32-8	Benzo(a)pyrene	660	
198-55-0	Perylene	200	
193-39-5	Indeno(1,2,3-cd)pyrene	410	
53-70-3	Dibenzo(a,h)anthracene	89.	
191-24-2	Benzo(g,h,i)perylene	370	
TPPAH	Total 16 PPAH	8400	
TPAH	Total PAH	12000	

1F - FORM I SV-SIM

SEMIVOLATILE SIM ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

E01W0

Lab Name: ALS Laboratory Group Contract: EPW05026

Lab Code: DATAC Case No.: 40638 Mod. Ref No.: 1734.2 SDG No.: E01T8

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: 1029331003

Sample wt/vol: 30.4 (g/mL) g Lab File ID: APE08C03

Extraction: (Type) SONC

% Moisture: 66. Decanted: (Y/N) N Date Received: 10/20/2010

Concentrated Extract Volume: 500. (uL) Date Extracted: 10/29/2010

Injection Volume: 1.0 (uL) GPC Factor: 2.0 Date Analyzed: 11/02/2010

GPC Cleanup: (Y/N) Y pH: 6.8 Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
90-12-0	1-Methylnaphthalene	2.4	J
91-57-6	2-Methylnaphthalene	3.8	J
91-20-3	Naphthalene	4.2	J
C1NAPH	C1-Naphthalenes	6.7	J
C2NAPH	C2-Naphthalenes	9.3	J
C3NAPH	C3-Naphthalenes	250	
C4NAPH	C4-Naphthalenes	15.	
208-96-8	Acenaphthylene	9.6	U
83-32-9	Acenaphthene	1.5	J
86-73-7	Fluorene	2.2	J
C1FLUOR	C1-Fluorenes	11.	
C2FLUOR	C2-Fluorenes	4.9	J
C3FLUOR	C3-Fluorenes	7.2	J
85-01-8	Phenanthrene	49.	
120-12-7	Anthracene	9.1	J
C1PHAN	C1-Phenanthrenes/Anthracenes	18.	
C2PHAN	C2-Phenanthrenes/Anthracenes	15.	
C3PHAN	C3-Phenanthrenes/Anthracenes	10.	
C4PHAN	C4-Phenanthrenes/Anthracenes	16.	
206-44-0	Fluoranthene	130	E
129-00-0	Pyrene	120	E
C1FLPY	C1-Fluoranthenes/Pyrenes	38.	
C2FLPY	C2-Fluoranthenes/Pyrenes	22.	
C3FLPY	C3-Fluoranthenes/Pyrenes	11.	
56-55-3	Benzo(a)anthracene	54.	
218-01-9	Chrysene	68.	
C1CHRYS	C1-Chrysenes	32.	
C2CHRYS	C2-Chrysenes	13.	
C3CHRYS	C3-Chrysenes	9.6	U
C4CHRYS	C4-Chrysenes	9.6	U

1F - FORM I SV-SIM

SEMIVOLATILE SIM ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

E01W0

Lab Name: ALS Laboratory Group Contract: EPW05026

Lab Code: DATAC Case No.: 40638 Mod. Ref No.: 1734.2 SDG No.: E01T8

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: 1029331003

Sample wt/vol: 30.4 (g/mL) g Lab File ID: APE08C03

Extraction: (Type) SONC

% Moisture: 66. Decanted: (Y/N) N Date Received: 10/20/2010

Concentrated Extract Volume: 500. (uL) Date Extracted: 10/29/2010

Injection Volume: 1.0 (uL) GPC Factor: 2.0 Date Analyzed: 11/02/2010

GPC Cleanup: (Y/N) Y pH: 6.8 Dilution Factor: 1.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
205-99-2	Benzo(b)fluoranthene	85.	
207-08-9	Benzo(k)fluoranthene	29.	
192-97-2	Benzo(e)pyrene	55.	
50-32-8	Benzo(a)pyrene	64.	
198-55-0	Perylene	17.	
193-39-5	Indeno(1,2,3-cd)pyrene	44.	
53-70-3	Dibenzo(a,h)anthracene	9.4	J
191-24-2	Benzo(g,h,i)perylene	43.	
TPPAH	Total 16 PPAH	710	
TPAH	Total PAH	1300	

1F - FORM I SV-SIM

SEMIVOLATILE SIM ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

E01W0DL

Lab Name: ALS Laboratory Group Contract: EPW05026

Lab Code: DATAC Case No.: 40638 Mod. Ref No.: 1734.2 SDG No.: E01T8

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: 1029331003DL

Sample wt/vol: 30.4 (g/mL) g Lab File ID: APF04C03

Extraction: (Type) SONC

% Moisture: 66. Decanted: (Y/N) N Date Received: 10/20/2010

Concentrated Extract Volume: 500. (uL) Date Extracted: 10/29/2010

Injection Volume: 1.0 (uL) GPC Factor: 2.0 Date Analyzed: 11/03/2010

GPC Cleanup: (Y/N) Y pH: 6.8 Dilution Factor: 2.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
90-12-0	1-Methylnaphthalene	2.9	JD
91-57-6	2-Methylnaphthalene	3.7	JD
91-20-3	Naphthalene	4.7	JD
C1NAPH	C1-Naphthalenes	7.5	JD
C2NAPH	C2-Naphthalenes	9.2	JD
C3NAPH	C3-Naphthalenes	13.	JD
C4NAPH	C4-Naphthalenes	24.	D
208-96-8	Acenaphthylene	19.	U
83-32-9	Acenaphthene	19.	U
86-73-7	Fluorene	19.	U
C1FLUOR	C1-Fluorenes	12.	JD
C2FLUOR	C2-Fluorenes	19.	U
C3FLUOR	C3-Fluorenes	19.	U
85-01-8	Phenanthrene	46.	D
120-12-7	Anthracene	7.9	JD
C1PHAN	C1-Phenanthrenes/Anthracenes	18.	JD
C2PHAN	C2-Phenanthrenes/Anthracenes	14.	JD
C3PHAN	C3-Phenanthrenes/Anthracenes	8.7	JD
C4PHAN	C4-Phenanthrenes/Anthracenes	17.	JD
206-44-0	Fluoranthene	130	D
129-00-0	Pyrene	110	D
C1FLPY	C1-Fluoranthenes/Pyrenes	35.	D
C2FLPY	C2-Fluoranthenes/Pyrenes	23.	D
C3FLPY	C3-Fluoranthenes/Pyrenes	19.	U
56-55-3	Benzo(a)anthracene	47.	D
218-01-9	Chrysene	63.	D
C1CHRYS	C1-Chrysenes	24.	D
C2CHRYS	C2-Chrysenes	19.	U
C3CHRYS	C3-Chrysenes	19.	U
C4CHRYS	C4-Chrysenes	19.	U

1F - FORM I SV-SIM

SEMIVOLATILE SIM ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

E01W0DL

Lab Name: ALS Laboratory Group Contract: EPW05026

Lab Code: DATAC Case No.: 40638 Mod. Ref No.: 1734.2 SDG No.: E01T8

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: 1029331003DL

Sample wt/vol: 30.4 (g/mL) g Lab File ID: APF04C03

Extraction: (Type) SONC

% Moisture: 66. Decanted: (Y/N) N Date Received: 10/20/2010

Concentrated Extract Volume: 500. (uL) Date Extracted: 10/29/2010

Injection Volume: 1.0 (uL) GPC Factor: 2.0 Date Analyzed: 11/03/2010

GPC Cleanup: (Y/N) Y pH: 6.8 Dilution Factor: 2.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
205-99-2	Benzo(b)fluoranthene	86.	D
207-08-9	Benzo(k)fluoranthene	32.	D
192-97-2	Benzo(e)pyrene	54.	D
50-32-8	Benzo(a)pyrene	60.	D
198-55-0	Perylene	17.	JD
193-39-5	Indeno(1,2,3-cd)pyrene	46.	D
53-70-3	Dibenzo(a,h)anthracene	9.8	JD
191-24-2	Benzo(g,h,i)perylene	44.	D
TPPAH	Total 16 PPAH	680	
TPAH	Total PAH	950	

1F - FORM I SV-SIM

SEMIVOLATILE SIM ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

E01W1

Lab Name: ALS Laboratory Group Contract: EPW05026

Lab Code: DATAC Case No.: 40638 Mod. Ref No.: 1734.2 SDG No.: E01T8

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: 1029331004

Sample wt/vol: 30.5 (g/mL) g Lab File ID: APE09C04

Extraction: (Type) SONC

% Moisture: 55. Decanted: (Y/N) N Date Received: 10/20/2010

Concentrated Extract Volume: 500. (uL) Date Extracted: 10/29/2010

Injection Volume: 1.0 (uL) GPC Factor: 2.0 Date Analyzed: 11/02/2010

GPC Cleanup: (Y/N) Y pH: 6.8 Dilution Factor: 10.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
90-12-0	1-Methylnaphthalene	150	
91-57-6	2-Methylnaphthalene	240	
91-20-3	Naphthalene	400	
C1NAPH	C1-Naphthalenes	380	
C2NAPH	C2-Naphthalenes	270	
C3NAPH	C3-Naphthalenes	390	
C4NAPH	C4-Naphthalenes	140	
208-96-8	Acenaphthylene	72.	U
83-32-9	Acenaphthene	1200	E
86-73-7	Fluorene	1400	E
C1FLUOR	C1-Fluorenes	620	
C2FLUOR	C2-Fluorenes	390	
C3FLUOR	C3-Fluorenes	490	
85-01-8	Phenanthrene	11000	E
120-12-7	Anthracene	3100	E
C1PHAN	C1-Phenanthrenes/Anthracenes	4200	
C2PHAN	C2-Phenanthrenes/Anthracenes	210	
C3PHAN	C3-Phenanthrenes/Anthracenes	890	
C4PHAN	C4-Phenanthrenes/Anthracenes	2200	
206-44-0	Fluoranthene	14000	E
129-00-0	Pyrene	10000	E
C1FLPY	C1-Fluoranthenes/Pyrenes	6100	
C2FLPY	C2-Fluoranthenes/Pyrenes	3200	
C3FLPY	C3-Fluoranthenes/Pyrenes	1100	
56-55-3	Benzo(a)anthracene	7900	E
218-01-9	Chrysene	7800	E
C1CHRYS	C1-Chrysenes	5000	
C2CHRYS	C2-Chrysenes	2000	
C3CHRYS	C3-Chrysenes	720	
C4CHRYS	C4-Chrysenes	360	

1F - FORM I SV-SIM

SEMIVOLATILE SIM ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

E01W1

Lab Name: ALS Laboratory Group Contract: EPW05026

Lab Code: DATAC Case No.: 40638 Mod. Ref No.: 1734.2 SDG No.: E01T8

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: 1029331004

Sample wt/vol: 30.5 (g/mL) g Lab File ID: APE09C04

Extraction: (Type) SONC

% Moisture: 55. Decanted: (Y/N) N Date Received: 10/20/2010

Concentrated Extract Volume: 500. (uL) Date Extracted: 10/29/2010

Injection Volume: 1.0 (uL) GPC Factor: 2.0 Date Analyzed: 11/02/2010

GPC Cleanup: (Y/N) Y pH: 6.8 Dilution Factor: 10.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
205-99-2	Benzo(b)fluoranthene	8800	E
207-08-9	Benzo(k)fluoranthene	3100	E
192-97-2	Benzo(e)pyrene	5100	E
50-32-8	Benzo(a)pyrene	6700	
198-55-0	Perylene	1900	E
193-39-5	Indeno(1,2,3-cd)pyrene	3700	E
53-70-3	Dibenzo(a,h)anthracene	1200	E
191-24-2	Benzo(g,h,i)perylene	3100	E
TPPAH	Total 16 PPAH	85000	
TPAH	Total PAH	120000	

1F - FORM I SV-SIM

SEMIVOLATILE SIM ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

E01W2

Lab Name: ALS Laboratory Group Contract: EPW05026

Lab Code: DATAC Case No.: 40638 Mod. Ref No.: 1734.2 SDG No.: E01T8

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: 1029331005

Sample wt/vol: 30.0 (g/mL) g Lab File ID: APE10C05

Extraction: (Type) SONC

% Moisture: 60. Decanted: (Y/N) N Date Received: 10/20/2010

Concentrated Extract Volume: 500. (uL) Date Extracted: 10/29/2010

Injection Volume: 1.0 (uL) GPC Factor: 2.0 Date Analyzed: 11/02/2010

GPC Cleanup: (Y/N) Y pH: 6.8 Dilution Factor: 10.0

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CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
90-12-0	1-Methylnaphthalene	82.	U
91-57-6	2-Methylnaphthalene	82.	U
91-20-3	Naphthalene	82.	U
C1NAPH	C1-Naphthalenes	82.	U
C2NAPH	C2-Naphthalenes	82.	U
C3NAPH	C3-Naphthalenes	82.	U
C4NAPH	C4-Naphthalenes	82.	U
208-96-8	Acenaphthylene	82.	U
83-32-9	Acenaphthene	82.	U
86-73-7	Fluorene	82.	U
C1FLUOR	C1-Fluorenes	82.	U
C2FLUOR	C2-Fluorenes	82.	U
C3FLUOR	C3-Fluorenes	82.	U
85-01-8	Phenanthrene	110	J
120-12-7	Anthracene	25.	J
C1PHAN	C1-Phenanthrenes/Anthracenes	47.	J
C2PHAN	C2-Phenanthrenes/Anthracenes	31.	J
C3PHAN	C3-Phenanthrenes/Anthracenes	82.	U
C4PHAN	C4-Phenanthrenes/Anthracenes	82.	U
206-44-0	Fluoranthene	190	J
129-00-0	Pyrene	140	J
C1FLPY	C1-Fluoranthenes/Pyrenes	78.	J
C2FLPY	C2-Fluoranthenes/Pyrenes	42.	J
C3FLPY	C3-Fluoranthenes/Pyrenes	82.	U
56-55-3	Benzo(a)anthracene	93.	J
218-01-9	Chrysene	100	J
C1CHRYS	C1-Chrysenes	74.	J
C2CHRYS	C2-Chrysenes	82.	U
C3CHRYS	C3-Chrysenes	82.	U
C4CHRYS	C4-Chrysenes	82.	U

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1F - FORM I SV-SIM

SEMIVOLATILE SIM ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

E01W2

Lab Name: ALS Laboratory Group Contract: EPW05026

Lab Code: DATAC Case No.: 40638 Mod. Ref No.: 1734.2 SDG No.: E01T8

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: 1029331005

Sample wt/vol: 30.0 (g/mL) g Lab File ID: APE10C05

Extraction: (Type) SONC

% Moisture: 60. Decanted: (Y/N) N Date Received: 10/20/2010

Concentrated Extract Volume: 500. (uL) Date Extracted: 10/29/2010

Injection Volume: 1.0 (uL) GPC Factor: 2.0 Date Analyzed: 11/02/2010

GPC Cleanup: (Y/N) Y pH: 6.8 Dilution Factor: 10.0

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) ug/kg	Q
205-99-2	Benzo(b)fluoranthene	130	J
207-08-9	Benzo(k)fluoranthene	47.	J
192-97-2	Benzo(e)pyrene	75.	J
50-32-8	Benzo(a)pyrene	93.	J
198-55-0	Perylene	30.	J
193-39-5	Indeno(1,2,3-cd)pyrene	51.	J
53-70-3	Dibenzo(a,h)anthracene	16.	J
191-24-2	Benzo(g,h,i)perylene	68.	J
TPPAH	Total 16 PPAH	1100	J
TPAH	Total PAH	1400	J

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3/18/11

ATTACHMENT C

DATA QUALIFIER DEFINITIONS

LABORATORY DATA QUALIFIER DEFITIONS

D – This qualifier indicates that the sample was re-analyzed at a higher dilution factor than the original analysis.

E – The result exceeded the highest standard in the initial calibration range of the instrument. The result is an estimate.

J - The analyte was positively identified and the associated numerical value is the approximate concentration of the analyte in the sample (due either to the quality of the data generated because certain quality control criteria were not met, or the concentration of the analyte was below the quantitation limit).

U - The analyte was not detected above the reporting limit. The reported result is the laboratory reporting limit.

DATA VALIDATION DATA QUALIFIER DEFITIONS

J - The analyte was positively identified and the associated numerical value is the approximate concentration of the analyte in the sample (due either to the quality of the data generated because certain quality control criteria were not met, or the concentration of the analyte was below the quantitation limit).

UJ - The analyte was not detected at a level greater than or equal to the adjusted quantitation limit. However, the reported adjusted quantiation limit is approximate and may be inaccurate or imprecise.

Weston Solutions, Inc.
20 North Wacker Drive, Suite 1210
Chicago, IL 60606
(312) 424-3300 fax: (312) 424-3330
www.westonsolutions.com

February 18, 2011

Ms. Brenda Jones and Mr. Ajit Vaidya
Great Lakes National Program Office
United States Environmental Protection Agency, Region V
77 West Jackson Boulevard, Mail Code: G-17J
Chicago, Illinois 60604-3507

Re: Data Review of Grain Size Analyses
For Sediment Samples Collected on November 2-4, 2010
Duck and Otter Creeks 2010 Data Gaps Investigation
Wood and Lucas Counties, Ohio
DCN: 1269-2F-ALFI

Dear Ms. Jones and Mr. Vaidya:

The United States Environmental Protection Agency (U.S. EPA) tasked Weston Solutions, Inc., (WESTON®) to perform data validation for sediment samples collected on November 2-4, 2010, for the Great Lakes National Program Office (GLNPO) Duck and Otter Creeks 2010 Data Gaps Investigation (Duck and Otter) Site. This data review is for Grain Size analysis of 14 sediment samples that includes one field split that were collected by the WESTON Superfund Technical Assessment and Response Team (START). The samples were validated in accordance with the "Quality Assurance Project Plan, Duck and Otter Creeks Data Gaps Investigation" dated September 28, 2010, which includes using the U.S. EPA Contract Laboratory Program National Functional Guidance for Organic and Inorganic Data Review. Table 1 provides a summary of the samples included in this review. All tables are presented at the end of this report.

The samples listed in Table 1 were analyzed by TestAmerica (TA) located in South Burlington, Vermont, under the following two work orders:

- 200-2370-1
- 200-2416-1

The samples were analyzed for grain size by ASTM D422.

An individual Quality Assurance/Quality Control (QA/QC) Analysis Checklist for Sediment Chemistry Analysis was not filled out for grain size because items listed on this checklist are not applicable to grain size analysis. The Attachment to this report contains the grain size data summary sheets. Below is the data review summary.

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GRAIN SIZE DATA REVIEW

Typical QC samples do not apply to grain size analysis as for chemical analytical parameters. Therefore, the only QC sample evaluated was the one field split associated with these work orders. This is discussed below.

There is one field split sample associated with the two work orders (identified with an "FS" suffix). According to the Field Sampling Plan, field split and duplicate samples were not required for grain size analysis. The relative percent differences (RPD) between the field split and parent sample were calculated to assist in evaluating the field split results. A QC limit for RPD for field splits was not stated in the QAPP; therefore, the field split results were compared to a standard QC limit of 50 RPD or less. The calculated RPDs were within this QC limit. Table 2 summarizes the field duplicate results and RPDs. The field split results were acceptable.

DATA QUALITY INDICATORS REVIEW

Many the data quality indicators (sensitivity, precision, accuracy, and completeness) were evaluated through the data validation procedures which are summarized above and discussed in detail in the Attachment.

Sensitivity. The QAPP stated that the laboratory would achieve a sensitivity in the percentile range which was met. Sensitivity was acceptable for grain size analyses.

Precision. Field precision was determined by evaluating the RPDs for the field split results. Because there was no QC limit stated in the QAPP, a standard QC limit of 50 RPD between the parent and duplicate result was used for the evaluation. The field split RPDs ranged from 0 to 24. See Tables 2 for individual RPD results. Field precision was acceptable.

There were no specific QC samples for laboratory precision which is in accordance with the QAPP.

Accuracy/Bias. Accuracy is a measure of the agreement between an observed value and an accepted reference value. There were no specific QC samples for laboratory accuracy which is in accordance with the QAPP.

Completeness. Completeness is a measure of the amount of valid data obtained compared to the amount of data that was planned to be collected under normal conditions. All samples results were received.

In summary, the grain size data are usable. No qualification of the grain size data was required.

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If there are any questions or comments regarding this report, please do not hesitate to contact WESTON START at 312-424-3300.

Very truly yours,
Weston Solutions, Inc.

Lisa Graczyk
WESTON START Team

Alex Clark
WESTON START Project Manager

Attachments:
Tables
Analytical Data Summary Sheets for Grain Size

cc: project file

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TABLES

This document was prepared by Weston Solutions, Inc., expressly for U.S. EPA. It shall not be released or disclosed in whole or in part without the express, written permission of U.S. EPA.

TABLE 1
SAMPLES INCLUDED IN DATA REVIEW

Sample ID	Lab ID	Date Collected	Comment
DC-13	200-2370-1	11/02/2010	
DC-14	200-2370-2	11/03/2010	
DC-16	200-2370-3	11/02/2010	
DC-17	200-2370-4	11/02/2010	
DC-19	200-2370-5	11/02/2010	
DC-19-FS	200-2370-6	11/02/2010	Field split of DC-19
OC-26	200-2370-7	11/03/2010	
OC-27	200-2370-8	11/03/2010	
OC-28	200-2370-9	11/03/2010	
OC-29	200-2416-1	11/04/2010	
OC-30	200-2416-2	11/04/2010	
OC-31	200-2416-3	11/04/2010	
OC-32	200-2416-4	11/04/2010	
OC-33	200-2416-5	11/04/2010	

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TABLE 2
FIELD SPLIT RESULTS
FOR GRAIN SIZE ANALYSES

Analyte	Sample: DC-19FS		
	Sample Result (%)	Replicate Result (%)	RPD
Clay	50.9	49.1	4
Coarse Sand	0	0	0
Fine Sand	2.8	3.5	22
Gravel	0	0	0
Hydrometer Reading 1 - Percent Finer	85.6	85	1
Hydrometer Reading 2 - Percent Finer	76.9	76.4	1
Hydrometer Reading 3 - Percent Finer	65.4	64.9	1
Hydrometer Reading 4 - Percent Finer	56.7	56.3	1
Hydrometer Reading 5 - Percent Finer	50.9	49.1	4
Hydrometer Reading 6 - Percent Finer	39.3	39	1
Hydrometer Reading 7 - Percent Finer	27.7	27.5	1
Medium Sand	1.8	2.3	24
Sand	4.6	5.8	23
Sieve Size #10 - Percent Finer	100	100	0
Sieve Size #100 - Percent Finer	96.7	95.7	1
Sieve Size #20 - Percent Finer	99.2	98.7	1
Sieve Size #200 - Percent Finer	95.4	94.2	1
Sieve Size #4 - Percent Finer	100	100	0
Sieve Size #40 - Percent Finer	98.2	97.7	1
Sieve Size #60 - Percent Finer	97.6	96.6	1
Sieve Size #80 - Percent Finer	96.9	96	1
Sieve Size 0.375 inch - Percent Finer	100	100	0
Sieve Size 0.75 inch - Percent Finer	100	100	0
Sieve Size 1 inch - Percent Finer	100	100	0
Sieve Size 1.5 inch - Percent Finer	100	100	0
Sieve Size 2 inch - Percent Finer	100	100	0
Sieve Size 3 inch - Percent Finer	100	100	0
Silt	44.5	45.1	1

Notes:
% – Percent
RPD – Relative Percent Difference

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ATTACHMENT

ANALYTICAL DATA SUMMARY SHEETS FOR GRAIN SIZE

Client: Weston Solutions, Inc.

Job Number: 200-2370-1
Sdg Number: 2370

Client Sample ID: **DC-13**

Lab Sample ID: 200-2370-1
Client Matrix: Sediment

Date Sampled: 11/02/2010 0940
Date Received: 11/05/2010 1020

D422 Grain Size

Method:	D422	Analysis Batch: 200-9293	Instrument ID: D422_import
Preparation:	N/A		Lab File ID: 200-2370-A-1.txt
Dilution:	1.0		Initial Weight/Volume: 166.46 g
Date Analyzed:	11/08/2010 1817		Final Weight/Volume:
Date Prepared:			

Analyte	DryWt Corrected: N	Result (% Passing)	Qualifier	NONE	NONE
Sieve Size 3 inch - Percent Finer		100.0			
Sieve Size 2 inch - Percent Finer		100.0			
Sieve Size 1.5 inch - Percent Finer		100.0			
Sieve Size 1 inch - Percent Finer		100.0			
Sieve Size 0.75 inch - Percent Finer		100.0			
Sieve Size 0.375 inch - Percent Finer		99.5			
Sieve Size #4 - Percent Finer		98.8			
Sieve Size #10 - Percent Finer		96.4			
Sieve Size #20 - Percent Finer		93.2			
Sieve Size #40 - Percent Finer		83.3			
Sieve Size #60 - Percent Finer		72.0			
Sieve Size #80 - Percent Finer		61.7			
Sieve Size #100 - Percent Finer		55.4			
Sieve Size #200 - Percent Finer		37.6			
Hydrometer Reading 1 - Percent Finer		22.3			
Hydrometer Reading 2 - Percent Finer		18.2			
Hydrometer Reading 3 - Percent Finer		15.2			
Hydrometer Reading 4 - Percent Finer		13.2			
Hydrometer Reading 5 - Percent Finer		11.2			
Hydrometer Reading 6 - Percent Finer		7.2			
Hydrometer Reading 7 - Percent Finer		4.0			

Client: Weston Solutions, Inc.

Job Number: 200-2370-1
Sdg Number: 2370

Client Sample ID: **DC-13**

Lab Sample ID: 200-2370-1
Client Matrix: Sediment

Date Sampled: 11/02/2010 0940
Date Received: 11/05/2010 1020

D422 Grain Size

Method:	D422	Analysis Batch: 200-9293	Instrument ID: D422_import
Preparation:	N/A		Lab File ID: 200-2370-A-1.txt
Dilution:	1.0		Initial Weight/Volume: 166.46 g
Date Analyzed:	11/08/2010 1817		Final Weight/Volume:
Date Prepared:			

Analyte	DryWt Corrected: N	Result (%)	Qualifier	NONE	NONE
Gravel		1.2			
Sand		61.2			
Coarse Sand		2.4			
Medium Sand		13.1			
Fine Sand		45.7			
Silt		26.4			
Clay		11.2			

Client: Weston Solutions, Inc.

Job Number: 200-2370-1
Sdg Number: 2370

Client Sample ID: **DC-14**

Lab Sample ID: 200-2370-2
Client Matrix: Sediment

Date Sampled: 11/03/2010 0920
Date Received: 11/05/2010 1020

D422 Grain Size

Method: D422
Preparation: N/A
Dilution: 1.0
Date Analyzed: 11/08/2010 1820
Date Prepared:

Analysis Batch: 200-9293

Instrument ID: D422_import
Lab File ID: 200-2370-A-2.txt
Initial Weight/Volume: 125.74 g
Final Weight/Volume:

Analyte	DryWt Corrected: N	Result (% Passing)	Qualifier	NONE	NONE
Sieve Size 3 inch - Percent Finer		100.0			
Sieve Size 2 inch - Percent Finer		100.0			
Sieve Size 1.5 inch - Percent Finer		100.0			
Sieve Size 1 inch - Percent Finer		100.0			
Sieve Size 0.75 inch - Percent Finer		100.0			
Sieve Size 0.375 inch - Percent Finer		100.0			
Sieve Size #4 - Percent Finer		100.0			
Sieve Size #10 - Percent Finer		100.0			
Sieve Size #20 - Percent Finer		99.7			
Sieve Size #40 - Percent Finer		99.4			
Sieve Size #60 - Percent Finer		99.0			
Sieve Size #80 - Percent Finer		98.7			
Sieve Size #100 - Percent Finer		98.5			
Sieve Size #200 - Percent Finer		97.6			
Hydrometer Reading 1 - Percent Finer		92.0			
Hydrometer Reading 2 - Percent Finer		78.2			
Hydrometer Reading 3 - Percent Finer		64.3			
Hydrometer Reading 4 - Percent Finer		57.4			
Hydrometer Reading 5 - Percent Finer		53.9			
Hydrometer Reading 6 - Percent Finer		43.6			
Hydrometer Reading 7 - Percent Finer		29.7			

Client: Weston Solutions, Inc.

Job Number: 200-2370-1
Sdg Number: 2370

Client Sample ID: **DC-14**

Lab Sample ID: 200-2370-2
Client Matrix: Sediment

Date Sampled: 11/03/2010 0920
Date Received: 11/05/2010 1020

D422 Grain Size

Method:	D422	Analysis Batch: 200-9293	Instrument ID:	D422_import
Preparation:	N/A		Lab File ID:	200-2370-A-2.txt
Dilution:	1.0		Initial Weight/Volume:	125.74 g
Date Analyzed:	11/08/2010 1820		Final Weight/Volume:	
Date Prepared:				

Analyte	DryWt Corrected: N	Result (%)	Qualifier	NONE	NONE
Gravel		0.0			
Sand		2.4			
Coarse Sand		0.0			
Medium Sand		0.6			
Fine Sand		1.8			
Silt		43.7			
Clay		53.9			

Client: Weston Solutions, Inc.

Job Number: 200-2370-1
Sdg Number: 2370

Client Sample ID: **DC-16**

Lab Sample ID: 200-2370-3
Client Matrix: Sediment

Date Sampled: 11/02/2010 1100
Date Received: 11/05/2010 1020

D422 Grain Size

Method: D422
Preparation: N/A
Dilution: 1.0
Date Analyzed: 11/08/2010 1822
Date Prepared:

Analysis Batch: 200-9293

Instrument ID: D422_import
Lab File ID: 200-2370-A-3.txt
Initial Weight/Volume: 131.89 g
Final Weight/Volume:

Analyte	DryWt Corrected: N	Result (% Passing)	Qualifier	NONE	NONE
Sieve Size 3 inch - Percent Finer		100.0			
Sieve Size 2 inch - Percent Finer		100.0			
Sieve Size 1.5 inch - Percent Finer		100.0			
Sieve Size 1 inch - Percent Finer		100.0			
Sieve Size 0.75 inch - Percent Finer		100.0			
Sieve Size 0.375 inch - Percent Finer		100.0			
Sieve Size #4 - Percent Finer		99.8			
Sieve Size #10 - Percent Finer		98.6			
Sieve Size #20 - Percent Finer		96.6			
Sieve Size #40 - Percent Finer		93.6			
Sieve Size #60 - Percent Finer		89.2			
Sieve Size #80 - Percent Finer		84.6			
Sieve Size #100 - Percent Finer		81.8			
Sieve Size #200 - Percent Finer		70.4			
Hydrometer Reading 1 - Percent Finer		47.4			
Hydrometer Reading 2 - Percent Finer		43.2			
Hydrometer Reading 3 - Percent Finer		32.1			
Hydrometer Reading 4 - Percent Finer		29.4			
Hydrometer Reading 5 - Percent Finer		23.8			
Hydrometer Reading 6 - Percent Finer		19.6			
Hydrometer Reading 7 - Percent Finer		13.9			

Client: Weston Solutions, Inc.

Job Number: 200-2370-1
Sdg Number: 2370

Client Sample ID: **DC-16**

Lab Sample ID: 200-2370-3
Client Matrix: Sediment

Date Sampled: 11/02/2010 1100
Date Received: 11/05/2010 1020

D422 Grain Size

Method:	D422	Analysis Batch: 200-9293	Instrument ID:	D422_import
Preparation:	N/A		Lab File ID:	200-2370-A-3.txt
Dilution:	1.0		Initial Weight/Volume:	131.89 g
Date Analyzed:	11/08/2010 1822		Final Weight/Volume:	
Date Prepared:				

Analyte	DryWt Corrected: N	Result (%)	Qualifier	NONE	NONE
Gravel		0.2			
Sand		29.4			
Coarse Sand		1.2			
Medium Sand		5.0			
Fine Sand		23.2			
Silt		46.6			
Clay		23.8			

Client: Weston Solutions, Inc.

Job Number: 200-2370-1
Sdg Number: 2370

Client Sample ID: **DC-17**

Lab Sample ID: 200-2370-4
Client Matrix: Sediment

Date Sampled: 11/02/2010 1445
Date Received: 11/05/2010 1020

D422 Grain Size

Method:	D422	Analysis Batch: 200-9293	Instrument ID: D422_import
Preparation:	N/A		Lab File ID: 200-2370-A-4.txt
Dilution:	1.0		Initial Weight/Volume: 135.13 g
Date Analyzed:	11/08/2010 1825		Final Weight/Volume:
Date Prepared:			

Analyte	DryWt Corrected: N	Result (% Passing)	Qualifier	NONE	NONE
Sieve Size 3 inch - Percent Finer		100.0			
Sieve Size 2 inch - Percent Finer		100.0			
Sieve Size 1.5 inch - Percent Finer		100.0			
Sieve Size 1 inch - Percent Finer		100.0			
Sieve Size 0.75 inch - Percent Finer		100.0			
Sieve Size 0.375 inch - Percent Finer		100.0			
Sieve Size #4 - Percent Finer		100.0			
Sieve Size #10 - Percent Finer		100.0			
Sieve Size #20 - Percent Finer		99.6			
Sieve Size #40 - Percent Finer		99.2			
Sieve Size #60 - Percent Finer		98.5			
Sieve Size #80 - Percent Finer		97.9			
Sieve Size #100 - Percent Finer		97.5			
Sieve Size #200 - Percent Finer		94.3			
Hydrometer Reading 1 - Percent Finer		79.9			
Hydrometer Reading 2 - Percent Finer		73.7			
Hydrometer Reading 3 - Percent Finer		61.2			
Hydrometer Reading 4 - Percent Finer		53.4			
Hydrometer Reading 5 - Percent Finer		48.7			
Hydrometer Reading 6 - Percent Finer		37.8			
Hydrometer Reading 7 - Percent Finer		23.7			

Client: Weston Solutions, Inc.

Job Number: 200-2370-1
Sdg Number: 2370

Client Sample ID: **DC-17**

Lab Sample ID: 200-2370-4
Client Matrix: Sediment

Date Sampled: 11/02/2010 1445
Date Received: 11/05/2010 1020

D422 Grain Size

Method:	D422	Analysis Batch: 200-9293	Instrument ID:	D422_import
Preparation:	N/A		Lab File ID:	200-2370-A-4.txt
Dilution:	1.0		Initial Weight/Volume:	135.13 g
Date Analyzed:	11/08/2010 1825		Final Weight/Volume:	
Date Prepared:				

Analyte	DryWt Corrected: N	Result (%)	Qualifier	NONE	NONE
Gravel		0.0			
Sand		5.7			
Coarse Sand		0.0			
Medium Sand		0.8			
Fine Sand		4.9			
Silt		45.6			
Clay		48.7			

Client: Weston Solutions, Inc.

Job Number: 200-2370-1
Sdg Number: 2370

Client Sample ID: **DC-19**

Lab Sample ID: 200-2370-5
Client Matrix: Sediment

Date Sampled: 11/02/2010 1630
Date Received: 11/05/2010 1020

D422 Grain Size

Method:	D422	Analysis Batch: 200-9293	Instrument ID: D422_import
Preparation:	N/A		Lab File ID: 200-2370-A-5.txt
Dilution:	1.0		Initial Weight/Volume: 151.73 g
Date Analyzed:	11/08/2010 1829		Final Weight/Volume:
Date Prepared:			

Analyte	DryWt Corrected: N	Result (% Passing)	Qualifier	NONE	NONE
Sieve Size 3 inch - Percent Finer		100.0			
Sieve Size 2 inch - Percent Finer		100.0			
Sieve Size 1.5 inch - Percent Finer		100.0			
Sieve Size 1 inch - Percent Finer		100.0			
Sieve Size 0.75 inch - Percent Finer		100.0			
Sieve Size 0.375 inch - Percent Finer		100.0			
Sieve Size #4 - Percent Finer		100.0			
Sieve Size #10 - Percent Finer		100.0			
Sieve Size #20 - Percent Finer		99.2			
Sieve Size #40 - Percent Finer		98.2			
Sieve Size #60 - Percent Finer		97.6			
Sieve Size #80 - Percent Finer		96.9			
Sieve Size #100 - Percent Finer		96.7			
Sieve Size #200 - Percent Finer		95.4			
Hydrometer Reading 1 - Percent Finer		85.6			
Hydrometer Reading 2 - Percent Finer		76.9			
Hydrometer Reading 3 - Percent Finer		65.4			
Hydrometer Reading 4 - Percent Finer		56.7			
Hydrometer Reading 5 - Percent Finer		50.9			
Hydrometer Reading 6 - Percent Finer		39.3			
Hydrometer Reading 7 - Percent Finer		27.7			

Client: Weston Solutions, Inc.

Job Number: 200-2370-1
Sdg Number: 2370

Client Sample ID: **DC-19**

Lab Sample ID: 200-2370-5
Client Matrix: Sediment

Date Sampled: 11/02/2010 1630
Date Received: 11/05/2010 1020

D422 Grain Size

Method:	D422	Analysis Batch: 200-9293	Instrument ID:	D422_import
Preparation:	N/A		Lab File ID:	200-2370-A-5.txt
Dilution:	1.0		Initial Weight/Volume:	151.73 g
Date Analyzed:	11/08/2010 1829		Final Weight/Volume:	
Date Prepared:				

Analyte	DryWt Corrected: N	Result (%)	Qualifier	NONE	NONE
Gravel		0.0			
Sand		4.6			
Coarse Sand		0.0			
Medium Sand		1.8			
Fine Sand		2.8			
Silt		44.5			
Clay		50.9			

Client: Weston Solutions, Inc.

Job Number: 200-2370-1
Sdg Number: 2370

Client Sample ID: **DC-19FS**

Lab Sample ID: 200-2370-6
Client Matrix: Sediment

Date Sampled: 11/02/2010 1630
Date Received: 11/05/2010 1020

D422 Grain Size

Method:	D422	Analysis Batch: 200-9293	Instrument ID: D422_import
Preparation:	N/A		Lab File ID: 200-2370-A-6.txt
Dilution:	1.0		Initial Weight/Volume: 147.22 g
Date Analyzed:	11/08/2010 1832		Final Weight/Volume:
Date Prepared:			

Analyte	DryWt Corrected: N	Result (% Passing)	Qualifier	NONE	NONE
Sieve Size 3 inch - Percent Finer		100.0			
Sieve Size 2 inch - Percent Finer		100.0			
Sieve Size 1.5 inch - Percent Finer		100.0			
Sieve Size 1 inch - Percent Finer		100.0			
Sieve Size 0.75 inch - Percent Finer		100.0			
Sieve Size 0.375 inch - Percent Finer		100.0			
Sieve Size #4 - Percent Finer		100.0			
Sieve Size #10 - Percent Finer		100.0			
Sieve Size #20 - Percent Finer		98.7			
Sieve Size #40 - Percent Finer		97.7			
Sieve Size #60 - Percent Finer		96.6			
Sieve Size #80 - Percent Finer		96.0			
Sieve Size #100 - Percent Finer		95.7			
Sieve Size #200 - Percent Finer		94.2			
Hydrometer Reading 1 - Percent Finer		85.0			
Hydrometer Reading 2 - Percent Finer		76.4			
Hydrometer Reading 3 - Percent Finer		64.9			
Hydrometer Reading 4 - Percent Finer		56.3			
Hydrometer Reading 5 - Percent Finer		49.1			
Hydrometer Reading 6 - Percent Finer		39.0			
Hydrometer Reading 7 - Percent Finer		27.5			

Client: Weston Solutions, Inc.

Job Number: 200-2370-1
Sdg Number: 2370

Client Sample ID: **DC-19FS**

Lab Sample ID: 200-2370-6
Client Matrix: Sediment

Date Sampled: 11/02/2010 1630
Date Received: 11/05/2010 1020

D422 Grain Size

Method:	D422	Analysis Batch: 200-9293	Instrument ID:	D422_import
Preparation:	N/A		Lab File ID:	200-2370-A-6.txt
Dilution:	1.0		Initial Weight/Volume:	147.22 g
Date Analyzed:	11/08/2010 1832		Final Weight/Volume:	
Date Prepared:				

Analyte	DryWt Corrected: N	Result (%)	Qualifier	NONE	NONE
Gravel		0.0			
Sand		5.8			
Coarse Sand		0.0			
Medium Sand		2.3			
Fine Sand		3.5			
Silt		45.1			
Clay		49.1			

Client: Weston Solutions, Inc.

Job Number: 200-2370-1
Sdg Number: 2370

Client Sample ID: **OC-26**

Lab Sample ID: 200-2370-7
Client Matrix: Sediment

Date Sampled: 11/03/2010 1115
Date Received: 11/05/2010 1020

D422 Grain Size

Method:	D422	Analysis Batch: 200-9293	Instrument ID: D422_import
Preparation:	N/A		Lab File ID: 200-2370-A-7.txt
Dilution:	1.0		Initial Weight/Volume: 135.22 g
Date Analyzed:	11/08/2010 1834		Final Weight/Volume:
Date Prepared:			

Analyte	DryWt Corrected: N	Result (% Passing)	Qualifier	NONE	NONE
Sieve Size 3 inch - Percent Finer		100.0			
Sieve Size 2 inch - Percent Finer		100.0			
Sieve Size 1.5 inch - Percent Finer		100.0			
Sieve Size 1 inch - Percent Finer		100.0			
Sieve Size 0.75 inch - Percent Finer		100.0			
Sieve Size 0.375 inch - Percent Finer		100.0			
Sieve Size #4 - Percent Finer		98.5			
Sieve Size #10 - Percent Finer		96.8			
Sieve Size #20 - Percent Finer		94.6			
Sieve Size #40 - Percent Finer		91.8			
Sieve Size #60 - Percent Finer		89.4			
Sieve Size #80 - Percent Finer		82.2			
Sieve Size #100 - Percent Finer		79.7			
Sieve Size #200 - Percent Finer		70.3			
Hydrometer Reading 1 - Percent Finer		62.1			
Hydrometer Reading 2 - Percent Finer		58.0			
Hydrometer Reading 3 - Percent Finer		49.7			
Hydrometer Reading 4 - Percent Finer		43.5			
Hydrometer Reading 5 - Percent Finer		38.4			
Hydrometer Reading 6 - Percent Finer		30.1			
Hydrometer Reading 7 - Percent Finer		22.9			

Client: Weston Solutions, Inc.

Job Number: 200-2370-1
Sdg Number: 2370

Client Sample ID: **OC-26**

Lab Sample ID: 200-2370-7
Client Matrix: Sediment

Date Sampled: 11/03/2010 1115
Date Received: 11/05/2010 1020

D422 Grain Size

Method:	D422	Analysis Batch: 200-9293	Instrument ID:	D422_import
Preparation:	N/A		Lab File ID:	200-2370-A-7.txt
Dilution:	1.0		Initial Weight/Volume:	135.22 g
Date Analyzed:	11/08/2010 1834		Final Weight/Volume:	
Date Prepared:				

Analyte	DryWt Corrected: N	Result (%)	Qualifier	NONE	NONE
Gravel		1.5			
Sand		28.2			
Coarse Sand		1.7			
Medium Sand		5.0			
Fine Sand		21.5			
Silt		31.9			
Clay		38.4			

Client: Weston Solutions, Inc.

Job Number: 200-2370-1
Sdg Number: 2370

Client Sample ID: **OC-27**

Lab Sample ID: 200-2370-8
Client Matrix: Sediment

Date Sampled: 11/03/2010 1500
Date Received: 11/05/2010 1020

D422 Grain Size

Method:	D422	Analysis Batch: 200-9293	Instrument ID: D422_import
Preparation:	N/A		Lab File ID: 200-2370-A-8.txt
Dilution:	1.0		Initial Weight/Volume: 144.18 g
Date Analyzed:	11/08/2010 1838		Final Weight/Volume:
Date Prepared:			

Analyte	DryWt Corrected: N	Result (% Passing)	Qualifier	NONE	NONE
Sieve Size 3 inch - Percent Finer		100.0			
Sieve Size 2 inch - Percent Finer		100.0			
Sieve Size 1.5 inch - Percent Finer		100.0			
Sieve Size 1 inch - Percent Finer		100.0			
Sieve Size 0.75 inch - Percent Finer		100.0			
Sieve Size 0.375 inch - Percent Finer		100.0			
Sieve Size #4 - Percent Finer		99.9			
Sieve Size #10 - Percent Finer		99.4			
Sieve Size #20 - Percent Finer		98.5			
Sieve Size #40 - Percent Finer		97.3			
Sieve Size #60 - Percent Finer		95.7			
Sieve Size #80 - Percent Finer		93.4			
Sieve Size #100 - Percent Finer		90.9			
Sieve Size #200 - Percent Finer		81.7			
Hydrometer Reading 1 - Percent Finer		61.8			
Hydrometer Reading 2 - Percent Finer		55.9			
Hydrometer Reading 3 - Percent Finer		43.2			
Hydrometer Reading 4 - Percent Finer		31.5			
Hydrometer Reading 5 - Percent Finer		24.6			
Hydrometer Reading 6 - Percent Finer		20.7			
Hydrometer Reading 7 - Percent Finer		16.8			

Client: Weston Solutions, Inc.

Job Number: 200-2370-1
Sdg Number: 2370

Client Sample ID: **OC-27**

Lab Sample ID: 200-2370-8
Client Matrix: Sediment

Date Sampled: 11/03/2010 1500
Date Received: 11/05/2010 1020

D422 Grain Size

Method:	D422	Analysis Batch: 200-9293	Instrument ID:	D422_import
Preparation:	N/A		Lab File ID:	200-2370-A-8.txt
Dilution:	1.0		Initial Weight/Volume:	144.18 g
Date Analyzed:	11/08/2010 1838		Final Weight/Volume:	
Date Prepared:				

Analyte	DryWt Corrected: N	Result (%)	Qualifier	NONE	NONE
Gravel		0.1			
Sand		18.2			
Coarse Sand		0.5			
Medium Sand		2.1			
Fine Sand		15.6			
Silt		57.1			
Clay		24.6			

Client: Weston Solutions, Inc.

Job Number: 200-2370-1
Sdg Number: 2370

Client Sample ID: **OC-28**

Lab Sample ID: 200-2370-9
Client Matrix: Sediment

Date Sampled: 11/03/2010 1630
Date Received: 11/05/2010 1020

D422 Grain Size

Method:	D422	Analysis Batch: 200-9293	Instrument ID: D422_import
Preparation:	N/A		Lab File ID: 200-2370-A-9.txt
Dilution:	1.0		Initial Weight/Volume: 152.62 g
Date Analyzed:	11/08/2010 1840		Final Weight/Volume:
Date Prepared:			

Analyte	DryWt Corrected: N	Result (% Passing)	Qualifier	NONE	NONE
Sieve Size 3 inch - Percent Finer		100.0			
Sieve Size 2 inch - Percent Finer		100.0			
Sieve Size 1.5 inch - Percent Finer		100.0			
Sieve Size 1 inch - Percent Finer		100.0			
Sieve Size 0.75 inch - Percent Finer		100.0			
Sieve Size 0.375 inch - Percent Finer		100.0			
Sieve Size #4 - Percent Finer		99.8			
Sieve Size #10 - Percent Finer		99.2			
Sieve Size #20 - Percent Finer		97.9			
Sieve Size #40 - Percent Finer		94.2			
Sieve Size #60 - Percent Finer		89.0			
Sieve Size #80 - Percent Finer		72.3			
Sieve Size #100 - Percent Finer		65.9			
Sieve Size #200 - Percent Finer		51.5			
Hydrometer Reading 1 - Percent Finer		33.6			
Hydrometer Reading 2 - Percent Finer		27.7			
Hydrometer Reading 3 - Percent Finer		21.1			
Hydrometer Reading 4 - Percent Finer		17.7			
Hydrometer Reading 5 - Percent Finer		14.4			
Hydrometer Reading 6 - Percent Finer		11.0			
Hydrometer Reading 7 - Percent Finer		7.7			

Client: Weston Solutions, Inc.

Job Number: 200-2370-1
Sdg Number: 2370

Client Sample ID: **OC-28**

Lab Sample ID: 200-2370-9
Client Matrix: Sediment

Date Sampled: 11/03/2010 1630
Date Received: 11/05/2010 1020

D422 Grain Size

Method:	D422	Analysis Batch: 200-9293	Instrument ID:	D422_import
Preparation:	N/A		Lab File ID:	200-2370-A-9.txt
Dilution:	1.0		Initial Weight/Volume:	152.62 g
Date Analyzed:	11/08/2010 1840		Final Weight/Volume:	
Date Prepared:				

Analyte	DryWt Corrected: N	Result (%)	Qualifier	NONE	NONE
Gravel		0.2			
Sand		48.3			
Coarse Sand		0.6			
Medium Sand		5.0			
Fine Sand		42.7			
Silt		37.1			
Clay		14.4			

Client: Weston Solutions, Inc.

Job Number: 200-2416-1
Sdg Number: 2416

Client Sample ID: **OC-29**

Lab Sample ID: 200-2416-1
Client Matrix: Sediment

Date Sampled: 11/04/2010 0915
Date Received: 11/10/2010 1040

D422 Grain Size

Method:	D422	Analysis Batch: 200-9539	Instrument ID: D422_import
Preparation:	N/A		Lab File ID: 200-2416-A-1.txt
Dilution:	1.0		Initial Weight/Volume: 124.47 g
Date Analyzed:	11/10/2010 2125		Final Weight/Volume:
Date Prepared:			

Analyte	DryWt Corrected: N	Result (% Passing)	Qualifier	NONE	NONE
Sieve Size 3 inch - Percent Finer		100.0			
Sieve Size 2 inch - Percent Finer		100.0			
Sieve Size 1.5 inch - Percent Finer		100.0			
Sieve Size 1 inch - Percent Finer		100.0			
Sieve Size 0.75 inch - Percent Finer		100.0			
Sieve Size 0.375 inch - Percent Finer		100.0			
Sieve Size #4 - Percent Finer		100.0			
Sieve Size #10 - Percent Finer		98.5			
Sieve Size #20 - Percent Finer		97.1			
Sieve Size #40 - Percent Finer		95.6			
Sieve Size #60 - Percent Finer		93.6			
Sieve Size #80 - Percent Finer		91.0			
Sieve Size #100 - Percent Finer		89.3			
Sieve Size #200 - Percent Finer		83.3			
Hydrometer Reading 1 - Percent Finer		67.1			
Hydrometer Reading 2 - Percent Finer		59.9			
Hydrometer Reading 3 - Percent Finer		45.6			
Hydrometer Reading 4 - Percent Finer		36.0			
Hydrometer Reading 5 - Percent Finer		31.3			
Hydrometer Reading 6 - Percent Finer		26.3			
Hydrometer Reading 7 - Percent Finer		19.1			

Client: Weston Solutions, Inc.

Job Number: 200-2416-1
Sdg Number: 2416

Client Sample ID: **OC-29**

Lab Sample ID: 200-2416-1
Client Matrix: Sediment

Date Sampled: 11/04/2010 0915
Date Received: 11/10/2010 1040

D422 Grain Size

Method:	D422	Analysis Batch: 200-9539	Instrument ID:	D422_import
Preparation:	N/A		Lab File ID:	200-2416-A-1.txt
Dilution:	1.0		Initial Weight/Volume:	124.47 g
Date Analyzed:	11/10/2010 2125		Final Weight/Volume:	
Date Prepared:				

Analyte	DryWt Corrected: N	Result (%)	Qualifier	NONE	NONE
Gravel		0.0			
Sand		16.7			
Coarse Sand		1.5			
Medium Sand		2.9			
Fine Sand		12.3			
Silt		52.0			
Clay		31.3			

Client: Weston Solutions, Inc.

Job Number: 200-2416-1
Sdg Number: 2416

Client Sample ID: **OC-30**

Lab Sample ID: 200-2416-2
Client Matrix: Sediment

Date Sampled: 11/04/2010 1025
Date Received: 11/10/2010 1040

D422 Grain Size

Method:	D422	Analysis Batch: 200-9539	Instrument ID: D422_import
Preparation:	N/A		Lab File ID: 200-2416-A-2.txt
Dilution:	1.0		Initial Weight/Volume: 123.22 g
Date Analyzed:	11/10/2010 2216		Final Weight/Volume:
Date Prepared:			

Analyte	DryWt Corrected: N	Result (% Passing)	Qualifier	NONE	NONE
Sieve Size 3 inch - Percent Finer		100.0			
Sieve Size 2 inch - Percent Finer		100.0			
Sieve Size 1.5 inch - Percent Finer		100.0			
Sieve Size 1 inch - Percent Finer		100.0			
Sieve Size 0.75 inch - Percent Finer		100.0			
Sieve Size 0.375 inch - Percent Finer		100.0			
Sieve Size #4 - Percent Finer		100.0			
Sieve Size #10 - Percent Finer		99.8			
Sieve Size #20 - Percent Finer		99.5			
Sieve Size #40 - Percent Finer		98.5			
Sieve Size #60 - Percent Finer		97.2			
Sieve Size #80 - Percent Finer		95.1			
Sieve Size #100 - Percent Finer		94.4			
Sieve Size #200 - Percent Finer		90.2			
Hydrometer Reading 1 - Percent Finer		69.7			
Hydrometer Reading 2 - Percent Finer		60.9			
Hydrometer Reading 3 - Percent Finer		49.9			
Hydrometer Reading 4 - Percent Finer		42.4			
Hydrometer Reading 5 - Percent Finer		36.9			
Hydrometer Reading 6 - Percent Finer		29.5			
Hydrometer Reading 7 - Percent Finer		21.1			

Client: Weston Solutions, Inc.

Job Number: 200-2416-1
Sdg Number: 2416

Client Sample ID: **OC-30**

Lab Sample ID: 200-2416-2
Client Matrix: Sediment

Date Sampled: 11/04/2010 1025
Date Received: 11/10/2010 1040

D422 Grain Size

Method:	D422	Analysis Batch: 200-9539	Instrument ID:	D422_import
Preparation:	N/A		Lab File ID:	200-2416-A-2.txt
Dilution:	1.0		Initial Weight/Volume:	123.22 g
Date Analyzed:	11/10/2010 2216		Final Weight/Volume:	
Date Prepared:				

Analyte	DryWt Corrected: N	Result (%)	Qualifier	NONE	NONE
Gravel		0.0			
Sand		9.8			
Coarse Sand		0.2			
Medium Sand		1.3			
Fine Sand		8.3			
Silt		53.3			
Clay		36.9			

Client: Weston Solutions, Inc.

Job Number: 200-2416-1
Sdg Number: 2416

Client Sample ID: **OC-31**

Lab Sample ID: 200-2416-3
Client Matrix: Sediment

Date Sampled: 11/04/2010 1140
Date Received: 11/10/2010 1040

D422 Grain Size

Method:	D422	Analysis Batch: 200-9539	Instrument ID: D422_import
Preparation:	N/A		Lab File ID: 200-2416-A-3.txt
Dilution:	1.0		Initial Weight/Volume: 129.57 g
Date Analyzed:	11/10/2010 2219		Final Weight/Volume:
Date Prepared:			

Analyte	DryWt Corrected: N	Result (% Passing)	Qualifier	NONE	NONE
Sieve Size 3 inch - Percent Finer		100.0			
Sieve Size 2 inch - Percent Finer		100.0			
Sieve Size 1.5 inch - Percent Finer		100.0			
Sieve Size 1 inch - Percent Finer		100.0			
Sieve Size 0.75 inch - Percent Finer		100.0			
Sieve Size 0.375 inch - Percent Finer		100.0			
Sieve Size #4 - Percent Finer		99.8			
Sieve Size #10 - Percent Finer		99.6			
Sieve Size #20 - Percent Finer		99.2			
Sieve Size #40 - Percent Finer		98.9			
Sieve Size #60 - Percent Finer		98.6			
Sieve Size #80 - Percent Finer		97.7			
Sieve Size #100 - Percent Finer		97.1			
Sieve Size #200 - Percent Finer		88.3			
Hydrometer Reading 1 - Percent Finer		66.9			
Hydrometer Reading 2 - Percent Finer		61.9			
Hydrometer Reading 3 - Percent Finer		53.1			
Hydrometer Reading 4 - Percent Finer		47.1			
Hydrometer Reading 5 - Percent Finer		42.0			
Hydrometer Reading 6 - Percent Finer		34.9			
Hydrometer Reading 7 - Percent Finer		25.3			

Client: Weston Solutions, Inc.

Job Number: 200-2416-1
Sdg Number: 2416

Client Sample ID: **OC-31**

Lab Sample ID: 200-2416-3
Client Matrix: Sediment

Date Sampled: 11/04/2010 1140
Date Received: 11/10/2010 1040

D422 Grain Size

Method:	D422	Analysis Batch: 200-9539	Instrument ID:	D422_import
Preparation:	N/A		Lab File ID:	200-2416-A-3.txt
Dilution:	1.0		Initial Weight/Volume:	129.57 g
Date Analyzed:	11/10/2010 2219		Final Weight/Volume:	
Date Prepared:				

Analyte	DryWt Corrected: N	Result (%)	Qualifier	NONE	NONE
Gravel		0.2			
Sand		11.5			
Coarse Sand		0.2			
Medium Sand		0.7			
Fine Sand		10.6			
Silt		46.3			
Clay		42.0			

Client: Weston Solutions, Inc.

Job Number: 200-2416-1
Sdg Number: 2416

Client Sample ID: **OC-32**

Lab Sample ID: 200-2416-4
Client Matrix: Sediment

Date Sampled: 11/04/2010 1435
Date Received: 11/10/2010 1040

D422 Grain Size

Method:	D422	Analysis Batch: 200-9539	Instrument ID: D422_import
Preparation:	N/A		Lab File ID: 200-2416-A-4.txt
Dilution:	1.0		Initial Weight/Volume: 114.83 g
Date Analyzed:	11/10/2010 2221		Final Weight/Volume:
Date Prepared:			

Analyte	DryWt Corrected: N	Result (% Passing)	Qualifier	NONE	NONE
Sieve Size 3 inch - Percent Finer		100.0			
Sieve Size 2 inch - Percent Finer		100.0			
Sieve Size 1.5 inch - Percent Finer		100.0			
Sieve Size 1 inch - Percent Finer		100.0			
Sieve Size 0.75 inch - Percent Finer		100.0			
Sieve Size 0.375 inch - Percent Finer		100.0			
Sieve Size #4 - Percent Finer		100.0			
Sieve Size #10 - Percent Finer		99.5			
Sieve Size #20 - Percent Finer		98.9			
Sieve Size #40 - Percent Finer		96.5			
Sieve Size #60 - Percent Finer		93.6			
Sieve Size #80 - Percent Finer		89.6			
Sieve Size #100 - Percent Finer		88.5			
Sieve Size #200 - Percent Finer		80.7			
Hydrometer Reading 1 - Percent Finer		64.7			
Hydrometer Reading 2 - Percent Finer		57.9			
Hydrometer Reading 3 - Percent Finer		48.9			
Hydrometer Reading 4 - Percent Finer		44.6			
Hydrometer Reading 5 - Percent Finer		40.0			
Hydrometer Reading 6 - Percent Finer		31.4			
Hydrometer Reading 7 - Percent Finer		22.7			

Client: Weston Solutions, Inc.

Job Number: 200-2416-1
Sdg Number: 2416

Client Sample ID: **OC-32**

Lab Sample ID: 200-2416-4
Client Matrix: Sediment

Date Sampled: 11/04/2010 1435
Date Received: 11/10/2010 1040

D422 Grain Size

Method:	D422	Analysis Batch: 200-9539		Instrument ID:	D422_import
Preparation:	N/A			Lab File ID:	200-2416-A-4.txt
Dilution:	1.0			Initial Weight/Volume:	114.83 g
Date Analyzed:	11/10/2010 2221			Final Weight/Volume:	
Date Prepared:					

Analyte	DryWt Corrected: N	Result (%)	Qualifier	NONE	NONE
Gravel		0.0			
Sand		19.3			
Coarse Sand		0.5			
Medium Sand		3.0			
Fine Sand		15.8			
Silt		40.7			
Clay		40.0			

Client: Weston Solutions, Inc.

Job Number: 200-2416-1
Sdg Number: 2416

Client Sample ID: **OC-33**

Lab Sample ID: 200-2416-5
Client Matrix: Sediment

Date Sampled: 11/04/2010 1545
Date Received: 11/10/2010 1040

D422 Grain Size

Method:	D422	Analysis Batch: 200-9539	Instrument ID: D422_import
Preparation:	N/A		Lab File ID: 200-2416-A-5.txt
Dilution:	1.0		Initial Weight/Volume: 139.64 g
Date Analyzed:	11/10/2010 2225		Final Weight/Volume:
Date Prepared:			

Analyte	DryWt Corrected: N	Result (% Passing)	Qualifier	NONE	NONE
Sieve Size 3 inch - Percent Finer		100.0			
Sieve Size 2 inch - Percent Finer		100.0			
Sieve Size 1.5 inch - Percent Finer		100.0			
Sieve Size 1 inch - Percent Finer		100.0			
Sieve Size 0.75 inch - Percent Finer		100.0			
Sieve Size 0.375 inch - Percent Finer		100.0			
Sieve Size #4 - Percent Finer		100.0			
Sieve Size #10 - Percent Finer		99.8			
Sieve Size #20 - Percent Finer		99.6			
Sieve Size #40 - Percent Finer		99.0			
Sieve Size #60 - Percent Finer		98.3			
Sieve Size #80 - Percent Finer		95.9			
Sieve Size #100 - Percent Finer		94.3			
Sieve Size #200 - Percent Finer		82.1			
Hydrometer Reading 1 - Percent Finer		59.7			
Hydrometer Reading 2 - Percent Finer		55.1			
Hydrometer Reading 3 - Percent Finer		48.1			
Hydrometer Reading 4 - Percent Finer		43.6			
Hydrometer Reading 5 - Percent Finer		39.0			
Hydrometer Reading 6 - Percent Finer		32.6			
Hydrometer Reading 7 - Percent Finer		23.5			

Client: Weston Solutions, Inc.

Job Number: 200-2416-1
Sdg Number: 2416

Client Sample ID: **OC-33**

Lab Sample ID: 200-2416-5
Client Matrix: Sediment

Date Sampled: 11/04/2010 1545
Date Received: 11/10/2010 1040

D422 Grain Size

Method:	D422	Analysis Batch: 200-9539	Instrument ID:	D422_import
Preparation:	N/A		Lab File ID:	200-2416-A-5.txt
Dilution:	1.0		Initial Weight/Volume:	139.64 g
Date Analyzed:	11/10/2010 2225		Final Weight/Volume:	
Date Prepared:				

Analyte	DryWt Corrected: N	Result (%)	Qualifier	NONE	NONE
Gravel		0.0			
Sand		17.9			
Coarse Sand		0.2			
Medium Sand		0.8			
Fine Sand		16.9			
Silt		43.1			
Clay		39.0			

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February 18, 2011

Ms. Brenda Jones and Mr. Ajit Vaidya
Great Lakes National Program Office
United States Environmental Protection Agency, Region V
77 West Jackson Boulevard, Mail Code: G-17J
Chicago, Illinois 60604-3507

Re: Data Review of General Chemistry Analyses (DOC, hardness, pH, and ammonia)
For the Pore Water of Sediment Samples Collected on November 2-4, 2010
Duck and Otter Creeks 2010 Data Gaps Investigation
Wood and Lucas Counties, Ohio
DCN: 1269-2F-ALFI

Dear Ms. Jones and Mr. Vaidya:

The United States Environmental Protection Agency (U.S. EPA) tasked Weston Solutions, Inc., (WESTON®) to perform data validation for sediment samples collected on November 2-4, 2010, for the Great Lakes National Program Office (GLNPO) Duck and Otter Creeks 2010 Data Gaps Investigation (Duck and Otter) Site. This data review is for dissolved organic carbon (DOC), hardness, pH, and ammonia analyses of the pore water of 14 sediment samples that includes one field split sample that were collected by the WESTON Superfund Technical Assessment and Response Team (START). The samples were validated in accordance with the "Quality Assurance Project Plan, Duck and Otter Creeks Data Gaps Investigation" dated September 28, 2010, which includes using the U.S. EPA Contract Laboratory Program National Functional Guidance for Organic and Inorganic Data Review. Table 1 provides a summary of the samples included in this review. All tables are presented at the end of this report.

The samples listed in Table 1 were analyzed by Columbia Analytical Services (CAS) located in Kelso, Washington, under the following six work orders:

- K1012377
- K1012381
- K1012413
- K1012416
- K1012421
- K1012529

Pore water was extracted from the sediment samples and then the pore water was analyzed for DOC using U.S. EPA Method 415.1; for hardness (as calcium carbonate) using Standard Method (SM) 2340B and U.S. EPA SW-856 Method 6010B; for pH using SM 4500-H+B; and for ammonia (as nitrogen) using SM 4500-NH3E. CAS provided WESTON with a staged electronic data deliverable (SEDD) that was used in conjunction with the Automated Data Review (ADR) software to assist in reviewing the data. All SEDDs were imported into the ADR software for

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review by the software program and all data was checked for completeness. Five percent of the data was put through a full data validation. Therefore, one of the work orders, K1012377, was selected for the full data validation. Work order K1012377 contained two sediment samples including one field split sample for the general chemistry parameters of pore water.

Attachment A to this report contains the individual Quality Assurance/Quality Control (QA/QC) Analysis Checklist for Sediment Chemistry Analysis for work order K1012377. Attachment B to this report contains a printed report from ADR that provides a summary of results with qualifiers applied by the laboratory and the ADR program. Attachment C contains the data qualifier definitions. The QC limits utilized were those stated in the QAPP. If there was not a QC limit specified in the QAPP, then the method or laboratory-determined QC limits were used. Below is the data review summary.

SUMMARY OF GENERAL CHEMISTRY DATA REVIEW

As stated above, five percent of the data was fully validated. Work order K1012377 was selected for full data validation. In work order K1012377, calibration standards, calibration blanks, laboratory control samples (LCS), laboratory duplicates, matrix spike (MS) samples, and holding times were all within the QC limits as applicable to each method for DOC, pH, ammonia, and hardness. In accordance with the Field Sampling Plan, field duplicates and field splits were not to be collected for the pore water analyses; however, one field split sample was collected and the results were acceptable.

Through full data validation and the ADR program, two problems with the quality control indicators was discovered. For the pH analyses, the holding time limit was exceeded for one sample. In addition, there was minor contamination below the reporting limit in the method blank; however, no qualification was required because the sample results were much greater.

Below are a description of the minor problems with QC failures and a review of the data quality indicators.

MINOR PROBLEMS

Minor problems with QC failures are noted below.

Holding Times. The holding times for DOC, ammonia, and hardness were acceptable. For pH, the method states that samples should be analyzed as soon as possible. Pore water sample DC-17 was analyzed 17 days from sample collection which is excessive. The pH result in sample DC-17 was flagged “J” as estimated.

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Method Blanks. Ammonia was detected in a method blank above the method detection limit but below the reporting limit. Sample results were much greater than the method blank concentration and therefore, no qualifications were required.

DATA QUALITY INDICATORS REVIEW

Many the data quality indicators (sensitivity, precision, accuracy, and completeness) were evaluated through the data validation procedures which are summarized above and discussed in detail in the Attachment.

Sensitivity. The laboratory reporting limits as stated in the QAPP was met for all samples when adjusted for the dilution factors. Sensitivity was acceptable.

Precision. Field precision was evaluated by evaluating the RPDs for the one field split sample. For the field split, the RPDs ranged were all below a standard QC limit of 50 percent. Table 2 summarizes the field split results. Field precision was evaluated and found to be acceptable.

Laboratory precision was determined by evaluating the relative percent difference (RPD) value for the laboratory duplicates for DOC, pH, and ammonia, and the RPD values for the LCS duplicate sample for hardness. The RPD values were all within the QAPP-stated QC limits. The mean RPDs for laboratory duplicates ranged from 0 to 8 percent. Table 3 summarizes the laboratory precision results. The laboratory precision was acceptable for the DOC, pH, ammonia, and hardness analyses.

Accuracy/Bias. Accuracy is a measure of the agreement between an observed value and an accepted reference value. Laboratory accuracy was evaluated by reviewing the QC criteria for percent recovery for MS results for DOC and ammonia; and LCS results for DOC, hardness, pH, and ammonia.

The mean LCS recoveries ranged from 97 to 100 percent and are within the QAPP QC limits. The mean MS recoveries ranged from 100 to 108 percent and are within the QAPP specified QC limits. Laboratory accuracy is acceptable. The LCS and MS recoveries do not indicate a bias associated with the pH, ammonia, hardness, and DOC results.

Completeness. Completeness is a measure of the amount of valid data obtained compared to the amount of data that was planned to be collected under normal conditions. All samples results were received.

In summary, the data are acceptable for use and data qualifications were applied to one sample result for holding time exceedance for pH. The ADR Summary Report in Attachment B indicates which sample results were flagged during data validation and the reason for the qualification. The laboratory data qualifiers applied are also indicated on the ADR Summary

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Report in Attachment B. Attachment C provides data qualifier definitions for those qualifiers applied during data validation and by the laboratory.

If there are any questions or comments regarding this report, please do not hesitate to contact WESTON START at 312-424-3300.

Very truly yours,
Weston Solutions, Inc.

Lisa Graczyk
WESTON START Team

Alex Clark
WESTON START Project Manager

Attachments:
Tables
A - QA/QC Analysis Checklist for General Chemistry Parameters for Work Order K1012377
B – ADR Summary Report for General Chemistry Parameters
C – Data Qualifier Definitions

cc: project file

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TABLES

This document was prepared by Weston Solutions, Inc., expressly for U.S. EPA. It shall not be released or disclosed in whole or in part without the express, written permission of U.S. EPA.

TABLE 1
SAMPLES INCLUDED IN DATA REVIEW

Sample ID	Lab ID	Date Collected	Comment
DC-19	K1012377-013	11/02/2010	
DC-19FS	K1012377-014	11/02/2010	Field split of DC-19
DC-17	K1012381-013	11/02/2010	
DC-13	K1012413-010	11/02/2010	
DC-16	K1012413-011	11/02/2010	
OC-26	K1012416-010	11/03/2010	
OC-27	K1012416-011	11/03/2010	
DC-14	K1012421-011	11/03/2010	
OC-28	K1012421-012	11/03/2010	
OC-32	K1012529-019	11/04/2010	
OC-33	K1012529-020	11/04/2010	
OC-29	K1012529-021	11/04/2010	
OC-30	K1012529-022	11/04/2010	
OC-31	K1012529-023	11/04/2010	

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TABLE 2
FIELD SPLIT RESULTS

Analyte	Sample: DC-19FS		
	Sample Result (mg/L)	**Replicate Result (mg/L)**	**RPD**
Ammonia as Nitrogen	8.12	8.53	5
DOC	50.4	40.6	22
Hardness, as CaCO3	299	309	3
pH (pH units)	7.32	7.39	1

Notes:
CaCO3 – Calcium Carbonate
DOC – Dissolved Organic Carbon
mg/L – Milligram per liter
RPD – Relative Percent Difference

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TABLE 3
QUANTITATIVE DATA ASSESSMENT

	Analytical Precision	Analytical Accuracy/Bias	
Analyte	**Mean Laboratory Duplicate or LCS/LCSD RPD (%) (n=3 for DOC; n=2 for pH, Ammonia, Hardness)**	**Mean MS Recovery (%) (n=3 for DOC; n=2 for Ammonia)**	**Mean LCS Recovery (%) (n=3 for DOC, pH; n=4 for Ammonia)**
DOC	8	100	102
Hardness	0	NA	108/104*
pH	1	NA	100
Ammonia	2	97	100

Notes:
* For hardness, a result is calculated from the results for calcium and magnesium. Therefore, the values listed for mean MS and mean LCS are for calcium/magnesium.

DOC – Dissolved Organic Carbon
LCS – Laboratory Control Sample
MS – Matrix Spike
NA – Not Applicable
RPD – Relative Percent Difference

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ATTACHMENT A

QA/QC ANALYSIS CHECKLIST FOR GENERAL CHEMISTRY PARAMETERS FOR WORK ORDER K1012377

GENERAL CHEMISTRY PARAMETERS

Dissolved Organic Carbon (DOC) by U.S. EPA Method 415.1
Hardness (as calcium carbonate) by SM 2340B and SW-846 6010B
pH by SM 4500-H+B
Ammonia (as nitrogen) by SM 4500-NH3E

WORK ORDER # K1012377

QA/QC Analysis Checklist for Sediment Chemistry Analysis

GRANT/IAG NUMBER: Not Applicable
PROJECT NAME: GLNPO Duck and Otter 2010 Data Gaps Investigation
REVIEWER: Lisa Graczyk, WESTON START
DATE: February 18, 2011

1. What sediment chemistry data has been collected (CHECK ALL THAT APPLY)?

Total Metals _____	PCBs _____	pH ___X__	TOC _____
Dioxins/Furans _____	PAHs _____	Pesticides _____	DO _____
AVS _____	SEM Metals _____	Particle Size _____	Other ___X (DOC, ammonia, and hardness)

2. Were the target detection limits met for each parameter?

Yes X
No _____ (EXPLAIN)

The reporting limits as stated in the QAPP were achieved when adjusted for dilution factors.

3. Were the method blanks less than the established MDL for each parameter?

Yes _____
No X (EXPLAIN)

A method blank was analyzed with the DOC, ammonia, and hardness analyses.

For the ammonia analyses, ammonia was detected below the reporting limit but above the method detection limit in the method blank. Because the sample results were above the reporting limit and significantly above the method blank results, no qualifications are required.

4. Did the results of Field Replicate Analysis vary by less than the % RPD specified in the QAPP?

Yes	X	
No		(EXPLAIN)

There are no field replicate samples associated with this work order.

5. Did the results of the Field Duplicates Analysis vary by less than the % RPD specified in the QAPP?

Yes	Not Applicable	
No		(EXPLAIN)

6. Did the surrogate spike/internal standards recoveries meet the limits set forth in the QAPP?

Yes	Not Applicable	
No		(EXPLAIN)

Internal standards and surrogates are not applicable to the pH, ammonia, hardness, and DOC analyses.

7. Did the MS/MSD recoveries meet the limits set forth in the QAPP?

Yes	X	
No		(EXPLAIN)

An MS was analyzed with the DOC and ammonia analyses.

General Chemistry Parameters Checklist
GLNPO Duck and Otter Creeks 2010 Data Gaps Investigation
Columbia Analytical Services
Laboratory Work Order #: K1012377

8. Did the RPD (%) of the MS/MSD sample set meet the limits set forth in the QAPP?

Yes	Not Applicable	
No		(EXPLAIN)

.

9. Did the LCS recoveries meet the limits set forth in the QAPP?

Yes	X	
No		(EXPLAIN)

10. Did the calibration verification standards (ICVs and CCVs) meet the requirements set forth in the QAPP?

Yes	X	
No		(EXPLAIN)

.

11. Did the calibration blanks (ICBs and CCBs) meet the limits set forth in the QAPP?

Yes	X	
No		(EXPLAIN)

12. Did the interference check samples meet the limits set forth in the QAPP?

Yes	X	
No		(EXPLAIN)

Interference check sample results are applicable to hardness analysis only.

General Chemistry Parameters Checklist
GLNPO Duck and Otter Creeks 2010 Data Gaps Investigation
Columbia Analytical Services
Laboratory Work Order #: K1012377

13. Did the serial dilution samples meet the limits set forth in the QAPP?

Yes	Not Applicable	
No		(EXPLAIN)

Serial dilution results were not analyzed with the analyses.

14. Were any level of contaminants detected above the MDL for the trip blanks and storage blanks?

Yes	Not Applicable	
No		(EXPLAIN)

Trip blanks and storage blanks are not applicable to to pH, flashpoint, TDS, and TSS analyses.

15. Did all required analyses take place within the required holding time protocols set forth in the QAPP?

Yes	X	
No		(EXPLAIN)

16. Did the laboratory duplicates vary by less than the % RPD specified in the QAPP?

Yes	X	
No		(EXPLAIN)

17. Are measured dry-weight contaminant concentrations reported?

Yes	Not Applicable	
No		(EXPLAIN)

18. Please provide details for all of the "UNACCEPTABLE" marked above. Include details on the specific analytes affected by any QA/QC discrepancies, and recommendations regarding usability of data.

Any items with “UNACCEPTABLE” marked above are described immediately following the “UNACCEPTABLE” marking in the corresponding item above.

The data are acceptable for use.

ATTACHMENT B

ADR SUMMARY REPORT FOR GENERAL CHEMISTRY PARAMETERS

Sample Qualification Report (All Analytes)

Client Sample ID : DC-19 **Lab Report Batch :** K1012377 **Lab ID :** CAS_K

Sample Date : 11/02/2010 **Analysis Type: 1RES/TOT** **Sample Matrix :** AQ

Lab Sample ID: K1012377-013

Reviewed By / Date : **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 415.1					**Dilution: 5**															
Carbon, Dissolved Organic	50.4		mg/L		YES															
Analysis Method : 6010B/SM 2340B					**Dilution: 1**															
Hardness as CaCO3, Dissolved	299		mg/L		YES															
Analysis Method : SM 4500-H+ B					**Dilution: 1**															
pH	7.32		pH UNITS		YES															
Analysis Method : SM 4500-NH3 E					**Dilution: 1**															
Ammonia as Nitrogen	8.12		mg/L		YES															

Project Number and Name: **40479 - Duck and Otter Creek** **Library Used:** **Duck and Otter**

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data revie

Sample Qualification Report (All Analytes)

Client Sample ID : DC-19FS **Lab Report Batch :** K1012377 **Lab ID :** CAS_K

Sample Date : 11/02/2010 **Analysis Type: 1RES/TOT** **Sample Matrix :** AQ

Lab Sample ID: K1012377-014

Reviewed By / Date : **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 415.1					**Dilution: 5**															
Carbon, Dissolved Organic	40.6		mg/L		YES															
Analysis Method : 6010B/SM 2340B					**Dilution: 1**															
Hardness as CaCO3, Dissolved	309		mg/L		YES															
Analysis Method : SM 4500-H+ B					**Dilution: 1**															
pH	7.39		pH UNITS		YES															
Analysis Method : SM 4500-NH3 E					**Dilution: 1**															
Ammonia as Nitrogen	8.53		mg/L		YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data revie

Sample Qualification Report (All Analytes)

Client Sample ID : DC-17 **Lab Report Batch :** K1012381 **Lab ID :** CAS_K

Sample Date : 11/02/2010 **Analysis Type: 1RES/TOT** **Sample Matrix :** AQ

Lab Sample ID: K1012381-013

Reviewed By / Date : **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 415.1					**Dilution: 10**															
Carbon, Dissolved Organic	57.8		mg/L		YES															
Analysis Method : 6010B/SM 2340B					**Dilution: 1**															
Hardness as CaCO3, Dissolved	330		mg/L		YES															
Analysis Method : SM 4500-H+ B					**Dilution: 1**															
pH	7.64		pH UNITS		YES	**J**		J												
Analysis Method : SM 4500-NH3 E					**Dilution: 1**															
Ammonia as Nitrogen	9.47		mg/L		YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data revie

Sample Qualification Report (All Analytes)

Client Sample ID : DC-13 **Lab Report Batch :** K1012413 **Lab ID :** CAS_K

Sample Date : 11/02/2010 **Analysis Type: 1RES/TOT** **Sample Matrix :** AQ

Lab Sample ID: K1012413-010

Reviewed By / Date : **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 415.1					**Dilution: 10**															
Carbon, Dissolved Organic	79.7		mg/L		YES															
Analysis Method : 6010B/SM 2340B					**Dilution: 1**															
Hardness as CaCO3, Dissolved	417		mg/L		YES															
Analysis Method : SM 4500-H+ B					**Dilution: 1**															
pH	7.31		pH UNITS		YES															
Analysis Method : SM 4500-NH3 E					**Dilution: 1**															
Ammonia as Nitrogen	17.0		mg/L		YES															

Project Number and Name: **40479 - Duck and Otter Creek** **Library Used:** **Duck and Otter**

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data revie

Sample Qualification Report (All Analytes)

Client Sample ID : DC-16 **Lab Report Batch :** K1012413 **Lab ID :** CAS_K

Sample Date : 11/02/2010 **Analysis Type: 1RES/TOT** **Sample Matrix :** AQ

Lab Sample ID: K1012413-011

Reviewed By / Date : **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 415.1					**Dilution: 5**															
Carbon, Dissolved Organic	59.8		mg/L		YES															
Analysis Method : 6010B/SM 2340B					**Dilution: 1**															
Hardness as CaCO3, Dissolved	332		mg/L		YES															
Analysis Method : SM 4500-H+ B					**Dilution: 1**															
pH	7.36		pH UNITS		YES															
Analysis Method : SM 4500-NH3 E					**Dilution: 1**															
Ammonia as Nitrogen	11.1		mg/L		YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data revie

Sample Qualification Report (All Analytes)

Client Sample ID : OC-26 **Lab Report Batch :** K1012416 **Lab ID :** CAS_K

Sample Date : 11/03/2010 **Analysis Type: 1RES/TOT** **Sample Matrix :** AQ

Lab Sample ID: K1012416-010

Reviewed By / Date : **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 415.1					**Dilution: 25**															
Carbon, Dissolved Organic	133		mg/L		YES															
Analysis Method : 6010B/SM 2340B					**Dilution: 1**															
Hardness as CaCO3, Dissolved	277		mg/L		YES															
Analysis Method : SM 4500-H+ B					**Dilution: 1**															
pH	7.68		pH UNITS		YES															
Analysis Method : SM 4500-NH3 E					**Dilution: 1**															
Ammonia as Nitrogen	6.18		mg/L		YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data revie

Sample Qualification Report (All Analytes)

Client Sample ID : OC-27 **Lab Report Batch :** K1012416 **Lab ID :** CAS_K

Sample Date : 11/03/2010 **Analysis Type: 1RES/TOT** **Sample Matrix :** AQ

Lab Sample ID: K1012416-011

Reviewed By / Date : **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 415.1					**Dilution: 50**															
Carbon, Dissolved Organic	157		mg/L		YES															
Analysis Method : 6010B/SM 2340B					**Dilution: 1**															
Hardness as CaCO3, Dissolved	461		mg/L		YES															
Analysis Method : SM 4500-H+ B					**Dilution: 1**															
pH	7.84		pH UNITS		YES															
Analysis Method : SM 4500-NH3 E					**Dilution: 1**															
Ammonia as Nitrogen	1.89		mg/L		YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data revie

Sample Qualification Report (All Analytes)

Client Sample ID : DC-14 **Lab Report Batch :** K1012421 **Lab ID :** CAS_K

Sample Date : 11/03/2010 **Analysis Type: 1RES/TOT** **Sample Matrix :** AQ

Lab Sample ID: K1012421-011

Reviewed By / Date : **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 415.1					**Dilution: 10**															
Carbon, Dissolved Organic	63.0		mg/L		YES															
Analysis Method : 6010B/SM 2340B					**Dilution: 1**															
Hardness as CaCO3, Dissolved	342		mg/L		YES															
Analysis Method : SM 4500-H+ B					**Dilution: 1**															
pH	7.39		pH UNITS		YES															
Analysis Method : SM 4500-NH3 E					**Dilution: 1**															
Ammonia as Nitrogen	11.3		mg/L		YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data revie

Sample Qualification Report (All Analytes)

Client Sample ID : OC-28 **Lab Report Batch :** K1012421 **Lab ID :** CAS_K

Sample Date : 11/03/2010 **Analysis Type: 1RES/TOT** **Sample Matrix :** AQ

Lab Sample ID: K1012421-012

Reviewed By / Date : **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 415.1					**Dilution: 10**															
Carbon, Dissolved Organic	77.7		mg/L		YES															
Analysis Method : 6010B/SM 2340B					**Dilution: 1**															
Hardness as CaCO3, Dissolved	532		mg/L		YES															
Analysis Method : SM 4500-H+ B					**Dilution: 1**															
pH	7.60		pH UNITS		YES															
Analysis Method : SM 4500-NH3 E					**Dilution: 1**															
Ammonia as Nitrogen	5.43		mg/L		YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data revie

Sample Qualification Report (All Analytes)

Client Sample ID : OC-29 **Lab Report Batch :** K1012529 **Lab ID :** CAS_K

Sample Date : 11/04/2010 **Analysis Type: 1RES/TOT** **Sample Matrix :** AQ

Lab Sample ID: K1012529-021

Reviewed By / Date : **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 415.1					**Dilution: 10**															
Carbon, Dissolved Organic	58.9		mg/L		YES															
Analysis Method : 6010B/SM 2340B					**Dilution: 1**															
Hardness as CaCO3, Dissolved	576		mg/L		YES															
Analysis Method : SM 4500-H+ B					**Dilution: 1**															
pH	7.98		pH UNITS		YES															
Analysis Method : SM 4500-NH3 E					**Dilution: 1**															
Ammonia as Nitrogen	3.35		mg/L		YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data revie

Sample Qualification Report (All Analytes)

Client Sample ID : OC-30 **Lab Report Batch :** K1012529 **Lab ID :** CAS_K

Sample Date : 11/04/2010 **Analysis Type: 1RES/TOT** **Sample Matrix :** AQ

Lab Sample ID: K1012529-022

Reviewed By / Date : **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 415.1					**Dilution: 10**															
Carbon, Dissolved Organic	44.4		mg/L		YES															
Analysis Method : 6010B/SM 2340B					**Dilution: 1**															
Hardness as CaCO3, Dissolved	230		mg/L		YES															
Analysis Method : SM 4500-H+ B					**Dilution: 1**															
pH	7.99		pH UNITS		YES															
Analysis Method : SM 4500-NH3 E					**Dilution: 1**															
Ammonia as Nitrogen	2.85		mg/L		YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data revie

Sample Qualification Report (All Analytes)

Client Sample ID : OC-31 **Lab Report Batch :** K1012529 **Lab ID :** CAS_K

Sample Date : 11/04/2010 **Analysis Type: 1RES/TOT** **Sample Matrix :** AQ

Lab Sample ID: K1012529-023

Reviewed By / Date : **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 415.1					**Dilution: 10**															
Carbon, Dissolved Organic	67.1		mg/L		YES															
Analysis Method : 6010B/SM 2340B					**Dilution: 1**															
Hardness as CaCO3, Dissolved	212		mg/L		YES															
Analysis Method : SM 4500-H+ B					**Dilution: 1**															
pH	8.08		pH UNITS		YES															
Analysis Method : SM 4500-NH3 E					**Dilution: 1**															
Ammonia as Nitrogen	2.19		mg/L		YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data revie

Sample Qualification Report (All Analytes)

Client Sample ID : OC-32 **Lab Report Batch :** K1012529 **Lab ID :** CAS_K

Sample Date : 11/04/2010 **Analysis Type: 1RES/TOT** **Sample Matrix :** AQ

Lab Sample ID: K1012529-019

Reviewed By / Date : **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 415.1					**Dilution: 10**															
Carbon, Dissolved Organic	120		mg/L		YES															
Analysis Method : 6010B/SM 2340B					**Dilution: 1**															
Hardness as CaCO3, Dissolved	243		mg/L		YES															
Analysis Method : SM 4500-H+ B					**Dilution: 1**															
pH	7.97		pH UNITS		YES															
Analysis Method : SM 4500-NH3 E					**Dilution: 1**															
Ammonia as Nitrogen	2.60		mg/L		YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data revie

Sample Qualification Report (All Analytes)

Client Sample ID : OC-33 **Lab Report Batch :** K1012529 **Lab ID :** CAS_K

Sample Date : 11/04/2010 **Analysis Type: 1RES/TOT** **Sample Matrix :** AQ

Lab Sample ID: K1012529-020

Reviewed By / Date : **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 415.1					**Dilution: 10**															
Carbon, Dissolved Organic	35.2		mg/L		YES															
Analysis Method : 6010B/SM 2340B					**Dilution: 1**															
Hardness as CaCO3, Dissolved	216		mg/L		YES															
Analysis Method : SM 4500-H+ B					**Dilution: 1**															
pH	7.69		pH UNITS		YES															
Analysis Method : SM 4500-NH3 E					**Dilution: 1**															
Ammonia as Nitrogen	2.31		mg/L		YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data revie

ATTACHMENT C

DATA QUALIFIER DEFINITIONS

LABORATORY DATA QUALIFIER DEFITIONS

Not Applicable

DATA VALIDATION DATA QUALIFIER DEFITIONS

J - The analyte was positively identified and the associated numerical value is the approximate concentration of the analyte in the sample (due either to the quality of the data generated because certain quality control criteria were not met, or the concentration of the analyte was below the quantitation limit).

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February 8, 2011

Ms. Brenda Jones and Mr. Ajit Vaidya
Great Lakes National Program Office
United States Environmental Protection Agency, Region V
77 West Jackson Boulevard, Mail Code: G-17J
Chicago, Illinois 60604-3507

Re: Data Review of Acid Volatile Sulfide (AVS) and Simultaneously Extracted Metals (SEM) Analysis
For Sediment Samples Collected on November 2-4, 2010
Duck and Otter Creeks 2010 Data Gaps Investigation
Wood and Lucas Counties, Ohio
DCN: 1269-2F-ALFI

Dear Ms. Jones and Mr. Vaidya:

The United States Environmental Protection Agency (U.S. EPA) tasked Weston Solutions, Inc., (WESTON®) to perform data validation for sediment samples collected on November 2-3, 2010, for the Great Lakes National Program Office (GLNPO) Duck and Otter Creeks 2010 Data Gaps Investigation Site. This data review is for AVS and SEM analysis of 18 sediment samples that includes one field split and four field duplicate samples that were collected by the Weston Solutions Inc. (WESTON) Superfund Technical Assessment and Response Team (START). The samples were validated in accordance with the "Quality Assurance Project Plan, Duck and Otter Creeks Data Gaps Investigation" dated September 28, 2010, which includes using the U.S. EPA Contract Laboratory Program National Functional Guidance for Organic and Inorganic Data Review. Table 1 provides a summary of the samples included in this review. All tables are presented at the end of this report.

The samples listed in Table 1 were analyzed by Columbia Analytical Services (CAS) located in Kelso, Washington, under the following six work orders:

- K1012377
- K1012381
- K1012413
- K1012416
- K1012421
- K1012529

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The samples were analyzed for AVS using U.S. EPA Method 831/R-91-100 and for SEM using U.S. EPA Method 831/R-91-100 and SW-846 Method 6010B. Table 2 summarizes the SEMs that were analyzed. CAS provided WESTON with a staged electronic data deliverable (SEDD) that was used in conjunction with the Automated Data Review (ADR) software to assist in reviewing the data. All SEDDs were imported into the ADR software for review by the software program and all data was checked for completeness. Five percent of the data was put through a full data validation. Therefore, one of the work orders, K1012377, was selected for the full data validation. Work order K1012377 contains two sediment samples, including one field split, for AVS and SEM analysis.

Attachment A to this report contains the individual Quality Assurance/Quality Control (QA/QC) Analysis Checklist for Sediment Chemistry Analysis for work order K1012377. Attachment B to this report contains a printed report from ADR that provides a summary of results with qualifiers applied by the laboratory and the ADR program. Attachment C contains the data qualifier definitions. The QC limits utilized were those stated in the QAPP. If there was not a QC limit specified in the QAPP, then the method or laboratory-determined QC limits were used. Below is the data review summary.

SUMMARY OF METALS DATA REVIEW

As stated above, five percent of the data was fully validated. Work order K1012377 was selected for full data validation. In work order K1012377, the holding times, calibration standards, calibration blanks, serial dilutions, laboratory control samples (LCS), and method blanks were all within the QC limits. All sample results were based on a dry weight for the AVS and SEM analyses.

For the remaining work orders, the ADR program indicated that all holding time limits, method blanks, LCSs, laboratory duplicates, matrix spikes (MS), and matrix spike duplicates (MSD) were within QC limits.

There were some problems with field split and field duplicate recoveries indicating some issues with sample heterogeneity.

Below are a description of the minor problems with QC failures and a review of the data quality indicators.

MINOR PROBLEMS

Minor problems with QC failures are noted below.

Field Splits. The QAPP stated that field splits (replicates) would be collected at a 10 percent frequency. There were a total of 13 field investigative samples and one field split collected (see

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Table 1 for which samples are designated as field splits). Therefore, the QAPP-stated frequency was very close to being met (split collected at an 8 percent frequency). A QC limit for field splits was not stated in the QAPP; therefore, a default QC limit of 50 RPD was used to evaluate field split results. The RPDs are below 50 RPD except for copper which has and RPD of 64 percent. This likely indicates some heterogeneity associated with copper in this sample and does not affect data usability. Tables 3 summarizes the field split results.

Field Duplicates. The QAPP stated that field duplicate samples would be collected at a 10 percent frequency. There were a total of 13 field investigative samples and four field duplicates collected (see Table 1 for which samples are designated as field duplicates). Therefore, the QAPP-stated frequency was met for the field duplicates. A QC limit for field duplicates was not stated in the QAPP; therefore, a default QC limit of 50 RPD was used to evaluate field duplicate results. The RPDs for AVS and some SEMs were outside this QC limit in some of the field duplicates. Table 4 summarizes the field duplicate results. Below is a description of the QC limit exceedances.

- **Field duplicate pair OC-27 and OC-27-DP.** In this field duplicate pair, the RPD for AVS is 134. This indicates heterogeneity associated with AVS in this sample. No qualifications are applied and data usability is not affected.

- **Field duplicate pair OC-31 and OC-31DP.** In this field duplicate pair, the RPD for AVS is 53 and the RPD for copper is 82. This indicates heterogeneity associated with AVS and copper in this sample. No qualifications are applied and data usability is not affected.

- **Field duplicate pair OC-32 and OC-32DP.** In this field duplicate pair, the RPD for AVS is 60 and the RPD for copper is 77. This indicates heterogeneity associated with AVS and copper in this sample. No qualifications are applied and data usability is not affected.

DATA QUALITY INDICATORS REVIEW

Many the data quality indicators (sensitivity, precision, accuracy, and completeness) were evaluated through the data validation procedures which are summarized above and discussed in detail in the attachments.

Sensitivity. Several of **t**he sediment reporting limits for SEMs as stated in the QAPP were not met; in many instances, this was due to correction for high percent moisture. Because there are no screening levels for SEMs, data usability is not affected. The reporting limits for AVS as stated in the QAPP were met. Sensitivity was adequate for the AVS and SEM analyses of sediment samples collected on November 2-4, 2010.

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Precision. Field precision was evaluated by evaluating the mean RPDs for field split and field duplicate results. For the field splits, mean RPDs ranged from 3 to 64 percent and for the field duplicates, mean RPDs ranged from 6 to 71 percent. Although the mean RPD values for copper and AVS slightly exceeded the QC limits, this does not affect data usability. Field duplicates are collected adjacent to the parent sample and the slightly high RPDs represent sample heterogeneity. Field precision was evaluated and found to be acceptable. Table 5 summarizes the field precision results.

Laboratory precision was determined by evaluating the RPD values between the laboratory duplicate and parent sample results. RPD values for laboratory duplicates are within QC limits. Table 5 summarizes the mean RPDs for laboratory duplicates. The laboratory precision was acceptable for the AVS and SEM analyses.

Accuracy. Accuracy is a measure of the agreement between an observed value and an accepted reference value. Laboratory accuracy was evaluated by reviewing the QC criteria for percent recovery for MS/MSD and LCS results. The LCS and MS recoveries were within the QC limits for all samples. Table 5 summarizes the accuracy estimates for this project. The mean MS recoveries ranged from 90 to 96 percent and the mean LCS recoveries ranged from 92 to 105 percent. Laboratory accuracy was acceptable. Based on the mean recoveries for both the LCSs and MSs, there appears to be no bias associated with the AVS and SEM analyses.

Completeness. Completeness is a measure of the amount of valid data obtained compared to the amount of data that was planned to be collected under normal conditions. All sample results were received.

In summary, there were some minor problems associated with field split and duplicate results. No qualifiers were applied during data validation. The ADR Summary Report in Attachment B summarizes the results. Attachment C provides data qualifier definitions for those qualifiers applied by the laboratory.

If there are any questions or comments regarding this report, please do not hesitate to contact WESTON START at 312-424-3300.

Very truly yours,
Weston Solutions, Inc.

Lisa Graczyk
WESTON START Team

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Alex Clark

WESTON START Project Manager

Attachments:

Tables
A - QA/QC Analysis Checklist for AVS and SEM for Work Order K1012377
B – ADR Summary Report for AVS and SEM
C – Data Qualifier Definitions

cc: project file

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TABLES

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TABLE 1
SAMPLES INCLUDED IN DATA REVIEW

Sample ID	Lab ID	Date Collected	Comment
DC-19	K1012377-001	11/02/2010	
DC-19FS	K1012377-012	11/02/2010	Field split of DC-19
DC-17	K1012381-005	11/02/2010	
DC-13	K1012413-001	11/02/2010	
DC-16	K1012413-002	11/02/2010	
OC-26	K1012416-001	11/03/2010	
OC-27	K1012416-006	11/03/2010	
OC-27-DP	K1012416-009	11/03/2010	Field duplicate of OC-27
DC-14	K1012421-001	11/03/2010	
OC-28	K1012421-007	11/03/2010	
OC-31DP	K1012529-003	11/04/2010	Field duplicate of OC-31
OC-32	K1012529-004	11/04/2010	
OC-32DP	K1012529-007	11/04/2010	Field duplicate of OC-32
OC-33	K1012529-008	11/04/2010	
OC-29	K1012529-011	11/04/2010	
OC-30	K1012529-014	11/04/2010	
OC-30DP	K1012529-017	11/04/2010	Field duplicate of OC-30
OC-31	K1012529-018	11/04/2010	

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TABLE 2 METAL ANALYTES	
CAS #	**Analyte**
7440-43-9	Cadmium
7440-50-8	Copper
7439-92-1	Lead
7440-02-0	Nickel
7440-22-4	Silver
7440-66-6	Zinc

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TABLE 3
FIELD SPLIT RESULTS

Analyte	Sample: DC-19FS			Sample:		
	Sample Result (µmole/g)	**Replicate Result (µmole/g)**	**RPD**	**Sample Result (µmole/g)**	**Replicate Result (µmole/g)**	**RPD**
Cadmium	0.0035	0.0033	6			
Copper	0.0087	0.0168	64			
Lead	0.031	0.027	14			
Nickel	0.043	0.04	7			
Silver	<0.0034	<0.0033	NA			
Zinc	0.396	0.385	3			
AVS	7.2	5.3	30			

Notes:
Highlighted results exceed 50 RPD.
µmole/g – Micromole Per Gram
AVS – Acid Volatile Sulfide
NA – Not Applicable
RPD – Relative Percent Difference

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TABLE 4
FIELD DUPLICATE RESULTS

Analyte	Sample: OC-27-DP			Sample: OC-31DP		
	Sample Result (µmole/g)	Replicate Result (µmole/g)	RPD	Sample Result (µmole/g)	Replicate Result (µmole/g)	RPD
Cadmium	0.0089	0.0104	16	0.0024	0.0024	0
Copper	<0.0039	<0.0039	NA	0.0125	0.0299	82
Lead	0.098	0.113	14	0.019	0.02	5
Nickel	0.049	0.056	13	0.026	0.025	4
Silver	<0.0023	<0.0023	NA	<0.0025	<0.0019	NA
Zinc	0.618	0.66	7	0.189	0.177	7
AVS	7.29	36.8	134	2.62	1.53	53
Analyte	**Sample: OC-32DP**			**Sample: OC-30DP**		
	Sample Result (µmole/g)	Replicate Result (µmole/g)	RPD	Sample Result (µmole/g)	Replicate Result (µmole/g)	RPD
Cadmium	0.0039	0.0046	16	0.0068	0.0055	21
Copper	0.015	0.0337	77	0.0498	0.0527	6
Lead	0.055	0.071	25	0.074	0.085	14
Nickel	0.028	0.03	7	0.039	0.039	0
Silver	<0.0022	<0.0020	NA	<0.0018	<0.0022	NA
Zinc	0.316	0.368	15	0.448	0.41	9
AVS	1.81	3.35	60	6.09	4.17	37

Notes:
Highlighted results exceed 50 RPD.
µmole/g – Micromole Per Gram
AVS – Acid Volatile Sulfide
NA – Not Applicable
RPD – Relative Percent Difference

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TABLE 5
QUANTITATIVE DATA ASSESSMENT

Parameter	Field Precision		Analytical Precision	Analytical Accuracy/Bias	
	Field Split RPD (%) (n=1)	Mean Field Duplicate RPD (%) (n=4)	Laboratory Duplicate RPD (%) (n=1)	Mean MS/MSD Recovery (%) (n=2 for AVS; n=1 for SEM)	Mean LCS Recovery (%)(n=2)
Cadmium	6	13	10.5	94	105
Copper	64	55	NA	93	100
Lead	14	15	4.8	96	103
Nickel	7	6	7.7	93	100
Silver	NA	NA	NA	95	98
Zinc	3	9	7.9	90	102
AVS	30	71	19	94	92

Notes:

LCS – Laboratory Control Sample
MS – Matrix Spike
MSD – Matrix Spike Duplicate
NA – Not Applicable (both results were non-detect for silver)
RPD – Relative Percent Difference

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Ms. Jones and Mr. Vaidya
U.S. EPA

Duck and Otter Creeks 2010 Data Gaps Investigation Site
AVS and SEM Data Review
For Sediment Samples Collected November 2-4, 2010
February 8, 2011

ATTACHMENT A

QA/QC ANALYSIS CHECKLIST FOR AVS AND SEM FOR WORK ORDER K1012377

ACID VOLATILE SULFIDE (AVS) BY METHOD 831/R-91-100 AND SIMULTANEOUSLY EXTRACTED METALS (SEM) BY U.S. EPA SW-846 METHOD 6010B

CAS Work Order #: K1012377

QA/QC Analysis Checklist for Sediment Chemistry Analysis

GRANT/IAG NUMBER: Not Applicable
PROJECT NAME: Duck and Otter Creeks 2010 Data Gaps Investigation
REVIEWER: Lisa Graczyk, WESTON START
DATE: February 8, 2011

1. What sediment chemistry data has been collected (CHECK ALL THAT APPLY)?

Total Metals ___	PCBs _____	pH _____	TOC _____
Dioxins/Furans _____	PAHs _____	Pesticides _____	DO _____
AVS __X___	SEM Metals _X_	Particle Size _____	Other _____

2. Were the target detection limits met for each parameter?

Yes	X (AVS)	
No	X (SEM)	(EXPLAIN)

The sediment reporting limits for SEMs as stated in the QAPP were not met; in many instances, this was due to correction for high percent moisture. Because there are no screening levels for SEMs, data usability is not affected.

3. Were the method blanks less than the established MDL for each parameter?

Yes	X	
No		(EXPLAIN)

AVS and SEMs were not detected in the method blank above the reporting limit.

4. Did the results of Field Replicate Analysis vary by less than the % RPD specified in the QAPP?

Yes		
No	X	(EXPLAIN)

There is one field replicate (split) associated with this work order (identified with an "FS" suffix in the station location designation). The field replicate results and investigative sample results were compared to a standard QC limit of 50 RPD or less.

For the field split pair, DC-19 and DC-19FS, this limit was exceeded for copper. The RPD for copper was 64 percent. This shows some minor heterogeneity regarding copper in this sample matrix.

5. Did the results of the Field Duplicates Analysis vary by less than the % RPD specified in the QAPP?

Yes	Not Applicable	
No		(EXPLAIN)

There is no field duplicate sample associated with this work order for the AVS and SEM analyses.

6. Did the surrogate spike/internal standards recoveries meet the limits set forth in the QAPP?

Yes	Not Applicable	
No		(EXPLAIN)

Surrogates and internal standards are not applicable to the AVS and SEM analyses.

7. Did the MS/MSD recoveries meet the limits set forth in the QAPP?

Yes	Not Applicable	
No		(EXPLAIN)

8. Did the RPD (%) of the MS/MSD sample set meet the limits set forth in the QAPP?

Yes	Not Applicable	
No		(EXPLAIN)

9. Did the LCS recoveries meet the limits set forth in the QAPP?

Yes	X	
No		(EXPLAIN)

The LCS recovery met the QAPP QC limits for the AVS and SEM analyses.

10. Did the calibration verification standards (ICVs and CCVs) meet the requirements set forth in the QAPP?

Yes	X	
No		(EXPLAIN)

The continuing calibration verification (CCV) standards were within QC limits.

11. Did the calibration blanks (ICBs and CCBs) meet the limits set forth in the QAPP?

Yes	X	
No		(EXPLAIN)

Continuing calibration blanks (CCB) contained no detections above the reporting limits.

12. Did the interference check samples meet the limits set forth in the QAPP?

Yes	X	
No		(EXPLAIN)

Interference check samples are not applicable to the AVS method.

13. Did the serial dilution samples meet the limits set forth in the QAPP?

Yes	X	
No		(EXPLAIN)

Serial dilution is not applicable to the AVS method.

14. Were any level of contaminants detected above the MDL for the trip blanks and storage blanks?

Yes	Not Applicable	
No		(EXPLAIN)

15. Did all required analyses take place within the required holding time protocols set forth in the QAPP?

Yes	X	
No		(EXPLAIN)

16. Did the laboratory duplicates vary by less than the % RPD specified in the QAPP?

Yes	Not Applicable	
No		(EXPLAIN)

17. Are measured dry-weight contaminant concentrations reported?

Yes	X	
No		(EXPLAIN)

Dry-weight concentrations are reported.

18. Please provide details for all of the "EXPLAIN" marked above. Include details on the specific analytes affected by any QA/QC discrepancies, and recommendations regarding usability of data.

Any items with “EXPLAIN” marked above are described immediately following the “EXPLAIN” marking in the corresponding item above.

The data are acceptable for use as qualified.

ATTACHMENT B

ADR SUMMARY REPORT FOR AVS AND SEM

Sample Qualification Report (All Analytes)

Client Sample ID : DC-19 **Lab Report Batch :** K1012377 **Lab ID :** CAS_K

Sample Date : 11/02/2010 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1012377-001

Reviewed By / Date : **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 6010B					**Dilution: 1.0**															
Cadmium	0.0035		uMole/g		YES															
Copper	0.0087		uMole/g		YES															
Lead	0.031		uMole/g		YES															
Nickel	0.043		uMole/g		YES															
Silver	0.0034		uMole/g	U	YES															
Zinc	0.396		uMole/g	*	YES															
Analysis Method : Draft 1991					**Dilution: 20**															
Sulfide, Acid-Volatile	7.2		uMole/g		YES															

Project Number and Name: **40479 - Duck and Otter Creek** **Library Used:** **Duck and Otter**

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data revie

Sample Qualification Report (All Analytes)

Client Sample ID : DC-19FS
Lab Report Batch : K1012377
Lab ID : CAS_K
Sample Date : 11/02/2010
Analysis Type: 1RES
Sample Matrix : SED
Lab Sample ID: K1012377-012

Reviewed By / Date :
Approved By / Date :

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 6010B					**Dilution: 1.0**															
Cadmium	0.0033		uMole/g		YES															
Copper	0.0168		uMole/g		YES															
Lead	0.027		uMole/g		YES															
Nickel	0.040		uMole/g		YES															
Silver	0.0033		uMole/g	U	YES															
Zinc	0.385		uMole/g	*	YES															
Analysis Method : Draft 1991					**Dilution: 20**															
Sulfide, Acid-Volatile	5.3		uMole/g		YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data revie

Sample Qualification Report (All Analytes)

Client Sample ID : DC-17 **Lab Report Batch :** K1012381 **Lab ID :** CAS_K

Sample Date : 11/02/2010 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1012381-005

Reviewed By / Date : **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 6010B					**Dilution: 1.0**															
Cadmium	0.0031		uMole/g		YES															
Copper	0.0066		uMole/g		YES															
Lead	0.032		uMole/g		YES															
Nickel	0.038		uMole/g		YES															
Silver	0.0031		uMole/g	U	YES															
Zinc	0.430		uMole/g	*	YES															
Analysis Method : Draft 1991					**Dilution: 20**															
Sulfide, Acid-Volatile	1.29		uMole/g		YES															

Project Number and Name: **40479 - Duck and Otter Creek** **Library Used:** **Duck and Otter**

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data revie

Sample Qualification Report (All Analytes)

Client Sample ID : DC-13 **Lab Report Batch :** K1012413 **Lab ID :** CAS_K

Sample Date : 11/02/2010 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1012413-001

Reviewed By / Date : **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 6010B					**Dilution: 1.0**															
Cadmium	0.0034		uMole/g		YES															
Copper	0.0263		uMole/g		YES															
Lead	0.044		uMole/g		YES															
Nickel	0.042		uMole/g		YES															
Silver	0.0030		uMole/g	U	YES															
Zinc	0.984		uMole/g	*	YES															
Analysis Method : Draft 1991					**Dilution: 20**															
Sulfide, Acid-Volatile	8.3		uMole/g		YES															

Project Number and Name: **40479 - Duck and Otter Creek** **Library Used:** **Duck and Otter**

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data revie

Sample Qualification Report (All Analytes)

Client Sample ID : DC-16 **Lab Report Batch :** K1012413 **Lab ID :** CAS_K

Sample Date : 11/02/2010 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1012413-002

Reviewed By / Date : **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 6010B					**Dilution: 1.0**															
Cadmium	0.0030		uMole/g		YES															
Copper	0.0146		uMole/g		YES															
Lead	0.032		uMole/g		YES															
Nickel	0.033		uMole/g		YES															
Silver	0.0029		uMole/g	U	YES															
Zinc	0.621		uMole/g	*	YES															
Analysis Method : Draft 1991					**Dilution: 20**															
Sulfide, Acid-Volatile	6.9		uMole/g		YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data revie

Sample Qualification Report (All Analytes)

Client Sample ID : OC-26 **Lab Report Batch :** K1012416 **Lab ID :** CAS_K

Sample Date : 11/03/2010 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1012416-001

Reviewed By / Date : **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 6010B					**Dilution: 1.0**															
Cadmium	0.0081		uMole/g		YES															
Copper	0.0320		uMole/g		YES															
Lead	0.103		uMole/g		YES															
Nickel	0.045		uMole/g		YES															
Silver	0.0019		uMole/g	U	YES															
Zinc	0.503		uMole/g	*	YES															
Analysis Method : Draft 1991					**Dilution: 20**															
Sulfide, Acid-Volatile	6.49		uMole/g		YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data revie

Sample Qualification Report (All Analytes)

Client Sample ID : OC-27 **Lab Report Batch :** K1012416 **Lab ID :** CAS_K

Sample Date : 11/03/2010 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1012416-006

Reviewed By / Date : **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 6010B					**Dilution: 1.0**															
Cadmium	0.0089		uMole/g		YES															
Copper	0.0039		uMole/g	U	YES															
Lead	0.098		uMole/g		YES															
Nickel	0.049		uMole/g		YES															
Silver	0.0023		uMole/g	U	YES															
Zinc	0.618		uMole/g	*	YES															
Analysis Method : Draft 1991					**Dilution: 20**															
Sulfide, Acid-Volatile	7.29		uMole/g		YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data revie

Sample Qualification Report (All Analytes)

Client Sample ID : OC-27-DP
Lab Report Batch : K1012416
Lab ID : CAS_K
Sample Date : 11/03/2010
Analysis Type: 1RES
Sample Matrix : SED
Lab Sample ID: K1012416-009

Reviewed By / Date :
Approved By / Date :

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 6010B					**Dilution: 1.0**															
Cadmium	0.0104		uMole/g		YES															
Copper	0.0039		uMole/g	U	YES															
Lead	0.113		uMole/g		YES															
Nickel	0.056		uMole/g		YES															
Silver	0.0023		uMole/g	U	YES															
Zinc	0.660		uMole/g	*	YES															
Analysis Method : Draft 1991					**Dilution: 100**															
Sulfide, Acid-Volatile	36.8		uMole/g		YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data revie

Sample Qualification Report (All Analytes)

Client Sample ID : DC-14 **Lab Report Batch :** K1012421 **Lab ID :** CAS_K

Sample Date : 11/03/2010 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1012421-001

Reviewed By / Date : **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 6010B					**Dilution: 1.0**															
Cadmium	0.0049		uMole/g		YES															
Copper	0.0185		uMole/g		YES															
Lead	0.044		uMole/g		YES															
Nickel	0.060		uMole/g		YES															
Silver	0.0031		uMole/g	U	YES															
Zinc	0.543		uMole/g	*	YES															
Analysis Method : Draft 1991					**Dilution: 20**															
Sulfide, Acid-Volatile	7.7		uMole/g		YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data revie

Sample Qualification Report (All Analytes)

Client Sample ID : OC-28 **Lab Report Batch :** K1012421 **Lab ID :** CAS_K

Sample Date : 11/03/2010 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1012421-007

Reviewed By / Date : **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 6010B					**Dilution: 1.0**															
Cadmium	0.0027		uMole/g		YES															
Copper	0.0034		uMole/g		YES															
Lead	0.047		uMole/g		YES															
Nickel	0.032		uMole/g		YES															
Silver	0.0017		uMole/g	U	YES															
Zinc	0.362		uMole/g	*	YES															
Analysis Method : Draft 1991					**Dilution: 20**															
Sulfide, Acid-Volatile	5.62		uMole/g		YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data revie

Sample Qualification Report (All Analytes)

Client Sample ID : OC-29 **Lab Report Batch :** K1012529 **Lab ID :** CAS_K

Sample Date : 11/04/2010 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1012529-011

Reviewed By / Date : **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 6010B					**Dilution: 1.0**															
Cadmium	0.0081		uMole/g		YES															
Copper	0.0041		uMole/g	U	YES															
Lead	0.082		uMole/g		YES															
Nickel	0.050		uMole/g		YES															
Silver	0.0024		uMole/g	U	YES															
Zinc	0.520		uMole/g		YES															
Analysis Method : Draft 1991					**Dilution: 100**															
Sulfide, Acid-Volatile	28.2		uMole/g		YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data revie

Sample Qualification Report (All Analytes)

Client Sample ID : OC-30 **Lab Report Batch :** K1012529 **Lab ID :** CAS_K

Sample Date : 11/04/2010 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1012529-014

Reviewed By / Date : **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 6010B					**Dilution: 1.0**															
Cadmium	0.0068		uMole/g		YES															
Copper	0.0498		uMole/g		YES															
Lead	0.074		uMole/g		YES															
Nickel	0.039		uMole/g		YES															
Silver	0.0018		uMole/g	U	YES															
Zinc	0.448		uMole/g		YES															
Analysis Method : Draft 1991					**Dilution: 20**															
Sulfide, Acid-Volatile	6.09		uMole/g		YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data revie

Sample Qualification Report (All Analytes)

Client Sample ID : OC-30DP **Lab Report Batch :** K1012529 **Lab ID :** CAS_K

Sample Date : 11/04/2010 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1012529-017

Reviewed By / Date : **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 6010B					**Dilution: 1.0**															
Cadmium	0.0055		uMole/g		YES															
Copper	0.0527		uMole/g		YES															
Lead	0.085		uMole/g		YES															
Nickel	0.039		uMole/g		YES															
Silver	0.0022		uMole/g	U	YES															
Zinc	0.410		uMole/g		YES															
Analysis Method : Draft 1991					**Dilution: 20**															
Sulfide, Acid-Volatile	4.17		uMole/g		YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data revie

Sample Qualification Report (All Analytes)

Client Sample ID : OC-31 **Lab Report Batch :** K1012529 **Lab ID :** CAS_K

Sample Date : 11/04/2010 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1012529-018

Reviewed By / Date : **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 6010B					**Dilution: 1.0**															
Cadmium	0.0024		uMole/g		YES															
Copper	0.0125		uMole/g		YES															
Lead	0.019		uMole/g		YES															
Nickel	0.026		uMole/g		YES															
Silver	0.0025		uMole/g	U	YES															
Zinc	0.189		uMole/g		YES															
Analysis Method : Draft 1991					**Dilution: 20**															
Sulfide, Acid-Volatile	2.62		uMole/g		YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data revie

Sample Qualification Report (All Analytes)

Client Sample ID : OC-31DP
Lab Report Batch : K1012529
Lab ID : CAS_K
Sample Date : 11/04/2010
Analysis Type: 1RES
Sample Matrix : SED
Lab Sample ID: K1012529-003

Reviewed By / Date :
Approved By / Date :

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 6010B					**Dilution: 1.0**															
Cadmium	0.0024		uMole/g		YES															
Copper	0.0299		uMole/g		YES															
Lead	0.020		uMole/g		YES															
Nickel	0.025		uMole/g		YES															
Silver	0.0019		uMole/g	U	YES															
Zinc	0.177		uMole/g		YES															
Analysis Method : Draft 1991					**Dilution: 20**															
Sulfide, Acid-Volatile	1.53		uMole/g		YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data revie

Sample Qualification Report (All Analytes)

Client Sample ID : OC-32 **Lab Report Batch :** K1012529 **Lab ID :** CAS_K

Sample Date : 11/04/2010 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1012529-004

Reviewed By / Date : **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 6010B					**Dilution: 1.0**															
Cadmium	0.0039		uMole/g		YES															
Copper	0.0150		uMole/g		YES															
Lead	0.055		uMole/g		YES															
Nickel	0.028		uMole/g		YES															
Silver	0.0022		uMole/g	U	YES															
Zinc	0.316		uMole/g		YES															
Analysis Method : Draft 1991					**Dilution: 20**															
Sulfide, Acid-Volatile	1.81		uMole/g		YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data revie

Sample Qualification Report (All Analytes)

Client Sample ID : OC-32DP
Lab Report Batch : K1012529
Lab ID : CAS_K
Sample Date : 11/04/2010
Analysis Type: 1RES
Sample Matrix : SED
Lab Sample ID: K1012529-007

Reviewed By / Date :
Approved By / Date :

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 6010B					**Dilution: 1.0**															
Cadmium	0.0046		uMole/g		YES															
Copper	0.0337		uMole/g		YES															
Lead	0.071		uMole/g		YES															
Nickel	0.030		uMole/g		YES															
Silver	0.0020		uMole/g	U	YES															
Zinc	0.368		uMole/g		YES															
Analysis Method : Draft 1991					**Dilution: 20**															
Sulfide, Acid-Volatile	3.35		uMole/g		YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data revie

Sample Qualification Report (All Analytes)

Client Sample ID : OC-33 **Lab Report Batch :** K1012529 **Lab ID :** CAS_K

Sample Date : 11/04/2010 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1012529-008

Reviewed By / Date : **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 6010B					**Dilution: 1.0**															
Cadmium	0.0019		uMole/g		YES															
Copper	0.0224		uMole/g		YES															
Lead	0.016		uMole/g		YES															
Nickel	0.022		uMole/g		YES															
Silver	0.0022		uMole/g	U	YES															
Zinc	0.285		uMole/g		YES															
Analysis Method : Draft 1991					**Dilution: 20**															
Sulfide, Acid-Volatile	1.57		uMole/g		YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data revie

ATTACHMENT C

DATA QUALIFIER DEFINITIONS

LABORATORY DATA QUALIFIER DEFITIONS

* - The result is an outlier.

U - The analyte was analyzed for but not detected at or above the method detection limit and/or reporting limit

DATA VALIDATION DATA QUALIFIER DEFITIONS

Not Applicable

Weston Solutions, Inc.
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February 14, 2011

Ms. Brenda Jones and Mr. Ajit Vaidya
Great Lakes National Program Office
United States Environmental Protection Agency, Region V
77 West Jackson Boulevard, Mail Code: G-17J
Chicago, Illinois 60604-3507

Re: Data Review of Total Petroleum Hydrocarbons (TPH) as Gasoline Range Organics (GRO), Diesel Range Organics (DRO), and Residual Range Organics (RRO) Analysis
For Sediment Samples Collected on November 2-4, 2010
Duck and Otter Creeks 2010 Data Gaps Investigation
Wood and Lucas Counties, Ohio
DCN: 1269-2F-ALFI

Dear Ms. Jones and Mr. Vaidya:

The United States Environmental Protection Agency (U.S. EPA) tasked Weston Solutions, Inc., (WESTON®) to perform data validation for sediment samples collected on November 2-4, 2010, for the Great Lakes National Program Office (GLNPO) Duck and Otter Creeks 2010 Data Gaps Investigation (Duck and Otter) Site. This data review is for TPH as GRO, DRO, and RRO analyses of 70 sediment samples that include 6 field splits and 6 field duplicates that were collected by the WESTON Superfund Technical Assessment and Response Team (START). The samples were validated in accordance with the "Quality Assurance Project Plan, Duck and Otter Creeks Data Gaps Investigation" dated September 28, 2010, which includes using the U.S. EPA Contract Laboratory Program National Functional Guidance for Organic and Inorganic Data Review. Table 1 provides a summary of the samples included in this review. All tables are presented at the end of this report.

The samples listed in Table 1 were analyzed by Columbia Analytical Services (CAS) located in Kelso, Washington, under the following six work orders:

- K1012377
- K1012381
- K1012413
- K1012416
- K1012421
- K1012529

The samples were analyzed for TPH using U.S. EPA SW-846 Method 8015. CAS provided WESTON with a staged electronic data deliverable (SEDD) that was used in conjunction with the Automated Data Review (ADR) software to assist in reviewing the data. All SEDDs were imported into the ADR software for review by the software program and all data was checked for

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completeness. Five percent of the data was put through a full data validation. Therefore, one of the work orders, K1012416, was selected for the full data validation. Work order K1012416 contained nine sediment samples, including three field duplicates, for TPH analysis.

Attachment A to this report contains the individual Quality Assurance/Quality Control (QA/QC) Analysis Checklist for Sediment Chemistry Analysis for work order K1012416. Attachment B to this report contains a printed report from ADR that provides a summary of results with qualifiers applied by the laboratory and the ADR program. Attachment C contains the data qualifier definitions. The QC limits utilized were those stated in the QAPP. If there was not a QC limit specified in the QAPP, then the method or laboratory-determined QC limits were used. Below is the data review summary.

SUMMARY OF TPH DATA REVIEW

As stated above, five percent of the data was fully validated. Work order K1012416 was selected for full data validation. In work order K1012416, the holding times, surrogates, calibration standards, laboratory control samples (LCS), matrix spike (MS) samples, matrix spike duplicate (MSD) samples, and field duplicates were all within the QC limits. All sample results were based on a dry weight for the TPH analyses.

Through full data validation and the ADR program, some minor problems with the quality control indicators were discovered. In all work orders, there were minor detections of GRO in the method blanks requiring some GRO results to be flagged as not detected. The percent recoveries for some of the MS/MSD samples were outside the QC limits requiring one result to be qualified as estimated.

The QAPP stated that field splits (replicates) and field duplicate samples would be collected at a 10 percent frequency. There were a total of 58 field investigative samples and six field duplicates and six field splits collected (see Table 1 for which samples are designated as field duplicates and splits). The QAPP-stated frequency was met for the field duplicates and splits. A QC limit for field splits and field duplicates was not stated in the QAPP; therefore, a default QC limit of 50 relative percent difference (RPD) was used to evaluate field split and duplicate results. The RPDs for most of the field duplicates and field splits are below 50 RPD. Tables 2 and 3 summarize the field split and field duplicate results, respectively.

Below are a description of the minor problems with QC failures and a review of the data quality indicators.

MINOR PROBLEMS

Minor problems with QC failures are noted below.

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Method Blanks. In all six work orders, method blanks contained detections of GRO below the reporting limit. In some samples, GRO results were detected below the reporting limit and at a concentration similar to the method blank concentration. These GRO results were flagged "U" as not detected. The ADR Summary Report in Attachment B shows which GRO results were flagged "U" based on method blank results.

MS and MSDs. There were a total of nine MS/MSD pairs associated with the DRO/RRO analyses and seven MS/MSD pairs associated with the GRO analyses. All GRO MS/MSD recoveries were within QC limits.

For the DRO/RRO analyses, the percent recoveries for three of the nine MS/MSD pairs were outside QC limits. In all of these instances except one, no qualifications were required in accordance with data validation guidance because the sample concentrations were more than four times the amount of the spike added making the spike recovery difficult. The exception was for DRO in the MS/MSD associated with sample DC-13-04. DRO was flagged "J" as estimated in sample DC-13-04 due to apparent matrix interference. The ADR Summary Report in Attachment B shows which DRO result was flagged "J" based on matrix spike results.

Field Splits. There were six field split samples associated with these work orders. Of the six field splits, only GRO in one of the splits, DC-19-04FS, exceeded the standard QC limit of 50 RPD. This likely indicates some sample heterogeneity associated with GRO in this one sample and data usability is not affected. Table 2 summarizes the field split results and RPDs.

Field Duplicates. There were six field duplicate samples associated with these work orders. Of the six field duplicates, two GRO RPDs, two DRO RPDs, and one RRO RPD exceeded the standard QC limit of 50 RPD. Field duplicates are collected adjacent to the parent sample and are not from the same homogenized sample aliquot. These elevated RPDs indicate some sample heterogeneity associated with these TPH compounds in the associated samples. Data usability is not affected. Table 3 summarizes the field duplicate results and RPDs.

Target Compound Identification. Target compound identification followed the method and was acceptable; however, the chromatograms for the petroleum product identified in the samples were not exact matches to the chromatograms for the DRO, RRO, and GRO standards used. CAS qualified most sample results to provide further details regarding the chromatograms. The qualifiers used were "H", "O", and "Y" and are defined as follows:

- An "H" qualifier indicates that the chromatographic fingerprint does resemble a petroleum product but the elution pattern indicates a greater amount of heavier molecular weight constituents than the calibration standard.
- An "O" qualifier indicates that the chromatographic fingerprint resembles an oil product, but does not match the calibration standard.

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- A "Y" qualifier indicates that the chromatographic fingerprint resembles a petroleum product eluting in approximately the correct carbon range, but the elution pattern does not match the calibration standard.

DATA QUALITY INDICATORS REVIEW

Many the data quality indicators (sensitivity, precision, accuracy, and completeness) were evaluated through the data validation procedures which are summarized above and discussed in detail in the Attachment.

Sensitivity. The laboratory reporting limits stated in the QAPP were 25 milligrams per kilogram (mg/kg) for DRO, 100 mg/kg for RRO, and 25 mg/kg for GRO. In many instances these reporting limits were not met; most due to dilutions and correction for percent moisture, The laboratory reported down to method detection limits which were lower than the reporting limits (all sample results reported below the reporting limit were qualified "J" as estimated). The elevated reporting limits do not affect data usability because there were detections of TPH compounds in the samples in most instances that the reporting limit was elevated and there are no screening levels to compare data to for TPH. Therefore, sensitivity was adequate for the DRO, RRO, and GRO analyses of sediment samples collected on November 2-4, 2010.

Precision. Field precision was determined by evaluating the RPDs for the field split and field duplicate results. The mean RPD for field splits ranged from 11 to 27 percent and the mean RPD for field duplicates ranged from 31 to 58 percent. With the exception of the mean RPD for GRO in the field duplicates, all mean RPDs are below the standard QC limit of 50 RPD (see discussion of field duplicates under Minor Problems above). Field precision was evaluated and found to be acceptable. Table 4 summarizes the mean field split and duplicate RPDs for each analyte.

Laboratory precision was determined by evaluating the RPD values between MS and MSD results. The mean MS/MSD RPD values were within QC limits. The mean RPD values ranged from 4 to 10 percent. Laboratory precision was acceptable. Table 4 summarizes the mean RPDs for MS/MSDs.

Accuracy/Bias. Accuracy is a measure of the agreement between an observed value and an accepted reference value. Laboratory accuracy was evaluated by reviewing the QC criteria for percent recovery for LCS results. All LCS mean percent recoveries were within the QAPP QC limits. Table 4 summarizes the accuracy estimates for the TPH analyses. The mean percent recoveries for LCSs ranged from 88 to 94 percent. Laboratory accuracy was acceptable. The mean LCS recoveries indicate a slightly low bias associated with the GRO, DRO, and RRO analyses.

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Completeness. Completeness is a measure of the amount of valid data obtained compared to the amount of data that was planned to be collected under normal conditions. All samples results were received.

In summary, there were some minor problems with QC failures as discussed above that required some results to be flagged. The ADR Summary Report in Attachment B indicates which sample results were flagged during data validation and the reason for the qualification. The laboratory data qualifiers applied are also indicated on the ADR Summary Report in Attachment B. Attachment C provides data qualifier definitions for those qualifiers applied during data validation and by the laboratory.

If there are any questions or comments regarding this report, please do not hesitate to contact WESTON START at 312-424-3300.

Very truly yours,
Weston Solutions, Inc.

Lisa Graczyk
WESTON START Team

Alex Clark
WESTON START Project Manager

Attachments:
Tables
A - QA/QC Analysis Checklist for TOC for Work Order K1012416
B – ADR Summary Report for TPH
C – Data Qualifier Definitions

cc: project file

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TABLES

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TABLE 1 SAMPLES INCLUDED IN DATA REVIEW			
Sample ID	**Lab ID**	**Date Collected**	**Comment**
DC-19	K1012377-001	11/02/2010	
DC-19-01	K1012377-002	11/02/2010	
DC-19-01FS	K1012377-003	11/02/2010	Field split of DC-19-01
DC-19-02	K1012377-004	11/02/2010	
DC-19-02FS	K1012377-005	11/02/2010	Field split of DC-19-02
DC-19-03	K1012377-006	11/02/2010	
DC-19-03FS	K1012377-007	11/02/2010	Field split of DC-19-03
DC-19-04	K1012377-008	11/02/2010	
DC-19-04FS	K1012377-009	11/02/2010	Field split of DC-19-04
DC-19-05	K1012377-010	11/02/2010	
DC-19-05FS	K1012377-011	11/02/2010	Field split of DC-19-05
DC-19FS	K1012377-012	11/02/2010	Field split of DC-19
DC-13-01	K1012381-001	11/02/2010	
DC-13-02	K1012381-002	11/02/2010	
DC-13-03	K1012381-003	11/02/2010	
DC-13-04	K1012381-004	11/02/2010	
DC-17	K1012381-005	11/02/2010	
DC-17-01	K1012381-006	11/02/2010	
DC-17-02	K1012381-007	11/02/2010	
DC-17-03	K1012381-008	11/02/2010	
DC-17-04	K1012381-009	11/02/2010	
DC-17-05	K1012381-010	11/02/2010	
DC-17-06	K1012381-011	11/02/2010	
DC-17-07	K1012381-012	11/02/2010	
DC-13	K1012413-001	11/02/2010	
DC-16	K1012413-002	11/02/2010	
DC-16-01	K1012413-003	11/02/2010	
DC-16-02	K1012413-004	11/02/2010	
DC-16-03	K1012413-005	11/02/2010	
DC-16-04	K1012413-006	11/02/2010	
DC-16-05	K1012413-007	11/02/2010	
DC-16-06	K1012413-008	11/02/2010	
DC-16-07	K1012413-009	11/02/2010	
OC-26	K1012416-001	11/03/2010	
OC-26-01	K1012416-002	11/03/2010	
OC-26-01DP	K1012416-003	11/03/2010	Field duplicate of OC-26-01

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TABLE 1
SAMPLES INCLUDED IN DATA REVIEW

Sample ID	Lab ID	Date Collected	Comment
OC-26-02	K1012416-004	11/03/2010	
OC-26-02DP	K1012416-005	11/03/2010	Field duplicate of OC-26-02
OC-27	K1012416-006	11/03/2010	
OC-27-01	K1012416-007	11/03/2010	
OC-27-02	K1012416-008	11/03/2010	
OC-27DP	K1012416-009	11/03/2010	Field duplicate of OC-27
DC-14	K1012421-001	11/03/2010	
DC-14-01	K1012421-002	11/03/2010	
DC-14-02	K1012421-003	11/03/2010	
DC-14-03	K1012421-004	11/03/2010	
DC-14-04	K1012421-005	11/03/2010	
DC-14-05	K1012421-006	11/03/2010	
OC-28	K1012421-007	11/03/2010	
OC-28-01	K1012421-008	11/03/2010	
OC-28-02	K1012421-009	11/03/2010	
OC-28-03	K1012421-010	11/03/2010	
OC-31-01	K1012529-001	11/04/2010	
OC-31-02	K1012529-002	11/04/2010	
OC-31DP	K1012529-003	11/04/2010	Field duplicate of OC-31
OC-32	K1012529-004	11/04/2010	
OC-32-01	K1012529-005	11/04/2010	
OC-32-02	K1012529-006	11/04/2010	
OC-32DP	K1012529-007	11/04/2010	Field duplicate of OC-32
OC-33	K1012529-008	11/04/2010	
OC-33-01	K1012529-009	11/04/2010	
OC-33-02	K1012529-010	11/04/2010	
OC-29	K1012529-011	11/04/2010	
OC-29-01	K1012529-012	11/04/2010	
OC-29-02	K1012529-013	11/04/2010	
OC-30	K1012529-014	11/04/2010	
OC-30-01	K1012529-015	11/04/2010	
OC-30-02	K1012529-016	11/04/2010	
OC-30DP	K1012529-017	11/04/2010	Field duplicate of OC-30
OC-31	K1012529-018	11/04/2010	

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TABLE 2
FIELD SPLIT RESULTS
FOR TPH ANALYSES

Analyte	Sample: DC-19-01FS			Sample: DC-19-02FS			Sample: DC-19-03FS			Sample: DC-19-04FS		
	Sample Result (mg/kg)	Replicate Result (mg/kg)	RPD	Sample Result (mg/kg)	Replicate Result (mg/kg)	RPD	Sample Result (mg/kg)	Replicate Result (mg/kg)	RPD	Sample Result (mg/kg)	Replicate Result (mg/kg)	RPD
DRO	340	370	8	990	800	21	1,600	2,200	32	3,800	3,800	0
RRO	1,100	1,200	9	1,800	1,500	18	2,500	3,400	31	5,900	5,300	11
GRO	<14	<14	NA	<6.4	<3.4	NA	7.4	8.5	14	19	38	67
Analyte	**Sample: DC-19-05FS**			**Sample: DC-19FS**			**Sample:**			**Sample:**		
	Sample Result (mg/kg)	Replicate Result (mg/kg)	RPD	Sample Result (mg/kg)	Replicate Result (mg/kg)	RPD	Sample Result (mg/kg)	Replicate Result (mg/kg)	RPD	Sample Result (mg/kg)	Replicate Result (mg/kg)	RPD
DRO	2,600	2,500	4	290	300	3						
RRO	3,800	3,500	8	1,400	1,400	0						
GRO	28	28	0	<19	<18	NA						

Notes:
Highlighted RPD values exceed the comparison value of 50 RPD.
DRO – Diesel Range Organics
GRO – Gasoline Range Organics
mg/kg – Milligram per Kilogram
NA – Not Applicable
RPD – Relative Percent Difference
RRO – Residual Range Organics

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TABLE 3
FIELD DUPLICATE RESULTS
FOR TPH ANALYSES

	Sample: OC-26-01DP			Sample: OC-26-02DP			Sample: OC-27DP			Sample: OC-31DP		
Analyte	**Sample Result (mg/kg)**	**Replicate Result (mg/kg)**	**RPD**	**Sample Result (mg/kg)**	**Replicate Result (mg/kg)**	**RPD**	**Sample Result (mg/kg)**	**Replicate Result (mg/kg)**	**RPD**	**Sample Result (mg/kg)**	**Replicate Result (mg/kg)**	**RPD**
DRO	2,900	2,900	0	60	67	11	11,000	14,000	24	150	420	95
RRO	3,200	3,500	9	95	88	8	11,000	12,000	9	380	760	67
GRO	100	140	33	<4.3	<2.5	NA	220	270	20	<3.7	<3.2	NA
	Sample: OC-32DP			**Sample: OC-30DP**			**Sample:**			**Sample:**		
Analyte	**Sample Result (mg/kg)**	**Replicate Result (mg/kg)**	**RPD**	**Sample Result (mg/kg)**	**Replicate Result (mg/kg)**	**RPD**	**Sample Result (mg/kg)**	**Replicate Result (mg/kg)**	**RPD**	**Sample Result (mg/kg)**	**Replicate Result (mg/kg)**	**RPD**
DRO	2,100	2,100	0	5,300	3,000	55						
RRO	2,700	2,700	0	5,100	3,500	37						
GRO	29	12	83	360	130	94						

Notes:
Highlighted RPD values exceed the comparison value of 50 RPD.
DRO – Diesel Range Organics
GRO – Gasoline Range Organics
mg/kg – Milligram per Kilogram
NA – Not Applicable
RPD – Relative Percent Difference
RRO – Residual Range Organics

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TABLE 4 QUANTITATIVE DATA ASSESSMENT FOR TPH				
	Field Precision		Analytical Precision	Analytical Accuracy/Bias
Parameter	Mean Field Split RPD (%) (n=6)	Mean Field Duplicate RPD (%) (n=6)	Mean MS/MSD RPD (%) (n=9; n=7 for GRO)	Mean LCS Recovery (%) (n=6; n=5 for GRO)
DRO	11	31	9	94
RRO	13	22	10	88
GRO	27	58	4	91

Notes:
DRO – Diesel Range Organics
GRO – Gasoline Range Organics
LCS – Laboratory Control Sample
MS – Matrix Spike
MSD – Matrix Spike Duplicate
RPD – Relative Percent Difference
RRO – Residual Range Organic

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ATTACHMENT A

QA/QC ANALYSIS CHECKLIST FOR TPH FOR WORK ORDER K1012416

TPH AS GRO, DRO, AND RRO

BY SW-846 METHOD 8015

CAS Work Order #: K1012416

QA/QC Analysis Checklist for Sediment Chemistry Analysis

GRANT/IAG NUMBER: Not Applicable
PROJECT NAME: Duck and Otter Creeks 2010 Data Gaps Investigation
REVIEWER: Lisa Graczyk, WESTON START
DATE: February 14, 2011

1. What sediment chemistry data has been collected (CHECK ALL THAT APPLY)?

Total Metals ____	PCBs _____	pH _____	TOC _____
Dioxins/Furans _____	PAHs _____	Pesticides _____	DO _____
AVS _____	SEM Metals _____	Particle Size _____	Other __X (TPH)

2. Were the target detection limits met for each parameter?

Yes _____
No X (EXPLAIN)

The reporting limits as stated in the QAPP were not met in many instances mostly due to the high concentrations of the target analytes in the samples and dilutions required, and percent moisture corrections. In addition, there were no screening criteria presented in the QAPP for TPH. Therefore data usability was not affected by the somewhat elevated reporting limits.

3. Were the method blanks less than the established MDL for each parameter?

Yes _____
No X (EXPLAIN)

GRO was detected in two method blanks below the reporting limit at 1.4 and 1.5 mg/kg. Three sample results had GRO detected below the reporting limit and had a similar concentration as the blank results. The GRO results in samples OC-26-02, OC-26-02DP, and OC-27-02 were flagged "U" as not detected.

TPH Checklist
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4. Did the results of Field Replicate Analysis vary by less than the % RPD specified in the QAPP?

Yes	Not Applicable	
No		(EXPLAIN)

5. Did the results of the Field Duplicates Analysis vary by less than the % RPD specified in the QAPP?

Yes	X	
No		(EXPLAIN)

6. Did the surrogate spike/internal standards recoveries meet the limits set forth in the QAPP?

Yes	X	
No		(EXPLAIN)

7. Did the MS/MSD recoveries meet the limits set forth in the QAPP?

Yes	X	
No		(EXPLAIN)

8. Did the RPD (%) of the MS/MSD sample set meet the limits set forth in the QAPP?

Yes	X	
No		(EXPLAIN)

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9. Did the LCS recoveries meet the limits set forth in the QAPP?

Yes	X	
No		(EXPLAIN)

10. Did the calibration verification standards (ICVs and CCVs) meet the requirements set forth in the QAPP?

Yes	X	
No		(EXPLAIN)

11. Did the calibration blanks (ICBs and CCBs) meet the limits set forth in the QAPP?

Yes	Not Applicable	
No		

12. Did the interference check samples meet the limits set forth in the QAPP?

Yes	Not Applicable	
No		(EXPLAIN)

13. Did the serial dilution samples meet the limits set forth in the QAPP?

Yes	Not Applicable	
No		(EXPLAIN)

14. Were any level of contaminants detected above the MDL for the trip blanks and storage blanks?

Yes	Not Applicable	
No		(EXPLAIN)

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15. Did all required analyses take place within the required holding time protocols set forth in the QAPP?

Yes	X	
No		(EXPLAIN)

16. Did the laboratory duplicates vary by less than the % RPD specified in the QAPP?

Yes	Not Applicable	
No		(EXPLAIN)

17. Are measured dry-weight contaminant concentrations reported?

Yes	X	
No		(EXPLAIN)

18. Please provide details for all of the "EXPLAIN" marked above. Include details on the specific analytes affected by any QA/QC discrepancies, and recommendations regarding usability of data.

Any items with “EXPLAIN” marked above are described immediately following the “EXPLAIN” marking in the corresponding item above.

Note that the laboratory qualified many of the sample results with a “J”, “O”, “Y”, and “D” are defined as follows:

- A “J” qualifier indicates that the sample result should be considered estimated because it was detected below the reporting limit.
- An “O” qualifier indicates that the chromatographic fingerprint resembles an oil product, but does not match the calibration standard.
- A “Y” qualifier indicates that the chromatographic fingerprint resembles a petroleum product eluting in approximately the correct carbon range, but the elution pattern does not match the calibration standard.
- A “D” qualifier indicates that the reported result is from a dilution.

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Columbia Analytical Services
Laboratory Work Order #: K1012416

All of these results should be considered estimated. Note that the sample chromatographic patterns not matching up to the standards is to be expected because of the weathering/degrading of the petroleum products over time.

In addition, some results were flagged by the laboratory with a “D” to indicate that the sample result is from a dilution.

The data are acceptable for use as qualified.

TPH Checklist
Duck and Otter Creeks 2010 Data Gaps Investigation
Columbia Analytical Services
Laboratory Work Order #: K1012416

ATTACHMENT B

ADR SUMMARY REPORT FOR TPH

Sample Qualification Report (All Analytes)

Client Sample ID : DC-19 **Lab Report Batch :** K1012377 **Lab ID :** CAS_K

Sample Date : 11/02/2010 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1012377-001

Reviewed By / Date : **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 8015C					**Dilution: 1**															
Gasoline Range Organics (GRO)	19		mg/Kg	U	YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data revie

Sample Qualification Report (All Analytes)

Client Sample ID : DC-19 **Lab Report Batch :** K1012377 **Lab ID :** CAS_K

Sample Date : 11/02/2010 **Analysis Type: 2RES** **Sample Matrix :** SED

Lab Sample ID: K1012377-001

Reviewed By / Date : **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 8015C					**Dilution: 1**															
Diesel Range Organics (DRO)	290		mg/Kg	H	YES															
Residual Range Organics (RRO)	1400		mg/Kg	O	YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data revie

Sample Qualification Report (All Analytes)

Client Sample ID : DC-19-01 **Lab Report Batch :** K1012377 **Lab ID :** CAS_K

Sample Date : 11/02/2010 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1012377-002

Reviewed By / Date : **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 8015C					**Dilution: 1**															
Gasoline Range Organics (GRO)	14		mg/Kg	U	YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data revie

Sample Qualification Report (All Analytes)

Client Sample ID : DC-19-01 **Lab Report Batch :** K1012377 **Lab ID :** CAS_K

Sample Date : 11/02/2010 **Analysis Type: 2RES** **Sample Matrix :** SED

Lab Sample ID: K1012377-002

Reviewed By / Date : **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 8015C					**Dilution: 1**															
Diesel Range Organics (DRO)	340		mg/Kg	H	YES															
Residual Range Organics (RRO)	1100		mg/Kg	O	YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data revie

Sample Qualification Report (All Analytes)

Client Sample ID : DC-19-01FS
Lab Report Batch : K1012377
Lab ID : CAS_K
Sample Date : 11/02/2010
Analysis Type: 1RES
Sample Matrix : SED
Lab Sample ID: K1012377-003

Reviewed By / Date :

Approved By / Date :

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 8015C					**Dilution: 1**															
Gasoline Range Organics (GRO)	14		mg/Kg	U	YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data revie

Sample Qualification Report (All Analytes)

Client Sample ID : DC-19-01FS
Lab Report Batch : K1012377
Lab ID : CAS_K
Sample Date : 11/02/2010
Analysis Type: 2RES
Sample Matrix : SED
Lab Sample ID: K1012377-003

Reviewed By / Date :

Approved By / Date :

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 8015C					**Dilution: 1**															
Diesel Range Organics (DRO)	370		mg/Kg	H	YES															
Residual Range Organics (RRO)	1200		mg/Kg	O	YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data revie

Sample Qualification Report (All Analytes)

Client Sample ID : DC-19-02 **Lab Report Batch :** K1012377 **Lab ID :** CAS_K

Sample Date : 11/02/2010 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1012377-004

Reviewed By / Date : **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 8015C						**Dilution: 1**														
Gasoline Range Organics (GRO)	6.4		mg/Kg	J	YES	**UJ**			U					J						

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data revie

Sample Qualification Report (All Analytes)

Client Sample ID : DC-19-02 **Lab Report Batch :** K1012377 **Lab ID :** CAS_K

Sample Date : 11/02/2010 **Analysis Type: 2RES** **Sample Matrix :** SED

Lab Sample ID: K1012377-004

Reviewed By / Date : **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 8015C					**Dilution: 1**															
Diesel Range Organics (DRO)	990		mg/Kg	H	YES															
Residual Range Organics (RRO)	1800		mg/Kg	O	YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data revie

Sample Qualification Report (All Analytes)

Client Sample ID : DC-19-02FS
Lab Report Batch : K1012377
Lab ID : CAS_K
Sample Date : 11/02/2010
Analysis Type: 1RES
Sample Matrix : SED
Lab Sample ID: K1012377-005

Reviewed By / Date :

Approved By / Date :

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 8015C						**Dilution: 1**														
Gasoline Range Organics (GRO)	3.4		mg/Kg	J	YES	**UJ**			U					J						

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data revie

Sample Qualification Report (All Analytes)

Client Sample ID : DC-19-02FS
Lab Report Batch : K1012377
Lab ID : CAS_K
Sample Date : 11/02/2010
Analysis Type: 2RES
Sample Matrix : SED
Lab Sample ID: K1012377-005

Reviewed By / Date :

Approved By / Date :

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 8015C					**Dilution: 1**															
Diesel Range Organics (DRO)	800		mg/Kg	H	YES															
Residual Range Organics (RRO)	1500		mg/Kg	O	YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data revie

Sample Qualification Report (All Analytes)

Client Sample ID : DC-19-03 **Lab Report Batch :** K1012377 **Lab ID :** CAS_K

Sample Date : 11/02/2010 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1012377-006

Reviewed By / Date : **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 8015C					**Dilution: 1**															
Gasoline Range Organics (GRO)	7.4		mg/Kg	J	YES	**J**								J						

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data revie

Sample Qualification Report (All Analytes)

Client Sample ID : DC-19-03 **Lab Report Batch :** K1012377 **Lab ID :** CAS_K

Sample Date : 11/02/2010 **Analysis Type: 2RES** **Sample Matrix :** SED

Lab Sample ID: K1012377-006

Reviewed By / Date : **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 8015C					**Dilution: 1**															
Diesel Range Organics (DRO)	1600		mg/Kg	H	YES															
Residual Range Organics (RRO)	2500		mg/Kg	O	YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data revie

Sample Qualification Report (All Analytes)

Client Sample ID : DC-19-03FS
Lab Report Batch : K1012377
Lab ID : CAS_K
Sample Date : 11/02/2010
Analysis Type: 1RES
Sample Matrix : SED
Lab Sample ID: K1012377-007

Reviewed By / Date :

Approved By / Date :

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 8015C						**Dilution: 1**														
Gasoline Range Organics (GRO)	8.5		mg/Kg	J	YES	**J**								J						

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data revie

Sample Qualification Report (All Analytes)

Client Sample ID : DC-19-03FS
Lab Report Batch : K1012377
Lab ID : CAS_K
Sample Date : 11/02/2010
Analysis Type: 2RES
Sample Matrix : SED
Lab Sample ID: K1012377-007

Reviewed By / Date :

Approved By / Date :

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 8015C					**Dilution: 1**															
Diesel Range Organics (DRO)	2200		mg/Kg	H	YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data revie

Sample Qualification Report (All Analytes)

Client Sample ID : DC-19-03FS
Lab Report Batch : K1012377
Lab ID : CAS_K
Sample Date : 11/02/2010
Analysis Type: 3RES
Sample Matrix : SED
Lab Sample ID: K1012377-007

Reviewed By / Date :

Approved By / Date :

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 8015C					**Dilution: 5**															
Residual Range Organics (RRO)	3400		mg/Kg	DO	YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data revie

Sample Qualification Report (All Analytes)

Client Sample ID : DC-19-04 **Lab Report Batch :** K1012377 **Lab ID :** CAS_K

Sample Date : 11/02/2010 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1012377-008

Reviewed By / Date : **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 8015C					**Dilution: 1**															
Gasoline Range Organics (GRO)	19		mg/Kg	Y	YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data revie

Sample Qualification Report (All Analytes)

Client Sample ID : DC-19-04 **Lab Report Batch :** K1012377 **Lab ID :** CAS_K

Sample Date : 11/02/2010 **Analysis Type: 2RES** **Sample Matrix :** SED

Lab Sample ID: K1012377-008

Reviewed By / Date : **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 8015C					**Dilution: 1**															
Diesel Range Organics (DRO)	3800		mg/Kg	H	YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data revie

Sample Qualification Report (All Analytes)

Client Sample ID : DC-19-04 **Lab Report Batch :** K1012377 **Lab ID :** CAS_K

Sample Date : 11/02/2010 **Analysis Type: 3RES** **Sample Matrix :** SED

Lab Sample ID: K1012377-008

Reviewed By / Date : **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 8015C					**Dilution: 10**															
Residual Range Organics (RRO)	5900		mg/Kg	DO	YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data revie

Sample Qualification Report (All Analytes)

Client Sample ID : DC-19-04FS
Lab Report Batch : K1012377
Lab ID : CAS_K
Sample Date : 11/03/2010
Analysis Type: 1RES
Sample Matrix : SED
Lab Sample ID: K1012377-009

Reviewed By / Date :

Approved By / Date :

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 8015C					**Dilution: 1**															
Gasoline Range Organics (GRO)	38		mg/Kg	Y	YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data revie

Sample Qualification Report (All Analytes)

Client Sample ID : DC-19-04FS
Lab Report Batch : K1012377
Lab ID : CAS_K
Sample Date : 11/03/2010
Analysis Type: 2RES
Sample Matrix : SED
Lab Sample ID: K1012377-009

Reviewed By / Date :

Approved By / Date :

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 8015C					**Dilution: 1**															
Diesel Range Organics (DRO)	3800		mg/Kg	H	YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data revie

Sample Qualification Report (All Analytes)

Client Sample ID : DC-19-04FS
Lab Report Batch : K1012377
Lab ID : CAS_K
Sample Date : 11/03/2010
Analysis Type: 3RES
Sample Matrix : SED
Lab Sample ID: K1012377-009

Reviewed By / Date :

Approved By / Date :

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 8015C					**Dilution: 10**															
Residual Range Organics (RRO)	5300		mg/Kg	DO	YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data revie

Sample Qualification Report (All Analytes)

Client Sample ID : DC-19-05 **Lab Report Batch :** K1012377 **Lab ID :** CAS_K

Sample Date : 11/02/2010 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1012377-010

Reviewed By / Date : **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 8015C					**Dilution: 1**															
Gasoline Range Organics (GRO)	28		mg/Kg	Y	YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data revie

Sample Qualification Report (All Analytes)

Client Sample ID : DC-19-05 **Lab Report Batch :** K1012377 **Lab ID :** CAS_K

Sample Date : 11/02/2010 **Analysis Type: 2RES** **Sample Matrix :** SED

Lab Sample ID: K1012377-010

Reviewed By / Date : **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 8015C					**Dilution: 1**															
Diesel Range Organics (DRO)	2600		mg/Kg	H	YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data revie

Sample Qualification Report (All Analytes)

Client Sample ID : DC-19-05 **Lab Report Batch :** K1012377 **Lab ID :** CAS_K

Sample Date : 11/02/2010 **Analysis Type: 3RES** **Sample Matrix :** SED

Lab Sample ID: K1012377-010

Reviewed By / Date : **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 8015C					**Dilution: 5**															
Residual Range Organics (RRO)	3800		mg/Kg	DO	YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data revie

Sample Qualification Report (All Analytes)

Client Sample ID : DC-19-05FS
Lab Report Batch : K1012377
Lab ID : CAS_K
Sample Date : 11/02/2010
Analysis Type: 1RES
Sample Matrix : SED
Lab Sample ID: K1012377-011

Reviewed By / Date :

Approved By / Date :

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 8015C					**Dilution: 1**															
Gasoline Range Organics (GRO)	28		mg/Kg	Y	YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data revie

Sample Qualification Report (All Analytes)

Client Sample ID : DC-19-05FS
Lab Report Batch : K1012377
Lab ID : CAS_K
Sample Date : 11/02/2010
Analysis Type: 2RES
Sample Matrix : SED
Lab Sample ID: K1012377-011

Reviewed By / Date :

Approved By / Date :

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 8015C					**Dilution: 1**															
Diesel Range Organics (DRO)	2500		mg/Kg	H	YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data revie

Sample Qualification Report (All Analytes)

Client Sample ID : DC-19-05FS
Lab Report Batch : K1012377
Lab ID : CAS_K
Sample Date : 11/02/2010
Analysis Type: 3RES
Sample Matrix : SED
Lab Sample ID: K1012377-011

Reviewed By / Date :

Approved By / Date :

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 8015C					**Dilution: 5**															
Residual Range Organics (RRO)	3500		mg/Kg	DO	YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data revie

Sample Qualification Report (All Analytes)

Client Sample ID : DC-19FS
Lab Report Batch : K1012377
Lab ID : CAS_K
Sample Date : 11/02/2010
Analysis Type: 1RES
Sample Matrix : SED
Lab Sample ID: K1012377-012

Reviewed By / Date :

Approved By / Date :

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 8015C					**Dilution: 1**															
Diesel Range Organics (DRO)	300		mg/Kg	H	YES															
Residual Range Organics (RRO)	1400		mg/Kg	O	YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data revie

Sample Qualification Report (All Analytes)

Client Sample ID : DC-19FS
Lab Report Batch : K1012377
Lab ID : CAS_K
Sample Date : 11/02/2010
Analysis Type: 2RES
Sample Matrix : SED
Lab Sample ID: K1012377-012

Reviewed By / Date :

Approved By / Date :

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 8015C					**Dilution: 1**															
Gasoline Range Organics (GRO)	18		mg/Kg	U	YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data revie

Sample Qualification Report (All Analytes)

Client Sample ID : DC-13-01 **Lab Report Batch :** K1012381 **Lab ID :** CAS_K

Sample Date : 11/02/2010 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1012381-001

Reviewed By / Date : **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 8015C						**Dilution: 1**														
Gasoline Range Organics (GRO)	7.9		mg/Kg	J	YES	**J**								J						

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data revie

Sample Qualification Report (All Analytes)

Client Sample ID : DC-13-01 **Lab Report Batch :** K1012381 **Lab ID :** CAS_K

Sample Date : 11/02/2010 **Analysis Type: 2RES** **Sample Matrix :** SED

Lab Sample ID: K1012381-001

Reviewed By / Date : **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 8015C					**Dilution: 1**															
Diesel Range Organics (DRO)	640		mg/Kg	H	YES															
Residual Range Organics (RRO)	1800		mg/Kg	O	YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data revie

Sample Qualification Report (All Analytes)

Client Sample ID : DC-13-02 **Lab Report Batch :** K1012381 **Lab ID :** CAS_K

Sample Date : 11/02/2010 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1012381-002

Reviewed By / Date : **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 8015C						**Dilution: 1**														
Gasoline Range Organics (GRO)	11		mg/Kg	J	YES	**J**								J						

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data revie

Sample Qualification Report (All Analytes)

Client Sample ID : DC-13-02 **Lab Report Batch :** K1012381 **Lab ID :** CAS_K

Sample Date : 11/02/2010 **Analysis Type: 2RES** **Sample Matrix :** SED

Lab Sample ID: K1012381-002

Reviewed By / Date : **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 8015C					**Dilution: 1**															
Diesel Range Organics (DRO)	730		mg/Kg	Y	YES															
Residual Range Organics (RRO)	1000		mg/Kg	O	YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data revie

Sample Qualification Report (All Analytes)

Client Sample ID : DC-13-03 **Lab Report Batch :** K1012381 **Lab ID :** CAS_K

Sample Date : 11/02/2010 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1012381-003

Reviewed By / Date : **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 8015C					**Dilution: 1**															
Gasoline Range Organics (GRO)	9.9		mg/Kg	J	YES	**J**								J						

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data revie

Sample Qualification Report (All Analytes)

Client Sample ID : DC-13-03 **Lab Report Batch :** K1012381 **Lab ID :** CAS_K

Sample Date : 11/02/2010 **Analysis Type: 2RES** **Sample Matrix :** SED

Lab Sample ID: K1012381-003

Reviewed By / Date : **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 8015C					**Dilution: 1**															
Diesel Range Organics (DRO)	420		mg/Kg	Y	YES															
Residual Range Organics (RRO)	780		mg/Kg	O	YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data revie

Sample Qualification Report (All Analytes)

Client Sample ID : DC-13-04 **Lab Report Batch :** K1012381 **Lab ID :** CAS_K

Sample Date : 11/02/2010 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1012381-004

Reviewed By / Date : **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 8015C					**Dilution: 1**															
Gasoline Range Organics (GRO)	11		mg/Kg	Y	YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data revie

Sample Qualification Report (All Analytes)

Client Sample ID : DC-13-04 **Lab Report Batch :** K1012381 **Lab ID :** CAS_K

Sample Date : 11/02/2010 **Analysis Type: 2RES** **Sample Matrix :** SED

Lab Sample ID: K1012381-004

Reviewed By / Date : **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 8015C					**Dilution: 1**															
Diesel Range Organics (DRO)	630		mg/Kg	H	YES	**J**					J									
Residual Range Organics (RRO)	1500		mg/Kg	O	YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data revie

Sample Qualification Report (All Analytes)

Client Sample ID : DC-17 **Lab Report Batch :** K1012381 **Lab ID :** CAS_K

Sample Date : 11/02/2010 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1012381-005

Reviewed By / Date : **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 8015C					**Dilution: 1**															
Diesel Range Organics (DRO)	460		mg/Kg	H	YES															
Residual Range Organics (RRO)	2300		mg/Kg	O	YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data revie

Sample Qualification Report (All Analytes)

Client Sample ID : DC-17 **Lab Report Batch :** K1012381 **Lab ID :** CAS_K

Sample Date : 11/02/2010 **Analysis Type: 2RES** **Sample Matrix :** SED

Lab Sample ID: K1012381-005

Reviewed By / Date : **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 8015C						**Dilution: 1**														
Gasoline Range Organics (GRO)	5.5		mg/Kg	J	YES	**UJ**			U					J						

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data revie

Sample Qualification Report (All Analytes)

Client Sample ID : DC-17-01 **Lab Report Batch :** K1012381 **Lab ID :** CAS_K

Sample Date : 11/02/2010 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1012381-006

Reviewed By / Date : **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 8015C						**Dilution: 1**														
Gasoline Range Organics (GRO)	4.1		mg/Kg	J	YES	**UJ**			U					J						

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data revie

Sample Qualification Report (All Analytes)

Client Sample ID : DC-17-01 **Lab Report Batch :** K1012381 **Lab ID :** CAS_K

Sample Date : 11/02/2010 **Analysis Type: 2RES** **Sample Matrix :** SED

Lab Sample ID: K1012381-006

Reviewed By / Date : **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 8015C					**Dilution: 1**															
Diesel Range Organics (DRO)	300		mg/Kg	H	YES															
Residual Range Organics (RRO)	1000		mg/Kg	O	YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data revie

Sample Qualification Report (All Analytes)

Client Sample ID : DC-17-02 **Lab Report Batch :** K1012381 **Lab ID :** CAS_K

Sample Date : 11/02/2010 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1012381-007

Reviewed By / Date : **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 8015C						**Dilution: 1**														
Gasoline Range Organics (GRO)	3.7		mg/Kg	J	YES	**UJ**			U					J						

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data revie

Sample Qualification Report (All Analytes)

Client Sample ID : DC-17-02 **Lab Report Batch :** K1012381 **Lab ID :** CAS_K

Sample Date : 11/02/2010 **Analysis Type: 2RES** **Sample Matrix :** SED

Lab Sample ID: K1012381-007

Reviewed By / Date : **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 8015C					**Dilution: 1**															
Diesel Range Organics (DRO)	620		mg/Kg	H	YES															
Residual Range Organics (RRO)	1200		mg/Kg	O	YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data revie

Sample Qualification Report (All Analytes)

Client Sample ID : DC-17-03 **Lab Report Batch :** K1012381 **Lab ID :** CAS_K

Sample Date : 11/02/2010 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1012381-008

Reviewed By / Date : **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 8015C					**Dilution: 1**															
Gasoline Range Organics (GRO)	7.3		mg/Kg	J	YES	**J**								J						

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data revie

Sample Qualification Report (All Analytes)

Client Sample ID : DC-17-03 **Lab Report Batch :** K1012381 **Lab ID :** CAS_K

Sample Date : 11/02/2010 **Analysis Type: 2RES** **Sample Matrix :** SED

Lab Sample ID: K1012381-008

Reviewed By / Date : **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 8015C					**Dilution: 1**															
Diesel Range Organics (DRO)	820		mg/Kg	Y	YES															
Residual Range Organics (RRO)	1300		mg/Kg	O	YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data revie

Sample Qualification Report (All Analytes)

Client Sample ID : DC-17-04 **Lab Report Batch :** K1012381 **Lab ID :** CAS_K

Sample Date : 11/02/2010 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1012381-009

Reviewed By / Date : **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 8015C					**Dilution: 1**															
Gasoline Range Organics (GRO)	25		mg/Kg	Y	YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data revie

Sample Qualification Report (All Analytes)

Client Sample ID : DC-17-04 **Lab Report Batch :** K1012381 **Lab ID :** CAS_K

Sample Date : 11/02/2010 **Analysis Type: 2RES** **Sample Matrix :** SED

Lab Sample ID: K1012381-009

Reviewed By / Date : **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 8015C					**Dilution: 1**															
Diesel Range Organics (DRO)	2800		mg/Kg	H	YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data revie

Sample Qualification Report (All Analytes)

Client Sample ID : DC-17-04 **Lab Report Batch :** K1012381 **Lab ID :** CAS_K

Sample Date : 11/02/2010 **Analysis Type: 3RES** **Sample Matrix :** SED

Lab Sample ID: K1012381-009

Reviewed By / Date : **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 8015C					**Dilution: 5**															
Residual Range Organics (RRO)	3700		mg/Kg	DO	YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data revie

Sample Qualification Report (All Analytes)

Client Sample ID : DC-17-05 **Lab Report Batch :** K1012381 **Lab ID :** CAS_K

Sample Date : 11/02/2010 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1012381-010

Reviewed By / Date : **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 8015C					**Dilution: 1**															
Gasoline Range Organics (GRO)	31		mg/Kg	Y	YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data revie

Sample Qualification Report (All Analytes)

Client Sample ID : DC-17-05 **Lab Report Batch :** K1012381 **Lab ID :** CAS_K

Sample Date : 11/02/2010 **Analysis Type: 2RES** **Sample Matrix :** SED

Lab Sample ID: K1012381-010

Reviewed By / Date : **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 8015C					**Dilution: 1**															
Diesel Range Organics (DRO)	2800		mg/Kg	H	YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data revie

Sample Qualification Report (All Analytes)

Client Sample ID : DC-17-05 **Lab Report Batch :** K1012381 **Lab ID :** CAS_K

Sample Date : 11/02/2010 **Analysis Type: 3RES** **Sample Matrix :** SED

Lab Sample ID: K1012381-010

Reviewed By / Date : **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 8015C					**Dilution: 5**															
Residual Range Organics (RRO)	3700		mg/Kg	DO	YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data revie

Sample Qualification Report (All Analytes)

Client Sample ID : DC-17-06 **Lab Report Batch :** K1012381 **Lab ID :** CAS_K

Sample Date : 11/02/2010 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1012381-011

Reviewed By / Date : **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 8015C					**Dilution: 1**															
Gasoline Range Organics (GRO)	25		mg/Kg	Y	YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data revie

Sample Qualification Report (All Analytes)

Client Sample ID : DC-17-06 **Lab Report Batch :** K1012381 **Lab ID :** CAS_K

Sample Date : 11/02/2010 **Analysis Type: 2RES** **Sample Matrix :** SED

Lab Sample ID: K1012381-011

Reviewed By / Date : **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 8015C					**Dilution: 1**															
Diesel Range Organics (DRO)	2600		mg/Kg	H	YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data revie

Sample Qualification Report (All Analytes)

Client Sample ID : DC-17-06 **Lab Report Batch :** K1012381 **Lab ID :** CAS_K

Sample Date : 11/02/2010 **Analysis Type: 3RES** **Sample Matrix :** SED

Lab Sample ID: K1012381-011

Reviewed By / Date : **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 8015C					**Dilution: 5**															
Residual Range Organics (RRO)	3500		mg/Kg	DO	YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data revie

Sample Qualification Report (All Analytes)

Client Sample ID : DC-17-07 **Lab Report Batch :** K1012381 **Lab ID :** CAS_K

Sample Date : 11/02/2010 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1012381-012

Reviewed By / Date : **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 8015C					**Dilution: 1**															
Gasoline Range Organics (GRO)	30		mg/Kg	Y	YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data revie

Sample Qualification Report (All Analytes)

Client Sample ID : DC-17-07 **Lab Report Batch :** K1012381 **Lab ID :** CAS_K

Sample Date : 11/02/2010 **Analysis Type: 2RES** **Sample Matrix :** SED

Lab Sample ID: K1012381-012

Reviewed By / Date : **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 8015C					**Dilution: 1**															
Diesel Range Organics (DRO)	3000		mg/Kg	H	YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data revie

Sample Qualification Report (All Analytes)

Client Sample ID : DC-17-07 **Lab Report Batch :** K1012381 **Lab ID :** CAS_K

Sample Date : 11/02/2010 **Analysis Type: 3RES** **Sample Matrix :** SED

Lab Sample ID: K1012381-012

Reviewed By / Date : **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 8015C					**Dilution: 5**															
Residual Range Organics (RRO)	3800		mg/Kg	DO	YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data revie

Sample Qualification Report (All Analytes)

Client Sample ID : DC-13 **Lab Report Batch :** K1012413 **Lab ID :** CAS_K

Sample Date : 11/02/2010 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1012413-001

Reviewed By / Date : **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 8015B					**Dilution: 1**															
Diesel Range Organics (DRO)	630		mg/Kg	H	YES															
Residual Range Organics (RRO)	3600		mg/Kg	O	YES															
Analysis Method : 8015C					**Dilution: 1**															
Gasoline Range Organics (GRO)	7.9		mg/Kg	J	YES	**J**								J						

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data revie

Sample Qualification Report (All Analytes)

Client Sample ID : DC-16 **Lab Report Batch :** K1012413 **Lab ID :** CAS_K

Sample Date : 11/02/2010 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1012413-002

Reviewed By / Date : **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 8015B					**Dilution: 1**															
Diesel Range Organics (DRO)	510		mg/Kg	H	YES															
Residual Range Organics (RRO)	2600		mg/Kg	O	YES															
Analysis Method : 8015C					**Dilution: 1**															
Gasoline Range Organics (GRO)	4.9		mg/Kg	J	YES	**UJ**			U					J						

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data revie

Sample Qualification Report (All Analytes)

Client Sample ID : DC-16-01 **Lab Report Batch :** K1012413 **Lab ID :** CAS_K

Sample Date : 11/02/2010 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1012413-003

Reviewed By / Date : **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 8015B					**Dilution: 1**															
Diesel Range Organics (DRO)	390		mg/Kg	H	YES															
Residual Range Organics (RRO)	1200		mg/Kg	O	YES															
Analysis Method : 8015C					**Dilution: 1**															
Gasoline Range Organics (GRO)	4.3		mg/Kg	J	YES	**UJ**			U					J						

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data revie

Sample Qualification Report (All Analytes)

Client Sample ID : DC-16-02 **Lab Report Batch :** K1012413 **Lab ID :** CAS_K

Sample Date : 11/02/2010 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1012413-004

Reviewed By / Date : **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 8015B					**Dilution: 1**															
Diesel Range Organics (DRO)	600		mg/Kg	Y	YES															
Residual Range Organics (RRO)	1200		mg/Kg	O	YES															
Analysis Method : 8015C					**Dilution: 1**															
Gasoline Range Organics (GRO)	3.6		mg/Kg	J	YES	**UJ**			U					J						

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data revie

Sample Qualification Report (All Analytes)

Client Sample ID : DC-16-03 **Lab Report Batch :** K1012413 **Lab ID :** CAS_K

Sample Date : 11/02/2010 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1012413-005

Reviewed By / Date : **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 8015B					**Dilution: 1**															
Diesel Range Organics (DRO)	600		mg/Kg	Y	YES															
Residual Range Organics (RRO)	890		mg/Kg	O	YES															
Analysis Method : 8015C					**Dilution: 1**															
Gasoline Range Organics (GRO)	4.0		mg/Kg	J	YES	**UJ**			U					J						

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data revie

Sample Qualification Report (All Analytes)

Client Sample ID : DC-16-04 **Lab Report Batch :** K1012413 **Lab ID :** CAS_K

Sample Date : 11/02/2010 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1012413-006

Reviewed By / Date : **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 8015B					**Dilution: 1**															
Diesel Range Organics (DRO)	2700		mg/Kg	Y	YES															
Analysis Method : 8015C					**Dilution: 1**															
Gasoline Range Organics (GRO)	16		mg/Kg	Y	YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data revie

Sample Qualification Report (All Analytes)

Client Sample ID : DC-16-04 **Lab Report Batch :** K1012413 **Lab ID :** CAS_K

Sample Date : 11/02/2010 **Analysis Type: 2RES** **Sample Matrix :** SED

Lab Sample ID: K1012413-006

Reviewed By / Date : **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 8015B					**Dilution: 5**															
Residual Range Organics (RRO)	4300		mg/Kg	DO	YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data revie

Sample Qualification Report (All Analytes)

Client Sample ID : DC-16-05 **Lab Report Batch :** K1012413 **Lab ID :** CAS_K

Sample Date : 11/02/2010 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1012413-007

Reviewed By / Date : **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 8015B					**Dilution: 1**															
Diesel Range Organics (DRO)	2500		mg/Kg	Y	YES															
Analysis Method : 8015C					**Dilution: 1**															
Gasoline Range Organics (GRO)	26		mg/Kg	Y	YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data revie

Sample Qualification Report (All Analytes)

Client Sample ID : DC-16-05 **Lab Report Batch :** K1012413 **Lab ID :** CAS_K

Sample Date : 11/02/2010 **Analysis Type: 2RES** **Sample Matrix :** SED

Lab Sample ID: K1012413-007

Reviewed By / Date : **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 8015B					**Dilution: 5**															
Residual Range Organics (RRO)	3200		mg/Kg	DO	YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data revie

Sample Qualification Report (All Analytes)

Client Sample ID : DC-16-06 **Lab Report Batch :** K1012413 **Lab ID :** CAS_K

Sample Date : 11/02/2010 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1012413-008

Reviewed By / Date : **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 8015B					**Dilution: 1**															
Diesel Range Organics (DRO)	2500		mg/Kg	Y	YES															
Analysis Method : 8015C					**Dilution: 1**															
Gasoline Range Organics (GRO)	41		mg/Kg	Y	YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data revie

Sample Qualification Report (All Analytes)

Client Sample ID : DC-16-06 **Lab Report Batch :** K1012413 **Lab ID :** CAS_K

Sample Date : 11/02/2010 **Analysis Type: 2RES** **Sample Matrix :** SED

Lab Sample ID: K1012413-008

Reviewed By / Date : **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 8015B					**Dilution: 5**															
Residual Range Organics (RRO)	3800		mg/Kg	DO	YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data revie

Sample Qualification Report (All Analytes)

Client Sample ID : DC-16-07 **Lab Report Batch :** K1012413 **Lab ID :** CAS_K

Sample Date : 11/02/2010 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1012413-009

Reviewed By / Date : **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 8015B					**Dilution: 1**															
Diesel Range Organics (DRO)	2700		mg/Kg	Y	YES															
Analysis Method : 8015C					**Dilution: 1**															
Gasoline Range Organics (GRO)	43		mg/Kg	Y	YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data revie

Sample Qualification Report (All Analytes)

Client Sample ID : DC-16-07 **Lab Report Batch :** K1012413 **Lab ID :** CAS_K

Sample Date : 11/02/2010 **Analysis Type: 2RES** **Sample Matrix :** SED

Lab Sample ID: K1012413-009

Reviewed By / Date : **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 8015B					**Dilution: 5**															
Residual Range Organics (RRO)	4100		mg/Kg	DO	YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data revie

Sample Qualification Report (All Analytes)

Client Sample ID : OC-26 **Lab Report Batch :** K1012416 **Lab ID :** CAS_K

Sample Date : 11/03/2010 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1012416-001

Reviewed By / Date : **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 8015B					**Dilution: 1**															
Diesel Range Organics (DRO)	3300		mg/Kg	Y	YES															
Analysis Method : 8015C					**Dilution: 1**															
Gasoline Range Organics (GRO)	180		mg/Kg	Y	YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data revie

Sample Qualification Report (All Analytes)

Client Sample ID : OC-26 **Lab Report Batch :** K1012416 **Lab ID :** CAS_K

Sample Date : 11/03/2010 **Analysis Type: 2RES** **Sample Matrix :** SED

Lab Sample ID: K1012416-001

Reviewed By / Date : **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 8015B					**Dilution: 5**															
Residual Range Organics (RRO)	3600		mg/Kg	DO	YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data revie

Sample Qualification Report (All Analytes)

Client Sample ID : OC-26-01 **Lab Report Batch :** K1012416 **Lab ID :** CAS_K

Sample Date : 11/03/2010 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1012416-002

Reviewed By / Date : **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 8015B					**Dilution: 1**															
Diesel Range Organics (DRO)	2900		mg/Kg	Y	YES															
Analysis Method : 8015C					**Dilution: 1**															
Gasoline Range Organics (GRO)	100		mg/Kg	Y	YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data revie

Sample Qualification Report (All Analytes)

Client Sample ID : OC-26-01 **Lab Report Batch :** K1012416 **Lab ID :** CAS_K

Sample Date : 11/03/2010 **Analysis Type: 2RES** **Sample Matrix :** SED

Lab Sample ID: K1012416-002

Reviewed By / Date : **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 8015B					**Dilution: 5**															
Residual Range Organics (RRO)	3200		mg/Kg	DO	YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data revie

Sample Qualification Report (All Analytes)

Client Sample ID : OC-26-01DP
Lab Report Batch : K1012416
Lab ID : CAS_K
Sample Date : 11/03/2010
Analysis Type: 1RES
Sample Matrix : SED
Lab Sample ID: K1012416-003

Reviewed By / Date :

Approved By / Date :

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 8015B					**Dilution: 1**															
Diesel Range Organics (DRO)	2900		mg/Kg	Y	YES															
Analysis Method : 8015C					**Dilution: 1**															
Gasoline Range Organics (GRO)	140		mg/Kg	Y	YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data revie

Sample Qualification Report (All Analytes)

Client Sample ID : OC-26-01DP
Lab Report Batch : K1012416
Lab ID : CAS_K
Sample Date : 11/03/2010
Analysis Type: 2RES
Sample Matrix : SED
Lab Sample ID: K1012416-003

Reviewed By / Date :

Approved By / Date :

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 8015B					**Dilution: 10**															
Residual Range Organics (RRO)	3500		mg/Kg	DO	YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data revie

Sample Qualification Report (All Analytes)

Client Sample ID : OC-26-02 **Lab Report Batch :** K1012416 **Lab ID :** CAS_K

Sample Date : 11/03/2010 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1012416-004

Reviewed By / Date : **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 8015B					**Dilution: 1**															
Diesel Range Organics (DRO)	60		mg/Kg	Y	YES															
Residual Range Organics (RRO)	95		mg/Kg	O	YES															
Analysis Method : 8015C					**Dilution: 1**															
Gasoline Range Organics (GRO)	4.3		mg/Kg	J	YES	**UJ**			U					J						

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data revie

Sample Qualification Report (All Analytes)

Client Sample ID : OC-26-02DP
Lab Report Batch : K1012416
Lab ID : CAS_K
Sample Date : 11/03/2010
Analysis Type: 1RES
Sample Matrix : SED
Lab Sample ID: K1012416-005

Reviewed By / Date :

Approved By / Date :

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 8015B					**Dilution: 1**															
Diesel Range Organics (DRO)	67		mg/Kg	Y	YES															
Residual Range Organics (RRO)	88		mg/Kg	O	YES															
Analysis Method : 8015C					**Dilution: 1**															
Gasoline Range Organics (GRO)	2.5		mg/Kg	J	YES	**UJ**			U					J						

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data revie

Sample Qualification Report (All Analytes)

Client Sample ID : OC-27 **Lab Report Batch :** K1012416 **Lab ID :** CAS_K

Sample Date : 11/03/2010 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1012416-006

Reviewed By / Date : **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 8015B					**Dilution: 1**															
Diesel Range Organics (DRO)	11000		mg/Kg	Y	YES															
Analysis Method : 8015C					**Dilution: 1**															
Gasoline Range Organics (GRO)	220		mg/Kg	Y	YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data revie

Sample Qualification Report (All Analytes)

Client Sample ID : OC-27 **Lab Report Batch :** K1012416 **Lab ID :** CAS_K

Sample Date : 11/03/2010 **Analysis Type: 2RES** **Sample Matrix :** SED

Lab Sample ID: K1012416-006

Reviewed By / Date : **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 8015B					**Dilution: 10**															
Residual Range Organics (RRO)	11000		mg/Kg	DO	YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data revie

Sample Qualification Report (All Analytes)

Client Sample ID : OC-27-01 **Lab Report Batch :** K1012416 **Lab ID :** CAS_K

Sample Date : 11/03/2010 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1012416-007

Reviewed By / Date : **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 8015B					**Dilution: 1**															
Diesel Range Organics (DRO)	700		mg/Kg	Y	YES															
Residual Range Organics (RRO)	760		mg/Kg	O	YES															
Analysis Method : 8015C					**Dilution: 1**															
Gasoline Range Organics (GRO)	63		mg/Kg	Y	YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data revie

Sample Qualification Report (All Analytes)

Client Sample ID : OC-27-02 **Lab Report Batch :** K1012416 **Lab ID :** CAS_K

Sample Date : 11/03/2010 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1012416-008

Reviewed By / Date : **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 8015B					**Dilution: 1**															
Diesel Range Organics (DRO)	61		mg/Kg	Y	YES															
Residual Range Organics (RRO)	73		mg/Kg	O	YES															
Analysis Method : 8015C					**Dilution: 1**															
Gasoline Range Organics (GRO)	3.3		mg/Kg	J	YES	**UJ**			U					J						

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data revie

Sample Qualification Report (All Analytes)

Client Sample ID : OC-27-DP
Lab Report Batch : K1012416
Lab ID : CAS_K
Sample Date : 11/03/2010
Analysis Type: 1RES
Sample Matrix : SED
Lab Sample ID: K1012416-009

Reviewed By / Date :

Approved By / Date :

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 8015B					**Dilution: 1**															
Diesel Range Organics (DRO)	14000		mg/Kg	Y	YES															
Analysis Method : 8015C					**Dilution: 1**															
Gasoline Range Organics (GRO)	270		mg/Kg	Y	YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data revie

Sample Qualification Report (All Analytes)

Client Sample ID : OC-27-DP
Lab Report Batch : K1012416
Lab ID : CAS_K
Sample Date : 11/03/2010
Analysis Type: 2RES
Sample Matrix : SED
Lab Sample ID: K1012416-009

Reviewed By / Date :

Approved By / Date :

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 8015B					**Dilution: 10**															
Residual Range Organics (RRO)	12000		mg/Kg	DO	YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data revie

Sample Qualification Report (All Analytes)

Client Sample ID : DC-14 **Lab Report Batch :** K1012421 **Lab ID :** CAS_K

Sample Date : 11/03/2010 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1012421-001

Reviewed By / Date : **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 8015B					**Dilution: 1**															
Diesel Range Organics (DRO)	210		mg/Kg	H	YES															
Residual Range Organics (RRO)	890		mg/Kg	O	YES															
Analysis Method : 8015C					**Dilution: 1**															
Gasoline Range Organics (GRO)	6.3		mg/Kg	J	YES	**UJ**			U					J						

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data revie

Sample Qualification Report (All Analytes)

Client Sample ID : DC-14-01 **Lab Report Batch :** K1012421 **Lab ID :** CAS_K

Sample Date : 11/03/2010 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1012421-002

Reviewed By / Date : **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 8015B					**Dilution: 1**															
Diesel Range Organics (DRO)	230		mg/Kg	H	YES															
Residual Range Organics (RRO)	960		mg/Kg	O	YES															
Analysis Method : 8015C					**Dilution: 1**															
Gasoline Range Organics (GRO)	4.9		mg/Kg	J	YES	**UJ**			U					J						

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data revie

Sample Qualification Report (All Analytes)

Client Sample ID : DC-14-02 **Lab Report Batch :** K1012421 **Lab ID :** CAS_K

Sample Date : 11/03/2010 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1012421-003

Reviewed By / Date : **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 8015B					**Dilution: 1**															
Diesel Range Organics (DRO)	310		mg/Kg	H	YES															
Residual Range Organics (RRO)	720		mg/Kg	O	YES															
Analysis Method : 8015C					**Dilution: 1**															
Gasoline Range Organics (GRO)	4.8		mg/Kg	J	YES	**UJ**			U					J						

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data revie

Sample Qualification Report (All Analytes)

Client Sample ID : DC-14-03 **Lab Report Batch :** K1012421 **Lab ID :** CAS_K

Sample Date : 11/03/2010 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1012421-004

Reviewed By / Date : **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 8015B					**Dilution: 1**															
Diesel Range Organics (DRO)	420		mg/Kg	H	YES															
Residual Range Organics (RRO)	910		mg/Kg	O	YES															
Analysis Method : 8015C					**Dilution: 1**															
Gasoline Range Organics (GRO)	7.1		mg/Kg	J	YES	**UJ**			U					J						

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data revie

Sample Qualification Report (All Analytes)

Client Sample ID : DC-14-04 **Lab Report Batch :** K1012421 **Lab ID :** CAS_K

Sample Date : 11/03/2010 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1012421-005

Reviewed By / Date : **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 8015B					**Dilution: 1**															
Diesel Range Organics (DRO)	1900		mg/Kg	Y	YES															
Residual Range Organics (RRO)	3100		mg/Kg	O	YES															
Analysis Method : 8015C					**Dilution: 1**															
Gasoline Range Organics (GRO)	47		mg/Kg	Y	YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data revie

Sample Qualification Report (All Analytes)

Client Sample ID : DC-14-05 **Lab Report Batch :** K1012421 **Lab ID :** CAS_K

Sample Date : 11/03/2010 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1012421-006

Reviewed By / Date : **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 8015B					**Dilution: 1**															
Diesel Range Organics (DRO)	3200		mg/Kg	Y	YES															
Analysis Method : 8015C					**Dilution: 1**															
Gasoline Range Organics (GRO)	62		mg/Kg	Y	YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data revie

Sample Qualification Report (All Analytes)

Client Sample ID : DC-14-05 **Lab Report Batch :** K1012421 **Lab ID :** CAS_K

Sample Date : 11/03/2010 **Analysis Type: 2RES** **Sample Matrix :** SED

Lab Sample ID: K1012421-006

Reviewed By / Date : **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 8015B					**Dilution: 5**															
Residual Range Organics (RRO)	5000		mg/Kg	DO	YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data revie

Sample Qualification Report (All Analytes)

Client Sample ID : OC-28 **Lab Report Batch :** K1012421 **Lab ID :** CAS_K

Sample Date : 11/03/2010 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1012421-007

Reviewed By / Date : **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 8015B					**Dilution: 1**															
Diesel Range Organics (DRO)	2900		mg/Kg	Y	YES															
Analysis Method : 8015C					**Dilution: 1**															
Gasoline Range Organics (GRO)	51		mg/Kg	Y	YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data revie

Sample Qualification Report (All Analytes)

Client Sample ID : OC-28 **Lab Report Batch :** K1012421 **Lab ID :** CAS_K

Sample Date : 11/03/2010 **Analysis Type: 2RES** **Sample Matrix :** SED

Lab Sample ID: K1012421-007

Reviewed By / Date : **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 8015B					**Dilution: 5**															
Residual Range Organics (RRO)	3900		mg/Kg	DO	YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data revie

Sample Qualification Report (All Analytes)

Client Sample ID : OC-28-01 **Lab Report Batch :** K1012421 **Lab ID :** CAS_K

Sample Date : 11/03/2010 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1012421-008

Reviewed By / Date : **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 8015B					**Dilution: 1**															
Diesel Range Organics (DRO)	7700		mg/Kg	Y	YES															
Analysis Method : 8015C					**Dilution: 1**															
Gasoline Range Organics (GRO)	970		mg/Kg	Y	YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data revie

Sample Qualification Report (All Analytes)

Client Sample ID : OC-28-01 **Lab Report Batch :** K1012421 **Lab ID :** CAS_K

Sample Date : 11/03/2010 **Analysis Type: 2RES** **Sample Matrix :** SED

Lab Sample ID: K1012421-008

Reviewed By / Date : **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 8015B					**Dilution: 10**															
Residual Range Organics (RRO)	7200		mg/Kg	DO	YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data revie

Sample Qualification Report (All Analytes)

Client Sample ID : OC-28-02 **Lab Report Batch :** K1012421 **Lab ID :** CAS_K

Sample Date : 11/03/2010 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1012421-009

Reviewed By / Date : **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 8015B					**Dilution: 1**															
Diesel Range Organics (DRO)	760		mg/Kg	Y	YES															
Residual Range Organics (RRO)	810		mg/Kg	O	YES															
Analysis Method : 8015C					**Dilution: 1**															
Gasoline Range Organics (GRO)	3.1		mg/Kg	J	YES	**UJ**			U					J						

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data revie

Sample Qualification Report (All Analytes)

Client Sample ID : OC-28-03 **Lab Report Batch :** K1012421 **Lab ID :** CAS_K

Sample Date : 11/03/2010 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1012421-010

Reviewed By / Date : **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 8015B					**Dilution: 1**															
Diesel Range Organics (DRO)	45		mg/Kg	Y	YES															
Residual Range Organics (RRO)	69		mg/Kg	O	YES															
Analysis Method : 8015C					**Dilution: 1**															
Gasoline Range Organics (GRO)	3.1		mg/Kg	J	YES	**UJ**			U					J						

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data revie

Sample Qualification Report (All Analytes)

Client Sample ID : OC-29 **Lab Report Batch :** K1012529 **Lab ID :** CAS_K

Sample Date : 11/04/2010 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1012529-011

Reviewed By / Date : **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 8015B					**Dilution: 1**															
Diesel Range Organics (DRO)	6200		mg/Kg	Y	YES															
Analysis Method : 8015C					**Dilution: 1**															
Gasoline Range Organics (GRO)	140		mg/Kg	Y	YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data revie

Sample Qualification Report (All Analytes)

Client Sample ID : OC-29 **Lab Report Batch :** K1012529 **Lab ID :** CAS_K

Sample Date : 11/04/2010 **Analysis Type: 2RES** **Sample Matrix :** SED

Lab Sample ID: K1012529-011

Reviewed By / Date : **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 8015B					**Dilution: 10**															
Residual Range Organics (RRO)	6400		mg/Kg	DO	YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data revie

Sample Qualification Report (All Analytes)

Client Sample ID : OC-29-01 **Lab Report Batch :** K1012529 **Lab ID :** CAS_K

Sample Date : 11/04/2010 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1012529-012

Reviewed By / Date : **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 8015B					**Dilution: 1**															
Diesel Range Organics (DRO)	2500		mg/Kg	Y	YES															
Analysis Method : 8015C					**Dilution: 1**															
Gasoline Range Organics (GRO)	75		mg/Kg	Y	YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data revie

Sample Qualification Report (All Analytes)

Client Sample ID : OC-29-01 **Lab Report Batch :** K1012529 **Lab ID :** CAS_K

Sample Date : 11/04/2010 **Analysis Type: 2RES** **Sample Matrix :** SED

Lab Sample ID: K1012529-012

Reviewed By / Date : **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 8015B					**Dilution: 5**															
Residual Range Organics (RRO)	2900		mg/Kg	DO	YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data revie

Sample Qualification Report (All Analytes)

Client Sample ID : OC-29-02 **Lab Report Batch :** K1012529 **Lab ID :** CAS_K

Sample Date : 11/04/2010 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1012529-013

Reviewed By / Date : **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 8015B					**Dilution: 1**															
Diesel Range Organics (DRO)	110		mg/Kg	Y	YES															
Residual Range Organics (RRO)	150		mg/Kg	O	YES															
Analysis Method : 8015C					**Dilution: 1**															
Gasoline Range Organics (GRO)	2.4		mg/Kg	J	YES	**UJ**			U					J						

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data revie

Sample Qualification Report (All Analytes)

Client Sample ID : OC-30 **Lab Report Batch :** K1012529 **Lab ID :** CAS_K

Sample Date : 11/04/2010 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1012529-014

Reviewed By / Date : **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 8015B					**Dilution: 1**															
Diesel Range Organics (DRO)	5300		mg/Kg	Y	YES															
Analysis Method : 8015C					**Dilution: 1**															
Gasoline Range Organics (GRO)	360		mg/Kg	Y	YES	**J**							J							

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data revie

Sample Qualification Report (All Analytes)

Client Sample ID : OC-30 **Lab Report Batch :** K1012529 **Lab ID :** CAS_K

Sample Date : 11/04/2010 **Analysis Type: 2RES** **Sample Matrix :** SED

Lab Sample ID: K1012529-014

Reviewed By / Date : **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 8015B					**Dilution: 10**															
Residual Range Organics (RRO)	5100		mg/Kg	DO	YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data revie

Sample Qualification Report (All Analytes)

Client Sample ID : OC-30-01 **Lab Report Batch :** K1012529 **Lab ID :** CAS_K

Sample Date : 11/04/2010 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1012529-015

Reviewed By / Date : **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 8015B					**Dilution: 1**															
Diesel Range Organics (DRO)	910		mg/Kg	Y	YES															
Residual Range Organics (RRO)	1100		mg/Kg	O	YES															
Analysis Method : 8015C					**Dilution: 1**															
Gasoline Range Organics (GRO)	24		mg/Kg	Y	YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data revie

Sample Qualification Report (All Analytes)

Client Sample ID : OC-30-02 **Lab Report Batch :** K1012529 **Lab ID :** CAS_K

Sample Date : 11/04/2010 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1012529-016

Reviewed By / Date : **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 8015B					**Dilution: 1**															
Diesel Range Organics (DRO)	41		mg/Kg	Y	YES															
Residual Range Organics (RRO)	60		mg/Kg	O	YES															
Analysis Method : 8015C					**Dilution: 1**															
Gasoline Range Organics (GRO)	2.7		mg/Kg	J	YES	**UJ**			U					J						

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data revie

Sample Qualification Report (All Analytes)

Client Sample ID : OC-30DP
Lab Report Batch : K1012529
Lab ID : CAS_K
Sample Date : 11/04/2010
Analysis Type: 1RES
Sample Matrix : SED
Lab Sample ID: K1012529-017

Reviewed By / Date :

Approved By / Date :

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 8015B					**Dilution: 1**															
Diesel Range Organics (DRO)	3000		mg/Kg	Y	YES															
Analysis Method : 8015C					**Dilution: 1**															
Gasoline Range Organics (GRO)	130		mg/Kg	Y	YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data revie

Sample Qualification Report (All Analytes)

Client Sample ID : OC-30DP
Lab Report Batch : K1012529
Lab ID : CAS_K
Sample Date : 11/04/2010
Analysis Type: 2RES
Sample Matrix : SED
Lab Sample ID: K1012529-017

Reviewed By / Date :

Approved By / Date :

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 8015B					**Dilution: 5**															
Residual Range Organics (RRO)	3500		mg/Kg	DO	YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data revie

Sample Qualification Report (All Analytes)

Client Sample ID : OC-31 **Lab Report Batch :** K1012529 **Lab ID :** CAS_K

Sample Date : 11/04/2010 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1012529-018

Reviewed By / Date : **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 8015B					**Dilution: 1**															
Diesel Range Organics (DRO)	150		mg/Kg	Y	YES															
Residual Range Organics (RRO)	380		mg/Kg	O	YES															
Analysis Method : 8015C					**Dilution: 1**															
Gasoline Range Organics (GRO)	3.7		mg/Kg	J	YES	**UJ**			U					J						

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data revie

Sample Qualification Report (All Analytes)

Client Sample ID : OC-31-01 **Lab Report Batch :** K1012529 **Lab ID :** CAS_K

Sample Date : 11/04/2010 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1012529-001

Reviewed By / Date : **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 8015B					**Dilution: 1**															
Diesel Range Organics (DRO)	44		mg/Kg	Y	YES															
Residual Range Organics (RRO)	57		mg/Kg	O	YES															
Analysis Method : 8015C					**Dilution: 1**															
Gasoline Range Organics (GRO)	2.0		mg/Kg	J	YES	**UJ**			U					J						

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data revie

Sample Qualification Report (All Analytes)

Client Sample ID : OC-31-02 **Lab Report Batch :** K1012529 **Lab ID :** CAS_K

Sample Date : 11/04/2010 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1012529-002

Reviewed By / Date : **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 8015B					**Dilution: 1**															
Diesel Range Organics (DRO)	460		mg/Kg	Y	YES															
Residual Range Organics (RRO)	570		mg/Kg	O	YES															
Analysis Method : 8015C					**Dilution: 1**															
Gasoline Range Organics (GRO)	7.5		mg/Kg	Y	YES	**U**			U											

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data revie

Sample Qualification Report (All Analytes)

Client Sample ID : OC-31DP
Lab Report Batch : K1012529
Lab ID : CAS_K
Sample Date : 11/04/2010
Analysis Type: 1RES
Sample Matrix : SED
Lab Sample ID: K1012529-003

Reviewed By / Date :

Approved By / Date :

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 8015B					**Dilution: 1**															
Diesel Range Organics (DRO)	420		mg/Kg	Y	YES															
Residual Range Organics (RRO)	760		mg/Kg	O	YES															
Analysis Method : 8015C					**Dilution: 1**															
Gasoline Range Organics (GRO)	3.2		mg/Kg	J	YES	**UJ**			U					J						

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data revie

Sample Qualification Report (All Analytes)

Client Sample ID : OC-32 **Lab Report Batch :** K1012529 **Lab ID :** CAS_K

Sample Date : 11/04/2010 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1012529-004

Reviewed By / Date : **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 8015B					**Dilution: 1**															
Diesel Range Organics (DRO)	2100		mg/Kg	Y	YES															
Residual Range Organics (RRO)	2700		mg/Kg	O	YES															
Analysis Method : 8015C					**Dilution: 1**															
Gasoline Range Organics (GRO)	29		mg/Kg	Y	YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data revie

Sample Qualification Report (All Analytes)

Client Sample ID : OC-32-01 **Lab Report Batch :** K1012529 **Lab ID :** CAS_K

Sample Date : 11/04/2010 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1012529-005

Reviewed By / Date : **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 8015B					**Dilution: 1**															
Diesel Range Organics (DRO)	250		mg/Kg	Y	YES															
Residual Range Organics (RRO)	370		mg/Kg	O	YES															
Analysis Method : 8015C					**Dilution: 1**															
Gasoline Range Organics (GRO)	19		mg/Kg	Y	YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data revie

Sample Qualification Report (All Analytes)

Client Sample ID : OC-32-02 **Lab Report Batch :** K1012529 **Lab ID :** CAS_K

Sample Date : 11/04/2010 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1012529-006

Reviewed By / Date : **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 8015B					**Dilution: 1**															
Diesel Range Organics (DRO)	26		mg/Kg	J	YES	**J**								J						
Residual Range Organics (RRO)	39		mg/Kg	O	YES															
Analysis Method : 8015C					**Dilution: 1**															
Gasoline Range Organics (GRO)	2.3		mg/Kg	J	YES	**UJ**			U					J						

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data revie

Sample Qualification Report (All Analytes)

Client Sample ID : OC-32DP
Lab Report Batch : K1012529
Lab ID : CAS_K
Sample Date : 11/04/2010
Analysis Type: 1RES
Sample Matrix : SED
Lab Sample ID: K1012529-007

Reviewed By / Date :
Approved By / Date :

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 8015B					**Dilution: 1**															
Diesel Range Organics (DRO)	2100		mg/Kg	Y	YES															
Residual Range Organics (RRO)	2700		mg/Kg	O	YES															
Analysis Method : 8015C					**Dilution: 1**															
Gasoline Range Organics (GRO)	12		mg/Kg	Y	YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data revie

Sample Qualification Report (All Analytes)

Client Sample ID : OC-33 **Lab Report Batch :** K1012529 **Lab ID :** CAS_K

Sample Date : 11/04/2010 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1012529-008

Reviewed By / Date : **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 8015B					**Dilution: 1**															
Diesel Range Organics (DRO)	230		mg/Kg	Y	YES															
Residual Range Organics (RRO)	470		mg/Kg	O	YES															
Analysis Method : 8015C					**Dilution: 1**															
Gasoline Range Organics (GRO)	3.9		mg/Kg	J	YES	**UJ**			U					J						

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data revie

Sample Qualification Report (All Analytes)

Client Sample ID : OC-33-01 **Lab Report Batch :** K1012529 **Lab ID :** CAS_K

Sample Date : 11/04/2010 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1012529-009

Reviewed By / Date : **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 8015B					**Dilution: 1**															
Diesel Range Organics (DRO)	250		mg/Kg	Y	YES															
Residual Range Organics (RRO)	440		mg/Kg	O	YES															
Analysis Method : 8015C					**Dilution: 1**															
Gasoline Range Organics (GRO)	4.0		mg/Kg	J	YES	**UJ**			U					J						

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data revie

Sample Qualification Report (All Analytes)

Client Sample ID : OC-33-02 **Lab Report Batch :** K1012529 **Lab ID :** CAS_K

Sample Date : 11/04/2010 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1012529-010

Reviewed By / Date : **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 8015B					**Dilution: 1**															
Diesel Range Organics (DRO)	10		mg/Kg	J	YES	**UJ**			U					J						
Residual Range Organics (RRO)	25		mg/Kg	J	YES	**J**								J						
Analysis Method : 8015C					**Dilution: 1**															
Gasoline Range Organics (GRO)	2.0		mg/Kg	J	YES	**UJ**			U					J						

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data revie

ATTACHMENT C

DATA QUALIFIER DEFINITIONS

LABORATORY DATA QUALIFIER DEFITIONS

D - The reported result is from a dilution.

H - Indicates that the chromatographic fingerprint does resemble a petroleum product but the elution pattern indicates a greater amount of heavier molecular weight constituents than the calibration standard.

J - The result is an estimated value that was detected outside the quantitation range.

O - Indicates that the chromatographic fingerprint resembles an oil product, but does not match the calibration standard.

U - The analyte was analyzed for but not detected at or above the method detection limit and/or reporting limit

Y - Indicates that the chromatographic fingerprint resembles a petroleum product eluting in approximately the correct carbon range, but the elution pattern does not match the calibration standard.

DATA VALIDATION DATA QUALIFIER DEFITIONS

J - The analyte was positively identified and the associated numerical value is the approximate concentration of the analyte in the sample (due either to the quality of the data generated because certain quality control criteria were not met, or the concentration of the analyte was below the quantitation limit).

U - The analyte was analyzed for but not detected at a level equal to or greater than the reporting limit.

Weston Solutions, Inc.
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Chicago, IL 60606
(312) 424-3300 fax: (312) 424-3330
www.westonsolutions.com

August 5, 2011

Ms. Brenda Jones and Mr. Ajit Vaidya
Great Lakes National Program Office
United States Environmental Protection Agency, Region V
77 West Jackson Boulevard, Mail Code: G-17J
Chicago, Illinois 60604-3507

Re: Data Review of Total Organic Carbon Analyses
For Sediment Samples Collected on May 10-12, 2011
Duck and Otter Creeks Confluence Investigation
Wood and Lucas Counties, Ohio
DCN: 1269-2B-AOVS

Dear Ms. Jones and Mr. Vaidya:

The United States Environmental Protection Agency (U.S. EPA) tasked Weston Solutions, Inc., (WESTON®) to perform data validation for sediment samples collected on May 10-12, 2011, for the Great Lakes National Program Office (GLNPO) Duck and Otter Creeks Confluence Investigation (Duck and Otter) Site. This data review is for total organic carbon (TOC) analysis of 53 sediment samples that includes four field splits and four field duplicates that were collected by the WESTON Superfund Technical Assessment and Response Team (START). The samples were validated in accordance with the "Quality Assurance Project Plan (QAPP), Duck and Otter Creeks Data Gaps Investigation" dated September 28, 2010, and QAPP Amendment 1 dated May 5, 2011, which includes using the U.S. EPA Contract Laboratory Program National Functional Guidance for Organic and Inorganic Data Review. Table 1 provides a summary of the samples included in this review. All tables are presented at the end of this report.

The samples listed in Table 1 were analyzed by Columbia Analytical Services (CAS) located in Kelso, Washington, under the following three work orders:

- K1104187
- K1104250
- K1104355

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The samples were analyzed for TOC using U.S. EPA SW-846 Method 9060. CAS provided WESTON with a staged electronic data deliverable (SEDD) that was used in conjunction with the Automated Data Review (ADR) software to assist in reviewing the data. All SEDDs were imported into the ADR software for review by the software program and all data was checked for completeness. Five percent of the data was put through a full data validation. Therefore, one of the work orders, K1104187, was selected for the full data validation. Work order K1104187 contained 7 sediment samples, including one field split for TOC analysis.

Attachment A to this report contains the individual Quality Assurance/Quality Control (QA/QC) Analysis Checklist for Sediment Chemistry Analysis for work order K1104187. Attachment B to this report contains a printed report from ADR that provides a summary of results with qualifiers applied by the laboratory and the ADR program. Attachment C contains the data qualifier definitions. The QC limits utilized were those stated in the QAPP. If there was not a QC limit specified in the QAPP, then the method or laboratory-determined QC limits were used. Below is the data review summary.

SUMMARY OF TOC DATA REVIEW

As stated above, five percent of the data was fully validated. Work order K1104187 was selected for full data validation. In work order K1104187, the holding times, method blanks, calibration standards, calibration blanks, laboratory duplicates, and laboratory control samples (LCS) were all within the QC limits. For the remaining work orders, the ADR program indicated that method blanks, laboratory duplicates, and laboratory control samples were all within QC limits. All sample results were based on a dry weight for the TOC analyses.

There was a minor problem with the recovery of a matrix spike duplicate (MSD) for which a sample result was qualified (see discussion under Minor Problems.

The QAPP stated that field splits (replicates) and field duplicate samples would be collected at a 5 percent frequency. There were a total of 45 field investigative samples and four field duplicates and four field splits collected. Therefore, the QAPP-stated frequency was met for the field duplicates and splits. A QC limit for field splits and field duplicates was not stated in the QAPP; therefore, a default QC limit of 50 relative percent difference (RPD) was used to evaluate field split and duplicate results. The RPDs for three field split and three field duplicate samples were below 50 percent. One field split and field duplicate sample exceeded this limit with an RPD of 86 and 170 percent, respectively. These exceedances indicate some heterogeneity associated with TOC sample results but in general field duplicate and split results were acceptable. Tables 2 and 3 summarize the field split and field duplicate results, respectively.

Below are a description of the minor problems with QC failures and a review of the data quality indicators.

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MINOR PROBLEMS

Minor problems with QC failures are noted below.

MS and MSDs. There were a total of three matrix spike (MS) and MSD pairs associated with the TOC analysis. The percent recoveries for all three MSs and two MSDs were within QC limits. The exception was the MSD using sample DC-20-03 as the spiked sample. This MSD had a percent recovery of 141 percent which is above the QC limit of 69 to 123 percent recovery. The TOC result in sample DC-20-03 was flagged "J" as estimated due to potential matrix interference in this sample.

DATA QUALITY INDICATORS REVIEW

Many the data quality indicators (sensitivity, precision, accuracy, and completeness) were evaluated through the data validation procedures which are summarized above and discussed in detail in the Attachment.

Sensitivity. The laboratory reporting limit of 0.05 percent TOC as stated in the QAPP was met for all samples. Sensitivity was acceptable.

Precision. Field precision is typically determined by evaluating the RPDs for the field split and field duplicate results. The mean RPD for field splits is 48 and for field duplicates is 42. The mean field split and duplicate RPDs indicate acceptable field precision. Table 4 summarizes the field precision results.

Laboratory precision was determined by evaluating the RPD values for MS/MSD samples and laboratory duplicates. The mean RPD for the laboratory duplicates is 9 and the mean RPD for MS/MSDs is 10. The RPDs are within the QAPP stated limits for precision. Table 4 summarizes the laboratory precision results. The laboratory precision is acceptable for the TOC analyses.

Accuracy/Bias. Accuracy is a measure of the agreement between an observed value and an accepted reference value. Laboratory accuracy was evaluated by reviewing the QC criteria for percent recovery for MS/MSD and LCS results. Table 4 summarizes the accuracy estimates for the TOC analyses. The mean percent recovery for the MS/MSD samples is 114 percent and for the LCS samples is 101 percent. All mean percent recoveries are within the QAPP specified QC limits. Laboratory accuracy was acceptable.

The mean LCS recoveries do not indicate a bias (either high or low) for the TOC analyses.

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Completeness. Completeness is a measure of the amount of valid data obtained compared to the amount of data that was planned to be collected under normal conditions. All samples results were received.

In summary, all QC indicator samples that were analyzed were mostly within control limits and a data qualifier was applied for and MSD being outside QC limits.

If there are any questions or comments regarding this report, please do not hesitate to contact WESTON START at 312-424-3300.

Very truly yours,
Weston Solutions, Inc.



Lisa Graczyk
WESTON START Team

Alex Clark
WESTON START Project Manager

Attachments:
Tables
A - QA/QC Analysis Checklist for TOC for Work Order K1104187
B – Analytical Data Summary Sheets from ADR for TOC
C – Data Qualifier Definitions

cc: project file

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TABLES

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TABLE 1
SAMPLES INCLUDED IN DATA REVIEW

Sample ID	Lab ID	Date Collected	Comment
OC-34-01	K1104187-001	05/10/2011	
OC-34-02	K1104187-002	05/10/2011	
OC-44-01	K1104187-003	05/10/2011	
OC-44-02	K1104187-004	05/10/2011	
OC-45-01	K1104187-005	05/10/2011	
OC-45-02	K1104187-006	05/10/2011	
OC-45-02-SP	K1104187-007	05/10/2011	Field split of OC-45-02
DC-25-01	K1104250-001	05/11/2011	
DC-25-01-DP	K1104250-002	05/11/2011	Field duplicate of DC-25-01
DC-25-02	K1104250-003	05/11/2011	
OC-42-01	K1104250-004	05/11/2011	
OC-42-01-DP	K1104250-005	05/11/2011	Field duplicate of OC-42-01
OC-42-02	K1104250-006	05/11/2011	
OC-42-02-DP	K1104250-007	05/11/2011	Field duplicate of OC-42-02
DC-20-01	K1104250-008	05/11/2011	
DC-20-01-SP	K1104250-009	05/11/2011	Field split of DC-20-01
DC-21-01	K1104250-010	05/11/2011	
DC-21-02	K1104250-011	05/11/2011	
DC-25-03	K1104250-012	05/11/2011	
OC-38	K1104250-013	05/11/2011	
OC-36-01	K1104250-014	05/10/2011	
OC-36-02	K1104250-015	05/10/2011	
OC-40-01	K1104250-016	05/11/2011	
OC-40-02	K1104250-017	05/11/2011	
OC-41-01	K1104250-018	05/10/2011	
OC-41-02	K1104250-019	05/10/2011	
DC-20-03	K1104355-001	05/11/2011	
DC-22-01	K1104355-002	05/11/2011	
DC-22-02	K1104355-003	05/11/2011	
DC-22-03	K1104355-004	05/11/2011	
DC-24-03-SP	K1104355-005	05/11/2011	Field split of DC-24-03
OC-35-01	K1104355-006	05/12/2011	
OC-35-02	K1104355-007	05/12/2011	
OC-46-01	K1104355-008	05/12/2011	
OC-46-02	K1104355-009	05/12/2011	

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TABLE 1
SAMPLES INCLUDED IN DATA REVIEW

Sample ID	Lab ID	Date Collected	Comment
OC-47-01	K1104355-010	05/12/2011	
OC-47-02	K1104355-011	05/12/2011	
OC-47-03	K1104355-012	05/12/2011	
OC-47-04	K1104355-013	05/12/2011	
OC-48-01	K1104355-014	05/12/2011	
OC-48-02	K1104355-015	05/12/2011	
OC-48-03	K1104355-016	05/12/2011	
OC-48-04	K1104355-017	05/12/2011	
DC-20-02	K1104355-018	05/11/2011	
DC-22-01-SP	K1104355-019	05/11/2011	Field split of DC-22-01
DC-23-01	K1104355-020	05/11/2011	
DC-23-02	K1104355-021	05/11/2011	
DC-23-03	K1104355-022	05/11/2011	
DC-23-04	K1104355-023	05/11/2011	
DC-24-01	K1104355-024	05/11/2011	
DC-24-02	K1104355-025	05/11/2011	
DC-24-03	K1104355-026	05/11/2011	
DC-25-02-DP	K1104355-027	05/11/2011	Field duplicate of DC-25-02

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TABLE 2
FIELD SPLIT RESULTS

Analyte	Sample: OC-45-02-SP			Sample: DC-20-01-SP		
	Sample Result (%)	Replicate Result (%)	RPD	Sample Result (%)	Replicate Result (%)	RPD
TOC	4.41	4.2	5	64.9	55.3	16
Analyte	**Sample: DC-22-01-SP**			**Sample: DC-24-03-SP**		
	Sample Result (%)	Replicate Result (%)	RPD	Sample Result (mg/kg)	Replicate Result (mg/kg)	RPD
TOC	7.28	7.14	2	26.6	2.17	170

Notes:
Highlighted RPD results indicate and RPD greater than 50 percent.
RPD – Relative Percent Difference
TOC – Total Organic Carbon

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TABLE 3
FIELD DUPLICATE RESULTS

Analyte	Sample: DC-25-01-DP			Sample: OC-42-01-DP		
	Sample Result (%)	**Duplicate Result (%)**	**RPD**	**Sample Result (%)**	**Duplicate Result (%)**	**RPD**
TOC	9.35	3.71	86	4.53	4.96	9
Analyte	**Sample: OC-42-02-DP**			**Sample: DC-25-02-DP**		
	Sample Result (%)	**Duplicate Result (%)**	**RPD**	**Sample Result (mg/kg)**	**Duplicate Result (mg/kg)**	**RPD**
TOC	1.68	0.971	53	2.92	3.48	17

Notes:
Highlighted RPD results indicate and RPD greater than 50 percent.
RPD – Relative Percent Difference
TOC – Total Organic Carbon

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TABLE 4
QUANTITATIVE DATA ASSESSMENT
FOR TOC

	Field Precision		Analytical Precision		Analytical Accuracy/Bias	
Parameter	**Mean Field Split RPD (%) (n=4)**	**Field Duplicate RPD (%) (n=4)**	**MS/MSD RPD (%) (n=3)**	**Mean Laboratory Duplicate RPD (%) (n=3)**	**Mean MS/MSD Recovery (%) (n=6)**	**Mean LCS Recovery (%) (n=7)**
TOC	48	42	10	9	114	101

Notes:
LCS – Laboratory Control Sample
MS – Matrix Spike
MSD – Matrix Spike Duplicate
RPD – Relative Percent Difference
TOC – Total Organic Carbon

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ATTACHMENT A

QA/QC ANALYSIS CHECKLIST FOR TOC FOR WORK ORDER K1104187

TOC BY SW-846 METHOD 9060

WORK ORDER # K1104187

QA/QC Analysis Checklist for Sediment Chemistry Analysis

GRANT/IAG NUMBER: Not Applicable
PROJECT NAME: GLNPO Duck and Otter Creeks Confluence Investigation
REVIEWER: Lisa Graczyk, WESTON START
DATE: August 5, 2011

1. What sediment chemistry data has been collected (CHECK ALL THAT APPLY)?

Total Metals ____	PCBs _____	pH _____	TOC __X__
Dioxins/Furans _____	PAHs _____	Pesticides _____	DO _____
AVS _____	SEM Metals _____	Particle Size _____	Other _____

2. Were the target detection limits met for each parameter?

Yes X
No _____ (EXPLAIN)

The TOC analysis met the reporting limit stated in the QAPP of 0.05 percent (%).

3. Were the method blanks less than the established MDL for each parameter?

Yes X
No _____ (EXPLAIN)

The method blank did not contain TOC detections above the reporting limit.

4. Did the results of Field Replicate Analysis vary by less than the % RPD specified in the QAPP?

Yes X
No _____ (EXPLAIN)

5. Did the results of the Field Duplicates Analysis vary by less than the % RPD specified in the QAPP?

Yes	Not Applicable	
No		(EXPLAIN)

6. Did the surrogate spike/internal standards recoveries meet the limits set forth in the QAPP?

Yes	Not Applicable	
No		(EXPLAIN)

Surrogates and internal standards do not apply to the TOC analysis.

7. Did the MS/MSD recoveries meet the limits set forth in the QAPP?

Yes		
No	X	(EXPLAIN)

The MS recovery was within QC limits but the MSD recovery was slightly elevated at a recovery of 141 percent. The TOC result in the parent sample, DC-20-03, was flagged "J" as estimated due to potential matrix interference in this sample. Other MS/MSD recoveries were acceptable and in general there does not seem to be an issue with matrix interference.

8. Did the RPD (%) of the MS/MSD sample set meet the limits set forth in the QAPP?

Yes	X	
No		(EXPLAIN)

9. Did the LCS recoveries meet the limits set forth in the QAPP?

Yes	X	
No		(EXPLAIN)

An LCS was analyzed with the TOC analysis and the recovery was within the QAPP-specified QC limit.

10. Did the calibration verification standards (ICVs and CCVs) meet the requirements set forth in the QAPP?

Yes	X	
No		(EXPLAIN)

11. Did the calibration blanks (ICBs and CCBs) meet the limits set forth in the QAPP?

Yes	X	
No		

The calibration blanks did not contain detections of TOC.

12. Did the interference check samples meet the limits set forth in the QAPP?

Yes	Not Applicable	
No		(EXPLAIN)

ICSs are not applicable to TOC analysis.

13. Did the serial dilution samples meet the limits set forth in the QAPP?

Yes	Not Applicable	
No		(EXPLAIN)

Serial dilutions are not applicable to TOC analysis.

14. Were any level of contaminants detected above the MDL for the trip blanks and storage blanks?

Yes	Not Applicable	
No		(EXPLAIN)

Trip blanks and storage blanks are not applicable to this method.

15. Did all required analyses take place within the required holding time protocols set forth in the QAPP?

Yes	X	
No		(EXPLAIN)

The analyses were performed in the holding time limit of 28 days from collection to analysis.

16. Did the laboratory duplicates vary by less than the % RPD specified in the QAPP?

Yes	X	
No		(EXPLAIN)

17. Are measured dry-weight contaminant concentrations reported?

Yes	X	
No		(EXPLAIN)

Dry weight concentrations were reported.

18. Please provide details for all of the "UNACCEPTABLE" marked above. Include details on the specific analytes affected by any QA/QC discrepancies, and recommendations regarding usability of data.

Any items with “UNACCEPTABLE” marked above are described immediately following the “UNACCEPTABLE” marking in the corresponding item above.

The data are acceptable for use.

TOC Checklist
GLNPO Duck and Otter Creeks Confluence Investigation
Columbia Analytical Services
Laboratory Work Order #: K1104187

ATTACHMENT B

ANALYTICAL DATA SUMMARY SHEETS FROM ADR FOR TOC

Sample Qualification Report (All Analytes)

Client Sample ID : OC-34-01 **Lab Report Batch :** K1104187 **Lab ID :** CAS_K

Sample Date : 05/10/2011 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1104187-001

Reviewed By / Date : LG 8/5/2011 **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 9060M					**Dilution: 1**															
Carbon, Total Organic	1.27		%		YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : OC-34-02 **Lab Report Batch :** K1104187 **Lab ID :** CAS_K

Sample Date : 05/10/2011 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1104187-002

Reviewed By / Date : LG 8/5/2011 **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 9060M					**Dilution: 1**															
Carbon, Total Organic	2.1		%		YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : OC-44-01 **Lab Report Batch :** K1104187 **Lab ID :** CAS_K

Sample Date : 05/10/2011 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1104187-003

Reviewed By / Date : LG 8/5/2011 **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 9060M					**Dilution: 1**															
Carbon, Total Organic	7.24		%		YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : OC-44-02 **Lab Report Batch :** K1104187 **Lab ID :** CAS_K

Sample Date : 05/10/2011 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1104187-004

Reviewed By / Date : LG 8/5/2011 **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 9060M					**Dilution: 1**															
Carbon, Total Organic	10.2		%		YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : OC-45-01 **Lab Report Batch :** K1104187 **Lab ID :** CAS_K

Sample Date : 05/10/2011 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1104187-005

Reviewed By / Date : LG 8/5/2011 **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 9060M					**Dilution: 1**															
Carbon, Total Organic	3.64		%		YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : OC-45-02 **Lab Report Batch :** K1104187 **Lab ID :** CAS_K

Sample Date : 05/10/2011 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1104187-006

Reviewed By / Date : LG 8/5/2011 **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 9060M					**Dilution: 1**															
Carbon, Total Organic	4.41		%		YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : OC-45-02-SP
Lab Report Batch : K1104187
Lab ID : CAS_K
Sample Date : 05/10/2011
Analysis Type: 1RES
Sample Matrix : SED
Lab Sample ID: K1104187-007

Reviewed By / Date : LG 8/5/2011
Approved By / Date :

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 9060M					**Dilution: 1**															
Carbon, Total Organic	4.2		%		YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : DC-20-01 **Lab Report Batch :** K1104250 **Lab ID :** CAS_K

Sample Date : 05/11/2011 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1104250-008

Reviewed By / Date : **Approved By / Date :** LG 8/5/2011

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 9060M					**Dilution: 1**															
Carbon, Total Organic	64.9		%		YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : DC-20-01-SP
Lab Report Batch : K1104250
Lab ID : CAS_K
Sample Date : 05/11/2011
Analysis Type: 1RES
Sample Matrix : SED
Lab Sample ID: K1104250-009

Reviewed By / Date :
Approved By / Date : LG 8/5/2011

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 9060M					**Dilution: 1**															
Carbon, Total Organic	55.3		%		YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : DC-21-01 **Lab Report Batch :** K1104250 **Lab ID :** CAS_K

Sample Date : 05/11/2011 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1104250-010

Reviewed By / Date : **Approved By / Date :** LG 8/5/2011

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 9060M					**Dilution: 1**															
Carbon, Total Organic	4.98		%		YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : DC-21-02 **Lab Report Batch :** K1104250 **Lab ID :** CAS_K

Sample Date : 05/11/2011 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1104250-011

Reviewed By / Date : **Approved By / Date :** LG 8/5/2011

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 9060M					**Dilution: 1**															
Carbon, Total Organic	3.05		%		YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : DC-25-01 **Lab Report Batch :** K1104250 **Lab ID :** CAS_K

Sample Date : 05/11/2011 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1104250-001

Reviewed By / Date : **Approved By / Date :** LG 8/5/2011

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 9060M					**Dilution: 1**															
Carbon, Total Organic	9.35		%		YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : DC-25-01-DP
Lab Report Batch : K1104250
Lab ID : CAS_K
Sample Date : 05/11/2011
Analysis Type: 1RES
Sample Matrix : SED
Lab Sample ID: K1104250-002

Reviewed By / Date :
Approved By / Date : LG 8/5/2011

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 9060M					**Dilution: 1**															
Carbon, Total Organic	3.71		%		YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : DC-25-02 **Lab Report Batch :** K1104250 **Lab ID :** CAS_K

Sample Date : 05/11/2011 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1104250-003

Reviewed By / Date : **Approved By / Date :** LG 8/5/2011

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 9060M					**Dilution: 1**															
Carbon, Total Organic	2.92		%		YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : DC-25-03 **Lab Report Batch :** K1104250 **Lab ID :** CAS_K

Sample Date : 05/11/2011 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1104250-012

Reviewed By / Date : **Approved By / Date :** LG 8/5/2011

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 9060M					**Dilution: 1**															
Carbon, Total Organic	1.93		%		YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : OC-36-01 **Lab Report Batch :** K1104250 **Lab ID :** CAS_K

Sample Date : 05/10/2011 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1104250-014

Reviewed By / Date : **Approved By / Date :** LG 8/5/2011

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 9060M					**Dilution: 1**															
Carbon, Total Organic	3.94		%		YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : OC-36-02 **Lab Report Batch :** K1104250 **Lab ID :** CAS_K

Sample Date : 05/10/2011 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1104250-015

Reviewed By / Date : **Approved By / Date :** LG 8/5/2011

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 9060M					**Dilution: 1**															
Carbon, Total Organic	1.06		%		YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : OC-38 **Lab Report Batch :** K1104250 **Lab ID :** CAS_K

Sample Date : 05/11/2011 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1104250-013

Reviewed By / Date : **Approved By / Date :** LG 8/5/2011

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 9060M					**Dilution: 1**															
Carbon, Total Organic	2.09		%		YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : OC-40-01 **Lab Report Batch :** K1104250 **Lab ID :** CAS_K

Sample Date : 05/11/2011 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1104250-016

Reviewed By / Date : **Approved By / Date :** LG 8/5/2011

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 9060M					**Dilution: 1**															
Carbon, Total Organic	1.44		%		YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : OC-40-02 **Lab Report Batch :** K1104250 **Lab ID :** CAS_K

Sample Date : 05/11/2011 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1104250-017

Reviewed By / Date : **Approved By / Date :** LG 8/5/2011

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 9060M					**Dilution: 1**															
Carbon, Total Organic	0.855		%		YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : OC-41-01 **Lab Report Batch :** K1104250 **Lab ID :** CAS_K

Sample Date : 05/10/2011 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1104250-018

Reviewed By / Date : **Approved By / Date :** LG 8/5/2011

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 9060M					**Dilution: 1**															
Carbon, Total Organic	1.01		%		YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : OC-41-02 **Lab Report Batch :** K1104250 **Lab ID :** CAS_K

Sample Date : 05/10/2011 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1104250-019

Reviewed By / Date : **Approved By / Date :** LG 8/5/2011

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 9060M					**Dilution: 1**															
Carbon, Total Organic	1.19		%		YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : OC-42-01 **Lab Report Batch :** K1104250 **Lab ID :** CAS_K

Sample Date : 05/11/2011 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1104250-004

Reviewed By / Date : **Approved By / Date :** LG 8/5/2011

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 9060M					**Dilution: 1**															
Carbon, Total Organic	4.53		%		YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : OC-42-01-DP
Lab Report Batch : K1104250
Lab ID : CAS_K
Sample Date : 05/11/2011
Analysis Type: 1RES
Sample Matrix : SED
Lab Sample ID: K1104250-005

Reviewed By / Date :
Approved By / Date : LG 8/5/2011

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 9060M					**Dilution: 1**															
Carbon, Total Organic	4.96		%		YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : OC-42-02 **Lab Report Batch :** K1104250 **Lab ID :** CAS_K

Sample Date : 05/11/2011 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1104250-006

Reviewed By / Date : **Approved By / Date :** LG 8/5/2011

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 9060M					**Dilution: 1**															
Carbon, Total Organic	1.68		%		YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : OC-42-02-DP
Lab Report Batch : K1104250
Lab ID : CAS_K
Sample Date : 05/11/2011
Analysis Type: 1RES
Sample Matrix : SED
Lab Sample ID: K1104250-007

Reviewed By / Date :
Approved By / Date : LG 8/5/2011

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 9060M					**Dilution: 1**															
Carbon, Total Organic	0.971		%		YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : DC-20-02 **Lab Report Batch :** K1104355 **Lab ID :** CAS_K

Sample Date : 05/11/2011 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1104355-018

Reviewed By / Date : **Approved By / Date :** LG 8/5/2011

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 9060M					**Dilution: 1**															
Carbon, Total Organic	6.56		%		YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : DC-20-03 **Lab Report Batch :** K1104355 **Lab ID :** CAS_K

Sample Date : 05/11/2011 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1104355-001

Reviewed By / Date : **Approved By / Date :** LG 8/5/2011

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 9060M					**Dilution: 1**															
Carbon, Total Organic	15.1		%		YES	**J**					J									

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : DC-22-01 **Lab Report Batch :** K1104355 **Lab ID :** CAS_K

Sample Date : 05/11/2011 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1104355-002

Reviewed By / Date : **Approved By / Date :** LG 8/5/2011

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 9060M					**Dilution: 1**															
Carbon, Total Organic	7.28		%		YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : DC-22-01-SP
Lab Report Batch : K1104355
Lab ID : CAS_K
Sample Date : 05/11/2011
Analysis Type: 1RES
Sample Matrix : SED
Lab Sample ID: K1104355-019

Reviewed By / Date :
Approved By / Date : LG 8/5/2011

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 9060M					**Dilution: 1**															
Carbon, Total Organic	7.14		%		YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : DC-22-02 **Lab Report Batch :** K1104355 **Lab ID :** CAS_K

Sample Date : 05/11/2011 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1104355-003

Reviewed By / Date : **Approved By / Date :** LG 8/5/2011

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 9060M					**Dilution: 1**															
Carbon, Total Organic	4.62		%		YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : DC-22-03 **Lab Report Batch :** K1104355 **Lab ID :** CAS_K

Sample Date : 05/11/2011 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1104355-004

Reviewed By / Date : **Approved By / Date :** LG 8/5/2011

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 9060M					**Dilution: 1**															
Carbon, Total Organic	3.20		%		YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : DC-23-01 **Lab Report Batch :** K1104355 **Lab ID :** CAS_K

Sample Date : 05/11/2011 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1104355-020

Reviewed By / Date : **Approved By / Date :** LG 8/5/2011

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 9060M					**Dilution: 1**															
Carbon, Total Organic	13.9		%		YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : DC-23-02 **Lab Report Batch :** K1104355 **Lab ID :** CAS_K

Sample Date : 05/11/2011 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1104355-021

Reviewed By / Date : **Approved By / Date :** LG 8/5/2011

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 9060M					**Dilution: 1**															
Carbon, Total Organic	7.26		%		YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : DC-23-03 **Lab Report Batch :** K1104355 **Lab ID :** CAS_K

Sample Date : 05/11/2011 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1104355-022

Reviewed By / Date : **Approved By / Date :** LG 8/5/2011

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 9060M					**Dilution: 1**															
Carbon, Total Organic	2.85		%		YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : DC-23-04 **Lab Report Batch :** K1104355 **Lab ID :** CAS_K

Sample Date : 05/11/2011 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1104355-023

Reviewed By / Date : **Approved By / Date :** LG 8/5/2011

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 9060M					**Dilution: 1**															
Carbon, Total Organic	3.47		%		YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : DC-24-01 **Lab Report Batch :** K1104355 **Lab ID :** CAS_K

Sample Date : 05/11/2011 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1104355-024

Reviewed By / Date : **Approved By / Date :** LG 8/5/2011

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 9060M					**Dilution: 1**															
Carbon, Total Organic	15.9		%		YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : DC-24-02 **Lab Report Batch :** K1104355 **Lab ID :** CAS_K

Sample Date : 05/11/2011 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1104355-025

Reviewed By / Date : **Approved By / Date :** LG 8/5/2011

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 9060M					**Dilution: 1**															
Carbon, Total Organic	5.61		%		YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : DC-24-03 **Lab Report Batch :** K1104355 **Lab ID :** CAS_K

Sample Date : 05/11/2011 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1104355-026

Reviewed By / Date : **Approved By / Date :** LG 8/5/2011

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 9060M					**Dilution: 1**															
Carbon, Total Organic	26.6		%		YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : DC-24-03-SP
Lab Report Batch : K1104355
Lab ID : CAS_K
Sample Date : 05/11/2011
Analysis Type: 1RES
Sample Matrix : SED
Lab Sample ID: K1104355-005

Reviewed By / Date :
Approved By / Date : LG 8/5/2011

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 9060M					**Dilution: 1**															
Carbon, Total Organic	2.17		%		YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : DC-25-02-DP
Lab Report Batch : K1104355
Lab ID : CAS_K
Sample Date : 05/11/2011
Analysis Type: 1RES
Sample Matrix : SED
Lab Sample ID: K1104355-027

Reviewed By / Date :
Approved By / Date : LG 8/5/2011

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 9060M					**Dilution: 1**															
Carbon, Total Organic	3.48		%		YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : OC-35-01 **Lab Report Batch :** K1104355 **Lab ID :** CAS_K

Sample Date : 05/12/2011 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1104355-006

Reviewed By / Date : **Approved By / Date :** LG 8/5/2011

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 9060M					**Dilution: 1**															
Carbon, Total Organic	5.35		%		YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : OC-35-02 **Lab Report Batch :** K1104355 **Lab ID :** CAS_K

Sample Date : 05/12/2011 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1104355-007

Reviewed By / Date : **Approved By / Date :** LG 8/5/2011

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 9060M					**Dilution: 1**															
Carbon, Total Organic	2.75		%		YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : OC-46-01 **Lab Report Batch :** K1104355 **Lab ID :** CAS_K

Sample Date : 05/12/2011 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1104355-008

Reviewed By / Date : **Approved By / Date :** LG 8/5/2011

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 9060M					**Dilution: 1**															
Carbon, Total Organic	2.25		%		YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : OC-46-02 **Lab Report Batch :** K1104355 **Lab ID :** CAS_K

Sample Date : 05/12/2011 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1104355-009

Reviewed By / Date : **Approved By / Date :** LG 8/5/2011

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 9060M					**Dilution: 1**															
Carbon, Total Organic	2.26		%		YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : OC-47-01 **Lab Report Batch :** K1104355 **Lab ID :** CAS_K

Sample Date : 05/12/2011 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1104355-010

Reviewed By / Date : **Approved By / Date :** LG 8/5/2011

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 9060M					**Dilution: 1**															
Carbon, Total Organic	2.07		%		YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : OC-47-02 **Lab Report Batch :** K1104355 **Lab ID :** CAS_K

Sample Date : 05/12/2011 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1104355-011

Reviewed By / Date : **Approved By / Date :** LG 8/5/2011

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 9060M					**Dilution: 1**															
Carbon, Total Organic	2.13		%		YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : OC-47-03 **Lab Report Batch :** K1104355 **Lab ID :** CAS_K

Sample Date : 05/12/2011 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1104355-012

Reviewed By / Date : **Approved By / Date :** LG 8/5/2011

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 9060M					**Dilution: 1**															
Carbon, Total Organic	1.78		%		YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : OC-47-04 **Lab Report Batch :** K1104355 **Lab ID :** CAS_K

Sample Date : 05/12/2011 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1104355-013

Reviewed By / Date : **Approved By / Date :** LG 8/5/2011

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 9060M					**Dilution: 1**															
Carbon, Total Organic	2.17		%		YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : OC-48-01 **Lab Report Batch :** K1104355 **Lab ID :** CAS_K

Sample Date : 05/12/2011 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1104355-014

Reviewed By / Date : **Approved By / Date :** LG 8/5/2011

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 9060M					**Dilution: 1**															
Carbon, Total Organic	2.01		%		YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : OC-48-02 **Lab Report Batch :** K1104355 **Lab ID :** CAS_K

Sample Date : 05/12/2011 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1104355-015

Reviewed By / Date : **Approved By / Date :** LG 8/5/2011

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 9060M					**Dilution: 1**															
Carbon, Total Organic	2.05		%		YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : OC-48-03 **Lab Report Batch :** K1104355 **Lab ID :** CAS_K

Sample Date : 05/12/2011 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1104355-016

Reviewed By / Date : **Approved By / Date :** LG 8/5/2011

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 9060M					**Dilution: 1**															
Carbon, Total Organic	2.21		%		YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : OC-48-04 **Lab Report Batch :** K1104355 **Lab ID :** CAS_K

Sample Date : 05/12/2011 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1104355-017

Reviewed By / Date : **Approved By / Date :** LG 8/5/2011

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 9060M					**Dilution: 1**															
Carbon, Total Organic	2.30		%		YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

ATTACHMENT C

DATA QUALIFIER DEFINITIONS

LABORATORY DATA QUALIFIER DEFITIONS

Not Applicable

DATA VALIDATION DATA QUALIFIER DEFITIONS

J - The analyte was positively identified and the associated numerical value is the approximate concentration of the analyte in the sample (due either to the quality of the data generated because certain quality control criteria were not met, or the concentration of the analyte was below the quantitation limit).

Weston Solutions, Inc.
20 North Wacker Drive, Suite 1210
Chicago, IL 60606
(312) 424-3300 fax: (312) 424-3330
www.westonsolutions.com

August 12, 2011

Ms. Brenda Jones and Mr. Ajit Vaidya
Great Lakes National Program Office
United States Environmental Protection Agency, Region V
77 West Jackson Boulevard, Mail Code: G-17J
Chicago, Illinois 60604-3507

Re: Data Review of Semivolatile Organic Compounds (SVOC) Analysis
For Sediment Samples Collected on May 11-12, 2011
CLP Case No. 41260, SDG No. E0272
Duck and Otter Creeks Confluence Investigation
Wood and Lucas Counties, Ohio
DCN: 1269-2B-AOVS

Dear Ms. Jones and Mr. Vaidya:

The United States Environmental Protection Agency (U.S. EPA) tasked Weston Solutions, Inc., (WESTON®) to perform data validation for the five percent of the sediment samples collected in May 2011 for the Great Lakes National Program Office (GLNPO) Duck and Otter Creeks Confluence Investigation Site. This data review is for SVOC analyses of eleven sediment samples that include one field duplicate sample that were collected by WESTON and analyzed under Sample Delivery Group (SDG) number E0272. The samples were validated in accordance with the "Quality Assurance Project Plan (QAPP), Duck and Otter Creeks Data Gaps Investigation" dated September 28, 2010, and QAPP Amendment 1 dated May 5, 2011, which includes using the U.S. EPA Contract Laboratory Program (CLP) National Functional Guidance for Organic and Inorganic Data Review. Table 1 provides a summary of the samples included in this review. All tables are presented at the end of this report.

The samples listed in Table 1 were analyzed under the U.S. EPA CLP by KAP Technologies, Inc. (KAP) located in The Woodlands, Texas, under case number 41260. Because only five percent of data is to be validated, SDG number E0272 was selected for data validation.

Sediment samples were analyzed for SVOCs using U.S. EPA CLP Statement of Work (SOW) SOM01.2 which utilizes gas chromatography/mass spectrometry (GC/MS). Table 2 provides a list of the SVOCs that were analyzed. KAP did not provide a Staged Electronic Data Deliverable (SEDD) with the CLP analytical package. Therefore, the Automated Data Review (ADR) software was not utilized to assist in reviewing this data.

Attachment A to this report contains the individual Quality Assurance/Quality Control (QA/QC) Analysis Checklist for Sediment Chemistry Analysis for SDG E0272. Attachment B to this report contains a printed summary report of sample results. Attachment C to this report contains a list of the data qualifiers associated with the sample results. The QC limits utilized were those stated in the QAPP. If there was not a QC limit specified in the QAPP, then the method or laboratory-determined QC limits were used. Below is the data review summary.

SUMMARY OF SVOC DATA REVIEW

The holding times, method blanks, initial calibration, continuing calibration, method blank, surrogates, internal standards, instrument check, matrix spike (MS), and matrix spike duplicate (MSD) were within the QC limits. Sample results are based on dry weight.

The relative percent differences (RPD) were calculated for the one field duplicate pair associated with this SDG. A QC limit for field duplicates was not stated in the QAPP; therefore, a default QC limit of 50 RPD was used to evaluate field duplicate results. Table 3 summarizes the field duplicate results along with the calculated RPD values. The field duplicate RPDs were acceptable.

Below is a summary of the data quality indicators associated with the SVOC analysis for the sediment samples associated with SDG E0272.

DATA QUALITY INDICATORS REVIEW

Many the data quality indicators (sensitivity, precision, accuracy, and completeness) were evaluated through the data validation procedures.

Sensitivity. The QAPP stated that method SOM01.2 would achieve a reporting limit of 170 to 330 micrograms per kilogram (µg/kg), dependent on the SVOC compound analyzed. The laboratory achieved the QAPP-stated reporting limits, when adjusted for dilution factor and percent moisture. Sensitivity was adequate for the SVOC analyses of sediment samples collected on May 11-12, 2011, that are associated with SDG E0272.

Precision. Field precision is determined by evaluating the RPDs for the field duplicate results. The RPD values for the field duplicates were below 50 RPD and are acceptable indicating good field precision.

Laboratory precision was evaluated by reviewing the RPD values between the MS and MSD results. The RPDs were within the QAPP-stated QC limits and ranged from 0 to 6 percent. Laboratory precision was acceptable for the SVOC analysis. Table 4 summarizes the laboratory precision results.

Accuracy/Bias. Accuracy is a measure of the agreement between an observed value and an accepted reference value. Laboratory accuracy was evaluated by reviewing the QC criteria for MS/MSD results. The MS/MSD percent recoveries were within the QAPP QC limits. Table 4 summarizes the accuracy estimates for the SVOC analysis. The mean MS/MSD percent recoveries ranged from 67 to 90 percent. Laboratory accuracy was acceptable. The MS/MSD recoveries indicate a low bias associated with the SVOC analyses.

Completeness. Completeness is a measure of the amount of valid data obtained compared to the amount of data that was planned to be collected under normal conditions. All samples results were received.

In summary, the data are usable for comparison to the SVOC screening criteria stated in the QAPP. No qualifications were added to the samples during the data review. Definitions for the laboratory qualifications are included in Attachment C.

If there are any questions or comments regarding this report, please do not hesitate to contact WESTON START at 847-918-4000.

Very truly yours,

Weston Solutions, Inc.

Lisa Graczyk
WESTON START Team

Alex Clark
WESTON START Project Manager

Attachments:
Tables
A- Checklists for SVOC Analytical Data for Case # 41260, SDG # E0272
B- Analytical Data Summary Sheets with Qualifiers
C- Data Qualifier Definitions

cc: project file

TABLES

TABLE 1
SAMPLES INCLUDED IN DATA REVIEW

Sample ID	Sample Location ID	Date Collected	Comment
E0272	DC-25-02	05/11/2011	
E0274	DC-25-03	05/11/2011	
E0283	DC-22-02	05/11/2011	
E0284	DC-22-03	05/11/2011	
E0291	DC-23-03	05/11/2011	
E0292	DC-23-04	05/11/2011	
E0294	DC-25-02-DP	05/11/2011	Field duplicate of DC-25-02 (E0272)
E0296	DC-47-02	05/12/2011	
E0297	DC-47-03	05/12/2011	
E0298	DC-47-04	05/12/2011	
E02A0	DC-48-02	05/12/2011	

TABLE 2 SVOC ANALYTES	
CAS #	**Analyte**
100-52-7	Benzaldehyde
108-95-2	Phenol
111-44-4	Bis(2-chloroethyl)ether
95-57-8	2-Chlorophenol
95-48-7	2-Methylphenol
108-60-1	2,2'-Oxybis(1-chloropropane)
98-86-2	Acetophenone
106-44-5	4-Methylphenol
621-64-7	N-Nitroso-di-n-propylamine
67-72-1	Hexachloroethane
98-95-3	Nitrobenzene
78-59-1	Isophorone
88-75-5	2-Nitrophenol
105-67-9	2,4-Dimethylphenol
111-91-1	Bis(2-chloroethoxy)methane
120-83-2	2,4-Dichlorophenol
91-20-3	Naphthalene
106-47-8	4-Chloroaniline
87-68-3	Hexachlorobutadiene
105-60-2	Caprolactam
59-50-7	4-Chloro-3-methylphenol
91-57-6	2-Methylnaphthalene
77-47-4	Hexachlorocyclopentadiene
88-06-2	2,4,6-Trichlorophenol
95-95-4	2,4,5-Trichlorophenol
92-52-4	1,1'-Biphenyl
91-58-7	2-Chloronaphthalene
88-74-4	2-Nitroaniline
131-11-3	Dimethylphthalate
606-20-2	2,6-Dinitrotoluene
208-96-8	Acenaphthylene
99-09-2	3-Nitroaniline
83-32-9	Acenaphthene
51-28-5	2,4-Dinitrophenol
100-02-7	4-Nitrophenol
132-64-9	Dibenzofuran
121-14-2	2,4-Dinitrotoluene
84-66-2	Diethylphthalate

TABLE 2 SVOC ANALYTES	
CAS #	**Analyte**
86-73-7	Fluorene
7005-72-3	4-Chlorophenyl-phenylether
100-01-6	4-Nitroaniline
534-52-1	4,6-Dinitro-2-methylphenol
86-30-6	N-Nitrosodiphenylamine
95-94-3	1,2,4,5-Tetrachlorobenzene
101-55-3	4-Bromophenyl-phenylether
118-74-1	Hexachlorobenzene
1912-24-9	Atrazine
87-86-5	Pentachlorophenol
85-01-8	Phenanthrene
120-12-7	Anthracene
86-74-8	Carbazole
84-74-2	Di-n-butylphthalate
206-44-0	Fluoranthene
129-00-0	Pyrene
85-68-7	Butylbenzylphthalate
91-94-1	3,3'-Dichlorobenzidine
56-55-3	Benzo(a)anthracene
218-01-9	Chrysene
117-81-7	Bis(2-ethylhexyl)phthalate
117-84-0	Di-n-octylphthalate
205-99-2	Benzo(b)fluoranthene
207-08-9	Benzo(k)fluoranthene
50-32-8	Benzo(a)pyrene
193-39-5	Indeno(1,2,3-cd)pyrene
53-70-3	Dibenzo(a,h)anthracene
191-24-2	Benzo(g,h,i)perylene
58-90-2	2,3,4,6-Tetrachlorophenol

Notes:
CAS – Chemical Abstracts Service
SVOC – Semivolatile Organic Compound

TABLE 3
FIELD DUPLICATE RESULTS

Analyte	Sample: DC-7/8DP		
	Sample Result (µg/kg)	Duplicate Result (µg/kg)	RPD
Benzaldehyde	<350	<360	NA
Phenol	<350	<360	NA
Bis(2-chloroethyl)ether	<350	<360	NA
2-Chlorophenol	<350	<360	NA
2-Methylphenol	<350	<360	NA
2,2'-Oxybis(1-chloropropane)	<350	<360	NA
Acetophenone	<350	<360	NA
4-Methylphenol	<350	<360	NA
N-Nitroso-di-n-propylamine	<350	<360	NA
Hexachloroethane	<350	<360	NA
Nitrobenzene	<350	<360	NA
Isophorone	<350	<360	NA
2-Nitrophenol	<350	<360	NA
2,4-Dimethylphenol	<350	<360	NA
Bis(2-chloroethoxy)methane	<350	<360	NA
2,4-Dichlorophenol	<350	<360	NA
Naphthalene	<350	<360	NA
4-Chloroaniline	<350	<360	NA
Hexachlorobutadiene	<350	<360	NA
Caprolactam	<350	<360	NA
4-Chloro-3-methylphenol	<350	<360	NA
2-Methylnaphthalene	<350	<360	NA
Hexachlorocyclopentadiene	<350	<360	NA
2,4,6-Trichlorophenol	<350	<360	NA
2,4,5-Trichlorophenol	<350	<360	NA
1,1'-Biphenyl	<350	<360	NA
2-Chloronaphthalene	<350	<360	NA
2-Nitroaniline	<690	<700	NA
Dimethylphthalate	<350	<360	NA
2,6-Dinitrotoluene	<350	<360	NA
Acenaphthylene	<350	<360	NA
3-Nitroaniline	<690	<700	NA
Acenaphthene	<350	<360	NA
2,4-Dinitrophenol	<690	<700	NA
4-Nitrophenol	<690	<700	NA

TABLE 3
FIELD DUPLICATE RESULTS

Analyte	Sample: DC-7/8DP		
	Sample Result (µg/kg)	**Duplicate Result (µg/kg)**	**RPD**
Dibenzofuran	<350	<360	NA
2,4-Dinitrotoluene	<350	<360	NA
Diethylphthalate	<350	<360	NA
Fluorene	<350	<360	NA
4-Chlorophenyl-phenylether	<350	<360	NA
4-Nitroaniline	<690	<700	NA
4,6-Dinitro-2-methylphenol	<690	<700	NA
N-Nitrosodiphenylamine	<350	<360	NA
1,2,4,5-Tetrachlorobenzene	<350	<360	NA
4-Bromophenyl-phenylether	<350	<360	NA
Hexachlorobenzene	<350	<360	NA
Atrazine	<350	<360	NA
Pentachlorophenol	<690	<700	NA
Phenanthrene	230	240	**4**
Anthracene	<350	<360	NA
Carbazole	<350	<360	NA
Di-n-butylphthalate	<350	<360	NA
Fluoranthene	270	210	**25**
Pyrene	270	240	**12**
Butylbenzylphthalate	<350	<360	NA
3,3'-Dichlorobenzidine	<350	<360	NA
Benzo(a)anthracene	180	<360	NA
Chrysene	240	210	**13**
Bis(2-ethylhexyl)phthalate	3300	2000	**49**
Di-n-octylphthalate	<350	<360	NA
Benzo(b)fluoranthene	150	<360	NA
Benzo(k)fluoranthene	<350	<360	NA
Benzo(a)pyrene	<350	<360	NA
Indeno(1,2,3-cd)pyrene	<350	<360	NA
Dibenzo(a,h)anthracene	<350	<360	NA
Benzo(g,h,i)perylene	<350	<360	NA
2,3,4,6-Tetrachlorophenol	<350	<360	NA

Notes:
µg/kg– Microgram per Kilogram
RPD – Relative Percent Difference
NA – Not Applicable

TABLE 4
QUANTITATIVE DATA ASSESSMENT

Analyte	Analytical Precision	Analytical Accuracy/Bias
	MS/MSD RPD (%) (n=1)	**Mean MS/MSD Recovery (%) (n=2)**
Phenol	0	72
2-Chlorophenol	6	67
N-Nitroso-di-n-propylamine	0	90
4-Chloro-3-methylphenol	4	78
Acenapthene	3	89
4-Nitrophenol	0	90
2,4-Dinitrotoluene	0	90
Pentachlorophenol	5	74
Pyrene	1	81

Notes:
MS – Matrix Spike
MSD – Matrix Spike Duplicate
RPD – Relative Percent Difference

ATTACHMENT A

CHECKLIST FOR SVOC ANALYTICAL DATA FOR CASE # 41260, SDG # E0272

SVOCs
BY CLP SOW SOM01.2

CASE# 41260
SDG# E0272

QA/QC Analysis Checklist for Sediment Chemistry Analysis

GRANT/IAG NUMBER: Not Applicable
PROJECT NAME: Duck and Otter Creeks Confluence Investigation
REVIEWER: Lisa Graczyk, WESTON START
DATE: August 12, 2011

1. What sediment chemistry data has been collected (CHECK ALL THAT APPLY)?

Total Metals ____	PCBs _____	pH _____	TOC _____
Dioxins/Furans _____	SVOCs ___X___	Pesticides _____	DO _____
AVS _____	SEM Metals _____	Particle Size _____	Other _____

2. Were the target detection limits met for each parameter?

Yes X
No _____

When adjusted for dilution factor and percent moisture, the QAPP-stated reporting limits were met for SVOC compounds.

3. Were the method blanks less than the established MDL for each parameter?

Yes X
No _____ (EXPLAIN)

The method blank contained no detections of target analytes.

4. Did the results of Field Replicate Analysis vary by less than the % RPD specified in the QAPP?

Yes	Not Applicable	
No		(EXPLAIN)

5. Did the results of the Field Duplicates Analysis vary by less than the % RPD specified in the QAPP?

Yes	X	
No		(EXPLAIN)

6. Did the surrogate spike/internal standards recoveries meet the limits set forth in the QAPP?

Yes	X	
No		(EXPLAIN)

7. Did the MS/MSD recoveries meet the limits set forth in the QAPP?

Yes	X	
No		(EXPLAIN)

8. Did the RPD (%) of the MS/MSD sample set meet the limits set forth in the QAPP?

Yes	X	
No		(EXPLAIN)

9. Did the LCS recoveries meet the limits set forth in the QAPP?

Yes	Not Applicable	
No		(EXPLAIN)

LCSs are not analyzed with SVOC analysis by SOM01.2.

10. Did the calibration verification standards (ICVs and CCVs) meet the requirements set forth in the QAPP?

Yes	X	
No		(EXPLAIN)

11. Did the calibration blanks (ICBs and CCBs) meet the limits set forth in the QAPP?

Yes	Not Applicable	
No		(EXPLAIN)

12. Did the interference check samples meet the limits set forth in the QAPP?

Yes	Not Applicable	
No		(EXPLAIN)

13. Did the serial dilution samples meet the limits set forth in the QAPP?

Yes	Not Applicable	
No		(EXPLAIN)

Serial dilution is not applicable to SVOCs by SOM01.2.

14. Were any level of contaminants detected above the MDL for the trip blanks and storage blanks?

Yes	Not Applicable	
No		(EXPLAIN)

Trip blanks and storage blanks are not applicable to SW-846 Method 8270C.

15. Did all required analyses take place within the required holding time protocols set forth in the QAPP?

Yes	X	
No		(EXPLAIN)

Samples were analyzed within the holding time requirement of 14 days to extraction from sample collection and 40 days to analysis following extraction.

16. Did the laboratory duplicates vary by less than the % RPD specified in the QAPP?

Yes	Not Applicable	
No		(EXPLAIN)

Laboratory duplicates were not analyzed with the samples.

17. Are measured dry-weight contaminant concentrations reported?

Yes	X	
No		(EXPLAIN)

Dry-weight concentrations are reported.

18. Please provide details for all of the "UNACCEPTABLE" marked above. Include details on the specific analytes affected by any QA/QC discrepancies, and recommendations regarding usability of data.

Any items with “UNACCEPTABLE” marked above are described immediately following the “UNACCEPTABLE” marking in the corresponding item above.

In addition, some results were detected below the laboratory reporting limit and were flagged “J” as estimated for this discrepancy. The data are acceptable for use as qualified.

SVOC Checklist
Duck and Otter Creeks Confluence Investigation
KAP Technologies, Inc.
Laboratory SDG#: E0272

ATTACHMENT B

ANALYTICAL DATA SUMMARY SHEETS WITH QUALIFIERS

1D - FORM I SV-1

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

E0272

Lab Name: KAP TECHNOLOGIES, INC. Contract: EPW11031

Lab Code: KAP Case No.: 41260 Mod. Ref No.: 2141.0 SDG No.: E0272

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: S-4018.01

Sample wt/vol: 30.10 (g/mL) G Lab File ID: D02731

Level: (LOW/MED) LOW Extraction: (Type) SOXH

% Moisture: 52 Decanted: (Y/N) N Date Received: 05/17/2011

Concentrated Extract Volume: 500 (uL) Date Extracted: 05/25/2011

Injection Volume: 1.0 (uL) GPC Factor: 2.0 Date Analyzed: 06/03/2011

GPC Cleanup: (Y/N) Y pH: 7.1 Dilution Factor: 1.0

CAS No.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
100-52-7	Benzaldehyde	350	U
108-95-2	Phenol	350	U
111-44-4	Bis(2-chloroethyl)ether	350	U
95-57-8	2-Chlorophenol	350	U
95-48-7	2-Methylphenol	350	U
108-60-1	2,2'-Oxybis(1-chloropropane)	350	U
98-86-2	Acetophenone	350	U
106-44-5	4-Methylphenol	350	U
621-64-7	N-Nitroso-di-n-propylamine	350	U
67-72-1	Hexachloroethane	350	U
98-95-3	Nitrobenzene	350	U
78-59-1	Isophorone	350	U
88-75-5	2-Nitrophenol	350	U
105-67-9	2,4-Dimethylphenol	350	U
111-91-1	Bis(2-chloroethoxy)methane	350	U
120-83-2	2,4-Dichlorophenol	350	U
91-20-3	Naphthalene	350	U
106-47-8	4-Chloroaniline	350	U
87-68-3	Hexachlorobutadiene	350	U
105-60-2	Caprolactam	350	U
59-50-7	4-Chloro-3-methylphenol	350	U
91-57-6	2-Methylnaphthalene	350	U
77-47-4	Hexachlorocyclopentadiene	350	U
88-06-2	2,4,6-Trichlorophenol	350	U
95-95-4	2,4,5-Trichlorophenol	350	U
92-52-4	1,1'-Biphenyl	350	U
91-58-7	2-Chloronaphthalene	350	U
88-74-4	2-Nitroaniline	690	U
131-11-3	Dimethylphthalate	350	U
606-20-2	2,6-Dinitrotoluene	350	U
208-96-8	Acenaphthylene	350	U
99-09-2	3-Nitroaniline	690	U
83-32-9	Acenaphthene	350	U

1E - FORM I SV-2

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

E0272

Lab Name: KAP TECHNOLOGIES, INC. Contract: EPW11031

Lab Code: KAP Case No.: 41260 Mod. Ref No.: 2141.0 SDG No.: E0272

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: S-4018.01

Sample wt/vol: 30.10 (g/mL) G Lab File ID: D02731

Level: (LOW/MED) LOW Extraction: (Type) SOXH

% Moisture: 52 Decanted: (Y/N) N Date Received: 05/17/2011

Concentrated Extract Volume: 500 (uL) Date Extracted: 05/25/2011

Injection Volume: 1.0 (uL) GPC Factor: 2.0 Date Analyzed: 06/03/2011

GPC Cleanup: (Y/N) Y pH: 7.1 Dilution Factor: 1.0

CAS No.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
51-28-5	2,4-Dinitrophenol	690	U
100-02-7	4-Nitrophenol	690	U
132-64-9	Dibenzofuran	350	U
121-14-2	2,4-Dinitrotoluene	350	U
84-66-2	Diethylphthalate	350	U
86-73-7	Fluorene	350	U
7005-72-3	4-Chlorophenyl-phenylether	350	U
100-01-6	4-Nitroaniline	690	U
534-52-1	4,6-Dinitro-2-methylphenol	690	U
86-30-6	N-Nitrosodiphenylamine 1	350	U
95-94-3	1,2,4,5-Tetrachlorobenzene	350	U
101-55-3	4-Bromophenyl-phenylether	350	U
118-74-1	Hexachlorobenzene	350	U
1912-24-9	Atrazine	350	U
87-86-5	Pentachlorophenol	690	U
85-01-8	Phenanthrene	230	J
120-12-7	Anthracene	350	U
86-74-8	Carbazole	350	U
84-74-2	Di-n-butylphthalate	350	U
206-44-0	Fluoranthene	270	J
129-00-0	Pyrene	270	J
85-68-7	Butylbenzylphthalate	350	U
91-94-1	3,3'-Dichlorobenzidine	350	U
56-55-3	Benzo(a)anthracene	180	J
218-01-9	Chrysene	240	J
117-81-7	Bis(2-ethylhexyl)phthalate	3300	
117-84-0	Di-n-octylphthalate	350	U
205-99-2	Benzo(b)fluoranthene	150	J
207-08-9	Benzo(k)fluoranthene	350	U
50-32-8	Benzo(a)pyrene	350	U
193-39-5	Indeno(1,2,3-cd)pyrene	350	U
53-70-3	Dibenzo(a,h)anthracene	350	U
191-24-2	Benzo(g,h,i)perylene	350	U
58-90-2	2,3,4,6-Tetrachlorophenol	350	U

[1] Cannot be separated from Diphenylamine

0027

1K - FORM I SV-TIC

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

E0272

Lab Name: KAP TECHNOLOGIES, INC. Contract: EPW11031

Lab Code: KAP Case No.: 41260 Mod. Ref No.: 2141.0 SDG No.: E0272

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: S-4018.01

Sample wt/vol: 30.10 (g/mL) G Lab File ID: D02731

Level: (LOW/MED) LOW Extraction: (Type) SOXH

% Moisture: 52 Decanted: (Y/N) N Date Received: 05/17/2011

Concentrated Extract Volume: 500 (uL) Date Extracted: 05/25/2011

Injection Volume: 1.0 (uL) Date Analyzed: 06/03/2011

GPC Cleanup: (Y/N) Y pH: 7.1 Dilution Factor: 1.0

CONCENTRATION UNITS:(ug/L or ug/Kg) UG/KG

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
01		Unknown-01	15.31	2200	J
02		Unknown-02	15.46	1900	J
03		Unknown-03	15.69	2800	J
04					
05					
06					
07					
08					
09					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					
26					
27					
28					
29					
30					
	E966796[2]	Total Alkanes	N/A		

[2] EPA-designated Registry Number.

1D - FORM I SV-1

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

E0274

Lab Name: KAP TECHNOLOGIES, INC. Contract: EPW11031

Lab Code: KAP Case No.: 41260 Mod. Ref No.: 2141.0 SDG No.: E0272

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: S-4018.02

Sample wt/vol: 30.00 (g/mL) G Lab File ID: D02734

Level: (LOW/MED) LOW Extraction: (Type) SOXH

% Moisture: 37 Decanted: (Y/N) N Date Received: 05/17/2011

Concentrated Extract Volume: 500 (uL) Date Extracted: 05/25/2011

Injection Volume: 1.0 (uL) GPC Factor: 2.0 Date Analyzed: 06/03/2011

GPC Cleanup: (Y/N) Y pH: 6.9 Dilution Factor: 1.0

CAS No.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
100-52-7	Benzaldehyde	270	U
108-95-2	Phenol	270	U
111-44-4	Bis(2-chloroethyl)ether	270	U
95-57-8	2-Chlorophenol	270	U
95-48-7	2-Methylphenol	270	U
108-60-1	2,2'-Oxybis(1-chloropropane)	270	U
98-86-2	Acetophenone	270	U
106-44-5	4-Methylphenol	270	U
621-64-7	N-Nitroso-di-n-propylamine	270	U
67-72-1	Hexachloroethane	270	U
98-95-3	Nitrobenzene	270	U
78-59-1	Isophorone	270	U
88-75-5	2-Nitrophenol	270	U
105-67-9	2,4-Dimethylphenol	270	U
111-91-1	Bis(2-chloroethoxy)methane	270	U
120-83-2	2,4-Dichlorophenol	270	U
91-20-3	Naphthalene	270	U
106-47-8	4-Chloroaniline	270	U
87-68-3	Hexachlorobutadiene	270	U
105-60-2	Caprolactam	270	U
59-50-7	4-Chloro-3-methylphenol	270	U
91-57-6	2-Methylnaphthalene	270	U
77-47-4	Hexachlorocyclopentadiene	270	U
88-06-2	2,4,6-Trichlorophenol	270	U
95-95-4	2,4,5-Trichlorophenol	270	U
92-52-4	1,1'-Biphenyl	270	U
91-58-7	2-Chloronaphthalene	270	U
88-74-4	2-Nitroaniline	520	U
131-11-3	Dimethylphthalate	270	U
606-20-2	2,6-Dinitrotoluene	270	U
208-96-8	Acenaphthylene	270	U
99-09-2	3-Nitroaniline	520	U
83-32-9	Acenaphthene	270	U

1E - FORM I SV-2

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

E0274

Lab Name: KAP TECHNOLOGIES, INC. Contract: EPW11031

Lab Code: KAP Case No.: 41260 Mod. Ref No.: 2141.0 SDG No.: E0272

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: S-4018.02

Sample wt/vol: 30.00 (g/mL) G Lab File ID: D02734

Level: (LOW/MED) LOW Extraction: (Type) SOXH

% Moisture: 37 Decanted: (Y/N) N Date Received: 05/17/2011

Concentrated Extract Volume: 500 (uL) Date Extracted: 05/25/2011

Injection Volume: 1.0 (uL) GPC Factor: 2.0 Date Analyzed: 06/03/2011

GPC Cleanup: (Y/N) Y pH: 6.9 Dilution Factor: 1.0

CAS No.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
51-28-5	2,4-Dinitrophenol	520	U
100-02-7	4-Nitrophenol	520	U
132-64-9	Dibenzofuran	270	U
121-14-2	2,4-Dinitrotoluene	270	U
84-66-2	Diethylphthalate	270	U
86-73-7	Fluorene	270	U
7005-72-3	4-Chlorophenyl-phenylether	270	U
100-01-6	4-Nitroaniline	520	U
534-52-1	4,6-Dinitro-2-methylphenol	520	U
86-30-6	N-Nitrosodiphenylamine 1	270	U
95-94-3	1,2,4,5-Tetrachlorobenzene	270	U
101-55-3	4-Bromophenyl-phenylether	270	U
118-74-1	Hexachlorobenzene	270	U
1912-24-9	Atrazine	270	U
87-86-5	Pentachlorophenol	520	U
85-01-8	Phenanthrene	170	J
120-12-7	Anthracene	270	U
86-74-8	Carbazole	270	U
84-74-2	Di-n-butylphthalate	270	U
206-44-0	Fluoranthene	270	U
129-00-0	Pyrene	130	J
85-68-7	Butylbenzylphthalate	270	U
91-94-1	3,3'-Dichlorobenzidine	270	U
56-55-3	Benzo(a)anthracene	270	U
218-01-9	Chrysene	270	U
117-81-7	Bis(2-ethylhexyl)phthalate	550	
117-84-0	Di-n-octylphthalate	270	U
205-99-2	Benzo(b)fluoranthene	270	U
207-08-9	Benzo(k)fluoranthene	270	U
50-32-8	Benzo(a)pyrene	270	U
193-39-5	Indeno(1,2,3-cd)pyrene	270	U
53-70-3	Dibenzo(a,h)anthracene	270	U
191-24-2	Benzo(g,h,i)perylene	270	U
58-90-2	2,3,4,6-Tetrachlorophenol	270	U

1 Cannot be separated from Diphenylamine

0050

1K - FORM I SV-TIC

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

E0274

Lab Name: KAP TECHNOLOGIES, INC. Contract: EPW11031

Lab Code: KAP Case No.: 41260 Mod. Ref No.: 2141.0 SDG No.: E0272

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: S-4018.02

Sample wt/vol: 30.00 (g/mL) G Lab File ID: D02734

Level: (LOW/MED) LOW Extraction: (Type) SOXH

% Moisture: 37 Decanted: (Y/N) N Date Received: 05/17/2011

Concentrated Extract Volume: 500 (uL) Date Extracted: 05/25/2011

Injection Volume: 1.0 (uL) Date Analyzed: 06/03/2011

GPC Cleanup: (Y/N) Y pH: 6.9 Dilution Factor: 1.0

CONCENTRATION UNITS:(ug/L or ug/Kg) UG/KG

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
01	000638-36-8	Hexadecane, 2,6,10,14-tetrame	14.00	1700	NJ
02		Unknown-01	14.46	1600	J
03		Unknown-02	15.47	1700	J
04					
05					
06					
07					
08					
09					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					
26					
27					
28					
29					
30					
	E966796[2]	Total Alkanes	N/A		

[2] EPA-designated Registry Number.

1D - FORM I SV-1

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

E0283

Lab Name: KAP TECHNOLOGIES, INC. Contract: EPW11031

Lab Code: KAP Case No.: 41260 Mod. Ref No.: 2141.0 SDG No.: E0272

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: S-4018.03

Sample wt/vol: 30.10 (g/mL) G Lab File ID: D02735

Level: (LOW/MED) LOW Extraction: (Type) SOXH

% Moisture: 45 Decanted: (Y/N) N Date Received: 05/17/2011

Concentrated Extract Volume: 500 (uL) Date Extracted: 05/25/2011

Injection Volume: 1.0 (uL) GPC Factor: 2.0 Date Analyzed: 06/03/2011

GPC Cleanup: (Y/N) Y pH: 6.9 Dilution Factor: 1.0

CAS No.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
100-52-7	Benzaldehyde	310	U
108-95-2	Phenol	310	U
111-44-4	Bis(2-chloroethyl)ether	310	U
95-57-8	2-Chlorophenol	310	U
95-48-7	2-Methylphenol	310	U
108-60-1	2,2'-Oxybis(1-chloropropane)	310	U
98-86-2	Acetophenone	310	U
106-44-5	4-Methylphenol	310	U
621-64-7	N-Nitroso-di-n-propylamine	310	U
67-72-1	Hexachloroethane	310	U
98-95-3	Nitrobenzene	310	U
78-59-1	Isophorone	310	U
88-75-5	2-Nitrophenol	310	U
105-67-9	2,4-Dimethylphenol	310	U
111-91-1	Bis(2-chloroethoxy)methane	310	U
120-83-2	2,4-Dichlorophenol	310	U
91-20-3	Naphthalene	310	U
106-47-8	4-Chloroaniline	310	U
87-68-3	Hexachlorobutadiene	310	U
105-60-2	Caprolactam	310	U
59-50-7	4-Chloro-3-methylphenol	310	U
91-57-6	2-Methylnaphthalene	310	U
77-47-4	Hexachlorocyclopentadiene	310	U
88-06-2	2,4,6-Trichlorophenol	310	U
95-95-4	2,4,5-Trichlorophenol	310	U
92-52-4	1,1'-Biphenyl	310	U
91-58-7	2-Chloronaphthalene	310	U
88-74-4	2-Nitroaniline	600	U
131-11-3	Dimethylphthalate	310	U
606-20-2	2,6-Dinitrotoluene	310	U
208-96-8	Acenaphthylene	310	U
99-09-2	3-Nitroaniline	600	U
83-32-9	Acenaphthene	310	U

1E - FORM I SV-2

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

E0283

Lab Name: KAP TECHNOLOGIES, INC. Contract: EPW11031

Lab Code: KAP Case No.: 41260 Mod. Ref No.: 2141.0 SDG No.: E0272

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: S-4018.03

Sample wt/vol: 30.10 (g/mL) G Lab File ID: D02735

Level: (LOW/MED) LOW Extraction: (Type) SOXH

% Moisture: 45 Decanted: (Y/N) N Date Received: 05/17/2011

Concentrated Extract Volume: 500 (uL) Date Extracted: 05/25/2011

Injection Volume: 1.0 (uL) GPC Factor: 2.0 Date Analyzed: 06/03/2011

GPC Cleanup: (Y/N) Y pH: 6.9 Dilution Factor: 1.0

CAS No.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
51-28-5	2,4-Dinitrophenol	600	U
100-02-7	4-Nitrophenol	600	U
132-64-9	Dibenzofuran	310	U
121-14-2	2,4-Dinitrotoluene	310	U
84-66-2	Diethylphthalate	310	U
86-73-7	Fluorene	310	U
7005-72-3	4-Chlorophenyl-phenylether	310	U
100-01-6	4-Nitroaniline	600	U
534-52-1	4,6-Dinitro-2-methylphenol	600	U
86-30-6	N-Nitrosodiphenylamine 1	310	U
95-94-3	1,2,4,5-Tetrachlorobenzene	310	U
101-55-3	4-Bromophenyl-phenylether	310	U
118-74-1	Hexachlorobenzene	310	U
1912-24-9	Atrazine	310	U
87-86-5	Pentachlorophenol	600	U
85-01-8	Phenanthrene	310	U
120-12-7	Anthracene	310	U
86-74-8	Carbazole	310	U
84-74-2	Di-n-butylphthalate	310	U
206-44-0	Fluoranthene	310	U
129-00-0	Pyrene	310	U
85-68-7	Butylbenzylphthalate	310	U
91-94-1	3,3'-Dichlorobenzidine	310	U
56-55-3	Benzo(a)anthracene	130	J
218-01-9	Chrysene	160	J
117-81-7	Bis(2-ethylhexyl)phthalate	280	J
117-84-0	Di-n-octylphthalate	310	U
205-99-2	Benzo(b)fluoranthene	310	U
207-08-9	Benzo(k)fluoranthene	310	U
50-32-8	Benzo(a)pyrene	310	U
193-39-5	Indeno(1,2,3-cd)pyrene	310	U
53-70-3	Dibenzo(a,h)anthracene	310	U
191-24-2	Benzo(g,h,i)perylene	130	J
58-90-2	2,3,4,6-Tetrachlorophenol	310	U

1 Cannot be separated from Diphenylamine

1K - FORM I SV-TIC

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

E0283

Lab Name: KAP TECHNOLOGIES, INC. Contract: EPW11031

Lab Code: KAP Case No.: 41260 Mod. Ref No.: 2141.0 SDG No.: E0272

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: S-4018.03

Sample wt/vol: 30.10 (g/mL) G Lab File ID: D02735

Level: (LOW/MED) LOW Extraction: (Type) SOXH

% Moisture: 45 Decanted: (Y/N) N Date Received: 05/17/2011

Concentrated Extract Volume: 500 (uL) Date Extracted: 05/25/2011

Injection Volume: 1.0 (uL) Date Analyzed: 06/03/2011

GPC Cleanup: (Y/N) Y pH: 6.9 Dilution Factor: 1.0

CONCENTRATION UNITS:(ug/L or ug/Kg) UG/KG

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
01		Unknown-01	18.63	1100	J
02		Unknown-02	18.76	1300	J
03		Unknown-03	20.15	1200	J
04					
05					
06					
07					
08					
09					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					
26					
27					
28					
29					
30					
	E966796[2]	Total Alkanes	N/A		

[2] EPA-designated Registry Number.

1D - FORM I SV-1

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

E0284

Lab Name: KAP TECHNOLOGIES, INC. Contract: EPW11031

Lab Code: KAP Case No.: 41260 Mod. Ref No.: 2141.0 SDG No.: E0272

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: S-4018.04

Sample wt/vol: 29.90 (g/mL) G Lab File ID: D02736

Level: (LOW/MED) LOW Extraction: (Type) SOXH

% Moisture: 48 Decanted: (Y/N) N Date Received: 05/17/2011

Concentrated Extract Volume: 500 (uL) Date Extracted: 05/25/2011

Injection Volume: 1.0 (uL) GPC Factor: 2.0 Date Analyzed: 06/03/2011

GPC Cleanup: (Y/N) Y pH: 7.0 Dilution Factor: 1.0

CAS No.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
100-52-7	Benzaldehyde	330	U
108-95-2	Phenol	330	U
111-44-4	Bis(2-chloroethyl)ether	330	U
95-57-8	2-Chlorophenol	330	U
95-48-7	2-Methylphenol	330	U
108-60-1	2,2'-Oxybis(1-chloropropane)	330	U
98-86-2	Acetophenone	330	U
106-44-5	4-Methylphenol	190	J
621-64-7	N-Nitroso-di-n-propylamine	330	U
67-72-1	Hexachloroethane	330	U
98-95-3	Nitrobenzene	330	U
78-59-1	Isophorone	330	U
88-75-5	2-Nitrophenol	330	U
105-67-9	2,4-Dimethylphenol	330	U
111-91-1	Bis(2-chloroethoxy)methane	330	U
120-83-2	2,4-Dichlorophenol	330	U
91-20-3	Naphthalene	330	U
106-47-8	4-Chloroaniline	330	U
87-68-3	Hexachlorobutadiene	330	U
105-60-2	Caprolactam	330	U
59-50-7	4-Chloro-3-methylphenol	330	U
91-57-6	2-Methylnaphthalene	330	U
77-47-4	Hexachlorocyclopentadiene	330	U
88-06-2	2,4,6-Trichlorophenol	330	U
95-95-4	2,4,5-Trichlorophenol	330	U
92-52-4	1,1'-Biphenyl	330	U
91-58-7	2-Chloronaphthalene	330	U
88-74-4	2-Nitroaniline	640	U
131-11-3	Dimethylphthalate	330	U
606-20-2	2,6-Dinitrotoluene	330	U
208-96-8	Acenaphthylene	330	U
99-09-2	3-Nitroaniline	640	U
83-32-9	Acenaphthene	330	U

1E - FORM I SV-2

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

E0284

Lab Name: KAP TECHNOLOGIES, INC. Contract: EPW11031

Lab Code: KAP Case No.: 41260 Mod. Ref No.: 2141.0 SDG No.: E0272

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: S-4018.04

Sample wt/vol: 29.90 (g/mL) G Lab File ID: D02736

Level: (LOW/MED) LOW Extraction: (Type) SOXH

% Moisture: 48 Decanted: (Y/N) N Date Received: 05/17/2011

Concentrated Extract Volume: 500 (uL) Date Extracted: 05/25/2011

Injection Volume: 1.0 (uL) GPC Factor: 2.0 Date Analyzed: 06/03/2011

GPC Cleanup: (Y/N) Y pH: 7.0 Dilution Factor: 1.0

CAS No.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
51-28-5	2,4-Dinitrophenol	640	U
100-02-7	4-Nitrophenol	640	U
132-64-9	Dibenzofuran	330	U
121-14-2	2,4-Dinitrotoluene	330	U
84-66-2	Diethylphthalate	330	U
86-73-7	Fluorene	330	U
7005-72-3	4-Chlorophenyl-phenylether	330	U
100-01-6	4-Nitroaniline	640	U
534-52-1	4,6-Dinitro-2-methylphenol	640	U
86-30-6	N-Nitrosodiphenylamine 1	330	U
95-94-3	1,2,4,5-Tetrachlorobenzene	330	U
101-55-3	4-Bromophenyl-phenylether	330	U
118-74-1	Hexachlorobenzene	330	U
1912-24-9	Atrazine	330	U
87-86-5	Pentachlorophenol	640	U
85-01-8	Phenanthrene	330	U
120-12-7	Anthracene	330	U
86-74-8	Carbazole	330	U
84-74-2	Di-n-butylphthalate	330	U
206-44-0	Fluoranthene	330	U
129-00-0	Pyrene	330	U
85-68-7	Butylbenzylphthalate	330	U
91-94-1	3,3'-Dichlorobenzidine	330	U
56-55-3	Benzo(a)anthracene	330	U
218-01-9	Chrysene	330	U
117-81-7	Bis(2-ethylhexyl)phthalate	260	J
117-84-0	Di-n-octylphthalate	330	U
205-99-2	Benzo(b)fluoranthene	330	U
207-08-9	Benzo(k)fluoranthene	330	U
50-32-8	Benzo(a)pyrene	330	U
193-39-5	Indeno(1,2,3-cd)pyrene	330	U
53-70-3	Dibenzo(a,h)anthracene	330	U
191-24-2	Benzo(g,h,i)perylene	330	U
58-90-2	2,3,4,6-Tetrachlorophenol	330	U

[1] Cannot be separated from Diphenylamine

0093

1K - FORM I SV-TIC

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

E0284

Lab Name: KAP TECHNOLOGIES, INC. Contract: EPW11031

Lab Code: KAP Case No.: 41260 Mod. Ref No.: 2141.0 SDG No.: E0272

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: S-4018.04

Sample wt/vol: 29.90 (g/mL) G Lab File ID: D02736

Level: (LOW/MED) LOW Extraction: (Type) SOXH

% Moisture: 48 Decanted: (Y/N) N Date Received: 05/17/2011

Concentrated Extract Volume: 500 (uL) Date Extracted: 05/25/2011

Injection Volume: 1.0 (uL) Date Analyzed: 06/03/2011

GPC Cleanup: (Y/N) Y pH: 7.0 Dilution Factor: 1.0

CONCENTRATION UNITS:(ug/L or ug/Kg) UG/KG

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
01		Unknown-01	17.53	960	J
02	007683-64-9	Squalene	18.51	1100	NJ
03		Unknown-02	18.62	1300	J
04					
05					
06					
07					
08					
09					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					
26					
27					
28					
29					
30					
	E966796[2]	Total Alkanes	N/A		

[2] EPA-designated Registry Number.

1D - FORM I SV-1

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

E0291

Lab Name: KAP TECHNOLOGIES, INC. Contract: EPW11031

Lab Code: KAP Case No.: 41260 Mod. Ref No.: 2141.0 SDG No.: E0272

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: S-4018.05

Sample wt/vol: 30.30 (g/mL) G Lab File ID: D02737

Level: (LOW/MED) LOW Extraction: (Type) SOXH

% Moisture: 47 Decanted: (Y/N) N Date Received: 05/17/2011

Concentrated Extract Volume: 500 (uL) Date Extracted: 05/25/2011

Injection Volume: 1.0 (uL) GPC Factor: 2.0 Date Analyzed: 06/03/2011

GPC Cleanup: (Y/N) Y pH: 6.8 Dilution Factor: 1.0

CAS No.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
100-52-7	Benzaldehyde	320	U
108-95-2	Phenol	320	U
111-44-4	Bis(2-chloroethyl)ether	320	U
95-57-8	2-Chlorophenol	320	U
95-48-7	2-Methylphenol	320	U
108-60-1	2,2'-Oxybis(1-chloropropane)	320	U
98-86-2	Acetophenone	320	U
106-44-5	4-Methylphenol	320	U
621-64-7	N-Nitroso-di-n-propylamine	320	U
67-72-1	Hexachloroethane	320	U
98-95-3	Nitrobenzene	320	U
78-59-1	Isophorone	320	U
88-75-5	2-Nitrophenol	320	U
105-67-9	2,4-Dimethylphenol	320	U
111-91-1	Bis(2-chloroethoxy)methane	320	U
120-83-2	2,4-Dichlorophenol	320	U
91-20-3	Naphthalene	320	U
106-47-8	4-Chloroaniline	320	U
87-68-3	Hexachlorobutadiene	320	U
105-60-2	Caprolactam	320	U
59-50-7	4-Chloro-3-methylphenol	320	U
91-57-6	2-Methylnaphthalene	320	U
77-47-4	Hexachlorocyclopentadiene	320	U
88-06-2	2,4,6-Trichlorophenol	320	U
95-95-4	2,4,5-Trichlorophenol	320	U
92-52-4	1,1'-Biphenyl	320	U
91-58-7	2-Chloronaphthalene	320	U
88-74-4	2-Nitroaniline	620	U
131-11-3	Dimethylphthalate	320	U
606-20-2	2,6-Dinitrotoluene	320	U
208-96-8	Acenaphthylene	320	U
99-09-2	3-Nitroaniline	620	U
83-32-9	Acenaphthene	320	U

1E - FORM I SV-2

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

E0291

Lab Name: KAP TECHNOLOGIES, INC. Contract: EPW11031

Lab Code: KAP Case No.: 41260 Mod. Ref No.: 2141.0 SDG No.: E0272

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: S-4018.05

Sample wt/vol: 30.30 (g/mL) G Lab File ID: D02737

Level: (LOW/MED) LOW Extraction: (Type) SOXH

% Moisture: 47 Decanted: (Y/N) N Date Received: 05/17/2011

Concentrated Extract Volume: 500 (uL) Date Extracted: 05/25/2011

Injection Volume: 1.0 (uL) GPC Factor: 2.0 Date Analyzed: 06/03/2011

GPC Cleanup: (Y/N) Y pH: 6.8 Dilution Factor: 1.0

CAS No.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
51-28-5	2,4-Dinitrophenol	620	U
100-02-7	4-Nitrophenol	620	U
132-64-9	Dibenzofuran	320	U
121-14-2	2,4-Dinitrotoluene	320	U
84-66-2	Diethylphthalate	320	U
86-73-7	Fluorene	320	U
7005-72-3	4-Chlorophenyl-phenylether	320	U
100-01-6	4-Nitroaniline	620	U
534-52-1	4,6-Dinitro-2-methylphenol	620	U
86-30-6	N-Nitrosodiphenylamine 1	320	U
95-94-3	1,2,4,5-Tetrachlorobenzene	320	U
101-55-3	4-Bromophenyl-phenylether	320	U
118-74-1	Hexachlorobenzene	320	U
1912-24-9	Atrazine	320	U
87-86-5	Pentachlorophenol	620	U
85-01-8	Phenanthrene	320	U
120-12-7	Anthracene	320	U
86-74-8	Carbazole	320	U
84-74-2	Di-n-butylphthalate	320	U
206-44-0	Fluoranthene	160	J
129-00-0	Pyrene	170	J
85-68-7	Butylbenzylphthalate	320	U
91-94-1	3,3'-Dichlorobenzidine	320	U
56-55-3	Benzo(a)anthracene	320	U
218-01-9	Chrysene	160	J
117-81-7	Bis(2-ethylhexyl)phthalate	470	
117-84-0	Di-n-octylphthalate	320	U
205-99-2	Benzo(b)fluoranthene	130	J
207-08-9	Benzo(k)fluoranthene	320	U
50-32-8	Benzo(a)pyrene	320	U
193-39-5	Indeno(1,2,3-cd)pyrene	320	U
53-70-3	Dibenzo(a,h)anthracene	320	U
191-24-2	Benzo(g,h,i)perylene	320	U
58-90-2	2,3,4,6-Tetrachlorophenol	320	U

[1] Cannot be separated from Diphenylamine

1K - FORM I SV-TIC

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

E0291

Lab Name: KAP TECHNOLOGIES, INC. Contract: EPW11031

Lab Code: KAP Case No.: 41260 Mod. Ref No.: 2141.0 SDG No.: E0272

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: S-4018.05

Sample wt/vol: 30.30 (g/mL) G Lab File ID: D02737

Level: (LOW/MED) LOW Extraction: (Type) SOXH

% Moisture: 47 Decanted: (Y/N) N Date Received: 05/17/2011

Concentrated Extract Volume: 500 (uL) Date Extracted: 05/25/2011

Injection Volume: 1.0 (uL) Date Analyzed: 06/03/2011

GPC Cleanup: (Y/N) Y pH: 6.8 Dilution Factor: 1.0

CONCENTRATION UNITS:(ug/L or ug/Kg) UG/KG

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
01		Unknown-01	15.31	1300	J
02		Unknown-02	15.69	1700	J
03		Unknown-03	18.63	1200	J
04					
05					
06					
07					
08					
09					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					
26					
27					
28					
29					
30					
	E966796[2]	Total Alkanes	N/A		

[2] EPA-designated Registry Number.

1D - FORM I SV-1

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

E0292

Lab Name: KAP TECHNOLOGIES, INC. Contract: EPW11031

Lab Code: KAP Case No.: 41260 Mod. Ref No.: 2141.0 SDG No.: E0272

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: S-4018.06

Sample wt/vol: 30.10 (g/mL) G Lab File ID: D02738

Level: (LOW/MED) LOW Extraction: (Type) SOXH

% Moisture: 42 Decanted: (Y/N) N Date Received: 05/17/2011

Concentrated Extract Volume: 500 (uL) Date Extracted: 05/25/2011

Injection Volume: 1.0 (uL) GPC Factor: 2.0 Date Analyzed: 06/03/2011

GPC Cleanup: (Y/N) Y pH: 6.9 Dilution Factor: 1.0

CAS No.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
100-52-7	Benzaldehyde	290	U
108-95-2	Phenol	290	U
111-44-4	Bis(2-chloroethyl)ether	290	U
95-57-8	2-Chlorophenol	290	U
95-48-7	2-Methylphenol	290	U
108-60-1	2,2'-Oxybis(1-chloropropane)	290	U
98-86-2	Acetophenone	290	U
106-44-5	4-Methylphenol	290	U
621-64-7	N-Nitroso-di-n-propylamine	290	U
67-72-1	Hexachloroethane	290	U
98-95-3	Nitrobenzene	290	U
78-59-1	Isophorone	290	U
88-75-5	2-Nitrophenol	290	U
105-67-9	2,4-Dimethylphenol	290	U
111-91-1	Bis(2-chloroethoxy)methane	290	U
120-83-2	2,4-Dichlorophenol	290	U
91-20-3	Naphthalene	290	U
106-47-8	4-Chloroaniline	290	U
87-68-3	Hexachlorobutadiene	290	U
105-60-2	Caprolactam	290	U
59-50-7	4-Chloro-3-methylphenol	290	U
91-57-6	2-Methylnaphthalene	290	U
77-47-4	Hexachlorocyclopentadiene	290	U
88-06-2	2,4,6-Trichlorophenol	290	U
95-95-4	2,4,5-Trichlorophenol	290	U
92-52-4	1,1'-Biphenyl	290	U
91-58-7	2-Chloronaphthalene	290	U
88-74-4	2-Nitroaniline	570	U
131-11-3	Dimethylphthalate	290	U
606-20-2	2,6-Dinitrotoluene	290	U
208-96-8	Acenaphthylene	290	U
99-09-2	3-Nitroaniline	570	U
83-32-9	Acenaphthene	290	U

1E - FORM I SV-2

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

E0292

Lab Name: KAP TECHNOLOGIES, INC. Contract: EPW11031

Lab Code: KAP Case No.: 41260 Mod. Ref No.: 2141.0 SDG No.: E0272

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: S-4018.06

Sample wt/vol: 30.10 (g/mL) G Lab File ID: D02738

Level: (LOW/MED) LOW Extraction: (Type) SOXH

% Moisture: 42 Decanted: (Y/N) N Date Received: 05/17/2011

Concentrated Extract Volume: 500 (uL) Date Extracted: 05/25/2011

Injection Volume: 1.0 (uL) GPC Factor: 2.0 Date Analyzed: 06/03/2011

GPC Cleanup: (Y/N) Y pH: 6.9 Dilution Factor: 1.0

CAS No.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
51-28-5	2,4-Dinitrophenol	570	U
100-02-7	4-Nitrophenol	570	U
132-64-9	Dibenzofuran	290	U
121-14-2	2,4-Dinitrotoluene	290	U
84-66-2	Diethylphthalate	290	U
86-73-7	Fluorene	290	U
7005-72-3	4-Chlorophenyl-phenylether	290	U
100-01-6	4-Nitroaniline	570	U
534-52-1	4,6-Dinitro-2-methylphenol	570	U
86-30-6	N-Nitrosodiphenylamine 1	290	U
95-94-3	1,2,4,5-Tetrachlorobenzene	290	U
101-55-3	4-Bromophenyl-phenylether	290	U
118-74-1	Hexachlorobenzene	290	U
1912-24-9	Atrazine	290	U
87-86-5	Pentachlorophenol	570	U
85-01-8	Phenanthrene	290	U
120-12-7	Anthracene	290	U
86-74-8	Carbazole	290	U
84-74-2	Di-n-butylphthalate	290	U
206-44-0	Fluoranthene	130	J
129-00-0	Pyrene	140	J
85-68-7	Butylbenzylphthalate	290	U
91-94-1	3,3'-Dichlorobenzidine	290	U
56-55-3	Benzo(a)anthracene	290	U
218-01-9	Chrysene	140	J
117-81-7	Bis(2-ethylhexyl)phthalate	820	
117-84-0	Di-n-octylphthalate	290	U
205-99-2	Benzo(b)fluoranthene	290	U
207-08-9	Benzo(k)fluoranthene	290	U
50-32-8	Benzo(a)pyrene	290	U
193-39-5	Indeno(1,2,3-cd)pyrene	290	U
53-70-3	Dibenzo(a,h)anthracene	290	U
191-24-2	Benzo(g,h,i)perylene	290	U
58-90-2	2,3,4,6-Tetrachlorophenol	290	U

1 Cannot be separated from Diphenylamine

1K - FORM I SV-TIC

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

E0292

Lab Name: KAP TECHNOLOGIES, INC. Contract: EPW11031

Lab Code: KAP Case No.: 41260 Mod. Ref No.: 2141.0 SDG No.: E0272

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: S-4018.06

Sample wt/vol: 30.10 (g/mL) G Lab File ID: D02738

Level: (LOW/MED) LOW Extraction: (Type) SOXH

% Moisture: 42 Decanted: (Y/N) N Date Received: 05/17/2011

Concentrated Extract Volume: 500 (uL) Date Extracted: 05/25/2011

Injection Volume: 1.0 (uL) Date Analyzed: 06/03/2011

GPC Cleanup: (Y/N) Y pH: 6.9 Dilution Factor: 1.0

CONCENTRATION UNITS:(ug/L or ug/Kg) UG/KG

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
01		Unknown-01	15.31	1500	J
02		Unknown-02	15.46	1200	J
03	007225-64-1	Heptadecane, 9-octyl-	15.69	1900	NJ
04					
05					
06					
07					
08					
09					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					
26					
27					
28					
29					
30					
	E966796[2]	Total Alkanes	N/A		

[2] EPA-designated Registry Number.

1D - FORM I SV-1

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

E0294

Lab Name: KAP TECHNOLOGIES, INC. Contract: EPW11031

Lab Code: KAP Case No.: 41260 Mod. Ref No.: 2141.0 SDG No.: E0272

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: S-4018.07

Sample wt/vol: 30.10 (g/mL) G Lab File ID: D02739

Level: (LOW/MED) LOW Extraction: (Type) SOXH

% Moisture: 53 Decanted: (Y/N) N Date Received: 05/17/2011

Concentrated Extract Volume: 500 (uL) Date Extracted: 05/25/2011

Injection Volume: 1.0 (uL) GPC Factor: 2.0 Date Analyzed: 06/03/2011

GPC Cleanup: (Y/N) Y pH: 6.9 Dilution Factor: 1.0

CAS No.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
100-52-7	Benzaldehyde	360	U
108-95-2	Phenol	360	U
111-44-4	Bis(2-chloroethyl)ether	360	U
95-57-8	2-Chlorophenol	360	U
95-48-7	2-Methylphenol	360	U
108-60-1	2,2'-Oxybis(1-chloropropane)	360	U
98-86-2	Acetophenone	360	U
106-44-5	4-Methylphenol	360	U
621-64-7	N-Nitroso-di-n-propylamine	360	U
67-72-1	Hexachloroethane	360	U
98-95-3	Nitrobenzene	360	U
78-59-1	Isophorone	360	U
88-75-5	2-Nitrophenol	360	U
105-67-9	2,4-Dimethylphenol	360	U
111-91-1	Bis(2-chloroethoxy)methane	360	U
120-83-2	2,4-Dichlorophenol	360	U
91-20-3	Naphthalene	360	U
106-47-8	4-Chloroaniline	360	U
87-68-3	Hexachlorobutadiene	360	U
105-60-2	Caprolactam	360	U
59-50-7	4-Chloro-3-methylphenol	360	U
91-57-6	2-Methylnaphthalene	360	U
77-47-4	Hexachlorocyclopentadiene	360	U
88-06-2	2,4,6-Trichlorophenol	360	U
95-95-4	2,4,5-Trichlorophenol	360	U
92-52-4	1,1'-Biphenyl	360	U
91-58-7	2-Chloronaphthalene	360	U
88-74-4	2-Nitroaniline	700	U
131-11-3	Dimethylphthalate	360	U
606-20-2	2,6-Dinitrotoluene	360	U
208-96-8	Acenaphthylene	360	U
99-09-2	3-Nitroaniline	700	U
83-32-9	Acenaphthene	360	U

1E - FORM I SV-2

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

E0294

Lab Name: KAP TECHNOLOGIES, INC. Contract: EPW11031

Lab Code: KAP Case No.: 41260 Mod. Ref No.: 2141.0 SDG No.: E0272

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: S-4018.07

Sample wt/vol: 30.10 (g/mL) G Lab File ID: D02739

Level: (LOW/MED) LOW Extraction: (Type) SOXH

% Moisture: 53 Decanted: (Y/N) N Date Received: 05/17/2011

Concentrated Extract Volume: 500 (uL) Date Extracted: 05/25/2011

Injection Volume: 1.0 (uL) GPC Factor: 2.0 Date Analyzed: 06/03/2011

GPC Cleanup: (Y/N) Y pH: 6.9 Dilution Factor: 1.0

CAS No.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
51-28-5	2,4-Dinitrophenol	700	U
100-02-7	4-Nitrophenol	700	U
132-64-9	Dibenzofuran	360	U
121-14-2	2,4-Dinitrotoluene	360	U
84-66-2	Diethylphthalate	360	U
86-73-7	Fluorene	360	U
7005-72-3	4-Chlorophenyl-phenylether	360	U
100-01-6	4-Nitroaniline	700	U
534-52-1	4,6-Dinitro-2-methylphenol	700	U
86-30-6	N-Nitrosodiphenylamine 1	360	U
95-94-3	1,2,4,5-Tetrachlorobenzene	360	U
101-55-3	4-Bromophenyl-phenylether	360	U
118-74-1	Hexachlorobenzene	360	U
1912-24-9	Atrazine	360	U
87-86-5	Pentachlorophenol	700	U
85-01-8	Phenanthrene	240	J
120-12-7	Anthracene	360	U
86-74-8	Carbazole	360	U
84-74-2	Di-n-butylphthalate	360	U
206-44-0	Fluoranthene	210	J
129-00-0	Pyrene	240	J
85-68-7	Butylbenzylphthalate	360	U
91-94-1	3,3'-Dichlorobenzidine	360	U
56-55-3	Benzo(a)anthracene	360	U
218-01-9	Chrysene	210	J
117-81-7	Bis(2-ethylhexyl)phthalate	2000	
117-84-0	Di-n-octylphthalate	360	U
205-99-2	Benzo(b)fluoranthene	360	U
207-08-9	Benzo(k)fluoranthene	360	U
50-32-8	Benzo(a)pyrene	360	U
193-39-5	Indeno(1,2,3-cd)pyrene	360	U
53-70-3	Dibenzo(a,h)anthracene	360	U
191-24-2	Benzo(g,h,i)perylene	360	U
58-90-2	2,3,4,6-Tetrachlorophenol	360	U

[1] Cannot be separated from Diphenylamine

1K - FORM I SV-TIC
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
E0294

Lab Name: KAP TECHNOLOGIES, INC. Contract: EPW11031

Lab Code: KAP Case No.: 41260 Mod. Ref No.: 2141.0 SDG No.: E0272

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: S-4018.07

Sample wt/vol: 30.10 (g/mL) G Lab File ID: D02739

Level: (LOW/MED) LOW Extraction: (Type) SOXH

% Moisture: 53 Decanted: (Y/N) N Date Received: 05/17/2011

Concentrated Extract Volume: 500 (uL) Date Extracted: 05/25/2011

Injection Volume: 1.0 (uL) Date Analyzed: 06/03/2011

GPC Cleanup: (Y/N) Y pH: 6.9 Dilution Factor: 1.0

CONCENTRATION UNITS:(ug/L or ug/Kg) UG/KG

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
01		Unknown-01	14.44	1600	J
02		Unknown-02	15.32	1900	J
03		Unknown-03	15.70	2200	J
04					
05					
06					
07					
08					
09					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					
26					
27					
28					
29					
30					
	E966796[2]	Total Alkanes	N/A		

[2] EPA-designated Registry Number.

1D - FORM I SV-1

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

E0296

Lab Name: KAP TECHNOLOGIES, INC. Contract: EPW11031

Lab Code: KAP Case No.: 41260 Mod. Ref No.: 2141.0 SDG No.: E0272

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: S-4018.08

Sample wt/vol: 29.90 (g/mL) G Lab File ID: D02740

Level: (LOW/MED) LOW Extraction: (Type) SOXH

% Moisture: 49 Decanted: (Y/N) N Date Received: 05/17/2011

Concentrated Extract Volume: 500 (uL) Date Extracted: 05/25/2011

Injection Volume: 1.0 (uL) GPC Factor: 2.0 Date Analyzed: 06/03/2011

GPC Cleanup: (Y/N) Y pH: 6.5 Dilution Factor: 1.0

CAS No.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
100-52-7	Benzaldehyde	330	U
108-95-2	Phenol	330	U
111-44-4	Bis(2-chloroethyl)ether	330	U
95-57-8	2-Chlorophenol	330	U
95-48-7	2-Methylphenol	330	U
108-60-1	2,2'-Oxybis(1-chloropropane)	330	U
98-86-2	Acetophenone	330	U
106-44-5	4-Methylphenol	330	U
621-64-7	N-Nitroso-di-n-propylamine	330	U
67-72-1	Hexachloroethane	330	U
98-95-3	Nitrobenzene	330	U
78-59-1	Isophorone	330	U
88-75-5	2-Nitrophenol	330	U
105-67-9	2,4-Dimethylphenol	330	U
111-91-1	Bis(2-chloroethoxy)methane	330	U
120-83-2	2,4-Dichlorophenol	330	U
91-20-3	Naphthalene	330	U
106-47-8	4-Chloroaniline	330	U
87-68-3	Hexachlorobutadiene	330	U
105-60-2	Caprolactam	330	U
59-50-7	4-Chloro-3-methylphenol	330	U
91-57-6	2-Methylnaphthalene	330	U
77-47-4	Hexachlorocyclopentadiene	330	U
88-06-2	2,4,6-Trichlorophenol	330	U
95-95-4	2,4,5-Trichlorophenol	330	U
92-52-4	1,1'-Biphenyl	330	U
91-58-7	2-Chloronaphthalene	330	U
88-74-4	2-Nitroaniline	650	U
131-11-3	Dimethylphthalate	330	U
606-20-2	2,6-Dinitrotoluene	330	U
208-96-8	Acenaphthylene	330	U
99-09-2	3-Nitroaniline	650	U
83-32-9	Acenaphthene	330	U

1E - FORM I SV-2

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

E0296

Lab Name: KAP TECHNOLOGIES, INC. Contract: EPW11031

Lab Code: KAP Case No.: 41260 Mod. Ref No.: 2141.0 SDG No.: E0272

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: S-4018.08

Sample wt/vol: 29.90 (g/mL) G Lab File ID: D02740

Level: (LOW/MED) LOW Extraction: (Type) SOXH

% Moisture: 49 Decanted: (Y/N) N Date Received: 05/17/2011

Concentrated Extract Volume: 500 (uL) Date Extracted: 05/25/2011

Injection Volume: 1.0 (uL) GPC Factor: 2.0 Date Analyzed: 06/03/2011

GPC Cleanup: (Y/N) Y pH: 6.5 Dilution Factor: 1.0

CAS No.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
51-28-5	2,4-Dinitrophenol	650	U
100-02-7	4-Nitrophenol	650	U
132-64-9	Dibenzofuran	330	U
121-14-2	2,4-Dinitrotoluene	330	U
84-66-2	Diethylphthalate	330	U
86-73-7	Fluorene	330	U
7005-72-3	4-Chlorophenyl-phenylether	330	U
100-01-6	4-Nitroaniline	650	U
534-52-1	4,6-Dinitro-2-methylphenol	650	U
86-30-6	N-Nitrosodiphenylamine 1	330	U
95-94-3	1,2,4,5-Tetrachlorobenzene	330	U
101-55-3	4-Bromophenyl-phenylether	330	U
118-74-1	Hexachlorobenzene	330	U
1912-24-9	Atrazine	330	U
87-86-5	Pentachlorophenol	650	U
85-01-8	Phenanthrene	330	U
120-12-7	Anthracene	330	U
86-74-8	Carbazole	330	U
84-74-2	Di-n-butylphthalate	330	U
206-44-0	Fluoranthene	330	U
129-00-0	Pyrene	330	U
85-68-7	Butylbenzylphthalate	330	U
91-94-1	3,3'-Dichlorobenzidine	330	U
56-55-3	Benzo(a)anthracene	330	U
218-01-9	Chrysene	330	U
117-81-7	Bis(2-ethylhexyl)phthalate	330	U
117-84-0	Di-n-octylphthalate	330	U
205-99-2	Benzo(b)fluoranthene	330	U
207-08-9	Benzo(k)fluoranthene	330	U
50-32-8	Benzo(a)pyrene	330	U
193-39-5	Indeno(1,2,3-cd)pyrene	330	U
53-70-3	Dibenzo(a,h)anthracene	330	U
191-24-2	Benzo(g,h,i)perylene	330	U
58-90-2	2,3,4,6-Tetrachlorophenol	330	U

1 Cannot be separated from Diphenylamine

1K - FORM I SV-TIC

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

E0296

Lab Name: KAP TECHNOLOGIES, INC. Contract: EPW11031

Lab Code: KAP Case No.: 41260 Mod. Ref No.: 2141.0 SDG No.: E0272

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: S-4018.08

Sample wt/vol: 29.90 (g/mL) G Lab File ID: D02740

Level: (LOW/MED) LOW Extraction: (Type) SOXH

% Moisture: 49 Decanted: (Y/N) N Date Received: 05/17/2011

Concentrated Extract Volume: 500 (uL) Date Extracted: 05/25/2011

Injection Volume: 1.0 (uL) Date Analyzed: 06/03/2011

GPC Cleanup: (Y/N) Y pH: 6.5 Dilution Factor: 1.0

CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
01		Unknown-01	20.13	1100	J
02					
03					
04					
05					
06					
07					
08					
09					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					
26					
27					
28					
29					
30					
	E966796[2]	Total Alkanes	N/A	2400	J

[2] EPA-designated Registry Number.

1D - FORM I SV-1

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

E0297

Lab Name: KAP TECHNOLOGIES, INC. Contract: EPW11031

Lab Code: KAP Case No.: 41260 Mod. Ref No.: 2141.0 SDG No.: E0272

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: S-4018.09

Sample wt/vol: 30.10 (g/mL) G Lab File ID: D02741

Level: (LOW/MED) LOW Extraction: (Type) SOXH

% Moisture: 43 Decanted: (Y/N) N Date Received: 05/17/2011

Concentrated Extract Volume: 500 (uL) Date Extracted: 05/25/2011

Injection Volume: 1.0 (uL) GPC Factor: 2.0 Date Analyzed: 06/03/2011

GPC Cleanup: (Y/N) Y pH: 6.6 Dilution Factor: 1.0

CAS No.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
100-52-7	Benzaldehyde	300	U
108-95-2	Phenol	300	U
111-44-4	Bis(2-chloroethyl)ether	300	U
95-57-8	2-Chlorophenol	300	U
95-48-7	2-Methylphenol	300	U
108-60-1	2,2'-Oxybis(1-chloropropane)	300	U
98-86-2	Acetophenone	300	U
106-44-5	4-Methylphenol	300	U
621-64-7	N-Nitroso-di-n-propylamine	300	U
67-72-1	Hexachloroethane	300	U
98-95-3	Nitrobenzene	300	U
78-59-1	Isophorone	300	U
88-75-5	2-Nitrophenol	300	U
105-67-9	2,4-Dimethylphenol	300	U
111-91-1	Bis(2-chloroethoxy)methane	300	U
120-83-2	2,4-Dichlorophenol	300	U
91-20-3	Naphthalene	300	U
106-47-8	4-Chloroaniline	300	U
87-68-3	Hexachlorobutadiene	300	U
105-60-2	Caprolactam	300	U
59-50-7	4-Chloro-3-methylphenol	300	U
91-57-6	2-Methylnaphthalene	300	U
77-47-4	Hexachlorocyclopentadiene	300	U
88-06-2	2,4,6-Trichlorophenol	300	U
95-95-4	2,4,5-Trichlorophenol	300	U
92-52-4	1,1'-Biphenyl	300	U
91-58-7	2-Chloronaphthalene	300	U
88-74-4	2-Nitroaniline	580	U
131-11-3	Dimethylphthalate	300	U
606-20-2	2,6-Dinitrotoluene	300	U
208-96-8	Acenaphthylene	300	U
99-09-2	3-Nitroaniline	580	U
83-32-9	Acenaphthene	300	U

1E - FORM I SV-2

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

E0297

Lab Name: KAP TECHNOLOGIES, INC. Contract: EPW11031

Lab Code: KAP Case No.: 41260 Mod. Ref No.: 2141.0 SDG No.: E0272

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: S-4018.09

Sample wt/vol: 30.10 (g/mL) G Lab File ID: D02741

Level: (LOW/MED) LOW Extraction: (Type) SOXH

% Moisture: 43 Decanted: (Y/N) N Date Received: 05/17/2011

Concentrated Extract Volume: 500 (uL) Date Extracted: 05/25/2011

Injection Volume: 1.0 (uL) GPC Factor: 2.0 Date Analyzed: 06/03/2011

GPC Cleanup: (Y/N) Y pH: 6.6 Dilution Factor: 1.0

CAS No.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
51-28-5	2,4-Dinitrophenol	580	U
100-02-7	4-Nitrophenol	580	U
132-64-9	Dibenzofuran	300	U
121-14-2	2,4-Dinitrotoluene	300	U
84-66-2	Diethylphthalate	300	U
86-73-7	Fluorene	300	U
7005-72-3	4-Chlorophenyl-phenylether	300	U
100-01-6	4-Nitroaniline	580	U
534-52-1	4,6-Dinitro-2-methylphenol	580	U
86-30-6	N-Nitrosodiphenylamine 1	300	U
95-94-3	1,2,4,5-Tetrachlorobenzene	300	U
101-55-3	4-Bromophenyl-phenylether	300	U
118-74-1	Hexachlorobenzene	300	U
1912-24-9	Atrazine	300	U
87-86-5	Pentachlorophenol	580	U
85-01-8	Phenanthrene	300	U
120-12-7	Anthracene	300	U
86-74-8	Carbazole	300	U
84-74-2	Di-n-butylphthalate	300	U
206-44-0	Fluoranthene	120	J
129-00-0	Pyrene	300	U
85-68-7	Butylbenzylphthalate	300	U
91-94-1	3,3'-Dichlorobenzidine	300	U
56-55-3	Benzo(a)anthracene	300	U
218-01-9	Chrysene	300	U
117-81-7	Bis(2-ethylhexyl)phthalate	190	J
117-84-0	Di-n-octylphthalate	300	U
205-99-2	Benzo(b)fluoranthene	300	U
207-08-9	Benzo(k)fluoranthene	300	U
50-32-8	Benzo(a)pyrene	300	U
193-39-5	Indeno(1,2,3-cd)pyrene	300	U
53-70-3	Dibenzo(a,h)anthracene	300	U
191-24-2	Benzo(g,h,i)perylene	300	U
58-90-2	2,3,4,6-Tetrachlorophenol	300	U

1 Cannot be separated from Diphenylamine

1K - FORM I SV-TIC

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

E0297

Lab Name: KAP TECHNOLOGIES, INC. Contract: EPW11031

Lab Code: KAP Case No.: 41260 Mod. Ref No.: 2141.0 SDG No.: E0272

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: S-4018.09

Sample wt/vol: 30.10 (g/mL) G Lab File ID: D02741

Level: (LOW/MED) LOW Extraction: (Type) SOXH

% Moisture: 43 Decanted: (Y/N) N Date Received: 05/17/2011

Concentrated Extract Volume: 500 (uL) Date Extracted: 05/25/2011

Injection Volume: 1.0 (uL) Date Analyzed: 06/03/2011

GPC Cleanup: (Y/N) Y pH: 6.6 Dilution Factor: 1.0

CONCENTRATION UNITS:(ug/L or ug/Kg) UG/KG

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
01	002789-88-0	di-p-Tolylacetylene	15.69	1000	NJ
02		Unknown-01	18.14	940	J
03		Unknown-02	18.63	950	J
04					
05					
06					
07					
08					
09					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					
26					
27					
28					
29					
30					
	E966796[2]	Total Alkanes	N/A		

[2] EPA-designated Registry Number.

1D - FORM I SV-1

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

E0298

Lab Name: KAP TECHNOLOGIES, INC. Contract: EPW11031

Lab Code: KAP Case No.: 41260 Mod. Ref No.: 2141.0 SDG No.: E0272

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: S-4018.10

Sample wt/vol: 29.90 (g/mL) G Lab File ID: D02749

Level: (LOW/MED) LOW Extraction: (Type) SOXH

% Moisture: 42 Decanted: (Y/N) N Date Received: 05/17/2011

Concentrated Extract Volume: 500 (uL) Date Extracted: 05/25/2011

Injection Volume: 1.0 (uL) GPC Factor: 2.0 Date Analyzed: 06/04/2011

GPC Cleanup: (Y/N) Y pH: 6.6 Dilution Factor: 1.0

CAS No.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
100-52-7	Benzaldehyde	290	U
108-95-2	Phenol	290	U
111-44-4	Bis(2-chloroethyl)ether	290	U
95-57-8	2-Chlorophenol	290	U
95-48-7	2-Methylphenol	290	U
108-60-1	2,2'-Oxybis(1-chloropropane)	290	U
98-86-2	Acetophenone	290	U
106-44-5	4-Methylphenol	290	U
621-64-7	N-Nitroso-di-n-propylamine	290	U
67-72-1	Hexachloroethane	290	U
98-95-3	Nitrobenzene	290	U
78-59-1	Isophorone	290	U
88-75-5	2-Nitrophenol	290	U
105-67-9	2,4-Dimethylphenol	290	U
111-91-1	Bis(2-chloroethoxy)methane	290	U
120-83-2	2,4-Dichlorophenol	290	U
91-20-3	Naphthalene	290	U
106-47-8	4-Chloroaniline	290	U
87-68-3	Hexachlorobutadiene	290	U
105-60-2	Caprolactam	290	U
59-50-7	4-Chloro-3-methylphenol	290	U
91-57-6	2-Methylnaphthalene	290	U
77-47-4	Hexachlorocyclopentadiene	290	U
88-06-2	2,4,6-Trichlorophenol	290	U
95-95-4	2,4,5-Trichlorophenol	290	U
92-52-4	1,1'-Biphenyl	290	U
91-58-7	2-Chloronaphthalene	290	U
88-74-4	2-Nitroaniline	570	U
131-11-3	Dimethylphthalate	290	U
606-20-2	2,6-Dinitrotoluene	290	U
208-96-8	Acenaphthylene	290	U
99-09-2	3-Nitroaniline	570	U
83-32-9	Acenaphthene	290	U

1E - FORM I SV-2

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

E0298

Lab Name: KAP TECHNOLOGIES, INC. Contract: EPW11031

Lab Code: KAP Case No.: 41260 Mod. Ref No.: 2141.0 SDG No.: E0272

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: S-4018.10

Sample wt/vol: 29.90 (g/mL) G Lab File ID: D02749

Level: (LOW/MED) LOW Extraction: (Type) SOXH

% Moisture: 42 Decanted: (Y/N) N Date Received: 05/17/2011

Concentrated Extract Volume: 500 (uL) Date Extracted: 05/25/2011

Injection Volume: 1.0 (uL) GPC Factor: 2.0 Date Analyzed: 06/04/2011

GPC Cleanup: (Y/N) Y pH: 6.6 Dilution Factor: 1.0

CAS No.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
51-28-5	2,4-Dinitrophenol	570	U
100-02-7	4-Nitrophenol	570	U
132-64-9	Dibenzofuran	290	U
121-14-2	2,4-Dinitrotoluene	290	U
84-66-2	Diethylphthalate	290	U
86-73-7	Fluorene	290	U
7005-72-3	4-Chlorophenyl-phenylether	290	U
100-01-6	4-Nitroaniline	570	U
534-52-1	4,6-Dinitro-2-methylphenol	570	U
86-30-6	N-Nitrosodiphenylamine 1	290	U
95-94-3	1,2,4,5-Tetrachlorobenzene	290	U
101-55-3	4-Bromophenyl-phenylether	290	U
118-74-1	Hexachlorobenzene	290	U
1912-24-9	Atrazine	290	U
87-86-5	Pentachlorophenol	570	U
85-01-8	Phenanthrene	170	J
120-12-7	Anthracene	290	U
86-74-8	Carbazole	290	U
84-74-2	Di-n-butylphthalate	290	U
206-44-0	Fluoranthene	290	U
129-00-0	Pyrene	160	J
85-68-7	Butylbenzylphthalate	290	U
91-94-1	3,3'-Dichlorobenzidine	290	U
56-55-3	Benzo(a)anthracene	290	U
218-01-9	Chrysene	160	J
117-81-7	Bis(2-ethylhexyl)phthalate	220	J
117-84-0	Di-n-octylphthalate	290	U
205-99-2	Benzo(b)fluoranthene	290	U
207-08-9	Benzo(k)fluoranthene	290	U
50-32-8	Benzo(a)pyrene	290	U
193-39-5	Indeno(1,2,3-cd)pyrene	290	U
53-70-3	Dibenzo(a,h)anthracene	290	U
191-24-2	Benzo(g,h,i)perylene	290	U
58-90-2	2,3,4,6-Tetrachlorophenol	290	U

[1] Cannot be separated from Diphenylamine

1K - FORM I SV-TIC

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

E0298

Lab Name: KAP TECHNOLOGIES, INC. Contract: EPW11031

Lab Code: KAP Case No.: 41260 Mod. Ref No.: 2141.0 SDG No.: E0272

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: S-4018.10

Sample wt/vol: 29.90 (g/mL) G Lab File ID: D02749

Level: (LOW/MED) LOW Extraction: (Type) SOXH

% Moisture: 42 Decanted: (Y/N) N Date Received: 05/17/2011

Concentrated Extract Volume: 500 (uL) Date Extracted: 05/25/2011

Injection Volume: 1.0 (uL) Date Analyzed: 06/04/2011

GPC Cleanup: (Y/N) Y pH: 6.6 Dilution Factor: 1.0

CONCENTRATION UNITS:(ug/L or ug/Kg) UG/KG

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
01		Unknown-01	15.30	1100	J
02	001576-67-6	Phenanthrene, 3,6-dimethyl-	15.69	1000	NJ
03		Unknown-02	18.62	890	J
04		Unknown-03	18.75	800	J
05					
06					
07					
08					
09					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					
26					
27					
28					
29					
30					
	E966796[2]	Total Alkanes	N/A	810	J

[2] EPA-designated Registry Number.

1D - FORM I SV-1

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

E02A0

Lab Name: KAP TECHNOLOGIES, INC. Contract: EPW11031

Lab Code: KAP Case No.: 41260 Mod. Ref No.: 2141.0 SDG No.: E0272

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: S-4018.11

Sample wt/vol: 30.10 (g/mL) G Lab File ID: D02750

Level: (LOW/MED) LOW Extraction: (Type) SOXH

% Moisture: 48 Decanted: (Y/N) N Date Received: 05/17/2011

Concentrated Extract Volume: 500 (uL) Date Extracted: 05/25/2011

Injection Volume: 1.0 (uL) GPC Factor: 2.0 Date Analyzed: 06/04/2011

GPC Cleanup: (Y/N) Y pH: 6.4 Dilution Factor: 1.0

CAS No.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
100-52-7	Benzaldehyde	330	U
108-95-2	Phenol	330	U
111-44-4	Bis(2-chloroethyl)ether	330	U
95-57-8	2-Chlorophenol	330	U
95-48-7	2-Methylphenol	330	U
108-60-1	2,2'-Oxybis(1-chloropropane)	330	U
98-86-2	Acetophenone	330	U
106-44-5	4-Methylphenol	330	U
621-64-7	N-Nitroso-di-n-propylamine	330	U
67-72-1	Hexachloroethane	330	U
98-95-3	Nitrobenzene	330	U
78-59-1	Isophorone	330	U
88-75-5	2-Nitrophenol	330	U
105-67-9	2,4-Dimethylphenol	330	U
111-91-1	Bis(2-chloroethoxy)methane	330	U
120-83-2	2,4-Dichlorophenol	330	U
91-20-3	Naphthalene	330	U
106-47-8	4-Chloroaniline	330	U
87-68-3	Hexachlorobutadiene	330	U
105-60-2	Caprolactam	330	U
59-50-7	4-Chloro-3-methylphenol	330	U
91-57-6	2-Methylnaphthalene	330	U
77-47-4	Hexachlorocyclopentadiene	330	U
88-06-2	2,4,6-Trichlorophenol	330	U
95-95-4	2,4,5-Trichlorophenol	330	U
92-52-4	1,1'-Biphenyl	330	U
91-58-7	2-Chloronaphthalene	330	U
88-74-4	2-Nitroaniline	630	U
131-11-3	Dimethylphthalate	330	U
606-20-2	2,6-Dinitrotoluene	330	U
208-96-8	Acenaphthylene	330	U
99-09-2	3-Nitroaniline	630	U
83-32-9	Acenaphthene	330	U

1E - FORM I SV-2

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

E02A0

Lab Name: KAP TECHNOLOGIES, INC. Contract: EPW11031

Lab Code: KAP Case No.: 41260 Mod. Ref No.: 2141.0 SDG No.: E0272

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: S-4018.11

Sample wt/vol: 30.10 (g/mL) G Lab File ID: D02750

Level: (LOW/MED) LOW Extraction: (Type) SOXH

% Moisture: 48 Decanted: (Y/N) N Date Received: 05/17/2011

Concentrated Extract Volume: 500 (uL) Date Extracted: 05/25/2011

Injection Volume: 1.0 (uL) GPC Factor: 2.0 Date Analyzed: 06/04/2011

GPC Cleanup: (Y/N) Y pH: 6.4 Dilution Factor: 1.0

CAS No.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
51-28-5	2,4-Dinitrophenol	630	U
100-02-7	4-Nitrophenol	630	U
132-64-9	Dibenzofuran	330	U
121-14-2	2,4-Dinitrotoluene	330	U
84-66-2	Diethylphthalate	330	U
86-73-7	Fluorene	330	U
7005-72-3	4-Chlorophenyl-phenylether	330	U
100-01-6	4-Nitroaniline	630	U
534-52-1	4,6-Dinitro-2-methylphenol	630	U
86-30-6	N-Nitrosodiphenylamine 1	330	U
95-94-3	1,2,4,5-Tetrachlorobenzene	330	U
101-55-3	4-Bromophenyl-phenylether	330	U
118-74-1	Hexachlorobenzene	330	U
1912-24-9	Atrazine	330	U
87-86-5	Pentachlorophenol	630	U
85-01-8	Phenanthrene	330	U
120-12-7	Anthracene	330	U
86-74-8	Carbazole	330	U
84-74-2	Di-n-butylphthalate	330	U
206-44-0	Fluoranthene	330	U
129-00-0	Pyrene	330	U
85-68-7	Butylbenzylphthalate	330	U
91-94-1	3,3'-Dichlorobenzidine	330	U
56-55-3	Benzo(a)anthracene	330	U
218-01-9	Chrysene	330	U
117-81-7	Bis(2-ethylhexyl)phthalate	330	U
117-84-0	Di-n-octylphthalate	330	U
205-99-2	Benzo(b)fluoranthene	330	U
207-08-9	Benzo(k)fluoranthene	330	U
50-32-8	Benzo(a)pyrene	330	U
193-39-5	Indeno(1,2,3-cd)pyrene	330	U
53-70-3	Dibenzo(a,h)anthracene	330	U
191-24-2	Benzo(g,h,i)perylene	330	U
58-90-2	2,3,4,6-Tetrachlorophenol	330	U

1 Cannot be separated from Diphenylamine

1K - FORM I SV-TIC
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
E02A0

Lab Name: KAP TECHNOLOGIES, INC. Contract: EPW11031

Lab Code: KAP Case No.: 41260 Mod. Ref No.: 2141.0 SDG No.: E0272

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: S-4018.11

Sample wt/vol: 30.10 (g/mL) G Lab File ID: D02750

Level: (LOW/MED) LOW Extraction: (Type) SOXH

% Moisture: 48 Decanted: (Y/N) N Date Received: 05/17/2011

Concentrated Extract Volume: 500 (uL) Date Extracted: 05/25/2011

Injection Volume: 1.0 (uL) Date Analyzed: 06/04/2011

GPC Cleanup: (Y/N) Y pH: 6.4 Dilution Factor: 1.0

CONCENTRATION UNITS:(ug/L or ug/Kg) UG/KG

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
01		Unknown-01	17.52	480	J
02					
03					
04					
05					
06					
07					
08					
09					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					
26					
27					
28					
29					
30					
	E966796[2]	Total Alkanes	N/A		

[2] EPA-designated Registry Number.

ATTACHMENT C

DATA QUALIFIER DEFINITIONS

LABORATORY DATA QUALIFIER DEFITIONS

J - The analyte was positively identified and the associated numerical value is the approximate concentration of the analyte in the sample (due either to the quality of the data generated because certain quality control criteria were not met, or the concentration of the analyte was below the quantitation limit).

N – This flag indicates presumptive evidence of a compound and is only used for Tentatively Identified Compounds (TICs), where the identification is based on a mass spectral library search. This flag is used in combination with the J flag.

U - The analyte was not detected above the reporting limit. The reported result is the laboratory reporting limit.

Weston Solutions, Inc.
20 North Wacker Drive, Suite 1210
Chicago, IL 60606
(312) 424-3300 fax: (312) 424-3330
www.westonsolutions.com

August 12, 2011

Ms. Brenda Jones and Mr. Ajit Vaidya
Great Lakes National Program Office
United States Environmental Protection Agency, Region V
77 West Jackson Boulevard, Mail Code: G-17J
Chicago, Illinois 60604-3507

Re: Data Review of Polychlorinated Biphenyls (PCB) Analysis
For Sediment Samples Collected on May 11-12, 2011
CLP Case No. 41260, SDG No. E0272
Duck and Otter Creeks Confluence Investigation
Wood and Lucas Counties, Ohio
DCN: 1269-2B-AOVS

Dear Ms. Jones and Mr. Vaidya:

The United States Environmental Protection Agency (U.S. EPA) tasked Weston Solutions, Inc., (WESTON®) to perform data validation for the five percent of the sediment samples collected on May 10-12, 2011, for the Great Lakes National Program Office (GLNPO) Duck and Otter Creeks Confluence Investigation Site. This data review is for PCB analyses of eleven sediment samples that includes one field duplicate sample that were collected by WESTON under Sample Delivery Group (SDG) number E0272. The samples were validated in accordance with the "Quality Assurance Project Plan (QAPP), Duck and Otter Creeks Data Gaps Investigation" dated September 28, 2010, and QAPP Amendment 1 dated May 5, 2011, which includes using the U.S. EPA Contract Laboratory Program (CLP) National Functional Guidance for Organic and Inorganic Data Review. Table 1 provides a summary of the samples included in this review. All tables are presented at the end of this report.

The samples listed in Table 1 were analyzed under the U.S. EPA CLP by KAP Technologies, Inc. (KAP) located in The Woodlands, Texas, under case number 41260. There were four SDGs associated with this case number for PCB analyses. Because only five percent of data is to be validated, SDG number E0272 was selected for data validation.

Sediment samples were analyzed for PCBs using U.S. EPA CLP Statement of Work (SOW) SOM01.2. Table 2 provides a list of the PCBs that were analyzed. KAP did not provide a Staged Electronic Data Deliverable (SEDD) with the CLP analytical package. Therefore, the Automated Data Review (ADR) software was not utilized to assist in reviewing this data.

Attachment A to this report contains the individual Quality Assurance/Quality Control (QA/QC) Analysis Checklist for Sediment Chemistry Analysis for SDG E0272. Attachment B to this report contains a printed summary report of sample results with hand-written qualifiers that were applied during the data review. Attachment C to this report contains a list of the data qualifiers associated with the sample results. The QC limits utilized were those stated in the QAPP. If

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there was not a QC limit specified in the QAPP, then the method or laboratory-determined QC limits were used. Below is the data review summary.

SUMMARY OF PCB DATA REVIEW

The initial calibration, continuing calibration, method blank, surrogates, and laboratory control sample (LCS) were within the QC limits.

The relative percent differences (RPD) calculated for the field duplicate pair were elevated. The recoveries for the matrix spike (MS) and matrix spike sample (MSD) were outside QC limits. Holding times were exceeded for all samples associated with this SDG. These issues are discussed in further detail below under Minor Problems.

Below is a review of the minor problems associated with QC failures and a summary of the data quality indicators associated with the PCB analysis for the sediment samples associated with SDG E0272.

MINOR PROBLEMS

Minor problems with QC failures are noted below.

Field Duplicate Results. The field duplicates were collected adjacent to an investigative sample and are not of the same homogenized material. One field duplicate pair is associated with the sediment samples collected on May 11-12, 2011, and SDG E0272 (see Table 1 for which sample was designated as a field duplicate).

Because a QC limit for field duplicates was not stated in the QAPP, a default QC limit of 50 RPD was used to evaluate field duplicate results. Aroclors 1248, 1254, and 1260 were detected in the field duplicate pair. The RPDs were elevated and ranged from 71 to 81 percent. The elevated RPDs are most likely due to sample heterogeneity associated with PCBs. Table 3 summarizes the field duplicate results and RPDs.

MS and MSD Results. There is one MS and MSD associated with this SDG. The MS and MSD recoveries for Aroclor 1016 were both outside QC limits and detected high. Because Aroclor 1016 was not detected in the samples, no qualification was applied. The percent recoveries for Aroclor 1260 were within QC limits. The RPD between the MS and MSD for both Aroclors 1016 and 1260 were within QC limits.

Holding Times. The holding time limit for PCB analysis is 14 days from sample collection to extraction and 40 days from extraction to analysis. All samples in this SDG were extracted past the 14 day holding time limit. Specifically, this limit was exceeded by two to three days. The detected results were flagged "J" as estimated and the quantitation limits for non-detected results were flagged "UJ" as estimated due to holding time exceedance.

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Total PCB Result Calculation. In those instances where all detected PCB results were below the reporting limit, then the laboratory did not include the detected PCB results in the total Aroclor calculation. Instead the laboratory reported the result as non-detect at the quantitation limit. During data validation, these total Aroclor results were changed to include those Aroclors detected below the reporting limit. Additionally, these total Aroclor results were flagged "J" to indicate that they are considered estimated due to being detected below the reporting limit.

DATA QUALITY INDICATORS REVIEW

Many the data quality indicators (sensitivity, precision, accuracy, and completeness) were evaluated through the data validation procedures which are summarized above and discussed in detail in the Attachment.

Sensitivity. The QAPP-stated reporting limits were met by the laboratory (when adjusted for percent moisture). Sensitivity was adequate for the PCB analyses of sediment samples collected on May 11-12, 2011, that are associated with SDG E0272.

Precision. Field precision is determined by evaluating the RPDs for the field duplicate results. The RPDs were elevated indicating sample heterogeneity associated with the PCB results.

Laboratory precision was evaluated by reviewing the RPD values between the MS and MSD results. There was only one MS/MSD pair associated with this SDG for which RPDs could be evaluated. The RPDs for the Aroclor 1016 and 1260 (the PCBs spiked in the MS/MSD) were 2 and 7 percent, respectively. These RPDs are within the QAPP-stated QC limits. Laboratory precision was acceptable for the PCB analysis. Table 4 summarizes the laboratory precision results.

Accuracy/Bias. Accuracy is a measure of the agreement between an observed value and an accepted reference value. Laboratory accuracy was evaluated by reviewing the QC criteria for percent recovery for LCS and MS/MSD results. The LCS percent recoveries were within the QAPP QC limits. The MS/MSD percent recoveries were within QC limits for Aroclor 1260 but not for Aroclor 1016. Because Aroclor 1016 was not detected in the samples, data usability is not affected. Table 4 summarizes the accuracy estimates for the PCB analysis. The percent recoveries for the LCS are 112 and 121 percent for Aroclor 1016 and Aroclor 1260, respectively. The mean MS/MSD percent recoveries are 159 and 57 percent for Aroclor 1016 and Aroclor 1260, respectively. Laboratory accuracy was acceptable. The LCS Aroclor recoveries indicate a high bias associated with the PCB analysis.

Completeness. Completeness is a measure of the amount of valid data obtained compared to the amount of data that was planned to be collected under normal conditions. All samples results were received.

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In summary, the data are usable for comparison to the PCB screening criteria stated in the QAPP. Qualifications were added to the samples during the data review for holding time exceedances. Definitions for the laboratory qualifications and data validation qualifications are included in Attachment C.

If there are any questions or comments regarding this report, please do not hesitate to contact WESTON START at 847-918-4000.

Very truly yours,
Weston Solutions, Inc.

Lisa Graczyk
WESTON START Team

Alex Clark
WESTON START Project Manager

Attachments:
Tables
A- Checklists for PCB Analytical Data for Case # 41260, SDG # E0272
B- Analytical Data Summary Sheets with Qualifiers
C- Data Qualifier Definitions

cc: project file

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Wojdakowski (Kuester), Natalie

From: Graczyk, Lisa
Sent: Monday, August 15, 2011 12:39 PM
To: Balla, Tonya; Wojdakowski (Kuester), Natalie
Subject: D&O-CLP PCB Data Review Report
Attachments: PCB Summary Report-D&O-Case 41260-SDG E0272.doc; PCB Checklist-E0272.doc; Att B-PCB Summary Sheets.pdf

See attached.

Natalie, I qualified all results in this SDG because the samples were extracted outside holding time limits. I also changed the total Aroclor results to reflect those PCBs detected below the reporting limit. Because I didn't get an SEDD with the CLP data, you will need to manually pull qualifiers off of the summary sheets in Attachment B. Let me know if you have any questions.

Lisa

Lisa Graczyk
Dynamac Corporation
20 North Wacker Drive, Suite 1210
Chicago, IL 60606
(w) 312-424-3339
(c) 312-305-6745

TABLES

This document was prepared by Weston Solutions, Inc., expressly for U.S. EPA. It shall not be released or disclosed in whole or in part without the express, written permission of U.S. EPA.

TABLE 1
SAMPLES INCLUDED IN DATA REVIEW

Sample ID	Sample Location ID	Date Collected	Comment
E0272	DC-25-02	05/11/2011	
E0274	DC-25-03	05/11/2011	
E0283	DC-22-02	05/11/2011	
E0284	DC-22-03	05/11/2011	
E0291	DC-23-03	05/11/2011	
E0292	DC-23-04	05/11/2011	
E0294	DC-25-02-DP	05/11/2011	Field duplicate of DC-25-02 (E0272)
E0296	DC-47-02	05/12/2011	
E0297	DC-47-03	05/12/2011	
E0298	DC-47-04	05/12/2011	
E02A0	DC-48-02	05/12/2011	

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TABLE 2 PCB ANALYTES	
CAS #	**Analyte**
12674-11-2	Aroclor 1016
11104-28-2	Aroclor 1221
11141-16-5	Aroclor 1232
53469-21-9	Aroclor 1242
12672-29-6	Aroclor 1248
11097-69-1	Aroclor 1254
11096-82-5	Aroclor 1260
37324-23-5	Aroclor 1262
11100-14-4	Aroclor 1268

Notes:

CAS – Chemical Abstracts Service
PCB – Polychlorinated Biphenyl

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TABLE 3 FIELD DUPLICATE RESULTS			
	Sample: DC-25-02-DP		
Analyte	**Sample Result (µg/kg)**	**Duplicate Result (µg/kg)**	**RPD**
Aroclor 1016	<68	<70	NA
Aroclor 1221	<68	<70	NA
Aroclor 1232	<68	<70	NA
Aroclor 1242	<68	<70	NA
Aroclor 1248	520	220	81
Aroclor 1254	280	120	80
Aroclor 1260	120	57	71
Aroclor 1262	<68	<70	NA
Aroclor 1260	<68	<70	NA

Notes:
Highlighted values exceed 50 RPD.
µg/kg– Microgram per Kilogram
NA – Not Applicable
RPD – Relative Percent Difference

TABLE 4
QUANTITATIVE DATA ASSESSMENT

Analyte	Analytical Precision	Analytical Accuracy/Bias	
	MS/MSD RPD (%) (n=1)	LCS Recovery (%) (n=1)	MS/MSD Recovery (%) (n=2)
Aroclor 1016	2	112	159
Aroclor 1260	7	121	57

Notes:
LCS – Laboratory Control Sample
MS – Matrix Spike
MSD – Matrix Spike Duplicate
RPD – Relative Percent Difference

ATTACHMENT A

CHECKLIST FOR PCB ANALYTICAL DATA FOR CASE # 41260, SDG # E0272

PCBs
BY CLP SOW SOM01.2

CASE# 41260
SDG# E0272

QA/QC Analysis Checklist for Sediment Chemistry Analysis

GRANT/IAG NUMBER: Not Applicable
PROJECT NAME: Duck and Otter Creeks Confluence Investigation
REVIEWER: Lisa Graczyk, WESTON START
DATE: August 12, 2011

1. What sediment chemistry data has been collected (CHECK ALL THAT APPLY)?

Total Metals ____	PCBs __X___	pH _____	TOC _____
Dioxins/Furans _____	PAHs _____	Pesticides _____	DO _____
AVS _____	SEM Metals _____	Particle Size _____	Other _____

2. Were the target detection limits met for each parameter?

Yes X
No _____

When adjusted for percent moisture, the QAPP stated reporting limits were met by the laboratory.

3. Were the method blanks less than the established MDL for each parameter?

Yes X
No _____ (EXPLAIN)

The method blank contained no detections of target analytes.

4. Did the results of Field Replicate Analysis vary by less than the % RPD specified in the QAPP?

Yes	Not Applicable	
No		(EXPLAIN)

There are no field replicates associated with this SDG.

5. Did the results of the Field Duplicates Analysis vary by less than the % RPD specified in the QAPP?

Yes		
No	X	(EXPLAIN)

There is one field duplicate associated with this SDG (identified with a "DP" suffix in the station location designation). The field duplicate was collected adjacent to the associated investigative sample. The field duplicate results and investigative sample results were compared to a standard QC limit of 50 RPD or less. The RPDs were elevated and ranged from 71 to 81 percent for the three Aroclors that were detected. These elevated RPDs are most likely due to sample heterogeneity associated with PCBs in these sediment samples.

6. Did the surrogate spike/internal standards recoveries meet the limits set forth in the QAPP?

Yes	X	
No		(EXPLAIN)

7. Did the MS/MSD recoveries meet the limits set forth in the QAPP?

Yes		
No	X	(EXPLAIN)

In the MS and MSD, Aroclor 1016 was detected high, above the QC limit for percent recovery. The percent recoveries for Aroclor 1260 were within QC limits. Because Arolcor 1016 was not detected in the samples, no qualifications are warranted.

8. Did the RPD (%) of the MS/MSD sample set meet the limits set forth in the QAPP?

Yes	X	
No		(EXPLAIN)

9. Did the LCS recoveries meet the limits set forth in the QAPP?

Yes	X	
No		(EXPLAIN)

The LCS recoveries met the QC limits specified in the QAPP.

10. Did the calibration verification standards (ICVs and CCVs) meet the requirements set forth in the QAPP?

Yes	X	
No		(EXPLAIN)

11. Did the calibration blanks (ICBs and CCBs) meet the limits set forth in the QAPP?

Yes	Not Applicable	
No		(EXPLAIN)

12. Did the interference check samples meet the limits set forth in the QAPP?

Yes	Not Applicable	
No		(EXPLAIN)

Interference check samples are not applicable to PCB analyses.

13. Did the serial dilution samples meet the limits set forth in the QAPP?

Yes	Not Applicable	
No		(EXPLAIN)

Serial dilution is not applicable to PCB analyses.

14. Were any level of contaminants detected above the MDL for the trip blanks and storage blanks?

Yes	Not Applicable	
No		(EXPLAIN)

15. Did all required analyses take place within the required holding time protocols set forth in the QAPP?

Yes		
No	X	(EXPLAIN)

Samples were analyzed outside the holding time requirement of 14 days to extraction. Samples were extracted 2 to 3 days past this holding time requirement. Detected sample results were flagged "J" and the quantitation limits for non-detected results were flagged "UJ" as estimated.

16. Did the laboratory duplicates vary by less than the % RPD specified in the QAPP?

Yes	Not Applicable	
No		(EXPLAIN)

Laboratory duplicates were not analyzed with the samples.

17. Are measured dry-weight contaminant concentrations reported?

Yes	X	
No		(EXPLAIN)

Dry-weight concentrations are reported.

18. Please provide details for all of the "UNACCEPTABLE" marked above. Include details on the specific analytes affected by any QA/QC discrepancies, and recommendations regarding usability of data.

Any items with “UNACCEPTABLE” marked above are described immediately following the “UNACCEPTABLE” marking in the corresponding item above.

In addition, some results were detected below the laboratory reporting limit and were flagged “J” as estimated for this discrepancy. The data are acceptable for use as qualified.

PCB Checklist
Duck and Otter Creeks Confluence Investigation
KAP Technologies, Inc.
Laboratory SDG#: E0272

ATTACHMENT B

ANALYTICAL DATA SUMMARY SHEETS WITH QUALIFIERS

1H - FORM I ARO
AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
E0272

Lab Name: KAP TECHNOLOGIES, INC. Contract: EPW11031

Lab Code: KAP Case No.: 41260 Mod Ref No.: 2148.0 SDG No.: E0272

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: S-4018.01

Sample wt/vol: 30.30 (g/mL) G Lab File ID: P36632

% Moisture: 52 Decanted: (Y/N) N Date Received: 05/17/2011

Extraction: (Type) SOXH Date Extracted: 05/28/2011

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 06/05/2011

Injection Volume: 1.0 (uL) GPC Factor: _____ Dilution Fact 1.0

GPC Cleanup: (Y/N) N pH: 7.1 Sulfur Cleanup: (Y/N) N

Acid Cleanup: (Y/N) Y

CAS No.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
12674-11-2	Aroclor-1016	68	U UJ
11104-28-2	Aroclor-1221	68	U
11141-16-5	Aroclor-1232	68	U
53469-21-9	Aroclor-1242	68	U
12672-29-6	Aroclor-1248	520	J
11097-69-1	Aroclor-1254	280	P J
11096-82-5	Aroclor-1260	120	P J
37324-23-5	Aroclor-1262	68	U UJ
11100-14-4	Aroclor-1268	68	U UJ
111-11-1	Total Aroclor	920	J

ZH
8/12/11

1H - FORM I ARO
AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
E0274

Lab Name: KAP TECHNOLOGIES, INC. Contract: EPW11031

Lab Code: KAP Case No.: 41260 Mod Ref No.: 2148.0 SDG No.: E0272

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: S-4018.02

Sample wt/vol: 30.10 (g/mL) G Lab File ID: P36633

% Moisture: 37 Decanted: (Y/N) N Date Received: 05/17/2011

Extraction: (Type) SOXH Date Extracted: 05/28/2011

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 06/05/2011

Injection Volume: 1.0 (uL) GPC Factor: _____ Dilution Fact 1.0

GPC Cleanup: (Y/N) N pH: 6.9 Sulfur Cleanup: (Y/N) N

Acid Cleanup: (Y/N) Y

CAS No.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
12674-11-2	Aroclor-1016	52	UJ
11104-28-2	Aroclor-1221	52	U
11141-16-5	Aroclor-1232	52	U
53469-21-9	Aroclor-1242	52	U
12672-29-6	Aroclor-1248	89	J
11097-69-1	Aroclor-1254	99	PJ
11096-82-5	Aroclor-1260	52	UJ
37324-23-5	Aroclor-1262	52	UJ
11100-14-4	Aroclor-1268	52	UJ
111-11-1	Total Aroclor	188	J

ZH
8/12/11

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

E0283

Lab Name: KAP TECHNOLOGIES, INC. Contract: EPW11031

Lab Code: KAP Case No.: 41260 Mod Ref No.: 2148.0 SDG No.: E0272

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: S-4018.03

Sample wt/vol: 30.10 (g/mL) G Lab File ID: P36634

% Moisture: 45 Decanted: (Y/N) N Date Received: 05/17/2011

Extraction: (Type) SOXH Date Extracted: 05/28/2011

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 06/05/2011

Injection Volume: 1.0 (uL) GPC Factor: _____ Dilution Fact 1.0

GPC Cleanup: (Y/N) N pH: 6.9 Sulfur Cleanup: (Y/N) N

Acid Cleanup: (Y/N) Y

CAS No.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
12674-11-2	Aroclor-1016	60	~~U~~ UJ
11104-28-2	Aroclor-1221	60	~~U~~
11141-16-5	Aroclor-1232	60	~~U~~
53469-21-9	Aroclor-1242	60	~~U~~
12672-29-6	Aroclor-1248	60	~~U~~P
11097-69-1	Aroclor-1254	22	JP
11096-82-5	Aroclor-1260	60	~~U~~P J
37324-23-5	Aroclor-1262	60	~~U~~
11100-14-4	Aroclor-1268	60	~~U~~
111-11-1	Total Aroclor	22 J~~60~~	~~U~~

LH
8/12/11

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

E0284

Lab Name: KAP TECHNOLOGIES, INC. Contract: EPW11031

Lab Code: KAP Case No.: 41260 Mod Ref No.: 2148.0 SDG No.: E0272

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: S-4018.04

Sample wt/vol: 29.90 (g/mL) G Lab File ID: P36635

% Moisture: 48 Decanted: (Y/N) N Date Received: 05/17/2011

Extraction: (Type) SOXH Date Extracted: 05/28/2011

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 06/05/2011

Injection Volume: 1.0 (uL) GPC Factor: _____ Dilution Fact 1.0

GPC Cleanup: (Y/N) N pH: 7.0 Sulfur Cleanup: (Y/N) N

Acid Cleanup: (Y/N) Y

CAS No.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
12674-11-2	Aroclor-1016	64	~~U~~ UJ
11104-28-2	Aroclor-1221	64	~~U~~
11141-16-5	Aroclor-1232	64	~~U~~
53469-21-9	Aroclor-1242	64	~~U~~
12672-29-6	Aroclor-1248	64	~~U~~
11097-69-1	Aroclor-1254	23	JP
11096-82-5	Aroclor-1260	64	~~UP~~ UJ
37324-23-5	Aroclor-1262	64	~~U~~
11100-14-4	Aroclor-1268	64	~~U~~
111-11-1	Total Aroclor	23 J ~~64~~	~~U~~

LY

8/12/11

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

E0291

Lab Name: KAP TECHNOLOGIES, INC. Contract: EPW11031

Lab Code: KAP Case No.: 41260 Mod Ref No.: 2148.0 SDG No.: E0272

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: S-4018.05

Sample wt/vol: 30.10 (g/mL) G Lab File ID: P36636

% Moisture: 47 Decanted: (Y/N) N Date Received: 05/17/2011

Extraction: (Type) SOXH Date Extracted: 05/28/2011

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 06/05/2011

Injection Volume: 1.0 (uL) GPC Factor: _____ Dilution Fact 1.0

GPC Cleanup: (Y/N) N pH: 6.8 Sulfur Cleanup: (Y/N) N

Acid Cleanup: (Y/N) Y

CAS No.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
12674-11-2	Aroclor-1016	62	U J
11104-28-2	Aroclor-1221	62	U
11141-16-5	Aroclor-1232	62	U
53469-21-9	Aroclor-1242	62	U
12672-29-6	Aroclor-1248	72	P J
11097-69-1	Aroclor-1254	120	J
11096-82-5	Aroclor-1260	54	J J
37324-23-5	Aroclor-1262	62	U UJ
11100-14-4	Aroclor-1268	62	U UJ
111-11-1	Total Aroclor	246	J

LG 8/12/11

SOM01.2 (6/2007)

0869

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

E0292

Lab Name: KAP TECHNOLOGIES, INC. Contract: EPW11031

Lab Code: KAP Case No.: 41260 Mod Ref No.: 2148.0 SDG No.: E0272

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: S-4018.06

Sample wt/vol: 29.90 (g/mL) G Lab File ID: P36637

% Moisture: 42 Decanted: (Y/N) N Date Received: 05/17/2011

Extraction: (Type) SOXH Date Extracted: 05/28/2011

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 06/05/2011

Injection Volume: 1.0 (uL) GPC Factor: _____ Dilution Fact 1.0

GPC Cleanup: (Y/N) N pH: 6.9 Sulfur Cleanup: (Y/N) N

Acid Cleanup: (Y/N) Y

CAS No.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
12674-11-2	Aroclor-1016	57	U UJ
11104-28-2	Aroclor-1221	57	U
11141-16-5	Aroclor-1232	57	U
53469-21-9	Aroclor-1242	57	U
12672-29-6	Aroclor-1248	59	J
11097-69-1	Aroclor-1254	49	JP
11096-82-5	Aroclor-1260	23	JP
37324-23-5	Aroclor-1262	57	U UJ
11100-14-4	Aroclor-1268	57	U UJ
111-11-1	Total Aroclor	131	J

LY
8/12/11

SOM01.2 (6/2007)

0880

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

E0294

Lab Name: KAP TECHNOLOGIES, INC. Contract: EPW11031

Lab Code: KAP Case No.: 41260 Mod Ref No.: 2148.0 SDG No.: E0272

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: S-4018.07

Sample wt/vol: 30.10 (g/mL) G Lab File ID: P36644

% Moisture: 53 Decanted: (Y/N) N Date Received: 05/17/2011

Extraction: (Type) SOXH Date Extracted: 05/28/2011

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 06/06/2011

Injection Volume: 1.0 (uL) GPC Factor: _____ Dilution Fact 1.0

GPC Cleanup: (Y/N) N pH: 6.9 Sulfur Cleanup: (Y/N) N

Acid Cleanup: (Y/N) Y

CAS No.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
12674-11-2	Aroclor-1016	70	U UJ
11104-28-2	Aroclor-1221	70	U
11141-16-5	Aroclor-1232	70	U
53469-21-9	Aroclor-1242	70	U
12672-29-6	Aroclor-1248	220	P J
11097-69-1	Aroclor-1254	120	P J
11096-82-5	Aroclor-1260	57	JP
37324-23-5	Aroclor-1262	70	U UJ
11100-14-4	Aroclor-1268	70	U UJ
111-11-1	Total Aroclor	397	J

ZY
8/12/11

SOM01.2 (6/2007)

0895

1H - FORM I ARO
AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
E0296

Lab Name: KAP TECHNOLOGIES, INC. Contract: EPW11031

Lab Code: KAP Case No.: 41260 Mod Ref No.: 2148.0 SDG No.: E0272

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: S-4018.08

Sample wt/vol: 30.00 (g/mL) G Lab File ID: P36645

% Moisture: 49 Decanted: (Y/N) N Date Received: 05/17/2011

Extraction: (Type) SOXH Date Extracted: 05/28/2011

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 06/06/2011

Injection Volume: 1.0 (uL) GPC Factor: _____ Dilution Fact 1.0

GPC Cleanup: (Y/N) N pH: 6.5 Sulfur Cleanup: (Y/N) N

Acid Cleanup: (Y/N) Y

CAS No.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
12674-11-2	Aroclor-1016	65	U
11104-28-2	Aroclor-1221	65	U
11141-16-5	Aroclor-1232	65	U
53469-21-9	Aroclor-1242	65	U
12672-29-6	Aroclor-1248	65	U
11097-69-1	Aroclor-1254	65	U
11096-82-5	Aroclor-1260	65	U
37324-23-5	Aroclor-1262	65	U
11100-14-4	Aroclor-1268	65	U
111-11-1	Total Aroclor	65	U

UJ

8/12/11

1H - FORM I ARO
AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
E0297

Lab Name: KAP TECHNOLOGIES, INC. Contract: EPW11031

Lab Code: KAP Case No.: 41260 Mod Ref No.: 2148.0 SDG No.: E0272

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: S-4018.09

Sample wt/vol: 30.30 (g/mL) G Lab File ID: P36646

% Moisture: 43 Decanted: (Y/N) N Date Received: 05/17/2011

Extraction: (Type) SOXH Date Extracted: 05/28/2011

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 06/06/2011

Injection Volume: 1.0 (uL) GPC Factor: _____ Dilution Fact 1.0

GPC Cleanup: (Y/N) N pH: 6.6 Sulfur Cleanup: (Y/N) N

Acid Cleanup: (Y/N) Y

CAS No.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
12674-11-2	Aroclor-1016	57	~~U~~ UJ
11104-28-2	Aroclor-1221	57	~~U~~
11141-16-5	Aroclor-1232	57	~~U~~
53469-21-9	Aroclor-1242	57	~~U~~
12672-29-6	Aroclor-1248	57	~~U~~
11097-69-1	Aroclor-1254	29	JP
11096-82-5	Aroclor-1260	57	~~U~~P UJ
37324-23-5	Aroclor-1262	57	~~U~~
11100-14-4	Aroclor-1268	57	~~U~~
111-11-1	Total Aroclor	29J ~~57~~	~~U~~

ZY
8/12/11

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

E0298

Lab Name: KAP TECHNOLOGIES, INC. Contract: EPW11031

Lab Code: KAP Case No.: 41260 Mod Ref No.: 2148.0 SDG No.: E0272

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: S-4018.10

Sample wt/vol: 30.10 (g/mL) G Lab File ID: P36647

% Moisture: 42 Decanted: (Y/N) N Date Received: 05/17/2011

Extraction: (Type) SOXH Date Extracted: 05/28/2011

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 06/06/2011

Injection Volume: 1.0 (uL) GPC Factor: _____ Dilution Fact 1.0

GPC Cleanup: (Y/N) N pH: 6.6 Sulfur Cleanup: (Y/N) N

Acid Cleanup: (Y/N) Y

CAS No.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q	
12674-11-2	Aroclor-1016	57	UJ	UJ
11104-28-2	Aroclor-1221	57	U	↓
11141-16-5	Aroclor-1232	57	U	
53469-21-9	Aroclor-1242	57	U	
12672-29-6	Aroclor-1248	89	J	
11097-69-1	Aroclor-1254	78	PJ	
11096-82-5	Aroclor-1260	40	JP	
37324-23-5	Aroclor-1262	57	UJ	UJ
11100-14-4	Aroclor-1268	57	U	UJ
111-11-1	Total Aroclor	207	J	

LH
8/12/11

SOM01.2 (6/2007)

0916

1H - FORM I ARO

AROCLOR ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

E02A0

Lab Name: KAP TECHNOLOGIES, INC. Contract: EPW11031

Lab Code: KAP Case No.: 41260 Mod Ref No.: 2148.0 SDG No.: E0272

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: S-4018.11

Sample wt/vol: 30.20 (g/mL) G Lab File ID: P36648

% Moisture: 48 Decanted: (Y/N) N Date Received: 05/17/2011

Extraction: (Type) SOXH Date Extracted: 05/28/2011

Concentrated Extract Volume: 10000 (uL) Date Analyzed: 06/06/2011

Injection Volume: 1.0 (uL) GPC Factor: _____ Dilution Fact 1.0

GPC Cleanup: (Y/N) N pH: 6.4 Sulfur Cleanup: (Y/N) N

Acid Cleanup: (Y/N) Y

CAS No.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
12674-11-2	Aroclor-1016	63	~~U~~
11104-28-2	Aroclor-1221	63	~~U~~
11141-16-5	Aroclor-1232	63	~~U~~
53469-21-9	Aroclor-1242	63	~~U~~
12672-29-6	Aroclor-1248	63	~~U~~
11097-69-1	Aroclor-1254	63	~~U~~P
11096-82-5	Aroclor-1260	63	~~U~~
37324-23-5	Aroclor-1262	63	~~U~~
11100-14-4	Aroclor-1268	63	~~U~~
111-11-1	Total Aroclor	63	U

UJ

ZG

8/12/11

ATTACHMENT C

DATA QUALIFIER DEFINITIONS

LABORATORY DATA QUALIFIER DEFITIONS

J - The analyte was positively identified and the associated numerical value is the approximate concentration of the analyte in the sample (due either to the quality of the data generated because certain quality control criteria were not met, or the concentration of the analyte was below the quantitation limit).

P - There is greater than 25% difference for detected concentrations between the two GC columns. The lower of the two values is reported.

U - The analyte was not detected above the reporting limit. The reported result is the laboratory reporting limit.

DATA VALIDATION QUALIFIER DEFITIONS

J - The analyte was positively identified and the associated numerical value is the approximate concentration of the analyte in the sample (due either to the quality of the data generated because certain quality control criteria were not met, or the concentration of the analyte was below the quantitation limit).

UJ - The analyte was analyzed for, but was not detected. The reported quantitation limit is approximate and may be inaccurate or imprecise.

Weston Solutions, Inc.
20 North Wacker Drive, Suite 1210
Chicago, Il. 60606
(312) 424-3300 fax: (312) 424-3330
www.westonsolutions.com

August 11, 2011

Ms. Brenda Jones and Mr. Ajit Vaidya
Great Lakes National Program Office
United States Environmental Protection Agency, Region V
77 West Jackson Boulevard, Mail Code: G-17J
Chicago, Illinois 60604-3507

Re: Data Review of Polycyclic Aromatic Hydrocarbons (PAH) Analysis
For the Pore Water of Sediment Samples Collected from May 10-12, 2011
Duck and Otter Creeks Confluence Investigation
Wood and Lucas Counties, Ohio
DCN: 1269-2B-AOVS

Dear Ms. Jones and Mr. Vaidya:

The United States Environmental Protection Agency (U.S. EPA) tasked Weston Solutions, Inc., (WESTON®) to perform data validation for the pore water of sediment samples collected from May 10-12, 2011, for the Great Lakes National Program Office (GLNPO) Duck and Otter Creeks Confluence Investigation Site. This data review is for PAH analysis of pore water of 18 sediment samples that were collected by the WESTON Superfund Technical Assessment and Response Team (START). The samples were validated in accordance with the "Quality Assurance Project Plan (QAPP), Duck and Otter Creeks Data Gaps Investigation" dated September 28, 2010, and QAPP Amendment 1 dated May 5, 2011, which includes using the U.S. EPA Contract Laboratory Program National Functional Guidance for Organic and Inorganic Data Review. Table 1 provides a summary of the samples included in this review. All tables are presented at the end of this report.

The samples listed in Table 1 were analyzed by Energy and Environmental Research Center (EERC) of the University of North Dakota located in Grand Forks, North Dakota. Table 2 provides a list of the PAH analytes that were tested for.

The samples were analyzed for PAHs using methodology developed by Hawthorne et al., 2005, and ASTM D7363. EERC did not provide WESTON with a staged electronic data deliverable (SEDD) and therefore, the Automated Data Review (ADR) software was not used to assist in reviewing the data. Standard quality control (QC) samples are not applicable to the methodology used for these PAH analyses including laboratory control samples, matrix spike samples, and laboratory duplicates. Therefore, a Quality Assurance/Quality Control (QA/QC) Analysis Checklist for Sediment Chemistry Analysis was not utilized for data review. Attachment A to this report contains a summary report of results with qualifiers applied by the laboratory. Attachment B contains the data qualifier definitions. The QC limits utilized were those stated in the QAPP. If there was not a QC limit specified in the QAPP, then the method or laboratory-determined QC limits were used. Below is the data review summary.

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SUMMARY OF PAH DATA REVIEW

The blanks water samples were all non-detect for target analytes. Analyses were conducted within holding times.

The Field Sampling Plan indicated that field duplicates and field splits were not required for the PAH analyses of the pore water samples and these were not collected.

All sample results were analyzed in duplicate in accordance with the ASTM method. It is up to the data user to decide which result to use or whether to use an average of the results. In addition, the results were reported in nanogram per gram which for water samples is the same as microgram per liter because the density of water is 1 milligram per liter.

Below is a review of the data quality indicators.

DATA QUALITY INDICATORS REVIEW

Many the data quality indicators (sensitivity, precision, accuracy, and completeness) were evaluated through the data validation procedures which are summarized above and discussed in detail in the Attachment.

Sensitivity. The laboratory reporting limits as stated in the QAPP were not met for all PAH compounds. These reporting limits only slightly exceeded the QAPP-stated reporting limit and were below the applicable screening level stated in the QAPP for ambient water quality criteria. Therefore, data usability is not affected. The laboratory flagged some results with a "J" to indicate that the result was detected below the reporting limit and should be considered estimated. Sensitivity was adequate for the PAH analyses of the pore water of sediment samples collected from May 10-12, 2011.

Precision. Laboratory precision is typically determined by evaluating the RPD values for laboratory duplicates. Laboratory duplicates were not analyzed with the PAH analyses. However, EERC did analyze each sample in duplicate in accordance with the ASTM method. Although an RPD value was not calculated for each detected result, a review of the data indicates good correlation between the sample result duplicates. Laboratory precision is acceptable.

Accuracy/Bias. Accuracy is a measure of the agreement between an observed value and an accepted reference value. Laboratory accuracy was not evaluated because QC samples typically analyzed to assess accuracy are not applicable to the analytical method used for the PAH analyses.

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Completeness. Completeness is a measure of the amount of valid data obtained compared to the amount of data that was planned to be collected under normal conditions. All samples results were received.

In summary, the data are acceptable for use and some data qualifications were applied to the sample results by the laboratory for results detected below the reporting limit. The Data Summary Report in the Attachment indicates which sample results were qualified by the laboratory. Attachment B provides data qualifier definitions for those qualifiers applied by the laboratory.

If there are any questions or comments regarding this report, please do not hesitate to contact WESTON START at 312-424-3300.

Very truly yours,
Weston Solutions, Inc.

Lisa Graczyk
WESTON START Team

Alex Clark
WESTON START Project Manager

Attachments:
Tables
A - Data Summary Report for PAHs
B – Data Qualifier Definitions

cc: project file

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TABLES

This document was prepared by Weston Solutions, Inc., expressly for U.S. EPA. It shall not be released or disclosed in whole or in part without the express, written permission of U.S. EPA.

TABLE 1
SAMPLES INCLUDED IN DATA REVIEW

Sample ID	Lab ID	Date Collected	Comment
DC-20-01	91A-1	05/11/2011	
DC-21-01	92A-1	05/11/2011	
DC-22-01	93A-1	05/11/2011	
DC-23-01	94A-1	05/11/2011	
DC-24-01	95A-1	05/11/2011	
DC-25-01	96A-1	05/11/2011	
OC-34-01	97A-1	05/10/2011	
OC-35-01	98A-1	05/12/2011	
OC-36-01	99A-1	05/10/2011	
OC-38	100A-1	05/11/2011	
OC-40-01	101A-1	05/11/2011	
OC-41-01	102A-1	05/10/2011	
OC-42-01	103A-1	05/11/2011	
OC-44-01	104A-1	05/10/2011	
OC-45-01	105A-1	05/10/2011	
OC-46-01	106A-1	05/12/2011	
OC-47-01	107A-1	05/12/2011	
OC-48-01	108A-1	05/12/2011	

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TABLE 2 PAH ANALYTES	
CAS #	**Analyte**
91-20-3	naphthalene
91-57-6	2-methylnaphthalene
90-12-0	1-methylnaphthalene
---	C2 naphthalenes
---	C3 naphthalenes
---	C4 naphthalenes
208-96-8	acenaphthylene
83-32-9	acenaphthene
86-73-7	fluorene
---	C1 fluorenes
---	C2 fluorenes
---	C3 fluorenes
85-01-8	phenanthrene
120-12-7	anthracene
---	C1 phenanthrenes/anthracenes
---	C2 phenanthrenes/anthracenes
---	C3 phenanthrenes/anthracenes
---	C4 phenanthrenes/anthracenes
206-44-0	fluoranthene
129-00-0	pyrene
---	C1 fluoranthenes/pyrenes
56-55-3	benz[a]anthracene
218-01-9	chrysene
---	C1 chrysenes
---	C2 chrysenes
---	C3 chrysenes
	C4 chrysenes
205-99-2 and 207-08-9	benzo[b+k]fluoranthene
192-97-2	benzo[e]pyrene
50-32-8	benzo[a]pyrene
198-55-0	perylene
193-39-5	indeno[1,2,3-cd]pyrene
53-70-3	dibenz[ah]anthracene
191-24-2	benzo[ghi]perylene

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Notes:

--- - There is no CAS number for this compound.
CAS – Chemical Abstracts Service
PAH – Polycyclic Aromatic Hydrocarbon

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ATTACHMENT A

DATA SUMMARY REPORT FOR PAHs

Energy and Environmental Research Center, GC/MS Lab
University of North Dakota, Campus Box 9018
15 North 23rd Street, Grand Forks, ND 58202
701-777-5000

EERC ID	**91A-1**	**91A-2**			
Sample Collection Date					
EERC Sample Receipt Date	**5/13/2011**	**5/13/2011**			
EERC Run Date	**5/16/2011**	**5/16/2011**	**5/16/2011**		
EERC Run Number	**2618A03.D**	**2618A04.D**	**2618A02.D**		
			Fiber		
Sample Name	**DC20**	**DC20**	**Water Blank**		
Treatment	**Pore Water**	**Pore Water**	**Pore Water**	**Target detection limit ng/g**	**Actual (reporting) detection limit, ng/g**
Sample Weight, g	**1.50**	**1.50**	**1.50**		
Matrix	**Sediment**	**Sediment**			
Units	**ng/g**	**ng/g**	**ng/g**		
naphthalene	ND	ND	ND	5.7	0.1
2-methylnaphthalene	ND	ND	ND	2.4	0.05
1-methylnaphthalene	ND	ND	ND	2.4	0.05
C2 naphthalenes	ND	ND	ND	0.89	0.15
C3 naphthalenes	ND	ND	ND	0.33	0.05
C4 naphthalenes	ND	ND	ND	0.12	0.15
acenaphthylene	ND	ND	ND	9	0.2
acenaphthene	ND	ND	ND	1.6	0.1
fluorene	ND	ND	ND	1.2	0.04
C1 fluorenes	ND	ND	ND	0.41	0.02
C2 fluorenes	ND	ND	ND	0.16	0.05
C3 fluorenes	ND	ND	ND	0.06	0.06
phenanthrene	ND	ND	ND	0.56	0.1
anthracene	ND	ND	ND	0.61	0.05
C1 phenanthrenes/anthracenes	ND	ND	ND	0.22	0.02
C2 phenanthrenes/anthracenes	ND	ND	ND	0.09	0.05
C3 phenanthrenes/anthracenes	ND	ND	ND	0.04	0.04
C4 phenanthrenes/anthracenes	ND	ND	ND	0.02	0.02
fluoranthene	ND	ND	ND	0.21	0.01
pyrene	ND	ND	ND	0.3	0.01
C1 fluoranthenes/pyrenes	ND	ND	ND	0.14	0.01
benz[a]anthracene	ND	ND	ND	0.066	0.001
chrysene	ND	ND	ND	0.06	0.001
C1 chrysenes	ND	ND	ND	0.025	0.005
C2 chrysenes	ND	ND	ND	0.014	0.01
C3 chrysenes	ND	ND	ND	0.005	0.01
C4 chrysenes	ND	ND	ND	0.002	0.01
benzo[b+k]fluoranthene	ND	ND	ND	0.019	0.005
benzo[e]pyrene	ND	ND	ND	0.028	0.005
benzo[a]pyrene	ND	ND	ND	0.026	0.008
perylene	ND	ND	ND	0.026	0.004
indeno[1,2,3-cd]pyrene	ND	ND	ND	0.008	0.001
dibenz[ah]anthracene	ND	ND	ND	0.008	0.002
benzo[ghi]perylene	ND	ND	ND	0.013	0.001

Target detection limits are those required by ASTM D7363 (C2 chyrsenes and larger PAHs, not applicable).
Actual experimental detection limits (reporting limits) are determined based on the signal to noise requirements stated in D7363.
ND = not detected.

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EERC ID	**92A-1**		**92A-2**					
Sample Collection Date								
EERC Sample Receipt Date	**5/13/2011**		**5/13/2011**					
EERC Run Date	**5/16/2011**		**5/16/2011**		**5/16/2011**			
EERC Run Number	**2618A07.D**		**2618A08.D**		**2618A06.D**			
					Fiber			
Sample Name	**DC21**		**DC21**		**Water Blank**			
Treatment	**Pore Water**		**Pore Water**		**Pore Water**		**Target detection limit**	**Actual (reporting) detection limit, ng/g**
Sample Weight, g	**1.51**		**1.51**		**1.50**			
Matrix	**Sediment**		**Sediment**					
Units	**ng/g**		**ng/g**		**ng/g**		**ng/g**	
naphthalene	ND		ND		ND		5.7	0.1
2-methylnaphthalene	ND		ND		ND		2.4	0.05
1-methylnaphthalene	ND		ND		ND		2.4	0.05
C2 naphthalenes	ND		ND		ND		0.89	0.15
C3 naphthalenes	ND		ND		ND		0.33	0.05
C4 naphthalenes	ND		ND		ND		0.12	0.15
acenaphthylene	ND		ND		ND		9	0.2
acenaphthene	ND		ND		ND		1.6	0.1
fluorene	ND		ND		ND		1.2	0.04
C1 fluorenes	ND		ND		ND		0.41	0.02
C2 fluorenes	ND		ND		ND		0.16	0.05
C3 fluorenes	ND		ND		ND		0.06	0.06
phenanthrene	ND		ND		ND		0.56	0.1
anthracene	ND		ND		ND		0.61	0.05
C1 phenanthrenes/anthracenes	ND		ND		ND		0.22	0.02
C2 phenanthrenes/anthracenes	ND		ND		ND		0.09	0.05
C3 phenanthrenes/anthracenes	ND		ND		ND		0.04	0.04
C4 phenanthrenes/anthracenes	ND		ND		ND		0.02	0.02
fluoranthene	0.01	J	0.01	J	ND		0.21	0.01
pyrene	ND		ND		ND		0.3	0.01
C1 fluoranthenes/pyrenes	ND		ND		ND		0.14	0.01
benz[a]anthracene	0.001	J	0.001	J	ND		0.066	0.001
chrysene	ND		ND		ND		0.06	0.001
C1 chrysenes	ND		ND		ND		0.025	0.005
C2 chrysenes	ND		ND		ND		0.014	0.01
C3 chrysenes	ND		ND		ND		0.005	0.01
C4 chrysenes	ND		ND		ND		0.002	0.01
benzo[b+k]fluoranthene	ND		ND		ND		0.019	0.005
benzo[e]pyrene	ND		ND		ND		0.028	0.005
benzo[a]pyrene	ND		ND		ND		0.026	0.008
perylene	ND		ND		ND		0.026	0.004
indeno[1,2,3-cd]pyrene	ND		ND		ND		0.008	0.001
dibenz[ah]anthracene	ND		ND		ND		0.008	0.002
benzo[ghi]perylene	ND		ND		ND		0.013	0.001

Target detection limits are those required by ASTM D7363 (C2 chyrsenes and larger PAHs, not applicable).
Actual experimental detection limits (reporting limits) are determined based on the signal to noise requirements stated in D7363.
ND = not detected.

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EERC ID	**93A-1**		**93A-2**					
Sample Collection Date								
EERC Sample Receipt Date	**5/13/2011**		**5/13/2011**					
EERC Run Date	**5/16/2011**		**5/16/2011**		**5/16/2011**			
EERC Run Number	**2618A11.D**		**2618A12.D**		**2618A10.D**			
					Fiber			
Sample Name	**DC22**		**DC22**		**Water Blank**			
Treatment	**Pore Water**		**Pore Water**		**Pore Water**		**Target detection limit ng/g**	**Actual (reporting) detection limit, ng/g**
Sample Weight, g	**1.50**		**1.51**		**1.50**			
Matrix	**Sediment**		**Sediment**					
Units	**ng/g**		**ng/g**		**ng/g**			
naphthalene	ND		ND		ND		5.7	0.1
2-methylnaphthalene	ND		ND		ND		2.4	0.05
1-methylnaphthalene	ND		ND		ND		2.4	0.05
C2 naphthalenes	ND		ND		ND		0.89	0.15
C3 naphthalenes	ND		ND		ND		0.33	0.05
C4 naphthalenes	ND		ND		ND		0.12	0.15
acenaphthylene	ND		ND		ND		9	0.2
acenaphthene	ND		ND		ND		1.6	0.1
fluorene	ND		ND		ND		1.2	0.04
C1 fluorenes	ND		ND		ND		0.41	0.02
C2 fluorenes	ND		ND		ND		0.16	0.05
C3 fluorenes	ND		ND		ND		0.06	0.06
phenanthrene	ND		ND		ND		0.56	0.1
anthracene	ND		ND		ND		0.61	0.05
C1 phenanthrenes/anthracenes	ND		ND		ND		0.22	0.02
C2 phenanthrenes/anthracenes	ND		ND		ND		0.09	0.05
C3 phenanthrenes/anthracenes	ND		ND		ND		0.04	0.04
C4 phenanthrenes/anthracenes	ND		ND		ND		0.02	0.02
fluoranthene	0.01	J	0.01	J	ND		0.21	0.01
pyrene	ND		ND		ND		0.3	0.01
C1 fluoranthenes/pyrenes	ND		ND		ND		0.14	0.01
benz[a]anthracene	ND		ND		ND		0.066	0.001
chrysene	ND		ND		ND		0.06	0.001
C1 chrysenes	ND		ND		ND		0.025	0.005
C2 chrysenes	ND		ND		ND		0.014	0.01
C3 chrysenes	ND		ND		ND		0.005	0.01
C4 chrysenes	ND		ND		ND		0.002	0.01
benzo[b+k]fluoranthene	ND		ND		ND		0.019	0.005
benzo[e]pyrene	ND		ND		ND		0.028	0.005
benzo[a]pyrene	ND		ND		ND		0.026	0.008
perylene	ND		ND		ND		0.026	0.004
indeno[1,2,3-cd]pyrene	ND		ND		ND		0.008	0.001
dibenz[ah]anthracene	ND		ND		ND		0.008	0.002
benzo[ghi]perylene	ND		ND		ND		0.013	0.001

Target detection limits are those required by ASTM D7363 (C2 chyrsenes and larger PAHs, not applicable).
Actual experimental detection limits (reporting limits) are determined based on the signal to noise requirements stated in D7363.
ND = not detected.

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EERC ID	94A-1		94A-2					
Sample Collection Date								
EERC Sample Receipt Date	5/13/2011		5/13/2011					
EERC Run Date	5/16/2011		5/16/2011		5/16/2011			
EERC Run Number	2618A15.D		2618A16.D		2618A14.D			
					Fiber			
Sample Name	DC23		DC23		Water Blank			
Treatment	Pore Water		Pore Water		Pore Water		Target detection limit ng/g	Actual (reporting) detection limit, ng/g
Sample Weight, g	1.50		1.51		1.50			
Matrix	Sediment		Sediment					
Units	ng/g		ng/g		ng/g			
naphthalene	ND		0.12	J	ND		5.7	0.1
2-methylnaphthalene	ND		ND		ND		2.4	0.05
1-methylnaphthalene	ND		ND		ND		2.4	0.05
C2 naphthalenes	ND		ND		ND		0.89	0.15
C3 naphthalenes	ND		ND		ND		0.33	0.05
C4 naphthalenes	ND		ND		ND		0.12	0.15
acenaphthylene	ND		ND		ND		9	0.2
acenaphthene	ND		ND		ND		1.6	0.1
fluorene	ND		ND		ND		1.2	0.04
C1 fluorenes	ND		ND		ND		0.41	0.02
C2 fluorenes	ND		ND		ND		0.16	0.05
C3 fluorenes	ND		ND		ND		0.06	0.06
phenanthrene	ND		ND		ND		0.56	0.1
anthracene	ND		ND		ND		0.61	0.05
C1 phenanthrenes/anthracenes	ND		ND		ND		0.22	0.02
C2 phenanthrenes/anthracenes	ND		ND		ND		0.09	0.05
C3 phenanthrenes/anthracenes	ND		ND		ND		0.04	0.04
C4 phenanthrenes/anthracenes	ND		ND		ND		0.02	0.02
fluoranthene	0.01	J	0.11	J	ND		0.21	0.01
pyrene	0.01	J	0.17	J	ND		0.3	0.01
C1 fluoranthenes/pyrenes	ND		ND		ND		0.14	0.01
benz[a]anthracene	ND		0.002	J	ND		0.066	0.001
chrysene	ND		0.003	J	ND		0.06	0.001
C1 chrysenes	ND		ND		ND		0.025	0.005
C2 chrysenes	ND		ND		ND		0.014	0.01
C3 chrysenes	ND		ND		ND		0.005	0.01
C4 chrysenes	ND		ND		ND		0.002	0.01
benzo[b+k]fluoranthene	ND		ND		ND		0.019	0.005
benzo[e]pyrene	ND		ND		ND		0.028	0.005
benzo[a]pyrene	ND		ND		ND		0.026	0.008
perylene	ND		ND		ND		0.026	0.004
indeno[1,2,3-cd]pyrene	ND		ND		ND		0.008	0.001
dibenz[ah]anthracene	ND		ND		ND		0.008	0.002
benzo[ghi]perylene	ND		ND		ND		0.013	0.001

Target detection limits are those required by ASTM D7363 (C2 chyrsenes and larger PAHs, not applicable).
Actual experimental detection limits (reporting limits) are determined based on the signal to noise requirements stated in D7363.
ND = not detected.

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EERC ID	**95A-1**		**95A-2**					
Sample Collection Date								
EERC Sample Receipt Date	**5/13/2011**		**5/13/2011**					
EERC Run Date	**5/17/2011**		**5/17/2011**		**5/17/2011**			
EERC Run Number	**2619A03.D**		**2619A04.D**		**2619A02.D**			
					Fiber			
Sample Name	**DC24**		**DC24**		**Water Blank**			
Treatment	**Pore Water**		**Pore Water**		**Pore Water**		**Target detection limit ng/g**	**Actual (reporting) detection limit, ng/g**
Sample Weight, g	**1.50**		**1.51**		**1.50**			
Matrix	**Sediment**		**Sediment**					
Units	**ng/g**		**ng/g**		**ng/g**			
naphthalene	ND		ND		ND		5.7	0.1
2-methylnaphthalene	ND		ND		ND		2.4	0.05
1-methylnaphthalene	ND		ND		ND		2.4	0.05
C2 naphthalenes	0.25	J	0.23	J	ND		0.89	0.15
C3 naphthalenes	ND		ND		ND		0.33	0.05
C4 naphthalenes	ND		ND		ND		0.12	0.15
acenaphthylene	ND		ND		ND		9	0.2
acenaphthene	ND		ND		ND		1.6	0.1
fluorene	ND		ND		ND		1.2	0.04
C1 fluorenes	ND		ND		ND		0.41	0.02
C2 fluorenes	ND		ND		ND		0.16	0.05
C3 fluorenes	ND		ND		ND		0.06	0.06
phenanthrene	ND		ND		ND		0.56	0.1
anthracene	ND		ND		ND		0.61	0.05
C1 phenanthrenes/anthracenes	ND		ND		ND		0.22	0.02
C2 phenanthrenes/anthracenes	ND		ND		ND		0.09	0.05
C3 phenanthrenes/anthracenes	ND		ND		ND		0.04	0.04
C4 phenanthrenes/anthracenes	ND		ND		ND		0.02	0.02
fluoranthene	0.01	J	0.01	J	ND		0.21	0.01
pyrene	0.01	J	ND		ND		0.3	0.01
C1 fluoranthenes/pyrenes	ND		ND		ND		0.14	0.01
benz[a]anthracene	ND		ND		ND		0.066	0.001
chrysene	ND		ND		ND		0.06	0.001
C1 chrysenes	ND		ND		ND		0.025	0.005
C2 chrysenes	ND		ND		ND		0.014	0.01
C3 chrysenes	ND		ND		ND		0.005	0.01
C4 chrysenes	ND		ND		ND		0.002	0.01
benzo[b+k]fluoranthene	ND		ND		ND		0.019	0.005
benzo[e]pyrene	ND		ND		ND		0.028	0.005
benzo[a]pyrene	ND		ND		ND		0.026	0.008
perylene	ND		ND		ND		0.026	0.004
indeno[1,2,3-cd]pyrene	ND		ND		ND		0.008	0.001
dibenz[ah]anthracene	ND		ND		ND		0.008	0.002
benzo[ghi]perylene	ND		ND		ND		0.013	0.001

Target detection limits are those required by ASTM D7363 (C2 chyrsenes and larger PAHs, not applicable).
Actual experimental detection limits (reporting limits) are determined based on the signal to noise requirements stated in D7363.
ND = not detected.

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EERC ID	96A-1		96A-2				Target detection limit ng/g	Actual (reporting) detection limit, ng/g
Sample Collection Date								
EERC Sample Receipt Date	5/13/2011		5/13/2011					
EERC Run Date	5/17/2011		5/17/2011		5/17/2011			
EERC Run Number	2619A07.D		2619A08.D		2619A06.D			
					Fiber			
Sample Name	DC25		DC25		Water Blank			
Treatment	Pore Water		Pore Water		Pore Water			
Sample Weight, g	1.50		1.51		1.50			
Matrix	Sediment		Sediment					
Units	ng/g		ng/g		ng/g			
naphthalene	ND		ND		ND		5.7	0.1
2-methylnaphthalene	ND		ND		ND		2.4	0.05
1-methylnaphthalene	ND		ND		ND		2.4	0.05
C2 naphthalenes	0.64	J	0.68	J	ND		0.89	0.15
C3 naphthalenes	3.67	J	3.87	J	ND		0.33	0.05
C4 naphthalenes	4.04	J	4.44	J	ND		0.12	0.15
acenaphthylene	ND		ND		ND		9	0.2
acenaphthene	ND		ND		ND		1.6	0.1
fluorene	ND		ND		ND		1.2	0.04
C1 fluorenes	0.12	J	0.13	J	ND		0.41	0.02
C2 fluorenes	0.21	J	0.21	J	ND		0.16	0.05
C3 fluorenes	ND		ND		ND		0.06	0.06
phenanthrene	ND		ND		ND		0.56	0.1
anthracene	ND		ND		ND		0.61	0.05
C1 phenanthrenes/anthracenes	0.14	J	0.12	J	ND		0.22	0.02
C2 phenanthrenes/anthracenes	ND		ND		ND		0.09	0.05
C3 phenanthrenes/anthracenes	ND		ND		ND		0.04	0.04
C4 phenanthrenes/anthracenes	ND		ND		ND		0.02	0.02
fluoranthene	0.02	J	0.02	J	ND		0.21	0.01
pyrene	0.02	J	0.02	J	ND		0.3	0.01
C1 fluoranthenes/pyrenes	ND		ND		ND		0.14	0.01
benz[a]anthracene	ND		ND		ND		0.066	0.001
chrysene	ND		ND		ND		0.06	0.001
C1 chrysenes	ND		ND		ND		0.025	0.005
C2 chrysenes	ND		ND		ND		0.014	0.01
C3 chrysenes	ND		ND		ND		0.005	0.01
C4 chrysenes	ND		ND		ND		0.002	0.01
benzo[b+k]fluoranthene	ND		ND		ND		0.019	0.005
benzo[e]pyrene	ND		ND		ND		0.028	0.005
benzo[a]pyrene	ND		ND		ND		0.026	0.008
perylene	ND		ND		ND		0.026	0.004
indeno[1,2,3-cd]pyrene	ND		ND		ND		0.008	0.001
dibenz[ah]anthracene	ND		ND		ND		0.008	0.002
benzo[ghi]perylene	ND		ND		ND		0.013	0.001

Target detection limits are those required by ASTM D7363 (C2 chyrsenes and larger PAHs, not applicable).
Actual experimental detection limits (reporting limits) are determined based on the signal to noise requirements stated in D7363.
ND = not detected.

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EERC ID	**97A-1**		**97A-2**					
Sample Collection Date								
EERC Sample Receipt Date	**5/13/2011**		**5/13/2011**					
EERC Run Date	**5/17/2011**		**5/17/2011**		**5/17/2011**			
EERC Run Number	**2619A11.D**		**2619A12.D**		**2619A10.D**			
					Fiber			
Sample Name	**OC34**		**OC34**		**Water Blank**			
Treatment	**Pore Water**		**Pore Water**		**Pore Water**		**Target detection limit ng/g**	**Actual (reporting) detection limit, ng/g**
Sample Weight, g	**1.50**		**1.50**		**1.50**			
Matrix	**Sediment**		**Sediment**					
Units	**ng/g**		**ng/g**		**ng/g**			
naphthalene	ND		ND		ND		5.7	0.1
2-methylnaphthalene	ND		ND		ND		2.4	0.05
1-methylnaphthalene	ND		ND		ND		2.4	0.05
C2 naphthalenes	ND		ND		ND		0.89	0.15
C3 naphthalenes	ND		ND		ND		0.33	0.05
C4 naphthalenes	ND		ND		ND		0.12	0.15
acenaphthylene	ND		ND		ND		9	0.2
acenaphthene	ND		ND		ND		1.6	0.1
fluorene	ND		ND		ND		1.2	0.04
C1 fluorenes	ND		ND		ND		0.41	0.02
C2 fluorenes	ND		ND		ND		0.16	0.05
C3 fluorenes	ND		ND		ND		0.06	0.06
phenanthrene	ND		ND		ND		0.56	0.1
anthracene	ND		ND		ND		0.61	0.05
C1 phenanthrenes/anthracenes	ND		ND		ND		0.22	0.02
C2 phenanthrenes/anthracenes	ND		ND		ND		0.09	0.05
C3 phenanthrenes/anthracenes	ND		ND		ND		0.04	0.04
C4 phenanthrenes/anthracenes	ND		ND		ND		0.02	0.02
fluoranthene	0.02	J	0.01	J	ND		0.21	0.01
pyrene	0.02	J	0.02	J	ND		0.3	0.01
C1 fluoranthenes/pyrenes	ND		ND		ND		0.14	0.01
benz[a]anthracene	ND		ND		ND		0.066	0.001
chrysene	ND		ND		ND		0.06	0.001
C1 chrysenes	ND		ND		ND		0.025	0.005
C2 chrysenes	ND		ND		ND		0.014	0.01
C3 chrysenes	ND		ND		ND		0.005	0.01
C4 chrysenes	ND		ND		ND		0.002	0.01
benzo[b+k]fluoranthene	ND		ND		ND		0.019	0.005
benzo[e]pyrene	ND		ND		ND		0.028	0.005
benzo[a]pyrene	ND		ND		ND		0.026	0.008
perylene	ND		ND		ND		0.026	0.004
indeno[1,2,3-cd]pyrene	ND		ND		ND		0.008	0.001
dibenz[ah]anthracene	ND		ND		ND		0.008	0.002
benzo[ghi]perylene	ND		ND		ND		0.013	0.001

Target detection limits are those required by ASTM D7363 (C2 chyrsenes and larger PAHs, not applicable).
Actual experimental detection limits (reporting limits) are determined based on the signal to noise requirements stated in D7363.
ND = not detected.

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EERC ID	**98A-1**		**98A-2**					
Sample Collection Date								
EERC Sample Receipt Date	**5/13/2011**		**5/13/2011**					
EERC Run Date	**5/17/2011**		**5/17/2011**		**5/17/2011**			
EERC Run Number	**2619A15.D**		**2619A16.D**		**2619A14.D**			
					Fiber			
Sample Name	**OC35**		**OC35**		**Water Blank**			
Treatment	**Pore Water**		**Pore Water**		**Pore Water**		**Target detection limit ng/g**	**Actual (reporting) detection limit, ng/g**
Sample Weight, g	**1.51**		**1.50**		**1.50**			
Matrix	**Sediment**		**Sediment**					
Units	**ng/g**		**ng/g**		**ng/g**			
naphthalene	ND		ND		ND		5.7	0.1
2-methylnaphthalene	ND		ND		ND		2.4	0.05
1-methylnaphthalene	ND		ND		ND		2.4	0.05
C2 naphthalenes	0.95	J	0.82	J	ND		0.89	0.15
C3 naphthalenes	3.82	J	3.65	J	ND		0.33	0.05
C4 naphthalenes	2.90	J	2.90	J	ND		0.12	0.15
acenaphthylene	ND		ND		ND		9	0.2
acenaphthene	0.15	J	0.11	J	ND		1.6	0.1
fluorene	0.09	J	0.08	J	ND		1.2	0.04
C1 fluorenes	0.15	J	0.14	J	ND		0.41	0.02
C2 fluorenes	0.27	J	0.29	J	ND		0.16	0.05
C3 fluorenes	ND		ND		ND		0.06	0.06
phenanthrene	ND		ND		ND		0.56	0.1
anthracene	ND		ND		ND		0.61	0.05
C1 phenanthrenes/anthracenes	0.18	J	0.19	J	ND		0.22	0.02
C2 phenanthrenes/anthracenes	0.52	J	0.50	J	ND		0.09	0.05
C3 phenanthrenes/anthracenes	0.27	J	0.25	J	ND		0.04	0.04
C4 phenanthrenes/anthracenes	ND		ND		ND		0.02	0.02
fluoranthene	0.07	J	0.07	J	ND		0.21	0.01
pyrene	0.16	J	0.16	J	ND		0.3	0.01
C1 fluoranthenes/pyrenes	0.14	J	0.13	J	ND		0.14	0.01
benz[a]anthracene	0.001	J	0.001	J	ND		0.066	0.001
chrysene	0.01	J	0.01	J	ND		0.06	0.001
C1 chrysenes	ND		ND		ND		0.025	0.005
C2 chrysenes	ND		ND		ND		0.014	0.01
C3 chrysenes	ND		ND		ND		0.005	0.01
C4 chrysenes	ND		ND		ND		0.002	0.01
benzo[b+k]fluoranthene	ND		ND		ND		0.019	0.005
benzo[e]pyrene	ND		ND		ND		0.028	0.005
benzo[a]pyrene	ND		ND		ND		0.026	0.008
perylene	ND		ND		ND		0.026	0.004
indeno[1,2,3-cd]pyrene	ND		ND		ND		0.008	0.001
dibenz[ah]anthracene	ND		ND		ND		0.008	0.002
benzo[ghi]perylene	ND		ND		ND		0.013	0.001

Target detection limits are those required by ASTM D7363 (C2 chyrsenes and larger PAHs, not applicable).
Actual experimental detection limits (reporting limits) are determined based on the signal to noise requirements stated in D7363.
ND = not detected.

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EERC ID	**99A-1**		**99A-2**					
Sample Collection Date								
EERC Sample Receipt Date	**5/13/2011**		**5/13/2011**					
EERC Run Date	**5/18/2011**		**5/18/2011**		**5/18/2011**			
EERC Run Number	**2620A03.D**		**2620A04.D**		**2620A02.D**			
					Fiber			
Sample Name	**OC36**		**OC36**		**Water Blank**			
Treatment	**Pore Water**		**Pore Water**		**Pore Water**		**Target detection limit ng/g**	**Actual (reporting) detection limit, ng/g**
Sample Weight, g	**1.50**		**1.51**		**1.50**			
Matrix	**Sediment**		**Sediment**					
Units	**ng/g**		**ng/g**		**ng/g**			
naphthalene	ND		0.26	J	ND		5.7	0.1
2-methylnaphthalene	ND		0.08	J	ND		2.4	0.05
1-methylnaphthalene	ND		0.08	J	ND		2.4	0.05
C2 naphthalenes	0.31	J	0.25	J	ND		0.89	0.15
C3 naphthalenes	0.77	J	0.78	J	ND		0.33	0.05
C4 naphthalenes	0.61	J	0.56	J	ND		0.12	0.15
acenaphthylene	ND		ND		ND		9	0.2
acenaphthene	ND		ND		ND		1.6	0.1
fluorene	ND		ND		ND		1.2	0.04
C1 fluorenes	0.03	J	0.03	J	ND		0.41	0.02
C2 fluorenes	0.11	J	0.09	J	ND		0.16	0.05
C3 fluorenes	ND		ND		ND		0.06	0.06
phenanthrene	ND		ND		ND		0.56	0.1
anthracene	ND		ND		ND		0.61	0.05
C1 phenanthrenes/anthracenes	0.07	J	0.09	J	ND		0.22	0.02
C2 phenanthrenes/anthracenes	0.17	J	0.16	J	ND		0.09	0.05
C3 phenanthrenes/anthracenes	ND		ND		ND		0.04	0.04
C4 phenanthrenes/anthracenes	ND		ND		ND		0.02	0.02
fluoranthene	0.02	J	0.02	J	ND		0.21	0.01
pyrene	0.04	J	0.04	J	ND		0.3	0.01
C1 fluoranthenes/pyrenes	0.03	J	0.02	J	ND		0.14	0.01
benz[a]anthracene	0.001	J	ND		ND		0.066	0.001
chrysene	0.001	J	0.001	J	ND		0.06	0.001
C1 chrysenes	ND		ND		ND		0.025	0.005
C2 chrysenes	ND		ND		ND		0.014	0.01
C3 chrysenes	ND		ND		ND		0.005	0.01
C4 chrysenes	ND		ND		ND		0.002	0.01
benzo[b+k]fluoranthene	ND		ND		ND		0.019	0.005
benzo[e]pyrene	ND		ND		ND		0.028	0.005
benzo[a]pyrene	ND		ND		ND		0.026	0.008
perylene	ND		ND		ND		0.026	0.004
indeno[1,2,3-cd]pyrene	ND		ND		ND		0.008	0.001
dibenz[ah]anthracene	ND		ND		ND		0.008	0.002
benzo[ghi]perylene	ND		ND		ND		0.013	0.001

Target detection limits are those required by ASTM D7363 (C2 chyrsenes and larger PAHs, not applicable).
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ND = not detected.

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EERC ID	100A-1		100A-2				Target detection limit ng/g	Actual (reporting) detection limit, ng/g
Sample Collection Date								
EERC Sample Receipt Date	5/13/2011		5/13/2011					
EERC Run Date	5/18/2011		5/18/2011		5/18/2011			
EERC Run Number	2620A07.D		2620A08.D		2620A06.D			
					Fiber			
Sample Name	OC38		OC38		Water Blank			
Treatment	Pore Water		Pore Water		Pore Water			
Sample Weight, g	1.51		1.51		1.50			
Matrix	Sediment		Sediment					
Units	ng/g		ng/g		ng/g			
naphthalene	0.12	J	ND		ND		5.7	0.1
2-methylnaphthalene	ND		ND		ND		2.4	0.05
1-methylnaphthalene	ND		ND		ND		2.4	0.05
C2 naphthalenes	0.20	J	0.37	J	ND		0.89	0.15
C3 naphthalenes	ND		ND		ND		0.33	0.05
C4 naphthalenes	ND		ND		ND		0.12	0.15
acenaphthylene	ND		ND		ND		9	0.2
acenaphthene	ND		ND		ND		1.6	0.1
fluorene	ND		ND		ND		1.2	0.04
C1 fluorenes	ND		ND		ND		0.41	0.02
C2 fluorenes	ND		ND		ND		0.16	0.05
C3 fluorenes	ND		ND		ND		0.06	0.06
phenanthrene	ND		ND		ND		0.56	0.1
anthracene	ND		ND		ND		0.61	0.05
C1 phenanthrenes/anthracenes	ND		ND		ND		0.22	0.02
C2 phenanthrenes/anthracenes	ND		ND		ND		0.09	0.05
C3 phenanthrenes/anthracenes	ND		ND		ND		0.04	0.04
C4 phenanthrenes/anthracenes	ND		ND		ND		0.02	0.02
fluoranthene	ND		ND		ND		0.21	0.01
pyrene	ND		ND		ND		0.3	0.01
C1 fluoranthenes/pyrenes	ND		ND		ND		0.14	0.01
benz[a]anthracene	ND		ND		ND		0.066	0.001
chrysene	ND		ND		ND		0.06	0.001
C1 chrysenes	ND		ND		ND		0.025	0.005
C2 chrysenes	ND		ND		ND		0.014	0.01
C3 chrysenes	ND		ND		ND		0.005	0.01
C4 chrysenes	ND		ND		ND		0.002	0.01
benzo[b+k]fluoranthene	ND		ND		ND		0.019	0.005
benzo[e]pyrene	ND		ND		ND		0.028	0.005
benzo[a]pyrene	ND		ND		ND		0.026	0.008
perylene	ND		ND		ND		0.026	0.004
indeno[1,2,3-cd]pyrene	ND		ND		ND		0.008	0.001
dibenz[ah]anthracene	ND		ND		ND		0.008	0.002
benzo[ghi]perylene	ND		ND		ND		0.013	0.001

Target detection limits are those required by ASTM D7363 (C2 chyrsenes and larger PAHs, not applicable).
Actual experimental detection limits (reporting limits) are determined based on the signal to noise requirements stated in D7363.
ND = not detected.

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EERC ID	**101A-1**		**101A-2**					
Sample Collection Date								
EERC Sample Receipt Date	**5/13/2011**		**5/13/2011**					
EERC Run Date	**5/18/2011**		**5/18/2011**		**5/18/2011**			
EERC Run Number	**2620A11.D**		**2620A12.D**		**2620A10.D**			
					Fiber			
Sample Name	**OC40**		**OC40**		**Water Blank**			
Treatment	**Pore Water**		**Pore Water**		**Pore Water**		**Target detection limit ng/g**	**Actual (reporting) detection limit, ng/g**
Sample Weight, g	**1.50**		**1.51**		**1.50**			
Matrix	**Sediment**		**Sediment**					
Units	**ng/g**		**ng/g**		**ng/g**			
naphthalene	ND		ND		ND		5.7	0.1
2-methylnaphthalene	ND		ND		ND		2.4	0.05
1-methylnaphthalene	ND		ND		ND		2.4	0.05
C2 naphthalenes	ND		ND		ND		0.89	0.15
C3 naphthalenes	ND		ND		ND		0.33	0.05
C4 naphthalenes	ND		ND		ND		0.12	0.15
acenaphthylene	ND		ND		ND		9	0.2
acenaphthene	ND		ND		ND		1.6	0.1
fluorene	ND		ND		ND		1.2	0.04
C1 fluorenes	ND		ND		ND		0.41	0.02
C2 fluorenes	ND		ND		ND		0.16	0.05
C3 fluorenes	ND		ND		ND		0.06	0.06
phenanthrene	ND		ND		ND		0.56	0.1
anthracene	ND		ND		ND		0.61	0.05
C1 phenanthrenes/anthracenes	ND		ND		ND		0.22	0.02
C2 phenanthrenes/anthracenes	ND		ND		ND		0.09	0.05
C3 phenanthrenes/anthracenes	ND		ND		ND		0.04	0.04
C4 phenanthrenes/anthracenes	ND		ND		ND		0.02	0.02
fluoranthene	0.01	J	0.01	J	ND		0.21	0.01
pyrene	0.02	J	0.02	J	ND		0.3	0.01
C1 fluoranthenes/pyrenes	ND		ND		ND		0.14	0.01
benz[a]anthracene	ND		ND		ND		0.066	0.001
chrysene	ND		ND		ND		0.06	0.001
C1 chrysenes	ND		ND		ND		0.025	0.005
C2 chrysenes	ND		ND		ND		0.014	0.01
C3 chrysenes	ND		ND		ND		0.005	0.01
C4 chrysenes	ND		ND		ND		0.002	0.01
benzo[b+k]fluoranthene	ND		ND		ND		0.019	0.005
benzo[e]pyrene	ND		ND		ND		0.028	0.005
benzo[a]pyrene	ND		ND		ND		0.026	0.008
perylene	ND		ND		ND		0.026	0.004
indeno[1,2,3-cd]pyrene	ND		ND		ND		0.008	0.001
dibenz[ah]anthracene	ND		ND		ND		0.008	0.002
benzo[ghi]perylene	ND		ND		ND		0.013	0.001

Target detection limits are those required by ASTM D7363 (C2 chyrsenes and larger PAHs, not applicable).
Actual experimental detection limits (reporting limits) are determined based on the signal to noise requirements stated in D7363.
ND = not detected.

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EERC ID	102A-1		102A-2				Target detection limit ng/g	Actual (reporting) detection limit, ng/g
Sample Collection Date								
EERC Sample Receipt Date	5/13/2011		5/13/2011					
EERC Run Date	5/18/2011		5/18/2011		5/18/2011			
EERC Run Number	2620A15.D		2620A16.D		2620A14.D			
					Fiber			
Sample Name	OC41		OC41		Water Blank			
Treatment	Pore Water		Pore Water		Pore Water			
Sample Weight, g	1.51		1.50		1.50			
Matrix	Sediment		Sediment					
Units	ng/g		ng/g		ng/g			
naphthalene	0.17	J	0.12	J	ND		5.7	0.1
2-methylnaphthalene	ND		ND		ND		2.4	0.05
1-methylnaphthalene	ND		ND		ND		2.4	0.05
C2 naphthalenes	0.48	J	0.38	J	ND		0.89	0.15
C3 naphthalenes	ND		ND		ND		0.33	0.05
C4 naphthalenes	ND		ND		ND		0.12	0.15
acenaphthylene	ND		ND		ND		9	0.2
acenaphthene	ND		ND		ND		1.6	0.1
fluorene	ND		ND		ND		1.2	0.04
C1 fluorenes	ND		ND		ND		0.41	0.02
C2 fluorenes	ND		ND		ND		0.16	0.05
C3 fluorenes	ND		ND		ND		0.06	0.06
phenanthrene	ND		ND		ND		0.56	0.1
anthracene	ND		ND		ND		0.61	0.05
C1 phenanthrenes/anthracenes	ND		ND		ND		0.22	0.02
C2 phenanthrenes/anthracenes	ND		ND		ND		0.09	0.05
C3 phenanthrenes/anthracenes	ND		ND		ND		0.04	0.04
C4 phenanthrenes/anthracenes	ND		ND		ND		0.02	0.02
fluoranthene	0.01	J	0.01	J	ND		0.21	0.01
pyrene	0.02	J	0.02	J	ND		0.3	0.01
C1 fluoranthenes/pyrenes	0.02	J	0.02	J	ND		0.14	0.01
benz[a]anthracene	ND		ND		ND		0.066	0.001
chrysene	0.001	J	0.001	J	ND		0.06	0.001
C1 chrysenes	ND		ND		ND		0.025	0.005
C2 chrysenes	ND		ND		ND		0.014	0.01
C3 chrysenes	ND		ND		ND		0.005	0.01
C4 chrysenes	ND		ND		ND		0.002	0.01
benzo[b+k]fluoranthene	ND		ND		ND		0.019	0.005
benzo[e]pyrene	ND		ND		ND		0.028	0.005
benzo[a]pyrene	ND		ND		ND		0.026	0.008
perylene	ND		ND		ND		0.026	0.004
indeno[1,2,3-cd]pyrene	ND		ND		ND		0.008	0.001
dibenz[ah]anthracene	ND		ND		ND		0.008	0.002
benzo[ghi]perylene	ND		ND		ND		0.013	0.001

Target detection limits are those required by ASTM D7363 (C2 chyrsenes and larger PAHs, not applicable).
Actual experimental detection limits (reporting limits) are determined based on the signal to noise requirements stated in D7363.
ND = not detected.

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EERC ID	**103A-1**		**103A-2**					
Sample Collection Date								
EERC Sample Receipt Date	**5/13/2011**		**5/13/2011**					
EERC Run Date	**5/19/2011**		**5/19/2011**		**5/19/2011**			
EERC Run Number	**2621A03.D**		**2621A04.D**		**2621A02.D**			
					Fiber			
Sample Name	**OC42**		**OC42**		**Water Blank**			
Treatment	**Pore Water**		**Pore Water**		**Pore Water**		**Target detection limit ng/g**	**Actual (reporting) detection limit, ng/g**
Sample Weight, g	**1.50**		**1.50**		**1.50**			
Matrix	**Sediment**		**Sediment**					
Units	**ng/g**		**ng/g**		**ng/g**			
naphthalene	2.42	J	2.51	J	ND		5.7	0.1
2-methylnaphthalene	0.47	J	0.43	J	ND		2.4	0.05
1-methylnaphthalene	7.03		7.79		ND		2.4	0.05
C2 naphthalenes	134.48		126.95		ND		0.89	0.15
C3 naphthalenes	488.87		463.58		ND		0.33	0.05
C4 naphthalenes	234.49		247.66		ND		0.12	0.15
acenaphthylene	2.67		3.07		ND		9	0.2
acenaphthene	4.12		4.81		ND		1.6	0.1
fluorene	8.02		9.66		ND		1.2	0.04
C1 fluorenes	24.79		30.45		ND		0.41	0.02
C2 fluorenes	23.62		31.29		ND		0.16	0.05
C3 fluorenes	17.25		23.71		ND		0.06	0.06
phenanthrene	32.27		42.08		ND		0.56	0.1
anthracene	2.91		4.06		ND		0.61	0.05
C1 phenanthrenes/anthracenes	49.90		70.04		ND		0.22	0.02
C2 phenanthrenes/anthracenes	30.03		45.89		ND		0.09	0.05
C3 phenanthrenes/anthracenes	8.47		12.63		ND		0.04	0.04
C4 phenanthrenes/anthracenes	4.93	J	6.96	J	ND		0.02	0.02
fluoranthene	1.66		2.49		ND		0.21	0.01
pyrene	6.65		9.68		ND		0.3	0.01
C1 fluoranthenes/pyrenes	6.32		9.68		ND		0.14	0.01
benz[a]anthracene	0.09	J	0.17		ND		0.066	0.001
chrysene	0.21		0.35		ND		0.06	0.001
C1 chrysenes	0.16		0.22		ND		0.025	0.005
C2 chrysenes	0.12	J	0.14	J	ND		0.014	0.01
C3 chrysenes	ND		ND		ND		0.005	0.01
C4 chrysenes	ND		ND		ND		0.002	0.01
benzo[b+k]fluoranthene	0.02	J	0.04	J	ND		0.019	0.005
benzo[e]pyrene	0.04	J	0.06	J	ND		0.028	0.005
benzo[a]pyrene	0.02	J	0.02	J	ND		0.026	0.008
perylene	ND		ND		ND		0.026	0.004
indeno[1,2,3-cd]pyrene	0.001	J	0.001	J	ND		0.008	0.001
dibenz[ah]anthracene	ND		ND		ND		0.008	0.002
benzo[ghi]perylene	0.006	J	0.005	J	ND		0.013	0.001

Target detection limits are those required by ASTM D7363 (C2 chyrsenes and larger PAHs, not applicable).
Actual experimental detection limits (reporting limits) are determined based on the signal to noise requirements stated in D7363.
ND = not detected.

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EERC ID	104A-1		104A-2				Target detection limit ng/g	Actual (reporting) detection limit, ng/g
Sample Collection Date								
EERC Sample Receipt Date	5/13/2011		5/13/2011					
EERC Run Date	5/19/2011		5/19/2011		5/19/2011			
EERC Run Number	2621A07.D		2621A08.D		2621A06.D			
					Fiber			
Sample Name	OC44		OC44		Water Blank			
Treatment	Pore Water		Pore Water		Pore Water			
Sample Weight, g	1.50		1.51		1.50			
Matrix	Sediment		Sediment					
Units	ng/g		ng/g		ng/g			
naphthalene	0.79	J	0.91	J	ND		5.7	0.1
2-methylnaphthalene	19.75		20.23		ND		2.4	0.05
1-methylnaphthalene	20.64		20.49		0.07	J	2.4	0.05
C2 naphthalenes	142.77		144.25		ND		0.89	0.15
C3 naphthalenes	176.17		180.74		ND		0.33	0.05
C4 naphthalenes	81.26		83.81		ND		0.12	0.15
acenaphthylene	1.00		1.11		ND		9	0.2
acenaphthene	1.31		1.40		ND		1.6	0.1
fluorene	1.39		1.51		ND		1.2	0.04
C1 fluorenes	4.63		5.03		ND		0.41	0.02
C2 fluorenes	5.64		5.97		ND		0.16	0.05
C3 fluorenes	6.47		4.79		ND		0.06	0.06
phenanthrene	1.91		2.14		ND		0.56	0.1
anthracene	0.37		0.42		ND		0.61	0.05
C1 phenanthrenes/anthracenes	6.61		7.46		ND		0.22	0.02
C2 phenanthrenes/anthracenes	9.95		10.42		ND		0.09	0.05
C3 phenanthrenes/anthracenes	4.96	J	4.83	J	ND		0.04	0.04
C4 phenanthrenes/anthracenes	3.83	J	3.27	J	ND		0.02	0.02
fluoranthene	0.21	J	0.27	J	ND		0.21	0.01
pyrene	0.78		1.07		ND		0.3	0.01
C1 fluoranthenes/pyrenes	1.43		1.78		ND		0.14	0.01
benz[a]anthracene	0.02	J	0.02	J	ND		0.066	0.001
chrysene	0.03	J	0.05	J	ND		0.06	0.001
C1 chrysenes	0.04	J	0.05	J	ND		0.025	0.005
C2 chrysenes	0.05	J	0.08	J	ND		0.014	0.01
C3 chrysenes	ND		ND		ND		0.005	0.01
C4 chrysenes	ND		ND		ND		0.002	0.01
benzo[b+k]fluoranthene	ND		ND		ND		0.019	0.005
benzo[e]pyrene	ND		ND		ND		0.028	0.005
benzo[a]pyrene	ND		0.01	J	ND		0.026	0.008
perylene	ND		ND		ND		0.026	0.004
indeno[1,2,3-cd]pyrene	ND		ND		ND		0.008	0.001
dibenz[ah]anthracene	ND		ND		ND		0.008	0.002
benzo[ghi]perylene	ND		ND		ND		0.013	0.001

Target detection limits are those required by ASTM D7363 (C2 chyrsenes and larger PAHs, not applicable).
Actual experimental detection limits (reporting limits) are determined based on the signal to noise requirements stated in D7363.
ND = not detected.

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15 North 23rd Street, Grand Forks, ND 58202
701-777-5000

EERC ID	**105B-1**		**105B-2**					
Sample Collection Date								
EERC Sample Receipt Date	**5/13/2011**		**5/13/2011**					
EERC Run Date	**6/2/2011**		**6/2/2011**		**6/2/2011**			
EERC Run Number	**2625A03.D**		**2625A04.D**		**2625A02.D**			
					Fiber			
Sample Name	**OC45**		**OC45**		**Water Blank**			
Treatment	**Pore Water**		**Pore Water**		**Pore Water**		**Target detection limit ng/g**	**Actual (reporting) detection limit, ng/g**
Sample Weight, g	**1.50**		**1.51**		**1.50**			
Matrix	**Sediment**		**Sediment**					
Units	**ng/g**		**ng/g**		**ng/g**			
naphthalene	1.47	J	1.26	J	ND		5.7	0.1
2-methylnaphthalene	0.28	J	0.27	J	ND		2.4	0.05
1-methylnaphthalene	0.36	J	0.34	J	ND		2.4	0.05
C2 naphthalenes	111.43		104.00		ND		0.89	0.15
C3 naphthalenes	351.01		330.35		ND		0.33	0.05
C4 naphthalenes	135.23		123.65		ND		0.12	0.15
acenaphthylene	2.14		1.99		ND		9	0.2
acenaphthene	2.24		2.19		ND		1.6	0.1
fluorene	3.07		2.93		ND		1.2	0.04
C1 fluorenes	7.86		7.53		ND		0.41	0.02
C2 fluorenes	9.42		8.82		ND		0.16	0.05
C3 fluorenes	ND		ND		ND		0.06	0.06
phenanthrene	2.23		2.22		ND		0.56	0.1
anthracene	0.41		0.40		ND		0.61	0.05
C1 phenanthrenes/anthracenes	7.56		7.58		ND		0.22	0.02
C2 phenanthrenes/anthracenes	11.39		11.02		ND		0.09	0.05
C3 phenanthrenes/anthracenes	6.57		5.91		ND		0.04	0.04
C4 phenanthrenes/anthracenes	5.09	J	4.10	J	ND		0.02	0.02
fluoranthene	0.19	J	0.17	J	ND		0.21	0.01
pyrene	0.55		0.52		ND		0.3	0.01
C1 fluoranthenes/pyrenes	1.08		0.99		ND		0.14	0.01
benz[a]anthracene	0.09	J	0.08	J	ND		0.066	0.001
chrysene	0.13		0.13		ND		0.06	0.001
C1 chrysenes	0.18		0.15		ND		0.025	0.005
C2 chrysenes	ND		ND		ND		0.014	0.01
C3 chrysenes	ND		ND		ND		0.005	0.01
C4 chrysenes	ND		ND		ND		0.002	0.01
benzo[b+k]fluoranthene	ND		ND		ND		0.019	0.005
benzo[e]pyrene	ND		ND		ND		0.028	0.005
benzo[a]pyrene	ND		ND		ND		0.026	0.008
perylene	ND		ND		ND		0.026	0.004
indeno[1,2,3-cd]pyrene	ND		ND		ND		0.008	0.001
dibenz[ah]anthracene	ND		ND		ND		0.008	0.002
benzo[ghi]perylene	ND		ND		ND		0.013	0.001

Target detection limits are those required by ASTM D7363 (C2 chyrsenes and larger PAHs, not applicable).
Actual experimental detection limits (reporting limits) are determined based on the signal to noise requirements stated in D7363.
ND = not detected.

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701-777-5000

EERC ID	106A-1		106A-2				Target detection limit ng/g	Actual (reporting) detection limit, ng/g
Sample Collection Date								
EERC Sample Receipt Date	5/13/2011		5/13/2011					
EERC Run Date	5/19/2011		5/19/2011		5/19/2011			
EERC Run Number	2621A15.D		2621A16.D		2621A14.D			
					Fiber			
Sample Name	OC46		OC46		Water Blank			
Treatment	Pore Water		Pore Water		Pore Water			
Sample Weight, g	1.50		1.50		1.50			
Matrix	Sediment		Sediment					
Units	ng/g		ng/g		ng/g			
naphthalene	ND		ND		ND		5.7	0.1
2-methylnaphthalene	0.06	J	0.06	J	ND		2.4	0.05
1-methylnaphthalene	0.06	J	0.07	J	ND		2.4	0.05
C2 naphthalenes	0.74	J	0.69	J	ND		0.89	0.15
C3 naphthalenes	3.37	J	3.80	J	ND		0.33	0.05
C4 naphthalenes	ND		ND		ND		0.12	0.15
acenaphthylene	ND		ND		ND		9	0.2
acenaphthene	ND		ND		ND		1.6	0.1
fluorene	ND		0.05	J	ND		1.2	0.04
C1 fluorenes	ND		ND		ND		0.41	0.02
C2 fluorenes	ND		ND		ND		0.16	0.05
C3 fluorenes	ND		ND		ND		0.06	0.06
phenanthrene	ND		ND		ND		0.56	0.1
anthracene	ND		ND		ND		0.61	0.05
C1 phenanthrenes/anthracenes	ND		ND		ND		0.22	0.02
C2 phenanthrenes/anthracenes	ND		ND		ND		0.09	0.05
C3 phenanthrenes/anthracenes	ND		ND		ND		0.04	0.04
C4 phenanthrenes/anthracenes	ND		ND		ND		0.02	0.02
fluoranthene	0.02	J	0.02	J	ND		0.21	0.01
pyrene	0.01	J	0.02	J	ND		0.3	0.01
C1 fluoranthenes/pyrenes	ND		ND		ND		0.14	0.01
benz[a]anthracene	ND		ND		ND		0.066	0.001
chrysene	ND		ND		ND		0.06	0.001
C1 chrysenes	ND		ND		ND		0.025	0.005
C2 chrysenes	ND		ND		ND		0.014	0.01
C3 chrysenes	ND		ND		ND		0.005	0.01
C4 chrysenes	ND		ND		ND		0.002	0.01
benzo[b+k]fluoranthene	ND		ND		ND		0.019	0.005
benzo[e]pyrene	ND		ND		ND		0.028	0.005
benzo[a]pyrene	ND		ND		ND		0.026	0.008
perylene	ND		ND		ND		0.026	0.004
indeno[1,2,3-cd]pyrene	ND		ND		ND		0.008	0.001
dibenz[ah]anthracene	ND		ND		ND		0.008	0.002
benzo[ghi]perylene	ND		ND		ND		0.013	0.001

Target detection limits are those required by ASTM D7363 (C2 chyrsenes and larger PAHs, not applicable).
Actual experimental detection limits (reporting limits) are determined based on the signal to noise requirements stated in D7363.
ND = not detected.

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EERC ID	107A-1		107A-2					
Sample Collection Date								
EERC Sample Receipt Date	5/13/2011		5/13/2011					
EERC Run Date	5/19/2011		5/19/2011		5/19/2011			
EERC Run Number	2622A03.D		2622A04.D		2622A02.D			
					Fiber			
Sample Name	OC47		OC47		Water Blank			
Treatment	Pore Water		Pore Water		Pore Water		Target detection limit ng/g	Actual (reporting) detection limit, ng/g
Sample Weight, g	1.50		1.51		1.50			
Matrix	Sediment		Sediment					
Units	ng/g		ng/g		ng/g			
naphthalene	0.10	J	ND		ND		5.7	0.1
2-methylnaphthalene	0.06	J	ND		ND		2.4	0.05
1-methylnaphthalene	0.06	J	ND		ND		2.4	0.05
C2 naphthalenes	0.57	J	0.54	J	ND		0.89	0.15
C3 naphthalenes	0.43	J	0.45	J	ND		0.33	0.05
C4 naphthalenes	ND		ND		ND		0.12	0.15
acenaphthylene	ND		ND		ND		9	0.2
acenaphthene	ND		ND		ND		1.6	0.1
fluorene	ND		ND		ND		1.2	0.04
C1 fluorenes	ND		ND		ND		0.41	0.02
C2 fluorenes	ND		ND		ND		0.16	0.05
C3 fluorenes	ND		ND		ND		0.06	0.06
phenanthrene	ND		ND		ND		0.56	0.1
anthracene	ND		ND		ND		0.61	0.05
C1 phenanthrenes/anthracenes	ND		ND		ND		0.22	0.02
C2 phenanthrenes/anthracenes	ND		ND		ND		0.09	0.05
C3 phenanthrenes/anthracenes	ND		ND		ND		0.04	0.04
C4 phenanthrenes/anthracenes	ND		ND		ND		0.02	0.02
fluoranthene	ND		ND		ND		0.21	0.01
pyrene	0.01	J	0.01	J	ND		0.3	0.01
C1 fluoranthenes/pyrenes	ND		ND		ND		0.14	0.01
benz[a]anthracene	ND		ND		ND		0.066	0.001
chrysene	ND		ND		ND		0.06	0.001
C1 chrysenes	ND		ND		ND		0.025	0.005
C2 chrysenes	ND		ND		ND		0.014	0.01
C3 chrysenes	ND		ND		ND		0.005	0.01
C4 chrysenes	ND		ND		ND		0.002	0.01
benzo[b+k]fluoranthene	ND		ND		ND		0.019	0.005
benzo[e]pyrene	ND		ND		ND		0.028	0.005
benzo[a]pyrene	ND		ND		ND		0.026	0.008
perylene	ND		ND		ND		0.026	0.004
indeno[1,2,3-cd]pyrene	ND		ND		ND		0.008	0.001
dibenz[ah]anthracene	ND		ND		ND		0.008	0.002
benzo[ghi]perylene	ND		ND		ND		0.013	0.001

Target detection limits are those required by ASTM D7363 (C2 chyrsenes and larger PAHs, not applicable).
Actual experimental detection limits (reporting limits) are determined based on the signal to noise requirements stated in D7363.
ND = not detected.

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EERC ID	108A-1		108A-2				Target detection limit ng/g	Actual (reporting) detection limit, ng/g
Sample Collection Date								
EERC Sample Receipt Date	5/13/2011		5/13/2011					
EERC Run Date	5/19/2011		5/19/2011		5/19/2011			
EERC Run Number	2622A07.D		2622A08.D		2622A06.D			
					Fiber			
Sample Name	OC48		OC48		Water Blank			
Treatment	Pore Water		Pore Water		Pore Water			
Sample Weight, g	1.50		1.51		1.50			
Matrix	Sediment		Sediment					
Units	ng/g		ng/g		ng/g			
naphthalene	0.10	J	ND		ND		5.7	0.1
2-methylnaphthalene	ND		ND		ND		2.4	0.05
1-methylnaphthalene	0.06	J	ND		ND		2.4	0.05
C2 naphthalenes	0.42	J	0.31	J	ND		0.89	0.15
C3 naphthalenes	0.44	J	0.29	J	ND		0.33	0.05
C4 naphthalenes	ND		ND		ND		0.12	0.15
acenaphthylene	ND		ND		ND		9	0.2
acenaphthene	ND		ND		ND		1.6	0.1
fluorene	ND		ND		ND		1.2	0.04
C1 fluorenes	ND		ND		ND		0.41	0.02
C2 fluorenes	ND		ND		ND		0.16	0.05
C3 fluorenes	ND		ND		ND		0.06	0.06
phenanthrene	ND		ND		ND		0.56	0.1
anthracene	ND		ND		ND		0.61	0.05
C1 phenanthrenes/anthracenes	ND		ND		ND		0.22	0.02
C2 phenanthrenes/anthracenes	ND		ND		ND		0.09	0.05
C3 phenanthrenes/anthracenes	ND		ND		ND		0.04	0.04
C4 phenanthrenes/anthracenes	ND		ND		ND		0.02	0.02
fluoranthene	ND		ND		ND		0.21	0.01
pyrene	0.01	J	0.01	J	ND		0.3	0.01
C1 fluoranthenes/pyrenes	ND		ND		ND		0.14	0.01
benz[a]anthracene	ND		ND		ND		0.066	0.001
chrysene	ND		ND		ND		0.06	0.001
C1 chrysenes	ND		ND		ND		0.025	0.005
C2 chrysenes	ND		ND		ND		0.014	0.01
C3 chrysenes	ND		ND		ND		0.005	0.01
C4 chrysenes	ND		ND		ND		0.002	0.01
benzo[b+k]fluoranthene	ND		ND		ND		0.019	0.005
benzo[e]pyrene	ND		ND		ND		0.028	0.005
benzo[a]pyrene	ND		ND		ND		0.026	0.008
perylene	ND		ND		ND		0.026	0.004
indeno[1,2,3-cd]pyrene	ND		ND		ND		0.008	0.001
dibenz[ah]anthracene	ND		ND		ND		0.008	0.002
benzo[ghi]perylene	ND		ND		ND		0.013	0.001

Target detection limits are those required by ASTM D7363 (C2 chyrsenes and larger PAHs, not applicable).
Actual experimental detection limits (reporting limits) are determined based on the signal to noise requirements stated in D7363.
ND = not detected.

ATTACHMENT B

DATA QUALIFIER DEFINITIONS

LABORATORY DATA QUALIFIER DEFITIONS

J - Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

ND - Indicates the analyte was analyzed for but not detected.

Weston Solutions, Inc.
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(312) 424-3300 fax: (312) 424-3330
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August 15, 2011

Ms. Brenda Jones and Mr. Ajit Vaidya
Great Lakes National Program Office
United States Environmental Protection Agency, Region V
77 West Jackson Boulevard, Mail Code: G-17J
Chicago, Illinois 60604-3507

Re: Data Review of Polynuclear Aromatic Hydrocarbon (PAH) Analysis
For Sediment Samples Collected on May 11-12, 2011
CLP Case No. 41260, SDG No. E0271
Duck and Otter Creeks Confluence Investigation
Wood and Lucas Counties, Ohio
DCN: 1269-2B-AOVS

Dear Ms. Jones and Mr. Vaidya:

The United States Environmental Protection Agency (U.S. EPA) tasked Weston Solutions, Inc., (WESTON®) to perform data validation for the five percent of the sediment samples collected in May 2011 for the Great Lakes National Program Office (GLNPO) Duck and Otter Creeks Confluence Investigation Site. This data review is of the analysis of PAH compounds for two sediment samples that were collected by WESTON and analyzed under Sample Delivery Group (SDG) number E0271. The samples were validated in accordance with the "Quality Assurance Project Plan (QAPP), Duck and Otter Creeks Data Gaps Investigation" dated September 28, 2010, and QAPP Amendment 1 dated May 5, 2011, which includes using the U.S. EPA Contract Laboratory Program (CLP) National Functional Guidance for Organic and Inorganic Data Review. Table 1 provides a summary of the samples included in this review. All tables are presented at the end of this report.

The samples listed in Table 1 were analyzed under the U.S. EPA CLP by KAP Technologies, Inc. (KAP) located in The Woodlands, Texas, under case number 41260. Because only five percent of data is to be validated, SDG number E0271 was selected for data validation.

Sediment samples were analyzed for PAHs using U.S. EPA CLP Statement of Work (SOW) SOM01.2 by gas chromatography/mass spectrometry (GC/MS) Selective Ion Monitoring (SIM) methodology. Table 2 provides a list of the PAHs that were analyzed. KAP did not provide a Staged Electronic Data Deliverable (SEDD) with the CLP analytical package. Therefore, the Automated Data Review (ADR) software was not utilized to assist in reviewing this data.

Attachment A to this report contains the individual Quality Assurance/Quality Control (QA/QC) Analysis Checklist for Sediment Chemistry Analysis for SDG E0271. Attachment B to this

report contains a printed summary report of sample results with hand-written qualifiers that were applied during the data review. Attachment C to this report contains a list of the data qualifiers associated with the sample results. The QC limits utilized were those stated in the QAPP. If there was not a QC limit specified in the QAPP, then the method or laboratory-determined QC limits were used. Below is the data review summary.

SUMMARY OF PAH DATA REVIEW

The initial calibration, method blank, and internal standards were within the QC limits. There were no field duplicate or field split samples associated with SDG E0271.

The matrix spike (MS) and matrix spike duplicate (MSD) results were outside QC limits for percent recoveries. One surrogate recovery was outside QC limits. A few compounds were outside QC limits in the continuing calibration verification (CCV) standards. Holding time limits for extraction were exceeded in all samples. These QC exceedances as described below under Minor Problems.

Below is a review of the minor problems associated with QC failures and a summary of the data quality indicators associated with the PAH analysis for the sediment samples in SDG E0271.

MINOR PROBLEMS

Minor problems with QC failures are noted below.

MS and MSD Results. There was one MS/MSD pair associated with the sample for this SDG and it included two spiked compounds. The percent recoveries for acenaphthene were within QC limits. The percent recoveries for pyrene were one percent below the QC limit; however, the spike added was 4 times lower than the sample concentration making recovery of the spike difficult. No qualifications are required in this instance.

Surrogate Results. The surrogate recoveries were within the QC limits except for one surrogate in the dilution of sample E0271 (E0271DL). Because this sample was a dilution and the other surrogate was within QC limits, no qualifications were warranted.

CCV Results. The following compounds were outside QC limits of 25 percent difference in the CCV standards: benzo(b)fluoranthene (28.4 percent), benzo(e)pyrene (33.8 percent), and perylene (32.8 percent). For these three compounds, detected results were flagged “J” and the quantitation limits for non-detected results were flagged “UJ” as estimated.

Holding Times. The holding time limit for PAH analysis is 14 days from sample collection to extraction and 40 days from extraction to analysis. All samples in this SDG were extracted past the 14 day holding time limit. Specifically, this limit was exceeded by one to two days. The detected results were flagged "J" as estimated and the quantitation limits for non-detected results were flagged "UJ" as estimated due to holding time exceedance.

DATA QUALITY INDICATORS REVIEW

Many the data quality indicators (sensitivity, precision, accuracy, and completeness) were evaluated through the data validation procedures which are summarized above and discussed in detail in the Attachment.

Sensitivity. The CLP Contract Required Quantitation Limits (CRQL) for PAH compounds is 3.3 micrograms per kilogram (µg/kg). When adjusted for dilution factor and percent moisture, the laboratory achieved these reporting limits. Sensitivity was adequate for the PAH analyses of sediment samples collected on May 11-12, 2011, that are associated with SDG E0271.

The laboratory reported results that were below the reporting limit but above the method detection limit. These results were flagged with a "J" by the laboratory and are considered estimated results.

Precision. There were no field duplicates or splits associated with SDG E0271; therefore, field precision was not evaluated.

Laboratory precision was evaluated by reviewing the relative percent difference (RPD) values for the MS/MSD. The RPDs for the MS/MSD were 0 percent for both spiked compounds. Laboratory precision was acceptable.

Accuracy/Bias. Accuracy is a measure of the agreement between an observed value and an accepted reference value. Laboratory accuracy is usually evaluated by reviewing the percent recovery results for laboratory control samples and MS/MSD results. Because LCS samples are not applicable to SOM01.2 and because the MS/MSD results were unusable for one compound, laboratory accuracy could not be evaluated by theses means. However, the continuing calibration verification results were all mostly within their QC limits of less than 25 percent difference (see description under Minor Problems) which indicates that laboratory accuracy is acceptable.

Completeness. Completeness is a measure of the amount of valid data obtained compared to the amount of data that was planned to be collected under normal conditions. All samples results were received.

In summary, the data are usable for comparison to the PAH screening criteria stated in the QAPP. Qualifications were added to the samples during the data review due to holding time exceedances for extraction and QC limit exceedances in CCV standards for three compounds. Attachment B includes the data summary sheets that show the hand-written data qualifications applied during data validation and the laboratory data qualifications. Definitions for the validation qualifiers applied and the laboratory qualifiers are included in Attachment C.

If there are any questions or comments regarding this report, please do not hesitate to contact WESTON START at 847-918-4000.

Very truly yours,

Weston Solutions, Inc.



Lisa Graczyk
WESTON START Team

Alex Clark
WESTON START Project Manager

Attachments:
Tables
A- Checklists for PAH Analytical Data for Case # 41260, SDG # E0271
B- Analytical Data Summary Sheets with Qualifiers
C- Data Qualifier Definitions

cc: project file

Wojdakowski (Kuester), Natalie

From: Graczyk, Lisa
Sent: Monday, August 15, 2011 12:40 PM
To: Balla, Tonya; Wojdakowski (Kuester), Natalie
Subject: D&O-CLP PAH Data Review Report
Attachments: PAHs-34 Summary Report-D&O-Case 41260-SDG E0271.doc; Att A-PAH Checklist-E0271.doc; Att B-PAH Summary Sheets w qualifiers.pdf

See attached.

Natalie, As with the PCBs, I qualified all results in this SDG because the samples were extracted outside holding time limits. Because I didn't get an SEDD with the CLP data, you will need to manually pull qualifiers off of the summary sheets in Attachment B. Let me know if you have any questions.

Lisa

Lisa Graczyk
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20 North Wacker Drive, Suite 1210
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(w) 312-424-3339
(c) 312-305-6745

TABLES

TABLE 1
SAMPLES INCLUDED IN DATA REVIEW

Sample ID	Sample Location ID	Date Collected	Comment
E0271	DC-25-01-DP	05/11/2011	
E0295	DC-47-01	05/12/2011	

TABLE 2 PAH ANALYTES	
CAS #	**Analyte**
90-12-0	1-Methylnaphthalene
91-57-6	2-Methylnaphthalene
83-32-9	Acenaphthene
208-96-8	Acenaphthylene
120-12-7	Anthracene
56-55-3	Benzo(a)anthracene
50-32-8	Benzo(a)pyrene
205-99-2	Benzo(b)fluoranthene
192-97-2	Benzo(e)pyrene
191-24-2	Benzo(g,h,i)perylene
207-08-9	Benzo(k)fluoranthene
218-01-9	Chrysene
---	C1-Chrysenes
---	C2-Chrysenes
---	C3-Chrysenes
---	C4-Chrysenes
53-70-3	Dibenz(a,h)anthracene
206-44-0	Fluoranthene
---	C1-Fluoranthenes/Pyrenes
---	C2-Fluoranthenes/Pyrenes
---	C3-Fluoranthenes/Pyrenes
86-73-7	Fluorene
---	C1-Fluorenes
---	C2-Fluorenes
---	C3-Fluorenes
193-39-5	Indeno(1,2,3-c,d)pyrene
91-20-3	Naphthalene
---	C1-Naphthalenes
---	C2-Naphthalenes
---	C3-Naphthalenes
---	C4-Naphthalenes
85-01-8	Phenanthrene
---	C1-Phenanthrenes/Anthracenes
---	C2-Phenanthrenes/Anthracenes
---	C3-Phenanthrenes/Anthracenes

TABLE 2
PAH ANALYTES

CAS #	Analyte
---	C4-Phenanthrenes/Anthracenes
129-00-0	Pyrene
198-55-0	Perylene
---	Total 16 PAHs
---	Total PAHs

Notes:
--- - There is no CAS number for this compound
CAS – Chemical Abstracts Service
PAH – Polynuclear Aromatic Hydrocarbon

ATTACHMENT A

CHECKLIST FOR PAH ANALYTICAL DATA FOR CASE # 41260, SDG # E0271

PAHs
BY CLP SOW SOM01.2

CASE# 41260
SDG# E0271

QA/QC Analysis Checklist for Sediment Chemistry Analysis

GRANT/IAG NUMBER: Not Applicable
PROJECT NAME: Duck and Otter Creeks Confluence Investigation
REVIEWER: Lisa Graczyk, WESTON START
DATE: August 15, 2011

1. What sediment chemistry data has been collected (CHECK ALL THAT APPLY)?

Total Metals ___	PCBs _____	pH _____	TOC _____
Dioxins/Furans _____	PAHs __X___	Pesticides _____	DO _____
AVS _____	SEM Metals _____	Particle Size _____	Other _____

2. Were the target detection limits met for each parameter?

Yes X
No _____

The CLP CRQL for PAH compounds by GC/MS SIM is 3.3 micrograms per kilogram (µg/kg). When adjusted for dilution factor and percent moisture, the laboratory achieved these reporting limits.

3. Were the method blanks less than the established MDL for each parameter?

Yes X
No _____ (EXPLAIN)

The method blank contained no detections of target analytes.

4. Did the results of Field Replicate Analysis vary by less than the % RPD specified in the QAPP?

Yes	Not Applicable	
No		(EXPLAIN)

There are no field replicates associated with this SDG.

5. Did the results of the Field Duplicates Analysis vary by less than the % RPD specified in the QAPP?

Yes	Not Applicable	
No		(EXPLAIN)

There are no field duplicates associated with this SDG.

6. Did the surrogate spike/internal standards recoveries meet the limits set forth in the QAPP?

Yes		
No	X	(EXPLAIN)

The surrogates were within the QC limits except for one surrogate in the dilution of sample E0271 (E0271DL). Because this sample was a dilution and the other surrogate was within QC limits, no qualifications were warranted.

7. Did the MS/MSD recoveries meet the limits set forth in the QAPP?

Yes		
No	X	(EXPLAIN)

There was one MS/MSD pair associated with the sample for this SDG. The percent recoveries for acenaphthene were within QC limits. The percent recoveries for pyrene were one percent below the QC limit; however, the spike added was 4 times lower than the sample concentration making recovery of the spike difficult. No qualifications are required in this instance.

8. Did the RPD (%) of the MS/MSD sample set meet the limits set forth in the QAPP?

Yes	X	
No		(EXPLAIN)

9. Did the LCS recoveries meet the limits set forth in the QAPP?

Yes	Not Applicable	
No		(EXPLAIN)

LCSs are not analyzed with PAH analysis by SOM01.2.

10. Did the calibration verification standards (ICVs and CCVs) meet the requirements set forth in the QAPP?

Yes		
No	X	(EXPLAIN)

There were no QC limits specified in the QAPP; therefore, the QC limits specified in the CLP SOW were used for the initial calibration and continuing calibration verification (CCV) checks. The initial calibration and most continuing calibration recoveries were within QC limits. The following compounds were outside QC limits in the CCVs: benzo(b)fluoranthene, benzo(e)pyrene, and perylene. For these three compounds, detected results were flagged "J" and the quantitation limits for non-detected results were flagged "UJ" as estimated.

11. Did the calibration blanks (ICBs and CCBs) meet the limits set forth in the QAPP?

Yes
Not Applicable
No (EXPLAIN)

12. Did the interference check samples meet the limits set forth in the QAPP?

Yes
Not Applicable
No (EXPLAIN)

13. Did the serial dilution samples meet the limits set forth in the QAPP?

Yes
Not Applicable
No (EXPLAIN)

Serial dilution is not applicable to SW-846 Method 8270C.

14. Were any level of contaminants detected above the MDL for the trip blanks and storage blanks?

Yes
Not Applicable
No (EXPLAIN)

Trip blanks and storage blanks are not applicable to SW-846 Method 8270C.

15. Did all required analyses take place within the required holding time protocols set forth in the QAPP?

Yes		
No	X	(EXPLAIN)

Samples were analyzed outside the holding time requirement of 14 days to extraction. Samples were extracted 1 to 2 days past this holding time requirement. Detected sample results were flagged "J" and the quantitation limits for non-detected results were flagged "UJ" as estimated.

16. Did the laboratory duplicates vary by less than the % RPD specified in the QAPP?

Yes	Not Applicable	
No		(EXPLAIN)

Laboratory duplicates were not analyzed with the samples.

17. Are measured dry-weight contaminant concentrations reported?

Yes	X	
No		(EXPLAIN)

Dry-weight concentrations are reported.

18. Please provide details for all of the "UNACCEPTABLE" marked above. Include details on the specific analytes affected by any QA/QC discrepancies, and recommendations regarding usability of data.

Any items with "UNACCEPTABLE" marked above are described immediately following the "UNACCEPTABLE" marking in the corresponding item above.

In addition, some results were detected below the laboratory reporting limit and were flagged "J" as estimated for this discrepancy. The data are acceptable for use as qualified.

PAH Checklist
Duck and Otter Creeks Confluence Investigation
KAP Technologies, Inc.
Laboratory SDG#: E0271

ATTACHMENT B

ANALYTICAL DATA SUMMARY SHEETS WITH QUALIFIERS

1F - FORM I SV-SIM
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
E0271

Lab Name: KAP TECHNOLOGIES, INC. Contract: EPW11031

Lab Code: KAP Case No.: 41260 Mod. Ref No.: 2145.0 SDG No.: E0271

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: S-4017.01

Sample wt/vol: 30.30 (g/mL) G Lab File ID: C11875

Extraction: (Type) SOXH

% Moisture: 53 Decanted: (Y/N) N Date Received: 05/17/2011

Concentrated Extract Volume: 500 (uL) Date Extracted: 05/27/2011

Injection Volume: 1.0 (uL) GPC Factor: 2.0 Date Analyzed: 06/02/2011

GPC Cleanup: (Y/N) Y pH: 6.9 Dilution Factor: 1.0

CAS No.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
90-12-0	1-Methylnaphthalene	10	
91-57-6	2-Methylnaphthalene	20	
91-20-3	Naphthalene	23	
C1NAPH	C1-Naphthalenes	23	J
C2NAPH	C2-Naphthalenes	64	J
C3NAPH	C3-Naphthalenes	160	J
C4NAPH	C4-Naphthalenes	160	J
208-96-8	Acenaphthylene	9.8	
83-32-9	Acenaphthene	6.9	J
86-73-7	Fluorene	13	
C1FLUOR	C1 Fluorenes	7.0	~~U~~ UJ
C2FLUOR	C2 Fluorenes	75	J
C3FLUOR	C3 Fluorenes	89	J
85-01-8	Phenanthrene	89	E
120-12-7	Anthracene	24	
C1PHAN	C1-Phenanthrenes/Anthracenes	120	J
C2PHAN	C2-Phenanthrenes/Anthracenes	140	J
C3PHAN	C3-Phenanthrenes/Anthracenes	130	J
C4PHAN	C4-Phenanthrenes/Anthracenes	82	J
206-44-0	Fluoranthene	140	E
129-00-0	Pyrene	110	E
C1FLPY	C1-Fluoranthenes/Pyrenes	110	J
C2FLPY	C2-Fluoranthenes/Pyrenes	74	J
C3FLPY	C3-Fluoranthenes/Pyrenes	61	J
56-55-3	Benzo(a)anthracene	88	E
218-01-9	Chrysene	85	E
C1CHRYS	C1 Chrysenes	110	J
C2CHRYS	C2 Chrysenes	85	J
C3CHRYS	C3 Chrysenes	89	J
C4CHRYS	C4 Chrysenes	7.0	~~U~~ UJ
205-99-2	Benzo(b)fluoranthene	87	E J
207-08-9	Benzo(k)fluoranthene	40	J
192-97-2	Benzo(e)pyrene	66	J
50-32-8	Benzo(a)pyrene	91	E J
198-55-0	Perylene	18	J
193-39-5	Indeno(1,2,3-cd)pyrene	66	J
53-70-3	Dibenzo(a,h)anthracene	59	
191-24-2	Benzo(g,h,i)perylene	120	E
TPPAH	Total 16 PPAH	1051.7	
TPAH	Total PAH	2727.7	

[1] Cannot be separated from Diphenylamine

8/15/11

0236

1F - FORM I SV-SIM
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
E0271DL

Lab Name: KAP TECHNOLOGIES, INC. Contract: EPW11031

Lab Code: KAP Case No.: 41260 Mod. Ref No.: 2145.0 SDG No.: E0271

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: S-4017.01DL

Sample wt/vol: 30.30 (g/mL) G Lab File ID: C11909

Extraction: (Type) SOXH

% Moisture: 53 Decanted: (Y/N) N Date Received: 05/17/2011

Concentrated Extract Volume: 500 (uL) Date Extracted: 05/27/2011

Injection Volume: 1.0 (uL) GPC Factor: 2.0 Date Analyzed: 06/03/2011

GPC Cleanup: (Y/N) Y pH: 6.9 Dilution Factor: 5.0

CAS No.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
90-12-0	1-Methylnaphthalene	35	~~U~~ UJ
91-57-6	2-Methylnaphthalene	35	U
91-20-3	Naphthalene	35	U
C1NAPH	C1-Naphthalenes	35	U
C2NAPH	C2-Naphthalenes	35	U
C3NAPH	C3-Naphthalenes	35	U
C4NAPH	C4-Naphthalenes	41	J
208-96-8	Acenaphthylene	35	~~U~~ UJ
83-32-9	Acenaphthene	35	U
86-73-7	Fluorene	35	U
C1FLUOR	C1 Fluorenes	35	U
C2FLUOR	C2 Fluorenes	35	U
C3FLUOR	C3 Fluorenes	35	U
85-01-8	Phenanthrene	76	D J
120-12-7	Anthracene	35	~~U~~ UJ
C1PHAN	C1-Phenanthrenes/Anthracenes	120	J
C2PHAN	C2-Phenanthrenes/Anthracenes	120	J
C3PHAN	C3-Phenanthrenes/Anthracenes	130	J
C4PHAN	C4-Phenanthrenes/Anthracenes	35	~~U~~ UJ
206-44-0	Fluoranthene	120	D J
129-00-0	Pyrene	130	D
C1FLPY	C1-Fluoranthenes/Pyrenes	110	J
C2FLPY	C2-Fluoranthenes/Pyrenes	54	J
C3FLPY	C3-Fluoranthenes/Pyrenes	39	J
56-55-3	Benzo(a)anthracene	85	D
218-01-9	Chrysene	86	D
C1CHRYS	C1 Chrysenes	86	J
C2CHRYS	C2 Chrysenes	68	J
C3CHRYS	C3 Chrysenes	35	~~U~~ UJ
C4CHRYS	C4 Chrysenes	35	~~U~~ UJ
205-99-2	Benzo(b)fluoranthene	63	D
207-08-9	Benzo(k)fluoranthene	52	D
192-97-2	Benzo(e)pyrene	86	D
50-32-8	Benzo(a)pyrene	120	D
198-55-0	Perylene	35	~~U~~ UJ
193-39-5	Indeno(1,2,3-cd)pyrene	71	D
53-70-3	Dibenzo(a,h)anthracene	62	D
191-24-2	Benzo(g,h,i)perylene	170	D
TPPAH	Total 16 PPAH	1035	
TPAH	Total PAH	1889	

[1] Cannot be separated from Diphenylamine

8/15/11

0280

1F - FORM I SV-SIM
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
E0271RE

Lab Name: KAP TECHNOLOGIES, INC. Contract: EPW11031

Lab Code: KAP Case No.: 41260 Mod. Ref No.: 2145.0 SDG No.: E0271

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: S-4017.01RE

Sample wt/vol: 30.30 (g/mL) G Lab File ID: C11885

Extraction: (Type) SOXH

% Moisture: 53 Decanted: (Y/N) N Date Received: 05/17/2011

Concentrated Extract Volume: 500 (uL) Date Extracted: 05/27/2011

Injection Volume: 1.0 (uL) GPC Factor: 2.0 Date Analyzed: 06/03/2011

GPC Cleanup: (Y/N) Y pH: 6.9 Dilution Factor: 1.0

CAS No.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
90-12-0	1-Methylnaphthalene	12	
91-57-6	2-Methylnaphthalene	23	
91-20-3	Naphthalene	27	
C1NAPH	C1-Naphthalenes	26	J
C2NAPH	C2-Naphthalenes	72	J
C3NAPH	C3-Naphthalenes	170	J
C4NAPH	C4-Naphthalenes	180	J
208-96-8	Acenaphthylene	11	
83-32-9	Acenaphthene	7.8	
86-73-7	Fluorene	14	
C1FLUOR	C1 Fluorenes	7.0	U
C2FLUOR	C2 Fluorenes	7.0	U
C3FLUOR	C3 Fluorenes	14	J
85-01-8	Phenanthrene	81	E
120-12-7	Anthracene	22	
C1PHAN	C1-Phenanthrenes/Anthracenes	110	J
C2PHAN	C2-Phenanthrenes/Anthracenes	120	J
C3PHAN	C3-Phenanthrenes/Anthracenes	130	J
C4PHAN	C4-Phenanthrenes/Anthracenes	85	J
206-44-0	Fluoranthene	130	E
129-00-0	Pyrene	120	E
C1FLPY	C1-Fluoranthenes/Pyrenes	97	J
C2FLPY	C2-Fluoranthenes/Pyrenes	65	J
C3FLPY	C3-Fluoranthenes/Pyrenes	59	J
56-55-3	Benzo(a)anthracene	80	E
218-01-9	Chrysene	74	E
C1CHRYS	C1 Chrysenes	72	J
C2CHRYS	C2 Chrysenes	50	J
C3CHRYS	C3 Chrysenes	49	J
C4CHRYS	C4 Chrysenes	7.0	U
205-99-2	Benzo(b)fluoranthene	57	J
207-08-9	Benzo(k)fluoranthene	42	
192-97-2	Benzo(e)pyrene	58	J
50-32-8	Benzo(a)pyrene	76	E
198-55-0	Perylene	17	J
193-39-5	Indeno(1,2,3-cd)pyrene	52	
53-70-3	Dibenzo(a,h)anthracene	27	
191-24-2	Benzo(g,h,i)perylene	64	
TPPAH	Total 16 PPAH	884.8	
TPAH	Total PAH	2281.8	

[1] Cannot be separated from Diphenylamine

8/15/11

0306

1F - FORM I SV-SIM

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
E0295

Lab Name: KAP TECHNOLOGIES, INC. Contract: EPW11031

Lab Code: KAP Case No.: 41260 Mod. Ref No.: 2145.0 SDG No.: E0271

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: S-4017.02

Sample wt/vol: 30.10 (g/mL) G Lab File ID: C11886

Extraction: (Type) SOXH

% Moisture: 55 Decanted: (Y/N) N Date Received: 05/17/2011

Concentrated Extract Volume: 500 (uL) Date Extracted: 05/27/2011

Injection Volume: 1.0 (uL) GPC Factor: 2.0 Date Analyzed: 06/03/2011

GPC Cleanup: (Y/N) Y pH: 6.7 Dilution Factor: 1.0

CAS No.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
90-12-0	1-Methylnaphthalene	7.3	~~U~~ UJ
91-57-6	2-Methylnaphthalene	7.3	U
91-20-3	Naphthalene	7.3	U
C1NAPH	C1-Naphthalenes	7.3	U
C2NAPH	C2-Naphthalenes	7.3	U
C3NAPH	C3-Naphthalenes	7.3	U
C4NAPH	C4-Naphthalenes	7.3	U
208-96-8	Acenaphthylene	6.7	J
83-32-9	Acenaphthene	7.3	U UJ
86-73-7	Fluorene	7.3	U
C1FLUOR	C1 Fluorenes	7.3	U
C2FLUOR	C2 Fluorenes	7.3	U
C3FLUOR	C3 Fluorenes	7.3	U
85-01-8	Phenanthrene	45	J
120-12-7	Anthracene	17	
C1PHAN	C1-Phenanthrenes/Anthracenes	38	J
C2PHAN	C2-Phenanthrenes/Anthracenes	38	J
C3PHAN	C3-Phenanthrenes/Anthracenes	37	J
C4PHAN	C4-Phenanthrenes/Anthracenes	7.3	U UJ
206-44-0	Fluoranthene	110	E J
129-00-0	Pyrene	110	E
C1FLPY	C1-Fluoranthenes/Pyrenes	57	J
C2FLPY	C2-Fluoranthenes/Pyrenes	36	J
C3FLPY	C3-Fluoranthenes/Pyrenes	32	J
56-55-3	Benzo(a)anthracene	62	
218-01-9	Chrysene	67	
C1CHRYS	C1 Chrysenes	45	J
C2CHRYS	C2 Chrysenes	35	J
C3CHRYS	C3 Chrysenes	7.3	U UJ
C4CHRYS	C4 Chrysenes	7.3	U UJ
205-99-2	Benzo(b)fluoranthene	67	J
207-08-9	Benzo(k)fluoranthene	45	J
192-97-2	Benzo(e)pyrene	50	J
50-32-8	Benzo(a)pyrene	64	J
198-55-0	Perylene	26	J
193-39-5	Indeno(1,2,3-cd)pyrene	49	J
53-70-3	Dibenzo(a,h)anthracene	22	J
191-24-2	Benzo(g,h,i)perylene	60	J
TPPAH	Total 16 PPAH	724.7	J
TPAH	Total PAH	1118.7	J

1 Cannot be separated from Diphenylamine

8/15/11

B344

1F - FORM I SV-SIM
SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
E0295DL

Lab Name: KAP TECHNOLOGIES, INC. Contract: EPW11031

Lab Code: KAP Case No.: 41260 Mod. Ref No.: 2145.0 SDG No.: E0271

Matrix: (SOIL/SED/WATER) SOIL Lab Sample ID: S-4017.02DL

Sample wt/vol: 30.10 (g/mL) G Lab File ID: C11910

Extraction: (Type) SOXH

% Moisture: 55 Decanted: (Y/N) N Date Received: 05/17/2011

Concentrated Extract Volume: 500 (uL) Date Extracted: 05/27/2011

Injection Volume: 1.0 (uL) GPC Factor: 2.0 Date Analyzed: 06/03/2011

GPC Cleanup: (Y/N) Y pH: 6.7 Dilution Factor: 5.0

CAS No.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q	
90-12-0	1-Methylnaphthalene	37	U	UJ
91-57-6	2-Methylnaphthalene	37	U	
91-20-3	Naphthalene	37	U	
C1NAPH	C1-Naphthalenes	37	U	
C2NAPH	C2-Naphthalenes	37	U	
C3NAPH	C3-Naphthalenes	37	U	
C4NAPH	C4-Naphthalenes	37	U	
208-96-8	Acenaphthylene	37	U	
83-32-9	Acenaphthene	37	U	
86-73-7	Fluorene	37	U	
C1FLUOR	C1 Fluorenes	37	U	
C2FLUOR	C2 Fluorenes	37	U	
C3FLUOR	C3 Fluorenes	37	U	
85-01-8	Phenanthrene	55	D	J
120-12-7	Anthracene	37	U	UJ
C1PHAN	C1-Phenanthrenes/Anthracenes	65	J	J
C2PHAN	C2-Phenanthrenes/Anthracenes	53	J	
C3PHAN	C3-Phenanthrenes/Anthracenes	46	J	
C4PHAN	C4-Phenanthrenes/Anthracenes	37	U	UJ
206-44-0	Fluoranthene	130	D	J
129-00-0	Pyrene	130	D	
C1FLPY	C1-Fluoranthenes/Pyrenes	84	J	
C2FLPY	C2-Fluoranthenes/Pyrenes	52	J	
C3FLPY	C3-Fluoranthenes/Pyrenes	53	J	
56-55-3	Benzo(a)anthracene	70	D	
218-01-9	Chrysene	82	D	
C1CHRYS	C1 Chrysenes	82	J	
C2CHRYS	C2 Chrysenes	48	J	
C3CHRYS	C3 Chrysenes	37	U	UJ
C4CHRYS	C4 Chrysenes	37	U	UJ
205-99-2	Benzo(b)fluoranthene	78	D	J
207-08-9	Benzo(k)fluoranthene	51	D	J
192-97-2	Benzo(e)pyrene	76	D	J
50-32-8	Benzo(a)pyrene	99	D	J
198-55-0	Perylene	35	DJ	J
193-39-5	Indeno(1,2,3-cd)pyrene	63	D	
53-70-3	Dibenzo(a,h)anthracene	38	D	
191-24-2	Benzo(g,h,i)perylene	120	D	
TPPAH	Total 16 PPAH	916		
TPAH	Total PAH	1510		

[1] Cannot be separated from Diphenylamine

LH 8/15/11

0369

ATTACHMENT C

DATA QUALIFIER DEFINITIONS

LABORATORY DATA QUALIFIER DEFITIONS

D – This qualifier indicates that the sample was re-analyzed at a higher dilution factor than the original analysis.

E – The result exceeded the highest standard in the initial calibration range of the instrument. The result is an estimate.

J - The analyte was positively identified and the associated numerical value is the approximate concentration of the analyte in the sample (due either to the quality of the data generated because certain quality control criteria were not met, or the concentration of the analyte was below the quantitation limit).

U - The analyte was not detected above the reporting limit. The reported result is the laboratory reporting limit.

DATA VALIDATION DATA QUALIFIER DEFITIONS

J - The analyte was positively identified and the associated numerical value is the approximate concentration of the analyte in the sample (due either to the quality of the data generated because certain quality control criteria were not met, or the concentration of the analyte was below the quantitation limit).

UJ - The analyte was not detected at a level greater than or equal to the adjusted quantitation limit. However, the reported adjusted quantiation limit is approximate and may be inaccurate or imprecise.

Weston Solutions, Inc.
20 North Wacker Drive, Suite 1210
Chicago, Il. 60606
(312) 424-3300 fax: (312) 424-3330
www.westonsolutions.com

July 29, 2011

Ms. Brenda Jones and Mr. Ajit Vaidya
Great Lakes National Program Office
United States Environmental Protection Agency, Region V
77 West Jackson Boulevard, Mail Code: G-17J
Chicago, Illinois 60604-3507

Re: Data Review of Metals Analysis
For Sediment Samples Collected on May 11, 2011
CLP Case No. 41260, SDG No. ME0268
Duck and Otter Creeks Confluence Investigation
Wood and Lucas Counties, Ohio
DCN: 1269-2B-AOVS

Dear Ms. Jones and Mr. Vaidya:

The United States Environmental Protection Agency (U.S. EPA) tasked Weston Solutions, Inc., (WESTON®) to perform data validation for the five percent of the sediment samples collected in May 2011 for the Great Lakes National Program Office (GLNPO) Duck and Otter Creeks Confluence Investigation Site. This data review is for metals analyses of seven sediment samples that include two field duplicate samples that were collected by WESTON under Sample Delivery Group (SDG) number ME0268. The samples were validated in accordance with the "Quality Assurance Project Plan (QAPP), Duck and Otter Creeks Data Gaps Investigation" dated September 28, 2010, and QAPP Amendment 1 dated May 5, 2011, which includes using the U.S. EPA Contract Laboratory Program (CLP) National Functional Guidance for Organic and Inorganic Data Review. Table 1 provides a summary of the samples included in this review. All tables are presented at the end of this report.

The samples listed in Table 1 were analyzed under the U.S. EPA CLP by Sentinel, Inc., (Sentinel) located in Huntsville, Alabama, under case number 41260. Because only five percent of data is to be validated, SDG number ME0268 was selected for data validation.

Sediment samples were analyzed for metals using U.S. EPA CLP Statement of Work (SOW) ISM01.2. Table 2 provides a list of the metals that were analyzed. Sentinel did not provide a Staged Electronic Data Deliverable (SEDD) with the CLP analytical package. Therefore, the Automated Data Review (ADR) software was not utilized to assist in reviewing this data.

Attachment A to this report contains the individual Quality Assurance/Quality Control (QA/QC) Analysis Checklist for Sediment Chemistry Analysis for SDG ME0268. Attachment B to this report contains a printed summary report of sample results with hand-written qualifiers that were applied during the data review. Attachment C to this report contains a list of the data qualifier definitions associated with the sample results. The QC limits utilized were those stated in the QAPP. If there was not a QC limit specified in the QAPP, then the method or laboratory-determined QC limits were used. Below is the data review summary.

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SUMMARY OF METALS DATA REVIEW

As stated above, only five percent of the data was validated. SDG ME0268 was selected for data validation. In SDG ME0268, the holding times, calibration standards, laboratory control sample (LCS), and interference check sample were all within the QC limits. Results were reported on a dry-weight basis.

The method blank and calibration blanks had some metals detected above the method detection limit but below the reporting limit that required some metals to be flagged as not detected in the samples. The QC limits were exceeded for some metals in the matrix spike (MS), laboratory duplicate, and serial dilution that required some metal results to be flagged as estimated. In addition, one of the two field duplicates had somewhat elevated relative percent difference (RPD) values.

Below are a description of the minor problems with QC failures and a review of the data quality indicators.

MINOR PROBLEMS

Minor problems with QC failures are noted below.

Method Blank Results. The method blank contained minor detections of some analytes at concentrations below the reporting limit (barium, cobalt, magnesium, mercury, nickel, and potassium). Except for mercury, the detected sample results for these metals were more than 10 times the blank contamination and no qualification was required. For mercury, results detected at less than 10 times the blank result were flagged "U" as not detected below the CRQL value. Attachment B contains hand-written qualifiers indicating which sample results for mercury were flagged "U."

Calibration Blank Results. There were detections of some target analytes in the calibration blanks that were below the reporting limit but above the method detection limit. Most of the sample results were more than ten times the blank concentration and no qualifications were required. The exception were three mercury results which were flagged "U" as not detected. Attachment B contains hand-written qualifiers indicating which sample results for mercury were flagged "U."

MS Results. Three metals were detected outside the QC limit in the MS sample: antimony with a 44 percent recovery, manganese with a 71 percent recovery, and zinc with a 67 percent recovery. All antimony, manganese, and zinc results were qualified "J" as estimated due to potential matrix interference. The laboratory flagged these same results with an "N" to indicate that the MS was outside QC limits. Attachment B contains hand-written qualifiers indicating which samples were flagged "J."

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Serial Dilution Results. In the serial dilution sample, the following metals were detected at greater than the QC limit of ten percent difference: barium, beryllium, cadmium, silver, and sodium. Those sample results that are greater than 50 times the method detection limit were flagged "J" as estimated. Data usability is not affected.

Field Duplicate Results. There are two field duplicates associated with this SDG (identified with a "DP" suffix in the station location designation, see Table 1). The field duplicates were collected adjacent to one another and not from the same homogenized sample aliquot as the parent sample.

The RPDs between the field duplicate results and investigative sample results were compared to a standard QC limit of 50 RPD or less. For the field duplicate pair associated with sample OC-42-02, all RPDs were below 50 except for one analyte which had an RPD of 80. In general there was good correlation between the parent sample and field duplicate sample OC-42-02DP. Table 3 summarizes the field duplicate results.

For the field duplicate pair associated with sample OC-25-01, more than half of the RPDs exceeded 50 percent. The elevated RPDs indicate definite sample heterogeneity associated with sample OC-25-01 and its duplicate. Table 3 summarizes the field duplicate results.

DATA QUALITY INDICATORS REVIEW

Many the data quality indicators (sensitivity, precision, accuracy, and completeness) were evaluated through the data validation procedures which are summarized above and discussed in detail in the attachments.

Sensitivity. The laboratory reporting limits stated in the QAPP were met for target metals, when adjusted for percent moisture. The laboratory reported those results detected below the reporting limit and flagged these results with a "J" as estimated. Sensitivity was acceptable for the samples associated with SDG ME0268.

Precision. Field precision was evaluated by evaluating the RPDs for two field duplicate samples. Although one RPD values for some sample were somewhat high, the average RPD value for the two field duplicates were acceptable, with one high average lead RPD value of 88 percent. This does not affect data usability and in general the field duplicate results had good correlation to the parent sample results. The mean RPDs ranged from 7 to 88 percent. Field precision was evaluated and found to be acceptable. Table 4 summarizes the field precision results.

Laboratory precision was determined by evaluating the RPD values for the laboratory duplicate. The RPD values for the laboratory duplicates were within the QC limits except for zinc. Zinc

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results were qualified based on this and data usability is not affected based on one elevated RPD value. Laboratory precision was adequate for the metals analysis. Table 4 summarizes the laboratory precision RPDs.

Accuracy. Accuracy is a measure of the agreement between an observed value and an accepted reference value. Laboratory accuracy was evaluated by reviewing the QC criteria for percent recovery for the LCS and MS results. There were three MS recoveries outside QC limits (only two required qualification, see Minor Problems Section). The LCS recoveries were within QC limits. The LCS recoveries ranged from 95 to 124 percent and the MS recoveries ranged from 44 to 119 percent. Laboratory accuracy was acceptable. Table 4 summarizes the accuracy estimates for this project. In general, there appears to be a slightly high bias associated with the metals analyses for SDG ME0268.

Completeness. Completeness is a measure of the amount of valid data obtained compared to the amount of data that was planned to be collected under normal conditions. All sample results were received.

In summary, the data are acceptable for use and data qualifications were applied to the sample results for method blank contamination, calibration blank contamination, MS results, and serial dilution results. The data summary sheets in Attachment B contain hand-written qualifiers to indicate which samples were qualified during data validation. The laboratory data qualifiers applied are also indicated on the data summary sheets in Attachment B. Attachment C provides data qualifier definitions for those qualifiers applied during data validation and by the laboratory.

If there are any questions or comments regarding this report, please do not hesitate to contact WESTON START at 312-424-3300.

Very truly yours,
Weston Solutions, Inc.

Lisa Graczyk
WESTON START Team

Alex Clark
WESTON START Project Manager

Attachments:
Tables

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A - QA/QC Analysis Checklist for Metals for SDG ME0268
B – Data Summary Report for Metals
C – Data Qualifier Definitions

cc: project file

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Wojdakowski (Kuester), Natalie

From: Graczyk, Lisa
Sent: Tuesday, August 02, 2011 10:37 AM
To: Balla, Tonya
Cc: Wojdakowski (Kuester), Natalie
Subject: Duck & Otter - CLP Metals Data Summary Report
Attachments: Att B-CLP Metals-Data Summary with Qualifiers.PDF; Att A-Metals Checklist-SDG ME0268.doc; Metals CLP Summary Report-May11-D&O-SDG ME0268.doc

See Attached.

Natalie, there were no SEDDs for the CLP Data for Duck and Otter. Therefore, you will need to manually enter in my qualifiers from Att B. Note that I'm only reviewing 5 percent of data so you won't see all sample results for CLP metals in the attachment.

Lisa

Lisa Graczyk
Dynamac Corporation
20 North Wacker Drive, Suite 1210
Chicago, IL 60606
(w) 312-424-3339
(c) 312-305-6745

TABLES

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TABLE 1
SAMPLES INCLUDED IN DATA REVIEW

Sample ID	Sample Location ID	Date Collected	Comment
ME0268	OC-42-02	10/8/2010	
ME0269	OC-42-02-DP	10/7/2010	Field duplicate of OC-42-02
ME0270	OC-25-01	10/7/2010	
ME0271	OC-25-01-DP	10/7/2010	Field duplicate of OC-25-01
ME0272	OC-25-02	10/7/2010	
ME0273	OC-38	10/7/2010	
ME0274	OC-25-03	10/7/2010	

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TABLE 2 METAL ANALYTES	
CAS #	**Analyte**
7429-90-5	Aluminum
7440-36-0	Antimony
7440-38-2	Arsenic
7440-39-3	Barium
7440-41-7	Beryllium
7440-43-9	Cadmium
7440-70-2	Calcium
7440-47-3	Chromium
7440-48-4	Cobalt
7440-50-8	Copper
7439-89-6	Iron
7439-92-1	Lead
7439-95-4	Magnesium
7439-96-5	Manganese
7439-97-6	Mercury
7440-02-0	Nickel
7440-09-7	Potassium
7782-49-2	Selenium
7440-22-4	Silver
7440-23-5	Sodium
7440-28-0	Thallium
7440-62-2	Vanadium
7440-66-6	Zinc

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TABLE 3
FIELD DUPLICATE RESULTS

Analyte	Sample: OC-42-02DP			Sample: OC-25-01DP		
	Sample Result (mg/kg)	Duplicate Result (mg/kg)	RPD	Sample Result (mg/kg)	Duplicate Result (mg/kg)	RPD
Aluminum	9,150	10,800	17	8,500	15,200	57
Antimony	0.32	0.29	10	0.77	1	26
Arsenic	7.1	9.9	33	41.8	83.2	66
Barium	75.6	76.1	1	133	153	14
Beryllium	0.4	0.46	14	0.33	0.58	55
Cadmium	0.47	0.55	16	1.1	2.5	78
Calcium	65,500	58,900	11	237,000	154,000	42
Chromium	18.5	18	3	18.8	38.1	68
Cobalt	9.6	10.1	5	4	7.2	57
Copper	23.6	24.5	4	20	35.6	56
Iron	18,900	22,000	15	11,000	18,400	50
Lead	16.3	38.1	80	29.7	84.3	96
Magnesium	13,500	16,300	19	10,500	12,900	21
Manganese	444	519	16	388	459	17
Mercury	0.039	0.063	47	0.069	0.094	31
Nickel	24.5	25.9	6	22.4	29.6	28
Potassium	2,040	2,050	0	1,010	1,780	55
Selenium	<4.5	<4.7	NA	3.8	4.6	19
Silver	1.4	1.7	19	0.71	1.2	51
Sodium	199	205	3	442	447	1
Thallium	<3.2	<3.4	NA	<5.1	<5.1	NA
Vanadium	22.6	26.8	17	23.8	51.7	74
Zinc	105	78	30	83.3	162	64

Notes:
Highlighted results exceed 50 RPD.
mg/kg – Milligram per Kilogram
NA – Not Applicable
RPD – Relative Percent Difference

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TABLE 4
QUANTITATIVE DATA ASSESSMENT

Analyte	Field Precision Field Duplicate RPD (%) (n=2)	Analytical Precision Laboratory Duplicate RPD (%) (n=1)	Analytical Accuracy/Bias LCS Recovery (%) (n=1)	Analytical Accuracy/Bias MS Recovery (%) (n=1)
Aluminum	37	1	124	NA
Antimony	18	NA	106	44
Arsenic	50	20	95	119
Barium	7	0	120	98
Beryllium	34	0	110	100
Cadmium	47	9	110	97
Calcium	27	3	113	NA
Chromium	35	7	115	103
Cobalt	31	2	114	103
Copper	30	11	116	111
Iron	33	2	115	NA
Lead	88	11	105	108
Magnesium	20	6	112	NA
Manganese	16	2	117	71
Mercury	39	5	NA	102
Nickel	17	1	114	103
Potassium	28	5	112	NA
Selenium	NA	NA	110	95
Silver	NA	7	100	97
Sodium	2	3	105	NA
Thallium	NA	NA	108	103
Vanadium	45	5	114	103
Zinc	47	56	114	67

Notes:
LCS – Laboratory Control Sample
MS – Matrix Spike
NA – Not Applicable
RPD – Relative Percent Difference

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ATTACHMENT A

QA/QC ANALYSIS CHECKLIST FOR METALS FOR SDG ME0268

Metals
BY CLP SOW ISM01.2

CASE# 41260
SDG# ME0268

QA/QC Analysis Checklist for Sediment Chemistry Analysis

GRANT/IAG NUMBER: Not Applicable
PROJECT NAME: Duck and Otter Creeks 2010 Data Gaps Investigation
REVIEWER: Lisa Graczyk, WESTON START
DATE: July 29, 2011

1. What sediment chemistry data has been collected (CHECK ALL THAT APPLY)?

Total Metals _X_	PCBs _____	pH _____	TOC _____
Dioxins/Furans _____	PAHs _____	Pesticides _____	DO _____
AVS _____	SEM Metals _____	Particle Size _____	Other _____

2. Were the target detection limits met for each parameter?

Yes X
No _____ (EXPLAIN)

The laboratory reporting limits were met (prior to adjustment for percent moisture).

3. Were the method blanks less than the established MDL for each parameter?

Yes _____
No X (EXPLAIN)

The method blank contained minor detections of some analytes at concentrations below the reporting limit (barium, cobalt, magnesium, mercury, nickel, and potassium). Except for mercury, the detected sample results for these metals were more than 10 times the blank contamination and no qualification was required. For mercury, results detected at less than 10 times the blank result were flagged "U" as not detected below the CRQL value.

4. Did the results of Field Replicate Analysis vary by less than the % RPD specified in the QAPP?

Yes	Not Applicable	
No		(EXPLAIN)

5. Did the results of the Field Duplicates Analysis vary by less than the % RPD specified in the QAPP?

Yes		
No	X	(EXPLAIN)

There are two field duplicates associated with this SDG (identified with a "DP" suffix in the station location designation). The field duplicates were collected adjacent to one another and not from the same homogenized sample aliquot as the parent sample.

The RPDs between the field duplicate results and investigative sample results were compared to a standard QC limit of 50 RPD or less. For the field duplicate pair associated with sample OC-42-02, all RPDs were below 50 except for one analyte which had an RPD of 88. For the field duplicate pair associated with sample OC-25-01, more than half of the RPDs exceeded 50 percent. The elevated RPDs indicate sample heterogeneity.

6. Did the surrogate spike/internal standards recoveries meet the limits set forth in the QAPP?

Yes	Not Applicable	
No		(EXPLAIN)

7. Did the MS/MSD recoveries meet the limits set forth in the QAPP?

Yes	
No	X

Three metals were detected outside the QC limit in the MS sample: antimony had a 44 percent recovery, manganese had a 71 percent recovery, and zinc had a 67 percent recovery. All antimony, manganese, and zinc results were qualified "J" as estimated due to potential matrix interference. The laboratory flagged these same results with an "N" to indicate that the MS was outside QC limits.

8. Did the RPD (%) of the MS/MSD sample set meet the limits set forth in the QAPP?

Yes	Not Applicable	
No		(EXPLAIN)

An MSD was not analyzed with the dissolved metals analysis.

9. Did the LCS recoveries meet the limits set forth in the QAPP?

Yes	X	
No		(EXPLAIN)

10. Did the calibration verification standards (ICVs and CCVs) meet the requirements set forth in the QAPP?

Yes	X	
No		(EXPLAIN)

Metals Checklist (CLP Data)
Duck and Otter Creeks 2010 Data Gaps Investigation
ALS Laboratory Group
Case #: 41260, SDG #: ME0268

11. Did the calibration blanks (ICBs and CCBs) meet the limits set forth in the QAPP?

Yes		
No	X	(EXPLAIN)

There were detections of several target analytes in the calibration blanks that were below the reporting limit but above the method detection limit. Most of the sample results were more than ten times the blank concentration and no qualifications were required. The exception was three mercury results which were flagged "U" as not detected.

12. Did the interference check samples meet the limits set forth in the QAPP?

Yes	X	
No		(EXPLAIN)

13. Did the serial dilution samples meet the limits set forth in the QAPP?

Yes		
No	X	(EXPLAIN)

The following metals were detected at greater than a ten percent difference in the serial dilution sample: barium, beryllium, cadmium, silver, and sodium. Those sample results that are greater than 50 times the method detection limit were flagged "J" as estimated. Data usability is not affected.

14. Were any level of contaminants detected above the MDL for the trip blanks and storage blanks?

Yes	Not Applicable	
No		(EXPLAIN)

Trip blanks and storage blanks are not applicable to this work order.

15. Did all required analyses take place within the required holding time protocols set forth in the QAPP?

Yes	X	
No		(EXPLAIN)

16. Did the laboratory duplicates vary by less than the % RPD specified in the QAPP?

Yes		
No	X	(EXPLAIN)

The laboratory duplicate met the requirements of the data validaton guidance of less than 20 RPD except for zinc. Detected results for zinc were flagged "J" as estimated.

17. Are measured dry-weight contaminant concentrations reported?

Yes	X	
No		(EXPLAIN)

18. Please provide details for all of the "UNACCEPTABLE" marked above. Include details on the specific analytes affected by any QA/QC discrepancies, and recommendations regarding usability of data.

Any items with "UNACCEPTABLE" marked above are described immediately following the "UNACCEPTABLE" marking in the corresponding item above.

The data are acceptable for use as qualified.

Metals Checklist (CLP Data)
Duck and Otter Creeks 2010 Data Gaps Investigation
ALS Laboratory Group
Case #: 41260, SDG #: ME0268

ATTACHMENT B

DATA SUMMARY REPORT FOR METALS

USEPA - CLP

1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

ME0268

Lab Name: Sentinel Contract: EPW09040

Lab Code: SENTIN Case No.: 41260 Mod. Ref. No. SDG No.: ME0268

Matrix: (soil/water) SOIL Lab Sample ID: 14001Z

% Solids: 77.8 Date Received: 05/12/2011

Concentration Units (ug/L, ug, or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	9150			P
7440-36-0	Antimony	0.32 J	J	N	P
7440-38-2	Arsenic	7.1			P
7440-39-3	Barium	75.6 J		E	P
7440-41-7	Beryllium	0.40 J	J	E	P
7440-43-9	Cadmium	0.47	J		P
7440-70-2	Calcium	65500			P
7440-47-3	Chromium	18.5			P
7440-48-4	Cobalt	9.6			P
7440-50-8	Copper	23.6			P
7439-89-6	Iron	18900			P
7439-92-1	Lead	16.3			P
7439-95-4	Magnesium	13500			P
7439-96-5	Manganese	444 J		N	P
7439-97-6	Mercury	0.10 ~~0.039~~ J			CV
7440-02-0	Nickel	24.5			P
7440-09-7	Potassium	2040			P
7782-49-2	Selenium	4.5	U		P
7440-22-4	Silver	1.4			P
7440-23-5	Sodium	199	J		P
7440-28-0	Thallium	3.2	U		P
7440-62-2	Vanadium	22.6			P
7440-66-6	Zinc	105 J		N*	P
57-12-5	Cyanide				NR

Color Before: BROWN Clarity Before: Texture: MEDIUM

Color After: YELLOW Clarity After: Artifacts:

Comments:

FORM IA-IN ISM01.2 (1/10)

7/27/11

USEPA - CLP

1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
ME0269

Lab Name: Sentinel Contract: EPW09040

Lab Code: SENTIN Case No.: 41260 Mod. Ref. No. SDG No.: ME0268

Matrix: (soil/water) SOIL Lab Sample ID: 14002

% Solids: 74.5 Date Received: 05/12/2011

Concentration Units (ug/L, ug, or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	10800			P
7440-36-0	Antimony	0.29 J	J	N	P
7440-38-2	Arsenic	9.9			P
7440-39-3	Barium	76.1 J		E	P
7440-41-7	Beryllium	0.46 J	J	E	P
7440-43-9	Cadmium	0.55	J		P
7440-70-2	Calcium	58900			P
7440-47-3	Chromium	18.0			P
7440-48-4	Cobalt	10.1			P
7440-50-8	Copper	24.5			P
7439-89-6	Iron	22000			P
7439-92-1	Lead	38.1			P
7439-95-4	Magnesium	16300			P
7439-96-5	Manganese	519 J		N	P
7439-97-6	Mercury	0.063	J		CV
7440-02-0	Nickel	25.9			P
7440-09-7	Potassium	2050			P
7782-49-2	Selenium	4.7	U		P
7440-22-4	Silver	1.7			P
7440-23-5	Sodium	205	J		P
7440-28-0	Thallium	3.4	U		P
7440-62-2	Vanadium	26.8			P
7440-66-6	Zinc	78.0 J		N*	P
57-12-5	Cyanide				NR

Color Before: BROWN Clarity Before: Texture: MEDIUM

Color After: YELLOW Clarity After: Artifacts:

Comments:

FORM IA-IN ISM01.2 (1/10)

ZH
7/27/11

USEPA - CLP

1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
ME0270

Lab Name: Sentinel Contract: EPW09040

Lab Code: SENTIN Case No.: 41260 Mod. Ref. No. SDG No.: ME0268

Matrix: (soil/water) SOIL Lab Sample ID: 14003

% Solids: 49.0 Date Received: 05/12/2011

Concentration Units (ug/L, ug, or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	8500			P
7440-36-0	Antimony	0.77 J	J	N	P
7440-38-2	Arsenic	41.8			P
7440-39-3	Barium	133 J		E	P
7440-41-7	Beryllium	0.33 J	J	E	P
7440-43-9	Cadmium	1.1 J			P
7440-70-2	Calcium	237000		D	P
7440-47-3	Chromium	18.8			P
7440-48-4	Cobalt	4.0	J		P
7440-50-8	Copper	20.0			P
7439-89-6	Iron	11000			P
7439-92-1	Lead	29.7			P
7439-95-4	Magnesium	10500 J			P
7439-96-5	Manganese	388 J		N	P
7439-97-6	Mercury	0.10 ~~-0.069~~	J		CV
7440-02-0	Nickel	22.4			P
7440-09-7	Potassium	1010	J		P
7782-49-2	Selenium	3.8	J		P
7440-22-4	Silver	0.71	J		P
7440-23-5	Sodium	442 J	J		P
7440-28-0	Thallium	5.1	U		P
7440-62-2	Vanadium	23.8			P
7440-66-6	Zinc	83.3 J		N*	P
57-12-5	Cyanide				NR

Color Before: BROWN Clarity Before: Texture: MEDIUM

Color After: YELLOW Clarity After: Artifacts:

Comments:

FORM IA-IN ISM01.2 (1/10)

LB
7/27/11

USEPA - CLP

1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
ME0271

Lab Name: Sentinel Contract: EPW09040

Lab Code: SENTIN Case No.: 41260 Mod. Ref. No. SDG No.: ME0268

Matrix: (soil/water) SOIL Lab Sample ID: 14004

% Solids: 48.6 Date Received: 05/12/2011

Concentration Units (ug/L, ug, or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	15200			P
7440-36-0	Antimony	1.0 J	J	N	P
7440-38-2	Arsenic	83.2			P
7440-39-3	Barium	153 J		E	P
7440-41-7	Beryllium	0.58 J	J	E	P
7440-43-9	Cadmium	2.5 J			P
7440-70-2	Calcium	154000		D	P
7440-47-3	Chromium	38.1			P
7440-48-4	Cobalt	7.2	J		P
7440-50-8	Copper	35.6			P
7439-89-6	Iron	18400			P
7439-92-1	Lead	84.3			P
7439-95-4	Magnesium	12900			P
7439-96-5	Manganese	459 J		N	P
7439-97-6	Mercury	0.094	J		CV
7440-02-0	Nickel	29.6			P
7440-09-7	Potassium	1780			P
7782-49-2	Selenium	4.6	J		P
7440-22-4	Silver	1.2	J		P
7440-23-5	Sodium	447 J	J		P
7440-28-0	Thallium	5.1	U		P
7440-62-2	Vanadium	51.7			P
7440-66-6	Zinc	162 J		N*	P
57-12-5	Cyanide				NR

Color Before: BROWN Clarity Before: Texture: MEDIUM

Color After: YELLOW Clarity After: Artifacts:

Comments:

FORM IA-IN ISM01.2 (1/10)

ZB
7/27/11

USEPA - CLP

1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
ME0272

Lab Name: Sentinel Contract: EPW09040

Lab Code: SENTIN Case No.: 41260 Mod. Ref. No. SDG No.: ME0268

Matrix: (soil/water) SOIL Lab Sample ID: 14005

% Solids: 47.6 Date Received: 05/12/2011

Concentration Units (ug/L, ug, or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	18400			P
7440-36-0	Antimony	0.61 J	J	N	P
7440-38-2	Arsenic	42.7			P
7440-39-3	Barium	173 J		E	P
7440-41-7	Beryllium	0.75 J	J	E	P
7440-43-9	Cadmium	4.4 J			P
7440-70-2	Calcium	130000		D	P
7440-47-3	Chromium	80.7			P
7440-48-4	Cobalt	10	J		P
7440-50-8	Copper	61.1			P
7439-89-6	Iron	26100			P
7439-92-1	Lead	67.7			P
7439-95-4	Magnesium	12700			P
7439-96-5	Manganese	471 J		N	P
7439-97-6	Mercury	0.10	J		CV
7440-02-0	Nickel	47.4			P
7440-09-7	Potassium	2600			P
7782-49-2	Selenium	1.8	J		P
7440-22-4	Silver	3.3 J			P
7440-23-5	Sodium	735 J	J		P
7440-28-0	Thallium	5.3	U		P
7440-62-2	Vanadium	39.9			P
7440-66-6	Zinc	224 J		N*	P
57-12-5	Cyanide				NR

Color Before: BROWN Clarity Before: Texture: MEDIUM

Color After: YELLOW Clarity After: Artifacts:

Comments:

FORM IA-IN ISM01.2 (1/10)

7/27/11

USEPA - CLP

1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
ME0273

Lab Name: Sentinel Contract: EPW09040

Lab Code: SENTIN Case No.: 41260 Mod. Ref. No. SDG No.: ME0268

Matrix: (soil/water) SOIL Lab Sample ID: 14006

% Solids: 76.3 Date Received: 05/12/2011

Concentration Units (ug/L, ug, or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	9830			P
7440-36-0	Antimony	0.10 J	J	N	P
7440-38-2	Arsenic	8.4			P
7440-39-3	Barium	72.3 J		E	P
7440-41-7	Beryllium	0.43 J	J	E	P
7440-43-9	Cadmium	0.37	J		P
7440-70-2	Calcium	75800		D	P
7440-47-3	Chromium	16.3			P
7440-48-4	Cobalt	10.1			P
7440-50-8	Copper	22.6			P
7439-89-6	Iron	21500			P
7439-92-1	Lead	9.2			P
7439-95-4	Magnesium	16400			P
7439-96-5	Manganese	443 J		N	P
7439-97-6	Mercury	0.10 ~~0.023~~	~~J~~		CV
7440-02-0	Nickel	28.0			P
7440-09-7	Potassium	2390			P
7782-49-2	Selenium	4.6	U		P
7440-22-4	Silver	1.7			P
7440-23-5	Sodium	239	J		P
7440-28-0	Thallium	3.3	U		P
7440-62-2	Vanadium	23.0			P
7440-66-6	Zinc	53.6 J		N*	P
57-12-5	Cyanide				NR

Color Before: BROWN Clarity Before: Texture: MEDIUM

Color After: YELLOW Clarity After: Artifacts:

Comments:

FORM IA-IN ISM01.2 (1/10)

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7/27/11

USEPA - CLP

1A-IN
INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.
ME0274

Lab Name: Sentinel Contract: EPW09040

Lab Code: SENTIN Case No.: 41260 Mod. Ref. No. SDG No.: ME0268

Matrix: (soil/water) SOIL Lab Sample ID: 14007

% Solids: 60.8 Date Received: 05/12/2011

Concentration Units (ug/L, ug, or mg/kg dry weight): MG/KG

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	13000			P
7440-36-0	Antimony	0.80 J	J	N	P
7440-38-2	Arsenic	12.5			P
7440-39-3	Barium	131 J		E	P
7440-41-7	Beryllium	0.68 J	J	E	P
7440-43-9	Cadmium	2.1 J			P
7440-70-2	Calcium	72400			P
7440-47-3	Chromium	41.9			P
7440-48-4	Cobalt	10.8			P
7440-50-8	Copper	44.5			P
7439-89-6	Iron	26100			P
7439-92-1	Lead	47.2			P
7439-95-4	Magnesium	19100			P
7439-96-5	Manganese	501 J		N	P
7439-97-6	Mercury	0.16	J		CV
7440-02-0	Nickel	37.1			P
7440-09-7	Potassium	2550			P
7782-49-2	Selenium	5.8	U		P
7440-22-4	Silver	2.4 J			P
7440-23-5	Sodium	1030 J			P
7440-28-0	Thallium	4.1	U		P
7440-62-2	Vanadium	30.4			P
7440-66-6	Zinc	157 J		N*	P
57-12-5	Cyanide				NR

Color Before: BROWN Clarity Before: Texture: MEDIUM

Color After: YELLOW Clarity After: Artifacts:

Comments:

FORM IA-IN ISM01.2 (1/10)

LV 7/27/11

ATTACHMENT C

DATA QUALIFIER DEFINITIONS

LABORATORY DATA QUALIFIER DEFITIONS

* - Duplicate analysis not within control limits.

D - The reported value is from a dilution.

E - The reported value is estimated due to the presence of interference.

J - The result is an estimated value that was detected outside the quantitation range.

N - Spiked sample recovery not within control limits.

U - The analyte was analyzed for, but not detected at or above the reporting limit.

DATA VALIDATION DATA QUALIFIER DEFITIONS

J - The analyte was positively identified and the associated numerical value is the approximate concentration of the analyte in the sample (due to the quality of the data generated because certain quality control criteria were not met).

U - The analyte was analyzed for, but not detected above the level of the reported sample quantitation limit.

Weston Solutions, Inc.
20 North Wacker Drive, Suite 1210
Chicago, IL 60606
(312) 424-3300 fax: (312) 424-3330
www.westonsolutions.com

August 8, 2011

Ms. Brenda Jones and Mr. Ajit Vaidya
Great Lakes National Program Office
United States Environmental Protection Agency, Region V
77 West Jackson Boulevard, Mail Code: G-17J
Chicago, Illinois 60604-3507

Re: Data Review of General Chemistry Analyses (DOC, hardness, pH, and ammonia)
For the Pore Water of Sediment Samples Collected on May 10-12, 2011
Duck and Otter Creeks Confluence Investigation
Wood and Lucas Counties, Ohio
DCN: 1269-2B-AOVS

Dear Ms. Jones and Mr. Vaidya:

The United States Environmental Protection Agency (U.S. EPA) tasked Weston Solutions, Inc., (WESTON®) to perform data validation for sediment samples collected on May 10-12, 2011, for the Great Lakes National Program Office (GLNPO) Duck and Otter Creeks Confluence Investigation (Duck and Otter) Site. This data review is for dissolved organic carbon (DOC), hardness, pH, and ammonia analyses of the pore water of 21 sediment samples that includes two field split and two field duplicate samples that were collected by the WESTON Superfund Technical Assessment and Response Team (START). The samples were validated in accordance with the "Quality Assurance Project Plan (QAPP), Duck and Otter Creeks Data Gaps Investigation" dated September 28, 2010, and QAPP Amendment 1 dated May 5, 2011, which includes using the U.S. EPA Contract Laboratory Program National Functional Guidance for Organic and Inorganic Data Review. Table 1 provides a summary of the samples included in this review. All tables are presented at the end of this report.

The samples listed in Table 1 were analyzed by Columbia Analytical Services (CAS) located in Kelso, Washington, under the following three work orders:

- K1104187
- K1104250
- K1104355

Pore water was extracted from the sediment samples and then the pore water was analyzed for DOC using U.S. EPA Method 415.1; for hardness (as calcium carbonate) using Standard Method (SM) 2340B and U.S. EPA SW-856 Method 6010C; for pH using SM 4500-H+B; and for ammonia (as nitrogen) using SM 4500-NH3E. CAS provided WESTON with a staged electronic data deliverable (SEDD) that was used in conjunction with the Automated Data Review (ADR) software to assist in reviewing the data. All SEDDs were imported into the ADR software for review by the software program and all data was checked for completeness. Five percent of the data was put through a full data validation. Therefore, one of the work orders, K1104187, was

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selected for the full data validation. Work order K1104187 contained two sediment samples general chemistry parameters of pore water.

Attachment A to this report contains the individual Quality Assurance/Quality Control (QA/QC) Analysis Checklist for Sediment Chemistry Analysis for work order K1104187. Attachment B to this report contains a printed report from ADR that provides a summary of results with qualifiers applied by the laboratory and the ADR program. Attachment C contains the data qualifier definitions. The QC limits utilized were those stated in the QAPP. If there was not a QC limit specified in the QAPP, then the method or laboratory-determined QC limits were used. Below is the data review summary.

SUMMARY OF GENERAL CHEMISTRY DATA REVIEW

As stated above, five percent of the data was fully validated. Work order K1104187 was selected for full data validation. In work order K1104187, calibration standards, laboratory control samples (LCS), laboratory duplicates, matrix spike (MS) samples, matrix spike duplicates (MSD), interference check sample, and holding times were all within the QC limits as applicable to each method for DOC, pH, ammonia, and hardness.

Through full data validation and the ADR program, two problems with the quality control indicators were discovered. For the pH analyses, the holding time limits were excessive for some samples. In addition, there was minor contamination below the reporting limit in the method blank for DOC and ammonia; however, no qualification was required because the sample results were much greater.

In accordance with the Field Sampling Plan, field duplicates and field splits were not to be collected for the pore water analyses; however, two field split and two field duplicate samples were collected. A QC limit for field duplicates was not stated in the QAPP; therefore, a default QC limit of 50 relative percent difference (RPD) was used to evaluate field split and duplicate results. The RPDs for hardness and pH were all below 50 percent. The RPD for ammonia was elevated in one field duplicate sample and the RPDs for DOC were elevated in one field duplicate and one field split sample. This indicates some minor heterogeneity with ammonia and DOC in the pore water samples. Field duplicate and field split results are acceptable. Tables 2 and 3 summarize the field split and field duplicate results, respectively.

Below are a description of the minor problems with QC failures and a review of the data quality indicators.

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MINOR PROBLEMS

Minor problems with QC failures are noted below.

Holding Times. The holding times for DOC, ammonia, and hardness were acceptable. For pH, the method states that samples should be analyzed as soon as possible. Approximately 13 pore water sample pH results were flagged "J" as estimated because the pH analysis was conducted more than 14 days after sediment collection.

Method Blanks and Calibration Blanks. Ammonia and DOC were detected in method blanks and calibration blanks above the method detection limit but below the reporting limit. Sample results were much greater than the method blank concentration and therefore, no qualifications were required.

DATA QUALITY INDICATORS REVIEW

Many the data quality indicators (sensitivity, precision, accuracy, and completeness) were evaluated through the data validation procedures which are summarized above and discussed in detail in the Attachment.

Sensitivity. The laboratory reporting limits as stated in the QAPP was met for all samples when adjusted for the dilution factors. Sensitivity was acceptable.

Precision. Field precision was evaluated by evaluating the RPDs for the two field split and two field duplicate samples. There were two elevated RPDs for DOC and one elevated RPD for ammonia indicating some minor sample heterogeneity associated with ammonia and DOC. However, the average RPDs for all splits/duplicates were less than 50 percent. Tables 2 and 3 summarize the field split and field duplicate results, respectively. Field precision was evaluated and found to be acceptable.

Laboratory precision was determined by evaluating the RPD values for the laboratory duplicates for DOC, pH, hardness, and ammonia. The RPD values were all within the QAPP-stated QC limits. The mean RPDs for laboratory duplicates ranged from 0 to 2 percent. Table 4 summarizes the laboratory precision results. The laboratory precision was acceptable for the DOC, pH, ammonia, and hardness analyses.

Accuracy/Bias. Accuracy is a measure of the agreement between an observed value and an accepted reference value. Laboratory accuracy was evaluated by reviewing the QC criteria for percent recovery for MS results for DOC and ammonia; and LCS results for DOC, hardness, pH, and ammonia.

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The mean LCS recoveries ranged from 98 to 100 percent and are within the QAPP QC limits. The mean MS recoveries ranged from 105 to 108 percent and are within the QAPP specified QC limits. Laboratory accuracy is acceptable. The LCS recoveries do not indicate a bias associated with the pH, ammonia, hardness, and DOC results.

Completeness. Completeness is a measure of the amount of valid data obtained compared to the amount of data that was planned to be collected under normal conditions. All samples results were received.

In summary, the data are acceptable for use and data qualifications were applied to some sample result for excessive holding times for pH. The ADR Summary Report in Attachment B indicates which sample results were flagged during data validation and the reason for the qualification. The laboratory data qualifiers applied are also indicated on the ADR Summary Report in Attachment B. Attachment C provides data qualifier definitions for those qualifiers applied during data validation (no qualifications were applied by the laboratory).

If there are any questions or comments regarding this report, please do not hesitate to contact WESTON START at 312-424-3300.

Very truly yours,
Weston Solutions, Inc.

Lisa Graczyk
WESTON START Team

Alex Clark
WESTON START Project Manager

Attachments:
Tables
A - QA/QC Analysis Checklist for General Chemistry Parameters for Work Order K1104187
B – ADR Summary Report for General Chemistry Parameters
C – Data Qualifier Definitions

cc: project file

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TABLES

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TABLE 1
SAMPLES INCLUDED IN DATA REVIEW

Sample ID	Lab ID	Date Collected	Comment
OC-44	K1104187-009	05/10/2011	
OC-45	K1104187-010	05/10/2011	
DC-25-01	K1104250-020	05/11/2011	
DC-25-01-DP	K1104250-021	05/11/2011	Field duplicate of DC-25-01
OC-42-01	K1104250-022	05/11/2011	
OC-42-01-DP	K1104250-023	05/11/2011	Field duplicate of OC-42-01
DC-20-01	K1104250-024	05/11/2011	
DC-20-01-SP	K1104250-025	05/11/2011	Field split of DC-20-01
DC-21-01	K1104250-026	05/11/2011	
OC-38-01	K1104250-027	05/11/2011	
OC-36-01	K1104250-028	05/10/2011	
OC-40-01	K1104250-029	05/10/2011	
OC-41-01	K1104250-030	05/10/2011	
DC-22-01	K1104355-028	05/11/2011	
OC-35-01	K1104355-029	05/12/2011	
OC-46-01	K1104355-030	05/12/2011	
OC-47-01	K1104355-031	05/12/2011	
OC-48-01	K1104355-032	05/12/2011	
DC-22-01-SP	K1104355-033	05/11/2011	Field split of DC-22-01
DC-23-01	K1104355-034	05/11/2011	
DC-24-01	K1104355-035	05/11/2011	

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TABLE 2
FIELD SPLIT RESULTS

Analyte	Sample: DC-20-01-SP			Sample: DC-22-01-SP		
	Sample Result (mg/L)	Replicate Result (mg/L)	RPD	Sample Result (mg/L)	Replicate Result (mg/L)	RPD
Ammonia as Nitrogen	8	7.81	2	4.18	3.36	22
DOC	13.7	46	108	8.21	7.97	3
Hardness, as CaCO3	1050	1020	3	350	347	1
pH (pH units)	7.97	8	0	7.81	8.77	12

Notes:
Highlighted RPDs exceed 50 percent.
CaCO3 – Calcium Carbonate
DOC – Dissolved Organic Carbon
mg/L – Milligram per liter
RPD – Relative Percent Difference

TABLE 3
FIELD DUPLICATE RESULTS

Analyte	Sample: DC-25-01-DP			Sample: DC-42-01-DP		
	Sample Result (mg/L)	Duplicate Result (mg/L)	RPD	Sample Result (mg/L)	Duplicate Result (mg/L)	RPD
Ammonia as Nitrogen	6.95	17.1	84	1.98	2.02	2
DOC	18.8	45.1	82	14.2	14.3	1
Hardness, as CaCO3	428	681	46	257	258	0
pH (pH units)	7.78	7.9	2	7.78	7.77	0

Notes:
Highlighted RPDs exceed 50 percent.
CaCO3 – Calcium Carbonate
DOC – Dissolved Organic Carbon
mg/L – Milligram per liter
RPD – Relative Percent Difference

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TABLE 4
QUANTITATIVE DATA ASSESSMENT

Analyte	Analytical Precision	Analytical Accuracy/Bias	
	Mean Laboratory Duplicate or LCS/LCSD RPD (%) (n=4 for DOC, Ammonia; n=3 for pH; n=1 for Hardness)	Mean MS Recovery (%) (n=3 for DOC; n=1 for Ammonia)	Mean LCS Recovery (%) (n=5 for DOC, pH; n=6 for Ammonia; n=3 for Hardness)
DOC	1	105	99
Hardness	2	NA	90/100*
pH	0	NA	99
Ammonia	2	108	98

Notes:
* For hardness, a result is calculated from the results for calcium and magnesium. Therefore, the values listed for mean LCS are for calcium/magnesium.

DOC – Dissolved Organic Carbon
LCS – Laboratory Control Sample
MS – Matrix Spike
NA – Not Applicable
RPD – Relative Percent Difference

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ATTACHMENT A

QA/QC ANALYSIS CHECKLIST FOR GENERAL CHEMISTRY PARAMETERS
FOR WORK ORDER K1104187

GENERAL CHEMISTRY PARAMETERS

Dissolved Organic Carbon (DOC) by U.S. EPA Method 415.1
Hardness (as calcium carbonate) by SM 2340B and SW-846 6010C
pH by SM 4500-H+B
Ammonia (as nitrogen) by SM 4500-NH3E

WORK ORDER # K1104187

QA/QC Analysis Checklist for Sediment Chemistry Analysis

GRANT/IAG NUMBER: Not Applicable
PROJECT NAME: GLNPO Duck and Otter 2010 Data Gaps Investigation
REVIEWER: Lisa Graczyk, WESTON START
DATE: August 8, 2011

1. What sediment chemistry data has been collected (CHECK ALL THAT APPLY)?

Total Metals _____	PCBs _____	pH ___X__	TOC _____
Dioxins/Furans _____	PAHs _____	Pesticides _____	DO _____
AVS _____	SEM Metals _____	Particle Size _____	Other ___X (DOC, ammonia, and hardness)

2. Were the target detection limits met for each parameter?

Yes X
No _____ (EXPLAIN)

The reporting limits as stated in the QAPP were achieved when adjusted for dilution factors.

3. Were the method blanks less than the established MDL for each parameter?

Yes _____
No X (EXPLAIN)

A method blank was analyzed with the DOC, ammonia, and hardness analyses.

For the ammonia and DOC analyses, ammonia and DOC were detected below the reporting limit but above the method detection limit in the method blank. Specifically, DOC was detected at 0.09 mg/L and ammonia was detected at 0.033 mg/L. Because the sample results were above the reporting limit and significantly above the method blank results, no qualifications are required.

General Chemistry Parameters Checklist
GLNPO Duck and Otter Creeks Confluence Investigation
Columbia Analytical Services
Laboratory Work Order #: K1104187

4. Did the results of Field Replicate Analysis vary by less than the % RPD specified in the QAPP?

Yes	Not Applicable	
No		(EXPLAIN)

5. Did the results of the Field Duplicates Analysis vary by less than the % RPD specified in the QAPP?

Yes	Not Applicable	
No		(EXPLAIN)

6. Did the surrogate spike/internal standards recoveries meet the limits set forth in the QAPP?

Yes	Not Applicable	
No		(EXPLAIN)

Internal standards and surrogates are not applicable to the pH, ammonia, hardness, and DOC analyses.

7. Did the MS/MSD recoveries meet the limits set forth in the QAPP?

Yes	X	
No		(EXPLAIN)

An MS was analyzed with the DOC and ammonia analyses.

8. Did the RPD (%) of the MS/MSD sample set meet the limits set forth in the QAPP?

Yes	X	
No		(EXPLAIN)

.

General Chemistry Parameters Checklist
GLNPO Duck and Otter Creeks Confluence Investigation
Columbia Analytical Services
Laboratory Work Order #: K1104187

9. Did the LCS recoveries meet the limits set forth in the QAPP?

Yes	X	
No		(EXPLAIN)

10. Did the calibration verification standards (ICVs and CCVs) meet the requirements set forth in the QAPP?

Yes	X	
No		(EXPLAIN)

.

11. Did the calibration blanks (ICBs and CCBs) meet the limits set forth in the QAPP?

Yes		
No	X	(EXPLAIN)

There were minor detections of ammonia and DOC in the calibration blanks below the reporting limit. The sample concentrations were much greater and no qualifications were required.

12. Did the interference check samples meet the limits set forth in the QAPP?

Yes	X	
No		(EXPLAIN)

Interference check sample results are applicable to hardness analysis only.

13. Did the serial dilution samples meet the limits set forth in the QAPP?

Yes	Not Applicable	
No		(EXPLAIN)

Serial dilution results were not analyzed with the analyses.

14. Were any level of contaminants detected above the MDL for the trip blanks and storage blanks?

Yes	Not Applicable	
No		(EXPLAIN)

15. Did all required analyses take place within the required holding time protocols set forth in the QAPP?

Yes	X	
No		(EXPLAIN)

16. Did the laboratory duplicates vary by less than the % RPD specified in the QAPP?

Yes	X	
No		(EXPLAIN)

17. Are measured dry-weight contaminant concentrations reported?

Yes	Not Applicable	
No		(EXPLAIN)

18. Please provide details for all of the "UNACCEPTABLE" marked above. Include details on the specific analytes affected by any QA/QC discrepancies, and recommendations regarding usability of data.

Any items with “UNACCEPTABLE” marked above are described immediately following the “UNACCEPTABLE” marking in the corresponding item above.

The data are acceptable for use.

ATTACHMENT B

ADR SUMMARY REPORT FOR GENERAL CHEMISTRY PARAMETERS

Sample Qualification Report (All Analytes)

Client Sample ID : OC-44 **Lab Report Batch :** K1104187 **Lab ID :** CAS_K

Sample Date : 05/10/2011 **Analysis Type: 1RES/TOT** **Sample Matrix :** AQ

Lab Sample ID: K1104187-009

Reviewed By / Date : LG 8/5/2011 **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 415.1					**Dilution: 2**															
Carbon, Dissolved Organic	47		mg/L		YES															
Analysis Method : 6010C/SM 2340B					**Dilution: 1**															
Hardness as CaCO3	552		mg/L		YES															
Analysis Method : SM 4500-H+ B					**Dilution: 1**															
pH	7.31		pH UNITS		YES															
Analysis Method : SM 4500-NH3 E					**Dilution: 1**															
Ammonia as Nitrogen	18.5		mg/L		YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : OC-45 **Lab Report Batch :** K1104187 **Lab ID :** CAS_K

Sample Date : 05/10/2011 **Analysis Type: 1RES/TOT** **Sample Matrix :** AQ

Lab Sample ID: K1104187-010

Reviewed By / Date : LG 8/5/2011 **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 415.1					**Dilution: 10**															
Carbon, Dissolved Organic	57		mg/L		YES															
Analysis Method : 6010C/SM 2340B					**Dilution: 1**															
Hardness as CaCO3	384		mg/L		YES															
Analysis Method : SM 4500-H+ B					**Dilution: 1**															
pH	7.5		pH UNITS		YES															
Analysis Method : SM 4500-NH3 E					**Dilution: 1**															
Ammonia as Nitrogen	11.1		mg/L		YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : DC-20-01-SP-W
Lab Report Batch : K1104250
Lab ID : CAS_K
Sample Date : 05/11/2011
Analysis Type: 1RES/TOT
Sample Matrix : AQ
Lab Sample ID: K1104250-025

Reviewed By / Date : LG 8/5/2011
Approved By / Date :

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 415.1					**Dilution: 5**															
Carbon, Dissolved Organic	46.0		mg/L		YES															
Analysis Method : 6010B/SM 2340B					**Dilution: 1**															
Hardness as CaCO3	1020		mg/L		YES															
Analysis Method : SM 4500-H+ B					**Dilution: 1**															
pH	8.00		pH UNITS		YES															
Analysis Method : SM 4500-NH3 E					**Dilution: 1**															
Ammonia as Nitrogen	7.81		mg/L		YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : DC-20-01-W
Lab Report Batch : K1104250
Lab ID : CAS_K
Sample Date : 05/11/2011
Analysis Type: 1RES/TOT
Sample Matrix : AQ
Lab Sample ID: K1104250-024

Reviewed By / Date : LG 8/5/2011
Approved By / Date :

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 415.1					**Dilution: 5**															
Carbon, Dissolved Organic	13.7		mg/L		YES															
Analysis Method : 6010B/SM 2340B					**Dilution: 1**															
Hardness as CaCO3	1050		mg/L		YES															
Analysis Method : SM 4500-H+ B					**Dilution: 1**															
pH	7.97		pH UNITS		YES															
Analysis Method : SM 4500-NH3 E					**Dilution: 1**															
Ammonia as Nitrogen	8		mg/L		YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : DC-21-01-W
Lab Report Batch : K1104250
Lab ID : CAS_K
Sample Date : 05/11/2011
Analysis Type: 1RES/TOT
Sample Matrix : AQ
Lab Sample ID: K1104250-026

Reviewed By / Date : LG 8/5/2011
Approved By / Date :

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 415.1					**Dilution: 1**															
Carbon, Dissolved Organic	10.2		mg/L		YES															
Analysis Method : 6010B/SM 2340B					**Dilution: 1**															
Hardness as CaCO3	622		mg/L		YES															
Analysis Method : SM 4500-H+ B					**Dilution: 1**															
pH	7.76		pH UNITS		YES	**J**		J												
Analysis Method : SM 4500-NH3 E					**Dilution: 1**															
Ammonia as Nitrogen	1.81		mg/L		YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : DC-25-01-DP-W
Lab Report Batch : K1104250
Lab ID : CAS_K
Sample Date : 05/11/2011
Analysis Type: 1RES/TOT
Sample Matrix : AQ
Lab Sample ID: K1104250-021

Reviewed By / Date : LG 8/5/2011
Approved By / Date :

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 415.1					**Dilution: 10**															
Carbon, Dissolved Organic	45.1		mg/L		YES															
Analysis Method : 6010B/SM 2340B					**Dilution: 1**															
Hardness as CaCO3	681		mg/L		YES															
Analysis Method : SM 4500-H+ B					**Dilution: 1**															
pH	7.90		pH UNITS		YES															
Analysis Method : SM 4500-NH3 E					**Dilution: 1**															
Ammonia as Nitrogen	17.1		mg/L		YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : DC-25-01-W
Lab Report Batch : K1104250
Lab ID : CAS_K
Sample Date : 05/11/2011
Analysis Type: 1RES/TOT
Sample Matrix : AQ
Lab Sample ID: K1104250-020

Reviewed By / Date : LG 8/5/2011
Approved By / Date :

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 415.1					**Dilution: 2**															
Carbon, Dissolved Organic	18.8		mg/L		YES															
Analysis Method : 6010B/SM 2340B					**Dilution: 1**															
Hardness as CaCO3	428		mg/L		YES															
Analysis Method : SM 4500-H+ B					**Dilution: 1**															
pH	7.78		pH UNITS		YES															
Analysis Method : SM 4500-NH3 E					**Dilution: 1**															
Ammonia as Nitrogen	6.95		mg/L		YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : OC-36-01-W
Lab Report Batch : K1104250
Lab ID : CAS_K
Sample Date : 05/10/2011
Analysis Type: 1RES/TOT
Sample Matrix : AQ
Lab Sample ID: K1104250-028

Reviewed By / Date : LG 8/5/2011
Approved By / Date :

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 415.1					**Dilution: 5**															
Carbon, Dissolved Organic	33.0		mg/L		YES															
Analysis Method : 6010B/SM 2340B					**Dilution: 1**															
Hardness as CaCO3	303		mg/L		YES															
Analysis Method : SM 4500-H+ B					**Dilution: 1**															
pH	7.85		pH UNITS		YES	**J**		J												
Analysis Method : SM 4500-NH3 E					**Dilution: 1**															
Ammonia as Nitrogen	1.11		mg/L		YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : OC-38-W **Lab Report Batch :** K1104250 **Lab ID :** CAS_K

Sample Date : 05/11/2011 **Analysis Type: 1RES/TOT** **Sample Matrix :** AQ

Lab Sample ID: K1104250-027

Reviewed By / Date : LG 8/5/2011 **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 415.1					**Dilution: 1**															
Carbon, Dissolved Organic	6.08		mg/L		YES															
Analysis Method : 6010B/SM 2340B					**Dilution: 1**															
Hardness as CaCO3	427		mg/L		YES															
Analysis Method : SM 4500-H+ B					**Dilution: 1**															
pH	8.03		pH UNITS		YES	**J**		J												
Analysis Method : SM 4500-NH3 E					**Dilution: 2**															
Ammonia as Nitrogen	1.75		mg/L		YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : OC-40-01-W
Lab Report Batch : K1104250
Lab ID : CAS_K
Sample Date : 05/10/2011
Analysis Type: 1RES/TOT
Sample Matrix : AQ
Lab Sample ID: K1104250-029

Reviewed By / Date : LG 8/5/2011
Approved By / Date :

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 415.1					**Dilution: 1**															
Carbon, Dissolved Organic	9.89		mg/L		YES															
Analysis Method : 6010B/SM 2340B					**Dilution: 1**															
Hardness as CaCO3	512		mg/L		YES															
Analysis Method : SM 4500-H+ B					**Dilution: 1**															
pH	8.01		pH UNITS		YES	**J**		J												
Analysis Method : SM 4500-NH3 E					**Dilution: 1**															
Ammonia as Nitrogen	1.29		mg/L		YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : OC-41-01-W
Lab Report Batch : K1104250
Lab ID : CAS_K
Sample Date : 05/10/2011
Analysis Type: 1RES/TOT
Sample Matrix : AQ
Lab Sample ID: K1104250-030

Reviewed By / Date : LG 8/5/2011
Approved By / Date :

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 415.1					**Dilution: 5**															
Carbon, Dissolved Organic	26.4		mg/L		YES															
Analysis Method : 6010B/SM 2340B					**Dilution: 1**															
Hardness as CaCO3	384		mg/L		YES															
Analysis Method : SM 4500-H+ B					**Dilution: 1**															
pH	7.75		pH UNITS		YES	**J**		J												
Analysis Method : SM 4500-NH3 E					**Dilution: 1**															
Ammonia as Nitrogen	0.252		mg/L		YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : OC-42-01-DP-W
Lab Report Batch : K1104250
Lab ID : CAS_K
Sample Date : 05/11/2011
Analysis Type: 1RES/TOT
Sample Matrix : AQ
Lab Sample ID: K1104250-023

Reviewed By / Date : LG 8/5/2011
Approved By / Date :

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 415.1					**Dilution: 10**															
Carbon, Dissolved Organic	14.3		mg/L		YES															
Analysis Method : 6010B/SM 2340B					**Dilution: 1**															
Hardness as CaCO3	258		mg/L		YES															
Analysis Method : SM 4500-H+ B					**Dilution: 1**															
pH	7.77		pH UNITS		YES															
Analysis Method : SM 4500-NH3 E					**Dilution: 1**															
Ammonia as Nitrogen	2.02		mg/L		YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : OC-42-01-W
Lab Report Batch : K1104250
Lab ID : CAS_K
Sample Date : 05/11/2011
Analysis Type: 1RES/TOT
Sample Matrix : AQ
Lab Sample ID: K1104250-022

Reviewed By / Date : LG 8/5/2011
Approved By / Date :

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 415.1					**Dilution: 10**															
Carbon, Dissolved Organic	14.2		mg/L		YES															
Analysis Method : 6010B/SM 2340B					**Dilution: 1**															
Hardness as CaCO3	257		mg/L		YES															
Analysis Method : SM 4500-H+ B					**Dilution: 1**															
pH	7.78		pH UNITS		YES															
Analysis Method : SM 4500-NH3 E					**Dilution: 1**															
Ammonia as Nitrogen	1.98		mg/L		YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : DC-22-01 **Lab Report Batch :** K1104355 **Lab ID :** CAS_K

Sample Date : 05/11/2011 **Analysis Type: 1RES/TOT** **Sample Matrix :** AQ

Lab Sample ID: K1104355-028

Reviewed By / Date : LG 8/5/2011 **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 6010C/SM 2340B					**Dilution: 1**															
Hardness as CaCO3	330		mg/L		YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : DC-22-01-SP
Lab Report Batch : K1104355
Lab ID : CAS_K
Sample Date : 05/11/2011
Analysis Type: 1RES/TOT
Sample Matrix : AQ
Lab Sample ID: K1104355-033

Reviewed By / Date : LG 8/5/2011
Approved By / Date :

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 6010C/SM 2340B					**Dilution: 1**															
Hardness as CaCO3	347		mg/L		YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : DC-22-01-SP-W
Lab Report Batch : K1104355
Lab ID : CAS_K
Sample Date : 05/11/2011
Analysis Type: 1RES/TOT
Sample Matrix : AQ
Lab Sample ID: K1104355-033

Reviewed By / Date : LG 8/5/2011
Approved By / Date :

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 415.1					**Dilution: 1**															
Carbon, Dissolved Organic	7.97		mg/L		YES															
Analysis Method : SM 4500-H+ B					**Dilution: 1**															
pH	8.11		pH UNITS		YES	**J**		J												
Analysis Method : SM 4500-NH3 E					**Dilution: 2**															
Ammonia as Nitrogen	3.36		mg/L		YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : DC-22-01-W
Lab Report Batch : K1104355
Lab ID : CAS_K
Sample Date : 05/11/2011
Analysis Type: 1RES/TOT
Sample Matrix : AQ
Lab Sample ID: K1104355-028

Reviewed By / Date : LG 8/5/2011
Approved By / Date :

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 415.1					**Dilution: 1**															
Carbon, Dissolved Organic	8.21		mg/L		YES															
Analysis Method : SM 4500-H+ B					**Dilution: 1**															
pH	7.81		pH UNITS		YES	**J**		J												
Analysis Method : SM 4500-NH3 E					**Dilution: 1**															
Ammonia as Nitrogen	4.18		mg/L		YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : DC-23-01 **Lab Report Batch :** K1104355 **Lab ID :** CAS_K

Sample Date : 05/11/2011 **Analysis Type: 1RES/TOT** **Sample Matrix :** AQ

Lab Sample ID: K1104355-034

Reviewed By / Date : LG 8/5/2011 **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 6010C/SM 2340B					**Dilution: 1**															
Hardness as CaCO3	283		mg/L		YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : DC-23-01-W
Lab Report Batch : K1104355
Lab ID : CAS_K
Sample Date : 05/11/2011
Analysis Type: 1RES/TOT
Sample Matrix : AQ
Lab Sample ID: K1104355-034

Reviewed By / Date : LG 8/5/2011
Approved By / Date :

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 415.1					**Dilution: 10**															
Carbon, Dissolved Organic	133		mg/L		YES															
Analysis Method : SM 4500-H+ B					**Dilution: 1**															
pH	7.81		pH UNITS		YES	**J**		J												
Analysis Method : SM 4500-NH3 E					**Dilution: 10**															
Ammonia as Nitrogen	6.07		mg/L		YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : DC-24-01 **Lab Report Batch :** K1104355 **Lab ID :** CAS_K

Sample Date : 05/11/2011 **Analysis Type: 1RES/TOT** **Sample Matrix :** AQ

Lab Sample ID: K1104355-035

Reviewed By / Date : LG 8/5/2011 **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 6010C/SM 2340B					**Dilution: 1**															
Hardness as CaCO3	296		mg/L		YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : DC-24-01-W
Lab Report Batch : K1104355
Lab ID : CAS_K
Sample Date : 05/11/2011
Analysis Type: 1RES/TOT
Sample Matrix : AQ
Lab Sample ID: K1104355-035

Reviewed By / Date : LG 8/5/2011
Approved By / Date :

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 415.1					**Dilution: 10**															
Carbon, Dissolved Organic	346		mg/L		YES															
Analysis Method : SM 4500-H+ B					**Dilution: 1**															
pH	7.66		pH UNITS		YES	**J**		J												
Analysis Method : SM 4500-NH3 E					**Dilution: 1**															
Ammonia as Nitrogen	4.75		mg/L		YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : OC-35-01 **Lab Report Batch :** K1104355 **Lab ID :** CAS_K

Sample Date : 05/12/2011 **Analysis Type: 1RES/TOT** **Sample Matrix :** AQ

Lab Sample ID: K1104355-029

Reviewed By / Date : LG 8/5/2011 **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 6010C/SM 2340B					**Dilution: 1**															
Hardness as CaCO3	261		mg/L		YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : OC-35-01-W
Lab Report Batch : K1104355
Lab ID : CAS_K
Sample Date : 05/12/2011
Analysis Type: 1RES/TOT
Sample Matrix : AQ
Lab Sample ID: K1104355-029

Reviewed By / Date : LG 8/5/2011
Approved By / Date :

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 415.1					**Dilution: 2**															
Carbon, Dissolved Organic	10.5		mg/L		YES															
Analysis Method : SM 4500-H+ B					**Dilution: 1**															
pH	7.72		pH UNITS		YES	**J**		J												
Analysis Method : SM 4500-NH3 E					**Dilution: 1**															
Ammonia as Nitrogen	10.8		mg/L		YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : OC-46-01 **Lab Report Batch :** K1104355 **Lab ID :** CAS_K

Sample Date : 05/12/2011 **Analysis Type: 1RES/TOT** **Sample Matrix :** AQ

Lab Sample ID: K1104355-030

Reviewed By / Date : LG 8/5/2011 **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 6010C/SM 2340B					**Dilution: 1**															
Hardness as CaCO3	321		mg/L		YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : OC-46-01-W
Lab Report Batch : K1104355
Lab ID : CAS_K
Sample Date : 05/12/2011
Analysis Type: 1RES/TOT
Sample Matrix : AQ
Lab Sample ID: K1104355-030

Reviewed By / Date : LG 8/5/2011
Approved By / Date :

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 415.1					**Dilution: 1**															
Carbon, Dissolved Organic	11.3		mg/L		YES															
Analysis Method : SM 4500-H+ B					**Dilution: 1**															
pH	7.65		pH UNITS		YES	**J**		J												
Analysis Method : SM 4500-NH3 E					**Dilution: 1**															
Ammonia as Nitrogen	4.47		mg/L		YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : OC-47-01 **Lab Report Batch :** K1104355 **Lab ID :** CAS_K

Sample Date : 05/12/2011 **Analysis Type: 1RES/TOT** **Sample Matrix :** AQ

Lab Sample ID: K1104355-031

Reviewed By / Date : LG 8/5/2011 **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 6010C/SM 2340B					**Dilution: 1**															
Hardness as CaCO3	532		mg/L		YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : OC-47-01-W
Lab Report Batch : K1104355
Lab ID : CAS_K
Sample Date : 05/12/2011
Analysis Type: 1RES/TOT
Sample Matrix : AQ
Lab Sample ID: K1104355-031

Reviewed By / Date : LG 8/5/2011
Approved By / Date :

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 415.1					**Dilution: 1**															
Carbon, Dissolved Organic	19.1		mg/L		YES															
Analysis Method : SM 4500-H+ B					**Dilution: 1**															
pH	7.67		pH UNITS		YES	**J**		J												
Analysis Method : SM 4500-NH3 E					**Dilution: 1**															
Ammonia as Nitrogen	6.50		mg/L		YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : OC-48-01 **Lab Report Batch :** K1104355 **Lab ID :** CAS_K

Sample Date : 05/12/2011 **Analysis Type: 1RES/TOT** **Sample Matrix :** AQ

Lab Sample ID: K1104355-032

Reviewed By / Date : LG 8/5/2011 **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 6010C/SM 2340B					**Dilution: 1**															
Hardness as CaCO3	517		mg/L		YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : OC-48-01-W
Lab Report Batch : K1104355
Lab ID : CAS_K
Sample Date : 05/12/2011
Analysis Type: 1RES/TOT
Sample Matrix : AQ
Lab Sample ID: K1104355-032

Reviewed By / Date : LG 8/5/2011
Approved By / Date :

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 415.1					**Dilution: 1**															
Carbon, Dissolved Organic	20.3		mg/L		YES															
Analysis Method : SM 4500-H+ B					**Dilution: 1**															
pH	7.80		pH UNITS		YES	**J**		J												
Analysis Method : SM 4500-NH3 E					**Dilution: 5**															
Ammonia as Nitrogen	8.15		mg/L		YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

ATTACHMENT C

DATA QUALIFIER DEFINITIONS

LABORATORY DATA QUALIFIER DEFITIONS

Not Applicable

DATA VALIDATION DATA QUALIFIER DEFITIONS

J - The analyte was positively identified and the associated numerical value is the approximate concentration of the analyte in the sample (due either to the quality of the data generated because certain quality control criteria were not met, or the concentration of the analyte was below the quantitation limit).

Weston Solutions, Inc.
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www.westonsolutions.com

August 5, 2011

Ms. Brenda Jones and Mr. Ajit Vaidya
Great Lakes National Program Office
United States Environmental Protection Agency, Region V
77 West Jackson Boulevard, Mail Code: G-17J
Chicago, Illinois 60604-3507

Re: Data Review of Total Petroleum Hydrocarbons (TPH) as Gasoline Range Organics (GRO), Diesel Range Organics (DRO), and Residual Range Organics (RRO) Analysis
For Sediment Samples Collected on May 10-12, 2011
Duck and Otter Creeks Confluence Investigation
Wood and Lucas Counties, Ohio
DCN: 1269-2B-AOVS

Dear Ms. Jones and Mr. Vaidya:

The United States Environmental Protection Agency (U.S. EPA) tasked Weston Solutions, Inc., (WESTON®) to perform data validation for sediment samples collected on May 10-12, 2011, for the Great Lakes National Program Office (GLNPO) Duck and Otter Creeks Confluence Investigation (Duck and Otter) Site. This data review is for TPH as GRO, DRO, and RRO analyses of 53 sediment samples that include four field splits and four field duplicates that were collected by the WESTON Superfund Technical Assessment and Response Team (START). The samples were validated in accordance with the "Quality Assurance Project Plan (QAPP), Duck and Otter Creeks Data Gaps Investigation" dated September 28, 2010, and QAPP Amendment 1 dated May 5, 2011, which includes using the U.S. EPA Contract Laboratory Program National Functional Guidance for Organic and Inorganic Data Review. Table 1 provides a summary of the samples included in this review. All tables are presented at the end of this report.

The samples listed in Table 1 were analyzed by Columbia Analytical Services (CAS) located in Kelso, Washington, under the following three work orders:

- K1104187
- K1104250
- K1104355

The samples were analyzed for TPH using U.S. EPA SW-846 Method 8015C. CAS provided WESTON with a staged electronic data deliverable (SEDD) that was used in conjunction with the Automated Data Review (ADR) software to assist in reviewing the data. All SEDDs were imported into the ADR software for review by the software program and all data was checked for completeness. Five percent of the data was put through a full data validation. Therefore, one of

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the work orders, K1104187, was selected for the full data validation. Work order K1104187 contains seven sediment samples, including one field split, for TPH analysis.

Attachment A to this report contains the individual Quality Assurance/Quality Control (QA/QC) Analysis Checklist for Sediment Chemistry Analysis for work order K1104187. Attachment B to this report contains a printed report from ADR that provides a summary of results with qualifiers applied by the laboratory and the ADR program. Attachment C contains the data qualifier definitions. The QC limits utilized were those stated in the QAPP. If there was not a QC limit specified in the QAPP, then the method or laboratory-determined QC limits were used. Below is the data review summary.

SUMMARY OF TPH DATA REVIEW

As stated above, five percent of the data was fully validated. Work order K1104187 was selected for full data validation. In work order K1104187, the holding times, calibration standards, laboratory control samples (LCS), field splits, matrix spike (MS), and matrix spike duplicates (MSD) were all within the QC limits. For the remaining work orders, the ADR program indicated that all holding time limits and LCS recoveries were within QC limits. All sample results were based on a dry weight for the TPH analyses.

Through full data validation and the ADR program, some minor problems with the quality control indicators were discovered. There were minor detections of target analtyes in the method blanks requiring some GRO results to be flagged as not detected. In two MS/MSD samples, the percent recoveries were outside the QC limits. In addition, some surrogates were outside QC limits requiring some results to be flagged as estimated. See discussion under Minor Problems for further details.

The QAPP stated that field splits (replicates) and field duplicate samples would be collected at a 5 percent frequency. There were a total of 45 field investigative samples and four field duplicates and four field splits collected (see Table 1 for which samples are designated as field duplicates and splits). Therefore, the QAPP-stated frequency was met for the field duplicates and splits. A QC limit for field splits and field duplicates was not stated in the QAPP; therefore, a default QC limit of 50 relative percent difference (RPD) was used to evaluate field split and duplicate results. The RPDs for all the field splits and three of the field duplicates are below 50 RPD. For one field duplicate, OC-42-02-DP, the RPDs were elevated indicating sample heterogeneity associated with this one sample. No qualifications are applied based on field duplicate results. Tables 2 and 3 summarize the field split and field duplicate results, respectively.

Below are a description of the minor problems with QC failures and a review of the data quality indicators.

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MINOR PROBLEMS

Minor problems with QC failures are noted below.

Method Blanks. There were minor detections of RRO and GRO in the method blanks below the reporting limit and above the method detection limit. In some samples the GRO result was less than five times the method blank result and below the reporting limit. These GRO results were flagged "U" as not detected. No RRO results required qualification based on method blank results.

MS and MSDs. There were a total of four MS/MSD pairs associated with the DRO, RRO, and GRO analyses. All percent recoveries for MS/MSDs were within QC limits except for RRO for two MS/MSD pairs and DRO for one MS/MSD pairs. In these instances, no qualifications were required because the sample concentrations were more than four times the amount of the spike added making the spike recovery difficult.

Surrogate Results. Several samples had surrogate recoveries outside of the QC limits. In some of these instances there were high concentrations of target analytes in the samples and dilutions were required by the laboratories. No qualification was required because of the dilutions affecting surrogate recovery.

In other instances, the surrogate recoveries were outside QC limits and dilutions were not required. In these instances, there was typically a high concentration of the target anaytle in the sample and the poor surrogate recovery may be due to matrix interference (the high analyte concentration interfering with the surrogate recovery). In these instances, the compound result that was related to the surrogate outside QC limits was flagged "J" as estimated. The ADR Summary Report in Attachment B shows which TPH results were flagged "J" based on surrogate spike results.

Target Compound Identification. Target compound identification followed the method and was acceptable; however, the chromatograms for the petroleum product identified in the samples were not exact matches to the chromatograms for the DRO, RRO, and GRO standards used. CAS qualified most sample results to provide further details regarding the chromatograms. The qualifiers used were "O" and "Y" and are defined as follows:

- An "O" qualifier indicates that the chromatographic fingerprint resembles an oil product, but does not match the calibration standard.
- A "Y" qualifier indicates that the chromatographic fingerprint resembles a petroleum product eluting in approximately the correct carbon range, but the elution pattern does not match the calibration standard.

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DATA QUALITY INDICATORS REVIEW

Many the data quality indicators (sensitivity, precision, accuracy, and completeness) were evaluated through the data validation procedures which are summarized above and discussed in detail in the Attachment.

Sensitivity. The laboratory reporting limits stated in the QAPP were 25 milligrams per kilogram (mg/kg) for DRO, 100 mg/kg for RRO, and 25 mg/kg for GRO. When corrected for dilutions and percent moisture, these reporting limits were met. In addition, the laboratory reported results detected below the reporting limit and above the method detection limit (all sample results reported below the reporting limit were qualified "J" as estimated). Sensitivity was adequate for the DRO, RRO, and GRO analyses of sediment samples collected on May 10-12, 2011.

Precision. Field precision was determined by evaluating the RPDs for the field split and field duplicate results. The mean RPDs for field splits ranged from 5 to 8 percent and the mean RPDs for field duplicates ranged from 32 to 45 percent. Field precision was evaluated and found to be acceptable. Table 4 summarizes the mean field split and duplicate RPDs for each analyte.

Laboratory precision was determined by evaluating the RPD values between MS and MSD results. The mean MS/MSD RPD values were within QC limits. The mean RPD values ranged from 4 to85 percent. Laboratory precision was acceptable. Table 4 summarizes the mean RPDs for MS/MSDs.

Accuracy/Bias. Accuracy is a measure of the agreement between an observed value and an accepted reference value. Laboratory accuracy was evaluated by reviewing the QC criteria for percent recovery for LCS and MS/MSD results. All LCS and MS/MSD mean percent recoveries were within the QAPP QC limits. Table 4 summarizes the accuracy estimates for the TPH analyses. The mean recoveries for LCSs ranged from 92 to 96 percent and the mean recoveries for MS/MSDs ranged from 81 to 110 percent. Laboratory accuracy was acceptable. The mean LCS recoveries indicate a slightly low bias associated with the TPH analysis.

Completeness. Completeness is a measure of the amount of valid data obtained compared to the amount of data that was planned to be collected under normal conditions. All samples results were received.

In summary, there were some minor problems with QC failures as discussed above that required some results to be flagged. The ADR Summary Report in Attachment B indicates which sample results were flagged during data validation and the reason for the qualification. The laboratory data qualifiers applied are also indicated on the ADR Summary Report in Attachment B. Attachment C provides data qualifier definitions for those qualifiers applied during data validation and by the laboratory.

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If there are any questions or comments regarding this report, please do not hesitate to contact WESTON START at 312-424-3300.

Very truly yours,
Weston Solutions, Inc.



Lisa Graczyk
WESTON START Team

Alex Clark
WESTON START Project Manager

Attachments:
Tables
A - QA/QC Analysis Checklist for TOC for Work Order K1104187
B – ADR Summary Report for TPH
C – Data Qualifier Definitions

cc: project file

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TABLES

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TABLE 1
SAMPLES INCLUDED IN DATA REVIEW

Sample ID	Lab ID	Date Collected	Comment
OC-34-01	K1104187-001	05/10/2011	
OC-34-02	K1104187-002	05/10/2011	
OC-44-01	K1104187-003	05/10/2011	
OC-44-02	K1104187-004	05/10/2011	
OC-45-01	K1104187-005	05/10/2011	
OC-45-02	K1104187-006	05/10/2011	
OC-45-02-SP	K1104187-007	05/10/2011	Field split of OC-45-02
DC-25-01	K1104250-001	05/11/2011	
DC-25-01-DP	K1104250-002	05/11/2011	Field duplicate of DC-25-01
DC-25-02	K1104250-003	05/11/2011	
OC-42-01	K1104250-004	05/11/2011	
OC-42-01-DP	K1104250-005	05/11/2011	Field duplicate of OC-42-01
OC-42-02	K1104250-006	05/11/2011	
OC-42-02-DP	K1104250-007	05/11/2011	Field duplicate of OC-42-02
DC-20-01	K1104250-008	05/11/2011	
DC-20-01-SP	K1104250-009	05/11/2011	Field split of DC-20-01
DC-21-01	K1104250-010	05/11/2011	
DC-21-02	K1104250-011	05/11/2011	
DC-25-03	K1104250-012	05/11/2011	
OC-38	K1104250-013	05/11/2011	
OC-36-01	K1104250-014	05/10/2011	
OC-36-02	K1104250-015	05/10/2011	
OC-40-01	K1104250-016	05/11/2011	
OC-40-02	K1104250-017	05/11/2011	
OC-41-01	K1104250-018	05/10/2011	
OC-41-02	K1104250-019	05/10/2011	
DC-20-03	K1104355-001	05/11/2011	
DC-22-01	K1104355-002	05/11/2011	
DC-22-02	K1104355-003	05/11/2011	
DC-22-03	K1104355-004	05/11/2011	
DC-24-03-SP	K1104355-005	05/11/2011	Field split of DC-24-03
OC-35-01	K1104355-006	05/12/2011	
OC-35-02	K1104355-007	05/12/2011	
OC-46-01	K1104355-008	05/12/2011	
OC-46-02	K1104355-009	05/12/2011	

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TABLE 1
SAMPLES INCLUDED IN DATA REVIEW

Sample ID	Lab ID	Date Collected	Comment
OC-47-01	K1104355-010	05/12/2011	
OC-47-02	K1104355-011	05/12/2011	
OC-47-03	K1104355-012	05/12/2011	
OC-47-04	K1104355-013	05/12/2011	
OC-48-01	K1104355-014	05/12/2011	
OC-48-02	K1104355-015	05/12/2011	
OC-48-03	K1104355-016	05/12/2011	
OC-48-04	K1104355-017	05/12/2011	
DC-20-02	K1104355-018	05/11/2011	
DC-22-01-SP	K1104355-019	05/11/2011	Field split of DC-22-01
DC-23-01	K1104355-020	05/11/2011	
DC-23-02	K1104355-021	05/11/2011	
DC-23-03	K1104355-022	05/11/2011	
DC-23-04	K1104355-023	05/11/2011	
DC-24-01	K1104355-024	05/11/2011	
DC-24-02	K1104355-025	05/11/2011	
DC-24-03	K1104355-026	05/11/2011	
DC-25-02-DP	K1104355-027	05/11/2011	Field duplicate of DC-25-02

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TABLE 2
FIELD SPLIT RESULTS
FOR TPH ANALYSES

	Sample: OC-45-02-SP			Sample: DC-20-01-SP		
Analyte	**Sample Result (mg/kg)**	**Replicate Result (mg/kg)**	**RPD**	**Sample Result (mg/kg)**	**Replicate Result (mg/kg)**	**RPD**
DRO	15,000	17,000	13	270	290	7
RRO	14,000	13,000	7	1,700	1,900	11
GRO	1900	2000	5	<5.6	<4.4	NA
	Sample: DC-22-01-SP			**Sample: DC-24-03-SP**		
Analyte	**Sample Result (mg/kg)**	**Replicate Result (mg/kg)**	**RPD**	**Sample Result (mg/kg)**	**Replicate Result (mg/kg)**	**RPD**
DRO	300	300	0	890	840	6
RRO	800	760	5	1,400	1,300	7
GRO	<2.8	<2.6	NA	9.3	<5.2	NA

Notes:
DRO – Diesel Range Organics
GRO – Gasoline Range Organics
mg/kg – Milligram per Kilogram
NA – Not Applicable
RPD – Relative Percent Difference
RRO – Residual Range Organics

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TABLE 3
FIELD DUPLICATE RESULTS
FOR TPH ANALYSES

Analyte	Sample: DC-25-01-DP			Sample: OC-42-01-DP		
	Sample Result (mg/kg)	Duplicate Result (mg/kg)	RPD	Sample Result (mg/kg)	Duplicate Result (mg/kg)	RPD
DRO	1,300	1,100	17	13,000	17,000	27
RRO	2,400	1,800	29	13,000	15,000	14
GRO	12	<6.5	NA	490	500	2
Analyte	**Sample: OC-42-02-DP**			**Sample: DC-25-02-DP**		
	Sample Result (mg/kg)	Duplicate Result (mg/kg)	RPD	Sample Result (mg/kg)	Duplicate Result (mg/kg)	RPD
DRO	410	940	79	2,200	2,000	10
RRO	310	1,300	123	3,000	2,600	14
GRO	24	20	18	35	16	75

Notes:
Highlighted RPD values exceed the comparison value of 50 RPD.
DRO – Diesel Range Organics
GRO – Gasoline Range Organics
mg/kg – Milligram per Kilogram
NA – Not Applicable
RPD – Relative Percent Difference
RRO – Residual Range Organics

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TABLE 4
QUANTITATIVE DATA ASSESSMENT
FOR TPH

	Field Precision		Analytical Precision	Analytical Accuracy/Bias	
Parameter	**Mean Field Split RPD (%) (n= 3)**	**Mean Field Duplicate RPD (%) (n=5)**	**Mean MS/MSD RPD (%) (n=4)**	**Mean LCS Recovery (%) (n=4)**	**Mean MS/MSD Recovery (%) (n=8)**
DRO	7	33	8	96	110
RRO	8	45	5	92	93
GRO	5	32	4	93	81

Notes:
DRO – Diesel Range Organics
GRO – Gasoline Range Organics
LCS – Laboratory Control Sample
MS – Matrix Spike
MSD – Matrix Spike Duplicate
RPD – Relative Percent Difference
RRO – Residual Range Organic

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ATTACHMENT A

QA/QC ANALYSIS CHECKLIST FOR TPH FOR WORK ORDER K1104187

TPH AS GRO, DRO, AND RRO

BY SW-846 METHOD 8015C

CAS Work Order #: K1104187

QA/QC Analysis Checklist for Sediment Chemistry Analysis

GRANT/IAG NUMBER: Not Applicable
PROJECT NAME: Duck and Otter Creeks Confluence Investigation
REVIEWER: Lisa Graczyk, WESTON START
DATE: August 5, 2011

1. What sediment chemistry data has been collected (CHECK ALL THAT APPLY)?

Total Metals ____	PCBs _____	pH _____	TOC _____
Dioxins/Furans _____	PAHs _____	Pesticides _____	DO _____
AVS _____	SEM Metals _____	Particle Size _____	Other __X (TPH)

2. Were the target detection limits met for each parameter?

Yes X
No _____ (EXPLAIN)

When corrected for percent moisture and dilutions, the reporting limits as stated in the QAPP were met.

3. Were the method blanks less than the established MDL for each parameter?

Yes _____
No X (EXPLAIN)

The method blank contained RRO at 8.1 mg/kg and GRO at 1.7 mg/kg which are below the reporting limit and greater than the method detection limit. One sample result, OC-34-01, was detected below the reporting limit and had a similar concentration as the GRO blank result. The GRO result in sample OC-34-01 was flagged "U" as not detected.

TPH Checklist
Duck and Otter Creeks Confluence Investigation
Columbia Analytical Services
Laboratory Work Order #: K1104187

4. Did the results of Field Replicate Analysis vary by less than the % RPD specified in the QAPP?

Yes	X	
No		(EXPLAIN)

5. Did the results of the Field Duplicates Analysis vary by less than the % RPD specified in the QAPP?

Yes	Not Applicable	
No		(EXPLAIN)

6. Did the surrogate spike/internal standards recoveries meet the limits set forth in the QAPP?

Yes		
No	X	(EXPLAIN)

In some samples, the surrogates were detected outside the QC limits. The affected sample results that were not due to sample dilutions were flagged "J" as estimated.

7. Did the MS/MSD recoveries meet the limits set forth in the QAPP?

Yes	X	
No		(EXPLAIN)

8. Did the RPD (%) of the MS/MSD sample set meet the limits set forth in the QAPP?

Yes	X	
No		(EXPLAIN)

9. Did the LCS recoveries meet the limits set forth in the QAPP?

Yes	X	
No		(EXPLAIN)

10. Did the calibration verification standards (ICVs and CCVs) meet the requirements set forth in the QAPP?

Yes	X	
No		(EXPLAIN)

11. Did the calibration blanks (ICBs and CCBs) meet the limits set forth in the QAPP?

Yes	Not Applicable	
No		

12. Did the interference check samples meet the limits set forth in the QAPP?

Yes	Not Applicable	
No		(EXPLAIN)

13. Did the serial dilution samples meet the limits set forth in the QAPP?

Yes	Not Applicable	
No		(EXPLAIN)

14. Were any level of contaminants detected above the MDL for the trip blanks and storage blanks?

Yes	Not Applicable	
No		(EXPLAIN)

TPH Checklist
Duck and Otter Creeks Confluence Investigation
Columbia Analytical Services
Laboratory Work Order #: K1104187

15. Did all required analyses take place within the required holding time protocols set forth in the QAPP?

Yes	X	
No		(EXPLAIN)

16. Did the laboratory duplicates vary by less than the % RPD specified in the QAPP?

Yes	Not Applicable	
No		(EXPLAIN)

17. Are measured dry-weight contaminant concentrations reported?

Yes	X	
No		(EXPLAIN)

18. Please provide details for all of the "EXPLAIN" marked above. Include details on the specific analytes affected by any QA/QC discrepancies, and recommendations regarding usability of data.

Any items with “EXPLAIN” marked above are described immediately following the “EXPLAIN” marking in the corresponding item above.

Note that the laboratory qualified many of the sample results with a “J”, “O”, “Y”, and “D” are defined as follows:

- A “J” qualifier indicates that the sample result should be considered estimated because it was detected below the reporting limit.
- An “O” qualifier indicates that the chromatographic fingerprint resembles an oil product, but does not match the calibration standard.
- A “Y” qualifier indicates that the chromatographic fingerprint resembles a petroleum product eluting in approximately the correct carbon range, but the elution pattern does not match the calibration standard.
- A “D” qualifier indicates that the reported result is from a dilution.

TPH Checklist
Duck and Otter Creeks Confluence Investigation
Columbia Analytical Services
Laboratory Work Order #: K1104187

All of these results should be considered estimated. Note that the sample chromatographic patterns not matching up to the standards is to be expected because of the weathering/degrading of the petroleum products over time.

The data are acceptable for use as qualified.

TPH Checklist
Duck and Otter Creeks Confluence Investigation
Columbia Analytical Services
Laboratory Work Order #: K1104187

ATTACHMENT B

ADR SUMMARY REPORT FOR TPH

Sample Qualification Report (All Analytes)

Client Sample ID : OC-34-01 **Lab Report Batch :** K1104187 **Lab ID :** CAS_K

Sample Date : 05/10/2011 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1104187-001

Reviewed By / Date : LG 8/4/2011 **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 8015C						**Dilution: 1**														
Gasoline Range Organics (GRO)	2.9		mg/Kg	J	YES	**UJ**			U					J						

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : OC-34-01 **Lab Report Batch :** K1104187 **Lab ID :** CAS_K

Sample Date : 05/10/2011 **Analysis Type: 2RES** **Sample Matrix :** SED

Lab Sample ID: K1104187-001

Reviewed By / Date : LG 8/4/2011 **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 8015C					**Dilution: 1**															
Diesel Range Organics (DRO)	120		mg/Kg	Y	YES															
Residual Range Organics (RRO)	91		mg/Kg	O	YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : OC-34-02 **Lab Report Batch :** K1104187 **Lab ID :** CAS_K

Sample Date : 05/10/2011 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1104187-002

Reviewed By / Date : LG 8/4/2011 **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 8015C					**Dilution: 1**															
Gasoline Range Organics (GRO)	850		mg/Kg	Y	YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : OC-34-02 **Lab Report Batch :** K1104187 **Lab ID :** CAS_K

Sample Date : 05/10/2011 **Analysis Type: 2RES** **Sample Matrix :** SED

Lab Sample ID: K1104187-002

Reviewed By / Date : LG 8/4/2011 **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 8015C					**Dilution: 1**															
Diesel Range Organics (DRO)	8500		mg/Kg	Y	YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : OC-34-02 **Lab Report Batch :** K1104187 **Lab ID :** CAS_K

Sample Date : 05/10/2011 **Analysis Type: 3RES** **Sample Matrix :** SED

Lab Sample ID: K1104187-002

Reviewed By / Date : LG 8/4/2011 **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 8015C					**Dilution: 10**															
Residual Range Organics (RRO)	5100		mg/Kg	DO	YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : OC-44-01 **Lab Report Batch :** K1104187 **Lab ID :** CAS_K

Sample Date : 05/10/2011 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1104187-003

Reviewed By / Date : LG 8/4/2011 **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 8015C						**Dilution: 1**														
Gasoline Range Organics (GRO)	980		mg/Kg	Y	YES	**J**							J							

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : OC-44-01 **Lab Report Batch :** K1104187 **Lab ID :** CAS_K

Sample Date : 05/10/2011 **Analysis Type: 2RES** **Sample Matrix :** SED

Lab Sample ID: K1104187-003

Reviewed By / Date : LG 8/4/2011 **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 8015C					**Dilution: 1**															
Diesel Range Organics (DRO)	4200		mg/Kg	Y	YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : OC-44-01 **Lab Report Batch :** K1104187 **Lab ID :** CAS_K

Sample Date : 05/10/2011 **Analysis Type: 3RES** **Sample Matrix :** SED

Lab Sample ID: K1104187-003

Reviewed By / Date : LG 8/4/2011 **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 8015C					**Dilution: 10**															
Residual Range Organics (RRO)	6200		mg/Kg	DO	YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : OC-44-02 **Lab Report Batch :** K1104187 **Lab ID :** CAS_K

Sample Date : 05/10/2011 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1104187-004

Reviewed By / Date : LG 8/4/2011 **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 8015C						**Dilution: 1**														
Gasoline Range Organics (GRO)	1400		mg/Kg	Y	YES	**J**							J							

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : OC-44-02 **Lab Report Batch :** K1104187 **Lab ID :** CAS_K

Sample Date : 05/10/2011 **Analysis Type: 2RES** **Sample Matrix :** SED

Lab Sample ID: K1104187-004

Reviewed By / Date : LG 8/4/2011 **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 8015C						**Dilution: 5**														
Diesel Range Organics (DRO)	60000		mg/Kg	DY	YES	**J**							J							

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : OC-44-02 **Lab Report Batch :** K1104187 **Lab ID :** CAS_K

Sample Date : 05/10/2011 **Analysis Type: 3RES** **Sample Matrix :** SED

Lab Sample ID: K1104187-004

Reviewed By / Date : LG 8/4/2011 **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 8015C					**Dilution: 50**															
Residual Range Organics (RRO)	64000		mg/Kg	DO	YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : OC-45-01 **Lab Report Batch :** K1104187 **Lab ID :** CAS_K

Sample Date : 05/10/2011 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1104187-005

Reviewed By / Date : LG 8/4/2011 **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 8015C					**Dilution: 1**															
Gasoline Range Organics (GRO)	170		mg/Kg	Y	YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : OC-45-01 **Lab Report Batch :** K1104187 **Lab ID :** CAS_K

Sample Date : 05/10/2011 **Analysis Type: 2RES** **Sample Matrix :** SED

Lab Sample ID: K1104187-005

Reviewed By / Date : LG 8/4/2011 **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 8015C					**Dilution: 1**															
Diesel Range Organics (DRO)	5500		mg/Kg	Y	YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : OC-45-01 **Lab Report Batch :** K1104187 **Lab ID :** CAS_K

Sample Date : 05/10/2011 **Analysis Type: 3RES** **Sample Matrix :** SED

Lab Sample ID: K1104187-005

Reviewed By / Date : LG 8/4/2011 **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 8015C					**Dilution: 10**															
Residual Range Organics (RRO)	4600		mg/Kg	DO	YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : OC-45-02 **Lab Report Batch :** K1104187 **Lab ID :** CAS_K

Sample Date : 05/10/2011 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1104187-006

Reviewed By / Date : LG 8/4/2011 **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 8015C						**Dilution: 1**														
Gasoline Range Organics (GRO)	1900		mg/Kg	Y	YES	**J**							J							

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : OC-45-02 **Lab Report Batch :** K1104187 **Lab ID :** CAS_K

Sample Date : 05/10/2011 **Analysis Type: 2RES** **Sample Matrix :** SED

Lab Sample ID: K1104187-006

Reviewed By / Date : LG 8/4/2011 **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 8015C					**Dilution: 1**															
Diesel Range Organics (DRO)	15000		mg/Kg	Y	YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : OC-45-02 **Lab Report Batch :** K1104187 **Lab ID :** CAS_K

Sample Date : 05/10/2011 **Analysis Type: 3RES** **Sample Matrix :** SED

Lab Sample ID: K1104187-006

Reviewed By / Date : LG 8/4/2011 **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 8015C					**Dilution: 10**															
Residual Range Organics (RRO)	14000		mg/Kg	DO	YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : OC-45-02-SP
Lab Report Batch : K1104187
Lab ID : CAS_K
Sample Date : 05/10/2011
Analysis Type: 1RES
Sample Matrix : SED
Lab Sample ID: K1104187-007

Reviewed By / Date : LG 8/4/2011
Approved By / Date :

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 8015C						**Dilution: 1**														
Gasoline Range Organics (GRO)	2000		mg/Kg	Y	YES	**J**							J							

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : OC-45-02-SP
Lab Report Batch : K1104187
Lab ID : CAS_K
Sample Date : 05/10/2011
Analysis Type: 2RES
Sample Matrix : SED
Lab Sample ID: K1104187-007

Reviewed By / Date : LG 8/4/2011
Approved By / Date :

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 8015C					**Dilution: 1**															
Diesel Range Organics (DRO)	17000		mg/Kg	Y	YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : OC-45-02-SP
Lab Report Batch : K1104187
Lab ID : CAS_K
Sample Date : 05/10/2011
Analysis Type: 3RES
Sample Matrix : SED
Lab Sample ID: K1104187-007

Reviewed By / Date : LG 8/4/2011
Approved By / Date :

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 8015C					**Dilution: 10**															
Residual Range Organics (RRO)	13000		mg/Kg	DO	YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : DC-20-01 **Lab Report Batch :** K1104250 **Lab ID :** CAS_K

Sample Date : 05/11/2011 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1104250-008

Reviewed By / Date : LG 8/4/2011 **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 8015C						**Dilution: 1**														
Gasoline Range Organics (GRO)	5.6		mg/Kg	J	YES	**UJ**			U					J						

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : DC-20-01 **Lab Report Batch :** K1104250 **Lab ID :** CAS_K

Sample Date : 05/11/2011 **Analysis Type: 2RES** **Sample Matrix :** SED

Lab Sample ID: K1104250-008

Reviewed By / Date : LG 8/4/2011 **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 8015C					**Dilution: 1**															
Diesel Range Organics (DRO)	270		mg/Kg	Y	YES															
Residual Range Organics (RRO)	1700		mg/Kg	O	YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : DC-20-01-SP
Lab Report Batch : K1104250
Lab ID : CAS_K
Sample Date : 05/11/2011
Analysis Type: 1RES
Sample Matrix : SED
Lab Sample ID: K1104250-009

Reviewed By / Date : LG 8/4/2011
Approved By / Date :

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 8015C						**Dilution: 1**														
Gasoline Range Organics (GRO)	4.4		mg/Kg	J	YES	**UJ**			U					J						

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : DC-20-01-SP
Lab Report Batch : K1104250
Lab ID : CAS_K
Sample Date : 05/11/2011
Analysis Type: 2RES
Sample Matrix : SED
Lab Sample ID: K1104250-009

Reviewed By / Date : LG 8/4/2011
Approved By / Date :

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 8015C					**Dilution: 5**															
Diesel Range Organics (DRO)	290		mg/Kg	DY	YES															
Residual Range Organics (RRO)	1900		mg/Kg	DO	YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : DC-21-01 **Lab Report Batch :** K1104250 **Lab ID :** CAS_K

Sample Date : 05/11/2011 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1104250-010

Reviewed By / Date : LG 8/4/2011 **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 8015C						**Dilution: 1**														
Gasoline Range Organics (GRO)	3.7		mg/Kg	J	YES	**UJ**			U					J						

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : DC-21-01 **Lab Report Batch :** K1104250 **Lab ID :** CAS_K

Sample Date : 05/11/2011 **Analysis Type: 2RES** **Sample Matrix :** SED

Lab Sample ID: K1104250-010

Reviewed By / Date : LG 8/4/2011 **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 8015C					**Dilution: 1**															
Diesel Range Organics (DRO)	250		mg/Kg	Y	YES															
Residual Range Organics (RRO)	880		mg/Kg	O	YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : DC-21-02 **Lab Report Batch :** K1104250 **Lab ID :** CAS_K

Sample Date : 05/11/2011 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1104250-011

Reviewed By / Date : LG 8/4/2011 **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 8015C						**Dilution: 1**														
Gasoline Range Organics (GRO)	6.0		mg/Kg	J	YES	**UJ**			U					J						

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : DC-21-02 **Lab Report Batch :** K1104250 **Lab ID :** CAS_K

Sample Date : 05/11/2011 **Analysis Type: 2RES** **Sample Matrix :** SED

Lab Sample ID: K1104250-011

Reviewed By / Date : LG 8/4/2011 **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 8015C					**Dilution: 1**															
Diesel Range Organics (DRO)	1100		mg/Kg	Y	YES															
Residual Range Organics (RRO)	1600		mg/Kg	O	YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : DC-25-01 **Lab Report Batch :** K1104250 **Lab ID :** CAS_K

Sample Date : 05/11/2011 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1104250-001

Reviewed By / Date : LG 8/4/2011 **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 8015C						**Dilution: 1**														
Gasoline Range Organics (GRO)	12		mg/Kg	J	YES	**J**								J						

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : DC-25-01 **Lab Report Batch :** K1104250 **Lab ID :** CAS_K

Sample Date : 05/11/2011 **Analysis Type: 2RES** **Sample Matrix :** SED

Lab Sample ID: K1104250-001

Reviewed By / Date : LG 8/4/2011 **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 8015C						**Dilution: 1**														
Diesel Range Organics (DRO)	1300		mg/Kg	Y	YES	**J**					J									
Residual Range Organics (RRO)	2400		mg/Kg	O	YES	**J**					J									

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : DC-25-01-DP
Lab Report Batch : K1104250
Lab ID : CAS_K
Sample Date : 05/11/2011
Analysis Type: 1RES
Sample Matrix : SED
Lab Sample ID: K1104250-002

Reviewed By / Date : LG 8/4/2011
Approved By / Date :

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 8015C						**Dilution: 1**														
Gasoline Range Organics (GRO)	6.5		mg/Kg	J	YES	**UJ**			U					J						

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : DC-25-01-DP
Lab Report Batch : K1104250
Lab ID : CAS_K
Sample Date : 05/11/2011
Analysis Type: 2RES
Sample Matrix : SED
Lab Sample ID: K1104250-002

Reviewed By / Date : LG 8/4/2011
Approved By / Date :

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 8015C					**Dilution: 1**															
Diesel Range Organics (DRO)	1100		mg/Kg	Y	YES															
Residual Range Organics (RRO)	1800		mg/Kg	O	YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : DC-25-02 **Lab Report Batch :** K1104250 **Lab ID :** CAS_K

Sample Date : 05/11/2011 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1104250-003

Reviewed By / Date : LG 8/4/2011 **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 8015C					**Dilution: 1**															
Gasoline Range Organics (GRO)	35		mg/Kg	Y	YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : DC-25-02 **Lab Report Batch :** K1104250 **Lab ID :** CAS_K

Sample Date : 05/11/2011 **Analysis Type: 2RES** **Sample Matrix :** SED

Lab Sample ID: K1104250-003

Reviewed By / Date : LG 8/4/2011 **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 8015C					**Dilution: 1**															
Diesel Range Organics (DRO)	2200		mg/Kg	Y	YES															
Residual Range Organics (RRO)	3000		mg/Kg	O	YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : DC-25-03 **Lab Report Batch :** K1104250 **Lab ID :** CAS_K

Sample Date : 05/11/2011 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1104250-012

Reviewed By / Date : LG 8/4/2011 **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 8015C						**Dilution: 1**														
Gasoline Range Organics (GRO)	8.7		mg/Kg	J	YES	**J**								J						

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : DC-25-03 **Lab Report Batch :** K1104250 **Lab ID :** CAS_K

Sample Date : 05/11/2011 **Analysis Type: 2RES** **Sample Matrix :** SED

Lab Sample ID: K1104250-012

Reviewed By / Date : LG 8/4/2011 **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 8015C					**Dilution: 1**															
Diesel Range Organics (DRO)	2200		mg/Kg	Y	YES															
Residual Range Organics (RRO)	1900		mg/Kg	O	YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : OC-36-01 **Lab Report Batch :** K1104250 **Lab ID :** CAS_K

Sample Date : 05/10/2011 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1104250-014

Reviewed By / Date : LG 8/4/2011 **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 8015C						**Dilution: 1**														
Gasoline Range Organics (GRO)	3.0		mg/Kg	J	YES	**UJ**			U					J						

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : OC-36-01 **Lab Report Batch :** K1104250 **Lab ID :** CAS_K

Sample Date : 05/10/2011 **Analysis Type: 2RES** **Sample Matrix :** SED

Lab Sample ID: K1104250-014

Reviewed By / Date : LG 8/4/2011 **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 8015C					**Dilution: 1**															
Diesel Range Organics (DRO)	220		mg/Kg	Y	YES															
Residual Range Organics (RRO)	310		mg/Kg	O	YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : OC-36-02 **Lab Report Batch :** K1104250 **Lab ID :** CAS_K

Sample Date : 05/10/2011 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1104250-015

Reviewed By / Date : LG 8/4/2011 **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 8015C						**Dilution: 1**														
Gasoline Range Organics (GRO)	2.2		mg/Kg	J	YES	**UJ**			U					J						

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : OC-36-02 **Lab Report Batch :** K1104250 **Lab ID :** CAS_K

Sample Date : 05/10/2011 **Analysis Type: 2RES** **Sample Matrix :** SED

Lab Sample ID: K1104250-015

Reviewed By / Date : LG 8/4/2011 **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 8015C					**Dilution: 1**															
Diesel Range Organics (DRO)	150		mg/Kg	Y	YES															
Residual Range Organics (RRO)	140		mg/Kg	O	YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : OC-38 **Lab Report Batch :** K1104250 **Lab ID :** CAS_K

Sample Date : 05/11/2011 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1104250-013

Reviewed By / Date : LG 8/4/2011 **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 8015C						**Dilution: 1**														
Gasoline Range Organics (GRO)	2.9		mg/Kg	J	YES	**UJ**			U					J						

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : OC-38 **Lab Report Batch :** K1104250 **Lab ID :** CAS_K

Sample Date : 05/11/2011 **Analysis Type: 2RES** **Sample Matrix :** SED

Lab Sample ID: K1104250-013

Reviewed By / Date : LG 8/4/2011 **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 8015C					**Dilution: 1**															
Diesel Range Organics (DRO)	120		mg/Kg	Y	YES															
Residual Range Organics (RRO)	110		mg/Kg	O	YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : OC-40-01 **Lab Report Batch :** K1104250 **Lab ID :** CAS_K

Sample Date : 05/11/2011 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1104250-016

Reviewed By / Date : LG 8/4/2011 **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 8015C						**Dilution: 1**														
Gasoline Range Organics (GRO)	2.4		mg/Kg	J	YES	**UJ**			U					J						

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : OC-40-01 **Lab Report Batch :** K1104250 **Lab ID :** CAS_K

Sample Date : 05/11/2011 **Analysis Type: 2RES** **Sample Matrix :** SED

Lab Sample ID: K1104250-016

Reviewed By / Date : LG 8/4/2011 **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 8015C					**Dilution: 1**															
Diesel Range Organics (DRO)	180		mg/Kg	Y	YES															
Residual Range Organics (RRO)	230		mg/Kg	O	YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : OC-40-02 **Lab Report Batch :** K1104250 **Lab ID :** CAS_K

Sample Date : 05/11/2011 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1104250-017

Reviewed By / Date : LG 8/4/2011 **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 8015C						**Dilution: 1**														
Gasoline Range Organics (GRO)	2.5		mg/Kg	J	YES	**UJ**			U					J						

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : OC-40-02 **Lab Report Batch :** K1104250 **Lab ID :** CAS_K

Sample Date : 05/11/2011 **Analysis Type: 2RES** **Sample Matrix :** SED

Lab Sample ID: K1104250-017

Reviewed By / Date : LG 8/4/2011 **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 8015C					**Dilution: 1**															
Diesel Range Organics (DRO)	220		mg/Kg	Y	YES															
Residual Range Organics (RRO)	300		mg/Kg	O	YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : OC-41-01 **Lab Report Batch :** K1104250 **Lab ID :** CAS_K

Sample Date : 05/10/2011 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1104250-018

Reviewed By / Date : LG 8/4/2011 **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 8015C						**Dilution: 1**														
Gasoline Range Organics (GRO)	2.6		mg/Kg	J	YES	**UJ**			U					J						

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : OC-41-01 **Lab Report Batch :** K1104250 **Lab ID :** CAS_K

Sample Date : 05/10/2011 **Analysis Type: 2RES** **Sample Matrix :** SED

Lab Sample ID: K1104250-018

Reviewed By / Date : LG 8/4/2011 **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 8015C					**Dilution: 1**															
Diesel Range Organics (DRO)	190		mg/Kg	Y	YES															
Residual Range Organics (RRO)	250		mg/Kg	O	YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : OC-41-02 **Lab Report Batch :** K1104250 **Lab ID :** CAS_K

Sample Date : 05/10/2011 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1104250-019

Reviewed By / Date : LG 8/4/2011 **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 8015C						**Dilution: 1**														
Gasoline Range Organics (GRO)	2.6		mg/Kg	J	YES	**UJ**			U					J						

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : OC-41-02 **Lab Report Batch :** K1104250 **Lab ID :** CAS_K

Sample Date : 05/10/2011 **Analysis Type: 2RES** **Sample Matrix :** SED

Lab Sample ID: K1104250-019

Reviewed By / Date : LG 8/4/2011 **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 8015C					**Dilution: 1**															
Diesel Range Organics (DRO)	160		mg/Kg	Y	YES															
Residual Range Organics (RRO)	160		mg/Kg	O	YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : OC-42-01 **Lab Report Batch :** K1104250 **Lab ID :** CAS_K

Sample Date : 05/11/2011 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1104250-004

Reviewed By / Date : LG 8/4/2011 **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 8015C						**Dilution: 1**														
Gasoline Range Organics (GRO)	490		mg/Kg	Y	YES	**J**							J							

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : OC-42-01 **Lab Report Batch :** K1104250 **Lab ID :** CAS_K

Sample Date : 05/11/2011 **Analysis Type: 2RES** **Sample Matrix :** SED

Lab Sample ID: K1104250-004

Reviewed By / Date : LG 8/4/2011 **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 8015C						**Dilution: 1**														
Diesel Range Organics (DRO)	13000		mg/Kg	Y	YES	**J**							J							

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : OC-42-01 **Lab Report Batch :** K1104250 **Lab ID :** CAS_K

Sample Date : 05/11/2011 **Analysis Type: 3RES** **Sample Matrix :** SED

Lab Sample ID: K1104250-004

Reviewed By / Date : LG 8/4/2011 **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 8015C					**Dilution: 10**															
Residual Range Organics (RRO)	13000		mg/Kg	DO	YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : OC-42-01-DP
Lab Report Batch : K1104250
Lab ID : CAS_K
Sample Date : 05/11/2011
Analysis Type: 1RES
Sample Matrix : SED
Lab Sample ID: K1104250-005

Reviewed By / Date : LG 8/4/2011
Approved By / Date :

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 8015C					**Dilution: 1**															
Gasoline Range Organics (GRO)	500		mg/Kg	Y	YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : OC-42-01-DP
Lab Report Batch : K1104250
Lab ID : CAS_K
Sample Date : 05/11/2011
Analysis Type: 2RES
Sample Matrix : SED
Lab Sample ID: K1104250-005

Reviewed By / Date : LG 8/4/2011
Approved By / Date :

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 8015C						**Dilution: 1**														
Diesel Range Organics (DRO)	17000		mg/Kg	Y	YES	**J**							J							

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : OC-42-01-DP
Lab Report Batch : K1104250
Lab ID : CAS_K
Sample Date : 05/11/2011
Analysis Type: 3RES
Sample Matrix : SED
Lab Sample ID: K1104250-005

Reviewed By / Date : LG 8/4/2011
Approved By / Date :

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 8015C					**Dilution: 10**															
Residual Range Organics (RRO)	15000		mg/Kg	DO	YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : OC-42-02 **Lab Report Batch :** K1104250 **Lab ID :** CAS_K

Sample Date : 05/11/2011 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1104250-006

Reviewed By / Date : LG 8/4/2011 **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 8015C					**Dilution: 1**															
Gasoline Range Organics (GRO)	24		mg/Kg	Y	YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : OC-42-02 **Lab Report Batch :** K1104250 **Lab ID :** CAS_K

Sample Date : 05/11/2011 **Analysis Type: 2RES** **Sample Matrix :** SED

Lab Sample ID: K1104250-006

Reviewed By / Date : LG 8/4/2011 **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 8015C					**Dilution: 1**															
Diesel Range Organics (DRO)	410		mg/Kg	Y	YES															
Residual Range Organics (RRO)	310		mg/Kg	O	YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : OC-42-02-DP
Lab Report Batch : K1104250
Lab ID : CAS_K
Sample Date : 05/11/2011
Analysis Type: 1RES
Sample Matrix : SED
Lab Sample ID: K1104250-007

Reviewed By / Date : LG 8/4/2011
Approved By / Date :

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 8015C					**Dilution: 1**															
Gasoline Range Organics (GRO)	20		mg/Kg	Y	YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : OC-42-02-DP
Lab Report Batch : K1104250
Lab ID : CAS_K
Sample Date : 05/11/2011
Analysis Type: 2RES
Sample Matrix : SED
Lab Sample ID: K1104250-007

Reviewed By / Date : LG 8/4/2011
Approved By / Date :

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 8015C					**Dilution: 1**															
Diesel Range Organics (DRO)	940		mg/Kg	Y	YES															
Residual Range Organics (RRO)	1300		mg/Kg	O	YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : DC-20-02 **Lab Report Batch :** K1104355 **Lab ID :** CAS_K

Sample Date : 05/11/2011 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1104355-018

Reviewed By / Date : LG 8/4/2011 **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 8015C						**Dilution: 1**														
Gasoline Range Organics (GRO)	4.8		mg/Kg	J	YES	**UJ**			U					J						

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : DC-20-02 **Lab Report Batch :** K1104355 **Lab ID :** CAS_K

Sample Date : 05/11/2011 **Analysis Type: 2RES** **Sample Matrix :** SED

Lab Sample ID: K1104355-018

Reviewed By / Date : LG 8/4/2011 **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 8015C					**Dilution: 1**															
Diesel Range Organics (DRO)	550		mg/Kg	Y	YES															
Residual Range Organics (RRO)	1600		mg/Kg	O	YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : DC-20-03 **Lab Report Batch :** K1104355 **Lab ID :** CAS_K

Sample Date : 05/11/2011 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1104355-001

Reviewed By / Date : LG 8/4/2011 **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 8015C						**Dilution: 1**														
Gasoline Range Organics (GRO)	4.3		mg/Kg	J	YES	**UJ**			U					J						

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : DC-20-03 **Lab Report Batch :** K1104355 **Lab ID :** CAS_K

Sample Date : 05/11/2011 **Analysis Type: 2RES** **Sample Matrix :** SED

Lab Sample ID: K1104355-001

Reviewed By / Date : LG 8/4/2011 **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 8015C					**Dilution: 1**															
Diesel Range Organics (DRO)	980		mg/Kg	Y	YES															
Residual Range Organics (RRO)	2600		mg/Kg	O	YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : DC-22-01 **Lab Report Batch :** K1104355 **Lab ID :** CAS_K

Sample Date : 05/11/2011 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1104355-002

Reviewed By / Date : LG 8/4/2011 **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 8015C						**Dilution: 1**														
Gasoline Range Organics (GRO)	2.8		mg/Kg	J	YES	**UJ**			U					J						

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : DC-22-01 **Lab Report Batch :** K1104355 **Lab ID :** CAS_K

Sample Date : 05/11/2011 **Analysis Type: 2RES** **Sample Matrix :** SED

Lab Sample ID: K1104355-002

Reviewed By / Date : LG 8/4/2011 **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 8015C					**Dilution: 1**															
Diesel Range Organics (DRO)	300		mg/Kg	Y	YES															
Residual Range Organics (RRO)	800		mg/Kg	O	YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : DC-22-01-SP
Lab Report Batch : K1104355
Lab ID : CAS_K
Sample Date : 05/11/2011
Analysis Type: 1RES
Sample Matrix : SED
Lab Sample ID: K1104355-019

Reviewed By / Date : LG 8/4/2011
Approved By / Date :

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 8015C						**Dilution: 1**														
Gasoline Range Organics (GRO)	2.6		mg/Kg	J	YES	**UJ**			U					J						

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : DC-22-01-SP
Lab Report Batch : K1104355
Lab ID : CAS_K
Sample Date : 05/11/2011
Analysis Type: 2RES
Sample Matrix : SED
Lab Sample ID: K1104355-019

Reviewed By / Date : LG 8/4/2011
Approved By / Date :

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 8015C					**Dilution: 1**															
Diesel Range Organics (DRO)	300		mg/Kg	Y	YES															
Residual Range Organics (RRO)	760		mg/Kg	O	YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : DC-22-02 **Lab Report Batch :** K1104355 **Lab ID :** CAS_K

Sample Date : 05/11/2011 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1104355-003

Reviewed By / Date : LG 8/4/2011 **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 8015C						**Dilution: 1**														
Gasoline Range Organics (GRO)	3.8		mg/Kg	J	YES	**UJ**			U					J						

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : DC-22-02 **Lab Report Batch :** K1104355 **Lab ID :** CAS_K

Sample Date : 05/11/2011 **Analysis Type: 2RES** **Sample Matrix :** SED

Lab Sample ID: K1104355-003

Reviewed By / Date : LG 8/4/2011 **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 8015C					**Dilution: 1**															
Diesel Range Organics (DRO)	290		mg/Kg	Y	YES															
Residual Range Organics (RRO)	840		mg/Kg	O	YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : DC-22-03 **Lab Report Batch :** K1104355 **Lab ID :** CAS_K

Sample Date : 05/11/2011 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1104355-004

Reviewed By / Date : LG 8/4/2011 **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 8015C						**Dilution: 1**														
Gasoline Range Organics (GRO)	4.4		mg/Kg	J	YES	**UJ**			U					J						

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : DC-22-03 **Lab Report Batch :** K1104355 **Lab ID :** CAS_K

Sample Date : 05/11/2011 **Analysis Type: 2RES** **Sample Matrix :** SED

Lab Sample ID: K1104355-004

Reviewed By / Date : LG 8/4/2011 **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 8015C					**Dilution: 1**															
Diesel Range Organics (DRO)	330		mg/Kg	Y	YES															
Residual Range Organics (RRO)	640		mg/Kg	O	YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : DC-23-01 **Lab Report Batch :** K1104355 **Lab ID :** CAS_K

Sample Date : 05/11/2011 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1104355-020

Reviewed By / Date : LG 8/4/2011 **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 8015C						**Dilution: 1**														
Gasoline Range Organics (GRO)	5.8		mg/Kg	J	YES	**UJ**			U					J						

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : DC-23-01 **Lab Report Batch :** K1104355 **Lab ID :** CAS_K

Sample Date : 05/11/2011 **Analysis Type: 2RES** **Sample Matrix :** SED

Lab Sample ID: K1104355-020

Reviewed By / Date : LG 8/4/2011 **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 8015C					**Dilution: 1**															
Diesel Range Organics (DRO)	520		mg/Kg	Y	YES															
Residual Range Organics (RRO)	2800		mg/Kg	O	YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : DC-23-02 **Lab Report Batch :** K1104355 **Lab ID :** CAS_K

Sample Date : 05/11/2011 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1104355-021

Reviewed By / Date : LG 8/4/2011 **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 8015C						**Dilution: 1**														
Gasoline Range Organics (GRO)	5.8		mg/Kg	J	YES	**UJ**			U					J						

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : DC-23-02 **Lab Report Batch :** K1104355 **Lab ID :** CAS_K

Sample Date : 05/11/2011 **Analysis Type: 2RES** **Sample Matrix :** SED

Lab Sample ID: K1104355-021

Reviewed By / Date : LG 8/4/2011 **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 8015C					**Dilution: 1**															
Diesel Range Organics (DRO)	460		mg/Kg	Y	YES															
Residual Range Organics (RRO)	1700		mg/Kg	O	YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : DC-23-03 **Lab Report Batch :** K1104355 **Lab ID :** CAS_K

Sample Date : 05/11/2011 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1104355-022

Reviewed By / Date : LG 8/4/2011 **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 8015C						**Dilution: 1**														
Gasoline Range Organics (GRO)	5.8		mg/Kg	J	YES	**UJ**			U					J						

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : DC-23-03 **Lab Report Batch :** K1104355 **Lab ID :** CAS_K

Sample Date : 05/11/2011 **Analysis Type: 2RES** **Sample Matrix :** SED

Lab Sample ID: K1104355-022

Reviewed By / Date : LG 8/4/2011 **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 8015C					**Dilution: 1**															
Diesel Range Organics (DRO)	510		mg/Kg	Y	YES															
Residual Range Organics (RRO)	1000		mg/Kg	O	YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : DC-23-04 **Lab Report Batch :** K1104355 **Lab ID :** CAS_K

Sample Date : 05/11/2011 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1104355-023

Reviewed By / Date : LG 8/4/2011 **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 8015C						**Dilution: 1**														
Gasoline Range Organics (GRO)	7.6		mg/Kg	J	YES	**UJ**			U					J						

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : DC-23-04 **Lab Report Batch :** K1104355 **Lab ID :** CAS_K

Sample Date : 05/11/2011 **Analysis Type: 2RES** **Sample Matrix :** SED

Lab Sample ID: K1104355-023

Reviewed By / Date : LG 8/4/2011 **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 8015C					**Dilution: 1**															
Diesel Range Organics (DRO)	450		mg/Kg	Y	YES															
Residual Range Organics (RRO)	650		mg/Kg	O	YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : DC-24-01 **Lab Report Batch :** K1104355 **Lab ID :** CAS_K

Sample Date : 05/11/2011 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1104355-024

Reviewed By / Date : LG 8/4/2011 **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 8015C						**Dilution: 1**														
Gasoline Range Organics (GRO)	5.3		mg/Kg	J	YES	**UJ**			U					J						

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : DC-24-01 **Lab Report Batch :** K1104355 **Lab ID :** CAS_K

Sample Date : 05/11/2011 **Analysis Type: 2RES** **Sample Matrix :** SED

Lab Sample ID: K1104355-024

Reviewed By / Date : LG 8/4/2011 **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 8015C					**Dilution: 1**															
Diesel Range Organics (DRO)	490		mg/Kg	Y	YES															
Residual Range Organics (RRO)	2700		mg/Kg	O	YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : DC-24-02 **Lab Report Batch :** K1104355 **Lab ID :** CAS_K

Sample Date : 05/11/2011 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1104355-025

Reviewed By / Date : LG 8/4/2011 **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 8015C						**Dilution: 1**														
Gasoline Range Organics (GRO)	5.0		mg/Kg	J	YES	**UJ**			U					J						

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : DC-24-02 **Lab Report Batch :** K1104355 **Lab ID :** CAS_K

Sample Date : 05/11/2011 **Analysis Type: 2RES** **Sample Matrix :** SED

Lab Sample ID: K1104355-025

Reviewed By / Date : LG 8/4/2011 **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 8015C					**Dilution: 1**															
Diesel Range Organics (DRO)	290		mg/Kg	Y	YES															
Residual Range Organics (RRO)	960		mg/Kg	O	YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : DC-24-03 **Lab Report Batch :** K1104355 **Lab ID :** CAS_K

Sample Date : 05/11/2011 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1104355-026

Reviewed By / Date : LG 8/4/2011 **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 8015C						**Dilution: 1**														
Gasoline Range Organics (GRO)	9.3		mg/Kg	J	YES	**J**								J						

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : DC-24-03 **Lab Report Batch :** K1104355 **Lab ID :** CAS_K

Sample Date : 05/11/2011 **Analysis Type: 2RES** **Sample Matrix :** SED

Lab Sample ID: K1104355-026

Reviewed By / Date : LG 8/4/2011 **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 8015C					**Dilution: 1**															
Diesel Range Organics (DRO)	890		mg/Kg	Y	YES															
Residual Range Organics (RRO)	1400		mg/Kg	O	YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : DC-24-03-SP
Lab Report Batch : K1104355
Lab ID : CAS_K
Sample Date : 05/11/2011
Analysis Type: 1RES
Sample Matrix : SED
Lab Sample ID: K1104355-005

Reviewed By / Date : LG 8/4/2011
Approved By / Date :

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 8015C						**Dilution: 1**														
Gasoline Range Organics (GRO)	5.2		mg/Kg	J	YES	**UJ**			U					J						

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : DC-24-03-SP
Lab Report Batch : K1104355
Lab ID : CAS_K
Sample Date : 05/11/2011
Analysis Type: 2RES
Sample Matrix : SED
Lab Sample ID: K1104355-005

Reviewed By / Date : LG 8/4/2011
Approved By / Date :

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 8015C					**Dilution: 1**															
Diesel Range Organics (DRO)	840		mg/Kg	Y	YES															
Residual Range Organics (RRO)	1300		mg/Kg	O	YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : DC-25-02-DP
Lab Report Batch : K1104355
Lab ID : CAS_K
Sample Date : 05/11/2011
Analysis Type: 1RES
Sample Matrix : SED
Lab Sample ID: K1104355-027

Reviewed By / Date : LG 8/4/2011
Approved By / Date :

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 8015C					**Dilution: 1**															
Gasoline Range Organics (GRO)	16		mg/Kg	Y	YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : DC-25-02-DP
Lab Report Batch : K1104355
Lab ID : CAS_K
Sample Date : 05/11/2011
Analysis Type: 2RES
Sample Matrix : SED
Lab Sample ID: K1104355-027

Reviewed By / Date : LG 8/4/2011
Approved By / Date :

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 8015C					**Dilution: 1**															
Diesel Range Organics (DRO)	2000		mg/Kg	Y	YES															
Residual Range Organics (RRO)	2600		mg/Kg	O	YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : OC-35-01 **Lab Report Batch :** K1104355 **Lab ID :** CAS_K

Sample Date : 05/12/2011 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1104355-006

Reviewed By / Date : LG 8/4/2011 **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 8015C					**Dilution: 1**															
Gasoline Range Organics (GRO)	45		mg/Kg	Y	YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : OC-35-01 **Lab Report Batch :** K1104355 **Lab ID :** CAS_K

Sample Date : 05/12/2011 **Analysis Type: 2RES** **Sample Matrix :** SED

Lab Sample ID: K1104355-006

Reviewed By / Date : LG 8/4/2011 **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 8015C					**Dilution: 1**															
Diesel Range Organics (DRO)	1200		mg/Kg	Y	YES															
Residual Range Organics (RRO)	1800		mg/Kg	O	YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : OC-35-02 **Lab Report Batch :** K1104355 **Lab ID :** CAS_K

Sample Date : 05/12/2011 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1104355-007

Reviewed By / Date : LG 8/4/2011 **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 8015C						**Dilution: 1**														
Gasoline Range Organics (GRO)	1000		mg/Kg	Y	YES	**J**							J							

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : OC-35-02 **Lab Report Batch :** K1104355 **Lab ID :** CAS_K

Sample Date : 05/12/2011 **Analysis Type: 2RES** **Sample Matrix :** SED

Lab Sample ID: K1104355-007

Reviewed By / Date : LG 8/4/2011 **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 8015C					**Dilution: 1**															
Diesel Range Organics (DRO)	3500		mg/Kg	Y	YES															
Residual Range Organics (RRO)	2600		mg/Kg	O	YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : OC-46-01 **Lab Report Batch :** K1104355 **Lab ID :** CAS_K

Sample Date : 05/12/2011 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1104355-008

Reviewed By / Date : LG 8/4/2011 **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 8015C						**Dilution: 1**														
Gasoline Range Organics (GRO)	3.8		mg/Kg	J	YES	**UJ**			U					J						

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : OC-46-01 **Lab Report Batch :** K1104355 **Lab ID :** CAS_K

Sample Date : 05/12/2011 **Analysis Type: 2RES** **Sample Matrix :** SED

Lab Sample ID: K1104355-008

Reviewed By / Date : LG 8/4/2011 **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 8015C					**Dilution: 1**															
Diesel Range Organics (DRO)	120		mg/Kg	Y	YES															
Residual Range Organics (RRO)	370		mg/Kg	O	YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : OC-46-02 **Lab Report Batch :** K1104355 **Lab ID :** CAS_K

Sample Date : 05/12/2011 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1104355-009

Reviewed By / Date : LG 8/4/2011 **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 8015C						**Dilution: 1**														
Gasoline Range Organics (GRO)	5.9		mg/Kg	J	YES	**UJ**			U					J						

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : OC-46-02 **Lab Report Batch :** K1104355 **Lab ID :** CAS_K

Sample Date : 05/12/2011 **Analysis Type: 2RES** **Sample Matrix :** SED

Lab Sample ID: K1104355-009

Reviewed By / Date : LG 8/4/2011 **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 8015C					**Dilution: 1**															
Diesel Range Organics (DRO)	500		mg/Kg	Y	YES															
Residual Range Organics (RRO)	830		mg/Kg	O	YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : OC-47-01 **Lab Report Batch :** K1104355 **Lab ID :** CAS_K

Sample Date : 05/12/2011 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1104355-010

Reviewed By / Date : LG 8/4/2011 **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 8015C						**Dilution: 1**														
Gasoline Range Organics (GRO)	4.3		mg/Kg	J	YES	**UJ**			U					J						

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : OC-47-01 **Lab Report Batch :** K1104355 **Lab ID :** CAS_K

Sample Date : 05/12/2011 **Analysis Type: 2RES** **Sample Matrix :** SED

Lab Sample ID: K1104355-010

Reviewed By / Date : LG 8/4/2011 **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 8015C					**Dilution: 1**															
Diesel Range Organics (DRO)	110		mg/Kg	Y	YES															
Residual Range Organics (RRO)	380		mg/Kg	O	YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : OC-47-02 **Lab Report Batch :** K1104355 **Lab ID :** CAS_K

Sample Date : 05/12/2011 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1104355-011

Reviewed By / Date : LG 8/4/2011 **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 8015C						**Dilution: 1**														
Gasoline Range Organics (GRO)	3.8		mg/Kg	J	YES	**UJ**			U					J						

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : OC-47-02 **Lab Report Batch :** K1104355 **Lab ID :** CAS_K

Sample Date : 05/12/2011 **Analysis Type: 2RES** **Sample Matrix :** SED

Lab Sample ID: K1104355-011

Reviewed By / Date : LG 8/4/2011 **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 8015C					**Dilution: 1**															
Diesel Range Organics (DRO)	81		mg/Kg	Y	YES															
Residual Range Organics (RRO)	220		mg/Kg	O	YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : OC-47-03 **Lab Report Batch :** K1104355 **Lab ID :** CAS_K

Sample Date : 05/12/2011 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1104355-012

Reviewed By / Date : LG 8/4/2011 **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 8015C						**Dilution: 1**														
Gasoline Range Organics (GRO)	4.0		mg/Kg	J	YES	**UJ**			U					J						

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : OC-47-03 **Lab Report Batch :** K1104355 **Lab ID :** CAS_K

Sample Date : 05/12/2011 **Analysis Type: 2RES** **Sample Matrix :** SED

Lab Sample ID: K1104355-012

Reviewed By / Date : LG 8/4/2011 **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 8015C					**Dilution: 1**															
Diesel Range Organics (DRO)	180		mg/Kg	Y	YES															
Residual Range Organics (RRO)	350		mg/Kg	O	YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : OC-47-04 **Lab Report Batch :** K1104355 **Lab ID :** CAS_K

Sample Date : 05/12/2011 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1104355-013

Reviewed By / Date : LG 8/4/2011 **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 8015C					**Dilution: 1**															
Gasoline Range Organics (GRO)	26		mg/Kg	Y	YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : OC-47-04 **Lab Report Batch :** K1104355 **Lab ID :** CAS_K

Sample Date : 05/12/2011 **Analysis Type: 2RES** **Sample Matrix :** SED

Lab Sample ID: K1104355-013

Reviewed By / Date : LG 8/4/2011 **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 8015C					**Dilution: 1**															
Diesel Range Organics (DRO)	490		mg/Kg	Y	YES															
Residual Range Organics (RRO)	660		mg/Kg	O	YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : OC-48-01 **Lab Report Batch :** K1104355 **Lab ID :** CAS_K

Sample Date : 05/12/2011 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1104355-014

Reviewed By / Date : LG 8/4/2011 **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 8015C						**Dilution: 1**														
Gasoline Range Organics (GRO)	3.7		mg/Kg	J	YES	**UJ**			U					J						

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : OC-48-01 **Lab Report Batch :** K1104355 **Lab ID :** CAS_K

Sample Date : 05/12/2011 **Analysis Type: 2RES** **Sample Matrix :** SED

Lab Sample ID: K1104355-014

Reviewed By / Date : LG 8/4/2011 **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 8015C					**Dilution: 1**															
Diesel Range Organics (DRO)	110		mg/Kg	Y	YES															
Residual Range Organics (RRO)	370		mg/Kg	O	YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : OC-48-02 **Lab Report Batch :** K1104355 **Lab ID :** CAS_K

Sample Date : 05/12/2011 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1104355-015

Reviewed By / Date : LG 8/4/2011 **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 8015C						**Dilution: 1**														
Gasoline Range Organics (GRO)	3.6		mg/Kg	J	YES	**UJ**			U					J						

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : OC-48-02 **Lab Report Batch :** K1104355 **Lab ID :** CAS_K

Sample Date : 05/12/2011 **Analysis Type: 2RES** **Sample Matrix :** SED

Lab Sample ID: K1104355-015

Reviewed By / Date : LG 8/4/2011 **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 8015C					**Dilution: 1**															
Diesel Range Organics (DRO)	160		mg/Kg	Y	YES															
Residual Range Organics (RRO)	470		mg/Kg	O	YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : OC-48-03 **Lab Report Batch :** K1104355 **Lab ID :** CAS_K

Sample Date : 05/12/2011 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1104355-016

Reviewed By / Date : LG 8/4/2011 **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 8015C						**Dilution: 1**														
Gasoline Range Organics (GRO)	5.0		mg/Kg	J	YES	**UJ**			U					J						

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : OC-48-03 **Lab Report Batch :** K1104355 **Lab ID :** CAS_K

Sample Date : 05/12/2011 **Analysis Type: 2RES** **Sample Matrix :** SED

Lab Sample ID: K1104355-016

Reviewed By / Date : LG 8/4/2011 **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 8015C					**Dilution: 1**															
Diesel Range Organics (DRO)	330		mg/Kg	Y	YES															
Residual Range Organics (RRO)	580		mg/Kg	O	YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : OC-48-04 **Lab Report Batch :** K1104355 **Lab ID :** CAS_K

Sample Date : 05/12/2011 **Analysis Type: 1RES** **Sample Matrix :** SED

Lab Sample ID: K1104355-017

Reviewed By / Date : LG 8/4/2011 **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 8015C					**Dilution: 1**															
Gasoline Range Organics (GRO)	39		mg/Kg	Y	YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

Sample Qualification Report (All Analytes)

Client Sample ID : OC-48-04 **Lab Report Batch :** K1104355 **Lab ID :** CAS_K

Sample Date : 05/12/2011 **Analysis Type: 2RES** **Sample Matrix :** SED

Lab Sample ID: K1104355-017

Reviewed By / Date : LG 8/4/2011 **Approved By / Date :**

Analyte Name	Result	Uncertainty / Error	Result Units	Lab Qual	Rep Res	Overall Qual*	Temp	HT	MB	LCS	MS	Lab Dup	Surr	Rep Limit	Moist Tot/Dis	Field QC	Tune	IC	ICV	CV / CCV
Analysis Method : 8015C					**Dilution: 1**															
Diesel Range Organics (DRO)	340		mg/Kg	Y	YES															
Residual Range Organics (RRO)	550		mg/Kg	O	YES															

* Overall result qualifier reflects summation of qualifiers added during automated data review and any qualifiers added manually for categories not assessed by automated data review

ATTACHMENT C

DATA QUALIFIER DEFINITIONS

LABORATORY DATA QUALIFIER DEFITIONS

D - The reported result is from a dilution.

J - The result is an estimated value that was detected outside the quantitation range.

O - Indicates that the chromatographic fingerprint resembles an oil product, but does not match the calibration standard.

U - The analyte was analyzed for but not detected at or above the method detection limit and/or reporting limit

Y - Indicates that the chromatographic fingerprint resembles a petroleum product eluting in approximately the correct carbon range, but the elution pattern does not match the calibration standard.

DATA VALIDATION DATA QUALIFIER DEFITIONS

J - The analyte was positively identified and the associated numerical value is the approximate concentration of the analyte in the sample (due either to the quality of the data generated because certain quality control criteria were not met, or the concentration of the analyte was below the quantitation limit).

U - The analyte was analyzed for but not detected at a level equal to or greater than the reporting limit.

UJ - The analyte was analyzed for, but was not detected. The reported quantitation limit is approximate and may be inaccurate or imprecise.

SEDIMENT ASSESSMENT REPORT
LOWER MAUMEE RIVER
MAUMEE RIVER AREA OF CONCERN
TOLEDO, LUCAS COUNTY, OHIO

Prepared for

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ACRONYMS AND ABBREVIATIONS

%	Percent
µg/kg	Microgram per kilogram
ADR	Automated Data Review
AOC	Area of Concern
ATSDR	Agency for Toxic Substances and Disease Registry
bss	Below sediment surface
BUI	Beneficial use impairment
cfs	Cubic foot per second
CLP	Contract Laboratory Program
COPC	Contaminant of potential concern
CSO	Combined sewer overflow
ESL	Ecological Screening Level
EXES	Exchange and Evaluation System
GLLA	Great Lakes Legacy Act
GLNPO	Great Lakes National Program Office
mg/kg	Milligram per kilogram
NFG	National Functional Guideline
Ohio EPA	Ohio Environmental Protection Agency
PAH	Polycyclic aromatic hydrocarbon
PCB	Polychlorinated biphenyl
PEC	Probable Effect Concentration
QA	Quality assurance
QC	Quality control
QAPP	Quality Assurance Project Plan
RAP	Remedial Action Plan
R/V	research vessel
RPD	relative percent difference
Shaw	Shaw Environmental and Infrastructure Inc.,
SMO	Sample Management Office
SOP	Standard Operating Procedure
SRV	Sediment Reference Value
START	Superfund Technical Assistance and Response Team
SVOC	Semivolatile organic compound
TAL	Target Analyte List
TCL	Target Compound List
TDD	Technical Direction Document
TOC	Total organic carbon
U.S. EPA	United States Environmental Protection Agency
VSP	Visual Sampling Plan
WESTON	Weston Solutions, Inc.

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EXECUTIVE SUMMARY

Weston Solutions, Inc. (WESTON®) has prepared this Sediment Assessment Report to summarize site characterization activities conducted for the Lower Maumee River project area in Toledo, Lucas County, Ohio as part of the Maumee River Area of Concern (AOC) United States Environmental Protection Agency (U.S. EPA) Great Lakes National Program Office (GLNPO) Great Lakes Legacy Act (GLLA) Project. The purpose of the GLLA project is to further define chemical contaminants in sediment, locate contaminated areas for additional evaluation, delineate hotspots, and attempt to identify any ongoing sources. The objective of this site characterization was to collect samples for chemical and physical properties analysis needed to support project area assessment and potential remediation activities.

When the Maumee River AOC was designated, it was primarily due to the large problem of agricultural runoff. However, upon further investigation, more problems were discovered, including former dumps and contaminated industrial sites, combined sewer overflows (CSO), and disposal of dredged materials. The biological communities in the Lower Maumee River have been identified as impaired. The land surrounding the Lower Maumee River project area is primarily industrial and commercial, with both current and historical sources of contamination. These sources of contaminants include various industries, chemical plants, petroleum production, and wastewater outfalls. The "Maumee Area of Concern Stage 2 Watershed Restoration Plan" dated 2006 indicated elevated concentrations of polychlorinated biphenyls (PCB), polycyclic aromatic hydrocarbons (PAH), and heavy metals in surface sediment in the Lower Maumee River project area.

The Lower Maumee River project area extends 5 river miles and is bound on the downstream edge by the Interstate 280 bridge (Veterans' Glass City Skyway) and on the upstream edge just downstream of Walbridge Park in Toledo, Ohio. During the site characterization, a total of 337 sediment samples (including 303 investigative, 17 field split, and 17 duplicate samples) were collected from 84 sampling locations in the Lower Maumee River project area. The sample design was based on detecting "hot spots" (local areas of elevated concentration) with a 646-foot-radius and a 95% confidence probability.

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Where sediment recovery was adequate, samples typically were collected from the following intervals: 0 to 6, 6 to 24, 24 to 48, 48 to 72, 72 to 96, 96 to 120, 120 to 144, and 144 to 168 inches below sediment surface (bss). Sediment volume was not expected to be adequate to allow collection of a sediment core at sampling locations near the center of the river upstream of Interstate 75. Therefore, only a surface sample from 0 to 6 inches bss was planned for collection using a ponar device at these locations. However, during site characterization activities, adequate core recovery was unexpectedly achieved at several locations near the center of the river upstream of Interstate 75. Samples were collected using a ponar device at many of these locations, and then the sampling team returned to several locations to collect a sediment core on a later date. Sediment cores were collected to depth of refusal or until native material was encountered. Sediment cores typically were collected using the GLNPO research vessel (R/V) Mudpuppy II. However, due to equipment problems with the Mudpuppy II, some sediment samples were collected using a vibracore device mounted to a pontoon boat.

All sediment samples were analyzed for the contaminants of potential concern (COPC): Target Analyte List (TAL) metals (including mercury) and semivolatile organic compounds (SVOC). In addition, approximately 10 percent (%) of all sediment samples collected were analyzed for Target Compound List (TCL) pesticides and PCB Aroclors. All sediment samples also were analyzed for physical properties, including % moisture, total organic carbon (TOC), and grain size.

The sample results for SVOCs, metals, PCBs, and pesticides were compared to Probable Effect Concentrations (PEC) set forth in the document "Development and Evaluation of Consensus-Based Sediment Quality Guidelines for Freshwater Ecosystems" (by D.D. MacDonald, et. al., dated 2000). The metals results were also compared to Ohio-specific Sediment Reference Values (SRV) set forth in the "Ohio Ecological Risk Assessment Guidance Document" dated February 2003, revised April 2008. Ecological Screening Levels (ESL) for sediment as set forth in U.S. EPA Region 5's "Ecological Screening Levels" dated 2003 were presented as a secondary source of screening criteria for SVOCs, metals, PCBs, and pesticides that do not have a developed PEC.

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The PECs and ESLs provide screening criteria to evaluate sediment chemistry data. PECs are defined as concentrations above which adverse effects are expected to occur and are the primary screening criteria for this characterization project. The ESLs represent a protective benchmark (for example, water quality criteria, sediment quality guidelines and criteria, and chronic no adverse effect levels) and are the secondary screening criteria. The Ohio-specific SRVs were developed to identify representative background sediment concentrations for lotic (flowing) water bodies.

The paragraphs below summarize the comparison of the analytical data to the screening levels, when available, for SVOCs, TAL metals, PCBs, and TCL pesticides.

SVOCs

Total PAH 17 and several individual PAHs (anthracene, benzo(a)anthracene, benzo(a)pyrene, chrysene, fluoranthene, fluorene, naphthalene, phenanthrene, and pyrene) were detected at concentrations exceeding PECs.

Anthracene, benzo(a)anthracene, benzo(a)pyrene, chrysene, fluoranthene, phenanthrene, and pyrene exceeded their respective PECs in the sample collected from location LMR11-14 from 0 to 6 inches bss. The calculated total PAH 17 concentration for sample LMR11-14-006 was 92,474.2 micrograms per kilogram (µg/kg), which exceeds the total PAH PEC of 22,800 µg/kg. LMR11-14 is near Corbutt Island in the upstream portion of the project area. Concentrations of PAHs exceeding PECs were detected only in the upper 6 inches of sediment at LMR11-14, which may be attributable to sediment deposited from upstream areas. The downstream side of Corbutt Island, where LMR11-14 is located, is a depositional zone for sediments. Sediment samples collected from deeper intervals at LMR11-14 did not contain PAHs at concentrations exceeding PECs. The 0 to 6 inch bss sample at LMR11-14 consisted primarily of sand (greater than 75%) whereas deeper samples at LMR11-14 consisted of higher percentages of silt and clay.

Anthracene, benzo(a)anthracene, benzo(a)pyrene, chrysene, fluoranthene, fluorene, naphthalene, phenanthrene, and pyrene exceeded their respective PECs in the sample collected from LMR11-

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69 from 0 to 6 inches bss. The calculated total PAH 17 concentration for sample LMR11-69-006 was 297,600 µg/kg, which exceeds the total PAH PEC of 22,800 µg/kg. Sediment recovery was poor at location LMR11-69 so deeper samples were not collected from this location. Therefore, the vertical extent of PAHs at concentrations exceeding the PECs is not defined. LMR11-69 was located near the mouth where Swan Creek discharges into the Maumee River. Elevated concentrations of PAHs have been detected in Swan Creek. The 0 to 6 inch bss sample at LMR11-69 consisted primarily of sand (greater than 75%).

Naphthalene and phenanthrene were detected at concentrations exceeding their PECs at sample location LMR11-50 at a depth of 72 to 96 inches bss. LMR11-50 was located near a CSO, which may be the source of PAHs detected in this area of the river.

TAL METALS

Metals exceeding PECs were noted throughout the investigation area, mostly in samples collected closer to the shores. The following TAL metals were detected at concentrations exceeding their respective PECs in at least one sample: arsenic, cadmium, chromium, lead, mercury, and zinc. The maximum concentration of lead in sediment, 419 milligrams per kilogram (mg/kg), was detected in a sample collected from location LMR11-69 from 0 to 6 inches bss. Elevated concentrations of PAHs also were detected in this sample which is located near the mouth of Swan Creek. High concentrations of lead also were detected in samples collected from LMR11-63 and LMR11-64 near the Clayton Street/Woodville Road bridge (Anthony Wayne High Level Bridge).

The maximum concentration of mercury in sediment, 5.6 mg/kg, was detected in a sample collected from LMR11-72 from 0 to 6 inches bss. A petroleum odor and a blue sheen on the water were noticed as the core at LMR11-72 was recovered. Sampling location LMR11-72 was placed at a historic sampling location previously identified as MAUMEE R AT PORTSIDE DOCKS, where elevated metals concentrations have been detected.

Sample location LMR11-72 is directly downstream from sample location LMR11-69 which also showed elevated concentrations of metals.

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PCBs

PCBs were not identified as a contaminant of concern for this site. While a subset of sediment samples were analyzed for PCBs, they were not detected in any sediment samples collected during site characterization activities.

TCL PESTICIDES

Detected concentrations of pesticides did not exceed their respective PECs in any samples collected during site characterization activities.

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1. INTRODUCTION

Weston Solutions, Inc. (WESTON®), has prepared this Sediment Assessment Report to summarize site characterization activities conducted for the Lower Maumee River project area in Toledo, Lucas County, Ohio (**Figure 1-1**). WESTON prepared the Sediment Assessment Report in response to a request from the United States Environmental Protection Agency (U.S. EPA) Great Lakes National Program Office (GLNPO) under Superfund Technical Assessment and Response Team (START) III Contract No. EP-S5-06-04, Technical Direction Document (TDD) No. S05-0008-1103-006. The site characterization activities were conducted as part of the Maumee River Area of Concern (AOC) Great Lakes Legacy Act (GLLA) project. The purpose of the GLLA project is to define chemical contaminants in sediment, locate contaminated areas for additional evaluation, delineate hotspots, and attempt to identify any ongoing sources. The data collection activities were conducted in accordance with WESTON's approved Quality Assurance Project Plan (QAPP) dated July 2011.

The sections below discuss the report organization, site description, site background and history, possible sources of contamination, the purpose of the study and project objectives, and contaminants of potential concern (COPC) and target analytes.

1.1 REPORT ORGANIZATION

This Sediment Assessment Report is organized as follows:

- Section 1 – Introduction
- Section 2 – Site Characterization Activities
- Section 3 – Sample Analytical Results
- Section 4 – Data Completeness
- Section 5 – Summary

Tables and figures are included after Section 5. **Appendix A** provides the sediment core logs, **Appendix B** provides analytical data tables for all samples collected, and **Appendix C** provides a photographic log of site conditions and sampling activities.

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1.2 SITE DESCRIPTION

The "Maumee Area of Concern Stage 2 Watershed Restoration Plan" states that the Maumee River begins in Fort Wayne at the confluence of the St. Joseph and St. Mary's Rivers and flows through Defiance and Napoleon and then on toward Toledo. Two major tributaries join the Maumee River: the Tiffin and Auglaize Rivers. In Wood and Lucas Counties, several smaller streams flow into the Maumee River: Beaver and Tontogany Creeks from the south and Swan Creek, which join the Maumee River in downtown Toledo.

The Maumee River travels more than 130 river miles to Lake Erie, 108 miles of which are located in Ohio. The Maumee River AOC does not include the entire Maumee River watershed. Instead, it includes the river's lower reach and tributaries as well as some neighboring watersheds (**Figure 1-1**). The boundaries of the Maumee River AOC originally were identified as the area extending from the Bowling Green water intake near Waterville (River Mile 22.8) along the Lower Maumee River downstream to Maumee Bay. The area includes direct drainage into the waters that are within Lucas, Ottawa, and Wood Counties and includes Swan Creek, Ottawa River (Tenmile Creek), Duck Creek, Otter Creek, Grassy Creek, Cedar Creek, and Crane Creek. In 1992, the AOC was expanded to include Packer Creek, Turtle Creek, Rusha Creek, and the Toussaint River. In 2010, the AOC boundaries were formally realigned to match the associated hydrologic units (**Figure 1-1**). The AOC's drainage area covers nearly all of Lucas County and parts of Fulton, Wood, Ottawa, and Sandusky Counties. The Maumee River AOC covers 787 square miles. The Maumee River has the largest drainage area of any Great Lakes river, with 3,942 stream miles.

The Lower Maumee River project area is located in the Maumee River AOC in Toledo, Lucas County, Ohio. The investigation area extends 5 river miles and is bound on the downstream edge by the Interstate 280 bridge (Veterans' Glass City Skyway) and on the upstream edge just downstream of Walbridge Park in Toledo, Ohio (**Figure 1-2**). The Ohio Environmental Protection Agency's (Ohio EPA) "Maumee Remedial Action Plan (RAP) Stage 1 Investigation Report" dated 1990 identified 10 beneficial use impairments (BUI) for the Maumee River AOC that also apply to the Lower Maumee River project area.

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The Maumee River subsurface consists of layers of bedrock with overlying layers of gravel, sand, silt, and clay left behind by glaciers and glacial lakes. Most regional bedrock is dolomite, a magnesium-bearing form of limestone. Smaller areas of sandstone and shale are present, especially in northwestern Lucas County.

The soils of the Maumee River are level to gently sloping and are very poorly to somewhat poorly drained. Lucas County formed in clayey and loamy, lake-laid sediment and water-reworked glacial till on broad flats of an old glacial lake.

The land area, or the watershed, that the Maumee River drains is 6,586 square miles, of which about 85 percent (%) is agricultural land. Daily average discharge ranges from a high of 94,000 cubic feet per second (cfs) to a low of 32 cfs and contributes about 25% of the total tributary discharge into Lake Erie exclusive of the Detroit River. The average annual rainfall in the river basin is 34.5 inches. The area in Wood and Lucas counties draining directly into the Maumee River is comparatively small. Most drainage flows into other rivers, Maumee Bay, or Lake Erie.

1.3 SITE BACKGROUND AND HISTORY

The "Maumee Area of Concern Stage 2 Watershed Restoration Plan" states that when the Maumee River AOC was designated, it was primarily due to the large problem of agricultural runoff. However, upon further investigation, more problems were discovered, including former dumps and contaminated industrial sites, combined sewer overflows (CSO), and disposal of dredged materials.

Originally the delisting of the Maumee River AOC was based on restoration of 14 BUIs for the entire AOC. Impairment of beneficial use means a change in the chemical, physical, or biological integrity of the Great Lakes ecosystem. According to the Ohio EPA's Maumee RAP dated 1990, 10 of the 14 BUIs in the Maumee River AOC required restoration. These BUIs included the following:

- Restrictions on fish and wildlife consumption
- Eutrophication or undesirable algae

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- Restrictions on drinking water consumption or taste and odor
- Degradation of fish and wildlife populations
- Beach closings (Recreational Contact)
- Fish tumors or other deformities
- Degradation of aesthetics
- Degradation of benthos
- Restriction on dredging activities
- Loss of fish and wildlife habitat

The Maumee RAP does not identify BUIs by watershed but for the entire Maumee River AOC because the only means of delisting in 1990 was through total restoration of the entire AOC. Since an incremental approach to delisting was adopted in 2001 by the U.S. Policy Committee, the 1990 RAP and its BUIs were re-evaluated with the help of other community partners. This re-evaluation was conducted based on data and information available in the late 1980s and early 1990s and resulted in the preparation of a BUI summary table for each watershed in the Maumee River AOC. These new tables allowed better determination of progress toward restoration of a watershed or a beneficial use.

1.4 POSSIBLE SOURCES OF CONTAMINATION

The biological communities in the Lower Maumee River have been identified as impaired. The land surrounding the Lower Maumee River project area is primarily industrial and commercial, with both current and historical contamination (**Figure 1-3**). These sources of contaminants include various industries, chemical plants, petroleum production, and wastewater outfalls. The "Maumee Area of Concern Stage 2 Watershed Restoration Plan" dated 2006 indicated elevated concentrations of polychlorinated biphenyls (PCB), polycyclic aromatic hydrocarbons (PAH), and heavy metals in surface sediment in the Lower Maumee River project area.

From 1910 to 1990, Jennison Wright ran a creosote operation and manufactured asphalt pavement sealer at an approximately 23-acre site located at 2332 Broadway Avenue in Toledo that it leased from two railroad companies (**Figure 1-3**). From October 1994 to April 1995, the

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Norfolk Southern Railway and Conrail railroads performed an initial cleanup called an "interim removal action." The cleanup was conducted to remove all vessels, structures, drums, waste piles, and residuals of creosote-contaminated soils (PAHs) for off-site disposal. A more detailed investigation by the railroads identified pollutants in soil and groundwater. In soil, these pollutants included PAHs, 1-methylnaphthalene, 2-methylnaphthalene, arsenic, barium, chromium, and mercury. Pollutants in shallow rock and bedrock groundwater included benzene, ethylbenzene, toluene, xylene, arsenic, barium, and PAHs.

The property located at 1968 Miami Street had been owned by the Pilkington North America and Libbey Owens Ford glassmaking companies (**Figure 1-3**). A site assessment indicated soil contaminated with arsenic and groundwater contaminated with arsenic, nickel, chromium, lead, and bis(2-ethylhexyl)phthalate at concentrations exceeding standards allowed for residential and commercial/industrial use. The current property owner voluntarily assessed the property and then conducted a site cleanup of sand ponds that had been used until the 1970s to dispose of wastewater from glassmaking operations.

1.5 PURPOSE OF STUDY AND PROJECT OBJECTIVE

The purpose of the Lower Maumee River GLLA project is to further define chemical contaminants in sediment, locate contaminated areas for additional evaluation, delineate hot spots, and attempt to identify any ongoing sources. The objective of this site characterization was to collect samples for chemical and physical properties analysis needed to support project area assessment and potential remediation activities.

1.6 COPCs AND TARGET ANALYTES

All sediment samples were analyzed for the following COPCs: Target Analyte List (TAL) metals (including mercury) and semivolatile organic compounds (SVOC). In addition, approximately 10% of all sediment samples collected were analyzed for Target Compound List (TCL) pesticides and PCB Aroclors. All sediment samples also were analyzed for physical properties, including % moisture, total organic carbon (TOC), and grain size.

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2. SITE CHARACTERIZATION ACTIVITIES

Site characterization activities were conducted from August 1 through 11, 2011, and included sediment sample collection and sediment characterization as discussed below.

2.1 SEDIMENT SAMPLE COLLECTION

The sample collection procedures are detailed in WESTON's QAPP dated July 2011. The data collected during characterization activities will be used to (1) evaluate the locations of the most heavily contaminated sediment and (2) focus areas for further evaluation and remediation.

The Lower Maumee River project area extends 5 river miles, bound on the downstream edge by the Interstate 280 bridge (Veterans' Glass City Skyway) and on the upstream edge just downstream of Walbridge Park in Toledo, Ohio (**Figure 1-2**). Most sediment sampling locations were selected using Visual Sampling Plan (VSP) software with a sample design based on detecting "hot spots" (local areas of elevated concentrations) with a 646-foot-radius and 95% confidence probability. Two sampling locations (LMR11-50 and LMR11-72) were chosen at two historic sampling locations within the project area boundaries previously identified as MAUMEE R DST LOF PONDS ADJ SUNKEN BARGE and MAUMEE R AT PORTSIDE DOCKS, respectively. However, proposed location LMR11-50 was moved closer to a nearby CSO location. Five sampling locations (LMR11-57, LMR11-59, LMR11-60, LMR11-62, and LMR11-63) were biased in an area where the City of Toledo is planning future development. Additionally, samples were not collected from the navigation channel.

A total of 337 sediment samples (including 303 investigative, 17 field split, and 17 duplicate samples) were collected from 84 sampling locations in the Lower Maumee River project area. **Table 2-1** presents the sampling location coordinates, and **Figure 2-1** shows the sediment sampling locations.

Where sediment recovery was adequate, samples typically were collected from the following intervals: 0 to 6, 6 to 24, 24 to 48, 48 to 72, 72 to 96, 96 to 120, 120 to 144, and 144 to 168 inches below sediment surface (bss). Except for the surface interval, each sampling interval was

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typically 24 inches long. If less than 12 inches of sediment was encountered in the bottom interval, it typically was included with the previous interval. Location LMR11-09 was not sampled because of poor recovery. In addition, poor recovery was noted in the upper 24 inches of sediment at location LMR11-43. Sediment collected from each sampling depth interval was homogenized, and an aliquot of each sediment sample was submitted for laboratory analysis.

Upstream of Interstate 75, sediment volume was not expected to be adequate to allow collection of a sediment core at sampling locations near the center of the river. Therefore, only a surface sample from 0 to 6 inches bss was planned for collection using a ponar device at these locations. However, during site characterization activities, adequate core recovery was unexpectedly achieved at several locations near the center of the river upstream of Interstate 75. Samples were collected using a ponar device at many of these locations, and then the sampling team returned to several locations to collect a sediment core on a later date. **Table 2-2** presents the sampling and analysis summary, including the sample collection device (ponar or vibracore) for each sediment sample. **Figure 2-2** shows the sediment thickness at each sampling location during the sediment sampling activities.

Sediment cores were collected to depth of refusal or until native material was encountered. Sediment cores typically were collected using the GLNPO research vessel (R/V) Mudpuppy II. However, due to equipment problems with the Mudpuppy II, some sediment samples were collected using a vibracore device mounted to a pontoon boat.

A U.S. EPA Contract Laboratory Program (CLP) laboratory analyzed the samples for SVOCs, TAL metals (including mercury), PCB Aroclors, TCL pesticides, and % moisture. A WESTON-procured subcontracted laboratory, TestAmerica Burlington of Burlington, Vermont, analyzed the samples for grain size and TOC (**Table 2-2**). Section 3 discusses the sample analytical results.

2.2 SEDIMENT CHARACTERISTICS

During site characterization activities, sediment throughout the Lower Maumee River project area largely was uniform. Sediment consisted of dark-brown to black, silty sand and sandy silt

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with fine to medium grains throughout. Areas near the shoreline and Corbutt Island also had a surface deposit of well-graded gravel and cobbles. Organic materials were observed throughout much of the top 24 inches of sediment. An oily sheen was observed at location LMR11-69 as the core was extracted. Poor recovery (12 of 60 inches) was noted for this core, and woody debris was noted on the top of the core. A petroleum odor was noticed as cores were recovered from LMR11-50 and LMR11-72. A blue sheen was noted on the water surface as the core from LMR11-72 was recovered.

The maximum water depth encountered during sediment sampling was 22.5 feet. The maximum sediment depth measured was 175 inches at location LMR11-50. **Figure 2-2** shows the sediment thickness recovered at each core location during sediment sampling. **Appendix A** presents the sediment core logs, which provide additional detail regarding the geologic profile and water and sediment depth at each sampling location.

3. SAMPLE ANALYTICAL RESULTS

This section summarizes analytical results for the site characterization samples collected from August 1 through 11, 2011. A total of 337 sediment samples (303 investigative, 17 field split, and 17 duplicate samples) were collected from 84 sampling locations in the Lower Maumee River project area. The table below summarizes the analytical parameters for the investigative samples collected.

Analysis	Sampling Depth (inches bss)							
	0- 6	6- 24	24- 48	48- 72	72- 96	96- 120	120- 144	144- 168
SVOCs	83	66	58	45	30	16	3	2
TAL Metals	83	66	58	45	30	16	3	2
PCB Aroclors	7	13	6	2	1	0	0	0
Pesticides	7	13	6	2	1	0	0	0
Grain Size	81	66	58	45	30	16	3	2
TOC	83	66	58	45	30	16	3	2

The sample results for SVOCs, metals (including mercury), PCBs, and pesticides were compared to Probable Effect Concentrations (PEC) set forth in the document "Development and Evaluation of Consensus-Based Sediment Quality Guidelines for Freshwater Ecosystems" (by D.D. MacDonald, et. al., dated 2000). The metals results were also compared to Ohio-specific

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Sediment Reference Values (SRV) set forth in the "Ohio Ecological Risk Assessment Guidance Document" dated February 2003 and revised in April 2008. Ecological Screening Levels (ESL) for sediment as set forth in U.S. EPA Region 5's "Ecological Screening Levels" dated 2003 are also presented as a secondary source of screening criteria and are used for comparison when PECs are not available.

The PECs and ESLs provide screening criteria to evaluate sediment chemistry data. PECs are defined as concentrations above which adverse effects are expected to occur and are the primary screening criteria for this characterization project. The ESLs represent a protective benchmark (for example, water quality criteria, sediment quality guidelines and criteria, and chronic no adverse effect levels) and are the secondary screening criteria. Sample results are compared to ESLs for chemicals that do not have a developed PEC, as discussed in sections 3.1 through 3.4. The Ohio-specific SRVs were developed to identify representative background sediment concentrations for lotic (flowing) water bodies. The SRVs may be used in conjunction with or instead of generating site-specific background concentrations for metals to determine if sediment potentially has been impacted. The SRVs are used as a screening tool for sites that have identified potential sediment contamination in lotic water bodies. Metals concentrations are compared to SRVs for chemicals that do not have a developed PEC as discussed in section 3.2.

Tables 3-1, 3-2, and 3-3 summarize the analytical results for SVOCs, TAL metals, and pesticides, respectively, by sediment depth sampling interval. These tables include the number of samples analyzed per depth interval; the number and percent of detected results; minimum and maximum detected concentrations; screening criteria; and the number of samples exceeding the screening criteria. **Appendix B** presents tables of the complete analytical results compared to PECs. The **Appendix B** tables summarize the sample results for % moisture, TOC, and grain size but do not compare these results to numerical screening criteria. **Appendix C** provides a photographic log of site conditions and sampling activities.

The sections below compare the analytical data to the screening criteria, when available, for SVOCs, TAL metals, PCBs, TCL pesticides, and physical properties.

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3.1 SVOCs

A total of 337 (303 investigative, 17 field split, and 17 duplicate) sediment samples were analyzed for SVOCs. **Table 3-1** summarizes the analytical results for SVOCs by sediment depth sampling interval. **Table B-1** in **Appendix B** provides the complete analytical results. Thirty SVOCs were detected in the sediment samples:

- 1,1'-Biphenyl
- 2-Methylnaphthalene
- 2-Methylphenol
- 4-Chloroaniline
- 4-Methylphenol
- Acenaphthene
- Acenaphthylene
- Acetophenone
- Anthracene
- Benzo(a)anthracene
- Benzo(a)pyrene
- Benzo(b)fluoranthene
- Benzo(g,h,i)perylene
- Benzo(k)fluoranthene
- Bis(2-ethylhexyl)phthalate
- Butylbenzylphthalate
- Caprolactam
- Carbazole
- Chrysene
- Dibenzo(a,h)anthracene
- Dibenzofuran
- Di-n-butylphthalate
- Di-n-octylphthalate
- Fluoranthene
- Fluorene
- Indeno(1,2,3-cd)pyrene
- Naphthalene
- Pentachlorophenol
- Phenanthrene
- Pyrene

Of the 30 SVOCs detected, the following PAHs were detected at concentrations that exceeded their respective PECs: anthracene, benzo(a)anthracene, benzo(a)pyrene, chrysene, fluoranthene, fluorene, naphthalene, phenanthrene, and pyrene.

A total PAH 17 concentration was calculated for each sample by summing the concentration of each detected PAH in addition to all non-detect concentrations at one-half the detection limit for comparison to the total PAH PEC. Total PAH 17 and individual PAH concentrations exceeded the PECs at samples collected from locations LMR11-14 and LMR11-69 at the surface interval of 0 to 6 inches bss. **Figure 3-1** shows the locations where total PAH results exceeded the PEC

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of 22,800 micrograms per kilogram (µg/kg). Anthracene, benzo(a)anthracene, benzo(a)pyrene, chrysene, fluoranthene, phenanthrene, and pyrene exceeded their respective PECs in the sample collected from location LMR11-14 from 0 to 6 inches bss. The calculated total PAH 17 concentration for sample LMR11-14-006 was 92,474.2 µg/kg, which exceeds the total PAH PEC of 22,800 µg/kg. LMR11-14 is near Corbutt Island in the upstream portion of the project area. Concentrations of PAHs exceeding PECs were detected only in the upper 6 inches of sediment at LMR11-14. The downstream side of Corbutt Island, where LMR11-14 is located, is a depositional zone for sediments. Sediment samples collected from deeper intervals at LMR11-14 did not contain PAHs at concentrations exceeding PECs.

The calculated total PAH 17 concentration for sample LMR11-69-006 was 297,600 µg/kg, which exceeds the total PAH PEC of 22,800 µg/kg. Anthracene, benzo(a)anthracene, benzo(a)pyrene, chrysene, fluoranthene, fluorene, naphthalene, phenanthrene, and pyrene exceeded their respective PECs in the sample collected from LMR11-69 from 0 to 6 inches bss. Sediment recovery was poor at location LMR11-69 so deeper samples were not collected from this location. Therefore, the vertical extent of PAHs at concentrations exceeding the PECs is not defined at this location. LMR11-69 was located near the mouth where Swan Creek discharges into the Maumee River. Concurrent sampling by GLNPO detected elevated concentrations of PAHs in Swan Creek (WESTON's Sediment Assessment Report-Swan Creek dated January 6, 2012).

Samples collected from 0 to 6 inches bss at LMR11-14 and LMR11-69 primarily consisted of sand (greater than 75%). Deeper samples from LMR11-14 consisted of higher percentages of silt and clay than samples from the surface interval. Grain size results are discussed in Section 3.5.

Additionally, although the total PAH value did not exceed the PEC, naphthalene and phenanthrene were detected at concentrations exceeding their PECs at sample location LMR11-50 at a depth of 72 to 96 inches bss. LMR11-50 was located near a CSO, which may be the source of PAHs detected in this area of the river.

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PECs have not been developed for the following detected SVOCs that are not PAHs: 1,1'-biphenyl, 2-methylphenol, 4-chloroaniline, 4-methylphenol, acetophenone, bis(2-ethylhexyl)phthalate, butylbenzylphthalate, caprolactam, carbazole, dibenzofuran, di-n-butylphthalate, di-n-octylphthalate, and pentachlorophenol. ESLs are available for comparison for all of these chemicals except 1,1-biphenyl, acetophenone, caprolactam, and carbazole. Concentrations of the following exceeded their respective ESLs: 4-methylphenol, bis(2-ethylhexyl)phthalate, butylbenzylphthalate, and dibenzofuran. Detected concentrations of the following did not exceed their respective ESLs: 2-methylphenol, 4-chloroaniline, di-n-butylphthalate, di-n-octylphthalate, and pentachlorophenol.

The highest concentration of bis(2-ethylhexyl)phthalate (1,500 µg/kg) and the only concentration of dibenzofuran (3,200 µg/kg) exceeding their respective ESLs of 182 and 449 µg/kg were detected in sample LMR11-69-006 where elevated concentrations of PAHs were detected. The highest concentrations of 4-methylphenol were detected in samples collected from LMR11-50, which is located near a CSO. Butylbenzylphthalate concentrations exceeded the ESL of 1,970 µg/kg in only one sample, LMR11-63-006 at a concentration of 7,100 µg/kg. Per the Agency for Toxic Substances and Disease Registry (ATSDR) *Toxicological Profile for Wood Creosote, Coal Tar Creosote, Coal Tar, Coal Tar Pitch, and Coal Tar Pitch Volatiles* (September 2002), 4-methylphenol is an component of wood creosote and dibenzofuran is an component of coal tar creosote.

3.2 TAL METALS

A total of 337 (303 investigative, 17 field split, and 17 duplicate) sediment samples were analyzed for metals. **Table 3-2** summarizes the analytical results for metals by sediment depth sampling interval. **Table B-2** in **Appendix B** provides the complete analytical results. Twenty-two TAL metals were detected in the sediment samples:

- Aluminum
- Antimony
- Arsenic
- Barium
- Beryllium
- Cadmium
- Calcium
- Chromium
- Cobalt
- Copper

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- Iron
- Lead
- Magnesium
- Manganese
- Mercury
- Nickel
- Potassium
- Selenium
- Silver
- Sodium
- Vanadium
- Zinc

Thallium was the only TAL metal not detected in at least one sediment sample. Of the 22 TAL metals detected, PECs have been developed for the following nine TAL metals: arsenic, cadmium, chromium, copper, lead, mercury, nickel, and zinc. The following TAL metals were detected at concentrations exceeding their respective PECs in at least one sample: arsenic, cadmium, chromium, lead, mercury, and zinc. **Figure 3-2** shows the locations where TAL metals results exceeded the PECs. Metals exceeding PECs were noted throughout the investigation area in mostly samples collected closer to the shores. The maximum concentration of lead in sediment, 419 milligrams per kilogram (mg/kg), was detected in a sample collected from location LMR11-69 from 0 to 6 inches bss. Elevated concentrations of PAHs also were detected in this sample which is located near the mouth of Swan Creek. High concentrations of lead also were detected in samples collected from LMR11-63 and LMR11-64 near the Clayton Street/Woodville Road Bridge (Anthony Wayne High Level Bridge).

The maximum concentration of mercury in sediment, 5.6 mg/kg, was detected in a sample collected from LMR11-72 from 0 to 6 inches bss. A petroleum odor and a blue sheen on the water were noticed as the core at LMR11-72 was recovered. Sampling location LMR11-72 was placed at a historic sampling location previously identified as MAUMEE R AT PORTSIDE DOCKS, where elevated metals concentrations have been detected.

PECs have not been developed for the following metals: aluminum, antimony, barium, beryllium, calcium, cobalt, iron, magnesium, manganese, potassium, selenium, silver, sodium, thallium, and vanadium. Ohio-specific SRVs representing background sediment concentrations for lotic (flowing) water bodies are available for the following TAL metals without PECs: aluminum, antimony, barium, calcium, iron, magnesium, manganese, potassium, and selenium. **Figure 3-3** shows locations where results for TAL metals without PECs exceeded the SRVs.

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3.3 PCBs

A total of 33 (29 investigative, 2 field split, and 2 duplicate) sediment samples were analyzed for PCB Aroclors. **Table B-3** in **Appendix B** provides the complete analytical results. PCB Aroclors were not detected in any sediment sample. PCBs were not originally identified as a major contaminant of concern, and more sampling may be needed to identify the nature and extent of PCB contamination.

3.4 TCL PESTICIDES

A total of 33 (29 investigative, 2 field split, and 2 duplicate) sediment samples were analyzed for TCL pesticides. **Table 3-3** summarizes the analytical results for pesticides by sediment depth sampling interval. **Table B-4** in **Appendix B** provides the complete analytical results. Six TCL pesticides were detected in the sediment samples:

- Aldrin
- Beta-BHC
- Endrin aldehyde
- Gamma-BHC (Lindane)
- Gamma-chlordane
- Heptachlor

Of the six detected pesticides, PECs have been developed for gamma-BHC and gamma-chlordane. Detected concentrations of gamma-BHC and gamma-chlordane did not exceed their respective PECs. PECs have not been developed for aldrin, beta-BHC, endrin aldehyde, or heptachlor. ESLs are available for these chemicals. Of these chemicals, heptachlor was the only chemical detected at concentrations exceeding the ESL. Heptachlor concentrations exceeded the ESL of 0.6 µg/kg in two samples, LMR11-12-006 at a concentration of 2.7 µg/kg and LMR11-26-024 at a concentration of 1.9 µg/kg.

3.5 PHYSICAL PROPERTIES

Grain size analysis was conducted on a total of 318 (301 investigative and 17 field split) sediment samples, and TOC analysis was conducted on a total of 337 (303 investigative, 17 field split, and 17 duplicate) sediment samples. **Table B-5** of **Appendix B** provides the complete analytical results. The geotechnical results for the 318 samples collected for grain size analysis

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indicate that the material sampled consisted of a mixture of fine sand, silt, and clay. The average composition was 27% sand, 28% silt, and 42% clay.

4. DATA COMPLETENESS

Data validation summaries were produced for each chemical analyte group. Data generated through the U.S. EPA CLP underwent an initial performance assessment and compliance screening check performed and uploaded by the Sample Management Office (SMO) to the Electronic Data Exchange and Evaluation System (EXES) website. These checks were conducted to confirm conformance with the U.S. EPA CLP National Functional Guidelines (NFG). After this assessment, Shaw Environmental and Infrastructure Inc., (Shaw) under subcontract to GLNPO, completed validation of the data generated by the U.S. EPA CLP (for SVOCs, TAL metals and mercury, PCB Aroclors, TCL pesticides, and % moisture analyses). Shaw performed Tier 2 validation on 5 to 10% of the samples and Tier 1 validation on the remaining 90 to 95%.

During the validation process, Shaw may have removed data qualifiers for following reasons:

- The EXES Software often J or R flag analytical results for temperature more precisely than U.S. CLP NFG standards. Data flags may have been removed in some instances where temperature was not out of range, but the software indicated it was.
- EXES generated flags may have been removed by validators because EXES does not decipher between multiple columns/calibrations.
- U.S. CLP NFG does not qualify for matrix spikes; EXES qualifies for spikes based on R2 guidance. Validation was conducted following U.S. EPA CLP NFGs and some flags may have been removed by the validator.
- Relative percent difference (RPD) over 40 are noted by validators and flagged with the dataset.

Data received from the subcontracted laboratory (TestAmerica Burlington) for all parameters except grain size were run through the Automated Data Review (ADR) checker. WESTON completed a 5% full manual data validation for all analyses conducted by the WESTON-

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procured subcontractor laboratory (grain size and TOC). The following are the general guidelines used for the data validation:

- NFGs for Superfund Organic Methods Data Review, U.S. EPA, June 2008
- NFGs for Inorganic Superfund Data Review, U.S. EPA, January 2010

Data not covered in the NFGs were compared to applicable analytical method guidelines, the laboratory standard operating procedures (SOP), and guidelines described in the WESTON QAPP dated July 2011.

The data validation consisted of completing the GLNPO Quality Assurance/Quality Control (QA/QC) checklist and preparing a data narrative summary report for each chemical parameter, which included the following completeness and usability components:

- Summary of data review
- Minor problems (as applicable)
  - Holding times
  - Method blanks
  - Matrix spike/matrix spike duplicates
  - Surrogates
  - Calibration
  - Laboratory control samples
  - Laboratory duplicates
  - Field duplicate results
- Data quality indicator review
  - Sensitivity
  - Precision
  - Accuracy
  - Completeness

Based on the data validation and data usability assessment, all data are considered suitable for project decisions per the QAPP. All the data validation summaries have been submitted to GLNPO under separate cover along with all of the Shaw and WESTON Data Validation Summaries for inclusion into GLNPO's GLSED.

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5. SUMMARY

During the sediment investigation, a total of 337 sediment samples (including field split and duplicate samples) were collected from 84 sampling locations in the Lower Maumee project area. Where sediment recovery was adequate, samples typically were collected from the following intervals: 0 to 6, 6 to 24, 24 to 48, 48 to 72, 72 to 96, 96 to 120, 120 to 144, and 144 to 168 inches bss.

All sediment samples were analyzed for the COPCs TAL metals (including mercury) and SVOCs. In addition, approximately 10% of all sediment samples collected were analyzed for TCL pesticides and PCB Aroclors. All sediment samples also were analyzed for physical properties, including % moisture, TOC, and grain size.

The sample results for SVOCs, metals, PCBs, and pesticides were compared to PECs set forth in the document "Development and Evaluation of Consensus-Based Sediment Quality Guidelines for Freshwater Ecosystems" (by D.D. MacDonald, et. al., dated 2000). The metals results were also compared to Ohio-specific SRVs set forth in the "Ohio Ecological Risk Assessment Guidance Document" dated February 2003, revised April 2008. ESLs for sediment as set forth in U.S. EPA Region 5's "Ecological Screening Levels" dated 2003 were presented as a secondary source of screening criteria for chemicals that do not have a developed PEC.

The PECs and ESLs provide screening criteria to evaluate sediment chemistry data. PECs are defined as concentrations above which adverse effects are expected to occur and are the primary screening criteria for this characterization project. The ESLs represent a protective benchmark (for example, water quality criteria, sediment quality guidelines and criteria, and chronic no adverse effect levels) and are the secondary screening criteria. The Ohio-specific SRVs were developed to identify representative background sediment concentrations for lotic (flowing) water bodies.

The sections below summarize the comparison of the analytical data to the screening levels, when available, for SVOCs, TAL metals (including mercury), PCBs, and TCL pesticides.

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5.1 SVOCs

Total PAH 17 and several individual PAHs (anthracene, benzo(a)anthracene, benzo(a)pyrene, chrysene, fluoranthene, fluorene, naphthalene, phenanthrene, and pyrene) were detected at concentrations exceeding PECs.

Anthracene, benzo(a)anthracene, benzo(a)pyrene, chrysene, fluoranthene, phenanthrene, and pyrene exceeded their respective PECs in the sample collected from location LMR11-14 from 0 to 6 inches bss. The calculated total PAH 17 concentration for sample LMR11-14-006 was 92,474.2 µg/kg, which exceeds the total PAH PEC of 22,800 µg/kg. LMR11-14 is near Corbutt Island in the upstream portion of the project area. Concentrations of PAHs exceeding PECs were detected only in the upper 6 inches of sediment at LMR11-14. The downstream side of Corbutt Island, where LMR11-14 is located, is a depositional zone for sediments. Sediment samples collected from deeper intervals at LMR11-14 did not contain PAHs at concentrations exceeding PECs. The 0 to 6 inch bss sample at LMR11-14 consisted primarily of sand (greater than 75%) whereas deeper samples at LMR11-14 consisted of higher percentages of silt and clay.

Anthracene, benzo(a)anthracene, benzo(a)pyrene, chrysene, fluoranthene, fluorene, naphthalene, phenanthrene, and pyrene exceeded their respective PECs in the sample collected from LMR11-69 from 0 to 6 inches bss. The calculated total PAH 17 concentration for sample LMR11-69-006 was 297,600 µg/kg, which exceeds the total PAH PEC of 22,800 µg/kg. Sediment recovery was poor at location LMR11-69 so deeper samples were not collected from this location. Therefore, the vertical extent of PAHs at concentrations exceeding the PECs is not defined. LMR11-69 was located near the mouth where Swan Creek discharges into the Maumee River. Elevated concentrations of PAHs have been detected in Swan Creek. The 0 to 6 inch bss sample at LMR11-69 consisted primarily of sand (greater than 75%).

Naphthalene and phenanthrene were detected at concentrations exceeding their PECs at sample location LMR11-50 at a depth of 72 to 96 inches bss. LMR11-50 was located near a CSO, which may be the source of PAHs detected in this area of the river.

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5.2 TAL METALS

Metals exceeding PECs were noted throughout the investigation area, mostly in samples collected closer to the shores. The following TAL metals were detected at concentrations exceeding their respective PECs in at least one sample: arsenic, cadmium, chromium, lead, mercury, and zinc. The maximum concentration of lead in sediment, 419 mg/kg, was detected in a sample collected from location LMR11-69 from 0 to 6 inches bss. Elevated concentrations of PAHs also were detected in this sample which is located near the mouth of Swan Creek. High concentrations of lead also were detected in samples collected from LMR11-63 and LMR11-64 near the Clayton Street / Woodville Road Bridge (Anthony Wayne High Level Bridge).

The maximum concentration of mercury in sediment, 5.6 mg/kg, was detected in a sample collected from LMR11-72 from 0 to 6 inches bss. A petroleum odor and a blue sheen on the water were noticed as the core at LMR11-72 was recovered. Sampling location LMR11-72 was placed at a historic sampling location previously identified as MAUMEE R AT PORTSIDE DOCKS, where elevated metals concentrations have been detected.

Sample location LMR11-72 is directly downstream from sample location LMR11-69 which also showed elevated concentrations of metals.

5.3 PCBs

PCBs were not identified as a contaminant of concern for this site. While a subset of sediment samples were analyzed for PCBs, they were not detected in any sediment samples collected during site characterization activities.

5.4 TCL PESTICIDES

Detected concentrations of pesticides did not exceed their respective PECs in any samples collected during the site characterization activities.

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6. NEXT STEPS

The purpose of the Lower Maumee River GLLA project is to further define chemical contaminants in sediment, locate contaminated areas for additional evaluation, delineate hot spots, and attempt to identify any ongoing sources. The objective of this site characterization was to collect samples for chemical and physical properties analysis needed to support project area assessment and potential remediation activities.

The data collected during the site characterization activities conducted for the Lower Maumee River project area is sufficient to meet the site characterization objectives. The data gaps and recommendations for future work to meet the objectives of the GLLA project are as follows:

- Delineate hot spots of contamination and determine the nature and extent of PAH and metal contamination in the Lower Maumee River project area.
- Identify any on-going sources of contamination.
    - Determine sources of potential upstream contamination.
    - Determine the influence of contamination from Swan Creek on the project area.
    - Determine the impact of CSOs on the project area.
- Estimate the bioavailability of contaminants of concern using Equilibrium Partitioning Sediment Benchmarks (ESBs) and determine ESB Toxic Units (ESBTU).
- Where bioaccumulative chemicals are present in sediment, it may be necessary to evaluate fish tissue and/or water column data in addition to sediment data in order to determine appropriate sediment management options.
- Evaluate metal toxicity through an indirect estimate of bioavailability based on concentrations of Simultaneously Extracted Metals (SEM).
- Estimate the volume of contaminated sediments.

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TABLES

Table 2-1
Sampling Location Coordinates
Lower Maumee River - Maumee River AOC
Toledo, Lucas County, Ohio

Location ID	Latitude (D.d)	Longitude (D.d)	Location ID	Latitude (D.d)	Longitude (D.d)
LMR11-01	41.62089	-83.57261	LMR11-44	41.62418	-83.53952
LMR11-02	41.61784	-83.57018	LMR11-45	41.62699	-83.53946
LMR11-03	41.62091	-83.57023	LMR11-46	41.62571	-83.53834
LMR11-04	41.61786	-83.56781	LMR11-47	41.62422	-83.53703
LMR11-05	41.61634	-83.56661	LMR11-48	41.62742	-83.53724
LMR11-06	41.62246	-83.56907	LMR11-49	41.62576	-83.53614
LMR11-07	41.61789	-83.56545	LMR11-50	41.62450	-83.53336
LMR11-08	41.62248	-83.56671	LMR11-51	41.62742	-83.53495
LMR11-10	41.62250	-83.56434	LMR11-52	41.62567	-83.53392
LMR11-11	41.62098	-83.56314	LMR11-53	41.62923	-83.53318
LMR11-12	41.61945	-83.56193	LMR11-54	41.62677	-83.53375
LMR11-13	41.62405	-83.56319	LMR11-55	41.63052	-83.53230
LMR11-14	41.62253	-83.56198	LMR11-56	41.63045	-83.53033
LMR11-15	41.62097	-83.56058	LMR11-57	41.63355	-83.53268
LMR11-16	41.61937	-83.55905	LMR11-58	41.63290	-83.53024
LMR11-17	41.62407	-83.56082	LMR11-59	41.63531	-83.53322
LMR11-18	41.62255	-83.55962	LMR11-60	41.63705	-83.53373
LMR11-19	41.62090	-83.55844	LMR11-61	41.63812	-83.53187
LMR11-20	41.62409	-83.55846	LMR11-62	41.63887	-83.53414
LMR11-21	41.62257	-83.55725	LMR11-63	41.64059	-83.53454
LMR11-22	41.62104	-83.55605	LMR11-64	41.64170	-83.53417
LMR11-23	41.62409	-83.55611	LMR11-65	41.64428	-83.53394
LMR11-24	41.62259	-83.55489	LMR11-66	41.64424	-83.53168
LMR11-25	41.62107	-83.55368	LMR11-67	41.64726	-83.53336
LMR11-26	41.62408	-83.55370	LMR11-68	41.64735	-83.53081
LMR11-27	41.62261	-83.55253	LMR11-69	41.64899	-83.53292
LMR11-28	41.62108	-83.55134	LMR11-70	41.64912	-83.52997
LMR11-29	41.62416	-83.55137	LMR11-71	41.64924	-83.52784
LMR11-30	41.62263	-83.55016	LMR11-72	41.65105	-83.53065
LMR11-31	41.62195	-83.54921	LMR11-73	41.62905	-83.53032
LMR11-32	41.62569	-83.55012	LMR11-74	41.65173	-83.52810
LMR11-33	41.62418	-83.54900	LMR11-75	41.65209	-83.52589
LMR11-34	41.62266	-83.54780	LMR11-76	41.65354	-83.52470
LMR11-35	41.62573	-83.54794	LMR11-77	41.65391	-83.52263
LMR11-36	41.62420	-83.54664	LMR11-78	41.65501	-83.52130
LMR11-37	41.62261	-83.54536	LMR11-79	41.65688	-83.52217
LMR11-38	41.62565	-83.54551	LMR11-80	41.65533	-83.51945
LMR11-39	41.62422	-83.54428	LMR11-81	41.65668	-83.51992
LMR11-40	41.62260	-83.54293	LMR11-82	41.65665	-83.51760
LMR11-41	41.62577	-83.54312	LMR11-83	41.62488	-83.51631
LMR11-42	41.62376	-83.54119	LMR11-84	41.65812	-83.51412
LMR11-43	41.62585	-83.54126	LMR11-85	41.65975	-83.51286

Notes:
D.d - Decimal degrees
ID - Identification

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Table 2-2
Sampling and Analysis Summary
Lower Maumee River - Maumee River AOC
Toledo, Lucas County, Ohio

Location ID	Field Sample ID	Sample Collection Device	Depth (inches bss)	Sampling Date	Analyses					
					SVOCs	TAL Metals	PCB Aroclors	TCL Pesticides	Grain Size	TOC
LMR11-01	LMR11-01-006	Ponar	0 - 6	8/2/2011	X	X			X	X
	LMR11-01-024	Vibracore	6 - 24	8/5/2011	X	X			X	X
	LMR11-01-048	Vibracore	24 - 48	8/5/2011	X	X			X	X
	LMR11-01-060	Vibracore	48 - 60	8/5/2011	X	X			X	X
LMR11-02	LMR11-02-006	Ponar	0 - 6	8/2/2011	X	X	X	X	X	X
LMR11-03	LMR11-03-006	Ponar	0 - 6	8/3/2011	X	X			X	X
	LMR11-03-024	Vibracore	6 - 24	8/3/2011	X	X			X	X
	LMR11-03-048	Vibracore	24 - 48	8/3/2011	X	X			X	X
	LMR11-03-059	Vibracore	48 - 59	8/3/2011	X	X			X	X
LMR11-04	LMR11-04-006	Ponar	0 - 6	8/3/2011	X	X			X	X
LMR11-05	LMR11-05-006	Ponar	0 - 6	8/4/2011	X	X			X	X
	LMR11-05-018	Vibracore	6 - 18	8/4/2011	X	X			X	X
LMR11-06	LMR11-06-006	Ponar	0 - 6	8/3/2011	X	X			X	X
	LMR11-06-024	Vibracore	6 - 24	8/3/2011	X	X			X	X
	LMR11-06-052	Vibracore	24 - 52	8/3/2011	X	X			X	X
LMR11-07	LMR11-07-006	Ponar	0 - 6	8/3/2011	X	X			X	X
LMR11-08	LMR11-08-006	Ponar	0 - 6	8/3/2011	X	X			X	X
	LMR11-08-024	Vibracore	6 - 24	8/5/2011	X	X			X	X
	LMR11-08-052	Vibracore	24 - 52	8/5/2011	X	X			X	X
LMR11-10	LMR11-10-006	Ponar	0 - 6	8/4/2011	X	X			X	X
	LMR11-10-024	Vibracore	6 - 24	8/4/2011	X	X			X	X
	LMR11-10-045	Vibracore	24 - 45	8/4/2011	X	X			X	X
LMR11-11	LMR11-11-006	Ponar	0 - 6	8/5/2011	X	X				X
	LMR11-11-024	Vibracore	6 - 24	8/5/2011	X	X			X	X
	LMR11-11-037	Vibracore	24 - 37	8/5/2011	X	X			X	X
LMR11-12	LMR11-12-006	Ponar	0 - 6	8/3/2011	X	X	X	X	X	X
LMR11-13	LMR11-13-006	Ponar	0 - 6	8/3/2011	X	X			X	X
	LMR11-13-026	hand-drive	6 - 26	8/3/2011	X	X			X	X
LMR11-14	LMR11-14-006	Ponar	0 - 6	8/5/2011	X	X			X	X
	LMR11-14-024	Vibracore	6 - 24	8/5/2011	X	X			X	X
	LMR11-14-045	Vibracore	24 - 45	8/5/2011	X	X			X	X
LMR11-15	LMR11-15-006	Vibracore	0 - 6	8/9/2011	X	X			X	X
	LMR11-15-006-DP	Vibracore	0 - 6	8/9/2011	X	X				X
	LMR11-15-024	Vibracore	6 - 24	8/9/2011	X	X			X	X
	LMR11-15-024-DP	Vibracore	6 - 24	8/9/2011	X	X				X
	LMR11-15-048	Vibracore	24 - 48	8/9/2011	X	X	X	X	X	X
	LMR11-15-048-DP	Vibracore	24 - 48	8/9/2011	X	X	X	X		X
	LMR11-15-072	Vibracore	48 - 72	8/9/2011	X	X			X	X
	LMR11-15-104	Vibracore	72 - 104	8/9/2011	X	X			X	X
LMR11-16	LMR11-16-006	Vibracore	0 - 6	8/9/2011	X	X			X	X
	LMR11-16-024	Vibracore	6 - 24	8/9/2011	X	X	X	X	X	X
	LMR11-16-048	Vibracore	24 - 48	8/9/2011	X	X			X	X
	LMR11-16-072	Vibracore	48 - 72	8/9/2011	X	X			X	X
LMR11-17	LMR11-17-006	Ponar	0 - 6	8/4/2011	X	X			X	X
	LMR11-17-021	Vibracore	6 - 21	8/4/2011	X	X			X	X
LMR11-18	LMR11-18-006	Ponar	0 - 6	8/3/2011	X	X			X	X
	LMR11-18-024	Vibracore	6 - 24	8/5/2011	X	X			X	X
	LMR11-18-048	Vibracore	24 - 48	8/5/2011	X	X			X	X

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Location ID	Field Sample ID	Sample Collection Device	Depth (inches bss)	Sampling Date	Analyses					
					SVOCs	TAL Metals	PCB Aroclors	TCL Pesticides	Grain Size	TOC
LMR11-19	LMR11-19-006	Ponar	0 - 6	8/3/2011	X	X			X	X
	LMR11-19-014	Vibracore	6 - 14	8/3/2011	X	X			X	X
LMR11-20	LMR11-20-006	Ponar	0 - 6	8/2/2011	X	X			X	X
	LMR11-20-006FS	Ponar	0 - 6	8/2/2011	X	X			X	X
	LMR11-20-024	Vibracore	6 - 24	8/5/2011	X	X	X	X	X	X
	LMR11-20-048	Vibracore	24 - 48	8/5/2011	X	X			X	X
	LMR11-20-060	Vibracore	48 - 60	8/5/2011	X	X			X	X
LMR11-21	LMR11-21-006	Ponar	0 - 6	8/3/2011	X	X			X	X
LMR11-22	LMR11-22-006	Ponar	0 - 6	8/4/2011	X	X			X	X
LMR11-23	LMR11-23-006	Vibracore	0 - 6	8/11/2011	X	X	X	X	X	X
	LMR11-23-024	Vibracore	6 - 24	8/11/2011	X	X	X	X	X	X
	LMR11-23-048	Vibracore	24 - 48	8/11/2011	X	X			X	X
	LMR11-23-072	Vibracore	48 - 72	8/11/2011	X	X			X	X
	LMR11-23-096	Vibracore	72 - 96	8/11/2011	X	X			X	X
	LMR11-23-115	Vibracore	96 - 115	8/11/2011	X	X			X	X
LMR11-24	LMR11-24-006	Ponar	0 - 6	8/4/2011	X	X			X	X
	LMR11-24-024	Vibracore	6 - 24	8/11/2011	X	X			X	X
	LMR11-24-048	Vibracore	24 - 48	8/11/2011	X	X	X	X	X	X
	LMR11-24-072	Vibracore	48 - 72	8/11/2011	X	X			X	X
	LMR11-24-096	Vibracore	72 - 96	8/11/2011	X	X			X	X
LMR11-25	LMR11-25-006	Vibracore	0 - 6	8/11/2011	X	X	X	X	X	X
	LMR11-25-024	Vibracore	6 - 24	8/11/2011	X	X			X	X
	LMR11-25-048	Vibracore	24 - 48	8/11/2011	X	X	X	X	X	X
	LMR11-25-072	Vibracore	48 - 72	8/11/2011	X	X			X	X
	LMR11-25-096	Vibracore	72 - 96	8/11/2011	X	X			X	X
LMR11-26	LMR11-26-006	Vibracore	0 - 6	8/10/2011	X	X			X	X
	LMR11-26-024	Vibracore	6 - 24	8/10/2011	X	X	X	X	X	X
	LMR11-26-048	Vibracore	24 - 48	8/10/2011	X	X			X	X
	LMR11-26-072	Vibracore	48 - 72	8/10/2011	X	X			X	X
	LMR11-26-096	Vibracore	72 - 96	8/10/2011	X	X			X	X
	LMR11-26-117	Vibracore	96 - 117	8/10/2011	X	X			X	X
LMR11-27	LMR11-27-006	Ponar	0 - 6	8/4/2011	X	X			X	X
	LMR11-27-024	Vibracore	6 - 24	8/11/2011	X	X			X	X
	LMR11-27-048	Vibracore	24 - 48	8/11/2011	X	X	X	X	X	X
	LMR11-27-072	Vibracore	48 - 72	8/11/2011	X	X			X	X
	LMR11-27-096	Vibracore	72 - 96	8/11/2011	X	X			X	X
	LMR11-27-115	Vibracore	96 - 115	8/11/2011	X	X			X	X
LMR11-28	LMR11-28-006	Vibracore	0 - 6	8/10/2011	X	X			X	X
	LMR11-28-034	Vibracore	6 - 34	8/10/2011	X	X	X	X	X	X
LMR11-29	LMR11-29-006	Ponar	0 - 6	8/4/2011	X	X			X	X
LMR11-30	LMR11-30-006	Ponar	0 - 6	8/4/2011	X	X			X	X
LMR11-31	LMR11-31-006	Ponar	0 - 6	8/4/2011	X	X			X	X
LMR11-32	LMR11-32-006	Vibracore	0 - 6	8/10/2011	X	X			X	X
	LMR11-32-024	Vibracore	6 - 24	8/10/2011	X	X			X	X
	LMR11-32-048	Vibracore	24 - 48	8/10/2011	X	X			X	X
	LMR11-32-072	Vibracore	48 - 72	8/10/2011	X	X	X	X	X	X
	LMR11-32-096	Vibracore	72 - 96	8/10/2011	X	X	X	X	X	X
	LMR11-32-116	Vibracore	96 - 116	8/10/2011	X	X			X	X
LMR11-33	LMR11-33-006	Ponar	0 - 6	8/4/2011	X	X			X	X

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Toledo, Lucas County, Ohio

Location ID	Field Sample ID	Sample Collection Device	Depth (inches bss)	Sampling Date	Analyses					
					SVOCs	TAL Metals	PCB Aroclors	TCL Pesticides	Grain Size	TOC
LMR11-34	LMR11-34-006	Ponar	0 - 6	8/4/2011	X	X			X	X
LMR11-35	LMR11-35-006	Vibracore	0 - 6	8/10/2011	X	X	X	X	X	X
	LMR11-35-024	Vibracore	6 - 24	8/10/2011	X	X			X	X
	LMR11-35-024FS	Vibracore	6 - 24	8/10/2011	X	X			X	X
	LMR11-35-048	Vibracore	24 - 48	8/10/2011	X	X			X	X
	LMR11-35-072	Vibracore	48 - 72	8/10/2011	X	X	X	X	X	X
	LMR11-35-096	Vibracore	72 - 96	8/10/2011	X	X			X	X
	LMR11-35-116	Vibracore	96 - 116	8/10/2011	X	X			X	X
LMR11-36	LMR11-36-006	Ponar	0 - 6	8/4/2011	X	X	X	X	X	X
LMR11-37	LMR11-37-006	Vibracore	0 - 6	8/10/2011	X	X			X	X
	LMR11-37-024	Vibracore	6 - 24	8/10/2011	X	X			X	X
	LMR11-37-048	Vibracore	24 - 48	8/10/2011	X	X	X	X	X	X
	LMR11-37-048-DP	Vibracore	24 - 48	8/10/2011	X	X	X	X		X
	LMR11-37-072	Vibracore	48 - 72	8/10/2011	X	X			X	X
LMR11-38	LMR11-38-006	Vibracore	0 - 6	8/9/2011	X	X			X	X
	LMR11-38-024	Vibracore	6 - 24	8/9/2011	X	X			X	X
	LMR11-38-024-DP	Vibracore	6 - 24	8/9/2011	X	X				X
	LMR11-38-024FS	Vibracore	6 - 24	8/9/2011	X	X			X	X
	LMR11-38-048	Vibracore	24 - 48	8/9/2011	X	X			X	X
	LMR11-38-048-DP	Vibracore	24 - 48	8/9/2011	X	X				X
	LMR11-38-072	Vibracore	48 - 72	8/9/2011	X	X			X	X
	LMR11-38-072-DP	Vibracore	48 - 72	8/9/2011	X	X				X
LMR11-39	LMR11-39-006	Ponar	0 - 6	8/4/2011	X	X			X	X
LMR11-40	LMR11-40-006	Vibracore	0 - 6	8/10/2011	X	X			X	X
	LMR11-40-024	Vibracore	6 - 24	8/10/2011	X	X	X	X	X	X
	LMR11-40-048	Vibracore	24 - 48	8/10/2011	X	X			X	X
	LMR11-40-084	Vibracore	48 - 84	8/10/2011	X	X			X	X
LMR11-41	LMR11-41-006	Ponar	0 - 6	8/4/2011	X	X			X	X
LMR11-42	LMR11-42-006	Vibracore	0 - 6	8/9/2011	X	X			X	X
	LMR11-42-024	Vibracore	6 - 24	8/9/2011	X	X			X	X
	LMR11-42-048	Vibracore	24 - 48	8/9/2011	X	X			X	X
	LMR11-42-048FS	Vibracore	24 - 48	8/9/2011	X	X			X	X
	LMR11-42-072	Vibracore	48 - 72	8/9/2011	X	X			X	X
	LMR11-42-096	Vibracore	72 - 96	8/9/2011	X	X			X	X
	LMR11-42-129	Vibracore	96 - 129	8/9/2011	X	X			X	X
LMR11-43	LMR11-43-030	Vibracore	24 - 30	8/9/2011	X	X			X	X
LMR11-44	LMR11-44-006	Vibracore	0 - 6	8/9/2011	X	X			X	X
	LMR11-44-024	Vibracore	6 - 24	8/9/2011	X	X			X	X
	LMR11-44-024FS	Vibracore	6 - 24	8/9/2011	X	X			X	X
	LMR11-44-048	Vibracore	24 - 48	8/9/2011	X	X			X	X
	LMR11-44-072	Vibracore	48 - 72	8/9/2011	X	X			X	X
	LMR11-44-096	Vibracore	72 - 96	8/9/2011	X	X			X	X
LMR11-45	LMR11-45-006	Vibracore	0 - 6	8/8/2011	X	X			X	X
	LMR11-45-024	Vibracore	6 - 24	8/8/2011	X	X			X	X
	LMR11-45-048	Vibracore	24 - 48	8/8/2011	X	X			X	X
	LMR11-45-048FS	Vibracore	24 - 48	8/8/2011	X	X			X	X
	LMR11-45-072	Vibracore	48 - 72	8/8/2011	X	X			X	X
	LMR11-45-096	Vibracore	72 - 96	8/8/2011	X	X			X	X

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Table 2-2
Sampling and Analysis Summary
Lower Maumee River - Maumee River AOC
Toledo, Lucas County, Ohio

Location ID	Field Sample ID	Sample Collection Device	Depth (inches bss)	Sampling Date	Analyses					
					SVOCs	TAL Metals	PCB Aroclors	TCL Pesticides	Grain Size	TOC
LMR11-46	LMR11-46-006	Vibracore	0 - 6	8/8/2011	X	X			X	X
	LMR11-46-024	Vibracore	6 - 24	8/8/2011	X	X			X	X
	LMR11-46-024FS	Vibracore	6 - 24	8/8/2011	X	X			X	X
	LMR11-46-048	Vibracore	24 - 48	8/8/2011	X	X			X	X
	LMR11-46-072	Vibracore	48 - 72	8/8/2011	X	X			X	X
	LMR11-46-093	Vibracore	72 - 93	8/8/2011	X	X			X	X
LMR11-47	LMR11-47-006	Vibracore	0 - 6	8/8/2011	X	X			X	X
	LMR11-47-024	Vibracore	6 - 24	8/8/2011	X	X			X	X
	LMR11-47-048	Vibracore	24 - 48	8/8/2011	X	X			X	X
	LMR11-47-072	Vibracore	48 - 72	8/8/2011	X	X			X	X
	LMR11-47-096	Vibracore	72 - 96	8/8/2011	X	X			X	X
	LMR11-47-120	Vibracore	96 - 120	8/8/2011	X	X			X	X
	LMR11-47-144	Vibracore	120 - 144	8/8/2011	X	X			X	X
LMR11-48	LMR11-48-006	Vibracore	0 - 6	8/8/2011	X	X			X	X
	LMR11-48-024	Vibracore	6 - 24	8/8/2011	X	X			X	X
	LMR11-48-024FS	Vibracore	6 - 24	8/8/2011	X	X			X	X
	LMR11-48-048	Vibracore	24 - 48	8/8/2011	X	X	X	X	X	X
	LMR11-48-061	Vibracore	48 - 61	8/8/2011	X	X			X	X
LMR11-49	LMR11-49-006	Vibracore	0 - 6	8/8/2011	X	X			X	X
	LMR11-49-024	Vibracore	6 - 24	8/8/2011	X	X			X	X
	LMR11-49-048	Vibracore	24 - 48	8/8/2011	X	X			X	X
	LMR11-49-072	Vibracore	48 - 72	8/8/2011	X	X			X	X
	LMR11-49-096	Vibracore	72 - 96	8/8/2011	X	X			X	X
	LMR11-49-115	Vibracore	96 - 115	8/8/2011	X	X			X	X
LMR11-50	LMR11-50-006	Vibracore	0 - 6	8/8/2011	X	X	X	X	X	X
	LMR11-50-006-DP	Vibracore	0 - 6	8/8/2011	X	X				X
	LMR11-50-024	Vibracore	6 - 24	8/8/2011	X	X			X	X
	LMR11-50-024-DP	Vibracore	6 - 24	8/8/2011	X	X				X
	LMR11-50-048	Vibracore	24 - 48	8/8/2011	X	X			X	X
	LMR11-50-048-DP	Vibracore	24 - 48	8/8/2011	X	X				X
	LMR11-50-072	Vibracore	48 - 72	8/8/2011	X	X			X	X
	LMR11-50-096	Vibracore	72 - 96	8/8/2011	X	X			X	X
	LMR11-50-120	Vibracore	96 - 120	8/8/2011	X	X			X	X
	LMR11-50-144	Vibracore	120 - 144	8/8/2011	X	X			X	X
	LMR11-50-175	Vibracore	144 - 175	8/8/2011	X	X			X	X
LMR11-51	LMR11-51-006	Vibracore	0 - 6	8/7/2011	X	X			X	X
	LMR11-51-024	Vibracore	6 - 24	8/7/2011	X	X			X	X
	LMR11-51-048	Vibracore	24 - 48	8/7/2011	X	X			X	X
	LMR11-51-075	Vibracore	48 - 75	8/7/2011	X	X			X	X
LMR11-52	LMR11-52-006	Vibracore	0 - 6	8/8/2011	X	X			X	X
	LMR11-52-024	Vibracore	6 - 24	8/8/2011	X	X			X	X
	LMR11-52-048	Vibracore	24 - 48	8/8/2011	X	X			X	X
	LMR11-52-048FS	Vibracore	24 - 48	8/8/2011	X	X			X	X
	LMR11-52-072	Vibracore	48 - 72	8/8/2011	X	X			X	X
LMR11-53	LMR11-53-006	Vibracore	0 - 6	8/7/2011	X	X			X	X
	LMR11-53-024	Vibracore	6 - 24	8/7/2011	X	X			X	X
	LMR11-53-048	Vibracore	24 - 48	8/7/2011	X	X			X	X
	LMR11-53-073	Vibracore	48 - 73	8/7/2011	X	X			X	X

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Table 2-2
Sampling and Analysis Summary
Lower Maumee River - Maumee River AOC
Toledo, Lucas County, Ohio

Location ID	Field Sample ID	Sample Collection Device	Depth (inches bss)	Sampling Date	Analyses					
					SVOCs	TAL Metals	PCB Aroclors	TCL Pesticides	Grain Size	TOC
LMR11-54	LMR11-54-006	Vibracore	0 - 6	8/8/2011	X	X			X	X
	LMR11-54-006-DP	Vibracore	0 - 6	8/8/2011	X	X				X
	LMR11-54-024	Vibracore	6 - 24	8/8/2011	X	X			X	X
	LMR11-54-024-DP	Vibracore	6 - 24	8/8/2011	X	X				X
	LMR11-54-048	Vibracore	24 - 48	8/8/2011	X	X			X	X
	LMR11-54-048-DP	Vibracore	24 - 48	8/8/2011	X	X				X
	LMR11-54-072	Vibracore	48 - 72	8/8/2011	X	X			X	X
	LMR11-54-086	Vibracore	72 - 86	8/8/2011	X	X			X	X
LMR11-55	LMR11-55-006	Vibracore	0 - 6	8/7/2011	X	X			X	X
	LMR11-55-006-DP	Vibracore	0 - 6	8/7/2011	X	X				X
	LMR11-55-030	Vibracore	6 - 30	8/7/2011	X	X			X	X
	LMR11-55-030-DP	Vibracore	6 - 30	8/7/2011	X	X				X
LMR11-56	LMR11-56-006	Vibracore	0 - 6	8/7/2011	X	X			X	X
	LMR11-56-024	Vibracore	6 - 24	8/7/2011	X	X			X	X
	LMR11-56-036	Vibracore	24 - 36	8/7/2011	X	X			X	X
LMR11-57	LMR11-57-006	Vibracore	0 - 6	8/6/2011	X	X			X	X
	LMR11-57-024	Vibracore	6 - 24	8/6/2011	X	X			X	X
	LMR11-57-048	Vibracore	24 - 48	8/6/2011	X	X			X	X
	LMR11-57-062	Vibracore	48 - 62	8/6/2011	X	X			X	X
LMR11-58	LMR11-58-010	Vibracore	0 - 10	8/6/2011	X	X			X	X
LMR11-59	LMR11-59-006	Vibracore	0 - 6	8/6/2011	X	X			X	X
	LMR11-59-024	Vibracore	6 - 24	8/6/2011	X	X	X	X	X	X
	LMR11-59-048	Vibracore	24 - 48	8/6/2011	X	X			X	X
	LMR11-59-072	Vibracore	48 - 72	8/6/2011	X	X			X	X
	LMR11-59-096	Vibracore	72 - 96	8/6/2011	X	X			X	X
	LMR11-59-116	Vibracore	96 - 116	8/6/2011	X	X			X	X
LMR11-60	LMR11-60-006	Vibracore	0 - 6	8/6/2011	X	X			X	X
	LMR11-60-024	Vibracore	6 - 24	8/6/2011	X	X			X	X
	LMR11-60-048	Vibracore	24 - 48	8/6/2011	X	X			X	X
	LMR11-60-048FS	Vibracore	24 - 48	8/6/2011	X	X			X	X
	LMR11-60-072	Vibracore	48 - 72	8/6/2011	X	X			X	X
	LMR11-60-092	Vibracore	72 - 92	8/6/2011	X	X			X	X
LMR11-61	LMR11-61-006	Vibracore	0 - 6	8/6/2011	X	X			X	X
	LMR11-61-030	Vibracore	6 - 30	8/6/2011	X	X			X	X
LMR11-62	LMR11-62-006	Vibracore	0 - 6	8/6/2011	X	X			X	X
	LMR11-62-024	Vibracore	6 - 24	8/6/2011	X	X			X	X
	LMR11-62-024DP	Vibracore	6 - 24	8/6/2011	X	X				X
	LMR11-62-048	Vibracore	24 - 48	8/6/2011	X	X			X	X
	LMR11-62-072	Vibracore	48 - 72	8/6/2011	X	X			X	X
	LMR11-62-096	Vibracore	72 - 96	8/6/2011	X	X			X	X
	LMR11-62-108	Vibracore	96 - 108	8/6/2011	X	X			X	X
LMR11-63	LMR11-63-006	Vibracore	0 - 6	8/8/2011	X	X			X	X
	LMR11-63-024	Vibracore	6 - 24	8/8/2011	X	X			X	X
	LMR11-63-048	Vibracore	24 - 48	8/8/2011	X	X			X	X
	LMR11-63-048FS	Vibracore	24 - 48	8/8/2011	X	X			X	X
	LMR11-63-072	Vibracore	48 - 72	8/8/2011	X	X			X	X
	LMR11-63-096	Vibracore	72 - 96	8/8/2011	X	X			X	X
	LMR11-63-115	Vibracore	96 - 115	8/8/2011	X	X			X	X

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Table 2-2
Sampling and Analysis Summary
Lower Maumee River - Maumee River AOC
Toledo, Lucas County, Ohio

Location ID	Field Sample ID	Sample Collection Device	Depth (inches bss)	Sampling Date	Analyses					
					SVOCs	TAL Metals	PCB Aroclors	TCL Pesticides	Grain Size	TOC
LMR11-64	LMR11-88-006	Vibracore	0 - 6	8/7/2011	X	X			X	X
	LMR11-88-024	Vibracore	6 - 24	8/7/2011	X	X			X	X
	LMR11-88-048	Vibracore	24 - 48	8/7/2011	X	X			X	X
	LMR11-88-072	Vibracore	48 - 72	8/7/2011	X	X			X	X
	LMR11-88-088	Vibracore	72 - 88	8/7/2011	X	X			X	X
LMR11-65	LMR11-65-006	Vibracore	0 - 6	8/6/2011	X	X			X	X
	LMR11-65-024	Vibracore	6 - 24	8/6/2011	X	X			X	X
LMR11-66	LMR11-66-006	Vibracore	0 - 6	8/7/2011	X	X			X	X
	LMR11-66-024	Vibracore	6 - 24	8/7/2011	X	X	X	X	X	X
	LMR11-66-048	Vibracore	24 - 48	8/7/2011	X	X			X	X
	LMR11-66-048FS	Vibracore	24 - 48	8/7/2011	X	X			X	X
	LMR11-66-072	Vibracore	48 - 72	8/7/2011	X	X			X	X
	LMR11-66-096	Vibracore	72 - 96	8/7/2011	X	X			X	X
	LMR11-66-117	Vibracore	96 - 117	8/7/2011	X	X			X	X
LMR11-67	LMR11-67-006	Vibracore	0 - 6	8/6/2011	X	X			X	X
	LMR11-67-024	Vibracore	6 - 24	8/6/2011	X	X			X	X
	LMR11-67-048	Vibracore	24 - 48	8/6/2011	X	X			X	X
	LMR11-67-077	Vibracore	48 - 77	8/6/2011	X	X			X	X
LMR11-68	LMR11-68-006	Vibracore	0 - 6	8/7/2011	X	X			X	X
	LMR11-68-024	Vibracore	6 - 24	8/7/2011	X	X			X	X
	LMR11-68-048	Vibracore	24 - 48	8/7/2011	X	X			X	X
	LMR11-68-072	Vibracore	48 - 72	8/7/2011	X	X			X	X
	LMR11-68-096	Vibracore	72 - 96	8/7/2011	X	X			X	X
LMR11-69	LMR11-69-006	Vibracore	0 - 6	8/6/2011	X	X			X	X
LMR11-70	LMR11-70-006	Vibracore	0 - 6	8/7/2011	X	X			X	X
	LMR11-70-024	Vibracore	6 - 24	8/7/2011	X	X	X	X	X	X
	LMR11-70-048	Vibracore	24 - 48	8/7/2011	X	X			X	X
	LMR11-70-072	Vibracore	48 - 72	8/7/2011	X	X			X	X
	LMR11-70-072FS	Vibracore	48 - 72	8/7/2011	X	X			X	X
	LMR11-70-085	Vibracore	72 - 85	8/7/2011	X	X			X	X
LMR11-71	LMR11-71-006	Vibracore	0 - 6	8/6/2011	X	X			X	X
	LMR11-71-024	Vibracore	6 - 24	8/6/2011	X	X	X	X	X	X
	LMR11-71-024FS	Vibracore	6 - 24	8/6/2011	X	X	X	X	X	X
	LMR11-71-048	Vibracore	24 - 48	8/6/2011	X	X			X	X
	LMR11-71-072	Vibracore	48 - 72	8/6/2011	X	X			X	X
	LMR11-71-096	Vibracore	72 - 96	8/6/2011	X	X			X	X
	LMR11-71-120	Vibracore	96 - 120	8/6/2011	X	X			X	X
	LMR11-71-144	Vibracore	120 - 144	8/6/2011	X	X			X	X
	LMR11-71-161	Vibracore	144 - 161	8/6/2011	X	X			X	X
LMR11-72	LMR11-72-006	Vibracore	0 - 6	8/5/2011	X	X			X	X
	LMR11-72-024	Vibracore	6 - 24	8/5/2011	X	X			X	X
	LMR11-72-035	Vibracore	24 - 35	8/5/2011	X	X			X	X
LMR11-73	LMR11-73-006	Vibracore	0 - 6	8/7/2011	X	X			X	X
	LMR11-73-024	Vibracore	6 - 24	8/7/2011	X	X			X	X
	LMR11-73-042	Vibracore	24 - 42	8/7/2011	X	X			X	X

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Table 2-2
Sampling and Analysis Summary
Lower Maumee River - Maumee River AOC
Toledo, Lucas County, Ohio

Location ID	Field Sample ID	Sample Collection Device	Depth (inches bss)	Sampling Date	Analyses					
					SVOCs	TAL Metals	PCB Aroclors	TCL Pesticides	Grain Size	TOC
LMR11-74	LMR11-74-006	Vibracore	0 - 6	8/5/2011	X	X			X	X
	LMR11-74-024	Vibracore	6 - 24	8/5/2011	X	X			X	X
	LMR11-74-048	Vibracore	24 - 48	8/5/2011	X	X			X	X
	LMR11-74-048FS	Vibracore	24 - 48	8/5/2011	X	X			X	X
	LMR11-74-072	Vibracore	48 - 72	8/5/2011	X	X			X	X
	LMR11-74-085	Vibracore	72 - 85	8/5/2011	X	X			X	X
LMR11-75	LMR11-75-006	Vibracore	0 - 6	8/5/2011	X	X			X	X
	LMR11-75-024	Vibracore	6 - 24	8/5/2011	X	X	X	X	X	X
	LMR11-75-048	Vibracore	24 - 48	8/5/2011	X	X			X	X
	LMR11-75-048FS	Vibracore	24 - 48	8/5/2011	X	X			X	X
	LMR11-75-080	Vibracore	48 - 80	8/5/2011	X	X			X	X
LMR11-76	LMR11-76-006	Vibracore	0 - 6	8/5/2011	X	X			X	X
	LMR11-76-024	Vibracore	6 - 24	8/5/2011	X	X	X	X	X	X
	LMR11-76-048	Vibracore	24 - 48	8/5/2011	X	X			X	X
	LMR11-76-072	Vibracore	48 - 72	8/5/2011	X	X			X	X
	LMR11-76-096	Vibracore	72 - 96	8/5/2011	X	X			X	X
	LMR11-76-120	Vibracore	96 - 120	8/5/2011	X	X			X	X
LMR11-77	LMR11-77-006	Vibracore	0 - 6	8/5/2011	X	X				X
	LMR11-77-024	Vibracore	6 - 24	8/5/2011	X	X			X	X
	LMR11-77-048	Vibracore	24 - 48	8/5/2011	X	X			X	X
	LMR11-77-072	Vibracore	48 - 72	8/5/2011	X	X			X	X
	LMR11-77-120	Vibracore	72 - 120	8/5/2011	X	X			X	X
LMR11-78	LMR11-78-014	Vibracore	0 - 14	8/5/2011	X	X			X	X
LMR11-79	LMR11-79-006	Vibracore	0 - 6	8/4/2011	X	X			X	X
	LMR11-79-024	Vibracore	6 - 24	8/4/2011	X	X	X	X	X	X
	LMR11-79-024FS	Vibracore	6 - 24	8/4/2011	X	X	X	X	X	X
	LMR11-79-054	Vibracore	24 - 54	8/4/2011	X	X			X	X
LMR11-80	LMR11-80-006	Vibracore	0 - 6	8/5/2011	X	X			X	X
	LMR11-80-024	Vibracore	6 - 24	8/5/2011	X	X			X	X
	LMR11-80-056	Vibracore	24 - 56	8/5/2011	X	X			X	X
LMR11-81	LMR11-81-006	Vibracore	0 - 6	8/5/2011	X	X			X	X
	LMR11-81-019	Vibracore	6 - 19	8/5/2011	X	X			X	X
LMR11-82	LMR11-82-006	Vibracore	0 - 6	8/5/2011	X	X			X	X
	LMR11-82-024	Vibracore	6 - 24	8/5/2011	X	X			X	X
	LMR11-82-055	Vibracore	24 - 55	8/5/2011	X	X			X	X
LMR11-83	LMR11-83-006	Vibracore	0 - 6	8/5/2011	X	X			X	X
	LMR11-83-024	Vibracore	6 - 24	8/5/2011	X	X			X	X
	LMR11-83-048	Vibracore	24 - 48	8/5/2011	X	X			X	X
	LMR11-83-072	Vibracore	48 - 72	8/5/2011	X	X			X	X
	LMR11-83-087	Vibracore	72 - 87	8/5/2011	X	X			X	X
LMR11-84	LMR11-84-006	Vibracore	0 - 6	8/5/2011	X	X			X	X
	LMR11-84-024	Vibracore	6 - 24	8/5/2011	X	X			X	X
	LMR11-84-048	Vibracore	24 - 48	8/5/2011	X	X			X	X
	LMR11-84-072	Vibracore	48 - 72	8/5/2011	X	X			X	X
	LMR11-84-072DP	Vibracore	48 - 72	8/5/2011	X	X				X
	LMR11-84-096	Vibracore	72 - 96	8/5/2011	X	X			X	X
	LMR11-84-115	Vibracore	96 - 115	8/5/2011	X	X			X	X

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Table 2-2
Sampling and Analysis Summary
Lower Maumee River - Maumee River AOC
Toledo, Lucas County, Ohio

Location ID	Field Sample ID	Sample Collection Device	Depth (inches bss)	Sampling Date	Analyses					
					SVOCs	TAL Metals	PCB Aroclors	TCL Pesticides	Grain Size	TOC
LMR11-85	LMR11-85-006	Vibracore	0 - 6	8/5/2011	X	X			X	X
	LMR11-85-024	Vibracore	6 - 24	8/5/2011	X	X			X	X
	LMR11-85-048	Vibracore	24 - 48	8/5/2011	X	X			X	X
	LMR11-85-074	Vibracore	48 - 74	8/5/2011	X	X			X	X
Total number of samples analyzed:					337	337	33	33	318	337

Notes:
bss - Below sediment surface
DP - Duplicate
FS - Field split
ID - Identification
PCB - Polychlorinated biphenyl
SVOC - Semivolatile organic compound
TOC - Total organic carbon
TAL - Target Analyte List
TCL - Target Compound List

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Table 3-1
Summary of SVOC Sediment Sample Results
Lower Maumee River - Maumee River AOC
Toledo, Lucas County, Ohio

Analyte	Sampling Depth (inches bss)	No. of Results	No. of Detects	% Detects	Minimum Detection (µg/kg)	Maximum Detection (µg/kg)	PEC [1] (µg/kg)	No. of Results Above PEC	ESL [2] (µg/kg)	No. of Results Above ESL
1,1'-Biphenyl	0-6	88	1	1%	390	390	NL	--	NL	--
	6-24	79	0	0%	--	--	NL	--	NL	--
	24-48	71	0	0%	--	--	NL	--	NL	--
	48-72	48	0	0%	--	--	NL	--	NL	--
	72-96	29	0	0%	--	--	NL	--	NL	--
	96-120	17	1	6%	31	31	NL	--	NL	--
	120-144	3	0	0%	--	--	NL	--	NL	--
	144 - 168	2	0	0%	--	--	NL	--	NL	--
1,2,4,5-Tetrachlorobenzene	0-6	88	0	0%	--	--	NL	--	1,252	--
	6-24	79	0	0%	--	--	NL	--	1,252	--
	24-48	71	0	0%	--	--	NL	--	1,252	--
	48-72	48	0	0%	--	--	NL	--	1,252	--
	72-96	29	0	0%	--	--	NL	--	1,252	--
	96-120	17	0	0%	--	--	NL	--	1,252	--
	120-144	3	0	0%	--	--	NL	--	1,252	--
	144 - 168	2	0	0%	--	--	NL	--	1,252	--
2,2'-Oxybis(1-chloropropane)	0-6	88	0	0%	--	--	NL	--	NL	--
	6-24	79	0	0%	--	--	NL	--	NL	--
	24-48	71	0	0%	--	--	NL	--	NL	--
	48-72	48	0	0%	--	--	NL	--	NL	--
	72-96	29	0	0%	--	--	NL	--	NL	--
	96-120	17	0	0%	--	--	NL	--	NL	--
	120-144	3	0	0%	--	--	NL	--	NL	--
	144 - 168	2	0	0%	--	--	NL	--	NL	--
2,3,4,6-Tetrachlorophenol	0-6	88	0	0%	--	--	NL	--	129	--
	6-24	79	0	0%	--	--	NL	--	129	--
	24-48	71	0	0%	--	--	NL	--	129	--
	48-72	48	0	0%	--	--	NL	--	129	--
	72-96	29	0	0%	--	--	NL	--	129	--
	96-120	17	0	0%	--	--	NL	--	129	--
	120-144	3	0	0%	--	--	NL	--	129	--
	144 - 168	2	0	0%	--	--	NL	--	129	--
2,4,5-Trichlorophenol	0-6	88	0	0%	--	--	NL	--	NL	--
	6-24	79	0	0%	--	--	NL	--	NL	--
	24-48	71	0	0%	--	--	NL	--	NL	--
	48-72	48	0	0%	--	--	NL	--	NL	--
	72-96	29	0	0%	--	--	NL	--	NL	--
	96-120	17	0	0%	--	--	NL	--	NL	--
	120-144	3	0	0%	--	--	NL	--	NL	--
	144 - 168	2	0	0%	--	--	NL	--	NL	--
2,4,6-Trichlorophenol	0-6	88	0	0%	--	--	NL	--	208	--
	6-24	79	0	0%	--	--	NL	--	208	--
	24-48	71	0	0%	--	--	NL	--	208	--
	48-72	48	0	0%	--	--	NL	--	208	--
	72-96	29	0	0%	--	--	NL	--	208	--
	96-120	17	0	0%	--	--	NL	--	208	--
	120-144	3	0	0%	--	--	NL	--	208	--
	144 - 168	2	0	0%	--	--	NL	--	208	--

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Table 3-1
Summary of SVOC Sediment Sample Results
Lower Maumee River - Maumee River AOC
Toledo, Lucas County, Ohio

Analyte	Sampling Depth (inches bss)	No. of Results	No. of Detects	% Detects	Minimum Detection (µg/kg)	Maximum Detection (µg/kg)	PEC [1] (µg/kg)	No. of Results Above PEC	ESL [2] (µg/kg)	No. of Results Above ESL
2,4-Dichlorophenol	0-6	88	0	0%	--	--	NL	--	81.7	--
	6-24	79	0	0%	--	--	NL	--	81.7	--
	24-48	71	0	0%	--	--	NL	--	81.7	--
	48-72	48	0	0%	--	--	NL	--	81.7	--
	72-96	29	0	0%	--	--	NL	--	81.7	--
	96-120	17	0	0%	--	--	NL	--	81.7	--
	120-144	3	0	0%	--	--	NL	--	81.7	--
	144 - 168	2	0	0%	--	--	NL	--	81.7	--
2,4-Dimethylphenol	0-6	88	0	0%	--	--	NL	--	304	--
	6-24	79	0	0%	--	--	NL	--	304	--
	24-48	71	0	0%	--	--	NL	--	304	--
	48-72	48	0	0%	--	--	NL	--	304	--
	72-96	29	0	0%	--	--	NL	--	304	--
	96-120	17	0	0%	--	--	NL	--	304	--
	120-144	3	0	0%	--	--	NL	--	304	--
	144 - 168	2	0	0%	--	--	NL	--	304	--
2,4-Dinitrophenol	0-6	88	0	0%	--	--	NL	--	6.21	--
	6-24	79	0	0%	--	--	NL	--	6.21	--
	24-48	71	0	0%	--	--	NL	--	6.21	--
	48-72	48	0	0%	--	--	NL	--	6.21	--
	72-96	29	0	0%	--	--	NL	--	6.21	--
	96-120	17	0	0%	--	--	NL	--	6.21	--
	120-144	3	0	0%	--	--	NL	--	6.21	--
	144 - 168	2	0	0%	--	--	NL	--	6.21	--
2,4-Dinitrotoluene	0-6	88	0	0%	--	--	NL	--	14.4	--
	6-24	79	0	0%	--	--	NL	--	14.4	--
	24-48	71	0	0%	--	--	NL	--	14.4	--
	48-72	48	0	0%	--	--	NL	--	14.4	--
	72-96	29	0	0%	--	--	NL	--	14.4	--
	96-120	17	0	0%	--	--	NL	--	14.4	--
	120-144	3	0	0%	--	--	NL	--	14.4	--
	144 - 168	2	0	0%	--	--	NL	--	14.4	--
2,6-Dinitrotoluene	0-6	88	0	0%	--	--	NL	--	39.8	--
	6-24	79	0	0%	--	--	NL	--	39.8	--
	24-48	71	0	0%	--	--	NL	--	39.8	--
	48-72	48	0	0%	--	--	NL	--	39.8	--
	72-96	29	0	0%	--	--	NL	--	39.8	--
	96-120	17	0	0%	--	--	NL	--	39.8	--
	120-144	3	0	0%	--	--	NL	--	39.8	--
	144 - 168	2	0	0%	--	--	NL	--	39.8	--
2-Chloronaphthalene	0-6	88	0	0%	--	--	NL	--	417	--
	6-24	79	0	0%	--	--	NL	--	417	--
	24-48	71	0	0%	--	--	NL	--	417	--
	48-72	48	0	0%	--	--	NL	--	417	--
	72-96	29	0	0%	--	--	NL	--	417	--
	96-120	17	0	0%	--	--	NL	--	417	--
	120-144	3	0	0%	--	--	NL	--	417	--
	144 - 168	2	0	0%	--	--	NL	--	417	--

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Table 3-1
Summary of SVOC Sediment Sample Results
Lower Maumee River - Maumee River AOC
Toledo, Lucas County, Ohio

Analyte	Sampling Depth (inches bss)	No. of Results	No. of Detects	% Detects	Minimum Detection (µg/kg)	Maximum Detection (µg/kg)	PEC [1] (µg/kg)	No. of Results Above PEC	ESL [2] (µg/kg)	No. of Results Above ESL
2-Chlorophenol	0-6	88	0	0%	--	--	NL	--	31.9	--
	6-24	79	0	0%	--	--	NL	--	31.9	--
	24-48	71	0	0%	--	--	NL	--	31.9	--
	48-72	48	0	0%	--	--	NL	--	31.9	--
	72-96	29	0	0%	--	--	NL	--	31.9	--
	96-120	17	0	0%	--	--	NL	--	31.9	--
	120-144	3	0	0%	--	--	NL	--	31.9	--
	144 - 168	2	0	0%	--	--	NL	--	31.9	--
2-Methylnaphthalene	0-6	88	10	11%	3.6	1400	NL	--	20.2	4
	6-24	79	18	23%	3.3	200	NL	--	20.2	4
	24-48	71	20	28%	2.9	150	NL	--	20.2	4
	48-72	48	16	33%	3.7	580	NL	--	20.2	3
	72-96	29	15	52%	2.8	660	NL	--	20.2	4
	96-120	17	6	35%	5.1	690	NL	--	20.2	3
	120-144	3	2	67%	6.2	9.8	NL	--	20.2	0
	144 - 168	2	2	100%	12	220	NL	--	20.2	1
2-Methylphenol	0-6	88	0	0%	--	--	NL	--	55.4	--
	6-24	79	0	0%	--	--	NL	--	55.4	--
	24-48	71	0	0%	--	--	NL	--	55.4	--
	48-72	48	0	0%	--	--	NL	--	55.4	--
	72-96	29	0	0%	--	--	NL	--	55.4	--
	96-120	17	1	6%	51	51	NL	--	55.4	0
	120-144	3	0	0%	--	--	NL	--	55.4	--
	144 - 168	2	0	0%	--	--	NL	--	55.4	--
2-Nitroaniline	0-6	88	0	0%	--	--	NL	--	NL	--
	6-24	79	0	0%	--	--	NL	--	NL	--
	24-48	71	0	0%	--	--	NL	--	NL	--
	48-72	48	0	0%	--	--	NL	--	NL	--
	72-96	29	0	0%	--	--	NL	--	NL	--
	96-120	17	0	0%	--	--	NL	--	NL	--
	120-144	3	0	0%	--	--	NL	--	NL	--
	144 - 168	2	0	0%	--	--	NL	--	NL	--
2-Nitrophenol	0-6	88	0	0%	--	--	NL	--	NL	--
	6-24	79	0	0%	--	--	NL	--	NL	--
	24-48	71	0	0%	--	--	NL	--	NL	--
	48-72	48	0	0%	--	--	NL	--	NL	--
	72-96	29	0	0%	--	--	NL	--	NL	--
	96-120	17	0	0%	--	--	NL	--	NL	--
	120-144	3	0	0%	--	--	NL	--	NL	--
	144 - 168	2	0	0%	--	--	NL	--	NL	--
3,3'-Dichlorobenzidine	0-6	88	0	0%	--	--	NL	--	127	--
	6-24	79	0	0%	--	--	NL	--	127	--
	24-48	71	0	0%	--	--	NL	--	127	--
	48-72	48	0	0%	--	--	NL	--	127	--
	72-96	29	0	0%	--	--	NL	--	127	--
	96-120	17	0	0%	--	--	NL	--	127	--
	120-144	3	0	0%	--	--	NL	--	127	--
	144 - 168	2	0	0%	--	--	NL	--	127	--

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Table 3-1
Summary of SVOC Sediment Sample Results
Lower Maumee River - Maumee River AOC
Toledo, Lucas County, Ohio

Analyte	Sampling Depth (inches bss)	No. of Results	No. of Detects	% Detects	Minimum Detection (µg/kg)	Maximum Detection (µg/kg)	PEC [1] (µg/kg)	No. of Results Above PEC	ESL [2] (µg/kg)	No. of Results Above ESL
3-Nitroaniline	0-6	88	0	0%	--	--	NL	--	NL	--
	6-24	79	0	0%	--	--	NL	--	NL	--
	24-48	71	0	0%	--	--	NL	--	NL	--
	48-72	48	0	0%	--	--	NL	--	NL	--
	72-96	29	0	0%	--	--	NL	--	NL	--
	96-120	17	0	0%	--	--	NL	--	NL	--
	120-144	3	0	0%	--	--	NL	--	NL	--
	144 - 168	2	0	0%	--	--	NL	--	NL	--
4,6-Dinitro-2-methylphenol	0-6	88	0	0%	--	--	NL	--	104	--
	6-24	79	0	0%	--	--	NL	--	104	--
	24-48	71	0	0%	--	--	NL	--	104	--
	48-72	48	0	0%	--	--	NL	--	104	--
	72-96	29	0	0%	--	--	NL	--	104	--
	96-120	17	0	0%	--	--	NL	--	104	--
	120-144	3	0	0%	--	--	NL	--	104	--
	144 - 168	2	0	0%	--	--	NL	--	104	--
4-Bromophenyl-phenylether	0-6	88	0	0%	--	--	NL	--	1,550	--
	6-24	79	0	0%	--	--	NL	--	1,550	--
	24-48	71	0	0%	--	--	NL	--	1,550	--
	48-72	48	0	0%	--	--	NL	--	1,550	--
	72-96	29	0	0%	--	--	NL	--	1,550	--
	96-120	17	0	0%	--	--	NL	--	1,550	--
	120-144	3	0	0%	--	--	NL	--	1,550	--
	144 - 168	2	0	0%	--	--	NL	--	1,550	--
4-Chloro-3-methylphenol	0-6	88	0	0%	--	--	NL	--	388	--
	6-24	79	0	0%	--	--	NL	--	388	--
	24-48	71	0	0%	--	--	NL	--	388	--
	48-72	48	0	0%	--	--	NL	--	388	--
	72-96	29	0	0%	--	--	NL	--	388	--
	96-120	17	0	0%	--	--	NL	--	388	--
	120-144	3	0	0%	--	--	NL	--	388	--
	144 - 168	2	0	0%	--	--	NL	--	388	--
4-Chloroaniline	0-6	88	1	1%	44	44	NL	--	146	0
	6-24	79	0	0%	--	--	NL	--	146	--
	24-48	71	0	0%	--	--	NL	--	146	--
	48-72	48	0	0%	--	--	NL	--	146	--
	72-96	29	0	0%	--	--	NL	--	146	--
	96-120	17	0	0%	--	--	NL	--	146	--
	120-144	3	0	0%	--	--	NL	--	146	--
	144 - 168	2	0	0%	--	--	NL	--	146	--
4-Chlorophenyl-phenylether	0-6	88	0	0%	--	--	NL	--	NL	--
	6-24	79	0	0%	--	--	NL	--	NL	--
	24-48	71	0	0%	--	--	NL	--	NL	--
	48-72	48	0	0%	--	--	NL	--	NL	--
	72-96	29	0	0%	--	--	NL	--	NL	--
	96-120	17	0	0%	--	--	NL	--	NL	--
	120-144	3	0	0%	--	--	NL	--	NL	--
	144 - 168	2	0	0%	--	--	NL	--	NL	--

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Table 3-1
Summary of SVOC Sediment Sample Results
Lower Maumee River - Maumee River AOC
Toledo, Lucas County, Ohio

Analyte	Sampling Depth (inches bss)	No. of Results	No. of Detects	% Detects	Minimum Detection (µg/kg)	Maximum Detection (µg/kg)	PEC [1] (µg/kg)	No. of Results Above PEC	ESL [2] (µg/kg)	No. of Results Above ESL
4-Methylphenol	0-6	88	15	17%	30	110	NL	--	20.2	15
	6-24	79	9	11%	38	140	NL	--	20.2	9
	24-48	71	11	15%	30	130	NL	--	20.2	11
	48-72	48	7	15%	34	90	NL	--	20.2	7
	72-96	29	4	14%	32	120	NL	--	20.2	4
	96-120	17	3	18%	64	480	NL	--	20.2	3
	120-144	3	1	33%	51	51	NL	--	20.2	1
	144 - 168	2	2	100%	51	850	NL	--	20.2	2
4-Nitroaniline	0-6	88	0	0%	--	--	NL	--	NL	--
	6-24	79	0	0%	--	--	NL	--	NL	--
	24-48	71	0	0%	--	--	NL	--	NL	--
	48-72	48	0	0%	--	--	NL	--	NL	--
	72-96	29	0	0%	--	--	NL	--	NL	--
	96-120	17	0	0%	--	--	NL	--	NL	--
	120-144	3	0	0%	--	--	NL	--	NL	--
	144 - 168	2	0	0%	--	--	NL	--	NL	--
4-Nitrophenol	0-6	88	0	0%	--	--	NL	--	13.3	--
	6-24	79	0	0%	--	--	NL	--	13.3	--
	24-48	71	0	0%	--	--	NL	--	13.3	--
	48-72	48	0	0%	--	--	NL	--	13.3	--
	72-96	29	0	0%	--	--	NL	--	13.3	--
	96-120	17	0	0%	--	--	NL	--	13.3	--
	120-144	3	0	0%	--	--	NL	--	13.3	--
	144 - 168	2	0	0%	--	--	NL	--	13.3	--
Acenaphthene	0-6	88	9	10%	3.5	13,000	NL	--	6.71	7
	6-24	79	16	20%	2.9	89	NL	--	6.71	6
	24-48	71	13	18%	2.8	88	NL	--	6.71	5
	48-72	48	11	23%	4.9	60	NL	--	6.71	7
	72-96	29	13	45%	3	190	NL	--	6.71	6
	96-120	17	6	35%	3.1	58	NL	--	6.71	3
	120-144	3	1	33%	3.7	3.7	NL	--	6.71	0
	144 - 168	2	2	100%	3.1	26	NL	--	6.71	1
Acenaphthylene	0-6	88	10	11%	3.8	2,700	NL	--	5.87	7
	6-24	79	15	19%	2.7	9.9	NL	--	5.87	8
	24-48	71	17	24%	3.1	34	NL	--	5.87	12
	48-72	48	11	23%	4	41	NL	--	5.87	6
	72-96	29	12	41%	2.7	52	NL	--	5.87	6
	96-120	17	7	41%	3.3	29	NL	--	5.87	4
	120-144	3	0	0%	--	--	NL	--	5.87	--
	144 - 168	2	1	50%	11	11	NL	--	5.87	1
Acetophenone	0-6	88	1	1%	51	51	NL	--	NL	--
	6-24	79	1	1%	70	70	NL	--	NL	--
	24-48	71	0	0%	--	--	NL	--	NL	--
	48-72	48	0	0%	--	--	NL	--	NL	--
	72-96	29	0	0%	--	--	NL	--	NL	--
	96-120	17	1	6%	62	62	NL	--	NL	--
	120-144	3	0	0%	--	--	NL	--	NL	--
	144 - 168	2	0	0%	--	--	NL	--	NL	--

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Table 3-1
Summary of SVOC Sediment Sample Results
Lower Maumee River - Maumee River AOC
Toledo, Lucas County, Ohio

Analyte	Sampling Depth (inches bss)	No. of Results	No. of Detects	% Detects	Minimum Detection (µg/kg)	Maximum Detection (µg/kg)	PEC [1] (µg/kg)	No. of Results Above PEC	ESL [2] (µg/kg)	No. of Results Above ESL
Anthracene	0-6	88	23	26%	3.1	21,000	845	2	57.2	4
	6-24	79	29	37%	3.3	70	845	0	57.2	1
	24-48	71	26	37%	3.7	62	845	0	57.2	1
	48-72	48	21	44%	3.4	76	845	0	57.2	3
	72-96	29	18	62%	3.7	210	845	0	57.2	3
	96-120	17	11	65%	3.7	93	845	0	57.2	1
	120-144	3	2	67%	5.7	6.8	845	0	57.2	0
	144 - 168	2	2	100%	5.1	97	845	0	57.2	1
Atrazine	0-6	88	0	0%	--	--	NL	--	NL	--
	6-24	79	0	0%	--	--	NL	--	NL	--
	24-48	71	0	0%	--	--	NL	--	NL	--
	48-72	48	0	0%	--	--	NL	--	NL	--
	72-96	29	0	0%	--	--	NL	--	NL	--
	96-120	17	0	0%	--	--	NL	--	NL	--
	120-144	3	0	0%	--	--	NL	--	NL	--
	144 - 168	2	0	0%	--	--	NL	--	NL	--
Benzaldehyde	0-6	88	0	0%	--	--	NL	--	NL	--
	6-24	79	0	0%	--	--	NL	--	NL	--
	24-48	71	0	0%	--	--	NL	--	NL	--
	48-72	48	0	0%	--	--	NL	--	NL	--
	72-96	29	0	0%	--	--	NL	--	NL	--
	96-120	17	0	0%	--	--	NL	--	NL	--
	120-144	3	0	0%	--	--	NL	--	NL	--
	144 - 168	2	0	0%	--	--	NL	--	NL	--
Benzo(a)anthracene	0-6	88	51	58%	3.1	22,000	1,050	2	108	4
	6-24	79	53	67%	3.6	330	1,050	0	108	1
	24-48	71	48	68%	3.3	160	1,050	0	108	2
	48-72	48	33	69%	3.2	290	1,050	0	108	3
	72-96	29	22	76%	5.9	670	1,050	0	108	4
	96-120	17	13	76%	6.2	200	1,050	0	108	1
	120-144	3	3	100%	11	17	1,050	0	108	0
	144 - 168	2	2	100%	10	180	1,050	0	108	1
Benzo(a)pyrene	0-6	88	58	66%	4.4	14,000	1,450	2	150	3
	6-24	79	54	68%	2.8	280	1,450	0	150	1
	24-48	71	47	66%	3.8	160	1,450	0	150	1
	48-72	48	32	67%	4.3	240	1,450	0	150	1
	72-96	29	22	76%	6.1	540	1,450	0	150	3
	96-120	17	12	71%	8.8	160	1,450	0	150	1
	120-144	3	3	100%	14	22	1,450	0	150	0
	144 - 168	2	2	100%	11	140	1,450	0	150	0
Benzo(b)fluoranthene	0-6	88	58	66%	3.1	17,000	NL	--	10,400	2
	6-24	79	61	77%	4	440	NL	--	10,400	0
	24-48	71	48	68%	4.2	190	NL	--	10,400	0
	48-72	48	35	73%	4	320	NL	--	10,400	0
	72-96	29	26	90%	6.2	710	NL	--	10,400	0
	96-120	17	13	76%	9.7	220	NL	--	10,400	0
	120-144	3	3	100%	13	28	NL	--	10,400	0
	144 - 168	2	2	100%	16	210	NL	--	10,400	0

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Table 3-1
Summary of SVOC Sediment Sample Results
Lower Maumee River - Maumee River AOC
Toledo, Lucas County, Ohio

Analyte	Sampling Depth (inches bss)	No. of Results	No. of Detects	% Detects	Minimum Detection (µg/kg)	Maximum Detection (µg/kg)	PEC [1] (µg/kg)	No. of Results Above PEC	ESL [2] (µg/kg)	No. of Results Above ESL
Benzo(g,h,i)perylene	0-6	88	29	33%	3.4	5,800	NL	--	170	2
	6-24	79	38	48%	2.7	180	NL	--	170	1
	24-48	71	33	46%	4.8	120	NL	--	170	0
	48-72	48	27	56%	4.5	110	NL	--	170	0
	72-96	29	19	66%	5	360	NL	--	170	2
	96-120	17	11	65%	4.4	94	NL	--	170	0
	120-144	3	3	100%	6.6	12	NL	--	170	0
	144 - 168	2	2	100%	7.3	92	NL	--	170	0
Benzo(k)fluoranthene	0-6	88	34	39%	3.1	11,000	NL	--	240	2
	6-24	79	36	46%	3	150	NL	--	240	0
	24-48	71	37	52%	2.9	72	NL	--	240	0
	48-72	48	25	52%	3.6	110	NL	--	240	0
	72-96	29	19	66%	5.4	330	NL	--	240	1
	96-120	17	12	71%	4.8	60	NL	--	240	0
	120-144	3	2	67%	7.4	9	NL	--	240	0
	144 - 168	2	2	100%	5.7	72	NL	--	240	0
Bis(2-chloroethoxy)methane	0-6	88	0	0%	--	--	NL	--	NL	--
	6-24	79	0	0%	--	--	NL	--	NL	--
	24-48	71	0	0%	--	--	NL	--	NL	--
	48-72	48	0	0%	--	--	NL	--	NL	--
	72-96	29	0	0%	--	--	NL	--	NL	--
	96-120	17	0	0%	--	--	NL	--	NL	--
	120-144	3	0	0%	--	--	NL	--	NL	--
	144 - 168	2	0	0%	--	--	NL	--	NL	--
Bis(2-chloroethyl)ether	0-6	88	0	0%	--	--	NL	--	3,520	--
	6-24	79	0	0%	--	--	NL	--	3,520	--
	24-48	71	0	0%	--	--	NL	--	3,520	--
	48-72	48	0	0%	--	--	NL	--	3,520	--
	72-96	29	0	0%	--	--	NL	--	3,520	--
	96-120	17	0	0%	--	--	NL	--	3,520	--
	120-144	3	0	0%	--	--	NL	--	3,520	--
	144 - 168	2	0	0%	--	--	NL	--	3,520	--
Bis(2-ethylhexyl)phthalate	0-6	88	8	9%	45	1,500	NL	--	182	1
	6-24	79	12	15%	36	260	NL	--	182	2
	24-48	71	8	11%	43	230	NL	--	182	2
	48-72	48	4	8%	49	1,100	NL	--	182	1
	72-96	29	2	7%	38	200	NL	--	182	1
	96-120	17	3	18%	33	130	NL	--	182	0
	120-144	3	0	0%	--	--	NL	--	182	--
	144 - 168	2	1	50%	190	190	NL	--	182	1
Butylbenzylphthalate	0-6	88	1	1%	7,100	7,100	NL	--	1,970	1
	6-24	79	0	0%	--	--	NL	--	1,970	--
	24-48	71	0	0%	--	--	NL	--	1,970	--
	48-72	48	0	0%	--	--	NL	--	1,970	--
	72-96	29	0	0%	--	--	NL	--	1,970	--
	96-120	17	0	0%	--	--	NL	--	1,970	--
	120-144	3	0	0%	--	--	NL	--	1,970	--
	144 - 168	2	0	0%	--	--	NL	--	1,970	--

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Table 3-1
Summary of SVOC Sediment Sample Results
Lower Maumee River - Maumee River AOC
Toledo, Lucas County, Ohio

Analyte	Sampling Depth (inches bss)	No. of Results	No. of Detects	% Detects	Minimum Detection (µg/kg)	Maximum Detection (µg/kg)	PEC [1] (µg/kg)	No. of Results Above PEC	ESL [2] (µg/kg)	No. of Results Above ESL
Caprolactam	0-6	88	0	0%	--	--	NL	--	NL	--
	6-24	79	1	1%	130	130	NL	--	NL	--
	24-48	71	0	0%	--	--	NL	--	NL	--
	48-72	48	1	2%	98	98	NL	--	NL	--
	72-96	29	0	0%	--	--	NL	--	NL	--
	96-120	17	0	0%	--	--	NL	--	NL	--
	120-144	3	0	0%	--	--	NL	--	NL	--
	144 - 168	2	0	0%	--	--	NL	--	NL	--
Carbazole	0-6	88	2	2%	880	2000	NL	--	NL	--
	6-24	79	1	1%	88	88	NL	--	NL	--
	24-48	71	0	0%	--	--	NL	--	NL	--
	48-72	48	1	2%	85	85	NL	--	NL	--
	72-96	29	2	7%	64	200	NL	--	NL	--
	96-120	17	0	0%	--	--	NL	--	NL	--
	120-144	3	0	0%	--	--	NL	--	NL	--
	144 - 168	2	0	0%	--	--	NL	--	NL	--
Chrysene	0-6	88	60	68%	3.2	23,000	1,290	2	166	3
	6-24	79	62	78%	3.6	340	1,290	0	166	1
	24-48	71	53	75%	3.8	180	1,290	0	166	1
	48-72	48	35	73%	4.2	270	1,290	0	166	2
	72-96	29	26	90%	5.6	640	1,290	0	166	2
	96-120	17	14	82%	5.2	200	1,290	0	166	1
	120-144	3	3	100%	12	17	1,290	0	166	0
	144 - 168	2	2	100%	12	220	1,290	0	166	1
Dibenzo(a,h)anthracene	0-6	88	13	15%	2.8	1,900	NL	--	33	3
	6-24	79	15	19%	3.4	50	NL	--	33	1
	24-48	71	18	25%	3.3	41	NL	--	33	1
	48-72	48	12	25%	3.5	39	NL	--	33	1
	72-96	29	11	38%	5	80	NL	--	33	3
	96-120	17	6	35%	3.9	39	NL	--	33	1
	120-144	3	1	33%	3.7	3.7	NL	--	33	0
	144 - 168	2	1	50%	33	33	NL	--	33	0
Dibenzofuran	0-6	88	3	3%	74	3,200	NL	--	449	1
	6-24	79	0	0%	--	--	NL	--	449	--
	24-48	71	1	1%	29	29	NL	--	449	0
	48-72	48	2	4%	33	160	NL	--	449	0
	72-96	29	2	7%	50	230	NL	--	449	0
	96-120	17	2	12%	55	92	NL	--	449	0
	120-144	3	0	0%	--	--	NL	--	449	--
	144 - 168	2	1	50%	83	83	NL	--	449	0
Diethylphthalate	0-6	88	0	0%	--	--	NL	--	295	--
	6-24	79	0	0%	--	--	NL	--	295	--
	24-48	71	0	0%	--	--	NL	--	295	--
	48-72	48	0	0%	--	--	NL	--	295	--
	72-96	29	0	0%	--	--	NL	--	295	--
	96-120	17	0	0%	--	--	NL	--	295	--
	120-144	3	0	0%	--	--	NL	--	295	--
	144 - 168	2	0	0%	--	--	NL	--	295	--

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Table 3-1
Summary of SVOC Sediment Sample Results
Lower Maumee River - Maumee River AOC
Toledo, Lucas County, Ohio

Analyte	Sampling Depth (inches bss)	No. of Results	No. of Detects	% Detects	Minimum Detection (µg/kg)	Maximum Detection (µg/kg)	PEC [1] (µg/kg)	No. of Results Above PEC	ESL [2] (µg/kg)	No. of Results Above ESL
Dimethylphthalate	0-6	88	0	0%	--	--	NL	--	NL	--
	6-24	79	0	0%	--	--	NL	--	NL	--
	24-48	71	0	0%	--	--	NL	--	NL	--
	48-72	48	0	0%	--	--	NL	--	NL	--
	72-96	29	0	0%	--	--	NL	--	NL	--
	96-120	17	0	0%	--	--	NL	--	NL	--
	120-144	3	0	0%	--	--	NL	--	NL	--
	144 - 168	2	0	0%	--	--	NL	--	NL	--
Di-n-butylphthalate	0-6	88	3	3%	39	500	NL	--	1,114	0
	6-24	79	3	4%	34	82	NL	--	1,114	0
	24-48	71	2	3%	85	130	NL	--	1,114	0
	48-72	48	1	2%	210	210	NL	--	1,114	0
	72-96	29	1	3%	65	65	NL	--	1,114	0
	96-120	17	0	0%	--	--	NL	--	1,114	--
	120-144	3	0	0%	--	--	NL	--	1,114	--
	144 - 168	2	0	0%	--	--	NL	--	1,114	--
Di-n-octylphthalate	0-6	88	1	1%	470	470	NL	--	40,600	0
	6-24	79	1	1%	82	82	NL	--	40,600	0
	24-48	71	0	0%	--	--	NL	--	40,600	--
	48-72	48	0	0%	--	--	NL	--	40,600	--
	72-96	29	0	0%	--	--	NL	--	40,600	--
	96-120	17	0	0%	--	--	NL	--	40,600	--
	120-144	3	0	0%	--	--	NL	--	40,600	--
	144 - 168	2	0	0%	--	--	NL	--	40,600	--
Fluoranthene	0-6	88	80	91%	3.4	59,000	2,230	2	423	3
	6-24	79	75	95%	3.8	940	2,230	0	423	1
	24-48	71	64	90%	2.6	320	2,230	0	423	0
	48-72	48	41	85%	2.9	690	2,230	0	423	1
	72-96	29	27	93%	8	1,700	2,230	0	423	2
	96-120	17	14	82%	5.2	530	2,230	0	423	1
	120-144	3	3	100%	21	29	2,230	0	423	0
	144 - 168	2	2	100%	22	450	2,230	0	423	1
Fluorene	0-6	88	12	14%	2.5	14,000	536	1	77.4	3
	6-24	79	17	22%	3.8	57	536	0	77.4	0
	24-48	71	19	27%	3.7	46	536	0	77.4	0
	48-72	48	14	29%	4.5	87	536	0	77.4	1
	72-96	29	16	55%	3	190	536	0	77.4	2
	96-120	17	7	41%	2.6	71	536	0	77.4	0
	120-144	3	1	33%	3.8	3.8	536	0	77.4	0
	144 - 168	2	2	100%	3.7	48	536	0	77.4	0
Hexachlorobenzene	0-6	88	0	0%	--	--	NL	--	20	--
	6-24	79	0	0%	--	--	NL	--	20	--
	24-48	71	0	0%	--	--	NL	--	20	--
	48-72	48	0	0%	--	--	NL	--	20	--
	72-96	29	0	0%	--	--	NL	--	20	--
	96-120	17	0	0%	--	--	NL	--	20	--
	120-144	3	0	0%	--	--	NL	--	20	--
	144 - 168	2	0	0%	--	--	NL	--	20	--

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Table 3-1
Summary of SVOC Sediment Sample Results
Lower Maumee River - Maumee River AOC
Toledo, Lucas County, Ohio

Analyte	Sampling Depth (inches bss)	No. of Results	No. of Detects	% Detects	Minimum Detection (µg/kg)	Maximum Detection (µg/kg)	PEC [1] (µg/kg)	No. of Results Above PEC	ESL [2] (µg/kg)	No. of Results Above ESL
Hexachlorobutadiene	0-6	88	0	0%	--	--	NL	--	26.5	--
	6-24	79	0	0%	--	--	NL	--	26.5	--
	24-48	71	0	0%	--	--	NL	--	26.5	--
	48-72	48	0	0%	--	--	NL	--	26.5	--
	72-96	29	0	0%	--	--	NL	--	26.5	--
	96-120	17	0	0%	--	--	NL	--	26.5	--
	120-144	3	0	0%	--	--	NL	--	26.5	--
	144 - 168	2	0	0%	--	--	NL	--	26.5	--
Hexachlorocyclopentadiene	0-6	88	0	0%	--	--	NL	--	901	--
	6-24	79	0	0%	--	--	NL	--	901	--
	24-48	71	0	0%	--	--	NL	--	901	--
	48-72	48	0	0%	--	--	NL	--	901	--
	72-96	29	0	0%	--	--	NL	--	901	--
	96-120	17	0	0%	--	--	NL	--	901	--
	120-144	3	0	0%	--	--	NL	--	901	--
	144 - 168	2	0	0%	--	--	NL	--	901	--
Hexachloroethane	0-6	88	0	0%	--	--	NL	--	584	--
	6-24	79	0	0%	--	--	NL	--	584	--
	24-48	71	0	0%	--	--	NL	--	584	--
	48-72	48	0	0%	--	--	NL	--	584	--
	72-96	29	0	0%	--	--	NL	--	584	--
	96-120	17	0	0%	--	--	NL	--	584	--
	120-144	3	0	0%	--	--	NL	--	584	--
	144 - 168	2	0	0%	--	--	NL	--	584	--
Indeno(1,2,3-cd)pyrene	0-6	88	32	36%	2.7	6,200	NL	--	200	2
	6-24	79	36	46%	3.1	170	NL	--	200	0
	24-48	71	34	48%	2.7	81	NL	--	200	0
	48-72	48	25	52%	4.1	110	NL	--	200	0
	72-96	29	19	66%	6	340	NL	--	200	1
	96-120	17	11	65%	4.9	84	NL	--	200	0
	120-144	3	2	67%	6.1	11	NL	--	200	0
	144 - 168	2	2	100%	6.6	80	NL	--	200	0
Isophorone	0-6	88	0	0%	--	--	NL	--	432	--
	6-24	79	0	0%	--	--	NL	--	432	--
	24-48	71	0	0%	--	--	NL	--	432	--
	48-72	48	0	0%	--	--	NL	--	432	--
	72-96	29	0	0%	--	--	NL	--	432	--
	96-120	17	0	0%	--	--	NL	--	432	--
	120-144	3	0	0%	--	--	NL	--	432	--
	144 - 168	2	0	0%	--	--	NL	--	432	--
Naphthalene	0-6	88	19	22%	3.4	3,700	561	1	176	1
	6-24	78	20	26%	4.1	110	561	0	176	0
	24-48	71	25	35%	3.3	140	561	0	176	0
	48-72	48	20	42%	4	350	561	0	176	1
	72-96	29	19	66%	3.7	570	561	1	176	1
	96-120	17	9	53%	4.7	360	561	0	176	1
	120-144	3	3	100%	5.7	7	561	0	176	0
	144 - 168	2	2	100%	10	170	561	0	176	0

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Table 3-1
Summary of SVOC Sediment Sample Results
Lower Maumee River - Maumee River AOC
Toledo, Lucas County, Ohio

Analyte	Sampling Depth (inches bss)	No. of Results	No. of Detects	% Detects	Minimum Detection (µg/kg)	Maximum Detection (µg/kg)	PEC [1] (µg/kg)	No. of Results Above PEC	ESL [2] (µg/kg)	No. of Results Above ESL
Nitrobenzene	0-6	88	0	0%	--	--	NL	--	145	--
	6-24	79	0	0%	--	--	NL	--	145	--
	24-48	71	0	0%	--	--	NL	--	145	--
	48-72	48	0	0%	--	--	NL	--	145	--
	72-96	29	0	0%	--	--	NL	--	145	--
	96-120	17	0	0%	--	--	NL	--	145	--
	120-144	3	0	0%	--	--	NL	--	145	--
	144 - 168	2	0	0%	--	--	NL	--	145	--
N-Nitroso-di-n-propylamine	0-6	88	0	0%	--	--	NL	--	NL	--
	6-24	79	0	0%	--	--	NL	--	NL	--
	24-48	71	0	0%	--	--	NL	--	NL	--
	48-72	48	0	0%	--	--	NL	--	NL	--
	72-96	29	0	0%	--	--	NL	--	NL	--
	96-120	17	0	0%	--	--	NL	--	NL	--
	120-144	3	0	0%	--	--	NL	--	NL	--
	144 - 168	2	0	0%	--	--	NL	--	NL	--
N-Nitrosodiphenylamine	0-6	88	0	0%	--	--	NL	--	NL	--
	6-24	79	0	0%	--	--	NL	--	NL	--
	24-48	71	0	0%	--	--	NL	--	NL	--
	48-72	48	0	0%	--	--	NL	--	NL	--
	72-96	29	0	0%	--	--	NL	--	NL	--
	96-120	17	0	0%	--	--	NL	--	NL	--
	120-144	3	0	0%	--	--	NL	--	NL	--
	144 - 168	2	0	0%	--	--	NL	--	NL	--
Pentachlorophenol	0-6	88	0	0%	--	--	NL	--	23,000	--
	6-24	79	0	0%	--	--	NL	--	23,000	--
	24-48	71	0	0%	--	--	NL	--	23,000	--
	48-72	48	1	2%	13	13	NL	--	23,000	0
	72-96	29	0	0%	--	--	NL	--	23,000	--
	96-120	17	0	0%	--	--	NL	--	23,000	--
	120-144	3	0	0%	--	--	NL	--	23,000	--
	144 - 168	2	0	0%	--	--	NL	--	23,000	--
Phenanthrene	0-6	88	63	72%	2.8	38000	1,170	2	204	4
	6-24	79	74	94%	2.6	440	1,170	0	204	2
	24-48	71	63	89%	3	280	1,170	0	204	2
	48-72	48	40	83%	4.2	930	1,170	0	204	3
	72-96	29	26	90%	8.8	1600	1,170	1	204	3
	96-120	17	15	88%	4.2	460	1,170	0	204	3
	120-144	3	3	100%	14	28	1,170	0	204	0
	144 - 168	2	2	100%	21	430	1,170	0	204	1
Phenol	0-6	88	1	1%	51	51	NL	--	49.1	1
	6-24	79	0	0%	--	--	NL	--	49.1	--
	24-48	71	0	0%	--	--	NL	--	49.1	--
	48-72	48	0	0%	--	--	NL	--	49.1	--
	72-96	29	0	0%	--	--	NL	--	49.1	--
	96-120	17	0	0%	--	--	NL	--	49.1	--
	120-144	3	0	0%	--	--	NL	--	49.1	--
	144 - 168	2	0	0%	--	--	NL	--	49.1	--

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Table 3-1
Summary of SVOC Sediment Sample Results
Lower Maumee River - Maumee River AOC
Toledo, Lucas County, Ohio

Analyte	Sampling Depth (inches bss)	No. of Results	No. of Detects	% Detects	Minimum Detection (µg/kg)	Maximum Detection (µg/kg)	PEC [1] (µg/kg)	No. of Results Above PEC	ESL [2] (µg/kg)	No. of Results Above ESL
Pyrene	0-6	88	83	94%	3.3	45,000	1,520	2	195	4
	6-24	79	77	97%	3	790	1,520	0	195	1
	24-48	71	66	93%	2.9	290	1,520	0	195	2
	48-72	48	40	83%	3.1	400	1,520	0	195	4
	72-96	29	28	97%	9.6	1,200	1,520	0	195	3
	96-120	17	15	88%	4.7	430	1,520	0	195	1
	120-144	3	3	100%	22	28	1,520	0	195	0
	144 - 168	2	2	100%	18	380	1,520	0	195	1
Total PAH 17 [3]	0-6	88	88	100%	19.55	297,600	22,800	2	NL	--
	6-24	79	79	100%	22.1	4,388.30	22,800	0	NL	--
	24-48	71	71	100%	21.25	2,037	22,800	0	NL	--
	48-72	48	48	100%	19.55	4,030.35	22,800	0	NL	--
	72-96	29	29	100%	42.5	9,952.55	22,800	0	NL	--
	96-120	17	17	100%	24.65	2,800	22,800	0	NL	--
	120-144	3	3	100%	144.4	229.6	22,800	0	NL	--
	144 - 168	2	2	100%	166.5	2,859	22,800	0	NL	--

Notes:
% - Percent
"--" - Not applicable
µg/kg - Microgram per kilogram
bss - Below sediment surface
ESL - Ecological Screening Level
NL - Not listed
PEC - Probable Effect Concentration
SRV - Sediment Reference Value
1 From "Development and Evaluation of Consensus-Based Sediment Quality Guidelines for Freshwater Ecosystems" (MacDonald, et. al., 2000)
2 From U.S. Environmental Protection Agency Region 5 Ecological Screening Levels, 2003
3 Total PAH 17 - Calculated as sum of detections plus one-half the detection limit for nondetected results

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Table 3-2
Summary of TAL Metals Sediment Sample Results
Lower Maumee River - Maumee River AOC
Toledo, Lucas County, Ohio

Analyte	Sampling Depth (inches bss)	No. of Results	No. of Detects	% Detects	Minimum Detection (mg/kg)	Maximum Detection (mg/kg)	PEC [1] (mg/kg)	No. of Results Above PEC	ESL[2] (mg/kg)	No. of Results Above ESL	SRV [3] (mg/kg)	No. of Results Above SRV
Aluminum	0 - 6	88	88	100%	3,020	24,900	NL	--	NL	--	42,000	0
	6 - 24	79	79	100%	2,100	27,100	NL	--	NL	--	42,000	0
	24 - 48	71	71	100%	4,110	27,800	NL	--	NL	--	42,000	0
	48 - 72	48	48	100%	2,940	27,800	NL	--	NL	--	42,000	0
	72 - 96	29	29	100%	4,040	29,300	NL	--	NL	--	42,000	0
	96 - 120	17	17	100%	5,230	24,200	NL	--	NL	--	42,000	0
	120 - 144	3	3	100%	15,700	17,000	NL	--	NL	--	42,000	0
	144 - 168	2	2	100%	14,500	14,600	NL	--	NL	--	42,000	0
Antimony	0 - 6	88	15	17%	0.25	0.91	NL	--	NL	--	0.84	2
	6 - 24	79	9	11%	0.23	1.3	NL	--	NL	--	0.84	3
	24 - 48	71	12	17%	0.24	1.1	NL	--	NL	--	0.84	2
	48 - 72	48	5	10%	0.38	0.93	NL	--	NL	--	0.84	2
	72 - 96	29	3	10%	0.31	1	NL	--	NL	--	0.84	2
	96 - 120	17	3	18%	0.38	0.8	NL	--	NL	--	0.84	0
	120 - 144	3	0	0%	--	--	NL	--	NL	--	0.84	--
	144 - 168	2	0	0%	--	--	NL	--	NL	--	0.84	--
Arsenic	0 - 6	88	88	100%	2.3	45.4	33	2	9.79	28	11	14
	6 - 24	79	79	100%	1.7	25.4	33	0	9.79	39	11	27
	24 - 48	71	71	100%	2.6	40.5	33	1	9.79	44	11	26
	48 - 72	48	48	100%	2.8	63.2	33	1	9.79	38	11	23
	72 - 96	29	29	100%	3.2	33.1	33	1	9.79	24	11	19
	96 - 120	17	17	100%	4.3	29.9	33	0	9.79	10	11	10
	120 - 144	3	3	100%	13.1	15.8	33	0	9.79	3	11	3
	144 - 168	2	2	100%	10.8	13.9	33	0	9.79	2	11	1
Barium	0 - 6	88	86	98%	27.4	265	NL	--	NL	--	210	1
	6 - 24	79	75	95%	22.2	305	NL	--	NL	--	210	1
	24 - 48	71	71	100%	28	840	NL	--	NL	--	210	1
	48 - 72	48	47	98%	26.1	179	NL	--	NL	--	210	0
	72 - 96	29	29	100%	27.9	185	NL	--	NL	--	210	0
	96 - 120	17	17	100%	32.8	174	NL	--	NL	--	210	0
	120 - 144	3	3	100%	122	181	NL	--	NL	--	210	0
	144 - 168	2	2	100%	116	187	NL	--	NL	--	210	0

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Table 3-2
Summary of TAL Metals Sediment Sample Results
Lower Maumee River - Maumee River AOC
Toledo, Lucas County, Ohio

Analyte	Sampling Depth (inches bss)	No. of Results	No. of Detects	% Detects	Minimum Detection (mg/kg)	Maximum Detection (mg/kg)	PEC [1] (mg/kg)	No. of Results Above PEC	ESL[2] (mg/kg)	No. of Results Above ESL	SRV [3] (mg/kg)	No. of Results Above SRV
Beryllium	0 - 6	88	42	48%	0.44	1.3	NL	--	NL	--	NL	--
	6 - 24	79	59	75%	0.51	1.2	NL	--	NL	--	NL	--
	24 - 48	71	51	72%	0.44	1.2	NL	--	NL	--	NL	--
	48 - 72	48	34	71%	0.53	1.1	NL	--	NL	--	NL	--
	72 - 96	29	18	62%	0.53	1.2	NL	--	NL	--	NL	--
	96 - 120	17	10	59%	0.55	1.1	NL	--	NL	--	NL	--
	120 - 144	3	3	100%	0.73	1	NL	--	NL	--	NL	--
	144 - 168	2	2	100%	0.67	0.84	NL	--	NL	--	NL	--
Cadmium	0 - 6	88	81	92%	0.49	5.2	4.98	1	0.99	71	0.96	72
	6 - 24	79	73	92%	0.66	7.2	4.98	2	0.99	67	0.96	67
	24 - 48	71	69	97%	0.5	6.5	4.98	2	0.99	62	0.96	62
	48 - 72	48	45	94%	0.41	7	4.98	1	0.99	43	0.96	43
	72 - 96	29	28	97%	0.61	5	4.98	1	0.99	25	0.96	25
	96 - 120	17	17	100%	0.46	6.4	4.98	2	0.99	13	0.96	13
	120 - 144	3	3	100%	3	5.7	4.98	1	0.99	3	0.96	3
	144 - 168	2	2	100%	3.5	3.6	4.98	0	0.99	2	0.96	2
Calcium	0 - 6	88	88	100%	22,700	204,000	NL	--	NL	--	110,000	1
	6 - 24	79	79	100%	23,300	99,900	NL	--	NL	--	110,000	0
	24 - 48	71	71	100%	24,800	221,000	NL	--	NL	--	110,000	1
	48 - 72	48	48	100%	31,400	77,200	NL	--	NL	--	110,000	0
	72 - 96	29	29	100%	28,600	68,500	NL	--	NL	--	110,000	0
	96 - 120	17	17	100%	33,100	71,500	NL	--	NL	--	110,000	0
	120 - 144	3	3	100%	34,000	66,400	NL	--	NL	--	110,000	0
	144 - 168	2	2	100%	33,800	35,400	NL	--	NL	--	110,000	0
Chromium	0 - 6	88	88	100%	7.1	77.8	111	0	43.4	5	51	2
	6 - 24	79	79	100%	5.2	56.8	111	0	43.4	6	51	5
	24 - 48	71	71	100%	8.3	59.9	111	0	43.4	5	51	3
	48 - 72	48	48	100%	6.5	136	111	1	43.4	2	51	2
	72 - 96	29	29	100%	7.7	63.4	111	0	43.4	4	51	1
	96 - 120	17	17	100%	9	44.8	111	0	43.4	2	51	0
	120 - 144	3	3	100%	30.5	53.1	111	0	43.4	1	51	1
	144 - 168	2	2	100%	25.7	36.8	111	0	43.4	0	51	0

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Table 3-2
Summary of TAL Metals Sediment Sample Results
Lower Maumee River - Maumee River AOC
Toledo, Lucas County, Ohio

Analyte	Sampling Depth (inches bss)	No. of Results	No. of Detects	% Detects	Minimum Detection (mg/kg)	Maximum Detection (mg/kg)	PEC [1] (mg/kg)	No. of Results Above PEC	ESL [2] (mg/kg)	No. of Results Above ESL	SRV [3] (mg/kg)	No. of Results Above SRV
Cobalt	0 - 6	88	72	82%	5.9	12.9	NL	--	50	0	NL	--
	6 - 24	79	74	94%	4.9	14.4	NL	--	50	0	NL	--
	24 - 48	71	67	94%	5.1	14.2	NL	--	50	0	NL	--
	48 - 72	48	45	94%	4.9	12.5	NL	--	50	0	NL	--
	72 - 96	29	28	97%	5.4	13.7	NL	--	50	0	NL	--
	96 - 120	17	14	82%	5.2	12.8	NL	--	50	0	NL	--
	120 - 144	3	3	100%	9	10.1	NL	--	50	0	NL	--
	144 - 168	2	2	100%	8.3	9.4	NL	--	50	0	NL	--
Copper	0 - 6	88	88	100%	2.8	120	149	0	31.6	45	42	13
	6 - 24	79	79	100%	2.5	102	149	0	31.6	55	42	15
	24 - 48	71	71	100%	7.6	68.4	149	0	31.6	50	42	16
	48 - 72	48	48	100%	6.3	92.2	149	0	31.6	32	42	9
	72 - 96	29	29	100%	9.9	96.8	149	0	31.6	19	42	9
	96 - 120	17	17	100%	8.1	79.7	149	0	31.6	9	42	6
	120 - 144	3	3	100%	42.9	79.8	149	0	31.6	3	42	3
	144 - 168	2	2	100%	47.9	61.9	149	0	31.6	2	42	2
Iron	0 - 6	88	88	100%	6,710	33,700	NL	--	NL	--	44,000	0
	6 - 24	79	79	100%	5,940	35,300	NL	--	NL	--	44,000	0
	24 - 48	71	71	100%	8,240	34,500	NL	--	NL	--	44,000	0
	48 - 72	48	48	100%	7,360	34,200	NL	--	NL	--	44,000	0
	72 - 96	29	29	100%	9,070	34,300	NL	--	NL	--	44,000	0
	96 - 120	17	17	100%	8,180	41,400	NL	--	NL	--	44,000	0
	120 - 144	3	3	100%	25,400	29,600	NL	--	NL	--	44,000	0
	144 - 168	2	2	100%	21,000	23,800	NL	--	NL	--	44,000	0
Lead	0 - 6	88	88	100%	3.8	419	128	3	35.8	14	NL	--
	6 - 24	79	79	100%	3.2	167	128	4	35.8	19	NL	--
	24 - 48	71	71	100%	5.1	410	128	5	35.8	21	NL	--
	48 - 72	48	48	100%	4	171	128	2	35.8	10	NL	--
	72 - 96	29	29	100%	4.6	205	128	2	35.8	12	NL	--
	96 - 120	17	17	100%	5.1	100	128	0	35.8	7	NL	--
	120 - 144	3	3	100%	64.6	136	128	1	35.8	3	NL	--
	144 - 168	2	2	100%	40.5	97.3	128	0	35.8	2	NL	--

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Table 3-2
Summary of TAL Metals Sediment Sample Results
Lower Maumee River - Maumee River AOC
Toledo, Lucas County, Ohio

Analyte	Sampling Depth (inches bss)	No. of Results	No. of Detects	% Detects	Minimum Detection (mg/kg)	Maximum Detection (mg/kg)	PEC [1] (mg/kg)	No. of Results Above PEC	ESL[2] (mg/kg)	No. of Results Above ESL	SRV [3] (mg/kg)	No. of Results Above SRV
Magnesium	0 - 6	88	88	100%	7,290	24,300	NL	--	NL	--	29,000	0
	6 - 24	79	79	100%	8,180	22,500	NL	--	NL	--	29,000	0
	24 - 48	71	71	100%	9,200	17,200	NL	--	NL	--	29,000	0
	48 - 72	48	48	100%	9,960	24,500	NL	--	NL	--	29,000	0
	72 - 96	29	29	100%	8,800	19,700	NL	--	NL	--	29,000	0
	96 - 120	17	17	100%	8,480	16,600	NL	--	NL	--	29,000	0
	120 - 144	3	3	100%	9,510	12,700	NL	--	NL	--	29,000	0
	144 - 168	2	2	100%	8,460	8,640	NL	--	NL	--	29,000	0
Manganese	0 - 6	88	88	100%	146	868	NL	--	NL	--	1,000	0
	6 - 24	79	79	100%	129	719	NL	--	NL	--	1,000	0
	24 - 48	71	71	100%	176	652	NL	--	NL	--	1,000	0
	48 - 72	48	48	100%	207	665	NL	--	NL	--	1,000	0
	72 - 96	29	29	100%	189	635	NL	--	NL	--	1,000	0
	96 - 120	17	17	100%	179	649	NL	--	NL	--	1,000	0
	120 - 144	3	3	100%	448	920	NL	--	NL	--	1,000	0
	144 - 168	2	2	100%	358	403	NL	--	NL	--	1,000	0
Mercury	0 - 6	88	80	91%	0.0052	5.6	1.06	1	0.174	9	NL	--
	6 - 24	79	71	90%	0.0052	0.94	1.06	0	0.174	13	NL	--
	24 - 48	71	66	93%	0.0097	1.7	1.06	2	0.174	13	NL	--
	48 - 72	48	42	88%	0.01	0.81	1.06	0	0.174	12	NL	--
	72 - 96	29	26	90%	0.017	0.75	1.06	0	0.174	11	NL	--
	96 - 120	17	16	94%	0.0088	0.89	1.06	0	0.174	7	NL	--
	120 - 144	3	2	67%	0.23	1.1	1.06	1	0.174	2	NL	--
	144 - 168	2	2	100%	0.18	0.85	1.06	0	0.174	2	NL	--
Nickel	0 - 6	88	88	100%	7.1	38.9	48.6	0	22.7	59	36	5
	6 - 24	79	79	100%	6.2	39.9	48.6	0	22.7	62	36	13
	24 - 48	71	71	100%	9.8	40.1	48.6	0	22.7	56	36	9
	48 - 72	48	48	100%	7.6	41.5	48.6	0	22.7	35	36	10
	72 - 96	29	29	100%	10.9	42.6	48.6	0	22.7	21	36	7
	96 - 120	17	17	100%	10	40.8	48.6	0	22.7	9	36	5
	120 - 144	3	3	100%	28.1	39.8	48.6	0	22.7	3	36	1
	144 - 168	2	2	100%	27.9	27.9	48.6	0	22.7	2	36	0

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Table 3-2
Summary of TAL Metals Sediment Sample Results
Lower Maumee River - Maumee River AOC
Toledo, Lucas County, Ohio

Analyte	Sampling Depth (inches bss)	No. of Results	No. of Detects	% Detects	Minimum Detection (mg/kg)	Maximum Detection (mg/kg)	PEC [1] (mg/kg)	No. of Results Above PEC	ESL[2] (mg/kg)	No. of Results Above ESL	SRV [3] (mg/kg)	No. of Results Above SRV
Potassium	0 - 6	88	87	99%	415	4,450	NL	--	NL	--	12,000	0
	6 - 24	79	78	99%	453	4,820	NL	--	NL	--	12,000	0
	24 - 48	71	71	100%	617	4,740	NL	--	NL	--	12,000	0
	48 - 72	48	48	100%	634	5,080	NL	--	NL	--	12,000	0
	72 - 96	29	29	100%	756	5,140	NL	--	NL	--	12,000	0
	96 - 120	17	17	100%	933	4,030	NL	--	NL	--	12,000	0
	120 - 144	3	3	100%	2,350	2,570	NL	--	NL	--	12,000	0
	144 - 168	2	2	100%	2,280	2,410	NL	--	NL	--	12,000	0
Selenium	0 - 6	88	1	1%	0.49	0.49	NL	--	NL	--	1.4	0
	6 - 24	79	0	0%	--	--	NL	--	NL	--	1.4	--
	24 - 48	71	1	1%	0.33	0.33	NL	--	NL	--	1.4	0
	48 - 72	48	2	4%	0.53	1.2	NL	--	NL	--	1.4	0
	72 - 96	29	2	7%	0.38	0.5	NL	--	NL	--	1.4	0
	96 - 120	17	0	0%	--	--	NL	--	NL	--	1.4	--
	120 - 144	3	1	33%	0.42	0.42	NL	--	NL	--	1.4	0
	144 - 168	2	0	0%	--	--	NL	--	NL	--	1.4	--
Silver	0 - 6	88	46	52%	0.036	3.1	NL	--	0.5	11	NL	--
	6 - 24	79	44	56%	0.062	2.3	NL	--	0.5	10	NL	--
	24 - 48	71	41	58%	0.057	2.1	NL	--	0.5	6	NL	--
	48 - 72	48	28	58%	0.1	1.6	NL	--	0.5	6	NL	--
	72 - 96	29	18	62%	0.11	3.3	NL	--	0.5	7	NL	--
	96 - 120	17	9	53%	0.045	1	NL	--	0.5	4	NL	--
	120 - 144	3	2	67%	0.53	2.8	NL	--	0.5	2	NL	--
	144 - 168	2	1	50%	0.66	0.66	NL	--	0.5	1	NL	--
Sodium	0 - 6	88	2	2%	1,570	6,620	NL	--	NL	--	NL	--
	6 - 24	79	2	3%	1,190	2,730	NL	--	NL	--	NL	--
	24 - 48	71	2	3%	980	1,050	NL	--	NL	--	NL	--
	48 - 72	48	2	4%	1,030	1,700	NL	--	NL	--	NL	--
	72 - 96	29	1	3%	1,540	1,540	NL	--	NL	--	NL	--
	96 - 120	17	1	6%	559	559	NL	--	NL	--	NL	--
	120 - 144	3	0	0%	--	--	NL	--	NL	--	NL	--
	144 - 168	2	0	0%	--	--	NL	--	NL	--	NL	--

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Table 3-2
Summary of TAL Metals Sediment Sample Results
Lower Maumee River - Maumee River AOC
Toledo, Lucas County, Ohio

Analyte	Sampling Depth (inches bss)	No. of Results	No. of Detects	% Detects	Minimum Detection (mg/kg)	Maximum Detection (mg/kg)	PEC [1] (mg/kg)	No. of Results Above PEC	ESL [2] (mg/kg)	No. of Results Above ESL	SRV [3] (mg/kg)	No. of Results Above SRV
Thallium	0 - 6	88	0	0%	--	--	NL	--	NL	--	NL	--
	6 - 24	79	0	0%	--	--	NL	--	NL	--	NL	--
	24 - 48	71	0	0%	--	--	NL	--	NL	--	NL	--
	48 - 72	48	0	0%	--	--	NL	--	NL	--	NL	--
	72 - 96	29	0	0%	--	--	NL	--	NL	--	NL	--
	96 - 120	17	0	0%	--	--	NL	--	NL	--	NL	--
	120 - 144	3	0	0%	--	--	NL	--	NL	--	NL	--
	144 - 168	2	0	0%	--	--	NL	--	NL	--	NL	--
Vanadium	0 - 6	88	88	100%	10.4	51.3	NL	--	NL	--	NL	--
	6 - 24	79	79	100%	7.7	54.6	NL	--	NL	--	NL	--
	24 - 48	71	71	100%	12.8	57.5	NL	--	NL	--	NL	--
	48 - 72	48	48	100%	13.2	57.9	NL	--	NL	--	NL	--
	72 - 96	29	29	100%	16.6	60.3	NL	--	NL	--	NL	--
	96 - 120	17	17	100%	15.6	50.5	NL	--	NL	--	NL	--
	120 - 144	3	3	100%	35	38.1	NL	--	NL	--	NL	--
	144 - 168	2	2	100%	32	35.3	NL	--	NL	--	NL	--
Zinc	0 - 6	88	88	100%	18.9	339	459	0	121	37	190	7
	6 - 24	79	79	100%	15.3	332	459	0	121	52	190	12
	24 - 48	71	71	100%	27.9	714	459	1	121	44	190	16
	48 - 72	48	48	100%	21.6	273	459	0	121	27	190	4
	72 - 96	29	29	100%	30.7	308	459	0	121	17	190	4
	96 - 120	17	17	100%	33	217	459	0	121	7	190	2
	120 - 144	3	3	100%	133	268	459	0	121	3	190	1
	144 - 168	2	2	100%	134	256	459	0	121	2	190	1

Notes:

% - Percent mg/kg - Milligram per kilogram PEC - Probable Effect Concentration TAL - Target Analyte List

"--" - Not applicable bss - Below sediment surface SRV - Sediment Reference Value

1 From "Development and Evaluation of Consensus-Based Sediment Quality Guidelines for Freshwater Ecosystems" (MacDonald, et. al., 2000)

2 From U.S. Environmental Protection Agency Region 5 Ecological Screening Levels, 2003

3 From "Ohio Ecological Risk Assessment Guidance Document," February 2003, revised April 2008

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Table 3-3
Summary of Pesticides Sediment Sample Results
Lower Maumee River - Maumee River AOC
Toledo, Lucas County, Ohio

Analyte	Sampling Depth (inches bss)	No. of Results	No. of Detects	% Detects	Minimum Detection (µg/kg)	Maximum Detection (µg/kg)	PEC [1] (µg/kg)	No. of Results Above PEC	ESL [2] (µg/kg)	No. of Results Above ESL
1,1,1-Trichloro-2,2-bis(p-methoxphenyl)ethane	0-6	7	0	0%	--	--	NL	--	13.6	--
	6-24	15	0	0%	--	--	NL	--	13.6	--
	24-48	8	0	0%	--	--	NL	--	13.6	--
	48-72	2	0	0%	--	--	NL	--	13.6	--
	72-96	1	0	0%	--	--	NL	--	13.6	--
4,4'-DDD	0-6	7	0	0%	--	--	28	--	4.88	--
	6-24	15	0	0%	--	--	28	--	4.88	--
	24-48	8	0	0%	--	--	28	--	4.88	--
	48-72	2	0	0%	--	--	28	--	4.88	--
	72-96	1	0	0%	--	--	28	--	4.88	--
4,4'-DDE	0-6	7	0	0%	--	--	31.3	--	3.16	--
	6-24	15	0	0%	--	--	31.3	--	3.16	--
	24-48	8	0	0%	--	--	31.3	--	3.16	--
	48-72	2	0	0%	--	--	31.3	--	3.16	--
	72-96	1	0	0%	--	--	31.3	--	3.16	--
4,4'-DDT	0-6	7	0	0%	--	--	62.9	--	4.16	--
	6-24	15	0	0%	--	--	62.9	--	4.16	--
	24-48	8	0	0%	--	--	62.9	--	4.16	--
	48-72	2	0	0%	--	--	62.9	--	4.16	--
	72-96	1	0	0%	--	--	62.9	--	4.16	--
Aldrin	0-6	7	1	14%	2	2	NL	--	2	0
	6-24	15	0	0%	--	--	NL	--	2	--
	24-48	8	0	0%	--	--	NL	--	2	--
	48-72	2	0	0%	--	--	NL	--	2	--
	72-96	1	0	0%	--	--	NL	--	2	--
Alpha-BHC	0-6	7	0	0%	--	--	NL	--	6	--
	6-24	15	0	0%	--	--	NL	--	6	--
	24-48	8	0	0%	--	--	NL	--	6	--
	48-72	2	0	0%	--	--	NL	--	6	--
	72-96	1	0	0%	--	--	NL	--	6	--
Alpha-Chlordane	0-6	7	0	0%	--	--	17.6	--	3.24	--
	6-24	15	0	0%	--	--	17.6	--	3.24	--
	24-48	8	0	0%	--	--	17.6	--	3.24	--
	48-72	2	0	0%	--	--	17.6	--	3.24	--
	72-96	1	0	0%	--	--	17.6	--	3.24	--
Beta-BHC	0-6	7	1	14%	1.7	1.7	NL	--	5	0
	6-24	15	2	13%	1.8	2.4	NL	--	5	0
	24-48	8	1	13%	2.6	2.6	NL	--	5	0
	48-72	2	0	0%	--	--	NL	--	5	--
	72-96	1	0	0%	--	--	NL	--	5	--
Camphechlor	0-6	7	0	0%	--	--	NL	--	0.077	--
	6-24	15	0	0%	--	--	NL	--	0.077	--
	24-48	8	0	0%	--	--	NL	--	0.077	--
	48-72	2	0	0%	--	--	NL	--	0.077	--
	72-96	1	0	0%	--	--	NL	--	0.077	--
Delta-BHC	0-6	7	0	0%	--	--	NL	--	71,500	--
	6-24	15	0	0%	--	--	NL	--	71,500	--
	24-48	8	0	0%	--	--	NL	--	71,500	--
	48-72	2	0	0%	--	--	NL	--	71,500	--
	72-96	1	0	0%	--	--	NL	--	71,500	--

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Table 3-3
Summary of Pesticides Sediment Sample Results
Lower Maumee River - Maumee River AOC
Toledo, Lucas County, Ohio

Analyte	Sampling Depth (inches bss)	No. of Results	No. of Detects	% Detects	Minimum Detection (µg/kg)	Maximum Detection (µg/kg)	PEC [1] (µg/kg)	No. of Results Above PEC	ESL [2] (µg/kg)	No. of Results Above ESL
Dieldrin	0-6	7	0	0%	--	--	61.8	--	295	--
	6-24	15	0	0%	--	--	61.8	--	295	--
	24-48	8	0	0%	--	--	61.8	--	295	--
	48-72	2	0	0%	--	--	61.8	--	295	--
	72-96	1	0	0%	--	--	61.8	--	295	--
Endosulfan I	0-6	7	0	0%	--	--	NL	--	3.26	--
	6-24	15	0	0%	--	--	NL	--	3.26	--
	24-48	8	0	0%	--	--	NL	--	3.26	--
	48-72	2	0	0%	--	--	NL	--	3.26	--
	72-96	1	0	0%	--	--	NL	--	3.26	--
Endosulfan II	0-6	7	0	0%	--	--	NL	--	1.94	--
	6-24	15	0	0%	--	--	NL	--	1.94	--
	24-48	8	0	0%	--	--	NL	--	1.94	--
	48-72	2	0	0%	--	--	NL	--	1.94	--
	72-96	1	0	0%	--	--	NL	--	1.94	--
Endosulfan sulfate	0-6	7	0	0%	--	--	NL	--	34.6	--
	6-24	15	0	0%	--	--	NL	--	34.6	--
	24-48	8	0	0%	--	--	NL	--	34.6	--
	48-72	2	0	0%	--	--	NL	--	34.6	--
	72-96	1	0	0%	--	--	NL	--	34.6	--
Endrin	0-6	7	0	0%	--	--	207	--	2.22	--
	6-24	15	0	0%	--	--	207	--	2.22	--
	24-48	8	0	0%	--	--	207	--	2.22	--
	48-72	2	0	0%	--	--	207	--	2.22	--
	72-96	1	0	0%	--	--	207	--	2.22	--
Endrin aldehyde	0-6	7	0	0%	--	--	NL	--	480	--
	6-24	15	1	7%	3.4	3.4	NL	--	480	0
	24-48	8	0	0%	--	--	NL	--	480	--
	48-72	2	0	0%	--	--	NL	--	480	--
	72-96	1	0	0%	--	--	NL	--	480	--
Endrin ketone	0-6	7	0	0%	--	--	NL	--	NL	--
	6-24	15	0	0%	--	--	NL	--	NL	--
	24-48	8	0	0%	--	--	NL	--	NL	--
	48-72	2	0	0%	--	--	NL	--	NL	--
	72-96	1	0	0%	--	--	NL	--	NL	--
Gamma-BHC (Lindane)	0-6	7	0	0%	--	--	4.99	--	2.37	--
	6-24	15	0	0%	--	--	4.99	--	2.37	--
	24-48	8	0	0%	--	--	4.99	--	2.37	--
	48-72	2	0	0%	--	--	4.99	--	2.37	--
	72-96	1	1	100%	2.2	2.2	4.99	0	2.37	0
Gamma-chlordane	0-6	7	2	29%	5.1	12	17.6	0	3.24	2
	6-24	15	0	0%	--	--	17.6	--	3.24	--
	24-48	8	0	0%	--	--	17.6	--	3.24	--
	48-72	2	0	0%	--	--	17.6	--	3.24	--
	72-96	1	0	0%	--	--	17.6	--	3.24	--
Heptachlor	0-6	7	1	14%	2.7	2.7	NL	--	0.6	1
	6-24	15	1	7%	1.9	1.9	NL	--	0.6	1
	24-48	8	0	0%	--	--	NL	--	0.6	--
	48-72	2	0	0%	--	--	NL	--	0.6	--
	72-96	1	0	0%	--	--	NL	--	0.6	--

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Table 3-3
Summary of Pesticides Sediment Sample Results
Lower Maumee River - Maumee River AOC
Toledo, Lucas County, Ohio

Analyte	Sampling Depth (inches bss)	No. of Results	No. of Detects	% Detects	Minimum Detection (µg/kg)	Maximum Detection (µg/kg)	PEC [1] (µg/kg)	No. of Results Above PEC	ESL [2] (µg/kg)	No. of Results Above ESL
Heptaclor epoxide	0-6	7	0	0%	--	--	16	--	2.47	--
	6-24	15	0	0%	--	--	16	--	2.47	--
	24-48	8	0	0%	--	--	16	--	2.47	--
	48-72	2	0	0%	--	--	16	--	2.47	--
	72-96	1	0	0%	--	--	16	--	2.47	--

Notes:
% - Percent
"--" - Not applicable
µg/kg - Microgram per kilogram
bss - Below sediment surface
ESL - Ecological Screening Level
NL - Not listed
PEC - Probable Effect Concentration
1 From "Development and Evaluation of Consensus-Based Sediment Quality Guidelines for Freshwater Ecosystems" (MacDonald, et. al., 2000)
2 From U.S. Environmental Protection Agency Region 5 Ecological Screening Levels, 2003

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FIGURES



FILE: D:\Lower_Maumee\mxd\SAR\SAR_F1-1_Site_Location.mxd 2:44:20 PM 6/13/2012 wojdakon

Legend

0 8 Miles

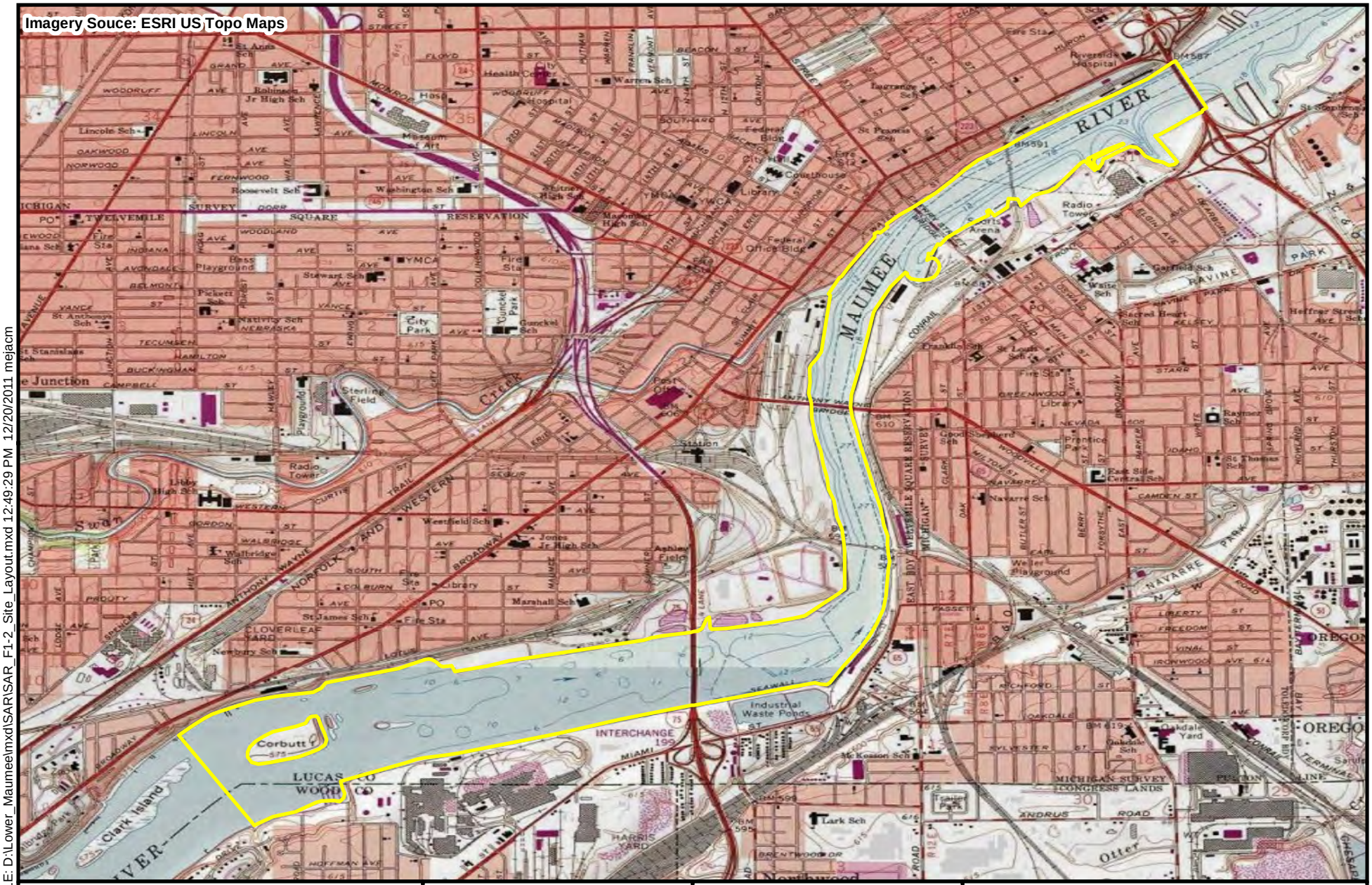
N

- Lower Maumee River Project Area
- Maumee AOC Boundary

Prepared For:
U.S. EPA REGION V
Contract No.: EP-S5-06-04
TDD: S05-0008-1103-006
DCN: 1395-2A-ASFS

Prepared By:
WESTON SOLUTIONS
750 E. Bunker Court
Suite 500
Vernon Hills, Illinois 60061

Figure 1-1
Site Location Map
Lower Maumee River
Toledo, Lucas County, Ohio



FILE: D:\Lower_Maumee\mxd\SAR\SAR_F1-2_Site_Layout.mxd 12:49:29 PM 12/20/2011 mejacm

Legend

Lower Maumee River Project Area

0 3,000 Feet

N

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DCN: 1395-2A-ASFS

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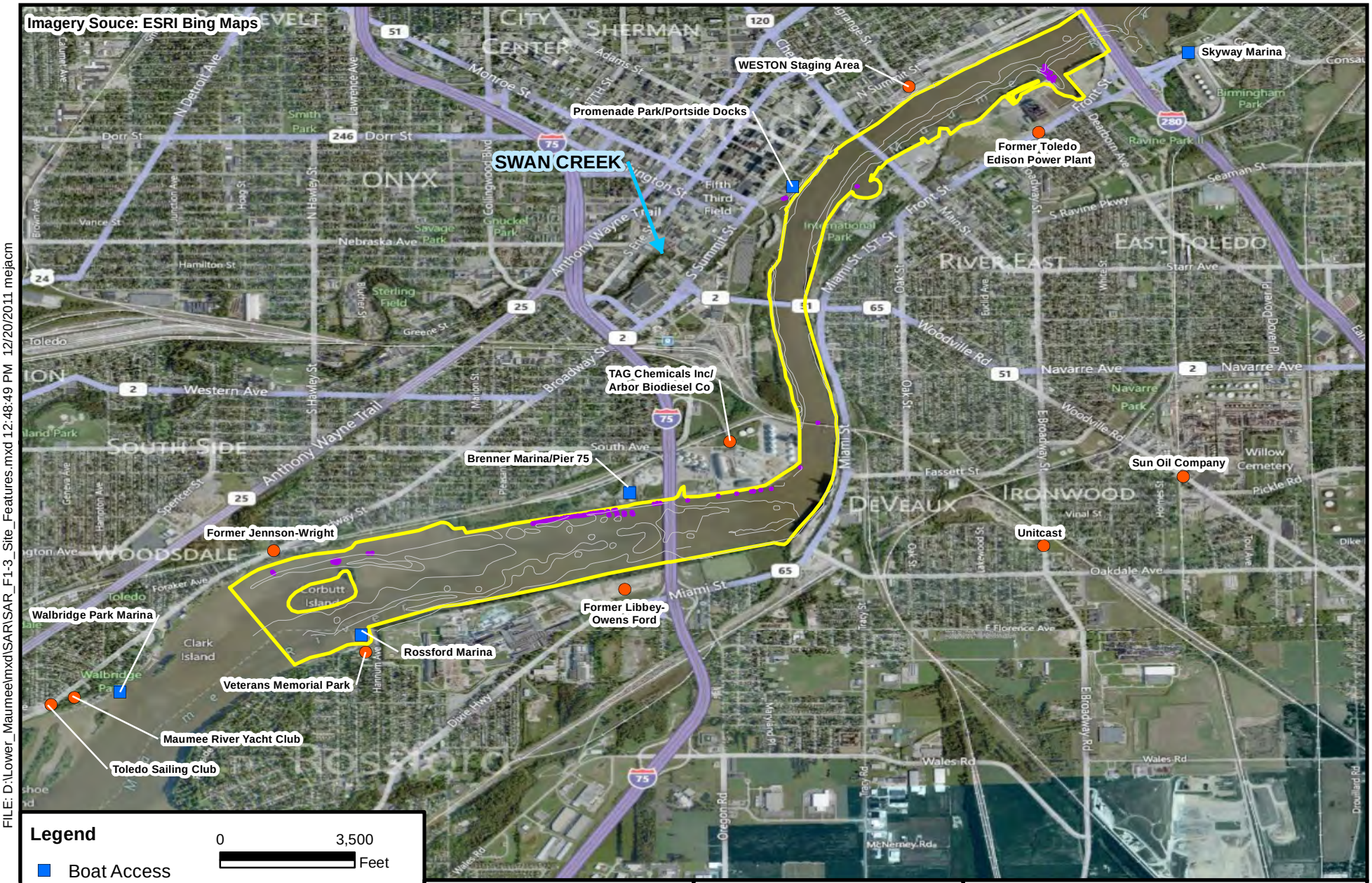
Suite 500
Vernon Hills, Illinois 60061

Figure 1-2
Site Layout Map
Lower Maumee River
Toledo, Lucas County, Ohio



FILE: D:\Lower_Maumee\mxd\SAR\SAR_F1-3_Site_Features.mxd 12:48:49 PM 12/20/2011 mejacm

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Figure 1-3
Site Features Map
Lower Maumee River
Toledo, Lucas County, Ohio

Imagery Source: ESRI Bing Maps

Note:
Standard Analysis includes Semivolatiles, Metals, Grain Size, and TOC
Extended Analysis includes Semivolatiles, Metals, Grain Size, TOC, PCBs, and Pesticides

Legend
- Sampling Location with Standard Analysis
- Sampling Location with Extended Analysis
- Lower Maumee River Project Area

0 2,500 Feet

N

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Figure 2-1
Sampling Location Map
Lower Maumee River
Toledo, Lucas County, Ohio

FILE: D:\Lower_Maumee\mxd\SAR\SAR_F2-1_Sampling_Location.mxd 1/5/2012 2:47:58 PM mejacm

Imagery Source: ESRI Bing Maps

5-foot penetration, poor recovery, woody debris on top of core

6-foot penetration, poor recovery

Legend

- Ponar Only
- No Refusal at Depth
- Lower Maumee River Project Area

- 0 - 6
- 6 - 24
- 24 - 48
- 48 - 72
- 72 - 96
- 96 - 120
- 120 - 144
- 144 - 168
- 168 and Above

Note: All depths are listed in inches below surface

N

0 2,500 Feet

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Figure 2-2
Sediment Thickness Map
Lower Maumee River
Toledo, Lucas County, Ohio

FILE: D:\Lower_Maumee\mxd\SAR\SAR_F2-2_Sediment_Thickness.mxd 1/5/2012 2:50:53 PM mejacm

Imagery Source: ESRI Bing Maps

LMR11-69 08/06/11

Depth	Parameter	Result	Units [Criteria]
0-6	Total PAH 17	297600	ug/Kg [22800]

LMR11-14 08/05/11

Depth	Parameter	Result	Units [Criteria]
0-6	Total PAH 17	92474.2	ug/Kg [22800]

Legend

- Result Below Criteria
- Result Above Criteria

0 - 6 in
6 - 24 in
24 - 48 in
48 - 72 in
72 - 96 in
96 - 120 in
120 - 144 in
144 - 168 in

N

Prepared For:
US EPA Region V
Contract No.: EP-S5-06-04
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Figure 3-1
Sampling Results Exceeding PECs - Total PAHs
Lower Maumee River
Toledo, Lucas County, Ohio

FILE: D:\Lower_Maumee\mxd\SAR\SAR_F3-1_Total_PAH_PEC.mxd 1/5/2012 2:57:27 PM mejacm

Imagery Source: ESRI Bing Maps

LMR11-72 08/05/11

Depth	Parameter	Result	Units	[Criteria]
0-6	Lead	205 J-	mg/kg	[128]
0-6	Mercury	5.6 J-	mg/kg	[1.06]

LMR11-69 08/06/11

Depth	Parameter	Result	Units	[Criteria]
0-6	Lead	419	mg/kg	[128]

LMR11-67 08/06/11

Depth	Parameter	Result	Units	[Criteria]
24-48	Cadmium	6.2	mg/kg	[4.98]

LMR11-65 08/06/11

Depth	Parameter	Result	Units	[Criteria]
6-24	Lead	161	mg/kg	[128]

LMR11-64 08/07/11

Depth	Parameter	Result	Units	[Criteria]
0-6	Lead	406	mg/kg	[128]
48-72	Lead	171	mg/kg	[128]

LMR11-63 08/08/11

Depth	Parameter	Result	Units	[Criteria]
24-48	Lead	410	mg/kg	[128]
24-48	Lead	284	mg/kg	[128]
24-48	Zinc	714	mg/kg	[459]
48-72	Lead	156	mg/kg	[128]
72-96	Arsenic	33.1	mg/kg	[33]
72-96	Lead	129	mg/kg	[128]

LMR11-79 08/04/11

Depth	Parameter	Result	Units	[Criteria]
0-6	Cadmium	5.2	mg/kg	[4.98]
6-24	Cadmium	7.2	mg/kg	[4.98]
6-24	Cadmium	5.5	mg/kg	[4.98]
6-24	Lead	167 J	mg/kg	[128]
6-24	Lead	160 J	mg/kg	[128]
24-54	Lead	143 J	mg/kg	[128]
24-54	Mercury	1.4	mg/kg	[1.06]

LMR11-76 08/05/11

Depth	Parameter	Result	Units	[Criteria]
0-6	Arsenic	45.4 J	mg/kg	[33]

LMR11-74 08/05/11

Depth	Parameter	Result	Units	[Criteria]
6-24	Lead	139 J	mg/kg	[128]
48-72	Chromium	136	mg/kg	[111]

LMR11-66 08/07/11

Depth	Parameter	Result	Units	[Criteria]
96-117	Cadmium	5.3	mg/kg	[4.98]

LMR11-32 08/10/11

Depth	Parameter	Result	Units	[Criteria]
24-48	Lead	244 J-	mg/kg	[128]
48-72	Cadmium	7 J-	mg/kg	[4.98]

LMR11-50 08/08/11

Depth	Parameter	Result	Units	[Criteria]
24-48	Lead	306	mg/kg	[128]
24-48	Mercury	1.7	mg/kg	[1.06]
72-96	Lead	205	mg/kg	[128]
120-144	Lead	136	mg/kg	[128]
120-144	Mercury	1.1	mg/kg	[1.06]

LMR11-47 08/08/11

Depth	Parameter	Result	Units	[Criteria]
72-96	Cadmium	5	mg/kg	[4.98]
96-120	Cadmium	6.4	mg/kg	[4.98]
120-144	Cadmium	5.7	mg/kg	[4.98]

LMR11-16 08/09/11

Depth	Parameter	Result	Units	[Criteria]
48-72	Arsenic	63.2	mg/kg	[33]

LMR11-28 08/10/11

Depth	Parameter	Result	Units	[Criteria]
0-6	Arsenic	35.8 J-	mg/kg	[33]

LMR11-42 08/09/11

Depth	Parameter	Result	Units	[Criteria]
24-48	Arsenic	40.5	mg/kg	[33]
24-48	Cadmium	6.5	mg/kg	[4.98]

Legend

- Result Below Criteria
- Result Above Criteria

0 - 6 in
6 - 24 in
24 - 48 in
48 - 72 in
72 - 96 in
96 - 120 in
120 - 144 in
144 - 168 in

N

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Contract No.: EP-S5-06-04
TDD: S05-0008-1103-006
DCN: 1395-2A-ASFS

Prepared By:
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750 E. Bunker Court
Suite 500
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Figure 3-2
Sampling Results Exceeding PECs - Total Metals
Lower Maumee River
Toledo, Lucas County, Ohio

FILE: D:\Lower_Maumee\mxd\SAR\SAR_F3-2_Total_Metals_PEC.mxd 1/5/2012 3:01:26 PM mejacm

Imagery Source: ESRI Bing Maps

LMR11-74 08/05/11

Depth	Parameter	Result		Units	[Criteria]
6-24	Antimony	1.3	J	mg/kg	[0.84]
24-48	Antimony	0.88	J	mg/kg	[0.84]
24-48	Antimony	1.1	J	mg/kg	[0.84]
48-72	Antimony	0.92	J	mg/kg	[0.84]
72-85	Antimony	0.86	J	mg/kg	[0.84]

LMR11-72 08/05/11

Depth	Parameter	Result		Units	[Criteria]
0-6	Antimony	0.91	J-	mg/kg	[0.84]

LMR11-77 08/05/11

Depth	Parameter	Result		Units	[Criteria]
48-72	Antimony	0.93	J-	mg/kg	[0.84]

LMR11-76 08/05/11

Depth	Parameter	Result	Units	[Criteria]
72-96	Antimony	1 J	mg/kg	[0.84]

LMR11-75 08/05/11

Depth	Parameter	Result		Units	[Criteria]
6-24	Antimony	1	J-	mg/kg	[0.84]

LMR11-63 08/08/11

Depth	Parameter	Result	Units	[Criteria]
24-48	Barium	840	mg/kg	[210]

LMR11-43 08/09/11

Depth	Parameter	Result	Units	[Criteria]
24-30	Calcium	221000	mg/kg	[110000]

LMR11-56 08/07/11

Depth	Parameter	Result	Units	[Criteria]
0-6	Barium	265	mg/kg	[210]

LMR11-73 08/07/11

Depth	Parameter	Result	Units	[Criteria]
6-24	Barium	305	mg/kg	[210]

LMR11-50 08/08/11

Depth	Parameter	Result		Units	[Criteria]
0-6	Antimony	0.85	J	mg/kg	[0.84]
6-24	Antimony	0.91	J	mg/kg	[0.84]

LMR11-05 08/04/11

Depth	Parameter	Result	Units	[Criteria]
0-6	Calcium	204000	mg/kg	[110000]

Note: Results for aluminum, antimony, barium, calcium, iron, magnesium, manganese, potassium, and selenium were compared to their respective SRVs because no PECs are available.

Legend

- Result Below Criteria
- Result Above Criteria

0 - 6 in
6 - 24 in
24 - 48 in
48 - 72 in
72 - 96 in
96 - 120 in
120 - 144 in
144 - 168 in

N

Prepared For:
US EPA Region V
Contract No.: EP-S5-06-04
TDD: S05-0008-1103-006
DCN: 1395-2A-ASFS

Prepared By:
WESTON SOLUTIONS, INC.
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Figure 3-3
Sampling Results Exceeding SRVs -
Total Metals without PECs
Lower Maumee River
Toledo, Lucas County, Ohio

FILE: D:\Lower_Maumee\mxd\SAR\SAR_F3-3_Total_Metals_SRV.mxd 1/5/2012 3:03:55 PM mejacm

APPENDIX A
SEDIMENT CORE LOGS

SEDIMENT LOG OF LMR11-01

U.S. EPA Region V
Contract: EP-S5-06-04

Lower Maumee River
Toledo, Lucas County, Ohio

Collection Date	: 08-02-11/08-05-11	WESTON Geologist	: J. Colomb
Sample Date	: 08-02-11/08-05-11	X Coordinates	: 41 37.253
Collector	: WESTON	Y Coordinates	: 83 34.357
Collection Method	: Ponar/Vibracore		
Total Depth	: 60"		

Samples Collected
- Investigative Sample
- Duplicate Sample
- MS/MSD Sample

Analyses Performed
SVOCs, Total Metals/Hg, TOC, Grain Size (TA)

DEPTH (ft)	GRAPHIC	USCS	DESCRIPTION	SAMPLE INTERVAL	REMARKS
0		ML	CLAYEY SILT, dark brown, trace fine grained sand		LMR11-01-06 (SVOCs, Total Metals/Hg, TOC, Grain Size)
1					LMR11-01-24 (SVOCs, Total Metals/Hg, TOC, Grain Size)
2					
3					LMR11-01-48 (SVOCs, Total Metals/Hg, TOC, Grain Size)
4		SM	SAND, with silt, fine to medium grained, dark brown, some shells		LMR11-01-60 (SVOCs, Total Metals/Hg, TOC, Grain Size)
5			END OF SEDIMENT BORING AT 60" bgs Ponar collected independent of vibracore		
6					

12-07-2011 C:\Documents and Settings\colomb\Desktop\Work Documents\LMR_Logs\LMR11_01.bor

SEDIMENT LOG OF LMR11-02

U.S. EPA Region V
Contract: EP-S5-06-04

Lower Maumee River
Toledo, Lucas County, Ohio

Collection Date	: 08-02-11	WESTON Geologist	: M. Beer
Sample Date	: 08-02-11	X Coordinates	: 41 37.071
Collector	: WESTON	Y Coordinates	: 83 34.211
Collection Method	: Ponar		
Total Depth	: 06"		

Samples Collected
- Investigative Sample
- Duplicate Sample
- MS/MSD Sample

Analyses Performed
SVOCs, Total Metals/Hg,
PCB Aroclors, Pesticides (CLP)
TOC, Grain Size (TA)

DEPTH (ft)	GRAPHIC	USCS	DESCRIPTION	SAMPLE INTERVAL	REMARKS
0		MH	SILT with trace fine sand, dark green/brown, some wood chips		LMR11-02-06 (SVOCs, Total Metals/Hg, PCB Aroclors, Pesticides) LMR11-02-06MS (PCB Aroclors, Pesticides) LMR11-02-06MSD (PCB Aroclors, Pesticides)
			END OF SEDIMENT BORING AT 6"		
			Ponar collected independently of vibracore		
1					

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SEDIMENT LOG OF LMR11-03

U.S. EPA Region V
Contract: EP-S5-06-04

Lower Maumee River
Toledo, Lucas County, Ohio

Collection Date	: 08-03-11	WESTON Geologist	: J. Colomb
Sample Date	: 08-03-11	X Coordinates	: 41 37.255
Collector	: WESTON	Y Coordinates	: 83 34.213
Collection Method	: Ponar/Vibracore		
Total Depth	: 59"		

Samples Collected
- Investigative Sample
- Duplicate Sample
- MS/MSD Sample

Analyses Performed
SVOCs, Total Metals/Hg, TOC, Grain Size (TA)

DEPTH (ft)	GRAPHIC	USCS	DESCRIPTION	SAMPLE INTERVAL	REMARKS
0		ML	SILT with fine sand, some gravel, some detritus, saturated, dark brown, no odor		LMR11-03-06 (SVOCs, Total Metals/Hg, TOC, Grain Size)
1		ML	CLAYEY SILT, trace fine sand, dark brown banding, some detritus, saturated, no odor		LMR11-03-24 (SVOCs, Total Metals/Hg, TOC, Grain Size)
2		ML	SILT, with some fine sand, light brown, dark brown banding, some detritus, no odor, wet		
3		ML			LMR11-03-48(SVOCs, Total Metals/Hg, TOC, Grain Size)
4		SP	SAND, Well Graded, light brown, some detritus, wet, no odor		
		ML	SILT, with some fine sand, light brown, dark brown banding, some detritus, no odor, wet		LMR11-03-59 (SVOCs, Total Metals/Hg, TOC, Grain Size)
5			END OF SEDIMENT BORING AT 59" bgs		
			Ponar collected independent of vibracore		
6					

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SEDIMENT LOG OF LMR11-04

U.S. EPA Region V
Contract: EP-S5-06-04

Lower Maumee River
Toledo, Lucas County, Ohio

Collection Date	: 08-04-11	WESTON Geologist	: J. Colomb
Sample Date	: 08-04-11	X Coordinates	: 41 37.072
Collector	: WESTON	Y Coordinates	: 83 34.069
Collection Method	: Ponar		
Total Depth	: 06"		

Samples Collected
- Investigative Sample
- Duplicate Sample
- MS/MSD Sample

Analyses Performed
SVOCs, Total Metals/Hg, TOC, Grain Size (TA)

DEPTH (ft)	GRAPHIC	USCS	DESCRIPTION	SAMPLE INTERVAL	REMARKS
0		SM	SILTY SAND, fine to medium grained, some silt, trace clay, grey, decay-like odor		LMR11-04-06 (SVOCs, Total Metals/Hg, TOC, Grain Size)
			END OF SEDIMENT BORING AT 6" bgs Ponar collected independent of vibracore		
1					

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SEDIMENT LOG OF LMR11-05

U.S. EPA Region V
Contract: EP-S5-06-04

Lower Maumee River
Toledo, Lucas County, Ohio

Collection Date	: 08-04-11	WESTON Geologist	: J. Colomb
Sample Date	: 08-04-11	X Coordinates	: 41 36.980
Collector	: WESTON	Y Coordinates	: 83 33.996
Collection Method	: Ponar/Vibracore		
Total Depth	: 24"		

Samples Collected
- Investigative Sample
- Duplicate Sample
- MS/MSD Sample

Analyses Performed
SVOCs, Total Metals/Hg, TOC, Grain Size (TA)

DEPTH (ft)	GRAPHIC	USCS	DESCRIPTION	SAMPLE INTERVAL	REMARKS
0		ML	CLAYEY SILT, trace fine sand, gray/brown, some detritus, saturated, no odor		LMR11-05-06 (SVOCs, Total Metals/Hg, TOC, Grain Size)
1		ML	CLAYEY SILT, trace fine sand, gray/brown, some detritus, saturated, no odor		LMR11-05-18 (SVOCs, Total Metals/Hg, TOC, Grain Size)
2			END OF SEDIMENT BORING AT 24" bgs Ponar collected independent of vibracore		
3					
4					
5					
6					

12-07-2011 C:\Documents and Settings\colomb\Desktop\Work Documents\LMR_Logs\LMR11_05.bor

SEDIMENT LOG OF LMR11-06

U.S. EPA Region V
Contract: EP-S5-06-04

Lower Maumee River
Toledo, Lucas County, Ohio

Collection Date	: 08-03-11	WESTON Geologist	: J. Colomb
Sample Date	: 08-03-11	X Coordinates	: 41 37.348
Collector	: WESTON	Y Coordinates	: 83 34.144
Collection Method	: Ponar/Vibracore		
Total Depth	: 52"		

Samples Collected
- Investigative Sample
- Duplicate Sample
- MS/MSD Sample

Analyses Performed
SVOCs, Total Metals/Hg, TOC, Grain Size (TA)

DEPTH (ft)	GRAPHIC	USCS	DESCRIPTION	SAMPLE INTERVAL	REMARKS
0		ML	SILT with some fine sand, saturated, dark brown, no odor		LMR11-06-06 (SVOCs, Total Metals/Hg, TOC, Grain Size)
1		ML	SILT, with trace fine sand, some detritus, light brown, saturated, no odor		LMR11-06-24 (SVOCs, Total Metals/Hg, TOC, Grain Size)
2		ML	CLAYEY SILT, trace fine sand, grey/light brown, saturated, no odor		LMR11-06-52 (SVOCs, Total Metals/Hg, TOC, Grain Size)
3					
4			END OF SEDIMENT BORING AT 52" bgs		
5					
6					

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SEDIMENT LOG OF LMR11-07

U.S. EPA Region V
Contract: EP-S5-06-04

Lower Maumee River
Toledo, Lucas County, Ohio

Collection Date	: 08-03-11	WESTON Geologist	: J. Colomb
Sample Date	: 08-03-11	X Coordinates	: 41 37.073
Collector	: WESTON	Y Coordinates	: 83 33.927
Collection Method	: Ponar/Vibracore		
Total Depth	: 06"		

Samples Collected
- Investigative Sample
- Duplicate Sample
- MS/MSD Sample

Analyses Performed
SVOCs, Total Metals/Hg, TOC, Grain Size (TA)

DEPTH (ft)	GRAPHIC	USCS	DESCRIPTION	SAMPLE INTERVAL	REMARKS
0		SW	SAND, Well Graded, fine to medium grain, some silt, some gravel, grey/brown, saturated, no odor, wood chips.		LMR11-07-06 (SVOCs, Total Metals/Hg, TOC, Grain Size)
			END OF SEDIMENT BORING AT 6" bgs		
1					

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SEDIMENT LOG OF LMR11- 08

U.S. EPA Region V
Contract: EP-S5-06-04

Lower Maumee River
Toledo, Lucas County, Ohio

Collection Date	: 08-03-1/08-05-11	WESTON Geologist	: J. Colomb
Sample Date	: 08-03-11/08-05-11	X Coordinates	: 41 37.349
Collector	: WESTON	Y Coordinates	: 83 34.002
Collection Method	: Ponar/Vibracore		
Total Depth	: 52"		

Samples Collected
- Investigative Sample
- Duplicate Sample
- MS/MSD Sample

Analyses Performed
SVOCs, Total Metals/Hg, TOC, Grain Size (TA)

DEPTH (ft)	GRAPHIC	USCS	DESCRIPTION	SAMPLE INTERVAL	REMARKS
0		ML	CLAYEY SILT, trace coarse gravel, gray, loose, trace organics, decay-like odor, saturated.		LMR11-08-06 (SVOCs, Total Metals/Hg, TOC, Grain Size)
1		ML	CLAYEY SILT, trace fine sand, grey-brown, trace organics, saturated, no odor.		LMR-11-08-24 (SVOCs, Total Metals/Hg, TOC, Grain Size)
2					
3					LMR-11-08-52 (SVOCs, Total Metals/Hg, TOC, Grain Size)
4					
			END OF SEDIMENT BORING AT 52" bgs		
5					
6					

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SEDIMENT LOG OF LMR11-10

U.S. EPA Region V
Contract: EP-S5-06-04

Lower Maumee River
Toledo, Lucas County, Ohio

Collection Date	: 08-04-11	WESTON Geologist	: J. Colomb
Sample Date	: 08-04-11	X Coordinates	: 41 37.350
Collector	: WESTON	Y Coordinates	: 83 33.861
Collection Method	: Ponar/Vibracore		
Total Depth	: 45"		

Samples Collected
- Investigative Sample
- Duplicate Sample
- MS/MSD Sample

Analyses Performed
SVOCs, Total Metals/Hg, TOC, Grain Size (TA)

DEPTH (ft)	GRAPHIC	USCS	DESCRIPTION	SAMPLE INTERVAL	REMARKS
0		SP	SAND, Poorly Graded, fine to medium grained, light brown, wet, organic odor, no visible organic material		LMR11-10-06 (SVOCs, Total Metals/Hg, TOC, Grain Size)
1		SP	SAND, Poorly Graded, fine to medium grained, light brown, wet, organic odor, no visible organic material		LMR11-10-24 (SVOCs, Total Metals/Hg, TOC, Grain Size)
2		SP	SAND, Poorly Graded, fine to medium grained, some clay, light brown, wet, organic odor, no visible organic material		LMR11-10-45 (SVOCs, Total Metals/Hg, TOC, Grain Size)
3					
4			END OF SEDIMENT BORING AT 45" bgs		
5					
6					

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SEDIMENT LOG OF LMR11-11

U.S. EPA Region V
Contract: EP-S5-06-04

Lower Maumee River
Toledo, Lucas County, Ohio

Collection Date	: 08-05-11	WESTON Geologist	: J. Colomb
Sample Date	: 08-05-11	X Coordinates	: 41 37.259
Collector	: WESTON	Y Coordinates	: 83 33.788
Collection Method	: Ponar/Vibracore		
Total Depth	: 37"		

Samples Collected
- Investigative Sample
- Duplicate Sample
- MS/MSD Sample

Analyses Performed
SVOCs, Total Metals/Hg, TOC, Grain Size (TA)

DEPTH (ft)	GRAPHIC	USCS	DESCRIPTION	SAMPLE INTERVAL	REMARKS
0		SP	SAND, Poorly Graded, fine to medium grained, dark brown, wet, no odor		LMR11-11-06 (SVOCs, Total Metals/Hg, TOC)
1		SW	SAND, Well Graded, fine to coarse grained, some cobbles, dark brown, wet, no odor		LMR11-11-24 (SVOCs, Total Metals/Hg, TOC, Grain Size)
2		SP	SAND, Poorly Graded, fine to medium grained, dark brown, damp, no odor		LMR11-11-37 (SVOCs, Total Metals/Hg, TOC, Grain Size)
3			END OF SEDIMENT BORING AT 37" bgs		
4					
5					
6					

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SEDIMENT LOG OF LMR11-12

U.S. EPA Region V
Contract: EP-S5-06-04

Lower Maumee River
Toledo, Lucas County, Ohio

Collection Date	: 08-03-11	WESTON Geologist	: J. Colomb
Sample Date	: 08-03-11	X Coordinates	: 41 37.167
Collector	: WESTON	Y Coordinates	: 83 33.716
Collection Method	: Ponar		
Total Depth	: 6"		

Samples Collected
- Investigative Sample
- Duplicate Sample
- MS/MSD Sample

Analyses Performed
SVOCs, Total Metals/Hg,
TOC, Grain Size (TA)
PCB Aroclors, Pesticides (CLP)

DEPTH (ft)	GRAPHIC	USCS	DESCRIPTION	SAMPLE INTERVAL	REMARKS
0		ML	CLAYEY SILT, no odor, some organics		LMR11-12-06 (SVOCs, Total Metals/Hg, TOC, Grain Size, PCB Aroclors, Pesticides)
			END OF SEDIMENT BORING AT 06" bgs Ponar collected independent of vibracore		
1					

12-07-2011 C:\Documents and Settings\colomb\Desktop\Work Documents\LMR_Logs\LMR11_12.bor

SEDIMENT LOG OF LMR11-13

Restoring Resource Efficiency

U.S. EPA Region V
Contract: EP-S5-06-04

Lower Maumee River
Toledo, Lucas County, Ohio

Collection Date	: 08-03-11	WESTON Geologist	: J. Colomb
Sample Date	: 08-03-11	X Coordinates	: 41 37.443
Collector	: WESTON	Y Coordinates	: 83 33.791
Collection Method	: Ponar/Hand Core		
Total Depth	: 26"		

Samples Collected
- Investigative Sample
- Duplicate Sample
- MS/MSD Sample

Analyses Performed
SVOCs, Total Metals/Hg, TOC, Grain Size (TA)

DEPTH (ft)	GRAPHIC	USCS	DESCRIPTION	SAMPLE INTERVAL	REMARKS
0		ML	CLAYEY SILT, with fine to medium sand, light brown, wet, no odor		LMR11-12-06 (SVOCs, Total Metals/Hg, TOC)
1		ML	CLAYEY SILT, trace fine sand, light brown, wet, no odor, grades to fine to medium sand		LMR11-12-26 (SVOCs, Total Metals/Hg, TOC, Grain Size)
2			END OF SEDIMENT BORING AT 26" bgs		
3					
4					
5					
6					

12-07-2011 C:\Documents and Settings\colomb\Desktop\Work Documents\LMR_Logs\LMR11_13.bor

SEDIMENT LOG OF LMR11-14

U.S. EPA Region V
Contract: EP-S5-06-04

Lower Maumee River
Toledo, Lucas County, Ohio

Collection Date	: 08-05-11	WESTON Geologist	: J. Colomb
Sample Date	: 08-05-11	X Coordinates	: 41 37.352
Collector	: WESTON	Y Coordinates	: 83 33.719
Collection Method	: Ponar/Vibracore		
Total Depth	: 45"		

Samples Collected
- Investigative Sample
- Duplicate Sample
- MS/MSD Sample

Analyses Performed
SVOCs, Total Metals/Hg, TOC, Grain Size (TA)

DEPTH (ft)	GRAPHIC	USCS	DESCRIPTION	SAMPLE INTERVAL	REMARKS
0		ML	SANDY SILT, fine grained sand, dark brown, some black banding, wet, no odor		LMR11-14-06 (SVOCs, Total Metals/Hg, TOC, Grain Size)
1		ML	SILT, with some fine sand, brown, wet, no odor		LMR11-14-24 (SVOCs, Total Metals/Hg, TOC, Grain Size)
2		ML	SILT, with some fine sand, dark brown, some black banding, wet, no odor		LMR11-14-45 (SVOCs, Total Metals/Hg, TOC, Grain Size)
3					
4			END OF SEDIMENT BORING AT 45" bgs		
5					
6					

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SEDIMENT LOG OF LMR11-15

U.S. EPA Region V
Contract: EP-S5-06-04

Lower Maumee River
Toledo, Lucas County, Ohio

Collection Date	: 08-09-11	WESTON Geologist	: J. Colomb
Sample Date	: 08-09-11	X Coordinates	: 41 37.257981
Collector	: WESTON	Y Coordinates	: 83 33.635086
Collection Method	: Ponar/Vibracore		
Total Depth	: 104"		

Samples Collected
- Investigative Sample
- Duplicate Sample
- MS/MSD Sample

Analyses Performed
SVOCs, Total Metals/Hg, TOC, Grain Size (TA)
PCB Aroclors, Pesticides (CLP)

DEPTH (ft)	USCS	DESCRIPTION	SAMPLE INTERVAL	REMARKS
0	ML	SANDY SILT, fine grained sand, saturated, no odor		LMR11-15-06 (SVOCs, Total Metals/Hg, TOC, Grain Size) LMR11-15-06-DP (SVOCs, Total Metals/Hg, TOC)
1	SP	SAND, Poorly Graded, fine to medium grained, some silt, some organics, wet, no odor		LMR11-15-24 (SVOCs, Total Metals/Hg, TOC, Grain Size) LMR11-15-24-DP (SVOCs, Total Metals/Hg, TOC)
2	ML	SILT, trace fine grained sand, saturated, no odor		LMR11-15-48 (SVOCs, Total Metals/Hg, TOC, Grain Size, PCB Aroclors, Pesticides) LMR11-15-48-DP (SVOCs, Total Metals/Hg, TOC, PCB Aroclors, Pesticides)
3				
4	ML	CLAYEY SILT, trace fine grained sand, light brown, saturated, no odor		LMR11-15-72 (SVOCs, Total Metals/Hg, TOC, Grain Size)
5				
6				
7				LMR11-15-104 (SVOCs, Total Metals/Hg, TOC, Grain Size)
8				
9		END OF SEDIMENT BORING AT 104" bgs		

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SEDIMENT LOG OF LMR11-16

U.S. EPA Region V
Contract: EP-S5-06-04

Lower Maumee River
Toledo, Lucas County, Ohio

Collection Date	: 08-09-11	WESTON Geologist	: J. Colomb
Sample Date	: 08-09-11	X Coordinates	: 41 37.162291
Collector	: WESTON	Y Coordinates	: 83 33.543026
Collection Method	: Ponar/Vibracore		
Total Depth	: 72"		

Samples Collected
- Investigative Sample
- Duplicate Sample
- MS/MSD Sample

Analyses Performed
SVOCs, Total Metals/Hg,
TOC, Grain Size (TA)
PCB Aroclors, Pesticides (CLP)

DEPTH (ft)	GRAPHIC	USCS	DESCRIPTION	SAMPLE INTERVAL	REMARKS
0		ML	SILT, trace fine grained sand, some gravel, light brown, saturated, no odor		LMR11-16-06 (SVOCs, Total Metals/Hg, TOC, Grain Size)
1		ML	SILT, trace fine sands, saturated, no odor		LMR-11-16-24 (SVOCs, Total Metals/Hg, TOC, Grain Size, PCB Aroclors, Pesticides)
2					
3					LMR-11-16-48 (SVOCs, Total Metals/Hg, TOC, Grain Size)
4		SW	SAND, Well Graded, fine to medium grained, some gravel, shell fragments, saturated, no odor		
5					LMR-11-16-72 (SVOCs, Total Metals/Hg, TOC, Grain Size)
6			END OF SEDIMENT BORING AT 72" bgs		

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SEDIMENT LOG OF LMR11-17

U.S. EPA Region V
Contract: EP-S5-06-04

Lower Maumee River
Toledo, Lucas County, Ohio

Collection Date	: 08-04-11	WESTON Geologist	: J. Colomb
Sample Date	: 08-04-11	X Coordinates	: 41 37.444
Collector	: WESTON	Y Coordinates	: 83 33.649
Collection Method	: Ponar/Vibracore		
Total Depth	: 21"		

Samples Collected
- Investigative Sample
- Duplicate Sample
- MS/MSD Sample

Analyses Performed
SVOCs, Total Metals/Hg, TOC, Grain Size (TA)

DEPTH (ft)	GRAPHIC	USCS	DESCRIPTION	SAMPLE INTERVAL	REMARKS
0		SP	SAND, Poorly Graded, fine to medium grained, some silt, some organics, light brown, wet, no odor		LMR11-17-06 (SVOCs, Total Metals/Hg, TOC, Grain Size)
1		SP	SAND, Poorly Graded, some silt, light brown, wet, no odor		LMR11-17-21 (SVOCs, Total Metals/Hg, TOC, Grain Size)
2			END OF SEDIMENT BORING AT 21" bgs		
3					
4					
5					
6					

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SEDIMENT LOG OF LMR11-18

U.S. EPA Region V
Contract: EP-S5-06-04

Lower Maumee River
Toledo, Lucas County, Ohio

Collection Date	: 08-03-11/08-05-11	WESTON Geologist	: J. Colomb
Sample Date	: 08-03-11/08-05-11	X Coordinates	: 41 37.353
Collector	: WESTON	Y Coordinates	: 83 33.577
Collection Method	: Ponar/Vibracore		
Total Depth	: 48"		

Samples Collected
- Investigative Sample
- Duplicate Sample
- MS/MSD Sample

Analyses Performed
SVOCs, Total Metals/Hg, TOC, Grain Size (TA)

DEPTH (ft)	USCS	DESCRIPTION	SAMPLE INTERVAL	REMARKS
0	ML	SILT, trace fine grained sand, trace organics, gray, wet, decay odor		LMR11-18-06 (SVOCs, Total Metals/Hg, TOC, Grain Size)
1	SP	SAND, Poorly Graded, fine to medium grained, some silt, dark brown, wet, no odor		LMR11-18-24 (SVOCs, Total Metals/Hg, TOC, Grain Size)
2	ML	CLAYEY SILT, with fine grained sand, dark brown, wet, no odor		LMR11-18-48 (SVOCs, Total Metals/Hg, TOC, Grain Size)
3				
4		END OF SEDIMENT BORING AT 48" bgs Ponar collected independent of Vibracore		
5				
6				

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SEDIMENT LOG OF LMR11-19

U.S. EPA Region V
Contract: EP-S5-06-04

Lower Maumee River
Toledo, Lucas County, Ohio

Collection Date	: 08-03-11	WESTON Geologist	: J. Colomb
Sample Date	: 08-03-11	X Coordinates	: 41 37.154
Collector	: WESTON	Y Coordinates	: 83 33.506
Collection Method	: Ponar/Vibracore		
Total Depth	: 14"		

Samples Collected
- Investigative Sample
- Duplicate Sample
- MS/MSD Sample

Analyses Performed
SVOCs, Total Metals/Hg, TOC, Grain Size (TA)

DEPTH (ft)	GRAPHIC	USCS	DESCRIPTION	SAMPLE INTERVAL	REMARKS
0		ML	SILT, some fine to medium sand, grey-brown, organics, saturated, no odor		LMR11-19-06 (SVOCs, Total Metals/Hg, TOC, Grain Size)
1		ML	SANDY SILT, fine to medium sand, some cobbles, dark brown, saturated, no odors		LMR11-19-14 (SVOCs, Total Metals/Hg, TOC, Grain Size)

END OF SEDIMENT BORING AT 14" bgs

Ponar collected independent of Vibracore

2
3
4
5
6

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SEDIMENT LOG OF LMR11-20

U.S. EPA Region V
Contract: EP-S5-06-04

Lower Maumee River
Toledo, Lucas County, Ohio

Collection Date	: 08-02-11/08-05-11	WESTON Geologist	: J. Colomb
Sample Date	: 08-02-11/08-05-11	X Coordinates	: 41 37.446
Collector	: WESTON	Y Coordinates	: 83 33.508
Collection Method	: Ponar/Vibracore		
Total Depth	: 60"		

Samples Collected
- Investigative Sample
- Duplicate Sample
- MS/MSD Sample

Analyses Performed
SVOCs, Total Metals/Hg,
TOC, Grain Size (TA)
PCB Aroclors, Pesticides (CLP)

DEPTH (ft)	USCS	DESCRIPTION	SAMPLE INTERVAL	REMARKS
0	ML	CLAYEY SILT, trace fine sand, grey-brown, saturated, no odor		LMR11-20-06 (SVOCs, Total Metals/Hg, TOC, Grain Size) LMR11-20-06-FS (SVOCs, Total Metals/Hg, TOC. Grain Size)
1	ML	SILT, trace fine sand, some clay, brown, saturated, no odor		LMR11-20-24 (SVOCs, Total Metals/Hg, TOC, Grain Size, PCB Aroclors, Pesticides)
2	ML	SILT, trace fine sand, brown, saturated, no odor		LMR11-20-48 (SVOCs, Total Metals/Hg, TOC, Grain Size)
3	ML	SILT, trace fine sand, grading from fine to medium, trace organics, brown, wet, no odor		LMR11-20-60 (SVOCs, Total Metals/Hg, TOC, Grain Size)
4				
5		END OF SEDIMENT BORING AT 60" bgs Ponar collected independent of Vibracore		
6				

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SEDIMENT LOG OF LMR11-21

U.S. EPA Region V
Contract: EP-S5-06-04

Lower Maumee River
Toledo, Lucas County, Ohio

Collection Date	: 08-04-11	WESTON Geologist	: J. Colomb
Sample Date	: 08-04-11	X Coordinates	: 41 37.354
Collector	: WESTON	Y Coordinates	: 83 33.435
Collection Method	: Ponar		
Total Depth	: 6"		

Samples Collected
- Investigative Sample
- Duplicate Sample
- MS/MSD Sample

Analyses Performed
SVOCs, Total Metals/Hg, TOC, Grain Size (TA)

DEPTH (ft)	GRAPHIC	USCS	DESCRIPTION	SAMPLE INTERVAL	REMARKS
0		ML	SILT, some fine grained sand, trace cobbles, trace organics, grey-brown, saturated, no odor		LMR11-21-06 (SVOCs, Total Metals/Hg, TOC, Grain Size)
			END OF SEDIMENT BORING AT 6" bgs Ponar collected independent of vibracore		
1					

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SEDIMENT LOG OF LMR11-22

U.S. EPA Region V
Contract: EP-S5-06-04

Lower Maumee River
Toledo, Lucas County, Ohio

Collection Date	: 08-04-11	WESTON Geologist	: J. Colomb
Sample Date	: 08-04-11	X Coordinates	: 41 37.263
Collector	: WESTON	Y Coordinates	: 83 33.363
Collection Method	: Ponar		
Total Depth	: 6"		

Samples Collected
- Investigative Sample
- Duplicate Sample
- MS/MSD Sample

Analyses Performed
SVOCs, Total Metals/Hg, TOC, Grain Size (TA)

DEPTH (ft)	GRAPHIC	USCS	DESCRIPTION	SAMPLE INTERVAL	REMARKS
0		ML	SILT, some fine grained sand, some gravel, trace organics, brown, saturated, no odor		LMR11-22-06 (SVOCs, Total Metals/Hg, TOC, Grain Size)
			END OF SEDIMENT BORING AT 6" bgs Ponar collected independently of vibracore		
1					

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SEDIMENT LOG OF LMR11-23

U.S. EPA Region V
Contract: EP-S5-06-04

Lower Maumee River
Toledo, Lucas County, Ohio

Collection Date	: 08-11-11	WESTON Geologist	: J. Colomb
Sample Date	: 08-11-11	X Coordinates	: 41 37.446
Collector	: WESTON	Y Coordinates	: 83 33.366
Collection Method	: Ponar		
Total Depth	: 115"		

Samples Collected
- Investigative Sample
- Duplicate Sample
- MS/MSD Sample

Analyses Performed
SVOCs, Total Metals/Hg, TOC, Grain Size (TA)
PCB Aroclors, Pesticides (CLP)

DEPTH (ft)	USCS	DESCRIPTION	SAMPLE INTERVAL	REMARKS
0	ML	SILT, trace fine grained sand, dark brown, saturated, no odor		LMR11-23-06 (SVOCs, Total Metals/Hg, TOC, Grain Size, PCB Aroclors, Pesticides)
1	ML	SILT, trace fine grained sand, dark brown, saturated, no odor		LMR11-23-24 (SVOCs, Total Metals/Hg, TOC, Grain Size, PCB Aroclors, Pesticides) LMR11-23-24-MS (PCB Aroclors, Pesticides) LMR11-23-24-MSD (PCB Aroclors, Pesticides)
2	ML	CLAYEY SILT, trace fine grained sand, dark brown, saturated, no odor		
3				LMR11-23-48 (SVOCs, Total Metals/Hg, TOC, Grain Size)
4				
5				LMR11-23-72 (SVOCs, Total Metals/Hg, TOC, Grain Size)
6				
7				LMR11-23-96 (SVOCs, Total Metals/Hg, TOC, Grain Size)
8				
9				LMR11-23-115 (SVOCs, Total Metals/Hg, TOC, Grain Size)

END OF SEDIMENT BORING AT 115" bgs

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SEDIMENT LOG OF LMR11-24

U.S. EPA Region V
Contract: EP-S5-06-04

Lower Maumee River
Toledo, Lucas County, Ohio

Collection Date	: 08-04-11/08-11-11	WESTON Geologist	: J. Colomb
Sample Date	: 08-04-11/08-11-11	X Coordinates	: 41 37.363
Collector	: WESTON	Y Coordinates	: 83 33.305
Collection Method	: Ponar/Vibracore		
Total Depth	: 96"		

Samples Collected
- Investigative Sample
- Duplicate Sample
- MS/MSD Sample

Analyses Performed
SVOCs, Total Metals/Hg, TOC, Grain Size (TA)
PCB Aroclors, Pesticides (CLP)

DEPTH (ft)	GRAPHIC	USCS	DESCRIPTION	SAMPLE INTERVAL	REMARKS
0		ML	SILT, trace fine grained sand, grey-brown, saturated, no odor		LMR11-24-06 (SVOCs, Total Metals/Hg, TOC, Grain Size)
1		ML	SILT, trace fine grained sand, dark brown, saturated, no odor		LMR11-24-24 (SVOCs, Total Metals/Hg, TOC, Grain Size)
2		ML	CLAYEY SILT, trace fine grained sand, dark brown, saturated, no odor		LMR11-24-48 (SVOCs, Total Metals/Hg, TOC, Grain Size, PCB Aroclors, Pesticides)
4		ML	CLAYEY SILT, trace fine grained sand, dark brown, wet, no odor		LMR11-24-72 (SVOCs, Total Metals/Hg, TOC, Grain Size)
6		ML	CLAYEY SILT, trace fine to medium grained sand, dark brown, wet, no odor		LMR11-24-96 (SVOCs, Total Metals/Hg, TOC, Grain Size)
8			END OF SEDIMENT BORING AT 96" bgs Ponar collected independently of vibracore		

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SEDIMENT LOG OF LMR11-25

U.S. EPA Region V
Contract: EP-S5-06-04

Lower Maumee River
Toledo, Lucas County, Ohio

Collection Date	: 08-11-11	WESTON Geologist	: J. Colomb
Sample Date	: 08-11-11	X Coordinates	: 41 37.264
Collector	: WESTON	Y Coordinates	: 83 33.221
Collection Method	: Ponar/Vibracore		
Total Depth	: 96"		

Samples Collected
- Investigative Sample
- Duplicate Sample
- MS/MSD Sample

Analyses Performed
SVOCs, Total Metals/Hg, TOC, Grain Size (TA)
PCB Aroclors, Pesticides (CLP)

DEPTH (ft)	GRAPHIC	USCS	DESCRIPTION	SAMPLE INTERVAL	REMARKS
0		ML	SILT, trace fine grained sand, grey-brown, saturated, no odor		LMR11-25-06 (SVOCs, Total Metals/Hg, TOC, Grain Size, PCB Aroclors, Pesticides)
1		ML	SILT, trace fine grained sand, dark brown, saturated, no odor		LMR11-25-24 (SVOCs, Total Metals/Hg, TOC, Grain Size)
2		ML	CLAYEY SILT, trace fine grained sand, dark brown, saturated, no odor		LMR11-25-48 (SVOCs, Total Metals/Hg, TOC, Grain Size, PCB Aroclors, Pesticides)
4					LMR11-25-72 (SVOCs, Total Metals/Hg, TOC, Grain Size)
6		ML	CLAYEY SILT, trace fine grained sand, dark brown, wet, no odor		LMR11-25-96 (SVOCs, Total Metals/Hg, TOC, Grain Size)
8			END OF SEDIMENT BORING AT 96" bgs		

Ponar and vibracore collected independently

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SEDIMENT LOG OF LMR11-26

U.S. EPA Region V
Contract: EP-S5-06-04

Lower Maumee River
Toledo, Lucas County, Ohio

Collection Date	: 08-10-11	WESTON Geologist	: J. Colomb
Sample Date	: 08-10-11	X Coordinates	: 41 37.4448
Collector	: WESTON	Y Coordinates	: 83 33.2218
Collection Method	: Ponar/Vibracore		
Total Depth	: 117"		

Samples Collected
- Investigative Sample
- Duplicate Sample
- MS/MSD Sample

Analyses Performed
SVOCs, Total Metals/Hg, TOC, Grain Size (TA)
PCB Aroclors, Pesticides (CLP)

DEPTH (ft)	USCS	DESCRIPTION	SAMPLE INTERVAL	REMARKS
0	ML	SILT, trace fine grained sand, grey-brown, saturated, no odor		LMR11-26-06 (SVOCs, Total Metals/Hg, TOC, Grain Size)
1	ML	SILT, trace fine grained sand, dark brown, saturated, no odor		LMR11-26-24 (SVOCs, Total Metals/Hg, TOC, Grain Size, PCB Aroclors, Pesticides)
2	ML	CLAYEY SILT, trace fine grained sand, dark brown, saturated, no odor		LMR11-26-48 (SVOCs, Total Metals/Hg, TOC, Grain Size)
4	ML	CLAYEY SILT, trace fine grained sand, dark brown, wet, no odor		LMR11-26-72 (SVOCs, Total Metals/Hg, TOC, Grain Size)
6	ML	CLAYEY SILT, trace fine to medium grained sand, dark brown, wet, no odor		LMR11-26-96 (SVOCs, Total Metals/Hg, TOC, Grain Size)
8				LMR11-26-117 (SVOCs, Total Metals/Hg, TOC, Grain Size)
9				
10		END OF SEDIMENT BORING AT 117" bgs		

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SEDIMENT LOG OF LMR11-27

U.S. EPA Region V
Contract: EP-S5-06-04

Lower Maumee River
Toledo, Lucas County, Ohio

Collection Date	: 08-04-11/08-11-11	WESTON Geologist	: J. Colomb
Sample Date	: 08-04-11/08-11-11	X Coordinates	: 41 37.3599
Collector	: WESTON	Y Coordinates	: 83 33.1628
Collection Method	: Ponar/Vibracore		
Total Depth	: 115"		

Samples Collected
- Investigative Sample
- Duplicate Sample
- MS/MSD Sample

Analyses Performed
SVOCs, Total Metals/Hg, TOC, Grain Size (TA)
PCB Aroclors, Pesticides (CLP)

DEPTH (ft)	USCS	DESCRIPTION	SAMPLE INTERVAL	REMARKS
0	ML	SILT, trace fine grained sand, grey-brown, saturated, no odor		LMR11-27-06 (SVOCs, Total Metals/Hg, TOC, Grain Size)
1	SP	SAND, Poorly Graded, fine to medium grained, light brown, saturated, no odor		LMR11-27-24 (SVOCs, Total Metals/Hg, TOC, Grain Size)
2	ML	CLAYEY SILT, trace fine grained sand, dark brown, saturated, no odor		LMR11-27-48 (SVOCs, Total Metals/Hg, TOC, Grain Size, PCB Aroclors, Pesticides)
4	ML	CLAYEY SILT, trace fine grained sand, dark brown, wet, no odor		LMR11-27-72 (SVOCs, Total Metals/Hg, TOC, Grain Size)
6	ML	CLAYEY SILT, trace fine to medium grained sand, dark brown, wet, no odor		LMR11-27-96 (SVOCs, Total Metals/Hg, TOC, Grain Size)
8	ML	SILT, trace fine grained sand, light brown, wet, no odor		LMR11-27-115 (SVOCs, Total Metals/Hg, TOC, Grain Size)
10		END OF SEDIMENT BORING AT 115" bgs Ponar and vibracore collected independently		

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SEDIMENT LOG OF LMR11-28

U.S. EPA Region V
Contract: EP-S5-06-04

Lower Maumee River
Toledo, Lucas County, Ohio

Collection Date	: 08-10-11	WESTON Geologist	: J. Colomb
Sample Date	: 08-10-11	X Coordinates	: 41 37.2645
Collector	: WESTON	Y Coordinates	: 83 33.0803
Collection Method	: Ponar/Vibracore		
Total Depth	: 34"		

Samples Collected
- Investigative Sample
- Duplicate Sample
- MS/MSD Sample

Analyses Performed
SVOCs, Total Metals/Hg,
TOC, Grain Size (TA)
PCB Aroclors, Pesticides (CLP)

DEPTH (ft)	GRAPHIC	USCS	DESCRIPTION	SAMPLE INTERVAL	REMARKS
0		ML	CLAYEY SILT, some fine to medium grained sand, grey-brown, trace organics, saturated, no odor		LMR11-28-06 (SVOCs, Total Metals/Hg, TOC, Grain Size)
1		ML	CLAYEY SILT, trace fine to medium grained sand, light brown, saturated, no odor		LMR11-28-34 (SVOCs, Total Metals/Hg, TOC, Grain Size, PCB Aroclors, Pesticides)
2					
3			END OF SEDIMENT BORING AT 34" bgs		
4					
5					
6					

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SEDIMENT LOG OF LMR11-29

U.S. EPA Region V
Contract: EP-S5-06-04

Lower Maumee River
Toledo, Lucas County, Ohio

Collection Date	: 08-04-11	WESTON Geologist	: J. Colomb
Sample Date	: 08-04-11	X Coordinates	: 41 37.449
Collector	: WESTON	Y Coordinates	: 83 33.082
Collection Method	: Ponar		
Total Depth	: 6"		

Samples Collected
- Investigative Sample
- Duplicate Sample
- MS/MSD Sample

Analyses Performed
SVOCs, Total Metals/Hg, TOC, Grain Size (TA)

DEPTH (ft)	GRAPHIC	USCS	DESCRIPTION	SAMPLE INTERVAL	REMARKS
0		ML	SILT, trace fine grained sand, dark brown, saturated, no odor		LMR11-29-06 (SVOCs, Total Metals/Hg, TOC, Grain Size)
			END OF SEDIMENT BORING AT 6" bgs Ponar only collected at this location		
1					

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SEDIMENT LOG OF LMR11-30

U.S. EPA Region V
Contract: EP-S5-06-04

Lower Maumee River
Toledo, Lucas County, Ohio

Collection Date	: 08-04-11	WESTON Geologist	: J. Colomb
Sample Date	: 08-04-11	X Coordinates	: 41 37.358
Collector	: WESTON	Y Coordinates	: 83 33.010
Collection Method	: Ponar		
Total Depth	: 6"		

Samples Collected
- Investigative Sample
- Duplicate Sample
- MS/MSD Sample

Analyses Performed
SVOCs, Total Metals/Hg, TOC, Grain Size (TA)

DEPTH (ft)	GRAPHIC	USCS	DESCRIPTION	SAMPLE INTERVAL	REMARKS
0		ML	CLAYEY SILT, some fine grained sand, trace organics, dark brown, saturated, no odor		LMR11-30-06 (SVOCs, Total Metals/Hg, TOC, Grain Size)
			END OF SEDIMENT BORING AT 6" bgs Ponar only collected at this location		
1					

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SEDIMENT LOG OF LMR11-31

U.S. EPA Region V
Contract: EP-S5-06-04

Lower Maumee River
Toledo, Lucas County, Ohio

Collection Date	: 08-04-11	WESTON Geologist	: J. Colomb
Sample Date	: 08-04-11	X Coordinates	: 41 37.371
Collector	: WESTON	Y Coordinates	: 83 32.953
Collection Method	: Ponar		
Total Depth	: 6"		

Samples Collected
- Investigative Sample
- Duplicate Sample
- MS/MSD Sample

Analyses Performed
SVOCs, Total Metals/Hg, TOC, Grain Size (TA)

DEPTH (ft)	GRAPHIC	USCS	DESCRIPTION	SAMPLE INTERVAL	REMARKS
0		ML	SILT, very fine silt, trace clay, trace organics, grey, saturated, no odor		LMR11-31-06 (SVOCs, Total Metals/Hg, TOC, Grain Size)
			END OF SEDIMENT BORING AT 6" bgs Ponar only collected at this location		
1					

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SEDIMENT LOG OF LMR11-32

U.S. EPA Region V
Contract: EP-S5-06-04

Lower Maumee River
Toledo, Lucas County, Ohio

Collection Date	: 08-10-11	WESTON Geologist	: J. Colomb
Sample Date	: 08-10-11	X Coordinates	: 41 37.5415
Collector	: WESTON	Y Coordinates	: 83 33.0072
Collection Method	: Ponar/Vibracore		
Total Depth	: 116"		

Samples Collected
- Investigative Sample
- Duplicate Sample
- MS/MSD Sample

Analyses Performed
SVOCs, Total Metals/Hg, TOC, Grain Size (TA)
PCB Aroclors, Pesticides (CLP)

DEPTH (ft)	USCS	DESCRIPTION	SAMPLE INTERVAL	REMARKS
0	ML	SILT, trace fine grained sand, grey-brown, saturated, no odor		LMR11-32-06 (SVOCs, Total Metals/Hg, TOC, Grain Size)
1	ML	SILT, trace fine grained sand, dark brown, saturated, no odor		LMR11-32-24 (SVOCs, Total Metals/Hg, TOC, Grain Size)
2	ML	CLAYEY SILT, trace fine grained sand, dark brown, saturated, no odor		LMR11-32-48 (SVOCs, Total Metals/Hg, TOC, Grain Size)
4	ML	CLAYEY SILT, trace fine grained sand, dark brown, wet, no odor		LMR11-32-72 (SVOCs, Total Metals/Hg, TOC, Grain Size, PCB Aroclors, Pesticides)
6	ML	CLAYEY SILT, trace fine to medium grained sand, dark brown, wet, no odor		LMR11-32-96 (SVOCs, Total Metals/Hg, TOC, Grain Size, PCB Aroclors, Pesticides)
8				LMR11-32-116 (SVOCs, Total Metals/Hg, TOC, Grain Size)
10		END OF SEDIMENT BORING AT 116" bgs		

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SEDIMENT LOG OF LMR11-33

U.S. EPA Region V
Contract: EP-S5-06-04

Lower Maumee River
Toledo, Lucas County, Ohio

Collection Date	: 08-04-11	WESTON Geologist	: J. Colomb
Sample Date	: 08-04-11	X Coordinates	: 41 37.451
Collector	: WESTON	Y Coordinates	: 83 32.940
Collection Method	: Ponar		
Total Depth	: 6"		

Samples Collected
- Investigative Sample
- Duplicate Sample
- MS/MSD Sample

Analyses Performed
SVOCs, Total Metals/Hg, TOC, Grain Size (TA)

DEPTH (ft)	GRAPHIC	USCS	DESCRIPTION	SAMPLE INTERVAL	REMARKS
0		ML	SILT, very fine silt, trace clay, trace organics, grey, saturated, no odor		LMR11-33-06 (SVOCs, Total Metals/Hg, TOC, Grain Size)
			END OF SEDIMENT BORING AT 6" bgs Ponar only collected at this location		
1					

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SEDIMENT LOG OF LMR11-34

U.S. EPA Region V
Contract: EP-S5-06-04

Lower Maumee River
Toledo, Lucas County, Ohio

Collection Date	: 08-04-11	WESTON Geologist	: J. Colomb
Sample Date	: 08-04-11	X Coordinates	: 41 37.359
Collector	: WESTON	Y Coordinates	: 83 32.868
Collection Method	: Ponar		
Total Depth	: 6"		

Samples Collected
- Investigative Sample
- Duplicate Sample
- MS/MSD Sample

Analyses Performed
SVOCs, Total Metals/Hg, TOC, Grain Size (TA)

DEPTH (ft)	GRAPHIC	USCS	DESCRIPTION	SAMPLE INTERVAL	REMARKS
0		ML	SANDY SILT, fine grained sand, grey-brown, saturated, no odor		LMR11-34-06 (SVOCs, Total Metals/Hg, TOC, Grain Size)
			END OF SEDIMENT BORING AT 6" bgs Ponar only collected at this location		
1					

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SEDIMENT LOG OF LMR11-35

U.S. EPA Region V
Contract: EP-S5-06-04

Lower Maumee River
Toledo, Lucas County, Ohio

Collection Date	: 08-10-11	WESTON Geologist	: J. Colomb
Sample Date	: 08-10-11	X Coordinates	: 41 37.5436' N
Collector	: WESTON	Y Coordinates	: 83 32.8763' W
Collection Method	: Ponar/Vibracore		
Total Depth	: 116"		

Samples Collected
- Investigative Sample
- Duplicate Sample
- MS/MSD Sample

Analyses Performed
SVOCs, Total Metals/Hg, TOC, Grain Size (TA)
PCB Aroclors, Pesticides (CLP)

DEPTH (ft)	USCS	DESCRIPTION	SAMPLE INTERVAL	REMARKS
0	ML	SILT, trace fine grained sand, dark brown, saturated, no odor		LMR11-35-06 (SVOCs, Total Metals/Hg, TOC, Grain Size, PCB Aroclors, Pesticides)
1	ML	SILT, trace fine grained sand, dark brown, saturated, no odor		LMR11-35-24 (SVOCs, Total Metals/Hg, TOC, Grain Size) LMR11-35-24-FS (SVOCs, Total Metals/Hg, TOC, Grain Size)
2	ML	SILT, trace fine grained sand, dark brown, wet, no odor		LMR11-35-48 (SVOCs, Total Metals/Hg, TOC, Grain Size)
3				
4	ML	CLAYEY SILT, trace fine grained sand, dark brown, wet, no odor		LMR11-35-72 (SVOCs, Total Metals/Hg, TOC, Grain Size, PCB Aroclors, Pesticides)
5				
6				LMR11-35-96 (SVOCs, Total Metals/Hg, TOC, Grain Size)
7				
8	ML	CLAYEY SILT, trace fine to medium grained sand, dark brown, wet, no odor, fine sand lens at 113"		LMR11-35-116 (SVOCs, Total Metals/Hg, TOC, Grain Size)
9				
10		END OF SEDIMENT BORING AT 116" bgs		

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SEDIMENT LOG OF LMR11-36

U.S. EPA Region V
Contract: EP-S5-06-04

Lower Maumee River
Toledo, Lucas County, Ohio

Collection Date	: 08-04-11	WESTON Geologist	: J. Colomb
Sample Date	: 08-04-11	X Coordinates	: 41 37.452' N
Collector	: WESTON	Y Coordinates	: 83 32.799' W
Collection Method	: Ponar		
Total Depth	: 6"		

Samples Collected
- Investigative Sample
- Duplicate Sample
- MS/MSD Sample

Analyses Performed
SVOCs, Total Metals/Hg, TOC, Grain Size (TA)
PCB Aroclors, Pesticides (CLP)

DEPTH (ft)	GRAPHIC	USCS	DESCRIPTION	SAMPLE INTERVAL	REMARKS
0		ML	SILT, trace fine grained sand, some gravel, trace organics, saturated, no odor		LMR11-36-06 (SVOCs, Total Metals/Hg, TOC, Grain Size, PCB Aroclors, Pesticides) LMR11-36-06-MS (PCB Aroclors, Pesticides) LMR11-36-06-MSD (PCB Aroclors, Pesticides)
			END OF SEDIMENT BORING AT 6" bgs Ponar only collected at this location		
1					

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SEDIMENT LOG OF LMR11-37

U.S. EPA Region V
Contract: EP-S5-06-04

Lower Maumee River
Toledo, Lucas County, Ohio

Collection Date	: 08-10-11	WESTON Geologist	: J. Colomb
Sample Date	: 08-10-11	X Coordinates	: 41 37.3567
Collector	: WESTON	Y Coordinates	: 83 32.7215
Collection Method	: Ponar/Vibracore		
Total Depth	: 72"		

Samples Collected
- Investigative Sample
- Duplicate Sample
- MS/MSD Sample

Analyses Performed
SVOCs, Total Metals/Hg,
TOC, Grain Size (TA)
PCB Aroclors, Pesticides (CLP)

DEPTH (ft)	USCS	DESCRIPTION	SAMPLE INTERVAL	REMARKS
0	ML	SILT, trace fine grained sand, light brown, saturated, no odor		LMR11-37-06 (SVOCs, Total Metals/Hg, TOC, Grain Size)
1	ML	SILT, trace fine grained sand, light brown, saturated, no odor		LMR11-37-24 (SVOCs, Total Metals/Hg, TOC, Grain Size)
2	ML	CLAYEY SILT, some fine grained sand, dark brown, wet, no odor		LMR11-37-48 (SVOCs, Total Metals/Hg, TOC, Grain Size, PCB Aroclors, Pesticides) LMR11-37-48-DP (PCB Aroclors, Pesticides)
3				
4	ML	CLAYEY SILT, trace fine grained sand, dark brown, wet, no odor		
5				LMR11-37-72 (SVOCs, Total Metals/Hg, TOC, Grain Size)
6		END OF SEDIMENT BORING AT 72" bgs		

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SEDIMENT LOG OF LMR11-38

U.S. EPA Region V
Contract: EP-S5-06-04

Lower Maumee River
Toledo, Lucas County, Ohio

Collection Date	: 08-09-11	WESTON Geologist	: J. Colomb
Sample Date	: 08-09-11	X Coordinates	: 41 37.538953
Collector	: WESTON	Y Coordinates	: 83 32.730710
Collection Method	: Ponar/Vibracore		
Total Depth	: 72"		

Samples Collected
- Investigative Sample
- Duplicate Sample
- MS/MSD Sample

Analyses Performed
SVOCs, Total Metals/Hg, TOC, Grain Size (TA)

DEPTH (ft)	GRAPHIC	USCS	DESCRIPTION	SAMPLE INTERVAL	REMARKS
0		ML	SILT, trace fine grained sand, light brown, wet, no odor		LMR11-38-06 (SVOCs, Total Metals/Hg, TOC, Grain Size)
1		ML	SILTY CLAY, trace fine grained sand, light brown, wet, no odor		LMR11-38-24 (SVOCs, Total Metals/Hg, TOC, Grain Size) LMR11-38-24-DP (SVOCs, Total Metals/Hg, TOC) LMR11-38-24-FS (SVOCs, Total Metals/Hg, TOC, Grain Size)
2		ML	CLAYEY SILT, some fine grained sand, dark brown, wet, no odor		
3		ML			LMR11-38-48 (SVOCs, Total Metals/Hg, TOC, Grain Size) LMR11-38-48-DP (SVOCs, Total Metals/Hg, TOC)
4		ML	CLAYEY SILT, trace fine grained sand, dark brown, wet, no odor		
5		ML			LMR11-38-72 (SVOCs, Total Metals/Hg, TOC, Grain Size) LMR11-38-72-DP (SVOCs, Total Metals/Hg, TOC)
6			END OF SEDIMENT BORING AT 72" bgs		

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SEDIMENT LOG OF LMR11-39

U.S. EPA Region V
Contract: EP-S5-06-04

Lower Maumee River
Toledo, Lucas County, Ohio

Collection Date	: 08-09-11	WESTON Geologist	: J. Colomb
Sample Date	: 08-09-11	X Coordinates	: 41 37.453' N
Collector	: WESTON	Y Coordinates	: 83 32.657' W
Collection Method	: Ponar		
Total Depth	: 6"		

Samples Collected
- Investigative Sample
- Duplicate Sample
- MS/MSD Sample

Analyses Performed
SVOCs, Total Metals/Hg, TOC, Grain Size (TA)

DEPTH (ft)	GRAPHIC	USCS	DESCRIPTION	SAMPLE INTERVAL	REMARKS
0		ML	SANDY SILT, with fine to medium grained sand, trace organics, light brown, saturated, no odor		LMR11-39-06 (SVOCs, Total Metals/Hg, TOC, Grain Size)
			END OF SEDIMENT BORING AT 6" bgs Ponar only collected at this location		
1					

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SEDIMENT LOG OF LMR11-40

U.S. EPA Region V
Contract: EP-S5-06-04

Lower Maumee River
Toledo, Lucas County, Ohio

Collection Date	: 08-10-11	WESTON Geologist	: J. Colomb
Sample Date	: 08-10-11	X Coordinates	: 41 37.35629
Collector	: WESTON	Y Coordinates	: 83 32.57583
Collection Method	: Ponar/Vibracore		
Total Depth	: 84"		

Samples Collected
- Investigative Sample
- Duplicate Sample
- MS/MSD Sample

Analyses Performed
SVOCs, Total Metals/Hg, TOC, Grain Size (TA)
PCB Aroclors, Pesticides

DEPTH (ft)	GRAPHIC	USCS	DESCRIPTION	SAMPLE INTERVAL	REMARKS
0		ML	SANDY SILT, fine grained sand, light brown, wet, no odor		LMR11-40-06 (SVOCs, Total Metals/Hg, TOC, Grain Size)
1		ML	SANDY SILT, fine to medium sand, trace gravel, wet, no odor, fine to medium sand lens at 18"		LMR11-40-24 (SVOCs, Total Metals/Hg, TOC, Grain Size, PCB Aroclors, Pesticides)
2		ML	CLAYEY SILT, trace fine grained sand, dark brown, wet, no odor		
3					LMR11-40-48 (SVOCs, Total Metals/Hg, TOC, Grain Size)
4		SP	SAND, Poorly Graded, fine to medium grained sand, dark brown, wet, no odor		
5					LMR11-40-72 (SVOCs, Total Metals/Hg, TOC, Grain Size)
6					
7			END OF SEDIMENT BORING AT 84" bgs		

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SEDIMENT LOG OF LMR11-41

U.S. EPA Region V
Contract: EP-S5-06-04

Lower Maumee River
Toledo, Lucas County, Ohio

Collection Date	: 08-04-11	WESTON Geologist	: J. Colomb
Sample Date	: 08-04-11	X Coordinates	: 41 37.546' N
Collector	: WESTON	Y Coordinates	: 83 32.587' W
Collection Method	: Ponar		
Total Depth	: 6"		

Samples Collected
- Investigative Sample
- Duplicate Sample
- MS/MSD Sample

Analyses Performed
SVOCs, Total Metals/Hg, TOC, Grain Size (TA)

DEPTH (ft)	GRAPHIC	USCS	DESCRIPTION	SAMPLE INTERVAL	REMARKS
0		ML	SANDY SILT, with fine to medium grained sand, organics, dark brown, saturated, decay odor		LMR11-41-06 (SVOCs, Total Metals/Hg, TOC, Grain Size)
			END OF SEDIMENT BORING AT 6" bgs Ponar only collected at this location		
1					

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SEDIMENT LOG OF LMR11-42

U.S. EPA Region V
Contract: EP-S5-06-04

Lower Maumee River
Toledo, Lucas County, Ohio

Collection Date	: 08-09-11	WESTON Geologist	: J. Colomb
Sample Date	: 08-09-11	X Coordinates	: 41 37.425541
Collector	: WESTON	Y Coordinates	: 83 32.471639
Collection Method	: Ponar/Vibracore		
Total Depth	: 129"		

Samples Collected
- Investigative Sample
- Duplicate Sample
- MS/MSD Sample

Analyses Performed
SVOCs, Total Metals/Hg, TOC, Grain Size (TA)

DEPTH (ft)	USCS	DESCRIPTION	SAMPLE INTERVAL	REMARKS
0	ML	SILT, trace fine grained sand, dark brown, saturated, no odor		LMR11-42-06 (SVOCs, Total Metals/Hg, TOC, Grain Size)
1	ML	SILT, trace fine grained sand, dark brown, saturated, no odor		LMR11-42-24 (SVOCs, Total Metals/Hg, TOC, Grain Size, PCB Aroclors, Pesticides)
2	ML	CLAYEY SILT, some fine grained sand, dark brown, saturated, no odor		LMR11-42-48 (SVOCs, Total Metals/Hg, TOC, Grain Size) LMR11-42-48FS (SVOCs, Total Metals/Hg, TOC, Grain Size)
3				
4	ML	CLAYEY SILT, some fine grained sand, dark brown, wet, no odor, fine to medium grained sand lens at 44"-48"		LMR11-42-72 (SVOCs, Total Metals/Hg, TOC, Grain Size)
5				
6	SC	SANDY CLAY, fine grained sand, dark brown, no odor		LMR11-42-96 (SVOCs, Total Metals/Hg, TOC, Grain Size)
7				
8	ML	CLAYEY SILT, with fine grained sand, grades to fine to medium sand, shell fragments, dark brown, saturated, no odor		LMR11-42-129 (SVOCs, Total Metals/Hg, TOC, Grain Size)
9				
10				
11		END OF SEDIMENT BORING AT 129" bgs		

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SEDIMENT LOG OF LMR11-43

U.S. EPA Region V
Contract: EP-S5-06-04

Lower Maumee River
Toledo, Lucas County, Ohio

Collection Date	: 08-09-11	WESTON Geologist	: J. Colomb
Sample Date	: 08-09-11	X Coordinates	: 41 37.551' N
Collector	: WESTON	Y Coordinates	: 83 32.476' W
Collection Method	: Ponar/Vibracore		
Total Depth	: 30"		

Samples Collected
- Investigative Sample
- Duplicate Sample
- MS/MSD Sample

Analyses Performed
SVOCs, Total Metals/Hg, TOC, Grain Size (TA)

DEPTH (ft)	GRAPHIC	USCS	DESCRIPTION	SAMPLE INTERVAL	REMARKS
0		GW	GRAVEL, Well Graded, some cobbles, some fine to medium sand, sark brown, saturated, no odor		
1					LMR11-43-30 (SVOCs, Total Metals/Hg, TOC, Grain Size)
2		SW	SAND, Well Graded, fine to medium sand, with silt, some gravel, light brown, wet, no odor		
			END OF SEDIMENT BORING AT 30" bgs		
3					
4					
5					
6					

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SEDIMENT LOG OF LMR11-44

U.S. EPA Region V
Contract: EP-S5-06-04

Lower Maumee River
Toledo, Lucas County, Ohio

Collection Date.	: 08-09-11	WESTON Geologist	: J. Colomb
Sample Date	: 08-09-11	X Coordinates	: 41 37.451073
Collector	: WESTON	Y Coordinates	: 83 32.371480
Collection Method	: Ponar/Vibracore		
Total Depth	: 96"		

Samples Collected
- Investigative Sample
- Duplicate Sample
- MS/MSD Sample

Analyses Performed
SVOCs, Total Metals/Hg, TOC, Grain Size (TA)

DEPTH (ft)	GRAPHIC	USCS	DESCRIPTION	SAMPLE INTERVAL	REMARKS
0		ML	SILT, trace fine grained sand, grey-brown, saturated, no odor		LMR11-44-06 (SVOCs, Total Metals/Hg, TOC, Grain Size)
1		ML	SANDY SILT, with fine to medium grained sand, grey-brown, saturated, no odor		LMR11-44-24 (SVOCs, Total Metals/Hg, TOC, Grain Size) LMR11-44-24FS (SVOCs, Total Metals/Hg, TOC, Grain Size)
2		ML	CLAYEY SILT, some fine grained sand, grey-brown, saturated, no odor		LMR11-44-48 (SVOCs, Total Metals/Hg, TOC, Grain Size)
3		ML			
4		ML	CLAYEY SILT, some fine grained sand, dark brown, wet, no odor, fine to medium grained sand lens with shell fragments at 49"-55"		LMR11-44-72 (SVOCs, Total Metals/Hg, TOC, Grain Size)
5		ML			
6		ML	CLAYEY SILT, trace fine grained sand, dark brown, wet, no odor		LMR11-44-96 (SVOCs, Total Metals/Hg, TOC, Grain Size)
7		ML			
8			END OF SEDIMENT BORING AT 96" bgs		

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SEDIMENT LOG OF LMR11-45

Restoring Resource Efficiency

U.S. EPA Region V
Contract: EP-S5-06-04

Lower Maumee River
Toledo, Lucas County, Ohio

Collection Date.	: 08-09-11	WESTON Geologist	: J. Colomb
Sample Date	: 08-09-11	X Coordinates	: 41 37.619347
Collector	: WESTON	Y Coordinates	: 83 32.367734
Collection Method	: Ponar/Vibracore		
Total Depth	: 96"		

Samples Collected
- Investigative Sample
- Duplicate Sample
- MS/MSD Sample

Analyses Performed
SVOCs, Total Metals/Hg, TOC, Grain Size (TA)

DEPTH (ft)	GRAPHIC	USCS	DESCRIPTION	SAMPLE INTERVAL	REMARKS
0		ML	SILT, trace fine grained sand, light brown, saturated, no odor		LMR11-45-06 (SVOCs, Total Metals/Hg, TOC, Grain Size)
1		ML	CLAYEY SILT, trace fine grained sand, llight brown, wet, no odor		LMR11-45-24 (SVOCs, Total Metals/Hg, TOC, Grain Size)
2		ML	CLAYEY SILT, trace fine grained sand, light brown, wet, no odor		LMR11-45-48 (SVOCs, Total Metals/Hg, TOC, Grain Size) LMR11-45-48FS (SVOCs, Total Metals/Hg, TOC, Grain Size)
3					
4		ML	CLAYEY SILT, trace fine grained sand, light brown, wet, no odor		LMR11-45-72 (SVOCs, Total Metals/Hg, TOC, Grain Size)
5					
6		ML	CLAYEY SILT, trace fine grained sand, light brown, damp, no odor		LMR11-45-96 (SVOCs, Total Metals/Hg, TOC, Grain Size)
7					
8			END OF SEDIMENT BORING AT 96" bgs		

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SEDIMENT LOG OF LMR11-46

U.S. EPA Region V
Contract: EP-S5-06-04

Lower Maumee River
Toledo, Lucas County, Ohio

Collection Date.	: 08-08-11	WESTON Geologist	: J. Colomb
Sample Date	: 08-08-11	X Coordinates	: 41 37.542306
Collector	: WESTON	Y Coordinates	: 83 32.300440
Collection Method	: Ponar/Vibracore		
Total Depth	: 93"		

Samples Collected
- Investigative Sample
- Duplicate Sample
- MS/MSD Sample

Analyses Performed
SVOCs, Total Metals/Hg, TOC, Grain Size (TA)

DEPTH (ft)	USCS	DESCRIPTION	SAMPLE INTERVAL	REMARKS
0	ML	SILT, trace fine grained sand, dark brown, saturated, no odor		LMR11-46-06 (SVOCs, Total Metals/Hg, TOC, Grain Size)
1	ML	SILT, trace fine grained sand, dark brown, saturated, no odor		LMR11-46-24 (SVOCs, Total Metals/Hg, TOC, Grain Size) LMR11-46-24FS (SVOCs, Total Metals/Hg, TOC, Grain Size)
2	ML	SANDY SILT, fine grained sand, dark brown, saturated, no odor, fine to medium sand lens at 40"		
3				LMR11-46-48 (SVOCs, Total Metals/Hg, TOC, Grain Size)
4	SP	SAND, Poorly Graded, fine to medium sand, shell fragments, light brown, damp, no odor		
5				LMR11-46-72 (SVOCs, Total Metals/Hg, TOC, Grain Size)
6	SP	SAND, Poorly Graded, fine to medium grained, dark brown, saturated, no odor, grades to CLAYEY SILT, trace fine sand		
7				LMR11-46-93 (SVOCs, Total Metals/Hg, TOC, Grain Size)
8		END OF SEDIMENT BORING AT 93" bgs		

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SEDIMENT LOG OF LMR11-47

U.S. EPA Region V
Contract: EP-S5-06-04

Lower Maumee River
Toledo, Lucas County, Ohio

Collection Date.	: 08-08-11	WESTON Geologist	: J. Colomb
Sample Date	: 08-08-11	X Coordinates	: 41 37.453409
Collector	: WESTON	Y Coordinates	: 83 32.222064
Collection Method	: Ponar/Vibracore		
Total Depth	: 144"		

Samples Collected
- Investigative Sample
- Duplicate Sample
- MS/MSD Sample

Analyses Performed
SVOCs, Total Metals/Hg, TOC, Grain Size (TA)

DEPTH (ft)	GRAPHIC	USCS	DESCRIPTION	SAMPLE INTERVAL	REMARKS
0		ML	SILT, trace fine grained sand, dark brown, saturated, product odor		LMR11-47-06 (SVOCs, Total Metals/Hg, TOC, Grain Size)
1		ML	SILT, trace fine grained sand, trace gravel, dark brown, saturated, product odor		LMR11-47-24 (SVOCs, Total Metals/Hg, TOC, Grain Size)
2		ML	SANDY SILT, fine grained sand, dark brown, saturated, product odor, fine to medium sand lens at 44"-48"		LMR11-47-48 (SVOCs, Total Metals/Hg, TOC, Grain Size)
4		ML	SANDY SILT, fine to medium sand, dark brown, saturated, faint product odor		LMR11-47-72 (SVOCs, Total Metals/Hg, TOC, Grain Size)
6		ML	CLAYEY SILT, trace fine grained sand, dark brown, wet, no odor		LMR11-47-96 (SVOCs, Total Metals/Hg, TOC, Grain Size)
8		SP	SAND, Poorly Graded, fine to medium sand, light brown, wet, no odor		LMR11-47-120 (SVOCs, Total Metals/Hg, TOC, Grain Size)
10		ML	CLAYEY SILT, trace fine to medium sand, dark brown, wet, no odor		LMR11-47-144 (SVOCs, Total Metals/Hg, TOC, Grain Size)
12			END OF SEDIMENT BORING AT 144" bgs		

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SEDIMENT LOG OF LMR11-48

U.S. EPA Region V
Contract: EP-S5-06-04

Lower Maumee River
Toledo, Lucas County, Ohio

Collection Date.	: 08-08-11	WESTON Geologist	: J. Colomb
Sample Date	: 08-08-11	X Coordinates	: 41 37.645074
Collector	: WESTON	Y Coordinates	: 83 32.234111
Collection Method	: Ponar/Vibracore		
Total Depth	: 61"		

Samples Collected
- Investigative Sample
- Duplicate Sample
- MS/MSD Sample

Analyses Performed
SVOCs, Total Metals/Hg,
TOC, Grain Size (TA)
PCB Aroclors, Pesticides (CLP)

DEPTH (ft)	GRAPHIC	USCS	DESCRIPTION	SAMPLE INTERVAL	REMARKS
0		ML	SILT, trace fine grained sand, dark brown, saturated, no odor		LMR11-48-06 (SVOCs, Total Metals/Hg, TOC, Grain Size)
1		ML	SILT, trace fine grained sand, dark brown, saturated, no odor		LMR11-48-24 (SVOCs, Total Metals/Hg, TOC, Grain Size) LMR11-48-24FS (SVOCs, Total Metals/Hg, TOC, Grain Size)
2		ML	CLAYEY SILT, trace fine grained sand, light brown, wet, no odor		
3		ML			LMR11-48-48 (SVOCs, Total Metals/Hg, TOC, Grain Size, PCB Aroclors, Pesticides)
4		ML	CLAYEY SILT, trace fine grained sand, dark brown, wet, no odor		LMR11-48-61 (SVOCs, Total Metals/Hg, TOC, Grain Size)
5					
6			END OF SEDIMENT BORING AT 61" bgs		

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SEDIMENT LOG OF LMR11-49

U.S. EPA Region V
Contract: EP-S5-06-04

Lower Maumee River
Toledo, Lucas County, Ohio

Collection Date.	: 08-08-11	WESTON Geologist	: J. Colomb
Sample Date	: 08-08-11	X Coordinates	: 41 37.545' N
Collector	: WESTON	Y Coordinates	: 83 32.168' W
Collection Method	: Ponar/Vibracore		
Total Depth	: 115"		

Samples Collected
- Investigative Sample
- Duplicate Sample
- MS/MSD Sample

Analyses Performed
SVOCs, Total Metals/Hg, TOC, Grain Size (TA)

DEPTH (ft)	GRAPHIC	USCS	DESCRIPTION	SAMPLE INTERVAL	REMARKS
0		ML	SILT, trace fine grained sand, dark brown, saturated, no odor		LMR11-49-06 (SVOCs, Total Metals/Hg, TOC, Grain Size)
1		ML	SILT, trace fine grained sand, dark brown, saturated, no odor		LMR11-49-24 (SVOCs, Total Metals/Hg, TOC, Grain Size)
2		ML	SILT, trace fine grained sand, dark brown, saturated, no odor		LMR11-49-48 (SVOCs, Total Metals/Hg, TOC, Grain Size, PCB Aroclors, Pesticides)
3					
4		ML	CLAYEY SILT, trace fine grained sand, dark brown, wet, no odor, fine to medium grained sand lens 68"-70"		LMR11-49-72 (SVOCs, Total Metals/Hg, TOC, Grain Size)
5					
6		ML	SANDY SILT, fine to medium grained sand, trace organics, dark brown, no odor		LMR11-49-96 (SVOCs, Total Metals/Hg, TOC, Grain Size)
7					
8					LMR11-49-115 (SVOCs, Total Metals/Hg, TOC, Grain Size)
9					
10			END OF SEDIMENT BORING AT 115" bgs		

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SEDIMENT LOG OF LMR11-50

U.S. EPA Region V
Contract: EP-S5-06-04

Lower Maumee River
Toledo, Lucas County, Ohio

Collection Date.	: 08-08-11	WESTON Geologist	: J. Colomb
Sample Date	: 08-08-11	X Coordinates	: 41 37.470024
Collector	: WESTON	Y Coordinates	: 83 32.001309
Collection Method	: Ponar/Vibracore		
Total Depth	: 175"		

Samples Collected
- Investigative Sample
- Duplicate Sample
- MS/MSD Sample

Analyses Performed
SVOCs, Total Metals/Hg, TOC, Grain Size (TA) PCB Aroclors, Pesticides (CLP)

DEPTH (ft)	USCS	DESCRIPTION	SAMPLE INTERVAL	REMARKS
0	ML	SILT, trace fine grained sand, organics, dark brown with black banding, saturated, product odor		LMR11-50-06 (SVOCs, Total Metals/Hg, TOC, Grain Size, PCB Aroclors, Pesticides)
1	ML	SILT, trace fine grained sand, dark brown with black banding, saturated, product odor		LMR11-50-06-DP (SVOCs, Total Metals/Hg, TOC) LMR11-50-06-MS (PCB Aroclors, Pesticides) LMR11-50-06-MSD (PCB Aroclors, Pesticides) LMR11-50-24 (SVOCs, Total Metals/Hg, TOC, Grain Size)
2	ML	CLAYEY SILT, with fine grained sand, organics, dark brown with black banding, saturated, black banding		LMR11-50-24-DP (SVOCs, Total Metals/Hg, TOC)
3				LMR11-50-48 (SVOCs, Total Metals/Hg, TOC, Grain Size) LMR11-50-48-DP (SVOCs, Total Metals/Hg, TOC)
4	ML	CLAYEY SILT, trace fine grained sand, dark brown with black banding, saturated, product odor		
5				LMR11-50-72 (SVOCs, Total Metals/Hg, TOC, Grain Size)
6	ML	CLAYEY SILT, with fine grained sand, organics, dark brown with black banding, saturated, product odor		
7				LMR11-50-96 (SVOCs, Total Metals/Hg, TOC, Grain Size)
8	ML	CLAYEY SILT, trace fine grained sand, organics, dark brown with black banding, saturated, product odor, fine to medium sand lens ar 96"-100"		
9				LMR11-50-120 (SVOCs, Total Metals/Hg, TOC, Grain Size)
10	ML	CLAYEY SILT, trace fine grained sand, dark brown with black banding, wet, no odor		
11				LMR11-50-144 (SVOCs, Total Metals/Hg, TOC, Grain Size)
12				
13				LMR11-50-175 (SVOCs, Total Metals/Hg, TOC, Grain Size)
14				
15		END OF SEDIMENT BORING AT 175" bgs		

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SEDIMENT LOG OF LMR11-51

U.S. EPA Region V
Contract: EP-S5-06-04

Lower Maumee River
Toledo, Lucas County, Ohio

Collection Date.	: 08-07-11	WESTON Geologist	: J. Colomb
Sample Date	: 08-07-11	X Coordinates	: 41 37.645242
Collector	: WESTON	Y Coordinates	: 83 32.096709
Collection Method	: Ponar/Vibracore		
Total Depth	: 75"		

Samples Collected
- Investigative Sample
- Duplicate Sample
- MS/MSD Sample

Analyses Performed
SVOCs, Total Metals/Hg, TOC, Grain Size (TA)

DEPTH (ft)	USCS	DESCRIPTION	SAMPLE INTERVAL	REMARKS
0	ML	SILT, trace fine grained sand, dark brown, saturated, no odor		LMR11-51-06 (SVOCs, Total Metals/Hg, TOC, Grain Size)
1	ML	CLAYEY SILT, trace fine grained sand, dark brown, saturated, no odor		LMR11-51-24 (SVOCs, Total Metals/Hg, TOC, Grain Size)
2	ML	CLAYEY SILT, trace fine grained sand, dark brown, saturated, no odor		LMR11-51-48 (SVOCs, Total Metals/Hg, TOC, Grain Size)
3				
4	ML	CLAYEY SILT, trace fine grained sand, dark brown, saturated, no odor		LMR11-51-75 (SVOCs, Total Metals/Hg, TOC, Grain Size)
5				
6		END OF SEDIMENT BORING AT 75" bgs		

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SEDIMENT LOG OF LMR11-52

U.S. EPA Region V
Contract: EP-S5-06-04

Lower Maumee River
Toledo, Lucas County, Ohio

Collection Date.	: 08-08-11	WESTON Geologist	: J. Colomb
Sample Date	: 08-08-11	X Coordinates	: 41 37.540146
Collector	: WESTON	Y Coordinates	: 83 32.035280
Collection Method	: Ponar/Vibracore		
Total Depth	: 72"		

Samples Collected
- Investigative Sample
- Duplicate Sample
- MS/MSD Sample

Analyses Performed
SVOCs, Total Metals/Hg, TOC, Grain Size (TA)

DEPTH (ft)	USCS	DESCRIPTION	SAMPLE INTERVAL	REMARKS
0	ML	SILT, trace fine grained sand, dark brown, saturated, no odor		LMR11-52-06 (SVOCs, Total Metals/Hg, TOC, Grain Size)
1	ML	CLAYEY SILT, trace fine grained sand, dark brown, saturated, no odor		LMR11-52-24 (SVOCs, Total Metals/Hg, TOC, Grain Size)
2	ML	CLAYEY SILT, trace fine grained sand, dark brown, saturated, no odor		LMR11-52-48 (SVOCs, Total Metals/Hg, TOC, Grain Size) LMR11-52-48FS (SVOCs, Total Metals/Hg, TOC, Grain Size)
3				
4	ML	CLAYEY SILT, trace fine grained sand, dark brown, saturated, no odor		LMR11-52-72 (SVOCs, Total Metals/Hg, TOC, Grain Size)
5				
6		END OF SEDIMENT BORING AT 72" bgs		

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SEDIMENT LOG OF LMR11-53

U.S. EPA Region V
Contract: EP-S5-06-04

Lower Maumee River
Toledo, Lucas County, Ohio

Collection Date.	: 08-07-11	WESTON Geologist	: J. Colomb
Sample Date	: 08-07-11	X Coordinates	: 41 37.75377
Collector	: WESTON	Y Coordinates	: 83 31.99104
Collection Method	: Ponar/Vibracore		
Total Depth	: 73"		

Samples Collected
- Investigative Sample
- Duplicate Sample
- MS/MSD Sample

Analyses Performed
SVOCs, Total Metals/Hg, TOC, Grain Size (TA)

DEPTH (ft)	USCS	DESCRIPTION	SAMPLE INTERVAL	REMARKS
0	ML	SANDY SILT, some fine grained sand, organics, dark brown, saturated, no odor		LMR11-53-06 (SVOCs, Total Metals/Hg, TOC, Grain Size)
1	ML	SANDY SILT, some fine grained sand, some clay, dark brown, saturated, no odor		LMR11-53-24 (SVOCs, Total Metals/Hg, TOC, Grain Size)
2	ML	SANDY SILT, some fine grained sand, some clay, some gravel, dark brown, no odor		LMR11-53-48 (SVOCs, Total Metals/Hg, TOC, Grain Size)
3	ML	SANDY SILT, fine to medium sand, light brown, wet, no odor, fine to medium sand lens 50"-53"		LMR11-53-72 (SVOCs, Total Metals/Hg, TOC, Grain Size)
4				
5				
6		END OF SEDIMENT BORING AT 73" bgs		

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SEDIMENT LOG OF LMR11-54

U.S. EPA Region V
Contract: EP-S5-06-04

Lower Maumee River
Toledo, Lucas County, Ohio

Collection Date.	: 08-08-11	WESTON Geologist	: J. Colomb
Sample Date	: 08-08-11	X Coordinates	: 41 37.606430
Collector	: WESTON	Y Coordinates	: 83 32.024905
Collection Method	: Ponar/Vibracore		
Total Depth	: 72"		

Samples Collected
- Investigative Sample
- Duplicate Sample
- MS/MSD Sample

Analyses Performed
SVOCs, Total Metals/Hg, TOC, Grain Size (TA)

DEPTH (ft)	GRAPHIC	USCS	DESCRIPTION	SAMPLE INTERVAL	REMARKS
0		ML	SANDY SILT, fine grained sand, shell fragments, light brown, saturated, no odor		LMR11-54-06 (SVOCs, Total Metals/Hg, TOC, Grain Size) LMR11-54-06DP (SVOCs, Total Metals/Hg, TOC)
1		ML	SANDY SILT, fine grained sand, shell fragments, light brown, saturated, no odor		LMR11-54-24 (SVOCs, Total Metals/Hg, TOC, Grain Size) LMR11-54-24DP (SVOCs, Total Metals/Hg, TOC)
2		ML	SANDY SILT, some fine grained sand, organics, light brown with black banding, no odor, fine to medium sand grained lens at 23"-35"		LMR11-54-48 (SVOCs, Total Metals/Hg, TOC, Grain Size) LMR11-54-48DP (SVOCs, Total Metals/Hg, TOC)
3					
4		ML	CLAYEY SILT, trace fine grained sand, organics, dark brown, damp, no odor		LMR11-54-72 (SVOCs, Total Metals/Hg, TOC, Grain Size)
5					
6		ML	CLAYEY SILT, trace fine grained sand, light brown, wet, no odor, fine to medium grained sand lens at 84"-86"		LMR11-54-86 (SVOCs, Total Metals/Hg, TOC, Grain Size)
7			END OF SEDIMENT BORING AT 86" bgs		

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SEDIMENT LOG OF LMR11-55

U.S. EPA Region V
Contract: EP-S5-06-04

Lower Maumee River
Toledo, Lucas County, Ohio

Collection Date.	: 08-07-11	WESTON Geologist	: J. Colomb
Sample Date	: 08-07-11	X Coordinates	: 41 37.831066
Collector	: WESTON	Y Coordinates	: 83 31.937833
Collection Method	: Ponar/Vibracore		
Total Depth	: 30"		

Samples Collected
- Investigative Sample
- Duplicate Sample
- MS/MSD Sample

Analyses Performed
SVOCs, Total Metals/Hg, TOC, Grain Size (TA)

DEPTH (ft)	GRAPHIC	USCS	DESCRIPTION	SAMPLE INTERVAL	REMARKS
0		ML	SILT, trace fine grained sand, some gravel, organics, saturated, no odor		LMR11-55-06 (SVOCs, Total Metals/Hg, TOC, Grain Size) LMR11-55-06DP (SVOCs, Total Metals/Hg, TOC)
1		ML	SANDY SILT, trace fine grained sand, organics, dark brown, saturated, no odor, grades to fine to medium sand		LMR11-55-30 (SVOCs, Total Metals/Hg, TOC, Grain Size) LMR11-55-30DP (SVOCs, Total Metals/Hg, TOC)
2			END OF SEDIMENT BORING AT 30" bgs		
3					
4					
5					
6					

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SEDIMENT LOG OF LMR11-56

U.S. EPA Region V
Contract: EP-S5-06-04

Lower Maumee River
Toledo, Lucas County, Ohio

Collection Date.	: 08-07-11	WESTON Geologist	: J. Colomb
Sample Date	: 08-07-11	X Coordinates	: 41 37.826741
Collector	: WESTON	Y Coordinates	: 83 31.819791
Collection Method	: Ponar/Vibracore		
Total Depth	: 36"		

Samples Collected
- Investigative Sample
- Duplicate Sample
- MS/MSD Sample

Analyses Performed
SVOCs, Total Metals/Hg, TOC, Grain Size (TA)

DEPTH (ft)	GRAPHIC	USCS	DESCRIPTION	SAMPLE INTERVAL	REMARKS
0		ML	SILT, trace fine grained sand, grey-brown, saturated, no odor		LMR11-56-06 (SVOCs, Total Metals/Hg, TOC, Grain Size)
1		ML	SILT, trace fine grained sand, grey-brown, saturated, no odor		LMR11-56-24 (SVOCs, Total Metals/Hg, TOC, Grain Size)
2		ML	SANDY SILT, with fine grained sand, grey-brown, no odor		LMR11-56-30 (SVOCs, Total Metals/Hg, TOC, Grain Size)
3			END OF SEDIMENT BORING AT 36" bgs		
4					
5					
6					

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SEDIMENT LOG OF LMR11-57

U.S. EPA Region V
Contract: EP-S5-06-04

Lower Maumee River
Toledo, Lucas County, Ohio

Collection Date.	: 08-06-11	WESTON Geologist	: J. Colomb
Sample Date	: 08-06-11	X Coordinates	: 41 38.012891
Collector	: WESTON	Y Coordinates	: 83 31.961009
Collection Method	: Ponar/Vibracore		
Total Depth	: 62"		

Samples Collected
- Investigative Sample
- Duplicate Sample
- MS/MSD Sample

Analyses Performed
SVOCs, Total Metals/Hg, TOC, Grain Size (TA)

DEPTH (ft)	GRAPHIC	USCS	DESCRIPTION	SAMPLE INTERVAL	REMARKS
0		ML	SANDY SILT, fine to medium grained sand, grey-brown, saturated, no odor		LMR11-57-06 (SVOCs, Total Metals/Hg, TOC, Grain Size)
1		ML	SANDY SILT, fine to medium grained sand, grey-brown, saturated, no odor		LMR11-57-24 (SVOCs, Total Metals/Hg, TOC, Grain Size)
2		SP	SAND, Poorly Graded, fine to medium grained, with silt, grey-brown, saturated, no odor		
3					LMR11-57-48 (SVOCs, Total Metals/Hg, TOC, Grain Size)
4		SP	SAND, Poorly Graded, fine to medium grained, with silt, wet, no odor, grades to CLAYEY SILT		LMR11-57-62 (SVOCs, Total Metals/Hg, TOC, Grain Size)
5			END OF SEDIMENT BORING AT 62" bgs		

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SEDIMENT LOG OF LMR11-58

U.S. EPA Region V
Contract: EP-S5-06-04

Lower Maumee River
Toledo, Lucas County, Ohio

Collection Date.	: 08-06-11	WESTON Geologist	: J. Colomb
Sample Date	: 08-06-11	X Coordinates	: 41 37.974137
Collector	: WESTON	Y Coordinates	: 83 31.814191
Collection Method	: Vibracore		
Total Depth	: 10"		

Samples Collected
- Investigative Sample
- Duplicate Sample
- MS/MSD Sample

Analyses Performed
SVOCs, Total Metals/Hg, TOC, Grain Size (TA)

DEPTH (ft)	GRAPHIC	USCS	DESCRIPTION	SAMPLE INTERVAL	REMARKS
0		CH	FAT CLAY, with some gravel, high plasticity, reddish brown, damp, no odor		LMR11-58-10 (SVOCs, Total Metals/Hg, TOC, Grain Size)
1			END OF SEDIMENT BORING AT 10" bgs		
2					
3					
4					
5					
6					

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SEDIMENT LOG OF LMR11-59

U.S. EPA Region V
Contract: EP-S5-06-04

Lower Maumee River
Toledo, Lucas County, Ohio

Collection Date.	: 08-06-11	WESTON Geologist	: J. Colomb
Sample Date	: 08-06-11	X Coordinates	: 41 38.118656
Collector	: WESTON	Y Coordinates	: 83 31.993105
Collection Method	: Ponar/Vibracore		
Total Depth	: 116"		

Samples Collected
- Investigative Sample
- Duplicate Sample
- MS/MSD Sample

Analyses Performed
SVOCs, Total Metals/Hg, TOC, Grain Size (TA)
PCB Aroclors, Pesticides (CLP)

DEPTH (ft)	GRAPHIC	USCS	DESCRIPTION	SAMPLE INTERVAL	REMARKS
0		ML	SILT, trace fine grained sand, dark brown, saturated, no odor		LMR11-59-06 (SVOCs, Total Metals/Hg, TOC, Grain Size)
1		ML	CLAYEY SILT, trace fine grained, dark brown, saturated, no odor		LMR11-59-24 (SVOCs, Total Metals/Hg, TOC, Grain Size, PCB Aroclors, Pesticides)
2		ML	CLAYEY SILT, trace fine grained sand, dark brown, saturated, no odor		LMR11-59-48 (SVOCs, Total Metals/Hg, TOC, Grain Size)
3					
4		ML	CLAYEY SILT, trace fine grained sand, dark brown, saturated, no odor		LMR11-59-72 (SVOCs, Total Metals/Hg, TOC, Grain Size)
5					
6		ML	SANDY SILT, fine to medium grained sand, dark brown, saturated, no odor, fine to medium grained sand seam at 72"-73"		LMR11-59-96 (SVOCs, Total Metals/Hg, TOC, Grain Size)
7					
8		SP	SAND, Poorly Graded, fine to medium grained sand, dark brown, wet, no odor		LMR11-59-116 (SVOCs, Total Metals/Hg, TOC, Grain Size)
9					
10			END OF SEDIMENT BORING AT 116"" bgs		

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SEDIMENT LOG OF LMR11-60

Restoring Resource Efficiency

U.S. EPA Region V
Contract: EP-S5-06-04

Lower Maumee River
Toledo, Lucas County, Ohio

Collection Date.	: 08-06-11	WESTON Geologist	: J. Colomb
Sample Date	: 08-06-11	X Coordinates	: 41 38.222882
Collector	: WESTON	Y Coordinates	: 83 32.02351
Collection Method	: Ponar/Vibracore		
Total Depth	: 92"		

Samples Collected
- Investigative Sample
- Duplicate Sample
- MS/MSD Sample

Analyses Performed
SVOCs, Total Metals/Hg, TOC, Grain Size (TA)

DEPTH (ft)	USCS	DESCRIPTION	SAMPLE INTERVAL	REMARKS
0	ML	SILT, trace fine grained sand, dark brown, saturated, no odor		LMR11-60-06 (SVOCs, Total Metals/Hg, TOC, Grain Size)
1	ML	SILT, trace fine grained, dark brown, saturated, no odor		LMR11-60-24 (SVOCs, Total Metals/Hg, TOC, Grain Size, PCB Aroclors, Pesticides)
2	ML	CLAYEY SILT, trace fine grained sand, dark brown, saturated, no odor		LMR11-60-48 (SVOCs, Total Metals/Hg, TOC, Grain Size) LMR11-60-48FS (SVOCs, Total Metals/Hg, TOC, Grain Size)
3				
4	ML	SANDY SILT, fine to medium grained sand, dark brown, saturated, no odor		LMR11-60-72 (SVOCs, Total Metals/Hg, TOC, Grain Size)
5				
6	ML	CLAYEY SILT, fine to medium grained sand, brown with block banding, wet, no odor		LMR11-60-92 (SVOCs, Total Metals/Hg, TOC, Grain Size)
7				
8		END OF SEDIMENT BORING AT 92"" bgs		

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SEDIMENT LOG OF LMR11-61

U.S. EPA Region V
Contract: EP-S5-06-04

Lower Maumee River
Toledo, Lucas County, Ohio

Collection Date.	: 08-06-11	WESTON Geologist	: J. Colomb
Sample Date	: 08-06-11	X Coordinates	: 41 38.286946
Collector	: WESTON	Y Coordinates	: 83 31.911951
Collection Method	: Ponar/Vibracore		
Total Depth	: 30"		

Samples Collected
- Investigative Sample
- Duplicate Sample
- MS/MSD Sample

Analyses Performed
SVOCs, Total Metals/Hg, TOC, Grain Size (TA)

DEPTH (ft)	GRAPHIC	USCS	DESCRIPTION	SAMPLE INTERVAL	REMARKS
0		ML	SILT, some fine sand, some cobbles, grey-brown, saturated, no odor		LMR11-61-06 (SVOCs, Total Metals/Hg, TOC, Grain Size)
1		SP	SAND, Poorly Graded, fine to medium sand, grey-brown, damp, no odor, grading to SILTY CLAY, with trace fine sand		LMR11-61-30 (SVOCs, Total Metals/Hg, TOC, Grain Size)
2					
			END OF SEDIMENT BORING AT 30" bgs		
3					
4					
5					
6					

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SEDIMENT LOG OF LMR11-62

U.S. EPA Region V
Contract: EP-S5-06-04

Lower Maumee River
Toledo, Lucas County, Ohio

Collection Date.	: 08-06-11	WESTON Geologist	: J. Colomb
Sample Date	: 08-06-11	X Coordinates	: 41 38.332252
Collector	: WESTON	Y Coordinates	: 83 32.048572
Collection Method	: Ponar/Vibracore		
Total Depth	: 108"		

Samples Collected
- Investigative Sample
- Duplicate Sample
- MS/MSD Sample

Analyses Performed
SVOCs, Total Metals/Hg, TOC, Grain Size (TA)

DEPTH (ft)	GRAPHIC	USCS	DESCRIPTION	SAMPLE INTERVAL	REMARKS
0		ML	SILT, trace fine sand, dark brown, saturated, no odor		LMR11-62-06 (SVOCs, Total Metals/Hg, TOC, Grain Size)
1		ML	CLAYEY SILT, trace fine sand, dark brown, wet, no odor		LMR11-62-24 (SVOCs, Total Metals/Hg, TOC, Grain Size) LMR11-62-24-DP (SVOCs, Total Metals/Hg, TOC)
2		ML	CLAYEY SILT, trace fine sand, dark brown with black banding, wet, no odor		LMR11-62-48 (SVOCs, Total Metals/Hg, TOC, Grain Size)
3					
4		SM	SANDY SILT, fine to medium grained sand, dark brown, wet, no odor; fine to medium sand lens at 48" - 54"		LMR11-62-72 (SVOCs, Total Metals/Hg, TOC, Grain Size)
5					
6		SP	SANDY SILT, fine to medium sand, some shell fragments, dark brown, wet, no odor; fine to medium sand lens at 76" to 82"		LMR11-62-96 (SVOCs, Total Metals/Hg, TOC, Grain Size)
7					
8		ML	SANDY SILT, fine to medium sand, dark brown with black banding, wet, no odor		LMR11-62-108 (SVOCs, Total Metals/Hg, TOC, Grain Size)
9			END OF SEDIMENT BORING AT 108" bgs		

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SEDIMENT LOG OF LMR11-63

U.S. EPA Region V
Contract: EP-S5-06-04

Lower Maumee River
Toledo, Lucas County, Ohio

Collection Date.	: 08-08-11	WESTON Geologist	: J. Colomb
Sample Date	: 08-08-11	X Coordinates	: 41 38.435198
Collector	: WESTON	Y Coordinates	: 83 32.072600
Collection Method	: Ponar/Vibracore		
Total Depth	: 115"		

Samples Collected
- Investigative Sample
- Duplicate Sample
- MS/MSD Sample

Analyses Performed
SVOCs, Total Metals/Hg, TOC, Grain Size (TA)

DEPTH (ft)	USCS	DESCRIPTION	SAMPLE INTERVAL	REMARKS
0	ML	SILT, trace fine sand, dark brown, saturated, slight product odor		LMR11-63-06 (SVOCs, Total Metals/Hg, TOC, Grain Size)
1	ML	SILT, trace fine sand, dark brown, saturated, slight product odor		LMR11-63-24 (SVOCs, Total Metals/Hg, TOC, Grain Size)
2	ML	CLAYEY SILT, some fine sand, dark brown, wet, slight product odor		LMR11-63-48 (SVOCs, Total Metals/Hg, TOC, Grain Size) LMR11-63-48-FS (SVOCs, Total Metals/Hg, TOC, Grain Size)
3				
4	ML	CLAYEY SILT, fine grained sand, dark brown, wet, slight product odor		LMR11-63-72 (SVOCs, Total Metals/Hg, TOC, Grain Size)
5				
6	ML	CLAYEY SILT, trace fine sand, dark brown, wet, slight product odor		LMR11-63-96 (SVOCs, Total Metals/Hg, TOC, Grain Size)
7				
8	ML	CLAYEY SILT, trace fine to medium sand, shell fragments, some organics, dark brown, slight product odor		LMR11-63-115 (SVOCs, Total Metals/Hg, TOC, Grain Size)
9				
10		END OF SEDIMENT BORING AT 115" bgs		

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SEDIMENT LOG OF LMR11-64

U.S. EPA Region V
Contract: EP-S5-06-04

Lower Maumee River
Toledo, Lucas County, Ohio

Collection Date.	: 08-07-11	WESTON Geologist	: J. Colomb
Sample Date	: 08-07-11	X Coordinates	: 41 38.502149
Collector	: WESTON	Y Coordinates	: 83 32.050110
Collection Method	: Ponar/Vibracore		
Total Depth	: 88"		

Samples Collected
- Investigative Sample
- Duplicate Sample
- MS/MSD Sample

Analyses Performed
SVOCs, Total Metals/Hg, TOC, Grain Size (TA)

DEPTH (ft)	GRAPHIC	USCS	DESCRIPTION	SAMPLE INTERVAL	REMARKS
0		ML	SILT, trace fine sand, dark brown, saturated, mild organic odor		LMR11-64-06 (SVOCs, Total Metals/Hg, TOC, Grain Size)
1		ML	SILT, trace fine sand, dark brown, saturated, mild organic odor		LMR11-64-24 (SVOCs, Total Metals/Hg, TOC, Grain Size)
2		ML	SILT, trace fine sand, dark brown, saturated, mild organic odor		LMR11-64-48 (SVOCs, Total Metals/Hg, TOC, Grain Size)
3					
4		ML	CLAYEY SILT, trace fine grained sand and gravel, dark brown, saturated, no odor		LMR11-64-72 (SVOCs, Total Metals/Hg, TOC, Grain Size)
5					
6		ML	CLAYEY SILT, trace fine sand, dark brown, wet, slight product odor; native clay at 88"		LMR11-64-88 (SVOCs, Total Metals/Hg, TOC, Grain Size)
7			END OF SEDIMENT BORING AT 88" bgs		
8					

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SEDIMENT LOG OF LMR11-65

U.S. EPA Region V
Contract: EP-S5-06-04

Lower Maumee River
Toledo, Lucas County, Ohio

Collection Date.	: 08-06-11	WESTON Geologist	: J. Colomb
Sample Date	: 08-06-11	X Coordinates	: 41 38.656585
Collector	: WESTON	Y Coordinates	: 83 32.036331
Collection Method	: Ponar/Vibracore		
Total Depth	: 24"		

Samples Collected
- Investigative Sample
- Duplicate Sample
- MS/MSD Sample

Analyses Performed
SVOCs, Total Metals/Hg, TOC, Grain Size (TA)

DEPTH (ft)	GRAPHIC	USCS	DESCRIPTION	SAMPLE INTERVAL	REMARKS
0		SM	SANDY SILT, fine to medium sand, dark brown, saturated, no odor		LMR11-65-06 (SVOCs, Total Metals/Hg, TOC, Grain Size)
1		SM	SANDY SILT, fine to medium grained sand, dark brown, saturated, no odor		LMR11-65-24 (SVOCs, Total Metals/Hg, TOC, Grain Size)
2			END OF SEDIMENT BORING AT 24" bgs		
3					
4					
5					
6					

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SEDIMENT LOG OF LMR11-66

U.S. EPA Region V
Contract: EP-S5-06-04

Lower Maumee River
Toledo, Lucas County, Ohio

Collection Date.	: 08-07-11	WESTON Geologist	: J. Colomb
Sample Date	: 08-07-11	X Coordinates	: 41 38.654401
Collector	: WESTON	Y Coordinates	: 83 31.900787
Collection Method	: Ponar/Vibracore		
Total Depth	: 117"		

Samples Collected
- Investigative Sample
- Duplicate Sample
- MS/MSD Sample

Analyses Performed
SVOCs, Total Metals/Hg, TOC, Grain Size (TA)
PCB Aroclors, Pesticides (CLP)

DEPTH (ft)	GRAPHIC	USCS	DESCRIPTION	SAMPLE INTERVAL	REMARKS
0		ML	SILT, trace fine sand, dark brown, saturated, no odor		LMR11-66-06 (SVOCs, Total Metals/Hg, TOC, Grain Size)
1		ML	SILT, trace fine sand, dark brown, saturated, no odor		LMR11-66-24 (SVOCs, Total Metals/Hg, TOC, Grain Size, PCB Aroclors, Pesticides)
2		ML	CLAYEY SILT, trace fine sand, dark brown, saturated, no odor		LMR11-66-48 (SVOCs, Total Metals/Hg, TOC, Grain Size) LMR11-66-48-FS (SVOCs, Total Metals/Hg, TOC, Grain Size)
3					
4		ML	CLAYEY SILT, trace fine grained sand, dark brown, saturated, no odor		LMR11-66-72 (SVOCs, Total Metals/Hg, TOC, Grain Size)
5					
6		ML	CLAYEY SILT, trace fine sand, dark brown, saturated, no odor		LMR11-66-96 (SVOCs, Total Metals/Hg, TOC, Grain Size)
7					
8		SP	SAND, Poorly Graded, fine to medium grained, dark brown, saturated, no odor		LMR11-66-117 (SVOCs, Total Metals/Hg, TOC, Grain Size)
9					
10			END OF SEDIMENT BORING AT 117" bgs		

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SEDIMENT LOG OF LMR11-67

U.S. EPA Region V
Contract: EP-S5-06-04

Lower Maumee River
Toledo, Lucas County, Ohio

Collection Date.	: 08-06-11	WESTON Geologist	: J. Colomb
Sample Date	: 08-06-11	X Coordinates	: 41 38.835492
Collector	: WESTON	Y Coordinates	: 83 32.001339
Collection Method	: Ponar/Vibracore		
Total Depth	: 77"		

Samples Collected
- Investigative Sample
- Duplicate Sample
- MS/MSD Sample

Analyses Performed
SVOCs, Total Metals/Hg, TOC, Grain Size (TA)

DEPTH (ft)	USCS	DESCRIPTION	SAMPLE INTERVAL	REMARKS
0	ML	SILT, trace fine sand, dark brown, saturated, no odor		LMR11-67-06 (SVOCs, Total Metals/Hg, TOC, Grain Size)
1	ML	SILT, trace fine sand, dark brown, saturated, no odor		LMR11-67-24 (SVOCs, Total Metals/Hg, TOC, Grain Size)
2	ML	CLAYEY SILT, trace fine sand, dark brown, saturated, no odor		LMR11-67-48 (SVOCs, Total Metals/Hg, TOC, Grain Size)
3				
4	ML	CLAYEY SILT, trace fine grained sand, dark brown, saturated, no odor		LMR11-67-77 (SVOCs, Total Metals/Hg, TOC, Grain Size)
5				
6		END OF SEDIMENT BORING AT 77" bgs		
7				

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SEDIMENT LOG OF LMR11-68

U.S. EPA Region V
Contract: EP-S5-06-04

Lower Maumee River
Toledo, Lucas County, Ohio

Collection Date.	: 08-07-11	WESTON Geologist	: J. Colomb
Sample Date	: 08-07-11	X Coordinates	: 41 38.840761
Collector	: WESTON	Y Coordinates	: 83 31.848410
Collection Method	: Ponar/Vibracore		
Total Depth	: 96"		

Samples Collected
- Investigative Sample
- Duplicate Sample
- MS/MSD Sample

Analyses Performed
SVOCs, Total Metals/Hg, TOC, Grain Size (TA)

DEPTH (ft)	GRAPHIC	USCS	DESCRIPTION	SAMPLE INTERVAL	REMARKS
0		ML	SILT, trace fine sand, dark brown, saturated, organic odor		LMR11-68-06 (SVOCs, Total Metals/Hg, TOC, Grain Size)
1		ML	SILT, trace fine sand, dark brown, saturated, organic odor		LMR11-68-24 (SVOCs, Total Metals/Hg, TOC, Grain Size)
2		ML	SILT, trace fine sand, dark brown, saturated, organic odor		LMR11-68-48 (SVOCs, Total Metals/Hg, TOC, Grain Size)
3					
4		ML	CLAYEY SILT, trace fine grained sand, dark brown, saturated, no odor		LMR11-68-72 (SVOCs, Total Metals/Hg, TOC, Grain Size)
5					
6		ML	CLAYEY SILT, trace fine sand, dark brown, saturated, no odor		LMR11-68-96 (SVOCs, Total Metals/Hg, TOC, Grain Size)
7					
8			END OF SEDIMENT BORING AT 96" bgs		

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SEDIMENT LOG OF LMR11-70

U.S. EPA Region V
Contract: EP-S5-06-04

Lower Maumee River
Toledo, Lucas County, Ohio

Collection Date.	: 08-07-11	WESTON Geologist	: J. Colomb
Sample Date	: 08-07-11	X Coordinates	: 41 38.947150
Collector	: WESTON	Y Coordinates	: 83 31.798020
Collection Method	: Ponar/Vibracore		
Total Depth	: 85"		

Samples Collected
- Investigative Sample
- Duplicate Sample
- MS/MSD Sample

Analyses Performed
SVOCs, Total Metals/Hg,
TOC, Grain Size (TA)
PCB Aroclors, Pesticides (CLP)

DEPTH (ft)	USCS	DESCRIPTION	SAMPLE INTERVAL	REMARKS
0	ML	SILT, trace fine sand, dark brown, saturated, no odor		LMR11-70-06 (SVOCs, Total Metals/Hg, TOC, Grain Size)
1	ML	SILT, trace fine sand, dark brown, saturated, no odor		LMR11-70-24 (SVOCs, Total Metals/Hg, TOC, Grain Size, PCB Aroclors, Pesticides)
2	ML	SILT, trace fine sand, dark brown, saturated, no odor		LMR11-70-48 (SVOCs, Total Metals/Hg, TOC, Grain Size)
3				
4	SP	SAND, Poorly Graded, fine to medium grained, some organics, black, wet, no odor; grades to CLAYEY SILT		LMR11-70-72 (SVOCs, Total Metals/Hg, TOC, Grain Size) LMR11-70-72-FS (SVOCs, Total Metals/Hg, TOC, Grain Size)
5				
6	ML	CLAYEY SILT, some fine sand, dark brown, wet, no odor; native clay at 85"		LMR11-70-85 (SVOCs, Total Metals/Hg, TOC, Grain Size)
7		END OF SEDIMENT BORING AT 85" bgs		
8				

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SEDIMENT LOG OF LMR11-71

U.S. EPA Region V
Contract: EP-S5-06-04

Lower Maumee River
Toledo, Lucas County, Ohio

Collection Date.	: 08-06-11	WESTON Geologist	: J. Colomb
Sample Date	: 08-06-11	X Coordinates	: 41 38.954561
Collector	: WESTON	Y Coordinates	: 83 31.670261
Collection Method	: Ponar/Vibracore		
Total Depth	: 161"		

Samples Collected
- Investigative Sample
- Duplicate Sample
- MS/MSD Sample

Analyses Performed
SVOCs, Total Metals/Hg, TOC, Grain Size (TA)
PCB Aroclors, Pesticides (CLP)

DEPTH (ft)	USCS	DESCRIPTION	SAMPLE INTERVAL	REMARKS
0	ML	SILT, trace fine sand, dark brown, saturated, no odor		LMR11-71-06 (SVOCs, Total Metals/Hg, TOC, Grain Size)
1	ML	SILT, trace fine sand, dark brown, saturated, no odor		LMR11-71-24 (SVOCs, Total Metals/Hg, TOC, Grain Size, PCB Aroclors, Pesticides) LMR11-71-24-FS (PCB Aroclors, Pesticides)
2	ML	CLAYEY SILT, trace fine sand, dark brown, saturated, no odor		
3				LMR11-71-48 (SVOCs, Total Metals/Hg, TOC, Grain Size)
4	ML	CLAYEY SILT, trace fine sand, dark brown, saturated, no odor		
5				LMR11-71-72 (SVOCs, Total Metals/Hg, TOC, Grain Size)
6	ML	CLAYEY SILT, trace fine sand, dark brown, saturated, no odor		
7				LMR11-71-96 (SVOCs, Total Metals/Hg, TOC, Grain Size)
8	ML	CLAYEY SILT, some fine sand, dark brown, wet, no odor		
9				LMR11-71-120 (SVOCs, Total Metals/Hg, TOC, Grain Size)
10	SM	SANDY SILT, fine grained sand, dark brown, wet, no odor		
11				LMR11-71-148 (SVOCs, Total Metals/Hg, TOC, Grain Size)
12	ML	CLAYEY SILT, some fine sand, wet, dark brown, no odor		
13				LMR11-71-161 (SVOCs, Total Metals/Hg, TOC, Grain Size)
		END OF SEDIMENT BORING AT 161" bgs		

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SEDIMENT LOG OF LMR11-72

U.S. EPA Region V
Contract: EP-S5-06-04

Lower Maumee River
Toledo, Lucas County, Ohio

Collection Date.	: 08-05-11	WESTON Geologist	: J. Colomb
Sample Date	: 08-05-11	X Coordinates	: 41 39.063258
Collector	: WESTON	Y Coordinates	: 83 31.839265
Collection Method	: Ponar/Vibracore		
Total Depth	: 35"		

Samples Collected
- Investigative Sample
- Duplicate Sample
- MS/MSD Sample

Analyses Performed
SVOCs, Total Metals/Hg, TOC, Grain Size (TA)

DEPTH (ft)	GRAPHIC	USCS	DESCRIPTION	SAMPLE INTERVAL	REMARKS
0		ML	SILT, trace fine sand, dark brown, saturated, no odor		LMR11-72-06 (SVOCs, Total Metals/Hg, TOC, Grain Size)
1		SW	SAND, Well Graded, fine to coarse grained sand, some gravel, some silt, brown, saturated, no odor		LMR11-72-24 (SVOCs, Total Metals/Hg, TOC, Grain Size)
2		SM	SILTY SAND, fine grained sand, brown, damp, no odor		LMR11-72-35 (SVOCs, Total Metals/Hg, TOC, Grain Size)
3			END OF SEDIMENT BORING AT 35" bgs		
4					
5					
6					

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SEDIMENT LOG OF LMR11-73

Restoring Resource Efficiency

U.S. EPA Region V
Contract: EP-S5-06-04

Lower Maumee River
Toledo, Lucas County, Ohio

Collection Date.	: 08-07-11	WESTON Geologist	: J. Colomb
Sample Date	: 08-07-11	X Coordinates	: 41 37.743010
Collector	: WESTON	Y Coordinates	: 83 31.819121
Collection Method	: Ponar/Vibracore		
Total Depth	: 42"		

Samples Collected
- Investigative Sample
- Duplicate Sample
- MS/MSD Sample

Analyses Performed
SVOCs, Total Metals/Hg, TOC, Grain Size (TA)

DEPTH (ft)	GRAPHIC	USCS	DESCRIPTION	SAMPLE INTERVAL	REMARKS
0		ML	SILT, trace fine sand, dark brown, saturated, no odor		LMR11-73-06 (SVOCs, Total Metals/Hg, TOC, Grain Size)
1		ML	CLAYEY SILT, trace fine sand, trace organics, dark brown, saturated, no odor		LMR11-73-24 (SVOCs, Total Metals/Hg, TOC, Grain Size)
2		ML	CLAYEY SILT, trace fine sand, dark brown, wet, no odor; fine to medium sand lens at 32" to 37".		LMR11-73-42 (SVOCs, Total Metals/Hg, TOC, Grain Size)
3			END OF SEDIMENT BORING AT 42" bgs		
4					

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SEDIMENT LOG OF LMR11-74

U.S. EPA Region V
Contract: EP-S5-06-04

Lower Maumee River
Toledo, Lucas County, Ohio

Collection Date.	: 08-05-11	WESTON Geologist	: J. Colomb
Sample Date	: 08-05-11	X Coordinates	: 41 39.103658
Collector	: WESTON	Y Coordinates	: 83 31.686007
Collection Method	: Ponar/Vibracore		
Total Depth	: 85"		

Samples Collected
- Investigative Sample
- Duplicate Sample
- MS/MSD Sample

Analyses Performed
SVOCs, Total Metals/Hg, TOC, Grain Size (TA)

DEPTH (ft)	GRAPHIC	USCS	DESCRIPTION	SAMPLE INTERVAL	REMARKS
0		ML	CLAYEY SILT, trace fine grained sand, dark brown, wet, no odor		LMR11-74-06 (SVOCs, Total Metals/Hg, TOC, Grain Size)
1		ML	CLAYEY SILT, trace fine sand, dark brown, wet, no odor		LMR11-74-24 (SVOCs, Total Metals/Hg, TOC, Grain Size)
2		ML	CLAYEY SILT, trace fine sand, dark brown, wet, no odor		LMR11-74-48 (SVOCs, Total Metals/Hg, TOC, Grain Size) LMR11-74-48FS (SVOCs, Total Metals/Hg, TOC, Grain Size)
3					
4		ML	CLAYEY SILT, trace fine sand, dark brown, wet, no odor; fine to medium grained sand lens at 68" to 69"		LMR11-74-72 (SVOCs, Total Metals/Hg, TOC, Grain Size)
5					
6		SP	SAND, Well Graded, fine to coarse, with some gravel, dark brown, saturated, no odor		LMR11-74-85 (SVOCs, Total Metals/Hg, TOC, Grain Size)
7			END OF SEDIMENT BORING AT 85" bgs		

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SEDIMENT LOG OF LMR11-75

Restoring Resource Efficiency

U.S. EPA Region V
Contract: EP-S5-06-04

Lower Maumee River
Toledo, Lucas County, Ohio

Collection Date.	: 08-05-11	WESTON Geologist	: J. Colomb
Sample Date	: 08-05-11	X Coordinates	: 41 39.1253698
Collector	: WESTON	Y Coordinates	: 83 31.553229
Collection Method	: Ponar/Vibracore		
Total Depth	: 80"		

Samples Collected
- Investigative Sample
- Duplicate Sample
- MS/MSD Sample

Analyses Performed
SVOCs, Total Metals/Hg, TOC, Grain Size (TA)
PCB Aroclors, Pesticides

DEPTH (ft)	GRAPHIC	USCS	DESCRIPTION	SAMPLE INTERVAL	REMARKS
0		ML	CLAYEY SILT, trace fine grained sand, dark brown, saturated, no odor		LMR11-75-06 (SVOCs, Total Metals/Hg, TOC, Grain Size)
1		ML	CLAYEY SILT, trace fine sand, dark brown, saturated, no odor		LMR11-75-24 (SVOCs, Total Metals/Hg, TOC, Grain Size, PCB Aroclors, Pesticides)
2		ML	CLAYEY SILT, trace fine sand, dark brown, saturated, no odor		LMR11-75-48 (SVOCs, Total Metals/Hg, TOC, Grain Size) LMR11-75-48FS (SVOCs, Total Metals/Hg, TOC, Grain Size)
3					
4		ML	CLAYEY SILT, trace fine to medium sand, dark brown, saturated, no odor; grades to fine to coarse sand and gravel, with shell fragments		LMR11-75-80 (SVOCs, Total Metals/Hg, TOC, Grain Size)
5					
6					
7			END OF SEDIMENT BORING AT 80" bgs		

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SEDIMENT LOG OF LMR11-76

U.S. EPA Region V
Contract: EP-S5-06-04

Lower Maumee River
Toledo, Lucas County, Ohio

Collection Date.	: 08-05-11	WESTON Geologist	: J. Colomb
Sample Date	: 08-05-11	X Coordinates	: 41 39.212416
Collector	: WESTON	Y Coordinates	: 83 31.482172
Collection Method	: Ponar/Vibracore		
Total Depth	: 120"		

Samples Collected
- Investigative Sample
- Duplicate Sample
- MS/MSD Sample

Analyses Performed
SVOCs, Total Metals/Hg, TOC, Grain Size (TA) PCB Aroclors, Pesticides

DEPTH (ft)	GRAPHIC	USCS	DESCRIPTION	SAMPLE INTERVAL	REMARKS
0		ML	CLAYEY SILT, trace fine grained sand, grey-black, saturated, no odor		LMR11-76-06 (SVOCs, Total Metals/Hg, TOC, Grain Size)
1		ML	CLAYEY SILT, trace fine sand, grey-brown, saturated, no odor; fine to medium sand lens at 16" -20"		LMR11-76-24 (SVOCs, Total Metals/Hg, TOC, Grain Size, PCB Aroclors, Pesticides)
2		ML	CLAYEY SILT, trace fine sand, grey-brown, wet, no odor		LMR11-76-48 (SVOCs, Total Metals/Hg, TOC, Grain Size)
3					
4		ML	CLAYEY SILT, trace fine sand, grey-brown, wet, no odor		LMR11-76-72 (SVOCs, Total Metals/Hg, TOC, Grain Size)
5					
6		ML	CLAYEY SILT, trace fine sand, grey-brown with black banding; wet, no odor		LMR11-76-96 (SVOCs, Total Metals/Hg, TOC, Grain Size)
7					
8		ML	CLAYEY SILT, trace fine sand, grey-brown with black banding, wet, no odor; fine to medium sand lens with shell fragments at 118"		LMR11-76-120 (SVOCs, Total Metals/Hg, TOC, Grain Size)
9					
10			END OF SEDIMENT BORING AT 120" bgs		

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SEDIMENT LOG OF LMR11-77

U.S. EPA Region V
Contract: EP-S5-06-04

Lower Maumee River
Toledo, Lucas County, Ohio

Collection Date.	: 08-05-11	WESTON Geologist	: J. Colomb
Sample Date	: 08-05-11	X Coordinates	: 41 39.234551
Collector	: WESTON	Y Coordinates	: 83 31.357649
Collection Method	: Ponar/Vibracore		
Total Depth	: 120"		

Samples Collected
- Investigative Sample
- Duplicate Sample
- MS/MSD Sample

Analyses Performed
SVOCs, Total Metals/Hg, TOC, Grain Size (TA)

DEPTH (ft)	GRAPHIC	USCS	DESCRIPTION	SAMPLE INTERVAL	REMARKS
0		ML	SILT, trace fine grained sand, dark brown, saturated, no odor		LMR11-77-06 (SVOCs, Total Metals/Hg, TOC, Grain Size)
1		ML	SILT, trace fine sand, dark brown, saturated, no odor		LMR11-77-24 (SVOCs, Total Metals/Hg, TOC, Grain Size)
2		ML	SILT, trace fine sand, dark brown, saturated, no odor		LMR11-77-48 (SVOCs, Total Metals/Hg, TOC, Grain Size)
3		ML	SILT, trace fine sand, dark brown, saturated, no odor		LMR11-77-72 (SVOCs, Total Metals/Hg, TOC, Grain Size)
4		ML	SILT, trace fine sand, dark brown, saturated, no odor		
5		ML	SILT, trace fine sand, dark brown, saturated, no odor		
6		ML	CLAYEY SILT, trace fine sand, dark brown, wet, no odor		LMR11-77-96 (SVOCs, Total Metals/Hg, TOC, Grain Size)
7		ML	CLAYEY SILT, trace fine sand, dark brown, wet, no odor		
8		ML	CLAYEY SILT, trace fine sand, dark brown, wet, no odor		LMR11-77-120 (SVOCs, Total Metals/Hg, TOC, Grain Size)
9					
10			END OF SEDIMENT BORING AT 120" bgs		

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SEDIMENT LOG OF LMR11-78

U.S. EPA Region V
Contract: EP-S5-06-04

Lower Maumee River
Toledo, Lucas County, Ohio

Collection Date.	: 08-05-11	WESTON Geologist	: J. Colomb
Sample Date	: 08-05-11	X Coordinates	: 41 39.300659
Collector	: WESTON	Y Coordinates	: 83 31.277895
Collection Method	: Vibracore		
Total Depth	: 14"		

Samples Collected
- Investigative Sample
- Duplicate Sample
- MS/MSD Sample

Analyses Performed
SVOCs, Total Metals/Hg, TOC, Grain Size (TA)

DEPTH (ft)	GRAPHIC	USCS	DESCRIPTION	SAMPLE INTERVAL	REMARKS
0		ML	SILT, trace fine grained sand, dark brown, wet, no odor; grades to fine to coarse sand with shell fragments, poorly graded		LMR11-78-14 (SVOCs, Total Metals/Hg, TOC, Grain Size)
1			END OF SEDIMENT BORING AT 14" bgs		

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SEDIMENT LOG OF LMR11-79

U.S. EPA Region V
Contract: EP-S5-06-04

Lower Maumee River
Toledo, Lucas County, Ohio

Collection Date.	: 08-04-11	WESTON Geologist	: J. Colomb
Sample Date	: 08-04-11	X Coordinates	: 41 39.412993
Collector	: WESTON	Y Coordinates	: 83 31.329944
Collection Method	: Ponar/Vibracore		
Total Depth	: 54"		

Samples Collected
- Investigative Sample
- Duplicate Sample
- MS/MSD Sample

Analyses Performed
SVOCs, Total Metals/Hg, TOC, Grain Size (TA)
PCB Aroclors, Pesticides (CLP)

DEPTH (ft)	USCS	DESCRIPTION	SAMPLE INTERVAL	REMARKS
0	ML	SILT, trace fine grained sand, dark brown, saturated, no odor		LMR11-79-06 (SVOCs, Total Metals/Hg, TOC, Grain Size)
1	ML	SILT, trace fine grained sand, trace clayey silt, dark brown, saturated, no odor,		LMR11-79-24 (SVOCs, Total Metals/Hg, TOC, Grain Size, PCB Aroclors, Pesticides) LMR11-79-24-FS (PCB Aroclors, Pesticides)
2	ML	CLAYEY SILT, trace fine sand, dark brown, saturated, no odor		
3				LMR11-79-54 (SVOCs, Total Metals/Hg, TOC, Grain Size)
4	CH	CLAY, high plasticity, trace fine sand, dark brown, wet, product odor		
		END OF SEDIMENT BORING AT 54" bgs		
5				
6				

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SEDIMENT LOG OF LMR11-80

U.S. EPA Region V
Contract: EP-S5-06-04

Lower Maumee River
Toledo, Lucas County, Ohio

Collection Date.	: 08-05-11	WESTON Geologist	: J. Colomb
Sample Date	: 08-05-11	X Coordinates	: 41 39.319786
Collector	: WESTON	Y Coordinates	: 83 31.166921
Collection Method	: Ponar/Vibracore		
Total Depth	: 56"		

Samples Collected
- Investigative Sample
- Duplicate Sample
- MS/MSD Sample

Analyses Performed
SVOCs, Total Metals/Hg, TOC, Grain Size (TA)

DEPTH (ft)	GRAPHIC	USCS	DESCRIPTION	SAMPLE INTERVAL	REMARKS
0		SM	SANDY SILT, fine grained sand, dark brown, saturated, no odor		LMR11-80-06 (SVOCs, Total Metals/Hg, TOC, Grain Size)
1		ML	SILT, some fine grained sand, dark brown, wet, no odor,		LMR11-80-24 (SVOCs, Total Metals/Hg, TOC, Grain Size)
2		ML	SILT, some fine sand, dark brown, wet, no odor; sand lens at 35" - 38"		LMR11-80-56 (SVOCs, Total Metals/Hg, TOC, Grain Size)
3					
4					
			END OF SEDIMENT BORING AT 56" bgs		
5					

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SEDIMENT LOG OF LMR11-81

U.S. EPA Region V
Contract: EP-S5-06-04

Lower Maumee River
Toledo, Lucas County, Ohio

Collection Date.	: 08-05-11	WESTON Geologist	: J. Colomb
Sample Date	: 08-05-11	X Coordinates	: 41 39.4007
Collector	: WESTON	Y Coordinates	: 83 31.195262
Collection Method	: Ponar/Vibracore		
Total Depth	: 19"		

Samples Collected
- Investigative Sample
- Duplicate Sample
- MS/MSD Sample

Analyses Performed
SVOCs, Total Metals/Hg, TOC, Grain Size (TA)

DEPTH (ft)	GRAPHIC	USCS	DESCRIPTION	SAMPLE INTERVAL	REMARKS
0		ML	SILT, fine grained sand, trace gravel, light brown, saturated, no odor		LMR11-81-06 (SVOCs, Total Metals/Hg, TOC, Grain Size)
1		SP	SAND, Poorly Graded, fine to medium grained, some shell fragments, light brown, damp, no odor		LMR11-81-19 (SVOCs, Total Metals/Hg, TOC, Grain Size)
2			END OF SEDIMENT BORING AT 19" bgs		

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SEDIMENT LOG OF LMR11-82

U.S. EPA Region V
Contract: EP-S5-06-04

Lower Maumee River
Toledo, Lucas County, Ohio

Collection Date.	: 08-05-11	WESTON Geologist	: J. Colomb
Sample Date	: 08-05-11	X Coordinates	: 41 39.399073
Collector	: WESTON	Y Coordinates	: 83 31.056224
Collection Method	: Ponar/Vibracore		
Total Depth	: 55"		

Samples Collected
- Investigative Sample
- Duplicate Sample
- MS/MSD Sample

Analyses Performed
SVOCs, Total Metals/Hg, TOC, Grain Size (TA)

DEPTH (ft)	GRAPHIC	USCS	DESCRIPTION	SAMPLE INTERVAL	REMARKS
0		SP	SAND, Poorly Graded, fine to medium grained, some silt, dark brown, saturated, no odor		LMR11-82-06 (SVOCs, Total Metals/Hg, TOC, Grain Size)
1		SP	SAND, Poorly Graded, fine to medium grained, some silt, dark brown, saturated, no odor		LMR11-82-24 (SVOCs, Total Metals/Hg, TOC, Grain Size)
2		SP	SAND, Poorly Graded, fine to medium grained, some silt, dark brown, saturated, no odor		LMR11-82-55 (SVOCs, Total Metals/Hg, TOC, Grain Size)
3					
4					
			END OF SEDIMENT BORING AT 55" bgs		
5					

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SEDIMENT LOG OF LMR11-83

U.S. EPA Region V
Contract: EP-S5-06-04

Lower Maumee River
Toledo, Lucas County, Ohio

Collection Date.	: 08-05-11	WESTON Geologist	: J. Colomb
Sample Date	: 08-05-11	X Coordinates	: 41 39.492565
Collector	: WESTON	Y Coordinates	: 83 30.978776
Collection Method	: Ponar/Vibracore		
Total Depth	: 87"		

Samples Collected
- Investigative Sample
- Duplicate Sample
- MS/MSD Sample

Analyses Performed
SVOCs, Total Metals/Hg, TOC, Grain Size (TA)

DEPTH (ft)	GRAPHIC	USCS	DESCRIPTION	SAMPLE INTERVAL	REMARKS
0		ML	SILT, trace fine sand, dark brown, saturated, no odor		LMR11-83-06 (SVOCs, Total Metals/Hg, TOC, Grain Size)
1		ML	SILT, trace fine sand, dark brown, saturated, no odor		LMR11-83-24 (SVOCs, Total Metals/Hg, TOC, Grain Size)
2		ML	CLAYEY SILT, trace fine sand, dark brown, wet, no odor; fine to medium sand lens at 26" - 34"		LMR11-83-48 (SVOCs, Total Metals/Hg, TOC, Grain Size)
4		SM	SANDY SILT, fine to coarse grained sand, dark brown, saturated, no odor		LMR11-83-72 (SVOCs, Total Metals/Hg, TOC, Grain Size)
6		SW	SAND, Well Graded, fine to coarse grained, some silt, shell fragments, dark brown, no odor		LMR11-83-87 (SVOCs, Total Metals/Hg, TOC, Grain Size)
7			END OF SEDIMENT BORING AT 87" bgs		

12-01-2011 C:\Documents and Settings\colomb\Desktop\Work Documents\LMR_Logs\LMR11_83.bor

SEDIMENT LOG OF LMR11-84

U.S. EPA Region V
Contract: EP-S5-06-04

Lower Maumee River
Toledo, Lucas County, Ohio

Collection Date.	: 08-05-11	WESTON Geologist	: J. Colomb
Sample Date	: 08-05-11	X Coordinates	: 41 39.487490
Collector	: WESTON	Y Coordinates	: 83 30.847300
Collection Method	: Ponar/Vibracore		
Total Depth	: 115"		

Samples Collected
- Investigative Sample
- Duplicate Sample
- MS/MSD Sample

Analyses Performed
SVOCs, Total Metals/Hg, TOC, Grain Size (TA)

DEPTH (ft)	GRAPHIC	USCS	DESCRIPTION	SAMPLE INTERVAL	REMARKS
0		ML	SILT, fine grained sand, dark brown, saturated, no odor		LMR11-84-06 (SVOCs, Total Metals/Hg, TOC, Grain Size)
1		ML	SILT, fine grained sand, dark brown, saturated, no odor		LMR11-84-24 (SVOCs, Total Metals/Hg, TOC, Grain Size)
2		ML	CLAYEY SILT, fine sand, dark brown, saturated, no odor		LMR11-84-48 (SVOCs, Total Metals/Hg, TOC, Grain Size)
4		SM	SANDY SILT, fine to medium grained sand, dark brown, saturated, no odor		LMR11-84-72 (SVOCs, Total Metals/Hg, TOC, Grain Size) LMR11-84-72-DP (SVOCs, Total Metals/Hg, TOC)
6		SM	SANDY SILT, fine to coarse grained, dark brown, saturated, no odor		LMR11-84-96 (SVOCs, Total Metals/Hg, TOC, Grain Size)
8		SP	SAND, Poorly Graded, fine to coarse grained, some shell fragments, dark brown, saturated, no odor		LMR11-84-115 (SVOCs, Total Metals/Hg, TOC, Grain Size)
10			END OF SEDIMENT BORING AT 115" bgs		

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SEDIMENT LOG OF LMR11-85

U.S. EPA Region V
Contract: EP-S5-06-04

Lower Maumee River
Toledo, Lucas County, Ohio

Collection Date.	: 08-05-11	WESTON Geologist	: J. Colomb
Sample Date	: 08-05-11	X Coordinates	: 41 39.585142
Collector	: WESTON	Y Coordinates	: 83 30.771467
Collection Method	: Ponar/Vibracore		
Total Depth	: 74"		

Samples Collected
- Investigative Sample
- Duplicate Sample
- MS/MSD Sample

Analyses Performed
SVOCs, Total Metals/Hg, TOC, Grain Size (TA)

DEPTH (ft)	USCS	DESCRIPTION	SAMPLE INTERVAL	REMARKS
0	ML	SILT, trace fine grained sand, some detritus, light brown, saturated, no odor		LMR11-85-06 (SVOCs, Total Metals/Hg, TOC, Grain Size)
1	ML	SILT, trace fine grained sand, some detritus, light brown, saturated, no odor		LMR11-85-24 (SVOCs, Total Metals/Hg, TOC, Grain Size)
2	ML	CLAYEY SILT, trace fine sand, light brown, saturated, no odor		LMR11-85-48 (SVOCs, Total Metals/Hg, TOC, Grain Size)
3				
4	SM	SANDY SILT, trace fine grained sand, some shell fragments, light brown, saturated, no odor		LMR11-85-74 (SVOCs, Total Metals/Hg, TOC, Grain Size)
5				
6		END OF SEDIMENT BORING AT 74" bgs		
7				
8				

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APPENDIX B
ANALYTICAL DATA TABLES

Table B-1
Sediment Sample Analytical Results - SVOCs
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-01	LMR11-01	LMR11-01	LMR11-01	LMR11-02
		Field Sample ID	LMR11-01-006	LMR11-01-024	LMR11-01-048	LMR11-01-060	LMR11-02-006
		Sample Date	8/2/2011	8/5/2011	8/5/2011	8/5/2011	8/2/2011
		Depth Interval (in bss)	0- 6	6- 24	24- 48	48- 60	0- 6
Chemical Name	**PEC[1]**	**Unit**					
1,1'-Biphenyl	NL	µg/kg	240 U	190 U	150 UJ	120 UJ	140 U
1,2,4,5-Tetrachlorobenzene	NL	µg/kg	240 U	190 U	150 UJ	120 UJ	140 U
2,2'-Oxybis(1-chloropropane)	NL	µg/kg	240 U	190 U	150 UJ	120 UJ	140 U
2,3,4,6-Tetrachlorophenol	NL	µg/kg	240 U	190 U	150 UJ	120 UJ	140 U
2,4,5-Trichlorophenol	NL	µg/kg	240 U	190 U	150 UJ	120 UJ	140 U
2,4,6-Trichlorophenol	NL	µg/kg	240 U	190 U	150 UJ	120 UJ	140 U
2,4-Dichlorophenol	NL	µg/kg	240 U	190 U	150 UJ	120 UJ	140 U
2,4-Dimethylphenol	NL	µg/kg	240 U	190 U	150 UJ	120 UJ	140 U
2,4-Dinitrophenol	NL	µg/kg	470 U	360 U	290 UJ	230 UJ	270 U
2,4-Dinitrotoluene	NL	µg/kg	240 U	190 U	150 UJ	120 UJ	140 U
2,6-Dinitrotoluene	NL	µg/kg	240 U	190 U	150 UJ	120 UJ	140 U
2-Chloronaphthalene	NL	µg/kg	240 U	190 U	150 UJ	120 UJ	140 U
2-Chlorophenol	NL	µg/kg	240 U	190 U	150 UJ	120 UJ	140 U
2-Methylnaphthalene	NL	µg/kg	4.7 UJ	3.6 U	2.9 UJ	2.3 UJ	2.7 UJ
2-Methylphenol	NL	µg/kg	240 U	190 U	150 UJ	120 UJ	140 U
2-Nitroaniline	NL	µg/kg	470 U	360 U	290 UJ	230 UJ	270 U
2-Nitrophenol	NL	µg/kg	240 U	190 U	150 UJ	120 UJ	140 U
3,3'-Dichlorobenzidine	NL	µg/kg	240 U	190 U	150 UJ	120 UJ	140 U
3-Nitroaniline	NL	µg/kg	470 U	360 U	290 UJ	230 UJ	270 U
4,6-Dinitro-2-methylphenol	NL	µg/kg	470 U	360 U	290 UJ	230 UJ	270 U
4-Bromophenyl-phenylether	NL	µg/kg	240 U	190 U	150 UJ	120 UJ	140 U
4-Chloro-3-methylphenol	NL	µg/kg	240 U	190 U	150 UJ	120 UJ	140 U
4-Chloroaniline	NL	µg/kg	240 U	190 U	150 UJ	120 UJ	140 U
4-Chlorophenyl-phenylether	NL	µg/kg	240 U	190 U	150 UJ	120 UJ	140 U
4-Methylphenol	NL	µg/kg	240 U	190 U	30 J	120 UJ	140 U
4-Nitroaniline	NL	µg/kg	470 U	360 U	290 UJ	230 UJ	270 U
4-Nitrophenol	NL	µg/kg	470 U	360 U	290 UJ	230 UJ	270 U
Acenaphthene	NL	µg/kg	4.7 U	3.6 U	2.9 UJ	2.3 UJ	2.7 U
Acenaphthylene	NL	µg/kg	4.7 U	3.6 U	2.9 UJ	2.3 UJ	2.7 U
Acetophenone	NL	µg/kg	240 U	190 U	150 UJ	120 UJ	140 U
Anthracene	845	µg/kg	4.7 U	3.6 U	2.9 UJ	2.3 UJ	2.7 U
Atrazine	NL	µg/kg	240 U	190 U	150 UJ	120 UJ	140 U
Benzaldehyde	NL	µg/kg	240 U	190 U	150 UJ	120 UJ	140 U
Benzo(a)anthracene	1050	µg/kg	5.3	3.6 U	5.9 J	2.3 UJ	3.1
Benzo(a)pyrene	1450	µg/kg	8.3	3.6 U	2.9 UJ	2.3 UJ	2.7 U

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Table B-1
Sediment Sample Analytical Results - SVOCs
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-01	LMR11-01	LMR11-01	LMR11-01	LMR11-02
		Field Sample ID	LMR11-01-006	LMR11-01-024	LMR11-01-048	LMR11-01-060	LMR11-02-006
		Sample Date	8/2/2011	8/5/2011	8/5/2011	8/5/2011	8/2/2011
		Depth Interval (in bss)	0- 6	6- 24	24- 48	48- 60	0- 6
Chemical Name	**PEC[1]**	**Unit**					
Benzo(b)fluoranthene	NL	µg/kg	5	5.6	2.9 UJ	2.3 UJ	2.7 U
Benzo(g,h,i)perylene	NL	µg/kg	4.7 U	3.6 U	2.9 UJ	2.3 UJ	2.7 U
Benzo(k)fluoranthene	NL	µg/kg	4.7 U	3.6 U	2.9 UJ	2.3 UJ	2.7 U
Bis(2-chloroethoxy)methane	NL	µg/kg	240 U	190 U	150 UJ	120 UJ	140 U
Bis(2-chloroethyl)ether	NL	µg/kg	240 U	190 U	150 UJ	120 UJ	140 U
Bis(2-ethylhexyl)phthalate	NL	µg/kg	240 U	190 U	150 UJ	120 UJ	140 U
Butylbenzylphthalate	NL	µg/kg	240 U	190 U	150 UJ	120 UJ	140 U
Caprolactam	NL	µg/kg	240 U	190 U	150 UJ	120 UJ	140 U
Carbazole	NL	µg/kg	240 U	190 U	150 UJ	120 UJ	140 U
Chrysene	1290	µg/kg	6.4	3.6 U	6.1 J	2.3 UJ	3.2
Dibenzo(a,h)anthracene	NL	µg/kg	4.7 U	3.6 U	2.9 UJ	2.3 UJ	2.7 U
Dibenzofuran	NL	µg/kg	240 U	190 U	150 UJ	120 UJ	140 U
Diethylphthalate	NL	µg/kg	240 U	190 U	150 UJ	120 UJ	140 U
Dimethylphthalate	NL	µg/kg	240 U	190 U	150 UJ	120 UJ	140 U
Di-n-butylphthalate	NL	µg/kg	240 U	190 U	150 UJ	120 UJ	140 U
Di-n-octylphthalate	NL	µg/kg	240 U	190 U	150 UJ	120 UJ	140 U
Fluoranthene	2230	µg/kg	11	7.9	13 J	2.9 J	5.8
Fluorene	536	µg/kg	4.7 U	3.6 U	2.9 UJ	2.3 UJ	2.7 U
Hexachlorobenzene	NL	µg/kg	240 U	190 U	150 UJ	120 UJ	140 U
Hexachlorobutadiene	NL	µg/kg	240 U	190 U	150 UJ	120 UJ	140 U
Hexachlorocyclopentadiene	NL	µg/kg	240 U	190 U	150 UJ	120 UJ	140 U
Hexachloroethane	NL	µg/kg	240 U	190 U	150 UJ	120 UJ	140 U
Indeno(1,2,3-cd)pyrene	NL	µg/kg	4.7 U	3.6 U	2.9 UJ	2.3 UJ	2.7 U
Isophorone	NL	µg/kg	240 U	190 U	150 UJ	120 UJ	140 U
Naphthalene	561	µg/kg	4.7 U	3.6 U	2.9 UJ	2.3 UJ	2.7 U
Nitrobenzene	NL	µg/kg	240 U	190 U	150 UJ	120 UJ	140 U
N-Nitroso-di-n-propylamine	NL	µg/kg	240 U	190 U	150 UJ	120 UJ	140 U
N-Nitrosodiphenylamine	NL	µg/kg	240 U	190 U	150 UJ	120 UJ	140 U
Pentachlorophenol	NL	µg/kg	9.5 U	7.4 UJ	5.9 UJ	4.7 UJ	5.4 U
Phenanthrene	1170	µg/kg	5.2	5.6	9.4 J	4.2 J	2.8
Phenol	NL	µg/kg	240 U	190 U	150 UJ	120 UJ	140 U
Pyrene	1520	µg/kg	14	6.8	12 J	3.1 J	5.6 J
Total PAH 17	22800	µg/kg	78.7	49.3	63.8	26.3	36.7
TOC	NL	mg/kg	25,000	23,600	18,800	11,300	10,900 J

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Table B-1
Sediment Sample Analytical Results - SVOCs
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-03	LMR11-03	LMR11-03	LMR11-03	LMR11-04
		Field Sample ID	LMR11-03-006	LMR11-03-024	LMR11-03-048	LMR11-03-059	LMR11-04-006
		Sample Date	8/3/2011	8/3/2011	8/3/2011	8/3/2011	8/3/2011
		Depth Interval (in bss)	0- 6	6- 24	24- 48	48- 59	0- 6
Chemical Name	**PEC[1]**	**Unit**					
1,1'-Biphenyl	NL	µg/kg	180 UJ	180 U	170 U	160 U	140 UJ
1,2,4,5-Tetrachlorobenzene	NL	µg/kg	180 U	180 U	170 U	160 U	140 U
2,2'-Oxybis(1-chloropropane)	NL	µg/kg	180 U	180 U	170 U	160 U	140 U
2,3,4,6-Tetrachlorophenol	NL	µg/kg	180 U	180 U	170 U	160 U	140 U
2,4,5-Trichlorophenol	NL	µg/kg	180 U	180 U	170 U	160 U	140 U
2,4,6-Trichlorophenol	NL	µg/kg	180 U	180 U	170 U	160 U	140 U
2,4-Dichlorophenol	NL	µg/kg	180 U	180 U	170 U	160 U	140 U
2,4-Dimethylphenol	NL	µg/kg	180 U	180 U	170 U	160 U	140 U
2,4-Dinitrophenol	NL	µg/kg	360 U	350 U	330 U	300 U	280 U
2,4-Dinitrotoluene	NL	µg/kg	180 U	180 U	170 U	160 U	140 U
2,6-Dinitrotoluene	NL	µg/kg	180 U	180 U	170 U	160 U	140 U
2-Chloronaphthalene	NL	µg/kg	180 U	180 U	170 U	160 U	140 U
2-Chlorophenol	NL	µg/kg	180 U	180 U	170 U	160 U	140 U
2-Methylnaphthalene	NL	µg/kg	3.6 UJ	3.5 U	3.3 U	3 U	2.8 UJ
2-Methylphenol	NL	µg/kg	180 U	180 U	170 U	160 U	140 U
2-Nitroaniline	NL	µg/kg	360 U	350 U	330 U	300 U	280 U
2-Nitrophenol	NL	µg/kg	180 U	180 U	170 U	160 U	140 U
3,3'-Dichlorobenzidine	NL	µg/kg	180 U	180 U	170 U	160 U	140 U
3-Nitroaniline	NL	µg/kg	360 U	350 U	330 U	300 U	280 U
4,6-Dinitro-2-methylphenol	NL	µg/kg	360 U	350 U	330 U	300 U	280 U
4-Bromophenyl-phenylether	NL	µg/kg	180 UJ	180 U	170 U	160 U	140 UJ
4-Chloro-3-methylphenol	NL	µg/kg	180 U	180 U	170 U	160 U	140 U
4-Chloroaniline	NL	µg/kg	180 U	180 U	170 U	160 U	140 U
4-Chlorophenyl-phenylether	NL	µg/kg	180 UJ	180 U	170 U	160 U	140 UJ
4-Methylphenol	NL	µg/kg	180 U	180 U	170 U	160 U	140 U
4-Nitroaniline	NL	µg/kg	360 U	350 U	330 U	300 U	280 U
4-Nitrophenol	NL	µg/kg	360 U	350 U	330 U	300 U	280 U
Acenaphthene	NL	µg/kg	3.6 U	3.5 U	3.3 U	3 U	2.8 U
Acenaphthylene	NL	µg/kg	3.6 U	3.5 U	3.3 U	3 U	2.8 U
Acetophenone	NL	µg/kg	180 U	180 U	170 U	160 U	140 U
Anthracene	845	µg/kg	4.8	3.5 U	3.3 U	3.7	4.9
Atrazine	NL	µg/kg	180 U	180 U	170 U	160 U	140 U
Benzaldehyde	NL	µg/kg	180 U	180 U	170 U	160 U	140 U
Benzo(a)anthracene	1050	µg/kg	15	4.6	9.7	10	19
Benzo(a)pyrene	1450	µg/kg	12	8.9	12	12	10

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Table B-1
Sediment Sample Analytical Results - SVOCs
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-03	LMR11-03	LMR11-03	LMR11-03	LMR11-04
		Field Sample ID	LMR11-03-006	LMR11-03-024	LMR11-03-048	LMR11-03-059	LMR11-04-006
		Sample Date	8/3/2011	8/3/2011	8/3/2011	8/3/2011	8/3/2011
		Depth Interval (in bss)	0- 6	6- 24	24- 48	48- 59	0- 6
Chemical Name	**PEC[1]**	**Unit**					
Benzo(b)fluoranthene	NL	µg/kg	16	7.6	12	13	16
Benzo(g,h,i)perylene	NL	µg/kg	3.6 U	3.5 U	4.8	5.1	2.8 U
Benzo(k)fluoranthene	NL	µg/kg	10	3.5 U	5.7	5	15
Bis(2-chloroethoxy)methane	NL	µg/kg	180 U	180 U	170 U	160 U	140 U
Bis(2-chloroethyl)ether	NL	µg/kg	180 U	180 U	170 U	160 U	140 U
Bis(2-ethylhexyl)phthalate	NL	µg/kg	180 UJ	180 U	170 U	1100	140 UJ
Butylbenzylphthalate	NL	µg/kg	180 UJ	180 U	170 U	160 U	140 UJ
Caprolactam	NL	µg/kg	180 UJ	180 U	170 U	160 U	140 UJ
Carbazole	NL	µg/kg	180 UJ	180 U	170 U	160 U	140 UJ
Chrysene	1290	µg/kg	15	5.8	9.8	12	22
Dibenzo(a,h)anthracene	NL	µg/kg	3.6 U	3.5 U	3.3 U	3 U	2.8 U
Dibenzofuran	NL	µg/kg	180 UJ	180 U	170 U	160 U	140 UJ
Diethylphthalate	NL	µg/kg	180 UJ	180 U	170 U	160 U	140 UJ
Dimethylphthalate	NL	µg/kg	180 UJ	180 U	170 U	160 U	140 UJ
Di-n-butylphthalate	NL	µg/kg	180 UJ	180 U	170 U	160 U	140 UJ
Di-n-octylphthalate	NL	µg/kg	180 UJ	180 U	170 U	160 U	140 UJ
Fluoranthene	2230	µg/kg	33	9.1	15	19	51
Fluorene	536	µg/kg	3.6 U	3.5 U	3.3 U	3 U	2.8 U
Hexachlorobenzene	NL	µg/kg	180 U	180 U	170 U	160 U	140 U
Hexachlorobutadiene	NL	µg/kg	180 U	180 U	170 U	160 U	140 U
Hexachlorocyclopentadiene	NL	µg/kg	180 U	180 U	170 U	160 U	140 U
Hexachloroethane	NL	µg/kg	180 U	180 U	170 U	160 U	140 U
Indeno(1,2,3-cd)pyrene	NL	µg/kg	3.6 U	3.5 U	5.7	5.7	7.4
Isophorone	NL	µg/kg	180 U	180 U	170 U	160 U	140 U
Naphthalene	561	µg/kg	3.6 U	3.5 U	3.3 U	3 U	2.8 U
Nitrobenzene	NL	µg/kg	180 U	180 U	170 U	160 U	140 U
N-Nitroso-di-n-propylamine	NL	µg/kg	180 U	180 U	170 U	160 U	140 U
N-Nitrosodiphenylamine	NL	µg/kg	180 U	180 U	170 U	160 U	140 U
Pentachlorophenol	NL	µg/kg	7.2 U	7.2 U	6.7 U	6.2 U	5.6 U
Phenanthrene	1170	µg/kg	16	5.4	6.8	14	14
Phenol	NL	µg/kg	180 U	180 U	170 U	160 U	140 U
Pyrene	1520	µg/kg	24	8.8	14	21	42
Total PAH 17	22800	µg/kg	160.2	67.7	107.05	129.5	210.75
TOC	NL	mg/kg	28,600	33,900	46,000	36,200	18,100

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Table B-1
Sediment Sample Analytical Results - SVOCs
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-05	LMR11-05	LMR11-06	LMR11-06	LMR11-06
		Field Sample ID	LMR11-05-006	LMR11-05-018	LMR11-06-006	LMR11-06-024	LMR11-06-052
		Sample Date	8/4/2011	8/4/2011	8/3/2011	8/3/2011	8/3/2011
		Depth Interval (in bss)	0- 6	6- 18	0- 6	6- 24	24- 52
Chemical Name	**PEC[1]**	**Unit**					
1,1'-Biphenyl	NL	µg/kg	170 U	160 U	240 U	210 U	180 U
1,2,4,5-Tetrachlorobenzene	NL	µg/kg	170 U	160 U	240 U	210 U	180 U
2,2'-Oxybis(1-chloropropane)	NL	µg/kg	170 U	160 U	240 U	210 U	180 U
2,3,4,6-Tetrachlorophenol	NL	µg/kg	170 U	160 U	240 U	210 U	180 U
2,4,5-Trichlorophenol	NL	µg/kg	170 U	160 U	240 U	210 U	180 U
2,4,6-Trichlorophenol	NL	µg/kg	170 U	160 U	240 U	210 U	180 U
2,4-Dichlorophenol	NL	µg/kg	170 U	160 U	240 U	210 U	180 U
2,4-Dimethylphenol	NL	µg/kg	170 U	160 U	240 U	210 U	180 U
2,4-Dinitrophenol	NL	µg/kg	320 U	320 U	460 U	400 U	360 U
2,4-Dinitrotoluene	NL	µg/kg	170 U	160 U	240 U	210 U	180 U
2,6-Dinitrotoluene	NL	µg/kg	170 U	160 U	240 U	210 U	180 U
2-Chloronaphthalene	NL	µg/kg	170 U	160 U	240 U	210 U	180 U
2-Chlorophenol	NL	µg/kg	170 U	160 U	240 U	210 U	180 U
2-Methylnaphthalene	NL	µg/kg	3.2 U	3.2 U	4.6 UJ	4 U	3.6 U
2-Methylphenol	NL	µg/kg	170 U	160 U	240 U	210 U	180 U
2-Nitroaniline	NL	µg/kg	320 U	320 U	460 U	400 U	360 U
2-Nitrophenol	NL	µg/kg	170 U	160 U	240 U	210 U	180 U
3,3'-Dichlorobenzidine	NL	µg/kg	170 U	160 U	240 U	210 U	180 U
3-Nitroaniline	NL	µg/kg	320 U	320 U	460 U	400 U	360 U
4,6-Dinitro-2-methylphenol	NL	µg/kg	320 U	320 U	460 U	400 U	360 U
4-Bromophenyl-phenylether	NL	µg/kg	170 U	160 U	240 U	210 U	180 U
4-Chloro-3-methylphenol	NL	µg/kg	170 U	160 U	240 U	210 U	180 U
4-Chloroaniline	NL	µg/kg	170 U	160 U	240 U	210 U	180 U
4-Chlorophenyl-phenylether	NL	µg/kg	170 U	160 U	240 U	210 U	180 U
4-Methylphenol	NL	µg/kg	170 U	160 U	240 U	210 U	180 U
4-Nitroaniline	NL	µg/kg	320 U	320 U	460 U	400 U	360 U
4-Nitrophenol	NL	µg/kg	320 U	320 U	460 U	400 U	360 U
Acenaphthene	NL	µg/kg	3.2 U	3.2 U	4.6 U	4 U	3.6 U
Acenaphthylene	NL	µg/kg	3.2 U	3.2 U	4.6 U	4 U	3.6 U
Acetophenone	NL	µg/kg	170 U	160 U	240 U	210 U	180 U
Anthracene	845	µg/kg	3.2 U	3.2 U	4.6 U	4 U	5.6
Atrazine	NL	µg/kg	170 U	160 U	240 U	210 U	180 U
Benzaldehyde	NL	µg/kg	170 U	160 U	240 U	210 U	180 U
Benzo(a)anthracene	1050	µg/kg	3.2 U	3.6	6.8	4.3	4.6
Benzo(a)pyrene	1450	µg/kg	5.7	5.5	5.7	8.4	6.4

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Table B-1
Sediment Sample Analytical Results - SVOCs
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-05	LMR11-05	LMR11-06	LMR11-06	LMR11-06
		Field Sample ID	LMR11-05-006	LMR11-05-018	LMR11-06-006	LMR11-06-024	LMR11-06-052
		Sample Date	8/4/2011	8/4/2011	8/3/2011	8/3/2011	8/3/2011
		Depth Interval (in bss)	0- 6	6- 18	0- 6	6- 24	24- 52
Chemical Name	**PEC[1]**	**Unit**					
Benzo(b)fluoranthene	NL	µg/kg	4.5	4.1	4.6 U	6.3	4.9
Benzo(g,h,i)perylene	NL	µg/kg	3.2 U	3.2 U	4.6 U	4 U	3.6 U
Benzo(k)fluoranthene	NL	µg/kg	3.2 U	3.2 U	4.6 U	4 U	3.6 U
Bis(2-chloroethoxy)methane	NL	µg/kg	170 U	160 U	240 U	210 U	180 U
Bis(2-chloroethyl)ether	NL	µg/kg	170 U	160 U	240 U	210 U	180 U
Bis(2-ethylhexyl)phthalate	NL	µg/kg	65 J	160 U	240 U	210 U	180 U
Butylbenzylphthalate	NL	µg/kg	170 U	160 U	240 U	210 U	180 U
Caprolactam	NL	µg/kg	170 U	160 U	240 U	210 U	180 U
Carbazole	NL	µg/kg	170 U	160 U	240 U	210 U	180 U
Chrysene	1290	µg/kg	3.6	3.6	7	5.1	4.9
Dibenzo(a,h)anthracene	NL	µg/kg	3.2 U	3.2 U	4.6 U	4 U	3.6 U
Dibenzofuran	NL	µg/kg	170 U	160 U	240 U	210 U	180 U
Diethylphthalate	NL	µg/kg	170 U	160 U	240 U	210 U	180 U
Dimethylphthalate	NL	µg/kg	170 U	160 U	240 U	210 U	180 U
Di-n-butylphthalate	NL	µg/kg	170 U	160 U	240 U	210 U	180 U
Di-n-octylphthalate	NL	µg/kg	170 U	160 U	240 U	210 U	180 U
Fluoranthene	2230	µg/kg	7.3	6.9	19	11	11
Fluorene	536	µg/kg	3.2 U	3.2 U	4.6 U	4 U	3.6 U
Hexachlorobenzene	NL	µg/kg	170 U	160 U	240 U	210 U	180 U
Hexachlorobutadiene	NL	µg/kg	170 U	160 U	240 U	210 U	180 U
Hexachlorocyclopentadiene	NL	µg/kg	170 U	160 U	240 U	210 U	180 U
Hexachloroethane	NL	µg/kg	170 U	160 U	240 U	210 U	180 U
Indeno(1,2,3-cd)pyrene	NL	µg/kg	3.2 U	3.2 U	4.6 U	4 U	3.6 U
Isophorone	NL	µg/kg	170 U	160 U	240 U	210 U	180 U
Naphthalene	561	µg/kg	3.2 U	3.2 U	4.6 U	4 U	4.5
Nitrobenzene	NL	µg/kg	170 U	160 U	240 U	210 U	180 U
N-Nitroso-di-n-propylamine	NL	µg/kg	170 U	160 U	240 U	210 U	180 U
N-Nitrosodiphenylamine	NL	µg/kg	170 U	160 U	240 U	210 U	180 U
Pentachlorophenol	NL	µg/kg	6.5 U	6.5 U	9.4 U	8.1 U	7.2 U
Phenanthrene	1170	µg/kg	3.8	4.3	12	5.9	12
Phenol	NL	µg/kg	170 U	160 U	240 U	210 U	180 U
Pyrene	1520	µg/kg	6.3	7.1	19	9.4	9.5
Total PAH 17	22800	µg/kg	48.8	51.1	94.8	70.4	77.8
TOC	NL	mg/kg	16,900	18,000	35,800	24,400	23,900

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Table B-1
Sediment Sample Analytical Results - SVOCs
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-07	LMR11-08	LMR11-08	LMR11-08	LMR11-10
		Field Sample ID	LMR11-07-006	LMR11-08-006	LMR11-08-024	LMR11-08-052	LMR11-10-006
		Sample Date	8/3/2011	8/3/2011	8/5/2011	8/5/2011	8/4/2011
		Depth Interval (in bss)	0- 6	0- 6	6- 24	24- 52	0- 6
Chemical Name	**PEC[1]**	**Unit**					
1,1'-Biphenyl	NL	µg/kg	160 UJ	250 UJ	21 UJ	180 UJ	130 U
1,2,4,5-Tetrachlorobenzene	NL	µg/kg	160 U	250 U	25 UJ	180 UJ	130 U
2,2'-Oxybis(1-chloropropane)	NL	µg/kg	160 U	250 U	29 UJ	180 UJ	130 U
2,3,4,6-Tetrachlorophenol	NL	µg/kg	160 U	250 U	29 UJ	180 UJ	130 U
2,4,5-Trichlorophenol	NL	µg/kg	160 U	250 U	37 UJ	180 UJ	130 U
2,4,6-Trichlorophenol	NL	µg/kg	160 U	250 U	43 UJ	180 UJ	130 U
2,4-Dichlorophenol	NL	µg/kg	160 U	250 U	43 UJ	180 UJ	130 U
2,4-Dimethylphenol	NL	µg/kg	160 U	250 U	37 UJ	180 UJ	130 U
2,4-Dinitrophenol	NL	µg/kg	320 U	480 U	57 UJ	350 UJ	250 U
2,4-Dinitrotoluene	NL	µg/kg	160 U	250 U	27 UJ	180 UJ	130 U
2,6-Dinitrotoluene	NL	µg/kg	160 U	250 U	38 UJ	180 UJ	130 U
2-Chloronaphthalene	NL	µg/kg	160 U	250 U	28 UJ	180 UJ	130 U
2-Chlorophenol	NL	µg/kg	160 U	250 U	30 UJ	180 UJ	130 U
2-Methylnaphthalene	NL	µg/kg	3.2 UJ	4.8 UJ	1.3 UJ	3.5 UJ	2.5 U
2-Methylphenol	NL	µg/kg	160 U	250 U	38 UJ	180 UJ	130 U
2-Nitroaniline	NL	µg/kg	320 U	480 U	38 UJ	350 UJ	250 U
2-Nitrophenol	NL	µg/kg	160 U	250 U	35 UJ	180 UJ	130 U
3,3'-Dichlorobenzidine	NL	µg/kg	160 U	250 U	9.1 UJ	180 UJ	130 U
3-Nitroaniline	NL	µg/kg	320 U	480 U	39 UJ	350 UJ	250 U
4,6-Dinitro-2-methylphenol	NL	µg/kg	320 U	480 U	48 UJ	350 UJ	250 U
4-Bromophenyl-phenylether	NL	µg/kg	160 UJ	250 UJ	30 UJ	180 UJ	130 U
4-Chloro-3-methylphenol	NL	µg/kg	160 U	250 U	37 UJ	180 UJ	130 U
4-Chloroaniline	NL	µg/kg	160 U	250 U	31 UJ	180 UJ	130 U
4-Chlorophenyl-phenylether	NL	µg/kg	160 UJ	250 UJ	29 UJ	180 UJ	130 U
4-Methylphenol	NL	µg/kg	160 U	250 U	32 UJ	180 UJ	130 U
4-Nitroaniline	NL	µg/kg	320 U	480 U	59 UJ	350 UJ	250 U
4-Nitrophenol	NL	µg/kg	320 U	480 U	71 UJ	350 UJ	250 U
Acenaphthene	NL	µg/kg	3.2 U	4.8 U	1.1 UJ	3.5 UJ	2.5 U
Acenaphthylene	NL	µg/kg	3.2 U	4.8 U	1.1 UJ	3.5 UJ	2.5 U
Acetophenone	NL	µg/kg	160 U	250 U	52 UJ	180 UJ	130 U
Anthracene	845	µg/kg	3.2 U	4.8 U	1.1 UJ	3.5 UJ	3.1
Atrazine	NL	µg/kg	160 U	250 U	31 UJ	180 UJ	130 U
Benzaldehyde	NL	µg/kg	160 U	250 U	27 UJ	180 UJ	130 U
Benzo(a)anthracene	1050	µg/kg	3.2 U	4.8 U	6.7 J	3.5 UJ	9.8
Benzo(a)pyrene	1450	µg/kg	3.2 U	4.8 U	9.3 J	3.5 UJ	8.4

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Table B-1
Sediment Sample Analytical Results - SVOCs
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-07	LMR11-08	LMR11-08	LMR11-08	LMR11-10
		Field Sample ID	LMR11-07-006	LMR11-08-006	LMR11-08-024	LMR11-08-052	LMR11-10-006
		Sample Date	8/3/2011	8/3/2011	8/5/2011	8/5/2011	8/4/2011
		Depth Interval (in bss)	0- 6	0- 6	6- 24	24- 52	0- 6
Chemical Name	**PEC[1]**	**Unit**					
Benzo(b)fluoranthene	NL	µg/kg	3.2 U	4.8 U	9.3 J	3.5 UJ	10
Benzo(g,h,i)perylene	NL	µg/kg	3.2 U	4.8 U	4.8 J	3.5 UJ	3.4
Benzo(k)fluoranthene	NL	µg/kg	3.2 U	4.8 U	1.2 UJ	3.5 UJ	5.8
Bis(2-chloroethoxy)methane	NL	µg/kg	160 U	250 U	48 UJ	180 UJ	130 U
Bis(2-chloroethyl)ether	NL	µg/kg	160 U	250 U	25 UJ	180 UJ	130 U
Bis(2-ethylhexyl)phthalate	NL	µg/kg	160 UJ	250 UJ	47 UJ	180 UJ	93 J
Butylbenzylphthalate	NL	µg/kg	160 UJ	250 UJ	45 UJ	180 UJ	130 U
Caprolactam	NL	µg/kg	160 UJ	250 UJ	63 UJ	180 UJ	130 U
Carbazole	NL	µg/kg	160 UJ	250 UJ	43 UJ	180 UJ	130 U
Chrysene	1290	µg/kg	4.4	4.8 U	7.1 J	3.5 UJ	11
Dibenzo(a,h)anthracene	NL	µg/kg	3.2 U	4.8 U	0.83 UJ	3.5 UJ	2.5 U
Dibenzofuran	NL	µg/kg	160 UJ	250 UJ	25 UJ	180 UJ	130 U
Diethylphthalate	NL	µg/kg	160 UJ	250 UJ	34 UJ	180 UJ	130 U
Dimethylphthalate	NL	µg/kg	160 UJ	250 UJ	39 UJ	180 UJ	130 U
Di-n-butylphthalate	NL	µg/kg	160 UJ	250 UJ	25 UJ	180 UJ	130 U
Di-n-octylphthalate	NL	µg/kg	160 UJ	250 UJ	27 UJ	180 UJ	130 U
Fluoranthene	2230	µg/kg	8.9	4.8 U	9.9 J	6.6 J	21
Fluorene	536	µg/kg	3.2 U	4.8 U	1 UJ	3.5 UJ	2.5 U
Hexachlorobenzene	NL	µg/kg	160 U	250 U	46 UJ	180 UJ	130 U
Hexachlorobutadiene	NL	µg/kg	160 U	250 U	46 UJ	180 UJ	130 U
Hexachlorocyclopentadiene	NL	µg/kg	160 U	250 U	28 UJ	180 UJ	130 U
Hexachloroethane	NL	µg/kg	160 U	250 U	35 UJ	180 UJ	130 U
Indeno(1,2,3-cd)pyrene	NL	µg/kg	3.2 U	4.8 U	4.2 J	3.5 UJ	4.6
Isophorone	NL	µg/kg	160 U	250 U	35 UJ	180 UJ	130 U
Naphthalene	561	µg/kg	3.2 U	4.8 U	2 UJ	3.5 UJ	2.5 U
Nitrobenzene	NL	µg/kg	160 U	250 U	25 UJ	180 UJ	130 U
N-Nitroso-di-n-propylamine	NL	µg/kg	160 U	250 U	48 UJ	180 UJ	130 U
N-Nitrosodiphenylamine	NL	µg/kg	160 U	250 U	25 UJ	180 UJ	130 U
Pentachlorophenol	NL	µg/kg	6.4 U	9.7 U	6.4 UJ	7 UJ	5.1 U
Phenanthrene	1170	µg/kg	6	4.8 U	5.2 J	4.9 J	11
Phenol	NL	µg/kg	160 U	250 U	41 UJ	180 UJ	130 U
Pyrene	1520	µg/kg	7.9	7.1	12 J	6 J	19
Total PAH 17	22800	µg/kg	48	45.5	83.3	42	114.6
TOC	NL	mg/kg	7,180	27,700	27,500	22,200	9,830

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Table B-1
Sediment Sample Analytical Results - SVOCs
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-10	LMR11-10	LMR11-11	LMR11-11	LMR11-11
		Field Sample ID	LMR11-10-024	LMR11-10-045	LMR11-11-006	LMR11-11-024	LMR11-11-037
		Sample Date	8/4/2011	8/4/2011	8/5/2011	8/5/2011	8/5/2011
		Depth Interval (in bss)	6- 24	24- 45	0- 6	6- 24	24- 37
Chemical Name	**PEC[1]**	**Unit**					
1,1'-Biphenyl	NL	µg/kg	120 U	120 U	120 UJ	150 UJ	130 UJ
1,2,4,5-Tetrachlorobenzene	NL	µg/kg	120 U	120 U	120 UJ	150 UJ	130 UJ
2,2'-Oxybis(1-chloropropane)	NL	µg/kg	120 U	120 U	120 UJ	150 UJ	130 UJ
2,3,4,6-Tetrachlorophenol	NL	µg/kg	120 U	120 U	120 UJ	150 UJ	130 UJ
2,4,5-Trichlorophenol	NL	µg/kg	120 U	120 U	120 UJ	150 UJ	130 UJ
2,4,6-Trichlorophenol	NL	µg/kg	120 U	120 U	120 UJ	150 UJ	130 UJ
2,4-Dichlorophenol	NL	µg/kg	120 U	120 U	120 UJ	150 UJ	130 UJ
2,4-Dimethylphenol	NL	µg/kg	120 U	120 U	120 UJ	150 UJ	130 UJ
2,4-Dinitrophenol	NL	µg/kg	240 U	240 U	230 UJ	290 UJ	250 UJ
2,4-Dinitrotoluene	NL	µg/kg	120 U	120 U	120 UJ	150 UJ	130 UJ
2,6-Dinitrotoluene	NL	µg/kg	120 U	120 U	120 UJ	150 UJ	130 UJ
2-Chloronaphthalene	NL	µg/kg	120 U	120 U	120 UJ	150 UJ	130 UJ
2-Chlorophenol	NL	µg/kg	120 U	120 U	120 UJ	150 UJ	130 UJ
2-Methylnaphthalene	NL	µg/kg	2.4 U	2.4 U	2.3 UJ	29 UJ	2.9 J
2-Methylphenol	NL	µg/kg	120 U	120 U	120 UJ	150 UJ	130 UJ
2-Nitroaniline	NL	µg/kg	240 U	240 U	230 UJ	290 UJ	250 UJ
2-Nitrophenol	NL	µg/kg	120 U	120 U	120 UJ	150 UJ	130 UJ
3,3'-Dichlorobenzidine	NL	µg/kg	120 U	120 U	120 UJ	150 UJ	130 UJ
3-Nitroaniline	NL	µg/kg	240 U	240 U	230 UJ	290 UJ	250 UJ
4,6-Dinitro-2-methylphenol	NL	µg/kg	240 U	240 U	230 UJ	290 UJ	250 UJ
4-Bromophenyl-phenylether	NL	µg/kg	120 U	120 U	120 UJ	150 UJ	130 UJ
4-Chloro-3-methylphenol	NL	µg/kg	120 U	120 U	120 UJ	150 UJ	130 UJ
4-Chloroaniline	NL	µg/kg	120 U	120 U	120 UJ	150 UJ	130 UJ
4-Chlorophenyl-phenylether	NL	µg/kg	120 U	120 U	120 UJ	150 UJ	130 UJ
4-Methylphenol	NL	µg/kg	120 U	120 U	120 UJ	150 UJ	130 UJ
4-Nitroaniline	NL	µg/kg	240 U	240 U	230 UJ	290 UJ	250 UJ
4-Nitrophenol	NL	µg/kg	240 U	240 U	230 UJ	290 UJ	250 UJ
Acenaphthene	NL	µg/kg	2.4 U	2.4 U	2.3 UJ	29 UJ	2.8 J
Acenaphthylene	NL	µg/kg	2.7	2.4 U	2.3 UJ	29 UJ	2.5 UJ
Acetophenone	NL	µg/kg	120 U	120 U	120 UJ	150 UJ	130 UJ
Anthracene	845	µg/kg	4.2	2.4 U	2.3 UJ	29 UJ	9.5 J
Atrazine	NL	µg/kg	120 U	120 U	120 UJ	150 UJ	130 UJ
Benzaldehyde	NL	µg/kg	120 U	120 U	120 UJ	150 UJ	130 UJ
Benzo(a)anthracene	1050	µg/kg	15	7.2	4.5 J	60 J	27 J
Benzo(a)pyrene	1450	µg/kg	14	8.2	5.2 J	85 J	25 J

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Table B-1
Sediment Sample Analytical Results - SVOCs
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-10	LMR11-10	LMR11-11	LMR11-11	LMR11-11
		Field Sample ID	LMR11-10-024	LMR11-10-045	LMR11-11-006	LMR11-11-024	LMR11-11-037
		Sample Date	8/4/2011	8/4/2011	8/5/2011	8/5/2011	8/5/2011
		Depth Interval (in bss)	6- 24	24- 45	0- 6	6- 24	24- 37
Chemical Name	**PEC[1]**	**Unit**					
Benzo(b)fluoranthene	NL	µg/kg	16	6	6.2 J	86 J	27 J
Benzo(g,h,i)perylene	NL	µg/kg	4.6	2.4 U	2.3 UJ	29 UJ	15 J
Benzo(k)fluoranthene	NL	µg/kg	8.8	2.9	3.1 J	36 J	16 J
Bis(2-chloroethoxy)methane	NL	µg/kg	120 U	120 U	120 UJ	150 UJ	130 UJ
Bis(2-chloroethyl)ether	NL	µg/kg	120 U	120 U	120 UJ	150 UJ	130 UJ
Bis(2-ethylhexyl)phthalate	NL	µg/kg	120 U	120 U	120 UJ	37 J	130 UJ
Butylbenzylphthalate	NL	µg/kg	120 U	120 U	120 UJ	150 UJ	130 UJ
Caprolactam	NL	µg/kg	120 U	120 U	120 UJ	150 UJ	130 UJ
Carbazole	NL	µg/kg	120 U	120 U	120 UJ	150 UJ	130 UJ
Chrysene	1290	µg/kg	15	6.8	6 J	77 J	27 J
Dibenzo(a,h)anthracene	NL	µg/kg	2.4 U	2.4 U	2.3 UJ	29 UJ	3.8 J
Dibenzofuran	NL	µg/kg	120 U	120 U	120 UJ	150 UJ	130 UJ
Diethylphthalate	NL	µg/kg	120 U	120 U	120 UJ	150 UJ	130 UJ
Dimethylphthalate	NL	µg/kg	120 U	120 U	120 UJ	150 UJ	130 UJ
Di-n-butylphthalate	NL	µg/kg	120 U	120 U	120 UJ	150 UJ	130 UJ
Di-n-octylphthalate	NL	µg/kg	120 U	120 U	120 UJ	150 UJ	130 UJ
Fluoranthene	2230	µg/kg	22	9.6	9.3 J	100 J	51 J
Fluorene	536	µg/kg	2.4 U	2.4 U	2.3 UJ	29 UJ	4 J
Hexachlorobenzene	NL	µg/kg	120 U	120 U	120 UJ	150 UJ	130 UJ
Hexachlorobutadiene	NL	µg/kg	120 U	120 U	120 UJ	150 UJ	130 UJ
Hexachlorocyclopentadiene	NL	µg/kg	120 U	120 U	120 UJ	150 UJ	130 UJ
Hexachloroethane	NL	µg/kg	120 U	120 U	120 UJ	150 UJ	130 UJ
Indeno(1,2,3-cd)pyrene	NL	µg/kg	6.7	2.7	2.7 J	36 J	14 J
Isophorone	NL	µg/kg	120 U	120 U	120 UJ	150 UJ	130 UJ
Naphthalene	561	µg/kg	2.4 U	2.4 U	2.3 UJ	29 UJ	4.1 J
Nitrobenzene	NL	µg/kg	120 U	120 U	120 UJ	150 UJ	130 UJ
N-Nitroso-di-n-propylamine	NL	µg/kg	120 U	120 U	120 UJ	150 UJ	130 UJ
N-Nitrosodiphenylamine	NL	µg/kg	120 U	120 U	120 UJ	150 UJ	130 UJ
Pentachlorophenol	NL	µg/kg	4.9 U	4.8 U	4.8 UJ	59 UJ	5.1 UJ
Phenanthrene	1170	µg/kg	11	5.6	4.9 J	52 J	34 J
Phenol	NL	µg/kg	120 U	120 U	120 UJ	150 UJ	130 UJ
Pyrene	1520	µg/kg	21	10	9.9 J	110 J	48 J
Total PAH 17	22800	µg/kg	147	68.6	61	758	312.35
TOC	NL	mg/kg	11,300	16,100	9,010	19,200	13,800

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Table B-1
Sediment Sample Analytical Results - SVOCs
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-12	LMR11-13	LMR11-13	LMR11-14	LMR11-14
		Field Sample ID	LMR11-12-006	LMR11-13-006	LMR11-13-026	LMR11-14-006	LMR11-14-024
		Sample Date	8/3/2011	8/3/2011	8/3/2011	8/5/2011	8/5/2011
		Depth Interval (in bss)	0- 6	0- 6	6- 26	0- 6	6- 24
Chemical Name	**PEC[1]**	**Unit**					
1,1'-Biphenyl	NL	µg/kg	230 U	170 U	140 U	130 UJ	160 UJ
1,2,4,5-Tetrachlorobenzene	NL	µg/kg	230 U	170 U	140 U	130 UJ	160 UJ
2,2'-Oxybis(1-chloropropane)	NL	µg/kg	230 U	170 U	140 U	130 UJ	160 UJ
2,3,4,6-Tetrachlorophenol	NL	µg/kg	230 U	170 U	140 U	130 UJ	160 UJ
2,4,5-Trichlorophenol	NL	µg/kg	230 U	170 U	140 U	130 UJ	160 UJ
2,4,6-Trichlorophenol	NL	µg/kg	230 U	170 U	140 U	130 UJ	160 UJ
2,4-Dichlorophenol	NL	µg/kg	230 U	170 U	140 U	130 UJ	160 UJ
2,4-Dimethylphenol	NL	µg/kg	230 U	170 U	140 U	130 UJ	160 UJ
2,4-Dinitrophenol	NL	µg/kg	440 U	330 U	260 U	250 UJ	310 UJ
2,4-Dinitrotoluene	NL	µg/kg	230 U	170 U	140 U	130 UJ	160 UJ
2,6-Dinitrotoluene	NL	µg/kg	230 U	170 U	140 U	130 UJ	160 UJ
2-Chloronaphthalene	NL	µg/kg	230 U	170 U	140 U	130 UJ	160 UJ
2-Chlorophenol	NL	µg/kg	230 U	170 U	140 U	130 UJ	160 UJ
2-Methylnaphthalene	NL	µg/kg	4.4 UJ	3.3 U	2.6 U	39 J	3.1 UJ
2-Methylphenol	NL	µg/kg	230 U	170 U	140 U	130 UJ	160 UJ
2-Nitroaniline	NL	µg/kg	440 U	330 U	260 U	250 UJ	310 UJ
2-Nitrophenol	NL	µg/kg	230 U	170 U	140 U	130 UJ	160 UJ
3,3'-Dichlorobenzidine	NL	µg/kg	230 U	170 U	140 U	130 UJ	160 UJ
3-Nitroaniline	NL	µg/kg	440 U	330 U	260 U	250 UJ	310 UJ
4,6-Dinitro-2-methylphenol	NL	µg/kg	440 U	330 U	260 U	250 UJ	310 UJ
4-Bromophenyl-phenylether	NL	µg/kg	230 U	170 U	140 U	130 UJ	160 UJ
4-Chloro-3-methylphenol	NL	µg/kg	230 U	170 U	140 U	130 UJ	160 UJ
4-Chloroaniline	NL	µg/kg	230 U	170 U	140 U	130 UJ	160 UJ
4-Chlorophenyl-phenylether	NL	µg/kg	230 U	170 U	140 U	130 UJ	160 UJ
4-Methylphenol	NL	µg/kg	230 U	37 J	140 U	77 J	160 UJ
4-Nitroaniline	NL	µg/kg	440 U	330 U	260 U	250 UJ	310 UJ
4-Nitrophenol	NL	µg/kg	440 U	330 U	260 U	250 UJ	310 UJ
Acenaphthene	NL	µg/kg	4.4 U	3.3 U	2.6 U	300 J	3.1 UJ
Acenaphthylene	NL	µg/kg	4.4 U	3.3 U	2.6 U	6.2 J	3.1 UJ
Acetophenone	NL	µg/kg	230 U	170 U	140 U	51 J	160 UJ
Anthracene	845	µg/kg	4.4 U	3.3 U	2.6 U	1,100 J	3.3 J
Atrazine	NL	µg/kg	230 U	170 U	140 U	130 UJ	160 UJ
Benzaldehyde	NL	µg/kg	230 U	170 U	140 U	130 UJ	160 UJ
Benzo(a)anthracene	1050	µg/kg	4.4 U	4.3	2.6 U	10,000 J	12 J
Benzo(a)pyrene	1450	µg/kg	4.4 U	7	2.6 U	9,600 J	3.1 UJ

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Table B-1
Sediment Sample Analytical Results - SVOCs
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-12	LMR11-13	LMR11-13	LMR11-14	LMR11-14
		Field Sample ID	LMR11-12-006	LMR11-13-006	LMR11-13-026	LMR11-14-006	LMR11-14-024
		Sample Date	8/3/2011	8/3/2011	8/3/2011	8/5/2011	8/5/2011
		Depth Interval (in bss)	0- 6	0- 6	6- 26	0- 6	6- 24
Chemical Name	**PEC[1]**	**Unit**					
Benzo(b)fluoranthene	NL	µg/kg	4.4 U	5.2	2.6 U	11,000 J	3.1 UJ
Benzo(g,h,i)perylene	NL	µg/kg	4.4 U	3.3 U	2.6 U	5800 J	3.1 UJ
Benzo(k)fluoranthene	NL	µg/kg	4.4 U	3.3 U	2.6 U	5,600 J	3.1 UJ
Bis(2-chloroethoxy)methane	NL	µg/kg	230 U	170 U	140 U	130 UJ	160 UJ
Bis(2-chloroethyl)ether	NL	µg/kg	230 U	170 U	140 U	130 UJ	160 UJ
Bis(2-ethylhexyl)phthalate	NL	µg/kg	230 U	170 U	36 J	130 UJ	160 UJ
Butylbenzylphthalate	NL	µg/kg	230 U	170 U	140 U	130 UJ	160 UJ
Caprolactam	NL	µg/kg	230 U	170 U	140 U	130 UJ	160 UJ
Carbazole	NL	µg/kg	230 U	170 U	140 U	880 J	160 UJ
Chrysene	1290	µg/kg	4.8	5	2.6 U	9,500 J	13 J
Dibenzo(a,h)anthracene	NL	µg/kg	4.4 U	3.3 U	2.6 U	1,400 J	3.1 UJ
Dibenzofuran	NL	µg/kg	230 U	170 U	140 U	130 J	160 UJ
Diethylphthalate	NL	µg/kg	230 U	170 U	140 U	130 UJ	160 UJ
Dimethylphthalate	NL	µg/kg	230 U	170 U	140 U	130 UJ	160 UJ
Di-n-butylphthalate	NL	µg/kg	230 U	170 U	140 U	130 UJ	160 UJ
Di-n-octylphthalate	NL	µg/kg	230 U	170 U	140 U	130 UJ	160 UJ
Fluoranthene	2230	µg/kg	9	11	2.6 U	13,000 J	20 J
Fluorene	536	µg/kg	4.4 U	3.3 U	2.6 U	260 J	3.1 UJ
Hexachlorobenzene	NL	µg/kg	230 U	170 U	140 U	130 UJ	160 UJ
Hexachlorobutadiene	NL	µg/kg	230 U	170 U	140 U	130 UJ	160 UJ
Hexachlorocyclopentadiene	NL	µg/kg	230 U	170 U	140 U	130 UJ	160 UJ
Hexachloroethane	NL	µg/kg	230 U	170 U	140 U	130 UJ	160 UJ
Indeno(1,2,3-cd)pyrene	NL	µg/kg	4.4 U	3.3 U	2.6 U	6,100 J	3.1 UJ
Isophorone	NL	µg/kg	230 U	170 U	140 U	130 UJ	160 UJ
Naphthalene	561	µg/kg	4.4 U	3.4	2.6 U	69 J	3.1 UJ
Nitrobenzene	NL	µg/kg	230 U	170 U	140 U	130 UJ	160 UJ
N-Nitroso-di-n-propylamine	NL	µg/kg	230 U	170 U	140 U	130 UJ	160 UJ
N-Nitrosodiphenylamine	NL	µg/kg	230 U	170 U	140 U	130 UJ	160 UJ
Pentachlorophenol	NL	µg/kg	9 U	6.7 U	5.4 U	5.1 UJ	6.2 UJ
Phenanthrene	1170	µg/kg	4.4 U	8.7	2.6 U	4,700 J	11 J
Phenol	NL	µg/kg	230 U	170 U	140 U	130 UJ	160 UJ
Pyrene	1520	µg/kg	12	10	2.6 U	14,000 J	23 J
Total PAH 17	22800	µg/kg	56.6	69.45	22.1	92474.2	99.35
TOC	NL	mg/kg	34,400	24,200	19,400	11,400	18,500

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Table B-1
Sediment Sample Analytical Results - SVOCs
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-14	LMR11-15	LMR11-15	LMR11-15	LMR11-15
		Field Sample ID	LMR11-14-045	LMR11-15-006	LMR11-15-006-DP	LMR11-15-024	LMR11-15-024-DP
		Sample Date	8/5/2011	8/9/2011	8/9/2011	8/9/2011	8/9/2011
		Depth Interval (in bss)	24- 45	0- 6	0- 6	6- 24	6- 24
Chemical Name	**PEC[1]**	**Unit**					
1,1'-Biphenyl	NL	µg/kg	150 UJ	320 U	340 U	280 U	280 U
1,2,4,5-Tetrachlorobenzene	NL	µg/kg	150 UJ	320 U	340 U	280 U	280 U
2,2'-Oxybis(1-chloropropane)	NL	µg/kg	150 UJ	320 U	340 U	280 U	280 U
2,3,4,6-Tetrachlorophenol	NL	µg/kg	150 UJ	320 U	340 U	280 U	280 U
2,4,5-Trichlorophenol	NL	µg/kg	150 UJ	320 U	340 U	280 U	280 U
2,4,6-Trichlorophenol	NL	µg/kg	150 UJ	320 U	340 U	280 U	280 U
2,4-Dichlorophenol	NL	µg/kg	150 UJ	320 U	340 U	280 U	280 U
2,4-Dimethylphenol	NL	µg/kg	150 UJ	320 U	340 U	280 U	280 U
2,4-Dinitrophenol	NL	µg/kg	300 UJ	620 U	660 U	550 U	550 U
2,4-Dinitrotoluene	NL	µg/kg	150 UJ	320 U	340 U	280 U	280 U
2,6-Dinitrotoluene	NL	µg/kg	150 UJ	320 U	340 U	280 U	280 U
2-Chloronaphthalene	NL	µg/kg	150 UJ	320 U	340 U	280 U	280 U
2-Chlorophenol	NL	µg/kg	150 UJ	320 U	340 U	280 U	280 U
2-Methylnaphthalene	NL	µg/kg	3 UJ	6.2 U	6.6 U	5.5 U	5.5 U
2-Methylphenol	NL	µg/kg	150 UJ	320 U	340 U	280 U	280 U
2-Nitroaniline	NL	µg/kg	300 UJ	620 U	660 U	550 U	550 U
2-Nitrophenol	NL	µg/kg	150 UJ	320 U	340 U	280 U	280 U
3,3'-Dichlorobenzidine	NL	µg/kg	150 UJ	320 U	340 U	280 U	280 U
3-Nitroaniline	NL	µg/kg	300 UJ	620 U	660 U	550 U	550 U
4,6-Dinitro-2-methylphenol	NL	µg/kg	300 UJ	620 U	660 U	550 U	550 U
4-Bromophenyl-phenylether	NL	µg/kg	150 UJ	320 U	340 U	280 U	280 U
4-Chloro-3-methylphenol	NL	µg/kg	150 UJ	320 U	340 U	280 U	280 U
4-Chloroaniline	NL	µg/kg	150 UJ	320 U	340 U	280 U	280 U
4-Chlorophenyl-phenylether	NL	µg/kg	150 UJ	320 U	340 U	280 U	280 U
4-Methylphenol	NL	µg/kg	150 UJ	320 U	340 U	280 U	280 U
4-Nitroaniline	NL	µg/kg	300 UJ	620 U	660 U	550 U	550 U
4-Nitrophenol	NL	µg/kg	300 UJ	620 U	660 U	550 U	550 U
Acenaphthene	NL	µg/kg	3 UJ	6.2 U	6.6 U	5.5 U	5.5 U
Acenaphthylene	NL	µg/kg	3 UJ	6.2 U	6.6 U	5.5 U	5.5 U
Acetophenone	NL	µg/kg	150 UJ	320 U	340 U	280 U	280 U
Anthracene	845	µg/kg	3 UJ	6.2 U	6.6 U	5.5 U	5.5 U
Atrazine	NL	µg/kg	150 UJ	320 U	340 U	280 U	280 U
Benzaldehyde	NL	µg/kg	150 UJ	320 U	340 U	280 U	280 U
Benzo(a)anthracene	1050	µg/kg	8.2 J	6.2 U	6.6 U	5.5 U	5.5 U
Benzo(a)pyrene	1450	µg/kg	14 J	6.2 U	6.6 U	5.5 U	5.5 U

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Table B-1
Sediment Sample Analytical Results - SVOCs
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-14	LMR11-15	LMR11-15	LMR11-15	LMR11-15
		Field Sample ID	LMR11-14-045	LMR11-15-006	LMR11-15-006-DP	LMR11-15-024	LMR11-15-024-DP
		Sample Date	8/5/2011	8/9/2011	8/9/2011	8/9/2011	8/9/2011
		Depth Interval (in bss)	24- 45	0- 6	0- 6	6- 24	6- 24
Chemical Name	**PEC[1]**	**Unit**					
Benzo(b)fluoranthene	NL	µg/kg	11 J	6.2 U	6.6 U	7.9	8.5
Benzo(g,h,i)perylene	NL	µg/kg	6.7 J	6.2 U	6.6 U	5.5 U	5.5 U
Benzo(k)fluoranthene	NL	µg/kg	6.3 J	6.2 U	6.6 U	5.5 U	5.5 U
Bis(2-chloroethoxy)methane	NL	µg/kg	150 UJ	320 U	340 U	280 U	280 U
Bis(2-chloroethyl)ether	NL	µg/kg	150 UJ	320 U	340 U	280 U	280 U
Bis(2-ethylhexyl)phthalate	NL	µg/kg	150 UJ	320 U	340 U	280 U	280 U
Butylbenzylphthalate	NL	µg/kg	150 UJ	320 U	340 U	280 U	280 U
Caprolactam	NL	µg/kg	150 UJ	320 U	340 U	280 U	280 U
Carbazole	NL	µg/kg	150 UJ	320 U	340 U	280 U	280 U
Chrysene	1290	µg/kg	9.4 J	6.2 U	6.6 U	5.6	5.6
Dibenzo(a,h)anthracene	NL	µg/kg	3 UJ	6.2 U	6.6 U	5.5 U	5.5 U
Dibenzofuran	NL	µg/kg	150 UJ	320 U	340 U	280 U	280 U
Diethylphthalate	NL	µg/kg	150 UJ	320 U	340 U	280 U	280 U
Dimethylphthalate	NL	µg/kg	150 UJ	320 U	340 U	280 U	280 U
Di-n-butylphthalate	NL	µg/kg	150 UJ	320 U	340 U	280 U	280 U
Di-n-octylphthalate	NL	µg/kg	150 UJ	320 U	340 U	280 U	280 U
Fluoranthene	2230	µg/kg	15 J	6.2 U	6.6 U	15	13
Fluorene	536	µg/kg	3 UJ	6.2 U	6.6 U	5.5 U	5.5 U
Hexachlorobenzene	NL	µg/kg	150 UJ	320 U	340 U	280 U	280 U
Hexachlorobutadiene	NL	µg/kg	150 UJ	320 U	340 U	280 U	280 U
Hexachlorocyclopentadiene	NL	µg/kg	150 UJ	320 U	340 U	280 U	280 U
Hexachloroethane	NL	µg/kg	150 UJ	320 U	340 U	280 U	280 U
Indeno(1,2,3-cd)pyrene	NL	µg/kg	5.1 J	6.2 U	6.6 U	5.5 U	5.5 U
Isophorone	NL	µg/kg	150 UJ	320 U	340 U	280 U	280 U
Naphthalene	561	µg/kg	3.4 J	6.2 U	6.6 U	5.5 U	5.5 U
Nitrobenzene	NL	µg/kg	150 UJ	320 U	340 U	280 U	280 U
N-Nitroso-di-n-propylamine	NL	µg/kg	150 UJ	320 U	340 U	280 U	280 U
N-Nitrosodiphenylamine	NL	µg/kg	150 UJ	320 U	340 U	280 U	280 U
Pentachlorophenol	NL	µg/kg	6.1 UJ	13 UJ	13 U	11 U	11 U
Phenanthrene	1170	µg/kg	11 J	6.2 U	6.6 U	12	7.3
Phenol	NL	µg/kg	150 UJ	320 U	340 U	280 U	280 U
Pyrene	1520	µg/kg	21 J	6.2 U	6.6 U	13	9.9
Total PAH 17	22800	µg/kg	120.1	52.7	56.1	86.5	77.3
TOC	NL	mg/kg	25,800	15,000 J	32,500 J	24,600 J	14,200 J

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Table B-1
Sediment Sample Analytical Results - SVOCs
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-15	LMR11-15	LMR11-15	LMR11-15	LMR11-16
		Field Sample ID	LMR11-15-048	LMR11-15-048-DP	LMR11-15-072	LMR11-15-104	LMR11-16-006
		Sample Date	8/9/2011	8/9/2011	8/9/2011	8/9/2011	8/9/2011
		Depth Interval (in bss)	24- 48	24- 48	48- 72	72- 104	0- 6
Chemical Name	**PEC[1]**	**Unit**					
1,1'-Biphenyl	NL	µg/kg	280 U	270 U	260 U	270 U	320 U
1,2,4,5-Tetrachlorobenzene	NL	µg/kg	280 U	270 U	260 U	270 U	320 U
2,2'-Oxybis(1-chloropropane)	NL	µg/kg	280 U	270 U	260 U	270 U	320 U
2,3,4,6-Tetrachlorophenol	NL	µg/kg	280 U	270 U	260 U	270 U	320 U
2,4,5-Trichlorophenol	NL	µg/kg	280 U	270 U	260 U	270 U	320 U
2,4,6-Trichlorophenol	NL	µg/kg	280 U	270 U	260 U	270 U	320 U
2,4-Dichlorophenol	NL	µg/kg	280 U	270 U	260 U	270 U	320 U
2,4-Dimethylphenol	NL	µg/kg	280 U	270 U	260 U	270 U	320 U
2,4-Dinitrophenol	NL	µg/kg	540 U	530 U	510 U	520 U	620 U
2,4-Dinitrotoluene	NL	µg/kg	280 U	270 U	260 U	270 U	320 U
2,6-Dinitrotoluene	NL	µg/kg	280 U	270 U	260 U	270 U	320 U
2-Chloronaphthalene	NL	µg/kg	280 U	270 U	260 U	270 U	320 U
2-Chlorophenol	NL	µg/kg	280 U	270 U	260 U	270 U	320 U
2-Methylnaphthalene	NL	µg/kg	5.4 U	5.3 U	5.1 U	5.2 U	6.2 U
2-Methylphenol	NL	µg/kg	280 U	270 U	260 U	270 U	320 U
2-Nitroaniline	NL	µg/kg	540 U	530 U	510 U	520 U	620 U
2-Nitrophenol	NL	µg/kg	280 U	270 U	260 U	270 U	320 U
3,3'-Dichlorobenzidine	NL	µg/kg	280 U	270 U	260 U	270 U	320 U
3-Nitroaniline	NL	µg/kg	540 U	530 U	510 U	520 U	620 U
4,6-Dinitro-2-methylphenol	NL	µg/kg	540 U	530 U	510 U	520 U	620 U
4-Bromophenyl-phenylether	NL	µg/kg	280 U	270 U	260 U	270 U	320 U
4-Chloro-3-methylphenol	NL	µg/kg	280 U	270 U	260 U	270 U	320 U
4-Chloroaniline	NL	µg/kg	280 U	270 U	260 U	270 U	320 U
4-Chlorophenyl-phenylether	NL	µg/kg	280 U	270 U	260 U	270 U	320 U
4-Methylphenol	NL	µg/kg	280 U	270 U	260 U	270 U	320 U
4-Nitroaniline	NL	µg/kg	540 U	530 U	510 U	520 U	620 U
4-Nitrophenol	NL	µg/kg	540 U	530 U	510 U	520 U	620 U
Acenaphthene	NL	µg/kg	5.4 U	5.3 U	5.1 U	5.2 U	6.2 U
Acenaphthylene	NL	µg/kg	5.4 U	5.3 U	5.1 U	5.2 U	6.2 U
Acetophenone	NL	µg/kg	280 U	270 U	260 U	270 U	320 U
Anthracene	845	µg/kg	5.4 U	5.3 U	5.1 U	5.2 U	6.2 U
Atrazine	NL	µg/kg	280 U	270 U	260 U	270 U	320 U
Benzaldehyde	NL	µg/kg	280 U	270 U	260 U	270 U	320 U
Benzo(a)anthracene	1050	µg/kg	5.4 U	6.8	10	5.2 U	6.7
Benzo(a)pyrene	1450	µg/kg	5.4 U	7.3	12	5.2 U	7

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Table B-1
Sediment Sample Analytical Results - SVOCs
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-15	LMR11-15	LMR11-15	LMR11-15	LMR11-16
		Field Sample ID	LMR11-15-048	LMR11-15-048-DP	LMR11-15-072	LMR11-15-104	LMR11-16-006
		Sample Date	8/9/2011	8/9/2011	8/9/2011	8/9/2011	8/9/2011
		Depth Interval (in bss)	24- 48	24- 48	48- 72	72- 104	0- 6
Chemical Name	**PEC[1]**	**Unit**					
Benzo(b)fluoranthene	NL	µg/kg	5.4 U	11	16	5.2 U	6.2 U
Benzo(g,h,i)perylene	NL	µg/kg	5.4 U	5.3 U	7.4	5.2 U	6.2 U
Benzo(k)fluoranthene	NL	µg/kg	5.4 U	5.3 U	5.6	5.2 U	6.2 U
Bis(2-chloroethoxy)methane	NL	µg/kg	280 U	270 U	260 U	270 U	320 U
Bis(2-chloroethyl)ether	NL	µg/kg	280 U	270 U	260 U	270 U	320 U
Bis(2-ethylhexyl)phthalate	NL	µg/kg	280 U	270 U	260 U	270 U	320 U
Butylbenzylphthalate	NL	µg/kg	280 U	270 U	260 U	270 U	320 U
Caprolactam	NL	µg/kg	280 U	270 U	260 U	270 U	320 U
Carbazole	NL	µg/kg	280 U	270 U	260 U	270 U	320 U
Chrysene	1290	µg/kg	5.4 U	7.1	11	5.6	9.3
Dibenzo(a,h)anthracene	NL	µg/kg	5.4 U	5.3 U	5.1 U	5.2 U	6.2 U
Dibenzofuran	NL	µg/kg	280 U	270 U	260 U	270 U	320 U
Diethylphthalate	NL	µg/kg	280 U	270 U	260 U	270 U	320 U
Dimethylphthalate	NL	µg/kg	280 U	270 U	260 U	270 U	320 U
Di-n-butylphthalate	NL	µg/kg	280 U	270 U	260 U	270 U	320 U
Di-n-octylphthalate	NL	µg/kg	280 U	270 U	260 U	270 U	320 U
Fluoranthene	2230	µg/kg	8.5	20	24	19	21
Fluorene	536	µg/kg	5.4 U	5.3 U	5.1 U	5.2 U	6.2 U
Hexachlorobenzene	NL	µg/kg	280 U	270 U	260 U	270 U	320 U
Hexachlorobutadiene	NL	µg/kg	280 U	270 U	260 U	270 U	320 U
Hexachlorocyclopentadiene	NL	µg/kg	280 U	270 U	260 U	270 U	320 U
Hexachloroethane	NL	µg/kg	280 U	270 U	260 U	270 U	320 U
Indeno(1,2,3-cd)pyrene	NL	µg/kg	5.4 U	5.3 U	6.4	5.2 U	6.2 U
Isophorone	NL	µg/kg	280 U	270 U	260 U	270 U	320 U
Naphthalene	561	µg/kg	5.4 U	5.3 U	5.1 U	5.2 U	6.2 U
Nitrobenzene	NL	µg/kg	280 U	270 U	260 U	270 U	320 U
N-Nitroso-di-n-propylamine	NL	µg/kg	280 U	270 U	260 U	270 U	320 U
N-Nitrosodiphenylamine	NL	µg/kg	280 U	270 U	260 U	270 U	320 U
Pentachlorophenol	NL	µg/kg	11 UJ	11 U	10 U	11 U	13 UJ
Phenanthrene	1170	µg/kg	6	9.6	18	19	17
Phenol	NL	µg/kg	280 U	270 U	260 U	270 U	320 U
Pyrene	1520	µg/kg	10	14	22	14	19
Total PAH 17	22800	µg/kg	62.3	102.3	150.25	91.4	114.1
TOC	NL	mg/kg	26,000	22,600	27,300	44,200	27,800

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Table B-1
Sediment Sample Analytical Results - SVOCs
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-16	LMR11-16	LMR11-16	LMR11-17	LMR11-17
		Field Sample ID	LMR11-16-024	LMR11-16-048	LMR11-16-072	LMR11-17-006	LMR11-17-021
		Sample Date	8/9/2011	8/9/2011	8/9/2011	8/4/2011	8/4/2011
		Depth Interval (in bss)	6- 24	24- 48	48- 72	0- 6	6- 21
Chemical Name	**PEC[1]**	**Unit**					
1,1'-Biphenyl	NL	µg/kg	320 U	310 U	290 U	130 U	120 U
1,2,4,5-Tetrachlorobenzene	NL	µg/kg	320 U	310 U	290 U	130 U	120 U
2,2'-Oxybis(1-chloropropane)	NL	µg/kg	320 U	310 U	290 U	130 U	120 U
2,3,4,6-Tetrachlorophenol	NL	µg/kg	320 U	310 U	290 U	130 U	120 U
2,4,5-Trichlorophenol	NL	µg/kg	320 U	310 U	290 U	130 U	120 U
2,4,6-Trichlorophenol	NL	µg/kg	320 U	310 U	290 U	130 U	120 U
2,4-Dichlorophenol	NL	µg/kg	320 U	310 U	290 U	130 U	120 U
2,4-Dimethylphenol	NL	µg/kg	320 U	310 U	290 U	130 U	120 U
2,4-Dinitrophenol	NL	µg/kg	630 U	600 U	550 U	250 U	230 U
2,4-Dinitrotoluene	NL	µg/kg	320 U	310 U	290 U	130 U	120 U
2,6-Dinitrotoluene	NL	µg/kg	320 U	310 U	290 U	130 U	120 U
2-Chloronaphthalene	NL	µg/kg	320 U	310 U	290 U	130 U	120 U
2-Chlorophenol	NL	µg/kg	320 U	310 U	290 U	130 U	120 U
2-Methylnaphthalene	NL	µg/kg	6.3 U	6 U	5.5 U	2.5 U	2.3 U
2-Methylphenol	NL	µg/kg	320 U	310 U	290 U	130 U	120 U
2-Nitroaniline	NL	µg/kg	630 U	600 U	550 U	250 U	230 U
2-Nitrophenol	NL	µg/kg	320 U	310 U	290 U	130 UJ	120 UJ
3,3'-Dichlorobenzidine	NL	µg/kg	320 U	310 U	290 U	130 U	120 U
3-Nitroaniline	NL	µg/kg	630 U	600 U	550 U	250 U	230 U
4,6-Dinitro-2-methylphenol	NL	µg/kg	630 U	600 U	550 U	250 U	230 U
4-Bromophenyl-phenylether	NL	µg/kg	320 U	310 U	290 U	130 U	120 U
4-Chloro-3-methylphenol	NL	µg/kg	320 U	310 U	290 U	130 U	120 U
4-Chloroaniline	NL	µg/kg	320 U	310 U	290 U	130 U	120 U
4-Chlorophenyl-phenylether	NL	µg/kg	320 U	310 U	290 U	130 U	120 U
4-Methylphenol	NL	µg/kg	320 U	310 U	290 U	130 U	120 U
4-Nitroaniline	NL	µg/kg	630 U	600 U	550 U	250 U	230 U
4-Nitrophenol	NL	µg/kg	630 U	600 U	550 U	250 U	230 U
Acenaphthene	NL	µg/kg	6.3 U	6 U	5.5 U	2.5 U	2.3 U
Acenaphthylene	NL	µg/kg	6.3 U	6 U	5.5 U	2.5 U	2.3 U
Acetophenone	NL	µg/kg	320 U	310 U	290 U	130 U	120 U
Anthracene	845	µg/kg	6.3 U	6 U	5.5 U	8.1	4.1
Atrazine	NL	µg/kg	320 U	310 U	290 U	130 U	120 U
Benzaldehyde	NL	µg/kg	320 U	310 U	290 U	130 U	120 U
Benzo(a)anthracene	1050	µg/kg	8.6	13	5.5 U	25	11
Benzo(a)pyrene	1450	µg/kg	7.1	9.5	5.5 U	18	6.1

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Table B-1
Sediment Sample Analytical Results - SVOCs
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-16	LMR11-16	LMR11-16	LMR11-17	LMR11-17
		Field Sample ID	LMR11-16-024	LMR11-16-048	LMR11-16-072	LMR11-17-006	LMR11-17-021
		Sample Date	8/9/2011	8/9/2011	8/9/2011	8/4/2011	8/4/2011
		Depth Interval (in bss)	6- 24	24- 48	48- 72	0- 6	6- 21
Chemical Name	**PEC[1]**	**Unit**					
Benzo(b)fluoranthene	NL	µg/kg	6.3 U	11	5.5 U	21	7.3
Benzo(g,h,i)perylene	NL	µg/kg	6.3 U	6 U	5.5 U	8.9	2.7
Benzo(k)fluoranthene	NL	µg/kg	6.3 U	6 U	5.5 U	8.2	3
Bis(2-chloroethoxy)methane	NL	µg/kg	320 U	310 U	290 U	130 U	120 U
Bis(2-chloroethyl)ether	NL	µg/kg	320 U	310 U	290 U	130 U	120 U
Bis(2-ethylhexyl)phthalate	NL	µg/kg	320 U	310 U	290 U	130 U	190
Butylbenzylphthalate	NL	µg/kg	320 U	310 U	290 U	130 U	120 U
Caprolactam	NL	µg/kg	320 U	310 U	290 U	130 U	120 U
Carbazole	NL	µg/kg	320 U	310 U	290 U	130 U	120 U
Chrysene	1290	µg/kg	12	14	5.5 U	29	10
Dibenzo(a,h)anthracene	NL	µg/kg	6.3 U	6 U	5.5 U	2.8	2.3 U
Dibenzofuran	NL	µg/kg	320 U	310 U	290 U	130 U	120 U
Diethylphthalate	NL	µg/kg	320 U	310 U	290 U	130 U	120 U
Dimethylphthalate	NL	µg/kg	320 U	310 U	290 U	130 U	120 U
Di-n-butylphthalate	NL	µg/kg	320 U	310 U	290 U	130 U	120 U
Di-n-octylphthalate	NL	µg/kg	320 U	310 U	290 U	130 U	120 U
Fluoranthene	2230	µg/kg	21	22	5.5 U	53	20
Fluorene	536	µg/kg	6.3 U	6 U	5.5 U	2.5	2.3 U
Hexachlorobenzene	NL	µg/kg	320 U	310 U	290 U	130 U	120 U
Hexachlorobutadiene	NL	µg/kg	320 U	310 U	290 U	130 U	120 U
Hexachlorocyclopentadiene	NL	µg/kg	320 U	310 U	290 U	130 U	120 U
Hexachloroethane	NL	µg/kg	320 U	310 U	290 U	130 U	120 U
Indeno(1,2,3-cd)pyrene	NL	µg/kg	6.3 U	6 U	5.5 U	9.7	3.1
Isophorone	NL	µg/kg	320 U	310 U	290 U	130 U	120 U
Naphthalene	561	µg/kg	6.3 U	6 U	5.5 U	2.5 U	2.3 U
Nitrobenzene	NL	µg/kg	320 U	310 U	290 U	130 U	120 U
N-Nitroso-di-n-propylamine	NL	µg/kg	320 U	310 U	290 U	130 U	120 U
N-Nitrosodiphenylamine	NL	µg/kg	320 U	310 U	290 U	130 U	120 U
Pentachlorophenol	NL	µg/kg	13 U	12 UJ	11 UJ	25 U	9.4 U
Phenanthrene	1170	µg/kg	14	12	5.5 U	20	13
Phenol	NL	µg/kg	320 U	310 U	290 U	130 U	120 U
Pyrene	1520	µg/kg	23	23	5.5 U	52	21
Total PAH 17	22800	µg/kg	120.35	134.5	46.75	263.2	108.2
TOC	NL	mg/kg	28,400	21,900	116,000	20,400	5,510

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Table B-1
Sediment Sample Analytical Results - SVOCs
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-18	LMR11-18	LMR11-18	LMR11-19	LMR11-19
		Field Sample ID	LMR11-18-006	LMR11-18-024	LMR11-18-048	LMR11-19-006	LMR11-19-014
		Sample Date	8/3/2011	8/5/2011	8/5/2011	8/3/2011	8/3/2011
		Depth Interval (in bss)	0- 6	6- 24	24- 48	0- 6	6- 14
Chemical Name	**PEC[1]**	**Unit**					
1,1'-Biphenyl	NL	µg/kg	230 U	160 UJ	160 UJ	180 U	210 UJ
1,2,4,5-Tetrachlorobenzene	NL	µg/kg	230 U	160 UJ	160 UJ	180 U	210 UJ
2,2'-Oxybis(1-chloropropane)	NL	µg/kg	230 U	160 UJ	160 UJ	180 U	210 UJ
2,3,4,6-Tetrachlorophenol	NL	µg/kg	230 U	160 UJ	160 UJ	180 U	210 UJ
2,4,5-Trichlorophenol	NL	µg/kg	230 U	160 UJ	160 UJ	180 U	210 UJ
2,4,6-Trichlorophenol	NL	µg/kg	230 U	160 UJ	160 UJ	180 U	210 UJ
2,4-Dichlorophenol	NL	µg/kg	230 U	160 UJ	160 UJ	180 U	210 UJ
2,4-Dimethylphenol	NL	µg/kg	230 U	160 UJ	160 UJ	180 U	210 UJ
2,4-Dinitrophenol	NL	µg/kg	450 U	300 UJ	310 UJ	350 U	410 UJ
2,4-Dinitrotoluene	NL	µg/kg	230 U	160 UJ	160 UJ	180 U	210 UJ
2,6-Dinitrotoluene	NL	µg/kg	230 U	160 UJ	160 UJ	180 U	210 UJ
2-Chloronaphthalene	NL	µg/kg	230 U	160 UJ	160 UJ	180 U	210 UJ
2-Chlorophenol	NL	µg/kg	230 U	160 UJ	160 UJ	180 U	210 UJ
2-Methylnaphthalene	NL	µg/kg	4.5 UJ	3 UJ	3.1 UJ	3.5 UJ	4.1 UJ
2-Methylphenol	NL	µg/kg	230 U	160 UJ	160 UJ	180 U	210 UJ
2-Nitroaniline	NL	µg/kg	450 U	300 UJ	310 UJ	350 U	410 UJ
2-Nitrophenol	NL	µg/kg	230 U	160 UJ	160 UJ	180 U	210 UJ
3,3'-Dichlorobenzidine	NL	µg/kg	230 U	160 UJ	160 UJ	180 U	210 UJ
3-Nitroaniline	NL	µg/kg	450 U	300 UJ	310 UJ	350 U	410 UJ
4,6-Dinitro-2-methylphenol	NL	µg/kg	450 U	300 UJ	310 UJ	350 U	410 UJ
4-Bromophenyl-phenylether	NL	µg/kg	230 U	160 UJ	160 UJ	180 U	210 UJ
4-Chloro-3-methylphenol	NL	µg/kg	230 U	160 UJ	160 UJ	180 U	210 UJ
4-Chloroaniline	NL	µg/kg	230 U	160 UJ	160 UJ	180 U	210 UJ
4-Chlorophenyl-phenylether	NL	µg/kg	230 U	160 UJ	160 UJ	180 U	210 UJ
4-Methylphenol	NL	µg/kg	230 U	160 UJ	46 J	180 U	210 UJ
4-Nitroaniline	NL	µg/kg	450 U	300 UJ	310 UJ	350 U	410 UJ
4-Nitrophenol	NL	µg/kg	450 U	300 UJ	310 UJ	350 U	410 UJ
Acenaphthene	NL	µg/kg	4.5 U	3 UJ	3.1 UJ	3.5 U	4.1 UJ
Acenaphthylene	NL	µg/kg	4.5 U	3 UJ	3.1 UJ	3.5 U	4.1 UJ
Acetophenone	NL	µg/kg	230 U	160 UJ	160 UJ	180 U	210 UJ
Anthracene	845	µg/kg	5.2	3 UJ	3.7 J	3.5 U	5.5 J
Atrazine	NL	µg/kg	230 U	160 UJ	160 UJ	180 U	210 UJ
Benzaldehyde	NL	µg/kg	230 U	160 UJ	160 UJ	180 U	210 UJ
Benzo(a)anthracene	1050	µg/kg	18	10 J	11 J	3.5 U	7.4 J
Benzo(a)pyrene	1450	µg/kg	11	12 J	15 J	3.5 U	7.8 J

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Table B-1
Sediment Sample Analytical Results - SVOCs
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-18	LMR11-18	LMR11-18	LMR11-19	LMR11-19
		Field Sample ID	LMR11-18-006	LMR11-18-024	LMR11-18-048	LMR11-19-006	LMR11-19-014
		Sample Date	8/3/2011	8/5/2011	8/5/2011	8/3/2011	8/3/2011
		Depth Interval (in bss)	0- 6	6- 24	24- 48	0- 6	6- 14
Chemical Name	**PEC[1]**	**Unit**					
Benzo(b)fluoranthene	NL	µg/kg	16	12 J	16 J	3.5 U	13 J
Benzo(g,h,i)perylene	NL	µg/kg	4.5 U	5.4 J	8.3 J	3.5 U	5.1 J
Benzo(k)fluoranthene	NL	µg/kg	13	4.9 J	7.4 J	3.5 U	4.1 UJ
Bis(2-chloroethoxy)methane	NL	µg/kg	230 U	160 UJ	160 UJ	180 U	210 UJ
Bis(2-chloroethyl)ether	NL	µg/kg	230 U	160 UJ	160 UJ	180 U	210 UJ
Bis(2-ethylhexyl)phthalate	NL	µg/kg	230 U	160 UJ	160 UJ	180 U	210 UJ
Butylbenzylphthalate	NL	µg/kg	230 U	160 UJ	160 UJ	180 U	210 UJ
Caprolactam	NL	µg/kg	230 U	160 UJ	160 UJ	180 U	210 UJ
Carbazole	NL	µg/kg	230 U	160 UJ	160 UJ	180 U	210 UJ
Chrysene	1290	µg/kg	20	9.9 J	14 J	3.5 U	12 J
Dibenzo(a,h)anthracene	NL	µg/kg	4.5 U	3 UJ	3.1 UJ	3.5 U	4.1 UJ
Dibenzofuran	NL	µg/kg	230 U	160 UJ	160 UJ	180 U	210 UJ
Diethylphthalate	NL	µg/kg	230 U	160 UJ	160 UJ	180 U	210 UJ
Dimethylphthalate	NL	µg/kg	230 U	160 UJ	160 UJ	180 U	210 UJ
Di-n-butylphthalate	NL	µg/kg	230 U	160 UJ	160 UJ	180 U	210 UJ
Di-n-octylphthalate	NL	µg/kg	230 U	160 UJ	160 UJ	180 U	210 UJ
Fluoranthene	2230	µg/kg	37	18 J	22 J	4.4	27 J
Fluorene	536	µg/kg	4.5 U	3 UJ	3.1 UJ	3.5 U	4.1 UJ
Hexachlorobenzene	NL	µg/kg	230 U	160 UJ	160 UJ	180 U	210 UJ
Hexachlorobutadiene	NL	µg/kg	230 U	160 UJ	160 UJ	180 U	210 UJ
Hexachlorocyclopentadiene	NL	µg/kg	230 U	160 UJ	160 UJ	180 U	210 UJ
Hexachloroethane	NL	µg/kg	230 U	160 UJ	160 UJ	180 U	210 UJ
Indeno(1,2,3-cd)pyrene	NL	µg/kg	4.5 U	4.7 J	6.8 J	3.5 U	4.1 UJ
Isophorone	NL	µg/kg	230 U	160 UJ	160 UJ	180 U	210 UJ
Naphthalene	561	µg/kg	4.5 U	3 UJ	3.9 J	3.5 U	4.1 UJ
Nitrobenzene	NL	µg/kg	230 U	160 UJ	160 UJ	180 U	210 UJ
N-Nitroso-di-n-propylamine	NL	µg/kg	230 U	160 UJ	160 UJ	180 U	210 UJ
N-Nitrosodiphenylamine	NL	µg/kg	230 U	160 UJ	160 UJ	180 U	210 UJ
Pentachlorophenol	NL	µg/kg	9 U	6.2 UJ	6.3 UJ	7.1 U	8.3 UJ
Phenanthrene	1170	µg/kg	14	7.3 J	17 J	3.5 U	22 J
Phenol	NL	µg/kg	230 U	160 UJ	160 UJ	180 U	210 UJ
Pyrene	1520	µg/kg	45	17 J	23 J	6	28 J
Total PAH 17	22800	µg/kg	197.2	111.7	155.85	36.65	144.2
TOC	NL	mg/kg	33,100	19,000	53,600 J	26,800	10,500

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Table B-1
Sediment Sample Analytical Results - SVOCs
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-20	LMR11-20	LMR11-20	LMR11-20	LMR11-20
		Field Sample ID	LMR11-20-006	LMR11-20-006FS	LMR11-20-024	LMR11-20-048	LMR11-20-060
		Sample Date	8/2/2011	8/2/2011	8/5/2011	8/5/2011	8/5/2011
		Depth Interval (in bss)	0- 6	0- 6	6- 24	24- 48	48- 60
Chemical Name	**PEC[1]**	**Unit**					
1,1'-Biphenyl	NL	µg/kg	230 U	240 U	190 UJ	160 UJ	140 UJ
1,2,4,5-Tetrachlorobenzene	NL	µg/kg	230 U	240 U	190 UJ	160 UJ	140 UJ
2,2'-Oxybis(1-chloropropane)	NL	µg/kg	230 U	240 U	190 UJ	160 UJ	140 UJ
2,3,4,6-Tetrachlorophenol	NL	µg/kg	230 U	240 U	190 UJ	160 UJ	140 UJ
2,4,5-Trichlorophenol	NL	µg/kg	230 U	240 U	190 UJ	160 UJ	140 UJ
2,4,6-Trichlorophenol	NL	µg/kg	230 U	240 U	190 UJ	160 UJ	140 UJ
2,4-Dichlorophenol	NL	µg/kg	230 U	240 U	190 UJ	160 UJ	140 UJ
2,4-Dimethylphenol	NL	µg/kg	230 U	240 U	190 UJ	160 UJ	140 UJ
2,4-Dinitrophenol	NL	µg/kg	450 U	460 U	380 UJ	320 UJ	270 UJ
2,4-Dinitrotoluene	NL	µg/kg	230 U	240 U	190 UJ	160 UJ	140 UJ
2,6-Dinitrotoluene	NL	µg/kg	230 U	240 U	190 UJ	160 UJ	140 UJ
2-Chloronaphthalene	NL	µg/kg	230 U	240 U	190 UJ	160 UJ	140 UJ
2-Chlorophenol	NL	µg/kg	230 U	240 U	190 UJ	160 UJ	140 UJ
2-Methylnaphthalene	NL	µg/kg	4.5 UJ	4.6 UJ	3.8 UJ	3.2 UJ	2.7 UJ
2-Methylphenol	NL	µg/kg	230 U	240 U	190 UJ	160 UJ	140 UJ
2-Nitroaniline	NL	µg/kg	450 U	460 U	380 UJ	320 UJ	270 UJ
2-Nitrophenol	NL	µg/kg	230 U	240 U	190 UJ	160 UJ	140 UJ
3,3'-Dichlorobenzidine	NL	µg/kg	230 U	240 U	190 UJ	160 UJ	140 UJ
3-Nitroaniline	NL	µg/kg	450 U	460 U	380 UJ	320 UJ	270 UJ
4,6-Dinitro-2-methylphenol	NL	µg/kg	450 U	460 U	380 UJ	320 UJ	270 UJ
4-Bromophenyl-phenylether	NL	µg/kg	230 U	240 U	190 UJ	160 UJ	140 UJ
4-Chloro-3-methylphenol	NL	µg/kg	230 U	240 U	190 UJ	160 UJ	140 UJ
4-Chloroaniline	NL	µg/kg	230 U	240 U	190 UJ	160 UJ	140 UJ
4-Chlorophenyl-phenylether	NL	µg/kg	230 U	240 U	190 UJ	160 UJ	140 UJ
4-Methylphenol	NL	µg/kg	230 U	240 U	190 UJ	160 UJ	140 UJ
4-Nitroaniline	NL	µg/kg	450 U	460 U	380 UJ	320 UJ	270 UJ
4-Nitrophenol	NL	µg/kg	450 U	460 U	380 UJ	320 UJ	270 UJ
Acenaphthene	NL	µg/kg	4.5 U	4.6 U	3.8 UJ	3.2 UJ	5.1 J
Acenaphthylene	NL	µg/kg	4.5 U	4.6 U	3.8 UJ	3.2 UJ	4.9 J
Acetophenone	NL	µg/kg	230 U	240 U	190 UJ	160 UJ	140 UJ
Anthracene	845	µg/kg	4.5 U	4.6 U	3.8 UJ	3.2 UJ	19 J
Atrazine	NL	µg/kg	230 U	240 U	190 UJ	160 UJ	140 UJ
Benzaldehyde	NL	µg/kg	230 U	240 U	190 UJ	160 UJ	140 UJ
Benzo(a)anthracene	1050	µg/kg	4.5 U	4.6 U	3.8 UJ	4.1 J	52 J
Benzo(a)pyrene	1450	µg/kg	10	4.6 U	3.8 UJ	5.2 J	44 J

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Table B-1
Sediment Sample Analytical Results - SVOCs
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-20	LMR11-20	LMR11-20	LMR11-20	LMR11-20
		Field Sample ID	LMR11-20-006	LMR11-20-006FS	LMR11-20-024	LMR11-20-048	LMR11-20-060
		Sample Date	8/2/2011	8/2/2011	8/5/2011	8/5/2011	8/5/2011
		Depth Interval (in bss)	0- 6	0- 6	6- 24	24- 48	48- 60
Chemical Name	**PEC[1]**	**Unit**					
Benzo(b)fluoranthene	NL	µg/kg	4.5 U	4.6 U	3.8 UJ	5.8 J	50 J
Benzo(g,h,i)perylene	NL	µg/kg	4.5 U	4.6 U	3.8 UJ	3.2 UJ	17 J
Benzo(k)fluoranthene	NL	µg/kg	4.5 U	4.6 U	3.8 UJ	3.2 UJ	29 J
Bis(2-chloroethoxy)methane	NL	µg/kg	230 U	240 U	190 UJ	160 UJ	140 UJ
Bis(2-chloroethyl)ether	NL	µg/kg	230 U	240 U	190 UJ	160 UJ	140 UJ
Bis(2-ethylhexyl)phthalate	NL	µg/kg	230 U	240 U	190 UJ	160 UJ	49 J
Butylbenzylphthalate	NL	µg/kg	230 U	240 U	190 UJ	160 UJ	140 UJ
Caprolactam	NL	µg/kg	230 U	240 U	190 UJ	160 UJ	140 UJ
Carbazole	NL	µg/kg	230 U	240 U	190 UJ	160 UJ	140 UJ
Chrysene	1290	µg/kg	4.5 U	4.6 U	3.8 UJ	5.6 J	53 J
Dibenzo(a,h)anthracene	NL	µg/kg	4.5 U	4.6 U	3.8 UJ	3.2 UJ	7.4 J
Dibenzofuran	NL	µg/kg	230 U	240 U	190 UJ	160 UJ	140 UJ
Diethylphthalate	NL	µg/kg	230 U	240 U	190 UJ	160 UJ	140 UJ
Dimethylphthalate	NL	µg/kg	230 U	240 U	190 UJ	160 UJ	140 UJ
Di-n-butylphthalate	NL	µg/kg	230 U	240 U	190 UJ	160 UJ	140 UJ
Di-n-octylphthalate	NL	µg/kg	230 U	240 U	190 UJ	160 UJ	140 UJ
Fluoranthene	2230	µg/kg	6.5	4.6 U	3.8 UJ	5.3 J	88 J
Fluorene	536	µg/kg	4.5 U	4.6 U	3.8 UJ	3.2 UJ	4.9 J
Hexachlorobenzene	NL	µg/kg	230 U	240 U	190 UJ	160 UJ	140 UJ
Hexachlorobutadiene	NL	µg/kg	230 U	240 U	190 UJ	160 UJ	140 UJ
Hexachlorocyclopentadiene	NL	µg/kg	230 U	240 U	190 UJ	160 UJ	140 UJ
Hexachloroethane	NL	µg/kg	230 U	240 U	190 UJ	160 UJ	140 UJ
Indeno(1,2,3-cd)pyrene	NL	µg/kg	4.5 U	4.6 U	3.8 UJ	3.2 UJ	24 J
Isophorone	NL	µg/kg	230 U	240 U	190 UJ	160 UJ	140 UJ
Naphthalene	561	µg/kg	4.5 U	4.6 U	3.8 UJ	3.2 UJ	5.5 J
Nitrobenzene	NL	µg/kg	230 U	240 U	190 UJ	160 UJ	140 UJ
N-Nitroso-di-n-propylamine	NL	µg/kg	230 U	240 U	190 UJ	160 UJ	140 UJ
N-Nitrosodiphenylamine	NL	µg/kg	230 U	240 U	190 UJ	160 UJ	140 UJ
Pentachlorophenol	NL	µg/kg	9.2 U	9.4 U	7.6 UJ	6.5 UJ	5.5 UJ
Phenanthrene	1170	µg/kg	4.5 U	4.6 U	3.8 UJ	3.2 UJ	59 J
Phenol	NL	µg/kg	230 U	240 U	190 UJ	160 UJ	140 UJ
Pyrene	1520	µg/kg	8.8	4.6 U	5.1 J	6.5 J	87 J
Total PAH 17	22800	µg/kg	56.8	39.1	35.5	50.1	551.15
TOC	NL	mg/kg	23,100	19,600	23,800	22,100	12,700

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Table B-1
Sediment Sample Analytical Results - SVOCs
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-21	LMR11-22	LMR11-23	LMR11-23	LMR11-23
		Field Sample ID	LMR11-21-006	LMR11-22-006	LMR11-23-006	LMR11-23-024	LMR11-23-048
		Sample Date	8/3/2011	8/4/2011	8/11/2011	8/11/2011	8/11/2011
		Depth Interval (in bss)	0- 6	0- 6	0- 6	6- 24	24- 48
Chemical Name	**PEC[1]**	**Unit**					
1,1'-Biphenyl	NL	µg/kg	200 U	210 U	360 U	330 U	320 U
1,2,4,5-Tetrachlorobenzene	NL	µg/kg	200 U	210 U	360 U	330 U	320 U
2,2'-Oxybis(1-chloropropane)	NL	µg/kg	200 U	210 U	360 U	330 U	320 U
2,3,4,6-Tetrachlorophenol	NL	µg/kg	200 U	210 U	360 U	330 U	320 U
2,4,5-Trichlorophenol	NL	µg/kg	200 U	210 U	360 U	330 UJ	320 UJ
2,4,6-Trichlorophenol	NL	µg/kg	200 U	210 U	360 U	330 U	320 U
2,4-Dichlorophenol	NL	µg/kg	200 U	210 U	360 U	330 U	320 U
2,4-Dimethylphenol	NL	µg/kg	200 U	210 U	360 U	330 U	320 U
2,4-Dinitrophenol	NL	µg/kg	380 U	410 U	690 U	650 U	630 U
2,4-Dinitrotoluene	NL	µg/kg	200 U	210 U	360 U	330 UJ	320 UJ
2,6-Dinitrotoluene	NL	µg/kg	200 U	210 U	360 U	330 U	320 U
2-Chloronaphthalene	NL	µg/kg	200 U	210 U	360 U	330 U	320 U
2-Chlorophenol	NL	µg/kg	200 U	210 U	360 U	330 U	320 U
2-Methylnaphthalene	NL	µg/kg	3.8 UJ	4.1 UJ	6.9 U	6.5 U	6.3 U
2-Methylphenol	NL	µg/kg	200 U	210 U	360 UJ	330 U	320 U
2-Nitroaniline	NL	µg/kg	380 U	410 U	690 U	650 U	630 U
2-Nitrophenol	NL	µg/kg	200 U	210 U	360 U	330 U	320 U
3,3'-Dichlorobenzidine	NL	µg/kg	200 U	210 U	360 U	330 U	320 U
3-Nitroaniline	NL	µg/kg	380 U	410 U	690 U	650 U	630 U
4,6-Dinitro-2-methylphenol	NL	µg/kg	380 U	410 U	690 U	650 U	630 U
4-Bromophenyl-phenylether	NL	µg/kg	200 U	210 U	360 U	330 U	320 U
4-Chloro-3-methylphenol	NL	µg/kg	200 U	210 U	360 U	330 U	320 U
4-Chloroaniline	NL	µg/kg	200 U	210 U	360 U	330 U	320 U
4-Chlorophenyl-phenylether	NL	µg/kg	200 U	210 U	360 U	330 U	320 U
4-Methylphenol	NL	µg/kg	200 U	210 U	360 U	330 U	320 U
4-Nitroaniline	NL	µg/kg	380 U	410 U	690 U	650 U	630 U
4-Nitrophenol	NL	µg/kg	380 U	410 U	690 U	650 U	630 U
Acenaphthene	NL	µg/kg	3.8 U	4.1 U	6.9 U	6.5 U	6.3 U
Acenaphthylene	NL	µg/kg	3.8 U	4.1 U	6.9 U	6.5 U	6.3 U
Acetophenone	NL	µg/kg	200 U	210 U	360 U	330 U	320 U
Anthracene	845	µg/kg	3.8 U	4.1 U	6.9 U	6.5 U	6.3 U
Atrazine	NL	µg/kg	200 U	210 U	360 U	330 U	320 U
Benzaldehyde	NL	µg/kg	200 U	210 U	360 U	330 U	320 U
Benzo(a)anthracene	1050	µg/kg	3.8 U	4.1 U	6.9 U	11	6.3 U
Benzo(a)pyrene	1450	µg/kg	3.8 U	4.1 U	6.9 U	15	6.3 U

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Table B-1
Sediment Sample Analytical Results - SVOCs
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-21	LMR11-22	LMR11-23	LMR11-23	LMR11-23
		Field Sample ID	LMR11-21-006	LMR11-22-006	LMR11-23-006	LMR11-23-024	LMR11-23-048
		Sample Date	8/3/2011	8/4/2011	8/11/2011	8/11/2011	8/11/2011
		Depth Interval (in bss)	0- 6	0- 6	0- 6	6- 24	24- 48
Chemical Name	**PEC[1]**	**Unit**					
Benzo(b)fluoranthene	NL	µg/kg	3.8 U	4.1 U	6.9 U	19	6.3 U
Benzo(g,h,i)perylene	NL	µg/kg	3.8 U	4.1 U	6.9 U	11	6.3 U
Benzo(k)fluoranthene	NL	µg/kg	3.8 U	4.1 U	6.9 U	6.5 U	6.3 U
Bis(2-chloroethoxy)methane	NL	µg/kg	200 U	210 U	360 U	330 U	320 U
Bis(2-chloroethyl)ether	NL	µg/kg	200 U	210 U	360 U	330 U	320 U
Bis(2-ethylhexyl)phthalate	NL	µg/kg	200 U	210 U	360 U	330 U	320 U
Butylbenzylphthalate	NL	µg/kg	200 U	210 U	360 U	330 U	320 U
Caprolactam	NL	µg/kg	200 U	210 U	360 U	330 U	320 U
Carbazole	NL	µg/kg	200 U	210 U	360 U	330 U	320 U
Chrysene	1290	µg/kg	4.2	4.1 U	6.9 U	14	6.3 U
Dibenzo(a,h)anthracene	NL	µg/kg	3.8 U	4.1 U	6.9 U	6.5 U	6.3 U
Dibenzofuran	NL	µg/kg	200 U	210 U	360 U	330 U	320 U
Diethylphthalate	NL	µg/kg	200 U	210 U	360 U	330 U	320 U
Dimethylphthalate	NL	µg/kg	200 U	210 U	360 U	330 U	320 U
Di-n-butylphthalate	NL	µg/kg	200 U	210 U	360 U	330 U	320 U
Di-n-octylphthalate	NL	µg/kg	200 U	210 U	360 U	330 U	320 U
Fluoranthene	2230	µg/kg	9	10	15	48	15
Fluorene	536	µg/kg	3.8 U	4.1 U	6.9 U	6.5 U	6.3 U
Hexachlorobenzene	NL	µg/kg	200 U	210 U	360 U	330 U	320 U
Hexachlorobutadiene	NL	µg/kg	200 U	210 U	360 U	330 U	320 U
Hexachlorocyclopentadiene	NL	µg/kg	200 U	210 U	360 U	330 U	320 U
Hexachloroethane	NL	µg/kg	200 U	210 U	360 U	330 U	320 U
Indeno(1,2,3-cd)pyrene	NL	µg/kg	3.8 U	4.1 U	6.9 U	7.6	6.3 U
Isophorone	NL	µg/kg	200 U	210 U	360 U	330 U	320 U
Naphthalene	561	µg/kg	3.8 U	4.1 U	6.9 U	6.5 U	6.3 U
Nitrobenzene	NL	µg/kg	200 U	210 U	360 U	330 U	320 U
N-Nitroso-di-n-propylamine	NL	µg/kg	200 U	210 U	360 U	330 U	320 U
N-Nitrosodiphenylamine	NL	µg/kg	200 U	210 U	360 U	330 U	320 U
Pentachlorophenol	NL	µg/kg	7.8 U	8.4 U	14 U	13 UJ	13 UJ
Phenanthrene	1170	µg/kg	4.5	6.3	9.8	34	15
Phenol	NL	µg/kg	200 U	210 U	360 U	330 U	320 U
Pyrene	1520	µg/kg	11	12	13	25 J	11
Total PAH 17	22800	µg/kg	53.4	57	86.1	210.6	85.1
TOC	NL	mg/kg	21,400	25,300	24,300	22,900	23,500

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Table B-1
Sediment Sample Analytical Results - SVOCs
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-23	LMR11-23	LMR11-23	LMR11-24	LMR11-24
		Field Sample ID	LMR11-23-072	LMR11-23-096	LMR11-23-115	LMR11-24-006	LMR11-24-024
		Sample Date	8/11/2011	8/11/2011	8/11/2011	8/4/2011	8/11/2011
		Depth Interval (in bss)	48- 72	72- 96	96- 115	0- 6	6- 24
Chemical Name	**PEC[1]**	**Unit**					
1,1'-Biphenyl	NL	µg/kg	300 U	290 U	210 U	130 U	270 U
1,2,4,5-Tetrachlorobenzene	NL	µg/kg	300 U	290 U	210 U	130 U	270 U
2,2'-Oxybis(1-chloropropane)	NL	µg/kg	300 U	290 U	210 U	130 U	270 U
2,3,4,6-Tetrachlorophenol	NL	µg/kg	300 U	290 U	210 U	130 U	270 U
2,4,5-Trichlorophenol	NL	µg/kg	300 UJ	290 UJ	210 UJ	130 U	270 UJ
2,4,6-Trichlorophenol	NL	µg/kg	300 U	290 U	210 U	130 U	270 U
2,4-Dichlorophenol	NL	µg/kg	300 U	290 U	210 U	130 U	270 U
2,4-Dimethylphenol	NL	µg/kg	300 U	290 U	210 U	130 U	270 U
2,4-Dinitrophenol	NL	µg/kg	580 U	560 U	420 U	260 U	520 U
2,4-Dinitrotoluene	NL	µg/kg	300 UJ	290 UJ	210 UJ	130 U	270 UJ
2,6-Dinitrotoluene	NL	µg/kg	300 U	290 U	210 U	130 U	270 U
2-Chloronaphthalene	NL	µg/kg	300 U	290 U	210 U	130 U	270 U
2-Chlorophenol	NL	µg/kg	300 U	290 U	210 U	130 U	270 U
2-Methylnaphthalene	NL	µg/kg	5.8 U	5.6 U	4.2 U	2.6 U	5.2 U
2-Methylphenol	NL	µg/kg	300 U	290 U	210 U	130 U	270 U
2-Nitroaniline	NL	µg/kg	580 U	560 U	420 U	260 U	520 U
2-Nitrophenol	NL	µg/kg	300 U	290 U	210 U	130 U	270 U
3,3'-Dichlorobenzidine	NL	µg/kg	300 U	290 U	210 U	130 U	270 U
3-Nitroaniline	NL	µg/kg	580 U	560 U	420 U	260 U	520 U
4,6-Dinitro-2-methylphenol	NL	µg/kg	580 U	560 U	420 U	260 U	520 U
4-Bromophenyl-phenylether	NL	µg/kg	300 U	290 U	210 U	130 U	270 U
4-Chloro-3-methylphenol	NL	µg/kg	300 U	290 U	210 U	130 U	270 U
4-Chloroaniline	NL	µg/kg	300 U	290 U	210 U	130 U	270 U
4-Chlorophenyl-phenylether	NL	µg/kg	300 U	290 U	210 U	130 U	270 U
4-Methylphenol	NL	µg/kg	300 U	290 U	210 U	130 U	270 U
4-Nitroaniline	NL	µg/kg	580 U	560 U	420 U	260 U	520 U
4-Nitrophenol	NL	µg/kg	580 U	560 U	420 U	260 U	520 U
Acenaphthene	NL	µg/kg	5.8 U	5.6 U	4.2 U	2.6 U	5.2 U
Acenaphthylene	NL	µg/kg	5.8 U	5.6 U	4.2 U	2.6 U	5.2 U
Acetophenone	NL	µg/kg	300 U	290 U	210 U	130 U	270 U
Anthracene	845	µg/kg	6.4	5.6 U	4.8	2.6 U	5.2 U
Atrazine	NL	µg/kg	300 U	290 U	210 U	130 U	270 U
Benzaldehyde	NL	µg/kg	300 U	290 U	210 U	130 U	270 U
Benzo(a)anthracene	1050	µg/kg	9.5	5.6 U	10	2.6 U	5.2 U
Benzo(a)pyrene	1450	µg/kg	10	5.6 U	4.2 U	4.4	5.2 U

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Table B-1
Sediment Sample Analytical Results - SVOCs
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-23	LMR11-23	LMR11-23	LMR11-24	LMR11-24
		Field Sample ID	LMR11-23-072	LMR11-23-096	LMR11-23-115	LMR11-24-006	LMR11-24-024
		Sample Date	8/11/2011	8/11/2011	8/11/2011	8/4/2011	8/11/2011
		Depth Interval (in bss)	48- 72	72- 96	96- 115	0- 6	6- 24
Chemical Name	**PEC[1]**	**Unit**					
Benzo(b)fluoranthene	NL	µg/kg	16	7.4	14	3.1	5.2 U
Benzo(g,h,i)perylene	NL	µg/kg	6.3	5.6 U	5.1	2.6 U	5.2 U
Benzo(k)fluoranthene	NL	µg/kg	6	5.6 U	4.9	2.6 U	5.2 U
Bis(2-chloroethoxy)methane	NL	µg/kg	300 U	290 U	210 U	130 U	270 U
Bis(2-chloroethyl)ether	NL	µg/kg	300 U	290 U	210 U	130 U	270 U
Bis(2-ethylhexyl)phthalate	NL	µg/kg	300 U	290 U	65 J	130 U	270 U
Butylbenzylphthalate	NL	µg/kg	300 U	290 U	210 U	130 U	270 U
Caprolactam	NL	µg/kg	300 U	290 U	210 U	130 U	270 U
Carbazole	NL	µg/kg	300 U	290 U	210 U	130 U	270 U
Chrysene	1290	µg/kg	12	5.6 U	13	2.6 U	5.2 U
Dibenzo(a,h)anthracene	NL	µg/kg	5.8 U	5.6 U	4.2 U	2.6 U	5.2 U
Dibenzofuran	NL	µg/kg	300 U	290 U	210 U	130 U	270 U
Diethylphthalate	NL	µg/kg	300 U	290 U	210 U	130 U	270 U
Dimethylphthalate	NL	µg/kg	300 U	290 U	210 U	130 U	270 U
Di-n-butylphthalate	NL	µg/kg	300 U	290 U	210 U	39 J	270 U
Di-n-octylphthalate	NL	µg/kg	300 U	290 U	210 U	130 U	270 U
Fluoranthene	2230	µg/kg	36	5.6 U	29	4.8	6.3
Fluorene	536	µg/kg	5.8 U	5.6 U	4.2 U	2.6 U	5.2 U
Hexachlorobenzene	NL	µg/kg	300 U	290 U	210 U	130 U	270 U
Hexachlorobutadiene	NL	µg/kg	300 U	290 U	210 U	130 U	270 U
Hexachlorocyclopentadiene	NL	µg/kg	300 U	290 U	210 U	130 U	270 U
Hexachloroethane	NL	µg/kg	300 U	290 U	210 U	130 U	270 U
Indeno(1,2,3-cd)pyrene	NL	µg/kg	5.8 U	5.6 U	4.9	2.6 U	5.2 U
Isophorone	NL	µg/kg	300 U	290 U	210 U	130 U	270 U
Naphthalene	561	µg/kg	5.8 U	5.6 U	4.2 U	2.6 U	5.2 U
Nitrobenzene	NL	µg/kg	300 U	290 U	210 U	130 U	270 U
N-Nitroso-di-n-propylamine	NL	µg/kg	300 U	290 U	210 U	130 U	270 U
N-Nitrosodiphenylamine	NL	µg/kg	300 U	290 U	210 U	130 U	270 U
Pentachlorophenol	NL	µg/kg	12 UJ	11 UJ	8.4 UJ	5.3 U	11 UJ
Phenanthrene	1170	µg/kg	30	5.6 U	26	2.6 U	5.2 U
Phenol	NL	µg/kg	300 U	290 U	210 U	130 U	270 U
Pyrene	1520	µg/kg	26	10	25	4.9	5.6
Total PAH 17	22800	µg/kg	178.5	59.4	151.4	34.1	50.9
TOC	NL	mg/kg	24,800	18,300	13,400	16,200	14,100

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Table B-1
Sediment Sample Analytical Results - SVOCs
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-24	LMR11-24	LMR11-24	LMR11-25	LMR11-25
		Field Sample ID	LMR11-24-048	LMR11-24-072	LMR11-24-096	LMR11-25-006	LMR11-25-024
		Sample Date	8/11/2011	8/11/2011	8/11/2011	8/11/2011	8/11/2011
		Depth Interval (in bss)	24- 48	48- 72	72- 96	0- 6	6- 24
Chemical Name	**PEC[1]**	**Unit**					
1,1'-Biphenyl	NL	µg/kg	310 U	270 U	300 U	340 U	320 U
1,2,4,5-Tetrachlorobenzene	NL	µg/kg	310 U	270 U	300 U	340 U	320 U
2,2'-Oxybis(1-chloropropane)	NL	µg/kg	310 U	270 U	300 U	340 U	320 U
2,3,4,6-Tetrachlorophenol	NL	µg/kg	310 U	270 U	300 U	340 U	320 U
2,4,5-Trichlorophenol	NL	µg/kg	310 UJ	270 UJ	300 UJ	340 U	320 U
2,4,6-Trichlorophenol	NL	µg/kg	310 U	270 U	300 U	340 U	320 U
2,4-Dichlorophenol	NL	µg/kg	310 U	270 U	300 U	340 U	320 U
2,4-Dimethylphenol	NL	µg/kg	310 U	270 U	300 U	340 U	320 U
2,4-Dinitrophenol	NL	µg/kg	600 U	530 U	590 U	660 U	620 U
2,4-Dinitrotoluene	NL	µg/kg	310 UJ	270 UJ	300 UJ	340 U	320 U
2,6-Dinitrotoluene	NL	µg/kg	310 U	270 U	300 U	340 U	320 U
2-Chloronaphthalene	NL	µg/kg	310 U	270 U	300 U	340 U	320 U
2-Chlorophenol	NL	µg/kg	310 U	270 U	300 U	340 U	320 U
2-Methylnaphthalene	NL	µg/kg	6 U	5.3 U	5.9 U	6.6 U	6.2 U
2-Methylphenol	NL	µg/kg	310 U	270 U	300 U	340 UJ	320 UJ
2-Nitroaniline	NL	µg/kg	600 U	530 U	590 U	660 U	620 U
2-Nitrophenol	NL	µg/kg	310 U	270 U	300 U	340 U	320 U
3,3'-Dichlorobenzidine	NL	µg/kg	310 U	270 U	300 U	340 U	320 U
3-Nitroaniline	NL	µg/kg	600 U	530 U	590 U	660 U	620 U
4,6-Dinitro-2-methylphenol	NL	µg/kg	600 U	530 U	590 U	660 U	620 U
4-Bromophenyl-phenylether	NL	µg/kg	310 U	270 U	300 U	340 U	320 U
4-Chloro-3-methylphenol	NL	µg/kg	310 U	270 U	300 U	340 U	320 U
4-Chloroaniline	NL	µg/kg	310 U	270 U	300 U	340 U	320 U
4-Chlorophenyl-phenylether	NL	µg/kg	310 U	270 U	300 U	340 U	320 U
4-Methylphenol	NL	µg/kg	310 U	270 U	300 U	340 U	320 U
4-Nitroaniline	NL	µg/kg	600 U	530 U	590 U	660 U	620 U
4-Nitrophenol	NL	µg/kg	600 U	530 U	590 U	660 U	620 U
Acenaphthene	NL	µg/kg	6 U	5.3 U	5.9 U	6.6 U	6.2 U
Acenaphthylene	NL	µg/kg	6 U	5.3 U	5.9 U	6.6 U	6.2 U
Acetophenone	NL	µg/kg	310 U	270 U	300 U	340 U	320 U
Anthracene	845	µg/kg	6 U	5.3 U	5.9 U	6.6 U	6.2 U
Atrazine	NL	µg/kg	310 U	270 U	300 U	340 U	320 U
Benzaldehyde	NL	µg/kg	310 U	270 U	300 U	340 U	320 U
Benzo(a)anthracene	1050	µg/kg	6 U	5.3 U	5.9 U	6.6 U	6.2 U
Benzo(a)pyrene	1450	µg/kg	6 U	5.3 U	5.9 U	6.6 U	6.2 U

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Table B-1
Sediment Sample Analytical Results - SVOCs
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-24	LMR11-24	LMR11-24	LMR11-25	LMR11-25
		Field Sample ID	LMR11-24-048	LMR11-24-072	LMR11-24-096	LMR11-25-006	LMR11-25-024
		Sample Date	8/11/2011	8/11/2011	8/11/2011	8/11/2011	8/11/2011
		Depth Interval (in bss)	24- 48	48- 72	72- 96	0- 6	6- 24
Chemical Name	**PEC[1]**	**Unit**					
Benzo(b)fluoranthene	NL	µg/kg	6 U	5.8	6.2	6.6 U	6.2 U
Benzo(g,h,i)perylene	NL	µg/kg	6 U	5.3 U	5.9 U	6.6 U	6.2 U
Benzo(k)fluoranthene	NL	µg/kg	6 U	5.3 U	5.9 U	6.6 U	6.2 U
Bis(2-chloroethoxy)methane	NL	µg/kg	310 U	270 U	300 U	340 U	320 U
Bis(2-chloroethyl)ether	NL	µg/kg	310 U	270 U	300 U	340 U	320 U
Bis(2-ethylhexyl)phthalate	NL	µg/kg	310 U	270 U	300 U	340 U	320 U
Butylbenzylphthalate	NL	µg/kg	310 U	270 U	300 U	340 U	320 U
Caprolactam	NL	µg/kg	310 U	270 U	300 U	340 U	320 U
Carbazole	NL	µg/kg	310 U	270 U	300 U	340 U	320 U
Chrysene	1290	µg/kg	6 U	5.3 U	6.3	6.6 U	6.2 U
Dibenzo(a,h)anthracene	NL	µg/kg	6 U	5.3 U	5.9 U	6.6 U	6.2 U
Dibenzofuran	NL	µg/kg	310 U	270 U	300 U	340 U	320 U
Diethylphthalate	NL	µg/kg	310 U	270 U	300 U	340 U	320 U
Dimethylphthalate	NL	µg/kg	310 U	270 U	300 U	340 U	320 U
Di-n-butylphthalate	NL	µg/kg	130 J	270 U	300 U	340 U	320 U
Di-n-octylphthalate	NL	µg/kg	310 U	270 U	300 U	340 U	320 U
Fluoranthene	2230	µg/kg	11	13	22	10	9.9
Fluorene	536	µg/kg	6 U	5.3 U	5.9 U	6.6 U	6.2 U
Hexachlorobenzene	NL	µg/kg	310 U	270 U	300 U	340 U	320 U
Hexachlorobutadiene	NL	µg/kg	310 U	270 U	300 U	340 U	320 U
Hexachlorocyclopentadiene	NL	µg/kg	310 U	270 U	300 U	340 U	320 U
Hexachloroethane	NL	µg/kg	310 U	270 U	300 U	340 U	320 U
Indeno(1,2,3-cd)pyrene	NL	µg/kg	6 U	5.3 U	5.9 U	6.6 U	6.2 U
Isophorone	NL	µg/kg	310 U	270 U	300 U	340 U	320 U
Naphthalene	561	µg/kg	6 U	5.3 U	5.9 U	6.6 U	6.2 U
Nitrobenzene	NL	µg/kg	310 U	270 U	300 U	340 U	320 U
N-Nitroso-di-n-propylamine	NL	µg/kg	310 U	270 U	300 U	340 U	320 U
N-Nitrosodiphenylamine	NL	µg/kg	310 U	270 U	300 U	340 U	320 U
Pentachlorophenol	NL	µg/kg	12 UJ	11 UJ	12 UJ	13 U	13 U
Phenanthrene	1170	µg/kg	9.5	11	16	6.6 U	8.3
Phenol	NL	µg/kg	310 U	270 U	300 U	340 U	320 U
Pyrene	1520	µg/kg	7.8	9.4	14	8.9	8.6
Total PAH 17	22800	µg/kg	70.3	73.65	99.9	68.4	70.2
TOC	NL	mg/kg	22,600	31,100	27,100	23,100	21,300

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Table B-1
Sediment Sample Analytical Results - SVOCs
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-25	LMR11-25	LMR11-25	LMR11-26	LMR11-26
		Field Sample ID	LMR11-25-048	LMR11-25-072	LMR11-25-096	LMR11-26-006	LMR11-26-024
		Sample Date	8/11/2011	8/11/2011	8/11/2011	8/10/2011	8/10/2011
		Depth Interval (in bss)	24- 48	48- 72	72- 96	0- 6	6- 24
Chemical Name	**PEC[1]**	**Unit**					
1,1'-Biphenyl	NL	µg/kg	300 U	290 U	260 U	340 U	300 UJ
1,2,4,5-Tetrachlorobenzene	NL	µg/kg	300 U	290 U	260 U	340 U	300 U
2,2'-Oxybis(1-chloropropane)	NL	µg/kg	300 U	290 U	260 U	340 U	300 U
2,3,4,6-Tetrachlorophenol	NL	µg/kg	300 U	290 U	260 U	340 U	300 U
2,4,5-Trichlorophenol	NL	µg/kg	300 U	290 U	260 U	340 U	300 U
2,4,6-Trichlorophenol	NL	µg/kg	300 U	290 U	260 U	340 U	300 U
2,4-Dichlorophenol	NL	µg/kg	300 U	290 U	260 U	340 U	300 U
2,4-Dimethylphenol	NL	µg/kg	300 U	290 U	260 U	340 U	300 U
2,4-Dinitrophenol	NL	µg/kg	580 U	570 U	500 U	650 U	570 U
2,4-Dinitrotoluene	NL	µg/kg	300 U	290 U	260 U	340 U	300 U
2,6-Dinitrotoluene	NL	µg/kg	300 U	290 U	260 U	340 U	300 U
2-Chloronaphthalene	NL	µg/kg	300 U	290 U	260 U	340 U	300 U
2-Chlorophenol	NL	µg/kg	300 U	290 U	260 U	340 U	300 U
2-Methylnaphthalene	NL	µg/kg	5.8 U	5.7 U	5 U	6.5 U	5.7 U
2-Methylphenol	NL	µg/kg	300 UJ	290 UJ	260 UJ	340 UJ	300 U
2-Nitroaniline	NL	µg/kg	580 U	570 U	500 U	650 U	570 U
2-Nitrophenol	NL	µg/kg	300 U	290 U	260 U	340 U	300 U
3,3'-Dichlorobenzidine	NL	µg/kg	300 U	290 U	260 U	340 U	300 U
3-Nitroaniline	NL	µg/kg	580 U	570 U	500 U	650 U	570 U
4,6-Dinitro-2-methylphenol	NL	µg/kg	580 U	570 U	500 U	650 U	570 U
4-Bromophenyl-phenylether	NL	µg/kg	300 U	290 U	260 U	340 U	300 UJ
4-Chloro-3-methylphenol	NL	µg/kg	300 U	290 U	260 U	340 U	300 U
4-Chloroaniline	NL	µg/kg	300 U	290 U	260 U	340 U	300 U
4-Chlorophenyl-phenylether	NL	µg/kg	300 U	290 U	260 U	340 U	300 UJ
4-Methylphenol	NL	µg/kg	300 U	290 U	260 U	340 U	300 U
4-Nitroaniline	NL	µg/kg	580 U	570 U	500 U	650 U	570 U
4-Nitrophenol	NL	µg/kg	580 U	570 U	500 U	650 U	570 U
Acenaphthene	NL	µg/kg	5.8 U	5.7 U	5 U	6.5 U	5.7 U
Acenaphthylene	NL	µg/kg	5.8 U	5.7 U	5 U	6.5 U	5.7 U
Acetophenone	NL	µg/kg	300 U	290 U	260 U	340 U	300 U
Anthracene	845	µg/kg	5.8 U	5.7 U	5 U	6.5 U	5.7 U
Atrazine	NL	µg/kg	300 U	290 U	260 U	340 U	300 U
Benzaldehyde	NL	µg/kg	300 U	290 U	260 U	340 U	300 U
Benzo(a)anthracene	1050	µg/kg	7.3	5.7 U	5 U	9.7	5.7 U
Benzo(a)pyrene	1450	µg/kg	16	5.7 U	5 U	13	5.7 U

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Table B-1
Sediment Sample Analytical Results - SVOCs
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-25	LMR11-25	LMR11-25	LMR11-26	LMR11-26
		Field Sample ID	LMR11-25-048	LMR11-25-072	LMR11-25-096	LMR11-26-006	LMR11-26-024
		Sample Date	8/11/2011	8/11/2011	8/11/2011	8/10/2011	8/10/2011
		Depth Interval (in bss)	24- 48	48- 72	72- 96	0- 6	6- 24
Chemical Name	**PEC[1]**	**Unit**					
Benzo(b)fluoranthene	NL	µg/kg	17	5.7 U	5 U	19	5.7 U
Benzo(g,h,i)perylene	NL	µg/kg	5.8 U	5.7 U	5 U	9.7	5.7 U
Benzo(k)fluoranthene	NL	µg/kg	6.1	5.7 U	5 U	8.1	5.7 U
Bis(2-chloroethoxy)methane	NL	µg/kg	300 U	290 U	260 U	340 U	300 U
Bis(2-chloroethyl)ether	NL	µg/kg	300 U	290 U	260 U	340 U	300 U
Bis(2-ethylhexyl)phthalate	NL	µg/kg	300 U	290 U	260 U	340 U	300 UJ
Butylbenzylphthalate	NL	µg/kg	300 U	290 U	260 U	340 U	300 UJ
Caprolactam	NL	µg/kg	300 U	290 U	260 U	340 U	300 UJ
Carbazole	NL	µg/kg	300 U	290 U	260 U	340 U	300 UJ
Chrysene	1290	µg/kg	9.5	5.7 U	5 U	11	5.7 U
Dibenzo(a,h)anthracene	NL	µg/kg	5.8 U	5.7 U	5 U	6.5 U	5.7 U
Dibenzofuran	NL	µg/kg	300 U	290 U	260 U	340 U	300 UJ
Diethylphthalate	NL	µg/kg	300 U	290 U	260 U	340 U	300 UJ
Dimethylphthalate	NL	µg/kg	300 U	290 U	260 U	340 U	300 UJ
Di-n-butylphthalate	NL	µg/kg	300 U	290 U	260 U	340 U	300 UJ
Di-n-octylphthalate	NL	µg/kg	300 U	290 U	260 U	340 U	300 UJ
Fluoranthene	2230	µg/kg	19	5.7 U	5 U	21	5.7 U
Fluorene	536	µg/kg	5.8 U	5.7 U	5 U	4.4 J	5.7 U
Hexachlorobenzene	NL	µg/kg	300 U	290 U	260 U	340 U	300 U
Hexachlorobutadiene	NL	µg/kg	300 U	290 U	260 U	340 U	300 U
Hexachlorocyclopentadiene	NL	µg/kg	300 U	290 U	260 U	340 U	300 U
Hexachloroethane	NL	µg/kg	300 U	290 U	260 U	340 U	300 U
Indeno(1,2,3-cd)pyrene	NL	µg/kg	5.8 U	5.7 U	5 U	8.5	5.7 U
Isophorone	NL	µg/kg	300 U	290 U	260 U	340 U	300 U
Naphthalene	561	µg/kg	5.8 U	5.7 U	5 U	6.5 U	5.7 U
Nitrobenzene	NL	µg/kg	300 U	290 U	260 U	340 U	300 U
N-Nitroso-di-n-propylamine	NL	µg/kg	300 U	290 U	260 U	340 U	300 U
N-Nitrosodiphenylamine	NL	µg/kg	300 U	290 U	260 U	340 U	300 U
Pentachlorophenol	NL	µg/kg	12 U	12 U	10 U	13 U	12 U
Phenanthrene	1170	µg/kg	13	5.7 U	5 U	8.9	7
Phenol	NL	µg/kg	300 U	290 U	260 U	340 U	300 U
Pyrene	1520	µg/kg	16	5.7 U	5 U	18	5.7 U
Total PAH 17	22800	µg/kg	130	48.45	42.5	150.8	52.6
TOC	NL	mg/kg	22,800	19,800	28,100	23,300 J	22,800

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Table B-1
Sediment Sample Analytical Results - SVOCs
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-26	LMR11-26	LMR11-26	LMR11-26	LMR11-27
		Field Sample ID	LMR11-26-048	LMR11-26-072	LMR11-26-096	LMR11-26-117	LMR11-27-006
		Sample Date	8/10/2011	8/10/2011	8/10/2011	8/10/2011	8/4/2011
		Depth Interval (in bss)	24- 48	48- 72	72- 96	96- 117	0- 6
Chemical Name	**PEC[1]**	**Unit**					
1,1'-Biphenyl	NL	µg/kg	310 U	290 U	270 U	230 U	190 U
1,2,4,5-Tetrachlorobenzene	NL	µg/kg	310 U	290 U	270 U	230 U	190 U
2,2'-Oxybis(1-chloropropane)	NL	µg/kg	310 U	290 U	270 U	230 U	190 U
2,3,4,6-Tetrachlorophenol	NL	µg/kg	310 U	290 U	270 U	230 U	190 U
2,4,5-Trichlorophenol	NL	µg/kg	310 U	290 U	270 U	230 U	190 U
2,4,6-Trichlorophenol	NL	µg/kg	310 U	290 U	270 U	230 U	190 U
2,4-Dichlorophenol	NL	µg/kg	310 U	290 U	270 U	230 U	190 U
2,4-Dimethylphenol	NL	µg/kg	310 U	290 U	270 U	230 U	190 U
2,4-Dinitrophenol	NL	µg/kg	590 U	570 U	530 U	460 U	360 U
2,4-Dinitrotoluene	NL	µg/kg	310 U	290 U	270 U	230 U	190 U
2,6-Dinitrotoluene	NL	µg/kg	310 U	290 U	270 U	230 U	190 U
2-Chloronaphthalene	NL	µg/kg	310 U	290 U	270 U	230 U	190 U
2-Chlorophenol	NL	µg/kg	310 U	290 U	270 U	230 U	190 U
2-Methylnaphthalene	NL	µg/kg	5.9 U	5.7 U	5.3 U	10	3.6 UJ
2-Methylphenol	NL	µg/kg	310 U	290 UJ	270 UJ	230 UJ	190 U
2-Nitroaniline	NL	µg/kg	590 U	570 U	530 U	460 U	360 U
2-Nitrophenol	NL	µg/kg	310 U	290 U	270 U	230 U	190 U
3,3'-Dichlorobenzidine	NL	µg/kg	310 U	290 U	270 U	230 U	190 U
3-Nitroaniline	NL	µg/kg	590 U	570 U	530 U	460 U	360 U
4,6-Dinitro-2-methylphenol	NL	µg/kg	590 U	570 U	530 U	460 U	360 U
4-Bromophenyl-phenylether	NL	µg/kg	310 U	290 U	270 U	230 U	190 U
4-Chloro-3-methylphenol	NL	µg/kg	310 U	290 U	270 U	230 U	190 U
4-Chloroaniline	NL	µg/kg	310 U	290 U	270 U	230 U	190 U
4-Chlorophenyl-phenylether	NL	µg/kg	310 U	290 U	270 U	230 U	190 U
4-Methylphenol	NL	µg/kg	310 U	290 U	270 U	230 U	190 U
4-Nitroaniline	NL	µg/kg	590 U	570 U	530 U	460 U	360 U
4-Nitrophenol	NL	µg/kg	590 U	570 U	530 U	460 U	360 U
Acenaphthene	NL	µg/kg	5.9 U	5.7 U	5.3 U	8.8	3.6 U
Acenaphthylene	NL	µg/kg	5.9 U	5.7 U	5.3 U	6.6	3.6 U
Acetophenone	NL	µg/kg	310 U	290 U	270 U	230 U	190 U
Anthracene	845	µg/kg	5.9 U	5.7 U	5.3 U	37	3.6 U
Atrazine	NL	µg/kg	310 U	290 U	270 U	230 U	190 U
Benzaldehyde	NL	µg/kg	310 U	290 U	270 U	230 U	190 U
Benzo(a)anthracene	1050	µg/kg	5.9 U	7.8	14	54	7.7
Benzo(a)pyrene	1450	µg/kg	5.9 U	8.4	24	49	7.2

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Table B-1
Sediment Sample Analytical Results - SVOCs
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-26	LMR11-26	LMR11-26	LMR11-26	LMR11-27
		Field Sample ID	LMR11-26-048	LMR11-26-072	LMR11-26-096	LMR11-26-117	LMR11-27-006
		Sample Date	8/10/2011	8/10/2011	8/10/2011	8/10/2011	8/4/2011
		Depth Interval (in bss)	24- 48	48- 72	72- 96	96- 117	0- 6
Chemical Name	**PEC[1]**	**Unit**					
Benzo(b)fluoranthene	NL	µg/kg	5.9 U	14	29	73	5.7
Benzo(g,h,i)perylene	NL	µg/kg	5.9 U	6.7	12	36	3.6 U
Benzo(k)fluoranthene	NL	µg/kg	5.9 U	5.7 U	8.8	26	4
Bis(2-chloroethoxy)methane	NL	µg/kg	310 U	290 U	270 U	230 U	190 U
Bis(2-chloroethyl)ether	NL	µg/kg	310 U	290 U	270 U	230 U	190 U
Bis(2-ethylhexyl)phthalate	NL	µg/kg	310 U	290 U	270 U	230 U	190 U
Butylbenzylphthalate	NL	µg/kg	310 U	290 U	270 U	230 U	190 U
Caprolactam	NL	µg/kg	310 U	290 U	270 U	230 U	190 U
Carbazole	NL	µg/kg	310 U	290 U	270 U	230 U	190 U
Chrysene	1290	µg/kg	7.6	9.8	19	61	9.6
Dibenzo(a,h)anthracene	NL	µg/kg	5.9 U	5.7 U	5.3 U	11	3.6 U
Dibenzofuran	NL	µg/kg	310 U	290 U	270 U	230 U	190 U
Diethylphthalate	NL	µg/kg	310 U	290 U	270 U	230 U	190 U
Dimethylphthalate	NL	µg/kg	310 U	290 U	270 U	230 U	190 U
Di-n-butylphthalate	NL	µg/kg	310 U	290 U	270 U	230 U	190 U
Di-n-octylphthalate	NL	µg/kg	310 U	290 U	270 U	230 U	190 U
Fluoranthene	2230	µg/kg	22	21	38	130	17
Fluorene	536	µg/kg	5.9 U	5.7 U	5.3 U	15	3.6 U
Hexachlorobenzene	NL	µg/kg	310 U	290 U	270 U	230 U	190 U
Hexachlorobutadiene	NL	µg/kg	310 U	290 U	270 U	230 U	190 U
Hexachlorocyclopentadiene	NL	µg/kg	310 U	290 U	270 U	230 U	190 U
Hexachloroethane	NL	µg/kg	310 U	290 U	270 U	230 U	190 U
Indeno(1,2,3-cd)pyrene	NL	µg/kg	5.9 U	6.1	11	33	3.6 U
Isophorone	NL	µg/kg	310 U	290 U	270 U	230 U	190 U
Naphthalene	561	µg/kg	5.9 U	6.1	5.3 U	11	3.6 U
Nitrobenzene	NL	µg/kg	310 U	290 U	270 U	230 U	190 U
N-Nitroso-di-n-propylamine	NL	µg/kg	310 U	290 U	270 U	230 U	190 U
N-Nitrosodiphenylamine	NL	µg/kg	310 U	290 U	270 U	230 U	190 U
Pentachlorophenol	NL	µg/kg	12 U	12 U	11 U	9.3 U	7.4 U
Phenanthrene	1170	µg/kg	14	14	28	92	5.1
Phenol	NL	µg/kg	310 U	290 U	270 U	230 U	190 U
Pyrene	1520	µg/kg	16	17	32	100	21
Total PAH 17	22800	µg/kg	97.95	130.85	234.35	753.4	93.5
TOC	NL	mg/kg	23,300	23,100	24,100	19,400	11,400

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Table B-1
Sediment Sample Analytical Results - SVOCs
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-27	LMR11-27	LMR11-27	LMR11-27	LMR11-27
		Field Sample ID	LMR11-27-024	LMR11-27-048	LMR11-27-072	LMR11-27-096	LMR11-27-115
		Sample Date	8/11/2011	8/11/2011	8/11/2011	8/11/2011	8/11/2011
		Depth Interval (in bss)	6- 24	24- 48	48- 72	72- 96	96- 115
Chemical Name	**PEC[1]**	**Unit**					
1,1'-Biphenyl	NL	µg/kg	300 U	270 U	260 U	280 U	280 U
1,2,4,5-Tetrachlorobenzene	NL	µg/kg	300 U	270 U	260 U	280 U	280 U
2,2'-Oxybis(1-chloropropane)	NL	µg/kg	300 U	270 U	260 U	280 U	280 U
2,3,4,6-Tetrachlorophenol	NL	µg/kg	300 U	270 U	260 U	280 U	280 U
2,4,5-Trichlorophenol	NL	µg/kg	300 UJ	270 UJ	260 UJ	280 UJ	280 UJ
2,4,6-Trichlorophenol	NL	µg/kg	300 U	270 U	260 U	280 U	280 U
2,4-Dichlorophenol	NL	µg/kg	300 U	270 U	260 U	280 U	280 U
2,4-Dimethylphenol	NL	µg/kg	300 U	270 U	260 U	280 U	280 U
2,4-Dinitrophenol	NL	µg/kg	590 U	530 U	510 U	540 U	550 U
2,4-Dinitrotoluene	NL	µg/kg	300 UJ	270 UJ	260 UJ	280 UJ	280 UJ
2,6-Dinitrotoluene	NL	µg/kg	300 U	270 U	260 U	280 U	280 U
2-Chloronaphthalene	NL	µg/kg	300 U	270 U	260 U	280 U	280 U
2-Chlorophenol	NL	µg/kg	300 U	270 U	260 U	280 U	280 U
2-Methylnaphthalene	NL	µg/kg	5.9 U	5.3 U	5.1 U	5.4 U	5.5 U
2-Methylphenol	NL	µg/kg	300 U	270 U	260 U	280 U	280 U
2-Nitroaniline	NL	µg/kg	590 U	530 U	510 U	540 U	550 U
2-Nitrophenol	NL	µg/kg	300 U	270 U	260 U	280 U	280 U
3,3'-Dichlorobenzidine	NL	µg/kg	300 U	270 U	260 U	280 U	280 U
3-Nitroaniline	NL	µg/kg	590 U	530 U	510 U	540 U	550 U
4,6-Dinitro-2-methylphenol	NL	µg/kg	590 U	530 U	510 U	540 U	550 U
4-Bromophenyl-phenylether	NL	µg/kg	300 U	270 U	260 U	280 U	280 U
4-Chloro-3-methylphenol	NL	µg/kg	300 U	270 U	260 U	280 U	280 U
4-Chloroaniline	NL	µg/kg	300 U	270 U	260 U	280 U	280 U
4-Chlorophenyl-phenylether	NL	µg/kg	300 U	270 U	260 U	280 U	280 U
4-Methylphenol	NL	µg/kg	300 U	270 U	260 U	280 U	280 U
4-Nitroaniline	NL	µg/kg	590 U	530 U	510 U	540 U	550 U
4-Nitrophenol	NL	µg/kg	590 U	530 U	510 U	540 U	550 U
Acenaphthene	NL	µg/kg	5.9 U	5.3 U	5.1 U	5.4 U	5.5 U
Acenaphthylene	NL	µg/kg	5.9 U	5.3 U	5.1 U	5.4 U	5.5 U
Acetophenone	NL	µg/kg	300 U	270 U	260 U	280 U	280 U
Anthracene	845	µg/kg	5.9 U	5.3 U	5.1 U	5.4 U	8.8
Atrazine	NL	µg/kg	300 U	270 U	260 U	280 U	280 U
Benzaldehyde	NL	µg/kg	300 U	270 U	260 U	280 U	280 U
Benzo(a)anthracene	1050	µg/kg	5.9 U	8.2	5.1 U	5.9	22
Benzo(a)pyrene	1450	µg/kg	5.9 U	11	5.1 U	9.3	21

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Table B-1
Sediment Sample Analytical Results - SVOCs
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-27	LMR11-27	LMR11-27	LMR11-27	LMR11-27
		Field Sample ID	LMR11-27-024	LMR11-27-048	LMR11-27-072	LMR11-27-096	LMR11-27-115
		Sample Date	8/11/2011	8/11/2011	8/11/2011	8/11/2011	8/11/2011
		Depth Interval (in bss)	6- 24	24- 48	48- 72	72- 96	96- 115
Chemical Name	**PEC[1]**	**Unit**					
Benzo(b)fluoranthene	NL	µg/kg	5.9 U	15	5.1 U	12	30
Benzo(g,h,i)perylene	NL	µg/kg	5.9 U	5.9	5.1 U	5.4 U	11
Benzo(k)fluoranthene	NL	µg/kg	5.9 U	6.5	5.1 U	5.4 U	11
Bis(2-chloroethoxy)methane	NL	µg/kg	300 U	270 U	260 U	280 U	280 U
Bis(2-chloroethyl)ether	NL	µg/kg	300 U	270 U	260 U	280 U	280 U
Bis(2-ethylhexyl)phthalate	NL	µg/kg	300 U	270 U	260 U	280 U	280 U
Butylbenzylphthalate	NL	µg/kg	300 U	270 U	260 U	280 U	280 U
Caprolactam	NL	µg/kg	300 U	270 U	98 J	280 U	280 U
Carbazole	NL	µg/kg	300 U	270 U	260 U	280 U	280 U
Chrysene	1290	µg/kg	5.9 U	10	5.1 U	6.1	22
Dibenzo(a,h)anthracene	NL	µg/kg	5.9 U	5.3 U	5.1 U	5.4 U	5.5 U
Dibenzofuran	NL	µg/kg	300 U	270 U	260 U	280 U	280 U
Diethylphthalate	NL	µg/kg	300 U	270 U	260 U	280 U	280 U
Dimethylphthalate	NL	µg/kg	300 U	270 U	260 U	280 U	280 U
Di-n-butylphthalate	NL	µg/kg	300 U	270 U	260 U	280 U	280 U
Di-n-octylphthalate	NL	µg/kg	300 U	270 U	260 U	280 U	280 U
Fluoranthene	2230	µg/kg	5.9 U	33	6.3	17	48
Fluorene	536	µg/kg	5.9 U	5.3 U	5.1 U	5.4 U	5.5 U
Hexachlorobenzene	NL	µg/kg	300 U	270 U	260 U	280 U	280 U
Hexachlorobutadiene	NL	µg/kg	300 U	270 U	260 U	280 U	280 U
Hexachlorocyclopentadiene	NL	µg/kg	300 U	270 U	260 U	280 U	280 U
Hexachloroethane	NL	µg/kg	300 U	270 U	260 U	280 U	280 U
Indeno(1,2,3-cd)pyrene	NL	µg/kg	5.9 U	6	5.1 U	5.4 U	10
Isophorone	NL	µg/kg	300 U	270 U	260 U	280 U	280 U
Naphthalene	561	µg/kg	5.9 U	5.3 U	5.1 U	5.4 U	5.5 U
Nitrobenzene	NL	µg/kg	300 U	270 U	260 U	280 U	280 U
N-Nitroso-di-n-propylamine	NL	µg/kg	300 U	270 U	260 U	280 U	280 U
N-Nitrosodiphenylamine	NL	µg/kg	300 U	270 U	260 U	280 U	280 U
Pentachlorophenol	NL	µg/kg	12 UJ	11 UJ	10 UJ	11 UJ	11 UJ
Phenanthrene	1170	µg/kg	5.9 U	21	5.2	9.3	21
Phenol	NL	µg/kg	300 U	270 U	260 U	280 U	280 U
Pyrene	1520	µg/kg	7.1	19	5.1 U	12	37
Total PAH 17	22800	µg/kg	54.3	154.15	49.75	98.6	258.3
TOC	NL	mg/kg	21,500	22,600	25,500	26,100	28,400

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Table B-1
Sediment Sample Analytical Results - SVOCs
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-28	LMR11-28	LMR11-29	LMR11-30	LMR11-31
		Field Sample ID	LMR11-28-006	LMR11-28-034	LMR11-29-006	LMR11-30-006	LMR11-31-006
		Sample Date	8/10/2011	8/10/2011	8/4/2011	8/4/2011	8/4/2011
		Depth Interval (in bss)	0- 6	6- 34	0- 6	0- 6	0- 6
Chemical Name	**PEC[1]**	**Unit**					
1,1'-Biphenyl	NL	µg/kg	380 U	210 U	210 U	240 U	230 U
1,2,4,5-Tetrachlorobenzene	NL	µg/kg	380 U	210 U	210 U	240 U	230 U
2,2'-Oxybis(1-chloropropane)	NL	µg/kg	380 U	210 U	210 U	240 U	230 U
2,3,4,6-Tetrachlorophenol	NL	µg/kg	380 U	210 U	210 U	240 U	230 U
2,4,5-Trichlorophenol	NL	µg/kg	380 UJ	210 UJ	210 U	240 U	230 U
2,4,6-Trichlorophenol	NL	µg/kg	380 U	210 U	210 U	240 U	230 U
2,4-Dichlorophenol	NL	µg/kg	380 U	210 U	210 U	240 U	230 U
2,4-Dimethylphenol	NL	µg/kg	380 U	210 U	210 U	240 U	230 U
2,4-Dinitrophenol	NL	µg/kg	730 U	410 U	400 U	470 U	450 U
2,4-Dinitrotoluene	NL	µg/kg	380 UJ	210 UJ	210 U	240 U	230 U
2,6-Dinitrotoluene	NL	µg/kg	380 U	210 U	210 U	240 U	230 U
2-Chloronaphthalene	NL	µg/kg	380 U	210 U	210 U	240 U	230 U
2-Chlorophenol	NL	µg/kg	380 U	210 U	210 U	240 U	230 U
2-Methylnaphthalene	NL	µg/kg	7.3 U	4.1 U	4 U	4.7 U	4.5 U
2-Methylphenol	NL	µg/kg	380 U	210 U	210 U	240 U	230 U
2-Nitroaniline	NL	µg/kg	730 U	410 U	400 U	470 U	450 U
2-Nitrophenol	NL	µg/kg	380 U	210 U	210 U	240 U	230 U
3,3'-Dichlorobenzidine	NL	µg/kg	380 U	210 U	210 U	240 U	230 U
3-Nitroaniline	NL	µg/kg	730 U	410 U	400 U	470 U	450 U
4,6-Dinitro-2-methylphenol	NL	µg/kg	730 U	410 U	400 U	470 U	450 U
4-Bromophenyl-phenylether	NL	µg/kg	380 U	210 U	210 U	240 U	230 U
4-Chloro-3-methylphenol	NL	µg/kg	380 U	210 U	210 U	240 U	230 U
4-Chloroaniline	NL	µg/kg	380 U	210 U	210 U	240 U	230 U
4-Chlorophenyl-phenylether	NL	µg/kg	380 U	210 U	210 U	240 U	230 U
4-Methylphenol	NL	µg/kg	380 U	210 U	210 U	240 U	230 U
4-Nitroaniline	NL	µg/kg	730 U	410 U	400 U	470 U	450 U
4-Nitrophenol	NL	µg/kg	730 U	410 U	400 U	470 U	450 U
Acenaphthene	NL	µg/kg	7.3 U	4.1 U	4 U	4.7 U	4.5 U
Acenaphthylene	NL	µg/kg	7.3 U	4.1 U	4 U	4.7 U	4.5 U
Acetophenone	NL	µg/kg	380 U	210 U	210 U	240 U	230 U
Anthracene	845	µg/kg	7.3 U	4.1 U	4 U	4.7 U	4.5 U
Atrazine	NL	µg/kg	380 U	210 U	210 U	240 U	230 U
Benzaldehyde	NL	µg/kg	380 U	210 U	210 U	240 U	230 U
Benzo(a)anthracene	1050	µg/kg	13	4.1 U	6.7	6.8	4.5 U
Benzo(a)pyrene	1450	µg/kg	18	4.1 U	12	13	8.2

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Table B-1
Sediment Sample Analytical Results - SVOCs
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-28	LMR11-28	LMR11-29	LMR11-30	LMR11-31
		Field Sample ID	LMR11-28-006	LMR11-28-034	LMR11-29-006	LMR11-30-006	LMR11-31-006
		Sample Date	8/10/2011	8/10/2011	8/4/2011	8/4/2011	8/4/2011
		Depth Interval (in bss)	0- 6	6- 34	0- 6	0- 6	0- 6
Chemical Name	**PEC[1]**	**Unit**					
Benzo(b)fluoranthene	NL	µg/kg	31	4.1 U	10	9	5.2
Benzo(g,h,i)perylene	NL	µg/kg	14	4.1 U	4.3	4.7 U	4.5 U
Benzo(k)fluoranthene	NL	µg/kg	12	4.1 U	5	5.5	4.5 U
Bis(2-chloroethoxy)methane	NL	µg/kg	380 U	210 U	210 U	240 U	230 U
Bis(2-chloroethyl)ether	NL	µg/kg	380 U	210 U	210 U	240 U	230 U
Bis(2-ethylhexyl)phthalate	NL	µg/kg	100 J	210 U	210 U	240 U	230 U
Butylbenzylphthalate	NL	µg/kg	380 U	210 U	210 U	240 U	230 U
Caprolactam	NL	µg/kg	380 U	210 U	210 U	240 U	230 U
Carbazole	NL	µg/kg	380 U	210 U	210 U	240 U	230 U
Chrysene	1290	µg/kg	18	5.8	6.8	7.9	4.5 U
Dibenzo(a,h)anthracene	NL	µg/kg	7.3 U	4.1 U	4 U	4.7 U	4.5 U
Dibenzofuran	NL	µg/kg	380 U	210 U	210 U	240 U	230 U
Diethylphthalate	NL	µg/kg	380 U	210 U	210 U	240 U	230 U
Dimethylphthalate	NL	µg/kg	380 U	210 U	210 U	240 U	230 U
Di-n-butylphthalate	NL	µg/kg	380 U	210 U	210 U	240 U	230 U
Di-n-octylphthalate	NL	µg/kg	380 U	210 U	210 U	240 U	230 U
Fluoranthene	2230	µg/kg	49	9	12	11	5.9
Fluorene	536	µg/kg	7.3 U	4.1 U	4 U	4.7 U	4.5 U
Hexachlorobenzene	NL	µg/kg	380 U	210 U	210 U	240 U	230 U
Hexachlorobutadiene	NL	µg/kg	380 U	210 U	210 U	240 U	230 U
Hexachlorocyclopentadiene	NL	µg/kg	380 U	210 U	210 U	240 U	230 U
Hexachloroethane	NL	µg/kg	380 U	210 U	210 U	240 U	230 U
Indeno(1,2,3-cd)pyrene	NL	µg/kg	12	4.1 U	5.3	4.7 U	4.5 U
Isophorone	NL	µg/kg	380 U	210 U	210 U	240 U	230 U
Naphthalene	561	µg/kg	7.3 U	4.1 U	4 U	4.7 U	4.5 U
Nitrobenzene	NL	µg/kg	380 U	210 U	210 U	240 U	230 U
N-Nitroso-di-n-propylamine	NL	µg/kg	380 U	210 U	210 U	240 U	230 U
N-Nitrosodiphenylamine	NL	µg/kg	380 U	210 U	210 U	240 U	230 U
Pentachlorophenol	NL	µg/kg	15 UJ	8.2 UJ	8.2 U	9.6 U	9 U
Phenanthrene	1170	µg/kg	30	16	4.9	6.9	4.5 U
Phenol	NL	µg/kg	380 U	210 U	210 U	240 U	230 U
Pyrene	1520	µg/kg	30	6.4	11	11	7.2
Total PAH 17	22800	µg/kg	252.55	63.85	92	92.25	55.75
TOC	NL	mg/kg	20,000	4,270	19,700	22,200	27,900

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Table B-1
Sediment Sample Analytical Results - SVOCs
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-32	LMR11-32	LMR11-32	LMR11-32	LMR11-32
		Field Sample ID	LMR11-32-006	LMR11-32-024	LMR11-32-048	LMR11-32-072	LMR11-32-096
		Sample Date	8/10/2011	8/10/2011	8/10/2011	8/10/2011	8/10/2011
		Depth Interval (in bss)	0- 6	6- 24	24- 48	48- 72	72- 96
Chemical Name	**PEC[1]**	**Unit**					
1,1'-Biphenyl	NL	µg/kg	340 U	290 U	280 U	230 U	230 U
1,2,4,5-Tetrachlorobenzene	NL	µg/kg	340 U	290 U	280 U	230 U	230 U
2,2'-Oxybis(1-chloropropane)	NL	µg/kg	340 U	290 U	280 U	230 U	230 U
2,3,4,6-Tetrachlorophenol	NL	µg/kg	340 U	290 U	280 U	230 U	230 U
2,4,5-Trichlorophenol	NL	µg/kg	340 U	290 U	280 U	230 U	230 U
2,4,6-Trichlorophenol	NL	µg/kg	340 U	290 U	280 U	230 U	230 U
2,4-Dichlorophenol	NL	µg/kg	340 U	290 U	280 U	230 U	230 U
2,4-Dimethylphenol	NL	µg/kg	340 U	290 U	280 U	230 U	230 U
2,4-Dinitrophenol	NL	µg/kg	650 U	570 U	550 U	450 U	440 U
2,4-Dinitrotoluene	NL	µg/kg	340 U	290 U	280 U	230 U	230 U
2,6-Dinitrotoluene	NL	µg/kg	340 U	290 U	280 U	230 U	230 U
2-Chloronaphthalene	NL	µg/kg	340 U	290 U	280 U	230 U	230 U
2-Chlorophenol	NL	µg/kg	340 U	290 U	280 U	230 U	230 U
2-Methylnaphthalene	NL	µg/kg	6.5 U	5.7 U	5.5 U	18	62
2-Methylphenol	NL	µg/kg	340 UJ	290 UJ	280 UJ	230 UJ	230 UJ
2-Nitroaniline	NL	µg/kg	650 U	570 U	550 U	450 U	440 U
2-Nitrophenol	NL	µg/kg	340 U	290 U	280 U	230 U	230 U
3,3'-Dichlorobenzidine	NL	µg/kg	340 U	290 U	280 U	230 U	230 U
3-Nitroaniline	NL	µg/kg	650 U	570 U	550 U	450 U	440 U
4,6-Dinitro-2-methylphenol	NL	µg/kg	650 U	570 U	550 U	450 U	440 U
4-Bromophenyl-phenylether	NL	µg/kg	340 U	290 U	280 U	230 U	230 U
4-Chloro-3-methylphenol	NL	µg/kg	340 U	290 U	280 U	230 U	230 U
4-Chloroaniline	NL	µg/kg	340 U	290 U	280 U	230 U	230 U
4-Chlorophenyl-phenylether	NL	µg/kg	340 U	290 U	280 U	230 U	230 U
4-Methylphenol	NL	µg/kg	340 U	290 U	280 U	230 U	230 U
4-Nitroaniline	NL	µg/kg	650 U	570 U	550 U	450 U	440 U
4-Nitrophenol	NL	µg/kg	650 U	570 U	550 U	450 U	440 U
Acenaphthene	NL	µg/kg	6.5 U	5.7 U	5.5 U	14	89
Acenaphthylene	NL	µg/kg	6.5 U	5.7 U	6.7	20	35
Acetophenone	NL	µg/kg	340 U	290 U	280 U	230 U	230 U
Anthracene	845	µg/kg	15	16	16	31	210
Atrazine	NL	µg/kg	340 U	290 U	280 U	230 U	230 U
Benzaldehyde	NL	µg/kg	340 U	290 U	280 U	230 U	230 U
Benzo(a)anthracene	1050	µg/kg	64	37	40	130	450
Benzo(a)pyrene	1450	µg/kg	80	50	49	110	320

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Table B-1
Sediment Sample Analytical Results - SVOCs
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-32	LMR11-32	LMR11-32	LMR11-32	LMR11-32
		Field Sample ID	LMR11-32-006	LMR11-32-024	LMR11-32-048	LMR11-32-072	LMR11-32-096
		Sample Date	8/10/2011	8/10/2011	8/10/2011	8/10/2011	8/10/2011
		Depth Interval (in bss)	0- 6	6- 24	24- 48	48- 72	72- 96
Chemical Name	**PEC[1]**	**Unit**					
Benzo(b)fluoranthene	NL	µg/kg	130	66	56	150	420
Benzo(g,h,i)perylene	NL	µg/kg	54	29	35	68	220
Benzo(k)fluoranthene	NL	µg/kg	43	25	25	55	180
Bis(2-chloroethoxy)methane	NL	µg/kg	340 U	290 U	280 U	230 U	230 U
Bis(2-chloroethyl)ether	NL	µg/kg	340 U	290 U	280 U	230 U	230 U
Bis(2-ethylhexyl)phthalate	NL	µg/kg	340 U	180 J	230 J	230 U	230 U
Butylbenzylphthalate	NL	µg/kg	340 U	290 U	280 U	230 U	230 U
Caprolactam	NL	µg/kg	340 U	290 U	280 U	230 U	230 U
Carbazole	NL	µg/kg	340 U	290 U	280 U	230 U	64 J
Chrysene	1290	µg/kg	83	42	44	130	390
Dibenzo(a,h)anthracene	NL	µg/kg	16	5.7 U	10	31	74
Dibenzofuran	NL	µg/kg	340 U	290 U	280 U	230 U	50 J
Diethylphthalate	NL	µg/kg	340 U	290 U	280 U	230 U	230 U
Dimethylphthalate	NL	µg/kg	340 U	290 U	280 U	230 U	230 U
Di-n-butylphthalate	NL	µg/kg	340 U	290 U	280 U	230 U	230 U
Di-n-octylphthalate	NL	µg/kg	340 U	290 U	280 U	230 U	230 U
Fluoranthene	2230	µg/kg	180	100	92	220	940
Fluorene	536	µg/kg	6.5 U	5.7 U	5.7	15	100
Hexachlorobenzene	NL	µg/kg	340 U	290 U	280 U	230 U	230 U
Hexachlorobutadiene	NL	µg/kg	340 U	290 U	280 U	230 U	230 U
Hexachlorocyclopentadiene	NL	µg/kg	340 U	290 U	280 U	230 U	230 U
Hexachloroethane	NL	µg/kg	340 U	290 U	280 U	230 U	230 U
Indeno(1,2,3-cd)pyrene	NL	µg/kg	52	27	32	63	190
Isophorone	NL	µg/kg	340 U	290 U	280 U	230 U	230 U
Naphthalene	561	µg/kg	6.5 U	5.7 U	6	22	73
Nitrobenzene	NL	µg/kg	340 U	290 U	280 U	230 U	230 U
N-Nitroso-di-n-propylamine	NL	µg/kg	340 U	290 U	280 U	230 U	230 U
N-Nitrosodiphenylamine	NL	µg/kg	340 U	290 U	280 U	230 U	230 U
Pentachlorophenol	NL	µg/kg	13 U	12 U	11 U	9.2 U	8.9 U
Phenanthrene	1170	µg/kg	81	73	62	130	740
Phenol	NL	µg/kg	340 U	290 U	280 U	230 U	230 U
Pyrene	1520	µg/kg	120	73	59	210	710
Total PAH 17	22800	µg/kg	934.25	555.1	543.9	1,417	5,203
TOC	NL	mg/kg	29,600	33,500	22,900	21,400	66,200

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Table B-1
Sediment Sample Analytical Results - SVOCs
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-32	LMR11-33	LMR11-34	LMR11-35	LMR11-35
		Field Sample ID	LMR11-32-116	LMR11-33-006	LMR11-34-006	LMR11-35-006	LMR11-35-024
		Sample Date	8/10/2011	8/4/2011	8/4/2011	8/10/2011	8/10/2011
		Depth Interval (in bss)	96- 116	0- 6	0- 6	0- 6	6- 24
Chemical Name	**PEC[1]**	**Unit**					
1,1'-Biphenyl	NL	µg/kg	240 U	190 U	240 U	340 U	300 U
1,2,4,5-Tetrachlorobenzene	NL	µg/kg	240 U	190 U	240 U	340 U	300 U
2,2'-Oxybis(1-chloropropane)	NL	µg/kg	240 U	190 U	240 U	340 U	300 U
2,3,4,6-Tetrachlorophenol	NL	µg/kg	240 U	190 U	240 U	340 U	300 U
2,4,5-Trichlorophenol	NL	µg/kg	240 U	190 U	240 U	340 U	300 U
2,4,6-Trichlorophenol	NL	µg/kg	240 U	190 U	240 U	340 U	300 U
2,4-Dichlorophenol	NL	µg/kg	240 U	190 U	240 U	340 U	300 U
2,4-Dimethylphenol	NL	µg/kg	240 U	190 U	240 U	340 U	300 U
2,4-Dinitrophenol	NL	µg/kg	470 U	360 U	470 U	650 U	590 U
2,4-Dinitrotoluene	NL	µg/kg	240 U	190 U	240 U	340 U	300 U
2,6-Dinitrotoluene	NL	µg/kg	240 U	190 U	240 U	340 U	300 U
2-Chloronaphthalene	NL	µg/kg	240 U	190 U	240 U	340 U	300 U
2-Chlorophenol	NL	µg/kg	240 U	190 U	240 U	340 U	300 U
2-Methylnaphthalene	NL	µg/kg	38	3.6 U	4.7 U	6.5 U	5.9 U
2-Methylphenol	NL	µg/kg	240 UJ	190 U	240 U	340 U	300 U
2-Nitroaniline	NL	µg/kg	470 U	360 U	470 U	650 U	590 U
2-Nitrophenol	NL	µg/kg	240 U	190 U	240 U	340 U	300 U
3,3'-Dichlorobenzidine	NL	µg/kg	240 U	190 U	240 U	340 U	300 U
3-Nitroaniline	NL	µg/kg	470 U	360 U	470 U	650 U	590 U
4,6-Dinitro-2-methylphenol	NL	µg/kg	470 U	360 U	470 U	650 U	590 U
4-Bromophenyl-phenylether	NL	µg/kg	240 U	190 U	240 U	340 U	300 U
4-Chloro-3-methylphenol	NL	µg/kg	240 U	190 U	240 U	340 U	300 U
4-Chloroaniline	NL	µg/kg	240 U	190 U	240 U	340 U	300 U
4-Chlorophenyl-phenylether	NL	µg/kg	240 U	190 U	240 U	340 U	300 U
4-Methylphenol	NL	µg/kg	240 U	190 U	240 U	340 U	300 U
4-Nitroaniline	NL	µg/kg	470 U	360 U	470 U	650 U	590 U
4-Nitrophenol	NL	µg/kg	470 U	360 U	470 U	650 U	590 U
Acenaphthene	NL	µg/kg	58	3.6 U	4.7 U	6.5 U	5.9 U
Acenaphthylene	NL	µg/kg	29	3.6 U	4.7 U	6.5 U	5.9 U
Acetophenone	NL	µg/kg	240 U	190 U	240 U	340 U	300 U
Anthracene	845	µg/kg	93	3.6 U	4.7 U	6.5 U	5.9 U
Atrazine	NL	µg/kg	240 U	190 U	240 U	340 U	300 U
Benzaldehyde	NL	µg/kg	240 U	190 U	240 U	340 U	300 U
Benzo(a)anthracene	1050	µg/kg	200	3.6 U	4.7 U	6.5 U	6.5
Benzo(a)pyrene	1450	µg/kg	160	6.6	4.7 U	6.5 U	7.4

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Table B-1
Sediment Sample Analytical Results - SVOCs
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-32	LMR11-33	LMR11-34	LMR11-35	LMR11-35
		Field Sample ID	LMR11-32-116	LMR11-33-006	LMR11-34-006	LMR11-35-006	LMR11-35-024
		Sample Date	8/10/2011	8/4/2011	8/4/2011	8/10/2011	8/10/2011
		Depth Interval (in bss)	96- 116	0- 6	0- 6	0- 6	6- 24
Chemical Name	**PEC[1]**	**Unit**					
Benzo(b)fluoranthene	NL	µg/kg	220	3.6 U	4.7 U	7	11
Benzo(g,h,i)perylene	NL	µg/kg	94	3.6 U	4.7 U	6.5 U	5.9 U
Benzo(k)fluoranthene	NL	µg/kg	60	3.6 U	4.7 U	6.5 U	5.9 U
Bis(2-chloroethoxy)methane	NL	µg/kg	240 U	190 U	240 U	340 U	300 U
Bis(2-chloroethyl)ether	NL	µg/kg	240 U	190 U	240 U	340 U	300 U
Bis(2-ethylhexyl)phthalate	NL	µg/kg	240 U	190 U	240 U	340 U	300 U
Butylbenzylphthalate	NL	µg/kg	240 U	190 U	240 U	340 U	300 U
Caprolactam	NL	µg/kg	240 U	190 U	240 U	340 U	300 U
Carbazole	NL	µg/kg	240 U	190 U	240 U	340 U	300 U
Chrysene	1290	µg/kg	200	3.6 U	4.7 U	7.9	7.5
Dibenzo(a,h)anthracene	NL	µg/kg	39	3.6 U	4.7 U	6.5 U	5.9 U
Dibenzofuran	NL	µg/kg	240 U	190 U	240 U	340 U	300 U
Diethylphthalate	NL	µg/kg	240 U	190 U	240 U	340 U	300 U
Dimethylphthalate	NL	µg/kg	240 U	190 U	240 U	340 U	300 U
Di-n-butylphthalate	NL	µg/kg	240 U	190 U	240 U	340 U	300 U
Di-n-octylphthalate	NL	µg/kg	240 U	190 U	240 U	340 U	300 U
Fluoranthene	2230	µg/kg	530	3.8	5.1	25	22
Fluorene	536	µg/kg	71	3.6 U	4.7 U	6.5 U	5.9 U
Hexachlorobenzene	NL	µg/kg	240 U	190 U	240 U	340 U	300 U
Hexachlorobutadiene	NL	µg/kg	240 U	190 U	240 U	340 U	300 U
Hexachlorocyclopentadiene	NL	µg/kg	240 U	190 U	240 U	340 U	300 U
Hexachloroethane	NL	µg/kg	240 U	190 U	240 U	340 U	300 U
Indeno(1,2,3-cd)pyrene	NL	µg/kg	84	3.6 U	4.7 U	6.5 U	5.9 U
Isophorone	NL	µg/kg	240 U	190 U	240 U	340 U	300 U
Naphthalene	561	µg/kg	34	3.6 U	4.7 U	6.5 U	5.9 U
Nitrobenzene	NL	µg/kg	240 U	190 U	240 U	340 U	300 U
N-Nitroso-di-n-propylamine	NL	µg/kg	240 U	190 U	240 U	340 U	300 U
N-Nitrosodiphenylamine	NL	µg/kg	240 U	190 U	240 U	340 U	300 U
Pentachlorophenol	NL	µg/kg	9.5 U	7.4 U	9.4 U	13 U	12 U
Phenanthrene	1170	µg/kg	460	3.6 U	4.7 U	19	16
Phenol	NL	µg/kg	240 U	190 U	240 U	340 U	300 U
Pyrene	1520	µg/kg	430	5.2	5.7	17	15
Total PAH 17	22800	µg/kg	2,800	40.8	46.05	114.9	114.9
TOC	NL	mg/kg	17,700	19,700	18,300	36,000	27,700

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Table B-1
Sediment Sample Analytical Results - SVOCs
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-35	LMR11-35	LMR11-35	LMR11-35	LMR11-35
		Field Sample ID	LMR11-35-024FS	LMR11-35-048	LMR11-35-072	LMR11-35-096	LMR11-35-116
		Sample Date	8/10/2011	8/10/2011	8/10/2011	8/10/2011	8/10/2011
		Depth Interval (in bss)	6- 24	24- 48	48- 72	72- 96	96- 116
Chemical Name	**PEC[1]**	**Unit**					
1,1'-Biphenyl	NL	µg/kg	310 U	330 U	290 U	310 U	260 U
1,2,4,5-Tetrachlorobenzene	NL	µg/kg	310 U	330 U	290 U	310 U	260 U
2,2'-Oxybis(1-chloropropane)	NL	µg/kg	310 U	330 U	290 U	310 U	260 U
2,3,4,6-Tetrachlorophenol	NL	µg/kg	310 U	330 U	290 U	310 U	260 U
2,4,5-Trichlorophenol	NL	µg/kg	310 U	330 U	290 U	310 U	260 U
2,4,6-Trichlorophenol	NL	µg/kg	310 U	330 U	290 U	310 U	260 U
2,4-Dichlorophenol	NL	µg/kg	310 U	330 U	290 U	310 U	260 U
2,4-Dimethylphenol	NL	µg/kg	310 U	330 U	290 U	310 U	260 U
2,4-Dinitrophenol	NL	µg/kg	600 U	630 U	570 U	590 U	500 U
2,4-Dinitrotoluene	NL	µg/kg	310 U	330 U	290 U	310 U	260 U
2,6-Dinitrotoluene	NL	µg/kg	310 U	330 U	290 U	310 U	260 U
2-Chloronaphthalene	NL	µg/kg	310 U	330 U	290 U	310 U	260 U
2-Chlorophenol	NL	µg/kg	310 U	330 U	290 U	310 U	260 U
2-Methylnaphthalene	NL	µg/kg	6 U	6.3 U	5.7 U	5.9 U	5 U
2-Methylphenol	NL	µg/kg	310 U	330 U	290 U	310 U	260 U
2-Nitroaniline	NL	µg/kg	600 U	630 U	570 U	590 U	500 U
2-Nitrophenol	NL	µg/kg	310 U	330 U	290 U	310 U	260 U
3,3'-Dichlorobenzidine	NL	µg/kg	310 U	330 U	290 U	310 U	260 U
3-Nitroaniline	NL	µg/kg	600 U	630 U	570 U	590 U	500 U
4,6-Dinitro-2-methylphenol	NL	µg/kg	600 U	630 U	570 U	590 U	500 U
4-Bromophenyl-phenylether	NL	µg/kg	310 U	330 U	290 U	310 U	260 U
4-Chloro-3-methylphenol	NL	µg/kg	310 U	330 U	290 U	310 U	260 U
4-Chloroaniline	NL	µg/kg	310 U	330 U	290 U	310 U	260 U
4-Chlorophenyl-phenylether	NL	µg/kg	310 U	330 U	290 U	310 U	260 U
4-Methylphenol	NL	µg/kg	310 U	330 U	290 U	310 U	260 U
4-Nitroaniline	NL	µg/kg	600 U	630 U	570 U	590 U	500 U
4-Nitrophenol	NL	µg/kg	600 U	630 U	570 U	590 U	500 U
Acenaphthene	NL	µg/kg	6 U	6.3 U	5.7 U	5.9 U	5 U
Acenaphthylene	NL	µg/kg	6 U	6.3 U	5.7 U	5.9 U	5 U
Acetophenone	NL	µg/kg	310 U	330 U	290 U	310 U	260 U
Anthracene	845	µg/kg	6 U	6.3 U	5.7 U	5.9 U	5.5
Atrazine	NL	µg/kg	310 U	330 U	290 U	310 U	260 U
Benzaldehyde	NL	µg/kg	310 U	330 U	290 U	310 U	260 U
Benzo(a)anthracene	1050	µg/kg	6 U	6.3 U	5.7 U	7.2	27
Benzo(a)pyrene	1450	µg/kg	6 U	6.3 U	5.7 U	5.9 U	34

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Table B-1
Sediment Sample Analytical Results - SVOCs
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-35	LMR11-35	LMR11-35	LMR11-35	LMR11-35
		Field Sample ID	LMR11-35-024FS	LMR11-35-048	LMR11-35-072	LMR11-35-096	LMR11-35-116
		Sample Date	8/10/2011	8/10/2011	8/10/2011	8/10/2011	8/10/2011
		Depth Interval (in bss)	6- 24	24- 48	48- 72	72- 96	96- 116
Chemical Name	**PEC[1]**	**Unit**					
Benzo(b)fluoranthene	NL	µg/kg	6.2	6.9	5.7 U	7.1	42
Benzo(g,h,i)perylene	NL	µg/kg	6 U	6.3 U	5.7 U	5.9 U	16
Benzo(k)fluoranthene	NL	µg/kg	6 U	6.3 U	5.7 U	5.9 U	15
Bis(2-chloroethoxy)methane	NL	µg/kg	310 U	330 U	290 U	310 U	260 U
Bis(2-chloroethyl)ether	NL	µg/kg	310 U	330 U	290 U	310 U	260 U
Bis(2-ethylhexyl)phthalate	NL	µg/kg	310 U	330 U	290 U	310 U	260 U
Butylbenzylphthalate	NL	µg/kg	310 U	330 U	290 U	310 U	260 U
Caprolactam	NL	µg/kg	130 J	330 U	290 U	310 U	260 U
Carbazole	NL	µg/kg	310 U	330 U	290 U	310 U	260 U
Chrysene	1290	µg/kg	7.2	6.3 U	5.7 U	9.5	27
Dibenzo(a,h)anthracene	NL	µg/kg	6 U	6.3 U	5.7 U	5.9 U	5.1
Dibenzofuran	NL	µg/kg	310 U	330 U	290 U	310 U	260 U
Diethylphthalate	NL	µg/kg	310 U	330 U	290 U	310 U	260 U
Dimethylphthalate	NL	µg/kg	310 U	330 U	290 U	310 U	260 U
Di-n-butylphthalate	NL	µg/kg	310 U	330 U	290 U	310 U	260 U
Di-n-octylphthalate	NL	µg/kg	310 U	330 U	290 U	310 U	260 U
Fluoranthene	2230	µg/kg	24	13	6.1	30	37
Fluorene	536	µg/kg	6 U	6.3 U	5.7 U	5.9 U	5 U
Hexachlorobenzene	NL	µg/kg	310 U	330 U	290 U	310 U	260 U
Hexachlorobutadiene	NL	µg/kg	310 U	330 U	290 U	310 U	260 U
Hexachlorocyclopentadiene	NL	µg/kg	310 U	330 U	290 U	310 U	260 U
Hexachloroethane	NL	µg/kg	310 U	330 U	290 U	310 U	260 U
Indeno(1,2,3-cd)pyrene	NL	µg/kg	6 U	6.3 U	5.7 U	5.9 U	16
Isophorone	NL	µg/kg	310 U	330 U	290 U	310 U	260 U
Naphthalene	561	µg/kg	6 U	6.3 U	5.7 U	5.9 U	5 U
Nitrobenzene	NL	µg/kg	310 U	330 U	290 U	310 U	260 U
N-Nitroso-di-n-propylamine	NL	µg/kg	310 U	330 U	290 U	310 U	260 U
N-Nitrosodiphenylamine	NL	µg/kg	310 U	330 U	290 U	310 U	260 U
Pentachlorophenol	NL	µg/kg	12 U	13 U	11 U	12 U	10 U
Phenanthrene	1170	µg/kg	17	9	5.7 U	21	22
Phenol	NL	µg/kg	310 U	330 U	290 U	310 U	260 U
Pyrene	1520	µg/kg	17	9.8	5.7 U	19	43
Total PAH 17	22800	µg/kg	107.4	79.65	51.7	126.25	302.1
TOC	NL	mg/kg	27,000	27,500	22,100	25,400	26,700

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Table B-1
Sediment Sample Analytical Results - SVOCs
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-36	LMR11-37	LMR11-37	LMR11-37	LMR11-37
		Field Sample ID	LMR11-36-006	LMR11-37-006	LMR11-37-024	LMR11-37-048	LMR11-37-048-DP
		Sample Date	8/4/2011	8/10/2011	8/10/2011	8/10/2011	8/10/2011
		Depth Interval (in bss)	0- 6	0- 6	6- 24	24- 48	24- 48
Chemical Name	**PEC[1]**	**Unit**					
1,1'-Biphenyl	NL	µg/kg	160 U	320 U	320 U	310 U	300 U
1,2,4,5-Tetrachlorobenzene	NL	µg/kg	160 U	320 U	320 U	310 U	300 U
2,2'-Oxybis(1-chloropropane)	NL	µg/kg	160 U	320 U	320 U	310 U	300 U
2,3,4,6-Tetrachlorophenol	NL	µg/kg	160 U	320 U	320 U	310 U	300 U
2,4,5-Trichlorophenol	NL	µg/kg	160 U	320 U	320 U	310 U	300 U
2,4,6-Trichlorophenol	NL	µg/kg	160 U	320 U	320 U	310 U	300 U
2,4-Dichlorophenol	NL	µg/kg	160 U	320 U	320 U	310 U	300 U
2,4-Dimethylphenol	NL	µg/kg	160 U	320 U	320 U	310 U	300 U
2,4-Dinitrophenol	NL	µg/kg	310 U	620 U	630 U	590 U	590 U
2,4-Dinitrotoluene	NL	µg/kg	160 U	320 U	320 U	310 U	300 U
2,6-Dinitrotoluene	NL	µg/kg	160 U	320 U	320 U	310 U	300 U
2-Chloronaphthalene	NL	µg/kg	160 U	320 U	320 U	310 U	300 U
2-Chlorophenol	NL	µg/kg	160 U	320 U	320 U	310 U	300 U
2-Methylnaphthalene	NL	µg/kg	3.1 U	6.2 U	6.3 U	5.9 U	5.9 U
2-Methylphenol	NL	µg/kg	160 U	320 U	320 U	310 U	300 U
2-Nitroaniline	NL	µg/kg	310 U	620 U	630 U	590 U	590 U
2-Nitrophenol	NL	µg/kg	160 U	320 U	320 U	310 U	300 U
3,3'-Dichlorobenzidine	NL	µg/kg	160 U	320 U	320 U	310 U	300 U
3-Nitroaniline	NL	µg/kg	310 U	620 U	630 U	590 U	590 U
4,6-Dinitro-2-methylphenol	NL	µg/kg	310 U	620 U	630 U	590 U	590 U
4-Bromophenyl-phenylether	NL	µg/kg	160 U	320 U	320 U	310 U	300 U
4-Chloro-3-methylphenol	NL	µg/kg	160 U	320 U	320 U	310 U	300 U
4-Chloroaniline	NL	µg/kg	160 U	320 U	320 U	310 U	300 U
4-Chlorophenyl-phenylether	NL	µg/kg	160 U	320 U	320 U	310 U	300 U
4-Methylphenol	NL	µg/kg	160 U	320 U	320 U	310 U	300 U
4-Nitroaniline	NL	µg/kg	310 U	620 U	630 U	590 U	590 U
4-Nitrophenol	NL	µg/kg	310 U	620 U	630 U	590 U	590 U
Acenaphthene	NL	µg/kg	3.1 U	6.2 U	6.3 U	5.9 U	5.9 U
Acenaphthylene	NL	µg/kg	3.1 U	6.2 U	6.3 U	5.9 U	5.9 U
Acetophenone	NL	µg/kg	160 U	320 U	320 U	310 U	300 U
Anthracene	845	µg/kg	3.1 U	6.2 U	6.3 U	5.9 U	5.9 U
Atrazine	NL	µg/kg	160 U	320 U	320 U	310 U	300 U
Benzaldehyde	NL	µg/kg	160 U	320 U	320 U	310 U	300 U
Benzo(a)anthracene	1050	µg/kg	3.1 U	6.2 U	6.3 U	5.9 U	5.9 U
Benzo(a)pyrene	1450	µg/kg	3.1 U	6.2 U	7.5	5.9 U	5.9 U

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Table B-1
Sediment Sample Analytical Results - SVOCs
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-36	LMR11-37	LMR11-37	LMR11-37	LMR11-37
		Field Sample ID	LMR11-36-006	LMR11-37-006	LMR11-37-024	LMR11-37-048	LMR11-37-048-DP
		Sample Date	8/4/2011	8/10/2011	8/10/2011	8/10/2011	8/10/2011
		Depth Interval (in bss)	0- 6	0- 6	6- 24	24- 48	24- 48
Chemical Name	**PEC[1]**	**Unit**					
Benzo(b)fluoranthene	NL	µg/kg	3.1 U	11	9.2	5.9 U	5.9 U
Benzo(g,h,i)perylene	NL	µg/kg	3.1 U	6.2 U	6.3 U	5.9 U	5.9 U
Benzo(k)fluoranthene	NL	µg/kg	3.1 U	6.2 U	6.3 U	5.9 U	5.9 U
Bis(2-chloroethoxy)methane	NL	µg/kg	160 U	320 U	320 U	310 U	300 U
Bis(2-chloroethyl)ether	NL	µg/kg	160 U	320 U	320 U	310 U	300 U
Bis(2-ethylhexyl)phthalate	NL	µg/kg	160 U	320 U	320 U	310 U	300 U
Butylbenzylphthalate	NL	µg/kg	160 U	320 U	320 U	310 U	300 U
Caprolactam	NL	µg/kg	160 U	320 U	320 U	310 U	300 U
Carbazole	NL	µg/kg	160 U	320 U	320 U	310 U	300 U
Chrysene	1290	µg/kg	3.1 U	6.4	6.3 U	5.9 U	5.9 U
Dibenzo(a,h)anthracene	NL	µg/kg	3.1 U	6.2 U	6.3 U	5.9 U	5.9 U
Dibenzofuran	NL	µg/kg	160 U	320 U	320 U	310 U	300 U
Diethylphthalate	NL	µg/kg	160 U	320 U	320 U	310 U	300 U
Dimethylphthalate	NL	µg/kg	160 U	320 U	320 U	310 U	300 U
Di-n-butylphthalate	NL	µg/kg	160 U	320 U	320 U	310 U	300 U
Di-n-octylphthalate	NL	µg/kg	160 U	320 U	320 U	310 U	300 U
Fluoranthene	2230	µg/kg	4.4	21	14	6.4	5.9 U
Fluorene	536	µg/kg	3.1 U	6.2 U	6.3 U	5.9 U	5.9 U
Hexachlorobenzene	NL	µg/kg	160 U	320 U	320 U	310 U	300 U
Hexachlorobutadiene	NL	µg/kg	160 U	320 U	320 U	310 U	300 U
Hexachlorocyclopentadiene	NL	µg/kg	160 U	320 U	320 U	310 U	300 U
Hexachloroethane	NL	µg/kg	160 U	320 U	320 U	310 U	300 U
Indeno(1,2,3-cd)pyrene	NL	µg/kg	3.1 U	6.2 U	6.3 U	5.9 U	5.9 U
Isophorone	NL	µg/kg	160 U	320 U	320 U	310 U	300 U
Naphthalene	561	µg/kg	3.1 U	6.2 U	6.3 U	5.9 U	5.9 U
Nitrobenzene	NL	µg/kg	160 U	320 U	320 U	310 U	300 U
N-Nitroso-di-n-propylamine	NL	µg/kg	160 U	320 U	320 U	310 U	300 U
N-Nitrosodiphenylamine	NL	µg/kg	160 U	320 U	320 U	310 U	300 U
Pentachlorophenol	NL	µg/kg	6.3 U	13 U	13 U	12 U	12 U
Phenanthrene	1170	µg/kg	3.1 U	15	9.9	5.9 U	5.9 U
Phenol	NL	µg/kg	160 U	320 U	320 U	310 U	300 U
Pyrene	1520	µg/kg	4.7 J	14	9.4	6.2	5.9 U
Total PAH 17	22800	µg/kg	32.35	104.6	87.8	56.85	50.15
TOC	NL	mg/kg	20,100	22,400	22,700	24,500	22,200

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Table B-1
Sediment Sample Analytical Results - SVOCs
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-37	LMR11-38	LMR11-38	LMR11-38	LMR11-38
		Field Sample ID	LMR11-37-072	LMR11-38-006	LMR11-38-024	LMR11-38-024-DP	LMR11-38-024FS
		Sample Date	8/10/2011	8/9/2011	8/9/2011	8/9/2011	8/9/2011
		Depth Interval (in bss)	48- 72	0- 6	6- 24	6- 24	6- 24
Chemical Name	**PEC[1]**	**Unit**					
1,1'-Biphenyl	NL	µg/kg	290 U	320 U	280 U	280 U	300 U
1,2,4,5-Tetrachlorobenzene	NL	µg/kg	290 U	320 U	280 U	280 U	300 U
2,2'-Oxybis(1-chloropropane)	NL	µg/kg	290 U	320 U	280 U	280 U	300 U
2,3,4,6-Tetrachlorophenol	NL	µg/kg	290 U	320 U	280 U	280 U	300 U
2,4,5-Trichlorophenol	NL	µg/kg	290 U	320 U	280 U	280 U	300 U
2,4,6-Trichlorophenol	NL	µg/kg	290 U	320 U	280 U	280 U	300 U
2,4-Dichlorophenol	NL	µg/kg	290 U	320 U	280 U	280 U	300 U
2,4-Dimethylphenol	NL	µg/kg	290 U	320 U	280 U	280 U	300 U
2,4-Dinitrophenol	NL	µg/kg	560 U	620 U	540 U	540 U	590 U
2,4-Dinitrotoluene	NL	µg/kg	290 U	320 U	280 U	280 U	300 U
2,6-Dinitrotoluene	NL	µg/kg	290 U	320 U	280 U	280 U	300 U
2-Chloronaphthalene	NL	µg/kg	290 U	320 U	280 U	280 U	300 U
2-Chlorophenol	NL	µg/kg	290 U	320 U	280 U	280 U	300 U
2-Methylnaphthalene	NL	µg/kg	5.6 U	6.2 U	5.4 U	5.4 U	5.9 U
2-Methylphenol	NL	µg/kg	290 U	320 U	280 U	280 U	300 U
2-Nitroaniline	NL	µg/kg	560 U	620 U	540 U	540 U	590 U
2-Nitrophenol	NL	µg/kg	290 U	320 U	280 U	280 U	300 U
3,3'-Dichlorobenzidine	NL	µg/kg	290 U	320 U	280 U	280 U	300 U
3-Nitroaniline	NL	µg/kg	560 U	620 U	540 U	540 U	590 U
4,6-Dinitro-2-methylphenol	NL	µg/kg	560 U	620 U	540 U	540 U	590 U
4-Bromophenyl-phenylether	NL	µg/kg	290 U	320 U	280 U	280 U	300 U
4-Chloro-3-methylphenol	NL	µg/kg	290 U	320 U	280 U	280 U	300 U
4-Chloroaniline	NL	µg/kg	290 U	320 U	280 U	280 U	300 U
4-Chlorophenyl-phenylether	NL	µg/kg	290 U	320 U	280 U	280 U	300 U
4-Methylphenol	NL	µg/kg	290 U	320 U	280 U	280 U	300 U
4-Nitroaniline	NL	µg/kg	560 U	620 U	540 U	540 U	590 U
4-Nitrophenol	NL	µg/kg	560 U	620 U	540 U	540 U	590 U
Acenaphthene	NL	µg/kg	5.6 U	6.2 U	5.4 U	5.4 U	5.9 U
Acenaphthylene	NL	µg/kg	5.6 U	6.2 U	5.4 U	5.4 U	5.9 U
Acetophenone	NL	µg/kg	290 U	320 U	280 U	280 U	300 U
Anthracene	845	µg/kg	5.6 U	6.2 U	5.9	5.4 U	5.9 U
Atrazine	NL	µg/kg	290 U	320 U	280 U	280 U	300 U
Benzaldehyde	NL	µg/kg	290 U	320 U	280 U	280 U	300 U
Benzo(a)anthracene	1050	µg/kg	5.6 U	6.7	21	10	14
Benzo(a)pyrene	1450	µg/kg	5.6 U	7	15	9.6	13

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Table B-1
Sediment Sample Analytical Results - SVOCs
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-37	LMR11-38	LMR11-38	LMR11-38	LMR11-38
		Field Sample ID	LMR11-37-072	LMR11-38-006	LMR11-38-024	LMR11-38-024-DP	LMR11-38-024FS
		Sample Date	8/10/2011	8/9/2011	8/9/2011	8/9/2011	8/9/2011
		Depth Interval (in bss)	48- 72	0- 6	6- 24	6- 24	6- 24
Chemical Name	**PEC[1]**	**Unit**					
Benzo(b)fluoranthene	NL	µg/kg	5.6 U	6.2 U	18	7.4	10
Benzo(g,h,i)perylene	NL	µg/kg	5.6 U	6.2 U	8.8	5.4 U	5.9 U
Benzo(k)fluoranthene	NL	µg/kg	5.6 U	6.2 U	7.6	5.4	6.9
Bis(2-chloroethoxy)methane	NL	µg/kg	290 U	320 U	280 U	280 U	300 U
Bis(2-chloroethyl)ether	NL	µg/kg	290 U	320 U	280 U	280 U	300 U
Bis(2-ethylhexyl)phthalate	NL	µg/kg	290 U	320 U	280 U	280 U	300 U
Butylbenzylphthalate	NL	µg/kg	290 U	320 U	280 U	280 U	300 U
Caprolactam	NL	µg/kg	290 U	320 U	280 U	280 U	300 U
Carbazole	NL	µg/kg	290 U	320 U	280 U	280 U	300 U
Chrysene	1290	µg/kg	5.6 U	7.8	24	11	15
Dibenzo(a,h)anthracene	NL	µg/kg	5.6 U	6.2 U	5.4 U	5.4 U	5.9 U
Dibenzofuran	NL	µg/kg	290 U	320 U	280 U	280 U	300 U
Diethylphthalate	NL	µg/kg	290 U	320 U	280 U	280 U	300 U
Dimethylphthalate	NL	µg/kg	290 U	320 U	280 U	280 U	300 U
Di-n-butylphthalate	NL	µg/kg	290 U	320 U	280 U	280 U	300 U
Di-n-octylphthalate	NL	µg/kg	290 U	320 U	280 U	280 U	300 U
Fluoranthene	2230	µg/kg	5.7	16	42	13	28
Fluorene	536	µg/kg	5.6 U	6.2 U	5.4 U	5.4 U	5.9 U
Hexachlorobenzene	NL	µg/kg	290 U	320 U	280 U	280 U	300 U
Hexachlorobutadiene	NL	µg/kg	290 U	320 U	280 U	280 U	300 U
Hexachlorocyclopentadiene	NL	µg/kg	290 U	320 U	280 U	280 U	300 U
Hexachloroethane	NL	µg/kg	290 U	320 U	280 U	280 U	300 U
Indeno(1,2,3-cd)pyrene	NL	µg/kg	5.6 U	6.2 U	7.8	5.4 U	5.9 U
Isophorone	NL	µg/kg	290 U	320 U	280 U	280 U	300 U
Naphthalene	561	µg/kg	5.6 U	6.2 U	5.4 U	5.4 U	5.9 U
Nitrobenzene	NL	µg/kg	290 U	320 U	280 U	280 U	300 U
N-Nitroso-di-n-propylamine	NL	µg/kg	290 U	320 U	280 U	280 U	300 U
N-Nitrosodiphenylamine	NL	µg/kg	290 U	320 U	280 U	280 U	300 U
Pentachlorophenol	NL	µg/kg	11 U	13 U	11 U	11 UJ	12 U
Phenanthrene	1170	µg/kg	5.6 U	9.1	22	5.8	18
Phenol	NL	µg/kg	290 U	320 U	280 U	280 U	300 U
Pyrene	1520	µg/kg	6	16	38	14	26
Total PAH 17	22800	µg/kg	53.7	96.7	226.3	100.5	157.45
TOC	NL	mg/kg	19,600	37,700	21,000	24,700	18,500

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Table B-1
Sediment Sample Analytical Results - SVOCs
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-38	LMR11-38	LMR11-38	LMR11-38	LMR11-39
		Field Sample ID	LMR11-38-048	LMR11-38-048-DP	LMR11-38-072	LMR11-38-072-DP	LMR11-39-006
		Sample Date	8/9/2011	8/9/2011	8/9/2011	8/9/2011	8/4/2011
		Depth Interval (in bss)	24- 48	24- 48	48- 72	48- 72	0- 6
Chemical Name	**PEC[1]**	**Unit**					
1,1'-Biphenyl	NL	µg/kg	290 U	290 U	290 U	310 U	150 U
1,2,4,5-Tetrachlorobenzene	NL	µg/kg	290 U	290 U	290 U	310 U	150 U
2,2'-Oxybis(1-chloropropane)	NL	µg/kg	290 U	290 U	290 U	310 U	150 U
2,3,4,6-Tetrachlorophenol	NL	µg/kg	290 U	290 U	290 U	310 U	150 U
2,4,5-Trichlorophenol	NL	µg/kg	290 U	290 U	290 U	310 U	150 U
2,4,6-Trichlorophenol	NL	µg/kg	290 U	290 U	290 U	310 U	150 U
2,4-Dichlorophenol	NL	µg/kg	290 U	290 U	290 U	310 U	150 U
2,4-Dimethylphenol	NL	µg/kg	290 U	290 U	290 U	310 U	150 U
2,4-Dinitrophenol	NL	µg/kg	560 U	560 U	570 U	610 U	290 U
2,4-Dinitrotoluene	NL	µg/kg	290 U	290 U	290 U	310 U	150 U
2,6-Dinitrotoluene	NL	µg/kg	290 U	290 U	290 U	310 U	150 U
2-Chloronaphthalene	NL	µg/kg	290 U	290 U	290 U	310 U	150 U
2-Chlorophenol	NL	µg/kg	290 U	290 U	290 U	310 U	150 U
2-Methylnaphthalene	NL	µg/kg	5.6 U	5.6 U	5.7 U	6.1 U	2.9 U
2-Methylphenol	NL	µg/kg	290 U	290 U	290 U	310 U	150 U
2-Nitroaniline	NL	µg/kg	560 U	560 U	570 U	610 U	290 U
2-Nitrophenol	NL	µg/kg	290 U	290 U	290 U	310 U	150 U
3,3'-Dichlorobenzidine	NL	µg/kg	290 U	290 U	290 U	310 U	150 U
3-Nitroaniline	NL	µg/kg	560 U	560 U	570 U	610 U	290 U
4,6-Dinitro-2-methylphenol	NL	µg/kg	560 U	560 U	570 U	610 U	290 U
4-Bromophenyl-phenylether	NL	µg/kg	290 U	290 U	290 U	310 U	150 U
4-Chloro-3-methylphenol	NL	µg/kg	290 U	290 U	290 U	310 U	150 U
4-Chloroaniline	NL	µg/kg	290 U	290 U	290 U	310 U	150 U
4-Chlorophenyl-phenylether	NL	µg/kg	290 U	290 U	290 U	310 U	150 U
4-Methylphenol	NL	µg/kg	290 U	290 U	290 U	310 U	150 U
4-Nitroaniline	NL	µg/kg	560 U	560 U	570 U	610 U	290 U
4-Nitrophenol	NL	µg/kg	560 U	560 U	570 U	610 U	290 U
Acenaphthene	NL	µg/kg	5.6 U	5.6 U	5.7 U	6.1 U	2.9 U
Acenaphthylene	NL	µg/kg	20	5.6 U	5.7 U	6.1 U	2.9 U
Acetophenone	NL	µg/kg	290 U	290 U	290 U	310 U	150 U
Anthracene	845	µg/kg	9.1	5.6 U	5.7 U	6.1 U	2.9 U
Atrazine	NL	µg/kg	290 U	290 U	290 U	310 U	150 U
Benzaldehyde	NL	µg/kg	290 U	290 U	290 U	310 U	150 U
Benzo(a)anthracene	1050	µg/kg	50	16	5.7 U	6.1 U	2.9 U
Benzo(a)pyrene	1450	µg/kg	31	12	5.7 U	6.1 U	5.3

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Table B-1
Sediment Sample Analytical Results - SVOCs
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-38	LMR11-38	LMR11-38	LMR11-38	LMR11-39
		Field Sample ID	LMR11-38-048	LMR11-38-048-DP	LMR11-38-072	LMR11-38-072-DP	LMR11-39-006
		Sample Date	8/9/2011	8/9/2011	8/9/2011	8/9/2011	8/4/2011
		Depth Interval (in bss)	24- 48	24- 48	48- 72	48- 72	0- 6
Chemical Name	**PEC[1]**	**Unit**					
Benzo(b)fluoranthene	NL	µg/kg	28	17	5.7 U	6.1 U	3.9
Benzo(g,h,i)perylene	NL	µg/kg	15	5.6 U	5.7 U	6.1 U	2.9 U
Benzo(k)fluoranthene	NL	µg/kg	12	8.7	5.7 U	6.1 U	2.9 U
Bis(2-chloroethoxy)methane	NL	µg/kg	290 U	290 U	290 U	310 U	150 U
Bis(2-chloroethyl)ether	NL	µg/kg	290 U	290 U	290 U	310 U	150 U
Bis(2-ethylhexyl)phthalate	NL	µg/kg	290 U	290 U	290 U	310 U	150 U
Butylbenzylphthalate	NL	µg/kg	290 U	290 U	290 U	310 U	150 U
Caprolactam	NL	µg/kg	290 U	290 U	290 U	310 U	150 U
Carbazole	NL	µg/kg	290 U	290 U	290 U	310 U	150 U
Chrysene	1290	µg/kg	47	20	5.7 U	7.1	3.8
Dibenzo(a,h)anthracene	NL	µg/kg	5.6 U	5.6 U	5.7 U	6.1 U	2.9 U
Dibenzofuran	NL	µg/kg	290 U	290 U	290 U	310 U	150 U
Diethylphthalate	NL	µg/kg	290 U	290 U	290 U	310 U	150 U
Dimethylphthalate	NL	µg/kg	290 U	290 U	290 U	310 U	150 U
Di-n-butylphthalate	NL	µg/kg	290 U	290 U	290 U	310 U	150 U
Di-n-octylphthalate	NL	µg/kg	290 U	290 U	290 U	310 U	150 U
Fluoranthene	2230	µg/kg	50	17	7.8	9.5	6.6
Fluorene	536	µg/kg	5.6 U	5.6 U	5.7 U	6.1 U	2.9 U
Hexachlorobenzene	NL	µg/kg	290 U	290 U	290 U	310 U	150 U
Hexachlorobutadiene	NL	µg/kg	290 U	290 U	290 U	310 U	150 U
Hexachlorocyclopentadiene	NL	µg/kg	290 U	290 U	290 U	310 U	150 U
Hexachloroethane	NL	µg/kg	290 U	290 U	290 U	310 U	150 U
Indeno(1,2,3-cd)pyrene	NL	µg/kg	12	5.6 U	5.7 U	6.1 U	2.9 U
Isophorone	NL	µg/kg	290 U	290 U	290 U	310 U	150 U
Naphthalene	561	µg/kg	5.6 U	5.6 U	5.7 U	6.1 U	2.9 U
Nitrobenzene	NL	µg/kg	290 U	290 U	290 U	310 U	150 U
N-Nitroso-di-n-propylamine	NL	µg/kg	290 U	290 U	290 U	310 U	150 U
N-Nitrosodiphenylamine	NL	µg/kg	290 U	290 U	290 U	310 U	150 U
Pentachlorophenol	NL	µg/kg	11 U	11 U	11 U	12 UJ	6 U
Phenanthrene	1170	µg/kg	10	11	5.7	7.3	4.4
Phenol	NL	µg/kg	290 U	290 U	290 U	310 U	150 U
Pyrene	1520	µg/kg	86	20	9.3	10 J	6.3
Total PAH 17	22800	µg/kg	384.1	146.9	62.7	73.55	46.25
TOC	NL	mg/kg	25,700	35,500	26,900	27,000	13,500

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Table B-1
Sediment Sample Analytical Results - SVOCs
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-40	LMR11-40	LMR11-40	LMR11-40	LMR11-41
		Field Sample ID	LMR11-40-006	LMR11-40-024	LMR11-40-048	LMR11-40-084	LMR11-41-006
		Sample Date	8/10/2011	8/10/2011	8/10/2011	8/10/2011	8/4/2011
		Depth Interval (in bss)	0- 6	6- 24	24- 48	48- 84	0- 6
Chemical Name	**PEC[1]**	**Unit**					
1,1'-Biphenyl	NL	µg/kg	220 U	220 U	240 U	210 U	200 U
1,2,4,5-Tetrachlorobenzene	NL	µg/kg	220 U	220 U	240 U	210 U	200 U
2,2'-Oxybis(1-chloropropane)	NL	µg/kg	220 U	220 U	240 U	210 U	200 U
2,3,4,6-Tetrachlorophenol	NL	µg/kg	220 U	220 U	240 U	210 U	200 U
2,4,5-Trichlorophenol	NL	µg/kg	220 U	220 U	240 U	210 U	200 U
2,4,6-Trichlorophenol	NL	µg/kg	220 U	220 U	240 U	210 U	200 U
2,4-Dichlorophenol	NL	µg/kg	220 U	220 U	240 U	210 U	200 U
2,4-Dimethylphenol	NL	µg/kg	220 U	220 U	240 U	210 U	200 U
2,4-Dinitrophenol	NL	µg/kg	420 U	420 U	460 U	410 U	400 U
2,4-Dinitrotoluene	NL	µg/kg	220 U	220 U	240 U	210 U	200 U
2,6-Dinitrotoluene	NL	µg/kg	220 U	220 U	240 U	210 U	200 U
2-Chloronaphthalene	NL	µg/kg	220 U	220 U	240 U	210 U	200 U
2-Chlorophenol	NL	µg/kg	220 U	220 U	240 U	210 U	200 U
2-Methylnaphthalene	NL	µg/kg	4.2 U	4.2 U	4.6 U	4.1 U	4 U
2-Methylphenol	NL	µg/kg	220 UJ	220 UJ	240 UJ	210 UJ	200 U
2-Nitroaniline	NL	µg/kg	420 U	420 U	460 U	410 U	400 U
2-Nitrophenol	NL	µg/kg	220 U	220 U	240 U	210 U	200 U
3,3'-Dichlorobenzidine	NL	µg/kg	220 U	220 U	240 U	210 U	200 U
3-Nitroaniline	NL	µg/kg	420 U	420 U	460 U	410 U	400 U
4,6-Dinitro-2-methylphenol	NL	µg/kg	420 U	420 U	460 U	410 U	400 U
4-Bromophenyl-phenylether	NL	µg/kg	220 U	220 U	240 U	210 U	200 U
4-Chloro-3-methylphenol	NL	µg/kg	220 U	220 U	240 U	210 U	200 U
4-Chloroaniline	NL	µg/kg	220 U	220 U	240 U	210 U	200 U
4-Chlorophenyl-phenylether	NL	µg/kg	220 U	220 U	240 U	210 U	200 U
4-Methylphenol	NL	µg/kg	220 U	220 U	240 U	210 U	200 U
4-Nitroaniline	NL	µg/kg	420 U	420 U	460 U	410 U	400 U
4-Nitrophenol	NL	µg/kg	420 U	420 U	460 U	410 U	400 U
Acenaphthene	NL	µg/kg	4.2 U	4.2 U	4.6 U	4.1 U	4 U
Acenaphthylene	NL	µg/kg	4.2 U	4.2 U	4.6 U	4.1 U	4 U
Acetophenone	NL	µg/kg	220 U	220 U	240 U	210 U	200 U
Anthracene	845	µg/kg	4.2 U	4.2 U	4.6 U	4.1 U	4 U
Atrazine	NL	µg/kg	220 U	220 U	240 U	210 U	200 U
Benzaldehyde	NL	µg/kg	220 U	220 U	240 U	210 U	200 U
Benzo(a)anthracene	1050	µg/kg	4.7	4.2 U	4.6 U	4.1 U	4.9
Benzo(a)pyrene	1450	µg/kg	4.6	4.2 U	4.6 U	4.1 U	9.4

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Table B-1
Sediment Sample Analytical Results - SVOCs
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-40	LMR11-40	LMR11-40	LMR11-40	LMR11-41
		Field Sample ID	LMR11-40-006	LMR11-40-024	LMR11-40-048	LMR11-40-084	LMR11-41-006
		Sample Date	8/10/2011	8/10/2011	8/10/2011	8/10/2011	8/4/2011
		Depth Interval (in bss)	0- 6	6- 24	24- 48	48- 84	0- 6
Chemical Name	**PEC[1]**	**Unit**					
Benzo(b)fluoranthene	NL	µg/kg	7.1	4.2 U	4.6 U	4.1 U	8
Benzo(g,h,i)perylene	NL	µg/kg	4.2 U	4.2 U	4.6 U	4.1 U	4 U
Benzo(k)fluoranthene	NL	µg/kg	4.2 U	4.2 U	4.6 U	4.1 U	4 U
Bis(2-chloroethoxy)methane	NL	µg/kg	220 U	220 U	240 U	210 U	200 U
Bis(2-chloroethyl)ether	NL	µg/kg	220 U	220 U	240 U	210 U	200 U
Bis(2-ethylhexyl)phthalate	NL	µg/kg	220 U	220 U	240 U	210 U	200 U
Butylbenzylphthalate	NL	µg/kg	220 U	220 U	240 U	210 U	200 U
Caprolactam	NL	µg/kg	220 U	220 U	240 U	210 U	200 U
Carbazole	NL	µg/kg	220 U	220 U	240 U	210 U	200 U
Chrysene	1290	µg/kg	5.7	5.5	4.6 U	4.1 U	6.3
Dibenzo(a,h)anthracene	NL	µg/kg	4.2 U	4.2 U	4.6 U	4.1 U	4 U
Dibenzofuran	NL	µg/kg	220 U	220 U	240 U	210 U	200 U
Diethylphthalate	NL	µg/kg	220 U	220 U	240 U	210 U	200 U
Dimethylphthalate	NL	µg/kg	220 U	220 U	240 U	210 U	200 U
Di-n-butylphthalate	NL	µg/kg	220 U	220 U	240 U	210 U	200 U
Di-n-octylphthalate	NL	µg/kg	220 U	220 U	240 U	210 U	200 U
Fluoranthene	2230	µg/kg	14	10	4.6 U	4.1 U	9
Fluorene	536	µg/kg	4.2 U	4.2 U	4.6 U	4.1 U	4 U
Hexachlorobenzene	NL	µg/kg	220 U	220 U	240 U	210 U	200 U
Hexachlorobutadiene	NL	µg/kg	220 U	220 U	240 U	210 U	200 U
Hexachlorocyclopentadiene	NL	µg/kg	220 U	220 U	240 U	210 U	200 U
Hexachloroethane	NL	µg/kg	220 U	220 U	240 U	210 U	200 U
Indeno(1,2,3-cd)pyrene	NL	µg/kg	4.2 U	4.2 U	4.6 U	4.1 U	4 U
Isophorone	NL	µg/kg	220 U	220 U	240 U	210 U	200 U
Naphthalene	561	µg/kg	4.2 U	4.2 U	4.6 U	4.1 U	4 U
Nitrobenzene	NL	µg/kg	220 U	220 U	240 U	210 U	200 U
N-Nitroso-di-n-propylamine	NL	µg/kg	220 U	220 U	240 U	210 U	200 U
N-Nitrosodiphenylamine	NL	µg/kg	220 U	220 U	240 U	210 U	200 U
Pentachlorophenol	NL	µg/kg	8.5 U	8.5 U	9.3 U	8.3 U	8.1 U
Phenanthrene	1170	µg/kg	8.6	12	4.6 U	6.5	4.8
Phenol	NL	µg/kg	220 U	220 U	240 U	210 U	200 U
Pyrene	1520	µg/kg	10	7.1	4.6 U	4.1 U	9.8
Total PAH 17	22800	µg/kg	75.7	61.9	39.1	39.3	72.2
TOC	NL	mg/kg	12,100	5,150	14,100	21,800	25,500

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Table B-1
Sediment Sample Analytical Results - SVOCs
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-42	LMR11-42	LMR11-42	LMR11-42	LMR11-42
		Field Sample ID	LMR11-42-006	LMR11-42-024	LMR11-42-048	LMR11-42-048FS	LMR11-42-072
		Sample Date	8/9/2011	8/9/2011	8/9/2011	8/9/2011	8/9/2011
		Depth Interval (in bss)	0- 6	6- 24	24- 48	24- 48	48- 72
Chemical Name	**PEC[1]**	**Unit**					
1,1'-Biphenyl	NL	µg/kg	260 U	270 UJ	280 U	260 U	220 U
1,2,4,5-Tetrachlorobenzene	NL	µg/kg	260 U	270 UJ	280 U	260 U	220 U
2,2'-Oxybis(1-chloropropane)	NL	µg/kg	260 U	270 UJ	280 U	260 U	220 U
2,3,4,6-Tetrachlorophenol	NL	µg/kg	260 U	270 UJ	280 U	260 U	220 U
2,4,5-Trichlorophenol	NL	µg/kg	260 U	270 UJ	280 U	260 U	220 U
2,4,6-Trichlorophenol	NL	µg/kg	260 U	270 UJ	280 U	260 U	220 U
2,4-Dichlorophenol	NL	µg/kg	260 U	270 UJ	280 U	260 U	220 U
2,4-Dimethylphenol	NL	µg/kg	260 U	270 UJ	280 U	260 U	220 U
2,4-Dinitrophenol	NL	µg/kg	510 U	520 UJ	530 U	500 U	440 U
2,4-Dinitrotoluene	NL	µg/kg	260 U	270 UJ	280 U	260 U	220 U
2,6-Dinitrotoluene	NL	µg/kg	260 U	270 UJ	280 U	260 U	220 U
2-Chloronaphthalene	NL	µg/kg	260 U	270 UJ	280 U	260 U	220 U
2-Chlorophenol	NL	µg/kg	260 U	270 UJ	280 U	260 U	220 U
2-Methylnaphthalene	NL	µg/kg	5.1 U	44 J	5.3 U	5 U	4.4 U
2-Methylphenol	NL	µg/kg	260 U	270 UJ	280 U	260 U	220 U
2-Nitroaniline	NL	µg/kg	510 U	520 UJ	530 U	500 U	440 U
2-Nitrophenol	NL	µg/kg	260 U	270 UJ	280 U	260 U	220 U
3,3'-Dichlorobenzidine	NL	µg/kg	260 U	270 UJ	280 U	260 U	220 U
3-Nitroaniline	NL	µg/kg	510 U	520 UJ	530 U	500 U	440 U
4,6-Dinitro-2-methylphenol	NL	µg/kg	510 U	520 UJ	530 U	500 U	440 U
4-Bromophenyl-phenylether	NL	µg/kg	260 U	270 UJ	280 U	260 U	220 U
4-Chloro-3-methylphenol	NL	µg/kg	260 U	270 UJ	280 U	260 U	220 U
4-Chloroaniline	NL	µg/kg	260 U	270 UJ	280 U	260 U	220 U
4-Chlorophenyl-phenylether	NL	µg/kg	260 U	270 UJ	280 U	260 U	220 U
4-Methylphenol	NL	µg/kg	260 U	270 UJ	280 U	260 U	220 U
4-Nitroaniline	NL	µg/kg	510 U	520 UJ	530 U	500 U	440 U
4-Nitrophenol	NL	µg/kg	510 U	520 UJ	530 U	500 U	440 U
Acenaphthene	NL	µg/kg	5.1 U	12 J	5.3 U	5 U	4.4 U
Acenaphthylene	NL	µg/kg	5.1 U	9.4 J	5.3 U	5 U	4.4 U
Acetophenone	NL	µg/kg	260 U	270 UJ	280 U	260 U	220 U
Anthracene	845	µg/kg	5.1 U	34 J	5.3 U	5 U	4.4 U
Atrazine	NL	µg/kg	260 U	270 UJ	280 U	260 U	220 U
Benzaldehyde	NL	µg/kg	260 U	270 UJ	280 U	260 U	220 U
Benzo(a)anthracene	1050	µg/kg	5.1 U	73 J	6.2	5 U	5.9
Benzo(a)pyrene	1450	µg/kg	5.1 U	60 J	5.7	5 U	5.5

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Table B-1
Sediment Sample Analytical Results - SVOCs
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-42	LMR11-42	LMR11-42	LMR11-42	LMR11-42
		Field Sample ID	LMR11-42-006	LMR11-42-024	LMR11-42-048	LMR11-42-048FS	LMR11-42-072
		Sample Date	8/9/2011	8/9/2011	8/9/2011	8/9/2011	8/9/2011
		Depth Interval (in bss)	0- 6	6- 24	24- 48	24- 48	48- 72
Chemical Name	**PEC[1]**	**Unit**					
Benzo(b)fluoranthene	NL	µg/kg	5.1 U	120 J	5.3 U	5 U	4.9
Benzo(g,h,i)perylene	NL	µg/kg	5.1 U	48 J	5.3 U	5 U	4.4 U
Benzo(k)fluoranthene	NL	µg/kg	5.1 U	29 J	5.3 U	5 U	4.4 U
Bis(2-chloroethoxy)methane	NL	µg/kg	260 U	270 UJ	280 U	260 U	220 U
Bis(2-chloroethyl)ether	NL	µg/kg	260 U	270 UJ	280 U	260 U	220 U
Bis(2-ethylhexyl)phthalate	NL	µg/kg	260 U	140 J	280 U	260 U	220 U
Butylbenzylphthalate	NL	µg/kg	260 U	270 UJ	280 U	260 U	220 U
Caprolactam	NL	µg/kg	260 U	270 UJ	280 U	260 U	220 U
Carbazole	NL	µg/kg	260 U	270 UJ	280 U	260 U	220 U
Chrysene	1290	µg/kg	5.1 U	90 J	6.6	5 U	8.9
Dibenzo(a,h)anthracene	NL	µg/kg	5.1 U	16 J	5.3 U	5 U	4.4 U
Dibenzofuran	NL	µg/kg	260 U	270 UJ	280 U	260 U	220 U
Diethylphthalate	NL	µg/kg	260 U	270 UJ	280 U	260 U	220 U
Dimethylphthalate	NL	µg/kg	260 U	270 UJ	280 U	260 U	220 U
Di-n-butylphthalate	NL	µg/kg	260 U	270 UJ	280 U	260 U	220 U
Di-n-octylphthalate	NL	µg/kg	260 U	270 UJ	280 U	260 U	220 U
Fluoranthene	2230	µg/kg	5.2	210 J	13	5.1	14
Fluorene	536	µg/kg	5.1 U	21 J	5.3 U	5 U	4.4 U
Hexachlorobenzene	NL	µg/kg	260 U	270 UJ	280 U	260 U	220 U
Hexachlorobutadiene	NL	µg/kg	260 U	270 UJ	280 U	260 U	220 U
Hexachlorocyclopentadiene	NL	µg/kg	260 U	270 UJ	280 U	260 U	220 U
Hexachloroethane	NL	µg/kg	260 U	270 UJ	280 U	260 U	220 U
Indeno(1,2,3-cd)pyrene	NL	µg/kg	5.1 U	44 J	5.3 U	5 U	4.4 U
Isophorone	NL	µg/kg	260 U	270 UJ	280 U	260 U	220 U
Naphthalene	561	µg/kg	5.1 U	34 J	5.3 U	5 U	4.4 U
Nitrobenzene	NL	µg/kg	260 U	270 UJ	280 U	260 U	220 U
N-Nitroso-di-n-propylamine	NL	µg/kg	260 U	270 UJ	280 U	260 U	220 U
N-Nitrosodiphenylamine	NL	µg/kg	260 U	270 UJ	280 U	260 U	220 U
Pentachlorophenol	NL	µg/kg	10 U	11 UJ	11 U	10 UJ	8.9 UJ
Phenanthrene	1170	µg/kg	5.1 U	150 J	12	5.2	12
Phenol	NL	µg/kg	260 U	270 UJ	280 U	260 U	220 U
Pyrene	1520	µg/kg	6.5	160 J	13	6.3	15
Total PAH 17	22800	µg/kg	49.95	1,154	85.65	51.6	88.2
TOC	NL	mg/kg	47,600	14,700	37,400	29,900	16,800

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Table B-1
Sediment Sample Analytical Results - SVOCs
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-42	LMR11-42	LMR11-43	LMR11-44	LMR11-44
		Field Sample ID	LMR11-42-096	LMR11-42-129	LMR11-43-030	LMR11-44-006	LMR11-44-024
		Sample Date	8/9/2011	8/9/2011	8/9/2011	8/9/2011	8/9/2011
		Depth Interval (in bss)	72- 96	96- 129	24- 30	0- 6	6- 24
Chemical Name	**PEC[1]**	**Unit**					
1,1'-Biphenyl	NL	µg/kg	230 U	210 U	200 U	320 U	310 U
1,2,4,5-Tetrachlorobenzene	NL	µg/kg	230 U	210 U	200 U	320 U	310 U
2,2'-Oxybis(1-chloropropane)	NL	µg/kg	230 U	210 U	200 U	320 U	310 U
2,3,4,6-Tetrachlorophenol	NL	µg/kg	230 U	210 U	200 U	320 U	310 U
2,4,5-Trichlorophenol	NL	µg/kg	230 U	210 U	200 U	320 U	310 U
2,4,6-Trichlorophenol	NL	µg/kg	230 U	210 U	200 U	320 U	310 U
2,4-Dichlorophenol	NL	µg/kg	230 U	210 U	200 U	320 U	310 U
2,4-Dimethylphenol	NL	µg/kg	230 U	210 U	200 U	320 U	310 U
2,4-Dinitrophenol	NL	µg/kg	460 U	400 U	390 U	610 U	600 U
2,4-Dinitrotoluene	NL	µg/kg	230 U	210 U	200 U	320 U	310 U
2,6-Dinitrotoluene	NL	µg/kg	230 U	210 U	200 U	320 U	310 U
2-Chloronaphthalene	NL	µg/kg	230 U	210 U	200 U	320 U	310 U
2-Chlorophenol	NL	µg/kg	230 U	210 U	200 U	320 U	310 U
2-Methylnaphthalene	NL	µg/kg	5.8	4 U	4.5	6.1 U	6 U
2-Methylphenol	NL	µg/kg	230 U	210 U	200 U	320 U	310 U
2-Nitroaniline	NL	µg/kg	460 U	400 U	390 U	610 U	600 U
2-Nitrophenol	NL	µg/kg	230 U	210 U	200 U	320 U	310 U
3,3'-Dichlorobenzidine	NL	µg/kg	230 U	210 U	200 U	320 U	310 U
3-Nitroaniline	NL	µg/kg	460 U	400 U	390 U	610 U	600 U
4,6-Dinitro-2-methylphenol	NL	µg/kg	460 U	400 U	390 U	610 U	600 U
4-Bromophenyl-phenylether	NL	µg/kg	230 U	210 U	200 U	320 U	310 U
4-Chloro-3-methylphenol	NL	µg/kg	230 U	210 U	200 U	320 U	310 U
4-Chloroaniline	NL	µg/kg	230 U	210 U	200 U	320 U	310 U
4-Chlorophenyl-phenylether	NL	µg/kg	230 U	210 U	200 U	320 U	310 U
4-Methylphenol	NL	µg/kg	230 U	210 U	200 U	320 U	310 U
4-Nitroaniline	NL	µg/kg	460 U	400 U	390 U	610 U	600 U
4-Nitrophenol	NL	µg/kg	460 U	400 U	390 U	610 U	600 U
Acenaphthene	NL	µg/kg	5.3	4 U	3.9 U	6.1 U	6 U
Acenaphthylene	NL	µg/kg	4.6 U	4 U	3.9 U	6.1 U	6 U
Acetophenone	NL	µg/kg	230 U	210 U	200 U	320 U	310 U
Anthracene	845	µg/kg	20	4 U	7.1	6.1 U	6 U
Atrazine	NL	µg/kg	230 U	210 U	200 U	320 U	310 U
Benzaldehyde	NL	µg/kg	230 U	210 U	200 U	320 U	310 U
Benzo(a)anthracene	1050	µg/kg	36	4 U	17	6.1 U	6 U
Benzo(a)pyrene	1450	µg/kg	20	4 U	11	6.1 U	6 U

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Table B-1
Sediment Sample Analytical Results - SVOCs
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-42	LMR11-42	LMR11-43	LMR11-44	LMR11-44
		Field Sample ID	LMR11-42-096	LMR11-42-129	LMR11-43-030	LMR11-44-006	LMR11-44-024
		Sample Date	8/9/2011	8/9/2011	8/9/2011	8/9/2011	8/9/2011
		Depth Interval (in bss)	72- 96	96- 129	24- 30	0- 6	6- 24
Chemical Name	**PEC[1]**	**Unit**					
Benzo(b)fluoranthene	NL	µg/kg	23	4 U	16	6.1 U	6 U
Benzo(g,h,i)perylene	NL	µg/kg	12	4 U	7.3	6.1 U	6 U
Benzo(k)fluoranthene	NL	µg/kg	11	4 U	4.9	6.1 U	6 U
Bis(2-chloroethoxy)methane	NL	µg/kg	230 U	210 U	200 U	320 U	310 U
Bis(2-chloroethyl)ether	NL	µg/kg	230 U	210 U	200 U	320 U	310 U
Bis(2-ethylhexyl)phthalate	NL	µg/kg	230 U	210 U	200 U	320 U	310 U
Butylbenzylphthalate	NL	µg/kg	230 U	210 U	200 U	320 U	310 U
Caprolactam	NL	µg/kg	230 U	210 U	200 U	320 U	310 U
Carbazole	NL	µg/kg	230 U	210 U	200 U	320 U	310 U
Chrysene	1290	µg/kg	35	4 U	25	7.8	6 U
Dibenzo(a,h)anthracene	NL	µg/kg	4.6 U	4 U	3.9 U	6.1 U	6 U
Dibenzofuran	NL	µg/kg	230 U	210 U	200 U	320 U	310 U
Diethylphthalate	NL	µg/kg	230 U	210 U	200 U	320 U	310 U
Dimethylphthalate	NL	µg/kg	230 U	210 U	200 U	320 U	310 U
Di-n-butylphthalate	NL	µg/kg	230 U	210 U	200 U	320 U	310 U
Di-n-octylphthalate	NL	µg/kg	230 U	210 U	200 U	320 U	310 U
Fluoranthene	2230	µg/kg	73	4 U	40	13	9.2
Fluorene	536	µg/kg	8.3	4 U	4.1	6.1 U	6 U
Hexachlorobenzene	NL	µg/kg	230 U	210 U	200 U	320 U	310 U
Hexachlorobutadiene	NL	µg/kg	230 U	210 U	200 U	320 U	310 U
Hexachlorocyclopentadiene	NL	µg/kg	230 U	210 U	200 U	320 U	310 U
Hexachloroethane	NL	µg/kg	230 U	210 U	200 U	320 U	310 U
Indeno(1,2,3-cd)pyrene	NL	µg/kg	10	4 U	5.6	6.1 U	6 U
Isophorone	NL	µg/kg	230 U	210 U	200 U	320 U	310 U
Naphthalene	561	µg/kg	6.4	4 U	4.7	6.1 U	6 U
Nitrobenzene	NL	µg/kg	230 U	210 U	200 U	320 U	310 U
N-Nitroso-di-n-propylamine	NL	µg/kg	230 U	210 U	200 U	320 U	310 U
N-Nitrosodiphenylamine	NL	µg/kg	230 U	210 U	200 U	320 U	310 U
Pentachlorophenol	NL	µg/kg	9.3 UJ	8.2 UJ	7.9 UJ	12 UJ	12 UJ
Phenanthrene	1170	µg/kg	57	4.2	26	8.7	6.6
Phenol	NL	µg/kg	230 U	210 U	200 U	320 U	310 U
Pyrene	1520	µg/kg	67	4.7	50	13	10
Total PAH 17	22800	µg/kg	394.4	38.9	229.05	82.15	67.8
TOC	NL	mg/kg	38,600	11,700	24,800	24,000	35,400

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Table B-1
Sediment Sample Analytical Results - SVOCs
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-44	LMR11-44	LMR11-44	LMR11-44	LMR11-45
		Field Sample ID	LMR11-44-024FS	LMR11-44-048	LMR11-44-072	LMR11-44-096	LMR11-45-006
		Sample Date	8/9/2011	8/9/2011	8/9/2011	8/9/2011	8/8/2011
		Depth Interval (in bss)	6- 24	24- 48	48- 72	72- 96	0- 6
Chemical Name	**PEC[1]**	**Unit**					
1,1'-Biphenyl	NL	µg/kg	310 U	270 U	240 U	250 U	350 U
1,2,4,5-Tetrachlorobenzene	NL	µg/kg	310 U	270 U	240 U	250 U	350 U
2,2'-Oxybis(1-chloropropane)	NL	µg/kg	310 U	270 U	240 U	250 U	350 U
2,3,4,6-Tetrachlorophenol	NL	µg/kg	310 U	270 U	240 U	250 U	350 U
2,4,5-Trichlorophenol	NL	µg/kg	310 U	270 U	240 U	250 U	350 U
2,4,6-Trichlorophenol	NL	µg/kg	310 U	270 U	240 U	250 U	350 U
2,4-Dichlorophenol	NL	µg/kg	310 U	270 U	240 U	250 U	350 U
2,4-Dimethylphenol	NL	µg/kg	310 U	270 U	240 U	250 U	350 U
2,4-Dinitrophenol	NL	µg/kg	600 U	520 U	460 U	490 U	670 U
2,4-Dinitrotoluene	NL	µg/kg	310 U	270 U	240 U	250 U	350 U
2,6-Dinitrotoluene	NL	µg/kg	310 U	270 U	240 U	250 U	350 U
2-Chloronaphthalene	NL	µg/kg	310 U	270 U	240 U	250 U	350 U
2-Chlorophenol	NL	µg/kg	310 U	270 U	240 U	250 U	350 U
2-Methylnaphthalene	NL	µg/kg	6 U	5.2 U	12	4.9 U	6.7 U
2-Methylphenol	NL	µg/kg	310 U	270 U	240 U	250 U	350 U
2-Nitroaniline	NL	µg/kg	600 U	520 U	460 U	490 U	670 U
2-Nitrophenol	NL	µg/kg	310 U	270 U	240 U	250 U	350 U
3,3'-Dichlorobenzidine	NL	µg/kg	310 U	270 U	240 U	250 U	350 U
3-Nitroaniline	NL	µg/kg	600 U	520 U	460 U	490 U	670 U
4,6-Dinitro-2-methylphenol	NL	µg/kg	600 U	520 U	460 U	490 U	670 U
4-Bromophenyl-phenylether	NL	µg/kg	310 U	270 U	240 U	250 U	350 U
4-Chloro-3-methylphenol	NL	µg/kg	310 U	270 U	240 U	250 U	350 U
4-Chloroaniline	NL	µg/kg	310 U	270 U	240 U	250 U	350 U
4-Chlorophenyl-phenylether	NL	µg/kg	310 U	270 U	240 U	250 U	350 U
4-Methylphenol	NL	µg/kg	310 U	270 U	240 U	250 U	350 U
4-Nitroaniline	NL	µg/kg	600 U	520 U	460 U	490 U	670 U
4-Nitrophenol	NL	µg/kg	600 U	520 U	460 U	490 U	670 U
Acenaphthene	NL	µg/kg	6 U	5.2 U	4.6 U	4.9 U	6.7 U
Acenaphthylene	NL	µg/kg	6 U	5.2 U	4.6 U	4.9 U	6.7 U
Acetophenone	NL	µg/kg	310 U	270 U	240 U	250 U	350 U
Anthracene	845	µg/kg	8.1	5.2 U	6.4	4.9 U	6.7 U
Atrazine	NL	µg/kg	310 U	270 U	240 U	250 U	350 U
Benzaldehyde	NL	µg/kg	310 U	270 U	240 U	250 U	350 U
Benzo(a)anthracene	1050	µg/kg	26	5.2 U	12	12	9.8
Benzo(a)pyrene	1450	µg/kg	15	5.2 U	7.1	8.4	9

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Table B-1
Sediment Sample Analytical Results - SVOCs
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-44	LMR11-44	LMR11-44	LMR11-44	LMR11-45
		Field Sample ID	LMR11-44-024FS	LMR11-44-048	LMR11-44-072	LMR11-44-096	LMR11-45-006
		Sample Date	8/9/2011	8/9/2011	8/9/2011	8/9/2011	8/8/2011
		Depth Interval (in bss)	6- 24	24- 48	48- 72	72- 96	0- 6
Chemical Name	**PEC[1]**	**Unit**					
Benzo(b)fluoranthene	NL	µg/kg	18	5.2 U	6.8	8.3	7.9
Benzo(g,h,i)perylene	NL	µg/kg	7.8	5.2 U	4.6 U	4.9 U	6.7 U
Benzo(k)fluoranthene	NL	µg/kg	6.6	5.2 U	4.6 U	4.9 U	6.7 U
Bis(2-chloroethoxy)methane	NL	µg/kg	310 U	270 U	240 U	250 U	350 U
Bis(2-chloroethyl)ether	NL	µg/kg	310 U	270 U	240 U	250 U	350 U
Bis(2-ethylhexyl)phthalate	NL	µg/kg	310 U	270 U	240 U	250 U	350 U
Butylbenzylphthalate	NL	µg/kg	310 U	270 U	240 U	250 U	350 U
Caprolactam	NL	µg/kg	310 U	270 U	240 U	250 U	350 U
Carbazole	NL	µg/kg	310 U	270 U	240 U	250 U	350 U
Chrysene	1290	µg/kg	25	5.2 U	15	14	11
Dibenzo(a,h)anthracene	NL	µg/kg	6 U	5.2 U	4.6 U	4.9 U	6.7 U
Dibenzofuran	NL	µg/kg	310 U	270 U	240 U	250 U	350 U
Diethylphthalate	NL	µg/kg	310 U	270 U	240 U	250 U	350 U
Dimethylphthalate	NL	µg/kg	310 U	270 U	240 U	250 U	350 U
Di-n-butylphthalate	NL	µg/kg	310 U	270 U	240 U	250 U	350 U
Di-n-octylphthalate	NL	µg/kg	310 U	270 U	240 U	250 U	350 U
Fluoranthene	2230	µg/kg	47	9.8	27	27	18
Fluorene	536	µg/kg	6 U	5.2 U	5	4.9 U	6.7 U
Hexachlorobenzene	NL	µg/kg	310 U	270 U	240 U	250 U	350 U
Hexachlorobutadiene	NL	µg/kg	310 U	270 U	240 U	250 U	350 U
Hexachlorocyclopentadiene	NL	µg/kg	310 U	270 U	240 U	250 U	350 U
Hexachloroethane	NL	µg/kg	310 U	270 U	240 U	250 U	350 U
Indeno(1,2,3-cd)pyrene	NL	µg/kg	6.8	5.2 U	4.6 U	4.9 U	6.7 U
Isophorone	NL	µg/kg	310 U	270 U	240 U	250 U	350 U
Naphthalene	561	µg/kg	6.4	5.2 U	11	5.5	6.7 U
Nitrobenzene	NL	µg/kg	310 U	270 U	240 U	250 U	350 U
N-Nitroso-di-n-propylamine	NL	µg/kg	310 U	270 U	240 U	250 U	350 U
N-Nitrosodiphenylamine	NL	µg/kg	310 U	270 U	240 U	250 U	350 U
Pentachlorophenol	NL	µg/kg	12 UJ	11 UJ	9.4 UJ	9.9 UJ	14 U
Phenanthrene	1170	µg/kg	29	9.6	28	21	8.1
Phenol	NL	µg/kg	310 U	270 U	240 U	250 U	350 U
Pyrene	1520	µg/kg	43	11	27	26	19 J
Total PAH 17	22800	µg/kg	253.7	66.8	171.1	144.25	116.3
TOC	NL	mg/kg	27,600	27,100	26,200	19,500	26,900

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Table B-1
Sediment Sample Analytical Results - SVOCs
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-45	LMR11-45	LMR11-45	LMR11-45	LMR11-45
		Field Sample ID	LMR11-45-024	LMR11-45-048	LMR11-45-048FS	LMR11-45-072	LMR11-45-096
		Sample Date	8/8/2011	8/8/2011	8/8/2011	8/8/2011	8/8/2011
		Depth Interval (in bss)	6- 24	24- 48	24- 48	48- 72	72- 96
Chemical Name	**PEC[1]**	**Unit**					
1,1'-Biphenyl	NL	µg/kg	310 U	300 U	300 U	300 U	300 U
1,2,4,5-Tetrachlorobenzene	NL	µg/kg	310 U	300 U	300 U	300 U	300 U
2,2'-Oxybis(1-chloropropane)	NL	µg/kg	310 UJ	300 U	300 U	300 U	300 U
2,3,4,6-Tetrachlorophenol	NL	µg/kg	310 U	300 U	300 U	300 U	300 U
2,4,5-Trichlorophenol	NL	µg/kg	310 U	300 U	300 U	300 U	300 U
2,4,6-Trichlorophenol	NL	µg/kg	310 U	300 U	300 U	300 U	300 U
2,4-Dichlorophenol	NL	µg/kg	310 U	300 U	300 U	300 U	300 U
2,4-Dimethylphenol	NL	µg/kg	310 U	300 U	300 U	300 U	300 U
2,4-Dinitrophenol	NL	µg/kg	600 U	570 U	570 U	580 U	580 U
2,4-Dinitrotoluene	NL	µg/kg	310 U	300 U	300 U	300 U	300 U
2,6-Dinitrotoluene	NL	µg/kg	310 U	300 U	300 U	300 U	300 U
2-Chloronaphthalene	NL	µg/kg	310 U	300 U	300 U	300 U	300 U
2-Chlorophenol	NL	µg/kg	310 U	300 U	300 U	300 U	300 U
2-Methylnaphthalene	NL	µg/kg	6 U	5.7 U	5.7 U	5.8 U	5.8 U
2-Methylphenol	NL	µg/kg	310 U	300 U	300 U	300 U	300 U
2-Nitroaniline	NL	µg/kg	600 U	570 U	570 U	580 U	580 U
2-Nitrophenol	NL	µg/kg	310 U	300 U	300 U	300 U	300 U
3,3'-Dichlorobenzidine	NL	µg/kg	310 U	300 U	300 U	300 U	300 U
3-Nitroaniline	NL	µg/kg	600 U	570 U	570 U	580 U	580 U
4,6-Dinitro-2-methylphenol	NL	µg/kg	600 U	570 U	570 U	580 U	580 U
4-Bromophenyl-phenylether	NL	µg/kg	310 U	300 U	300 U	300 U	300 U
4-Chloro-3-methylphenol	NL	µg/kg	310 U	300 U	300 U	300 U	300 U
4-Chloroaniline	NL	µg/kg	310 U	300 U	300 U	300 U	300 U
4-Chlorophenyl-phenylether	NL	µg/kg	310 U	300 U	300 U	300 U	300 U
4-Methylphenol	NL	µg/kg	310 U	300 U	300 U	300 U	300 U
4-Nitroaniline	NL	µg/kg	600 U	570 U	570 U	580 U	580 U
4-Nitrophenol	NL	µg/kg	600 U	570 U	570 U	580 U	580 U
Acenaphthene	NL	µg/kg	6 U	5.7 U	5.7 U	5.8 U	5.8 U
Acenaphthylene	NL	µg/kg	6 U	5.7 U	5.7 U	5.8 U	5.8 U
Acetophenone	NL	µg/kg	310 U	300 U	300 U	300 U	300 U
Anthracene	845	µg/kg	6 U	5.7 U	5.7 U	5.8 U	5.8 U
Atrazine	NL	µg/kg	310 U	300 U	300 U	300 U	300 U
Benzaldehyde	NL	µg/kg	310 U	300 U	300 U	300 U	300 U
Benzo(a)anthracene	1050	µg/kg	6 U	5.7 U	5.7 U	5.8 U	5.8 U
Benzo(a)pyrene	1450	µg/kg	6 U	5.7 U	5.7 U	5.8 U	6.1

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Table B-1
Sediment Sample Analytical Results - SVOCs
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-45	LMR11-45	LMR11-45	LMR11-45	LMR11-45
		Field Sample ID	LMR11-45-024	LMR11-45-048	LMR11-45-048FS	LMR11-45-072	LMR11-45-096
		Sample Date	8/8/2011	8/8/2011	8/8/2011	8/8/2011	8/8/2011
		Depth Interval (in bss)	6- 24	24- 48	24- 48	48- 72	72- 96
Chemical Name	**PEC[1]**	**Unit**					
Benzo(b)fluoranthene	NL	µg/kg	6 U	5.7 U	5.7 U	5.8 U	5.8 U
Benzo(g,h,i)perylene	NL	µg/kg	6 U	5.7 U	5.7 U	5.8 U	5.8 U
Benzo(k)fluoranthene	NL	µg/kg	6 U	5.7 U	5.7 U	5.8 U	5.8 U
Bis(2-chloroethoxy)methane	NL	µg/kg	310 UJ	300 U	300 U	300 U	300 U
Bis(2-chloroethyl)ether	NL	µg/kg	310 UJ	300 U	300 U	300 U	300 U
Bis(2-ethylhexyl)phthalate	NL	µg/kg	310 U	300 U	300 U	300 U	300 U
Butylbenzylphthalate	NL	µg/kg	310 U	300 U	300 U	300 U	300 U
Caprolactam	NL	µg/kg	310 U	300 U	300 U	300 U	300 U
Carbazole	NL	µg/kg	310 U	300 U	300 U	300 U	300 U
Chrysene	1290	µg/kg	7.2	6.4	7.3	5.8 U	6.7
Dibenzo(a,h)anthracene	NL	µg/kg	6 U	5.7 U	5.7 U	5.8 U	5.8 U
Dibenzofuran	NL	µg/kg	310 U	300 U	300 U	300 U	300 U
Diethylphthalate	NL	µg/kg	310 U	300 U	300 U	300 U	300 U
Dimethylphthalate	NL	µg/kg	310 U	300 U	300 U	300 U	300 U
Di-n-butylphthalate	NL	µg/kg	310 U	300 U	300 U	300 U	300 U
Di-n-octylphthalate	NL	µg/kg	82 J	300 U	300 U	300 U	300 U
Fluoranthene	2230	µg/kg	14	13	13	5.8 U	12
Fluorene	536	µg/kg	6 U	5.7 U	5.7 U	5.8 U	5.8 U
Hexachlorobenzene	NL	µg/kg	310 U	300 U	300 U	300 U	300 U
Hexachlorobutadiene	NL	µg/kg	310 U	300 U	300 U	300 U	300 U
Hexachlorocyclopentadiene	NL	µg/kg	310 U	300 U	300 U	300 U	300 U
Hexachloroethane	NL	µg/kg	310 U	300 U	300 U	300 U	300 U
Indeno(1,2,3-cd)pyrene	NL	µg/kg	6 U	5.7 U	5.7 U	5.8 U	5.8 U
Isophorone	NL	µg/kg	310 U	300 U	300 U	300 U	300 U
Naphthalene	561	µg/kg	6 U	5.7 U	5.7 U	5.8 U	5.8 U
Nitrobenzene	NL	µg/kg	310 U	300 U	300 U	300 U	300 U
N-Nitroso-di-n-propylamine	NL	µg/kg	310 U	300 U	300 U	300 U	300 U
N-Nitrosodiphenylamine	NL	µg/kg	310 U	300 U	300 U	300 U	300 U
Pentachlorophenol	NL	µg/kg	12 UJ	12 U	12 U	12 U	12 U
Phenanthrene	1170	µg/kg	9.1	10	9.6	5.8 U	8.8
Phenol	NL	µg/kg	310 U	300 U	300 U	300 U	300 U
Pyrene	1520	µg/kg	15	15	15	7.3	14
Total PAH 17	22800	µg/kg	84.3	81.45	81.95	53.7	82.4
TOC	NL	mg/kg	23,500	33,800	26,500	33,100	34,300

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Table B-1
Sediment Sample Analytical Results - SVOCs
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-46	LMR11-46	LMR11-46	LMR11-46	LMR11-46
		Field Sample ID	LMR11-46-006	LMR11-46-024	LMR11-46-024FS	LMR11-46-048	LMR11-46-072
		Sample Date	8/8/2011	8/8/2011	8/8/2011	8/8/2011	8/8/2011
		Depth Interval (in bss)	0- 6	6- 24	6- 24	24- 48	48- 72
Chemical Name	**PEC[1]**	**Unit**					
1,1'-Biphenyl	NL	µg/kg	330 U	320 U	300 U	280 U	210 UJ
1,2,4,5-Tetrachlorobenzene	NL	µg/kg	330 U	320 U	300 U	280 U	210 U
2,2'-Oxybis(1-chloropropane)	NL	µg/kg	330 U	320 U	300 U	280 U	210 U
2,3,4,6-Tetrachlorophenol	NL	µg/kg	330 U	320 U	300 U	280 U	210 U
2,4,5-Trichlorophenol	NL	µg/kg	330 U	320 U	300 U	280 U	210 U
2,4,6-Trichlorophenol	NL	µg/kg	330 U	320 U	300 U	280 U	210 U
2,4-Dichlorophenol	NL	µg/kg	330 U	320 U	300 U	280 U	210 U
2,4-Dimethylphenol	NL	µg/kg	330 U	320 U	300 U	280 U	210 U
2,4-Dinitrophenol	NL	µg/kg	650 U	630 U	590 U	550 U	400 U
2,4-Dinitrotoluene	NL	µg/kg	330 U	320 U	300 U	280 U	210 U
2,6-Dinitrotoluene	NL	µg/kg	330 U	320 U	300 U	280 U	210 U
2-Chloronaphthalene	NL	µg/kg	330 U	320 U	300 U	280 U	210 U
2-Chlorophenol	NL	µg/kg	330 U	320 U	300 U	280 U	210 U
2-Methylnaphthalene	NL	µg/kg	6.5 U	6.3 U	5.9 U	5.5 U	4 U
2-Methylphenol	NL	µg/kg	330 U	320 U	300 U	280 U	210 U
2-Nitroaniline	NL	µg/kg	650 U	630 U	590 U	550 U	400 U
2-Nitrophenol	NL	µg/kg	330 U	320 U	300 U	280 U	210 U
3,3'-Dichlorobenzidine	NL	µg/kg	330 U	320 U	300 U	280 U	210 U
3-Nitroaniline	NL	µg/kg	650 U	630 U	590 U	550 U	400 U
4,6-Dinitro-2-methylphenol	NL	µg/kg	650 U	630 U	590 U	550 U	400 U
4-Bromophenyl-phenylether	NL	µg/kg	330 U	320 U	300 U	280 U	210 U
4-Chloro-3-methylphenol	NL	µg/kg	330 U	320 U	300 U	280 U	210 U
4-Chloroaniline	NL	µg/kg	330 U	320 U	300 U	280 U	210 U
4-Chlorophenyl-phenylether	NL	µg/kg	330 U	320 U	300 U	280 U	210 U
4-Methylphenol	NL	µg/kg	330 U	320 U	300 U	280 U	210 U
4-Nitroaniline	NL	µg/kg	650 U	630 U	590 U	550 U	400 U
4-Nitrophenol	NL	µg/kg	650 U	630 U	590 U	550 U	400 U
Acenaphthene	NL	µg/kg	6.5 U	6.3 U	5.9 U	5.5 U	4 U
Acenaphthylene	NL	µg/kg	6.5 U	6.3 U	5.9 U	5.5 U	4 U
Acetophenone	NL	µg/kg	330 U	320 U	300 U	280 U	210 U
Anthracene	845	µg/kg	6.5 U	6.3 U	5.9 U	5.5 U	6.6
Atrazine	NL	µg/kg	330 U	320 U	300 U	280 U	210 U
Benzaldehyde	NL	µg/kg	330 U	320 U	300 U	280 U	210 U
Benzo(a)anthracene	1050	µg/kg	6.5 U	11	11	5.5 U	11
Benzo(a)pyrene	1450	µg/kg	14	22	23	12	12

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Table B-1
Sediment Sample Analytical Results - SVOCs
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-46	LMR11-46	LMR11-46	LMR11-46	LMR11-46
		Field Sample ID	LMR11-46-006	LMR11-46-024	LMR11-46-024FS	LMR11-46-048	LMR11-46-072
		Sample Date	8/8/2011	8/8/2011	8/8/2011	8/8/2011	8/8/2011
		Depth Interval (in bss)	0- 6	6- 24	6- 24	24- 48	48- 72
Chemical Name	**PEC[1]**	**Unit**					
Benzo(b)fluoranthene	NL	µg/kg	6.5 U	18	19	5.9	14
Benzo(g,h,i)perylene	NL	µg/kg	6.5 U	7.4	8.3	5.5 U	4.9
Benzo(k)fluoranthene	NL	µg/kg	6.5 U	6.3 U	6.9	5.5 U	4.8
Bis(2-chloroethoxy)methane	NL	µg/kg	330 U	320 U	300 U	280 U	210 U
Bis(2-chloroethyl)ether	NL	µg/kg	330 U	320 U	300 U	280 U	210 U
Bis(2-ethylhexyl)phthalate	NL	µg/kg	330 U	320 U	300 U	280 U	210 UJ
Butylbenzylphthalate	NL	µg/kg	330 U	320 U	300 U	280 U	210 UJ
Caprolactam	NL	µg/kg	330 U	320 U	300 U	280 U	210 UJ
Carbazole	NL	µg/kg	330 U	320 U	300 U	280 U	210 U
Chrysene	1290	µg/kg	6.5 U	13	12	5.5 U	16
Dibenzo(a,h)anthracene	NL	µg/kg	6.5 U	6.3 U	5.9 U	5.5 U	4 U
Dibenzofuran	NL	µg/kg	330 U	320 U	300 U	280 U	210 U
Diethylphthalate	NL	µg/kg	330 U	320 U	300 U	280 U	210 UJ
Dimethylphthalate	NL	µg/kg	330 U	320 U	300 U	280 U	210 UJ
Di-n-butylphthalate	NL	µg/kg	330 U	320 U	300 U	280 U	210 UJ
Di-n-octylphthalate	NL	µg/kg	330 U	320 U	300 U	280 U	210 UJ
Fluoranthene	2230	µg/kg	6.5 U	25	23	8	32
Fluorene	536	µg/kg	6.5 U	6.3 U	5.9 U	5.5 U	4 U
Hexachlorobenzene	NL	µg/kg	330 U	320 U	300 U	280 U	210 U
Hexachlorobutadiene	NL	µg/kg	330 U	320 U	300 U	280 U	210 U
Hexachlorocyclopentadiene	NL	µg/kg	330 U	320 U	300 U	280 U	210 U
Hexachloroethane	NL	µg/kg	330 U	320 U	300 U	280 U	210 U
Indeno(1,2,3-cd)pyrene	NL	µg/kg	6.5 U	7.1	7.4	5.5 U	4 U
Isophorone	NL	µg/kg	330 U	320 U	300 U	280 U	210 U
Naphthalene	561	µg/kg	6.5 U	6.3 U	5.9 U	5.5 U	4 U
Nitrobenzene	NL	µg/kg	330 U	320 U	300 U	280 U	210 U
N-Nitroso-di-n-propylamine	NL	µg/kg	330 U	320 U	300 U	280 U	210 U
N-Nitrosodiphenylamine	NL	µg/kg	330 U	320 U	300 U	280 U	210 U
Pentachlorophenol	NL	µg/kg	13 U	13 U	12 U	11 U	8.2 U
Phenanthrene	1170	µg/kg	6.5 U	16	11	5.8	26
Phenol	NL	µg/kg	330 U	320 U	300 U	280 U	210 U
Pyrene	1520	µg/kg	8	25	25	9.5	31
Total PAH 17	22800	µg/kg	70.75	169.7	167.25	74.2	172.3
TOC	NL	mg/kg	43,300	19,700	24,900	28,300	20,300

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Table B-1
Sediment Sample Analytical Results - SVOCs
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-46	LMR11-47	LMR11-47	LMR11-47	LMR11-47
		Field Sample ID	LMR11-46-093	LMR11-47-006	LMR11-47-024	LMR11-47-048	LMR11-47-072
		Sample Date	8/8/2011	8/8/2011	8/8/2011	8/8/2011	8/8/2011
		Depth Interval (in bss)	72- 93	0- 6	6- 24	24- 48	48- 72
Chemical Name	**PEC[1]**	**Unit**					
1,1'-Biphenyl	NL	µg/kg	250 U	340 U	310 U	290 U	290 U
1,2,4,5-Tetrachlorobenzene	NL	µg/kg	250 U	340 U	310 U	290 U	290 U
2,2'-Oxybis(1-chloropropane)	NL	µg/kg	250 U	340 U	310 U	290 U	290 U
2,3,4,6-Tetrachlorophenol	NL	µg/kg	250 U	340 U	310 U	290 U	290 U
2,4,5-Trichlorophenol	NL	µg/kg	250 U	340 U	310 U	290 U	290 U
2,4,6-Trichlorophenol	NL	µg/kg	250 U	340 U	310 U	290 U	290 U
2,4-Dichlorophenol	NL	µg/kg	250 U	340 U	310 U	290 U	290 U
2,4-Dimethylphenol	NL	µg/kg	250 U	340 U	310 U	290 U	290 U
2,4-Dinitrophenol	NL	µg/kg	480 U	660 U	610 U	560 U	560 U
2,4-Dinitrotoluene	NL	µg/kg	250 U	340 U	310 U	290 U	290 U
2,6-Dinitrotoluene	NL	µg/kg	250 U	340 U	310 U	290 U	290 U
2-Chloronaphthalene	NL	µg/kg	250 U	340 U	310 U	290 U	290 U
2-Chlorophenol	NL	µg/kg	250 U	340 U	310 U	290 U	290 U
2-Methylnaphthalene	NL	µg/kg	11	6.6 U	6.1 U	5.6 U	5.6 U
2-Methylphenol	NL	µg/kg	250 U	340 U	310 U	290 U	290 U
2-Nitroaniline	NL	µg/kg	480 U	660 U	610 U	560 U	560 U
2-Nitrophenol	NL	µg/kg	250 U	340 U	310 U	290 U	290 U
3,3'-Dichlorobenzidine	NL	µg/kg	250 U	340 U	310 U	290 U	290 U
3-Nitroaniline	NL	µg/kg	480 U	660 U	610 U	560 U	560 U
4,6-Dinitro-2-methylphenol	NL	µg/kg	480 U	660 U	610 U	560 U	560 U
4-Bromophenyl-phenylether	NL	µg/kg	250 U	340 U	310 U	290 U	290 U
4-Chloro-3-methylphenol	NL	µg/kg	250 U	340 U	310 U	290 U	290 U
4-Chloroaniline	NL	µg/kg	250 U	340 U	310 U	290 U	290 U
4-Chlorophenyl-phenylether	NL	µg/kg	250 U	340 U	310 U	290 U	290 U
4-Methylphenol	NL	µg/kg	250 U	340 U	310 U	290 U	290 U
4-Nitroaniline	NL	µg/kg	480 U	660 U	610 U	560 U	560 U
4-Nitrophenol	NL	µg/kg	480 U	660 U	610 U	560 U	560 U
Acenaphthene	NL	µg/kg	5.4	6.6 U	6.1 U	5.6 U	5.6 U
Acenaphthylene	NL	µg/kg	5.3	6.6 U	6.1 U	5.6 U	5.6 U
Acetophenone	NL	µg/kg	250 U	340 U	310 U	290 U	290 U
Anthracene	845	µg/kg	43	6.6 U	6.1 U	5.6 U	5.6
Atrazine	NL	µg/kg	250 U	340 U	310 U	290 U	290 U
Benzaldehyde	NL	µg/kg	250 U	340 U	310 U	290 U	290 U
Benzo(a)anthracene	1050	µg/kg	98	6.6 U	6.1 U	6	15
Benzo(a)pyrene	1450	µg/kg	91	24	9.4	15	21

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Table B-1
Sediment Sample Analytical Results - SVOCs
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-46	LMR11-47	LMR11-47	LMR11-47	LMR11-47
		Field Sample ID	LMR11-46-093	LMR11-47-006	LMR11-47-024	LMR11-47-048	LMR11-47-072
		Sample Date	8/8/2011	8/8/2011	8/8/2011	8/8/2011	8/8/2011
		Depth Interval (in bss)	72- 93	0- 6	6- 24	24- 48	48- 72
Chemical Name	**PEC[1]**	**Unit**					
Benzo(b)fluoranthene	NL	µg/kg	97	16	9	10	21
Benzo(g,h,i)perylene	NL	µg/kg	50	7.8	6.1 U	5.6 U	8.8
Benzo(k)fluoranthene	NL	µg/kg	52	6.6 U	6.1 U	5.6 U	7.5
Bis(2-chloroethoxy)methane	NL	µg/kg	250 U	340 U	310 U	290 U	290 U
Bis(2-chloroethyl)ether	NL	µg/kg	250 U	340 U	310 U	290 U	290 U
Bis(2-ethylhexyl)phthalate	NL	µg/kg	250 U	340 U	310 U	290 U	290 U
Butylbenzylphthalate	NL	µg/kg	250 U	340 U	310 U	290 U	290 U
Caprolactam	NL	µg/kg	250 U	340 U	310 U	290 U	290 U
Carbazole	NL	µg/kg	250 U	340 U	310 U	290 U	290 U
Chrysene	1290	µg/kg	94	9.1	6.3	6.8	16
Dibenzo(a,h)anthracene	NL	µg/kg	19	6.6 U	6.1 U	5.6 U	5.6 U
Dibenzofuran	NL	µg/kg	250 U	340 U	310 U	290 U	290 U
Diethylphthalate	NL	µg/kg	250 U	340 U	310 U	290 U	290 U
Dimethylphthalate	NL	µg/kg	250 U	340 U	310 U	290 U	290 U
Di-n-butylphthalate	NL	µg/kg	65 J	340 U	310 U	290 U	290 U
Di-n-octylphthalate	NL	µg/kg	250 U	340 U	310 U	290 U	290 U
Fluoranthene	2230	µg/kg	170	13	14	12	30
Fluorene	536	µg/kg	8.4	6.6 U	6.1 U	5.6 U	5.6 U
Hexachlorobenzene	NL	µg/kg	250 U	340 U	310 U	290 U	290 U
Hexachlorobutadiene	NL	µg/kg	250 U	340 U	310 U	290 U	290 U
Hexachlorocyclopentadiene	NL	µg/kg	250 U	340 U	310 U	290 U	290 U
Hexachloroethane	NL	µg/kg	250 U	340 U	310 U	290 U	290 U
Indeno(1,2,3-cd)pyrene	NL	µg/kg	42	7.1	6.1 U	5.6 U	8.3
Isophorone	NL	µg/kg	250 U	340 U	310 U	290 U	290 U
Naphthalene	561	µg/kg	13	6.6 U	6.1 U	5.6 U	5.6 U
Nitrobenzene	NL	µg/kg	250 U	340 U	310 U	290 U	290 U
N-Nitroso-di-n-propylamine	NL	µg/kg	250 U	340 U	310 U	290 U	290 U
N-Nitrosodiphenylamine	NL	µg/kg	250 U	340 U	310 U	290 U	290 U
Pentachlorophenol	NL	µg/kg	9.7 U	13 U	12 U	11 U	11 U
Phenanthrene	1170	µg/kg	76	6.6 U	9.7	6.7	17
Phenol	NL	µg/kg	250 U	340 U	310 U	290 U	290 U
Pyrene	1520	µg/kg	170	16	13	13	28
Total PAH 17	22800	µg/kg	1045.1	126	94.95	97.5	195
TOC	NL	mg/kg	29,600	26,000	22,600	17,300	28,000

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Table B-1
Sediment Sample Analytical Results - SVOCs
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-47	LMR11-47	LMR11-47	LMR11-48	LMR11-48
		Field Sample ID	LMR11-47-096	LMR11-47-120	LMR11-47-144	LMR11-48-006	LMR11-48-024
		Sample Date	8/8/2011	8/8/2011	8/8/2011	8/8/2011	8/8/2011
		Depth Interval (in bss)	72- 96	96- 120	120- 144	0- 6	6- 24
Chemical Name	**PEC[1]**	**Unit**					
1,1'-Biphenyl	NL	µg/kg	290 U	270 U	300 U	390 U	330 U
1,2,4,5-Tetrachlorobenzene	NL	µg/kg	290 U	270 U	300 U	390 U	330 U
2,2'-Oxybis(1-chloropropane)	NL	µg/kg	290 U	270 U	300 U	390 U	330 U
2,3,4,6-Tetrachlorophenol	NL	µg/kg	290 U	270 U	300 U	390 U	330 U
2,4,5-Trichlorophenol	NL	µg/kg	290 U	270 U	300 U	390 U	330 U
2,4,6-Trichlorophenol	NL	µg/kg	290 U	270 U	300 U	390 U	330 U
2,4-Dichlorophenol	NL	µg/kg	290 U	270 U	300 U	390 U	330 U
2,4-Dimethylphenol	NL	µg/kg	290 U	270 U	300 U	390 U	330 U
2,4-Dinitrophenol	NL	µg/kg	570 U	530 U	570 U	760 U	650 U
2,4-Dinitrotoluene	NL	µg/kg	290 U	270 U	300 U	390 U	330 U
2,6-Dinitrotoluene	NL	µg/kg	290 U	270 U	300 U	390 U	330 U
2-Chloronaphthalene	NL	µg/kg	290 U	270 U	300 U	390 U	330 U
2-Chlorophenol	NL	µg/kg	290 U	270 U	300 U	390 U	330 U
2-Methylnaphthalene	NL	µg/kg	5.7 U	5.3 U	5.7 U	7.6 U	6.5 U
2-Methylphenol	NL	µg/kg	290 U	270 U	300 U	390 U	330 U
2-Nitroaniline	NL	µg/kg	570 U	530 U	570 U	760 U	650 U
2-Nitrophenol	NL	µg/kg	290 U	270 U	300 U	390 U	330 U
3,3'-Dichlorobenzidine	NL	µg/kg	290 U	270 U	300 U	390 U	330 U
3-Nitroaniline	NL	µg/kg	570 U	530 U	570 U	760 U	650 U
4,6-Dinitro-2-methylphenol	NL	µg/kg	570 U	530 U	570 U	760 U	650 U
4-Bromophenyl-phenylether	NL	µg/kg	290 U	270 U	300 U	390 U	330 U
4-Chloro-3-methylphenol	NL	µg/kg	290 U	270 U	300 U	390 U	330 U
4-Chloroaniline	NL	µg/kg	290 U	270 U	300 U	390 U	330 U
4-Chlorophenyl-phenylether	NL	µg/kg	290 U	270 U	300 U	390 U	330 U
4-Methylphenol	NL	µg/kg	290 U	270 U	300 U	390 U	330 U
4-Nitroaniline	NL	µg/kg	570 U	530 U	570 U	760 U	650 U
4-Nitrophenol	NL	µg/kg	570 U	530 U	570 U	760 U	650 U
Acenaphthene	NL	µg/kg	5.7 U	5.3 U	5.7 U	7.6 U	6.5 U
Acenaphthylene	NL	µg/kg	5.7 U	5.3 U	5.7 U	7.6 U	6.5 U
Acetophenone	NL	µg/kg	290 U	270 U	300 U	390 U	330 U
Anthracene	845	µg/kg	5.7 U	5.3 U	5.7 U	7.6 U	6.5 U
Atrazine	NL	µg/kg	290 U	270 U	300 U	390 U	330 U
Benzaldehyde	NL	µg/kg	290 U	270 U	300 U	390 U	330 U
Benzo(a)anthracene	1050	µg/kg	5.7 U	6.2	11	7.6 U	6.5 U
Benzo(a)pyrene	1450	µg/kg	5.7 U	13	14	7.6 U	7

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Table B-1
Sediment Sample Analytical Results - SVOCs
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-47	LMR11-47	LMR11-47	LMR11-48	LMR11-48
		Field Sample ID	LMR11-47-096	LMR11-47-120	LMR11-47-144	LMR11-48-006	LMR11-48-024
		Sample Date	8/8/2011	8/8/2011	8/8/2011	8/8/2011	8/8/2011
		Depth Interval (in bss)	72- 96	96- 120	120- 144	0- 6	6- 24
Chemical Name	**PEC[1]**	**Unit**					
Benzo(b)fluoranthene	NL	µg/kg	6.7	9.7	14	7.6 U	6.5 U
Benzo(g,h,i)perylene	NL	µg/kg	5.7 U	5.3 U	6.6	7.6 U	6.5 U
Benzo(k)fluoranthene	NL	µg/kg	5.7 U	5.3 U	5.7 U	7.6 U	6.5 U
Bis(2-chloroethoxy)methane	NL	µg/kg	290 U	270 U	300 U	390 U	330 U
Bis(2-chloroethyl)ether	NL	µg/kg	290 U	270 U	300 U	390 U	330 U
Bis(2-ethylhexyl)phthalate	NL	µg/kg	290 U	270 U	300 U	390 U	330 U
Butylbenzylphthalate	NL	µg/kg	290 U	270 U	300 U	390 U	330 U
Caprolactam	NL	µg/kg	290 U	270 U	300 U	390 U	330 U
Carbazole	NL	µg/kg	290 U	270 U	300 U	390 U	330 U
Chrysene	1290	µg/kg	5.7 U	7.5	12	7.6 U	8.3
Dibenzo(a,h)anthracene	NL	µg/kg	5.7 U	5.3 U	5.7 U	7.6 U	6.5 U
Dibenzofuran	NL	µg/kg	290 U	270 U	300 U	390 U	330 U
Diethylphthalate	NL	µg/kg	290 U	270 U	300 U	390 U	330 U
Dimethylphthalate	NL	µg/kg	290 U	270 U	300 U	390 U	330 U
Di-n-butylphthalate	NL	µg/kg	290 U	270 U	300 U	500	330 U
Di-n-octylphthalate	NL	µg/kg	290 U	270 U	300 U	390 U	330 U
Fluoranthene	2230	µg/kg	8	15	21	8.8	15
Fluorene	536	µg/kg	5.7 U	5.3 U	5.7 U	7.6 U	6.5 U
Hexachlorobenzene	NL	µg/kg	290 U	270 U	300 U	390 U	330 U
Hexachlorobutadiene	NL	µg/kg	290 U	270 U	300 U	390 U	330 U
Hexachlorocyclopentadiene	NL	µg/kg	290 U	270 U	300 U	390 U	330 U
Hexachloroethane	NL	µg/kg	290 U	270 U	300 U	390 U	330 U
Indeno(1,2,3-cd)pyrene	NL	µg/kg	5.7 U	5.3 U	5.7 U	7.6 U	6.5 U
Isophorone	NL	µg/kg	290 U	270 U	300 U	390 U	330 U
Naphthalene	561	µg/kg	5.7 U	5.3 U	7	7.6 U	6.5 U
Nitrobenzene	NL	µg/kg	290 U	270 U	300 U	390 U	330 U
N-Nitroso-di-n-propylamine	NL	µg/kg	290 U	270 U	300 U	390 U	330 U
N-Nitrosodiphenylamine	NL	µg/kg	290 U	270 U	300 U	390 U	330 U
Pentachlorophenol	NL	µg/kg	12 U	11 U	12 U	15 U	13 U
Phenanthrene	1170	µg/kg	5.7 U	11	14	7.6 U	12
Phenol	NL	µg/kg	290 U	270 U	300 U	390 U	330 U
Pyrene	1520	µg/kg	9.6	14	22	11	16
Total PAH 17	22800	µg/kg	64.2	102.9	144.4	76.8	97.3
TOC	NL	mg/kg	29,300	31,000	37,800	30,000	39,400

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Table B-1
Sediment Sample Analytical Results - SVOCs
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-48	LMR11-48	LMR11-48	LMR11-49	LMR11-49
		Field Sample ID	LMR11-48-024FS	LMR11-48-048	LMR11-48-061	LMR11-49-006	LMR11-49-024
		Sample Date	8/8/2011	8/8/2011	8/8/2011	8/8/2011	8/8/2011
		Depth Interval (in bss)	6- 24	24- 48	48- 61	0- 6	6- 24
Chemical Name	**PEC[1]**	**Unit**					
1,1'-Biphenyl	NL	µg/kg	330 U	310 U	290 U	320 UJ	310 UJ
1,2,4,5-Tetrachlorobenzene	NL	µg/kg	330 U	310 U	290 U	320 UJ	310 UJ
2,2'-Oxybis(1-chloropropane)	NL	µg/kg	330 U	310 U	290 U	320 UJ	310 UJ
2,3,4,6-Tetrachlorophenol	NL	µg/kg	330 U	310 U	290 U	320 UJ	310 UJ
2,4,5-Trichlorophenol	NL	µg/kg	330 U	310 U	290 U	320 UJ	310 UJ
2,4,6-Trichlorophenol	NL	µg/kg	330 U	310 U	290 U	320 UJ	310 UJ
2,4-Dichlorophenol	NL	µg/kg	330 U	310 U	290 U	320 UJ	310 UJ
2,4-Dimethylphenol	NL	µg/kg	330 U	310 U	290 U	320 UJ	310 UJ
2,4-Dinitrophenol	NL	µg/kg	650 U	610 U	570 U	620 UJ	600 UJ
2,4-Dinitrotoluene	NL	µg/kg	330 U	310 U	290 U	320 UJ	310 UJ
2,6-Dinitrotoluene	NL	µg/kg	330 U	310 U	290 U	320 UJ	310 UJ
2-Chloronaphthalene	NL	µg/kg	330 U	310 U	290 U	320 UJ	310 UJ
2-Chlorophenol	NL	µg/kg	330 U	310 U	290 U	320 UJ	310 UJ
2-Methylnaphthalene	NL	µg/kg	6.5 U	6.1 U	5.7 U	6.2 UJ	6 UJ
2-Methylphenol	NL	µg/kg	330 U	310 U	290 U	320 UJ	310 UJ
2-Nitroaniline	NL	µg/kg	650 U	610 U	570 U	620 UJ	600 UJ
2-Nitrophenol	NL	µg/kg	330 U	310 U	290 U	320 UJ	310 UJ
3,3'-Dichlorobenzidine	NL	µg/kg	330 U	310 U	290 U	320 UJ	310 UJ
3-Nitroaniline	NL	µg/kg	650 U	610 U	570 U	620 UJ	600 UJ
4,6-Dinitro-2-methylphenol	NL	µg/kg	650 U	610 U	570 U	620 UJ	600 UJ
4-Bromophenyl-phenylether	NL	µg/kg	330 U	310 U	290 U	320 UJ	310 UJ
4-Chloro-3-methylphenol	NL	µg/kg	330 U	310 U	290 U	320 UJ	310 UJ
4-Chloroaniline	NL	µg/kg	330 U	310 U	290 U	320 UJ	310 UJ
4-Chlorophenyl-phenylether	NL	µg/kg	330 U	310 U	290 U	320 UJ	310 UJ
4-Methylphenol	NL	µg/kg	330 U	310 U	290 U	320 UJ	310 UJ
4-Nitroaniline	NL	µg/kg	650 U	610 U	570 U	620 UJ	600 UJ
4-Nitrophenol	NL	µg/kg	650 U	610 U	570 U	620 UJ	600 UJ
Acenaphthene	NL	µg/kg	6.5 U	6.1 U	5.7 U	6.2 UJ	6 UJ
Acenaphthylene	NL	µg/kg	6.5 U	6.1 U	5.7 U	6.2 UJ	6 UJ
Acetophenone	NL	µg/kg	330 U	310 U	290 U	320 UJ	310 UJ
Anthracene	845	µg/kg	6.5 U	6.1 U	5.7 U	6.2 UJ	6 UJ
Atrazine	NL	µg/kg	330 U	310 U	290 U	320 UJ	310 UJ
Benzaldehyde	NL	µg/kg	330 U	310 U	290 U	320 UJ	310 UJ
Benzo(a)anthracene	1050	µg/kg	7.7	6.1 U	9.9	6.2 UJ	6 UJ
Benzo(a)pyrene	1450	µg/kg	9.5	6.1 U	7.6	11 J	6 UJ

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Table B-1
Sediment Sample Analytical Results - SVOCs
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-48	LMR11-48	LMR11-48	LMR11-49	LMR11-49
		Field Sample ID	LMR11-48-024FS	LMR11-48-048	LMR11-48-061	LMR11-49-006	LMR11-49-024
		Sample Date	8/8/2011	8/8/2011	8/8/2011	8/8/2011	8/8/2011
		Depth Interval (in bss)	6- 24	24- 48	48- 61	0- 6	6- 24
Chemical Name	**PEC[1]**	**Unit**					
Benzo(b)fluoranthene	NL	µg/kg	8.4	6.1 U	9.4	6.9 J	7.7 J
Benzo(g,h,i)perylene	NL	µg/kg	6.5 U	6.1 U	6.8	6.2 UJ	6 UJ
Benzo(k)fluoranthene	NL	µg/kg	6.5 U	6.1 U	5.7 U	6.2 UJ	6 UJ
Bis(2-chloroethoxy)methane	NL	µg/kg	330 U	310 U	290 U	320 UJ	310 UJ
Bis(2-chloroethyl)ether	NL	µg/kg	330 U	310 U	290 U	320 UJ	310 UJ
Bis(2-ethylhexyl)phthalate	NL	µg/kg	330 U	310 U	290 U	320 UJ	310 UJ
Butylbenzylphthalate	NL	µg/kg	330 U	310 U	290 U	320 UJ	310 UJ
Caprolactam	NL	µg/kg	330 U	310 U	290 U	320 UJ	310 UJ
Carbazole	NL	µg/kg	330 U	310 U	290 U	320 UJ	310 UJ
Chrysene	1290	µg/kg	13	7.1	12	6.2 UJ	6.3 J
Dibenzo(a,h)anthracene	NL	µg/kg	6.5 U	6.1 U	5.7 U	6.2 UJ	6 UJ
Dibenzofuran	NL	µg/kg	330 U	310 U	290 U	320 UJ	310 UJ
Diethylphthalate	NL	µg/kg	330 U	310 U	290 U	320 UJ	310 UJ
Dimethylphthalate	NL	µg/kg	330 U	310 U	290 U	320 UJ	310 UJ
Di-n-butylphthalate	NL	µg/kg	330 U	310 U	210 J	320 UJ	310 UJ
Di-n-octylphthalate	NL	µg/kg	330 U	310 U	290 U	320 UJ	310 UJ
Fluoranthene	2230	µg/kg	21	11	14	7.8 J	12 J
Fluorene	536	µg/kg	6.5 U	6.1 U	5.7 U	6.2 UJ	6 UJ
Hexachlorobenzene	NL	µg/kg	330 U	310 U	290 U	320 UJ	310 UJ
Hexachlorobutadiene	NL	µg/kg	330 U	310 U	290 U	320 UJ	310 UJ
Hexachlorocyclopentadiene	NL	µg/kg	330 U	310 U	290 U	320 UJ	310 UJ
Hexachloroethane	NL	µg/kg	330 U	310 U	290 U	320 UJ	310 UJ
Indeno(1,2,3-cd)pyrene	NL	µg/kg	6.5 U	6.1 U	6.9	6.2 UJ	6 UJ
Isophorone	NL	µg/kg	330 U	310 U	290 U	320 UJ	310 UJ
Naphthalene	561	µg/kg	6.5 U	6.1 U	5.7 U	6.2 UJ	6 UJ
Nitrobenzene	NL	µg/kg	330 U	310 U	290 U	320 UJ	310 UJ
N-Nitroso-di-n-propylamine	NL	µg/kg	330 U	310 U	290 U	320 UJ	310 UJ
N-Nitrosodiphenylamine	NL	µg/kg	330 U	310 U	290 U	320 UJ	310 UJ
Pentachlorophenol	NL	µg/kg	13 U	12 U	13	13 UJ	12 UJ
Phenanthrene	1170	µg/kg	14	6.6	9.3	6.2 UJ	8.8 J
Phenol	NL	µg/kg	330 U	310 U	290 U	320 UJ	310 UJ
Pyrene	1520	µg/kg	21	12	16	9.6 J	13 J
Total PAH 17	22800	µg/kg	127.1	76.35	114.7	75.6	83.8
TOC	NL	mg/kg	26,600	26,400	30,300	23,800	21,000

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Table B-1
Sediment Sample Analytical Results - SVOCs
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-49	LMR11-49	LMR11-49	LMR11-49	LMR11-50
		Field Sample ID	LMR11-49-048	LMR11-49-072	LMR11-49-096	LMR11-49-115	LMR11-50-006
		Sample Date	8/8/2011	8/8/2011	8/8/2011	8/8/2011	8/8/2011
		Depth Interval (in bss)	24- 48	48- 72	72- 96	96- 115	0- 6
Chemical Name	**PEC[1]**	**Unit**					
1,1'-Biphenyl	NL	µg/kg	270 UJ	260 UJ	250 UJ	230 UJ	370 U
1,2,4,5-Tetrachlorobenzene	NL	µg/kg	270 UJ	260 UJ	250 UJ	230 UJ	370 U
2,2'-Oxybis(1-chloropropane)	NL	µg/kg	270 UJ	260 UJ	250 UJ	230 UJ	370 U
2,3,4,6-Tetrachlorophenol	NL	µg/kg	270 UJ	260 UJ	250 UJ	230 UJ	370 U
2,4,5-Trichlorophenol	NL	µg/kg	270 UJ	260 UJ	250 UJ	230 UJ	370 U
2,4,6-Trichlorophenol	NL	µg/kg	270 UJ	260 UJ	250 UJ	230 UJ	370 U
2,4-Dichlorophenol	NL	µg/kg	270 UJ	260 UJ	250 UJ	230 UJ	370 U
2,4-Dimethylphenol	NL	µg/kg	270 UJ	260 UJ	250 UJ	230 UJ	370 U
2,4-Dinitrophenol	NL	µg/kg	520 UJ	500 UJ	480 UJ	450 UJ	720 U
2,4-Dinitrotoluene	NL	µg/kg	270 UJ	260 UJ	250 UJ	230 UJ	370 U
2,6-Dinitrotoluene	NL	µg/kg	270 UJ	260 UJ	250 UJ	230 UJ	370 U
2-Chloronaphthalene	NL	µg/kg	270 UJ	260 UJ	250 UJ	230 UJ	370 U
2-Chlorophenol	NL	µg/kg	270 UJ	260 UJ	250 UJ	230 UJ	370 U
2-Methylnaphthalene	NL	µg/kg	5.2 UJ	5 UJ	7.9 J	4.5 UJ	7.2 U
2-Methylphenol	NL	µg/kg	270 UJ	260 UJ	250 UJ	230 UJ	370 U
2-Nitroaniline	NL	µg/kg	520 UJ	500 UJ	480 UJ	450 UJ	720 U
2-Nitrophenol	NL	µg/kg	270 UJ	260 UJ	250 UJ	230 UJ	370 U
3,3'-Dichlorobenzidine	NL	µg/kg	270 UJ	260 UJ	250 UJ	230 UJ	370 U
3-Nitroaniline	NL	µg/kg	520 UJ	500 UJ	480 UJ	450 UJ	720 U
4,6-Dinitro-2-methylphenol	NL	µg/kg	520 UJ	500 UJ	480 UJ	450 UJ	720 U
4-Bromophenyl-phenylether	NL	µg/kg	270 UJ	260 UJ	250 UJ	230 UJ	370 U
4-Chloro-3-methylphenol	NL	µg/kg	270 UJ	260 UJ	250 UJ	230 UJ	370 U
4-Chloroaniline	NL	µg/kg	270 UJ	260 UJ	250 UJ	230 UJ	370 U
4-Chlorophenyl-phenylether	NL	µg/kg	270 UJ	260 UJ	250 UJ	230 UJ	370 U
4-Methylphenol	NL	µg/kg	270 UJ	260 UJ	250 UJ	230 UJ	370 U
4-Nitroaniline	NL	µg/kg	520 UJ	500 UJ	480 UJ	450 UJ	720 U
4-Nitrophenol	NL	µg/kg	520 UJ	500 UJ	480 UJ	450 UJ	720 U
Acenaphthene	NL	µg/kg	5.2 UJ	5 UJ	4.8 UJ	4.5 UJ	7.2 U
Acenaphthylene	NL	µg/kg	5.2 UJ	5 UJ	10 J	4.5 UJ	7.2 U
Acetophenone	NL	µg/kg	270 UJ	260 UJ	250 UJ	230 UJ	370 U
Anthracene	845	µg/kg	5.2 UJ	5 UJ	25 J	4.5 UJ	7.2 U
Atrazine	NL	µg/kg	270 UJ	260 UJ	250 UJ	230 UJ	370 U
Benzaldehyde	NL	µg/kg	270 UJ	260 UJ	250 UJ	230 UJ	370 U
Benzo(a)anthracene	1050	µg/kg	5.2 UJ	5.3 J	120 J	7.9 J	28
Benzo(a)pyrene	1450	µg/kg	5.2 UJ	5 UJ	100 J	8.8 J	49

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Table B-1
Sediment Sample Analytical Results - SVOCs
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-49	LMR11-49	LMR11-49	LMR11-49	LMR11-50
		Field Sample ID	LMR11-49-048	LMR11-49-072	LMR11-49-096	LMR11-49-115	LMR11-50-006
		Sample Date	8/8/2011	8/8/2011	8/8/2011	8/8/2011	8/8/2011
		Depth Interval (in bss)	24- 48	48- 72	72- 96	96- 115	0- 6
Chemical Name	**PEC[1]**	**Unit**					
Benzo(b)fluoranthene	NL	µg/kg	5.2 UJ	7.4 J	110 J	10 J	62
Benzo(g,h,i)perylene	NL	µg/kg	5.2 UJ	5 UJ	57 J	4.5 UJ	38
Benzo(k)fluoranthene	NL	µg/kg	5.2 UJ	5 UJ	57 J	5.7 J	38
Bis(2-chloroethoxy)methane	NL	µg/kg	270 UJ	260 UJ	250 UJ	230 UJ	370 U
Bis(2-chloroethyl)ether	NL	µg/kg	270 UJ	260 UJ	250 UJ	230 UJ	370 U
Bis(2-ethylhexyl)phthalate	NL	µg/kg	270 UJ	260 UJ	250 UJ	230 UJ	370 U
Butylbenzylphthalate	NL	µg/kg	270 UJ	260 UJ	250 UJ	230 UJ	370 U
Caprolactam	NL	µg/kg	270 UJ	260 UJ	250 UJ	230 UJ	370 U
Carbazole	NL	µg/kg	270 UJ	260 UJ	250 UJ	230 UJ	370 U
Chrysene	1290	µg/kg	5.2 UJ	7 J	100 J	9.5 J	41
Dibenzo(a,h)anthracene	NL	µg/kg	5.2 UJ	5 UJ	16 J	4.5 UJ	8.7
Dibenzofuran	NL	µg/kg	270 UJ	260 UJ	250 UJ	230 UJ	370 U
Diethylphthalate	NL	µg/kg	270 UJ	260 UJ	250 UJ	230 UJ	370 U
Dimethylphthalate	NL	µg/kg	270 UJ	260 UJ	250 UJ	230 UJ	370 U
Di-n-butylphthalate	NL	µg/kg	270 UJ	260 UJ	250 UJ	230 UJ	370 U
Di-n-octylphthalate	NL	µg/kg	270 UJ	260 UJ	250 UJ	230 UJ	370 U
Fluoranthene	2230	µg/kg	5.2 UJ	11 J	180 J	17 J	72
Fluorene	536	µg/kg	5.2 UJ	5 UJ	7 J	4.5 UJ	7.2 U
Hexachlorobenzene	NL	µg/kg	270 UJ	260 UJ	250 UJ	230 UJ	370 U
Hexachlorobutadiene	NL	µg/kg	270 UJ	260 UJ	250 UJ	230 UJ	370 U
Hexachlorocyclopentadiene	NL	µg/kg	270 UJ	260 UJ	250 UJ	230 UJ	370 U
Hexachloroethane	NL	µg/kg	270 UJ	260 UJ	250 UJ	230 UJ	370 U
Indeno(1,2,3-cd)pyrene	NL	µg/kg	5.2 UJ	5 UJ	51 J	4.5 UJ	30
Isophorone	NL	µg/kg	270 UJ	260 UJ	250 UJ	230 UJ	370 U
Naphthalene	561	µg/kg	5.2 UJ	5 UJ	13 J	4.5 UJ	9
Nitrobenzene	NL	µg/kg	270 UJ	260 UJ	250 UJ	230 UJ	370 U
N-Nitroso-di-n-propylamine	NL	µg/kg	270 UJ	260 UJ	250 UJ	230 UJ	370 U
N-Nitrosodiphenylamine	NL	µg/kg	270 UJ	260 UJ	250 UJ	230 UJ	370 U
Pentachlorophenol	NL	µg/kg	11 UJ	10 UJ	9.8 UJ	9.2 UJ	15 UJ
Phenanthrene	1170	µg/kg	5.2 UJ	8 J	72 J	14 J	35
Phenol	NL	µg/kg	270 UJ	260 UJ	250 UJ	230 UJ	370 U
Pyrene	1520	µg/kg	6.3 J	12 J	190 J	21 J	65 J
Total PAH 17	22800	µg/kg	47.9	78.2	1,118	114.15	493.7
TOC	NL	mg/kg	26,500	29,600	19,600	26,900 J	34,800

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Table B-1
Sediment Sample Analytical Results - SVOCs
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-50	LMR11-50	LMR11-50	LMR11-50	LMR11-50
		Field Sample ID	LMR11-50-006-DP	LMR11-50-024	LMR11-50-024-DP	LMR11-50-048	LMR11-50-048-DP
		Sample Date	8/8/2011	8/8/2011	8/8/2011	8/8/2011	8/8/2011
		Depth Interval (in bss)	0- 6	6- 24	6- 24	24- 48	24- 48
Chemical Name	**PEC[1]**	**Unit**					
1,1'-Biphenyl	NL	µg/kg	360 U	360 U	300 U	270 U	240 U
1,2,4,5-Tetrachlorobenzene	NL	µg/kg	360 U	360 U	300 U	270 U	240 U
2,2'-Oxybis(1-chloropropane)	NL	µg/kg	360 U	360 U	300 U	270 U	240 U
2,3,4,6-Tetrachlorophenol	NL	µg/kg	360 U	360 U	300 U	270 U	240 U
2,4,5-Trichlorophenol	NL	µg/kg	360 U	360 U	300 U	270 U	240 U
2,4,6-Trichlorophenol	NL	µg/kg	360 U	360 U	300 U	270 U	240 U
2,4-Dichlorophenol	NL	µg/kg	360 U	360 U	300 U	270 U	240 U
2,4-Dimethylphenol	NL	µg/kg	360 U	360 U	300 U	270 U	240 U
2,4-Dinitrophenol	NL	µg/kg	710 U	700 U	580 U	530 U	470 U
2,4-Dinitrotoluene	NL	µg/kg	360 U	360 U	300 U	270 U	240 U
2,6-Dinitrotoluene	NL	µg/kg	360 U	360 U	300 U	270 U	240 U
2-Chloronaphthalene	NL	µg/kg	360 U	360 U	300 U	270 U	240 U
2-Chlorophenol	NL	µg/kg	360 U	360 U	300 U	270 U	240 U
2-Methylnaphthalene	NL	µg/kg	7.1 U	12	46	8.5	36
2-Methylphenol	NL	µg/kg	360 U	360 U	300 U	270 U	240 U
2-Nitroaniline	NL	µg/kg	710 U	700 U	580 U	530 U	470 U
2-Nitrophenol	NL	µg/kg	360 U	360 U	300 U	270 U	240 U
3,3'-Dichlorobenzidine	NL	µg/kg	360 U	360 U	300 U	270 U	240 U
3-Nitroaniline	NL	µg/kg	710 U	700 U	580 U	530 U	470 U
4,6-Dinitro-2-methylphenol	NL	µg/kg	710 U	700 U	580 U	530 U	470 U
4-Bromophenyl-phenylether	NL	µg/kg	360 U	360 U	300 U	270 U	240 U
4-Chloro-3-methylphenol	NL	µg/kg	360 U	360 U	300 U	270 U	240 U
4-Chloroaniline	NL	µg/kg	360 U	360 U	300 U	270 U	240 U
4-Chlorophenyl-phenylether	NL	µg/kg	360 U	360 U	300 U	270 U	240 U
4-Methylphenol	NL	µg/kg	360 U	360 U	300 U	270 U	53 J
4-Nitroaniline	NL	µg/kg	710 U	700 U	580 U	530 U	470 U
4-Nitrophenol	NL	µg/kg	710 U	700 U	580 U	530 U	470 U
Acenaphthene	NL	µg/kg	7.1 U	7 U	46	7.2	4.7 U
Acenaphthylene	NL	µg/kg	7.1 U	7 U	9.3	5.3 U	15
Acetophenone	NL	µg/kg	360 U	360 U	300 U	270 U	240 U
Anthracene	845	µg/kg	27	22	70	19	54
Atrazine	NL	µg/kg	360 U	360 U	300 U	270 U	240 U
Benzaldehyde	NL	µg/kg	360 U	360 U	300 U	270 U	240 U
Benzo(a)anthracene	1050	µg/kg	93	91	330	66	160
Benzo(a)pyrene	1450	µg/kg	97	95	280	67	140

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Table B-1
Sediment Sample Analytical Results - SVOCs
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-50	LMR11-50	LMR11-50	LMR11-50	LMR11-50
		Field Sample ID	LMR11-50-006-DP	LMR11-50-024	LMR11-50-024-DP	LMR11-50-048	LMR11-50-048-DP
		Sample Date	8/8/2011	8/8/2011	8/8/2011	8/8/2011	8/8/2011
		Depth Interval (in bss)	0- 6	6- 24	6- 24	24- 48	24- 48
Chemical Name	**PEC[1]**	**Unit**					
Benzo(b)fluoranthene	NL	µg/kg	130	140	440	81	190
Benzo(g,h,i)perylene	NL	µg/kg	70	77	180	45	83
Benzo(k)fluoranthene	NL	µg/kg	77	66	150	48	71
Bis(2-chloroethoxy)methane	NL	µg/kg	360 U	360 U	300 U	270 U	240 U
Bis(2-chloroethyl)ether	NL	µg/kg	360 U	360 U	300 U	270 U	240 U
Bis(2-ethylhexyl)phthalate	NL	µg/kg	160 J	130 J	130 J	74 J	220 J
Butylbenzylphthalate	NL	µg/kg	360 U	360 U	300 U	270 U	240 U
Caprolactam	NL	µg/kg	360 U	360 U	300 U	270 U	240 U
Carbazole	NL	µg/kg	360 U	360 U	88 J	270 U	240 U
Chrysene	1290	µg/kg	110	120	340	69	180
Dibenzo(a,h)anthracene	NL	µg/kg	20	19	50	12	23
Dibenzofuran	NL	µg/kg	360 U	360 U	300 U	270 U	240 U
Diethylphthalate	NL	µg/kg	360 U	360 U	300 U	270 U	240 U
Dimethylphthalate	NL	µg/kg	360 U	360 U	300 U	270 U	240 U
Di-n-butylphthalate	NL	µg/kg	360 U	360 U	82 J	270 U	240 U
Di-n-octylphthalate	NL	µg/kg	360 U	360 U	300 U	270 U	240 U
Fluoranthene	2230	µg/kg	190	210	940	140	320
Fluorene	536	µg/kg	10	11	57	9.9	26
Hexachlorobenzene	NL	µg/kg	360 U	360 U	300 U	270 U	240 U
Hexachlorobutadiene	NL	µg/kg	360 U	360 U	300 U	270 U	240 U
Hexachlorocyclopentadiene	NL	µg/kg	360 U	360 U	300 U	270 U	240 U
Hexachloroethane	NL	µg/kg	360 U	360 U	300 U	270 U	240 U
Indeno(1,2,3-cd)pyrene	NL	µg/kg	58	66	170	52	76
Isophorone	NL	µg/kg	360 U	360 U	300 U	270 U	240 U
Naphthalene	561	µg/kg	7.4	14	50	10	23
Nitrobenzene	NL	µg/kg	360 U	360 U	300 U	270 U	240 U
N-Nitroso-di-n-propylamine	NL	µg/kg	360 U	360 U	300 U	270 U	240 U
N-Nitrosodiphenylamine	NL	µg/kg	360 U	360 U	300 U	270 U	240 U
Pentachlorophenol	NL	µg/kg	14 UJ	14 UJ	12 U	11 UJ	9.6 UJ
Phenanthrene	1170	µg/kg	110	110	440	96	220
Phenol	NL	µg/kg	360 U	360 U	300 U	270 U	240 U
Pyrene	1520	µg/kg	160	180	790	130	270
Total PAH 17	22800	µg/kg	1,170	1,240	4,388	863.25	1,889
TOC	NL	mg/kg	37,400	33,700	28,700	25,700	17,000

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Table B-1
Sediment Sample Analytical Results - SVOCs
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-50	LMR11-50	LMR11-50	LMR11-50	LMR11-50
		Field Sample ID	LMR11-50-072	LMR11-50-096	LMR11-50-120	LMR11-50-144	LMR11-50-175
		Sample Date	8/8/2011	8/8/2011	8/8/2011	8/8/2011	8/8/2011
		Depth Interval (in bss)	48- 72	72- 96	96- 120	120- 144	144- 175
Chemical Name	**PEC[1]**	**Unit**					
1,1'-Biphenyl	NL	µg/kg	240 U	260 U	280 U	280 U	260 U
1,2,4,5-Tetrachlorobenzene	NL	µg/kg	240 U	260 U	280 U	280 U	260 U
2,2'-Oxybis(1-chloropropane)	NL	µg/kg	240 U	260 U	280 U	280 U	260 U
2,3,4,6-Tetrachlorophenol	NL	µg/kg	240 U	260 U	280 U	280 U	260 U
2,4,5-Trichlorophenol	NL	µg/kg	240 U	260 U	280 U	280 U	260 U
2,4,6-Trichlorophenol	NL	µg/kg	240 U	260 U	280 U	280 U	260 U
2,4-Dichlorophenol	NL	µg/kg	240 U	260 U	280 U	280 U	260 U
2,4-Dimethylphenol	NL	µg/kg	240 U	260 U	280 U	280 U	260 U
2,4-Dinitrophenol	NL	µg/kg	470 U	510 U	540 U	550 U	510 U
2,4-Dinitrotoluene	NL	µg/kg	240 U	260 U	280 U	280 U	260 U
2,6-Dinitrotoluene	NL	µg/kg	240 U	260 U	280 U	280 U	260 U
2-Chloronaphthalene	NL	µg/kg	240 U	260 U	280 U	280 U	260 U
2-Chlorophenol	NL	µg/kg	240 U	260 U	280 U	280 U	260 U
2-Methylnaphthalene	NL	µg/kg	580	660	690	6.2	220
2-Methylphenol	NL	µg/kg	240 U	260 U	280 U	280 U	260 U
2-Nitroaniline	NL	µg/kg	470 U	510 U	540 U	550 U	510 U
2-Nitrophenol	NL	µg/kg	240 U	260 U	280 U	280 U	260 U
3,3'-Dichlorobenzidine	NL	µg/kg	240 U	260 U	280 U	280 U	260 U
3-Nitroaniline	NL	µg/kg	470 U	510 U	540 U	550 U	510 U
4,6-Dinitro-2-methylphenol	NL	µg/kg	470 U	510 U	540 U	550 U	510 U
4-Bromophenyl-phenylether	NL	µg/kg	240 U	260 U	280 U	280 U	260 U
4-Chloro-3-methylphenol	NL	µg/kg	240 U	260 U	280 U	280 U	260 U
4-Chloroaniline	NL	µg/kg	240 U	260 U	280 U	280 U	260 U
4-Chlorophenyl-phenylether	NL	µg/kg	240 U	260 U	280 U	280 U	260 U
4-Methylphenol	NL	µg/kg	240 U	260 U	480	280 U	850
4-Nitroaniline	NL	µg/kg	470 U	510 U	540 U	550 U	510 U
4-Nitrophenol	NL	µg/kg	470 U	510 U	540 U	550 U	510 U
Acenaphthene	NL	µg/kg	40	190	5.4 U	5.5 U	26
Acenaphthylene	NL	µg/kg	4.7 U	5.1 U	5.4 U	5.5 U	11
Acetophenone	NL	µg/kg	240 U	260 U	280 U	280 U	260 U
Anthracene	845	µg/kg	70	170	43	6.8	97
Atrazine	NL	µg/kg	240 U	260 U	280 U	280 U	260 U
Benzaldehyde	NL	µg/kg	240 U	260 U	280 U	280 U	260 U
Benzo(a)anthracene	1050	µg/kg	170	670	77	14	180
Benzo(a)pyrene	1450	µg/kg	120	540	46	16	140

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Table B-1
Sediment Sample Analytical Results - SVOCs
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-50	LMR11-50	LMR11-50	LMR11-50	LMR11-50
		Field Sample ID	LMR11-50-072	LMR11-50-096	LMR11-50-120	LMR11-50-144	LMR11-50-175
		Sample Date	8/8/2011	8/8/2011	8/8/2011	8/8/2011	8/8/2011
		Depth Interval (in bss)	48- 72	72- 96	96- 120	120- 144	144- 175
Chemical Name	**PEC[1]**	**Unit**					
Benzo(b)fluoranthene	NL	µg/kg	170	710	72	13	210
Benzo(g,h,i)perylene	NL	µg/kg	68	360	41	6.9	92
Benzo(k)fluoranthene	NL	µg/kg	75	330	51	9	72
Bis(2-chloroethoxy)methane	NL	µg/kg	240 U	260 U	280 U	280 U	260 U
Bis(2-chloroethyl)ether	NL	µg/kg	240 U	260 U	280 U	280 U	260 U
Bis(2-ethylhexyl)phthalate	NL	µg/kg	180 J	200 J	130 J	280 U	190 J
Butylbenzylphthalate	NL	µg/kg	240 U	260 U	280 U	280 U	260 U
Caprolactam	NL	µg/kg	240 U	260 U	280 U	280 U	260 U
Carbazole	NL	µg/kg	85 J	200 J	280 U	280 U	260 U
Chrysene	1290	µg/kg	190	640	97	14	220
Dibenzo(a,h)anthracene	NL	µg/kg	20	80	10	5.5 U	33
Dibenzofuran	NL	µg/kg	160 J	230 J	55 J	280 U	83 J
Diethylphthalate	NL	µg/kg	240 U	260 U	280 U	280 U	260 U
Dimethylphthalate	NL	µg/kg	240 U	260 U	280 U	280 U	260 U
Di-n-butylphthalate	NL	µg/kg	240 U	260 U	280 U	280 U	260 U
Di-n-octylphthalate	NL	µg/kg	240 U	260 U	280 U	280 U	260 U
Fluoranthene	2230	µg/kg	690	1,700	180	29	450
Fluorene	536	µg/kg	87	190	69	5.5 U	48
Hexachlorobenzene	NL	µg/kg	240 U	260 U	280 U	280 U	260 U
Hexachlorobutadiene	NL	µg/kg	240 U	260 U	280 U	280 U	260 U
Hexachlorocyclopentadiene	NL	µg/kg	240 U	260 U	280 U	280 U	260 U
Hexachloroethane	NL	µg/kg	240 U	260 U	280 U	280 U	260 U
Indeno(1,2,3-cd)pyrene	NL	µg/kg	68	340	33	6.1	80
Isophorone	NL	µg/kg	240 U	260 U	280 U	280 U	260 U
Naphthalene	561	µg/kg	350	570	100	5.7	170
Nitrobenzene	NL	µg/kg	240 U	260 U	280 U	280 U	260 U
N-Nitroso-di-n-propylamine	NL	µg/kg	240 U	260 U	280 U	280 U	260 U
N-Nitrosodiphenylamine	NL	µg/kg	240 U	260 U	280 U	280 U	260 U
Pentachlorophenol	NL	µg/kg	9.5 UJ	10 UJ	11 UJ	11 UJ	10 UJ
Phenanthrene	1170	µg/kg	930	1,600	310	28	430
Phenol	NL	µg/kg	240 U	260 U	280 U	280 U	260 U
Pyrene	1520	µg/kg	400	1200	160	28	380
Total PAH 17	22800	µg/kg	4,030	9,953	1,984	193.7	2,859
TOC	NL	mg/kg	36,200	48,500	32,200	54,500	39,900

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Table B-1
Sediment Sample Analytical Results - SVOCs
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-51	LMR11-51	LMR11-51	LMR11-51	LMR11-52
		Field Sample ID	LMR11-51-006	LMR11-51-024	LMR11-51-048	LMR11-51-075	LMR11-52-006
		Sample Date	8/7/2011	8/7/2011	8/7/2011	8/7/2011	8/8/2011
		Depth Interval (in bss)	0- 6	6- 24	24- 48	48- 75	0- 6
Chemical Name	**PEC[1]**	**Unit**					
1,1'-Biphenyl	NL	µg/kg	200 UJ	200 UJ	170 UJ	170 UJ	330 UJ
1,2,4,5-Tetrachlorobenzene	NL	µg/kg	200 UJ	200 UJ	170 UJ	170 UJ	330 UJ
2,2'-Oxybis(1-chloropropane)	NL	µg/kg	200 UJ	200 UJ	170 UJ	170 UJ	330 UJ
2,3,4,6-Tetrachlorophenol	NL	µg/kg	200 UJ	200 UJ	170 UJ	170 UJ	330 UJ
2,4,5-Trichlorophenol	NL	µg/kg	200 UJ	200 UJ	170 UJ	170 UJ	330 UJ
2,4,6-Trichlorophenol	NL	µg/kg	200 UJ	200 UJ	170 UJ	170 UJ	330 UJ
2,4-Dichlorophenol	NL	µg/kg	200 UJ	200 UJ	170 UJ	170 UJ	330 UJ
2,4-Dimethylphenol	NL	µg/kg	200 UJ	200 UJ	170 UJ	170 UJ	330 UJ
2,4-Dinitrophenol	NL	µg/kg	380 UJ	380 UJ	340 UJ	330 UJ	630 UJ
2,4-Dinitrotoluene	NL	µg/kg	200 UJ	200 UJ	170 UJ	170 UJ	330 UJ
2,6-Dinitrotoluene	NL	µg/kg	200 UJ	200 UJ	170 UJ	170 UJ	330 UJ
2-Chloronaphthalene	NL	µg/kg	200 UJ	200 UJ	170 UJ	170 UJ	330 UJ
2-Chlorophenol	NL	µg/kg	200 UJ	200 UJ	170 UJ	170 UJ	330 UJ
2-Methylnaphthalene	NL	µg/kg	3.8 UJ	3.8 UJ	3.4 UJ	3.3 UJ	6.3 UJ
2-Methylphenol	NL	µg/kg	200 UJ	200 UJ	170 UJ	170 UJ	330 UJ
2-Nitroaniline	NL	µg/kg	380 UJ	380 UJ	340 UJ	330 UJ	630 UJ
2-Nitrophenol	NL	µg/kg	200 UJ	200 UJ	170 UJ	170 UJ	330 UJ
3,3'-Dichlorobenzidine	NL	µg/kg	200 UJ	200 UJ	170 UJ	170 UJ	330 UJ
3-Nitroaniline	NL	µg/kg	380 UJ	380 UJ	340 UJ	330 UJ	630 UJ
4,6-Dinitro-2-methylphenol	NL	µg/kg	380 UJ	380 UJ	340 UJ	330 UJ	630 UJ
4-Bromophenyl-phenylether	NL	µg/kg	200 UJ	200 UJ	170 UJ	170 UJ	330 UJ
4-Chloro-3-methylphenol	NL	µg/kg	200 UJ	200 UJ	170 UJ	170 UJ	330 UJ
4-Chloroaniline	NL	µg/kg	200 UJ	200 UJ	170 UJ	170 UJ	330 UJ
4-Chlorophenyl-phenylether	NL	µg/kg	200 UJ	200 UJ	170 UJ	170 UJ	330 UJ
4-Methylphenol	NL	µg/kg	200 UJ	200 UJ	130 J	90 J	330 UJ
4-Nitroaniline	NL	µg/kg	380 UJ	380 UJ	340 UJ	330 UJ	630 UJ
4-Nitrophenol	NL	µg/kg	380 UJ	380 UJ	340 UJ	330 UJ	630 UJ
Acenaphthene	NL	µg/kg	3.8 UJ	3.8 UJ	3.4 UJ	3.3 UJ	6.3 UJ
Acenaphthylene	NL	µg/kg	3.8 UJ	3.8 UJ	3.4 UJ	3.3 UJ	6.3 UJ
Acetophenone	NL	µg/kg	200 UJ	200 UJ	170 UJ	170 UJ	330 UJ
Anthracene	845	µg/kg	3.8 UJ	3.8 UJ	3.4 UJ	3.3 UJ	6.3 UJ
Atrazine	NL	µg/kg	200 UJ	200 UJ	170 UJ	170 UJ	330 UJ
Benzaldehyde	NL	µg/kg	200 UJ	200 UJ	170 UJ	170 UJ	330 UJ
Benzo(a)anthracene	1050	µg/kg	3.8 UJ	3.8 UJ	3.7 J	3.3 UJ	11 J
Benzo(a)pyrene	1450	µg/kg	3.8 UJ	3.8 UJ	5 J	3.3 UJ	15 J

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Table B-1
Sediment Sample Analytical Results - SVOCs
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-51	LMR11-51	LMR11-51	LMR11-51	LMR11-52
		Field Sample ID	LMR11-51-006	LMR11-51-024	LMR11-51-048	LMR11-51-075	LMR11-52-006
		Sample Date	8/7/2011	8/7/2011	8/7/2011	8/7/2011	8/8/2011
		Depth Interval (in bss)	0- 6	6- 24	24- 48	48- 75	0- 6
Chemical Name	**PEC[1]**	**Unit**					
Benzo(b)fluoranthene	NL	µg/kg	3.8 UJ	3.8 UJ	6.6 J	4.8 J	14 J
Benzo(g,h,i)perylene	NL	µg/kg	3.8 UJ	3.8 UJ	3.4 UJ	3.3 UJ	6.3 UJ
Benzo(k)fluoranthene	NL	µg/kg	3.8 UJ	3.8 UJ	3.4 UJ	3.3 UJ	6.3 UJ
Bis(2-chloroethoxy)methane	NL	µg/kg	200 UJ	200 UJ	170 UJ	170 UJ	330 UJ
Bis(2-chloroethyl)ether	NL	µg/kg	200 UJ	200 UJ	170 UJ	170 UJ	330 UJ
Bis(2-ethylhexyl)phthalate	NL	µg/kg	200 UJ	200 UJ	170 UJ	170 UJ	330 UJ
Butylbenzylphthalate	NL	µg/kg	200 UJ	200 UJ	170 UJ	170 UJ	330 UJ
Caprolactam	NL	µg/kg	200 UJ	200 UJ	170 UJ	170 UJ	330 UJ
Carbazole	NL	µg/kg	200 UJ	200 UJ	170 UJ	170 UJ	330 UJ
Chrysene	1290	µg/kg	3.8 UJ	3.8 UJ	4.2 J	4.2 J	11 J
Dibenzo(a,h)anthracene	NL	µg/kg	3.8 UJ	3.8 UJ	3.4 UJ	3.3 UJ	6.3 UJ
Dibenzofuran	NL	µg/kg	200 UJ	200 UJ	170 UJ	170 UJ	330 UJ
Diethylphthalate	NL	µg/kg	200 UJ	200 UJ	170 UJ	170 UJ	330 UJ
Dimethylphthalate	NL	µg/kg	200 UJ	200 UJ	170 UJ	170 UJ	330 UJ
Di-n-butylphthalate	NL	µg/kg	200 UJ	200 UJ	170 UJ	170 UJ	330 UJ
Di-n-octylphthalate	NL	µg/kg	200 UJ	200 UJ	170 UJ	170 UJ	330 UJ
Fluoranthene	2230	µg/kg	3.8 UJ	6.9 J	8.8 J	7.1 J	24 J
Fluorene	536	µg/kg	3.8 UJ	3.8 UJ	3.4 UJ	3.3 UJ	6.3 UJ
Hexachlorobenzene	NL	µg/kg	200 UJ	200 UJ	170 UJ	170 UJ	330 UJ
Hexachlorobutadiene	NL	µg/kg	200 UJ	200 UJ	170 UJ	170 UJ	330 UJ
Hexachlorocyclopentadiene	NL	µg/kg	200 UJ	200 UJ	170 UJ	170 UJ	330 UJ
Hexachloroethane	NL	µg/kg	200 UJ	200 UJ	170 UJ	170 UJ	330 UJ
Indeno(1,2,3-cd)pyrene	NL	µg/kg	3.8 UJ	3.8 UJ	3.4 UJ	3.3 UJ	6.3 UJ
Isophorone	NL	µg/kg	200 UJ	200 UJ	170 UJ	170 UJ	330 UJ
Naphthalene	561	µg/kg	3.8 UJ	3.8 UJ	3.4 UJ	3.3 UJ	6.3 UJ
Nitrobenzene	NL	µg/kg	200 UJ	200 UJ	170 UJ	170 UJ	330 UJ
N-Nitroso-di-n-propylamine	NL	µg/kg	200 UJ	200 UJ	170 UJ	170 UJ	330 UJ
N-Nitrosodiphenylamine	NL	µg/kg	200 UJ	200 UJ	170 UJ	170 UJ	330 UJ
Pentachlorophenol	NL	µg/kg	7.7 UJ	7.7 UJ	6.8 UJ	6.6 UJ	13 UJ
Phenanthrene	1170	µg/kg	3.8 UJ	5.7 J	6.3 J	5.6 J	14 J
Phenol	NL	µg/kg	200 UJ	200 UJ	170 UJ	170 UJ	330 UJ
Pyrene	1520	µg/kg	3.8 UJ	6.2 J	7.9 J	7.7 J	22 J
Total PAH 17	22800	µg/kg	32.3	45.4	59.5	49.2	142.5
TOC	NL	mg/kg	21,400	19,400	21,100	18,200	18,300

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Table B-1
Sediment Sample Analytical Results - SVOCs
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-52	LMR11-52	LMR11-52	LMR11-52	LMR11-53
		Field Sample ID	LMR11-52-024	LMR11-52-048	LMR11-52-048FS	LMR11-52-072	LMR11-53-006
		Sample Date	8/8/2011	8/8/2011	8/8/2011	8/8/2011	8/7/2011
		Depth Interval (in bss)	6- 24	24- 48	24- 48	48- 72	0- 6
Chemical Name	**PEC[1]**	**Unit**					
1,1'-Biphenyl	NL	µg/kg	300 UJ	290 UJ	300 UJ	280 UJ	360 UJ
1,2,4,5-Tetrachlorobenzene	NL	µg/kg	300 UJ	290 UJ	300 UJ	280 UJ	360 UJ
2,2'-Oxybis(1-chloropropane)	NL	µg/kg	300 UJ	290 UJ	300 UJ	280 UJ	360 UJ
2,3,4,6-Tetrachlorophenol	NL	µg/kg	300 UJ	290 UJ	300 UJ	280 UJ	360 UJ
2,4,5-Trichlorophenol	NL	µg/kg	300 UJ	290 UJ	300 UJ	280 UJ	360 UJ
2,4,6-Trichlorophenol	NL	µg/kg	300 UJ	290 UJ	300 UJ	280 UJ	360 UJ
2,4-Dichlorophenol	NL	µg/kg	300 UJ	290 UJ	300 UJ	280 UJ	360 UJ
2,4-Dimethylphenol	NL	µg/kg	300 UJ	290 UJ	300 UJ	280 UJ	360 UJ
2,4-Dinitrophenol	NL	µg/kg	580 UJ	560 UJ	580 UJ	550 UJ	700 UJ
2,4-Dinitrotoluene	NL	µg/kg	300 UJ	290 UJ	300 UJ	280 UJ	360 UJ
2,6-Dinitrotoluene	NL	µg/kg	300 UJ	290 UJ	300 UJ	280 UJ	360 UJ
2-Chloronaphthalene	NL	µg/kg	300 UJ	290 UJ	300 UJ	280 UJ	360 UJ
2-Chlorophenol	NL	µg/kg	300 UJ	290 UJ	300 UJ	280 UJ	360 UJ
2-Methylnaphthalene	NL	µg/kg	5.8 UJ	5.6 UJ	5.8 UJ	5.5 UJ	7 UJ
2-Methylphenol	NL	µg/kg	300 UJ	290 UJ	300 UJ	280 UJ	360 UJ
2-Nitroaniline	NL	µg/kg	580 UJ	560 UJ	580 UJ	550 UJ	700 UJ
2-Nitrophenol	NL	µg/kg	300 UJ	290 UJ	300 UJ	280 UJ	360 UJ
3,3'-Dichlorobenzidine	NL	µg/kg	300 UJ	290 UJ	300 UJ	280 UJ	360 UJ
3-Nitroaniline	NL	µg/kg	580 UJ	560 UJ	580 UJ	550 UJ	700 UJ
4,6-Dinitro-2-methylphenol	NL	µg/kg	580 UJ	560 UJ	580 UJ	550 UJ	700 UJ
4-Bromophenyl-phenylether	NL	µg/kg	300 UJ	290 UJ	300 UJ	280 UJ	360 UJ
4-Chloro-3-methylphenol	NL	µg/kg	300 UJ	290 UJ	300 UJ	280 UJ	360 UJ
4-Chloroaniline	NL	µg/kg	300 UJ	290 UJ	300 UJ	280 UJ	360 UJ
4-Chlorophenyl-phenylether	NL	µg/kg	300 UJ	290 UJ	300 UJ	280 UJ	360 UJ
4-Methylphenol	NL	µg/kg	300 UJ	290 UJ	300 UJ	280 UJ	360 UJ
4-Nitroaniline	NL	µg/kg	580 UJ	560 UJ	580 UJ	550 UJ	700 UJ
4-Nitrophenol	NL	µg/kg	580 UJ	560 UJ	580 UJ	550 UJ	700 UJ
Acenaphthene	NL	µg/kg	5.8 UJ	5.6 UJ	5.8 UJ	5.5 UJ	7 UJ
Acenaphthylene	NL	µg/kg	5.8 UJ	5.6 UJ	5.8 UJ	5.5 UJ	7 UJ
Acetophenone	NL	µg/kg	300 UJ	290 UJ	300 UJ	280 UJ	360 UJ
Anthracene	845	µg/kg	5.8 UJ	5.6 UJ	5.8 UJ	5.5 UJ	7 UJ
Atrazine	NL	µg/kg	300 UJ	290 UJ	300 UJ	280 UJ	360 UJ
Benzaldehyde	NL	µg/kg	300 UJ	290 UJ	300 UJ	280 UJ	360 UJ
Benzo(a)anthracene	1050	µg/kg	7.9 J	28 J	8.4 J	10 J	13 J
Benzo(a)pyrene	1450	µg/kg	13 J	29 J	14 J	15 J	18 J

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Table B-1
Sediment Sample Analytical Results - SVOCs
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-52	LMR11-52	LMR11-52	LMR11-52	LMR11-53
		Field Sample ID	LMR11-52-024	LMR11-52-048	LMR11-52-048FS	LMR11-52-072	LMR11-53-006
		Sample Date	8/8/2011	8/8/2011	8/8/2011	8/8/2011	8/7/2011
		Depth Interval (in bss)	6- 24	24- 48	24- 48	48- 72	0- 6
Chemical Name	**PEC[1]**	**Unit**					
Benzo(b)fluoranthene	NL	µg/kg	12 J	24 J	12 J	13 J	26 J
Benzo(g,h,i)perylene	NL	µg/kg	6.2 J	11 J	5.9 J	6.7 J	12 J
Benzo(k)fluoranthene	NL	µg/kg	5.8 UJ	17 J	5.9 J	6.6 J	12 J
Bis(2-chloroethoxy)methane	NL	µg/kg	300 UJ	290 UJ	300 UJ	280 UJ	360 UJ
Bis(2-chloroethyl)ether	NL	µg/kg	300 UJ	290 UJ	300 UJ	280 UJ	360 UJ
Bis(2-ethylhexyl)phthalate	NL	µg/kg	300 UJ	290 UJ	300 UJ	280 UJ	360 UJ
Butylbenzylphthalate	NL	µg/kg	300 UJ	290 UJ	300 UJ	280 UJ	360 UJ
Caprolactam	NL	µg/kg	300 UJ	290 UJ	300 UJ	280 UJ	360 UJ
Carbazole	NL	µg/kg	300 UJ	290 UJ	300 UJ	280 UJ	360 UJ
Chrysene	1290	µg/kg	8.3 J	24 J	9.6 J	10 J	17 J
Dibenzo(a,h)anthracene	NL	µg/kg	5.8 UJ	5.6 UJ	5.8 UJ	5.5 UJ	7 UJ
Dibenzofuran	NL	µg/kg	300 UJ	290 UJ	300 UJ	280 UJ	360 UJ
Diethylphthalate	NL	µg/kg	300 UJ	290 UJ	300 UJ	280 UJ	360 UJ
Dimethylphthalate	NL	µg/kg	300 UJ	290 UJ	300 UJ	280 UJ	360 UJ
Di-n-butylphthalate	NL	µg/kg	300 UJ	290 UJ	300 UJ	280 UJ	360 UJ
Di-n-octylphthalate	NL	µg/kg	300 UJ	290 UJ	300 UJ	280 UJ	360 UJ
Fluoranthene	2230	µg/kg	13 J	39 J	18 J	18 J	33 J
Fluorene	536	µg/kg	5.8 UJ	5.6 UJ	5.8 UJ	5.5 UJ	7 UJ
Hexachlorobenzene	NL	µg/kg	300 UJ	290 UJ	300 UJ	280 UJ	360 UJ
Hexachlorobutadiene	NL	µg/kg	300 UJ	290 UJ	300 UJ	280 UJ	360 UJ
Hexachlorocyclopentadiene	NL	µg/kg	300 UJ	290 UJ	300 UJ	280 UJ	360 UJ
Hexachloroethane	NL	µg/kg	300 UJ	290 UJ	300 UJ	280 UJ	360 UJ
Indeno(1,2,3-cd)pyrene	NL	µg/kg	5.8 UJ	11 J	5.8 UJ	5.6 J	10 J
Isophorone	NL	µg/kg	300 UJ	290 UJ	300 UJ	280 UJ	360 UJ
Naphthalene	561	µg/kg	5.8 UJ	5.6 UJ	5.8 UJ	5.5 UJ	7 UJ
Nitrobenzene	NL	µg/kg	300 UJ	290 UJ	300 UJ	280 UJ	360 UJ
N-Nitroso-di-n-propylamine	NL	µg/kg	300 UJ	290 UJ	300 UJ	280 UJ	360 UJ
N-Nitrosodiphenylamine	NL	µg/kg	300 UJ	290 UJ	300 UJ	280 UJ	360 UJ
Pentachlorophenol	NL	µg/kg	12 UJ	11 UJ	12 UJ	11 UJ	14 UJ
Phenanthrene	1170	µg/kg	9.7 J	7.5 J	12 J	11 J	15 J
Phenol	NL	µg/kg	300 UJ	290 UJ	300 UJ	280 UJ	360 UJ
Pyrene	1520	µg/kg	15 J	42 J	17 J	19 J	29 J
Total PAH 17	22800	µg/kg	111.2	252.1	126	134.15	209.5
TOC	NL	mg/kg	27,700	22,900	22,500	20,800	34,900

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Table B-1
Sediment Sample Analytical Results - SVOCs
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-53	LMR11-53	LMR11-53	LMR11-54	LMR11-54
		Field Sample ID	LMR11-53-024	LMR11-53-048	LMR11-53-073	LMR11-54-006	LMR11-54-006-DP
		Sample Date	8/7/2011	8/7/2011	8/7/2011	8/8/2011	8/8/2011
		Depth Interval (in bss)	6- 24	24- 48	48- 73	0- 6	0- 6
Chemical Name	**PEC[1]**	**Unit**					
1,1'-Biphenyl	NL	µg/kg	250 UJ	250 UJ	240 UJ	310 UJ	300 UJ
1,2,4,5-Tetrachlorobenzene	NL	µg/kg	250 UJ	250 UJ	240 UJ	310 UJ	300 UJ
2,2'-Oxybis(1-chloropropane)	NL	µg/kg	250 UJ	250 UJ	240 UJ	310 UJ	300 UJ
2,3,4,6-Tetrachlorophenol	NL	µg/kg	250 UJ	250 UJ	240 UJ	310 UJ	300 UJ
2,4,5-Trichlorophenol	NL	µg/kg	250 UJ	250 UJ	240 UJ	310 UJ	300 UJ
2,4,6-Trichlorophenol	NL	µg/kg	250 UJ	250 UJ	240 UJ	310 UJ	300 UJ
2,4-Dichlorophenol	NL	µg/kg	250 UJ	250 UJ	240 UJ	310 UJ	300 UJ
2,4-Dimethylphenol	NL	µg/kg	250 UJ	250 UJ	240 UJ	310 UJ	300 UJ
2,4-Dinitrophenol	NL	µg/kg	490 UJ	480 UJ	460 UJ	600 UJ	590 UJ
2,4-Dinitrotoluene	NL	µg/kg	250 UJ	250 UJ	240 UJ	310 UJ	300 UJ
2,6-Dinitrotoluene	NL	µg/kg	250 UJ	250 UJ	240 UJ	310 UJ	300 UJ
2-Chloronaphthalene	NL	µg/kg	250 UJ	250 UJ	240 UJ	310 UJ	300 UJ
2-Chlorophenol	NL	µg/kg	250 UJ	250 UJ	240 UJ	310 UJ	300 UJ
2-Methylnaphthalene	NL	µg/kg	4.9 UJ	4.8 UJ	4.6 UJ	6 UJ	5.9 UJ
2-Methylphenol	NL	µg/kg	250 UJ	250 UJ	240 UJ	310 UJ	300 UJ
2-Nitroaniline	NL	µg/kg	490 UJ	480 UJ	460 UJ	600 UJ	590 UJ
2-Nitrophenol	NL	µg/kg	250 UJ	250 UJ	240 UJ	310 UJ	300 UJ
3,3'-Dichlorobenzidine	NL	µg/kg	250 UJ	250 UJ	240 UJ	310 UJ	300 UJ
3-Nitroaniline	NL	µg/kg	490 UJ	480 UJ	460 UJ	600 UJ	590 UJ
4,6-Dinitro-2-methylphenol	NL	µg/kg	490 UJ	480 UJ	460 UJ	600 UJ	590 UJ
4-Bromophenyl-phenylether	NL	µg/kg	250 UJ	250 UJ	240 UJ	310 UJ	300 UJ
4-Chloro-3-methylphenol	NL	µg/kg	250 UJ	250 UJ	240 UJ	310 UJ	300 UJ
4-Chloroaniline	NL	µg/kg	250 UJ	250 UJ	240 UJ	310 UJ	300 UJ
4-Chlorophenyl-phenylether	NL	µg/kg	250 UJ	250 UJ	240 UJ	310 UJ	300 UJ
4-Methylphenol	NL	µg/kg	250 UJ	250 UJ	240 UJ	310 UJ	300 UJ
4-Nitroaniline	NL	µg/kg	490 UJ	480 UJ	460 UJ	600 UJ	590 UJ
4-Nitrophenol	NL	µg/kg	490 UJ	480 UJ	460 UJ	600 UJ	590 UJ
Acenaphthene	NL	µg/kg	4.9 UJ	4.8 UJ	4.6 UJ	6 UJ	5.9 UJ
Acenaphthylene	NL	µg/kg	4.9 UJ	4.8 UJ	4.6 UJ	6 UJ	5.9 UJ
Acetophenone	NL	µg/kg	250 UJ	250 UJ	240 UJ	310 UJ	300 UJ
Anthracene	845	µg/kg	4.9 UJ	4.8 UJ	4.6 UJ	6 UJ	5.9 UJ
Atrazine	NL	µg/kg	250 UJ	250 UJ	240 UJ	310 UJ	300 UJ
Benzaldehyde	NL	µg/kg	250 UJ	250 UJ	240 UJ	310 UJ	300 UJ
Benzo(a)anthracene	1050	µg/kg	4.9 UJ	4.8 UJ	8.7 J	6 UJ	7.5 J
Benzo(a)pyrene	1450	µg/kg	4.9 UJ	4.8 UJ	11 J	6 UJ	9.7 J

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Table B-1
Sediment Sample Analytical Results - SVOCs
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-53	LMR11-53	LMR11-53	LMR11-54	LMR11-54
		Field Sample ID	LMR11-53-024	LMR11-53-048	LMR11-53-073	LMR11-54-006	LMR11-54-006-DP
		Sample Date	8/7/2011	8/7/2011	8/7/2011	8/8/2011	8/8/2011
		Depth Interval (in bss)	6- 24	24- 48	48- 73	0- 6	0- 6
Chemical Name	**PEC[1]**	**Unit**					
Benzo(b)fluoranthene	NL	µg/kg	4.9 UJ	4.8 UJ	12 J	6 UJ	30 J
Benzo(g,h,i)perylene	NL	µg/kg	4.9 UJ	4.8 UJ	5.5 J	6 UJ	6.8 J
Benzo(k)fluoranthene	NL	µg/kg	4.9 UJ	4.8 UJ	7.9 J	6 UJ	16 J
Bis(2-chloroethoxy)methane	NL	µg/kg	250 UJ	250 UJ	240 UJ	310 UJ	300 UJ
Bis(2-chloroethyl)ether	NL	µg/kg	250 UJ	250 UJ	240 UJ	310 UJ	300 UJ
Bis(2-ethylhexyl)phthalate	NL	µg/kg	250 UJ	250 UJ	240 UJ	310 UJ	300 UJ
Butylbenzylphthalate	NL	µg/kg	250 UJ	250 UJ	240 UJ	310 UJ	300 UJ
Caprolactam	NL	µg/kg	250 UJ	250 UJ	240 UJ	310 UJ	300 UJ
Carbazole	NL	µg/kg	250 UJ	250 UJ	240 UJ	310 UJ	300 UJ
Chrysene	1290	µg/kg	4.9 UJ	4.8 UJ	12 J	6 UJ	17 J
Dibenzo(a,h)anthracene	NL	µg/kg	4.9 UJ	4.8 UJ	4.6 UJ	6 UJ	5.9 UJ
Dibenzofuran	NL	µg/kg	250 UJ	250 UJ	240 UJ	310 UJ	300 UJ
Diethylphthalate	NL	µg/kg	250 UJ	250 UJ	240 UJ	310 UJ	300 UJ
Dimethylphthalate	NL	µg/kg	250 UJ	250 UJ	240 UJ	310 UJ	300 UJ
Di-n-butylphthalate	NL	µg/kg	250 UJ	250 UJ	240 UJ	310 UJ	300 UJ
Di-n-octylphthalate	NL	µg/kg	250 UJ	250 UJ	240 UJ	310 UJ	300 UJ
Fluoranthene	2230	µg/kg	8.7 J	4.8 UJ	20 J	8 J	12 J
Fluorene	536	µg/kg	4.9 UJ	4.8 UJ	4.6 UJ	6 UJ	5.9 UJ
Hexachlorobenzene	NL	µg/kg	250 UJ	250 UJ	240 UJ	310 UJ	300 UJ
Hexachlorobutadiene	NL	µg/kg	250 UJ	250 UJ	240 UJ	310 UJ	300 UJ
Hexachlorocyclopentadiene	NL	µg/kg	250 UJ	250 UJ	240 UJ	310 UJ	300 UJ
Hexachloroethane	NL	µg/kg	250 UJ	250 UJ	240 UJ	310 UJ	300 UJ
Indeno(1,2,3-cd)pyrene	NL	µg/kg	4.9 UJ	4.8 UJ	4.7 J	6 UJ	6.7 J
Isophorone	NL	µg/kg	250 UJ	250 UJ	240 UJ	310 UJ	300 UJ
Naphthalene	561	µg/kg	4.9 UJ	4.8 UJ	4.6 UJ	6 UJ	5.9 UJ
Nitrobenzene	NL	µg/kg	250 UJ	250 UJ	240 UJ	310 UJ	300 UJ
N-Nitroso-di-n-propylamine	NL	µg/kg	250 UJ	250 UJ	240 UJ	310 UJ	300 UJ
N-Nitrosodiphenylamine	NL	µg/kg	250 UJ	250 UJ	240 UJ	310 UJ	300 UJ
Pentachlorophenol	NL	µg/kg	10 UJ	9.7 UJ	9.4 UJ	12 UJ	12 UJ
Phenanthrene	1170	µg/kg	7.8 J	4.8 UJ	16 J	6 UJ	5.9 UJ
Phenol	NL	µg/kg	250 UJ	250 UJ	240 UJ	310 UJ	300 UJ
Pyrene	1520	µg/kg	9.1 J	5.2 J	20 J	9 J	14 J
Total PAH 17	22800	µg/kg	59.9	43.6	133.9	62	143.3
TOC	NL	mg/kg	28,200	23,400	19,800	16,600	22,400

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Table B-1
Sediment Sample Analytical Results - SVOCs
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-54	LMR11-54	LMR11-54	LMR11-54	LMR11-54
		Field Sample ID	LMR11-54-024	LMR11-54-024-DP	LMR11-54-048	LMR11-54-048-DP	LMR11-54-072
		Sample Date	8/8/2011	8/8/2011	8/8/2011	8/8/2011	8/8/2011
		Depth Interval (in bss)	6- 24	6- 24	24- 48	24- 48	48- 72
Chemical Name	**PEC[1]**	**Unit**					
1,1'-Biphenyl	NL	µg/kg	250 UJ	240 UJ	290 UJ	260 UJ	270 UJ
1,2,4,5-Tetrachlorobenzene	NL	µg/kg	250 UJ	240 UJ	290 UJ	260 UJ	270 UJ
2,2'-Oxybis(1-chloropropane)	NL	µg/kg	250 UJ	240 UJ	290 UJ	260 UJ	270 UJ
2,3,4,6-Tetrachlorophenol	NL	µg/kg	250 UJ	240 UJ	290 UJ	260 UJ	270 UJ
2,4,5-Trichlorophenol	NL	µg/kg	250 UJ	240 UJ	290 UJ	260 UJ	270 UJ
2,4,6-Trichlorophenol	NL	µg/kg	250 UJ	240 UJ	290 UJ	260 UJ	270 UJ
2,4-Dichlorophenol	NL	µg/kg	250 UJ	240 UJ	290 UJ	260 UJ	270 UJ
2,4-Dimethylphenol	NL	µg/kg	250 UJ	240 UJ	290 UJ	260 UJ	270 UJ
2,4-Dinitrophenol	NL	µg/kg	490 UJ	460 UJ	560 UJ	500 UJ	530 UJ
2,4-Dinitrotoluene	NL	µg/kg	250 UJ	240 UJ	290 UJ	260 UJ	270 UJ
2,6-Dinitrotoluene	NL	µg/kg	250 UJ	240 UJ	290 UJ	260 UJ	270 UJ
2-Chloronaphthalene	NL	µg/kg	250 UJ	240 UJ	290 UJ	260 UJ	270 UJ
2-Chlorophenol	NL	µg/kg	250 UJ	240 UJ	290 UJ	260 UJ	270 UJ
2-Methylnaphthalene	NL	µg/kg	4.9 UJ	4.6 UJ	7.2 J	5 UJ	13 J
2-Methylphenol	NL	µg/kg	250 UJ	240 UJ	290 UJ	260 UJ	270 UJ
2-Nitroaniline	NL	µg/kg	490 UJ	460 UJ	560 UJ	500 UJ	530 UJ
2-Nitrophenol	NL	µg/kg	250 UJ	240 UJ	290 UJ	260 UJ	270 UJ
3,3'-Dichlorobenzidine	NL	µg/kg	250 UJ	240 UJ	290 UJ	260 UJ	270 UJ
3-Nitroaniline	NL	µg/kg	490 UJ	460 UJ	560 UJ	500 UJ	530 UJ
4,6-Dinitro-2-methylphenol	NL	µg/kg	490 UJ	460 UJ	560 UJ	500 UJ	530 UJ
4-Bromophenyl-phenylether	NL	µg/kg	250 UJ	240 UJ	290 UJ	260 UJ	270 UJ
4-Chloro-3-methylphenol	NL	µg/kg	250 UJ	240 UJ	290 UJ	260 UJ	270 UJ
4-Chloroaniline	NL	µg/kg	250 UJ	240 UJ	290 UJ	260 UJ	270 UJ
4-Chlorophenyl-phenylether	NL	µg/kg	250 UJ	240 UJ	290 UJ	260 UJ	270 UJ
4-Methylphenol	NL	µg/kg	250 UJ	240 UJ	290 UJ	260 UJ	270 UJ
4-Nitroaniline	NL	µg/kg	490 UJ	460 UJ	560 UJ	500 UJ	530 UJ
4-Nitrophenol	NL	µg/kg	490 UJ	460 UJ	560 UJ	500 UJ	530 UJ
Acenaphthene	NL	µg/kg	4.9 UJ	4.6 UJ	5.6 UJ	5 UJ	22 J
Acenaphthylene	NL	µg/kg	4.9 UJ	4.6 UJ	5.6 UJ	7.6 J	41 J
Acetophenone	NL	µg/kg	250 UJ	240 UJ	290 UJ	260 UJ	270 UJ
Anthracene	845	µg/kg	4.9 UJ	4.6 UJ	18 J	14 J	76 J
Atrazine	NL	µg/kg	250 UJ	240 UJ	290 UJ	260 UJ	270 UJ
Benzaldehyde	NL	µg/kg	250 UJ	240 UJ	290 UJ	260 UJ	270 UJ
Benzo(a)anthracene	1050	µg/kg	8.7 J	6.5 J	52 J	79 J	290 J
Benzo(a)pyrene	1450	µg/kg	18 J	7 J	42 J	74 J	240 J

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Table B-1
Sediment Sample Analytical Results - SVOCs
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-54	LMR11-54	LMR11-54	LMR11-54	LMR11-54
		Field Sample ID	LMR11-54-024	LMR11-54-024-DP	LMR11-54-048	LMR11-54-048-DP	LMR11-54-072
		Sample Date	8/8/2011	8/8/2011	8/8/2011	8/8/2011	8/8/2011
		Depth Interval (in bss)	6- 24	6- 24	24- 48	24- 48	48- 72
Chemical Name	**PEC[1]**	**Unit**					
Benzo(b)fluoranthene	NL	µg/kg	23 J	9.2 J	55 J	84 J	320 J
Benzo(g,h,i)perylene	NL	µg/kg	6.8 J	4.6 UJ	23 J	40 J	110 J
Benzo(k)fluoranthene	NL	µg/kg	8.8 J	5.5 J	21 J	42 J	110 J
Bis(2-chloroethoxy)methane	NL	µg/kg	250 UJ	240 UJ	290 UJ	260 UJ	270 UJ
Bis(2-chloroethyl)ether	NL	µg/kg	250 UJ	240 UJ	290 UJ	260 UJ	270 UJ
Bis(2-ethylhexyl)phthalate	NL	µg/kg	250 UJ	240 UJ	290 UJ	260 UJ	270 UJ
Butylbenzylphthalate	NL	µg/kg	250 UJ	240 UJ	290 UJ	260 UJ	270 UJ
Caprolactam	NL	µg/kg	250 UJ	240 UJ	290 UJ	260 UJ	270 UJ
Carbazole	NL	µg/kg	250 UJ	240 UJ	290 UJ	260 UJ	270 UJ
Chrysene	1290	µg/kg	12 J	8.1 J	64 J	71 J	270 J
Dibenzo(a,h)anthracene	NL	µg/kg	4.9 UJ	4.6 UJ	8.7 J	8.9 J	39 J
Dibenzofuran	NL	µg/kg	250 UJ	240 UJ	290 UJ	260 UJ	270 UJ
Diethylphthalate	NL	µg/kg	250 UJ	240 UJ	290 UJ	260 UJ	270 UJ
Dimethylphthalate	NL	µg/kg	250 UJ	240 UJ	290 UJ	260 UJ	270 UJ
Di-n-butylphthalate	NL	µg/kg	250 UJ	240 UJ	290 UJ	260 UJ	270 UJ
Di-n-octylphthalate	NL	µg/kg	250 UJ	240 UJ	290 UJ	260 UJ	270 UJ
Fluoranthene	2230	µg/kg	14 J	17 J	120 J	110 J	370 J
Fluorene	536	µg/kg	4.9 UJ	4.6 UJ	13 J	5 UJ	23 J
Hexachlorobenzene	NL	µg/kg	250 UJ	240 UJ	290 UJ	260 UJ	270 UJ
Hexachlorobutadiene	NL	µg/kg	250 UJ	240 UJ	290 UJ	260 UJ	270 UJ
Hexachlorocyclopentadiene	NL	µg/kg	250 UJ	240 UJ	290 UJ	260 UJ	270 UJ
Hexachloroethane	NL	µg/kg	250 UJ	240 UJ	290 UJ	260 UJ	270 UJ
Indeno(1,2,3-cd)pyrene	NL	µg/kg	6.5 J	4.6 UJ	20 J	36 J	110 J
Isophorone	NL	µg/kg	250 UJ	240 UJ	290 UJ	260 UJ	270 UJ
Naphthalene	561	µg/kg	4.9 UJ	4.6 UJ	5.6 UJ	5 UJ	34 J
Nitrobenzene	NL	µg/kg	250 UJ	240 UJ	290 UJ	260 UJ	270 UJ
N-Nitroso-di-n-propylamine	NL	µg/kg	250 UJ	240 UJ	290 UJ	260 UJ	270 UJ
N-Nitrosodiphenylamine	NL	µg/kg	250 UJ	240 UJ	290 UJ	260 UJ	270 UJ
Pentachlorophenol	NL	µg/kg	9.9 UJ	9.3 UJ	11 UJ	10 UJ	11 UJ
Phenanthrene	1170	µg/kg	7.5 J	12 J	74 J	32 J	270 J
Phenol	NL	µg/kg	250 UJ	240 UJ	290 UJ	260 UJ	270 UJ
Pyrene	1520	µg/kg	17 J	18 J	140 J	120 J	380 J
Total PAH 17	22800	µg/kg	139.45	104	666.3	728.5	2,718
TOC	NL	mg/kg	17,500 J	33,400 J	18,100	20,800	30,700

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Table B-1
Sediment Sample Analytical Results - SVOCs
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-54	LMR11-55	LMR11-55	LMR11-55	LMR11-55
		Field Sample ID	LMR11-54-086	LMR11-55-006	LMR11-55-006-DP	LMR11-55-030	LMR11-55-030-DP
		Sample Date	8/8/2011	8/7/2011	8/7/2011	8/7/2011	8/7/2011
		Depth Interval (in bss)	72- 86	0- 6	0- 6	6- 30	6- 30
Chemical Name	**PEC[1]**	**Unit**					
1,1'-Biphenyl	NL	µg/kg	270 UJ	220 UJ	200 UJ	150 UJ	140 UJ
1,2,4,5-Tetrachlorobenzene	NL	µg/kg	270 UJ	220 UJ	200 UJ	150 UJ	140 UJ
2,2'-Oxybis(1-chloropropane)	NL	µg/kg	270 UJ	220 UJ	200 UJ	150 UJ	140 UJ
2,3,4,6-Tetrachlorophenol	NL	µg/kg	270 UJ	220 UJ	200 UJ	150 UJ	140 UJ
2,4,5-Trichlorophenol	NL	µg/kg	270 UJ	220 UJ	200 UJ	150 UJ	140 UJ
2,4,6-Trichlorophenol	NL	µg/kg	270 UJ	220 UJ	200 UJ	150 UJ	140 UJ
2,4-Dichlorophenol	NL	µg/kg	270 UJ	220 UJ	200 UJ	150 UJ	140 UJ
2,4-Dimethylphenol	NL	µg/kg	270 UJ	220 UJ	200 UJ	150 UJ	140 UJ
2,4-Dinitrophenol	NL	µg/kg	530 UJ	430 UJ	400 UJ	300 UJ	280 UJ
2,4-Dinitrotoluene	NL	µg/kg	270 UJ	220 UJ	200 UJ	150 UJ	140 UJ
2,6-Dinitrotoluene	NL	µg/kg	270 UJ	220 UJ	200 UJ	150 UJ	140 UJ
2-Chloronaphthalene	NL	µg/kg	270 UJ	220 UJ	200 UJ	150 UJ	140 UJ
2-Chlorophenol	NL	µg/kg	270 UJ	220 UJ	200 UJ	150 UJ	140 UJ
2-Methylnaphthalene	NL	µg/kg	7.4 J	4.3 UJ	4 UJ	3.5 J	2.8 UJ
2-Methylphenol	NL	µg/kg	270 UJ	220 UJ	200 UJ	150 UJ	140 UJ
2-Nitroaniline	NL	µg/kg	530 UJ	430 UJ	400 UJ	300 UJ	280 UJ
2-Nitrophenol	NL	µg/kg	270 UJ	220 UJ	200 UJ	150 UJ	140 UJ
3,3'-Dichlorobenzidine	NL	µg/kg	270 UJ	220 UJ	200 UJ	150 UJ	140 UJ
3-Nitroaniline	NL	µg/kg	530 UJ	430 UJ	400 UJ	300 UJ	280 UJ
4,6-Dinitro-2-methylphenol	NL	µg/kg	530 UJ	430 UJ	400 UJ	300 UJ	280 UJ
4-Bromophenyl-phenylether	NL	µg/kg	270 UJ	220 UJ	200 UJ	150 UJ	140 UJ
4-Chloro-3-methylphenol	NL	µg/kg	270 UJ	220 UJ	200 UJ	150 UJ	140 UJ
4-Chloroaniline	NL	µg/kg	270 UJ	220 UJ	200 UJ	150 UJ	140 UJ
4-Chlorophenyl-phenylether	NL	µg/kg	270 UJ	220 UJ	200 UJ	150 UJ	140 UJ
4-Methylphenol	NL	µg/kg	270 UJ	220 UJ	200 UJ	150 UJ	140 UJ
4-Nitroaniline	NL	µg/kg	530 UJ	430 UJ	400 UJ	300 UJ	280 UJ
4-Nitrophenol	NL	µg/kg	530 UJ	430 UJ	400 UJ	300 UJ	280 UJ
Acenaphthene	NL	µg/kg	6.4 J	4.3 UJ	4 UJ	5.6 J	2.8 UJ
Acenaphthylene	NL	µg/kg	6.6 J	4.3 UJ	4 UJ	3 UJ	2.8 UJ
Acetophenone	NL	µg/kg	270 UJ	220 UJ	200 UJ	150 UJ	70 J
Anthracene	845	µg/kg	8.7 J	4.3 UJ	4 UJ	7.3 J	2.8 UJ
Atrazine	NL	µg/kg	270 UJ	220 UJ	200 UJ	150 UJ	140 UJ
Benzaldehyde	NL	µg/kg	270 UJ	220 UJ	200 UJ	150 UJ	140 UJ
Benzo(a)anthracene	1050	µg/kg	11 J	4.3 UJ	4 UJ	21 J	8.5 J
Benzo(a)pyrene	1450	µg/kg	16 J	4.3 UJ	4 UJ	20 J	8.6 J

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Table B-1
Sediment Sample Analytical Results - SVOCs
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-54	LMR11-55	LMR11-55	LMR11-55	LMR11-55
		Field Sample ID	LMR11-54-086	LMR11-55-006	LMR11-55-006-DP	LMR11-55-030	LMR11-55-030-DP
		Sample Date	8/8/2011	8/7/2011	8/7/2011	8/7/2011	8/7/2011
		Depth Interval (in bss)	72- 86	0- 6	0- 6	6- 30	6- 30
Chemical Name	**PEC[1]**	**Unit**					
Benzo(b)fluoranthene	NL	µg/kg	19 J	4.3 UJ	4.3 J	25 J	12 J
Benzo(g,h,i)perylene	NL	µg/kg	9.7 J	4.3 UJ	4 UJ	11 J	5.6 J
Benzo(k)fluoranthene	NL	µg/kg	6.9 J	4.3 UJ	4 UJ	9.8 J	4.9 J
Bis(2-chloroethoxy)methane	NL	µg/kg	270 UJ	220 UJ	200 UJ	150 UJ	140 UJ
Bis(2-chloroethyl)ether	NL	µg/kg	270 UJ	220 UJ	200 UJ	150 UJ	140 UJ
Bis(2-ethylhexyl)phthalate	NL	µg/kg	270 UJ	220 UJ	200 UJ	150 UJ	140 UJ
Butylbenzylphthalate	NL	µg/kg	270 UJ	220 UJ	200 UJ	150 UJ	140 UJ
Caprolactam	NL	µg/kg	270 UJ	220 UJ	200 UJ	150 UJ	140 UJ
Carbazole	NL	µg/kg	270 UJ	220 UJ	200 UJ	150 UJ	140 UJ
Chrysene	1290	µg/kg	15 J	4.3 UJ	4 UJ	18 J	8.3 J
Dibenzo(a,h)anthracene	NL	µg/kg	5.3 UJ	4.3 UJ	4 UJ	3.4 J	2.8 UJ
Dibenzofuran	NL	µg/kg	270 UJ	220 UJ	200 UJ	150 UJ	140 UJ
Diethylphthalate	NL	µg/kg	270 UJ	220 UJ	200 UJ	150 UJ	140 UJ
Dimethylphthalate	NL	µg/kg	270 UJ	220 UJ	200 UJ	150 UJ	140 UJ
Di-n-butylphthalate	NL	µg/kg	270 UJ	220 UJ	200 UJ	150 UJ	34 J
Di-n-octylphthalate	NL	µg/kg	270 UJ	220 UJ	200 UJ	150 UJ	140 UJ
Fluoranthene	2230	µg/kg	29 J	11 J	6.8 J	53 J	17 J
Fluorene	536	µg/kg	9.9 J	4.3 UJ	4 UJ	4.6 J	2.8 UJ
Hexachlorobenzene	NL	µg/kg	270 UJ	220 UJ	200 UJ	150 UJ	140 UJ
Hexachlorobutadiene	NL	µg/kg	270 UJ	220 UJ	200 UJ	150 UJ	140 UJ
Hexachlorocyclopentadiene	NL	µg/kg	270 UJ	220 UJ	200 UJ	150 UJ	140 UJ
Hexachloroethane	NL	µg/kg	270 UJ	220 UJ	200 UJ	150 UJ	140 UJ
Indeno(1,2,3-cd)pyrene	NL	µg/kg	8.1 J	4.3 UJ	4 UJ	10 J	5 J
Isophorone	NL	µg/kg	270 UJ	220 UJ	200 UJ	150 UJ	140 UJ
Naphthalene	561	µg/kg	6.9 J	4.3 UJ	4 UJ	4.1 J	2.8 UJ
Nitrobenzene	NL	µg/kg	270 UJ	220 UJ	200 UJ	150 UJ	140 UJ
N-Nitroso-di-n-propylamine	NL	µg/kg	270 UJ	220 UJ	200 UJ	150 UJ	140 UJ
N-Nitrosodiphenylamine	NL	µg/kg	270 UJ	220 UJ	200 UJ	150 UJ	140 UJ
Pentachlorophenol	NL	µg/kg	11 UJ	8.7 UJ	8 UJ	6.1 UJ	5.6 UJ
Phenanthrene	1170	µg/kg	26 J	9.3 J	4.2 J	33 J	9.1 J
Phenol	NL	µg/kg	270 UJ	220 UJ	200 UJ	150 UJ	140 UJ
Pyrene	1520	µg/kg	30 J	8.2 J	5.5 J	29 J	13 J
Total PAH 17	22800	µg/kg	219.25	58.6	46.8	259.8	101.8
TOC	NL	mg/kg	28,600	26,700	26,200	20,600	23,200

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Table B-1
Sediment Sample Analytical Results - SVOCs
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-56	LMR11-56	LMR11-56	LMR11-57	LMR11-57
		Field Sample ID	LMR11-56-006	LMR11-56-024	LMR11-56-036	LMR11-57-006	LMR11-57-024
		Sample Date	8/7/2011	8/7/2011	8/7/2011	8/6/2011	8/6/2011
		Depth Interval (in bss)	0- 6	6- 24	24- 36	0- 6	6- 24
Chemical Name	**PEC[1]**	**Unit**					
1,1'-Biphenyl	NL	µg/kg	190 UJ	160 UJ	170 UJ	210 UJ	120 UJ
1,2,4,5-Tetrachlorobenzene	NL	µg/kg	190 UJ	160 UJ	170 UJ	210 UJ	120 UJ
2,2'-Oxybis(1-chloropropane)	NL	µg/kg	190 UJ	160 UJ	170 UJ	210 UJ	120 UJ
2,3,4,6-Tetrachlorophenol	NL	µg/kg	190 UJ	160 UJ	170 UJ	210 UJ	120 UJ
2,4,5-Trichlorophenol	NL	µg/kg	190 UJ	160 UJ	170 UJ	210 UJ	120 UJ
2,4,6-Trichlorophenol	NL	µg/kg	190 UJ	160 UJ	170 UJ	210 UJ	120 UJ
2,4-Dichlorophenol	NL	µg/kg	190 UJ	160 UJ	170 UJ	210 UJ	120 UJ
2,4-Dimethylphenol	NL	µg/kg	190 UJ	160 UJ	170 UJ	210 UJ	120 UJ
2,4-Dinitrophenol	NL	µg/kg	380 UJ	310 UJ	330 UJ	400 UJ	230 UJ
2,4-Dinitrotoluene	NL	µg/kg	190 UJ	160 UJ	170 UJ	210 UJ	120 UJ
2,6-Dinitrotoluene	NL	µg/kg	190 UJ	160 UJ	170 UJ	210 UJ	120 UJ
2-Chloronaphthalene	NL	µg/kg	190 UJ	160 UJ	170 UJ	210 UJ	120 UJ
2-Chlorophenol	NL	µg/kg	190 UJ	160 UJ	170 UJ	210 UJ	120 UJ
2-Methylnaphthalene	NL	µg/kg	3.8 UJ	3.1 UJ	3.7 J	4 UJ	2.3 UJ
2-Methylphenol	NL	µg/kg	190 UJ	160 UJ	170 UJ	210 UJ	120 UJ
2-Nitroaniline	NL	µg/kg	380 UJ	310 UJ	330 UJ	400 UJ	230 UJ
2-Nitrophenol	NL	µg/kg	190 UJ	160 UJ	170 UJ	210 UJ	120 UJ
3,3'-Dichlorobenzidine	NL	µg/kg	190 UJ	160 UJ	170 UJ	210 UJ	120 UJ
3-Nitroaniline	NL	µg/kg	380 UJ	310 UJ	330 UJ	400 UJ	230 UJ
4,6-Dinitro-2-methylphenol	NL	µg/kg	380 UJ	310 UJ	330 UJ	400 UJ	230 UJ
4-Bromophenyl-phenylether	NL	µg/kg	190 UJ	160 UJ	170 UJ	210 UJ	120 UJ
4-Chloro-3-methylphenol	NL	µg/kg	190 UJ	160 UJ	170 UJ	210 UJ	120 UJ
4-Chloroaniline	NL	µg/kg	190 UJ	160 UJ	170 UJ	210 UJ	120 UJ
4-Chlorophenyl-phenylether	NL	µg/kg	190 UJ	160 UJ	170 UJ	210 UJ	120 UJ
4-Methylphenol	NL	µg/kg	190 UJ	160 UJ	170 UJ	210 UJ	120 UJ
4-Nitroaniline	NL	µg/kg	380 UJ	310 UJ	330 UJ	400 UJ	230 UJ
4-Nitrophenol	NL	µg/kg	380 UJ	310 UJ	330 UJ	400 UJ	230 UJ
Acenaphthene	NL	µg/kg	3.8 UJ	3.1 UJ	3.3 UJ	4 UJ	2.3 UJ
Acenaphthylene	NL	µg/kg	3.8 UJ	3.1 UJ	3.3 UJ	16 J	5.7 J
Acetophenone	NL	µg/kg	190 UJ	160 UJ	170 UJ	210 UJ	120 UJ
Anthracene	845	µg/kg	3.8 UJ	5 J	3.8 J	4 UJ	2.3 UJ
Atrazine	NL	µg/kg	190 UJ	160 UJ	170 UJ	210 UJ	120 UJ
Benzaldehyde	NL	µg/kg	190 UJ	160 UJ	170 UJ	210 UJ	120 UJ
Benzo(a)anthracene	1050	µg/kg	3.6 J	13 J	9.6 J	4.7 J	2.3 UJ
Benzo(a)pyrene	1450	µg/kg	4.4 J	14 J	11 J	5.4 J	2.3 UJ

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Table B-1
Sediment Sample Analytical Results - SVOCs
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-56	LMR11-56	LMR11-56	LMR11-57	LMR11-57
		Field Sample ID	LMR11-56-006	LMR11-56-024	LMR11-56-036	LMR11-57-006	LMR11-57-024
		Sample Date	8/7/2011	8/7/2011	8/7/2011	8/6/2011	8/6/2011
		Depth Interval (in bss)	0- 6	6- 24	24- 36	0- 6	6- 24
Chemical Name	**PEC[1]**	**Unit**					
Benzo(b)fluoranthene	NL	µg/kg	6.7 J	18 J	15 J	7.1 J	2.3 UJ
Benzo(g,h,i)perylene	NL	µg/kg	3.8 UJ	8 J	6.9 J	4 UJ	2.3 UJ
Benzo(k)fluoranthene	NL	µg/kg	3.8 UJ	6.3 J	6.2 J	4 UJ	2.3 UJ
Bis(2-chloroethoxy)methane	NL	µg/kg	190 UJ	160 UJ	170 UJ	210 UJ	120 UJ
Bis(2-chloroethyl)ether	NL	µg/kg	190 UJ	160 UJ	170 UJ	210 UJ	120 UJ
Bis(2-ethylhexyl)phthalate	NL	µg/kg	190 UJ	160 UJ	170 UJ	210 UJ	120 UJ
Butylbenzylphthalate	NL	µg/kg	190 UJ	160 UJ	170 UJ	210 UJ	120 UJ
Caprolactam	NL	µg/kg	190 UJ	160 UJ	170 UJ	210 UJ	120 UJ
Carbazole	NL	µg/kg	190 UJ	160 UJ	170 UJ	210 UJ	120 UJ
Chrysene	1290	µg/kg	4.4 J	14 J	11 J	5.8 J	2.3 UJ
Dibenzo(a,h)anthracene	NL	µg/kg	3.8 UJ	3.1 UJ	3.3 UJ	4 UJ	2.3 UJ
Dibenzofuran	NL	µg/kg	190 UJ	160 UJ	170 UJ	210 UJ	120 UJ
Diethylphthalate	NL	µg/kg	190 UJ	160 UJ	170 UJ	210 UJ	120 UJ
Dimethylphthalate	NL	µg/kg	190 UJ	160 UJ	170 UJ	210 UJ	120 UJ
Di-n-butylphthalate	NL	µg/kg	190 UJ	160 UJ	170 UJ	210 UJ	120 UJ
Di-n-octylphthalate	NL	µg/kg	190 UJ	160 UJ	170 UJ	210 UJ	120 UJ
Fluoranthene	2230	µg/kg	10 J	32 J	26 J	11 J	3.8 J
Fluorene	536	µg/kg	3.8 UJ	3.1 UJ	3.3 UJ	4 UJ	2.3 UJ
Hexachlorobenzene	NL	µg/kg	190 UJ	160 UJ	170 UJ	210 UJ	120 UJ
Hexachlorobutadiene	NL	µg/kg	190 UJ	160 UJ	170 UJ	210 UJ	120 UJ
Hexachlorocyclopentadiene	NL	µg/kg	190 UJ	160 UJ	170 UJ	210 UJ	120 UJ
Hexachloroethane	NL	µg/kg	190 UJ	160 UJ	170 UJ	210 UJ	120 UJ
Indeno(1,2,3-cd)pyrene	NL	µg/kg	3.8 UJ	7.6 J	6.3 J	4 UJ	2.3 UJ
Isophorone	NL	µg/kg	190 UJ	160 UJ	170 UJ	210 UJ	120 UJ
Naphthalene	561	µg/kg	3.8 UJ	3.1 UJ	4.7 J	4 UJ	2.3 UJ
Nitrobenzene	NL	µg/kg	190 UJ	160 UJ	170 UJ	210 UJ	120 UJ
N-Nitroso-di-n-propylamine	NL	µg/kg	190 UJ	160 UJ	170 UJ	210 UJ	120 UJ
N-Nitrosodiphenylamine	NL	µg/kg	190 UJ	160 UJ	170 UJ	210 UJ	120 UJ
Pentachlorophenol	NL	µg/kg	7.6 UJ	6.4 UJ	6.7 UJ	8.1 UJ	4.7 UJ
Phenanthrene	1170	µg/kg	6.3 J	22 J	21 J	5.8 J	2.6 J
Phenol	NL	µg/kg	190 UJ	160 UJ	170 UJ	210 UJ	120 UJ
Pyrene	1520	µg/kg	7.4 J	19 J	19 J	8.5 J	3 J
Total PAH 17	22800	µg/kg	61.8	168.2	150.8	82.3	30.05
TOC	NL	mg/kg	21,700	19,700	23,200	29,200	6,000

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Table B-1
Sediment Sample Analytical Results - SVOCs
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-57	LMR11-57	LMR11-58	LMR11-59	LMR11-59
		Field Sample ID	LMR11-57-048	LMR11-57-062	LMR11-58-010	LMR11-59-006	LMR11-59-024
		Sample Date	8/6/2011	8/6/2011	8/6/2011	8/6/2011	8/6/2011
		Depth Interval (in bss)	24- 48	48- 62	0- 10	0- 6	6- 24
Chemical Name	**PEC[1]**	**Unit**					
1,1'-Biphenyl	NL	µg/kg	160 UJ	160 UJ	120 UJ	160 U	180 U
1,2,4,5-Tetrachlorobenzene	NL	µg/kg	160 UJ	160 UJ	120 UJ	160 U	180 U
2,2'-Oxybis(1-chloropropane)	NL	µg/kg	160 UJ	160 UJ	120 UJ	160 U	180 U
2,3,4,6-Tetrachlorophenol	NL	µg/kg	160 UJ	160 UJ	120 UJ	160 U	180 U
2,4,5-Trichlorophenol	NL	µg/kg	160 UJ	160 UJ	120 UJ	160 U	180 U
2,4,6-Trichlorophenol	NL	µg/kg	160 UJ	160 UJ	120 UJ	160 U	180 U
2,4-Dichlorophenol	NL	µg/kg	160 UJ	160 UJ	120 UJ	160 U	180 U
2,4-Dimethylphenol	NL	µg/kg	160 UJ	160 UJ	120 UJ	160 U	180 U
2,4-Dinitrophenol	NL	µg/kg	310 UJ	310 UJ	230 UJ	320 U	360 U
2,4-Dinitrotoluene	NL	µg/kg	160 UJ	160 UJ	120 UJ	160 U	180 U
2,6-Dinitrotoluene	NL	µg/kg	160 UJ	160 UJ	120 UJ	160 U	180 U
2-Chloronaphthalene	NL	µg/kg	160 UJ	160 UJ	120 UJ	160 U	180 U
2-Chlorophenol	NL	µg/kg	160 UJ	160 UJ	120 UJ	160 U	180 U
2-Methylnaphthalene	NL	µg/kg	3.1 UJ	3.1 UJ	2.3 UJ	3.2 U	3.6 U
2-Methylphenol	NL	µg/kg	160 UJ	160 UJ	120 UJ	160 U	180 U
2-Nitroaniline	NL	µg/kg	310 UJ	310 UJ	230 UJ	320 U	360 U
2-Nitrophenol	NL	µg/kg	160 UJ	160 UJ	120 UJ	160 U	180 U
3,3'-Dichlorobenzidine	NL	µg/kg	160 UJ	160 UJ	120 UJ	160 U	180 U
3-Nitroaniline	NL	µg/kg	310 UJ	310 UJ	230 UJ	320 U	360 U
4,6-Dinitro-2-methylphenol	NL	µg/kg	310 UJ	310 UJ	230 UJ	320 U	360 U
4-Bromophenyl-phenylether	NL	µg/kg	160 UJ	160 UJ	120 UJ	160 U	180 U
4-Chloro-3-methylphenol	NL	µg/kg	160 UJ	160 UJ	120 UJ	160 U	180 U
4-Chloroaniline	NL	µg/kg	160 UJ	160 UJ	120 UJ	160 U	180 U
4-Chlorophenyl-phenylether	NL	µg/kg	160 UJ	160 UJ	120 UJ	160 U	180 U
4-Methylphenol	NL	µg/kg	160 UJ	160 UJ	120 UJ	160 U	180 U
4-Nitroaniline	NL	µg/kg	310 UJ	310 UJ	230 UJ	320 U	360 U
4-Nitrophenol	NL	µg/kg	310 UJ	310 UJ	230 UJ	320 U	360 U
Acenaphthene	NL	µg/kg	3.1 UJ	3.1 UJ	2.3 UJ	3.2 U	3.6 U
Acenaphthylene	NL	µg/kg	5.2 J	3.1 UJ	2.3 UJ	3.2 U	3.6 U
Acetophenone	NL	µg/kg	160 UJ	160 UJ	120 UJ	160 U	180 U
Anthracene	845	µg/kg	3.1 UJ	3.6 J	2.3 UJ	3.2 U	3.6 U
Atrazine	NL	µg/kg	160 UJ	160 UJ	120 UJ	160 U	180 U
Benzaldehyde	NL	µg/kg	160 UJ	160 UJ	120 UJ	160 U	180 U
Benzo(a)anthracene	1050	µg/kg	3.1 UJ	3.2 J	2.3 UJ	4.9	3.6 U
Benzo(a)pyrene	1450	µg/kg	3.1 UJ	4.4 J	2.3 UJ	7.9	3.6 U

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Table B-1
Sediment Sample Analytical Results - SVOCs
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-57	LMR11-57	LMR11-58	LMR11-59	LMR11-59
		Field Sample ID	LMR11-57-048	LMR11-57-062	LMR11-58-010	LMR11-59-006	LMR11-59-024
		Sample Date	8/6/2011	8/6/2011	8/6/2011	8/6/2011	8/6/2011
		Depth Interval (in bss)	24- 48	48- 62	0- 10	0- 6	6- 24
Chemical Name	**PEC[1]**	**Unit**					
Benzo(b)fluoranthene	NL	µg/kg	3.1 UJ	4 J	2.3 UJ	11	5
Benzo(g,h,i)perylene	NL	µg/kg	3.1 UJ	34 J	2.3 UJ	4.8	3.6 U
Benzo(k)fluoranthene	NL	µg/kg	3.1 UJ	3.1 UJ	2.3 UJ	4	3.6 U
Bis(2-chloroethoxy)methane	NL	µg/kg	160 UJ	160 UJ	120 UJ	160 U	180 U
Bis(2-chloroethyl)ether	NL	µg/kg	160 UJ	160 UJ	120 UJ	160 U	180 U
Bis(2-ethylhexyl)phthalate	NL	µg/kg	160 UJ	160 UJ	120 UJ	160 U	180 U
Butylbenzylphthalate	NL	µg/kg	160 UJ	160 UJ	120 UJ	160 U	180 U
Caprolactam	NL	µg/kg	160 UJ	160 UJ	120 UJ	160 U	180 U
Carbazole	NL	µg/kg	160 UJ	160 UJ	120 UJ	160 U	180 U
Chrysene	1290	µg/kg	3.1 UJ	5.9 J	2.3 UJ	6.4	3.6 U
Dibenzo(a,h)anthracene	NL	µg/kg	3.1 UJ	3.1 UJ	2.3 UJ	3.2 U	3.6 U
Dibenzofuran	NL	µg/kg	160 UJ	160 UJ	120 UJ	160 U	180 U
Diethylphthalate	NL	µg/kg	160 UJ	160 UJ	120 UJ	160 U	180 U
Dimethylphthalate	NL	µg/kg	160 UJ	160 UJ	120 UJ	160 U	180 U
Di-n-butylphthalate	NL	µg/kg	160 UJ	160 UJ	120 UJ	160 U	180 U
Di-n-octylphthalate	NL	µg/kg	160 UJ	160 UJ	120 UJ	160 U	180 U
Fluoranthene	2230	µg/kg	3.1 UJ	8.6 J	2.3 UJ	13	6.4
Fluorene	536	µg/kg	3.1 UJ	3.1 UJ	2.3 UJ	3.2 U	3.6 U
Hexachlorobenzene	NL	µg/kg	160 UJ	160 UJ	120 UJ	160 U	180 U
Hexachlorobutadiene	NL	µg/kg	160 UJ	160 UJ	120 UJ	160 U	180 U
Hexachlorocyclopentadiene	NL	µg/kg	160 UJ	160 UJ	120 UJ	160 U	180 UJ
Hexachloroethane	NL	µg/kg	160 UJ	160 UJ	120 UJ	160 U	180 U
Indeno(1,2,3-cd)pyrene	NL	µg/kg	3.1 UJ	3.1 UJ	2.3 UJ	6.5	3.6 U
Isophorone	NL	µg/kg	160 UJ	160 UJ	120 UJ	160 U	180 U
Naphthalene	561	µg/kg	3.1 UJ	3.1 UJ	2.3 UJ	3.2 U	3.6 U
Nitrobenzene	NL	µg/kg	160 UJ	160 UJ	120 UJ	160 U	180 U
N-Nitroso-di-n-propylamine	NL	µg/kg	160 UJ	160 UJ	120 UJ	160 U	180 U
N-Nitrosodiphenylamine	NL	µg/kg	160 UJ	160 UJ	120 UJ	160 U	180 U
Pentachlorophenol	NL	µg/kg	6.3 UJ	6.2 UJ	4.6 UJ	320 U	7.2 U
Phenanthrene	1170	µg/kg	3.5 J	9.1 J	2.3 UJ	5.5	4.2
Phenol	NL	µg/kg	160 UJ	160 UJ	120 UJ	160 U	180 U
Pyrene	1520	µg/kg	3.1 UJ	9 J	2.3 UJ	11 J	5.5
Total PAH 17	22800	µg/kg	31.95	94.2	19.55	86.2	44.5
TOC	NL	mg/kg	23,300 J	25,900	26,300	27,900 J	22,000

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Table B-1
Sediment Sample Analytical Results - SVOCs
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-59	LMR11-59	LMR11-59	LMR11-59	LMR11-60
		Field Sample ID	LMR11-59-048	LMR11-59-072	LMR11-59-096	LMR11-59-116	LMR11-60-006
		Sample Date	8/6/2011	8/6/2011	8/6/2011	8/6/2011	8/6/2011
		Depth Interval (in bss)	24- 48	48- 72	72- 96	96- 116	0- 6
Chemical Name	**PEC[1]**	**Unit**					
1,1'-Biphenyl	NL	µg/kg	180 U	170 U	150 U	130 U	180 UJ
1,2,4,5-Tetrachlorobenzene	NL	µg/kg	180 U	170 U	150 U	130 U	180 UJ
2,2'-Oxybis(1-chloropropane)	NL	µg/kg	180 U	170 U	150 U	130 U	180 UJ
2,3,4,6-Tetrachlorophenol	NL	µg/kg	180 U	170 U	150 U	130 U	180 UJ
2,4,5-Trichlorophenol	NL	µg/kg	180 U	170 U	150 U	130 U	180 UJ
2,4,6-Trichlorophenol	NL	µg/kg	180 U	170 U	150 U	130 U	180 UJ
2,4-Dichlorophenol	NL	µg/kg	180 U	170 U	150 U	130 U	180 UJ
2,4-Dimethylphenol	NL	µg/kg	180 U	170 U	150 U	130 U	180 UJ
2,4-Dinitrophenol	NL	µg/kg	350 U	320 U	280 U	250 U	360 UJ
2,4-Dinitrotoluene	NL	µg/kg	180 U	170 U	150 U	130 U	180 UJ
2,6-Dinitrotoluene	NL	µg/kg	180 U	170 U	150 U	130 U	180 UJ
2-Chloronaphthalene	NL	µg/kg	180 U	170 U	150 U	130 U	180 UJ
2-Chlorophenol	NL	µg/kg	180 U	170 U	150 U	130 U	180 UJ
2-Methylnaphthalene	NL	µg/kg	3.5 U	3.2 U	2.8 U	2.5 U	3.6 UJ
2-Methylphenol	NL	µg/kg	180 U	170 U	150 U	130 U	180 UJ
2-Nitroaniline	NL	µg/kg	350 U	320 U	280 U	250 U	360 UJ
2-Nitrophenol	NL	µg/kg	180 U	170 U	150 U	130 U	180 UJ
3,3'-Dichlorobenzidine	NL	µg/kg	180 U	170 U	150 U	130 U	180 UJ
3-Nitroaniline	NL	µg/kg	350 U	320 U	280 U	250 U	360 UJ
4,6-Dinitro-2-methylphenol	NL	µg/kg	350 U	320 U	280 U	250 U	360 UJ
4-Bromophenyl-phenylether	NL	µg/kg	180 U	170 U	150 U	130 U	180 UJ
4-Chloro-3-methylphenol	NL	µg/kg	180 U	170 U	150 U	130 U	180 UJ
4-Chloroaniline	NL	µg/kg	180 U	170 U	150 U	130 U	180 UJ
4-Chlorophenyl-phenylether	NL	µg/kg	180 U	170 U	150 U	130 U	180 UJ
4-Methylphenol	NL	µg/kg	180 U	170 U	150 U	130 U	180 UJ
4-Nitroaniline	NL	µg/kg	350 U	320 U	280 U	250 U	360 UJ
4-Nitrophenol	NL	µg/kg	350 U	320 U	280 U	250 U	360 UJ
Acenaphthene	NL	µg/kg	3.5 U	3.2 U	2.8 U	3.1	3.6 UJ
Acenaphthylene	NL	µg/kg	3.5 U	3.2 U	2.8 U	4.4	3.6 UJ
Acetophenone	NL	µg/kg	180 U	170 U	150 U	130 U	180 UJ
Anthracene	845	µg/kg	3.5 U	3.2 U	4.1	6.6	3.6 UJ
Atrazine	NL	µg/kg	180 U	170 U	150 U	130 U	180 UJ
Benzaldehyde	NL	µg/kg	180 U	170 U	150 U	130 U	180 UJ
Benzo(a)anthracene	1050	µg/kg	8.8	6.1	12	15	5.3 J
Benzo(a)pyrene	1450	µg/kg	10	6.5	15	21	6.1 J

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Table B-1
Sediment Sample Analytical Results - SVOCs
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-59	LMR11-59	LMR11-59	LMR11-59	LMR11-60
		Field Sample ID	LMR11-59-048	LMR11-59-072	LMR11-59-096	LMR11-59-116	LMR11-60-006
		Sample Date	8/6/2011	8/6/2011	8/6/2011	8/6/2011	8/6/2011
		Depth Interval (in bss)	24- 48	48- 72	72- 96	96- 116	0- 6
Chemical Name	**PEC[1]**	**Unit**					
Benzo(b)fluoranthene	NL	µg/kg	16	10	18	23	9.3 J
Benzo(g,h,i)perylene	NL	µg/kg	4.9	3.2 U	7.4	12	3.6 UJ
Benzo(k)fluoranthene	NL	µg/kg	5.1	3.6	6.3	6.8	4 J
Bis(2-chloroethoxy)methane	NL	µg/kg	180 U	170 U	150 U	130 U	180 UJ
Bis(2-chloroethyl)ether	NL	µg/kg	180 U	170 U	150 U	130 U	180 UJ
Bis(2-ethylhexyl)phthalate	NL	µg/kg	49 J	170 U	38 J	33 J	45 J
Butylbenzylphthalate	NL	µg/kg	180 U	170 U	150 U	130 U	180 UJ
Caprolactam	NL	µg/kg	180 U	170 U	150 U	130 U	180 UJ
Carbazole	NL	µg/kg	180 U	170 U	150 U	130 U	180 UJ
Chrysene	1290	µg/kg	9.9	6.7	12	16	6.6 J
Dibenzo(a,h)anthracene	NL	µg/kg	3.5 U	3.2 U	2.8 U	3.9	3.6 UJ
Dibenzofuran	NL	µg/kg	180 U	170 U	150 U	130 U	180 UJ
Diethylphthalate	NL	µg/kg	180 U	170 U	150 U	130 U	180 UJ
Dimethylphthalate	NL	µg/kg	180 U	170 U	150 U	130 U	180 UJ
Di-n-butylphthalate	NL	µg/kg	180 U	170 U	150 U	130 U	180 UJ
Di-n-octylphthalate	NL	µg/kg	180 U	170 U	150 U	130 U	180 UJ
Fluoranthene	2230	µg/kg	16	14	22	26	16 J
Fluorene	536	µg/kg	3.5 U	3.2 U	2.8 U	2.6	3.6 UJ
Hexachlorobenzene	NL	µg/kg	180 U	170 U	150 U	130 U	180 UJ
Hexachlorobutadiene	NL	µg/kg	180 U	170 U	150 U	130 U	180 UJ
Hexachlorocyclopentadiene	NL	µg/kg	180 UJ	170 UJ	150 UJ	130 UJ	180 UJ
Hexachloroethane	NL	µg/kg	180 U	170 U	150 U	130 U	180 UJ
Indeno(1,2,3-cd)pyrene	NL	µg/kg	6.3	4.1	8.3	11	3.9 J
Isophorone	NL	µg/kg	180 U	170 U	150 U	130 U	180 UJ
Naphthalene	561	µg/kg	3.5 U	3.2 U	3.7	5.9	3.6 UJ
Nitrobenzene	NL	µg/kg	180 U	170 U	150 U	130 U	180 UJ
N-Nitroso-di-n-propylamine	NL	µg/kg	180 U	170 U	150 U	130 U	180 UJ
N-Nitrosodiphenylamine	NL	µg/kg	180 U	170 U	150 U	130 U	180 UJ
Pentachlorophenol	NL	µg/kg	7.1 U	6.6 U	5.7 U	5 U	7.3 UJ
Phenanthrene	1170	µg/kg	9.4	9.3	17	23	9.9 J
Phenol	NL	µg/kg	180 U	170 U	150 U	130 U	180 UJ
Pyrene	1520	µg/kg	14	12	21	27	13 J
Total PAH 17	22800	µg/kg	112.65	85.1	153.8	208.55	88.5
TOC	NL	mg/kg	31,300	20,600	22,100	18,600	18,400

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Table B-1
Sediment Sample Analytical Results - SVOCs
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-60	LMR11-60	LMR11-60	LMR11-60	LMR11-60
		Field Sample ID	LMR11-60-024	LMR11-60-048	LMR11-60-048FS	LMR11-60-072	LMR11-60-092
		Sample Date	8/6/2011	8/6/2011	8/6/2011	8/6/2011	8/6/2011
		Depth Interval (in bss)	6- 24	24- 48	24- 48	48- 72	72- 92
Chemical Name	**PEC[1]**	**Unit**					
1,1'-Biphenyl	NL	µg/kg	190 UJ	180 U	180 U	150 U	150 U
1,2,4,5-Tetrachlorobenzene	NL	µg/kg	190 UJ	180 U	180 U	150 U	150 U
2,2'-Oxybis(1-chloropropane)	NL	µg/kg	190 UJ	180 U	180 U	150 U	150 U
2,3,4,6-Tetrachlorophenol	NL	µg/kg	190 UJ	180 U	180 U	150 U	150 U
2,4,5-Trichlorophenol	NL	µg/kg	190 UJ	180 U	180 U	150 U	150 U
2,4,6-Trichlorophenol	NL	µg/kg	190 UJ	180 U	180 U	150 U	150 U
2,4-Dichlorophenol	NL	µg/kg	190 UJ	180 U	180 U	150 U	150 U
2,4-Dimethylphenol	NL	µg/kg	190 UJ	180 U	180 U	150 U	150 U
2,4-Dinitrophenol	NL	µg/kg	370 UJ	340 U	350 U	290 U	290 U
2,4-Dinitrotoluene	NL	µg/kg	190 UJ	180 U	180 U	150 U	150 U
2,6-Dinitrotoluene	NL	µg/kg	190 UJ	180 U	180 U	150 U	150 U
2-Chloronaphthalene	NL	µg/kg	190 UJ	180 U	180 U	150 U	150 U
2-Chlorophenol	NL	µg/kg	190 UJ	180 U	180 U	150 U	150 U
2-Methylnaphthalene	NL	µg/kg	3.7 UJ	3.4 U	3.5 U	6.3	10
2-Methylphenol	NL	µg/kg	190 UJ	180 U	180 U	150 U	150 U
2-Nitroaniline	NL	µg/kg	370 UJ	340 U	350 U	290 U	290 U
2-Nitrophenol	NL	µg/kg	190 UJ	180 U	180 U	150 U	150 U
3,3'-Dichlorobenzidine	NL	µg/kg	190 UJ	180 U	180 U	150 U	150 U
3-Nitroaniline	NL	µg/kg	370 UJ	340 U	350 U	290 U	290 U
4,6-Dinitro-2-methylphenol	NL	µg/kg	370 UJ	340 U	350 U	290 U	290 U
4-Bromophenyl-phenylether	NL	µg/kg	190 UJ	180 U	180 U	150 U	150 U
4-Chloro-3-methylphenol	NL	µg/kg	190 UJ	180 U	180 U	150 U	150 U
4-Chloroaniline	NL	µg/kg	190 UJ	180 U	180 U	150 U	150 U
4-Chlorophenyl-phenylether	NL	µg/kg	190 UJ	180 U	180 U	150 U	150 U
4-Methylphenol	NL	µg/kg	190 UJ	180 U	180 U	150 U	32 J
4-Nitroaniline	NL	µg/kg	370 UJ	340 U	350 U	290 U	290 U
4-Nitrophenol	NL	µg/kg	370 UJ	340 U	350 U	290 U	290 U
Acenaphthene	NL	µg/kg	3.7 UJ	3.4 U	3.5 U	2.9 U	12
Acenaphthylene	NL	µg/kg	3.7 UJ	3.4 U	3.5 U	2.9 U	10
Acetophenone	NL	µg/kg	190 UJ	180 U	180 U	150 U	150 U
Anthracene	845	µg/kg	3.7 UJ	3.4 U	3.5 U	4.5	26
Atrazine	NL	µg/kg	190 UJ	180 U	180 U	150 U	150 U
Benzaldehyde	NL	µg/kg	190 UJ	180 U	180 U	150 U	150 U
Benzo(a)anthracene	1050	µg/kg	7.6 J	6.3	4	11	60
Benzo(a)pyrene	1450	µg/kg	11 J	8.1	4.4	12	59

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Table B-1
Sediment Sample Analytical Results - SVOCs
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-60	LMR11-60	LMR11-60	LMR11-60	LMR11-60
		Field Sample ID	LMR11-60-024	LMR11-60-048	LMR11-60-048FS	LMR11-60-072	LMR11-60-092
		Sample Date	8/6/2011	8/6/2011	8/6/2011	8/6/2011	8/6/2011
		Depth Interval (in bss)	6- 24	24- 48	24- 48	48- 72	72- 92
Chemical Name	**PEC[1]**	**Unit**					
Benzo(b)fluoranthene	NL	µg/kg	14 J	11	6.9	17	77
Benzo(g,h,i)perylene	NL	µg/kg	3.8 J	3.4 U	3.5 U	6.3	33
Benzo(k)fluoranthene	NL	µg/kg	6 J	4.3	3.5 U	5.8	29
Bis(2-chloroethoxy)methane	NL	µg/kg	190 UJ	180 U	180 U	150 U	150 U
Bis(2-chloroethyl)ether	NL	µg/kg	190 UJ	180 U	180 U	150 U	150 U
Bis(2-ethylhexyl)phthalate	NL	µg/kg	50 J	180 U	54 J	56 J	150 U
Butylbenzylphthalate	NL	µg/kg	190 UJ	180 U	180 U	150 U	150 U
Caprolactam	NL	µg/kg	190 UJ	180 U	180 U	150 U	150 U
Carbazole	NL	µg/kg	190 UJ	180 U	180 U	150 U	150 U
Chrysene	1290	µg/kg	8.7 J	7.3	4.9	13	62
Dibenzo(a,h)anthracene	NL	µg/kg	3.7 UJ	3.4 U	3.5 U	2.9 U	13
Dibenzofuran	NL	µg/kg	190 UJ	180 U	180 U	150 U	150 U
Diethylphthalate	NL	µg/kg	190 UJ	180 U	180 U	150 U	150 U
Dimethylphthalate	NL	µg/kg	190 UJ	180 U	180 U	150 U	150 U
Di-n-butylphthalate	NL	µg/kg	190 UJ	180 U	180 U	150 U	150 U
Di-n-octylphthalate	NL	µg/kg	190 UJ	180 U	180 U	150 U	150 U
Fluoranthene	2230	µg/kg	19 J	12	9.3	26	120
Fluorene	536	µg/kg	3.7 UJ	3.4 U	3.5 U	2.9 U	14
Hexachlorobenzene	NL	µg/kg	190 UJ	180 U	180 U	150 U	150 U
Hexachlorobutadiene	NL	µg/kg	190 UJ	180 U	180 U	150 U	150 U
Hexachlorocyclopentadiene	NL	µg/kg	190 UJ	180 U	180 UJ	150 UJ	150 UJ
Hexachloroethane	NL	µg/kg	190 UJ	180 U	180 U	150 U	150 U
Indeno(1,2,3-cd)pyrene	NL	µg/kg	6.2 J	4.6	3.5 U	7	35
Isophorone	NL	µg/kg	190 UJ	180 U	180 U	150 U	150 U
Naphthalene	561	µg/kg	3.7 UJ	3.4 U	3.5 U	6.8	14
Nitrobenzene	NL	µg/kg	190 UJ	180 U	180 U	150 U	150 U
N-Nitroso-di-n-propylamine	NL	µg/kg	190 UJ	180 U	180 U	150 U	150 U
N-Nitrosodiphenylamine	NL	µg/kg	190 UJ	180 U	180 U	150 U	150 U
Pentachlorophenol	NL	µg/kg	7.5 UJ	340 U	7.2 U	6 U	5.9 U
Phenanthrene	1170	µg/kg	9.4 J	5.8	6.9	25	100
Phenol	NL	µg/kg	190 UJ	180 U	180 U	150 U	150 U
Pyrene	1520	µg/kg	15 J	12	8.6	24	110
Total PAH 17	22800	µg/kg	113.65	85	62.5	170.5	784
TOC	NL	mg/kg	28,100	31,400	23,100	19,500	24,900

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Table B-1
Sediment Sample Analytical Results - SVOCs
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-61	LMR11-61	LMR11-62	LMR11-62	LMR11-62
		Field Sample ID	LMR11-61-006	LMR11-61-030	LMR11-62-006	LMR11-62-024	LMR11-62-024DP
		Sample Date	8/6/2011	8/6/2011	8/6/2011	8/6/2011	8/6/2011
		Depth Interval (in bss)	0- 6	6- 30	0- 6	6- 24	6- 24
Chemical Name	**PEC[1]**	**Unit**					
1,1'-Biphenyl	NL	µg/kg	140 UJ	120 UJ	190 U	160 U	190 U
1,2,4,5-Tetrachlorobenzene	NL	µg/kg	140 UJ	120 UJ	190 U	160 U	190 U
2,2'-Oxybis(1-chloropropane)	NL	µg/kg	140 UJ	120 UJ	190 U	160 U	190 U
2,3,4,6-Tetrachlorophenol	NL	µg/kg	140 UJ	120 UJ	190 U	160 U	190 U
2,4,5-Trichlorophenol	NL	µg/kg	140 UJ	120 UJ	190 U	160 U	190 U
2,4,6-Trichlorophenol	NL	µg/kg	140 UJ	120 UJ	190 U	160 U	190 U
2,4-Dichlorophenol	NL	µg/kg	140 UJ	120 UJ	190 U	160 U	190 U
2,4-Dimethylphenol	NL	µg/kg	140 UJ	120 UJ	190 U	160 U	190 U
2,4-Dinitrophenol	NL	µg/kg	260 UJ	230 UJ	360 U	310 U	370 U
2,4-Dinitrotoluene	NL	µg/kg	140 UJ	120 UJ	190 U	160 U	190 U
2,6-Dinitrotoluene	NL	µg/kg	140 UJ	120 UJ	190 U	160 U	190 U
2-Chloronaphthalene	NL	µg/kg	140 UJ	120 UJ	190 U	160 U	190 U
2-Chlorophenol	NL	µg/kg	140 UJ	120 UJ	190 U	160 U	190 U
2-Methylnaphthalene	NL	µg/kg	260 J	2.3 UJ	11	3.1 U	3.7 U
2-Methylphenol	NL	µg/kg	140 UJ	120 UJ	190 U	160 U	190 U
2-Nitroaniline	NL	µg/kg	260 UJ	230 UJ	360 U	310 U	370 U
2-Nitrophenol	NL	µg/kg	140 UJ	120 UJ	190 U	160 U	190 U
3,3'-Dichlorobenzidine	NL	µg/kg	140 UJ	120 UJ	190 U	160 U	190 U
3-Nitroaniline	NL	µg/kg	260 UJ	230 UJ	360 U	310 U	370 U
4,6-Dinitro-2-methylphenol	NL	µg/kg	260 UJ	230 UJ	360 U	310 U	370 U
4-Bromophenyl-phenylether	NL	µg/kg	140 UJ	120 UJ	190 U	160 U	190 U
4-Chloro-3-methylphenol	NL	µg/kg	140 UJ	120 UJ	190 U	160 U	190 U
4-Chloroaniline	NL	µg/kg	140 UJ	120 UJ	190 U	160 U	190 U
4-Chlorophenyl-phenylether	NL	µg/kg	140 UJ	120 UJ	190 U	160 U	190 U
4-Methylphenol	NL	µg/kg	31 J	120 UJ	190 U	160 U	190 U
4-Nitroaniline	NL	µg/kg	260 UJ	230 UJ	360 U	310 U	370 U
4-Nitrophenol	NL	µg/kg	260 UJ	230 UJ	360 U	310 U	370 U
Acenaphthene	NL	µg/kg	49 J	3.3 J	20	6.2	3.7 U
Acenaphthylene	NL	µg/kg	22 J	2.3 UJ	3.6 U	3.1 U	3.7 U
Acetophenone	NL	µg/kg	140 UJ	120 UJ	190 U	160 U	190 U
Anthracene	845	µg/kg	85 J	8.8 J	17	7.2	3.7 U
Atrazine	NL	µg/kg	140 UJ	120 UJ	190 U	160 U	190 U
Benzaldehyde	NL	µg/kg	140 UJ	120 UJ	190 U	160 U	190 U
Benzo(a)anthracene	1050	µg/kg	170 J	11 J	14	18	4.9
Benzo(a)pyrene	1450	µg/kg	130 J	8.6 J	23	26	3.7 U

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Table B-1
Sediment Sample Analytical Results - SVOCs
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-61	LMR11-61	LMR11-62	LMR11-62	LMR11-62
		Field Sample ID	LMR11-61-006	LMR11-61-030	LMR11-62-006	LMR11-62-024	LMR11-62-024DP
		Sample Date	8/6/2011	8/6/2011	8/6/2011	8/6/2011	8/6/2011
		Depth Interval (in bss)	0- 6	6- 30	0- 6	6- 24	6- 24
Chemical Name	**PEC[1]**	**Unit**					
Benzo(b)fluoranthene	NL	µg/kg	170 J	11 J	24	26	8.5
Benzo(g,h,i)perylene	NL	µg/kg	80 J	3.1 J	10	9.4	3.7 U
Benzo(k)fluoranthene	NL	µg/kg	70 J	4.2 J	6.4	7.8	3.7 U
Bis(2-chloroethoxy)methane	NL	µg/kg	140 UJ	120 UJ	190 U	160 U	190 U
Bis(2-chloroethyl)ether	NL	µg/kg	140 UJ	120 UJ	190 U	160 U	190 U
Bis(2-ethylhexyl)phthalate	NL	µg/kg	140 UJ	260 J	190 U	160 U	190 U
Butylbenzylphthalate	NL	µg/kg	140 UJ	120 UJ	190 U	160 U	190 U
Caprolactam	NL	µg/kg	140 UJ	120 UJ	190 U	160 U	190 U
Carbazole	NL	µg/kg	140 UJ	120 UJ	190 U	160 U	190 U
Chrysene	1290	µg/kg	160 J	11 J	17	18	5.4
Dibenzo(a,h)anthracene	NL	µg/kg	26 UJ	2.3 UJ	3.9	3.9	3.7 U
Dibenzofuran	NL	µg/kg	74 J	120 UJ	190 U	160 U	190 U
Diethylphthalate	NL	µg/kg	140 UJ	120 UJ	190 U	160 U	190 U
Dimethylphthalate	NL	µg/kg	140 UJ	120 UJ	190 U	160 U	190 U
Di-n-butylphthalate	NL	µg/kg	140 UJ	120 UJ	190 U	160 U	190 U
Di-n-octylphthalate	NL	µg/kg	140 UJ	120 UJ	190 U	160 U	190 U
Fluoranthene	2230	µg/kg	330 J	35 J	35	31	9.4
Fluorene	536	µg/kg	62 J	6.3 J	9.7	3.1 U	3.7 U
Hexachlorobenzene	NL	µg/kg	140 UJ	120 UJ	190 U	160 U	190 U
Hexachlorobutadiene	NL	µg/kg	140 UJ	120 UJ	190 U	160 U	190 U
Hexachlorocyclopentadiene	NL	µg/kg	140 UJ	120 UJ	190 U	160 U	190 U
Hexachloroethane	NL	µg/kg	140 UJ	120 UJ	190 U	160 U	190 U
Indeno(1,2,3-cd)pyrene	NL	µg/kg	71 J	4 J	12	12	3.7 U
Isophorone	NL	µg/kg	140 UJ	120 UJ	190 U	160 U	190 U
Naphthalene	561	µg/kg	72 J	2.3 UJ	36	6.6	3.7 U
Nitrobenzene	NL	µg/kg	140 UJ	120 UJ	190 U	160 U	190 U
N-Nitroso-di-n-propylamine	NL	µg/kg	140 UJ	120 UJ	190 U	160 U	190 U
N-Nitrosodiphenylamine	NL	µg/kg	140 UJ	120 UJ	190 U	160 U	190 U
Pentachlorophenol	NL	µg/kg	5.4 UJ	4.7 UJ	22 UJ	13 UJ	370 U
Phenanthrene	1170	µg/kg	340 J	21 J	77	22	5.6
Phenol	NL	µg/kg	140 UJ	120 UJ	190 U	160 U	190 U
Pyrene	1520	µg/kg	260 J	20 J	43	38	9.9
Total PAH 17	22800	µg/kg	2344	151.9	360.8	236.75	64.05
TOC	NL	mg/kg	27,400	24,500	27,100	19,700	22,400

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Table B-1
Sediment Sample Analytical Results - SVOCs
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-62	LMR11-62	LMR11-62	LMR11-62	LMR11-63
		Field Sample ID	LMR11-62-048	LMR11-62-072	LMR11-62-096	LMR11-62-108	LMR11-63-006
		Sample Date	8/6/2011	8/6/2011	8/6/2011	8/6/2011	8/8/2011
		Depth Interval (in bss)	24- 48	48- 72	72- 96	96- 108	0- 6
Chemical Name	**PEC[1]**	**Unit**					
1,1'-Biphenyl	NL	µg/kg	130 U	120 U	140 U	150 U	380 U
1,2,4,5-Tetrachlorobenzene	NL	µg/kg	130 U	120 U	140 U	150 U	380 U
2,2'-Oxybis(1-chloropropane)	NL	µg/kg	130 U	120 U	140 U	150 U	380 U
2,3,4,6-Tetrachlorophenol	NL	µg/kg	130 U	120 U	140 U	150 U	380 U
2,4,5-Trichlorophenol	NL	µg/kg	130 U	120 U	140 U	150 U	380 U
2,4,6-Trichlorophenol	NL	µg/kg	130 U	120 U	140 U	150 U	380 U
2,4-Dichlorophenol	NL	µg/kg	130 U	120 U	140 U	150 U	380 U
2,4-Dimethylphenol	NL	µg/kg	130 U	120 U	140 U	150 U	380 U
2,4-Dinitrophenol	NL	µg/kg	250 U	230 U	280 U	290 U	750 U
2,4-Dinitrotoluene	NL	µg/kg	130 U	120 U	140 U	150 U	380 U
2,6-Dinitrotoluene	NL	µg/kg	130 U	120 U	140 U	150 U	380 U
2-Chloronaphthalene	NL	µg/kg	130 U	120 U	140 U	150 U	380 U
2-Chlorophenol	NL	µg/kg	130 U	120 U	140 U	150 U	380 U
2-Methylnaphthalene	NL	µg/kg	2.5 U	2.3 U	2.8	2.9 U	7.5 U
2-Methylphenol	NL	µg/kg	130 U	120 U	140 U	150 U	380 U
2-Nitroaniline	NL	µg/kg	250 U	230 U	280 U	290 U	750 U
2-Nitrophenol	NL	µg/kg	130 U	120 U	140 U	150 U	380 U
3,3'-Dichlorobenzidine	NL	µg/kg	130 U	120 U	140 U	150 U	380 U
3-Nitroaniline	NL	µg/kg	250 U	230 U	280 U	290 U	750 U
4,6-Dinitro-2-methylphenol	NL	µg/kg	250 U	230 U	280 U	290 U	750 U
4-Bromophenyl-phenylether	NL	µg/kg	130 U	120 U	140 U	150 U	380 U
4-Chloro-3-methylphenol	NL	µg/kg	130 U	120 U	140 U	150 U	380 U
4-Chloroaniline	NL	µg/kg	130 U	120 U	140 U	150 U	380 U
4-Chlorophenyl-phenylether	NL	µg/kg	130 U	120 U	140 U	150 U	380 U
4-Methylphenol	NL	µg/kg	130 U	120 U	140 U	150 U	380 U
4-Nitroaniline	NL	µg/kg	250 U	230 U	280 U	290 U	750 U
4-Nitrophenol	NL	µg/kg	250 U	230 U	280 U	290 U	750 U
Acenaphthene	NL	µg/kg	2.5 U	2.3 U	4.7	2.9 U	7.5 U
Acenaphthylene	NL	µg/kg	2.5 U	2.3 U	4	2.9 U	7.5 U
Acetophenone	NL	µg/kg	130 U	120 U	140 U	150 U	380 U
Anthracene	845	µg/kg	2.5 U	2.3 U	12	2.9 U	7.5 U
Atrazine	NL	µg/kg	130 U	120 U	140 U	150 U	380 U
Benzaldehyde	NL	µg/kg	130 U	120 U	140 U	150 U	380 U
Benzo(a)anthracene	1050	µg/kg	2.5 U	2.3 U	24	2.9 U	15
Benzo(a)pyrene	1450	µg/kg	2.5 U	2.3 U	27	2.9 U	30

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Table B-1
Sediment Sample Analytical Results - SVOCs
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-62	LMR11-62	LMR11-62	LMR11-62	LMR11-63
		Field Sample ID	LMR11-62-048	LMR11-62-072	LMR11-62-096	LMR11-62-108	LMR11-63-006
		Sample Date	8/6/2011	8/6/2011	8/6/2011	8/6/2011	8/8/2011
		Depth Interval (in bss)	24- 48	48- 72	72- 96	96- 108	0- 6
Chemical Name	**PEC[1]**	**Unit**					
Benzo(b)fluoranthene	NL	µg/kg	2.5 U	2.3 U	37	2.9 U	26
Benzo(g,h,i)perylene	NL	µg/kg	2.5 U	2.3 U	12	2.9 U	14
Benzo(k)fluoranthene	NL	µg/kg	2.5 U	2.3 U	15	2.9 U	14
Bis(2-chloroethoxy)methane	NL	µg/kg	130 U	120 U	140 U	150 U	380 U
Bis(2-chloroethyl)ether	NL	µg/kg	130 U	120 U	140 U	150 U	380 U
Bis(2-ethylhexyl)phthalate	NL	µg/kg	130 U	120 U	140 U	150 U	380 U
Butylbenzylphthalate	NL	µg/kg	130 U	120 U	140 U	150 U	7100
Caprolactam	NL	µg/kg	130 U	120 U	140 U	150 U	380 U
Carbazole	NL	µg/kg	130 U	120 U	140 U	150 U	380 U
Chrysene	1290	µg/kg	2.5 U	2.3 U	26	2.9 U	18
Dibenzo(a,h)anthracene	NL	µg/kg	2.5 U	2.3 U	5.5	2.9 U	7.5 U
Dibenzofuran	NL	µg/kg	130 U	120 U	140 U	150 U	380 U
Diethylphthalate	NL	µg/kg	130 U	120 U	140 U	150 U	380 U
Dimethylphthalate	NL	µg/kg	130 U	120 U	140 U	150 U	380 U
Di-n-butylphthalate	NL	µg/kg	130 U	120 U	140 U	150 U	380 U
Di-n-octylphthalate	NL	µg/kg	130 U	120 U	140 U	150 U	380 U
Fluoranthene	2230	µg/kg	2.5 U	2.3 U	54	2.9 U	30
Fluorene	536	µg/kg	2.5 U	2.3 U	6.1	2.9 U	7.5 U
Hexachlorobenzene	NL	µg/kg	130 U	120 U	140 U	150 U	380 U
Hexachlorobutadiene	NL	µg/kg	130 U	120 U	140 U	150 U	380 U
Hexachlorocyclopentadiene	NL	µg/kg	130 U	120 U	140 U	150 U	380 U
Hexachloroethane	NL	µg/kg	130 U	120 U	140 U	150 U	380 U
Indeno(1,2,3-cd)pyrene	NL	µg/kg	2.5 U	2.3 U	16	2.9 U	12
Isophorone	NL	µg/kg	130 U	120 U	140 U	150 U	380 U
Naphthalene	561	µg/kg	2.5 U	2.3 U	5.9	2.9 U	7.5 U
Nitrobenzene	NL	µg/kg	130 U	120 U	140 U	150 U	380 U
N-Nitroso-di-n-propylamine	NL	µg/kg	130 U	120 U	140 U	150 U	380 U
N-Nitrosodiphenylamine	NL	µg/kg	130 U	120 U	140 U	150 U	380 U
Pentachlorophenol	NL	µg/kg	250 U	230 U	17 UJ	290 U	15 U
Phenanthrene	1170	µg/kg	2.5 U	2.3 U	39	2.9 U	20
Phenol	NL	µg/kg	130 U	120 U	140 U	150 U	380 U
Pyrene	1520	µg/kg	2.5 U	2.3 U	44	2.9 U	30
Total PAH 17	22800	µg/kg	21.25	19.55	335	24.65	235.25
TOC	NL	mg/kg	21,900	6,430	26,900	14,500	26,800

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Table B-1
Sediment Sample Analytical Results - SVOCs
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-63	LMR11-63	LMR11-63	LMR11-63	LMR11-63
		Field Sample ID	LMR11-63-024	LMR11-63-048	LMR11-63-048FS	LMR11-63-072	LMR11-63-096
		Sample Date	8/8/2011	8/8/2011	8/8/2011	8/8/2011	8/8/2011
		Depth Interval (in bss)	6- 24	24- 48	24- 48	48- 72	72- 96
Chemical Name	**PEC[1]**	**Unit**					
1,1'-Biphenyl	NL	µg/kg	300 U	280 U	250 U	260 U	280 U
1,2,4,5-Tetrachlorobenzene	NL	µg/kg	300 U	280 U	250 U	260 U	280 U
2,2'-Oxybis(1-chloropropane)	NL	µg/kg	300 U	280 U	250 U	260 U	280 U
2,3,4,6-Tetrachlorophenol	NL	µg/kg	300 U	280 U	250 U	260 U	280 U
2,4,5-Trichlorophenol	NL	µg/kg	300 U	280 U	250 U	260 U	280 U
2,4,6-Trichlorophenol	NL	µg/kg	300 U	280 U	250 U	260 U	280 U
2,4-Dichlorophenol	NL	µg/kg	300 U	280 U	250 U	260 U	280 U
2,4-Dimethylphenol	NL	µg/kg	300 U	280 U	250 U	260 U	280 U
2,4-Dinitrophenol	NL	µg/kg	580 U	550 U	480 U	510 U	550 U
2,4-Dinitrotoluene	NL	µg/kg	300 U	280 U	250 U	260 U	280 U
2,6-Dinitrotoluene	NL	µg/kg	300 U	280 U	250 U	260 U	280 U
2-Chloronaphthalene	NL	µg/kg	300 U	280 U	250 U	260 U	280 U
2-Chlorophenol	NL	µg/kg	300 U	280 U	250 U	260 U	280 U
2-Methylnaphthalene	NL	µg/kg	62	38	7.1	40	74
2-Methylphenol	NL	µg/kg	300 U	280 U	250 U	260 U	280 U
2-Nitroaniline	NL	µg/kg	580 U	550 U	480 U	510 U	550 U
2-Nitrophenol	NL	µg/kg	300 U	280 U	250 U	260 U	280 U
3,3'-Dichlorobenzidine	NL	µg/kg	300 U	280 U	250 U	260 U	280 U
3-Nitroaniline	NL	µg/kg	580 U	550 U	480 U	510 U	550 U
4,6-Dinitro-2-methylphenol	NL	µg/kg	580 U	550 U	480 U	510 U	550 U
4-Bromophenyl-phenylether	NL	µg/kg	300 U	280 U	250 U	260 U	280 U
4-Chloro-3-methylphenol	NL	µg/kg	300 U	280 U	250 U	260 U	280 U
4-Chloroaniline	NL	µg/kg	300 U	280 U	250 U	260 U	280 U
4-Chlorophenyl-phenylether	NL	µg/kg	300 U	280 U	250 U	260 U	280 U
4-Methylphenol	NL	µg/kg	300 U	280 U	250 U	260 U	280 U
4-Nitroaniline	NL	µg/kg	580 U	550 U	480 U	510 U	550 U
4-Nitrophenol	NL	µg/kg	580 U	550 U	480 U	510 U	550 U
Acenaphthene	NL	µg/kg	11	88	9.7	60	51
Acenaphthylene	NL	µg/kg	8.1	34	21	20	52
Acetophenone	NL	µg/kg	300 U	280 U	250 U	260 U	280 U
Anthracene	845	µg/kg	37	62	19	60	75
Atrazine	NL	µg/kg	300 U	280 U	250 U	260 U	280 U
Benzaldehyde	NL	µg/kg	300 U	280 U	250 U	260 U	280 U
Benzo(a)anthracene	1050	µg/kg	93	150	64	92	120
Benzo(a)pyrene	1450	µg/kg	73	160	100	89	180

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Table B-1
Sediment Sample Analytical Results - SVOCs
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-63	LMR11-63	LMR11-63	LMR11-63	LMR11-63
		Field Sample ID	LMR11-63-024	LMR11-63-048	LMR11-63-048FS	LMR11-63-072	LMR11-63-096
		Sample Date	8/8/2011	8/8/2011	8/8/2011	8/8/2011	8/8/2011
		Depth Interval (in bss)	6- 24	24- 48	24- 48	48- 72	72- 96
Chemical Name	**PEC[1]**	**Unit**					
Benzo(b)fluoranthene	NL	µg/kg	91	140	71	88	130
Benzo(g,h,i)perylene	NL	µg/kg	45	120	74	65	140
Benzo(k)fluoranthene	NL	µg/kg	52	72	45	50	47
Bis(2-chloroethoxy)methane	NL	µg/kg	300 U	280 U	250 U	260 U	280 U
Bis(2-chloroethyl)ether	NL	µg/kg	300 U	280 U	250 U	260 U	280 U
Bis(2-ethylhexyl)phthalate	NL	µg/kg	300 U	280 U	250 U	260 U	280 U
Butylbenzylphthalate	NL	µg/kg	300 U	280 U	250 U	260 U	280 U
Caprolactam	NL	µg/kg	300 U	280 U	250 U	260 U	280 U
Carbazole	NL	µg/kg	300 U	280 U	250 U	260 U	280 U
Chrysene	1290	µg/kg	100	150	68	110	120
Dibenzo(a,h)anthracene	NL	µg/kg	21	41	22	28	34
Dibenzofuran	NL	µg/kg	300 U	280 U	250 U	260 U	280 U
Diethylphthalate	NL	µg/kg	300 U	280 U	250 U	260 U	280 U
Dimethylphthalate	NL	µg/kg	300 U	280 U	250 U	260 U	280 U
Di-n-butylphthalate	NL	µg/kg	300 U	85 J	250 U	260 U	280 U
Di-n-octylphthalate	NL	µg/kg	300 U	280 U	250 U	260 U	280 U
Fluoranthene	2230	µg/kg	180	220	44	200	150
Fluorene	536	µg/kg	16	46	7.3	47	48
Hexachlorobenzene	NL	µg/kg	300 U	280 U	250 U	260 U	280 U
Hexachlorobutadiene	NL	µg/kg	300 U	280 U	250 U	260 U	280 U
Hexachlorocyclopentadiene	NL	µg/kg	300 U	280 U	250 U	260 U	280 U
Hexachloroethane	NL	µg/kg	300 U	280 U	250 U	260 U	280 U
Indeno(1,2,3-cd)pyrene	NL	µg/kg	40	81	45	47	79
Isophorone	NL	µg/kg	300 U	280 U	250 U	260 U	280 U
Naphthalene	561	µg/kg	46	65	14	68	160
Nitrobenzene	NL	µg/kg	300 U	280 U	250 U	260 U	280 U
N-Nitroso-di-n-propylamine	NL	µg/kg	300 U	280 U	250 U	260 U	280 U
N-Nitrosodiphenylamine	NL	µg/kg	300 U	280 U	250 U	260 U	280 U
Pentachlorophenol	NL	µg/kg	12 U	11 U	9.7 U	10 U	11 U
Phenanthrene	1170	µg/kg	130	280	46	240	260
Phenol	NL	µg/kg	300 U	280 U	250 U	260 U	280 U
Pyrene	1520	µg/kg	180	290	63	240	270
Total PAH 17	22800	µg/kg	1,185	2,037	720.1	1,544	1,990
TOC	NL	mg/kg	40,800	31,800	36,400	46,700 J	36,800

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Table B-1
Sediment Sample Analytical Results - SVOCs
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-63	LMR11-64	LMR11-64	LMR11-64	LMR11-64
		Field Sample ID	LMR11-63-115	LMR11-88-006	LMR11-88-024	LMR11-88-048	LMR11-88-072
		Sample Date	8/8/2011	8/7/2011	8/7/2011	8/7/2011	8/7/2011
		Depth Interval (in bss)	96- 115	0- 6	6- 24	24- 48	48- 72
Chemical Name	**PEC[1]**	**Unit**					
1,1'-Biphenyl	NL	µg/kg	240 U	140 UJ	160 UJ	140 UJ	270 UJ
1,2,4,5-Tetrachlorobenzene	NL	µg/kg	240 U	140 UJ	160 UJ	140 UJ	270 UJ
2,2'-Oxybis(1-chloropropane)	NL	µg/kg	240 U	140 UJ	160 UJ	140 UJ	270 UJ
2,3,4,6-Tetrachlorophenol	NL	µg/kg	240 U	140 UJ	160 UJ	140 UJ	270 UJ
2,4,5-Trichlorophenol	NL	µg/kg	240 U	140 UJ	160 UJ	140 UJ	270 UJ
2,4,6-Trichlorophenol	NL	µg/kg	240 U	140 UJ	160 UJ	140 UJ	270 UJ
2,4-Dichlorophenol	NL	µg/kg	240 U	140 UJ	160 UJ	140 UJ	270 UJ
2,4-Dimethylphenol	NL	µg/kg	240 U	140 UJ	160 UJ	140 UJ	270 UJ
2,4-Dinitrophenol	NL	µg/kg	460 U	270 UJ	300 UJ	270 UJ	530 UJ
2,4-Dinitrotoluene	NL	µg/kg	240 U	140 UJ	160 UJ	140 UJ	270 UJ
2,6-Dinitrotoluene	NL	µg/kg	240 U	140 UJ	160 UJ	140 UJ	270 UJ
2-Chloronaphthalene	NL	µg/kg	240 U	140 UJ	160 UJ	140 UJ	270 UJ
2-Chlorophenol	NL	µg/kg	240 U	140 UJ	160 UJ	140 UJ	270 UJ
2-Methylnaphthalene	NL	µg/kg	5.1	2.7 UJ	4.8 J	5 J	7.2 J
2-Methylphenol	NL	µg/kg	240 U	140 UJ	160 UJ	140 UJ	270 UJ
2-Nitroaniline	NL	µg/kg	460 U	270 UJ	300 UJ	270 UJ	530 UJ
2-Nitrophenol	NL	µg/kg	240 U	140 UJ	160 UJ	140 UJ	270 UJ
3,3'-Dichlorobenzidine	NL	µg/kg	240 U	140 UJ	160 UJ	140 UJ	270 UJ
3-Nitroaniline	NL	µg/kg	460 U	270 UJ	300 UJ	270 UJ	530 UJ
4,6-Dinitro-2-methylphenol	NL	µg/kg	460 U	270 UJ	300 UJ	270 UJ	530 UJ
4-Bromophenyl-phenylether	NL	µg/kg	240 U	140 UJ	160 UJ	140 UJ	270 UJ
4-Chloro-3-methylphenol	NL	µg/kg	240 U	140 UJ	160 UJ	140 UJ	270 UJ
4-Chloroaniline	NL	µg/kg	240 U	140 UJ	160 UJ	140 UJ	270 UJ
4-Chlorophenyl-phenylether	NL	µg/kg	240 U	140 UJ	160 UJ	140 UJ	270 UJ
4-Methylphenol	NL	µg/kg	240 U	94 J	140 J	31 J	270 UJ
4-Nitroaniline	NL	µg/kg	460 U	270 UJ	300 UJ	270 UJ	530 UJ
4-Nitrophenol	NL	µg/kg	460 U	270 UJ	300 UJ	270 UJ	530 UJ
Acenaphthene	NL	µg/kg	4.6 U	3.5 J	4.7 J	2.7 UJ	5.3 UJ
Acenaphthylene	NL	µg/kg	4.6 U	2.7 UJ	3 UJ	3.1 J	17 J
Acetophenone	NL	µg/kg	240 U	140 UJ	160 UJ	140 UJ	270 UJ
Anthracene	845	µg/kg	4.6 U	3.2 J	5 J	6 J	14 J
Atrazine	NL	µg/kg	240 U	140 UJ	160 UJ	140 UJ	270 UJ
Benzaldehyde	NL	µg/kg	240 U	140 UJ	160 UJ	140 UJ	270 UJ
Benzo(a)anthracene	1050	µg/kg	4.6 U	3.7 J	9.6 J	18 J	64 J
Benzo(a)pyrene	1450	µg/kg	4.6 U	2.7 UJ	11 J	19 J	75 J

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Table B-1
Sediment Sample Analytical Results - SVOCs
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-63	LMR11-64	LMR11-64	LMR11-64	LMR11-64
		Field Sample ID	LMR11-63-115	LMR11-88-006	LMR11-88-024	LMR11-88-048	LMR11-88-072
		Sample Date	8/8/2011	8/7/2011	8/7/2011	8/7/2011	8/7/2011
		Depth Interval (in bss)	96- 115	0- 6	6- 24	24- 48	48- 72
Chemical Name	**PEC[1]**	**Unit**					
Benzo(b)fluoranthene	NL	µg/kg	4.6 U	4.7 J	15 J	23 J	110 J
Benzo(g,h,i)perylene	NL	µg/kg	4.6 U	2.7 UJ	7 J	11 J	40 J
Benzo(k)fluoranthene	NL	µg/kg	4.6 U	2.7 UJ	6.2 J	8.8 J	43 J
Bis(2-chloroethoxy)methane	NL	µg/kg	240 U	140 UJ	160 UJ	140 UJ	270 UJ
Bis(2-chloroethyl)ether	NL	µg/kg	240 U	140 UJ	160 UJ	140 UJ	270 UJ
Bis(2-ethylhexyl)phthalate	NL	µg/kg	240 U	130 J	160 UJ	140 UJ	270 UJ
Butylbenzylphthalate	NL	µg/kg	240 U	140 UJ	160 UJ	140 UJ	270 UJ
Caprolactam	NL	µg/kg	240 U	140 UJ	160 UJ	140 UJ	270 UJ
Carbazole	NL	µg/kg	240 U	140 UJ	160 UJ	140 UJ	270 UJ
Chrysene	1290	µg/kg	5.2	4.2 J	11 J	18 J	70 J
Dibenzo(a,h)anthracene	NL	µg/kg	4.6 U	2.7 UJ	3 UJ	3.8 J	11 J
Dibenzofuran	NL	µg/kg	240 U	140 UJ	160 UJ	140 UJ	270 UJ
Diethylphthalate	NL	µg/kg	240 U	140 UJ	160 UJ	140 UJ	270 UJ
Dimethylphthalate	NL	µg/kg	240 U	140 UJ	160 UJ	140 UJ	270 UJ
Di-n-butylphthalate	NL	µg/kg	240 U	140 UJ	160 UJ	140 UJ	270 UJ
Di-n-octylphthalate	NL	µg/kg	240 U	140 UJ	160 UJ	140 UJ	270 UJ
Fluoranthene	2230	µg/kg	5.2	10 J	24 J	33 J	50 J
Fluorene	536	µg/kg	4.6 U	2.7 UJ	5.1 J	3.7 J	6.3 J
Hexachlorobenzene	NL	µg/kg	240 U	140 UJ	160 UJ	140 UJ	270 UJ
Hexachlorobutadiene	NL	µg/kg	240 U	140 UJ	160 UJ	140 UJ	270 UJ
Hexachlorocyclopentadiene	NL	µg/kg	240 U	140 UJ	160 UJ	140 UJ	270 UJ
Hexachloroethane	NL	µg/kg	240 U	140 UJ	160 UJ	140 UJ	270 UJ
Indeno(1,2,3-cd)pyrene	NL	µg/kg	4.6 U	2.7 UJ	6.1 J	10 J	36 J
Isophorone	NL	µg/kg	240 U	140 UJ	160 UJ	140 UJ	270 UJ
Naphthalene	561	µg/kg	5.8	4.9 J	12 J	9.1 J	15 J
Nitrobenzene	NL	µg/kg	240 U	140 UJ	160 UJ	140 UJ	270 UJ
N-Nitroso-di-n-propylamine	NL	µg/kg	240 U	140 UJ	160 UJ	140 UJ	270 UJ
N-Nitrosodiphenylamine	NL	µg/kg	240 U	140 UJ	160 UJ	140 UJ	270 UJ
Pentachlorophenol	NL	µg/kg	9.3 U	5.5 UJ	6.1 UJ	5.5 UJ	11 UJ
Phenanthrene	1170	µg/kg	10	14 J	24 J	24 J	33 J
Phenol	NL	µg/kg	240 U	140 UJ	160 UJ	140 UJ	270 UJ
Pyrene	1520	µg/kg	9	9.6 J	21 J	27 J	48 J
Total PAH 17	22800	µg/kg	65.6	68.6	169.5	223.85	642.15
TOC	NL	mg/kg	26,700	24,100	25,400	25,200	30,600

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Table B-1
Sediment Sample Analytical Results - SVOCs
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-64	LMR11-65	LMR11-65	LMR11-66	LMR11-66
		Field Sample ID	LMR11-88-088	LMR11-65-006	LMR11-65-024	LMR11-66-006	LMR11-66-024
		Sample Date	8/7/2011	8/6/2011	8/6/2011	8/7/2011	8/7/2011
		Depth Interval (in bss)	72- 88	0- 6	6- 24	0- 6	6- 24
Chemical Name	**PEC[1]**	**Unit**					
1,1'-Biphenyl	NL	µg/kg	220 UJ	190 U	150 U	190 UJ	190 UJ
1,2,4,5-Tetrachlorobenzene	NL	µg/kg	220 UJ	190 U	150 U	190 UJ	190 UJ
2,2'-Oxybis(1-chloropropane)	NL	µg/kg	220 UJ	190 U	150 U	190 UJ	190 UJ
2,3,4,6-Tetrachlorophenol	NL	µg/kg	220 UJ	190 U	150 U	190 UJ	190 UJ
2,4,5-Trichlorophenol	NL	µg/kg	220 UJ	190 U	150 U	190 UJ	190 UJ
2,4,6-Trichlorophenol	NL	µg/kg	220 UJ	190 U	150 U	190 UJ	190 UJ
2,4-Dichlorophenol	NL	µg/kg	220 UJ	190 U	150 U	190 UJ	190 UJ
2,4-Dimethylphenol	NL	µg/kg	220 UJ	190 U	150 U	190 UJ	190 UJ
2,4-Dinitrophenol	NL	µg/kg	420 UJ	360 U	300 U	370 UJ	370 UJ
2,4-Dinitrotoluene	NL	µg/kg	220 UJ	190 U	150 U	190 UJ	190 UJ
2,6-Dinitrotoluene	NL	µg/kg	220 UJ	190 U	150 U	190 UJ	190 UJ
2-Chloronaphthalene	NL	µg/kg	220 UJ	190 U	150 U	190 UJ	190 UJ
2-Chlorophenol	NL	µg/kg	220 UJ	190 U	150 U	190 UJ	190 UJ
2-Methylnaphthalene	NL	µg/kg	8 J	3.6 U	13	3.7 UJ	3.7 UJ
2-Methylphenol	NL	µg/kg	220 UJ	190 U	150 U	190 UJ	190 UJ
2-Nitroaniline	NL	µg/kg	420 UJ	360 U	300 U	370 UJ	370 UJ
2-Nitrophenol	NL	µg/kg	220 UJ	190 U	150 U	190 UJ	190 UJ
3,3'-Dichlorobenzidine	NL	µg/kg	220 UJ	190 U	150 U	190 UJ	190 UJ
3-Nitroaniline	NL	µg/kg	420 UJ	360 U	300 U	370 UJ	370 UJ
4,6-Dinitro-2-methylphenol	NL	µg/kg	420 UJ	360 U	300 U	370 UJ	370 UJ
4-Bromophenyl-phenylether	NL	µg/kg	220 UJ	190 U	150 U	190 UJ	190 UJ
4-Chloro-3-methylphenol	NL	µg/kg	220 UJ	190 U	150 U	190 UJ	190 UJ
4-Chloroaniline	NL	µg/kg	220 UJ	190 U	150 U	190 UJ	190 UJ
4-Chlorophenyl-phenylether	NL	µg/kg	220 UJ	190 U	150 U	190 UJ	190 UJ
4-Methylphenol	NL	µg/kg	220 UJ	58 J	54 J	190 UJ	190 UJ
4-Nitroaniline	NL	µg/kg	420 UJ	360 U	300 U	370 UJ	370 UJ
4-Nitrophenol	NL	µg/kg	420 UJ	360 U	300 U	370 UJ	370 UJ
Acenaphthene	NL	µg/kg	4.2 UJ	3.6 U	4.5	3.7 UJ	3.7 UJ
Acenaphthylene	NL	µg/kg	4.2 UJ	3.6 U	4.8	3.7 UJ	3.7 UJ
Acetophenone	NL	µg/kg	220 UJ	190 U	150 U	190 UJ	190 UJ
Anthracene	845	µg/kg	8.9 J	3.6 U	7.4	3.7 UJ	3.7 UJ
Atrazine	NL	µg/kg	220 UJ	190 U	150 U	190 UJ	190 UJ
Benzaldehyde	NL	µg/kg	220 UJ	190 U	150 U	190 UJ	190 UJ
Benzo(a)anthracene	1050	µg/kg	16 J	4.7	24	3.7 UJ	4.6 J
Benzo(a)pyrene	1450	µg/kg	17 J	5	34	3.7 UJ	5.4 J

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Table B-1
Sediment Sample Analytical Results - SVOCs
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-64	LMR11-65	LMR11-65	LMR11-66	LMR11-66
		Field Sample ID	LMR11-88-088	LMR11-65-006	LMR11-65-024	LMR11-66-006	LMR11-66-024
		Sample Date	8/7/2011	8/6/2011	8/6/2011	8/7/2011	8/7/2011
		Depth Interval (in bss)	72- 88	0- 6	6- 24	0- 6	6- 24
Chemical Name	**PEC[1]**	**Unit**					
Benzo(b)fluoranthene	NL	µg/kg	22 J	7.2	45	4.6 J	8.6 J
Benzo(g,h,i)perylene	NL	µg/kg	9 J	3.6 U	18	3.7 UJ	3.7 UJ
Benzo(k)fluoranthene	NL	µg/kg	7.6 J	3.6 U	17	3.7 UJ	3.7 UJ
Bis(2-chloroethoxy)methane	NL	µg/kg	220 UJ	190 U	150 U	190 UJ	190 UJ
Bis(2-chloroethyl)ether	NL	µg/kg	220 UJ	190 U	150 U	190 UJ	190 UJ
Bis(2-ethylhexyl)phthalate	NL	µg/kg	220 UJ	190 U	44 J	190 UJ	190 UJ
Butylbenzylphthalate	NL	µg/kg	220 UJ	190 U	150 U	190 UJ	190 UJ
Caprolactam	NL	µg/kg	220 UJ	190 U	150 U	190 UJ	190 UJ
Carbazole	NL	µg/kg	220 UJ	190 U	150 U	190 UJ	190 UJ
Chrysene	1290	µg/kg	17 J	4.9	25	3.7 UJ	5.6 J
Dibenzo(a,h)anthracene	NL	µg/kg	4.2 UJ	3.6 U	7.6	3.7 UJ	3.7 UJ
Dibenzofuran	NL	µg/kg	220 UJ	190 U	150 U	190 UJ	190 UJ
Diethylphthalate	NL	µg/kg	220 UJ	190 U	150 U	190 UJ	190 UJ
Dimethylphthalate	NL	µg/kg	220 UJ	190 U	150 U	190 UJ	190 UJ
Di-n-butylphthalate	NL	µg/kg	220 UJ	190 U	150 U	190 UJ	190 UJ
Di-n-octylphthalate	NL	µg/kg	220 UJ	190 U	150 U	190 UJ	190 UJ
Fluoranthene	2230	µg/kg	33 J	10	43	6.7 J	15 J
Fluorene	536	µg/kg	5.9 J	3.6 U	5.3	3.7 UJ	3.7 UJ
Hexachlorobenzene	NL	µg/kg	220 UJ	190 U	150 U	190 UJ	190 UJ
Hexachlorobutadiene	NL	µg/kg	220 UJ	190 U	150 U	190 UJ	190 UJ
Hexachlorocyclopentadiene	NL	µg/kg	220 UJ	190 UJ	150 UJ	190 UJ	190 UJ
Hexachloroethane	NL	µg/kg	220 UJ	190 U	150 U	190 UJ	190 UJ
Indeno(1,2,3-cd)pyrene	NL	µg/kg	7.5 J	3.6 U	22	3.7 UJ	3.7 UJ
Isophorone	NL	µg/kg	220 UJ	190 U	150 U	190 UJ	190 UJ
Naphthalene	561	µg/kg	12 J	7.6		3.7 UJ	3.7 UJ
Nitrobenzene	NL	µg/kg	220 UJ	190 U	150 U	190 UJ	190 UJ
N-Nitroso-di-n-propylamine	NL	µg/kg	220 UJ	190 U	150 U	190 UJ	190 UJ
N-Nitrosodiphenylamine	NL	µg/kg	220 UJ	190 U	150 U	190 UJ	190 UJ
Pentachlorophenol	NL	µg/kg	8.6 UJ	7.3 U	6 U	7.5 UJ	7.6 UJ
Phenanthrene	1170	µg/kg	33 J	8.3	33	5.1 J	9.9 J
Phenol	NL	µg/kg	220 UJ	190 U	150 U	190 UJ	190 UJ
Pyrene	1520	µg/kg	33 J	8.9	35	5.7 J	10 J
Total PAH 17	22800	µg/kg	236.2	72.8	338.6	46.15	77.6
TOC	NL	mg/kg	20,500	17,700	22,000	28,000	26,500

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Table B-1
Sediment Sample Analytical Results - SVOCs
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-66	LMR11-66	LMR11-66	LMR11-66	LMR11-66
		Field Sample ID	LMR11-66-048	LMR11-66-048FS	LMR11-66-072	LMR11-66-096	LMR11-66-117
		Sample Date	8/7/2011	8/7/2011	8/7/2011	8/7/2011	8/7/2011
		Depth Interval (in bss)	24- 48	24- 48	48- 72	72- 96	96- 117
Chemical Name	**PEC[1]**	**Unit**					
1,1'-Biphenyl	NL	µg/kg	180 UJ	160 UJ	170 UJ	190 UJ	160 UJ
1,2,4,5-Tetrachlorobenzene	NL	µg/kg	180 UJ	160 UJ	170 UJ	190 UJ	160 UJ
2,2'-Oxybis(1-chloropropane)	NL	µg/kg	180 UJ	160 UJ	170 UJ	190 UJ	160 UJ
2,3,4,6-Tetrachlorophenol	NL	µg/kg	180 UJ	160 UJ	170 UJ	190 UJ	160 UJ
2,4,5-Trichlorophenol	NL	µg/kg	180 UJ	160 UJ	170 UJ	190 UJ	160 UJ
2,4,6-Trichlorophenol	NL	µg/kg	180 UJ	160 UJ	170 UJ	190 UJ	160 UJ
2,4-Dichlorophenol	NL	µg/kg	180 UJ	160 UJ	170 UJ	190 UJ	160 UJ
2,4-Dimethylphenol	NL	µg/kg	180 UJ	160 UJ	170 UJ	190 UJ	160 UJ
2,4-Dinitrophenol	NL	µg/kg	350 UJ	320 UJ	330 UJ	360 UJ	320 UJ
2,4-Dinitrotoluene	NL	µg/kg	180 UJ	160 UJ	170 UJ	190 UJ	160 UJ
2,6-Dinitrotoluene	NL	µg/kg	180 UJ	160 UJ	170 UJ	190 UJ	160 UJ
2-Chloronaphthalene	NL	µg/kg	180 UJ	160 UJ	170 UJ	190 UJ	160 UJ
2-Chlorophenol	NL	µg/kg	180 UJ	160 UJ	170 UJ	190 UJ	160 UJ
2-Methylnaphthalene	NL	µg/kg	3.5 UJ	3.2 UJ	3.3 UJ	13 J	3.2 UJ
2-Methylphenol	NL	µg/kg	180 UJ	160 UJ	170 UJ	190 UJ	160 UJ
2-Nitroaniline	NL	µg/kg	350 UJ	320 UJ	330 UJ	360 UJ	320 UJ
2-Nitrophenol	NL	µg/kg	180 UJ	160 UJ	170 UJ	190 UJ	160 UJ
3,3'-Dichlorobenzidine	NL	µg/kg	180 UJ	160 UJ	170 UJ	190 UJ	160 UJ
3-Nitroaniline	NL	µg/kg	350 UJ	320 UJ	330 UJ	360 UJ	320 UJ
4,6-Dinitro-2-methylphenol	NL	µg/kg	350 UJ	320 UJ	330 UJ	360 UJ	320 UJ
4-Bromophenyl-phenylether	NL	µg/kg	180 UJ	160 UJ	170 UJ	190 UJ	160 UJ
4-Chloro-3-methylphenol	NL	µg/kg	180 UJ	160 UJ	170 UJ	190 UJ	160 UJ
4-Chloroaniline	NL	µg/kg	180 UJ	160 UJ	170 UJ	190 UJ	160 UJ
4-Chlorophenyl-phenylether	NL	µg/kg	180 UJ	160 UJ	170 UJ	190 UJ	160 UJ
4-Methylphenol	NL	µg/kg	180 UJ	160 UJ	170 UJ	61 J	160 UJ
4-Nitroaniline	NL	µg/kg	350 UJ	320 UJ	330 UJ	360 UJ	320 UJ
4-Nitrophenol	NL	µg/kg	350 UJ	320 UJ	330 UJ	360 UJ	320 UJ
Acenaphthene	NL	µg/kg	3.5 UJ	3.2 UJ	3.3 UJ	3.6 UJ	3.2 UJ
Acenaphthylene	NL	µg/kg	3.5 UJ	3.2 UJ	3.3 UJ	3.6 UJ	3.2 UJ
Acetophenone	NL	µg/kg	180 UJ	160 UJ	170 UJ	190 UJ	160 UJ
Anthracene	845	µg/kg	3.5 UJ	3.2 UJ	3.3 UJ	11 J	3.2 UJ
Atrazine	NL	µg/kg	180 UJ	160 UJ	170 UJ	190 UJ	160 UJ
Benzaldehyde	NL	µg/kg	180 UJ	160 UJ	170 UJ	190 UJ	160 UJ
Benzo(a)anthracene	1050	µg/kg	15 J	11 J	6.1 J	36 J	3.2 UJ
Benzo(a)pyrene	1450	µg/kg	18 J	10 J	6.8 J	36 J	3.2 UJ

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Table B-1
Sediment Sample Analytical Results - SVOCs
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-66	LMR11-66	LMR11-66	LMR11-66	LMR11-66
		Field Sample ID	LMR11-66-048	LMR11-66-048FS	LMR11-66-072	LMR11-66-096	LMR11-66-117
		Sample Date	8/7/2011	8/7/2011	8/7/2011	8/7/2011	8/7/2011
		Depth Interval (in bss)	24- 48	24- 48	48- 72	72- 96	96- 117
Chemical Name	**PEC[1]**	**Unit**					
Benzo(b)fluoranthene	NL	µg/kg	27 J	20 J	10 J	40 J	3.2 UJ
Benzo(g,h,i)perylene	NL	µg/kg	10 J	6.7 J	5.1 J	21 J	3.2 UJ
Benzo(k)fluoranthene	NL	µg/kg	10 J	6.1 J	4 J	27 J	3.2 UJ
Bis(2-chloroethoxy)methane	NL	µg/kg	180 UJ	160 UJ	170 UJ	190 UJ	160 UJ
Bis(2-chloroethyl)ether	NL	µg/kg	180 UJ	160 UJ	170 UJ	190 UJ	160 UJ
Bis(2-ethylhexyl)phthalate	NL	µg/kg	180 UJ	66 J	170 UJ	190 UJ	160 UJ
Butylbenzylphthalate	NL	µg/kg	180 UJ	160 UJ	170 UJ	190 UJ	160 UJ
Caprolactam	NL	µg/kg	180 UJ	160 UJ	170 UJ	190 UJ	160 UJ
Carbazole	NL	µg/kg	180 UJ	160 UJ	170 UJ	190 UJ	160 UJ
Chrysene	1290	µg/kg	17 J	22 J	8.8 J	41 J	3.2 UJ
Dibenzo(a,h)anthracene	NL	µg/kg	3.5 UJ	3.2 UJ	3.3 UJ	5 J	3.2 UJ
Dibenzofuran	NL	µg/kg	180 UJ	160 UJ	170 UJ	190 UJ	160 UJ
Diethylphthalate	NL	µg/kg	180 UJ	160 UJ	170 UJ	190 UJ	160 UJ
Dimethylphthalate	NL	µg/kg	180 UJ	160 UJ	170 UJ	190 UJ	160 UJ
Di-n-butylphthalate	NL	µg/kg	180 UJ	160 UJ	170 UJ	190 UJ	160 UJ
Di-n-octylphthalate	NL	µg/kg	180 UJ	160 UJ	170 UJ	190 UJ	160 UJ
Fluoranthene	2230	µg/kg	24 J	25 J	19 J	73 J	3.2 UJ
Fluorene	536	µg/kg	3.5 UJ	3.2 UJ	3.3 UJ	5.8 J	3.2 UJ
Hexachlorobenzene	NL	µg/kg	180 UJ	160 UJ	170 UJ	190 UJ	160 UJ
Hexachlorobutadiene	NL	µg/kg	180 UJ	160 UJ	170 UJ	190 UJ	160 UJ
Hexachlorocyclopentadiene	NL	µg/kg	180 UJ	160 UJ	170 UJ	190 UJ	160 UJ
Hexachloroethane	NL	µg/kg	180 UJ	160 UJ	170 UJ	190 UJ	160 UJ
Indeno(1,2,3-cd)pyrene	NL	µg/kg	10 J	6.4 J	4.7 J	20 J	3.2 UJ
Isophorone	NL	µg/kg	180 UJ	160 UJ	170 UJ	190 UJ	160 UJ
Naphthalene	561	µg/kg	3.5 UJ	3.2 UJ	4 J	12 J	3.2 UJ
Nitrobenzene	NL	µg/kg	180 UJ	160 UJ	170 UJ	190 UJ	160 UJ
N-Nitroso-di-n-propylamine	NL	µg/kg	180 UJ	160 UJ	170 UJ	190 UJ	160 UJ
N-Nitrosodiphenylamine	NL	µg/kg	180 UJ	160 UJ	170 UJ	190 UJ	160 UJ
Pentachlorophenol	NL	µg/kg	7.1 UJ	6.4 UJ	6.7 UJ	7.3 UJ	6.4 UJ
Phenanthrene	1170	µg/kg	13 J	12 J	13 J	43 J	3.2 UJ
Phenol	NL	µg/kg	180 UJ	160 UJ	170 UJ	190 UJ	160 UJ
Pyrene	1520	µg/kg	18 J	16 J	13 J	66 J	3.2 UJ
Total PAH 17	22800	µg/kg	174.25	146.4	104.4	453.4	27.2
TOC	NL	mg/kg	23,800 J	24,500	25,600	24,500	34,900

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Table B-1
Sediment Sample Analytical Results - SVOCs
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-67	LMR11-67	LMR11-67	LMR11-67	LMR11-68
		Field Sample ID	LMR11-67-006	LMR11-67-024	LMR11-67-048	LMR11-67-077	LMR11-68-006
		Sample Date	8/6/2011	8/6/2011	8/6/2011	8/6/2011	8/7/2011
		Depth Interval (in bss)	0- 6	6- 24	24- 48	48- 77	0- 6
Chemical Name	**PEC[1]**	**Unit**					
1,1'-Biphenyl	NL	µg/kg	180 U	180 U	160 U	150 U	180 UJ
1,2,4,5-Tetrachlorobenzene	NL	µg/kg	180 U	180 U	160 U	150 U	180 UJ
2,2'-Oxybis(1-chloropropane)	NL	µg/kg	180 U	180 U	160 U	150 U	180 UJ
2,3,4,6-Tetrachlorophenol	NL	µg/kg	180 U	180 U	160 U	150 U	180 UJ
2,4,5-Trichlorophenol	NL	µg/kg	180 U	180 U	160 U	150 U	180 UJ
2,4,6-Trichlorophenol	NL	µg/kg	180 U	180 U	160 U	150 U	180 UJ
2,4-Dichlorophenol	NL	µg/kg	180 U	180 U	160 U	150 U	180 UJ
2,4-Dimethylphenol	NL	µg/kg	180 U	180 U	160 U	150 U	180 UJ
2,4-Dinitrophenol	NL	µg/kg	350 U	350 U	310 U	290 U	350 UJ
2,4-Dinitrotoluene	NL	µg/kg	180 U	180 U	160 U	150 U	180 UJ
2,6-Dinitrotoluene	NL	µg/kg	180 U	180 U	160 U	150 U	180 UJ
2-Chloronaphthalene	NL	µg/kg	180 U	180 U	160 U	150 U	180 UJ
2-Chlorophenol	NL	µg/kg	180 U	180 U	160 U	150 U	180 UJ
2-Methylnaphthalene	NL	µg/kg	3.5 U	4.2	5.3	15	3.5 UJ
2-Methylphenol	NL	µg/kg	180 U	180 U	160 U	150 U	180 UJ
2-Nitroaniline	NL	µg/kg	350 U	350 U	310 U	290 U	350 UJ
2-Nitrophenol	NL	µg/kg	180 U	180 U	160 U	150 U	180 UJ
3,3'-Dichlorobenzidine	NL	µg/kg	180 U	180 U	160 U	150 U	180 UJ
3-Nitroaniline	NL	µg/kg	350 U	350 U	310 U	290 U	350 UJ
4,6-Dinitro-2-methylphenol	NL	µg/kg	350 U	350 U	310 U	290 U	350 UJ
4-Bromophenyl-phenylether	NL	µg/kg	180 U	180 U	160 U	150 U	180 UJ
4-Chloro-3-methylphenol	NL	µg/kg	180 U	180 U	160 U	150 U	180 UJ
4-Chloroaniline	NL	µg/kg	180 U	180 U	160 U	150 U	180 UJ
4-Chlorophenyl-phenylether	NL	µg/kg	180 U	180 U	160 U	150 U	180 UJ
4-Methylphenol	NL	µg/kg	56 J	91 J	86 J	39 J	180 UJ
4-Nitroaniline	NL	µg/kg	350 U	350 U	310 U	290 U	350 UJ
4-Nitrophenol	NL	µg/kg	350 U	350 U	310 U	290 U	350 UJ
Acenaphthene	NL	µg/kg	3.5 U	3.5 U	3.1 U	15	3.5 UJ
Acenaphthylene	NL	µg/kg	3.5 U	3.5 U	6.1	15	3.5 UJ
Acetophenone	NL	µg/kg	180 U	180 U	160 U	150 U	180 UJ
Anthracene	845	µg/kg	5.2	4.4	9.6	29	3.5 UJ
Atrazine	NL	µg/kg	180 U	180 U	160 U	150 U	180 UJ
Benzaldehyde	NL	µg/kg	180 U	180 U	160 U	150 U	180 UJ
Benzo(a)anthracene	1050	µg/kg	13	11	48	88	6.1 J
Benzo(a)pyrene	1450	µg/kg	18	14	48	87	6.8 J

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Table B-1
Sediment Sample Analytical Results - SVOCs
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-67	LMR11-67	LMR11-67	LMR11-67	LMR11-68
		Field Sample ID	LMR11-67-006	LMR11-67-024	LMR11-67-048	LMR11-67-077	LMR11-68-006
		Sample Date	8/6/2011	8/6/2011	8/6/2011	8/6/2011	8/7/2011
		Depth Interval (in bss)	0- 6	6- 24	24- 48	48- 77	0- 6
Chemical Name	**PEC[1]**	**Unit**					
Benzo(b)fluoranthene	NL	µg/kg	21	19	53	100	11 J
Benzo(g,h,i)perylene	NL	µg/kg	7.6	6.7	20	39	5.2 J
Benzo(k)fluoranthene	NL	µg/kg	8.8	7.7	20	43	4.2 J
Bis(2-chloroethoxy)methane	NL	µg/kg	180 U	180 U	160 U	150 U	180 UJ
Bis(2-chloroethyl)ether	NL	µg/kg	180 U	180 U	160 U	150 U	180 UJ
Bis(2-ethylhexyl)phthalate	NL	µg/kg	160 J	68 J	43 J	150 U	180 UJ
Butylbenzylphthalate	NL	µg/kg	180 U	180 U	160 U	150 U	180 UJ
Caprolactam	NL	µg/kg	180 U	180 U	160 U	150 U	180 UJ
Carbazole	NL	µg/kg	180 U	180 U	160 U	150 U	180 UJ
Chrysene	1290	µg/kg	14	13	45	86	7.2 J
Dibenzo(a,h)anthracene	NL	µg/kg	3.5 U	3.5 U	8.1	19	3.5 UJ
Dibenzofuran	NL	µg/kg	180 U	180 U	160 U	150 U	180 UJ
Diethylphthalate	NL	µg/kg	180 U	180 U	160 U	150 U	180 UJ
Dimethylphthalate	NL	µg/kg	180 U	180 U	160 U	150 U	180 UJ
Di-n-butylphthalate	NL	µg/kg	180 U	180 U	160 U	150 U	180 UJ
Di-n-octylphthalate	NL	µg/kg	180 U	180 U	160 U	150 U	180 UJ
Fluoranthene	2230	µg/kg	25	22	75	140	17 J
Fluorene	536	µg/kg	3.5 U	3.5 U	4.2	15	3.5 UJ
Hexachlorobenzene	NL	µg/kg	180 U	180 U	160 U	150 U	180 UJ
Hexachlorobutadiene	NL	µg/kg	180 U	180 U	160 U	150 U	180 UJ
Hexachlorocyclopentadiene	NL	µg/kg	180 UJ	180 UJ	160 UJ	150 UJ	180 UJ
Hexachloroethane	NL	µg/kg	180 U	180 U	160 U	150 U	180 UJ
Indeno(1,2,3-cd)pyrene	NL	µg/kg	9.4	8.8	25	52	4.5 J
Isophorone	NL	µg/kg	180 U	180 U	160 U	150 U	180 UJ
Naphthalene	561	µg/kg	6.6	11	9.2	29	3.5 UJ
Nitrobenzene	NL	µg/kg	180 U	180 U	160 U	150 U	180 UJ
N-Nitroso-di-n-propylamine	NL	µg/kg	180 U	180 U	160 U	150 U	180 UJ
N-Nitrosodiphenylamine	NL	µg/kg	180 U	180 U	160 U	150 U	180 UJ
Pentachlorophenol	NL	µg/kg	7 U	7.1 U	6.4 U	5.9 U	7.2 UJ
Phenanthrene	1170	µg/kg	20	17	35	110	12 J
Phenol	NL	µg/kg	180 U	180 U	160 U	150 U	180 UJ
Pyrene	1520	µg/kg	22	19	77	120	14 J
Total PAH 17	22800	µg/kg	179.35	164.8	490.05	1,002	100.25
TOC	NL	mg/kg	24,400	27,300	29,400	32,800	27,000

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Table B-1
Sediment Sample Analytical Results - SVOCs
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-68	LMR11-68	LMR11-68	LMR11-68	LMR11-69
		Field Sample ID	LMR11-68-024	LMR11-68-048	LMR11-68-072	LMR11-68-096	LMR11-69-006
		Sample Date	8/7/2011	8/7/2011	8/7/2011	8/7/2011	8/6/2011
		Depth Interval (in bss)	6- 24	24- 48	48- 72	72- 96	0- 6
Chemical Name	**PEC[1]**	**Unit**					
1,1'-Biphenyl	NL	µg/kg	190 UJ	190 UJ	180 UJ	180 UJ	390 J
1,2,4,5-Tetrachlorobenzene	NL	µg/kg	190 UJ	190 UJ	180 UJ	180 UJ	120 UJ
2,2'-Oxybis(1-chloropropane)	NL	µg/kg	190 UJ	190 UJ	180 UJ	180 UJ	120 UJ
2,3,4,6-Tetrachlorophenol	NL	µg/kg	190 UJ	190 UJ	180 UJ	180 UJ	120 UJ
2,4,5-Trichlorophenol	NL	µg/kg	190 UJ	190 UJ	180 UJ	180 UJ	120 UJ
2,4,6-Trichlorophenol	NL	µg/kg	190 UJ	190 UJ	180 UJ	180 UJ	120 UJ
2,4-Dichlorophenol	NL	µg/kg	190 UJ	190 UJ	180 UJ	180 UJ	120 UJ
2,4-Dimethylphenol	NL	µg/kg	190 UJ	190 UJ	180 UJ	180 UJ	120 UJ
2,4-Dinitrophenol	NL	µg/kg	370 UJ	370 UJ	350 UJ	340 UJ	230 UJ
2,4-Dinitrotoluene	NL	µg/kg	190 UJ	190 UJ	180 UJ	180 UJ	120 UJ
2,6-Dinitrotoluene	NL	µg/kg	190 UJ	190 UJ	180 UJ	180 UJ	120 UJ
2-Chloronaphthalene	NL	µg/kg	190 UJ	190 UJ	180 UJ	180 UJ	120 UJ
2-Chlorophenol	NL	µg/kg	190 UJ	190 UJ	180 UJ	180 UJ	120 UJ
2-Methylnaphthalene	NL	µg/kg	3.7 UJ	3.7 UJ	3.5 UJ	3.4 UJ	1,400 J
2-Methylphenol	NL	µg/kg	190 UJ	190 UJ	180 UJ	180 UJ	120 UJ
2-Nitroaniline	NL	µg/kg	370 UJ	370 UJ	350 UJ	340 UJ	230 UJ
2-Nitrophenol	NL	µg/kg	190 UJ	190 UJ	180 UJ	180 UJ	120 UJ
3,3'-Dichlorobenzidine	NL	µg/kg	190 UJ	190 UJ	180 UJ	180 UJ	120 UJ
3-Nitroaniline	NL	µg/kg	370 UJ	370 UJ	350 UJ	340 UJ	230 UJ
4,6-Dinitro-2-methylphenol	NL	µg/kg	370 UJ	370 UJ	350 UJ	340 UJ	230 UJ
4-Bromophenyl-phenylether	NL	µg/kg	190 UJ	190 UJ	180 UJ	180 UJ	120 UJ
4-Chloro-3-methylphenol	NL	µg/kg	190 UJ	190 UJ	180 UJ	180 UJ	120 UJ
4-Chloroaniline	NL	µg/kg	190 UJ	190 UJ	180 UJ	180 UJ	44 J
4-Chlorophenyl-phenylether	NL	µg/kg	190 UJ	190 UJ	180 UJ	180 UJ	120 UJ
4-Methylphenol	NL	µg/kg	190 UJ	190 UJ	180 UJ	180 UJ	110 J
4-Nitroaniline	NL	µg/kg	370 UJ	370 UJ	350 UJ	340 UJ	230 UJ
4-Nitrophenol	NL	µg/kg	370 UJ	370 UJ	350 UJ	340 UJ	230 UJ
Acenaphthene	NL	µg/kg	3.7 UJ	3.7 UJ	3.5 UJ	3.4 UJ	13,000 J
Acenaphthylene	NL	µg/kg	3.7 UJ	3.7 UJ	3.5 UJ	3.4 UJ	2,700 J
Acetophenone	NL	µg/kg	190 UJ	190 UJ	180 UJ	180 UJ	120 UJ
Anthracene	845	µg/kg	3.7 UJ	3.7 UJ	3.5 UJ	3.7 J	21,000 J
Atrazine	NL	µg/kg	190 UJ	190 UJ	180 UJ	180 UJ	120 UJ
Benzaldehyde	NL	µg/kg	190 UJ	190 UJ	180 UJ	180 UJ	120 UJ
Benzo(a)anthracene	1050	µg/kg	3.7 UJ	3.7 UJ	3.5 UJ	8.4 J	22,000 J
Benzo(a)pyrene	1450	µg/kg	3.7 UJ	3.7 UJ	3.5 UJ	9.5 J	14,000 J

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Table B-1
Sediment Sample Analytical Results - SVOCs
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-68	LMR11-68	LMR11-68	LMR11-68	LMR11-69
		Field Sample ID	LMR11-68-024	LMR11-68-048	LMR11-68-072	LMR11-68-096	LMR11-69-006
		Sample Date	8/7/2011	8/7/2011	8/7/2011	8/7/2011	8/6/2011
		Depth Interval (in bss)	6- 24	24- 48	48- 72	72- 96	0- 6
Chemical Name	**PEC[1]**	**Unit**					
Benzo(b)fluoranthene	NL	µg/kg	5 J	3.7 UJ	3.5 UJ	15 J	17,000 J
Benzo(g,h,i)perylene	NL	µg/kg	3.7 UJ	3.7 UJ	3.5 UJ	6.6 J	4700 J
Benzo(k)fluoranthene	NL	µg/kg	3.7 UJ	3.7 UJ	3.5 UJ	5.9 J	11,000 J
Bis(2-chloroethoxy)methane	NL	µg/kg	190 UJ	190 UJ	180 UJ	180 UJ	120 UJ
Bis(2-chloroethyl)ether	NL	µg/kg	190 UJ	190 UJ	180 UJ	180 UJ	120 UJ
Bis(2-ethylhexyl)phthalate	NL	µg/kg	190 UJ	190 UJ	180 UJ	180 UJ	1,500 J
Butylbenzylphthalate	NL	µg/kg	190 UJ	190 UJ	180 UJ	180 UJ	120 UJ
Caprolactam	NL	µg/kg	190 UJ	190 UJ	180 UJ	180 UJ	120 UJ
Carbazole	NL	µg/kg	190 UJ	190 UJ	180 UJ	180 UJ	2,000 J
Chrysene	1290	µg/kg	3.7 UJ	3.7 UJ	3.5 UJ	11 J	23,000 J
Dibenzo(a,h)anthracene	NL	µg/kg	3.7 UJ	3.7 UJ	3.5 UJ	3.4 UJ	1,900 J
Dibenzofuran	NL	µg/kg	190 UJ	190 UJ	180 UJ	180 UJ	3,200 J
Diethylphthalate	NL	µg/kg	190 UJ	190 UJ	180 UJ	180 UJ	120 UJ
Dimethylphthalate	NL	µg/kg	190 UJ	190 UJ	180 UJ	180 UJ	120 UJ
Di-n-butylphthalate	NL	µg/kg	190 UJ	190 UJ	180 UJ	180 UJ	410 J
Di-n-octylphthalate	NL	µg/kg	190 UJ	190 UJ	180 UJ	180 UJ	470 J
Fluoranthene	2230	µg/kg	8.9 J	3.7 UJ	3.5 UJ	22 J	59,000 J
Fluorene	536	µg/kg	3.7 UJ	3.7 UJ	3.5 UJ	3.4 UJ	14,000 J
Hexachlorobenzene	NL	µg/kg	190 UJ	190 UJ	180 UJ	180 UJ	120 UJ
Hexachlorobutadiene	NL	µg/kg	190 UJ	190 UJ	180 UJ	180 UJ	120 UJ
Hexachlorocyclopentadiene	NL	µg/kg	190 UJ	190 UJ	180 UJ	180 UJ	120 UJ
Hexachloroethane	NL	µg/kg	190 UJ	190 UJ	180 UJ	180 UJ	120 UJ
Indeno(1,2,3-cd)pyrene	NL	µg/kg	3.7 UJ	3.7 UJ	3.5 UJ	6 J	6200 J
Isophorone	NL	µg/kg	190 UJ	190 UJ	180 UJ	180 UJ	120 UJ
Naphthalene	561	µg/kg	3.7 UJ	3.7 UJ	3.5 UJ	3.7 J	3,700 J
Nitrobenzene	NL	µg/kg	190 UJ	190 UJ	180 UJ	180 UJ	120 UJ
N-Nitroso-di-n-propylamine	NL	µg/kg	190 UJ	190 UJ	180 UJ	180 UJ	120 UJ
N-Nitrosodiphenylamine	NL	µg/kg	190 UJ	190 UJ	180 UJ	180 UJ	120 UJ
Pentachlorophenol	NL	µg/kg	7.6 UJ	7.4 UJ	7.1 UJ	6.9 UJ	46 UJ
Phenanthrene	1170	µg/kg	7 J	3.7 UJ	3.5 UJ	15 J	38,000 J
Phenol	NL	µg/kg	190 UJ	190 UJ	180 UJ	180 UJ	51 J
Pyrene	1520	µg/kg	7.1 J	3.7 UJ	3.5 UJ	18 J	45,000 J
Total PAH 17	22800	µg/kg	52.05	31.45	29.75	133.3	297,600
TOC	NL	mg/kg	23,600	23,800	22,400	23,000	45,400

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Table B-1
Sediment Sample Analytical Results - SVOCs
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-70	LMR11-70	LMR11-70	LMR11-70	LMR11-70
		Field Sample ID	LMR11-70-006	LMR11-70-024	LMR11-70-048	LMR11-70-072	LMR11-70-072FS
		Sample Date	8/7/2011	8/7/2011	8/7/2011	8/7/2011	8/7/2011
		Depth Interval (in bss)	0- 6	6- 24	24- 48	48- 72	48- 72
Chemical Name	**PEC[1]**	**Unit**					
1,1'-Biphenyl	NL	µg/kg	400 UJ	370 UJ	320 UJ	180 UJ	320 UJ
1,2,4,5-Tetrachlorobenzene	NL	µg/kg	400 UJ	370 UJ	320 UJ	180 UJ	320 UJ
2,2'-Oxybis(1-chloropropane)	NL	µg/kg	400 UJ	370 UJ	320 UJ	180 UJ	320 UJ
2,3,4,6-Tetrachlorophenol	NL	µg/kg	400 UJ	370 UJ	320 UJ	180 UJ	320 UJ
2,4,5-Trichlorophenol	NL	µg/kg	400 UJ	370 UJ	320 UJ	180 UJ	320 UJ
2,4,6-Trichlorophenol	NL	µg/kg	400 UJ	370 UJ	320 UJ	180 UJ	320 UJ
2,4-Dichlorophenol	NL	µg/kg	400 UJ	370 UJ	320 UJ	180 UJ	320 UJ
2,4-Dimethylphenol	NL	µg/kg	400 UJ	370 UJ	320 UJ	180 UJ	320 UJ
2,4-Dinitrophenol	NL	µg/kg	770 UJ	710 UJ	620 UJ	350 UJ	620 UJ
2,4-Dinitrotoluene	NL	µg/kg	400 UJ	370 UJ	320 UJ	180 UJ	320 UJ
2,6-Dinitrotoluene	NL	µg/kg	400 UJ	370 UJ	320 UJ	180 UJ	320 UJ
2-Chloronaphthalene	NL	µg/kg	400 UJ	370 UJ	320 UJ	180 UJ	320 UJ
2-Chlorophenol	NL	µg/kg	400 UJ	370 UJ	320 UJ	180 UJ	320 UJ
2-Methylnaphthalene	NL	µg/kg	7.7 UJ	7.1 UJ	6.2 UJ	3.5 UJ	6.7 J
2-Methylphenol	NL	µg/kg	400 UJ	370 UJ	320 UJ	180 UJ	320 UJ
2-Nitroaniline	NL	µg/kg	770 UJ	710 UJ	620 UJ	350 UJ	620 UJ
2-Nitrophenol	NL	µg/kg	400 UJ	370 UJ	320 UJ	180 UJ	320 UJ
3,3'-Dichlorobenzidine	NL	µg/kg	400 UJ	370 UJ	320 UJ	180 UJ	320 UJ
3-Nitroaniline	NL	µg/kg	770 UJ	710 UJ	620 UJ	350 UJ	620 UJ
4,6-Dinitro-2-methylphenol	NL	µg/kg	770 UJ	710 UJ	620 UJ	350 UJ	620 UJ
4-Bromophenyl-phenylether	NL	µg/kg	400 UJ	370 UJ	320 UJ	180 UJ	320 UJ
4-Chloro-3-methylphenol	NL	µg/kg	400 UJ	370 UJ	320 UJ	180 UJ	320 UJ
4-Chloroaniline	NL	µg/kg	400 UJ	370 UJ	320 UJ	180 UJ	320 UJ
4-Chlorophenyl-phenylether	NL	µg/kg	400 UJ	370 UJ	320 UJ	180 UJ	320 UJ
4-Methylphenol	NL	µg/kg	400 UJ	370 UJ	320 UJ	180 UJ	320 UJ
4-Nitroaniline	NL	µg/kg	770 UJ	710 UJ	620 UJ	350 UJ	620 UJ
4-Nitrophenol	NL	µg/kg	770 UJ	710 UJ	620 UJ	350 UJ	620 UJ
Acenaphthene	NL	µg/kg	7.7 UJ	7.1 UJ	6.2 UJ	3.5 UJ	6.2 UJ
Acenaphthylene	NL	µg/kg	7.7 UJ	7.1 UJ	6.2 UJ	3.5 UJ	6.2 UJ
Acetophenone	NL	µg/kg	400 UJ	370 UJ	320 UJ	180 UJ	320 UJ
Anthracene	845	µg/kg	7.7 UJ	7.1 UJ	6.2 UJ	3.5 UJ	6.2 UJ
Atrazine	NL	µg/kg	400 UJ	370 UJ	320 UJ	180 UJ	320 UJ
Benzaldehyde	NL	µg/kg	400 UJ	370 UJ	320 UJ	180 UJ	320 UJ
Benzo(a)anthracene	1050	µg/kg	7.7 UJ	7.1 UJ	6.2 UJ	4.1 J	13 J
Benzo(a)pyrene	1450	µg/kg	7.7 UJ	7.1 UJ	6.2 UJ	4.3 J	20 J

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Table B-1
Sediment Sample Analytical Results - SVOCs
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-70	LMR11-70	LMR11-70	LMR11-70	LMR11-70
		Field Sample ID	LMR11-70-006	LMR11-70-024	LMR11-70-048	LMR11-70-072	LMR11-70-072FS
		Sample Date	8/7/2011	8/7/2011	8/7/2011	8/7/2011	8/7/2011
		Depth Interval (in bss)	0- 6	6- 24	24- 48	48- 72	48- 72
Chemical Name	**PEC[1]**	**Unit**					
Benzo(b)fluoranthene	NL	µg/kg	7.7 UJ	7.1 UJ	6.2 UJ	7.2 J	25 J
Benzo(g,h,i)perylene	NL	µg/kg	7.7 UJ	7.1 UJ	6.2 UJ	3.5 UJ	11 J
Benzo(k)fluoranthene	NL	µg/kg	7.7 UJ	7.1 UJ	6.2 UJ	3.5 UJ	11 J
Bis(2-chloroethoxy)methane	NL	µg/kg	400 UJ	370 UJ	320 UJ	180 UJ	320 UJ
Bis(2-chloroethyl)ether	NL	µg/kg	400 UJ	370 UJ	320 UJ	180 UJ	320 UJ
Bis(2-ethylhexyl)phthalate	NL	µg/kg	400 UJ	370 UJ	320 UJ	180 UJ	320 UJ
Butylbenzylphthalate	NL	µg/kg	400 UJ	370 UJ	320 UJ	180 UJ	320 UJ
Caprolactam	NL	µg/kg	400 UJ	370 UJ	320 UJ	180 UJ	320 UJ
Carbazole	NL	µg/kg	400 UJ	370 UJ	320 UJ	180 UJ	320 UJ
Chrysene	1290	µg/kg	7.7 UJ	7.1 UJ	6.2 UJ	4.4 J	15 J
Dibenzo(a,h)anthracene	NL	µg/kg	7.7 UJ	7.1 UJ	6.2 UJ	3.5 UJ	6.2 UJ
Dibenzofuran	NL	µg/kg	400 UJ	370 UJ	320 UJ	180 UJ	320 UJ
Diethylphthalate	NL	µg/kg	400 UJ	370 UJ	320 UJ	180 UJ	320 UJ
Dimethylphthalate	NL	µg/kg	400 UJ	370 UJ	320 UJ	180 UJ	320 UJ
Di-n-butylphthalate	NL	µg/kg	400 UJ	370 UJ	320 UJ	180 UJ	320 UJ
Di-n-octylphthalate	NL	µg/kg	400 UJ	370 UJ	320 UJ	180 UJ	320 UJ
Fluoranthene	2230	µg/kg	13 J	13 J	11 J	8.4 J	32 J
Fluorene	536	µg/kg	7.7 UJ	7.1 UJ	6.2 UJ	3.5 UJ	6.2 UJ
Hexachlorobenzene	NL	µg/kg	400 UJ	370 UJ	320 UJ	180 UJ	320 UJ
Hexachlorobutadiene	NL	µg/kg	400 UJ	370 UJ	320 UJ	180 UJ	320 UJ
Hexachlorocyclopentadiene	NL	µg/kg	400 UJ	370 UJ	320 UJ	180 UJ	320 UJ
Hexachloroethane	NL	µg/kg	400 UJ	370 UJ	320 UJ	180 UJ	320 UJ
Indeno(1,2,3-cd)pyrene	NL	µg/kg	7.7 UJ	7.1 UJ	6.2 UJ	3.5 UJ	9.8 J
Isophorone	NL	µg/kg	400 UJ	370 UJ	320 UJ	180 UJ	320 UJ
Naphthalene	561	µg/kg	7.7 UJ	7.1 UJ	6.2 UJ	3.5 UJ	6.3 J
Nitrobenzene	NL	µg/kg	400 UJ	370 UJ	320 UJ	180 UJ	320 UJ
N-Nitroso-di-n-propylamine	NL	µg/kg	400 UJ	370 UJ	320 UJ	180 UJ	320 UJ
N-Nitrosodiphenylamine	NL	µg/kg	400 UJ	370 UJ	320 UJ	180 UJ	320 UJ
Pentachlorophenol	NL	µg/kg	16 UJ	14 UJ	12 UJ	7.2 UJ	13 UJ
Phenanthrene	1170	µg/kg	9 J	10 J	7.7 J	5 J	19 J
Phenol	NL	µg/kg	400 UJ	370 UJ	320 UJ	180 UJ	320 UJ
Pyrene	1520	µg/kg	13 J	13 J	11 J	7.5 J	28 J
Total PAH 17	22800	µg/kg	88.9	85.7	73.1	58.4	212.3
TOC	NL	mg/kg	23,600	25,500	29,000	37,000	35,800

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Table B-1
Sediment Sample Analytical Results - SVOCs
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-70	LMR11-71	LMR11-71	LMR11-71	LMR11-71
		Field Sample ID	LMR11-70-085	LMR11-71-006	LMR11-71-024	LMR11-71-024FS	LMR11-71-048
		Sample Date	8/7/2011	8/6/2011	8/6/2011	8/6/2011	8/6/2011
		Depth Interval (in bss)	72- 85	0- 6	6- 24	6- 24	24- 48
Chemical Name	**PEC[1]**	**Unit**					
1,1'-Biphenyl	NL	µg/kg	290 UJ	210 UJ	200 UJ	200 UJ	180 UJ
1,2,4,5-Tetrachlorobenzene	NL	µg/kg	290 UJ	210 UJ	200 UJ	200 UJ	180 UJ
2,2'-Oxybis(1-chloropropane)	NL	µg/kg	290 UJ	210 UJ	200 UJ	200 UJ	180 UJ
2,3,4,6-Tetrachlorophenol	NL	µg/kg	290 UJ	210 UJ	200 UJ	200 UJ	180 UJ
2,4,5-Trichlorophenol	NL	µg/kg	290 UJ	210 UJ	200 UJ	200 UJ	180 UJ
2,4,6-Trichlorophenol	NL	µg/kg	290 UJ	210 UJ	200 UJ	200 UJ	180 UJ
2,4-Dichlorophenol	NL	µg/kg	290 UJ	210 UJ	200 UJ	200 UJ	180 UJ
2,4-Dimethylphenol	NL	µg/kg	290 UJ	210 UJ	200 UJ	200 UJ	180 UJ
2,4-Dinitrophenol	NL	µg/kg	570 UJ	420 UJ	390 UJ	390 UJ	350 UJ
2,4-Dinitrotoluene	NL	µg/kg	290 UJ	210 UJ	200 UJ	200 UJ	180 UJ
2,6-Dinitrotoluene	NL	µg/kg	290 UJ	210 UJ	200 UJ	200 UJ	180 UJ
2-Chloronaphthalene	NL	µg/kg	290 UJ	210 UJ	200 UJ	200 UJ	180 UJ
2-Chlorophenol	NL	µg/kg	290 UJ	210 UJ	200 UJ	200 UJ	180 UJ
2-Methylnaphthalene	NL	µg/kg	5.7 UJ	4.2 UJ	3.9 UJ	3.9 UJ	3.5 UJ
2-Methylphenol	NL	µg/kg	290 UJ	210 UJ	200 UJ	200 UJ	180 UJ
2-Nitroaniline	NL	µg/kg	570 UJ	420 UJ	390 UJ	390 UJ	350 UJ
2-Nitrophenol	NL	µg/kg	290 UJ	210 UJ	200 UJ	200 UJ	180 UJ
3,3'-Dichlorobenzidine	NL	µg/kg	290 UJ	210 UJ	200 UJ	200 UJ	180 UJ
3-Nitroaniline	NL	µg/kg	570 UJ	420 UJ	390 UJ	390 UJ	350 UJ
4,6-Dinitro-2-methylphenol	NL	µg/kg	570 UJ	420 UJ	390 UJ	390 UJ	350 UJ
4-Bromophenyl-phenylether	NL	µg/kg	290 UJ	210 UJ	200 UJ	200 UJ	180 UJ
4-Chloro-3-methylphenol	NL	µg/kg	290 UJ	210 UJ	200 UJ	200 UJ	180 UJ
4-Chloroaniline	NL	µg/kg	290 UJ	210 UJ	200 UJ	200 UJ	180 UJ
4-Chlorophenyl-phenylether	NL	µg/kg	290 UJ	210 UJ	200 UJ	200 UJ	180 UJ
4-Methylphenol	NL	µg/kg	290 UJ	210 UJ	200 UJ	200 UJ	180 UJ
4-Nitroaniline	NL	µg/kg	570 UJ	420 UJ	390 UJ	390 UJ	350 UJ
4-Nitrophenol	NL	µg/kg	570 UJ	420 UJ	390 UJ	390 UJ	350 UJ
Acenaphthene	NL	µg/kg	5.7 UJ	4.2 UJ	3.9 UJ	3.9 UJ	3.5 UJ
Acenaphthylene	NL	µg/kg	5.7 UJ	4.2 UJ	3.9 UJ	3.9 UJ	3.5 UJ
Acetophenone	NL	µg/kg	290 UJ	210 UJ	200 UJ	200 UJ	180 UJ
Anthracene	845	µg/kg	5.7 UJ	4.2 UJ	3.9 UJ	3.9 UJ	3.5 UJ
Atrazine	NL	µg/kg	290 UJ	210 UJ	200 UJ	200 UJ	180 UJ
Benzaldehyde	NL	µg/kg	290 UJ	210 UJ	200 UJ	200 UJ	180 UJ
Benzo(a)anthracene	1050	µg/kg	5.7 UJ	4.2 UJ	3.9 UJ	3.9 UJ	3.3 J
Benzo(a)pyrene	1450	µg/kg	5.7 UJ	4.2 UJ	3.9 UJ	3.9 UJ	3.8 J

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Table B-1
Sediment Sample Analytical Results - SVOCs
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-70	LMR11-71	LMR11-71	LMR11-71	LMR11-71
		Field Sample ID	LMR11-70-085	LMR11-71-006	LMR11-71-024	LMR11-71-024FS	LMR11-71-048
		Sample Date	8/7/2011	8/6/2011	8/6/2011	8/6/2011	8/6/2011
		Depth Interval (in bss)	72- 85	0- 6	6- 24	6- 24	24- 48
Chemical Name	**PEC[1]**	**Unit**					
Benzo(b)fluoranthene	NL	µg/kg	7.4 J	4.2 J	4 J	3.9 UJ	6.2 J
Benzo(g,h,i)perylene	NL	µg/kg	5.7 UJ	4.2 UJ	3.9 UJ	3.9 UJ	3.5 UJ
Benzo(k)fluoranthene	NL	µg/kg	5.7 UJ	4.2 UJ	3.9 UJ	3.9 UJ	3.5 UJ
Bis(2-chloroethoxy)methane	NL	µg/kg	290 UJ	210 UJ	200 UJ	200 UJ	180 UJ
Bis(2-chloroethyl)ether	NL	µg/kg	290 UJ	210 UJ	200 UJ	200 UJ	180 UJ
Bis(2-ethylhexyl)phthalate	NL	µg/kg	290 UJ	210 UJ	200 UJ	200 UJ	180 UJ
Butylbenzylphthalate	NL	µg/kg	290 UJ	210 UJ	200 UJ	200 UJ	180 UJ
Caprolactam	NL	µg/kg	290 UJ	210 UJ	200 UJ	200 UJ	180 UJ
Carbazole	NL	µg/kg	290 UJ	210 UJ	200 UJ	200 UJ	180 UJ
Chrysene	1290	µg/kg	6.5 J	4.2 UJ	3.9 UJ	3.9 UJ	3.8 J
Dibenzo(a,h)anthracene	NL	µg/kg	5.7 UJ	210 UJ	200 UJ	200 UJ	180 UJ
Dibenzofuran	NL	µg/kg	290 UJ	4.2 UJ	3.9 UJ	3.9 UJ	3.5 UJ
Diethylphthalate	NL	µg/kg	290 UJ	210 UJ	200 UJ	200 UJ	180 UJ
Dimethylphthalate	NL	µg/kg	290 UJ	210 UJ	200 UJ	200 UJ	180 UJ
Di-n-butylphthalate	NL	µg/kg	290 UJ	210 UJ	200 UJ	200 UJ	180 UJ
Di-n-octylphthalate	NL	µg/kg	290 UJ	210 UJ	200 UJ	200 UJ	180 UJ
Fluoranthene	2230	µg/kg	14 J	6 J	6.3 J	5.2 J	8.6 J
Fluorene	536	µg/kg	5.7 UJ	4.2 UJ	3.9 UJ	3.9 UJ	3.5 UJ
Hexachlorobenzene	NL	µg/kg	290 UJ	210 UJ	200 UJ	200 UJ	180 UJ
Hexachlorobutadiene	NL	µg/kg	290 UJ	210 UJ	200 UJ	200 UJ	180 UJ
Hexachlorocyclopentadiene	NL	µg/kg	290 UJ	210 UJ	200 UJ	200 UJ	180 UJ
Hexachloroethane	NL	µg/kg	290 UJ	210 UJ	200 UJ	200 UJ	180 UJ
Indeno(1,2,3-cd)pyrene	NL	µg/kg	5.7 UJ	4.2 UJ	3.9 UJ	3.9 UJ	3.5 UJ
Isophorone	NL	µg/kg	290 UJ	210 UJ	200 UJ	200 UJ	180 UJ
Naphthalene	561	µg/kg	5.7 UJ	4.2 UJ	3.9 UJ	3.9 UJ	3.5 UJ
Nitrobenzene	NL	µg/kg	290 UJ	210 UJ	200 UJ	200 UJ	180 UJ
N-Nitroso-di-n-propylamine	NL	µg/kg	290 UJ	210 UJ	200 UJ	200 UJ	180 UJ
N-Nitrosodiphenylamine	NL	µg/kg	290 UJ	210 UJ	200 UJ	200 UJ	180 UJ
Pentachlorophenol	NL	µg/kg	11 UJ	8.5 UJ	8 UJ	7.8 UJ	7 UJ
Phenanthrene	1170	µg/kg	11 J	4.2 UJ	4.1 J	3.9 UJ	6.7 J
Phenol	NL	µg/kg	290 UJ	210 UJ	200 UJ	200 UJ	180 UJ
Pyrene	1520	µg/kg	15 J	5.1 J	5.4 J	4.5 J	7.5 J
Total PAH 17	22800	µg/kg	88.1	44.7	45.15	38.95	57.4
TOC	NL	mg/kg	29,000	27,700	21,600	19,800	20,200

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Table B-1
Sediment Sample Analytical Results - SVOCs
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-71	LMR11-71	LMR11-71	LMR11-71	LMR11-71
		Field Sample ID	LMR11-71-072	LMR11-71-096	LMR11-71-120	LMR11-71-144	LMR11-71-161
		Sample Date	8/6/2011	8/6/2011	8/6/2011	8/6/2011	8/6/2011
		Depth Interval (in bss)	48- 72	72- 96	96- 120	120- 144	144- 161
Chemical Name	**PEC[1]**	**Unit**					
1,1'-Biphenyl	NL	µg/kg	170 UJ	170 UJ	160 UJ	160 UJ	150 UJ
1,2,4,5-Tetrachlorobenzene	NL	µg/kg	170 UJ	170 UJ	160 UJ	160 UJ	150 UJ
2,2'-Oxybis(1-chloropropane)	NL	µg/kg	170 UJ	170 UJ	160 UJ	160 UJ	150 UJ
2,3,4,6-Tetrachlorophenol	NL	µg/kg	170 UJ	170 UJ	160 UJ	160 UJ	150 UJ
2,4,5-Trichlorophenol	NL	µg/kg	170 UJ	170 UJ	160 UJ	160 UJ	150 UJ
2,4,6-Trichlorophenol	NL	µg/kg	170 UJ	170 UJ	160 UJ	160 UJ	150 UJ
2,4-Dichlorophenol	NL	µg/kg	170 UJ	170 UJ	160 UJ	160 UJ	150 UJ
2,4-Dimethylphenol	NL	µg/kg	170 UJ	170 UJ	160 UJ	160 UJ	150 UJ
2,4-Dinitrophenol	NL	µg/kg	330 UJ	320 UJ	310 UJ	300 UJ	300 UJ
2,4-Dinitrotoluene	NL	µg/kg	170 UJ	170 UJ	160 UJ	160 UJ	150 UJ
2,6-Dinitrotoluene	NL	µg/kg	170 UJ	170 UJ	160 UJ	160 UJ	150 UJ
2-Chloronaphthalene	NL	µg/kg	170 UJ	170 UJ	160 UJ	160 UJ	150 UJ
2-Chlorophenol	NL	µg/kg	170 UJ	170 UJ	160 UJ	160 UJ	150 UJ
2-Methylnaphthalene	NL	µg/kg	4.7 J	8.6 J	3.1 UJ	9.8 J	12 J
2-Methylphenol	NL	µg/kg	170 UJ	170 UJ	160 UJ	160 UJ	150 UJ
2-Nitroaniline	NL	µg/kg	330 UJ	320 UJ	310 UJ	300 UJ	300 UJ
2-Nitrophenol	NL	µg/kg	170 UJ	170 UJ	160 UJ	160 UJ	150 UJ
3,3'-Dichlorobenzidine	NL	µg/kg	170 UJ	170 UJ	160 UJ	160 UJ	150 UJ
3-Nitroaniline	NL	µg/kg	330 UJ	320 UJ	310 UJ	300 UJ	300 UJ
4,6-Dinitro-2-methylphenol	NL	µg/kg	330 UJ	320 UJ	310 UJ	300 UJ	300 UJ
4-Bromophenyl-phenylether	NL	µg/kg	170 UJ	170 UJ	160 UJ	160 UJ	150 UJ
4-Chloro-3-methylphenol	NL	µg/kg	170 UJ	170 UJ	160 UJ	160 UJ	150 UJ
4-Chloroaniline	NL	µg/kg	170 UJ	170 UJ	160 UJ	160 UJ	150 UJ
4-Chlorophenyl-phenylether	NL	µg/kg	170 UJ	170 UJ	160 UJ	160 UJ	150 UJ
4-Methylphenol	NL	µg/kg	54 J	82 J	64 J	51 J	51 J
4-Nitroaniline	NL	µg/kg	330 UJ	320 UJ	310 UJ	300 UJ	300 UJ
4-Nitrophenol	NL	µg/kg	330 UJ	320 UJ	310 UJ	300 UJ	300 UJ
Acenaphthene	NL	µg/kg	6.7 J	5.3 J	3.1 UJ	3.7 J	3.1 J
Acenaphthylene	NL	µg/kg	4 J	5.3 J	5.8 J	3 UJ	3 UJ
Acetophenone	NL	µg/kg	170 UJ	170 UJ	160 UJ	160 UJ	150 UJ
Anthracene	845	µg/kg	8 J	10 J	3.7 J	5.7 J	5.1 J
Atrazine	NL	µg/kg	170 UJ	170 UJ	160 UJ	160 UJ	150 UJ
Benzaldehyde	NL	µg/kg	170 UJ	170 UJ	160 UJ	160 UJ	150 UJ
Benzo(a)anthracene	1050	µg/kg	26 J	27 J	9.2 J	17 J	10 J
Benzo(a)pyrene	1450	µg/kg	28 J	32 J	9.9 J	22 J	11 J

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Table B-1
Sediment Sample Analytical Results - SVOCs
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-71	LMR11-71	LMR11-71	LMR11-71	LMR11-71
		Field Sample ID	LMR11-71-072	LMR11-71-096	LMR11-71-120	LMR11-71-144	LMR11-71-161
		Sample Date	8/6/2011	8/6/2011	8/6/2011	8/6/2011	8/6/2011
		Depth Interval (in bss)	48- 72	72- 96	96- 120	120- 144	144- 161
Chemical Name	**PEC[1]**	**Unit**					
Benzo(b)fluoranthene	NL	µg/kg	39 J	46 J	15 J	28 J	16 J
Benzo(g,h,i)perylene	NL	µg/kg	15 J	20 J	4.7 J	12 J	7.3 J
Benzo(k)fluoranthene	NL	µg/kg	12 J	14 J	5.3 J	7.4 J	5.7 J
Bis(2-chloroethoxy)methane	NL	µg/kg	170 UJ	170 UJ	160 UJ	160 UJ	150 UJ
Bis(2-chloroethyl)ether	NL	µg/kg	170 UJ	170 UJ	160 UJ	160 UJ	150 UJ
Bis(2-ethylhexyl)phthalate	NL	µg/kg	170 UJ	170 UJ	160 UJ	160 UJ	150 UJ
Butylbenzylphthalate	NL	µg/kg	170 UJ	170 UJ	160 UJ	160 UJ	150 UJ
Caprolactam	NL	µg/kg	170 UJ	170 UJ	160 UJ	160 UJ	150 UJ
Carbazole	NL	µg/kg	170 UJ	170 UJ	160 UJ	160 UJ	150 UJ
Chrysene	1290	µg/kg	23 J	41 J	9.8 J	17 J	12 J
Dibenzo(a,h)anthracene	NL	µg/kg	170 UJ	170 UJ	160 UJ	160 UJ	150 UJ
Dibenzofuran	NL	µg/kg	4.9 J	6.1 J	3.1 UJ	3.7 J	3 UJ
Diethylphthalate	NL	µg/kg	170 UJ	170 UJ	160 UJ	160 UJ	150 UJ
Dimethylphthalate	NL	µg/kg	170 UJ	170 UJ	160 UJ	160 UJ	150 UJ
Di-n-butylphthalate	NL	µg/kg	170 UJ	170 UJ	160 UJ	160 UJ	150 UJ
Di-n-octylphthalate	NL	µg/kg	170 UJ	170 UJ	160 UJ	160 UJ	150 UJ
Fluoranthene	2230	µg/kg	57 J	70 J	18 J	29 J	22 J
Fluorene	536	µg/kg	5.1 J	5.9 J	3.1 UJ	3.8 J	3.7 J
Hexachlorobenzene	NL	µg/kg	170 UJ	170 UJ	160 UJ	160 UJ	150 UJ
Hexachlorobutadiene	NL	µg/kg	170 UJ	170 UJ	160 UJ	160 UJ	150 UJ
Hexachlorocyclopentadiene	NL	µg/kg	170 UJ	170 UJ	160 UJ	160 UJ	150 UJ
Hexachloroethane	NL	µg/kg	170 UJ	170 UJ	160 UJ	160 UJ	150 UJ
Indeno(1,2,3-cd)pyrene	NL	µg/kg	14 J	19 J	6.4 J	11 J	6.6 J
Isophorone	NL	µg/kg	170 UJ	170 UJ	160 UJ	160 UJ	150 UJ
Naphthalene	561	µg/kg	11 J	18 J	4.7 J	7 J	10 J
Nitrobenzene	NL	µg/kg	170 UJ	170 UJ	160 UJ	160 UJ	150 UJ
N-Nitroso-di-n-propylamine	NL	µg/kg	170 UJ	170 UJ	160 UJ	160 UJ	150 UJ
N-Nitrosodiphenylamine	NL	µg/kg	170 UJ	170 UJ	160 UJ	160 UJ	150 UJ
Pentachlorophenol	NL	µg/kg	6.7 UJ	6.6 UJ	6.3 UJ	6.2 UJ	6.1 UJ
Phenanthrene	1170	µg/kg	28 J	41 J	11 J	24 J	21 J
Phenol	NL	µg/kg	170 UJ	170 UJ	160 UJ	160 UJ	150 UJ
Pyrene	1520	µg/kg	41 J	49 J	14 J	27 J	18 J
Total PAH 17	22800	µg/kg	327.4	418.2	123.7	229.6	166.5
TOC	NL	mg/kg	23,300	27,800	24,400	29,200	21,100

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Table B-1
Sediment Sample Analytical Results - SVOCs
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-72	LMR11-72	LMR11-72	LMR11-73	LMR11-73
		Field Sample ID	LMR11-72-006	LMR11-72-024	LMR11-72-035	LMR11-73-006	LMR11-73-024
		Sample Date	8/5/2011	8/5/2011	8/5/2011	8/7/2011	8/7/2011
		Depth Interval (in bss)	0- 6	6- 24	24- 35	0- 6	6- 24
Chemical Name	**PEC[1]**	**Unit**					
1,1'-Biphenyl	NL	µg/kg	160 UJ	120 UJ	120 UJ	160 UJ	180 UJ
1,2,4,5-Tetrachlorobenzene	NL	µg/kg	160 UJ	120 UJ	120 UJ	160 UJ	180 UJ
2,2'-Oxybis(1-chloropropane)	NL	µg/kg	160 UJ	120 UJ	120 UJ	160 UJ	180 UJ
2,3,4,6-Tetrachlorophenol	NL	µg/kg	160 UJ	120 UJ	120 UJ	160 UJ	180 UJ
2,4,5-Trichlorophenol	NL	µg/kg	160 UJ	120 UJ	120 UJ	160 UJ	180 UJ
2,4,6-Trichlorophenol	NL	µg/kg	160 UJ	120 UJ	120 UJ	160 UJ	180 UJ
2,4-Dichlorophenol	NL	µg/kg	160 UJ	120 UJ	120 UJ	160 UJ	180 UJ
2,4-Dimethylphenol	NL	µg/kg	160 UJ	120 UJ	120 UJ	160 UJ	180 UJ
2,4-Dinitrophenol	NL	µg/kg	310 UJ	230 UJ	240 UJ	320 UJ	340 UJ
2,4-Dinitrotoluene	NL	µg/kg	160 UJ	120 UJ	120 UJ	160 UJ	180 UJ
2,6-Dinitrotoluene	NL	µg/kg	160 UJ	120 UJ	120 UJ	160 UJ	180 UJ
2-Chloronaphthalene	NL	µg/kg	160 UJ	120 UJ	120 UJ	160 UJ	180 UJ
2-Chlorophenol	NL	µg/kg	160 UJ	120 UJ	120 UJ	160 UJ	180 UJ
2-Methylnaphthalene	NL	µg/kg	42 J	5.8 J	2.4 UJ	3.2 UJ	3.4 UJ
2-Methylphenol	NL	µg/kg	160 UJ	120 UJ	120 UJ	160 UJ	180 UJ
2-Nitroaniline	NL	µg/kg	310 UJ	230 UJ	240 UJ	320 UJ	340 UJ
2-Nitrophenol	NL	µg/kg	160 UJ	120 UJ	120 UJ	160 UJ	180 UJ
3,3'-Dichlorobenzidine	NL	µg/kg	160 UJ	120 UJ	120 UJ	160 UJ	180 UJ
3-Nitroaniline	NL	µg/kg	310 UJ	230 UJ	240 UJ	320 UJ	340 UJ
4,6-Dinitro-2-methylphenol	NL	µg/kg	310 UJ	230 UJ	240 UJ	320 UJ	340 UJ
4-Bromophenyl-phenylether	NL	µg/kg	160 UJ	120 UJ	120 UJ	160 UJ	180 UJ
4-Chloro-3-methylphenol	NL	µg/kg	160 UJ	120 UJ	120 UJ	160 UJ	180 UJ
4-Chloroaniline	NL	µg/kg	160 UJ	120 UJ	120 UJ	160 UJ	180 UJ
4-Chlorophenyl-phenylether	NL	µg/kg	160 UJ	120 UJ	120 UJ	160 UJ	180 UJ
4-Methylphenol	NL	µg/kg	64 J	120 UJ	120 UJ	160 UJ	180 UJ
4-Nitroaniline	NL	µg/kg	310 UJ	230 UJ	240 UJ	320 UJ	340 UJ
4-Nitrophenol	NL	µg/kg	310 UJ	230 UJ	240 UJ	320 UJ	340 UJ
Acenaphthene	NL	µg/kg	130 J	89 J	2.4 UJ	3.2 UJ	3.4 UJ
Acenaphthylene	NL	µg/kg	72 J	5.5 J	2.4 UJ	3.2 UJ	3.4 UJ
Acetophenone	NL	µg/kg	160 UJ	120 UJ	120 UJ	160 UJ	180 UJ
Anthracene	845	µg/kg	270 J	43 J	2.4 UJ	5.8 J	3.4 UJ
Atrazine	NL	µg/kg	160 UJ	120 UJ	120 UJ	160 UJ	180 UJ
Benzaldehyde	NL	µg/kg	160 UJ	120 UJ	120 UJ	160 UJ	180 UJ
Benzo(a)anthracene	1050	µg/kg	340 J	41 J	2.4 UJ	17 J	3.8 J
Benzo(a)pyrene	1450	µg/kg	270 J	34 J	2.4 UJ	18 J	4.7 J

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Table B-1
Sediment Sample Analytical Results - SVOCs
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-72	LMR11-72	LMR11-72	LMR11-73	LMR11-73
		Field Sample ID	LMR11-72-006	LMR11-72-024	LMR11-72-035	LMR11-73-006	LMR11-73-024
		Sample Date	8/5/2011	8/5/2011	8/5/2011	8/7/2011	8/7/2011
		Depth Interval (in bss)	0- 6	6- 24	24- 35	0- 6	6- 24
Chemical Name	**PEC[1]**	**Unit**					
Benzo(b)fluoranthene	NL	µg/kg	260 J	35 J	2.4 UJ	28 J	8.4 J
Benzo(g,h,i)perylene	NL	µg/kg	140 J	14 J	2.4 UJ	11 J	4 J
Benzo(k)fluoranthene	NL	µg/kg	110 J	14 J	2.4 UJ	7.8 J	3.4 UJ
Bis(2-chloroethoxy)methane	NL	µg/kg	160 UJ	120 UJ	120 UJ	160 UJ	180 UJ
Bis(2-chloroethyl)ether	NL	µg/kg	160 UJ	120 UJ	120 UJ	160 UJ	180 UJ
Bis(2-ethylhexyl)phthalate	NL	µg/kg	160 UJ	120 UJ	120 UJ	160 UJ	180 UJ
Butylbenzylphthalate	NL	µg/kg	160 UJ	120 UJ	120 UJ	160 UJ	180 UJ
Caprolactam	NL	µg/kg	160 UJ	120 UJ	120 UJ	160 UJ	180 UJ
Carbazole	NL	µg/kg	160 UJ	120 UJ	120 UJ	160 UJ	180 UJ
Chrysene	1290	µg/kg	350 J	44 J	4.8 J	18 J	5.4 J
Dibenzo(a,h)anthracene	NL	µg/kg	160 UJ	120 UJ	120 UJ	160 UJ	180 UJ
Dibenzofuran	NL	µg/kg	44 J	4.2 J	2.4 UJ	3.3 J	3.4 UJ
Diethylphthalate	NL	µg/kg	160 UJ	120 UJ	120 UJ	160 UJ	180 UJ
Dimethylphthalate	NL	µg/kg	160 UJ	120 UJ	120 UJ	160 UJ	180 UJ
Di-n-butylphthalate	NL	µg/kg	160 UJ	81 J	120 UJ	160 UJ	180 UJ
Di-n-octylphthalate	NL	µg/kg	160 UJ	120 UJ	120 UJ	160 UJ	180 UJ
Fluoranthene	2230	µg/kg	800 J	95 J	4.6 J	52 J	11 J
Fluorene	536	µg/kg	140 J	56 J	2.4 UJ	3.2 UJ	3.4 UJ
Hexachlorobenzene	NL	µg/kg	160 UJ	120 UJ	120 UJ	160 UJ	180 UJ
Hexachlorobutadiene	NL	µg/kg	160 UJ	120 UJ	120 UJ	160 UJ	180 UJ
Hexachlorocyclopentadiene	NL	µg/kg	160 UJ	120 UJ	120 UJ	160 UJ	180 UJ
Hexachloroethane	NL	µg/kg	160 UJ	120 UJ	120 UJ	160 UJ	180 UJ
Indeno(1,2,3-cd)pyrene	NL	µg/kg	150 J	15 J	2.4 UJ	10 J	3.4 UJ
Isophorone	NL	µg/kg	160 UJ	120 UJ	120 UJ	160 UJ	180 UJ
Naphthalene	561	µg/kg	70 J	6.2 J	2.4 UJ	3.2 UJ	3.4 UJ
Nitrobenzene	NL	µg/kg	160 UJ	120 UJ	120 UJ	160 UJ	180 UJ
N-Nitroso-di-n-propylamine	NL	µg/kg	160 UJ	120 UJ	120 UJ	160 UJ	180 UJ
N-Nitrosodiphenylamine	NL	µg/kg	160 UJ	120 UJ	120 UJ	160 UJ	180 UJ
Pentachlorophenol	NL	µg/kg	6.4 UJ	4.7 UJ	4.8 UJ	6.4 UJ	7 UJ
Phenanthrene	1170	µg/kg	1,000 J	270 J	8.4 J	29 J	7.9 J
Phenol	NL	µg/kg	160 UJ	120 UJ	120 UJ	160 UJ	180 UJ
Pyrene	1520	µg/kg	800 J	100 J	6.2 J	31 J	8.7 J
Total PAH 17	22800	µg/kg	4,988	871.7	39.6	238.9	69.2
TOC	NL	mg/kg	61,100	21,600	12,800	21,000	19,600

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Table B-1
Sediment Sample Analytical Results - SVOCs
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-73	LMR11-74	LMR11-74	LMR11-74	LMR11-74
		Field Sample ID	LMR11-73-042	LMR11-74-006	LMR11-74-024	LMR11-74-048	LMR11-74-048FS
		Sample Date	8/7/2011	8/5/2011	8/5/2011	8/5/2011	8/5/2011
		Depth Interval (in bss)	24- 42	0- 6	6- 24	24- 48	24- 48
Chemical Name	**PEC[1]**	**Unit**					
1,1'-Biphenyl	NL	µg/kg	140 UJ	170 UJ	160 UJ	170 UJ	160 UJ
1,2,4,5-Tetrachlorobenzene	NL	µg/kg	140 UJ	170 UJ	160 UJ	170 UJ	160 UJ
2,2'-Oxybis(1-chloropropane)	NL	µg/kg	140 UJ	170 UJ	160 UJ	170 UJ	160 UJ
2,3,4,6-Tetrachlorophenol	NL	µg/kg	140 UJ	170 UJ	160 UJ	170 UJ	160 UJ
2,4,5-Trichlorophenol	NL	µg/kg	140 UJ	170 UJ	160 UJ	170 UJ	160 UJ
2,4,6-Trichlorophenol	NL	µg/kg	140 UJ	170 UJ	160 UJ	170 UJ	160 UJ
2,4-Dichlorophenol	NL	µg/kg	140 UJ	170 UJ	160 UJ	170 UJ	160 UJ
2,4-Dimethylphenol	NL	µg/kg	140 UJ	170 UJ	160 UJ	170 UJ	160 UJ
2,4-Dinitrophenol	NL	µg/kg	270 UJ	330 UJ	310 UJ	320 UJ	310 UJ
2,4-Dinitrotoluene	NL	µg/kg	140 UJ	170 UJ	160 UJ	170 UJ	160 UJ
2,6-Dinitrotoluene	NL	µg/kg	140 UJ	170 UJ	160 UJ	170 UJ	160 UJ
2-Chloronaphthalene	NL	µg/kg	140 UJ	170 UJ	160 UJ	170 UJ	160 UJ
2-Chlorophenol	NL	µg/kg	140 UJ	170 UJ	160 UJ	170 UJ	160 UJ
2-Methylnaphthalene	NL	µg/kg	150 J	3.3 UJ	6.5 J	7.4 J	5.1 J
2-Methylphenol	NL	µg/kg	140 UJ	170 UJ	160 UJ	170 UJ	160 UJ
2-Nitroaniline	NL	µg/kg	270 UJ	330 UJ	310 UJ	320 UJ	310 UJ
2-Nitrophenol	NL	µg/kg	140 UJ	170 UJ	160 UJ	170 UJ	160 UJ
3,3'-Dichlorobenzidine	NL	µg/kg	140 UJ	170 UJ	160 UJ	170 UJ	160 UJ
3-Nitroaniline	NL	µg/kg	270 UJ	330 UJ	310 UJ	320 UJ	310 UJ
4,6-Dinitro-2-methylphenol	NL	µg/kg	270 UJ	330 UJ	310 UJ	320 UJ	310 UJ
4-Bromophenyl-phenylether	NL	µg/kg	140 UJ	170 UJ	160 UJ	170 UJ	160 UJ
4-Chloro-3-methylphenol	NL	µg/kg	140 UJ	170 UJ	160 UJ	170 UJ	160 UJ
4-Chloroaniline	NL	µg/kg	140 UJ	170 UJ	160 UJ	170 UJ	160 UJ
4-Chlorophenyl-phenylether	NL	µg/kg	140 UJ	170 UJ	160 UJ	170 UJ	160 UJ
4-Methylphenol	NL	µg/kg	140 UJ	59 J	42 J	44 J	33 J
4-Nitroaniline	NL	µg/kg	270 UJ	330 UJ	310 UJ	320 UJ	310 UJ
4-Nitrophenol	NL	µg/kg	270 UJ	330 UJ	310 UJ	320 UJ	310 UJ
Acenaphthene	NL	µg/kg	6.1 J	3.3 UJ	5.6 J	4.9 J	3.5 J
Acenaphthylene	NL	µg/kg	3.1 J	3.3 UJ	6.8 J	7.2 J	5.6 J
Acetophenone	NL	µg/kg	140 UJ	170 UJ	160 UJ	170 UJ	160 UJ
Anthracene	845	µg/kg	8.1 J	3.4 J	13 J	12 J	9.8 J
Atrazine	NL	µg/kg	140 UJ	170 UJ	160 UJ	170 UJ	160 UJ
Benzaldehyde	NL	µg/kg	140 UJ	170 UJ	160 UJ	170 UJ	160 UJ
Benzo(a)anthracene	1050	µg/kg	25 J	5.9 J	27 J	21 J	19 J
Benzo(a)pyrene	1450	µg/kg	27 J	9.1 J	30 J	27 J	23 J

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Table B-1
Sediment Sample Analytical Results - SVOCs
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-73	LMR11-74	LMR11-74	LMR11-74	LMR11-74
		Field Sample ID	LMR11-73-042	LMR11-74-006	LMR11-74-024	LMR11-74-048	LMR11-74-048FS
		Sample Date	8/7/2011	8/5/2011	8/5/2011	8/5/2011	8/5/2011
		Depth Interval (in bss)	24- 42	0- 6	6- 24	24- 48	24- 48
Chemical Name	**PEC[1]**	**Unit**					
Benzo(b)fluoranthene	NL	µg/kg	36 J	11 J	33 J	30 J	26 J
Benzo(g,h,i)perylene	NL	µg/kg	18 J	4.5 J	12 J	11 J	9.9 J
Benzo(k)fluoranthene	NL	µg/kg	16 J	4.4 J	21 J	15 J	11 J
Bis(2-chloroethoxy)methane	NL	µg/kg	140 UJ	170 UJ	160 UJ	170 UJ	160 UJ
Bis(2-chloroethyl)ether	NL	µg/kg	140 UJ	170 UJ	160 UJ	170 UJ	160 UJ
Bis(2-ethylhexyl)phthalate	NL	µg/kg	140 UJ	170 UJ	160 UJ	170 UJ	160 UJ
Butylbenzylphthalate	NL	µg/kg	140 UJ	170 UJ	160 UJ	170 UJ	160 UJ
Caprolactam	NL	µg/kg	140 UJ	170 UJ	160 UJ	170 UJ	160 UJ
Carbazole	NL	µg/kg	140 UJ	170 UJ	160 UJ	170 UJ	160 UJ
Chrysene	1290	µg/kg	34 J	7.1 J	33 J	26 J	20 J
Dibenzo(a,h)anthracene	NL	µg/kg	140 UJ	170 UJ	160 UJ	170 UJ	160 UJ
Dibenzofuran	NL	µg/kg	5.6 J	3.3 UJ	4.4 J	4.2 J	3.3 J
Diethylphthalate	NL	µg/kg	140 UJ	170 UJ	160 UJ	170 UJ	160 UJ
Dimethylphthalate	NL	µg/kg	140 UJ	170 UJ	160 UJ	170 UJ	160 UJ
Di-n-butylphthalate	NL	µg/kg	140 UJ	170 UJ	160 UJ	170 UJ	160 UJ
Di-n-octylphthalate	NL	µg/kg	140 UJ	170 UJ	160 UJ	170 UJ	160 UJ
Fluoranthene	2230	µg/kg	38 J	13 J	58 J	40 J	36 J
Fluorene	536	µg/kg	9.3 J	3.3 UJ	8.5 J	7.6 J	5.9 J
Hexachlorobenzene	NL	µg/kg	140 UJ	170 UJ	160 UJ	170 UJ	160 UJ
Hexachlorobutadiene	NL	µg/kg	140 UJ	170 UJ	160 UJ	170 UJ	160 UJ
Hexachlorocyclopentadiene	NL	µg/kg	140 UJ	170 UJ	160 UJ	170 UJ	160 UJ
Hexachloroethane	NL	µg/kg	140 UJ	170 UJ	160 UJ	170 UJ	160 UJ
Indeno(1,2,3-cd)pyrene	NL	µg/kg	16 J	6.1 J	16 J	14 J	12 J
Isophorone	NL	µg/kg	140 UJ	170 UJ	160 UJ	170 UJ	160 UJ
Naphthalene	561	µg/kg	140 J	9.8 J	13 J	14 J	9 J
Nitrobenzene	NL	µg/kg	140 UJ	170 UJ	160 UJ	170 UJ	160 UJ
N-Nitroso-di-n-propylamine	NL	µg/kg	140 UJ	170 UJ	160 UJ	170 UJ	160 UJ
N-Nitrosodiphenylamine	NL	µg/kg	140 UJ	170 UJ	160 UJ	170 UJ	160 UJ
Pentachlorophenol	NL	µg/kg	5.6 UJ	6.8 UJ	6.4 UJ	6.5 UJ	6.4 UJ
Phenanthrene	1170	µg/kg	55 J	12 J	47 J	39 J	34 J
Phenol	NL	µg/kg	140 UJ	170 UJ	160 UJ	170 UJ	160 UJ
Pyrene	1520	µg/kg	38 J	13 J	65 J	42 J	36 J
Total PAH 17	22800	µg/kg	625.2	107.55	399.8	322.3	269.1
TOC	NL	mg/kg	13,300	22,200	31,500	21,800	29,800

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Table B-1
Sediment Sample Analytical Results - SVOCs
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-74	LMR11-74	LMR11-75	LMR11-75	LMR11-75
		Field Sample ID	LMR11-74-072	LMR11-74-085	LMR11-75-006	LMR11-75-024	LMR11-75-048
		Sample Date	8/5/2011	8/5/2011	8/5/2011	8/5/2011	8/5/2011
		Depth Interval (in bss)	48- 72	72- 85	0- 6	6- 24	24- 48
Chemical Name	**PEC[1]**	**Unit**					
1,1'-Biphenyl	NL	µg/kg	160 UJ	120 UJ	170 UJ	170 UJ	170 U
1,2,4,5-Tetrachlorobenzene	NL	µg/kg	160 UJ	120 UJ	170 UJ	170 UJ	170 U
2,2'-Oxybis(1-chloropropane)	NL	µg/kg	160 UJ	120 UJ	170 UJ	170 UJ	170 U
2,3,4,6-Tetrachlorophenol	NL	µg/kg	160 UJ	120 UJ	170 UJ	170 UJ	170 U
2,4,5-Trichlorophenol	NL	µg/kg	160 UJ	120 UJ	170 UJ	170 UJ	170 U
2,4,6-Trichlorophenol	NL	µg/kg	160 UJ	120 UJ	170 UJ	170 UJ	170 U
2,4-Dichlorophenol	NL	µg/kg	160 UJ	120 UJ	170 UJ	170 UJ	170 U
2,4-Dimethylphenol	NL	µg/kg	160 UJ	120 UJ	170 UJ	170 UJ	170 U
2,4-Dinitrophenol	NL	µg/kg	310 UJ	230 UJ	330 UJ	320 UJ	330 U
2,4-Dinitrotoluene	NL	µg/kg	160 UJ	120 UJ	170 UJ	170 UJ	170 U
2,6-Dinitrotoluene	NL	µg/kg	160 UJ	120 UJ	170 UJ	170 UJ	170 U
2-Chloronaphthalene	NL	µg/kg	160 UJ	120 UJ	170 UJ	170 UJ	170 U
2-Chlorophenol	NL	µg/kg	160 UJ	120 UJ	170 UJ	170 UJ	170 U
2-Methylnaphthalene	NL	µg/kg	4.5 J	11 J	6.9 J	5.7 J	4.4
2-Methylphenol	NL	µg/kg	160 UJ	120 UJ	170 UJ	170 UJ	170 U
2-Nitroaniline	NL	µg/kg	310 UJ	230 UJ	330 UJ	320 UJ	330 U
2-Nitrophenol	NL	µg/kg	160 UJ	120 UJ	170 UJ	170 UJ	170 U
3,3'-Dichlorobenzidine	NL	µg/kg	160 UJ	120 UJ	170 UJ	170 UJ	170 U
3-Nitroaniline	NL	µg/kg	310 UJ	230 UJ	330 UJ	320 UJ	330 U
4,6-Dinitro-2-methylphenol	NL	µg/kg	310 UJ	230 UJ	330 UJ	320 UJ	330 U
4-Bromophenyl-phenylether	NL	µg/kg	160 UJ	120 UJ	170 UJ	170 UJ	170 U
4-Chloro-3-methylphenol	NL	µg/kg	160 UJ	120 UJ	170 UJ	170 UJ	170 U
4-Chloroaniline	NL	µg/kg	160 UJ	120 UJ	170 UJ	170 UJ	170 U
4-Chlorophenyl-phenylether	NL	µg/kg	160 UJ	120 UJ	170 UJ	170 UJ	170 U
4-Methylphenol	NL	µg/kg	66 J	120 UJ	170 UJ	170 UJ	170 U
4-Nitroaniline	NL	µg/kg	310 UJ	230 UJ	330 UJ	320 UJ	330 U
4-Nitrophenol	NL	µg/kg	310 UJ	230 UJ	330 UJ	320 UJ	330 U
Acenaphthene	NL	µg/kg	3.1 UJ	16 J	6.6 J	5.8 J	6.6
Acenaphthylene	NL	µg/kg	4.4 J	11 J	10 J	6.1 J	7
Acetophenone	NL	µg/kg	160 UJ	120 UJ	170 UJ	170 UJ	170 U
Anthracene	845	µg/kg	7.3 J	42 J	17 J	13 J	13
Atrazine	NL	µg/kg	160 UJ	120 UJ	170 UJ	170 UJ	170 U
Benzaldehyde	NL	µg/kg	160 UJ	120 UJ	170 UJ	170 UJ	170 U
Benzo(a)anthracene	1050	µg/kg	16 J	70 J	45 J	30 J	24
Benzo(a)pyrene	1450	µg/kg	20 J	62 J	53 J	32 J	33

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Table B-1
Sediment Sample Analytical Results - SVOCs
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-74	LMR11-74	LMR11-75	LMR11-75	LMR11-75
		Field Sample ID	LMR11-74-072	LMR11-74-085	LMR11-75-006	LMR11-75-024	LMR11-75-048
		Sample Date	8/5/2011	8/5/2011	8/5/2011	8/5/2011	8/5/2011
		Depth Interval (in bss)	48- 72	72- 85	0- 6	6- 24	24- 48
Chemical Name	**PEC[1]**	**Unit**					
Benzo(b)fluoranthene	NL	µg/kg	24 J	66 J	74 J	47 J	32
Benzo(g,h,i)perylene	NL	µg/kg	8 J	28 J	20 J	13 J	11
Benzo(k)fluoranthene	NL	µg/kg	8.9 J	34 J	24 J	18 J	18
Bis(2-chloroethoxy)methane	NL	µg/kg	160 UJ	120 UJ	170 UJ	170 UJ	170 U
Bis(2-chloroethyl)ether	NL	µg/kg	160 UJ	120 UJ	170 UJ	170 UJ	170 U
Bis(2-ethylhexyl)phthalate	NL	µg/kg	160 UJ	120 UJ	170 UJ	170 UJ	170 U
Butylbenzylphthalate	NL	µg/kg	160 UJ	120 UJ	170 UJ	170 UJ	170 U
Caprolactam	NL	µg/kg	160 UJ	120 UJ	170 UJ	170 UJ	170 U
Carbazole	NL	µg/kg	160 UJ	120 UJ	170 UJ	170 UJ	170 U
Chrysene	1290	µg/kg	19 J	78 J	52 J	32 J	26
Dibenzo(a,h)anthracene	NL	µg/kg	160 UJ	120 UJ	170 UJ	170 UJ	170 U
Dibenzofuran	NL	µg/kg	3.1 UJ	8.8 J	11 J	6.7 J	5.8
Diethylphthalate	NL	µg/kg	160 UJ	120 UJ	170 UJ	170 UJ	170 U
Dimethylphthalate	NL	µg/kg	160 UJ	120 UJ	170 UJ	170 UJ	170 U
Di-n-butylphthalate	NL	µg/kg	160 UJ	120 UJ	170 UJ	170 UJ	170 U
Di-n-octylphthalate	NL	µg/kg	160 UJ	120 UJ	170 UJ	170 UJ	170 U
Fluoranthene	2230	µg/kg	28 J	140 J	100 J	64 J	45
Fluorene	536	µg/kg	4.5 J	16 J	9.7 J	7.8 J	8
Hexachlorobenzene	NL	µg/kg	160 UJ	120 UJ	170 UJ	170 UJ	170 U
Hexachlorobutadiene	NL	µg/kg	160 UJ	120 UJ	170 UJ	170 UJ	170 U
Hexachlorocyclopentadiene	NL	µg/kg	160 UJ	120 UJ	170 UJ	170 UJ	170 U
Hexachloroethane	NL	µg/kg	160 UJ	120 UJ	170 UJ	170 UJ	170 U
Indeno(1,2,3-cd)pyrene	NL	µg/kg	10 J	32 J	32 J	20 J	17
Isophorone	NL	µg/kg	160 UJ	120 UJ	170 UJ	170 UJ	170 U
Naphthalene	561	µg/kg	7.6 J	11 J	18 J	9.9 J	9.1
Nitrobenzene	NL	µg/kg	160 UJ	120 UJ	170 UJ	170 UJ	170 U
N-Nitroso-di-n-propylamine	NL	µg/kg	160 UJ	120 UJ	170 UJ	170 UJ	170 U
N-Nitrosodiphenylamine	NL	µg/kg	160 UJ	120 UJ	170 UJ	170 UJ	170 U
Pentachlorophenol	NL	µg/kg	6.2 UJ	4.7 UJ	6.7 UJ	6.5 UJ	6.7 UJ
Phenanthrene	1170	µg/kg	24 J	150 J	68 J	42 J	35
Phenol	NL	µg/kg	160 UJ	120 UJ	170 UJ	170 UJ	170 U
Pyrene	1520	µg/kg	29 J	140 J	85 J	56 J	39
Total PAH 17	22800	µg/kg	218.3	915.8	632.2	409	333.9
TOC	NL	mg/kg	25,200	10,800	29,700	41,700	33,600

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Table B-1
Sediment Sample Analytical Results - SVOCs
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-75	LMR11-75	LMR11-76	LMR11-76	LMR11-76
		Field Sample ID	LMR11-75-048FS	LMR11-75-080	LMR11-76-006	LMR11-76-024	LMR11-76-048
		Sample Date	8/5/2011	8/5/2011	8/5/2011	8/5/2011	8/5/2011
		Depth Interval (in bss)	24- 48	48- 80	0- 6	6- 24	24- 48
Chemical Name	**PEC[1]**	**Unit**					
1,1'-Biphenyl	NL	µg/kg	160 U	170 UJ	200 U	150 U	170 U
1,2,4,5-Tetrachlorobenzene	NL	µg/kg	160 U	170 UJ	200 U	150 U	170 U
2,2'-Oxybis(1-chloropropane)	NL	µg/kg	160 U	170 UJ	200 U	150 U	170 U
2,3,4,6-Tetrachlorophenol	NL	µg/kg	160 U	170 UJ	200 U	150 U	170 U
2,4,5-Trichlorophenol	NL	µg/kg	160 U	170 UJ	200 U	150 U	170 U
2,4,6-Trichlorophenol	NL	µg/kg	160 U	170 UJ	200 U	150 U	170 U
2,4-Dichlorophenol	NL	µg/kg	160 U	170 UJ	200 U	150 U	170 U
2,4-Dimethylphenol	NL	µg/kg	160 U	170 UJ	200 U	150 U	170 U
2,4-Dinitrophenol	NL	µg/kg	320 U	320 UJ	390 U	280 U	330 U
2,4-Dinitrotoluene	NL	µg/kg	160 U	170 UJ	200 U	150 U	170 U
2,6-Dinitrotoluene	NL	µg/kg	160 U	170 UJ	200 U	150 U	170 U
2-Chloronaphthalene	NL	µg/kg	160 U	170 UJ	200 U	150 U	170 U
2-Chlorophenol	NL	µg/kg	160 U	170 UJ	200 U	150 U	170 U
2-Methylnaphthalene	NL	µg/kg	3.2 U	3.9 J	17	2.8 U	3.9
2-Methylphenol	NL	µg/kg	160 U	170 UJ	200 U	150 U	170 U
2-Nitroaniline	NL	µg/kg	320 U	320 UJ	390 U	280 U	330 U
2-Nitrophenol	NL	µg/kg	160 U	170 UJ	200 UJ	150 UJ	170 UJ
3,3'-Dichlorobenzidine	NL	µg/kg	160 U	170 UJ	200 U	150 U	170 U
3-Nitroaniline	NL	µg/kg	320 U	320 UJ	390 U	280 U	330 U
4,6-Dinitro-2-methylphenol	NL	µg/kg	320 U	320 UJ	390 U	280 U	330 U
4-Bromophenyl-phenylether	NL	µg/kg	160 U	170 UJ	200 U	150 U	170 U
4-Chloro-3-methylphenol	NL	µg/kg	160 U	170 UJ	200 U	150 U	170 U
4-Chloroaniline	NL	µg/kg	160 U	170 UJ	200 U	150 U	170 U
4-Chlorophenyl-phenylether	NL	µg/kg	160 U	170 UJ	200 U	150 U	170 U
4-Methylphenol	NL	µg/kg	160 U	170 UJ	43 J	150 U	170 U
4-Nitroaniline	NL	µg/kg	320 U	320 UJ	390 U	280 U	330 U
4-Nitrophenol	NL	µg/kg	320 U	320 UJ	390 U	280 U	330 U
Acenaphthene	NL	µg/kg	3.2 U	6.6 J	6.9	2.9	4
Acenaphthylene	NL	µg/kg	3.2 U	4.8 J	8	3.3	7.2
Acetophenone	NL	µg/kg	160 U	170 UJ	200 U	150 U	170 U
Anthracene	845	µg/kg	11	12 J	13	6.2	11
Atrazine	NL	µg/kg	160 U	170 UJ	200 U	150 U	170 U
Benzaldehyde	NL	µg/kg	160 U	170 UJ	200 U	150 U	170 U
Benzo(a)anthracene	1050	µg/kg	34	24 J	26	11	22
Benzo(a)pyrene	1450	µg/kg	37	31 J	23	11	17

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Table B-1
Sediment Sample Analytical Results - SVOCs
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-75	LMR11-75	LMR11-76	LMR11-76	LMR11-76
		Field Sample ID	LMR11-75-048FS	LMR11-75-080	LMR11-76-006	LMR11-76-024	LMR11-76-048
		Sample Date	8/5/2011	8/5/2011	8/5/2011	8/5/2011	8/5/2011
		Depth Interval (in bss)	24- 48	48- 80	0- 6	6- 24	24- 48
Chemical Name	**PEC[1]**	**Unit**					
Benzo(b)fluoranthene	NL	µg/kg	47	31 J	25	12	18
Benzo(g,h,i)perylene	NL	µg/kg	13	10 J	9.2	4.4	7.5
Benzo(k)fluoranthene	NL	µg/kg	20	11 J	12	4.6	6.6
Bis(2-chloroethoxy)methane	NL	µg/kg	160 U	170 UJ	200 U	150 U	170 U
Bis(2-chloroethyl)ether	NL	µg/kg	160 U	170 UJ	200 U	150 U	170 U
Bis(2-ethylhexyl)phthalate	NL	µg/kg	160 U	170 UJ	200 U	150 U	170 U
Butylbenzylphthalate	NL	µg/kg	160 U	170 UJ	200 U	150 U	170 U
Caprolactam	NL	µg/kg	160 U	170 UJ	200 U	150 U	170 U
Carbazole	NL	µg/kg	160 U	170 UJ	200 U	150 U	170 U
Chrysene	1290	µg/kg	33	25 J	27	13	25
Dibenzo(a,h)anthracene	NL	µg/kg	160 U	170 UJ	200 U	150 U	170 U
Dibenzofuran	NL	µg/kg	7.1	5.1 J	4.1	2.8 U	3.3 U
Diethylphthalate	NL	µg/kg	160 U	170 UJ	200 U	150 U	170 U
Dimethylphthalate	NL	µg/kg	160 U	170 UJ	200 U	150 U	170 U
Di-n-butylphthalate	NL	µg/kg	160 U	170 UJ	200 U	150 U	170 U
Di-n-octylphthalate	NL	µg/kg	160 U	170 UJ	200 U	150 U	170 U
Fluoranthene	2230	µg/kg	58	46 J	42	23	36
Fluorene	536	µg/kg	3.2 U	6.2 J	9.1	3.8	6.2
Hexachlorobenzene	NL	µg/kg	160 U	170 UJ	200 U	150 U	170 U
Hexachlorobutadiene	NL	µg/kg	160 U	170 UJ	200 U	150 U	170 U
Hexachlorocyclopentadiene	NL	µg/kg	160 U	170 UJ	200 U	150 U	170 U
Hexachloroethane	NL	µg/kg	160 U	170 UJ	200 U	150 U	170 U
Indeno(1,2,3-cd)pyrene	NL	µg/kg	20	15 J	11	5.6	9.4
Isophorone	NL	µg/kg	160 U	170 UJ	200 U	150 U	170 U
Naphthalene	561	µg/kg	4.9	7.9 J	25	5.9	10
Nitrobenzene	NL	µg/kg	160 U	170 UJ	200 U	150 U	170 U
N-Nitroso-di-n-propylamine	NL	µg/kg	160 U	170 UJ	200 U	150 U	170 U
N-Nitrosodiphenylamine	NL	µg/kg	160 U	170 UJ	200 U	150 U	170 U
Pentachlorophenol	NL	µg/kg	19 UJ	6.5 UJ	16 U	280 UJ	13 U
Phenanthrene	1170	µg/kg	24	37 J	42	26	44
Phenol	NL	µg/kg	160 U	170 UJ	200 U	150 U	170 U
Pyrene	1520	µg/kg	46	42 J	44	24	40
Total PAH 17	22800	µg/kg	361.4	318.5	344.3	159.5	269.45
TOC	NL	mg/kg	26,400	24,200	29,100	13,900	23,300

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Table B-1
Sediment Sample Analytical Results - SVOCs
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-76	LMR11-76	LMR11-76	LMR11-77	LMR11-77
		Field Sample ID	LMR11-76-072	LMR11-76-096	LMR11-76-120	LMR11-77-006	LMR11-77-024
		Sample Date	8/5/2011	8/5/2011	8/5/2011	8/5/2011	8/5/2011
		Depth Interval (in bss)	48- 72	72- 96	96- 120	0- 6	6- 24
Chemical Name	**PEC[1]**	**Unit**					
1,1'-Biphenyl	NL	µg/kg	160 U	170 U	160 U	210 UJ	150 UJ
1,2,4,5-Tetrachlorobenzene	NL	µg/kg	160 U	170 U	160 U	210 UJ	150 UJ
2,2'-Oxybis(1-chloropropane)	NL	µg/kg	160 U	170 U	160 U	210 UJ	150 UJ
2,3,4,6-Tetrachlorophenol	NL	µg/kg	160 U	170 U	160 U	210 UJ	150 UJ
2,4,5-Trichlorophenol	NL	µg/kg	160 U	170 U	160 U	210 UJ	150 UJ
2,4,6-Trichlorophenol	NL	µg/kg	160 U	170 U	160 U	210 UJ	150 UJ
2,4-Dichlorophenol	NL	µg/kg	160 U	170 U	160 U	210 UJ	150 UJ
2,4-Dimethylphenol	NL	µg/kg	160 U	170 U	160 U	210 UJ	150 UJ
2,4-Dinitrophenol	NL	µg/kg	310 U	330 U	310 U	410 UJ	290 UJ
2,4-Dinitrotoluene	NL	µg/kg	160 U	170 U	160 U	210 UJ	150 UJ
2,6-Dinitrotoluene	NL	µg/kg	160 U	170 U	160 U	210 UJ	150 UJ
2-Chloronaphthalene	NL	µg/kg	160 U	170 U	160 U	210 UJ	150 UJ
2-Chlorophenol	NL	µg/kg	160 U	170 U	160 U	210 UJ	150 UJ
2-Methylnaphthalene	NL	µg/kg	3.7	4.2	3.1 U	4.1 UJ	3.3 J
2-Methylphenol	NL	µg/kg	160 U	170 U	160 U	210 UJ	150 UJ
2-Nitroaniline	NL	µg/kg	310 U	330 U	310 U	410 UJ	290 UJ
2-Nitrophenol	NL	µg/kg	160 UJ	170 UJ	160 UJ	210 UJ	150 UJ
3,3'-Dichlorobenzidine	NL	µg/kg	160 U	170 U	160 U	210 UJ	150 UJ
3-Nitroaniline	NL	µg/kg	310 U	330 U	310 U	410 UJ	290 UJ
4,6-Dinitro-2-methylphenol	NL	µg/kg	310 U	330 U	310 U	410 UJ	290 UJ
4-Bromophenyl-phenylether	NL	µg/kg	160 U	170 U	160 U	210 UJ	150 UJ
4-Chloro-3-methylphenol	NL	µg/kg	160 U	170 U	160 U	210 UJ	150 UJ
4-Chloroaniline	NL	µg/kg	160 U	170 U	160 U	210 UJ	150 UJ
4-Chlorophenyl-phenylether	NL	µg/kg	160 U	170 U	160 U	210 UJ	150 UJ
4-Methylphenol	NL	µg/kg	160 U	170 U	160 U	210 UJ	150 UJ
4-Nitroaniline	NL	µg/kg	310 U	330 U	310 U	410 UJ	290 UJ
4-Nitrophenol	NL	µg/kg	310 U	330 U	310 U	410 UJ	290 UJ
Acenaphthene	NL	µg/kg	7.7	6.4	3.7	4.1 UJ	2.9 UJ
Acenaphthylene	NL	µg/kg	3.1 U	4.8	3.3	4.1 UJ	2.9 UJ
Acetophenone	NL	µg/kg	160 U	170 U	160 U	210 UJ	150 UJ
Anthracene	845	µg/kg	25	12	6.7	4.1 UJ	5 J
Atrazine	NL	µg/kg	160 U	170 U	160 U	210 UJ	150 UJ
Benzaldehyde	NL	µg/kg	160 U	170 U	160 U	210 UJ	150 UJ
Benzo(a)anthracene	1050	µg/kg	35	14	11	5.1 J	15 J
Benzo(a)pyrene	1450	µg/kg	24	14	11	9 J	19 J

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Table B-1
Sediment Sample Analytical Results - SVOCs
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-76	LMR11-76	LMR11-76	LMR11-77	LMR11-77
		Field Sample ID	LMR11-76-072	LMR11-76-096	LMR11-76-120	LMR11-77-006	LMR11-77-024
		Sample Date	8/5/2011	8/5/2011	8/5/2011	8/5/2011	8/5/2011
		Depth Interval (in bss)	48- 72	72- 96	96- 120	0- 6	6- 24
Chemical Name	**PEC[1]**	**Unit**					
Benzo(b)fluoranthene	NL	µg/kg	27	14	11	8.1 J	21 J
Benzo(g,h,i)perylene	NL	µg/kg	7.7	5	4.4	4.6 J	12 J
Benzo(k)fluoranthene	NL	µg/kg	10	5.4	4.8	4.1 UJ	11 J
Bis(2-chloroethoxy)methane	NL	µg/kg	160 U	170 U	160 U	210 UJ	150 UJ
Bis(2-chloroethyl)ether	NL	µg/kg	160 U	170 U	160 U	210 UJ	150 UJ
Bis(2-ethylhexyl)phthalate	NL	µg/kg	160 U	170 U	160 U	210 UJ	150 UJ
Butylbenzylphthalate	NL	µg/kg	160 U	170 U	160 U	210 UJ	150 UJ
Caprolactam	NL	µg/kg	160 U	170 U	160 U	210 UJ	150 UJ
Carbazole	NL	µg/kg	160 U	170 U	160 U	210 UJ	150 UJ
Chrysene	1290	µg/kg	31	14	13	6 J	15 J
Dibenzo(a,h)anthracene	NL	µg/kg	160 U	170 U	160 U	210 UJ	150 UJ
Dibenzofuran	NL	µg/kg	3.5	3.3 U	3.1 U	4.1 UJ	2.9 UJ
Diethylphthalate	NL	µg/kg	160 U	170 U	160 U	210 UJ	150 UJ
Dimethylphthalate	NL	µg/kg	160 U	170 U	160 U	210 UJ	150 UJ
Di-n-butylphthalate	NL	µg/kg	160 U	170 U	160 U	210 UJ	150 UJ
Di-n-octylphthalate	NL	µg/kg	160 U	170 U	160 U	210 UJ	150 UJ
Fluoranthene	2230	µg/kg	90	33	24	9.4 J	26 J
Fluorene	536	µg/kg	12	9.3	3.6	4.1 UJ	2.9 UJ
Hexachlorobenzene	NL	µg/kg	160 U	170 U	160 U	210 UJ	150 UJ
Hexachlorobutadiene	NL	µg/kg	160 U	170 U	160 U	210 UJ	150 UJ
Hexachlorocyclopentadiene	NL	µg/kg	160 U	170 U	160 U	210 UJ	150 UJ
Hexachloroethane	NL	µg/kg	160 U	170 U	160 U	210 UJ	150 UJ
Indeno(1,2,3-cd)pyrene	NL	µg/kg	11	6.6	5.6	4.1 UJ	10 J
Isophorone	NL	µg/kg	160 U	170 U	160 U	210 UJ	150 UJ
Naphthalene	561	µg/kg	7	7.3	8.1	4.1 UJ	6.5 J
Nitrobenzene	NL	µg/kg	160 U	170 U	160 U	210 UJ	150 UJ
N-Nitroso-di-n-propylamine	NL	µg/kg	160 U	170 U	160 U	210 UJ	150 UJ
N-Nitrosodiphenylamine	NL	µg/kg	160 U	170 U	160 U	210 UJ	150 UJ
Pentachlorophenol	NL	µg/kg	32 U	13 U	310 UJ	8.4 UJ	5.8 UJ
Phenanthrene	1170	µg/kg	99	39	20	6.6 J	18 J
Phenol	NL	µg/kg	160 U	170 U	160 U	210 UJ	150 UJ
Pyrene	1520	µg/kg	81	32	25	12 J	28 J
Total PAH 17	22800	µg/kg	476.15	222.65	158.3	79.25	195.6
TOC	NL	mg/kg	23,600	22,400	24,000	24,800	30,200

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Table B-1
Sediment Sample Analytical Results - SVOCs
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-77	LMR11-77	LMR11-77	LMR11-78	LMR11-79
		Field Sample ID	LMR11-77-048	LMR11-77-072	LMR11-77-120	LMR11-78-014	LMR11-79-006
		Sample Date	8/5/2011	8/5/2011	8/5/2011	8/5/2011	8/4/2011
		Depth Interval (in bss)	24- 48	48- 72	72- 120	0- 14	0- 6
Chemical Name	**PEC[1]**	**Unit**					
1,1'-Biphenyl	NL	µg/kg	150 UJ	160 UJ	160 UJ	130 U	190 U
1,2,4,5-Tetrachlorobenzene	NL	µg/kg	150 UJ	160 UJ	160 UJ	130 U	190 U
2,2'-Oxybis(1-chloropropane)	NL	µg/kg	150 UJ	160 UJ	160 UJ	130 U	190 U
2,3,4,6-Tetrachlorophenol	NL	µg/kg	150 UJ	160 UJ	160 UJ	130 U	190 U
2,4,5-Trichlorophenol	NL	µg/kg	150 UJ	160 UJ	160 UJ	130 U	190 U
2,4,6-Trichlorophenol	NL	µg/kg	150 UJ	160 UJ	160 UJ	130 U	190 U
2,4-Dichlorophenol	NL	µg/kg	150 UJ	160 UJ	160 UJ	130 U	190 U
2,4-Dimethylphenol	NL	µg/kg	150 UJ	160 UJ	160 UJ	130 U	190 U
2,4-Dinitrophenol	NL	µg/kg	280 UJ	310 UJ	310 UJ	240 U	370 U
2,4-Dinitrotoluene	NL	µg/kg	150 UJ	160 UJ	160 UJ	130 U	190 U
2,6-Dinitrotoluene	NL	µg/kg	150 UJ	160 UJ	160 UJ	130 U	190 U
2-Chloronaphthalene	NL	µg/kg	150 UJ	160 UJ	160 UJ	130 U	190 U
2-Chlorophenol	NL	µg/kg	150 UJ	160 UJ	160 UJ	130 U	190 U
2-Methylnaphthalene	NL	µg/kg	11 J	17 J	6.4 J	2.4 U	4
2-Methylphenol	NL	µg/kg	150 UJ	160 UJ	160 UJ	130 U	190 U
2-Nitroaniline	NL	µg/kg	280 UJ	310 UJ	310 UJ	240 U	370 U
2-Nitrophenol	NL	µg/kg	150 UJ	160 UJ	160 UJ	130 U	190 U
3,3'-Dichlorobenzidine	NL	µg/kg	150 UJ	160 UJ	160 UJ	130 U	190 U
3-Nitroaniline	NL	µg/kg	280 UJ	310 UJ	310 UJ	240 U	370 U
4,6-Dinitro-2-methylphenol	NL	µg/kg	280 UJ	310 UJ	310 UJ	240 U	370 U
4-Bromophenyl-phenylether	NL	µg/kg	150 UJ	160 UJ	160 UJ	130 U	190 U
4-Chloro-3-methylphenol	NL	µg/kg	150 UJ	160 UJ	160 UJ	130 U	190 U
4-Chloroaniline	NL	µg/kg	150 UJ	160 UJ	160 UJ	130 U	190 U
4-Chlorophenyl-phenylether	NL	µg/kg	150 UJ	160 UJ	160 UJ	130 U	190 U
4-Methylphenol	NL	µg/kg	36 J	160 UJ	160 UJ	130 U	78 J
4-Nitroaniline	NL	µg/kg	280 UJ	310 UJ	310 UJ	240 U	370 U
4-Nitrophenol	NL	µg/kg	280 UJ	310 UJ	310 UJ	240 U	370 U
Acenaphthene	NL	µg/kg	10 J	4.9 J	6.6 J	2.4 U	3.7 U
Acenaphthylene	NL	µg/kg	9 J	6.4 J	5.9 J	2.4 U	3.7 U
Acetophenone	NL	µg/kg	150 UJ	160 UJ	160 UJ	130 U	190 U
Anthracene	845	µg/kg	41 J	18 J	15 J	2.4 U	5.4
Atrazine	NL	µg/kg	150 UJ	160 UJ	160 UJ	130 U	190 U
Benzaldehyde	NL	µg/kg	150 UJ	160 UJ	160 UJ	130 U	190 U
Benzo(a)anthracene	1050	µg/kg	83 J	47 J	28 J	2.4 U	11
Benzo(a)pyrene	1450	µg/kg	78 J	47 J	28 J	2.4 U	13

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Table B-1
Sediment Sample Analytical Results - SVOCs
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-77	LMR11-77	LMR11-77	LMR11-78	LMR11-79
		Field Sample ID	LMR11-77-048	LMR11-77-072	LMR11-77-120	LMR11-78-014	LMR11-79-006
		Sample Date	8/5/2011	8/5/2011	8/5/2011	8/5/2011	8/4/2011
		Depth Interval (in bss)	24- 48	48- 72	72- 120	0- 14	0- 6
Chemical Name	**PEC[1]**	**Unit**					
Benzo(b)fluoranthene	NL	µg/kg	85 J	56 J	36 J	2.4 U	15
Benzo(g,h,i)perylene	NL	µg/kg	47 J	31 J	11 J	2.4 U	5
Benzo(k)fluoranthene	NL	µg/kg	55 J	29 J	16 J	2.4 U	5.8
Bis(2-chloroethoxy)methane	NL	µg/kg	150 UJ	160 UJ	160 UJ	130 U	190 U
Bis(2-chloroethyl)ether	NL	µg/kg	150 UJ	160 UJ	160 UJ	130 U	190 U
Bis(2-ethylhexyl)phthalate	NL	µg/kg	150 UJ	160 UJ	160 UJ	130 U	190 U
Butylbenzylphthalate	NL	µg/kg	150 UJ	160 UJ	160 UJ	130 U	190 U
Caprolactam	NL	µg/kg	150 UJ	160 UJ	160 UJ	130 U	190 U
Carbazole	NL	µg/kg	150 UJ	160 UJ	160 UJ	130 U	190 U
Chrysene	1290	µg/kg	87 J	57 J	31 J	2.4 U	12
Dibenzo(a,h)anthracene	NL	µg/kg	150 UJ	160 UJ	160 UJ	130 U	190 U
Dibenzofuran	NL	µg/kg	16 J	7.5 J	5 J	2.4 U	3.7 U
Diethylphthalate	NL	µg/kg	150 UJ	160 UJ	160 UJ	130 U	190 U
Dimethylphthalate	NL	µg/kg	150 UJ	160 UJ	160 UJ	130 U	190 U
Di-n-butylphthalate	NL	µg/kg	150 UJ	160 UJ	160 UJ	130 U	190 U
Di-n-octylphthalate	NL	µg/kg	150 UJ	160 UJ	160 UJ	130 U	190 U
Fluoranthene	2230	µg/kg	150 J	85 J	67 J	3.4	23
Fluorene	536	µg/kg	13 J	7 J	9.5 J	2.4 U	3.7 U
Hexachlorobenzene	NL	µg/kg	150 UJ	160 UJ	160 UJ	130 U	190 U
Hexachlorobutadiene	NL	µg/kg	150 UJ	160 UJ	160 UJ	130 U	190 U
Hexachlorocyclopentadiene	NL	µg/kg	150 UJ	160 UJ	160 UJ	130 U	190 U
Hexachloroethane	NL	µg/kg	150 UJ	160 UJ	160 UJ	130 U	190 U
Indeno(1,2,3-cd)pyrene	NL	µg/kg	41 J	27 J	15 J	2.4 U	6.8
Isophorone	NL	µg/kg	150 UJ	160 UJ	160 UJ	130 U	190 U
Naphthalene	561	µg/kg	16 J	20 J	24 J	2.4 U	12
Nitrobenzene	NL	µg/kg	150 UJ	160 UJ	160 UJ	130 U	190 U
N-Nitroso-di-n-propylamine	NL	µg/kg	150 UJ	160 UJ	160 UJ	130 U	190 U
N-Nitrosodiphenylamine	NL	µg/kg	150 UJ	160 UJ	160 UJ	130 U	190 U
Pentachlorophenol	NL	µg/kg	5.8 UJ	6.4 UJ	6.3 UJ	240 U	7.6 U
Phenanthrene	1170	µg/kg	110 J	68 J	47 J	2.4 U	18
Phenol	NL	µg/kg	150 UJ	160 UJ	160 UJ	130 U	190 U
Pyrene	1520	µg/kg	150 J	100 J	61 J	3.3	21
Total PAH 17	22800	µg/kg	1,002	627.8	412.4	24.7	159.4
TOC	NL	mg/kg	31,300	41,500	35,400	14,700	29,400

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Table B-1
Sediment Sample Analytical Results - SVOCs
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-79	LMR11-79	LMR11-79	LMR11-80	LMR11-80
		Field Sample ID	LMR11-79-024	LMR11-79-024FS	LMR11-79-054	LMR11-80-006	LMR11-80-024
		Sample Date	8/4/2011	8/4/2011	8/4/2011	8/5/2011	8/5/2011
		Depth Interval (in bss)	6- 24	6- 24	24- 54	0- 6	6- 24
Chemical Name	**PEC[1]**	**Unit**					
1,1'-Biphenyl	NL	µg/kg	180 U	180 U	170 U	150 UJ	150 UJ
1,2,4,5-Tetrachlorobenzene	NL	µg/kg	180 U	180 U	170 U	150 UJ	150 UJ
2,2'-Oxybis(1-chloropropane)	NL	µg/kg	180 U	180 U	170 U	150 UJ	150 UJ
2,3,4,6-Tetrachlorophenol	NL	µg/kg	180 U	180 U	170 U	150 UJ	150 UJ
2,4,5-Trichlorophenol	NL	µg/kg	180 U	180 U	170 U	150 UJ	150 UJ
2,4,6-Trichlorophenol	NL	µg/kg	180 U	180 U	170 U	150 UJ	150 UJ
2,4-Dichlorophenol	NL	µg/kg	180 U	180 U	170 U	150 UJ	150 UJ
2,4-Dimethylphenol	NL	µg/kg	180 U	180 U	170 U	150 UJ	150 UJ
2,4-Dinitrophenol	NL	µg/kg	350 U	350 U	340 U	290 UJ	290 UJ
2,4-Dinitrotoluene	NL	µg/kg	180 U	180 U	170 U	150 UJ	150 UJ
2,6-Dinitrotoluene	NL	µg/kg	180 U	180 U	170 U	150 UJ	150 UJ
2-Chloronaphthalene	NL	µg/kg	180 U	180 U	170 U	150 UJ	150 UJ
2-Chlorophenol	NL	µg/kg	180 U	180 U	170 U	150 UJ	150 UJ
2-Methylnaphthalene	NL	µg/kg	6	8.7	9.1	3.6 J	4.1 J
2-Methylphenol	NL	µg/kg	180 U	180 U	170 U	150 UJ	150 UJ
2-Nitroaniline	NL	µg/kg	350 U	350 U	340 U	290 UJ	290 UJ
2-Nitrophenol	NL	µg/kg	180 U	180 U	170 U	150 UJ	150 UJ
3,3'-Dichlorobenzidine	NL	µg/kg	180 U	180 U	170 U	150 UJ	150 UJ
3-Nitroaniline	NL	µg/kg	350 U	350 U	340 U	290 UJ	290 UJ
4,6-Dinitro-2-methylphenol	NL	µg/kg	350 U	350 U	340 U	290 UJ	290 UJ
4-Bromophenyl-phenylether	NL	µg/kg	180 U	180 U	170 U	150 UJ	150 UJ
4-Chloro-3-methylphenol	NL	µg/kg	180 U	180 U	170 U	150 UJ	150 UJ
4-Chloroaniline	NL	µg/kg	180 U	180 U	170 U	150 UJ	150 UJ
4-Chlorophenyl-phenylether	NL	µg/kg	180 U	180 U	170 U	150 UJ	150 UJ
4-Methylphenol	NL	µg/kg	70 J	75 J	36 J	30 J	150 UJ
4-Nitroaniline	NL	µg/kg	350 U	350 U	340 U	290 UJ	290 UJ
4-Nitrophenol	NL	µg/kg	350 U	350 U	340 U	290 UJ	290 UJ
Acenaphthene	NL	µg/kg	3.5 U	4.8	5.7	2.9 UJ	5.9 J
Acenaphthylene	NL	µg/kg	6.5	8.3	12	3.9 J	3.5 J
Acetophenone	NL	µg/kg	180 U	180 U	170 U	150 UJ	150 UJ
Anthracene	845	µg/kg	8.8	13	18	6.9 J	21 J
Atrazine	NL	µg/kg	180 U	180 U	170 U	150 UJ	150 UJ
Benzaldehyde	NL	µg/kg	180 U	180 U	170 U	150 UJ	150 UJ
Benzo(a)anthracene	1050	µg/kg	22	34	37	24 J	47 J
Benzo(a)pyrene	1450	µg/kg	29	38	41	28 J	40 J

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Table B-1
Sediment Sample Analytical Results - SVOCs
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-79	LMR11-79	LMR11-79	LMR11-80	LMR11-80
		Field Sample ID	LMR11-79-024	LMR11-79-024FS	LMR11-79-054	LMR11-80-006	LMR11-80-024
		Sample Date	8/4/2011	8/4/2011	8/4/2011	8/5/2011	8/5/2011
		Depth Interval (in bss)	6- 24	6- 24	24- 54	0- 6	6- 24
Chemical Name	**PEC[1]**	**Unit**					
Benzo(b)fluoranthene	NL	µg/kg	33	46	51	38 J	45 J
Benzo(g,h,i)perylene	NL	µg/kg	12	17	19	11 J	25 J
Benzo(k)fluoranthene	NL	µg/kg	19	23	21	14 J	25 J
Bis(2-chloroethoxy)methane	NL	µg/kg	180 U	180 U	170 U	150 UJ	150 UJ
Bis(2-chloroethyl)ether	NL	µg/kg	180 U	180 U	170 U	150 UJ	150 UJ
Bis(2-ethylhexyl)phthalate	NL	µg/kg	120 J	180 U	170 U	150 UJ	150 UJ
Butylbenzylphthalate	NL	µg/kg	180 U	180 U	170 U	150 UJ	150 UJ
Caprolactam	NL	µg/kg	180 U	180 U	170 U	150 UJ	150 UJ
Carbazole	NL	µg/kg	180 U	180 U	170 U	150 UJ	150 UJ
Chrysene	1290	µg/kg	29	40	42	24 J	43 J
Dibenzo(a,h)anthracene	NL	µg/kg	180 U	180 U	170 U	150 UJ	150 UJ
Dibenzofuran	NL	µg/kg	4.2	6.7	7.4	5.3 J	6.3 J
Diethylphthalate	NL	µg/kg	180 U	180 U	170 U	150 UJ	150 UJ
Dimethylphthalate	NL	µg/kg	180 U	180 U	170 U	150 UJ	150 UJ
Di-n-butylphthalate	NL	µg/kg	180 U	180 U	170 U	150 UJ	150 UJ
Di-n-octylphthalate	NL	µg/kg	180 U	180 U	170 U	150 UJ	150 UJ
Fluoranthene	2230	µg/kg	51	69	71	46 J	81 J
Fluorene	536	µg/kg	5.6	8.3	9.2	2.9 UJ	8.6 J
Hexachlorobenzene	NL	µg/kg	180 U	180 U	170 U	150 UJ	150 UJ
Hexachlorobutadiene	NL	µg/kg	180 U	180 U	170 U	150 UJ	150 UJ
Hexachlorocyclopentadiene	NL	µg/kg	180 U	180 U	170 U	150 UJ	150 UJ
Hexachloroethane	NL	µg/kg	180 U	180 U	170 U	150 UJ	150 UJ
Indeno(1,2,3-cd)pyrene	NL	µg/kg	16	23	26	17 J	23 J
Isophorone	NL	µg/kg	180 U	180 U	170 U	150 UJ	150 UJ
Naphthalene	561	µg/kg	18	26	21	6.3 J	8 J
Nitrobenzene	NL	µg/kg	180 U	180 U	170 U	150 UJ	150 UJ
N-Nitroso-di-n-propylamine	NL	µg/kg	180 U	180 U	170 U	150 UJ	150 UJ
N-Nitrosodiphenylamine	NL	µg/kg	180 U	180 U	170 U	150 UJ	150 UJ
Pentachlorophenol	NL	µg/kg	7.1 U	7.2 U	6.9 U	6 UJ	5.8 UJ
Phenanthrene	1170	µg/kg	31	47	53	22 J	77 J
Phenol	NL	µg/kg	180 U	180 U	170 U	150 UJ	150 UJ
Pyrene	1520	µg/kg	43	59	63	40 J	86 J
Total PAH 17	22800	µg/kg	335.85	471.8	506.4	292.9	549.4
TOC	NL	mg/kg	27,700	34,300	25,500	32,400	24,600

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Table B-1
Sediment Sample Analytical Results - SVOCs
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-80	LMR11-81	LMR11-81	LMR11-82	LMR11-82
		Field Sample ID	LMR11-80-056	LMR11-81-006	LMR11-81-019	LMR11-82-006	LMR11-82-024
		Sample Date	8/5/2011	8/5/2011	8/5/2011	8/5/2011	8/5/2011
		Depth Interval (in bss)	24- 56	0- 6	6- 19	0- 6	6- 24
Chemical Name	**PEC[1]**	**Unit**					
1,1'-Biphenyl	NL	µg/kg	130 UJ	130 U	110 U	170 U	130 U
1,2,4,5-Tetrachlorobenzene	NL	µg/kg	130 UJ	130 U	110 U	170 U	130 U
2,2'-Oxybis(1-chloropropane)	NL	µg/kg	130 UJ	130 U	110 U	170 U	130 U
2,3,4,6-Tetrachlorophenol	NL	µg/kg	130 UJ	130 U	110 U	170 U	130 U
2,4,5-Trichlorophenol	NL	µg/kg	130 UJ	130 U	110 U	170 U	130 U
2,4,6-Trichlorophenol	NL	µg/kg	130 UJ	130 U	110 U	170 U	130 U
2,4-Dichlorophenol	NL	µg/kg	130 UJ	130 U	110 U	170 U	130 U
2,4-Dimethylphenol	NL	µg/kg	130 UJ	130 U	110 U	170 U	130 U
2,4-Dinitrophenol	NL	µg/kg	260 UJ	260 U	220 U	330 U	250 U
2,4-Dinitrotoluene	NL	µg/kg	130 UJ	130 U	110 U	170 U	130 U
2,6-Dinitrotoluene	NL	µg/kg	130 UJ	130 U	110 U	170 U	130 U
2-Chloronaphthalene	NL	µg/kg	130 UJ	130 U	110 U	170 U	130 U
2-Chlorophenol	NL	µg/kg	130 UJ	130 U	110 U	170 U	130 U
2-Methylnaphthalene	NL	µg/kg	2.6 UJ	2.6 U	2.2 U	3.3 U	2.5 U
2-Methylphenol	NL	µg/kg	130 UJ	130 U	110 U	170 U	130 U
2-Nitroaniline	NL	µg/kg	260 UJ	260 U	220 U	330 U	250 U
2-Nitrophenol	NL	µg/kg	130 UJ	130 UJ	110 UJ	170 U	130 U
3,3'-Dichlorobenzidine	NL	µg/kg	130 UJ	130 U	110 U	170 U	130 U
3-Nitroaniline	NL	µg/kg	260 UJ	260 U	220 U	330 U	250 U
4,6-Dinitro-2-methylphenol	NL	µg/kg	260 UJ	260 U	220 U	330 U	250 U
4-Bromophenyl-phenylether	NL	µg/kg	130 UJ	130 U	110 U	170 U	130 U
4-Chloro-3-methylphenol	NL	µg/kg	130 UJ	130 U	110 U	170 U	130 U
4-Chloroaniline	NL	µg/kg	130 UJ	130 U	110 U	170 U	130 U
4-Chlorophenyl-phenylether	NL	µg/kg	130 UJ	130 U	110 U	170 U	130 U
4-Methylphenol	NL	µg/kg	130 UJ	130 U	110 U	170 U	130 U
4-Nitroaniline	NL	µg/kg	260 UJ	260 U	220 U	330 U	250 U
4-Nitrophenol	NL	µg/kg	260 UJ	260 U	220 U	330 U	250 U
Acenaphthene	NL	µg/kg	2.6 UJ	2.6 U	2.2 U	7.5	2.5 U
Acenaphthylene	NL	µg/kg	2.6 UJ	2.6 U	2.2 U	3.8	2.5 U
Acetophenone	NL	µg/kg	130 UJ	130 U	110 U	170 U	130 U
Anthracene	845	µg/kg	4.7 J	2.6 U	3.6	21	2.5 U
Atrazine	NL	µg/kg	130 UJ	130 U	110 U	170 U	130 U
Benzaldehyde	NL	µg/kg	130 UJ	130 U	110 U	170 U	130 U
Benzo(a)anthracene	1050	µg/kg	17 J	2.6 U	5.3	45	5.2
Benzo(a)pyrene	1450	µg/kg	20 J	2.6 U	2.8	48	7.4

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Table B-1
Sediment Sample Analytical Results - SVOCs
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-80	LMR11-81	LMR11-81	LMR11-82	LMR11-82
		Field Sample ID	LMR11-80-056	LMR11-81-006	LMR11-81-019	LMR11-82-006	LMR11-82-024
		Sample Date	8/5/2011	8/5/2011	8/5/2011	8/5/2011	8/5/2011
		Depth Interval (in bss)	24- 56	0- 6	6- 19	0- 6	6- 24
Chemical Name	**PEC[1]**	**Unit**					
Benzo(b)fluoranthene	NL	µg/kg	21 J	2.6 U	4.1	63	11
Benzo(g,h,i)perylene	NL	µg/kg	11 J	2.6 U	2.2 U	15	3.1
Benzo(k)fluoranthene	NL	µg/kg	8 J	2.6 U	2.2 U	24	3.9
Bis(2-chloroethoxy)methane	NL	µg/kg	130 UJ	130 U	110 U	170 U	130 U
Bis(2-chloroethyl)ether	NL	µg/kg	130 UJ	130 U	110 U	170 U	130 U
Bis(2-ethylhexyl)phthalate	NL	µg/kg	130 UJ	130 U	110 U	170 U	130 U
Butylbenzylphthalate	NL	µg/kg	130 UJ	130 U	110 U	170 U	130 U
Caprolactam	NL	µg/kg	130 UJ	130 U	110 U	170 U	130 U
Carbazole	NL	µg/kg	130 UJ	130 U	110 U	170 U	130 U
Chrysene	1290	µg/kg	15 J	2.6 U	6.4	42	6.1
Dibenzo(a,h)anthracene	NL	µg/kg	130 UJ	130 U	110 U	170 U	130 U
Dibenzofuran	NL	µg/kg	2.6 UJ	2.6 U	2.2 U	8.3	2.5 U
Diethylphthalate	NL	µg/kg	130 UJ	130 U	110 U	170 U	130 U
Dimethylphthalate	NL	µg/kg	130 UJ	130 U	110 U	170 U	130 U
Di-n-butylphthalate	NL	µg/kg	130 UJ	130 U	110 U	170 U	130 U
Di-n-octylphthalate	NL	µg/kg	130 UJ	130 U	110 U	170 U	130 U
Fluoranthene	2230	µg/kg	20 J	2.6 U	11	84	12
Fluorene	536	µg/kg	2.6 UJ	2.6 U	2.2 U	4.3	2.5 U
Hexachlorobenzene	NL	µg/kg	130 UJ	130 U	110 U	170 U	130 U
Hexachlorobutadiene	NL	µg/kg	130 UJ	130 U	110 U	170 U	130 U
Hexachlorocyclopentadiene	NL	µg/kg	130 UJ	130 U	110 U	170 U	130 U
Hexachloroethane	NL	µg/kg	130 UJ	130 U	110 U	170 U	130 U
Indeno(1,2,3-cd)pyrene	NL	µg/kg	9.4 J	2.6 U	2.2 U	24	4.7
Isophorone	NL	µg/kg	130 UJ	130 U	110 U	170 U	130 U
Naphthalene	561	µg/kg	3.3 J	2.6 U	2.2 U	8.5	2.5 U
Nitrobenzene	NL	µg/kg	130 UJ	130 U	110 U	170 U	130 U
N-Nitroso-di-n-propylamine	NL	µg/kg	130 UJ	130 U	110 U	170 U	130 U
N-Nitrosodiphenylamine	NL	µg/kg	130 UJ	130 U	110 U	170 U	130 U
Pentachlorophenol	NL	µg/kg	5.3 UJ	260 UJ	220 UJ	27 UJ	250 U
Phenanthrene	1170	µg/kg	8.5 J	2.6 U	6.7	41	5.3
Phenol	NL	µg/kg	130 UJ	130 U	110 U	170 U	130 U
Pyrene	1520	µg/kg	29 J	3.8	17	65	11
Total PAH 17	22800	µg/kg	173.4	24.6	66.8	506.05	78.45
TOC	NL	mg/kg	11,700	19,400	10,800	16,200	21,700

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Table B-1
Sediment Sample Analytical Results - SVOCs
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-82	LMR11-83	LMR11-83	LMR11-83	LMR11-83
		Field Sample ID	LMR11-82-055	LMR11-83-006	LMR11-83-024	LMR11-83-048	LMR11-83-072
		Sample Date	8/5/2011	8/5/2011	8/5/2011	8/5/2011	8/5/2011
		Depth Interval (in bss)	24- 55	0- 6	6- 24	24- 48	48- 72
Chemical Name	**PEC[1]**	**Unit**					
1,1'-Biphenyl	NL	µg/kg	110 U	180 U	160 U	160 U	150 U
1,2,4,5-Tetrachlorobenzene	NL	µg/kg	110 U	180 U	160 U	160 U	150 U
2,2'-Oxybis(1-chloropropane)	NL	µg/kg	110 U	180 U	160 U	160 U	150 U
2,3,4,6-Tetrachlorophenol	NL	µg/kg	110 U	180 U	160 U	160 U	150 U
2,4,5-Trichlorophenol	NL	µg/kg	110 U	180 U	160 U	160 U	150 U
2,4,6-Trichlorophenol	NL	µg/kg	110 U	180 U	160 U	160 U	150 U
2,4-Dichlorophenol	NL	µg/kg	110 U	180 U	160 U	160 U	150 U
2,4-Dimethylphenol	NL	µg/kg	110 U	180 U	160 U	160 U	150 U
2,4-Dinitrophenol	NL	µg/kg	220 U	340 U	320 U	310 U	280 U
2,4-Dinitrotoluene	NL	µg/kg	110 U	180 U	160 U	160 U	150 U
2,6-Dinitrotoluene	NL	µg/kg	110 U	180 U	160 U	160 U	150 U
2-Chloronaphthalene	NL	µg/kg	110 U	180 U	160 U	160 U	150 U
2-Chlorophenol	NL	µg/kg	110 U	180 U	160 U	160 U	150 U
2-Methylnaphthalene	NL	µg/kg	2.2 U	3.4 U	4.5	3.7	2.8 U
2-Methylphenol	NL	µg/kg	110 U	180 U	160 U	160 U	150 U
2-Nitroaniline	NL	µg/kg	220 U	340 U	320 U	310 U	280 U
2-Nitrophenol	NL	µg/kg	110 U	180 UJ	160 U	160 UJ	150 U
3,3'-Dichlorobenzidine	NL	µg/kg	110 U	180 U	160 U	160 U	150 U
3-Nitroaniline	NL	µg/kg	220 U	340 U	320 U	310 U	280 U
4,6-Dinitro-2-methylphenol	NL	µg/kg	220 U	340 U	320 U	310 U	280 U
4-Bromophenyl-phenylether	NL	µg/kg	110 U	180 U	160 U	160 U	150 U
4-Chloro-3-methylphenol	NL	µg/kg	110 U	180 U	160 U	160 U	150 U
4-Chloroaniline	NL	µg/kg	110 U	180 U	160 U	160 U	150 U
4-Chlorophenyl-phenylether	NL	µg/kg	110 U	180 U	160 U	160 U	150 U
4-Methylphenol	NL	µg/kg	110 U	47 J	69 J	160 U	34 J
4-Nitroaniline	NL	µg/kg	220 U	340 U	320 U	310 U	280 U
4-Nitrophenol	NL	µg/kg	220 U	340 U	320 U	310 U	280 U
Acenaphthene	NL	µg/kg	2.2 U	3.4 U	10	7.5	2.8 U
Acenaphthylene	NL	µg/kg	2.2 U	3.4 U	5.1	3.1 U	2.8 U
Acetophenone	NL	µg/kg	110 U	180 U	160 U	160 U	150 U
Anthracene	845	µg/kg	2.2 U	3.6	48	23	2.8 U
Atrazine	NL	µg/kg	110 U	180 U	160 U	160 U	150 U
Benzaldehyde	NL	µg/kg	110 U	180 U	160 U	160 U	150 U
Benzo(a)anthracene	1050	µg/kg	2.2 U	6.1	99	39	4.9
Benzo(a)pyrene	1450	µg/kg	2.2 U	6.2	76	34	4.5

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Table B-1
Sediment Sample Analytical Results - SVOCs
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-82	LMR11-83	LMR11-83	LMR11-83	LMR11-83
		Field Sample ID	LMR11-82-055	LMR11-83-006	LMR11-83-024	LMR11-83-048	LMR11-83-072
		Sample Date	8/5/2011	8/5/2011	8/5/2011	8/5/2011	8/5/2011
		Depth Interval (in bss)	24- 55	0- 6	6- 24	24- 48	48- 72
Chemical Name	**PEC[1]**	**Unit**					
Benzo(b)fluoranthene	NL	µg/kg	2.2 U	7.6	94	40	4.1
Benzo(g,h,i)perylene	NL	µg/kg	2.2 U	3.4 U	16	12	2.8 U
Benzo(k)fluoranthene	NL	µg/kg	2.2 U	3.4 U	20	16	2.8 U
Bis(2-chloroethoxy)methane	NL	µg/kg	110 U	180 U	160 U	160 U	150 U
Bis(2-chloroethyl)ether	NL	µg/kg	110 U	180 U	160 U	160 U	150 U
Bis(2-ethylhexyl)phthalate	NL	µg/kg	110 U	180 U	160 U	59 J	150 U
Butylbenzylphthalate	NL	µg/kg	110 U	180 U	160 U	160 U	150 U
Caprolactam	NL	µg/kg	110 U	180 U	160 U	160 U	150 U
Carbazole	NL	µg/kg	110 U	180 U	160 U	160 U	150 U
Chrysene	1290	µg/kg	2.2 U	7.2	110	39	6.5
Dibenzo(a,h)anthracene	NL	µg/kg	110 U	180 U	160 U	160 U	150 U
Dibenzofuran	NL	µg/kg	2.2 U	3.4 U	9.7	3.1 U	2.8 U
Diethylphthalate	NL	µg/kg	110 U	180 U	160 U	160 U	150 U
Dimethylphthalate	NL	µg/kg	110 U	180 U	160 U	160 U	150 U
Di-n-butylphthalate	NL	µg/kg	110 U	180 U	160 U	160 U	150 U
Di-n-octylphthalate	NL	µg/kg	110 U	180 U	160 U	160 U	150 U
Fluoranthene	2230	µg/kg	2.6	13	170	69	9.1
Fluorene	536	µg/kg	2.2 U	3.4 U	14	12	2.8 U
Hexachlorobenzene	NL	µg/kg	110 U	180 U	160 U	160 U	150 U
Hexachlorobutadiene	NL	µg/kg	110 U	180 U	160 U	160 U	150 U
Hexachlorocyclopentadiene	NL	µg/kg	110 U	180 U	160 U	160 U	150 U
Hexachloroethane	NL	µg/kg	110 U	180 U	160 U	160 U	150 U
Indeno(1,2,3-cd)pyrene	NL	µg/kg	2.2 U	4.1	23	16	2.8 U
Isophorone	NL	µg/kg	110 U	180 U	160 U	160 U	150 U
Naphthalene	561	µg/kg	2.2 U	10	15	6.8	6.4
Nitrobenzene	NL	µg/kg	110 U	180 U	160 U	160 U	150 U
N-Nitroso-di-n-propylamine	NL	µg/kg	110 U	180 U	160 U	160 U	150 U
N-Nitrosodiphenylamine	NL	µg/kg	110 U	180 U	160 U	160 U	150 U
Pentachlorophenol	NL	µg/kg	4.5 UJ	340 UJ	65 U	6.3 U	5.8 U
Phenanthrene	1170	µg/kg	3	12	130	67	7.5
Phenol	NL	µg/kg	110 U	180 U	160 U	160 U	150 U
Pyrene	1520	µg/kg	2.9	13	150	65	11
Total PAH 17	22800	µg/kg	23.9	94.7	994.3	453.1	66.6
TOC	NL	mg/kg	27,800	22,700	24,800	38,000	18,500

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Table B-1
Sediment Sample Analytical Results - SVOCs
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-83	LMR11-84	LMR11-84	LMR11-84	LMR11-84
		Field Sample ID	LMR11-83-087	LMR11-84-006	LMR11-84-024	LMR11-84-048	LMR11-84-072
		Sample Date	8/5/2011	8/5/2011	8/5/2011	8/5/2011	8/5/2011
		Depth Interval (in bss)	72- 87	0- 6	6- 24	24- 48	48- 72
Chemical Name	**PEC[1]**	**Unit**					
1,1'-Biphenyl	NL	µg/kg	130 U	190 U	190 U	120 U	160 U
1,2,4,5-Tetrachlorobenzene	NL	µg/kg	130 U	190 U	190 U	120 U	160 U
2,2'-Oxybis(1-chloropropane)	NL	µg/kg	130 U	190 U	190 U	120 U	160 U
2,3,4,6-Tetrachlorophenol	NL	µg/kg	130 U	190 U	190 U	120 U	160 U
2,4,5-Trichlorophenol	NL	µg/kg	130 U	190 U	190 U	120 U	160 U
2,4,6-Trichlorophenol	NL	µg/kg	130 U	190 U	190 U	120 U	160 U
2,4-Dichlorophenol	NL	µg/kg	130 U	190 U	190 U	120 U	160 U
2,4-Dimethylphenol	NL	µg/kg	130 U	190 U	190 U	120 U	160 U
2,4-Dinitrophenol	NL	µg/kg	250 U	370 U	360 U	230 U	320 U
2,4-Dinitrotoluene	NL	µg/kg	130 U	190 U	190 U	120 U	160 U
2,6-Dinitrotoluene	NL	µg/kg	130 U	190 U	190 U	120 U	160 U
2-Chloronaphthalene	NL	µg/kg	130 U	190 U	190 U	120 U	160 U
2-Chlorophenol	NL	µg/kg	130 U	190 U	190 U	120 U	160 U
2-Methylnaphthalene	NL	µg/kg	2.5 U	3.7 U	200	42	230
2-Methylphenol	NL	µg/kg	130 U	190 U	190 U	120 U	160 U
2-Nitroaniline	NL	µg/kg	250 U	370 U	360 U	230 U	320 U
2-Nitrophenol	NL	µg/kg	130 U	190 U	190 U	120 U	160 U
3,3'-Dichlorobenzidine	NL	µg/kg	130 U	190 U	190 U	120 U	160 U
3-Nitroaniline	NL	µg/kg	250 U	370 U	360 U	230 U	320 U
4,6-Dinitro-2-methylphenol	NL	µg/kg	250 U	370 U	360 U	230 U	320 U
4-Bromophenyl-phenylether	NL	µg/kg	130 U	190 U	190 U	120 U	160 U
4-Chloro-3-methylphenol	NL	µg/kg	130 U	190 U	190 U	120 U	160 U
4-Chloroaniline	NL	µg/kg	130 U	190 U	190 U	120 U	160 U
4-Chlorophenyl-phenylether	NL	µg/kg	130 U	190 U	190 U	120 U	160 U
4-Methylphenol	NL	µg/kg	130 U	64 J	38 J	36 J	53 J
4-Nitroaniline	NL	µg/kg	250 U	370 U	360 U	230 U	320 U
4-Nitrophenol	NL	µg/kg	250 U	370 U	360 U	230 U	320 U
Acenaphthene	NL	µg/kg	3	3.7 U	25	5.4	8.4
Acenaphthylene	NL	µg/kg	2.7	3.7 U	9.9	3.5	4.9
Acetophenone	NL	µg/kg	130 U	190 U	190 U	120 U	160 U
Anthracene	845	µg/kg	5.3	3.7 U	34	11	16
Atrazine	NL	µg/kg	130 U	190 U	190 U	120 U	160 U
Benzaldehyde	NL	µg/kg	130 U	190 U	190 U	120 U	160 U
Benzo(a)anthracene	1050	µg/kg	9.3	3.8	37	25	72
Benzo(a)pyrene	1450	µg/kg	14	5.8	32	29	61

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Table B-1
Sediment Sample Analytical Results - SVOCs
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-83	LMR11-84	LMR11-84	LMR11-84	LMR11-84
		Field Sample ID	LMR11-83-087	LMR11-84-006	LMR11-84-024	LMR11-84-048	LMR11-84-072
		Sample Date	8/5/2011	8/5/2011	8/5/2011	8/5/2011	8/5/2011
		Depth Interval (in bss)	72- 87	0- 6	6- 24	24- 48	48- 72
Chemical Name	**PEC[1]**	**Unit**					
Benzo(b)fluoranthene	NL	µg/kg	14	9.4	48	42	96
Benzo(g,h,i)perylene	NL	µg/kg	5.8	3.7 U	19	11	19
Benzo(k)fluoranthene	NL	µg/kg	6.5	3.7 U	22	16	29
Bis(2-chloroethoxy)methane	NL	µg/kg	130 U	190 U	190 U	120 U	160 U
Bis(2-chloroethyl)ether	NL	µg/kg	130 U	190 U	190 U	120 U	160 U
Bis(2-ethylhexyl)phthalate	NL	µg/kg	130 U	190 U	190 U	120 U	160 U
Butylbenzylphthalate	NL	µg/kg	130 U	190 U	190 U	120 U	160 U
Caprolactam	NL	µg/kg	130 U	190 U	190 U	120 U	160 U
Carbazole	NL	µg/kg	130 U	190 U	190 U	120 U	160 U
Chrysene	1290	µg/kg	11	5.4	44	32	94
Dibenzo(a,h)anthracene	NL	µg/kg	130 U	190 U	190 U	29 J	160 U
Dibenzofuran	NL	µg/kg	2.5 U	3.7 U	9.9	5.5	11
Diethylphthalate	NL	µg/kg	130 U	190 U	190 U	120 U	160 U
Dimethylphthalate	NL	µg/kg	130 U	190 U	190 U	120 U	160 U
Di-n-butylphthalate	NL	µg/kg	130 U	190 U	190 U	120 U	160 U
Di-n-octylphthalate	NL	µg/kg	130 U	190 U	190 U	120 U	160 U
Fluoranthene	2230	µg/kg	19	11	88	72	130
Fluorene	536	µg/kg	3	3.7 U	23	6.7	13
Hexachlorobenzene	NL	µg/kg	130 U	190 U	190 U	120 U	160 U
Hexachlorobutadiene	NL	µg/kg	130 U	190 U	190 U	120 U	160 U
Hexachlorocyclopentadiene	NL	µg/kg	130 U	190 U	190 U	120 U	160 U
Hexachloroethane	NL	µg/kg	130 U	190 U	190 U	120 U	160 U
Indeno(1,2,3-cd)pyrene	NL	µg/kg	7.2	3.7 U	25	17	25
Isophorone	NL	µg/kg	130 U	190 U	190 U	120 U	160 U
Naphthalene	561	µg/kg	6.5	3.7 U	110	42	160
Nitrobenzene	NL	µg/kg	130 U	190 U	190 U	120 U	160 U
N-Nitroso-di-n-propylamine	NL	µg/kg	130 U	190 U	190 U	120 U	160 U
N-Nitrosodiphenylamine	NL	µg/kg	130 U	190 U	190 U	120 U	160 U
Pentachlorophenol	NL	µg/kg	5.1 U	370 U	59 UJ	24 UJ	65 UJ
Phenanthrene	1170	µg/kg	16	6.6	130	79	150
Phenol	NL	µg/kg	130 U	190 U	190 U	120 U	160 U
Pyrene	1520	µg/kg	20	10	74	59	110
Total PAH 17	22800	µg/kg	145.8	70.5	930.8	498.1	1,229.30
TOC	NL	mg/kg	9,430 J	23,900	34,100	21,600	26,900 J

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Table B-1
Sediment Sample Analytical Results - SVOCs
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-84	LMR11-84	LMR11-84	LMR11-85	LMR11-85
		Field Sample ID	LMR11-84-072DP	LMR11-84-096	LMR11-84-115	LMR11-85-006	LMR11-85-024
		Sample Date	8/5/2011	8/5/2011	8/5/2011	8/5/2011	8/5/2011
		Depth Interval (in bss)	48- 72	72- 96	96- 115	0- 6	6- 24
Chemical Name	**PEC[1]**	**Unit**					
1,1'-Biphenyl	NL	µg/kg	160 U	150 U	31 J	180 U	170 U
1,2,4,5-Tetrachlorobenzene	NL	µg/kg	160 U	150 U	150 U	180 U	170 U
2,2'-Oxybis(1-chloropropane)	NL	µg/kg	160 U	150 U	150 U	180 U	170 U
2,3,4,6-Tetrachlorophenol	NL	µg/kg	160 U	150 U	150 U	180 U	170 U
2,4,5-Trichlorophenol	NL	µg/kg	160 U	150 U	150 U	180 U	170 U
2,4,6-Trichlorophenol	NL	µg/kg	160 U	150 U	150 U	180 U	170 U
2,4-Dichlorophenol	NL	µg/kg	160 U	150 U	150 U	180 U	170 U
2,4-Dimethylphenol	NL	µg/kg	160 U	150 U	150 U	180 U	170 U
2,4-Dinitrophenol	NL	µg/kg	310 U	300 U	290 U	340 U	320 U
2,4-Dinitrotoluene	NL	µg/kg	160 U	150 U	150 U	180 U	170 U
2,6-Dinitrotoluene	NL	µg/kg	160 U	150 U	150 U	180 U	170 U
2-Chloronaphthalene	NL	µg/kg	160 U	150 U	150 U	180 U	170 U
2-Chlorophenol	NL	µg/kg	160 U	150 U	150 U	180 U	170 U
2-Methylnaphthalene	NL	µg/kg	3.1 U	170	490	4.5	3.9
2-Methylphenol	NL	µg/kg	160 U	150 U	51 J	180 U	170 U
2-Nitroaniline	NL	µg/kg	310 U	300 U	290 U	340 U	320 U
2-Nitrophenol	NL	µg/kg	160 U	150 U	150 U	180 UJ	170 UJ
3,3'-Dichlorobenzidine	NL	µg/kg	160 U	150 U	150 U	180 U	170 U
3-Nitroaniline	NL	µg/kg	310 U	300 U	290 U	340 U	320 U
4,6-Dinitro-2-methylphenol	NL	µg/kg	310 U	300 U	290 U	340 U	320 U
4-Bromophenyl-phenylether	NL	µg/kg	160 U	150 U	150 U	180 U	170 U
4-Chloro-3-methylphenol	NL	µg/kg	160 U	150 U	150 U	180 U	170 U
4-Chloroaniline	NL	µg/kg	160 U	150 U	150 U	180 U	170 U
4-Chlorophenyl-phenylether	NL	µg/kg	160 U	150 U	150 U	180 U	170 U
4-Methylphenol	NL	µg/kg	64 J	120 J	95 J	95 J	40 J
4-Nitroaniline	NL	µg/kg	310 U	300 U	290 U	340 U	320 U
4-Nitrophenol	NL	µg/kg	310 U	300 U	290 U	340 U	320 U
Acenaphthene	NL	µg/kg	3.1 U	9	19	3.4 U	3.2 U
Acenaphthylene	NL	µg/kg	3.1 U	3.4	9.3	3.9	3.2 U
Acetophenone	NL	µg/kg	160 U	150 U	62 J	180 U	170 U
Anthracene	845	µg/kg	3.1 U	26	29	9.4	3.2 U
Atrazine	NL	µg/kg	160 U	150 U	150 U	180 U	170 U
Benzaldehyde	NL	µg/kg	160 U	150 U	150 U	180 U	170 U
Benzo(a)anthracene	1050	µg/kg	3.1 U	62	95	29	4.5
Benzo(a)pyrene	1450	µg/kg	3.1 U	66	99	31	4

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Table B-1
Sediment Sample Analytical Results - SVOCs
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-84	LMR11-84	LMR11-84	LMR11-85	LMR11-85
		Field Sample ID	LMR11-84-072DP	LMR11-84-096	LMR11-84-115	LMR11-85-006	LMR11-85-024
		Sample Date	8/5/2011	8/5/2011	8/5/2011	8/5/2011	8/5/2011
		Depth Interval (in bss)	48- 72	72- 96	96- 115	0- 6	6- 24
Chemical Name	**PEC[1]**	**Unit**					
Benzo(b)fluoranthene	NL	µg/kg	3.1 U	90	130	31	5.1
Benzo(g,h,i)perylene	NL	µg/kg	3.1 U	28	49	13	3.2 U
Benzo(k)fluoranthene	NL	µg/kg	3.1 U	33	47	15	3.2 U
Bis(2-chloroethoxy)methane	NL	µg/kg	160 U	150 U	150 U	180 U	170 U
Bis(2-chloroethyl)ether	NL	µg/kg	160 U	150 U	150 U	180 U	170 U
Bis(2-ethylhexyl)phthalate	NL	µg/kg	160 U	150 U	150 U	180 U	170 U
Butylbenzylphthalate	NL	µg/kg	160 U	150 U	150 U	180 U	170 U
Caprolactam	NL	µg/kg	160 U	150 U	150 U	180 U	170 U
Carbazole	NL	µg/kg	160 U	150 U	150 U	180 U	170 U
Chrysene	1290	µg/kg	3.1 U	65	110	29	5.3
Dibenzo(a,h)anthracene	NL	µg/kg	33 J	150 U	92 J	180 U	170 U
Dibenzofuran	NL	µg/kg	3.1 U	16	29 U	3.4 U	3.2 U
Diethylphthalate	NL	µg/kg	160 U	150 U	150 U	180 U	170 U
Dimethylphthalate	NL	µg/kg	160 U	150 U	150 U	180 U	170 U
Di-n-butylphthalate	NL	µg/kg	160 U	150 U	150 U	180 U	170 U
Di-n-octylphthalate	NL	µg/kg	160 U	150 U	150 U	180 U	170 U
Fluoranthene	2230	µg/kg	3.1 U	120	160	50	8.3
Fluorene	536	µg/kg	3.1 U	14	41	4	3.2 U
Hexachlorobenzene	NL	µg/kg	160 U	150 U	150 U	180 U	170 U
Hexachlorobutadiene	NL	µg/kg	160 U	150 U	150 U	180 U	170 U
Hexachlorocyclopentadiene	NL	µg/kg	160 U	150 U	150 U	180 U	170 U
Hexachloroethane	NL	µg/kg	160 U	150 U	150 U	180 U	170 U
Indeno(1,2,3-cd)pyrene	NL	µg/kg	3.1 U	35	53	15	3.2 U
Isophorone	NL	µg/kg	160 U	150 U	150 U	180 U	170 U
Naphthalene	561	µg/kg	3.1 U	120	360	13	10
Nitrobenzene	NL	µg/kg	160 U	150 U	150 U	180 U	170 U
N-Nitroso-di-n-propylamine	NL	µg/kg	160 U	150 U	150 U	180 U	170 U
N-Nitrosodiphenylamine	NL	µg/kg	160 U	150 U	150 U	180 U	170 U
Pentachlorophenol	NL	µg/kg	310 U	60 UJ	59 UJ	28 U	320 UJ
Phenanthrene	1170	µg/kg	3.1 U	130	240	32	6.6
Phenol	NL	µg/kg	160 U	150 U	150 U	180 U	170 U
Pyrene	1520	µg/kg	3.1 U	90	140	52	8.7
Total PAH 17	22800	µg/kg	26.35	1,077	2,086	335.2	69.2
TOC	NL	mg/kg	169,000 J	74,000	52,700	20,400	17,000

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Table B-1
Sediment Sample Analytical Results - SVOCs
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-85	LMR11-85
		Field Sample ID	LMR11-85-048	LMR11-85-074
		Sample Date	8/5/2011	8/5/2011
		Depth Interval (in bss)	24- 48	48- 74
Chemical Name	**PEC[1]**	**Unit**		
1,1'-Biphenyl	NL	µg/kg	190 U	150 U
1,2,4,5-Tetrachlorobenzene	NL	µg/kg	190 U	150 U
2,2'-Oxybis(1-chloropropane)	NL	µg/kg	190 U	150 U
2,3,4,6-Tetrachlorophenol	NL	µg/kg	190 U	150 U
2,4,5-Trichlorophenol	NL	µg/kg	190 U	150 U
2,4,6-Trichlorophenol	NL	µg/kg	190 U	150 U
2,4-Dichlorophenol	NL	µg/kg	190 U	150 U
2,4-Dimethylphenol	NL	µg/kg	190 U	150 U
2,4-Dinitrophenol	NL	µg/kg	370 U	290 U
2,4-Dinitrotoluene	NL	µg/kg	190 U	150 U
2,6-Dinitrotoluene	NL	µg/kg	190 U	150 U
2-Chloronaphthalene	NL	µg/kg	190 U	150 U
2-Chlorophenol	NL	µg/kg	190 U	150 U
2-Methylnaphthalene	NL	µg/kg	3.9	3.7
2-Methylphenol	NL	µg/kg	190 U	150 U
2-Nitroaniline	NL	µg/kg	370 U	290 U
2-Nitrophenol	NL	µg/kg	190 UJ	150 UJ
3,3'-Dichlorobenzidine	NL	µg/kg	190 U	150 U
3-Nitroaniline	NL	µg/kg	370 U	290 U
4,6-Dinitro-2-methylphenol	NL	µg/kg	370 U	290 U
4-Bromophenyl-phenylether	NL	µg/kg	190 U	150 U
4-Chloro-3-methylphenol	NL	µg/kg	190 U	150 U
4-Chloroaniline	NL	µg/kg	190 U	150 U
4-Chlorophenyl-phenylether	NL	µg/kg	190 U	150 U
4-Methylphenol	NL	µg/kg	190 U	150 U
4-Nitroaniline	NL	µg/kg	370 U	290 U
4-Nitrophenol	NL	µg/kg	370 U	290 U
Acenaphthene	NL	µg/kg	3.7 U	2.9 U
Acenaphthylene	NL	µg/kg	3.7 U	2.9 U
Acetophenone	NL	µg/kg	190 U	150 U
Anthracene	845	µg/kg	3.7 U	3.4
Atrazine	NL	µg/kg	190 U	150 U
Benzaldehyde	NL	µg/kg	190 U	150 U
Benzo(a)anthracene	1050	µg/kg	3.9	9.1
Benzo(a)pyrene	1450	µg/kg	3.7 U	13

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Table B-1
Sediment Sample Analytical Results - SVOCs
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-85	LMR11-85
		Field Sample ID	LMR11-85-048	LMR11-85-074
		Sample Date	8/5/2011	8/5/2011
		Depth Interval (in bss)	24- 48	48- 74
Chemical Name	**PEC[1]**	**Unit**		
Benzo(b)fluoranthene	NL	µg/kg	4.2	12
Benzo(g,h,i)perylene	NL	µg/kg	3.7 U	4.5
Benzo(k)fluoranthene	NL	µg/kg	3.7 U	5.1
Bis(2-chloroethoxy)methane	NL	µg/kg	190 U	150 U
Bis(2-chloroethyl)ether	NL	µg/kg	190 U	150 U
Bis(2-ethylhexyl)phthalate	NL	µg/kg	190 U	150 U
Butylbenzylphthalate	NL	µg/kg	190 U	150 U
Caprolactam	NL	µg/kg	190 U	150 U
Carbazole	NL	µg/kg	190 U	150 U
Chrysene	1290	µg/kg	4.7	9.5
Dibenzo(a,h)anthracene	NL	µg/kg	190 U	150 U
Dibenzofuran	NL	µg/kg	3.7 U	2.9 U
Diethylphthalate	NL	µg/kg	190 U	150 U
Dimethylphthalate	NL	µg/kg	190 U	150 U
Di-n-butylphthalate	NL	µg/kg	190 U	150 U
Di-n-octylphthalate	NL	µg/kg	190 U	150 U
Fluoranthene	2230	µg/kg	9.3	14
Fluorene	536	µg/kg	3.7 U	2.9 U
Hexachlorobenzene	NL	µg/kg	190 U	150 U
Hexachlorobutadiene	NL	µg/kg	190 U	150 U
Hexachlorocyclopentadiene	NL	µg/kg	190 U	150 U
Hexachloroethane	NL	µg/kg	190 U	150 U
Indeno(1,2,3-cd)pyrene	NL	µg/kg	3.7 U	5.4
Isophorone	NL	µg/kg	190 U	150 U
Naphthalene	561	µg/kg	11	6.7
Nitrobenzene	NL	µg/kg	190 U	150 U
N-Nitroso-di-n-propylamine	NL	µg/kg	190 U	150 U
N-Nitrosodiphenylamine	NL	µg/kg	190 U	150 U
Pentachlorophenol	NL	µg/kg	370 UJ	290 UJ
Phenanthrene	1170	µg/kg	8.6	9.6
Phenol	NL	µg/kg	190 U	150 U
Pyrene	1520	µg/kg	10	15 J
Total PAH 17	22800	µg/kg	72.25	116.8
TOC	NL	mg/kg	39,900	22,900

Notes and Abbreviations:
Result exceeds PEC
% - Percent
µg/kg - Microgram per kilogram
DP - Duplicate
FS - Field split
ID - Identification
in bss - Inches below sediment surface
J - Estimated value
mg/kg - Milligram per kilogram
NL - Not Listed
PAH - Polycylic Aromatic Hydrocarbon
PEC - Probable Effect Concentration
TOC - Total Organic Carbon
U - Not detected
[1] Consensus-based PEC values (2000)

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Table B-2
Sediment Sample Analytical Results - TAL Metals
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-01	LMR11-01	LMR11-01	LMR11-01	LMR11-02	LMR11-03	LMR11-03
		Field Sample ID	LMR11-01-006	LMR11-01-024	LMR11-01-048	LMR11-01-060	LMR11-02-006	LMR11-03-006	LMR11-03-024
		Sample Date	8/2/2011	8/5/2011	8/5/2011	8/5/2011	8/2/2011	8/3/2011	8/3/2011
		Depth Interval (in bss)	0- 6	6- 24	24- 48	48- 60	0- 6	0- 6	6- 24
Chemical Name	PEC[1]	Unit							
Aluminum	NL	mg/kg	20,700	20,600 J-	13,300 J-	6,140 J-	4,350	10,900	19,000
Antimony	NL	mg/kg	0.33 UJ	0.3 UJ	0.27 UJ	7.3 UJ	0.2 UJ	7.3 UJ	0.3 UJ
Arsenic	33	mg/kg	8.1	9.5 J-	6.1 J-	13.8 J-	2.7	6.3	8.5
Barium	NL	mg/kg	143	154 J-	95.6 J-	38.1 J-	27.4	79.6	124
Beryllium	NL	mg/kg	0.94	0.97 J-	0.023 UJ	0.022 UJ	0.017 U	0.022 U	0.86
Cadmium	4.98	mg/kg	1.6	1.9 J-	1.1 J-	0.013 UJ	0.011 U	1.1	1.8
Calcium	NL	mg/kg	42,100	35,100 J-	34,700 J-	44,500 J-	26,700	45,500	45,000
Chromium	111	mg/kg	30.4	32.1 J-	21.3 J-	11.7 J-	8	17.8	28.8
Cobalt	NL	mg/kg	10.7	11.4 J-	9 J-	10.3 J-	0.05 U	7.4	9.5
Copper	149	mg/kg	37.6	40.1 J-	23.7 J-	16 J-	6.6	24	34.4
Iron	NL	mg/kg	28,500	29,800 J-	19,800 J-	17,200 J-	7,560	17,200	25,400
Lead	128	mg/kg	23.7 J	35.4 J-	16.9 J-	10.7 J-	4.9 J	14.7 J	21.7
Magnesium	NL	mg/kg	12,700	10,200 J-	12,300 J-	19,700 J-	7,290	13,500	14,000
Manganese	NL	mg/kg	430	519 J-	358 J-	279 J-	149	326	423
Mercury	1.06	mg/kg	0.062 J	0.094 J-	0.11 J-	0.024 J-	0.017 J	0.044 J	0.07 J
Nickel	48.6	mg/kg	32.1	36.1 J-	25 J-	21.5 J-	8.3	19.2	29.5
Potassium	NL	mg/kg	3,720	2,920 J-	2,230 J-	1,110 J-	780	1,970	3,350
Selenium	NL	mg/kg	5.6 U	5 UJ	4.5 UJ	4.3 UJ	3.3 U	4.2 U	4.9 U
Silver	NL	mg/kg	0.051 U	0.28 J-	0.057 J-	1.2 UJ	0.95 U	0.039 U	0.21 J
Sodium	NL	mg/kg	1.9 U	1.7 UJ	1.5 UJ	1.5 UJ	1.1 U	1.5 U	1.7 UJ
Thallium	NL	mg/kg	0.22 U	0.2 UJ	0.18 UJ	0.17 UJ	0.13 U	0.17 U	0.2 U
Vanadium	NL	mg/kg	44.6	42.3 J-	31.5 J-	17.8 J-	12.2	27.2	44.7
Zinc	459	mg/kg	131 J	332 J-	73.2 J-	38.4 J-	27.9 J	75.7 J	117

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Table B-2
Sediment Sample Analytical Results - TAL Metals
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-03	LMR11-03	LMR11-04	LMR11-05	LMR11-05	LMR11-06	LMR11-06
		Field Sample ID	LMR11-03-048	LMR11-03-059	LMR11-04-006	LMR11-05-006	LMR11-05-018	LMR11-06-006	LMR11-06-024
		Sample Date	8/3/2011	8/3/2011	8/3/2011	8/4/2011	8/4/2011	8/3/2011	8/3/2011
		Depth Interval (in bss)	24- 48	48- 59	0- 6	0- 6	6- 18	0- 6	6- 24
Chemical Name	PEC[1]	Unit							
Aluminum	NL	mg/kg	20,400	19,900	5,620	10,100	22,200	17,400	24,700
Antimony	NL	mg/kg	0.28 UJ	0.3 UJ	0.2 UJ	0.26 UJ	0.28 UJ	0.49 J	0.39 UJ
Arsenic	33	mg/kg	9.3	8.8	3.6	9.5	11.8	8	9
Barium	NL	mg/kg	149	130	34.3	68.8	139	123	156
Beryllium	NL	mg/kg	0.97	0.89	0.017 U	0.022 U	1.2	0.88	1.1
Cadmium	4.98	mg/kg	2.2	2.6	0.01 U	1.1	2.5	1.4	2
Calcium	NL	mg/kg	42,700	37,600	31,500	204,000	40,900	42,000	38,500
Chromium	111	mg/kg	32	31.6	9.5	15.3	33	27	35
Cobalt	NL	mg/kg	11.4	9.8	0.049 U	0.064 U	11.7	9.8	11.6
Copper	149	mg/kg	37.4	33	8.2	21	35.4	34.3	40.2
Iron	NL	mg/kg	31,200	26,900	9,070	18,600	28,300	25,600	30,800
Lead	128	mg/kg	31.2	26.8	6 J	14.3	27.5	20.7 J	24.6
Magnesium	NL	mg/kg	11,800	11,100	9,300	9,200	12,300	12,600	12,000
Manganese	NL	mg/kg	641	510	185	868	457	436	439
Mercury	1.06	mg/kg	0.11 J	0.081 J	0.019 J	0.04 J	0.063 J	0.056 J	0.072 J
Nickel	48.6	mg/kg	35.1	31.7	10.2	20.3	34.8	28.5	35.5
Potassium	NL	mg/kg	2,880	3,200	1,040	1,850	3,980	3,190	4,480
Selenium	NL	mg/kg	4.7 U	5 U	3.3 U	4.3 U	4.6 U	6.2 U	6.5 U
Silver	NL	mg/kg	0.23 J	0.29 J	0.95 U	1.2 U	0.19 J	0.13 J	0.25 J
Sodium	NL	mg/kg	1.6 UJ	1.7 UJ	1.1 U	1.5 UJ	1.6 UJ	2.1 U	2.2 UJ
Thallium	NL	mg/kg	0.19 U	0.2 U	0.13 U	0.17 U	0.18 U	0.25 U	0.26 U
Vanadium	NL	mg/kg	44.3	45.6	14.7	25.5	48.8	39.4	53.8
Zinc	459	mg/kg	269	124	43 J	76.9	124	120 J	146

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Table B-2
Sediment Sample Analytical Results - TAL Metals
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-06	LMR11-07	LMR11-08	LMR11-08	LMR11-08	LMR11-10	LMR11-10
		Field Sample ID	LMR11-06-052	LMR11-07-006	LMR11-08-006	LMR11-08-024	LMR11-08-052	LMR11-10-006	LMR11-10-024
		Sample Date	8/3/2011	8/3/2011	8/3/2011	8/5/2011	8/5/2011	8/4/2011	8/4/2011
		Depth Interval (in bss)	24- 52	0- 6	0- 6	6- 24	24- 52	0- 6	6- 24
Chemical Name	PEC[1]	Unit							
Aluminum	NL	mg/kg	19,400	9,360	18,800	24,000 J-	22,600 J-	3,330	8,350
Antimony	NL	mg/kg	0.24 UJ	7.1 UJ	0.39 UJ	0.34 UJ	0.28 UJ	6.8 UJ	0.22 UJ
Arsenic	33	mg/kg	8.1	5.6	7.9	9.2 J-	9.3 J-	2.3 J	5.6 J
Barium	NL	mg/kg	133	63	130	156 J-	158 J-	0.07 U	65.5
Beryllium	NL	mg/kg	0.86	0.021 U	0.033 U	1 J-	1 J-	0.02 U	0.019 U
Cadmium	4.98	mg/kg	2.9	0.71	1.4	1.6 J-	1.7 J-	0.012 U	2
Calcium	NL	mg/kg	32,100	52,600	41,600	39,100 J-	35,700 J-	33,700	32,200
Chromium	111	mg/kg	34.6	15.2	27.9	33.8 J-	32.6 J-	7.1	16.2
Cobalt	NL	mg/kg	9.2	7	10.2	11.4 J-	11.4 J-	0.059 U	6.4
Copper	149	mg/kg	34.8	15.9	33.2	38.3 J-	38.3 J-	4.7	18.8
Iron	NL	mg/kg	24,900	14,900	26,300	29,900 J-	29,500 J-	6,710	13,600
Lead	128	mg/kg	33.8	10.2 J	19.8 J	25.2 J-	27.5 J-	4.7 J	14.8 J
Magnesium	NL	mg/kg	9,680	10,900	12,100	12,100 J-	10,800 J-	10,200	10,900
Manganese	NL	mg/kg	440	311	407	481 J-	521 J-	146	239
Mercury	1.06	mg/kg	0.073 J	0.038 J	0.056 J	0.074 J-	0.077 J-	0.011 J	0.038 J
Nickel	48.6	mg/kg	32.7	17.4	29.8	35.1 J-	35.6 J-	7.1	18.1
Potassium	NL	mg/kg	3,140	1,550	3,410	4,280 J-	3,560 J-	10.6 U	1160
Selenium	NL	mg/kg	4 U	4.1 U	6.4 U	5.6 UJ	4.7 UJ	4 U	3.6 U
Silver	NL	mg/kg	0.3 J	0.038 U	0.059 U	0.22 J-	0.2 J-	0.036 U	0.033 U
Sodium	NL	mg/kg	1.4 UJ	1.4 U	2.2 U	1.9 UJ	1.6 UJ	1.4 U	1.2 U
Thallium	NL	mg/kg	0.16 U	0.16 U	0.26 U	0.23 UJ	0.19 UJ	0.16 U	0.14 U
Vanadium	NL	mg/kg	41.4	21.9	41.9	51.5 J-	45.3 J-	10.8	19.5
Zinc	459	mg/kg	200	60.4 J	116 J	130 J-	153 J-	24.6	64

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Table B-2
Sediment Sample Analytical Results - TAL Metals
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-10	LMR11-11	LMR11-11	LMR11-11	LMR11-12	LMR11-13	LMR11-13
		Field Sample ID	LMR11-10-045	LMR11-11-006	LMR11-11-024	LMR11-11-037	LMR11-12-006	LMR11-13-006	LMR11-13-026
		Sample Date	8/4/2011	8/5/2011	8/5/2011	8/5/2011	8/3/2011	8/3/2011	8/3/2011
		Depth Interval (in bss)	24- 45	0- 6	6- 24	24- 37	0- 6	0- 6	6- 26
Chemical Name	PEC[1]	Unit							
Aluminum	NL	mg/kg	6,970	5,210 J-	6,050 J-	4,110 J-	16,000	17,500	13,800
Antimony	NL	mg/kg	0.21 UJ	0.28 UJ	0.2 UJ	7.4 UJ	11.4 UJ	0.24 UJ	0.23 UJ
Arsenic	33	mg/kg	5.1 J	3.8 J-	4.5 J-	3.6 J-	7.7	11.8 J	5.2 J
Barium	NL	mg/kg	45.8	31.3 J-	45.7 J-	29.7 J-	122	116	89.4
Beryllium	NL	mg/kg	0.018 U	0.024 UJ	0.017 UJ	0.022 UJ	0.034 U	0.84	0.65
Cadmium	4.98	mg/kg	0.68	0.014 UJ	0.66 J-	0.014 UJ	1.2	1.6	0.9
Calcium	NL	mg/kg	31,000	33,800 J-	33,600 J-	32,000 J-	45,300	40,600	35,000
Chromium	111	mg/kg	13.4	10 J-	11.3 J-	9.1 J-	24.6	25.5	19.9
Cobalt	NL	mg/kg	5.7	0.068 UJ	4.9 J-	0.064 UJ	10.3	10.1	8.8
Copper	149	mg/kg	12.3	8.5 J-	12.9 J-	9.6 J-	29.8	34.2	20.4
Iron	NL	mg/kg	11,500	8,500 J-	10,300 J-	8,240 J-	25,000	23,700	18,800
Lead	128	mg/kg	10.6 J	7.1 J-	15.9 J-	8 J-	17.6 J	34.6 J	15.3 J
Magnesium	NL	mg/kg	9,870	11,800 J-	9,940 J-	9,200 J-	11,600	12,400	12,400
Manganese	NL	mg/kg	226	167 J-	238 J-	176 J-	548	373	306
Mercury	1.06	mg/kg	0.036 J	0.017 J-	0.031 J-	0.032 J-	0.041 J	0.14	0.07 J
Nickel	48.6	mg/kg	14.3	10.5 J-	12.6 J-	11.6 J-	28.9	28.1	23.4
Potassium	NL	mg/kg	1,040	966 J-	1,030 J-	617 J-	2,680	2,960	2,370
Selenium	NL	mg/kg	3.4 U	4.6 UJ	3.3 UJ	4.3 UJ	6.7 U	4 U	3.8 U
Silver	NL	mg/kg	0.031 U	1.3 UJ	0.94 UJ	1.2 UJ	0.061 U	0.036 U	0.035 U
Sodium	NL	mg/kg	1.2 U	1.6 UJ	1.1 UJ	1.5 UJ	2.3 U	1.4 U	1.3 U
Thallium	NL	mg/kg	0.14 U	0.18 UJ	0.13 UJ	0.17 UJ	0.27 U	0.16 U	0.15 U
Vanadium	NL	mg/kg	18.9	14.7 J-	17.1 J-	12.8 J-	35.3	39.8	32.6
Zinc	459	mg/kg	48	37.5 J-	50 J-	34.7 J-	106 J	103	66.8

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Table B-2
Sediment Sample Analytical Results - TAL Metals
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-14	LMR11-14	LMR11-14	LMR11-15	LMR11-15	LMR11-15	LMR11-15
		Field Sample ID	LMR11-14-006	LMR11-14-024	LMR11-14-045	LMR11-15-006	LMR11-15-006-DP	LMR11-15-024	LMR11-15-024-DP
		Sample Date	8/5/2011	8/5/2011	8/5/2011	8/9/2011	8/9/2011	8/9/2011	8/9/2011
		Depth Interval (in bss)	0- 6	6- 24	24- 45	0- 6	0- 6	6- 24	6- 24
Chemical Name	PEC[1]	Unit							
Aluminum	NL	mg/kg	4,560 J-	11,900 J-	9,120 J-	24,400	22,400	24,400	20,000
Antimony	NL	mg/kg	0.39 J-	7.6 UJ	0.32 J-	9.9 UJ	0.3 UJ	0.32 UJ	0.32 UJ
Arsenic	33	mg/kg	3.2 J-	6.8 J-	8.9 J-	8.6	8.4	9.3	7.9
Barium	NL	mg/kg	35.2 J-	87.1 J-	82.6 J-	159	138	152	114
Beryllium	NL	mg/kg	0.019 UJ	0.023 UJ	0.024 UJ	0.93	0.93	1.1	0.79
Cadmium	4.98	mg/kg	0.012 UJ	1.3 J-	3.1 J-	1.8	1.3	1.6	1.2
Calcium	NL	mg/kg	36,000 J-	36,800 J-	49,800 J-	33,600	37,300	36,200	32,700
Chromium	111	mg/kg	8.4 J-	20.3 J-	29.1 J-	32.3	31	33.9	27.3
Cobalt	NL	mg/kg	0.056 UJ	8 J-	7.4 J-	11.4	10.3 J	11.4 J	9.3 J
Copper	149	mg/kg	10.4 J-	25 J-	32.2 J-	34.8	31.3	36.5	27.4
Iron	NL	mg/kg	8,560 J-	18,200 J-	16,200 J-	29,500	26,100	30,600	24,000
Lead	128	mg/kg	6.6 J-	18.8 J-	30.8 J-	21.6	19 J	23.1 J	16.5 J
Magnesium	NL	mg/kg	10,500 J-	11,500 J-	13,500 J-	10,400	10,600	11,300	10,400
Manganese	NL	mg/kg	190 J-	325 J-	420 J-	512	442 J	536 J	427 J
Mercury	1.06	mg/kg	0.023 J-	0.059 J-	0.098 J-	0.063 J	0.057 J	0.051 J	0.046 J
Nickel	48.6	mg/kg	9.1 J-	22.8 J-	25.9 J-	34.6	29.6 J	34.5 J	27.2 J
Potassium	NL	mg/kg	849 J-	1,880 J-	1,460 J-	4,330	4,450	4,300	3,890
Selenium	NL	mg/kg	3.8 UJ	4.4 UJ	4.7 UJ	5.8 U	4.9 U	5.4 U	5.3 U
Silver	NL	mg/kg	1.1 UJ	0.083 J-	0.18 J-	0.053 U	0.045 U	0.049 U	0.049 U
Sodium	NL	mg/kg	1.3 UJ	1.5 UJ	1.6 UJ	2 UJ	1.7 U	1.8 U	1.8 U
Thallium	NL	mg/kg	0.15 UJ	0.18 UJ	0.19 UJ	0.23 U	0.2 U	0.22 U	0.21 U
Vanadium	NL	mg/kg	14.3 J-	28.1 J-	23 J-	47.1	47.8	50.1	43.7
Zinc	459	mg/kg	31 J-	81.5 J-	88.9 J-	129	106 J	130 J	95.9 J

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Table B-2
Sediment Sample Analytical Results - TAL Metals
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-15	LMR11-15	LMR11-15	LMR11-15	LMR11-16	LMR11-16	LMR11-16
		Field Sample ID	LMR11-15-048	LMR11-15-048-DP	LMR11-15-072	LMR11-15-104	LMR11-16-006	LMR11-16-024	LMR11-16-048
		Sample Date	8/9/2011	8/9/2011	8/9/2011	8/9/2011	8/9/2011	8/9/2011	8/9/2011
		Depth Interval (in bss)	24- 48	24- 48	48- 72	72- 104	0- 6	6- 24	24- 48
Chemical Name	PEC[1]	Unit							
Aluminum	NL	mg/kg	17,600	22,500	11,300	12,500	24,000	27,100	25,900
Antimony	NL	mg/kg	0.24 UJ	0.27 UJ	0.28 UJ	0.27 UJ	11.3 UJ	0.33 UJ	0.34 UJ
Arsenic	33	mg/kg	10	8.9	9.9	11.3	10.7	11.6	16.4
Barium	NL	mg/kg	109	132	77.9	87.8	165	175	167
Beryllium	NL	mg/kg	0.76	0.9	0.024 U	0.023 U	0.96	1.1	0.97
Cadmium	4.98	mg/kg	1.5	1.4	1.3	1.5	2	2.1	2.1
Calcium	NL	mg/kg	55,400	35,600	77,200	64,700	31,600	31,100	36,200
Chromium	111	mg/kg	26.4	30.5	19.9	22	33.1	36.4	35.2
Cobalt	NL	mg/kg	8.9 J	10 J	8 J	8.8 J	12.4	12.6	11.6
Copper	149	mg/kg	30	38.4	26.6	30.4	37.7	39.6	38.2
Iron	NL	mg/kg	23,300	26,000	20,300	20,600	31,800	33,500	31,300
Lead	128	mg/kg	20.8 J	19.6 J	20.4 J	20.4 J	24.1	25.6	29.7
Magnesium	NL	mg/kg	15,600	10,800	24,500	19,700	10,800	11,000	11,100
Manganese	NL	mg/kg	503 J	447 J	511 J	467 J	496	521	550
Mercury	1.06	mg/kg	0.059 J	0.055 J	0.054 J	0.068 J	0.066 J	0.075 J	0.087 J
Nickel	48.6	mg/kg	26.3 J	29.5 J	22.8 J	25.2 J	37.6	38.9	36.3
Potassium	NL	mg/kg	3,170	4,120	1,940	2,300	3,790	4,570	4,360
Selenium	NL	mg/kg	3.9 U	4.4 U	4.7 U	4.5 U	6.6 U	5.5 U	5.6 U
Silver	NL	mg/kg	0.036 U	0.04 U	1.4 U	0.041 U	0.06 U	0.051 U	0.052 U
Sodium	NL	mg/kg	1.3 U	1.5 U	1.6 U	1.6 U	2.3 UJ	1.9 UJ	980 J
Thallium	NL	mg/kg	0.16 U	0.18 U	0.19 U	0.18 U	0.26 U	0.22 U	0.23 U
Vanadium	NL	mg/kg	40.3	47.2	29.8	34.8	46.4	53.9	52.5
Zinc	459	mg/kg	107 J	111 J	80.7 J	83.7 J	139	145	197

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Table B-2
Sediment Sample Analytical Results - TAL Metals
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-16	LMR11-17	LMR11-17	LMR11-18	LMR11-18	LMR11-18	LMR11-19
		Field Sample ID	LMR11-16-072	LMR11-17-006	LMR11-17-021	LMR11-18-006	LMR11-18-024	LMR11-18-048	LMR11-19-006
		Sample Date	8/9/2011	8/4/2011	8/4/2011	8/3/2011	8/5/2011	8/5/2011	8/3/2011
		Depth Interval (in bss)	48- 72	0- 6	6- 21	0- 6	6- 24	24- 48	0- 6
Chemical Name	PEC[1]	Unit							
Aluminum	NL	mg/kg	12,100	3,020	3,880	9,300	8,820 J-	14,700 J-	13,100
Antimony	NL	mg/kg	0.32 UJ	6.2 UJ	0.21 UJ	0.34 UJ	8.2 UJ	9.4 UJ	0.5 J
Arsenic	33	mg/kg	63.2	3.4 J	3.4 J	5.1	7.4 J-	9.5 J-	6.2
Barium	NL	mg/kg	99.8	0.064 U	22.2	69.3	67.9 J-	129 J-	88.4
Beryllium	NL	mg/kg	0.028 U	0.019 U	0.018 U	0.03 U	0.025 UJ	0.028 UJ	0.027 U
Cadmium	4.98	mg/kg	2	0.011 U	0.011 U	0.018 U	1.1 J-	4.6 J-	0.92
Calcium	NL	mg/kg	35,600	30,500	48,700	39,000	39,300 J-	55,200 J-	33,300
Chromium	111	mg/kg	23.6	8.1	7.6	14.8	16.4 J-	44.9 J-	19.9
Cobalt	NL	mg/kg	8.1	0.053 U	0.053 U	0.085 U	7.5 J-	8.8 J-	8.1
Copper	149	mg/kg	27.1	2.8	6.2	18.7	20.9 J-	42.2 J-	19.6
Iron	NL	mg/kg	16,800	7,320	8,010	14,600	15,000 J-	21,000 J-	19,000
Lead	128	mg/kg	29	3.8 J	4.4 J	11.8 J	15.7 J-	40.4 J-	12.8 J
Magnesium	NL	mg/kg	9,970	9,860	14,500	11,000	10,900 J-	12,100 J-	9,710
Manganese	NL	mg/kg	328	148	230	290	294 J-	499 J-	345
Mercury	1.06	mg/kg	0.078 J	0.0052 J	0.0052 J	0.027 J	0.059 J-	0.12 J-	0.029 J
Nickel	48.6	mg/kg	23.1	7.2	8.9	16.5	20 J-	35.4 J-	21.4
Potassium	NL	mg/kg	2,070	415 J	676	1,850	1,360 J-	2,700 J-	2,380
Selenium	NL	mg/kg	0.53 J	3.6 U	3.5 U	5.7 U	4.8 UJ	5.5 UJ	0.49 J
Silver	NL	mg/kg	0.049 U	0.033 U	1 U	1.6 U	1.4 UJ	0.4 J-	0.098 J
Sodium	NL	mg/kg	1700 J	1.2 U	1.2 U	2 U	1.6 UJ	1.9 UJ	1.8 U
Thallium	NL	mg/kg	0.21 U	0.14 U	0.14 U	0.23 U	0.19 UJ	0.22 UJ	0.21 U
Vanadium	NL	mg/kg	31.5	10.4	11.9	24.4	22.6 J-	33.6 J-	29.9
Zinc	459	mg/kg	76.5	18.9	27.5	60.1 J	83.5 J-	126 J-	78.5 J

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Table B-2
Sediment Sample Analytical Results - TAL Metals
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-19	LMR11-20	LMR11-20	LMR11-20	LMR11-20	LMR11-20	LMR11-21
		Field Sample ID	LMR11-19-014	LMR11-20-006	LMR11-20-006FS	LMR11-20-024	LMR11-20-048	LMR11-20-060	LMR11-21-006
		Sample Date	8/3/2011	8/2/2011	8/2/2011	8/5/2011	8/5/2011	8/5/2011	8/3/2011
		Depth Interval (in bss)	6- 14	0- 6	0- 6	6- 24	24- 48	48- 60	0- 6
Chemical Name	PEC[1]	Unit							
Aluminum	NL	mg/kg	6,540 J-	21,000	21,700	22,400 J-	27,800 J-	9,090 J-	11,000
Antimony	NL	mg/kg	0.25 UJ	11.4 UJ	0.43 UJ	0.7 J-	0.64 J-	0.38 J-	0.44 J
Arsenic	33	mg/kg	7.5 J-	8.8	9.1	9.6 J-	10.4 J-	8.7 J-	6.5
Barium	NL	mg/kg	48.3 J-	148	154	158 J-	178 J-	68.8 J-	79.6
Beryllium	NL	mg/kg	0.022 UJ	0.95	0.037 U	1 J-	1.2 J-	0.022 UJ	0.03 U
Cadmium	4.98	mg/kg	0.87 J-	1.6	1.7	1.6 J-	2.2 J-	1.6 J-	1.3
Calcium	NL	mg/kg	60,300 J-	34,600	35,600	38,700 J-	34,700 J-	45,900 J-	35,300
Chromium	111	mg/kg	14 J-	31	32.3	32.5 J-	40.2 J-	21.7 J-	17.7
Cobalt	NL	mg/kg	6.3 J-	11.3	11.5	11.8 J-	12.4 J-	6.7 J-	0.087 U
Copper	149	mg/kg	13.6 J-	36.8	37.9	39.8 J-	42.1 J-	21.1 J-	21.5
Iron	NL	mg/kg	11,500 J-	30,100	30,700	30,300 J-	33,300 J-	14,100 J-	17,000
Lead	128	mg/kg	10.5 J-	23.5 J	24.1 J	25.7 J-	31.5 J-	27.6 J-	12.7 J
Magnesium	NL	mg/kg	15,000 J-	10,700	10,900	11,200 J-	11,100 J-	11,000 J-	9,560
Manganese	NL	mg/kg	285 J-	443	444	511 J-	578 J-	333 J-	338
Mercury	1.06	mg/kg	0.018 J-	0.072 J	0.063 J	0.075 J-	0.074 J-	0.088 J-	0.039 J
Nickel	48.6	mg/kg	16 J-	34.7	35.6	36 J-	40.1 J-	19.8 J-	19.5
Potassium	NL	mg/kg	1,230 J-	3,400	3,650	3,720 J-	4,740 J-	1,730 J-	2,040
Selenium	NL	mg/kg	4.2 UJ	6.6 U	7.2 U	5.8 UJ	5.4 UJ	4.3 UJ	5.8 U
Silver	NL	mg/kg	1.2 UJ	0.061 U	0.066 U	0.27 J-	0.23 J-	0.13 J-	1.7 U
Sodium	NL	mg/kg	1.4 UJ	2.3 U	2.5 U	2 UJ	1.8 UJ	1.5 UJ	2 U
Thallium	NL	mg/kg	0.17 UJ	0.27 U	0.29 U	0.23 UJ	0.21 UJ	0.17 UJ	0.23 U
Vanadium	NL	mg/kg	18.1 J-	43.8	45.6	45.7 J-	57.5 J-	24.5 J-	26.3
Zinc	459	mg/kg	42.3 J-	135 J	138 J	135 J-	171 J-	62.1 J-	75.5 J

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Table B-2
Sediment Sample Analytical Results - TAL Metals
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-22	LMR11-23	LMR11-23	LMR11-23	LMR11-23	LMR11-23	LMR11-23
		Field Sample ID	LMR11-22-006	LMR11-23-006	LMR11-23-024	LMR11-23-048	LMR11-23-072	LMR11-23-096	LMR11-23-115
		Sample Date	8/4/2011	8/11/2011	8/11/2011	8/11/2011	8/11/2011	8/11/2011	8/11/2011
		Depth Interval (in bss)	0- 6	0- 6	6- 24	24- 48	48- 72	72- 96	96- 115
Chemical Name	PEC[1]	Unit							
Aluminum	NL	mg/kg	14,200	21,500 J-	24,800 J-	21,800 J-	19,700 J-	22,900 J-	7,230 J-
Antimony	NL	mg/kg	0.6 J	0.38 UJ	0.36 UJ	0.36 UJ	0.31 UJ	0.22 UJ	0.21 UJ
Arsenic	33	mg/kg	7.6	9.1 J-	10.1 J-	9.2 J-	10.4 J-	9.4 J-	8.1 J-
Barium	NL	mg/kg	92.9	146 J-	161 J-	145 J-	135 J-	144 J-	53.3 J-
Beryllium	NL	mg/kg	0.028 U	0.99 J-	1 J-	0.91 J-	0.83 J-	0.92 J-	0.018 UJ
Cadmium	4.98	mg/kg	1	1.7 J-	1.9 J-	1.7 J-	2.3 J-	2.3 J-	1.2 J-
Calcium	NL	mg/kg	45,100	42,900 J-	39,300 J-	32,500 J-	43,800 J-	28,600 J-	54,300 J-
Chromium	111	mg/kg	21.5	31.6 J-	35.6 J-	31.6 J-	32.3 J-	34 J-	14 J-
Cobalt	NL	mg/kg	8.7	11.2 J-	12.3 J-	10.8 J-	10.4 J-	10.1 J-	5.8 J-
Copper	149	mg/kg	22.3	35.8 J-	39.9 J-	35.2 J-	35.9 J-	35.5 J-	16.6 J-
Iron	NL	mg/kg	20,600	29,700 J-	32,500 J-	29,400 J-	27,200 J-	27,300 J-	12,400 J-
Lead	128	mg/kg	13.5 J	22.9 J-	26.4 J-	23.3 J-	29.3 J-	28.2 J-	15.3 J-
Magnesium	NL	mg/kg	10,000	11,700 J-	12,100 J-	9,740 J-	12,200 J-	9,640 J-	15,500 J-
Manganese	NL	mg/kg	377	481 J-	522 J-	484 J-	542 J-	456 J-	327 J-
Mercury	1.06	mg/kg	0.041 J	0.057 J-	0.068 J-	0.078 J-	0.071 J-	0.067 J-	0.043 J-
Nickel	48.6	mg/kg	23.3	34 J-	37.4 J-	33.7 J-	33.1 J-	34 J-	16.2 J-
Potassium	NL	mg/kg	2,590	3,580 J-	4,160 J-	3,600 J-	3,180 J-	3,590 J-	1,200 J-
Selenium	NL	mg/kg	5.4 U	6.4 UJ	5.9 UJ	6 UJ	5.1 UJ	3.6 UJ	3.6 UJ
Silver	NL	mg/kg	0.057 J	0.17 J-	0.21 J-	0.17 J-	0.16 J-	0.18 J-	0.045 J-
Sodium	NL	mg/kg	1.9 U	2.2 UJ	2 UJ	2.1 UJ	1.8 UJ	1.2 UJ	1.2 UJ
Thallium	NL	mg/kg	0.22 U	0.25 UJ	0.24 UJ	0.24 UJ	0.21 UJ	0.15 UJ	0.14 UJ
Vanadium	NL	mg/kg	33.1	45.8 J-	53.4 J-	45.6 J-	42.7 J-	46.8 J-	19.1 J-
Zinc	459	mg/kg	83.1 J	132 J-	145 J-	133 J-	150 J-	125 J-	52.9 J-

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Table B-2
Sediment Sample Analytical Results - TAL Metals
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-24	LMR11-24	LMR11-24	LMR11-24	LMR11-24	LMR11-25	LMR11-25
		Field Sample ID	LMR11-24-006	LMR11-24-024	LMR11-24-048	LMR11-24-072	LMR11-24-096	LMR11-25-006	LMR11-25-024
		Sample Date	8/4/2011	8/11/2011	8/11/2011	8/11/2011	8/11/2011	8/11/2011	8/11/2011
		Depth Interval (in bss)	0- 6	6- 24	24- 48	48- 72	72- 96	0- 6	6- 24
Chemical Name	PEC[1]	Unit							
Aluminum	NL	mg/kg	5,240	13,400 J-	18,200 J-	20,200 J-	22,800 J-	20,300 J-	26,200 J-
Antimony	NL	mg/kg	5.7 UJ	0.32 UJ	0.26 UJ	0.27 UJ	0.28 UJ	0.33 UJ	0.34 UJ
Arsenic	33	mg/kg	3.2	7.3 J-	10.3 J-	11.2 J-	10.8 J-	10.5 J-	10.8 J-
Barium	NL	mg/kg	35	91.7 J-	127 J-	131 J-	157 J-	146 J-	170 J-
Beryllium	NL	mg/kg	0.017 U	0.028 UJ	0.86 J-	0.92 J-	0.99 J-	0.96 J-	1.2 J-
Cadmium	4.98	mg/kg	0.52	1.2 J-	2.1 J-	2.1 J-	2.1 J-	1.8 J-	1.9 J-
Calcium	NL	mg/kg	28,300	35,200 J-	46,000 J-	50,000 J-	43,700 J-	44,200 J-	35,300 J-
Chromium	111	mg/kg	9.4	21.7 J-	29.3 J-	30.9 J-	33.9 J-	30.7 J-	37.4 J-
Cobalt	NL	mg/kg	0.05 U	8.7 J-	10.1 J-	10.1 J-	11.5 J-	11.5 J-	12.8 J-
Copper	149	mg/kg	8.2	23.8 J-	34.8 J-	36.5 J-	38.4 J-	37.5 J-	41.3 J-
Iron	NL	mg/kg	8,750	19,500 J-	25,800 J-	25,900 J-	30,800 J-	29,300 J-	34,000 J-
Lead	128	mg/kg	5.7 J	16.7 J-	26.2 J-	27.7 J-	28.4 J-	23.8 J-	25.2 J-
Magnesium	NL	mg/kg	8,110	9,560 J-	12,300 J-	14,300 J-	11,600 J-	10,200 J-	10,600 J-
Manganese	NL	mg/kg	193	339 J-	528 J-	535 J-	635 J-	629 J-	599 J-
Mercury	1.06	mg/kg	0.021 J	0.046 J-	0.064 J-	0.068 J-	0.065 J-	0.063 J-	0.067 J-
Nickel	48.6	mg/kg	10.1	24.2 J-	30.9 J-	31.7 J-	36.3 J-	33.8 J-	38.5 J-
Potassium	NL	mg/kg	918	2,210 J-	2,810 J-	3,560 J-	3,500 J-	3,420 J-	4,490 J-
Selenium	NL	mg/kg	3.3 U	5.4 UJ	4.3 UJ	4.5 UJ	4.6 UJ	5.5 UJ	5.7 UJ
Silver	NL	mg/kg	0.06 J	0.062 J-	0.18 J-	0.17 J-	0.26 J-	0.19 J-	0.2 J-
Sodium	NL	mg/kg	1.1 U	1.9 UJ	1.5 UJ	1.6 UJ	1.6 UJ	1.9 UJ	1.9 UJ
Thallium	NL	mg/kg	0.13 U	0.22 UJ	0.17 UJ	0.18 UJ	0.19 UJ	0.22 UJ	0.23 UJ
Vanadium	NL	mg/kg	13.8	30.9 J-	40.2 J-	45 J-	46.4 J-	42.7 J-	54.6 J-
Zinc	459	mg/kg	52.4 J	88.3 J-	126 J-	161 J-	149 J-	125 J-	142 J-

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Table B-2
Sediment Sample Analytical Results - TAL Metals
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-25	LMR11-25	LMR11-25	LMR11-26	LMR11-26	LMR11-26	LMR11-26
		Field Sample ID	LMR11-25-048	LMR11-25-072	LMR11-25-096	LMR11-26-006	LMR11-26-024	LMR11-26-048	LMR11-26-072
		Sample Date	8/11/2011	8/11/2011	8/11/2011	8/10/2011	8/10/2011	8/10/2011	8/10/2011
		Depth Interval (in bss)	24- 48	48- 72	72- 96	0- 6	6- 24	24- 48	48- 72
Chemical Name	PEC[1]	Unit							
Aluminum	NL	mg/kg	24,300 J-	21,500 J-	15,100 J-	15,800 J-	20,200 J-	21,100 J-	21,800 J-
Antimony	NL	mg/kg	0.27 UJ	0.3 UJ	0.27 UJ	0.28 UJ	0.32 UJ	0.35 UJ	0.3 UJ
Arsenic	33	mg/kg	11.2 J-	11.4 J-	16.5 J-	7.7 J-	9.3 J-	9.8 J-	11.3 J-
Barium	NL	mg/kg	158 J-	153 J-	103 J-	111 J-	139 J-	151 J-	148 J-
Beryllium	NL	mg/kg	1 J-	1 J-	0.7 J-	0.78 J-	0.95 J-	1 J-	0.98 J-
Cadmium	4.98	mg/kg	1.9 J-	2.3 J-	2.3 J-	1.2 J-	1.5 J-	1.6 J-	2.3 J-
Calcium	NL	mg/kg	34,600 J-	44,300 J-	52,700 J-	39,500 J-	41,200 J-	40,300 J-	45,700 J-
Chromium	111	mg/kg	34.7 J-	33.8 J-	25.7 J-	23.6 J-	30.5 J-	31.7 J-	34.4 J-
Cobalt	NL	mg/kg	11.8 J-	11.9 J-	9.1 J-	8.7 J-	10.8 J-	11.4 J-	11 J-
Copper	149	mg/kg	40.5 J-	39.6 J-	28.9 J-	30.5 J-	35.2 J-	36.2 J-	40.1 J-
Iron	NL	mg/kg	31,100 J-	30,600 J-	21,900 J-	22,500 J-	28,600 J-	31,100 J-	29,500 J-
Lead	128	mg/kg	31 J-	29 J-	26.1 J-	18.1 J-	25.3 J-	24.2 J-	30.9 J-
Magnesium	NL	mg/kg	10,200 J-	11,200 J-	13,800 J-	10,700 J-	11,700 J-	10,500 J-	12,500 J-
Manganese	NL	mg/kg	542 J-	582 J-	445 J-	381 J-	505 J-	614 J-	598 J-
Mercury	1.06	mg/kg	0.072 J-	0.063 J-	0.058 J-	0.059 J-	0.069 J-	0.075 J-	0.089 J-
Nickel	48.6	mg/kg	35.4 J-	37.1 J-	27.6 J-	25.3 J-	32.2 J-	34.6 J-	34.5 J-
Potassium	NL	mg/kg	3,880 J-	3,200 J-	2,450 J-	2,620 J-	3,300 J-	3,210 J-	3,650 J-
Selenium	NL	mg/kg	4.5 UJ	4.9 UJ	4.5 UJ	4.6 UJ	5.4 UJ	5.8 UJ	4.9 UJ
Silver	NL	mg/kg	0.18 J-	0.27 J-	0.11 J-	0.13 J-	0.2 J-	0.17 J-	0.25 J-
Sodium	NL	mg/kg	1.5 UJ	1.7 UJ	1.5 UJ	1.6 UJ	1.9 UJ	2 UJ	1.7 UJ
Thallium	NL	mg/kg	0.18 UJ	0.2 UJ	0.18 UJ	0.18 UJ	0.22 UJ	0.23 UJ	0.2 UJ
Vanadium	NL	mg/kg	49.4 J-	44.9 J-	35.9 J-	35.6 J-	44.2 J-	45.6 J-	47.1 J-
Zinc	459	mg/kg	281 J-	151 J-	97.7 J-	100 J-	127 J-	143 J-	167 J-

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Table B-2
Sediment Sample Analytical Results - TAL Metals
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-26	LMR11-26	LMR11-27	LMR11-27	LMR11-27	LMR11-27	LMR11-27
		Field Sample ID	LMR11-26-096	LMR11-26-117	LMR11-27-006	LMR11-27-024	LMR11-27-048	LMR11-27-072	LMR11-27-096
		Sample Date	8/10/2011	8/10/2011	8/4/2011	8/11/2011	8/11/2011	8/11/2011	8/11/2011
		Depth Interval (in bss)	72- 96	96- 117	0- 6	6- 24	24- 48	48- 72	72- 96
Chemical Name	PEC[1]	Unit							
Aluminum	NL	mg/kg	10,000 J-	6,980 J-	7,290	17,900	12,700	13,900	10,600
Antimony	NL	mg/kg	0.25 UJ	0.28 UJ	6.3 UJ	0.3 UJ	8 UJ	0.24 UJ	0.25 UJ
Arsenic	33	mg/kg	10.1 J-	8.4 J-	4.4	9.7	9.5	9.8	9.8
Barium	NL	mg/kg	78 J-	55.6 J-	51.7	130	101	102	84.5
Beryllium	NL	mg/kg	0.022 UJ	0.024 UJ	0.019 U	0.79	0.024 U	0.62	0.022 U
Cadmium	4.98	mg/kg	1.7 J-	1.2 J-	0.61	1.8	2.2	1.9	2.3
Calcium	NL	mg/kg	57,200 J-	55,800 J-	28,700	40,400	47,500	44,500	51,000
Chromium	111	mg/kg	18.7 J-	14.9 J-	12.4	28.2	24.3	24.5	23.2
Cobalt	NL	mg/kg	7.6 J-	0.068 UJ	5.9	10.2	8.5	8.6	7.9
Copper	149	mg/kg	25.1 J-	16.6 J-	12.7	33.6	30.7	29	29.8
Iron	NL	mg/kg	17,100 J-	12,400 J-	12,400	26,100	21,200	21,400	17,100
Lead	128	mg/kg	20 J-	15.6 J-	8.3 J	24.4	25	24.1	25.4
Magnesium	NL	mg/kg	15,100 J-	12,800 J-	8,220	10,600	12,300	11,000	12,200
Manganese	NL	mg/kg	453 J-	335 J-	245	552	480	449	427
Mercury	1.06	mg/kg	0.1 J-	0.051 J-	0.025 J	0.06 J	0.056 J	0.052 J	0.065 J
Nickel	48.6	mg/kg	21 J-	16.9 J-	14	31.7 J	27.1 J	27 J	25.6 J
Potassium	NL	mg/kg	1,860 J-	1,410 J-	1,180	2,620 J	1,860 J	2,040 J	1,700 J
Selenium	NL	mg/kg	4.2 UJ	4.6 UJ	3.6 U	5 U	4.7 U	4 U	4.2 U
Silver	NL	mg/kg	0.12 J-	1.3 UJ	0.036 J	0.2 J	0.15 J	0.1 J	0.19 J
Sodium	NL	mg/kg	1.5 UJ	1.6 UJ	1.3 U	1.7 U	1.6 U	1.4 U	1.5 U
Thallium	NL	mg/kg	0.17 UJ	0.18 UJ	0.15 U	0.2 U	0.19 U	0.16 U	0.17 U
Vanadium	NL	mg/kg	30.6 J-	22.6 J-	17.9	36.2	28.4	29.9	25.5
Zinc	459	mg/kg	70.4 J-	49.9 J-	54.6 J	131	99.9	92.4	88.5

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Table B-2
Sediment Sample Analytical Results - TAL Metals
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-27	LMR11-28	LMR11-28	LMR11-29	LMR11-30	LMR11-31	LMR11-32
		Field Sample ID	LMR11-27-115	LMR11-28-006	LMR11-28-034	LMR11-29-006	LMR11-30-006	LMR11-31-006	LMR11-32-006
		Sample Date	8/11/2011	8/10/2011	8/10/2011	8/4/2011	8/4/2011	8/4/2011	8/10/2011
		Depth Interval (in bss)	96- 115	0- 6	6- 34	0- 6	0- 6	0- 6	0- 6
Chemical Name	PEC[1]	Unit							
Aluminum	NL	mg/kg	6,950	14,500 J-	2,100 J-	12,700	16,500	19,000	16,400 J-
Antimony	NL	mg/kg	0.23 UJ	9.5 UJ	0.19 UJ	9.6 UJ	11.6 UJ	0.64 J	0.36 UJ
Arsenic	33	mg/kg	14.4	35.8 J-	13.1 J-	6.7	8.1	10.2	10.1 J-
Barium	NL	mg/kg	64.5	114 J-	0.055 UJ	96.8	120	136	129 J-
Beryllium	NL	mg/kg	0.02 U	0.029 UJ	0.016 UJ	0.029 U	0.035 U	0.039 U	0.031 UJ
Cadmium	4.98	mg/kg	1.6	1.4 J-	0.0098 UJ	1.1	1.2	1.4	1.7 J-
Calcium	NL	mg/kg	71,500	44,800 J-	65,900 J-	42,300	40,000	42,500	44,000 J-
Chromium	111	mg/kg	18	22.5 J-	5.2 J-	20.1	25.6	28.5	26.9 J-
Cobalt	NL	mg/kg	7.4	9.4 J-	0.046 UJ	8.4	9.6	0.11 U	9.7 J-
Copper	149	mg/kg	22	28.6 J-	2.5 J-	25	35.2	33.7	44.8 J-
Iron	NL	mg/kg	14,300	23,900 J-	6,380 J-	20,100	24,800	27,500	24,400 J-
Lead	128	mg/kg	19.2	18.6 J-	3.7 J-	15.7 J	17.6 J	20.7 J	72.7 J-
Magnesium	NL	mg/kg	14,900	13,200 J-	17,700 J-	11,200	10,800	11,800	13,400 J-
Manganese	NL	mg/kg	403	447 J-	254 J-	369	472	440	415 J-
Mercury	1.06	mg/kg	0.054 J	0.043 J-	0.13 UJ	0.045 J	0.041 J	0.066 J	0.32 J-
Nickel	48.6	mg/kg	20.6 J	27.1 J-	6.2 J-	23.2	28.1	31.4	27.8 J-
Potassium	NL	mg/kg	1,230 J	2,470 J-	8.4 UJ	2,200	2,910	3,420	3,000 J-
Selenium	NL	mg/kg	3.9 U	5.6 UJ	3.1 UJ	5.6 U	6.7 U	7.5 U	6.1 UJ
Silver	NL	mg/kg	0.057 J	0.11 J-	0.89 UJ	0.065 J	0.076 J	0.22 J	0.23 J-
Sodium	NL	mg/kg	1.3 U	6,620 J-	1,190 J-	1.9 U	2.3 U	2.6 U	2.1 UJ
Thallium	NL	mg/kg	0.16 U	0.22 UJ	0.12 UJ	0.23 U	0.27 U	0.3 U	0.24 UJ
Vanadium	NL	mg/kg	24.1	28.4 J-	7.7 J-	30.4	36.8	42.6	39 J-
Zinc	459	mg/kg	58.6	109 J-	15.3 J-	90.5 J	106 J	123 J	149 J-

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Table B-2
Sediment Sample Analytical Results - TAL Metals
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-32	LMR11-32	LMR11-32	LMR11-32	LMR11-32	LMR11-33	LMR11-34
		Field Sample ID	LMR11-32-024	LMR11-32-048	LMR11-32-072	LMR11-32-096	LMR11-32-116	LMR11-33-006	LMR11-34-006
		Sample Date	8/10/2011	8/10/2011	8/10/2011	8/10/2011	8/10/2011	8/4/2011	8/4/2011
		Depth Interval (in bss)	6- 24	24- 48	48- 72	72- 96	96- 116	0- 6	0- 6
Chemical Name	PEC[1]	Unit							
Aluminum	NL	mg/kg	15,300 J-	11,700 J-	6,840 J-	5,600 J-	10,600 J-	11,100	13,300
Antimony	NL	mg/kg	0.25 UJ	0.35 UJ	0.27 UJ	0.23 UJ	0.22 UJ	9.3 UJ	10.8 UJ
Arsenic	33	mg/kg	9.7 J-	13.9 J-	11.1 J-	13.7 J-	18.2 J-	9.4	7
Barium	NL	mg/kg	125 J-	122 J-	97.8 J-	74.5 J-	101 J-	79.7	87
Beryllium	NL	mg/kg	0.74 J-	0.03 UJ	0.023 UJ	0.019 UJ	0.55 J-	0.028 U	0.032 U
Cadmium	4.98	mg/kg	1.5 J-	2 J-	7 J-	0.93 J-	1 J-	0.91	1.3
Calcium	NL	mg/kg	38,700 J-	47,100 J-	38,200 J-	32,500 J-	33,100 J-	37,000	31,100
Chromium	111	mg/kg	25.1 J-	24 J-	22.3 J-	11.4 J-	16.8 J-	17.6	20.2
Cobalt	NL	mg/kg	9.3 J-	9.3 J-	8.1 J-	6.1 J-	7.5 J-	0.081 U	0.094 U
Copper	149	mg/kg	50.7 J-	41.9 J-	41.7 J-	35.8 J-	40.9 J-	19.5	21.9
Iron	NL	mg/kg	21,700 J-	21,400 J-	14,400 J-	10,300 J-	17,100 J-	17,200	19,300
Lead	128	mg/kg	62.7 J-	244 J-	126 J-	91.3 J-	78.9 J-	12.9 J	13.1
Magnesium	NL	mg/kg	12,600 J-	12,600 J-	10,300 J-	8,800 J-	8,480 J-	9,910	8,960
Manganese	NL	mg/kg	356 J-	404 J-	310 J-	189 J-	304 J-	314	323
Mercury	1.06	mg/kg	0.13 J-	0.16 J-	0.18 J-	0.7 J-	0.89 J-	0.035 J	0.043 J
Nickel	48.6	mg/kg	27 J-	28.9 J-	22.3 J-	14.3 J-	19.5 J-	19.9	21.9
Potassium	NL	mg/kg	2,670 J-	1,760 J-	1,030 J-	1,000 J-	1,820 J-	1,920	2,440
Selenium	NL	mg/kg	4.2 UJ	5.9 UJ	4.5 UJ	3.8 UJ	3.7 UJ	5.4 U	0.5 U
Silver	NL	mg/kg	0.43 J-	2.1 J-	0.23 J-	0.18 J-	0.75 J-	1.5 U	0.098 J
Sodium	NL	mg/kg	1.4 UJ	2 UJ	1.6 UJ	1.3 UJ	1.3 UJ	1.9 U	2.2 UJ
Thallium	NL	mg/kg	0.17 UJ	0.24 UJ	0.18 UJ	0.15 UJ	0.15 UJ	0.22 U	0.25 U
Vanadium	NL	mg/kg	37.1 J-	29.6 J-	21.9 J-	17.1 J-	25.5 J-	27.7	30.7
Zinc	459	mg/kg	153 J-	275 J-	182 J-	147 J-	186 J-	74.3 J	80.3

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Table B-2
Sediment Sample Analytical Results - TAL Metals
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-35	LMR11-35	LMR11-35	LMR11-35	LMR11-35	LMR11-35	LMR11-35
		Field Sample ID	LMR11-35-006	LMR11-35-024	LMR11-35-024FS	LMR11-35-048	LMR11-35-072	LMR11-35-096	LMR11-35-116
		Sample Date	8/10/2011	8/10/2011	8/10/2011	8/10/2011	8/10/2011	8/10/2011	8/10/2011
		Depth Interval (in bss)	0- 6	6- 24	6- 24	24- 48	48- 72	72- 96	96- 116
Chemical Name	PEC[1]	Unit							
Aluminum	NL	mg/kg	22,000	24,400	22,500	23,200	27,800	29,300	18,400
Antimony	NL	mg/kg	0.32 UJ	0.26 UJ	0.27 UJ	0.29 UJ	0.34 UJ	0.37 UJ	0.31 UJ
Arsenic	33	mg/kg	9.3	11.4	10.8	9.5	11.1	11.7	13.3
Barium	NL	mg/kg	143	164	157	150	168	180	125
Beryllium	NL	mg/kg	0.94	1.1	0.99	1.1	1.1	1.2	0.85
Cadmium	4.98	mg/kg	1.5	2.1	1.9	1.6	1.8	2	2.5
Calcium	NL	mg/kg	42,500	40,900	41,100	36,900	37,200	35,500	52,200
Chromium	111	mg/kg	30.9	36.6	33.8	32.8	38.1	40.9	32.9
Cobalt	NL	mg/kg	10.5 J	11.9 J	11.6 J	11.2 J	12.4 J	12.8 J	9.9 J
Copper	149	mg/kg	38.9	42.8	41.4	38.4	41.9	43.2	38
Iron	NL	mg/kg	27,200	31,900	30,600	29,100	32,700	34,300	24,500
Lead	128	mg/kg	23.8 J	36.4 J	34.5 J	25.6 J	29.2 J	31.9 J	35.2 J
Magnesium	NL	mg/kg	12,200	11,200	11,300	11,400	11,900	10,700	13,600
Manganese	NL	mg/kg	463 J	664 J	600 J	473 J	549 J	615 J	509 J
Mercury	1.06	mg/kg	0.068 J	0.077 J	0.078 J	0.073 J	0.069 J	0.072 J	0.14
Nickel	48.6	mg/kg	31.1 J	37 J	35.8 J	33.4 J	37.1 J	39.2 J	30.8 J
Potassium	NL	mg/kg	4,110	3,930	3,420	4,120	5,080	5,140	3,460
Selenium	NL	mg/kg	5.4 U	4.3 U	4.4 U	4.8 U	5.6 U	6.1 U	5.1 U
Silver	NL	mg/kg	0.049 U	0.04 U	0.04 U	0.23 J	0.26 J	0.27 J	0.22 J
Sodium	NL	mg/kg	1.8 U	1.5 U	1.5 U	1.7 U	1.9 U	2.1 U	1.7 U
Thallium	NL	mg/kg	0.22 U	0.17 U	0.18 U	0.19 U	0.23 U	0.25 U	0.2 U
Vanadium	NL	mg/kg	46.9	49.1	45	48.5	57.9	60.3	40.7
Zinc	459	mg/kg	120 J	295 J	258 J	129 J	147 J	231 J	121 J

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Table B-2
Sediment Sample Analytical Results - TAL Metals
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-36	LMR11-37	LMR11-37	LMR11-37	LMR11-37	LMR11-37	LMR11-38
		Field Sample ID	LMR11-36-006	LMR11-37-006	LMR11-37-024	LMR11-37-048	LMR11-37-048-DP	LMR11-37-072	LMR11-38-006
		Sample Date	8/4/2011	8/10/2011	8/10/2011	8/10/2011	8/10/2011	8/10/2011	8/9/2011
		Depth Interval (in bss)	0- 6	0- 6	6- 24	24- 48	24- 48	48- 72	0- 6
Chemical Name	PEC[1]	Unit							
Aluminum	NL	mg/kg	11,700	23,000	24,000	16,900	23,300 J-	24,600	19,200
Antimony	NL	mg/kg	9 UJ	0.39 UJ	0.31 UJ	0.27 UJ	0.27 UJ	0.25 UJ	0.27 UJ
Arsenic	33	mg/kg	6.2	11	11.4	13.8	12.4 J-	13.3	9
Barium	NL	mg/kg	75	154	163	127	156 J-	148	136
Beryllium	NL	mg/kg	0.027 U	1	1	0.79	1.1 J-	1	0.8
Cadmium	4.98	mg/kg	1.1	1.7	1.8	1.9	1.8 J-	2.1	2
Calcium	NL	mg/kg	43,500	43,500	35,200	38,400	38,000 J-	32,700	45,900
Chromium	111	mg/kg	19.6	33	33.9	27.9	34.4 J-	35.7	27.8
Cobalt	NL	mg/kg	8.2	12.2 J	12.3 J	10.1 J	11.5 J-	10.4 J	10.4
Copper	149	mg/kg	18.2	40.5	41.2	34.5	39.5 J-	37.6	33.1
Iron	NL	mg/kg	17,500	30,600	32,600	27,200	31,300 J-	26,800	27,100
Lead	128	mg/kg	12	24.5 J	26.4 J	25.9 J	31.2 J-	28.1 J	21.7
Magnesium	NL	mg/kg	12,500	12,700	10,800	11,800	11,200 J-	10,900	12,500
Manganese	NL	mg/kg	333	531 J	548 J	623 J	551 J-	404 J	480
Mercury	1.06	mg/kg	0.038 J	0.06 J	0.066 J	0.069 J	0.076 J-	0.074 J	0.065 J
Nickel	48.6	mg/kg	20.2	35.7 J	37.4 J	30.8 J	35.3 J-	33.6 J	30.5
Potassium	NL	mg/kg	2,090	4,110	3,800	2,460	3,680 J-	4,470	3,070
Selenium	NL	mg/kg	5.2 U	6.5 U	5.1 U	4.6 U	4.4 UJ	4.2 U	4.6 U
Silver	NL	mg/kg	0.057 J	0.17 J	0.22 J	0.17 J	0.22 J-	0.17 J	1.4
Sodium	NL	mg/kg	1.8 UJ	2.2 U	1.8 U	1.6 U	1.5 UJ	1.4 U	1.6 UJ
Thallium	NL	mg/kg	0.21 U	0.26 U	0.2 U	0.18 U	0.18 UJ	0.17 U	0.18 U
Vanadium	NL	mg/kg	28.1	47.1	46.1	35.7	49.2 J-	50	40.2
Zinc	459	mg/kg	70.1	132 J	139 J	112 J	250 J-	123 J	121

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Table B-2
Sediment Sample Analytical Results - TAL Metals
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-38	LMR11-38	LMR11-38	LMR11-38	LMR11-38	LMR11-38	LMR11-38
		Field Sample ID	LMR11-38-024	LMR11-38-024-DP	LMR11-38-024FS	LMR11-38-048	LMR11-38-048-DP	LMR11-38-072	LMR11-38-072-DP
		Sample Date	8/9/2011	8/9/2011	8/9/2011	8/9/2011	8/9/2011	8/9/2011	8/9/2011
		Depth Interval (in bss)	6- 24	6- 24	6- 24	24- 48	24- 48	48- 72	48- 72
Chemical Name	PEC[1]	Unit							
Aluminum	NL	mg/kg	11,300	14,500	13,100	22,400	19,600	21,400	26,600
Antimony	NL	mg/kg	0.23 UJ	9.1 UJ	0.25 UJ	0.29 UJ	0.34 UJ	0.28 UJ	10.5 UJ
Arsenic	33	mg/kg	7.1	8.2	7.3	9.9	9.2	10.2	10.8
Barium	NL	mg/kg	86.8	104	99.6	156	127	145	169
Beryllium	NL	mg/kg	0.51 J	0.027 U	0.52 J	0.88	0.03 U	0.83	1
Cadmium	4.98	mg/kg	1.5	1.6	1.6	2.4	1.8	2.4	2.3
Calcium	NL	mg/kg	38,600	46,800	38,400	39,200	41,300	38,200	36,600
Chromium	111	mg/kg	18.3	22.3	20.8	32.1	27.9	31.3	37.1
Cobalt	NL	mg/kg	7.7	8.8	8.4	11.4	9.9	10.9	12.4
Copper	149	mg/kg	23.8	27	25.4	34.4	32.4	35.4	40.1
Iron	NL	mg/kg	18,900	21,300	21,100	31,700	25,200	29,600	33,500
Lead	128	mg/kg	15.5	17.8	17.7	23.1	23.6	25.2	26.2
Magnesium	NL	mg/kg	10,700	13,400	10,400	11,300	12,600	11,400	11,900
Manganese	NL	mg/kg	375	409	403	652	454	542	560
Mercury	1.06	mg/kg	0.046 J	0.069 J	0.053 J	0.071 J	0.068 J	0.067 J	0.081 J
Nickel	48.6	mg/kg	21.7	24.8	24.1	34.2	29.2	33.5	38.2
Potassium	NL	mg/kg	1,670	2,560	2,030	3,520	3,570	3,270	4,490
Selenium	NL	mg/kg	3.9 U	5.3 U	4.2 U	4.8 U	5.7 U	4.6 U	6.1 U
Silver	NL	mg/kg	0.13 J	0.048 U	0.15 J	0.23 J	0.052 U	0.25 J	0.056 U
Sodium	NL	mg/kg	1.3 UJ	1.8 UJ	1.5 UJ	1.6 UJ	2 UJ	1.6 UJ	2.1 UJ
Thallium	NL	mg/kg	0.15 U	0.21 U	0.17 U	0.19 U	0.23 U	0.18 U	0.25 U
Vanadium	NL	mg/kg	25.3	33.4	28.6	46.5	42.5	45	54.4
Zinc	459	mg/kg	84.1	93	93.3	134	113	150	155

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Table B-2
Sediment Sample Analytical Results - TAL Metals
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-39	LMR11-40	LMR11-40	LMR11-40	LMR11-40	LMR11-41	LMR11-42
		Field Sample ID	LMR11-39-006	LMR11-40-006	LMR11-40-024	LMR11-40-048	LMR11-40-084	LMR11-41-006	LMR11-42-006
		Sample Date	8/4/2011	8/10/2011	8/10/2011	8/10/2011	8/10/2011	8/4/2011	8/9/2011
		Depth Interval (in bss)	0- 6	0- 6	6- 24	24- 48	48- 84	0- 6	0- 6
Chemical Name	PEC[1]	Unit							
Aluminum	NL	mg/kg	9,790	9,700 J-	4,290 J-	6,880 J-	5,860 J-	13,100	11,400
Antimony	NL	mg/kg	8.3 UJ	0.22 UJ	0.27 UJ	0.2 UJ	0.21 UJ	8.3 UJ	0.24 UJ
Arsenic	33	mg/kg	5.5	8 J-	4.5 J-	4.5 J-	3.3 J-	7.3	14.2
Barium	NL	mg/kg	68.3	63.4 J-	34.7 J-	54.3 J-	50.5 J-	84.8	89.5
Beryllium	NL	mg/kg	0.025 U	0.019 UJ	0.023 UJ	0.017 UJ	0.018 UJ	0.025 U	0.021 U
Cadmium	4.98	mg/kg	1.1	1.2 J-	0.014 UJ	0.71 J-	0.66 J-	1.4	2.7
Calcium	NL	mg/kg	33,800	36,100 J-	40,300 J-	39,700 J-	36,300 J-	41,400	44,100
Chromium	111	mg/kg	15.7	17.4 J-	8.4 J-	12 J-	10.4 J-	20.7	37.7
Cobalt	NL	mg/kg	7.4	6.2 J-	0.066 UJ	7 J-	6.3 J-	7.8	9.4
Copper	149	mg/kg	17	17.7 J-	8.6 J-	15.5 J-	14 J-	23.3	30.7
Iron	NL	mg/kg	16,400	14,100 J-	10,900 J-	13,700 J-	12,200 J-	18,600	18,500
Lead	128	mg/kg	11.1	17.3 J-	6.5 J-	8.6 J-	7.2 J-	16	33.9
Magnesium	NL	mg/kg	9,770	10,100 J-	11,800 J-	14,900 J-	13,500 J-	11,400	11,700
Manganese	NL	mg/kg	326	247 J-	315 J-	318 J-	264 J-	352	433
Mercury	1.06	mg/kg	0.032 J	0.047 J-	0.022 J-	0.039 J-	0.018 J-	0.045 J	0.11 J
Nickel	48.6	mg/kg	18.5	16.9 J-	11.6 J-	16.5 J-	15.5 J-	21.2	23
Potassium	NL	mg/kg	1,560	1,770 J-	763 J-	1,130 J-	918 J-	2,390	1,820
Selenium	NL	mg/kg	0.39 U	3.7 UJ	4.4 UJ	3.3 UJ	3.5 UJ	4.8 U	4 U
Silver	NL	mg/kg	0.049 J	1.1 UJ	1.3 UJ	0.95 UJ	0.99 UJ	1.4 U	0.037 U
Sodium	NL	mg/kg	1.7 UJ	1.3 UJ	1.5 UJ	1.1 UJ	1.2 UJ	1.7 UJ	1.4 UJ
Thallium	NL	mg/kg	0.19 U	0.15 UJ	0.18 UJ	0.13 UJ	0.14 UJ	0.19 U	0.16 U
Vanadium	NL	mg/kg	23.9	24.7 J-	14.3 J-	19.3 J-	15.7 J-	31.9	26.8
Zinc	459	mg/kg	76.1	57.2 J-	28.3 J-	43.1 J-	40.7 J-	83.4	87.1

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Table B-2
Sediment Sample Analytical Results - TAL Metals
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-42	LMR11-42	LMR11-42	LMR11-42	LMR11-42	LMR11-42	LMR11-43
		Field Sample ID	LMR11-42-024	LMR11-42-048	LMR11-42-048FS	LMR11-42-072	LMR11-42-096	LMR11-42-129	LMR11-43-030
		Sample Date	8/9/2011	8/9/2011	8/9/2011	8/9/2011	8/9/2011	8/9/2011	8/9/2011
		Depth Interval (in bss)	6- 24	24- 48	24- 48	48- 72	72- 96	96- 129	24- 30
Chemical Name	PEC[1]	Unit							
Aluminum	NL	mg/kg	11,200	11,700	18,100	7,620	7,140	7,840	4,860
Antimony	NL	mg/kg	0.26 UJ	8.5 UJ	0.38 UJ	0.26 UJ	7.9 UJ	6.4 UJ	0.2 UJ
Arsenic	33	mg/kg	13.8	23.1	40.5	11.9	13.9	5.1	5.4
Barium	NL	mg/kg	91.6	93.4	140	51.9	58.4	56.7	36.1
Beryllium	NL	mg/kg	0.022 U	0.44 J	0.032 U	0.022 U	0.024 U	0.019 U	0.017 U
Cadmium	4.98	mg/kg	2.2	3.1	6.5	1.1	1.4	0.83	0.85
Calcium	NL	mg/kg	47,000	46,100	62,600	51,600	44,500	47,400	221,000
Chromium	111	mg/kg	28.3	30.7	59.9	14.7	20.9	13.1	9.7
Cobalt	NL	mg/kg	8	8.7	14.2	0.064 U	7	6.7 J	0.05 U
Copper	149	mg/kg	29.3	29.9	49.8	14.7	19.7	13.6	10.8
Iron	NL	mg/kg	18,100	19,200	27,000	12,600	13,900	13,400	8,340
Lead	128	mg/kg	23.5	38.1	124	14.1	15.5	8.8	42.9
Magnesium	NL	mg/kg	12,100	11,400	15,700	15,600	11,300	16,600	14,200
Manganese	NL	mg/kg	397	433	598	299	308	332	376
Mercury	1.06	mg/kg	0.086 J	0.11 J	0.16 J	0.068 J	0.074 J	0.0088 J	0.029 J
Nickel	48.6	mg/kg	21	23.6	33.6	14.3	17.6	17.1 J	9.8
Potassium	NL	mg/kg	2,090	1,910	3,280	1,440	1,180	1,350	1,030
Selenium	NL	mg/kg	4.3 U	5 U	6.3 U	4.3 U	4.6 U	3.7 U	3.4 U
Silver	NL	mg/kg	0.039 U	0.19 J	0.057 U	0.039 U	0.042 U	1.1 U	0.031 U
Sodium	NL	mg/kg	1.5 UJ	1.7 UJ	2.1 UJ	1.5 UJ	1.6 UJ	559	1.2 UJ
Thallium	NL	mg/kg	0.17 U	0.2 U	0.25 U	0.17 U	0.18 U	0.15 U	0.14 U
Vanadium	NL	mg/kg	28.1	27.6	41.9	20	19.9	19.8	14.5
Zinc	459	mg/kg	81.5	92.4	127	54	59.7	46.9 J	34.3

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Table B-2
Sediment Sample Analytical Results - TAL Metals
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-44	LMR11-44	LMR11-44	LMR11-44	LMR11-44	LMR11-44	LMR11-45
		Field Sample ID	LMR11-44-006	LMR11-44-024	LMR11-44-024FS	LMR11-44-048	LMR11-44-072	LMR11-44-096	LMR11-45-006
		Sample Date	8/9/2011	8/9/2011	8/9/2011	8/9/2011	8/9/2011	8/9/2011	8/8/2011
		Depth Interval (in bss)	0- 6	6- 24	6- 24	24- 48	48- 72	72- 96	0- 6
Chemical Name	PEC[1]	Unit							
Aluminum	NL	mg/kg	23,000	21,000	21,800	21,600	9,680	18,500	21,600
Antimony	NL	mg/kg	10.7 UJ	0.32 UJ	0.36 UJ	0.23 UJ	0.21 UJ	0.25 UJ	9 UJ
Arsenic	33	mg/kg	9.9	11.2	11.4	11	19.2	29.1	9.9
Barium	NL	mg/kg	151	147	147	136	65.2	137	139
Beryllium	NL	mg/kg	0.032 U	0.84	1.2	0.9	0.53	0.84	0.79
Cadmium	4.98	mg/kg	1.9	2.2	2.3	2.3	2.1	2.4	2.1
Calcium	NL	mg/kg	36,600	42,600	42,500	33,600	44,800	47,600	40,100
Chromium	111	mg/kg	32.5	32.1	32.8	32.2	21.8	30.3	30.5
Cobalt	NL	mg/kg	11.3	11.1	11	9.8	8.5	9.1	10.7
Copper	149	mg/kg	35	37.3	36.7	32.4	20	38.9	35.5
Iron	NL	mg/kg	29,300	29,600	28,400	26,700	16,000	21,600	27,900
Lead	128	mg/kg	23.2	29.7	29.9	28.1	27.9	38.8	23
Magnesium	NL	mg/kg	11,500	12,000	12,000	10,500	12,500	11,200	12,400
Manganese	NL	mg/kg	484	544	520	581	324	442	481
Mercury	1.06	mg/kg	0.073 J	0.091 J	0.12 J	0.064 J	0.075 J	0.18	0.064 J
Nickel	48.6	mg/kg	34.3	34.2	34.4	31.6	21.9	28.8	32.3
Potassium	NL	mg/kg	4,010	3,230	3,590	3,640	1,700	3,470	3,890
Selenium	NL	mg/kg	6.3 U	5.3 U	5.9 U	3.9 U	3.5 U	4.2 U	5.2 U
Silver	NL	mg/kg	0.057 U	0.048 U	0.054 U	0.035 U	0.032 U	0.039 U	0.23 J
Sodium	NL	mg/kg	2.1 UJ	1.8 UJ	2 UJ	1.3 UJ	1.2 UJ	1.5 UJ	1.8 UJ
Thallium	NL	mg/kg	0.25 U	0.21 U	0.24 U	0.15 U	0.14 U	0.17 U	0.21 U
Vanadium	NL	mg/kg	48.2	44	45.6	45.1	26.1	38.1	46
Zinc	459	mg/kg	137	167	174	118	69.6	129	127

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Table B-2
Sediment Sample Analytical Results - TAL Metals
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-45	LMR11-45	LMR11-45	LMR11-45	LMR11-45	LMR11-46	LMR11-46
		Field Sample ID	LMR11-45-024	LMR11-45-048	LMR11-45-048FS	LMR11-45-072	LMR11-45-096	LMR11-46-006	LMR11-46-024
		Sample Date	8/8/2011	8/8/2011	8/8/2011	8/8/2011	8/8/2011	8/8/2011	8/8/2011
		Depth Interval (in bss)	6- 24	24- 48	24- 48	48- 72	72- 96	0- 6	6- 24
Chemical Name	PEC[1]	Unit							
Aluminum	NL	mg/kg	22,700	26,100	24,900	23,300	24,400	17,100	20,600
Antimony	NL	mg/kg	7.8 UJ	0.28 UJ	0.26 UJ	0.37 UJ	0.27 UJ	0.34 UJ	0.31 UJ
Arsenic	33	mg/kg	10.7	11	11.9	11.3	12.3	9.5	12.5
Barium	NL	mg/kg	158	173	164	162	162	113	134
Beryllium	NL	mg/kg	0.95	1.2	1.1	0.97	1	0.87	0.98
Cadmium	4.98	mg/kg	2.5	2.5	2.6	2.6	2.6	1.5	2.4
Calcium	NL	mg/kg	36,000	34,800	36,900	38,500	36,200	38,800	49,300
Chromium	111	mg/kg	33.2	36.4	34.9	34.6	35.9	26.3	31.5
Cobalt	NL	mg/kg	12.3	12.7	12.1	12.5	13.7	9.7	10.3
Copper	149	mg/kg	40.9	39.4	38.5	38.9	39	30.1 J	36.8 J
Iron	NL	mg/kg	32,900	34,500	33,500	34,200	32,900	23,800	27,200
Lead	128	mg/kg	28.9	26.5	28	30.4	30.7	20.4	30.1
Magnesium	NL	mg/kg	11,700	11,100	11,100	11,100	11,100	10,900	14,400
Manganese	NL	mg/kg	585	604	652	645	609	422	577
Mercury	1.06	mg/kg	0.07 J	0.071 J	0.058 J	0.076 J	0.08 J	0.0011 U	0.0009 U
Nickel	48.6	mg/kg	37.2	38.8	36.9	38.4	39.4	27.8	31.1
Potassium	NL	mg/kg	3,280	3,930	3,730	3,310	3,410	3,090	3,830
Selenium	NL	mg/kg	4.6 U	0.38 U	4.3 U	6.1 U	4.4 U	5.7 U	5.1 U
Silver	NL	mg/kg	0.28 J	0.22 J	0.27 J	0.27 J	0.31 J	0.052 U	0.047 U
Sodium	NL	mg/kg	1.6 UJ	1.6 UJ	1.5 UJ	2.1 UJ	1.5 UJ	2 U	1.8 U
Thallium	NL	mg/kg	0.18 U	0.19 U	0.17 U	0.25 U	0.18 U	0.23 U	0.21 U
Vanadium	NL	mg/kg	45.7	53.1	50.8	48.2	50	39.9	47.6
Zinc	459	mg/kg	150	158	161	173	224	105	130

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Table B-2
Sediment Sample Analytical Results - TAL Metals
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-46	LMR11-46	LMR11-46	LMR11-46	LMR11-47	LMR11-47	LMR11-47
		Field Sample ID	LMR11-46-024FS	LMR11-46-048	LMR11-46-072	LMR11-46-093	LMR11-47-006	LMR11-47-024	LMR11-47-048
		Sample Date	8/8/2011	8/8/2011	8/8/2011	8/8/2011	8/8/2011	8/8/2011	8/8/2011
		Depth Interval (in bss)	6- 24	24- 48	48- 72	72- 93	0- 6	6- 24	24- 48
Chemical Name	PEC[1]	Unit							
Aluminum	NL	mg/kg	16,100	12,100	2,940	4,040	18,700	22,800	12,700
Antimony	NL	mg/kg	0.34 UJ	0.25 UJ	0.24 UJ	0.24 UJ	10.4 UJ	0.27 UJ	0.23 UJ
Arsenic	33	mg/kg	12	9.7	4	4.6	9.7	10.8	7.8
Barium	NL	mg/kg	116	79.9	0.071 U	27.9	126	144	74.6
Beryllium	NL	mg/kg	0.82	0.021 U	0.021 U	0.021 U	0.88	0.97	0.02 U
Cadmium	4.98	mg/kg	2.2	1.8	0.013 U	0.69	1.5	1.9	1.2
Calcium	NL	mg/kg	45,100	51,600	55,800	57,700	37,400	40,200	38,600
Chromium	111	mg/kg	26.5	22	6.5	9.9	27.5	33.5	20.6
Cobalt	NL	mg/kg	9.7	6.9	0.059 U	0.06 U	9.9	10.4	7.1
Copper	149	mg/kg	33.8 J	24 J	6.3 J	9.9 J	32.2 J	36.5 J	18.5 J
Iron	NL	mg/kg	25,500	17,700	7,360	9,070	26,300	28,700	17,200
Lead	128	mg/kg	28	20.5	4.2	8.2	22.5	27.7	14.8
Magnesium	NL	mg/kg	12,500	12,900	11,400	11,200	10,900	11,500	11,200
Manganese	NL	mg/kg	548	419	207	239	449	527	333
Mercury	1.06	mg/kg	0.0009 U	0.0009 U	0.0007 U	0.0007 U	0.0011 U	0.001 U	0.0009 U
Nickel	48.6	mg/kg	29	20.9	7.6	10.9	30	32.4	20
Potassium	NL	mg/kg	2,520	2,400	634	861	3,180	3,960	2,320
Selenium	NL	mg/kg	5.7 U	4.2 U	4 U	4 U	6 U	4.5 U	3.9 U
Silver	NL	mg/kg	0.052 U	0.038 U	1.1 U	0.037 U	0.055 U	0.041 U	0.035 U
Sodium	NL	mg/kg	2 U	1.4 U	1.4 U	1.4 U	2.1 U	1.6 U	1.3 U
Thallium	NL	mg/kg	0.23 U	0.17 U	0.16 U	0.16 U	0.24 U	0.18 U	0.15 U
Vanadium	NL	mg/kg	36.8	31.6	13.6	16.6	41.3	50.4	30.6
Zinc	459	mg/kg	117	81.9	21.6	30.7	123	171	77.6

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Table B-2
Sediment Sample Analytical Results - TAL Metals
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-47	LMR11-47	LMR11-47	LMR11-47	LMR11-48	LMR11-48	LMR11-48
		Field Sample ID	LMR11-47-072	LMR11-47-096	LMR11-47-120	LMR11-47-144	LMR11-48-006	LMR11-48-024	LMR11-48-024FS
		Sample Date	8/8/2011	8/8/2011	8/8/2011	8/8/2011	8/8/2011	8/8/2011	8/8/2011
		Depth Interval (in bss)	48- 72	72- 96	96- 120	120- 144	0- 6	6- 24	6- 24
Chemical Name	PEC[1]	Unit							
Aluminum	NL	mg/kg	18,800	23,200	14,400	15,700	22,300	19,100	20,500
Antimony	NL	mg/kg	0.3 UJ	0.28 UJ	0.22 UJ	0.32 UJ	11.5 UJ	9.5 UJ	0.37 UJ
Arsenic	33	mg/kg	15.4	13.3	16.2	15.8	10.8	10	10.7
Barium	NL	mg/kg	132	160	125	134	158	144	145
Beryllium	NL	mg/kg	0.84	1	0.76	0.79	0.035 U	0.82	0.032 U
Cadmium	4.98	mg/kg	3.3	5	6.4	5.7	2.2	2.2	2.2
Calcium	NL	mg/kg	51,200	38,200	45,700	58,600	48,000	42,300	40,200
Chromium	111	mg/kg	36.7	50.6	44.6	53.1	32.7	28.6	30.4
Cobalt	NL	mg/kg	9.8	11	10.6	9.9	12	11.5	11.1
Copper	149	mg/kg	43.8 J	47.4 J	45.5 J	47.9 J	36.6	35.8	35.7
Iron	NL	mg/kg	26,600	30,000	21,900	25,400	31,900	30,300	30,600
Lead	128	mg/kg	41.3	93.4	59.3	77.7	22.8	23.6	22.2
Magnesium	NL	mg/kg	12,900	11,700	10,400	12,700	12,500	11,600	11,000
Manganese	NL	mg/kg	581	548	485	572	765	573	558
Mercury	1.06	mg/kg	0.001 U	0.0009 U	0.0009 U	0.001 U	0.059 J	0.066 J	0.058 J
Nickel	48.6	mg/kg	34.6	42.6	38.8	39.8	35.3	34.1	33.2
Potassium	NL	mg/kg	3,220	3,880	2,480	2,350	3,910	2,660	3,290
Selenium	NL	mg/kg	4.9 U	0.38 J	3.6 U	0.42 J	6.7 U	5.5 U	6.2 U
Silver	NL	mg/kg	0.045 U	0.043 U	0.033 U	0.048 U	0.17 J	0.23 J	0.2 J
Sodium	NL	mg/kg	1.7 U	1.6 U	1.2 U	1.8 U	2.3 UJ	1.9 UJ	2.1 UJ
Thallium	NL	mg/kg	0.2 U	0.19 U	0.15 U	0.21 U	0.27 U	0.22 U	0.25 U
Vanadium	NL	mg/kg	42.3	50.8	33.5	35	47.9	39.1	42.7
Zinc	459	mg/kg	144	172	131	151	138	137	137

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Table B-2
Sediment Sample Analytical Results - TAL Metals
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-48	LMR11-48	LMR11-49	LMR11-49	LMR11-49	LMR11-49	LMR11-49
		Field Sample ID	LMR11-48-048	LMR11-48-061	LMR11-49-006	LMR11-49-024	LMR11-49-048	LMR11-49-072	LMR11-49-096
		Sample Date	8/8/2011	8/8/2011	8/8/2011	8/8/2011	8/8/2011	8/8/2011	8/8/2011
		Depth Interval (in bss)	24- 48	48- 61	0- 6	6- 24	24- 48	48- 72	72- 96
Chemical Name	PEC[1]	Unit							
Aluminum	NL	mg/kg	25,800	25,000	18,700	20,400	18,600	10,300	4,590
Antimony	NL	mg/kg	0.28 UJ	0.27 UJ	0.39 UJ	0.31 UJ	0.27 UJ	0.25 UJ	0.24 UJ
Arsenic	33	mg/kg	10.5	10.7	10.1	11	11	10.8	6.7
Barium	NL	mg/kg	166	163	130	146	139	85	41.8
Beryllium	NL	mg/kg	1	0.98	0.94	1	0.92	0.021 U	0.02 U
Cadmium	4.98	mg/kg	2.4	2.5	2	2.3	2.6	2.6	1.5
Calcium	NL	mg/kg	45,500	37,800	40,000	41,200	52,400	64,700	51,400
Chromium	111	mg/kg	35.4	34.9	29.4	32.2	31.9	24.9	15.2
Cobalt	NL	mg/kg	11.9	12.2	11.2	11.6	10.7	9	6.3
Copper	149	mg/kg	39.6	39.7	35.5	38.8	39.1	31.6	14.3
Iron	NL	mg/kg	32,400	32,300	29,100	31,500	28,800	20,200	10,500
Lead	128	mg/kg	26.3	26.7	22.6	27.3	32.7	29.5	20.1
Magnesium	NL	mg/kg	12,200	11,900	11,600	11,600	13,300	17,200	11,700
Manganese	NL	mg/kg	600	569	510	575	591	512	306
Mercury	1.06	mg/kg	0.075 J	0.074 J	0.069 J	0.072 J	0.086 J	0.084 J	0.058 J
Nickel	48.6	mg/kg	36.4	36.7	33.2 J	35 J	33.4 J	26.9 J	18.5 J
Potassium	NL	mg/kg	4,540	4,220	2,950	2,960	2,750	1,590	756
Selenium	NL	mg/kg	4.7 U	4.5 U	6.4 U	5.1 U	4.4 U	4.2 U	4 U
Silver	NL	mg/kg	0.26 J	0.26 J	0.059 U	0.047 U	0.041 U	0.038 U	0.036 U
Sodium	NL	mg/kg	1.6 UJ	1.5 UJ	2.2 U	1.8 U	1.5 U	1.4 U	1.4 U
Thallium	NL	mg/kg	0.19 U	0.18 U	0.26 U	0.2 U	0.18 U	0.17 U	0.16 U
Vanadium	NL	mg/kg	53.7	51.8	41.7	43.1	40.4	27.9	17.2
Zinc	459	mg/kg	143	144	130	165	199	98.1	48.4

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Table B-2
Sediment Sample Analytical Results - TAL Metals
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-49	LMR11-50	LMR11-50	LMR11-50	LMR11-50	LMR11-50	LMR11-50
		Field Sample ID	LMR11-49-115	LMR11-50-006	LMR11-50-006-DP	LMR11-50-024	LMR11-50-024-DP	LMR11-50-048	LMR11-50-048-DP
		Sample Date	8/8/2011	8/8/2011	8/8/2011	8/8/2011	8/8/2011	8/8/2011	8/8/2011
		Depth Interval (in bss)	96- 115	0- 6	0- 6	6- 24	6- 24	24- 48	24- 48
Chemical Name	PEC[1]	Unit							
Aluminum	NL	mg/kg	9,620	15,900	18,600	17,300	10,900	8,610	7,620
Antimony	NL	mg/kg	0.21 UJ	0.33 UJ	0.85 J	0.32 UJ	0.91 J	0.24 UJ	0.23 UJ
Arsenic	33	mg/kg	8.9	10.9	11	11.1	8.5	9	11.3
Barium	NL	mg/kg	79.8	132	146	153	100	97	92.9
Beryllium	NL	mg/kg	0.55	0.8	0.91	0.9	0.023 U	0.57	0.72
Cadmium	4.98	mg/kg	2.7	1.4	2.2	2.1	1.9	2	1.8
Calcium	NL	mg/kg	53,200	43,600	46,300 J	50,600	38,900 J	42,900	39,900
Chromium	111	mg/kg	25.8	27.9	35.2	33.6	23.2	21	22.7
Cobalt	NL	mg/kg	8	8.7	10.2	10.4	7	7.5	5.8
Copper	149	mg/kg	27.8	46.2 J	64.6 J	60.1	42.8 J	41.9	63.2
Iron	NL	mg/kg	17,900	24,200	27,000 J	27,700	20,800 J	20,500	17,300
Lead	128	mg/kg	28.8	36.1	41 J	45.8	66.5 J	86.2	306
Magnesium	NL	mg/kg	13,700	13,000	14,000 J	14,200	12,000 J	12,300	10,400
Manganese	NL	mg/kg	454	404	460 J	495	352 J	354	526
Mercury	1.06	mg/kg	0.068 J	0.0013 U	0.11 J	0.14 J	0.17	0.16	1.7
Nickel	48.6	mg/kg	26.1 J	34.4	35.1	35.1 J	22.2	22.9 J	17.6 J
Potassium	NL	mg/kg	1,530	2,870	3,430 J	2,850	1,780 J	1,230	1,140
Selenium	NL	mg/kg	3.5 U	5.5 U	5.9 U	5.3 U	4.5 U	3.9 U	3.8 U
Silver	NL	mg/kg	0.032 U	0.05 U	0.52 J	0.048 U	0.38 J	0.036 U	0.034 U
Sodium	NL	mg/kg	1.2 U	1.9 U	2 U	1.8 U	1.5 U	1.3 U	1.3 U
Thallium	NL	mg/kg	0.14 U	0.22 U	0.23 U	0.21 U	0.18 U	0.16 U	0.15 U
Vanadium	NL	mg/kg	26.2	37.7	41.5 J	37.5	27 J	21.5	17.8
Zinc	459	mg/kg	91.7	198	197 J	193	220 J	145	160

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Table B-2
Sediment Sample Analytical Results - TAL Metals
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-50	LMR11-50	LMR11-50	LMR11-50	LMR11-50	LMR11-51	LMR11-51
		Field Sample ID	LMR11-50-072	LMR11-50-096	LMR11-50-120	LMR11-50-144	LMR11-50-175	LMR11-51-006	LMR11-51-024
		Sample Date	8/8/2011	8/8/2011	8/8/2011	8/8/2011	8/8/2011	8/7/2011	8/7/2011
		Depth Interval (in bss)	48- 72	72- 96	96- 120	120- 144	144- 175	0- 6	6- 24
Chemical Name	PEC[1]	Unit							
Aluminum	NL	mg/kg	8,450	13,500	18,200	17,000	14,600	18,500	20,900
Antimony	NL	mg/kg	0.26 UJ	0.32 UJ	0.31 UJ	0.25 UJ	0.25 UJ	11.2 UJ	0.3 UJ
Arsenic	33	mg/kg	10.1	16.7	13.9	13.8	13.9	9.1	9.3
Barium	NL	mg/kg	103	185	174	181	187	146	148
Beryllium	NL	mg/kg	0.65	0.87	0.96	1	0.84	0.034 U	1.1
Cadmium	4.98	mg/kg	2.3	4.5	4.6	3.7	3.5	1.8	2
Calcium	NL	mg/kg	42,700	44,000	43,800	34,000	33,800	47,700	45,500
Chromium	111	mg/kg	24.6	48.4	36.7	30.5	25.7	27.7	30.3
Cobalt	NL	mg/kg	7.3	10.7	12.1	10.1	9.4	11.3 J	11.2 J
Copper	149	mg/kg	55.6	96.8	79.7	79.8 J	61.9 J	36.4	36.3
Iron	NL	mg/kg	20,200	29,200	41,400	29,600	23,800	28,500	29,000
Lead	128	mg/kg	77.9	205	100	136	97.3	21	23.2
Magnesium	NL	mg/kg	10,800	10,400	11,400	9,510	8,460	10,300	11,500
Manganese	NL	mg/kg	361	538	609	448	403	599	519
Mercury	1.06	mg/kg	0.25	0.41	0.48	1.1	0.85	0.06 J	0.07 J
Nickel	48.6	mg/kg	23.3 J	32.7 J	39.5 J	33.6	27.9	33.1 J	33.4 J
Potassium	NL	mg/kg	1,200	2,130	2,990	2,570	2,410	2,960	3,370
Selenium	NL	mg/kg	4.3 U	5.4 U	5.2 U	4.1 U	4.1 U	6.5 U	5.1 U
Silver	NL	mg/kg	0.039 U	3.3 J+	0.048 U	2.8	0.038 U	0.17 J	0.21 J
Sodium	NL	mg/kg	1.5 U	1.8 U	1.8 U	1.4 U	1.4 U	2.2 U	1.7 U
Thallium	NL	mg/kg	0.17 U	0.21 U	0.21 U	0.17 U	0.17 U	0.26 U	0.2 U
Vanadium	NL	mg/kg	22.2	33.6	40.6	38.1	35.3	37.4	43.2
Zinc	459	mg/kg	174	308	198	268	256	131 J	132 J

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Table B-2
Sediment Sample Analytical Results - TAL Metals
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-51	LMR11-51	LMR11-52	LMR11-52	LMR11-52	LMR11-52	LMR11-52
		Field Sample ID	LMR11-51-048	LMR11-51-075	LMR11-52-006	LMR11-52-024	LMR11-52-048	LMR11-52-048FS	LMR11-52-072
		Sample Date	8/7/2011	8/7/2011	8/8/2011	8/8/2011	8/8/2011	8/8/2011	8/8/2011
		Depth Interval (in bss)	24- 48	48- 75	0- 6	6- 24	24- 48	24- 48	48- 72
Chemical Name	PEC[1]	Unit							
Aluminum	NL	mg/kg	23,800	21,700	12,800	19,000	19,200	15,400	17,600
Antimony	NL	mg/kg	0.27 UJ	0.3 UJ	0.35 UJ	0.33 UJ	0.25 UJ	0.24 UJ	0.23 UJ
Arsenic	33	mg/kg	11.1	9.9	9.5	10.6	11.6	10.4	10.7
Barium	NL	mg/kg	162	142	117	129	133	110	122
Beryllium	NL	mg/kg	1.2	0.94	0.03 U	0.95	0.98	0.8	0.88
Cadmium	4.98	mg/kg	2.4	3.1	1.5	2.4	2.3	2.4	2.8
Calcium	NL	mg/kg	42,900	51,700	43,900	43,600	46,000	45,200	42,700
Chromium	111	mg/kg	34.8	35.1	21.4	32.3	31.8	28.2	31.3
Cobalt	NL	mg/kg	12 J	11 J	9.8	10.9	10.7	9.5	10.1
Copper	149	mg/kg	39.6	37.4	27.7	36.3	38	34.3	38.3
Iron	NL	mg/kg	32,100	26,500	23,000	28,200	27,900	24,200	25,800
Lead	128	mg/kg	29.6	31	17.8	28.7	33.9	27.6	30.2
Magnesium	NL	mg/kg	11,900	12,100	10,400	12,200	12,000	12,400	12,400
Manganese	NL	mg/kg	631	518	404	488	519	478	461
Mercury	1.06	mg/kg	0.076 J	0.088 J	0.058 J	0.087 J	0.073 J	0.085 J	0.077 J
Nickel	48.6	mg/kg	36.7 J	36.7 J	25.8 J	33.2 J	32.5 J	29.9 J	32.6 J
Potassium	NL	mg/kg	3,540	3,580	2,020	3,100	2,950	2,300	2,660
Selenium	NL	mg/kg	4.5 U	5 U	5.8 U	5.5 U	4.1 U	4 U	3.8 U
Silver	NL	mg/kg	0.3 J	0.25 J	0.053 U	0.05 U	0.038 U	0.037 U	0.035 U
Sodium	NL	mg/kg	1.6 U	1.7 U	2 U	1.9 U	1.4 U	1.4 U	1.3 U
Thallium	NL	mg/kg	0.18 U	0.2 U	0.23 U	0.22 U	0.16 U	0.16 U	0.15 U
Vanadium	NL	mg/kg	48.8	45.2	29.8	43.6	42.9	34.5	37.8
Zinc	459	mg/kg	183 J	130 J	99.8	141	298	116	119

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Table B-2
Sediment Sample Analytical Results - TAL Metals
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-53	LMR11-53	LMR11-53	LMR11-53	LMR11-54	LMR11-54	LMR11-54
		Field Sample ID	LMR11-53-006	LMR11-53-024	LMR11-53-048	LMR11-53-073	LMR11-54-006	LMR11-54-006-DP	LMR11-54-024
		Sample Date	8/7/2011	8/7/2011	8/7/2011	8/7/2011	8/8/2011	8/8/2011	8/8/2011
		Depth Interval (in bss)	0- 6	6- 24	24- 48	48- 73	0- 6	0- 6	6- 24
Chemical Name	PEC[1]	Unit							
Aluminum	NL	mg/kg	18,400 J	11,200 J	16,400 J	13,400 J	8,160 J	11,600 J	10,100 J
Antimony	NL	mg/kg	0.37 UJ	0.26 UJ	7.4 UJ	0.2 UJ	0.27 UJ	0.26 UJ	0.23 UJ
Arsenic	33	mg/kg	9.2	7.4	8.7	8	5.6	6.7	6.3
Barium	NL	mg/kg	126	80.1	105	98.8	60.8	91.3	73.1
Beryllium	NL	mg/kg	0.97	0.63	0.75	0.63	0.023 U	0.022 U	0.02 U
Cadmium	4.98	mg/kg	1.7	1.3	1.6	3.1	0.97	1.3	1.1
Calcium	NL	mg/kg	42,900	60,200	54,000	45,800	29,200	40,400	35,000
Chromium	111	mg/kg	28	18.1	25	27.7	14	18.6	16
Cobalt	NL	mg/kg	10.7	7.3	9.2	8.3	0.066 U	8.1	7.6
Copper	149	mg/kg	33	22.3	26.8	32.8	17.4	24.4	19.4
Iron	NL	mg/kg	26,500	17,500	22,400	19,600	13,800	18,200	15,600
Lead	128	mg/kg	19.6	14.8	20.3	27.3	11.1	31.6	12.6
Magnesium	NL	mg/kg	11,500	13,200	12,600	11,100	7,600	9,610	8,980
Manganese	NL	mg/kg	525 J	391 J	419 J	389 J	251 J	337 J	285 J
Mercury	1.06	mg/kg	0.0012 U	0.001 U	0.0009 U	0.0007 U	0.001 U	0.001 U	0.0009 U
Nickel	48.6	mg/kg	30.3	20.3	26.6	27.5	16.4	21.5	18.5
Potassium	NL	mg/kg	3,270 J	1,940 J	2,800 J	2,070 J	1,420 J	1,960 J	1,810 J
Selenium	NL	mg/kg	6.2 U	4.3 U	4.3 U	3.3 U	4.4 U	4.4 U	3.8 U
Silver	NL	mg/kg	0.057 U	0.039 U	0.039 U	0.03 U	0.041 U	0.04 U	0.035 U
Sodium	NL	mg/kg	2.1 U	1.5 U	1.5 U	1.1 U	1.5 U	1.5 U	1.3 U
Thallium	NL	mg/kg	0.25 U	0.17 U	0.17 U	0.13 U	0.18 U	0.17 U	0.15 U
Vanadium	NL	mg/kg	41.2	25.2	35.5	28	19.9	24.9	23.9
Zinc	459	mg/kg	112 J	74.5 J	157 J	113 J	59.8 J	81 J	67.4 J

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Table B-2
Sediment Sample Analytical Results - TAL Metals
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-54	LMR11-54	LMR11-54	LMR11-54	LMR11-54	LMR11-55	LMR11-55
		Field Sample ID	LMR11-54-024-DP	LMR11-54-048	LMR11-54-048-DP	LMR11-54-072	LMR11-54-086	LMR11-55-006	LMR11-55-006-DP
		Sample Date	8/8/2011	8/8/2011	8/8/2011	8/8/2011	8/8/2011	8/7/2011	8/7/2011
		Depth Interval (in bss)	6- 24	24- 48	24- 48	48- 72	72- 86	0- 6	0- 6
Chemical Name	PEC[1]	Unit							
Aluminum	NL	mg/kg	8,000 J	14,700 J	17,100	14,700	13,400	12,500	12,900
Antimony	NL	mg/kg	8.3 UJ	0.25 UJ	0.31 UJ	0.32 UJ	0.25 UJ	9.5 UJ	0.38 UJ
Arsenic	33	mg/kg	6.9	8.4	9	8.1	10.6	8.1	6.8
Barium	NL	mg/kg	60.7	111	124	103	107	96.8	94.2
Beryllium	NL	mg/kg	0.025 U	0.72	0.9	0.78	0.74	0.028 U	0.033 U
Cadmium	4.98	mg/kg	0.93	1.5	1.7	1.8	3.5	1.1	1.1
Calcium	NL	mg/kg	55,300	37,100	49,700	44,700	51,000	39,200	35,700
Chromium	111	mg/kg	13.2	23	28.6	24.4	31.1	20.7	20.4
Cobalt	NL	mg/kg	7.9	10.4	11.5	9.1	9.1	9.4	0.094 U
Copper	149	mg/kg	16.7	28.9	32.5	28.2	37.7	53.3	24.3
Iron	NL	mg/kg	13,500	22,200	27,200	22,200	23,200	22,300	21,800
Lead	128	mg/kg	12.1	23.1	19.7	22.4	35.5	19.4	16.3
Magnesium	NL	mg/kg	18,800	9,220	12,100	12,300	11,300	9,120	9,660
Manganese	NL	mg/kg	280 J	460 J	605	410	518	430	383
Mercury	1.06	mg/kg	0.0009 U	0.0008 U	0.066 J	0.061 J	0.078 J	0.08 J	0.059 J
Nickel	48.6	mg/kg	16.8	26.6	31.1 J	26.9 J	31.5 J	26 J	24.6 J
Potassium	NL	mg/kg	1,530 J	2,560 J	2,880	2,340	1,880	1,840	2,070
Selenium	NL	mg/kg	4.8 U	4.2 U	5.1 U	5.4 U	4.2 U	5.5 U	6.3 U
Silver	NL	mg/kg	0.044 U	0.039 U	0.047 U	0.049 U	0.039 U	0.088 J	1.8 U
Sodium	NL	mg/kg	1.7 U	1.5 U	1.8 U	1.8 U	1.5 U	1.9 U	2.2 U
Thallium	NL	mg/kg	0.19 U	0.17 U	0.21 U	0.21 U	0.17 U	0.22 U	0.25 U
Vanadium	NL	mg/kg	19.7	31	39.1	33.7	30.4	28.8	30.6
Zinc	459	mg/kg	54.8 J	91.8 J	114	106	134	103 J	96.2 J

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Table B-2
Sediment Sample Analytical Results - TAL Metals
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-55	LMR11-55	LMR11-56	LMR11-56	LMR11-56	LMR11-57	LMR11-57
		Field Sample ID	LMR11-55-030	LMR11-55-030-DP	LMR11-56-006	LMR11-56-024	LMR11-56-036	LMR11-57-006	LMR11-57-024
		Sample Date	8/7/2011	8/7/2011	8/7/2011	8/7/2011	8/7/2011	8/6/2011	8/6/2011
		Depth Interval (in bss)	6- 30	6- 30	0- 6	6- 24	24- 36	0- 6	6- 24
Chemical Name	PEC[1]	Unit							
Aluminum	NL	mg/kg	15,800	20,300	16,600	18,400	8,590	13,300	2,890
Antimony	NL	mg/kg	0.31 UJ	0.37 UJ	0.32 UJ	0.33 UJ	7.1 UJ	0.68 J	0.23 J
Arsenic	33	mg/kg	11.1	11.7	8	11.1	12.1	7	1.7
Barium	NL	mg/kg	106	154	265	139	88	96.9	0.058 U
Beryllium	NL	mg/kg	0.75	0.97	0.8	0.88	0.021 U	0.035 U	0.017 U
Cadmium	4.98	mg/kg	1.4	1.9	1.2	1.6	1.6	1.3	0.01 U
Calcium	NL	mg/kg	59,800	57,100	30,700	41,700	57,000	33,800 J	23,300 J
Chromium	111	mg/kg	26.1	32.7	25.3	28.6	22	21.8	6.2
Cobalt	NL	mg/kg	11.7	14.4	9	10.9	7.6	0.1 U	0.049 U
Copper	149	mg/kg	32.3	45.1	29.2	34.1	28.2	26.2 J	4.1 J
Iron	NL	mg/kg	27,100	34,200	24,700	28,300	17,500	20,600 J	5,940 J
Lead	128	mg/kg	21	36.2	20.9	26.1	26.7	16 J	3.2 J
Magnesium	NL	mg/kg	20,400	15,000	8,830	11,600	13,100	9,840 J	8,180 J
Manganese	NL	mg/kg	484	675	423	492	387	358 J	129 J
Mercury	1.06	mg/kg	0.05 J	0.069 J	0.064 J	0.067 J	0.052 J	0.067 J	0.0094 J
Nickel	48.6	mg/kg	31.9 J	39.9 J	27.7 J	32.2 J	22.2 J	24.2	6.5
Potassium	NL	mg/kg	2,590	3,260	2,820	2,910	1,570	2,260 J	472 J
Selenium	NL	mg/kg	5.2 U	6.2 U	5.3 U	5.5 U	4.1 U	6.8 U	3.3 U
Silver	NL	mg/kg	0.12 J	0.21 J	0.16 J	0.14 J	0.099 J	0.14 J	0.94 U
Sodium	NL	mg/kg	1.8 U	2.1 U	1.8 U	1.9 U	1.4 U	2.3 U	1.1 U
Thallium	NL	mg/kg	0.21 U	0.25 U	0.21 U	0.22 U	0.16 U	0.27 U	0.13 U
Vanadium	NL	mg/kg	36.4	48.7	37	42.1	23.9	30.4 J	9.2 J
Zinc	459	mg/kg	111 J	153 J	127 J	144 J	83.4 J	90.4 J	20.6 J

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Table B-2
Sediment Sample Analytical Results - TAL Metals
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-57	LMR11-57	LMR11-58	LMR11-59	LMR11-59	LMR11-59	LMR11-59
		Field Sample ID	LMR11-57-048	LMR11-57-062	LMR11-58-010	LMR11-59-006	LMR11-59-024	LMR11-59-048	LMR11-59-072
		Sample Date	8/6/2011	8/6/2011	8/6/2011	8/6/2011	8/6/2011	8/6/2011	8/6/2011
		Depth Interval (in bss)	24- 48	48- 62	0- 10	0- 6	6- 24	24- 48	48- 72
Chemical Name	PEC[1]	Unit							
Aluminum	NL	mg/kg	6,160	3,720	8,260	14,900	20,900	17,200	20,400
Antimony	NL	mg/kg	0.33 J	7.4 UJ	0.18 UJ	0.49 J	0.29 UJ	0.77 J	0.29 UJ
Arsenic	33	mg/kg	2.6	2.8	6.4	8	9.3	8.1	10.8
Barium	NL	mg/kg	45.1	26.1	64	108	147	115	131
Beryllium	NL	mg/kg	0.018 U	0.022 U	0.44	0.77	0.9	0.88	0.84
Cadmium	4.98	mg/kg	0.64	0.014 U	0.6	1.4 J	1.6 J	1.6 J	1.9 J
Calcium	NL	mg/kg	29,300 J	39,500 J	67,200	51,600	40,300	39,600	45,000
Chromium	111	mg/kg	10.5	7.4	13.8	23.5	30	25.9	32.2
Cobalt	NL	mg/kg	5.1	0.064 U	7.5	8.6	10.4	8.9	9.9
Copper	149	mg/kg	10.5 J	7 J	18	29.5	35.3	30.2	35.6
Iron	NL	mg/kg	11,800 J	8,350 J	17,100	22,200	28,100	23,100	26,900
Lead	128	mg/kg	5.5 J	4 J	8.7	20.2	22.5	22	29.2
Magnesium	NL	mg/kg	9,950 J	11,300 J	15,100	13,600	11,200	11,300	13,500
Manganese	NL	mg/kg	327 J	243 J	363	436	478	446	499
Mercury	1.06	mg/kg	0.0097 J	0.012 J	0.013 J	0.062 J	0.072 J	0.061 J	0.093 J
Nickel	48.6	mg/kg	13.6	10.1	20.8 J	24.3	31.7	26.5	31
Potassium	NL	mg/kg	1,130 J	678 J	2,120	2,740	3,740	3,110	3,470
Selenium	NL	mg/kg	3.4 U	4.3 U	3 U	5.3 U	4.8 U	4.4 U	4.9 U
Silver	NL	mg/kg	0.98 U	1.2 U	0.86 U	0.17 J	0.17 J	0.17 J	0.27 J
Sodium	NL	mg/kg	1.2 U	1.5 U	1 U	1.8 UJ	1.7 UJ	1.5 UJ	1.7 UJ
Thallium	NL	mg/kg	0.14 U	0.17 U	0.12 U	0.21 U	0.19 U	0.18 U	0.19 U
Vanadium	NL	mg/kg	16.9 J	13.2 J	22.7	36.4	45.8	38.2	46.7
Zinc	459	mg/kg	34.9 J	25.4 J	42.6 J	100	125	107	140

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Table B-2
Sediment Sample Analytical Results - TAL Metals
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-59	LMR11-59	LMR11-60	LMR11-60	LMR11-60	LMR11-60	LMR11-60
		Field Sample ID	LMR11-59-096	LMR11-59-116	LMR11-60-006	LMR11-60-024	LMR11-60-048	LMR11-60-048FS	LMR11-60-072
		Sample Date	8/6/2011	8/6/2011	8/6/2011	8/6/2011	8/6/2011	8/6/2011	8/6/2011
		Depth Interval (in bss)	72- 96	96- 116	0- 6	6- 24	24- 48	24- 48	48- 72
Chemical Name	PEC[1]	Unit							
Aluminum	NL	mg/kg	14,600	5,230	19,600	19,200	21,700	24,900	12,100
Antimony	NL	mg/kg	0.3 UJ	6 UJ	0.37 UJ	0.33 UJ	0.31 UJ	0.28 UJ	7.3 UJ
Arsenic	33	mg/kg	12.3	4.4	8.7	9.2	10	10.4	11.4
Barium	NL	mg/kg	94.9	32.8	141	142	147	160	81.9
Beryllium	NL	mg/kg	0.026 U	0.018 U	0.9	1	0.91	1	0.022 U
Cadmium	4.98	mg/kg	1.2	0.57	1.6 J	1.7 J	1.8 J	1.9 J	1.1 J
Calcium	NL	mg/kg	38,600	33,700	54,000	39,300	40,200	36,600	35,300
Chromium	111	mg/kg	21.9	9	28.9	29.2	31.9	35.5	18.9
Cobalt	NL	mg/kg	8.4	0.052 U	10.4	11.1	11	11.3	7.5
Copper	149	mg/kg	25	8.1	34.2	37.5	38	39.3	23.5
Iron	NL	mg/kg	19,900	8,180	27,300	29,300	29,800	31,200	18,300
Lead	128	mg/kg	25.7	8.5	21.8	24.6	27	29.9	28.4
Magnesium	NL	mg/kg	11,700	9,270	12,200	12,000	12,100	11,400	11,200
Manganese	NL	mg/kg	389	179	433	488	532	507	357
Mercury	1.06	mg/kg	0.23	0.27	0.06 J	0.079 J	0.088 J	0.077 J	0.2
Nickel	48.6	mg/kg	23	10	31	33.5	33.5	35.5	20.7
Potassium	NL	mg/kg	2,810	933	3,530	3,020	3,770	4,310	2,100
Selenium	NL	mg/kg	5 U	3.5 U	6.2 U	5.5 U	5.2 U	4.7 U	4.2 U
Silver	NL	mg/kg	0.25 J	1 U	0.16 J	0.16 J	0.24 J	0.37 J	0.24 J
Sodium	NL	mg/kg	1.7 UJ	1.2 UJ	2.1 UJ	1.9 UJ	1.8 UJ	1.6 UJ	1.5 UJ
Thallium	NL	mg/kg	0.2 U	0.14 U	0.25 U	0.22 U	0.21 U	0.19 U	0.17 U
Vanadium	NL	mg/kg	35	15.6	44.1	41.8	48.2	53	29.7
Zinc	459	mg/kg	100	39.2	123	140	142	180	96.4

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Table B-2
Sediment Sample Analytical Results - TAL Metals
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-60	LMR11-61	LMR11-61	LMR11-62	LMR11-62	LMR11-62	LMR11-62
		Field Sample ID	LMR11-60-092	LMR11-61-006	LMR11-61-030	LMR11-62-006	LMR11-62-024	LMR11-62-024DP	LMR11-62-048
		Sample Date	8/6/2011	8/6/2011	8/6/2011	8/6/2011	8/6/2011	8/6/2011	8/6/2011
		Depth Interval (in bss)	72- 92	0- 6	6- 30	0- 6	6- 24	6- 24	24- 48
Chemical Name	PEC[1]	Unit							
Aluminum	NL	mg/kg	19,200	8,880	13,800	19,900	17,200	16,300	11,200
Antimony	NL	mg/kg	0.25 UJ	0.23 UJ	0.22 UJ	10.1 UJ	0.72 J	0.31 UJ	0.24 J
Arsenic	33	mg/kg	16.8	9.9	9.9	9.3	20.5	8.9	6.7
Barium	NL	mg/kg	131	117	114	136	127	117	79.3
Beryllium	NL	mg/kg	0.84	1.3	0.84	0.03 U	0.77	0.78	0.02 U
Cadmium	4.98	mg/kg	1.3 J	0.62	0.86	1.6 J	1.5 J	1.6 J	0.81 J
Calcium	NL	mg/kg	39,200	44,200	99,900	41,500	41,600	43,800	36,100
Chromium	111	mg/kg	26.6	10.5	20.4	30.5	26.8	26.8	17.6
Cobalt	NL	mg/kg	10.1	5.9	10.4	10.3	9.9	9.3	7.6
Copper	149	mg/kg	37	20	25	34.9	45.9	30.4	22.9
Iron	NL	mg/kg	25,700	15,800	24,700	27,900	26,500	24,000	17,900
Lead	128	mg/kg	38.9	29.8	13.8	26.8	62.2	27.2	25.9
Magnesium	NL	mg/kg	12,100	7,390	22,500	12,200	11,800	11,800	11,200
Manganese	NL	mg/kg	448	618	719	483	493	430	321
Mercury	1.06	mg/kg	0.26	0.08 J	0.023 J	0.072 J	0.5	0.08 J	0.17
Nickel	48.6	mg/kg	29.5	15.1 J	29 J	31.7	29.3	27.4	20.1
Potassium	NL	mg/kg	3,370	1,350	3,400	3,470	2,980	2,750	1,820
Selenium	NL	mg/kg	4.2 U	3.9 U	3.6 U	5.9 U	5.3 U	5.2 U	3.9 U
Silver	NL	mg/kg	0.39 J	0.049 J	1 U	0.22 J	0.72 J	0.3 J	0.091 J
Sodium	NL	mg/kg	1.4 UJ	1.3 U	1.2 U	2 UJ	1.8 UJ	1.8 UJ	1.4 UJ
Thallium	NL	mg/kg	0.17 U	0.16 U	0.14 U	0.24 U	0.21 U	0.21 U	0.16 U
Vanadium	NL	mg/kg	43.3	17.5	34.1	44.6	40.6	39.5	28.3
Zinc	459	mg/kg	145	55.4 J	62.2 J	130	171	119	83.9

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Table B-2
Sediment Sample Analytical Results - TAL Metals
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-62	LMR11-62	LMR11-62	LMR11-63	LMR11-63	LMR11-63	LMR11-63
		Field Sample ID	LMR11-62-072	LMR11-62-096	LMR11-62-108	LMR11-63-006	LMR11-63-024	LMR11-63-048	LMR11-63-048FS
		Sample Date	8/6/2011	8/6/2011	8/6/2011	8/8/2011	8/8/2011	8/8/2011	8/8/2011
		Depth Interval (in bss)	48- 72	72- 96	96- 108	0- 6	6- 24	24- 48	24- 48
Chemical Name	PEC[1]	Unit							
Aluminum	NL	mg/kg	4,590	7,170	5,520	19,200	16,800	15,800	13,600
Antimony	NL	mg/kg	6.8 UJ	8 UJ	6.2 UJ	0.28 UJ	0.33 UJ	0.27 UJ	0.23 UJ
Arsenic	33	mg/kg	3.1	4.2	4.3	10	9.2	28.6	32.1
Barium	NL	mg/kg	33.5	54.2	41.8	144	131	163	840
Beryllium	NL	mg/kg	0.02 U	0.024 U	0.019 U	0.95	0.79	0.8	0.68
Cadmium	4.98	mg/kg	0.41 J	0.61 J	0.46 J	1.7	1.7	2.1	3.3
Calcium	NL	mg/kg	34,900	42,100	41,600	42,100	40,300	42,700	39,200
Chromium	111	mg/kg	8.4	11.7	10	30.9	27.8	30.2	27.8
Cobalt	NL	mg/kg	4.9 J	6.3 J	5.2	10.8	9.1	9.2	8.2
Copper	149	mg/kg	7.5	12.5	9.6	39 J	33.8 J	58.6 J	45.3 J
Iron	NL	mg/kg	9,310	12,600	10,700	28,300	22,800	24,700	28,900
Lead	128	mg/kg	4.6	6.5	5.1	35.3	42.1	410	284
Magnesium	NL	mg/kg	10,600	12,600	11,600	12,800	11,700	11,900	11,200
Manganese	NL	mg/kg	238	285	267	487	411	454	441
Mercury	1.06	mg/kg	0.01 J	0.017 J	0.011 J	0.0012 U	0.25	0.46	0.34
Nickel	48.6	mg/kg	10.9	15.8	12.3	32.8	26.7	26.8	23.7
Potassium	NL	mg/kg	791	1,390	1,050	2,990	2,990	2,740	2,310
Selenium	NL	mg/kg	4 U	4.6 U	3.6 U	4.7 U	5.5 U	4.5 U	3.8 U
Silver	NL	mg/kg	1.1 U	1.3 U	1 U	0.043 U	0.05 U	0.041 U	0.034 U
Sodium	NL	mg/kg	1.4 UJ	1.6 UJ	1.2 UJ	1.6 U	1.9 U	1.5 U	1.3 U
Thallium	NL	mg/kg	0.16 U	0.19 U	0.15 U	0.19 U	0.22 U	0.18 U	0.15 U
Vanadium	NL	mg/kg	13.9	20.7	16.9	41.8	39	37.8	35.3
Zinc	459	mg/kg	30.5	44.1	33	141	126	271	714

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Table B-2
Sediment Sample Analytical Results - TAL Metals
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-63	LMR11-63	LMR11-63	LMR11-64	LMR11-64	LMR11-64	LMR11-64
		Field Sample ID	LMR11-63-072	LMR11-63-096	LMR11-63-115	LMR11-88-006	LMR11-88-024	LMR11-88-048	LMR11-88-072
		Sample Date	8/8/2011	8/8/2011	8/8/2011	8/7/2011	8/7/2011	8/7/2011	8/7/2011
		Depth Interval (in bss)	48- 72	72- 96	96- 115	0- 6	6- 24	24- 48	48- 72
Chemical Name	PEC[1]	Unit							
Aluminum	NL	mg/kg	16,800	15,100	5,730	12,000	14,600 J	13,400 J	18,900 J
Antimony	NL	mg/kg	0.26 UJ	0.3 UJ	7.9 UJ	0.24 UJ	0.25 UJ	0.26 UJ	0.34 UJ
Arsenic	33	mg/kg	31.3	33.1	4.3	15	24.5	20	23.9
Barium	NL	mg/kg	165	144	47.3	97.3	127	107	151
Beryllium	NL	mg/kg	0.87	0.8	0.024 U	0.6	0.85	0.69	0.93
Cadmium	4.98	mg/kg	2.3	2.1	0.85	2.6	4.3	2.7	4.4
Calcium	NL	mg/kg	41,100	43,500	44,300	78,400	50,300	50,600	46,600
Chromium	111	mg/kg	26	24.6	10.8	32.3	51.7	59.9	62.8
Cobalt	NL	mg/kg	10.3	10	0.069 U	8.5 J	9.9	8.5	11.1
Copper	149	mg/kg	85.5	70.1	11.8	39.3	53.1	44.8	74.4
Iron	NL	mg/kg	27,900	26,800	12,500	20,000	24,300	22,900	28,300
Lead	128	mg/kg	156	129	7.3	406	79.2	51.7	171
Magnesium	NL	mg/kg	12,200	12,900	12,700	16,200	12,600	12,500	12,500
Manganese	NL	mg/kg	465	481	352	516	547 J	431 J	585 J
Mercury	1.06	mg/kg	0.81	0.75	0.01 J	0.16	0.17	0.29	0.35
Nickel	48.6	mg/kg	30.2	28.2	14.6	24.7 J	31.3	26	35.1
Potassium	NL	mg/kg	2,590	2,420	1,000	2,060	2,310 J	2,140 J	3,360 J
Selenium	NL	mg/kg	0.34 U	0.4 U	4.6 U	4.1 U	4.2 U	4.3 U	5.6 U
Silver	NL	mg/kg	1.2 J	1.3 J	1.3 U	0.56 J	1.3 J+	0.039 U	1.6 J+
Sodium	NL	mg/kg	1.5 UJ	1.7 UJ	1.6 UJ	1.4 U	1.4 U	1,050	1,030
Thallium	NL	mg/kg	0.17 U	0.2 U	0.18 U	0.16 U	0.17 U	0.17 U	0.23 U
Vanadium	NL	mg/kg	38.3	36.7	18.6	27.4	33.9	31.4	43
Zinc	459	mg/kg	273	265	40.2	113 J	161 J	144 J	190 J

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Table B-2
Sediment Sample Analytical Results - TAL Metals
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-64	LMR11-65	LMR11-65	LMR11-66	LMR11-66	LMR11-66	LMR11-66
		Field Sample ID	LMR11-88-088	LMR11-65-006	LMR11-65-024	LMR11-66-006	LMR11-66-024	LMR11-66-048	LMR11-66-048FS
		Sample Date	8/7/2011	8/6/2011	8/6/2011	8/7/2011	8/7/2011	8/7/2011	8/7/2011
		Depth Interval (in bss)	72- 88	0- 6	6- 24	0- 6	6- 24	24- 48	24- 48
Chemical Name	PEC[1]	Unit							
Aluminum	NL	mg/kg	11,800 J	18,400	17,800	18,800	21,600	22,900	22,300
Antimony	NL	mg/kg	0.2 UJ	0.25 UJ	0.3 UJ	0.3 UJ	0.3 UJ	0.28 UJ	0.37 UJ
Arsenic	33	mg/kg	25.9	14.2	17.4	9	9.7	9.9	10.9
Barium	NL	mg/kg	101	127	126	145	164	197	194
Beryllium	NL	mg/kg	0.62	0.81	0.93	0.92	1	1	0.99
Cadmium	4.98	mg/kg	2.9	2.7	4.5	1.9	2.1	2.2	2.1
Calcium	NL	mg/kg	47,000	32,600	47,100	44,100	47,900	39,900	43,300
Chromium	111	mg/kg	63.4	43.2	31	28.8	31.9	33.2	33.6
Cobalt	NL	mg/kg	8.1	9.1	10.3	10.4 J	11.5 J	12 J	11.6 J
Copper	149	mg/kg	45.2	41.1	42	34.9	38.2	41.3	40.3
Iron	NL	mg/kg	19,300	23,600	25,100	26,800	30,800	30,900	29,800
Lead	128	mg/kg	47	54.4	161	26.6	25	28.6	29.1
Magnesium	NL	mg/kg	12,600	9,430	14,900	12,200	12,400	11,900	12,500
Manganese	NL	mg/kg	422 J	438	421	506	552	531	525
Mercury	1.06	mg/kg	0.18	0.16	0.18 J	0.074 J	0.073 J	0.087 J	0.076 J
Nickel	48.6	mg/kg	25.2	28.3	29	31.3 J	34.3 J	35.9 J	34.6 J
Potassium	NL	mg/kg	1,970 J	3,240	3,140	3,080	3,430	3,840	4,110
Selenium	NL	mg/kg	3.4 U	4.2 U	5 U	5 U	5.1 U	4.6 U	6.2 U
Silver	NL	mg/kg	0.031 U	0.76 J	0.61 J	0.17 J	0.32 J	0.21 J	0.26 J
Sodium	NL	mg/kg	1,540	1,570 J	2,730 J	1.7 U	1.7 U	1.6 U	2.1 U
Thallium	NL	mg/kg	0.14 U	0.17 U	0.2 U	0.2 U	0.2 U	0.18 U	0.25 U
Vanadium	NL	mg/kg	27	40.7	40.6	40.8	45.5	45.6	49.7
Zinc	459	mg/kg	136 J	151	154	128 J	138 J	143 J	148 J

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Table B-2
Sediment Sample Analytical Results - TAL Metals
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-66	LMR11-66	LMR11-66	LMR11-67	LMR11-67	LMR11-67	LMR11-67
		Field Sample ID	LMR11-66-072	LMR11-66-096	LMR11-66-117	LMR11-67-006	LMR11-67-024	LMR11-67-048	LMR11-67-077
		Sample Date	8/7/2011	8/7/2011	8/7/2011	8/6/2011	8/6/2011	8/6/2011	8/6/2011
		Depth Interval (in bss)	48- 72	72- 96	96- 117	0- 6	6- 24	24- 48	48- 77
Chemical Name	PEC[1]	Unit							
Aluminum	NL	mg/kg	21,600	15,300	20,800	18,100	17,200	17,400	16,700
Antimony	NL	mg/kg	0.27 UJ	0.31 UJ	0.23 UJ	0.31 UJ	0.26 UJ	0.6 J	0.28 UJ
Arsenic	33	mg/kg	9.9	11.7	11.7	18.4	20.3	17.2	17.8
Barium	NL	mg/kg	156	117	153	140	153	157	145
Beryllium	NL	mg/kg	0.94	0.027 U	0.94	0.87	0.9	1	0.85
Cadmium	4.98	mg/kg	2	3.6	5.3	4.4	4.5	6.2	4.8
Calcium	NL	mg/kg	41,700	45,500	46,700	53,400	46,600	40,800	43,800
Chromium	111	mg/kg	31.2	34	41.4	52.3	53.8	36.1	35.6
Cobalt	NL	mg/kg	10.6 J	10.2 J	11 J	10.3	10.5	11.7	9.8
Copper	149	mg/kg	38.5	44.2	51.5	57.6	64.7	64.7	58.5
Iron	NL	mg/kg	27,900	23,800	26,700	26,300	27,100	29,400	24,800
Lead	128	mg/kg	29.4	67.8	43.7	73.6	98.5	95.2	126
Magnesium	NL	mg/kg	12,700	12,100	11,100	13,300	12,100	11,300	11,700
Manganese	NL	mg/kg	492	486	488	565	533	539	522
Mercury	1.06	mg/kg	0.089 J	0.12 J	0.1 J	0.28	0.42	0.32	0.38
Nickel	48.6	mg/kg	32.2 J	34.2 J	40.8 J	36.1	34.9	35.5	28.6
Potassium	NL	mg/kg	3,720	2,350	3,270	3,410	2,700	2,430	2,870
Selenium	NL	mg/kg	4.5 U	0.5 J	3.9 U	5.2 U	4.3 U	5.2 U	4.6 U
Silver	NL	mg/kg	0.23 J	0.52 J	0.51 J	0.93 J	1.8	1.2 J	1.2 J
Sodium	NL	mg/kg	1.5 U	1.8 U	1.3 U	1.8 UJ	1.5 UJ	1.8 UJ	1.6 UJ
Thallium	NL	mg/kg	0.18 U	0.21 U	0.16 U	0.21 U	0.17 U	0.21 U	0.18 U
Vanadium	NL	mg/kg	46.5	34.5	42.1	42	38.3	38	38.4
Zinc	459	mg/kg	142 J	156 J	162 J	172	220	211	232

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Table B-2
Sediment Sample Analytical Results - TAL Metals
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-68	LMR11-68	LMR11-68	LMR11-68	LMR11-68	LMR11-69	LMR11-70
		Field Sample ID	LMR11-68-006	LMR11-68-024	LMR11-68-048	LMR11-68-072	LMR11-68-096	LMR11-69-006	LMR11-70-006
		Sample Date	8/7/2011	8/7/2011	8/7/2011	8/7/2011	8/7/2011	8/6/2011	8/7/2011
		Depth Interval (in bss)	0- 6	6- 24	24- 48	48- 72	72- 96	0- 6	0- 6
Chemical Name	PEC[1]	Unit							
Aluminum	NL	mg/kg	21,500	22,900	21,000	25,300 J	20,100	7,090	24,900 J
Antimony	NL	mg/kg	0.28 UJ	0.32 UJ	0.31 UJ	0.28 UJ	0.3 UJ	0.3 UJ	0.35 UJ
Arsenic	33	mg/kg	9.4	9.7	10.1	11	12.6	23.3	10.4
Barium	NL	mg/kg	151	186	157	163	157	129	169
Beryllium	NL	mg/kg	0.95	1.1	1	1.1	0.99	0.87	1.1
Cadmium	4.98	mg/kg	1.9	2.1	2.1	2	2.9	1.7	1.9
Calcium	NL	mg/kg	43,900	46,100	35,600	38,200	39,400	106,000	22,700
Chromium	111	mg/kg	30.1	32.6	31.1	35.8	34.8	21.6	34.9
Cobalt	NL	mg/kg	10.9 J	11.9 J	12 J	11.9	11.7 J	12.9	12.6
Copper	149	mg/kg	34.9	38.6	39.4	39.6	47.4	120	37.5
Iron	NL	mg/kg	27,300	30,800	31,200	32,600	30,400	22,800	33,700
Lead	128	mg/kg	22.2	24.3	26	27.8	44.2	419	23.1
Magnesium	NL	mg/kg	12,500	12,200	11,100	11,300	11,500	24,300	9,210
Manganese	NL	mg/kg	504	581	535	587 J	618	600	543 J
Mercury	1.06	mg/kg	0.068 J	0.074 J	0.079 J	0.0009 U	0.12 J	0.22	0.0013 U
Nickel	48.6	mg/kg	30.9 J	35.4 J	36.3 J	36.2	37.9 J	38.9	37.1
Potassium	NL	mg/kg	3,980	3,940	3,090	4,290 J	2,790	1,410	4,040 J
Selenium	NL	mg/kg	4.7 U	5.4 U	5.2 U	4.6 U	5 U	4.9 U	5.8 U
Silver	NL	mg/kg	0.17 J	0.17 J	0.21 J	0.042 U	0.83 J	0.64 J	0.053 U
Sodium	NL	mg/kg	1.6 U	1.8 U	1.8 U	1.6 U	1.7 U	1.7 UJ	2 U
Thallium	NL	mg/kg	0.19 U	0.21 U	0.21 U	0.18 U	0.2 U	0.2 U	0.23 U
Vanadium	NL	mg/kg	46.1	46.5	41.6	54	40.2	23.1	51.3
Zinc	459	mg/kg	123 J	136 J	140 J	142 J	175 J	300	139 J

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Table B-2
Sediment Sample Analytical Results - TAL Metals
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-70	LMR11-70	LMR11-70	LMR11-70	LMR11-70	LMR11-71	LMR11-71
		Field Sample ID	LMR11-70-024	LMR11-70-048	LMR11-70-072	LMR11-70-072FS	LMR11-70-085	LMR11-71-006	LMR11-71-024
		Sample Date	8/7/2011	8/7/2011	8/7/2011	8/7/2011	8/7/2011	8/6/2011	8/6/2011
		Depth Interval (in bss)	6- 24	24- 48	48- 72	48- 72	72- 85	0- 6	6- 24
Chemical Name	PEC[1]	Unit							
Aluminum	NL	mg/kg	25,600 J	21,400 J	18,200 J	19,100 J	23,500 J	23,100	24,400
Antimony	NL	mg/kg	0.31 UJ	0.33 UJ	0.37 UJ	0.35 UJ	0.29 UJ	0.33 UJ	0.35 UJ
Arsenic	33	mg/kg	9.7	9.8	9	10	9.8	8.4	10.5
Barium	NL	mg/kg	165	149	135	154	162	167	166
Beryllium	NL	mg/kg	1.1	0.95	0.9	0.96	1.2	1.1	1.1
Cadmium	4.98	mg/kg	1.9	1.8	1.8	2	2	1.7	1.9
Calcium	NL	mg/kg	32,600	42,800	50,700	49,100	37,000	40,800	35,400
Chromium	111	mg/kg	35.5	31.1	28	29.6	34	33.7	36.1
Cobalt	NL	mg/kg	12.5	11.4	10.8	11.7	11.6	11.7	12.4
Copper	149	mg/kg	38	35.9	37.3	39.6	38	39.8	42.8
Iron	NL	mg/kg	32,500	28,500	27,100	31,100	30,900	31,800	34,400
Lead	128	mg/kg	21.7	21.7	21.7	24.3	23.9	26.6	31.3
Magnesium	NL	mg/kg	10,400	10,800	11,900	11,500	11,000	12,000	11,200
Manganese	NL	mg/kg	657 J	607 J	581 J	665 J	510 J	426	501
Mercury	1.06	mg/kg	0.0011 U	0.0011 U	0.0012 U	0.0011 U	0.001 U	0.085 J	0.09 J
Nickel	48.6	mg/kg	36.3	32.9	31.1	34.3	34.6	35.6 J	38.9 J
Potassium	NL	mg/kg	4,820 J	4,030 J	3,300 J	3,000 J	4,030 J	4,060	3,830
Selenium	NL	mg/kg	5.1 U	5.5 U	6.1 U	5.9 U	4.9 U	5.5 U	5.9 U
Silver	NL	mg/kg	0.047 U	0.051 U	0.056 U	0.054 U	0.045 U	0.2 J	0.28 J
Sodium	NL	mg/kg	1.8 U	1.9 U	2.1 U	2 U	1.7 U	1.9 U	2 U
Thallium	NL	mg/kg	0.2 U	0.22 U	0.25 U	0.24 U	0.19 U	0.22 U	0.24 U
Vanadium	NL	mg/kg	53.1	45.6	40.3	40.2	50.3	50.3	51.6
Zinc	459	mg/kg	130 J	123 J	117 J	134 J	131 J	142 J	213 J

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Table B-2
Sediment Sample Analytical Results - TAL Metals
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-71	LMR11-71	LMR11-71	LMR11-71	LMR11-71	LMR11-71	LMR11-71
		Field Sample ID	LMR11-71-024FS	LMR11-71-048	LMR11-71-072	LMR11-71-096	LMR11-71-120	LMR11-71-144	LMR11-71-161
		Sample Date	8/6/2011	8/6/2011	8/6/2011	8/6/2011	8/6/2011	8/6/2011	8/6/2011
		Depth Interval (in bss)	6- 24	24- 48	48- 72	72- 96	96- 120	120- 144	144- 161
Chemical Name	PEC[1]	Unit							
Aluminum	NL	mg/kg	23,700	22,400	17,500	15,600	20,000	15,900	14,500
Antimony	NL	mg/kg	0.33 UJ	0.32 UJ	0.26 UJ	0.25 UJ	0.26 UJ	0.24 UJ	0.23 UJ
Arsenic	33	mg/kg	9.5	12.4	12	14	14	13.1	10.8
Barium	NL	mg/kg	156	156	147	132	152	122	116
Beryllium	NL	mg/kg	1.1	1	0.88	0.81	0.96	0.73	0.67
Cadmium	4.98	mg/kg	1.8	3.2	3.7	4.5	4.5	3	3.6
Calcium	NL	mg/kg	33,600	40,600	48,300	44,700	47,300	66,400	35,400
Chromium	111	mg/kg	34.4	39.3	36.8	45.6	44.8	37.6	36.8
Cobalt	NL	mg/kg	11.8	11.6	10.7	10.6	11.3	9	8.3
Copper	149	mg/kg	39.8	51.9	59.2	49.1	53.3	43	47.9
Iron	NL	mg/kg	33,000	32,100	28,500	26,200	30,300	25,500	21,000
Lead	128	mg/kg	26.5	60.9	70.9	67.3	62.3	64.6	40.5
Magnesium	NL	mg/kg	11,000	11,600	12,500	12,300	12,100	10,300	8,640
Manganese	NL	mg/kg	454	534	587	502	585	920	358
Mercury	1.06	mg/kg	0.08 J	0.16 J	0.23	0.23	0.21	0.23	0.18
Nickel	48.6	mg/kg	36.7 J	39.6 J	38.2 J	37.9 J	36.6 J	28.1 J	27.9 J
Potassium	NL	mg/kg	3,840	3,420	2,410	2,260	2,940	2,550	2,280
Selenium	NL	mg/kg	5.5 U	5.4 U	4.3 U	4.2 U	4.3 U	3.9 U	3.9 U
Silver	NL	mg/kg	0.21 J	0.45 J	0.41 J	0.72 J	0.56 J	0.53 J	0.66 J
Sodium	NL	mg/kg	1.9 U	1.9 U	1.5 U	1.4 U	1.5 U	1.4 U	1.3 U
Thallium	NL	mg/kg	0.22 U	0.22 U	0.17 U	0.17 U	0.17 U	0.16 U	0.15 U
Vanadium	NL	mg/kg	50.4	48.7	39.2	37.3	43.8	36.1	32
Zinc	459	mg/kg	155 J	183 J	173 J	164 J	175 J	133 J	134 J

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Table B-2
Sediment Sample Analytical Results - TAL Metals
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-72	LMR11-72	LMR11-72	LMR11-73	LMR11-73	LMR11-73	LMR11-74
		Field Sample ID	LMR11-72-006	LMR11-72-024	LMR11-72-035	LMR11-73-006	LMR11-73-024	LMR11-73-042	LMR11-74-006
		Sample Date	8/5/2011	8/5/2011	8/5/2011	8/7/2011	8/7/2011	8/7/2011	8/5/2011
		Depth Interval (in bss)	0- 6	6- 24	24- 35	0- 6	6- 24	24- 42	0- 6
Chemical Name	PEC[1]	Unit							
Aluminum	NL	mg/kg	12,600 J-	3,200 J-	4,270 J-	12,300	20,100	13,800	19,400
Antimony	NL	mg/kg	0.91 J-	5.9 UJ	6.8 UJ	0.28 UJ	0.4 UJ	0.24 UJ	0.83 J
Arsenic	33	mg/kg	19.6 J-	4.2 J-	4.5 J-	9.6	9.6	12.7	13.3
Barium	NL	mg/kg	152 J-	0.061 UJ	29.1 J-	142	305	105	142
Beryllium	NL	mg/kg	0.75 J-	0.018 UJ	0.021 UJ	0.024 U	0.035 U	0.67	0.91
Cadmium	4.98	mg/kg	1.5 J-	0.011 UJ	0.013 UJ	1.1	2.1	1.7	4.5
Calcium	NL	mg/kg	32,900 J-	39,400 J-	45,000 J-	48,300	49,500	47,100	36,600 J
Chromium	111	mg/kg	23.9 J-	8.4 J-	8.3 J-	22	32	21.1	35.7
Cobalt	NL	mg/kg	8.7 J-	5.3 J-	0.059 UJ	8.7	11.2 J	9.1 J	10.8
Copper	149	mg/kg	90.6 J-	6.8 J-	10 J-	28.4	37.5	29.1	49.9 J
Iron	NL	mg/kg	21,500 J-	7,360 J-	9,260 J-	20,800	29,000	23,000	28,700 J
Lead	128	mg/kg	205 J-	7 J-	5.7 J-	25.2	22.6	26.1	74.4 J
Magnesium	NL	mg/kg	9,640 J-	14,500 J-	12,600 J-	12,600	12,600	12,500	10,100 J
Manganese	NL	mg/kg	302 J-	159 J-	222 J-	397	505	461	572 J
Mercury	1.06	mg/kg	5.6 J-	0.055 J-	0.033 J-	0.061 J	0.07 J	0.055 J	0.25
Nickel	48.6	mg/kg	26 J-	9.7 J-	11.8 J-	24.3 J	32.8 J	25.1 J	32.5
Potassium	NL	mg/kg	2,140 J-	850 J-	786 J-	2,080	3,490	2,080	3,130 J
Selenium	NL	mg/kg	4.2 UJ	3.4 UJ	4 UJ	4.7 U	6.7 U	0.33 J	5.3 U
Silver	NL	mg/kg	2.9 J-	0.98 UJ	1.1 UJ	0.13 J	0.19 J	0.25 J	0.9 J
Sodium	NL	mg/kg	1.5 UJ	1.2 UJ	1.4 UJ	1.6 U	2.3 U	1.4 U	1.8 U
Thallium	NL	mg/kg	0.17 UJ	0.14 UJ	0.16 UJ	0.19 U	0.27 U	0.16 U	0.21 U
Vanadium	NL	mg/kg	31 J-	11.4 J-	14 J-	30.6	43.4	33.9	43.3 J
Zinc	459	mg/kg	339 J-	34 J-	27.9 J-	97.2 J	136 J	119 J	180 J

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Table B-2
Sediment Sample Analytical Results - TAL Metals
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-74	LMR11-74	LMR11-74	LMR11-74	LMR11-74	LMR11-75	LMR11-75
		Field Sample ID	LMR11-74-024	LMR11-74-048	LMR11-74-048FS	LMR11-74-072	LMR11-74-085	LMR11-75-006	LMR11-75-024
		Sample Date	8/5/2011	8/5/2011	8/5/2011	8/5/2011	8/5/2011	8/5/2011	8/5/2011
		Depth Interval (in bss)	6- 24	24- 48	24- 48	48- 72	72- 85	0- 6	6- 24
Chemical Name	PEC[1]	Unit							
Aluminum	NL	mg/kg	16,000	24,800	23,500	23,400	10,100	19,700 J-	17,700 J-
Antimony	NL	mg/kg	1.3 J	0.88 J	1.1 J	0.92 J	0.86 J	0.73 J-	1 J-
Arsenic	33	mg/kg	22.8	10.8	20.5	25.2	15.7	18.8 J-	25.4 J-
Barium	NL	mg/kg	136	164	165	179	79.6	143 J-	153 J-
Beryllium	NL	mg/kg	0.84	1.2	1	1.1	0.53	0.9 J-	0.85 J-
Cadmium	4.98	mg/kg	4	2.9	3.3	3.7	1.4	1.8 J-	1.7 J-
Calcium	NL	mg/kg	38,800 J	24,800 J	31,900 J	31,400 J	67,900 J	39,000 J-	43,600 J-
Chromium	111	mg/kg	39.9	36.3	45.9	136	23.5	28.5 J-	25.9 J-
Cobalt	NL	mg/kg	10.6	12.3	11.7	12.4	6.4	10.7 J-	10 J-
Copper	149	mg/kg	66.8 J	42.6 J	61.1 J	92.2 J	36.5 J	46.8 J-	53.2 J-
Iron	NL	mg/kg	28,900 J	31,400 J	31,000 J	32,000 J	16,500 J	28,700 J-	27,000 J-
Lead	128	mg/kg	139 J	38.4 J	97.9 J	118 J	54.3 J	71.3 J-	107 J-
Magnesium	NL	mg/kg	10,400 J	9,550 J	10,400 J	9,960 J	13,900 J	12,800 J-	12,300 J-
Manganese	NL	mg/kg	526 J	594 J	595 J	587 J	343 J	469 J-	471 J-
Mercury	1.06	mg/kg	0.35	0.18	0.35	0.43	0.38	0.69 J-	0.94 J-
Nickel	48.6	mg/kg	33.1	36.7	35	41.5	19.1	31.7 J-	29.5 J-
Potassium	NL	mg/kg	2,230 J	3,830 J	4,050 J	3,700 J	1,810 J	3,440 J-	3,120 J-
Selenium	NL	mg/kg	5.7 U	4.8 U	4.5 U	4.8 U	3.4 U	4.8 UJ	4.4 UJ
Silver	NL	mg/kg	0.92 J	0.29 J	0.7 J	1 J	0.64 J	0.57 J+	0.76 J+
Sodium	NL	mg/kg	2 U	1.7 U	1.5 U	1.7 U	1.2 U	1.6 UJ	1.5 UJ
Thallium	NL	mg/kg	0.23 U	0.19 U	0.18 U	0.19 U	0.13 U	0.19 UJ	0.18 UJ
Vanadium	NL	mg/kg	35.9 J	51.1 J	50.3 J	49.4 J	24.8 J	44.4 J-	40 J-
Zinc	459	mg/kg	245 J	144 J	213 J	248 J	117 J	205 J-	229 J-

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Table B-2
Sediment Sample Analytical Results - TAL Metals
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-75	LMR11-75	LMR11-75	LMR11-76	LMR11-76	LMR11-76	LMR11-76
		Field Sample ID	LMR11-75-048	LMR11-75-048FS	LMR11-75-080	LMR11-76-006	LMR11-76-024	LMR11-76-048	LMR11-76-072
		Sample Date	8/5/2011	8/5/2011	8/5/2011	8/5/2011	8/5/2011	8/5/2011	8/5/2011
		Depth Interval (in bss)	24- 48	24- 48	48- 80	0- 6	6- 24	24- 48	48- 72
Chemical Name	PEC[1]	Unit							
Aluminum	NL	mg/kg	23,000 J-	20,100 J-	17,900 J-	18,300	13,400	22,000	21,500
Antimony	NL	mg/kg	0.27 UJ	0.28 UJ	0.28 UJ	0.34 UJ	0.25 UJ	0.27 UJ	0.67 J
Arsenic	33	mg/kg	24 J-	21 J-	21 J-	45.4 J	20.8 J	27.4 J	13.7
Barium	NL	mg/kg	166 J-	153 J-	140 J-	172	105	167	152
Beryllium	NL	mg/kg	1.2 J-	0.99 J-	0.96 J-	0.94	0.66	1	1
Cadmium	4.98	mg/kg	1.9 J-	1.6 J-	1.6 J-	3.3	1.5	1.9	1.7
Calcium	NL	mg/kg	38,200 J-	40,300 J-	42,500 J-	41,900	33,400	34,500	34,000 J
Chromium	111	mg/kg	32.2 J-	28.9 J-	27.3 J-	44	21.7	31.4	30.2
Cobalt	NL	mg/kg	11.9 J-	11.6 J-	11.5 J-	11.3	8.4	11.3	12.5
Copper	149	mg/kg	50.4 J-	46.2 J-	50.5 J-	73.6	36.8	52.6	40.2 J
Iron	NL	mg/kg	31,100 J-	30,000 J-	29,300 J-	31,000	21,200	31,600	30,100 J
Lead	128	mg/kg	80.9 J-	73.4 J-	63.8 J-	114 J	57 J	89.5 J	35 J
Magnesium	NL	mg/kg	11,900 J-	12,200 J-	12,000 J-	10,800	10,200	11,000	10,400 J
Manganese	NL	mg/kg	495 J-	500 J-	510 J-	567	347	525	623 J
Mercury	1.06	mg/kg	0.66 J-	0.69 J-	0.52 J-	0.59	0.26	0.53	0.28
Nickel	48.6	mg/kg	35.1 J-	33.8 J-	33 J-	35.5	24	34.6	35.2
Potassium	NL	mg/kg	4,100 J-	3,300 J-	2,760 J-	3,040	2,300	3,550	3,260 J
Selenium	NL	mg/kg	4.5 UJ	4.7 UJ	4.7 UJ	5.7 U	4.1 U	4.5 U	4.7 U
Silver	NL	mg/kg	0.76 J+	1.5 J+	0.62 J+	0.053 U	0.037 U	0.041 U	0.34 J
Sodium	NL	mg/kg	1.5 UJ	1.6 UJ	1.6 UJ	2 U	1.4 U	1.6 U	1.6 U
Thallium	NL	mg/kg	0.18 UJ	0.19 UJ	0.19 UJ	0.23 U	0.16 U	0.18 U	0.19 U
Vanadium	NL	mg/kg	50.9 J-	44 J-	39.8 J-	40.4	29.9	46.1	45.6 J
Zinc	459	mg/kg	219 J-	198 J-	188 J-	322	164	245	154 J

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Table B-2
Sediment Sample Analytical Results - TAL Metals
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-76	LMR11-76	LMR11-77	LMR11-77	LMR11-77	LMR11-77	LMR11-77
		Field Sample ID	LMR11-76-096	LMR11-76-120	LMR11-77-006	LMR11-77-024	LMR11-77-048	LMR11-77-072	LMR11-77-120
		Sample Date	8/5/2011	8/5/2011	8/5/2011	8/5/2011	8/5/2011	8/5/2011	8/5/2011
		Depth Interval (in bss)	72- 96	96- 120	0- 6	6- 24	24- 48	48- 72	72- 120
Chemical Name	PEC[1]	Unit							
Aluminum	NL	mg/kg	24,500	20,200	17,800 J-	13,600 J-	12,900 J-	20,400 J-	24,200 J-
Antimony	NL	mg/kg	1 J	0.76 J	0.8 J-	0.81 J-	0.75 J-	0.93 J-	0.8 J-
Arsenic	33	mg/kg	18.7	29.9	9 J-	12.9 J-	18.9 J-	19.9 J-	16 J-
Barium	NL	mg/kg	162	147	127 J-	114 J-	128 J-	161 J-	164 J-
Beryllium	NL	mg/kg	1.1	0.96	0.031 UJ	0.71 J-	0.71 J-	0.98 J-	1.1 J-
Cadmium	4.98	mg/kg	1.8	1.9	1.7 J-	2.6 J-	3.2 J-	2.1 J-	1.7 J-
Calcium	NL	mg/kg	36,400 J	39,200 J	38,800 J-	40,200 J-	49,600 J-	34,800 J-	35,700 J-
Chromium	111	mg/kg	34.6	29.6	28.1 J-	24.2 J-	41 J-	31.4 J-	32.6 J-
Cobalt	NL	mg/kg	12.9	11.4	10.3 J-	8.9 J-	9.1 J-	12.1 J-	12.8 J-
Copper	149	mg/kg	43.7 J	48.8 J	36.5 J-	40.8 J-	55.2 J-	49.7 J-	42.8 J-
Iron	NL	mg/kg	32,400 J	35,200 J	26,800 J-	22,300 J-	22,800 J-	33,000 J-	32,900 J-
Lead	128	mg/kg	44.7 J	70.6 J	26.8 J-	61.8 J-	68.5 J-	71.2 J-	41.1 J-
Magnesium	NL	mg/kg	11,700 J	11,400 J	11,400 J-	12,100 J-	13,300 J-	10,800 J-	11,800 J-
Manganese	NL	mg/kg	573 J	649 J	426 J-	341 J-	417 J-	482 J-	547 J-
Mercury	1.06	mg/kg	0.35	0.71	0.073 J-	0.2 J-	0.41 J-	0.69 J-	0.3 J-
Nickel	48.6	mg/kg	37.4	32.2	31.5 J-	26.1 J-	27.7 J-	36.9 J-	37.6 J-
Potassium	NL	mg/kg	4,250 J	3,440 J	2,920 J-	2,290 J-	2,100 J-	3,080 J-	4,030 J-
Selenium	NL	mg/kg	5.8 U	4.6 U	6.1 UJ	4.2 UJ	4.3 UJ	5.3 UJ	4.3 UJ
Silver	NL	mg/kg	0.54 J	1 J	0.21 J+	0.53 J+	0.6 J+	0.54 J+	0.34 J+
Sodium	NL	mg/kg	2 U	1.6 U	2.1 UJ	1.4 UJ	1.5 UJ	1.8 UJ	1.5 UJ
Thallium	NL	mg/kg	0.23 U	0.18 U	0.24 UJ	0.17 UJ	0.17 UJ	0.21 UJ	0.17 UJ
Vanadium	NL	mg/kg	53.7 J	46.5 J	38.3 J-	31 J-	30.3 J-	42.9 J-	50.5 J-
Zinc	459	mg/kg	180 J	217 J	122 J-	147 J-	163 J-	224 J-	164 J-

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Table B-2
Sediment Sample Analytical Results - TAL Metals
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-78	LMR11-79	LMR11-79	LMR11-79	LMR11-79	LMR11-80	LMR11-80
		Field Sample ID	LMR11-78-014	LMR11-79-006	LMR11-79-024	LMR11-79-024FS	LMR11-79-054	LMR11-80-006	LMR11-80-024
		Sample Date	8/5/2011	8/4/2011	8/4/2011	8/4/2011	8/4/2011	8/5/2011	8/5/2011
		Depth Interval (in bss)	0- 14	0- 6	6- 24	6- 24	24- 54	0- 6	6- 24
Chemical Name	PEC[1]	Unit							
Aluminum	NL	mg/kg	5,220	21,300	21,900	23,700	18,300	9,200 J-	16,700 J-
Antimony	NL	mg/kg	0.25 J	0.3 UJ	0.3 UJ	0.34 UJ	0.29 UJ	0.17 UJ	0.61 J-
Arsenic	33	mg/kg	3.7	23 J	21.7 J	19.3 J	22.8 J	9 J-	14.2 J-
Barium	NL	mg/kg	32.4	179	192	192	153	77.7 J-	130 J-
Beryllium	NL	mg/kg	0.019 U	1.1	1.1	1.1	0.9	0.5 J-	0.88 J-
Cadmium	4.98	mg/kg	0.49 J	5.2	7.2	5.5	2.9	1.5 J-	1.5 J-
Calcium	NL	mg/kg	52,200	28,900	33,900	33,200	33,700	54,200 J-	39,100 J-
Chromium	111	mg/kg	9.3	77.8	55.6	49.5	55.1	16.2 J-	24.9 J-
Cobalt	NL	mg/kg	5.9	10.7	12.2	12	10.5	6.2 J-	10.7 J-
Copper	149	mg/kg	8.3	91.4	102	94.8	68.4	23.3 J-	37.1 J-
Iron	NL	mg/kg	11,000	31,700	35,300	34,200	26,700	15,600 J-	27,400 J-
Lead	128	mg/kg	5.3	109 J	167 J	160 J	143 J	30.8 J-	40.5 J-
Magnesium	NL	mg/kg	12,500	9,230	10,500	10,500	9,700	8,860 J-	11,900 J-
Manganese	NL	mg/kg	225	515	581	532	469	240 J-	411 J-
Mercury	1.06	mg/kg	0.014 J	0.47	0.54	0.44	1.4	0.11 J-	0.25 J-
Nickel	48.6	mg/kg	12.5	37.3	38.6	38.6	31.6	16.8 J-	30.8 J-
Potassium	NL	mg/kg	988	3,500	3,390	3,970	3,160	1,610 J-	2,560 J-
Selenium	NL	mg/kg	3.7 U	5 U	5 U	5.7 U	4.8 U	2.9 UJ	4.5 UJ
Silver	NL	mg/kg	1 U	3.1	2.3	1.7	0.044 U	0.21 J-	0.42 J+
Sodium	NL	mg/kg	1.3 UJ	1.7 U	1.7 U	2 U	1.7 U	1 UJ	1.5 UJ
Thallium	NL	mg/kg	0.15 U	0.2 U	0.2 U	0.23 U	0.19 U	0.12 UJ	0.18 UJ
Vanadium	NL	mg/kg	16.8	46	46.9	52	40.7	22.1 J-	36.6 J-
Zinc	459	mg/kg	40.4	302	331	291	235	91.9 J-	145 J-

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Table B-2
Sediment Sample Analytical Results - TAL Metals
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-80	LMR11-81	LMR11-81	LMR11-82	LMR11-82	LMR11-82	LMR11-83
		Field Sample ID	LMR11-80-056	LMR11-81-006	LMR11-81-019	LMR11-82-006	LMR11-82-024	LMR11-82-055	LMR11-83-006
		Sample Date	8/5/2011	8/5/2011	8/5/2011	8/5/2011	8/5/2011	8/5/2011	8/5/2011
		Depth Interval (in bss)	24- 56	0- 6	6- 19	0- 6	6- 24	24- 55	0- 6
Chemical Name	PEC[1]	Unit							
Aluminum	NL	mg/kg	6,840 J-	6,680	2,880	13,500 J-	10,200 J-	5,030 J-	15,300
Antimony	NL	mg/kg	0.33 J-	0.22 UJ	0.23 UJ	0.31 UJ	0.3 UJ	0.39 J-	0.74 J
Arsenic	33	mg/kg	6.7 J-	4.2 J	3.5 J	7 J-	5.6 J-	3.5 J-	17
Barium	NL	mg/kg	46.7 J-	42.8	0.069 U	86.9 J-	65.1 J-	28 J-	120
Beryllium	NL	mg/kg	0.016 UJ	0.019 U	0.02 U	0.027 UJ	0.026 UJ	0.018 UJ	0.78
Cadmium	4.98	mg/kg	0.68 J-	0.72	0.012 U	1.2 J-	0.75 J-	0.5 J-	4
Calcium	NL	mg/kg	40,900 J-	46,800	48,700	31,900 J-	40,000 J-	46,100 J-	48,900 J
Chromium	111	mg/kg	11.9 J-	12.4	6.9	20.9 J-	16.5 J-	8.8 J-	48.6
Cobalt	NL	mg/kg	6.4 J-	6.5	0.058 U	8 J-	7.8 J-	5.2 J-	9.2
Copper	149	mg/kg	13 J-	12.3	4.7	22.2 J-	15.8 J-	7.6 J-	54.6 J
Iron	NL	mg/kg	13,100 J-	13,000	7,460	18,500 J-	16,400 J-	9,360 J-	24,800 J
Lead	128	mg/kg	13.5 J-	8 J	5.4 J	17.5 J-	23.1 J-	5.1 J-	67.7 J
Magnesium	NL	mg/kg	12,600 J-	14,000	17,000	9,520 J-	12,400 J-	14,900 J-	12,200 J
Manganese	NL	mg/kg	241 J-	307	208	302 J-	322 J-	217 J-	492 J
Mercury	1.06	mg/kg	0.08 J-	0.016 J	0.011 J	0.05 J-	0.062 J-	0.01 J-	0.24
Nickel	48.6	mg/kg	14.9 J-	16.1	8.9	22.1 J-	19.7 J-	10.6 J-	32.2
Potassium	NL	mg/kg	1,130 J-	1,180	453 J	2,540 J-	1,920 J-	1,080 J-	2,720 J
Selenium	NL	mg/kg	3.2 UJ	3.7 U	3.9 U	5.2 UJ	5 UJ	3.4 UJ	4.6 U
Silver	NL	mg/kg	0.075 J+	0.034 U	1.1 U	0.14 J+	1.4 UJ	0.98 UJ	0.79 J
Sodium	NL	mg/kg	1.1 UJ	1.3 U	1.3 U	1.8 UJ	1.7 UJ	1.2 UJ	1.6 U
Thallium	NL	mg/kg	0.13 UJ	0.15 U	0.16 U	0.21 UJ	0.2 UJ	0.14 UJ	0.18 U
Vanadium	NL	mg/kg	18.7 J-	17.8	10.3	31.7 J-	27.8 J-	16.8 J-	35.6 J
Zinc	459	mg/kg	54.6 J-	42.6	21.9	85 J-	57.4 J-	28.5 J-	158 J

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Table B-2
Sediment Sample Analytical Results - TAL Metals
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-83	LMR11-83	LMR11-83	LMR11-83	LMR11-84	LMR11-84	LMR11-84
		Field Sample ID	LMR11-83-024	LMR11-83-048	LMR11-83-072	LMR11-83-087	LMR11-84-006	LMR11-84-024	LMR11-84-048
		Sample Date	8/5/2011	8/5/2011	8/5/2011	8/5/2011	8/5/2011	8/5/2011	8/5/2011
		Depth Interval (in bss)	6- 24	24- 48	48- 72	72- 87	0- 6	6- 24	24- 48
Chemical Name	PEC[1]	Unit							
Aluminum	NL	mg/kg	15,900	9,610	9,200	4,620	11,400 J-	21,800 J-	8,750 J-
Antimony	NL	mg/kg	0.71 J	0.59 J	0.47 J	0.31 J	0.27 UJ	0.31 UJ	0.38 UJ
Arsenic	33	mg/kg	20.2	14.7	9.5	3.2	6.3 J-	9.8 J-	10.9 J-
Barium	NL	mg/kg	130	85	62.7	30.6	83.5 J-	147 J-	73.5 J-
Beryllium	NL	mg/kg	0.86	0.51	0.021 U	0.019 U	0.023 UJ	0.99 J-	0.033 UJ
Cadmium	4.98	mg/kg	4.1	1.8	1.3	0.012 U	1.2 J-	1.9 J-	1.3 J-
Calcium	NL	mg/kg	43,100 J	39,400 J	55,600 J	68,500 J	29,200 J-	39,000 J-	65,800 J-
Chromium	111	mg/kg	53.2	30.5	21	7.7	18 J-	32.2 J-	18.9 J-
Cobalt	NL	mg/kg	10.1	7.5	6.7	5.4	7.1 J-	11.6 J-	0.095 UJ
Copper	149	mg/kg	60.3 J	36.2 J	23.9 J	18.2 J	23.6 J-	39.4 J-	21 J-
Iron	NL	mg/kg	27,700 J	18,400 J	17,300 J	12,700 J	17,900 J-	29,400 J-	21,500 J-
Lead	128	mg/kg	82.8 J	54.9 J	25.1 J	4.6 J	15.8 J-	30.4 J-	22.2 J-
Magnesium	NL	mg/kg	11,700 J	11,100 J	14,600 J	9,020 J	8,490 J-	11,900 J-	15,500 J-
Manganese	NL	mg/kg	511 J	348 J	349 J	565 J	298 J-	471 J-	368 J-
Mercury	1.06	mg/kg	0.31	0.26	0.12 J	0.019 J	0.053 J-	0.084 J-	0.11 J-
Nickel	48.6	mg/kg	33.9	21	18.4	11.4	21 J-	34.8 J-	21.2 J-
Potassium	NL	mg/kg	2,580 J	1,500 J	1,800 J	848 J	1,880 J-	3,890 J-	1,600 J-
Selenium	NL	mg/kg	5.6 U	3.5 U	4 U	3.7 U	4.6 UJ	5.2 UJ	6.4 UJ
Silver	NL	mg/kg	1.2 J	0.47 J	0.31 J	1.1 U	0.11 J+	0.22 J+	0.085 J+
Sodium	NL	mg/kg	1.9 U	1.2 U	1.4 U	1.3 U	1.6 UJ	1.8 UJ	2.2 UJ
Thallium	NL	mg/kg	0.23 U	0.14 U	0.16 U	0.15 U	0.18 UJ	0.21 UJ	0.25 UJ
Vanadium	NL	mg/kg	36.4 J	24.1 J	26.5 J	20.1 J	25.5 J-	46.5 J-	25.3 J-
Zinc	459	mg/kg	198 J	132 J	84.8 J	36 J	82 J-	136 J-	66.4 J-

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Table B-2
Sediment Sample Analytical Results - TAL Metals
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-84	LMR11-84	LMR11-84	LMR11-84	LMR11-85	LMR11-85	LMR11-85
		Field Sample ID	LMR11-84-072	LMR11-84-072DP	LMR11-84-096	LMR11-84-115	LMR11-85-006	LMR11-85-024	LMR11-85-048
		Sample Date	8/5/2011	8/5/2011	8/5/2011	8/5/2011	8/5/2011	8/5/2011	8/5/2011
		Depth Interval (in bss)	48- 72	48- 72	72- 96	96- 115	0- 6	6- 24	24- 48
Chemical Name	PEC[1]	Unit							
Aluminum	NL	mg/kg	10,600 J-	13,100	9,930 J-	12,400	15,100	18,900	18,300
Antimony	NL	mg/kg	0.24 UJ	8.1 UJ	0.28 UJ	0.38 J	0.3 UJ	0.29 UJ	0.32 UJ
Arsenic	33	mg/kg	13 J-	14.8	13.6 J-	15.7	17.8 J	20.8 J	15.4 J
Barium	NL	mg/kg	111 J-	134	107 J-	117	128	150	126
Beryllium	NL	mg/kg	0.64 J-	0.84	0.71 J-	0.89	0.81	0.94	0.95
Cadmium	4.98	mg/kg	2.6 J-	3 J	2.5 J-	2.3 J	3.6	3.8	2
Calcium	NL	mg/kg	36,200 J-	43,000	38,500 J-	34,400	43,300	37,700	70,200
Chromium	111	mg/kg	28.1 J-	32.7	27.3 J-	28.9	50	56.8	33.3
Cobalt	NL	mg/kg	7.3 J-	8.9	7.8 J-	8.4	9.5	10.6	10.7
Copper	149	mg/kg	35.6 J-	38.7	35.6 J-	34.4	51	55.7	40.9
Iron	NL	mg/kg	22,600 J-	28,400	23,700 J-	29,700	23,700	27,500	29,700
Lead	128	mg/kg	29.4 J-	35.3	27.4 J-	30.8	57 J	66.4 J	36.9 J
Magnesium	NL	mg/kg	10,900 J-	10,500	9,100 J-	8,990	11,200	10,800	17,200
Manganese	NL	mg/kg	301 J-	426	312 J-	320	469	481	598
Mercury	1.06	mg/kg	0.16 J-	0.19	0.2 J-	0.23	0.17	0.18	0.15 J
Nickel	48.6	mg/kg	21.5 J-	26.9	23.4 J-	25.4	30.9	33.4	31.7
Potassium	NL	mg/kg	1,930 J-	2,110	1,620 J-	2,130	2,730	3,360	3,830
Selenium	NL	mg/kg	1.2 J-	4.8 U	4.7 UJ	4.3 U	5 U	4.8 U	5.3 U
Silver	NL	mg/kg	0.36 J+	0.36 J	0.35 J+	0.39 J	0.045 U	0.044 U	0.049 U
Sodium	NL	mg/kg	1.4 UJ	1.6 UJ	1.6 UJ	1.5 UJ	1.7 U	1.7 U	1.8 U
Thallium	NL	mg/kg	0.16 UJ	0.19 U	0.19 UJ	0.17 U	0.2 U	0.19 U	0.21 U
Vanadium	NL	mg/kg	26.5 J-	31.8	24.9 J-	31.1	35.3	40.7	44.5
Zinc	459	mg/kg	83.7 J-	107	84.7 J-	103	142	186	128

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Table B-2
Sediment Sample Analytical Results - TAL Metals
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-85
		Field Sample ID	LMR11-85-074
		Sample Date	8/5/2011
		Depth Interval (in bss)	48- 74
Chemical Name	PEC[1]	Unit	
Aluminum	NL	mg/kg	10,500
Antimony	NL	mg/kg	0.31 UJ
Arsenic	33	mg/kg	9.8 J
Barium	NL	mg/kg	76.5
Beryllium	NL	mg/kg	0.027 U
Cadmium	4.98	mg/kg	1.4
Calcium	NL	mg/kg	55,000
Chromium	111	mg/kg	22.6
Cobalt	NL	mg/kg	7.5
Copper	149	mg/kg	24.6
Iron	NL	mg/kg	19,800
Lead	128	mg/kg	28 J
Magnesium	NL	mg/kg	15,700
Manganese	NL	mg/kg	393
Mercury	1.06	mg/kg	0.09 J
Nickel	48.6	mg/kg	20.9
Potassium	NL	mg/kg	1,940
Selenium	NL	mg/kg	5.2 U
Silver	NL	mg/kg	0.047 U
Sodium	NL	mg/kg	1.8 U
Thallium	NL	mg/kg	0.21 U
Vanadium	NL	mg/kg	27.7
Zinc	459	mg/kg	101

Notes:
Result exceeds PEC
DP - Duplicate
FS - Field split
ID - Identification
in bss - Inches below sediment surface
J - Estimated value
J+ - Estimated value, biased high
J- - Estimated value, biased low
mg/kg - milligram per kilogram
NL - Not Listed
PEC - Probable Effect Concentration
U - Not detected
[1] Consensus-based PEC values (2000)

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Table B-3
Sediment Sample Analytical Results - PCBs
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-02	LMR11-12	LMR11-15	LMR11-15	LMR11-16	LMR11-20
		Field Sample ID	LMR11-02-006	LMR11-12-006	LMR11-15-048	LMR11-15-048-DP	LMR11-16-024	LMR11-20-024
		Sample Date	8/2/2011	8/3/2011	8/9/2011	8/9/2011	8/9/2011	8/5/2011
		Depth Interval (in bss)	0- 6	0- 6	24- 48	24- 48	6- 24	6- 24
Chemical Name	**PEC[1]**	**Unit**						
AROCLOR-1016	NL	µg/kg	47 U	82 U	54 U	54 U	64 U	67 UJ
AROCLOR-1221	NL	µg/kg	47 U	82 U	54 U	54 U	64 U	67 UJ
AROCLOR-1232	NL	µg/kg	47 U	82 U	54 U	54 U	64 U	67 UJ
AROCLOR-1242	NL	µg/kg	47 U	82 U	54 U	54 U	64 U	67 UJ
AROCLOR-1248	NL	µg/kg	47 U	82 U	54 U	54 U	64 U	67 UJ
AROCLOR-1254	NL	µg/kg	47 U	82 U	54 U	54 U	64 U	67 UJ
AROCLOR-1260	NL	µg/kg	47 U	82 U	54 U	54 U	64 U	67 UJ
AROCLOR-1262	NL	µg/kg	47 U	82 U	54 U	54 U	64 U	67 UJ
AROCLOR-1268	NL	µg/kg	47 U	82 U	54 U	54 U	64 U	67 UJ
Total PCB	676	µg/kg	0 U	0 U	0 U	0 U	0 U	0 U

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Table B-3
Sediment Sample Analytical Results - PCBs
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-23	LMR11-23	LMR11-24	LMR11-25	LMR11-25	LMR11-26
		Field Sample ID	LMR11-23-006	LMR11-23-024	LMR11-24-048	LMR11-25-006	LMR11-25-048	LMR11-26-024
		Sample Date	8/11/2011	8/11/2011	8/11/2011	8/11/2011	8/11/2011	8/10/2011
		Depth Interval (in bss)	0- 6	6- 24	24- 48	0- 6	24- 48	6- 24
Chemical Name	**PEC[1]**	**Unit**						
AROCLOR-1016	NL	µg/kg	74 U	64 U	58 U	67 U	60 U	58 U
AROCLOR-1221	NL	µg/kg	74 U	64 U	58 U	67 U	60 U	58 U
AROCLOR-1232	NL	µg/kg	74 U	64 U	58 U	67 U	60 U	58 U
AROCLOR-1242	NL	µg/kg	74 U	64 U	58 U	67 U	60 U	58 U
AROCLOR-1248	NL	µg/kg	74 U	64 U	58 U	67 U	60 U	58 U
AROCLOR-1254	NL	µg/kg	74 U	64 U	58 U	67 U	60 U	58 U
AROCLOR-1260	NL	µg/kg	74 U	64 U	58 U	67 U	60 U	58 U
AROCLOR-1262	NL	µg/kg	74 U	64 U	58 U	67 U	60 U	58 U
AROCLOR-1268	NL	µg/kg	74 U	64 U	58 U	67 U	60 U	58 U
Total PCB	676	µg/kg	0 U	0 U	0 U	0 U	0 U	0 U

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Table B-3
Sediment Sample Analytical Results - PCBs
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-27	LMR11-28	LMR11-32	LMR11-32	LMR11-35	LMR11-35
		Field Sample ID	LMR11-27-048	LMR11-28-034	LMR11-32-072	LMR11-32-096	LMR11-35-006	LMR11-35-072
		Sample Date	8/11/2011	8/10/2011	8/10/2011	8/10/2011	8/10/2011	8/10/2011
		Depth Interval (in bss)	24- 48	6- 34	48- 72	72- 96	0- 6	48- 72
Chemical Name	**PEC[1]**	**Unit**						
AROCLOR-1016	NL	µg/kg	52 U	42 U	46 U	46 U	64 U	62 U
AROCLOR-1221	NL	µg/kg	52 U	42 U	46 U	46 U	64 U	62 U
AROCLOR-1232	NL	µg/kg	52 U	42 U	46 U	46 U	64 U	62 U
AROCLOR-1242	NL	µg/kg	52 U	42 U	46 U	46 U	64 U	62 U
AROCLOR-1248	NL	µg/kg	52 U	42 U	46 U	46 U	64 U	62 U
AROCLOR-1254	NL	µg/kg	52 U	42 U	46 U	46 U	64 U	62 U
AROCLOR-1260	NL	µg/kg	52 U	42 U	46 U	46 U	64 U	62 U
AROCLOR-1262	NL	µg/kg	52 U	42 U	46 U	46 U	64 U	62 U
AROCLOR-1268	NL	µg/kg	52 U	42 U	46 U	46 U	64 U	62 U
Total PCB	676	µg/kg	0 U	0 U	0 U	0 U	0 U	0 U

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Table B-3
Sediment Sample Analytical Results - PCBs
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-36	LMR11-37	LMR11-37	LMR11-40	LMR11-48	LMR11-50
		Field Sample ID	LMR11-36-006	LMR11-37-048	LMR11-37-048-DP	LMR11-40-024	LMR11-48-048	LMR11-50-006
		Sample Date	8/4/2011	8/10/2011	8/10/2011	8/10/2011	8/8/2011	8/8/2011
		Depth Interval (in bss)	0- 6	24- 48	24- 48	6- 24	24- 48	0- 6
Chemical Name	**PEC[1]**	**Unit**						
AROCLOR-1016	NL	µg/kg	52 U	60 U	61 U	42 U	60 U	73 U
AROCLOR-1221	NL	µg/kg	52 U	60 U	61 U	42 U	60 U	73 U
AROCLOR-1232	NL	µg/kg	52 U	60 U	61 U	42 U	60 U	73 U
AROCLOR-1242	NL	µg/kg	52 U	60 U	61 U	42 U	60 U	73 U
AROCLOR-1248	NL	µg/kg	52 U	60 U	61 U	42 U	60 U	73 U
AROCLOR-1254	NL	µg/kg	52 U	60 U	61 U	42 U	60 U	73 U
AROCLOR-1260	NL	µg/kg	52 U	60 U	61 U	42 U	60 U	73 U
AROCLOR-1262	NL	µg/kg	52 U	60 U	61 U	42 U	60 U	73 U
AROCLOR-1268	NL	µg/kg	52 U	60 U	61 U	42 U	60 U	73 U
Total PCB	676	µg/kg	0 U	0 U	0 U	0 U	0 U	0 U

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Table B-3
Sediment Sample Analytical Results - PCBs
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-59	LMR11-66	LMR11-70	LMR11-71	LMR11-71	LMR11-75
		Field Sample ID	LMR11-59-024	LMR11-66-024	LMR11-70-024	LMR11-71-024	LMR11-71-024FS	LMR11-75-024
		Sample Date	8/6/2011	8/7/2011	8/7/2011	8/6/2011	8/6/2011	8/5/2011
		Depth Interval (in bss)	6- 24	6- 24	6- 24	6- 24	6- 24	6- 24
Chemical Name	**PEC[1]**	**Unit**						
AROCLOR-1016	NL	µg/kg	63 U	62 UJ	72 UJ	67 UJ	67 UJ	58 UJ
AROCLOR-1221	NL	µg/kg	63 U	62 UJ	72 UJ	67 UJ	67 UJ	58 UJ
AROCLOR-1232	NL	µg/kg	63 U	62 UJ	72 UJ	67 UJ	67 UJ	58 UJ
AROCLOR-1242	NL	µg/kg	63 U	62 UJ	72 UJ	67 UJ	67 UJ	58 UJ
AROCLOR-1248	NL	µg/kg	63 U	62 UJ	72 UJ	67 UJ	67 UJ	58 UJ
AROCLOR-1254	NL	µg/kg	63 U	62 UJ	72 UJ	67 UJ	67 UJ	58 UJ
AROCLOR-1260	NL	µg/kg	63 U	62 UJ	72 UJ	67 UJ	67 UJ	58 UJ
AROCLOR-1262	NL	µg/kg	63 U	62 UJ	72 UJ	67 UJ	67 UJ	58 UJ
AROCLOR-1268	NL	µg/kg	63 U	62 UJ	72 UJ	67 UJ	67 UJ	58 UJ
Total PCB	676	µg/kg	0 U	0 U	0 U	0 U	0 U	0 U

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Table B-3
Sediment Sample Analytical Results - PCBs
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-76	LMR11-79	LMR11-79
		Field Sample ID	LMR11-76-024	LMR11-79-024	LMR11-79-024FS
		Sample Date	8/5/2011	8/4/2011	8/4/2011
		Depth Interval (in bss)	6- 24	6- 24	6- 24
Chemical Name	**PEC[1]**	**Unit**			
AROCLOR-1016	NL	µg/kg	55 U	60 U	61 U
AROCLOR-1221	NL	µg/kg	55 U	60 U	61 U
AROCLOR-1232	NL	µg/kg	55 U	60 U	61 U
AROCLOR-1242	NL	µg/kg	55 U	60 U	61 U
AROCLOR-1248	NL	µg/kg	55 U	60 U	61 U
AROCLOR-1254	NL	µg/kg	55 U	60 U	61 U
AROCLOR-1260	NL	µg/kg	55 U	60 U	61 U
AROCLOR-1262	NL	µg/kg	55 U	60 U	61 U
AROCLOR-1268	NL	µg/kg	55 U	60 U	61 U
Total PCB	676	µg/kg	0 U	0 U	0 U

Notes:

µg/kg - Microgram per kilogram
DP - Duplicate
FS - Field split
ID - Identification
in bss - Inches below sediment surface
J - Estimated value
NL - Not Listed
PCB - Polychlorinated biphenyl
PEC - Probable Effect Concentration
U - Not detected
[1] Consensus-based PEC values (2000)

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Table B-4
Sediment Sample Analytical Results - Pesticides
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-02	LMR11-12	LMR11-15	LMR11-15	LMR11-16
		Field Sample ID	LMR11-02-006	LMR11-12-006	LMR11-15-048	LMR11-15-048-DP	LMR11-16-024
		Sample Date	8/2/2011	8/3/2011	8/9/2011	8/9/2011	8/9/2011
		Depth Interval (in bss)	0- 6	0- 6	24- 48	24- 48	6- 24
Chemical Name	**PEC[1]**	**Unit**					
1,1,1-TRICHLORO-2,2-BIS (P-METHOXPHENYL)-ETHANE	NL		24 U	42 U	28 U	28 U	33 U
4,4'-DDD	28	µg/kg	4.7 U	8.2 U	5.4 U	5.4 U	6.3 U
4,4'-DDE	31.3	µg/kg	4.7 U	8.2 U	5.4 U	5.4 U	6.3 U
4,4'-DDT	62.9	µg/kg	4.7 U	8.2 U	5.4 U	5.4 U	6.3 U
ALDRIN	NL	µg/kg	2.4 U	4.2 U	2.8 U	2.8 U	3.3 U
ALPHA-BHC	NL	µg/kg	2.4 U	4.2 U	2.8 U	2.8 U	3.3 U
ALPHA-CHLORDANE	17.6	µg/kg	2.4 U	4.2 U	2.8 U	2.8 U	3.3 U
BETA-BHC	NL	µg/kg	2.4 U	4.2 U	2.8 U	2.8 U	3.3 U
CAMPHECHLOR	NL	µg/kg	240 U	420 U	280 U	280 U	330 U
DELTA-BHC	NL	µg/kg	2.4 U	4.2 U	2.8 U	2.8 U	3.3 U
DIELDRIN	61.8	µg/kg	4.7 U	8.2 U	5.4 U	5.4 U	6.3 U
ENDOSULFAN I	NL	µg/kg	2.4 U	4.2 U	2.8 U	2.8 U	3.3 U
ENDOSULFAN II	NL	µg/kg	4.7 U	8.2 U	5.4 U	5.4 U	6.3 U
ENDOSULFAN SULFATE	NL	µg/kg	4.7 U	8.2 U	5.4 U	5.4 U	6.3 U
ENDRIN	207	µg/kg	4.7 U	8.2 U	5.4 U	5.4 U	6.3 U
ENDRIN ALDEHYDE	NL	µg/kg	4.7 U	8.2 U	5.4 U	5.4 U	6.3 U
ENDRIN KETONE	NL	µg/kg	4.7 U	8.2 U	5.4 U	5.4 U	6.3 U
GAMMA-BHC (LINDANE)	4.99	µg/kg	2.4 U	4.2 U	2.8 U	2.8 U	3.3 U
GAMMA-CHLORDANE	17.6	µg/kg	12	4.2 U	2.8 U	2.8 U	3.3 U
HEPTACHLOR	NL	µg/kg	2.4 U	2.7 J	2.8 U	2.8 U	3.3 U
HEPTACHLOR EPOXIDE	16	µg/kg	2.4 U	4.2 U	2.8 U	2.8 U	3.3 U

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Table B-4
Sediment Sample Analytical Results - Pesticides
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-20	LMR11-23	LMR11-23	LMR11-24	LMR11-25
		Field Sample ID	LMR11-20-024	LMR11-23-006	LMR11-23-024	LMR11-24-048	LMR11-25-006
		Sample Date	8/5/2011	8/11/2011	8/11/2011	8/11/2011	8/11/2011
		Depth Interval (in bss)	6- 24	0- 6	6- 24	24- 48	0- 6
Chemical Name	**PEC[1]**	**Unit**					
1,1,1-TRICHLORO-2,2-BIS (P-METHOXPHENYL)-ETHANE	NL		34 UJ	38 U	33 U	30 U	34 U
4,4'-DDD	28	µg/kg	6.6 UJ	7.4 U	6.4 U	5.9 U	6.6 U
4,4'-DDE	31.3	µg/kg	6.6 UJ	7.4 U	6.4 U	5.9 U	6.6 U
4,4'-DDT	62.9	µg/kg	6.6 UJ	7.4 U	6.4 U	5.9 U	6.6 U
ALDRIN	NL	µg/kg	3.4 UJ	3.8 U	3.3 U	3 U	3.4 U
ALPHA-BHC	NL	µg/kg	3.4 UJ	3.8 U	3.3 U	3 U	3.4 U
ALPHA-CHLORDANE	17.6	µg/kg	3.4 UJ	3.8 U	3.3 U	3 U	3.4 U
BETA-BHC	NL	µg/kg	3.4 UJ	3.8 U	3.3 U	3 U	1.7 J
CAMPHECHLOR	NL	µg/kg	340 UJ	380 U	330 U	300 U	340 U
DELTA-BHC	NL	µg/kg	3.4 UJ	3.8 U	3.3 U	3 U	3.4 U
DIELDRIN	61.8	µg/kg	6.6 UJ	7.4 U	6.4 U	5.9 U	6.6 U
ENDOSULFAN I	NL	µg/kg	3.4 UJ	3.8 U	3.3 U	3 U	3.4 U
ENDOSULFAN II	NL	µg/kg	6.6 UJ	7.4 U	6.4 U	5.9 U	6.6 U
ENDOSULFAN SULFATE	NL	µg/kg	6.6 UJ	7.4 U	6.4 U	5.9 U	6.6 U
ENDRIN	207	µg/kg	6.6 UJ	7.4 U	6.4 U	5.9 U	6.6 U
ENDRIN ALDEHYDE	NL	µg/kg	6.6 UJ	7.4 U	6.4 U	5.9 U	6.6 U
ENDRIN KETONE	NL	µg/kg	6.6 UJ	7.4 U	6.4 U	5.9 U	6.6 U
GAMMA-BHC (LINDANE)	4.99	µg/kg	3.4 UJ	3.8 U	3.3 U	3 U	3.4 U
GAMMA-CHLORDANE	17.6	µg/kg	3.4 UJ	3.8 U	3.3 U	3 U	3.4 U
HEPTACHLOR	NL	µg/kg	3.4 UJ	3.8 U	3.3 U	3 U	3.4 U
HEPTACHLOR EPOXIDE	16	µg/kg	3.4 UJ	3.8 U	3.3 U	3 U	3.4 U

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Table B-4
Sediment Sample Analytical Results - Pesticides
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-25	LMR11-26	LMR11-27	LMR11-28	LMR11-32
		Field Sample ID	LMR11-25-048	LMR11-26-024	LMR11-27-048	LMR11-28-034	LMR11-32-072
		Sample Date	8/11/2011	8/10/2011	8/11/2011	8/10/2011	8/10/2011
		Depth Interval (in bss)	24- 48	6- 24	24- 48	6- 34	48- 72
Chemical Name	**PEC[1]**	**Unit**					
1,1,1-TRICHLORO-2,2-BIS (P-METHOXPHENYL)-ETHANE	NL		31 U	29 U	28 U	22 U	24 U
4,4'-DDD	28	µg/kg	5.9 U	5.7 U	5.4 U	4.2 U	4.6 U
4,4'-DDE	31.3	µg/kg	5.9 U	5.7 U	5.4 U	4.2 U	4.6 U
4,4'-DDT	62.9	µg/kg	5.9 U	5.7 U	5.4 U	4.2 U	4.6 U
ALDRIN	NL	µg/kg	3.1 U	2.9 U	2.8 U	2.2 U	2.4 U
ALPHA-BHC	NL	µg/kg	3.1 U	2.9 U	2.8 U	2.2 U	2.4 U
ALPHA-CHLORDANE	17.6	µg/kg	3.1 U	2.9 U	2.8 U	2.2 U	2.4 U
BETA-BHC	NL	µg/kg	2.6 J	2.9 U	2.8 U	2.2 U	2.4 U
CAMPHECHLOR	NL	µg/kg	310 U	290 U	280 U	220 U	240 U
DELTA-BHC	NL	µg/kg	3.1 U	2.9 U	2.8 U	2.2 U	2.4 U
DIELDRIN	61.8	µg/kg	5.9 U	5.7 U	5.4 U	4.2 U	4.6 U
ENDOSULFAN I	NL	µg/kg	3.1 U	2.9 U	2.8 U	2.2 U	2.4 U
ENDOSULFAN II	NL	µg/kg	5.9 U	5.7 U	5.4 U	4.2 U	4.6 U
ENDOSULFAN SULFATE	NL	µg/kg	5.9 U	5.7 U	5.4 U	4.2 U	4.6 U
ENDRIN	207	µg/kg	5.9 U	5.7 U	5.4 U	4.2 U	4.6 U
ENDRIN ALDEHYDE	NL	µg/kg	5.9 U	3.4 J	5.4 U	4.2 U	4.6 U
ENDRIN KETONE	NL	µg/kg	5.9 U	5.7 U	5.4 U	4.2 U	4.6 U
GAMMA-BHC (LINDANE)	4.99	µg/kg	3.1 U	2.9 U	2.8 U	2.2 U	2.4 U
GAMMA-CHLORDANE	17.6	µg/kg	3.1 U	2.9 U	2.8 U	2.2 U	2.4 U
HEPTACHLOR	NL	µg/kg	3.1 U	1.9 J	2.8 U	2.2 U	2.4 U
HEPTACHLOR EPOXIDE	16	µg/kg	3.1 U	2.9 U	2.8 U	2.2 U	2.4 U

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Table B-4
Sediment Sample Analytical Results - Pesticides
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-32	LMR11-35	LMR11-35	LMR11-36	LMR11-37
		Field Sample ID	LMR11-32-096	LMR11-35-006	LMR11-35-072	LMR11-36-006	LMR11-37-048
		Sample Date	8/10/2011	8/10/2011	8/10/2011	8/4/2011	8/10/2011
		Depth Interval (in bss)	72- 96	0- 6	48- 72	0- 6	24- 48
Chemical Name	**PEC[1]**	**Unit**					
1,1,1-TRICHLORO-2,2-BIS (P-METHOXPHENYL)-ETHANE	NL		23 U	33 U	32 U	27 U	32 U
4,4'-DDD	28	µg/kg	4.5 U	6.5 U	6.2 U	5.1 U	6.2 U
4,4'-DDE	31.3	µg/kg	4.5 U	6.5 U	6.2 U	5.1 U	6.2 U
4,4'-DDT	62.9	µg/kg	4.5 U	6.5 U	6.2 U	5.1 U	6.2 U
ALDRIN	NL	µg/kg	2.3 U	3.3 U	3.2 U	2.7 U	3.2 U
ALPHA-BHC	NL	µg/kg	2.3 U	3.3 U	3.2 U	2.7 U	3.2 U
ALPHA-CHLORDANE	17.6	µg/kg	2.3 U	3.3 U	3.2 U	2.7 U	3.2 U
BETA-BHC	NL	µg/kg	2.3 U	3.3 U	3.2 U	2.7 U	3.2 U
CAMPHECHLOR	NL	µg/kg	230 U	330 U	320 U	270 U	320 U
DELTA-BHC	NL	µg/kg	2.3 U	3.3 U	3.2 U	2.7 U	3.2 U
DIELDRIN	61.8	µg/kg	4.5 U	6.5 U	6.2 U	5.1 U	6.2 U
ENDOSULFAN I	NL	µg/kg	2.3 U	3.3 U	3.2 U	2.7 U	3.2 U
ENDOSULFAN II	NL	µg/kg	4.5 U	6.5 U	6.2 U	5.1 U	6.2 U
ENDOSULFAN SULFATE	NL	µg/kg	4.5 U	6.5 U	6.2 U	5.1 U	6.2 U
ENDRIN	207	µg/kg	4.5 U	6.5 U	6.2 U	5.1 U	6.2 U
ENDRIN ALDEHYDE	NL	µg/kg	4.5 U	6.5 U	6.2 U	5.1 U	6.2 U
ENDRIN KETONE	NL	µg/kg	4.5 U	6.5 U	6.2 U	5.1 U	6.2 U
GAMMA-BHC (LINDANE)	4.99	µg/kg	2.2 J	3.3 U	3.2 U	2.7 U	3.2 U
GAMMA-CHLORDANE	17.6	µg/kg	2.3 U	3.3 U	3.2 U	2.7 U	3.2 U
HEPTACHLOR	NL	µg/kg	2.3 U	3.3 U	3.2 U	2.7 U	3.2 U
HEPTACHLOR EPOXIDE	16	µg/kg	2.3 U	3.3 U	3.2 U	2.7 U	3.2 U

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Table B-4
Sediment Sample Analytical Results - Pesticides
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-37	LMR11-40	LMR11-48	LMR11-50	LMR11-59
		Field Sample ID	LMR11-37-048-DP	LMR11-40-024	LMR11-48-048	LMR11-50-006	LMR11-59-024
		Sample Date	8/10/2011	8/10/2011	8/8/2011	8/8/2011	8/6/2011
		Depth Interval (in bss)	24- 48	6- 24	24- 48	0- 6	6- 24
Chemical Name	**PEC[1]**	**Unit**					
1,1,1-TRICHLORO-2,2-BIS (P-METHOXPHENYL)-ETHANE	NL		31 U	21 U	31 U	38 U	32 U
4,4'-DDD	28	µg/kg	6.1 U	4.2 U	6 U	7.4 U	6.2 U
4,4'-DDE	31.3	µg/kg	6.1 U	4.2 U	6 U	7.4 U	6.2 U
4,4'-DDT	62.9	µg/kg	6.1 U	4.2 U	6 U	7.4 U	6.2 U
ALDRIN	NL	µg/kg	3.1 U	2.1 U	3.1 U	2 J	3.2 U
ALPHA-BHC	NL	µg/kg	3.1 U	2.1 U	3.1 U	3.8 U	3.2 U
ALPHA-CHLORDANE	17.6	µg/kg	3.1 U	2.1 U	3.1 U	3.8 U	3.2 U
BETA-BHC	NL	µg/kg	3.1 U	2.1 U	3.1 U	3.8 U	2.4 J
CAMPHECHLOR	NL	µg/kg	310 U	210 U	310 U	380 U	320 U
DELTA-BHC	NL	µg/kg	3.1 U	2.1 U	3.1 U	3.8 U	3.2 U
DIELDRIN	61.8	µg/kg	6.1 U	4.2 U	6 U	7.4 U	6.2 U
ENDOSULFAN I	NL	µg/kg	3.1 U	2.1 U	3.1 U	3.8 U	3.2 U
ENDOSULFAN II	NL	µg/kg	6.1 U	4.2 U	6 U	7.4 U	6.2 U
ENDOSULFAN SULFATE	NL	µg/kg	6.1 U	4.2 U	6 U	7.4 U	6.2 U
ENDRIN	207	µg/kg	6.1 U	4.2 U	6 U	7.4 U	6.2 U
ENDRIN ALDEHYDE	NL	µg/kg	6.1 U	4.2 U	6 U	7.4 U	6.2 U
ENDRIN KETONE	NL	µg/kg	6.1 U	4.2 U	6 U	7.4 U	6.2 U
GAMMA-BHC (LINDANE)	4.99	µg/kg	3.1 U	2.1 U	3.1 U	3.8 U	3.2 U
GAMMA-CHLORDANE	17.6	µg/kg	3.1 U	2.1 U	3.1 U	5.1 R	3.2 U
HEPTACHLOR	NL	µg/kg	3.1 U	2.1 U	3.1 U	3.8 U	3.2 U
HEPTACHLOR EPOXIDE	16	µg/kg	3.1 U	2.1 U	3.1 U	3.8 U	3.2 U

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Table B-4
Sediment Sample Analytical Results - Pesticides
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-66	LMR11-70	LMR11-71	LMR11-71	LMR11-75
		Field Sample ID	LMR11-66-024	LMR11-70-024	LMR11-71-024	LMR11-71-024FS	LMR11-75-024
		Sample Date	8/7/2011	8/7/2011	8/6/2011	8/6/2011	8/5/2011
		Depth Interval (in bss)	6- 24	6- 24	6- 24	6- 24	6- 24
Chemical Name	**PEC[1]**	**Unit**					
1,1,1-TRICHLORO-2,2-BIS (P-METHOXPHENYL)-ETHANE	NL		32 UJ	36 UJ	35 UJ	35 UJ	30 UJ
4,4'-DDD	28	µg/kg	6.2 UJ	7.1 UJ	6.7 UJ	6.7 UJ	5.8 UJ
4,4'-DDE	31.3	µg/kg	6.2 UJ	7.1 UJ	6.7 UJ	6.7 UJ	5.8 UJ
4,4'-DDT	62.9	µg/kg	6.2 UJ	7.1 UJ	6.7 UJ	6.7 UJ	5.8 UJ
ALDRIN	NL	µg/kg	3.2 UJ	3.6 UJ	3.5 UJ	3.5 UJ	3 UJ
ALPHA-BHC	NL	µg/kg	3.2 UJ	3.6 UJ	3.5 UJ	3.5 UJ	3 UJ
ALPHA-CHLORDANE	17.6	µg/kg	3.2 UJ	3.6 UJ	3.5 UJ	3.5 UJ	3 UJ
BETA-BHC	NL	µg/kg	1.8 J	3.6 UJ	3.5 UJ	3.5 UJ	3 UJ
CAMPHECHLOR	NL	µg/kg	320 UJ	360 UJ	350 UJ	350 UJ	300 UJ
DELTA-BHC	NL	µg/kg	3.2 UJ	3.6 UJ	3.5 UJ	3.5 UJ	3 UJ
DIELDRIN	61.8	µg/kg	6.2 UJ	7.1 UJ	6.7 UJ	6.7 UJ	5.8 UJ
ENDOSULFAN I	NL	µg/kg	3.2 UJ	3.6 UJ	3.5 UJ	3.5 UJ	3 UJ
ENDOSULFAN II	NL	µg/kg	6.2 UJ	7.1 UJ	6.7 UJ	6.7 UJ	5.8 UJ
ENDOSULFAN SULFATE	NL	µg/kg	6.2 UJ	7.1 UJ	6.7 UJ	6.7 UJ	5.8 UJ
ENDRIN	207	µg/kg	6.2 UJ	7.1 UJ	6.7 UJ	6.7 UJ	5.8 UJ
ENDRIN ALDEHYDE	NL	µg/kg	6.2 UJ	7.1 UJ	6.7 UJ	6.7 UJ	5.8 UJ
ENDRIN KETONE	NL	µg/kg	6.2 UJ	7.1 UJ	6.7 UJ	6.7 UJ	5.8 UJ
GAMMA-BHC (LINDANE)	4.99	µg/kg	3.2 UJ	3.6 UJ	3.5 UJ	3.5 UJ	3 UJ
GAMMA-CHLORDANE	17.6	µg/kg	3.2 UJ	3.6 UJ	3.5 UJ	3.5 UJ	3 UJ
HEPTACHLOR	NL	µg/kg	3.2 UJ	3.6 UJ	3.5 UJ	3.5 UJ	3 UJ
HEPTACHLOR EPOXIDE	16	µg/kg	3.2 UJ	3.6 UJ	3.5 UJ	3.5 UJ	3 UJ

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Table B-4
Sediment Sample Analytical Results - Pesticides
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-76	LMR11-79	LMR11-79
		Field Sample ID	LMR11-76-024	LMR11-79-024	LMR11-79-024FS
		Sample Date	8/5/2011	8/4/2011	8/4/2011
		Depth Interval (in bss)	6- 24	6- 24	6- 24
Chemical Name	**PEC[1]**	**Unit**			
1,1,1-TRICHLORO-2,2-BIS (P-METHOXPHENYL)-ETHANE	NL		28 U	31 U	32 U
4,4'-DDD	28	µg/kg	5.5 U	6.1 U	6.2 U
4,4'-DDE	31.3	µg/kg	5.5 U	6.1 U	6.2 U
4,4'-DDT	62.9	µg/kg	5.5 U	6.1 U	6.2 U
ALDRIN	NL	µg/kg	2.8 U	3.1 U	3.2 U
ALPHA-BHC	NL	µg/kg	2.8 U	3.1 U	3.2 U
ALPHA-CHLORDANE	17.6	µg/kg	2.8 U	3.1 U	3.2 U
BETA-BHC	NL	µg/kg	2.8 U	3.1 U	3.2 U
CAMPHECHLOR	NL	µg/kg	280 U	310 U	320 U
DELTA-BHC	NL	µg/kg	2.8 U	3.1 U	3.2 U
DIELDRIN	61.8	µg/kg	5.5 U	6.1 U	6.2 U
ENDOSULFAN I	NL	µg/kg	2.8 U	3.1 U	3.2 U
ENDOSULFAN II	NL	µg/kg	5.5 U	6.1 U	6.2 U
ENDOSULFAN SULFATE	NL	µg/kg	5.5 U	6.1 U	6.2 U
ENDRIN	207	µg/kg	5.5 U	6.1 U	6.2 U
ENDRIN ALDEHYDE	NL	µg/kg	5.5 U	6.1 U	6.2 U
ENDRIN KETONE	NL	µg/kg	5.5 U	6.1 U	6.2 U
GAMMA-BHC (LINDANE)	4.99	µg/kg	2.8 U	3.1 U	3.2 U
GAMMA-CHLORDANE	17.6	µg/kg	2.8 U	3.1 U	3.2 U
HEPTACHLOR	NL	µg/kg	2.8 U	3.1 U	3.2 U
HEPTACHLOR EPOXIDE	16	µg/kg	2.8 U	3.1 U	3.2 U

Notes:
µg/kg - Microgram per kilogram
DP - Duplicate
FS - Field split
ID - Identification
in bss - Inches below sediment surface
J - Estimated value
NL - Not Listed
PEC - Probable Effect Concentration
U - Not detected
[1] Consensus-based PEC values (2000)

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Table B-5
Sediment Sample Analytical Results - Physical Properties
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

	Location ID	LMR11-01	LMR11-01	LMR11-01	LMR11-01	LMR11-02	LMR11-03
	Field Sample ID	LMR11-01-006	LMR11-01-024	LMR11-01-048	LMR11-01-060	LMR11-02-006	LMR11-03-006
	Sample Date	8/2/2011	8/5/2011	8/5/2011	8/5/2011	8/2/2011	8/3/2011
	Depth Interval (in bss)	0- 6	6- 24	24- 48	48- 60	0- 6	0- 6
Chemical Name	**Unit**						
Grain Size							
Gravel	%	0	0	4.4	6.2	0.3	0.4
Sand	%	12.5	2.1	18.3	75.8	86.9	37.1
Silt	%	40.7	31.7	27.5	6.3	3.8	40.5
Clay	%	46.8	66.2	49.8	11.7	9.1	22
Coarse Sand	%	0	0	1.9	16.4	1	0.8
Medium Sand	%	0.4	0.2	5.2	34.8	6.1	0.6
Fine Sand	%	12.1	1.9	11.2	24.6	79.8	35.7
Sieve Size 3 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 2 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 1.5 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 1 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 0.75 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 0.375 inch - Percent Finer	% PASSED	100	100	96.5	99.3	100	100
Sieve Size #4 - Percent Finer	% PASSED	100	100	95.6	93.8	99.7	99.6
Sieve Size #10 - Percent Finer	% PASSED	100	100	93.7	77.4	98.7	98.8
Sieve Size #20 - Percent Finer	% PASSED	99.9	99.9	91.8	56.8	97.4	98.6
Sieve Size #40 - Percent Finer	% PASSED	99.6	99.8	88.5	42.6	92.6	98.2
Sieve Size #60 - Percent Finer	% PASSED	97.5	99.6	85.2	36.6	35.3	97.2
Sieve Size #80 - Percent Finer	% PASSED	95.1	99.2	81.1	24.6	15.9	94.2
Sieve Size #100 - Percent Finer	% PASSED	93.5	99	80	21.5	13.7	90.3
Sieve Size #200 - Percent Finer	% PASSED	87.5	97.9	77.3	18	12.8	62.5
Hydrometer Reading 1 - Percent Finer	% PASSED	75.9	92.1	69.7	16.2	13.5	34.2
Hydrometer Reading 2 - Percent Finer	% PASSED	70.1	86.9	64.7	15.1	12	32
Hydrometer Reading 3 - Percent Finer	% PASSED	61.3	78.3	59.8	13.6	11.3	27.6
Hydrometer Reading 4 - Percent Finer	% PASSED	54.1	74.8	54.8	12.8	10.5	25.3
Hydrometer Reading 5 - Percent Finer	% PASSED	46.8	66.2	49.8	11.7	9.1	22
Hydrometer Reading 6 - Percent Finer	% PASSED	38.1	55.6	41.6	9.8	7.6	17.6
Hydrometer Reading 7 - Percent Finer	% PASSED	26.4	43.5	33.3	7.9	5.3	14.4
TOC							
TOC	mg/kg	25,000	23,600	18,800	11,300	10,900 J	28,600

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Table B-5
Sediment Sample Analytical Results - Physical Properties
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

	Location ID	LMR11-03	LMR11-03	LMR11-03	LMR11-04	LMR11-05	LMR11-05
	Field Sample ID	LMR11-03-024	LMR11-03-048	LMR11-03-059	LMR11-04-006	LMR11-05-006	LMR11-05-018
	Sample Date	8/3/2011	8/3/2011	8/3/2011	8/3/2011	8/4/2011	8/4/2011
	Depth Interval (in bss)	6- 24	24- 48	48- 59	0- 6	0- 6	6- 18
Chemical Name	**Unit**						
Grain Size							
Gravel	%	0.5	0	0.4	1.1	5.5	0
Sand	%	12.5	7.4	32.3	84.9	34.8	12.2
Silt	%	47.5	41.2	32.9	3.6	26.2	32.6
Clay	%	39.5	51.4	34.4	10.4	33.5	55.2
Coarse Sand	%	0.5	0	0.1	1.7	4.1	0
Medium Sand	%	1.2	1.3	1.9	9.7	6.4	1.6
Fine Sand	%	10.8	6.1	30.3	73.5	24.3	10.6
Sieve Size 3 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 2 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 1.5 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 1 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 0.75 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 0.375 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size #4 - Percent Finer	% PASSED	99.5	100	99.6	98.9	94.5	100
Sieve Size #10 - Percent Finer	% PASSED	99	100	99.5	97.2	90.4	100
Sieve Size #20 - Percent Finer	% PASSED	98.8	99.3	98.8	94.4	87.1	99.3
Sieve Size #40 - Percent Finer	% PASSED	97.8	98.7	97.6	87.5	84	98.4
Sieve Size #60 - Percent Finer	% PASSED	96.7	98.3	94	32.8	79.3	97.2
Sieve Size #80 - Percent Finer	% PASSED	95.7	97.9	88.2	16.9	74	95.7
Sieve Size #100 - Percent Finer	% PASSED	94.8	97.5	83.3	15	70.2	94.4
Sieve Size #200 - Percent Finer	% PASSED	87	92.6	67.3	14	59.7	87.8
Hydrometer Reading 1 - Percent Finer	% PASSED	58.3	72.5	50.6	14.1	47.2	76.6
Hydrometer Reading 2 - Percent Finer	% PASSED	53.9	69.2	46.9	14.1	44.2	72.6
Hydrometer Reading 3 - Percent Finer	% PASSED	48.4	62.7	41.9	12.9	40.3	65.9
Hydrometer Reading 4 - Percent Finer	% PASSED	43.9	56.2	38.2	12.3	38.4	60.6
Hydrometer Reading 5 - Percent Finer	% PASSED	39.5	51.4	34.4	10.4	33.5	55.2
Hydrometer Reading 6 - Percent Finer	% PASSED	31.8	43.3	28.2	9.2	27.6	45.8
Hydrometer Reading 7 - Percent Finer	% PASSED	25.1	31.9	22	6.2	20.7	36.4
TOC							
TOC	mg/kg	33,900	46,000	36,200	18,100	16,900	18,000

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Table B-5
Sediment Sample Analytical Results - Physical Properties
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

	Location ID	LMR11-06	LMR11-06	LMR11-06	LMR11-07	LMR11-08	LMR11-08
	Field Sample ID	LMR11-06-006	LMR11-06-024	LMR11-06-052	LMR11-07-006	LMR11-08-006	LMR11-08-024
	Sample Date	8/3/2011	8/3/2011	8/3/2011	8/3/2011	8/3/2011	8/5/2011
	Depth Interval (in bss)	0- 6	6- 24	24- 52	0- 6	0- 6	6- 24
Chemical Name	**Unit**						
Grain Size							
Gravel	%	0	0	0	2.6	0	0
Sand	%	20	2.9	6.4	66.3	12.9	2.8
Silt	%	34.3	36	40.5	10.5	42.7	30.3
Clay	%	45.7	61.1	53.1	20.6	44.4	66.9
Coarse Sand	%	0	0	0	4.4	0.3	0
Medium Sand	%	2.4	0.5	0.9	23.4	1.1	0.3
Fine Sand	%	17.6	2.4	5.5	38.5	11.5	2.5
Sieve Size 3 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 2 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 1.5 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 1 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 0.75 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 0.375 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size #4 - Percent Finer	% PASSED	100	100	100	97.4	100	100
Sieve Size #10 - Percent Finer	% PASSED	100	100	100	93	99.7	100
Sieve Size #20 - Percent Finer	% PASSED	98.5	99.7	99.6	85.6	99.3	99.8
Sieve Size #40 - Percent Finer	% PASSED	97.6	99.5	99.1	69.6	98.6	99.7
Sieve Size #60 - Percent Finer	% PASSED	96	99.3	98.3	44.9	97.2	99.5
Sieve Size #80 - Percent Finer	% PASSED	93.6	99	97.3	34.4	94.8	99.1
Sieve Size #100 - Percent Finer	% PASSED	90.3	98.7	96.6	32	93	98.8
Sieve Size #200 - Percent Finer	% PASSED	80	97.1	93.6	31.1	87.1	97.2
Hydrometer Reading 1 - Percent Finer	% PASSED	70.7	89.1	77.5	28.7	66.1	93.1
Hydrometer Reading 2 - Percent Finer	% PASSED	64.4	82.9	72.6	27.5	61.3	87.9
Hydrometer Reading 3 - Percent Finer	% PASSED	58.2	76.7	66.1	25	54.2	79.1
Hydrometer Reading 4 - Percent Finer	% PASSED	55	68.9	59.6	22.5	49.2	73.9
Hydrometer Reading 5 - Percent Finer	% PASSED	45.7	61.1	53.1	20.6	44.4	66.9
Hydrometer Reading 6 - Percent Finer	% PASSED	37.8	51.7	43.3	16.9	34.9	54.4
Hydrometer Reading 7 - Percent Finer	% PASSED	30	39.2	33.6	12.6	25.3	42.2
TOC							
TOC	mg/kg	35,800	24,400	23,900	7,180	27,700	27,500

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Table B-5
Sediment Sample Analytical Results - Physical Properties
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

	Location ID	LMR11-08	LMR11-10	LMR11-10	LMR11-10	LMR11-11	LMR11-11
	Field Sample ID	LMR11-08-052	LMR11-10-006	LMR11-10-024	LMR11-10-045	LMR11-11-006	LMR11-11-024
	Sample Date	8/5/2011	8/4/2011	8/4/2011	8/4/2011	8/5/2011	8/5/2011
	Depth Interval (in bss)	24- 52	0- 6	6- 24	24- 45	0- 6	6- 24
Chemical Name	**Unit**						
Grain Size							
Gravel	%	0	0	4.1	0.6	NA	0
Sand	%	4	89.3	55	64.7	NA	68.5
Silt	%	25.8	4.6	16.6	17.2	NA	16.9
Clay	%	70.2	6.2	24.3	17.5	NA	14.6
Coarse Sand	%	0	0	1.1	1.2	NA	0.8
Medium Sand	%	0.2	3.3	7.9	16	NA	2.9
Fine Sand	%	3.8	86	46	47.5	NA	64.8
Sieve Size 3 inch - Percent Finer	% PASSED	100	100	100	100	NA	100
Sieve Size 2 inch - Percent Finer	% PASSED	100	100	100	100	NA	100
Sieve Size 1.5 inch - Percent Finer	% PASSED	100	100	100	100	NA	100
Sieve Size 1 inch - Percent Finer	% PASSED	100	100	100	100	NA	100
Sieve Size 0.75 inch - Percent Finer	% PASSED	100	100	100	100	NA	100
Sieve Size 0.375 inch - Percent Finer	% PASSED	100	100	95.9	100	NA	100
Sieve Size #4 - Percent Finer	% PASSED	100	100	95.9	99.4	NA	100
Sieve Size #10 - Percent Finer	% PASSED	100	100	94.8	98.2	NA	99.2
Sieve Size #20 - Percent Finer	% PASSED	99.9	99.3	92.7	94.2	NA	97.9
Sieve Size #40 - Percent Finer	% PASSED	99.8	96.7	86.9	82.2	NA	96.3
Sieve Size #60 - Percent Finer	% PASSED	99.4	84.5	74.3	64	NA	91.8
Sieve Size #80 - Percent Finer	% PASSED	98.4	63	63.4	53.9	NA	83
Sieve Size #100 - Percent Finer	% PASSED	98	44.6	55.7	48	NA	69.6
Sieve Size #200 - Percent Finer	% PASSED	96	10.7	40.9	34.7	NA	31.5
Hydrometer Reading 1 - Percent Finer	% PASSED	92.8	9	35	27.5	NA	22.3
Hydrometer Reading 2 - Percent Finer	% PASSED	87.1	8.5	33.2	24.9	NA	20.9
Hydrometer Reading 3 - Percent Finer	% PASSED	81.5	8	29.6	21.5	NA	18.8
Hydrometer Reading 4 - Percent Finer	% PASSED	75.9	7.6	26.9	18.8	NA	16.7
Hydrometer Reading 5 - Percent Finer	% PASSED	70.2	6.2	24.3	17.5	NA	14.6
Hydrometer Reading 6 - Percent Finer	% PASSED	56.7	5.1	20.7	14.2	NA	11
Hydrometer Reading 7 - Percent Finer	% PASSED	45.4	4.3	15.3	10.8	NA	8.2
TOC							
TOC	mg/kg	22,200	9,830	11,300	16,100	9,010	19,200

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Table B-5
Sediment Sample Analytical Results - Physical Properties
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

	Location ID	LMR11-11	LMR11-12	LMR11-13	LMR11-13	LMR11-14	LMR11-14
	Field Sample ID	LMR11-11-037	LMR11-12-006	LMR11-13-006	LMR11-13-026	LMR11-14-006	LMR11-14-024
	Sample Date	8/5/2011	8/3/2011	8/3/2011	8/3/2011	8/5/2011	8/5/2011
	Depth Interval (in bss)	24- 37	0- 6	0- 6	6- 26	0- 6	6- 24
Chemical Name	**Unit**						
Grain Size							
Gravel	%	0.7	0	0.9	0	0	0
Sand	%	81	27.6	14.8	26.3	78.7	40.4
Silt	%	11.2	33.6	43	36.3	17.2	32.3
Clay	%	7.1	38.8	41.3	37.4	4.1	27.3
Coarse Sand	%	1.1	1	0.1	0	0	0
Medium Sand	%	6.4	8.7	1.7	1.8	1	2.6
Fine Sand	%	73.5	17.9	13	24.5	77.7	37.8
Sieve Size 3 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 2 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 1.5 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 1 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 0.75 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 0.375 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size #4 - Percent Finer	% PASSED	99.3	100	99.1	100	100	100
Sieve Size #10 - Percent Finer	% PASSED	98.2	99	99	100	100	100
Sieve Size #20 - Percent Finer	% PASSED	95.8	96	98.5	99.6	99.7	99.3
Sieve Size #40 - Percent Finer	% PASSED	91.8	90.3	97.3	98.2	99	97.4
Sieve Size #60 - Percent Finer	% PASSED	80.5	84.8	94.6	94.6	97.2	90
Sieve Size #80 - Percent Finer	% PASSED	64.5	73.6	92.6	87.6	86.8	81
Sieve Size #100 - Percent Finer	% PASSED	47.7	73.1	91.2	84.8	67.1	74.4
Sieve Size #200 - Percent Finer	% PASSED	18.3	72.4	84.3	73.7	21.3	59.6
Hydrometer Reading 1 - Percent Finer	% PASSED	13.1	59.6	71.6	59.3	9.2	44.4
Hydrometer Reading 2 - Percent Finer	% PASSED	11.1	55	64.3	54.7	7.7	39.7
Hydrometer Reading 3 - Percent Finer	% PASSED	9.7	46.9	54.6	47.8	7	36.6
Hydrometer Reading 4 - Percent Finer	% PASSED	9.1	41.1	46.2	42	5.6	32
Hydrometer Reading 5 - Percent Finer	% PASSED	7.1	38.8	41.3	37.4	4.1	27.3
Hydrometer Reading 6 - Percent Finer	% PASSED	5.1	29.6	31.6	28.1	2.7	21.1
Hydrometer Reading 7 - Percent Finer	% PASSED	3.8	21.5	23.2	21.3	1.2	15
TOC							
TOC	mg/kg	13,800	34,400	24,200	19,400	11,400	18,500

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Table B-5
Sediment Sample Analytical Results - Physical Properties
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

	Location ID	LMR11-14	LMR11-15	LMR11-15	LMR11-15	LMR11-15	LMR11-15
	Field Sample ID	LMR11-14-045	LMR11-15-006	LMR11-15-006-DP	LMR11-15-024	LMR11-15-024-DP	LMR11-15-048
	Sample Date	8/5/2011	8/9/2011	8/9/2011	8/9/2011	8/9/2011	8/9/2011
	Depth Interval (in bss)	24- 45	0- 6	0- 6	6- 24	6- 24	24- 48
Chemical Name	**Unit**						
Grain Size							
Gravel	%	0	0.8	NA	0	NA	0
Sand	%	21.9	26.7	NA	25.1	NA	22.5
Silt	%	46.1	31.7	NA	21.4	NA	34.5
Clay	%	32	40.8	NA	53.5	NA	43
Coarse Sand	%	0	0.6	NA	1.1	NA	0
Medium Sand	%	2.2	3	NA	6.6	NA	2.6
Fine Sand	%	19.7	23.1	NA	17.4	NA	19.9
Sieve Size 3 inch - Percent Finer	% PASSED	100	100	NA	100	NA	100
Sieve Size 2 inch - Percent Finer	% PASSED	100	100	NA	100	NA	100
Sieve Size 1.5 inch - Percent Finer	% PASSED	100	100	NA	100	NA	100
Sieve Size 1 inch - Percent Finer	% PASSED	100	100	NA	100	NA	100
Sieve Size 0.75 inch - Percent Finer	% PASSED	100	100	NA	100	NA	100
Sieve Size 0.375 inch - Percent Finer	% PASSED	100	100	NA	100	NA	100
Sieve Size #4 - Percent Finer	% PASSED	100	99.2	NA	100	NA	100
Sieve Size #10 - Percent Finer	% PASSED	100	98.6	NA	98.9	NA	100
Sieve Size #20 - Percent Finer	% PASSED	99.6	98	NA	97.4	NA	99.4
Sieve Size #40 - Percent Finer	% PASSED	97.8	95.6	NA	92.3	NA	97.4
Sieve Size #60 - Percent Finer	% PASSED	95	91.2	NA	86.1	NA	93.1
Sieve Size #80 - Percent Finer	% PASSED	92.6	77.6	NA	77.2	NA	85.1
Sieve Size #100 - Percent Finer	% PASSED	89.9	75.5	NA	76.2	NA	83.3
Sieve Size #200 - Percent Finer	% PASSED	78.1	72.5	NA	74.9	NA	77.5
Hydrometer Reading 1 - Percent Finer	% PASSED	53.7	55.6	NA	74.5	NA	66.5
Hydrometer Reading 2 - Percent Finer	% PASSED	48.3	52.6	NA	71	NA	63.1
Hydrometer Reading 3 - Percent Finer	% PASSED	40.2	49.7	NA	65.8	NA	56.4
Hydrometer Reading 4 - Percent Finer	% PASSED	36.1	45.2	NA	60.5	NA	49.7
Hydrometer Reading 5 - Percent Finer	% PASSED	32	40.8	NA	53.5	NA	43
Hydrometer Reading 6 - Percent Finer	% PASSED	23.9	31.9	NA	44.8	NA	34.6
Hydrometer Reading 7 - Percent Finer	% PASSED	17.2	24.5	NA	36	NA	27.9
TOC							
TOC	mg/kg	25,800	15,000 J	32,500 J	24,600 J	14,200 J	26,000

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Table B-5
Sediment Sample Analytical Results - Physical Properties
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

	Location ID	LMR11-15	LMR11-15	LMR11-15	LMR11-16	LMR11-16	LMR11-16
	Field Sample ID	LMR11-15-048-DP	LMR11-15-072	LMR11-15-104	LMR11-16-006	LMR11-16-024	LMR11-16-048
	Sample Date	8/9/2011	8/9/2011	8/9/2011	8/9/2011	8/9/2011	8/9/2011
	Depth Interval (in bss)	24- 48	48- 72	72- 104	0- 6	6- 24	24- 48
Chemical Name	**Unit**						
Grain Size							
Gravel	%	NA	0	0	0	0	0.1
Sand	%	NA	4.4	15.5	2.4	0.6	10.1
Silt	%	NA	59.8	46	32.8	30.6	33.2
Clay	%	NA	35.8	38.5	64.8	68.8	56.6
Coarse Sand	%	NA	0	0	0	0	0.4
Medium Sand	%	NA	0.1	0.3	0.5	0.1	1.3
Fine Sand	%	NA	4.3	15.2	1.9	0.5	8.4
Sieve Size 3 inch - Percent Finer	% PASSED	NA	100	100	100	100	100
Sieve Size 2 inch - Percent Finer	% PASSED	NA	100	100	100	100	100
Sieve Size 1.5 inch - Percent Finer	% PASSED	NA	100	100	100	100	100
Sieve Size 1 inch - Percent Finer	% PASSED	NA	100	100	100	100	100
Sieve Size 0.75 inch - Percent Finer	% PASSED	NA	100	100	100	100	100
Sieve Size 0.375 inch - Percent Finer	% PASSED	NA	100	100	100	100	100
Sieve Size #4 - Percent Finer	% PASSED	NA	100	100	100	100	99.9
Sieve Size #10 - Percent Finer	% PASSED	NA	100	100	100	100	99.5
Sieve Size #20 - Percent Finer	% PASSED	NA	100	99.9	99.7	99.9	99
Sieve Size #40 - Percent Finer	% PASSED	NA	99.9	99.7	99.5	99.9	98.2
Sieve Size #60 - Percent Finer	% PASSED	NA	99.7	99.5	99.4	99.9	97.2
Sieve Size #80 - Percent Finer	% PASSED	NA	99.2	98.5	99	99.9	94.4
Sieve Size #100 - Percent Finer	% PASSED	NA	99	97.4	98.7	99.8	92.9
Sieve Size #200 - Percent Finer	% PASSED	NA	95.6	84.5	97.6	99.4	89.8
Hydrometer Reading 1 - Percent Finer	% PASSED	NA	69	68.8	85.9	93.7	74.5
Hydrometer Reading 2 - Percent Finer	% PASSED	NA	61.1	59.7	83.6	91.2	72.7
Hydrometer Reading 3 - Percent Finer	% PASSED	NA	48.4	50.6	78.9	83.8	67.4
Hydrometer Reading 4 - Percent Finer	% PASSED	NA	40.5	44.5	71.8	76.3	60.2
Hydrometer Reading 5 - Percent Finer	% PASSED	NA	35.8	38.5	64.8	68.8	56.6
Hydrometer Reading 6 - Percent Finer	% PASSED	NA	26.3	29.3	53	56.3	47.7
Hydrometer Reading 7 - Percent Finer	% PASSED	NA	21.5	21.8	41.3	43.9	36.9
TOC							
TOC	mg/kg	22,600	27,300	44,200	27,800	28,400	21,900

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Table B-5
Sediment Sample Analytical Results - Physical Properties
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

	Location ID	LMR11-16	LMR11-17	LMR11-17	LMR11-18	LMR11-18	LMR11-18
	Field Sample ID	LMR11-16-072	LMR11-17-006	LMR11-17-021	LMR11-18-006	LMR11-18-024	LMR11-18-048
	Sample Date	8/9/2011	8/4/2011	8/4/2011	8/3/2011	8/5/2011	8/5/2011
	Depth Interval (in bss)	48- 72	0- 6	6- 21	0- 6	6- 24	24- 48
Chemical Name	**Unit**						
Grain Size							
Gravel	%	4.2	0.2	21.8	2	0	0
Sand	%	36.3	95	61.3	54.9	48.7	30.5
Silt	%	42.8	2.7	12.6	21.9	29.4	40.2
Clay	%	16.7	2.2	4.3	21.2	21.9	29.3
Coarse Sand	%	1.4	2.8	5.1	3.8	0	0
Medium Sand	%	5.2	32.8	21.6	0.6	1.9	1.5
Fine Sand	%	29.7	59.4	34.6	50.5	46.8	29
Sieve Size 3 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 2 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 1.5 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 1 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 0.75 inch - Percent Finer	% PASSED	100	100	87.9	100	100	100
Sieve Size 0.375 inch - Percent Finer	% PASSED	96.5	100	84	100	100	100
Sieve Size #4 - Percent Finer	% PASSED	95.8	99.8	78.2	98	100	100
Sieve Size #10 - Percent Finer	% PASSED	94.4	97	73.1	94.2	100	100
Sieve Size #20 - Percent Finer	% PASSED	93.1	89.2	66.1	94	99.3	99.1
Sieve Size #40 - Percent Finer	% PASSED	89.2	64.2	51.5	93.6	98.1	98.5
Sieve Size #60 - Percent Finer	% PASSED	86.4	29.2	34.9	91.7	92.3	97
Sieve Size #80 - Percent Finer	% PASSED	79.7	6.9	22.6	83.3	81.5	91
Sieve Size #100 - Percent Finer	% PASSED	74.3	5.7	20.6	70.5	73.1	85.1
Sieve Size #200 - Percent Finer	% PASSED	59.5	4.9	16.9	43.1	51.3	69.5
Hydrometer Reading 1 - Percent Finer	% PASSED	33.9	2.9	7.8	29.6	33.4	49.9
Hydrometer Reading 2 - Percent Finer	% PASSED	30.9	2.9	7.1	27	30.5	44.3
Hydrometer Reading 3 - Percent Finer	% PASSED	22.8	2.9	6.4	24.5	26.7	38.7
Hydrometer Reading 4 - Percent Finer	% PASSED	19.8	2.9	5.7	22.9	23.8	33.1
Hydrometer Reading 5 - Percent Finer	% PASSED	16.7	2.2	4.3	21.2	21.9	29.3
Hydrometer Reading 6 - Percent Finer	% PASSED	13.7	1.7	3.6	16.9	17	21.8
Hydrometer Reading 7 - Percent Finer	% PASSED	11.7	1.7	2.9	14.4	12.2	18.1
TOC							
TOC	mg/kg	116,000	20,400	5,510	33,100	19,000	53,600 J

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Table B-5
Sediment Sample Analytical Results - Physical Properties
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

	Location ID	LMR11-19	LMR11-19	LMR11-20	LMR11-20	LMR11-20	LMR11-20
	Field Sample ID	LMR11-19-006	LMR11-19-014	LMR11-20-006	LMR11-20-006FS	LMR11-20-024	LMR11-20-048
	Sample Date	8/3/2011	8/3/2011	8/2/2011	8/2/2011	8/5/2011	8/5/2011
	Depth Interval (in bss)	0- 6	6- 14	0- 6	0- 6	6- 24	24- 48
Chemical Name	**Unit**						
Grain Size							
Gravel	%	0.9	66.1	0	0	0	0
Sand	%	69.7	23.5	4.5	4.9	1.5	1.9
Silt	%	5.9	6.5	27.9	33.7	38.9	36.1
Clay	%	23.5	3.9	67.6	61.4	59.6	62
Coarse Sand	%	0.9	1.2	0	0	0	0
Medium Sand	%	13.2	3.4	0.4	0.6	0.2	0.4
Fine Sand	%	55.6	18.9	4.1	4.3	1.3	1.5
Sieve Size 3 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 2 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 1.5 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 1 inch - Percent Finer	% PASSED	100	74.2	100	100	100	100
Sieve Size 0.75 inch - Percent Finer	% PASSED	100	61.7	100	100	100	100
Sieve Size 0.375 inch - Percent Finer	% PASSED	100	36.7	100	100	100	100
Sieve Size #4 - Percent Finer	% PASSED	99.1	33.9	100	100	100	100
Sieve Size #10 - Percent Finer	% PASSED	98.2	32.7	100	100	100	100
Sieve Size #20 - Percent Finer	% PASSED	95	31.5	99.9	99.8	100	100
Sieve Size #40 - Percent Finer	% PASSED	85	29.3	99.6	99.4	99.8	99.6
Sieve Size #60 - Percent Finer	% PASSED	62.8	22.4	98	97.8	99.6	99.3
Sieve Size #80 - Percent Finer	% PASSED	31.5	17.4	97.1	96.8	99.4	99.1
Sieve Size #100 - Percent Finer	% PASSED	30.1	14.7	96.7	96.5	99.2	98.8
Sieve Size #200 - Percent Finer	% PASSED	29.4	10.4	95.5	95.1	98.5	98.1
Hydrometer Reading 1 - Percent Finer	% PASSED	33.5	5.9	95.1	88	84	85
Hydrometer Reading 2 - Percent Finer	% PASSED	32.6	5.9	89	82.7	80.2	80.9
Hydrometer Reading 3 - Percent Finer	% PASSED	29	4.9	79.8	73.3	72.7	74.6
Hydrometer Reading 4 - Percent Finer	% PASSED	25.3	4.2	73.7	66.7	65.2	66.2
Hydrometer Reading 5 - Percent Finer	% PASSED	23.5	3.9	67.6	61.4	59.6	62
Hydrometer Reading 6 - Percent Finer	% PASSED	19.8	2.9	53.8	50.7	48.3	49.5
Hydrometer Reading 7 - Percent Finer	% PASSED	14.3	2.2	40	36.1	33.2	34.9
TOC							
TOC	mg/kg	26,800	10,500	23,100	19,600	23,800	22,100

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Table B-5
Sediment Sample Analytical Results - Physical Properties
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

	Location ID	LMR11-20	LMR11-21	LMR11-22	LMR11-23	LMR11-23	LMR11-23
	Field Sample ID	LMR11-20-060	LMR11-21-006	LMR11-22-006	LMR11-23-006	LMR11-23-024	LMR11-23-048
	Sample Date	8/5/2011	8/3/2011	8/4/2011	8/11/2011	8/11/2011	8/11/2011
	Depth Interval (in bss)	48- 60	0- 6	0- 6	0- 6	6- 24	24- 48
Chemical Name	**Unit**						
Grain Size							
Gravel	%	0.5	0.4	1	0	0	0
Sand	%	34.8	50.1	51.2	2.5	1	1.1
Silt	%	39.7	21.6	15.7	36.8	39.8	35.7
Clay	%	25	27.9	32.1	60.7	59.2	63.2
Coarse Sand	%	0	0.2	4	0	0	0
Medium Sand	%	2.4	1.5	16.1	0.3	0.1	0
Fine Sand	%	32.4	48.4	31.1	2.2	0.9	1.1
Sieve Size 3 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 2 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 1.5 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 1 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 0.75 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 0.375 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size #4 - Percent Finer	% PASSED	99.5	99.6	99	100	100	100
Sieve Size #10 - Percent Finer	% PASSED	99.5	99.4	95	100	100	100
Sieve Size #20 - Percent Finer	% PASSED	99	98.9	89.4	99.9	99.9	100
Sieve Size #40 - Percent Finer	% PASSED	97.1	97.9	78.9	99.7	99.9	100
Sieve Size #60 - Percent Finer	% PASSED	89.7	95.9	55.7	99.2	99.8	100
Sieve Size #80 - Percent Finer	% PASSED	82.8	73.7	49.9	99	99.8	100
Sieve Size #100 - Percent Finer	% PASSED	78.6	63.3	48.7	98.9	99.8	99.9
Sieve Size #200 - Percent Finer	% PASSED	64.7	49.5	47.8	97.5	99	98.9
Hydrometer Reading 1 - Percent Finer	% PASSED	47.4	42	47.3	92.7	89	91.9
Hydrometer Reading 2 - Percent Finer	% PASSED	41	39	44.1	85.9	82	87.5
Hydrometer Reading 3 - Percent Finer	% PASSED	34.6	33.9	39.4	76.8	73.2	78.7
Hydrometer Reading 4 - Percent Finer	% PASSED	29.8	30.9	35.2	69.8	66.2	69.9
Hydrometer Reading 5 - Percent Finer	% PASSED	25	27.9	32.1	60.7	59.2	63.2
Hydrometer Reading 6 - Percent Finer	% PASSED	18.6	23.8	26.4	49.3	48.6	52.2
Hydrometer Reading 7 - Percent Finer	% PASSED	12.2	17.8	20	37.9	36.3	39
TOC							
TOC	mg/kg	12,700	21,400	25,300	24,300	22,900	23,500

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Table B-5
Sediment Sample Analytical Results - Physical Properties
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

	Location ID	LMR11-23	LMR11-23	LMR11-23	LMR11-24	LMR11-24	LMR11-24
	Field Sample ID	LMR11-23-072	LMR11-23-096	LMR11-23-115	LMR11-24-006	LMR11-24-024	LMR11-24-048
	Sample Date	8/11/2011	8/11/2011	8/11/2011	8/4/2011	8/11/2011	8/11/2011
	Depth Interval (in bss)	48- 72	72- 96	96- 115	0- 6	6- 24	24- 48
Chemical Name	**Unit**						
Grain Size							
Gravel	%	0	0	0.8	0.1	0	0
Sand	%	6.3	7.6	41.5	83.6	38	17.3
Silt	%	39.3	34.4	42.4	5.6	20.7	27
Clay	%	54.4	58	15.3	10.7	41.3	55.7
Coarse Sand	%	0	0	0.4	0.6	0.4	0.1
Medium Sand	%	0.2	0.4	5.2	7.9	2.1	0.5
Fine Sand	%	6.1	7.2	35.9	75.1	35.5	16.7
Sieve Size 3 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 2 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 1.5 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 1 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 0.75 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 0.375 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size #4 - Percent Finer	% PASSED	100	100	99.2	99.9	100	100
Sieve Size #10 - Percent Finer	% PASSED	100	100	98.8	99.3	99.6	99.9
Sieve Size #20 - Percent Finer	% PASSED	99.9	99.9	97.7	97.9	99.1	99.8
Sieve Size #40 - Percent Finer	% PASSED	99.8	99.6	93.6	91.4	97.5	99.4
Sieve Size #60 - Percent Finer	% PASSED	99.7	97.4	86.4	52.4	87.6	95.5
Sieve Size #80 - Percent Finer	% PASSED	99.5	95	83.3	22.9	73.5	89.4
Sieve Size #100 - Percent Finer	% PASSED	99.1	94.5	80.5	18.2	68.1	86.6
Sieve Size #200 - Percent Finer	% PASSED	93.7	92.4	57.7	16.3	62	82.7
Hydrometer Reading 1 - Percent Finer	% PASSED	81.1	82	31.1	15.1	59.4	80.5
Hydrometer Reading 2 - Percent Finer	% PASSED	76.1	77.6	25.9	14.4	55.8	76.3
Hydrometer Reading 3 - Percent Finer	% PASSED	69.4	73.3	22.4	12.9	49.8	68.1
Hydrometer Reading 4 - Percent Finer	% PASSED	61.1	64.6	18.9	11.4	46.2	61.2
Hydrometer Reading 5 - Percent Finer	% PASSED	54.4	58	15.3	10.7	41.3	55.7
Hydrometer Reading 6 - Percent Finer	% PASSED	44.4	47.2	11.8	9.1	33.9	45.8
Hydrometer Reading 7 - Percent Finer	% PASSED	32.8	36.3	9.3	6.9	26.7	34.7
TOC							
TOC	mg/kg	24,800	18,300	13,400	16,200	14,100	22,600

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Table B-5
Sediment Sample Analytical Results - Physical Properties
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

	Location ID	LMR11-24	LMR11-24	LMR11-25	LMR11-25	LMR11-25	LMR11-25
	Field Sample ID	LMR11-24-072	LMR11-24-096	LMR11-25-006	LMR11-25-024	LMR11-25-048	LMR11-25-072
	Sample Date	8/11/2011	8/11/2011	8/11/2011	8/11/2011	8/11/2011	8/11/2011
	Depth Interval (in bss)	48- 72	72- 96	0- 6	6- 24	24- 48	48- 72
Chemical Name	**Unit**						
Grain Size							
Gravel	%	0	0	0	0	0	0
Sand	%	10.2	3.1	2	0.3	4.8	5.4
Silt	%	38.9	37.3	26	31.5	31.8	34.5
Clay	%	50.9	59.6	72	68.2	63.4	60.1
Coarse Sand	%	0	0	0.2	0	0	0
Medium Sand	%	0.5	0.5	0.1	0	0	0.2
Fine Sand	%	9.7	2.6	1.7	0.3	4.8	5.2
Sieve Size 3 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 2 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 1.5 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 1 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 0.75 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 0.375 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size #4 - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size #10 - Percent Finer	% PASSED	100	100	99.8	100	100	100
Sieve Size #20 - Percent Finer	% PASSED	99.9	99.9	99.8	100	100	99.9
Sieve Size #40 - Percent Finer	% PASSED	99.5	99.5	99.7	100	100	99.8
Sieve Size #60 - Percent Finer	% PASSED	98.8	99	99.5	100	100	99.5
Sieve Size #80 - Percent Finer	% PASSED	97.2	98.5	99.5	100	99.8	98.2
Sieve Size #100 - Percent Finer	% PASSED	95.9	98.3	99.4	100	99.3	97.1
Sieve Size #200 - Percent Finer	% PASSED	89.8	96.9	98	99.7	95.2	94.6
Hydrometer Reading 1 - Percent Finer	% PASSED	79	88.3	96.6	93.4	90.2	81
Hydrometer Reading 2 - Percent Finer	% PASSED	73.1	83.2	91.7	89.5	84.4	77.2
Hydrometer Reading 3 - Percent Finer	% PASSED	62.7	74.8	86.8	81.8	76.8	71.5
Hydrometer Reading 4 - Percent Finer	% PASSED	56.8	68	76.9	76	69.1	65.8
Hydrometer Reading 5 - Percent Finer	% PASSED	50.9	59.6	72	68.2	63.4	60.1
Hydrometer Reading 6 - Percent Finer	% PASSED	41.7	49.2	61.8	60.5	55.8	46.8
Hydrometer Reading 7 - Percent Finer	% PASSED	29.9	37.4	47.1	44.9	42.4	35.4
TOC							
TOC	mg/kg	31,100	27,100	23,100	21,300	22,800	19,800

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Table B-5
Sediment Sample Analytical Results - Physical Properties
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

	Location ID	LMR11-25	LMR11-26	LMR11-26	LMR11-26	LMR11-26	LMR11-26
	Field Sample ID	LMR11-25-096	LMR11-26-006	LMR11-26-024	LMR11-26-048	LMR11-26-072	LMR11-26-096
	Sample Date	8/11/2011	8/10/2011	8/10/2011	8/10/2011	8/10/2011	8/10/2011
	Depth Interval (in bss)	72- 96	0- 6	6- 24	24- 48	48- 72	72- 96
Chemical Name	**Unit**						
Grain Size							
Gravel	%	0	0.3	0	0	0	0
Sand	%	20.7	19.7	5.2	2.7	3.3	28.1
Silt	%	44.2	34.1	38	29.9	38.8	38.2
Clay	%	35.1	45.9	56.8	67.4	57.9	33.7
Coarse Sand	%	0	0	0	0	0	0
Medium Sand	%	0.6	2.5	0.5	0.3	0.3	0.9
Fine Sand	%	20.1	17.2	4.7	2.4	3	27.2
Sieve Size 3 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 2 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 1.5 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 1 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 0.75 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 0.375 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size #4 - Percent Finer	% PASSED	100	99.7	100	100	100	100
Sieve Size #10 - Percent Finer	% PASSED	100	99.7	100	100	100	100
Sieve Size #20 - Percent Finer	% PASSED	99.6	98.7	99.8	99.9	99.9	99.6
Sieve Size #40 - Percent Finer	% PASSED	99.4	97.2	99.5	99.7	99.7	99.1
Sieve Size #60 - Percent Finer	% PASSED	98.9	93.7	99.1	99.3	99.5	98.1
Sieve Size #80 - Percent Finer	% PASSED	97.4	91.6	98.6	99	99.3	95.4
Sieve Size #100 - Percent Finer	% PASSED	95.4	89.7	98.1	98.8	99.2	91.6
Sieve Size #200 - Percent Finer	% PASSED	79.3	80	94.8	97.3	96.7	71.9
Hydrometer Reading 1 - Percent Finer	% PASSED	57.9	70.7	83.9	95.9	88.8	58.4
Hydrometer Reading 2 - Percent Finer	% PASSED	52.2	64.5	80.7	89.6	83.7	51.5
Hydrometer Reading 3 - Percent Finer	% PASSED	45.1	56.7	71.2	80.1	73.4	44.7
Hydrometer Reading 4 - Percent Finer	% PASSED	39.4	52.1	63.2	76.9	66.5	39.2
Hydrometer Reading 5 - Percent Finer	% PASSED	35.1	45.9	56.8	67.4	57.9	33.7
Hydrometer Reading 6 - Percent Finer	% PASSED	28	38.2	45.7	56.4	47.6	25.5
Hydrometer Reading 7 - Percent Finer	% PASSED	19.5	28.9	34.5	42.2	35.5	18.7
TOC							
TOC	mg/kg	28,100	23,300 J	22,800	23,300	23,100	24,100

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Table B-5
Sediment Sample Analytical Results - Physical Properties
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

	Location ID	LMR11-26	LMR11-27	LMR11-27	LMR11-27	LMR11-27	LMR11-27
	Field Sample ID	LMR11-26-117	LMR11-27-006	LMR11-27-024	LMR11-27-048	LMR11-27-072	LMR11-27-096
	Sample Date	8/10/2011	8/4/2011	8/11/2011	8/11/2011	8/11/2011	8/11/2011
	Depth Interval (in bss)	96- 117	0- 6	6- 24	24- 48	48- 72	72- 96
Chemical Name	**Unit**						
Grain Size							
Gravel	%	0	0.2	0.7	0	0	0
Sand	%	47.5	67.5	17.6	25.8	28	42.9
Silt	%	33.4	14.5	27.7	29.8	21.5	29.6
Clay	%	19.1	17.8	54	44.4	50.5	27.5
Coarse Sand	%	0	1.2	1.1	0.2	0	0.1
Medium Sand	%	0.9	6.9	2.4	1.5	2.2	0.8
Fine Sand	%	46.6	59.4	14.1	24.1	25.8	42
Sieve Size 3 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 2 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 1.5 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 1 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 0.75 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 0.375 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size #4 - Percent Finer	% PASSED	100	99.8	99.3	100	100	100
Sieve Size #10 - Percent Finer	% PASSED	100	98.6	98.2	99.8	100	99.9
Sieve Size #20 - Percent Finer	% PASSED	99.9	97	97.4	99.1	99.6	99.5
Sieve Size #40 - Percent Finer	% PASSED	99.1	91.7	95.8	98.3	97.8	99.1
Sieve Size #60 - Percent Finer	% PASSED	96.3	56.7	92.9	92.9	91.9	94
Sieve Size #80 - Percent Finer	% PASSED	89.9	35.4	84.8	84	79.3	82.6
Sieve Size #100 - Percent Finer	% PASSED	82.6	33.3	84.1	80.9	76.5	73.6
Sieve Size #200 - Percent Finer	% PASSED	52.5	32.3	81.7	74.2	72	57.1
Hydrometer Reading 1 - Percent Finer	% PASSED	35.4	26.5	75.4	64.9	71.2	42.1
Hydrometer Reading 2 - Percent Finer	% PASSED	31.1	24.6	70.8	60.8	66.4	39.5
Hydrometer Reading 3 - Percent Finer	% PASSED	25.6	22.2	64.6	55.3	61.6	35.5
Hydrometer Reading 4 - Percent Finer	% PASSED	22.3	19.7	58.6	48.5	56.8	32.9
Hydrometer Reading 5 - Percent Finer	% PASSED	19.1	17.8	54	44.4	50.5	27.5
Hydrometer Reading 6 - Percent Finer	% PASSED	13.6	15.8	41.8	34.8	40.8	22.1
Hydrometer Reading 7 - Percent Finer	% PASSED	9.4	11.6	31.2	25.3	29.6	15.4
TOC							
TOC	mg/kg	19,400	11,400	21,500	22,600	25,500	26,100

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Table B-5
Sediment Sample Analytical Results - Physical Properties
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

	Location ID	LMR11-27	LMR11-28	LMR11-28	LMR11-29	LMR11-30	LMR11-31
	Field Sample ID	LMR11-27-115	LMR11-28-006	LMR11-28-034	LMR11-29-006	LMR11-30-006	LMR11-31-006
	Sample Date	8/11/2011	8/10/2011	8/10/2011	8/4/2011	8/4/2011	8/4/2011
	Depth Interval (in bss)	96- 115	0- 6	6- 34	0- 6	0- 6	0- 6
Chemical Name	**Unit**						
Grain Size							
Gravel	%	0	0.2	3.2	0.2	0	1.1
Sand	%	37.6	16.3	89.1	40.3	27.3	11.8
Silt	%	36.4	45.2	4.8	29	27.4	39.7
Clay	%	26	38.3	2.8	30.5	45.3	47.4
Coarse Sand	%	0.2	0.9	6.3	0.3	0.3	0
Medium Sand	%	1.7	2.7	24.8	0.6	3.4	0.4
Fine Sand	%	35.7	12.7	58	39.4	23.6	11.4
Sieve Size 3 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 2 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 1.5 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 1 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 0.75 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 0.375 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size #4 - Percent Finer	% PASSED	100	99.8	96.8	99.8	100	98.9
Sieve Size #10 - Percent Finer	% PASSED	99.8	98.9	90.5	99.5	99.7	98.9
Sieve Size #20 - Percent Finer	% PASSED	99.1	97.7	78.2	99.4	98.9	98.8
Sieve Size #40 - Percent Finer	% PASSED	98.1	96.2	65.7	98.9	96.3	98.5
Sieve Size #60 - Percent Finer	% PASSED	97.3	93.9	36.4	96	84.6	97.2
Sieve Size #80 - Percent Finer	% PASSED	91.4	92.1	16	83.8	75.1	93.9
Sieve Size #100 - Percent Finer	% PASSED	86	90.9	10.8	73.9	74	92.2
Sieve Size #200 - Percent Finer	% PASSED	62.4	83.5	7.7	59.5	72.7	87.1
Hydrometer Reading 1 - Percent Finer	% PASSED	46.5	63.2	4	48.6	69.4	75.2
Hydrometer Reading 2 - Percent Finer	% PASSED	42	59.7	3.6	43.5	63.5	69
Hydrometer Reading 3 - Percent Finer	% PASSED	35.1	52.6	3.2	36.6	56.1	58.8
Hydrometer Reading 4 - Percent Finer	% PASSED	30.6	45.5	2.8	33.2	50.2	51.4
Hydrometer Reading 5 - Percent Finer	% PASSED	26	38.3	2.8	30.5	45.3	47.4
Hydrometer Reading 6 - Percent Finer	% PASSED	19	32.9	2.4	26.2	39.1	39.8
Hydrometer Reading 7 - Percent Finer	% PASSED	12.1	26	1.6	19.4	28.5	29.8
TOC							
TOC	mg/kg	28,400	20,000	4,270	19,700	22,200	27,900

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Table B-5
Sediment Sample Analytical Results - Physical Properties
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

	Location ID	LMR11-32	LMR11-32	LMR11-32	LMR11-32	LMR11-32	LMR11-32
	Field Sample ID	LMR11-32-006	LMR11-32-024	LMR11-32-048	LMR11-32-072	LMR11-32-096	LMR11-32-116
	Sample Date	8/10/2011	8/10/2011	8/10/2011	8/10/2011	8/10/2011	8/10/2011
	Depth Interval (in bss)	0- 6	6- 24	24- 48	48- 72	72- 96	96- 116
Chemical Name	**Unit**						
Grain Size							
Gravel	%	0	0	0	7.2	8.2	0
Sand	%	23	20.5	24.6	62.7	64.1	53.6
Silt	%	37.9	36.9	34.7	16.5	12.3	22
Clay	%	39.1	42.6	40.7	13.6	15.4	24.4
Coarse Sand	%	0	0.3	1.2	5.3	2.6	0.4
Medium Sand	%	1.9	2.1	4.2	14.4	10.3	1.8
Fine Sand	%	21.1	18.1	19.2	43	51.2	51.4
Sieve Size 3 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 2 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 1.5 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 1 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 0.75 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 0.375 inch - Percent Finer	% PASSED	100	100	100	100	96.3	100
Sieve Size #4 - Percent Finer	% PASSED	100	100	100	92.8	91.8	100
Sieve Size #10 - Percent Finer	% PASSED	100	99.7	98.8	87.5	89.2	99.6
Sieve Size #20 - Percent Finer	% PASSED	99.8	99	97.3	82.8	86.5	99.2
Sieve Size #40 - Percent Finer	% PASSED	98.1	97.6	94.6	73.1	78.9	97.8
Sieve Size #60 - Percent Finer	% PASSED	94.5	94.5	90.5	53.6	61.6	84.4
Sieve Size #80 - Percent Finer	% PASSED	91.4	92.1	87	42.9	49.3	67.8
Sieve Size #100 - Percent Finer	% PASSED	88.9	90.2	84.6	38.4	41.9	59.1
Sieve Size #200 - Percent Finer	% PASSED	77	79.5	75.4	30.1	27.7	46.4
Hydrometer Reading 1 - Percent Finer	% PASSED	62.8	67.4	66.2	21.7	23.4	35.3
Hydrometer Reading 2 - Percent Finer	% PASSED	57.6	59.8	58.9	19.7	21.4	32.9
Hydrometer Reading 3 - Percent Finer	% PASSED	48.3	52.1	51.6	17.7	18.4	29.3
Hydrometer Reading 4 - Percent Finer	% PASSED	43	46.4	46.1	14.6	16.4	26.8
Hydrometer Reading 5 - Percent Finer	% PASSED	39.1	42.6	40.7	13.6	15.4	24.4
Hydrometer Reading 6 - Percent Finer	% PASSED	32.6	35	35.2	11.5	12.4	19.4
Hydrometer Reading 7 - Percent Finer	% PASSED	26	29.2	26.1	8.5	9.4	15.8
TOC							
TOC	mg/kg	29,600	33,500	22,900	21,400	66,200	17,700

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Table B-5
Sediment Sample Analytical Results - Physical Properties
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

	Location ID	LMR11-33	LMR11-34	LMR11-35	LMR11-35	LMR11-35	LMR11-35
	Field Sample ID	LMR11-33-006	LMR11-34-006	LMR11-35-006	LMR11-35-024	LMR11-35-024FS	LMR11-35-048
	Sample Date	8/4/2011	8/4/2011	8/10/2011	8/10/2011	8/10/2011	8/10/2011
	Depth Interval (in bss)	0- 6	0- 6	0- 6	6- 24	6- 24	24- 48
Chemical Name	**Unit**						
Grain Size							
Gravel	%	0.4	1.5	0	0	0	0
Sand	%	64.8	47.1	9.4	1.5	1	3.4
Silt	%	12.6	21	35	29.6	27.3	32.2
Clay	%	22.2	30.4	55.6	68.9	71.7	64.4
Coarse Sand	%	0.6	2.8	0	0	0	0
Medium Sand	%	1.5	7.9	0.1	0	0	0.1
Fine Sand	%	62.7	36.4	9.3	1.5	1	3.3
Sieve Size 3 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 2 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 1.5 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 1 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 0.75 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 0.375 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size #4 - Percent Finer	% PASSED	99.6	98.5	100	100	100	100
Sieve Size #10 - Percent Finer	% PASSED	99	95.7	100	100	100	100
Sieve Size #20 - Percent Finer	% PASSED	98.7	92.3	100	100	100	99.9
Sieve Size #40 - Percent Finer	% PASSED	97.5	87.8	99.9	100	100	99.9
Sieve Size #60 - Percent Finer	% PASSED	86.1	75.4	99.7	100	100	99.8
Sieve Size #80 - Percent Finer	% PASSED	54.9	57.3	98.4	100	99.9	99.6
Sieve Size #100 - Percent Finer	% PASSED	43.3	54	97.3	99.9	99.9	99.3
Sieve Size #200 - Percent Finer	% PASSED	34.8	51.4	90.6	98.5	99	96.6
Hydrometer Reading 1 - Percent Finer	% PASSED	32.9	45.8	81.2	96.6	98.6	93.1
Hydrometer Reading 2 - Percent Finer	% PASSED	31.8	41.7	76.1	92.9	94.8	88.3
Hydrometer Reading 3 - Percent Finer	% PASSED	28.6	36.6	68.4	85.5	87.1	78.8
Hydrometer Reading 4 - Percent Finer	% PASSED	26.4	34.5	63.3	80	81.3	70.8
Hydrometer Reading 5 - Percent Finer	% PASSED	22.2	30.4	55.6	68.9	71.7	64.4
Hydrometer Reading 6 - Percent Finer	% PASSED	18.9	25.4	45.3	57.8	58.3	53.2
Hydrometer Reading 7 - Percent Finer	% PASSED	14.6	19.1	35.1	43.1	44.8	40.4
TOC							
TOC	mg/kg	19,700	18,300	36,000	27,700	27,000	27,500

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Table B-5
Sediment Sample Analytical Results - Physical Properties
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

	Location ID	LMR11-35	LMR11-35	LMR11-35	LMR11-36	LMR11-37	LMR11-37
	Field Sample ID	LMR11-35-072	LMR11-35-096	LMR11-35-116	LMR11-36-006	LMR11-37-006	LMR11-37-024
	Sample Date	8/10/2011	8/10/2011	8/10/2011	8/4/2011	8/10/2011	8/10/2011
	Depth Interval (in bss)	48- 72	72- 96	96- 116	0- 6	0- 6	6- 24
Chemical Name	**Unit**						
Grain Size							
Gravel	%	0	0	0	0	0	0
Sand	%	1.1	0.4	36.9	73.9	3.7	2
Silt	%	28.2	25.3	31.4	8.2	32.3	26
Clay	%	70.7	74.3	31.7	17.9	64	72
Coarse Sand	%	0	0	0	0.4	0	0
Medium Sand	%	0.2	0.1	1.5	4.9	0.3	0.1
Fine Sand	%	0.9	0.3	35.4	68.6	3.4	1.9
Sieve Size 3 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 2 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 1.5 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 1 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 0.75 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 0.375 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size #4 - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size #10 - Percent Finer	% PASSED	100	100	100	99.6	100	100
Sieve Size #20 - Percent Finer	% PASSED	99.9	99.9	99.7	98.8	99.8	100
Sieve Size #40 - Percent Finer	% PASSED	99.8	99.9	98.5	94.7	99.7	99.9
Sieve Size #60 - Percent Finer	% PASSED	99.8	99.9	93.2	69.5	99.5	99.7
Sieve Size #80 - Percent Finer	% PASSED	99.7	99.9	82.6	34.4	99.1	99.6
Sieve Size #100 - Percent Finer	% PASSED	99.7	99.9	77.5	28.1	98.8	99.6
Sieve Size #200 - Percent Finer	% PASSED	98.9	99.6	63.1	26.1	96.3	98
Hydrometer Reading 1 - Percent Finer	% PASSED	98.8	99.5	52.2	25.5	91	96.7
Hydrometer Reading 2 - Percent Finer	% PASSED	93.5	96.1	46.8	23.6	86.2	90.6
Hydrometer Reading 3 - Percent Finer	% PASSED	84.7	87.7	41.4	21.7	78.3	84.5
Hydrometer Reading 4 - Percent Finer	% PASSED	79.5	79.4	36	19.8	73.5	79.6
Hydrometer Reading 5 - Percent Finer	% PASSED	70.7	74.3	31.7	17.9	64	72
Hydrometer Reading 6 - Percent Finer	% PASSED	58.4	62.6	25.2	15	52.9	60
Hydrometer Reading 7 - Percent Finer	% PASSED	44.4	47.5	19.8	12.1	40.2	44.8
TOC							
TOC	mg/kg	22,100	25,400	26,700	20,100	22,400	22,700

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Table B-5
Sediment Sample Analytical Results - Physical Properties
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

	Location ID	LMR11-37	LMR11-37	LMR11-37	LMR11-38	LMR11-38	LMR11-38
	Field Sample ID	LMR11-37-048	LMR11-37-048-DP	LMR11-37-072	LMR11-38-006	LMR11-38-024	LMR11-38-024-DP
	Sample Date	8/10/2011	8/10/2011	8/10/2011	8/9/2011	8/9/2011	8/9/2011
	Depth Interval (in bss)	24- 48	24- 48	48- 72	0- 6	6- 24	6- 24
Chemical Name	**Unit**						
Grain Size							
Gravel	%	0	NA	1.7	0	0	NA
Sand	%	1.6	NA	15.9	13.5	25.4	NA
Silt	%	29.7	NA	24.1	35	23	NA
Clay	%	68.7	NA	58.3	51.5	51.6	NA
Coarse Sand	%	0	NA	0.7	0	0	NA
Medium Sand	%	0.1	NA	4	0.5	0.5	NA
Fine Sand	%	1.5	NA	11.2	13	24.9	NA
Sieve Size 3 inch - Percent Finer	% PASSED	100	NA	100	100	100	NA
Sieve Size 2 inch - Percent Finer	% PASSED	100	NA	100	100	100	NA
Sieve Size 1.5 inch - Percent Finer	% PASSED	100	NA	100	100	100	NA
Sieve Size 1 inch - Percent Finer	% PASSED	100	NA	100	100	100	NA
Sieve Size 0.75 inch - Percent Finer	% PASSED	100	NA	100	100	100	NA
Sieve Size 0.375 inch - Percent Finer	% PASSED	100	NA	100	100	100	NA
Sieve Size #4 - Percent Finer	% PASSED	100	NA	98.3	100	100	NA
Sieve Size #10 - Percent Finer	% PASSED	100	NA	97.6	100	100	NA
Sieve Size #20 - Percent Finer	% PASSED	100	NA	96.6	99.7	99.7	NA
Sieve Size #40 - Percent Finer	% PASSED	99.9	NA	93.6	99.5	99.5	NA
Sieve Size #60 - Percent Finer	% PASSED	99.6	NA	88.6	99	99.2	NA
Sieve Size #80 - Percent Finer	% PASSED	99.4	NA	86.4	97.1	97.1	NA
Sieve Size #100 - Percent Finer	% PASSED	99.4	NA	85.4	94.9	90.1	NA
Sieve Size #200 - Percent Finer	% PASSED	98.4	NA	82.4	86.5	74.6	NA
Hydrometer Reading 1 - Percent Finer	% PASSED	96.4	NA	81.4	77.9	73.1	NA
Hydrometer Reading 2 - Percent Finer	% PASSED	92.5	NA	75.3	73.3	68.2	NA
Hydrometer Reading 3 - Percent Finer	% PASSED	84.7	NA	69.2	63.9	63.2	NA
Hydrometer Reading 4 - Percent Finer	% PASSED	76.5	NA	62.8	56.2	54.9	NA
Hydrometer Reading 5 - Percent Finer	% PASSED	68.7	NA	58.3	51.5	51.6	NA
Hydrometer Reading 6 - Percent Finer	% PASSED	57.3	NA	47.6	41.9	41.4	NA
Hydrometer Reading 7 - Percent Finer	% PASSED	45.6	NA	37.1	32.9	31.7	NA
TOC							
TOC	mg/kg	24,500	22,200	19,600	37,700	21,000	24,700

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Table B-5
Sediment Sample Analytical Results - Physical Properties
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

	Location ID	LMR11-38	LMR11-38	LMR11-38	LMR11-38	LMR11-38	LMR11-39
	Field Sample ID	LMR11-38-024FS	LMR11-38-048	LMR11-38-048-DP	LMR11-38-072	LMR11-38-072-DP	LMR11-39-006
	Sample Date	8/9/2011	8/9/2011	8/9/2011	8/9/2011	8/9/2011	8/4/2011
	Depth Interval (in bss)	6- 24	24- 48	24- 48	48- 72	48- 72	0- 6
Chemical Name	**Unit**						
Grain Size							
Gravel	%	0	0	NA	0	NA	0.7
Sand	%	43.6	8.9	NA	2.9	NA	78.6
Silt	%	21.5	35.4	NA	36.2	NA	5.2
Clay	%	34.9	55.7	NA	60.9	NA	15.5
Coarse Sand	%	0	0	NA	0	NA	1.3
Medium Sand	%	0.7	0.2	NA	0	NA	8.7
Fine Sand	%	42.9	8.7	NA	2.9	NA	68.6
Sieve Size 3 inch - Percent Finer	% PASSED	100	100	NA	100	NA	100
Sieve Size 2 inch - Percent Finer	% PASSED	100	100	NA	100	NA	100
Sieve Size 1.5 inch - Percent Finer	% PASSED	100	100	NA	100	NA	100
Sieve Size 1 inch - Percent Finer	% PASSED	100	100	NA	100	NA	100
Sieve Size 0.75 inch - Percent Finer	% PASSED	100	100	NA	100	NA	100
Sieve Size 0.375 inch - Percent Finer	% PASSED	100	100	NA	100	NA	100
Sieve Size #4 - Percent Finer	% PASSED	100	100	NA	100	NA	99.3
Sieve Size #10 - Percent Finer	% PASSED	100	100	NA	100	NA	98
Sieve Size #20 - Percent Finer	% PASSED	99.6	99.9	NA	100	NA	96.2
Sieve Size #40 - Percent Finer	% PASSED	99.3	99.8	NA	100	NA	89.3
Sieve Size #60 - Percent Finer	% PASSED	98.6	99.8	NA	100	NA	58.3
Sieve Size #80 - Percent Finer	% PASSED	94.3	99.5	NA	99.7	NA	28.7
Sieve Size #100 - Percent Finer	% PASSED	83.6	98.4	NA	99.2	NA	22.8
Sieve Size #200 - Percent Finer	% PASSED	56.4	91.1	NA	97.1	NA	20.7
Hydrometer Reading 1 - Percent Finer	% PASSED	51.3	79.3	NA	86.8	NA	22.1
Hydrometer Reading 2 - Percent Finer	% PASSED	49	75.8	NA	82	NA	20.4
Hydrometer Reading 3 - Percent Finer	% PASSED	44.4	68.6	NA	74	NA	18.8
Hydrometer Reading 4 - Percent Finer	% PASSED	38.5	61.4	NA	69.2	NA	17.1
Hydrometer Reading 5 - Percent Finer	% PASSED	34.9	55.7	NA	60.9	NA	15.5
Hydrometer Reading 6 - Percent Finer	% PASSED	29.1	44.9	NA	49.7	NA	13
Hydrometer Reading 7 - Percent Finer	% PASSED	22.3	38	NA	40.3	NA	10.4
TOC							
TOC	mg/kg	18,500	25,700	35,500	26,900	27,000	13,500

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Table B-5
Sediment Sample Analytical Results - Physical Properties
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

	Location ID	LMR11-40	LMR11-40	LMR11-40	LMR11-40	LMR11-41	LMR11-42
	Field Sample ID	LMR11-40-006	LMR11-40-024	LMR11-40-048	LMR11-40-084	LMR11-41-006	LMR11-42-006
	Sample Date	8/10/2011	8/10/2011	8/10/2011	8/10/2011	8/4/2011	8/9/2011
	Depth Interval (in bss)	0- 6	6- 24	24- 48	48- 84	0- 6	0- 6
Chemical Name	**Unit**						
Grain Size							
Gravel	%	2	0.2	0	0.5	3.6	28
Sand	%	66.1	59.9	32.6	66.6	51.1	22.3
Silt	%	16.5	24.8	44.7	22.5	20.5	28.3
Clay	%	15.4	15.1	22.7	10.4	24.8	21.4
Coarse Sand	%	1.7	0.5	0.1	2.1	1.5	1.3
Medium Sand	%	3.4	4.8	1.7	13.8	2.2	2.2
Fine Sand	%	61	54.6	30.8	50.7	47.4	18.8
Sieve Size 3 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 2 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 1.5 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 1 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 0.75 inch - Percent Finer	% PASSED	100	100	100	100	100	75.4
Sieve Size 0.375 inch - Percent Finer	% PASSED	100	100	100	100	97	74.8
Sieve Size #4 - Percent Finer	% PASSED	98	99.8	100	99.5	96.4	72
Sieve Size #10 - Percent Finer	% PASSED	96.3	99.3	99.9	97.4	94.9	70.7
Sieve Size #20 - Percent Finer	% PASSED	95.2	97.8	99.4	93.7	94.3	70
Sieve Size #40 - Percent Finer	% PASSED	92.9	94.5	98.2	83.6	92.7	68.5
Sieve Size #60 - Percent Finer	% PASSED	84.9	83.9	94.6	60.4	86.2	64.1
Sieve Size #80 - Percent Finer	% PASSED	61.1	72.5	87.8	48.3	67.9	59.3
Sieve Size #100 - Percent Finer	% PASSED	48.3	62	83.3	44.2	57.7	56.6
Sieve Size #200 - Percent Finer	% PASSED	31.9	39.9	67.4	32.9	45.3	49.7
Hydrometer Reading 1 - Percent Finer	% PASSED	24.8	28.8	46.4	21.6	36.4	34
Hydrometer Reading 2 - Percent Finer	% PASSED	22	24.6	40.5	17.5	33.5	30.8
Hydrometer Reading 3 - Percent Finer	% PASSED	20.1	20.3	31.6	15.5	30.6	26.9
Hydrometer Reading 4 - Percent Finer	% PASSED	16.3	17.2	25.7	12.4	26.8	23.7
Hydrometer Reading 5 - Percent Finer	% PASSED	15.4	15.1	22.7	10.4	24.8	21.4
Hydrometer Reading 6 - Percent Finer	% PASSED	12.4	11.8	18	9.4	20	16.7
Hydrometer Reading 7 - Percent Finer	% PASSED	9.6	9.8	13.8	6.3	15.1	13.5
TOC							
TOC	mg/kg	12,100	5,150	14,100	21,800	25,500	47,600

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Table B-5
Sediment Sample Analytical Results - Physical Properties
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

	Location ID	LMR11-42	LMR11-42	LMR11-42	LMR11-42	LMR11-42	LMR11-42
	Field Sample ID	LMR11-42-024	LMR11-42-048	LMR11-42-048FS	LMR11-42-072	LMR11-42-096	LMR11-42-129
	Sample Date	8/9/2011	8/9/2011	8/9/2011	8/9/2011	8/9/2011	8/9/2011
	Depth Interval (in bss)	6- 24	24- 48	24- 48	48- 72	72- 96	96- 129
Chemical Name	**Unit**						
Grain Size							
Gravel	%	3.8	1	13.7	32.5	0.3	1.2
Sand	%	48	25.9	27.5	46.7	65.2	63.8
Silt	%	24.1	32.7	23.5	8.1	19.7	18.5
Clay	%	24.1	40.4	35.3	12.7	14.8	16.5
Coarse Sand	%	2.1	1.3	1.5	4.6	1	5.1
Medium Sand	%	6.2	5.8	6.2	14.2	6.3	27.7
Fine Sand	%	39.7	18.8	19.8	27.9	57.9	31
Sieve Size 3 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 2 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 1.5 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 1 inch - Percent Finer	% PASSED	100	100	100	81.2	100	100
Sieve Size 0.75 inch - Percent Finer	% PASSED	100	100	100	81.2	100	100
Sieve Size 0.375 inch - Percent Finer	% PASSED	98.8	100	94.5	72.5	100	100
Sieve Size #4 - Percent Finer	% PASSED	96.2	99	86.3	67.5	99.7	98.8
Sieve Size #10 - Percent Finer	% PASSED	94.1	97.7	84.8	62.9	98.7	93.7
Sieve Size #20 - Percent Finer	% PASSED	92.5	95.6	82.7	57	96.9	82.7
Sieve Size #40 - Percent Finer	% PASSED	87.9	91.9	78.6	48.7	92.4	66
Sieve Size #60 - Percent Finer	% PASSED	81.3	87.8	74	41.4	83.8	54.8
Sieve Size #80 - Percent Finer	% PASSED	65.5	80.9	66.8	30.6	63.5	45.6
Sieve Size #100 - Percent Finer	% PASSED	59.9	78.8	64.6	27.3	55.2	43
Sieve Size #200 - Percent Finer	% PASSED	48.2	73.1	58.8	20.8	34.5	35
Hydrometer Reading 1 - Percent Finer	% PASSED	39.1	65.7	58.8	20.4	24.6	28.3
Hydrometer Reading 2 - Percent Finer	% PASSED	35.6	60.9	54.7	18.4	22.8	24.8
Hydrometer Reading 3 - Percent Finer	% PASSED	31.2	51.3	46.6	16.5	19.3	24.1
Hydrometer Reading 4 - Percent Finer	% PASSED	27.7	46.5	41.5	15.1	17.5	19.3
Hydrometer Reading 5 - Percent Finer	% PASSED	24.1	40.4	35.3	12.7	14.8	16.5
Hydrometer Reading 6 - Percent Finer	% PASSED	19.1	32	27.2	9.8	12.1	13
Hydrometer Reading 7 - Percent Finer	% PASSED	14.8	22.4	19	7.9	9.4	10.2
TOC							
TOC	mg/kg	14,700	37,400	29,900	16,800	38,600	11,700

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Table B-5
Sediment Sample Analytical Results - Physical Properties
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

	Location ID	LMR11-43	LMR11-44	LMR11-44	LMR11-44	LMR11-44	LMR11-44
	Field Sample ID	LMR11-43-030	LMR11-44-006	LMR11-44-024	LMR11-44-024FS	LMR11-44-048	LMR11-44-072
	Sample Date	8/9/2011	8/9/2011	8/9/2011	8/9/2011	8/9/2011	8/9/2011
	Depth Interval (in bss)	24- 30	0- 6	6- 24	6- 24	24- 48	48- 72
Chemical Name	**Unit**						
Grain Size							
Gravel	%	37.7	1.3	0	0	0.4	6.3
Sand	%	52.5	14.2	4.9	5	31.8	66.1
Silt	%	7.1	31.7	34.9	35	16.1	10.2
Clay	%	2.7	52.8	60.2	60	51.7	17.4
Coarse Sand	%	7.4	1	0	0	1.1	5.1
Medium Sand	%	16.5	2.8	0.6	0.6	7.4	21.2
Fine Sand	%	28.6	10.4	4.3	4.4	23.3	39.8
Sieve Size 3 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 2 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 1.5 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 1 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 0.75 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 0.375 inch - Percent Finer	% PASSED	76.6	100	100	100	100	96.9
Sieve Size #4 - Percent Finer	% PASSED	62.3	98.7	100	100	99.6	93.7
Sieve Size #10 - Percent Finer	% PASSED	54.9	97.7	100	100	98.5	88.6
Sieve Size #20 - Percent Finer	% PASSED	48.4	96.7	99.7	99.6	96.3	82.3
Sieve Size #40 - Percent Finer	% PASSED	38.4	94.9	99.4	99.4	91.1	67.4
Sieve Size #60 - Percent Finer	% PASSED	30	93	99.3	99.2	84.1	48.4
Sieve Size #80 - Percent Finer	% PASSED	19.9	88.3	98.5	98.4	74	34.5
Sieve Size #100 - Percent Finer	% PASSED	16.6	87.1	98.2	98.1	71.1	30.8
Sieve Size #200 - Percent Finer	% PASSED	9.8	84.5	95.1	95	67.8	27.6
Hydrometer Reading 1 - Percent Finer	% PASSED	4.4	76	87.1	86.2	67.8	25.5
Hydrometer Reading 2 - Percent Finer	% PASSED	4.4	72.4	81.4	82.9	65.1	23.7
Hydrometer Reading 3 - Percent Finer	% PASSED	3.8	65.3	72.9	73.1	61.1	21.5
Hydrometer Reading 4 - Percent Finer	% PASSED	3.2	58.1	67.3	66.5	57.1	19.2
Hydrometer Reading 5 - Percent Finer	% PASSED	2.7	52.8	60.2	60	51.7	17.4
Hydrometer Reading 6 - Percent Finer	% PASSED	2.1	42.1	48.9	48.5	42.3	13.8
Hydrometer Reading 7 - Percent Finer	% PASSED	2.1	33	37.6	38.6	33	10.2
TOC							
TOC	mg/kg	24,800	24,000	35,400	27,600	27,100	26,200

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Table B-5
Sediment Sample Analytical Results - Physical Properties
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

	Location ID	LMR11-44	LMR11-45	LMR11-45	LMR11-45	LMR11-45	LMR11-45
	Field Sample ID	LMR11-44-096	LMR11-45-006	LMR11-45-024	LMR11-45-048	LMR11-45-048FS	LMR11-45-072
	Sample Date	8/9/2011	8/8/2011	8/8/2011	8/8/2011	8/8/2011	8/8/2011
	Depth Interval (in bss)	72- 96	0- 6	6- 24	24- 48	24- 48	48- 72
Chemical Name	**Unit**						
Grain Size							
Gravel	%	0	0	6.8	0	0	0
Sand	%	28.7	8.3	2	0.4	0.4	1
Silt	%	34.4	35.9	32.7	30.9	34.3	30.6
Clay	%	36.9	55.8	58.5	68.7	65.3	68.4
Coarse Sand	%	0.8	0	0.1	0	0	0
Medium Sand	%	3.4	0.9	0.2	0.1	0	0
Fine Sand	%	24.5	7.4	1.7	0.3	0.4	1
Sieve Size 3 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 2 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 1.5 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 1 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 0.75 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 0.375 inch - Percent Finer	% PASSED	100	100	93.2	100	100	100
Sieve Size #4 - Percent Finer	% PASSED	100	100	93.2	100	100	100
Sieve Size #10 - Percent Finer	% PASSED	99.2	100	93.1	100	100	100
Sieve Size #20 - Percent Finer	% PASSED	98.3	99.6	93	100	100	100
Sieve Size #40 - Percent Finer	% PASSED	95.8	99.1	92.9	99.9	100	100
Sieve Size #60 - Percent Finer	% PASSED	92.5	98.5	92.7	99.8	100	99.9
Sieve Size #80 - Percent Finer	% PASSED	82.3	97.5	92.6	99.8	100	99.9
Sieve Size #100 - Percent Finer	% PASSED	79	96.4	92.4	99.8	99.9	99.9
Sieve Size #200 - Percent Finer	% PASSED	71.3	91.7	91.2	99.6	99.6	99
Hydrometer Reading 1 - Percent Finer	% PASSED	56.4	81.7	79.9	92.2	84.6	91.7
Hydrometer Reading 2 - Percent Finer	% PASSED	51.5	78	76	88.2	82.1	89.9
Hydrometer Reading 3 - Percent Finer	% PASSED	48.3	68.8	68.2	80.4	74.9	82.8
Hydrometer Reading 4 - Percent Finer	% PASSED	41.8	61.4	62.4	74.6	70.1	73.8
Hydrometer Reading 5 - Percent Finer	% PASSED	36.9	55.8	58.5	68.7	65.3	68.4
Hydrometer Reading 6 - Percent Finer	% PASSED	28.7	46.3	48.5	58.6	55.7	57.7
Hydrometer Reading 7 - Percent Finer	% PASSED	22.2	35.2	36.9	45.3	41.3	45.1
TOC							
TOC	mg/kg	19,500	26,900	23,500	33,800	26,500	33,100

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Table B-5
Sediment Sample Analytical Results - Physical Properties
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

	Location ID	LMR11-45	LMR11-46	LMR11-46	LMR11-46	LMR11-46	LMR11-46
	Field Sample ID	LMR11-45-096	LMR11-46-006	LMR11-46-024	LMR11-46-024FS	LMR11-46-048	LMR11-46-072
	Sample Date	8/8/2011	8/8/2011	8/8/2011	8/8/2011	8/8/2011	8/8/2011
	Depth Interval (in bss)	72- 96	0- 6	6- 24	6- 24	24- 48	48- 72
Chemical Name	**Unit**						
Grain Size							
Gravel	%	0	1.5	0	0	0	0
Sand	%	1.8	16.6	11.7	14.1	40.5	91.8
Silt	%	28.7	31.4	36.5	34.2	32.5	5.3
Clay	%	69.5	50.5	51.8	51.7	27	2.8
Coarse Sand	%	0	0.7	0.3	0.5	0.1	0.4
Medium Sand	%	0.4	2	1.2	1.5	1.5	6.4
Fine Sand	%	1.4	13.9	10.2	12.1	38.9	85
Sieve Size 3 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 2 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 1.5 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 1 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 0.75 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 0.375 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size #4 - Percent Finer	% PASSED	100	98.5	100	100	100	100
Sieve Size #10 - Percent Finer	% PASSED	100	97.8	99.7	99.5	99.9	99.6
Sieve Size #20 - Percent Finer	% PASSED	99.9	97.2	99.3	99	99.7	98.9
Sieve Size #40 - Percent Finer	% PASSED	99.6	95.8	98.5	98	98.4	93.2
Sieve Size #60 - Percent Finer	% PASSED	99.1	93	97	96.1	92.1	71
Sieve Size #80 - Percent Finer	% PASSED	98.9	88.1	94.2	92.4	83.6	47.9
Sieve Size #100 - Percent Finer	% PASSED	98.8	85.9	92.7	90.7	76.7	33.9
Sieve Size #200 - Percent Finer	% PASSED	98.2	81.9	88.3	85.9	59.5	8.2
Hydrometer Reading 1 - Percent Finer	% PASSED	91.8	77.1	79.1	78.3	43.6	4.8
Hydrometer Reading 2 - Percent Finer	% PASSED	89.8	72.2	72.7	72.2	39.9	4
Hydrometer Reading 3 - Percent Finer	% PASSED	83.7	63.9	64.6	63.9	35.3	3.6
Hydrometer Reading 4 - Percent Finer	% PASSED	77.6	58.9	59.8	56.5	31.6	3.3
Hydrometer Reading 5 - Percent Finer	% PASSED	69.5	50.5	51.8	51.7	27	2.9
Hydrometer Reading 6 - Percent Finer	% PASSED	59.3	42.4	42.1	41.7	21.4	2.5
Hydrometer Reading 7 - Percent Finer	% PASSED	47.1	30.8	32.5	30.7	16.8	2.1
TOC							
TOC	mg/kg	34,300	43,300	19,700	24,900	28,300	20,300

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Table B-5
Sediment Sample Analytical Results - Physical Properties
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

	Location ID	LMR11-46	LMR11-47	LMR11-47	LMR11-47	LMR11-47	LMR11-47
	Field Sample ID	LMR11-46-093	LMR11-47-006	LMR11-47-024	LMR11-47-048	LMR11-47-072	LMR11-47-096
	Sample Date	8/8/2011	8/8/2011	8/8/2011	8/8/2011	8/8/2011	8/8/2011
	Depth Interval (in bss)	72- 93	0- 6	6- 24	24- 48	48- 72	72- 96
Chemical Name	**Unit**						
Grain Size							
Gravel	%	3.5	0.9	1.6	1.2	0	0
Sand	%	39.8	14.1	6.2	35.2	18.8	3.4
Silt	%	29.1	33.2	33.2	24	32.7	32.3
Clay	%	27.6	51.8	59	39.6	48.5	64.3
Coarse Sand	%	0.7	0	0.4	0.9	0	0
Medium Sand	%	1.7	0.9	0.4	12.3	2.5	0.5
Fine Sand	%	37.4	13.2	5.4	22	16.3	2.9
Sieve Size 3 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 2 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 1.5 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 1 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 0.75 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 0.375 inch - Percent Finer	% PASSED	100	100	98.4	100	100	100
Sieve Size #4 - Percent Finer	% PASSED	96.5	99.1	98.4	98.8	100	100
Sieve Size #10 - Percent Finer	% PASSED	95.8	99.1	98	97.9	100	100
Sieve Size #20 - Percent Finer	% PASSED	95.4	98.7	97.9	96.4	99.4	99.9
Sieve Size #40 - Percent Finer	% PASSED	94.1	98.2	97.6	85.6	97.5	99.5
Sieve Size #60 - Percent Finer	% PASSED	89.6	96.3	96.8	71	93.6	99.1
Sieve Size #80 - Percent Finer	% PASSED	82.2	93.1	95.7	68.5	89.4	98.9
Sieve Size #100 - Percent Finer	% PASSED	75.1	91.1	95	67.2	87.3	98.5
Sieve Size #200 - Percent Finer	% PASSED	56.7	85	92.2	63.6	81.2	96.6
Hydrometer Reading 1 - Percent Finer	% PASSED	47.4	77.9	85.6	60.6	75.7	94.2
Hydrometer Reading 2 - Percent Finer	% PASSED	42.5	70.4	80.6	54.6	68.9	88.9
Hydrometer Reading 3 - Percent Finer	% PASSED	36.3	63	70.7	48.6	62.1	80.1
Hydrometer Reading 4 - Percent Finer	% PASSED	31.3	58	64	44.6	53.6	73.1
Hydrometer Reading 5 - Percent Finer	% PASSED	27.6	51.8	59	39.6	48.5	64.3
Hydrometer Reading 6 - Percent Finer	% PASSED	22.6	41.8	49.1	32.6	38.3	53.7
Hydrometer Reading 7 - Percent Finer	% PASSED	16.4	33.1	37.5	24.6	29.9	41.4
TOC							
TOC	mg/kg	29,600	26,000	22,600	17,300	28,000	29,300

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Table B-5
Sediment Sample Analytical Results - Physical Properties
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

	Location ID	LMR11-47	LMR11-47	LMR11-48	LMR11-48	LMR11-48	LMR11-48
	Field Sample ID	LMR11-47-120	LMR11-47-144	LMR11-48-006	LMR11-48-024	LMR11-48-024FS	LMR11-48-048
	Sample Date	8/8/2011	8/8/2011	8/8/2011	8/8/2011	8/8/2011	8/8/2011
	Depth Interval (in bss)	96- 120	120- 144	0- 6	6- 24	6- 24	24- 48
Chemical Name	**Unit**						
Grain Size							
Gravel	%	0	0	0	0.7	0	0
Sand	%	25.8	7.5	2.8	5.6	7.6	4.8
Silt	%	31.8	48.7	40	36	38.1	33.5
Clay	%	42.4	43.8	57.2	57.7	54.3	61.7
Coarse Sand	%	0.2	0	0.1	0.1	0	0
Medium Sand	%	1.6	0.4	0.6	0.6	0.9	0.4
Fine Sand	%	24	7.1	2.1	4.9	6.7	4.4
Sieve Size 3 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 2 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 1.5 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 1 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 0.75 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 0.375 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size #4 - Percent Finer	% PASSED	100	100	100	99.3	100	100
Sieve Size #10 - Percent Finer	% PASSED	99.8	100	99.9	99.2	100	100
Sieve Size #20 - Percent Finer	% PASSED	99.4	99.9	99.5	98.9	99.7	99.8
Sieve Size #40 - Percent Finer	% PASSED	98.2	99.6	99.3	98.6	99.1	99.6
Sieve Size #60 - Percent Finer	% PASSED	95.8	99.2	99.2	98.2	98.6	99.6
Sieve Size #80 - Percent Finer	% PASSED	86.7	98.2	98.5	96.6	96	98.9
Sieve Size #100 - Percent Finer	% PASSED	78.9	97.2	98.1	96	94.9	98.3
Sieve Size #200 - Percent Finer	% PASSED	74.2	92.5	97.2	93.7	92.4	95.2
Hydrometer Reading 1 - Percent Finer	% PASSED	66	76.7	88.5	84.9	79.8	89.1
Hydrometer Reading 2 - Percent Finer	% PASSED	60.4	69.8	79.6	81.1	75.6	81.2
Hydrometer Reading 3 - Percent Finer	% PASSED	53.5	59.5	70.6	73.3	65	73.4
Hydrometer Reading 4 - Percent Finer	% PASSED	48	52.6	66.2	65.5	58.6	65.6
Hydrometer Reading 5 - Percent Finer	% PASSED	42.4	43.8	57.2	57.7	54.3	61.7
Hydrometer Reading 6 - Percent Finer	% PASSED	34.1	35.4	48.3	49.9	45.9	50
Hydrometer Reading 7 - Percent Finer	% PASSED	25.8	25.1	39.3	38.2	37.4	38.3
TOC							
TOC	mg/kg	31,000	37,800	30,000	39,400	26,600	26,400

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Table B-5
Sediment Sample Analytical Results - Physical Properties
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

	Location ID	LMR11-48	LMR11-49	LMR11-49	LMR11-49	LMR11-49	LMR11-49
	Field Sample ID	LMR11-48-061	LMR11-49-006	LMR11-49-024	LMR11-49-048	LMR11-49-072	LMR11-49-096
	Sample Date	8/8/2011	8/8/2011	8/8/2011	8/8/2011	8/8/2011	8/8/2011
	Depth Interval (in bss)	48- 61	0- 6	6- 24	24- 48	48- 72	72- 96
Chemical Name	**Unit**						
Grain Size							
Gravel	%	0	0	0	0	0	0.4
Sand	%	4.8	8.4	5.1	6.3	30.7	70
Silt	%	30.8	31.4	31.9	39.3	42.7	20.1
Clay	%	64.4	60.2	63	54.4	26.6	9.5
Coarse Sand	%	0	0.6	0.6	0	0.1	1.6
Medium Sand	%	1.5	0.4	0.3	0.1	0.4	2.5
Fine Sand	%	3.3	7.4	4.2	6.2	30.2	65.9
Sieve Size 3 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 2 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 1.5 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 1 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 0.75 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 0.375 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size #4 - Percent Finer	% PASSED	100	100	100	100	100	99.6
Sieve Size #10 - Percent Finer	% PASSED	100	99.4	99.4	100	99.9	98
Sieve Size #20 - Percent Finer	% PASSED	99.4	99.4	99.4	100	99.8	97.7
Sieve Size #40 - Percent Finer	% PASSED	98.5	99	99.1	99.9	99.5	95.5
Sieve Size #60 - Percent Finer	% PASSED	98	97.6	97.9	99.6	97.6	85.7
Sieve Size #80 - Percent Finer	% PASSED	97.2	95.2	96.4	99.2	93.3	71.9
Sieve Size #100 - Percent Finer	% PASSED	96.9	93.8	95.9	98.9	88.7	58.1
Sieve Size #200 - Percent Finer	% PASSED	95.2	91.6	94.9	93.7	69.3	29.6
Hydrometer Reading 1 - Percent Finer	% PASSED	90.5	83.1	89.3	83.8	49.3	16.4
Hydrometer Reading 2 - Percent Finer	% PASSED	86.1	79.3	85.5	76.4	42.8	14.8
Hydrometer Reading 3 - Percent Finer	% PASSED	77.4	71.7	78	67.2	36.3	12.6
Hydrometer Reading 4 - Percent Finer	% PASSED	73.1	64.1	68.6	59.9	30.9	10.3
Hydrometer Reading 5 - Percent Finer	% PASSED	64.4	60.2	63	54.4	26.6	9.5
Hydrometer Reading 6 - Percent Finer	% PASSED	55.7	48.6	51.6	43.2	21.1	8
Hydrometer Reading 7 - Percent Finer	% PASSED	42.6	37.4	40.5	32.3	15.8	5.7
TOC							
TOC	mg/kg	30,300	23,800	21,000	26,500	29,600	19,600

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Table B-5
Sediment Sample Analytical Results - Physical Properties
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

	Location ID	LMR11-49	LMR11-50	LMR11-50	LMR11-50	LMR11-50	LMR11-50
	Field Sample ID	LMR11-49-115	LMR11-50-006	LMR11-50-006-DP	LMR11-50-024	LMR11-50-024-DP	LMR11-50-048
	Sample Date	8/8/2011	8/8/2011	8/8/2011	8/8/2011	8/8/2011	8/8/2011
	Depth Interval (in bss)	96- 115	0- 6	0- 6	6- 24	6- 24	24- 48
Chemical Name	**Unit**						
Grain Size							
Gravel	%	2.6	4.3	NA	0.4	NA	5.6
Sand	%	51.4	17.5	NA	22.4	NA	57.2
Silt	%	24	31	NA	27.6	NA	12.6
Clay	%	22	47.2	NA	49.6	NA	24.6
Coarse Sand	%	1.7	1.7	NA	0.8	NA	3.5
Medium Sand	%	3.2	3.5	NA	4	NA	10.9
Fine Sand	%	46.5	12.3	NA	17.6	NA	42.8
Sieve Size 3 inch - Percent Finer	% PASSED	100	100	NA	100	NA	100
Sieve Size 2 inch - Percent Finer	% PASSED	100	100	NA	100	NA	100
Sieve Size 1.5 inch - Percent Finer	% PASSED	100	100	NA	100	NA	100
Sieve Size 1 inch - Percent Finer	% PASSED	100	100	NA	100	NA	100
Sieve Size 0.75 inch - Percent Finer	% PASSED	100	100	NA	100	NA	100
Sieve Size 0.375 inch - Percent Finer	% PASSED	100	100	NA	100	NA	96.3
Sieve Size #4 - Percent Finer	% PASSED	97.4	95.7	NA	99.6	NA	94.4
Sieve Size #10 - Percent Finer	% PASSED	95.7	94	NA	98.8	NA	90.9
Sieve Size #20 - Percent Finer	% PASSED	95.2	92.5	NA	97.3	NA	87.1
Sieve Size #40 - Percent Finer	% PASSED	92.5	90.5	NA	94.8	NA	80
Sieve Size #60 - Percent Finer	% PASSED	81.8	87.6	NA	90.1	NA	65
Sieve Size #80 - Percent Finer	% PASSED	70.5	85.4	NA	86.5	NA	54.3
Sieve Size #100 - Percent Finer	% PASSED	62.7	84	NA	84.3	NA	48.6
Sieve Size #200 - Percent Finer	% PASSED	46	78.2	NA	77.2	NA	37.2
Hydrometer Reading 1 - Percent Finer	% PASSED	34.5	71.5	NA	72.8	NA	32.5
Hydrometer Reading 2 - Percent Finer	% PASSED	32.3	67.4	NA	67	NA	30.5
Hydrometer Reading 3 - Percent Finer	% PASSED	27.8	59.3	NA	59.8	NA	28.6
Hydrometer Reading 4 - Percent Finer	% PASSED	24.4	53.3	NA	54	NA	26.6
Hydrometer Reading 5 - Percent Finer	% PASSED	22	47.2	NA	49.6	NA	24.6
Hydrometer Reading 6 - Percent Finer	% PASSED	17.5	38.8	NA	42.4	NA	19.7
Hydrometer Reading 7 - Percent Finer	% PASSED	13.1	30.7	NA	33.6	NA	15.8
TOC							
TOC	mg/kg	26,900 J	34,800	37,400	33,700	28,700	25,700

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Table B-5
Sediment Sample Analytical Results - Physical Properties
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

	Location ID	LMR11-50	LMR11-50	LMR11-50	LMR11-50	LMR11-50	LMR11-50
	Field Sample ID	LMR11-50-048-DP	LMR11-50-072	LMR11-50-096	LMR11-50-120	LMR11-50-144	LMR11-50-175
	Sample Date	8/8/2011	8/8/2011	8/8/2011	8/8/2011	8/8/2011	8/8/2011
	Depth Interval (in bss)	24- 48	48- 72	72- 96	96- 120	120- 144	144- 175
Chemical Name	**Unit**						
Grain Size							
Gravel	%	NA	8.2	4.9	0.6	1.8	9
Sand	%	NA	57.4	35	16.4	30.4	17.4
Silt	%	NA	14.7	23.4	40.3	29.4	32.5
Clay	%	NA	19.7	36.7	42.7	38.4	41.1
Coarse Sand	%	NA	4.8	4.5	0.5	2.1	1.9
Medium Sand	%	NA	13.9	10.2	2.2	9.6	4.6
Fine Sand	%	NA	38.7	20.3	13.7	18.7	10.9
Sieve Size 3 inch - Percent Finer	% PASSED	NA	100	100	100	100	100
Sieve Size 2 inch - Percent Finer	% PASSED	NA	100	100	100	100	100
Sieve Size 1.5 inch - Percent Finer	% PASSED	NA	100	100	100	100	100
Sieve Size 1 inch - Percent Finer	% PASSED	NA	100	100	100	100	100
Sieve Size 0.75 inch - Percent Finer	% PASSED	NA	100	100	100	100	100
Sieve Size 0.375 inch - Percent Finer	% PASSED	NA	96.5	100	100	100	92.5
Sieve Size #4 - Percent Finer	% PASSED	NA	91.8	95.1	99.4	98.2	91
Sieve Size #10 - Percent Finer	% PASSED	NA	87	90.6	98.9	96.1	89.1
Sieve Size #20 - Percent Finer	% PASSED	NA	81.7	85.5	98.3	91.8	87.1
Sieve Size #40 - Percent Finer	% PASSED	NA	73.1	80.4	96.7	86.5	84.5
Sieve Size #60 - Percent Finer	% PASSED	NA	58.1	74	94.6	81	81.3
Sieve Size #80 - Percent Finer	% PASSED	NA	48.8	69.4	92.7	77.5	79.1
Sieve Size #100 - Percent Finer	% PASSED	NA	44.1	67	91.4	75.3	77.8
Sieve Size #200 - Percent Finer	% PASSED	NA	34.4	60.1	83	67.8	73.6
Hydrometer Reading 1 - Percent Finer	% PASSED	NA	28.3	55.5	65.8	59	61.1
Hydrometer Reading 2 - Percent Finer	% PASSED	NA	26.2	51.7	60.1	55.6	56.5
Hydrometer Reading 3 - Percent Finer	% PASSED	NA	23.3	44.2	54.3	48.7	50.3
Hydrometer Reading 4 - Percent Finer	% PASSED	NA	21.1	40.4	47.1	44.1	45.7
Hydrometer Reading 5 - Percent Finer	% PASSED	NA	19.7	36.7	42.7	38.4	41.1
Hydrometer Reading 6 - Percent Finer	% PASSED	NA	16	30.4	34.1	29.3	31.8
Hydrometer Reading 7 - Percent Finer	% PASSED	NA	12.4	22.8	24	21.3	22.5
TOC							
TOC	mg/kg	17,000	36,200	48,500	32,200	54,500	39,900

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Table B-5
Sediment Sample Analytical Results - Physical Properties
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

	Location ID	LMR11-51	LMR11-51	LMR11-51	LMR11-51	LMR11-52	LMR11-52
	Field Sample ID	LMR11-51-006	LMR11-51-024	LMR11-51-048	LMR11-51-075	LMR11-52-006	LMR11-52-024
	Sample Date	8/7/2011	8/7/2011	8/7/2011	8/7/2011	8/8/2011	8/8/2011
	Depth Interval (in bss)	0- 6	6- 24	24- 48	48- 75	0- 6	6- 24
Chemical Name	**Unit**						
Grain Size							
Gravel	%	0	0	0	2.9	0	0
Sand	%	31.4	9.8	10.1	1.3	15.5	9.7
Silt	%	28	37.1	34.6	37.6	28.7	35
Clay	%	40.6	53.1	55.3	58.2	55.8	55.3
Coarse Sand	%	0.9	0.6	0	0.1	0	0
Medium Sand	%	1.1	0.6	0.3	0	1.1	0.2
Fine Sand	%	29.4	8.6	9.8	1.2	14.4	9.5
Sieve Size 3 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 2 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 1.5 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 1 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 0.75 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 0.375 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size #4 - Percent Finer	% PASSED	100	100	100	97.1	100	100
Sieve Size #10 - Percent Finer	% PASSED	99.1	99.4	100	97	100	100
Sieve Size #20 - Percent Finer	% PASSED	98.8	99.2	99.9	97	99.3	100
Sieve Size #40 - Percent Finer	% PASSED	98	98.8	99.7	97	98.9	99.8
Sieve Size #60 - Percent Finer	% PASSED	93.9	97.9	99.1	97	97.5	99.1
Sieve Size #80 - Percent Finer	% PASSED	80	95.6	97.3	96.9	94.6	97.8
Sieve Size #100 - Percent Finer	% PASSED	73.8	94	95.7	96.8	91.8	96.4
Sieve Size #200 - Percent Finer	% PASSED	68.6	90.2	89.9	95.8	84.5	90.3
Hydrometer Reading 1 - Percent Finer	% PASSED	63.8	77.9	81.4	80.9	81.1	83.6
Hydrometer Reading 2 - Percent Finer	% PASSED	60.2	74.1	76.2	76.3	76	76.9
Hydrometer Reading 3 - Percent Finer	% PASSED	53.1	66.4	69.2	71.8	67.6	68.6
Hydrometer Reading 4 - Percent Finer	% PASSED	46	60.7	60.5	65	60.9	60.3
Hydrometer Reading 5 - Percent Finer	% PASSED	40.6	53.1	55.3	58.2	55.8	55.3
Hydrometer Reading 6 - Percent Finer	% PASSED	33.3	45.3	46.5	44.5	45.7	45
Hydrometer Reading 7 - Percent Finer	% PASSED	26	33.6	35.9	35.3	35.6	33.3
TOC							
TOC	mg/kg	21,400	19,400	21,100	18,200	18,300	27,700

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Table B-5
Sediment Sample Analytical Results - Physical Properties
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

	Location ID	LMR11-52	LMR11-52	LMR11-52	LMR11-53	LMR11-53	LMR11-53
	Field Sample ID	LMR11-52-048	LMR11-52-048FS	LMR11-52-072	LMR11-53-006	LMR11-53-024	LMR11-53-048
	Sample Date	8/8/2011	8/8/2011	8/8/2011	8/7/2011	8/7/2011	8/7/2011
	Depth Interval (in bss)	24- 48	24- 48	48- 72	0- 6	6- 24	24- 48
Chemical Name	**Unit**						
Grain Size							
Gravel	%	0	0	0	0	17	0
Sand	%	9.5	7.2	8.8	12.7	37.2	27
Silt	%	38.5	34.2	49	29.5	13.5	18.2
Clay	%	52	58.6	42.2	57.8	32.3	54.8
Coarse Sand	%	0	0	0	0	7.2	2.2
Medium Sand	%	0.3	0.2	0.1	1.6	15.9	9.5
Fine Sand	%	9.2	7	8.7	11.1	14.1	15.3
Sieve Size 3 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 2 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 1.5 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 1 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 0.75 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 0.375 inch - Percent Finer	% PASSED	100	100	100	100	95.3	100
Sieve Size #4 - Percent Finer	% PASSED	100	100	100	100	83	100
Sieve Size #10 - Percent Finer	% PASSED	100	100	100	100	75.8	97.8
Sieve Size #20 - Percent Finer	% PASSED	99.9	100	100	99.5	67.8	94.8
Sieve Size #40 - Percent Finer	% PASSED	99.7	99.8	99.9	98.4	59.9	88.3
Sieve Size #60 - Percent Finer	% PASSED	98.4	98.8	99.6	96.6	54.4	80.1
Sieve Size #80 - Percent Finer	% PASSED	96.6	97.6	99.1	93.8	51.5	76.4
Sieve Size #100 - Percent Finer	% PASSED	95.2	96.6	98.6	92	49.8	75
Sieve Size #200 - Percent Finer	% PASSED	90.5	92.8	91.2	87.3	45.8	73
Hydrometer Reading 1 - Percent Finer	% PASSED	78	86.8	75	81.9	43.9	72.3
Hydrometer Reading 2 - Percent Finer	% PASSED	73.6	81.2	64	75.5	41.8	70.6
Hydrometer Reading 3 - Percent Finer	% PASSED	63.6	71.8	53.1	69.1	37.5	63.6
Hydrometer Reading 4 - Percent Finer	% PASSED	56.4	62.4	45.8	62.6	34.3	60
Hydrometer Reading 5 - Percent Finer	% PASSED	52	58.6	42.2	57.8	32.3	54.8
Hydrometer Reading 6 - Percent Finer	% PASSED	42	47	32.8	49.8	26.8	45.7
Hydrometer Reading 7 - Percent Finer	% PASSED	33.3	36	24	36.9	21.4	35.1
TOC							
TOC	mg/kg	22,900	22,500	20,800	34,900	28,200	23,400

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Table B-5
Sediment Sample Analytical Results - Physical Properties
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

	Location ID	LMR11-53	LMR11-54	LMR11-54	LMR11-54	LMR11-54	LMR11-54
	Field Sample ID	LMR11-53-073	LMR11-54-006	LMR11-54-006-DP	LMR11-54-024	LMR11-54-024-DP	LMR11-54-048
	Sample Date	8/7/2011	8/8/2011	8/8/2011	8/8/2011	8/8/2011	8/8/2011
	Depth Interval (in bss)	48- 73	0- 6	0- 6	6- 24	6- 24	24- 48
Chemical Name	**Unit**						
Grain Size							
Gravel	%	0.5	6.4	NA	6.6	NA	2.2
Sand	%	66.1	50.5	NA	49.7	NA	81.8
Silt	%	16	14.6	NA	14.2	NA	8.3
Clay	%	17.4	28.5	NA	29.5	NA	7.7
Coarse Sand	%	3.9	2	NA	3	NA	3.7
Medium Sand	%	21	4.3	NA	7.5	NA	13.6
Fine Sand	%	41.2	44.2	NA	39.2	NA	64.5
Sieve Size 3 inch - Percent Finer	% PASSED	100	100	NA	100	NA	100
Sieve Size 2 inch - Percent Finer	% PASSED	100	100	NA	100	NA	100
Sieve Size 1.5 inch - Percent Finer	% PASSED	100	100	NA	100	NA	100
Sieve Size 1 inch - Percent Finer	% PASSED	100	100	NA	100	NA	100
Sieve Size 0.75 inch - Percent Finer	% PASSED	100	100	NA	100	NA	100
Sieve Size 0.375 inch - Percent Finer	% PASSED	100	97.3	NA	96.4	NA	100
Sieve Size #4 - Percent Finer	% PASSED	99.5	93.6	NA	93.4	NA	97.8
Sieve Size #10 - Percent Finer	% PASSED	95.6	91.6	NA	90.4	NA	94.1
Sieve Size #20 - Percent Finer	% PASSED	88.2	90.2	NA	87.6	NA	88.9
Sieve Size #40 - Percent Finer	% PASSED	74.6	87.3	NA	82.9	NA	80.5
Sieve Size #60 - Percent Finer	% PASSED	56.2	78.3	NA	72.8	NA	66.5
Sieve Size #80 - Percent Finer	% PASSED	47.3	60.5	NA	58.2	NA	49.5
Sieve Size #100 - Percent Finer	% PASSED	42.7	51.2	NA	51.4	NA	36.2
Sieve Size #200 - Percent Finer	% PASSED	33.4	43.1	NA	43.7	NA	16
Hydrometer Reading 1 - Percent Finer	% PASSED	25.6	40.3	NA	41.4	NA	11.4
Hydrometer Reading 2 - Percent Finer	% PASSED	23.9	38.3	NA	39.2	NA	11.4
Hydrometer Reading 3 - Percent Finer	% PASSED	20.7	34.4	NA	36	NA	10.2
Hydrometer Reading 4 - Percent Finer	% PASSED	19	31.5	NA	32.7	NA	9
Hydrometer Reading 5 - Percent Finer	% PASSED	17.4	28.5	NA	29.5	NA	7.7
Hydrometer Reading 6 - Percent Finer	% PASSED	14	24.5	NA	24.1	NA	6.2
Hydrometer Reading 7 - Percent Finer	% PASSED	10.7	18.7	NA	18.6	NA	5
TOC							
TOC	mg/kg	19,800	16,600	22,400	17,500 J	33,400 J	18,100

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Table B-5
Sediment Sample Analytical Results - Physical Properties
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

	Location ID	LMR11-54	LMR11-54	LMR11-54	LMR11-55	LMR11-55	LMR11-55
	Field Sample ID	LMR11-54-048-DP	LMR11-54-072	LMR11-54-086	LMR11-55-006	LMR11-55-006-DP	LMR11-55-030
	Sample Date	8/8/2011	8/8/2011	8/8/2011	8/7/2011	8/7/2011	8/7/2011
	Depth Interval (in bss)	24- 48	48- 72	72- 86	0- 6	0- 6	6- 30
Chemical Name	**Unit**						
Grain Size							
Gravel	%	NA	9.5	0	7.8	NA	16.4
Sand	%	NA	25.2	22.5	34.1	NA	37.6
Silt	%	NA	24.8	31.5	17.8	NA	25.7
Clay	%	NA	40.5	46	40.3	NA	20.3
Coarse Sand	%	NA	1	0	2.6	NA	5.6
Medium Sand	%	NA	2.6	0.5	4.5	NA	10.1
Fine Sand	%	NA	21.6	22	27	NA	21.9
Sieve Size 3 inch - Percent Finer	% PASSED	NA	100	100	100	NA	100
Sieve Size 2 inch - Percent Finer	% PASSED	NA	100	100	100	NA	100
Sieve Size 1.5 inch - Percent Finer	% PASSED	NA	100	100	100	NA	100
Sieve Size 1 inch - Percent Finer	% PASSED	NA	100	100	100	NA	100
Sieve Size 0.75 inch - Percent Finer	% PASSED	NA	100	100	100	NA	100
Sieve Size 0.375 inch - Percent Finer	% PASSED	NA	94	100	96.9	NA	96.3
Sieve Size #4 - Percent Finer	% PASSED	NA	90.5	100	92.2	NA	83.6
Sieve Size #10 - Percent Finer	% PASSED	NA	89.5	100	89.6	NA	78
Sieve Size #20 - Percent Finer	% PASSED	NA	88.6	99.9	87.6	NA	73.2
Sieve Size #40 - Percent Finer	% PASSED	NA	86.9	99.5	85.1	NA	67.9
Sieve Size #60 - Percent Finer	% PASSED	NA	83.2	97.9	79.8	NA	60.9
Sieve Size #80 - Percent Finer	% PASSED	NA	79.8	91.3	70	NA	54.3
Sieve Size #100 - Percent Finer	% PASSED	NA	77.1	85.1	64.3	NA	51.1
Sieve Size #200 - Percent Finer	% PASSED	NA	65.3	77.5	58.1	NA	46
Hydrometer Reading 1 - Percent Finer	% PASSED	NA	55.7	69.7	56.6	NA	28
Hydrometer Reading 2 - Percent Finer	% PASSED	NA	51.2	64.7	53.9	NA	26.3
Hydrometer Reading 3 - Percent Finer	% PASSED	NA	48.2	59.6	48.4	NA	24.5
Hydrometer Reading 4 - Percent Finer	% PASSED	NA	43.7	52.8	43	NA	22.8
Hydrometer Reading 5 - Percent Finer	% PASSED	NA	40.5	46	40.3	NA	20.3
Hydrometer Reading 6 - Percent Finer	% PASSED	NA	34.5	39	33.5	NA	16
Hydrometer Reading 7 - Percent Finer	% PASSED	NA	25.5	28.8	25.3	NA	12.5
TOC							
TOC	mg/kg	20,800	30,700	28,600	26,700	26,200	20,600

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Table B-5
Sediment Sample Analytical Results - Physical Properties
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

	Location ID	LMR11-55	LMR11-56	LMR11-56	LMR11-56	LMR11-57	LMR11-57
	Field Sample ID	LMR11-55-030-DP	LMR11-56-006	LMR11-56-024	LMR11-56-036	LMR11-57-006	LMR11-57-024
	Sample Date	8/7/2011	8/7/2011	8/7/2011	8/7/2011	8/6/2011	8/6/2011
	Depth Interval (in bss)	6- 30	0- 6	6- 24	24- 36	0- 6	6- 24
Chemical Name	**Unit**						
Grain Size							
Gravel	%	NA	1.9	3.3	8.3	0.7	0
Sand	%	NA	20.6	25.5	28.5	42.1	94.5
Silt	%	NA	30.4	20.6	28.8	19.4	2.2
Clay	%	NA	47.1	50.6	34.4	37.8	3.2
Coarse Sand	%	NA	1.8	1.8	3.1	0.2	0.1
Medium Sand	%	NA	3.7	3.1	6.4	2.4	2.1
Fine Sand	%	NA	15.1	20.6	19	39.5	92.3
Sieve Size 3 inch - Percent Finer	% PASSED	NA	100	100	100	100	100
Sieve Size 2 inch - Percent Finer	% PASSED	NA	100	100	100	100	100
Sieve Size 1.5 inch - Percent Finer	% PASSED	NA	100	100	100	100	100
Sieve Size 1 inch - Percent Finer	% PASSED	NA	100	100	100	100	100
Sieve Size 0.75 inch - Percent Finer	% PASSED	NA	100	100	100	100	100
Sieve Size 0.375 inch - Percent Finer	% PASSED	NA	99	97.8	100	100	100
Sieve Size #4 - Percent Finer	% PASSED	NA	98.1	96.7	91.7	99.3	100
Sieve Size #10 - Percent Finer	% PASSED	NA	96.3	94.9	88.6	99.1	99.9
Sieve Size #20 - Percent Finer	% PASSED	NA	94.9	93.6	85.5	98.6	99.7
Sieve Size #40 - Percent Finer	% PASSED	NA	92.6	91.8	82.2	96.7	97.8
Sieve Size #60 - Percent Finer	% PASSED	NA	89.1	88	77.4	84.9	51.5
Sieve Size #80 - Percent Finer	% PASSED	NA	86.4	83.3	73.8	66.3	9.1
Sieve Size #100 - Percent Finer	% PASSED	NA	84.3	79.6	71.4	63.2	6.9
Sieve Size #200 - Percent Finer	% PASSED	NA	77.5	71.2	63.2	57.2	5.5
Hydrometer Reading 1 - Percent Finer	% PASSED	NA	62.5	67.2	53.9	55.3	5
Hydrometer Reading 2 - Percent Finer	% PASSED	NA	59.9	64.2	50	52	4.5
Hydrometer Reading 3 - Percent Finer	% PASSED	NA	54.8	59.6	43.5	46.5	3.7
Hydrometer Reading 4 - Percent Finer	% PASSED	NA	49.7	55.1	39.6	42.2	3.7
Hydrometer Reading 5 - Percent Finer	% PASSED	NA	47.1	50.6	34.4	37.8	3.2
Hydrometer Reading 6 - Percent Finer	% PASSED	NA	38.1	43.1	26.7	31.2	2.8
Hydrometer Reading 7 - Percent Finer	% PASSED	NA	29.1	32.5	20.2	22.5	2
TOC							
TOC	mg/kg	23,200	21,700	19,700	23,200	29,200	6,000

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Table B-5
Sediment Sample Analytical Results - Physical Properties
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

	Location ID	LMR11-57	LMR11-57	LMR11-58	LMR11-59	LMR11-59	LMR11-59
	Field Sample ID	LMR11-57-048	LMR11-57-062	LMR11-58-010	LMR11-59-006	LMR11-59-024	LMR11-59-048
	Sample Date	8/6/2011	8/6/2011	8/6/2011	8/6/2011	8/6/2011	8/6/2011
	Depth Interval (in bss)	24- 48	48- 62	0- 10	0- 6	6- 24	24- 48
Chemical Name	**Unit**						
Grain Size							
Gravel	%	0	0	0	0	0	0
Sand	%	65.6	89.1	18.2	24.1	7.2	8.4
Silt	%	13.9	6.2	29.4	31.1	31.6	35.3
Clay	%	20.5	4.7	52.4	44.8	61.2	56.3
Coarse Sand	%	0	0	2	0	0	0
Medium Sand	%	1.4	0.6	4.6	0.6	0	0.4
Fine Sand	%	64.2	88.5	11.6	23.5	7.2	8
Sieve Size 3 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 2 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 1.5 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 1 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 0.75 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 0.375 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size #4 - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size #10 - Percent Finer	% PASSED	100	100	98	100	100	100
Sieve Size #20 - Percent Finer	% PASSED	99.7	99.8	95.8	99.6	100	99.9
Sieve Size #40 - Percent Finer	% PASSED	98.6	99.4	93.4	99.4	100	99.6
Sieve Size #60 - Percent Finer	% PASSED	67	81.7	90.5	98.7	99.9	99.2
Sieve Size #80 - Percent Finer	% PASSED	45	49.4	88.3	96.5	99.4	98.1
Sieve Size #100 - Percent Finer	% PASSED	40.2	31.5	86.9	92.7	98.5	97.3
Sieve Size #200 - Percent Finer	% PASSED	34.4	10.9	81.8	75.9	92.8	91.6
Hydrometer Reading 1 - Percent Finer	% PASSED	33.9	10.3	73.1	69.5	88.2	82.5
Hydrometer Reading 2 - Percent Finer	% PASSED	29.1	8.5	69.4	63	82.3	77.1
Hydrometer Reading 3 - Percent Finer	% PASSED	26.2	7.2	63.8	57.8	74.9	68.9
Hydrometer Reading 4 - Percent Finer	% PASSED	22.4	6	58	51.3	68.7	63.2
Hydrometer Reading 5 - Percent Finer	% PASSED	20.5	4.7	52.4	44.8	61.2	56.3
Hydrometer Reading 6 - Percent Finer	% PASSED	16.3	3.5	41	36.9	50.8	46.7
Hydrometer Reading 7 - Percent Finer	% PASSED	13.4	2.2	28.1	27.8	38.9	35.8
TOC							
TOC	mg/kg	23,300 J	25,900	26,300	27,900 J	22,000	31,300

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Table B-5
Sediment Sample Analytical Results - Physical Properties
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

	Location ID	LMR11-59	LMR11-59	LMR11-59	LMR11-60	LMR11-60	LMR11-60
	Field Sample ID	LMR11-59-072	LMR11-59-096	LMR11-59-116	LMR11-60-006	LMR11-60-024	LMR11-60-048
	Sample Date	8/6/2011	8/6/2011	8/6/2011	8/6/2011	8/6/2011	8/6/2011
	Depth Interval (in bss)	48- 72	72- 96	96- 116	0- 6	6- 24	24- 48
Chemical Name	**Unit**						
Grain Size							
Gravel	%	0	0.9	6.1	0.9	0	0
Sand	%	16	41.3	75.2	10.9	5.1	2.7
Silt	%	27.2	21.1	4.6	40.7	37.4	37.4
Clay	%	56.8	36.7	14.1	47.5	57.5	59.9
Coarse Sand	%	0.4	0.2	0.4	0.9	0	0
Medium Sand	%	2.2	9	20.5	0.2	0	0.3
Fine Sand	%	13.4	32.1	54.3	9.8	5.1	2.4
Sieve Size 3 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 2 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 1.5 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 1 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 0.75 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 0.375 inch - Percent Finer	% PASSED	100	99.1	95.1	100	100	100
Sieve Size #4 - Percent Finer	% PASSED	100	99.1	93.9	99.1	100	100
Sieve Size #10 - Percent Finer	% PASSED	99.6	98.9	93.5	98.2	100	100
Sieve Size #20 - Percent Finer	% PASSED	99.2	98.2	92.5	98.1	100	99.8
Sieve Size #40 - Percent Finer	% PASSED	97.4	89.9	73	98	100	99.7
Sieve Size #60 - Percent Finer	% PASSED	95.1	81	40	97.9	99.9	99.6
Sieve Size #80 - Percent Finer	% PASSED	92.9	69	26.4	97	99.8	99.5
Sieve Size #100 - Percent Finer	% PASSED	91	65.1	22.4	96.5	99.5	99.3
Sieve Size #200 - Percent Finer	% PASSED	84	57.8	18.7	88.2	94.9	97.3
Hydrometer Reading 1 - Percent Finer	% PASSED	79.1	53.2	21.3	69.6	83.8	85.3
Hydrometer Reading 2 - Percent Finer	% PASSED	75	49.3	20	65.4	78.2	79.6
Hydrometer Reading 3 - Percent Finer	% PASSED	67.8	45.4	18.1	57.2	70.7	71.2
Hydrometer Reading 4 - Percent Finer	% PASSED	62.3	40.6	16.1	53.1	63.2	65.5
Hydrometer Reading 5 - Percent Finer	% PASSED	56.8	36.7	14.1	47.5	57.5	59.9
Hydrometer Reading 6 - Percent Finer	% PASSED	45.8	30.7	12.1	39.2	48	50
Hydrometer Reading 7 - Percent Finer	% PASSED	34.7	23	8.2	29.6	34.9	38.6
TOC							
TOC	mg/kg	20,600	22,100	18,600	18,400	28,100	31,400

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Table B-5
Sediment Sample Analytical Results - Physical Properties
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

	Location ID	LMR11-60	LMR11-60	LMR11-60	LMR11-61	LMR11-61	LMR11-62
	Field Sample ID	LMR11-60-048FS	LMR11-60-072	LMR11-60-092	LMR11-61-006	LMR11-61-030	LMR11-62-006
	Sample Date	8/6/2011	8/6/2011	8/6/2011	8/6/2011	8/6/2011	8/6/2011
	Depth Interval (in bss)	24- 48	48- 72	72- 92	0- 6	6- 30	0- 6
Chemical Name	**Unit**						
Grain Size							
Gravel	%	0	1.3	0	26.3	5	0
Sand	%	6	36	13.9	46	25	11.7
Silt	%	37.1	28.7	45	13.4	25.8	35.9
Clay	%	56.9	34	41.1	14.3	44.2	52.4
Coarse Sand	%	0	1.1	0	9.5	4.3	0
Medium Sand	%	0.2	6.6	0.9	16	6.6	0.2
Fine Sand	%	5.8	28.3	13	20.5	14.1	11.5
Sieve Size 3 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 2 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 1.5 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 1 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 0.75 inch - Percent Finer	% PASSED	100	100	100	93.2	100	100
Sieve Size 0.375 inch - Percent Finer	% PASSED	100	100	100	84	100	100
Sieve Size #4 - Percent Finer	% PASSED	100	98.7	100	73.7	95	100
Sieve Size #10 - Percent Finer	% PASSED	100	97.6	100	64.2	90.7	100
Sieve Size #20 - Percent Finer	% PASSED	99.9	96.2	99.9	56.5	87.5	99.9
Sieve Size #40 - Percent Finer	% PASSED	99.8	91	99.1	48.2	84.1	99.8
Sieve Size #60 - Percent Finer	% PASSED	99.8	82.7	96.2	38.6	79.7	99.8
Sieve Size #80 - Percent Finer	% PASSED	99.5	72.5	94.5	33.1	76.7	99.3
Sieve Size #100 - Percent Finer	% PASSED	99.2	70.5	93.4	31.1	75.1	98.9
Sieve Size #200 - Percent Finer	% PASSED	94	62.7	86.1	27.7	70	88.3
Hydrometer Reading 1 - Percent Finer	% PASSED	79.5	52	63.3	20.5	67.1	74.2
Hydrometer Reading 2 - Percent Finer	% PASSED	76.7	48.4	58.4	19.3	60.6	71.1
Hydrometer Reading 3 - Percent Finer	% PASSED	68.2	43.6	51	18.1	55.7	63.3
Hydrometer Reading 4 - Percent Finer	% PASSED	61.2	38.8	44.8	16.1	52.2	57.1
Hydrometer Reading 5 - Percent Finer	% PASSED	56.9	34	41.1	14.3	44.2	52.4
Hydrometer Reading 6 - Percent Finer	% PASSED	45.6	28	32.3	11.7	37.4	42.9
Hydrometer Reading 7 - Percent Finer	% PASSED	35.8	20.8	23.8	8.7	27.7	32
TOC							
TOC	mg/kg	23,100	19,500	24,900	27,400	24,500	27,100

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Table B-5
Sediment Sample Analytical Results - Physical Properties
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

	Location ID	LMR11-62	LMR11-62	LMR11-62	LMR11-62	LMR11-62	LMR11-62
	Field Sample ID	LMR11-62-024	LMR11-62-024DP	LMR11-62-048	LMR11-62-072	LMR11-62-096	LMR11-62-108
	Sample Date	8/6/2011	8/6/2011	8/6/2011	8/6/2011	8/6/2011	8/6/2011
	Depth Interval (in bss)	6- 24	6- 24	24- 48	48- 72	72- 96	96- 108
Chemical Name	**Unit**						
Grain Size							
Gravel	%	0	NA	0.1	0	0	0.2
Sand	%	11.9	NA	60	90.2	53.2	71.3
Silt	%	27.1	NA	19.6	5.7	29.5	13.4
Clay	%	61	NA	20.3	4.1	17.3	15.1
Coarse Sand	%	0.1	NA	0.2	0	0	0.2
Medium Sand	%	0.7	NA	9.7	2.5	2.4	11.8
Fine Sand	%	11.1	NA	50.1	87.7	50.8	59.3
Sieve Size 3 inch - Percent Finer	% PASSED	100	NA	100	100	100	100
Sieve Size 2 inch - Percent Finer	% PASSED	100	NA	100	100	100	100
Sieve Size 1.5 inch - Percent Finer	% PASSED	100	NA	100	100	100	100
Sieve Size 1 inch - Percent Finer	% PASSED	100	NA	100	100	100	100
Sieve Size 0.75 inch - Percent Finer	% PASSED	100	NA	100	100	100	100
Sieve Size 0.375 inch - Percent Finer	% PASSED	100	NA	100	100	100	100
Sieve Size #4 - Percent Finer	% PASSED	100	NA	99.9	100	100	99.8
Sieve Size #10 - Percent Finer	% PASSED	99.9	NA	99.7	100	100	99.6
Sieve Size #20 - Percent Finer	% PASSED	99.8	NA	98.5	99.9	99.7	98.8
Sieve Size #40 - Percent Finer	% PASSED	99.2	NA	90	97.5	97.6	87.8
Sieve Size #60 - Percent Finer	% PASSED	98.2	NA	71.3	61.4	80.3	43.2
Sieve Size #80 - Percent Finer	% PASSED	95.7	NA	50.2	20.5	71	33.5
Sieve Size #100 - Percent Finer	% PASSED	94.6	NA	46.4	14.9	65.2	31.6
Sieve Size #200 - Percent Finer	% PASSED	88.1	NA	39.9	9.8	46.8	28.5
Hydrometer Reading 1 - Percent Finer	% PASSED	82.2	NA	31.7	8.3	35.2	25.8
Hydrometer Reading 2 - Percent Finer	% PASSED	78.3	NA	29.6	6.8	31.1	23.3
Hydrometer Reading 3 - Percent Finer	% PASSED	72.5	NA	24.6	6	25.6	20.9
Hydrometer Reading 4 - Percent Finer	% PASSED	66.8	NA	22.4	4.9	21.4	18.5
Hydrometer Reading 5 - Percent Finer	% PASSED	61	NA	20.3	4.1	17.3	15.1
Hydrometer Reading 6 - Percent Finer	% PASSED	53.1	NA	15.3	2.9	13.2	11.1
Hydrometer Reading 7 - Percent Finer	% PASSED	39.6	NA	11.8	2.2	9.1	7.8
TOC							
TOC	mg/kg	19,700	22,400	21,900	6,430	26,900	14,500

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Table B-5
Sediment Sample Analytical Results - Physical Properties
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

	Location ID	LMR11-63	LMR11-63	LMR11-63	LMR11-63	LMR11-63	LMR11-63
	Field Sample ID	LMR11-63-006	LMR11-63-024	LMR11-63-048	LMR11-63-048FS	LMR11-63-072	LMR11-63-096
	Sample Date	8/8/2011	8/8/2011	8/8/2011	8/8/2011	8/8/2011	8/8/2011
	Depth Interval (in bss)	0- 6	6- 24	24- 48	24- 48	48- 72	72- 96
Chemical Name	**Unit**						
Grain Size							
Gravel	%	0	11.8	0.4	3.3	0	0
Sand	%	11.2	27.3	26.5	23.9	8.6	15.4
Silt	%	35.4	20.4	28.6	27.7	31.2	35.1
Clay	%	53.4	40.5	44.5	45.1	60.2	49.5
Coarse Sand	%	0.1	1.3	0.5	1	0	0
Medium Sand	%	0.4	2.8	2.7	2.6	0.8	0.6
Fine Sand	%	10.7	23.2	23.3	20.3	7.8	14.8
Sieve Size 3 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 2 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 1.5 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 1 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 0.75 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 0.375 inch - Percent Finer	% PASSED	100	90.5	100	97.2	100	100
Sieve Size #4 - Percent Finer	% PASSED	100	88.2	99.6	96.7	100	100
Sieve Size #10 - Percent Finer	% PASSED	99.9	86.9	99.1	95.7	100	100
Sieve Size #20 - Percent Finer	% PASSED	99.7	85.8	98.4	95	99.6	99.8
Sieve Size #40 - Percent Finer	% PASSED	99.5	84.1	96.4	93.1	99.2	99.4
Sieve Size #60 - Percent Finer	% PASSED	99.1	79.8	87.3	85.1	96.7	95.6
Sieve Size #80 - Percent Finer	% PASSED	98.4	76.8	82.5	81.2	95.6	90.5
Sieve Size #100 - Percent Finer	% PASSED	97.5	74.5	80.2	79.3	94.9	89.1
Sieve Size #200 - Percent Finer	% PASSED	88.8	60.9	73.1	72.8	91.4	84.6
Hydrometer Reading 1 - Percent Finer	% PASSED	77.8	58	66.1	67.5	85.9	75.9
Hydrometer Reading 2 - Percent Finer	% PASSED	73.5	53.9	61	62.2	79	70.1
Hydrometer Reading 3 - Percent Finer	% PASSED	64.9	47.2	53.4	55.6	72.2	61.4
Hydrometer Reading 4 - Percent Finer	% PASSED	62	44.5	48.3	51.6	65.3	53.9
Hydrometer Reading 5 - Percent Finer	% PASSED	53.4	40.5	44.5	45.1	60.2	49.5
Hydrometer Reading 6 - Percent Finer	% PASSED	46	32.5	35.7	35.8	49.9	39.4
Hydrometer Reading 7 - Percent Finer	% PASSED	33.2	25.7	25.5	26.6	36.2	29.2
TOC							
TOC	mg/kg	26,800	40,800	31,800	36,400	46,700 J	36,800

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Table B-5
Sediment Sample Analytical Results - Physical Properties
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

	Location ID	LMR11-63	LMR11-64	LMR11-64	LMR11-64	LMR11-64	LMR11-64
	Field Sample ID	LMR11-63-115	LMR11-88-006	LMR11-88-024	LMR11-88-048	LMR11-88-072	LMR11-88-088
	Sample Date	8/8/2011	8/7/2011	8/7/2011	8/7/2011	8/7/2011	8/7/2011
	Depth Interval (in bss)	96- 115	0- 6	6- 24	24- 48	48- 72	72- 88
Chemical Name	**Unit**						
Grain Size							
Gravel	%	0	12.4	0	13	0.7	7.3
Sand	%	68.1	33.6	12.1	35.4	14	46.1
Silt	%	19.2	22.2	39.4	14.7	32.8	19.2
Clay	%	12.7	31.8	48.5	36.9	52.5	27.4
Coarse Sand	%	0.3	4.5	2	5	0.1	5.3
Medium Sand	%	1	12.7	3.4	11.8	3.1	15.4
Fine Sand	%	66.8	16.4	6.7	18.6	10.8	25.4
Sieve Size 3 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 2 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 1.5 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 1 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 0.75 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 0.375 inch - Percent Finer	% PASSED	100	95.9	100	94	100	98.9
Sieve Size #4 - Percent Finer	% PASSED	100	87.6	100	87	99.3	92.7
Sieve Size #10 - Percent Finer	% PASSED	99.7	83.1	98	82	99.2	87.4
Sieve Size #20 - Percent Finer	% PASSED	99.5	77.5	96.3	78	98.1	81.9
Sieve Size #40 - Percent Finer	% PASSED	98.7	70.4	94.6	70.2	96.1	72
Sieve Size #60 - Percent Finer	% PASSED	92.4	62.4	92.4	58.5	92.5	56.9
Sieve Size #80 - Percent Finer	% PASSED	52.8	59	91.3	55.4	91	52.5
Sieve Size #100 - Percent Finer	% PASSED	46.1	57.5	90.7	54.2	90	50.5
Sieve Size #200 - Percent Finer	% PASSED	31.9	54	87.9	51.6	85.3	46.6
Hydrometer Reading 1 - Percent Finer	% PASSED	22	47.9	74.1	50.2	81.1	37.5
Hydrometer Reading 2 - Percent Finer	% PASSED	20.7	44.2	70.4	47.5	73.4	36.3
Hydrometer Reading 3 - Percent Finer	% PASSED	18.1	39.2	63.1	43.5	65.8	33.8
Hydrometer Reading 4 - Percent Finer	% PASSED	15.4	36.7	55.8	40.9	60.1	31.3
Hydrometer Reading 5 - Percent Finer	% PASSED	12.7	31.8	48.5	36.9	52.5	27.4
Hydrometer Reading 6 - Percent Finer	% PASSED	10.1	25.5	39.4	30.2	42.9	22.5
Hydrometer Reading 7 - Percent Finer	% PASSED	7.4	19.3	30.3	22.2	33.4	16.3
TOC							
TOC	mg/kg	26,700	24,100	25,400	25,200	30,600	20,500

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Table B-5
Sediment Sample Analytical Results - Physical Properties
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

	Location ID	LMR11-65	LMR11-65	LMR11-66	LMR11-66	LMR11-66	LMR11-66
	Field Sample ID	LMR11-65-006	LMR11-65-024	LMR11-66-006	LMR11-66-024	LMR11-66-048	LMR11-66-048FS
	Sample Date	8/6/2011	8/6/2011	8/7/2011	8/7/2011	8/7/2011	8/7/2011
	Depth Interval (in bss)	0- 6	6- 24	0- 6	6- 24	24- 48	24- 48
Chemical Name	**Unit**						
Grain Size							
Gravel	%	0.2	7.1	0	0	0	0
Sand	%	12.4	41.2	11.4	6.7	15.9	9.7
Silt	%	27.8	18.4	38	39.5	37	40.8
Clay	%	59.6	33.3	50.6	53.8	47.1	49.5
Coarse Sand	%	0.5	4.6	1	0	0	0
Medium Sand	%	2.9	12.9	0.8	0.5	0.1	0.1
Fine Sand	%	9	23.7	9.6	6.2	15.8	9.6
Sieve Size 3 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 2 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 1.5 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 1 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 0.75 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 0.375 inch - Percent Finer	% PASSED	100	96.7	100	100	100	100
Sieve Size #4 - Percent Finer	% PASSED	99.8	92.9	100	100	100	100
Sieve Size #10 - Percent Finer	% PASSED	99.3	88.3	99	100	100	100
Sieve Size #20 - Percent Finer	% PASSED	98.6	83.3	98.6	99.9	100	100
Sieve Size #40 - Percent Finer	% PASSED	96.4	75.4	98.2	99.5	99.9	99.9
Sieve Size #60 - Percent Finer	% PASSED	92.7	62.9	97.8	99.2	99.7	99.8
Sieve Size #80 - Percent Finer	% PASSED	91	57.9	97.4	98.8	98.9	99.5
Sieve Size #100 - Percent Finer	% PASSED	90.1	55.9	96.7	98.2	97	98.8
Sieve Size #200 - Percent Finer	% PASSED	87.4	51.7	88.6	93.3	84.1	90.3
Hydrometer Reading 1 - Percent Finer	% PASSED	84.3	48.7	75.9	85.2	69.9	72.5
Hydrometer Reading 2 - Percent Finer	% PASSED	79.7	45.7	72	78.5	65.7	68.3
Hydrometer Reading 3 - Percent Finer	% PASSED	70.4	40.6	64.4	67.5	59.5	62.1
Hydrometer Reading 4 - Percent Finer	% PASSED	64.2	37	56.7	60.5	53.3	57.9
Hydrometer Reading 5 - Percent Finer	% PASSED	59.6	33.3	50.6	53.8	47.1	49.5
Hydrometer Reading 6 - Percent Finer	% PASSED	48.8	26	41	45	36.6	41
Hydrometer Reading 7 - Percent Finer	% PASSED	36.4	19.4	33	35.8	30.2	30.4
TOC							
TOC	mg/kg	17,700	22,000	28,000	26,500	23,800 J	24,500

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Table B-5
Sediment Sample Analytical Results - Physical Properties
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

	Location ID	LMR11-66	LMR11-66	LMR11-66	LMR11-67	LMR11-67	LMR11-67
	Field Sample ID	LMR11-66-072	LMR11-66-096	LMR11-66-117	LMR11-67-006	LMR11-67-024	LMR11-67-048
	Sample Date	8/7/2011	8/7/2011	8/7/2011	8/6/2011	8/6/2011	8/6/2011
	Depth Interval (in bss)	48- 72	72- 96	96- 117	0- 6	6- 24	24- 48
Chemical Name	**Unit**						
Grain Size							
Gravel	%	0	0	0	0.3	0	1.3
Sand	%	4.1	30.8	13.5	24.3	8.9	11
Silt	%	43.7	32.8	40.7	44.5	39.7	31.3
Clay	%	52.2	36.4	45.8	30.9	51.4	56.4
Coarse Sand	%	0	0.2	0.2	0	0	0.5
Medium Sand	%	0	0.7	0.5	1.4	0.8	1.3
Fine Sand	%	4.1	29.9	12.8	22.9	8.1	9.2
Sieve Size 3 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 2 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 1.5 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 1 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 0.75 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 0.375 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size #4 - Percent Finer	% PASSED	100	100	100	99.7	100	98.7
Sieve Size #10 - Percent Finer	% PASSED	100	99.8	99.8	99.7	100	98.2
Sieve Size #20 - Percent Finer	% PASSED	100	99.7	99.6	99.1	99.6	97.9
Sieve Size #40 - Percent Finer	% PASSED	100	99.1	99.3	98.3	99.2	96.9
Sieve Size #60 - Percent Finer	% PASSED	99.9	95.3	98.6	95.7	97.5	93.6
Sieve Size #80 - Percent Finer	% PASSED	99.7	86.5	97.6	92.9	96.2	91.6
Sieve Size #100 - Percent Finer	% PASSED	99.4	80.2	96.2	90.2	95.4	90.7
Sieve Size #200 - Percent Finer	% PASSED	95.9	69.2	86.5	75.4	91.1	87.7
Hydrometer Reading 1 - Percent Finer	% PASSED	74.7	54.1	69.7	55.3	78	80.9
Hydrometer Reading 2 - Percent Finer	% PASSED	70.6	50	66.5	47.5	72.2	75.8
Hydrometer Reading 3 - Percent Finer	% PASSED	66.6	45.9	58.5	39.7	64	69.3
Hydrometer Reading 4 - Percent Finer	% PASSED	60.5	41.8	52.2	34.8	58.3	62.8
Hydrometer Reading 5 - Percent Finer	% PASSED	52.2	36.4	45.8	30.9	51.4	56.4
Hydrometer Reading 6 - Percent Finer	% PASSED	44	29.4	37.7	25	42.1	47.3
Hydrometer Reading 7 - Percent Finer	% PASSED	35.7	22.6	29.7	18.1	29.5	33.1
TOC							
TOC	mg/kg	25,600	24,500	34,900	24,400	27,300	29,400

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Table B-5
Sediment Sample Analytical Results - Physical Properties
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

	Location ID	LMR11-67	LMR11-68	LMR11-68	LMR11-68	LMR11-68	LMR11-68
	Field Sample ID	LMR11-67-077	LMR11-68-006	LMR11-68-024	LMR11-68-048	LMR11-68-072	LMR11-68-096
	Sample Date	8/6/2011	8/7/2011	8/7/2011	8/7/2011	8/7/2011	8/7/2011
	Depth Interval (in bss)	48- 77	0- 6	6- 24	24- 48	48- 72	72- 96
Chemical Name	**Unit**						
Grain Size							
Gravel	%	0	0	0	0	0	0
Sand	%	27.5	9.4	3.3	2.7	5.1	2.8
Silt	%	32.7	40.7	40.6	31.7	32.3	31.8
Clay	%	39.8	49.9	56.1	65.6	62.6	65.4
Coarse Sand	%	0	0	0	0	0	0
Medium Sand	%	3	0.4	0.1	0.3	0.5	0.5
Fine Sand	%	24.5	9	3.2	2.4	4.6	2.3
Sieve Size 3 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 2 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 1.5 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 1 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 0.75 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 0.375 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size #4 - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size #10 - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size #20 - Percent Finer	% PASSED	99.3	99.7	99.9	99.8	99.8	99.8
Sieve Size #40 - Percent Finer	% PASSED	97	99.6	99.9	99.7	99.5	99.5
Sieve Size #60 - Percent Finer	% PASSED	88.8	99.3	99.9	99.6	99.3	99.2
Sieve Size #80 - Percent Finer	% PASSED	82.7	97.8	99.9	99.4	99.1	98.9
Sieve Size #100 - Percent Finer	% PASSED	79.7	96.4	99.7	99.1	98.6	98.7
Sieve Size #200 - Percent Finer	% PASSED	72.5	90.6	96.7	97.3	94.9	97.2
Hydrometer Reading 1 - Percent Finer	% PASSED	61	77.1	84.4	94	87.5	88.1
Hydrometer Reading 2 - Percent Finer	% PASSED	56.6	71.3	78.7	87.9	83.3	84
Hydrometer Reading 3 - Percent Finer	% PASSED	49.9	63.5	71.2	81.9	79.2	77.8
Hydrometer Reading 4 - Percent Finer	% PASSED	44.3	57.7	63.6	73.6	72.9	71.6
Hydrometer Reading 5 - Percent Finer	% PASSED	39.8	49.9	56.1	65.6	62.6	65.4
Hydrometer Reading 6 - Percent Finer	% PASSED	33.1	42	46.4	53.5	50.3	55
Hydrometer Reading 7 - Percent Finer	% PASSED	23	32.2	35.1	27.2	38	42.6
TOC							
TOC	mg/kg	32,800	27,000	23,600	23,800	22,400	23,000

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Table B-5
Sediment Sample Analytical Results - Physical Properties
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

	Location ID	LMR11-69	LMR11-70	LMR11-70	LMR11-70	LMR11-70	LMR11-70
	Field Sample ID	LMR11-69-006	LMR11-70-006	LMR11-70-024	LMR11-70-048	LMR11-70-072	LMR11-70-072FS
	Sample Date	8/6/2011	8/7/2011	8/7/2011	8/7/2011	8/7/2011	8/7/2011
	Depth Interval (in bss)	0- 6	0- 6	6- 24	24- 48	48- 72	48- 72
Chemical Name	**Unit**						
Grain Size							
Gravel	%	18	0	0	0	0	3
Sand	%	76.6	1.7	0.3	4.9	13.2	16.2
Silt	%	4.1	30.4	28.5	34	27.8	31.6
Clay	%	1.3	67.9	71.2	61.1	59	49.2
Coarse Sand	%	15	0	0	0	0	4
Medium Sand	%	40.5	0.7	0.1	0.4	3	1.2
Fine Sand	%	21.1	1	0.2	4.5	10.2	11
Sieve Size 3 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 2 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 1.5 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 1 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 0.75 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 0.375 inch - Percent Finer	% PASSED	95.5	100	100	100	100	100
Sieve Size #4 - Percent Finer	% PASSED	82	100	100	100	100	97
Sieve Size #10 - Percent Finer	% PASSED	67	100	100	100	100	93
Sieve Size #20 - Percent Finer	% PASSED	45.1	99.5	100	99.9	98.8	92.7
Sieve Size #40 - Percent Finer	% PASSED	26.5	99.3	99.9	99.6	97	91.8
Sieve Size #60 - Percent Finer	% PASSED	10.9	99.2	99.9	98.7	95.4	90.1
Sieve Size #80 - Percent Finer	% PASSED	7.1	99	99.9	97.3	93.7	88.6
Sieve Size #100 - Percent Finer	% PASSED	6.4	99	99.9	96.6	92.7	87.4
Sieve Size #200 - Percent Finer	% PASSED	5.4	98.3	99.7	95.1	86.8	80.8
Hydrometer Reading 1 - Percent Finer	% PASSED	2.8	91.4	95.1	94.5	84	72.4
Hydrometer Reading 2 - Percent Finer	% PASSED	2.3	87.5	91.4	87.2	82.1	68.1
Hydrometer Reading 3 - Percent Finer	% PASSED	2.3	79.8	82.4	76.1	72.6	60.7
Hydrometer Reading 4 - Percent Finer	% PASSED	1.8	75.9	76.9	70.6	66.6	55
Hydrometer Reading 5 - Percent Finer	% PASSED	1.3	67.9	71.2	61.1	59	49.2
Hydrometer Reading 6 - Percent Finer	% PASSED	0.8	58.2	58.4	51.9	49.6	39
Hydrometer Reading 7 - Percent Finer	% PASSED	0.3	46.7	45.7	39	38.2	28.9
TOC							
TOC	mg/kg	45,400	23,600	25,500	29,000	37,000	35,800

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Table B-5
Sediment Sample Analytical Results - Physical Properties
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

	Location ID	LMR11-70	LMR11-71	LMR11-71	LMR11-71	LMR11-71	LMR11-71
	Field Sample ID	LMR11-70-085	LMR11-71-006	LMR11-71-024	LMR11-71-024FS	LMR11-71-048	LMR11-71-072
	Sample Date	8/7/2011	8/6/2011	8/6/2011	8/6/2011	8/6/2011	8/6/2011
	Depth Interval (in bss)	72- 85	0- 6	6- 24	6- 24	24- 48	48- 72
Chemical Name	**Unit**						
Grain Size							
Gravel	%	0.2	0	0	0	0	0
Sand	%	7.2	3.3	0.9	1.1	0.5	3.2
Silt	%	28.9	40.8	39	37.3	39.7	35.5
Clay	%	63.7	55.9	60.1	61.6	59.8	61.3
Coarse Sand	%	1.1	0	0	0	0	0
Medium Sand	%	0.7	0.5	0.1	0.2	0	0
Fine Sand	%	5.4	2.8	0.8	0.9	0.5	3.2
Sieve Size 3 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 2 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 1.5 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 1 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 0.75 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 0.375 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size #4 - Percent Finer	% PASSED	99.8	100	100	100	100	100
Sieve Size #10 - Percent Finer	% PASSED	98.7	100	100	100	100	100
Sieve Size #20 - Percent Finer	% PASSED	98.5	99.9	100	99.9	100	100
Sieve Size #40 - Percent Finer	% PASSED	98	99.5	99.9	99.8	100	100
Sieve Size #60 - Percent Finer	% PASSED	97	99.2	99.9	99.7	100	99.8
Sieve Size #80 - Percent Finer	% PASSED	95.7	99	99.8	99.6	100	99.5
Sieve Size #100 - Percent Finer	% PASSED	94.9	98.8	99.6	99.4	99.9	99.1
Sieve Size #200 - Percent Finer	% PASSED	92.6	96.7	99.1	98.9	99.5	96.8
Hydrometer Reading 1 - Percent Finer	% PASSED	87.3	88.9	91.9	90.1	90.2	88.4
Hydrometer Reading 2 - Percent Finer	% PASSED	82.9	81.6	86	84.8	84.5	83.6
Hydrometer Reading 3 - Percent Finer	% PASSED	75.5	72.4	76.8	75.8	73.1	75.7
Hydrometer Reading 4 - Percent Finer	% PASSED	68.1	65.1	65.7	68.7	65.5	67.7
Hydrometer Reading 5 - Percent Finer	% PASSED	63.7	55.9	60.1	61.6	59.8	61.3
Hydrometer Reading 6 - Percent Finer	% PASSED	53.2	44.6	48.7	50.6	48.1	49.9
Hydrometer Reading 7 - Percent Finer	% PASSED	41.4	33.6	35.8	38.1	36.7	40.4
TOC							
TOC	mg/kg	29,000	27,700	21,600	19,800	20,200	23,300

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Table B-5
Sediment Sample Analytical Results - Physical Properties
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

	Location ID	LMR11-71	LMR11-71	LMR11-71	LMR11-71	LMR11-72	LMR11-72
	Field Sample ID	LMR11-71-096	LMR11-71-120	LMR11-71-144	LMR11-71-161	LMR11-72-006	LMR11-72-024
	Sample Date	8/6/2011	8/6/2011	8/6/2011	8/6/2011	8/5/2011	8/5/2011
	Depth Interval (in bss)	72- 96	96- 120	120- 144	144- 161	0- 6	6- 24
Chemical Name	**Unit**						
Grain Size							
Gravel	%	0.2	1.3	2.4	0	0.6	21.4
Sand	%	6.6	26.8	20.9	9.6	26	62.9
Silt	%	42.5	29.7	28.9	35.5	39.2	13.3
Clay	%	50.7	42.2	47.8	54.9	34.2	2.4
Coarse Sand	%	0.1	4.9	2	0.5	1.1	7.5
Medium Sand	%	0.6	10.2	5.9	2.8	3	15.7
Fine Sand	%	5.9	11.7	13	6.3	21.9	39.7
Sieve Size 3 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 2 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 1.5 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 1 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 0.75 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 0.375 inch - Percent Finer	% PASSED	100	100	98.4	100	100	87.9
Sieve Size #4 - Percent Finer	% PASSED	99.8	98.7	97.6	100	99.4	78.6
Sieve Size #10 - Percent Finer	% PASSED	99.7	93.8	95.6	99.5	98.3	71.1
Sieve Size #20 - Percent Finer	% PASSED	99.5	89.4	93.7	98.4	97.5	65.9
Sieve Size #40 - Percent Finer	% PASSED	99.1	83.6	89.7	96.7	95.3	55.4
Sieve Size #60 - Percent Finer	% PASSED	98.5	78.6	84.7	94.4	89.4	38.7
Sieve Size #80 - Percent Finer	% PASSED	97.9	76.5	81.9	93.2	84.1	27.2
Sieve Size #100 - Percent Finer	% PASSED	97.3	75.4	80.3	92.5	81.4	22.4
Sieve Size #200 - Percent Finer	% PASSED	93.2	71.9	76.7	90.4	73.4	15.7
Hydrometer Reading 1 - Percent Finer	% PASSED	79.8	65.9	72.9	85.4	57.7	7.3
Hydrometer Reading 2 - Percent Finer	% PASSED	73.8	61.5	68.2	80.3	51.1	6.2
Hydrometer Reading 3 - Percent Finer	% PASSED	63.1	54.1	62	70.2	44.4	4.1
Hydrometer Reading 4 - Percent Finer	% PASSED	57	46.7	54.1	63.4	37.7	2.9
Hydrometer Reading 5 - Percent Finer	% PASSED	50.7	42.2	47.8	54.9	34.2	2.4
Hydrometer Reading 6 - Percent Finer	% PASSED	40.1	34.6	38.2	44.5	24.3	0.8
Hydrometer Reading 7 - Percent Finer	% PASSED	30.9	27.2	30.3	34.1	14.3	-0.2
TOC							
TOC	mg/kg	27,800	24,400	29,200	21,100	61,100	21,600

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Table B-5
Sediment Sample Analytical Results - Physical Properties
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

	Location ID	LMR11-72	LMR11-73	LMR11-73	LMR11-73	LMR11-74	LMR11-74
	Field Sample ID	LMR11-72-035	LMR11-73-006	LMR11-73-024	LMR11-73-042	LMR11-74-006	LMR11-74-024
	Sample Date	8/5/2011	8/7/2011	8/7/2011	8/7/2011	8/5/2011	8/5/2011
	Depth Interval (in bss)	24- 35	0- 6	6- 24	24- 42	0- 6	6- 24
Chemical Name	**Unit**						
Grain Size							
Gravel	%	1.1	0	0	7.1	0	0.4
Sand	%	67.7	42.2	19.1	55.4	14.9	13.9
Silt	%	26.3	25.2	34.6	10.6	26.3	29.8
Clay	%	4.9	32.6	46.3	26.9	58.8	55.9
Coarse Sand	%	1.6	1	0.9	6.8	0	0.4
Medium Sand	%	7.5	3.6	2.6	16.4	3	1
Fine Sand	%	58.6	37.6	15.6	32.2	11.9	12.5
Sieve Size 3 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 2 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 1.5 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 1 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 0.75 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 0.375 inch - Percent Finer	% PASSED	100	100	100	98.3	100	100
Sieve Size #4 - Percent Finer	% PASSED	98.9	100	100	92.9	100	99.6
Sieve Size #10 - Percent Finer	% PASSED	97.3	99	99.1	86.1	100	99.2
Sieve Size #20 - Percent Finer	% PASSED	94.6	97.8	98.1	79.1	98.9	98.9
Sieve Size #40 - Percent Finer	% PASSED	89.8	95.4	96.5	69.7	97	98.2
Sieve Size #60 - Percent Finer	% PASSED	76.2	91.3	94	57.3	91.4	96.2
Sieve Size #80 - Percent Finer	% PASSED	61.9	83.9	91.6	49.2	87.7	92.3
Sieve Size #100 - Percent Finer	% PASSED	49.9	77.2	89.5	44.9	86.8	90.1
Sieve Size #200 - Percent Finer	% PASSED	31.2	57.8	80.9	37.5	85.1	85.7
Hydrometer Reading 1 - Percent Finer	% PASSED	16.7	48.2	66.2	37.5	85.1	80.8
Hydrometer Reading 2 - Percent Finer	% PASSED	13	45.4	63	36.3	79.5	75.5
Hydrometer Reading 3 - Percent Finer	% PASSED	9.3	41.2	58.1	32.9	73.8	70.2
Hydrometer Reading 4 - Percent Finer	% PASSED	7.1	37	51.2	30.6	66.3	63.1
Hydrometer Reading 5 - Percent Finer	% PASSED	4.9	32.6	46.3	26.9	58.8	55.9
Hydrometer Reading 6 - Percent Finer	% PASSED	2.7	26.8	39.5	22.1	47.7	47
Hydrometer Reading 7 - Percent Finer	% PASSED	1.2	21.2	31.3	15.2	36.5	34.6
TOC							
TOC	mg/kg	12,800	21,000	19,600	13,300	22,200	31,500

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Table B-5
Sediment Sample Analytical Results - Physical Properties
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

	Location ID	LMR11-74	LMR11-74	LMR11-74	LMR11-74	LMR11-75	LMR11-75
	Field Sample ID	LMR11-74-048	LMR11-74-048FS	LMR11-74-072	LMR11-74-085	LMR11-75-006	LMR11-75-024
	Sample Date	8/5/2011	8/5/2011	8/5/2011	8/5/2011	8/5/2011	8/5/2011
	Depth Interval (in bss)	24- 48	24- 48	48- 72	72- 85	0- 6	6- 24
Chemical Name	**Unit**						
Grain Size							
Gravel	%	0	0	0	14.9	25.9	0
Sand	%	2.6	0.7	0.9	73.6	11.3	14.5
Silt	%	32.7	29.8	27	6.1	23.4	39.3
Clay	%	64.7	69.5	72.1	5.4	39.4	46.2
Coarse Sand	%	0	0	0	20.4	1.1	0
Medium Sand	%	0.5	0	0.2	31.9	1.3	0.5
Fine Sand	%	2.1	0.7	0.7	21.3	8.9	14
Sieve Size 3 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 2 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 1.5 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 1 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 0.75 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 0.375 inch - Percent Finer	% PASSED	100	100	100	94.1	84.5	100
Sieve Size #4 - Percent Finer	% PASSED	100	100	100	85.1	74.1	100
Sieve Size #10 - Percent Finer	% PASSED	100	100	100	64.7	73	100
Sieve Size #20 - Percent Finer	% PASSED	99.7	100	99.9	48.3	72.3	99.7
Sieve Size #40 - Percent Finer	% PASSED	99.5	100	99.8	32.8	71.7	99.5
Sieve Size #60 - Percent Finer	% PASSED	99.1	99.8	99.6	18	69.7	98.9
Sieve Size #80 - Percent Finer	% PASSED	98.4	99.5	99.4	14	66.9	98.2
Sieve Size #100 - Percent Finer	% PASSED	98.1	99.4	99.3	12.7	65.7	97.1
Sieve Size #200 - Percent Finer	% PASSED	97.4	99.3	99.1	11.5	62.8	85.5
Hydrometer Reading 1 - Percent Finer	% PASSED	92.8	96.8	99.3	8.1	57.4	72.6
Hydrometer Reading 2 - Percent Finer	% PASSED	89.1	92.9	93.9	7.8	51.9	66.9
Hydrometer Reading 3 - Percent Finer	% PASSED	79.7	85.1	86.6	6.8	47.7	57.5
Hydrometer Reading 4 - Percent Finer	% PASSED	74.1	77.3	77.5	6.1	43.6	50
Hydrometer Reading 5 - Percent Finer	% PASSED	64.7	69.5	72.1	5.4	39.4	46.2
Hydrometer Reading 6 - Percent Finer	% PASSED	51.6	57.8	57.5	4	31	34.8
Hydrometer Reading 7 - Percent Finer	% PASSED	38.5	42.1	41	3	28.4	23.7
TOC							
TOC	mg/kg	21,800	29,800	25,200	10,800	29,700	41,700

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Table B-5
Sediment Sample Analytical Results - Physical Properties
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

	Location ID	LMR11-75	LMR11-75	LMR11-75	LMR11-76	LMR11-76	LMR11-76
	Field Sample ID	LMR11-75-048	LMR11-75-048FS	LMR11-75-080	LMR11-76-006	LMR11-76-024	LMR11-76-048
	Sample Date	8/5/2011	8/5/2011	8/5/2011	8/5/2011	8/5/2011	8/5/2011
	Depth Interval (in bss)	24- 48	24- 48	48- 80	0- 6	6- 24	24- 48
Chemical Name	**Unit**						
Grain Size							
Gravel	%	0	0	12	0.6	0.5	0
Sand	%	3.5	3.8	5.6	11.4	30.1	10.5
Silt	%	32.3	30.9	31	28.9	23.6	30.3
Clay	%	64.2	65.3	51.4	59.1	45.8	59.2
Coarse Sand	%	0	0	1	1.4	1.4	0.4
Medium Sand	%	0.3	0.3	1.1	4.2	9.4	2.4
Fine Sand	%	3.2	3.5	3.5	5.8	19.3	7.7
Sieve Size 3 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 2 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 1.5 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 1 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 0.75 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 0.375 inch - Percent Finer	% PASSED	100	100	89.9	100	100	100
Sieve Size #4 - Percent Finer	% PASSED	100	100	88	99.4	99.5	100
Sieve Size #10 - Percent Finer	% PASSED	100	100	87	98	98.1	99.6
Sieve Size #20 - Percent Finer	% PASSED	99.9	99.9	86.5	96.7	96	99.2
Sieve Size #40 - Percent Finer	% PASSED	99.7	99.7	85.9	93.8	88.7	97.2
Sieve Size #60 - Percent Finer	% PASSED	99.2	99.1	84.9	91.3	78.3	94.9
Sieve Size #80 - Percent Finer	% PASSED	98.8	98.6	84.4	89.9	76	94
Sieve Size #100 - Percent Finer	% PASSED	98.4	98.2	84.1	89.7	75.1	93.3
Sieve Size #200 - Percent Finer	% PASSED	96.5	96.2	82.4	88	69.4	89.5
Hydrometer Reading 1 - Percent Finer	% PASSED	94.9	93.8	78.3	86.8	66.2	83.5
Hydrometer Reading 2 - Percent Finer	% PASSED	87.7	88.5	73.2	81.3	62.8	78.7
Hydrometer Reading 3 - Percent Finer	% PASSED	78.6	79.6	64.8	70.2	57.1	72.2
Hydrometer Reading 4 - Percent Finer	% PASSED	71.4	72.4	58.1	64.6	50.4	64.1
Hydrometer Reading 5 - Percent Finer	% PASSED	64.2	65.3	51.4	59.1	45.8	59.2
Hydrometer Reading 6 - Percent Finer	% PASSED	49.6	50.9	42.8	47.8	36.8	46.3
Hydrometer Reading 7 - Percent Finer	% PASSED	37.1	40.3	31.2	35.5	27.8	34.9
TOC							
TOC	mg/kg	33,600	26,400	24,200	29,100	13,900	23,300

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Table B-5
Sediment Sample Analytical Results - Physical Properties
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

	Location ID	LMR11-76	LMR11-76	LMR11-76	LMR11-77	LMR11-77	LMR11-77
	Field Sample ID	LMR11-76-072	LMR11-76-096	LMR11-76-120	LMR11-77-006	LMR11-77-024	LMR11-77-048
	Sample Date	8/5/2011	8/5/2011	8/5/2011	8/5/2011	8/5/2011	8/5/2011
	Depth Interval (in bss)	48- 72	72- 96	96- 120	0- 6	6- 24	24- 48
Chemical Name	**Unit**						
Grain Size							
Gravel	%	0	0	1.2	NA	33.3	0
Sand	%	4.4	0.6	9.9	NA	15.3	13.5
Silt	%	25.4	26.5	25	NA	15	32.6
Clay	%	70.2	72.9	63.9	NA	36.4	53.9
Coarse Sand	%	0	0	0.5	NA	1.5	0.7
Medium Sand	%	0.8	0.1	1.5	NA	4.2	2.9
Fine Sand	%	3.6	0.5	7.9	NA	9.6	9.9
Sieve Size 3 inch - Percent Finer	% PASSED	100	100	100	NA	100	100
Sieve Size 2 inch - Percent Finer	% PASSED	100	100	100	NA	100	100
Sieve Size 1.5 inch - Percent Finer	% PASSED	100	100	100	NA	100	100
Sieve Size 1 inch - Percent Finer	% PASSED	100	100	100	NA	67.2	100
Sieve Size 0.75 inch - Percent Finer	% PASSED	100	100	100	NA	67.2	100
Sieve Size 0.375 inch - Percent Finer	% PASSED	100	100	100	NA	67.2	100
Sieve Size #4 - Percent Finer	% PASSED	100	100	98.8	NA	66.7	100
Sieve Size #10 - Percent Finer	% PASSED	100	100	98.3	NA	65.2	99.3
Sieve Size #20 - Percent Finer	% PASSED	99.9	100	98.1	NA	63.6	98.2
Sieve Size #40 - Percent Finer	% PASSED	99.2	99.9	96.8	NA	61	96.4
Sieve Size #60 - Percent Finer	% PASSED	98.4	99.7	94.2	NA	57.5	93.7
Sieve Size #80 - Percent Finer	% PASSED	98.2	99.7	92.6	NA	55.5	92.2
Sieve Size #100 - Percent Finer	% PASSED	97.9	99.7	91.6	NA	54.5	91.1
Sieve Size #200 - Percent Finer	% PASSED	95.6	99.4	88.9	NA	51.4	86.5
Hydrometer Reading 1 - Percent Finer	% PASSED	94.5	99.2	88.3	NA	50.3	79.1
Hydrometer Reading 2 - Percent Finer	% PASSED	91	95.7	84.8	NA	47.2	72.4
Hydrometer Reading 3 - Percent Finer	% PASSED	84.1	85.2	74.3	NA	42.6	65.7
Hydrometer Reading 4 - Percent Finer	% PASSED	77.2	81.7	70.8	NA	40.3	59
Hydrometer Reading 5 - Percent Finer	% PASSED	70.2	72.9	63.9	NA	36.4	53.9
Hydrometer Reading 6 - Percent Finer	% PASSED	58.1	58.9	51.6	NA	30.2	43.9
Hydrometer Reading 7 - Percent Finer	% PASSED	44.3	44.9	39.4	NA	24.8	35.5
TOC							
TOC	mg/kg	23,600	22,400	24,000	24,800	30,200	31,300

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Table B-5
Sediment Sample Analytical Results - Physical Properties
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

	Location ID	LMR11-77	LMR11-77	LMR11-78	LMR11-79	LMR11-79	LMR11-79
	Field Sample ID	LMR11-77-072	LMR11-77-120	LMR11-78-014	LMR11-79-006	LMR11-79-024	LMR11-79-024FS
	Sample Date	8/5/2011	8/5/2011	8/5/2011	8/4/2011	8/4/2011	8/4/2011
	Depth Interval (in bss)	48- 72	72- 120	0- 14	0- 6	6- 24	6- 24
Chemical Name	**Unit**						
Grain Size							
Gravel	%	0	0	29.8	0	0	0
Sand	%	3.8	1.6	56	4.6	2.6	7.3
Silt	%	25.4	27.5	5.7	28.6	29	29.4
Clay	%	70.8	70.9	8.5	66.8	68.4	63.3
Coarse Sand	%	0	0	5.4	0	0	0
Medium Sand	%	0.7	0.5	11.3	0.3	0.4	1.2
Fine Sand	%	3.1	1.1	39.3	4.3	2.2	6.1
Sieve Size 3 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 2 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 1.5 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 1 inch - Percent Finer	% PASSED	100	100	88.9	100	100	100
Sieve Size 0.75 inch - Percent Finer	% PASSED	100	100	73.1	100	100	100
Sieve Size 0.375 inch - Percent Finer	% PASSED	100	100	72.3	100	100	100
Sieve Size #4 - Percent Finer	% PASSED	100	100	70.2	100	100	100
Sieve Size #10 - Percent Finer	% PASSED	100	100	64.8	100	100	100
Sieve Size #20 - Percent Finer	% PASSED	99.7	99.7	57.9	99.9	99.7	99.5
Sieve Size #40 - Percent Finer	% PASSED	99.3	99.5	53.5	99.7	99.6	98.8
Sieve Size #60 - Percent Finer	% PASSED	98.9	99.4	46.7	99.2	99.4	97.3
Sieve Size #80 - Percent Finer	% PASSED	98.6	99.3	27.6	98.6	99.1	96
Sieve Size #100 - Percent Finer	% PASSED	98.3	99.1	22.6	98.1	98.8	95.2
Sieve Size #200 - Percent Finer	% PASSED	96.2	98.4	14.2	95.4	97.4	92.7
Hydrometer Reading 1 - Percent Finer	% PASSED	93	95.1	17.3	89.5	97.2	92.4
Hydrometer Reading 2 - Percent Finer	% PASSED	89.6	91.4	14.4	85.2	89.6	85.9
Hydrometer Reading 3 - Percent Finer	% PASSED	82.9	84	12	79.5	82.1	79.4
Hydrometer Reading 4 - Percent Finer	% PASSED	77.8	78.4	10.3	73.9	74.5	71.4
Hydrometer Reading 5 - Percent Finer	% PASSED	70.8	70.9	8.5	66.8	68.4	63.3
Hydrometer Reading 6 - Percent Finer	% PASSED	60.8	59.8	6.2	55.5	56.3	50.1
Hydrometer Reading 7 - Percent Finer	% PASSED	49	46.8	4.4	41.3	41.2	37.4
TOC							
TOC	mg/kg	41,500	35,400	14,700	29,400	27,700	34,300

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Table B-5
Sediment Sample Analytical Results - Physical Properties
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

	Location ID	LMR11-79	LMR11-80	LMR11-80	LMR11-80	LMR11-81	LMR11-81
	Field Sample ID	LMR11-79-054	LMR11-80-006	LMR11-80-024	LMR11-80-056	LMR11-81-006	LMR11-81-019
	Sample Date	8/4/2011	8/5/2011	8/5/2011	8/5/2011	8/5/2011	8/5/2011
	Depth Interval (in bss)	24- 54	0- 6	6- 24	24- 56	0- 6	6- 19
Chemical Name	**Unit**						
Grain Size							
Gravel	%	0.6	1.4	0	6.9	5.2	21.8
Sand	%	5.2	37.5	6.9	47.4	59.9	68.3
Silt	%	33.8	23.3	29.7	13.4	20.9	6
Clay	%	60.4	37.8	63.4	32.3	14	4
Coarse Sand	%	0.4	1.4	0	1.7	2	5.3
Medium Sand	%	1.6	4	0.6	15	15.6	26.2
Fine Sand	%	3.2	32.1	6.3	30.7	42.3	36.8
Sieve Size 3 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 2 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 1.5 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 1 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 0.75 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 0.375 inch - Percent Finer	% PASSED	100	100	100	95.8	98.9	89.4
Sieve Size #4 - Percent Finer	% PASSED	99.4	98.6	100	93.1	94.8	78.2
Sieve Size #10 - Percent Finer	% PASSED	99	97.2	100	91.4	92.8	72.9
Sieve Size #20 - Percent Finer	% PASSED	98.3	95.2	99.8	87.3	88.9	65.2
Sieve Size #40 - Percent Finer	% PASSED	97.4	93.2	99.4	76.4	77.2	46.7
Sieve Size #60 - Percent Finer	% PASSED	96.7	91.7	99	62.8	67.8	30.4
Sieve Size #80 - Percent Finer	% PASSED	96.2	83.9	98	56.5	54.6	17.4
Sieve Size #100 - Percent Finer	% PASSED	95.8	78.3	96.8	53.3	48.2	13.9
Sieve Size #200 - Percent Finer	% PASSED	94.2	61.1	93.1	45.7	34.9	9.9
Hydrometer Reading 1 - Percent Finer	% PASSED	83.3	55.2	89.2	44.2	26.3	6.9
Hydrometer Reading 2 - Percent Finer	% PASSED	80.4	51.2	82.8	40.6	23.5	6.2
Hydrometer Reading 3 - Percent Finer	% PASSED	71.8	44.5	74.7	37.1	20.1	5.8
Hydrometer Reading 4 - Percent Finer	% PASSED	66.1	41.8	69.9	35.9	16.7	4.7
Hydrometer Reading 5 - Percent Finer	% PASSED	60.4	37.8	63.4	32.3	14	4
Hydrometer Reading 6 - Percent Finer	% PASSED	47.2	32.4	51.9	25	11.3	3.2
Hydrometer Reading 7 - Percent Finer	% PASSED	36	25.7	42.2	20.3	8.6	2.5
TOC							
TOC	mg/kg	25,500	32,400	24,600	11,700	19,400	10,800

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Table B-5
Sediment Sample Analytical Results - Physical Properties
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

	Location ID	LMR11-82	LMR11-82	LMR11-82	LMR11-83	LMR11-83	LMR11-83
	Field Sample ID	LMR11-82-006	LMR11-82-024	LMR11-82-055	LMR11-83-006	LMR11-83-024	LMR11-83-048
	Sample Date	8/5/2011	8/5/2011	8/5/2011	8/5/2011	8/5/2011	8/5/2011
	Depth Interval (in bss)	0- 6	6- 24	24- 55	0- 6	6- 24	24- 48
Chemical Name	**Unit**						
Grain Size							
Gravel	%	0.7	0	0.5	11.2	4.3	5.8
Sand	%	56.2	66.9	78.3	18.8	20.6	43.4
Silt	%	16.2	13.9	14.7	28.5	25.9	21.5
Clay	%	26.9	19.2	6.5	41.5	49.2	29.3
Coarse Sand	%	0.5	0.8	1.9	1.6	1.4	2.8
Medium Sand	%	2.1	7.8	19	4	4.2	12.5
Fine Sand	%	53.6	58.3	57.4	13.2	15	28.1
Sieve Size 3 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 2 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 1.5 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 1 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 0.75 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 0.375 inch - Percent Finer	% PASSED	99.3	100	100	92.2	100	98.4
Sieve Size #4 - Percent Finer	% PASSED	99.3	100	99.5	88.8	95.7	94.2
Sieve Size #10 - Percent Finer	% PASSED	98.8	99.2	97.6	87.2	94.3	91.4
Sieve Size #20 - Percent Finer	% PASSED	98.3	96.8	91.4	85.9	92.8	87.5
Sieve Size #40 - Percent Finer	% PASSED	96.7	91.4	78.6	83.2	90.1	78.9
Sieve Size #60 - Percent Finer	% PASSED	69.6	65.2	49.9	78.5	85.3	68.2
Sieve Size #80 - Percent Finer	% PASSED	50.1	50.2	36.4	74.7	80.3	60.7
Sieve Size #100 - Percent Finer	% PASSED	47.6	44.9	31.2	73.3	78.1	57.6
Sieve Size #200 - Percent Finer	% PASSED	43.1	33.1	21.2	70	75.1	50.8
Hydrometer Reading 1 - Percent Finer	% PASSED	38	31.9	13.7	61	69.6	42.2
Hydrometer Reading 2 - Percent Finer	% PASSED	36.3	29.6	11.5	56.1	65.2	39.1
Hydrometer Reading 3 - Percent Finer	% PASSED	32.9	26.1	9.3	51.2	59.4	35.4
Hydrometer Reading 4 - Percent Finer	% PASSED	29.5	22.6	8.1	47.3	55	31.6
Hydrometer Reading 5 - Percent Finer	% PASSED	26.9	19.2	6.5	41.5	49.2	29.3
Hydrometer Reading 6 - Percent Finer	% PASSED	22.6	14.4	4.7	32.7	38.9	24
Hydrometer Reading 7 - Percent Finer	% PASSED	17.5	9.9	3.7	24	28.6	17.1
TOC							
TOC	mg/kg	16,200	21,700	27,800	22,700	24,800	38,000

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Table B-5
Sediment Sample Analytical Results - Physical Properties
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

	Location ID	LMR11-83	LMR11-83	LMR11-84	LMR11-84	LMR11-84	LMR11-84
	Field Sample ID	LMR11-83-072	LMR11-83-087	LMR11-84-006	LMR11-84-024	LMR11-84-048	LMR11-84-072
	Sample Date	8/5/2011	8/5/2011	8/5/2011	8/5/2011	8/5/2011	8/5/2011
	Depth Interval (in bss)	48- 72	72- 87	0- 6	6- 24	24- 48	48- 72
Chemical Name	**Unit**						
Grain Size							
Gravel	%	5.8	24.1	0	4.1	0.5	0.2
Sand	%	49.1	64.5	12	17.3	69.7	37.8
Silt	%	17.8	6.4	36.7	24.3	12.7	29
Clay	%	27.3	5	51.3	54.3	17.1	33
Coarse Sand	%	0.7	7.6	0	0.7	1.9	1
Medium Sand	%	6.9	18.2	0.9	4	16.8	10.2
Fine Sand	%	41.5	38.7	11.1	12.6	51	26.6
Sieve Size 3 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 2 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 1.5 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 1 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 0.75 inch - Percent Finer	% PASSED	100	86.6	100	100	100	100
Sieve Size 0.375 inch - Percent Finer	% PASSED	95.2	80.6	100	96.5	100	100
Sieve Size #4 - Percent Finer	% PASSED	94.2	75.9	100	95.9	99.5	99.8
Sieve Size #10 - Percent Finer	% PASSED	93.5	68.3	100	95.2	97.6	98.8
Sieve Size #20 - Percent Finer	% PASSED	91.9	60.2	99.6	94	92.9	96.2
Sieve Size #40 - Percent Finer	% PASSED	86.6	50.1	99.1	91.2	80.8	88.6
Sieve Size #60 - Percent Finer	% PASSED	71.2	31	98.3	86.4	58.7	77.6
Sieve Size #80 - Percent Finer	% PASSED	60.5	20.4	97.6	84	47	72.9
Sieve Size #100 - Percent Finer	% PASSED	55.7	16.7	96.8	82.7	40.8	70.4
Sieve Size #200 - Percent Finer	% PASSED	45.1	11.4	88	78.6	29.8	62
Hydrometer Reading 1 - Percent Finer	% PASSED	41.8	10.4	72.2	74.4	25.3	49.7
Hydrometer Reading 2 - Percent Finer	% PASSED	39.1	8.8	67	70.7	23.4	45.8
Hydrometer Reading 3 - Percent Finer	% PASSED	33.8	7.3	61.8	63.2	20.3	42
Hydrometer Reading 4 - Percent Finer	% PASSED	29.9	5.7	55.3	59.4	18.4	38.1
Hydrometer Reading 5 - Percent Finer	% PASSED	27.3	5	51.3	54.3	17.1	33
Hydrometer Reading 6 - Percent Finer	% PASSED	22	3.5	40.9	45.6	14.6	26.4
Hydrometer Reading 7 - Percent Finer	% PASSED	15.3	2.7	31.9	34.4	11.6	18.6
TOC							
TOC	mg/kg	18,500	9,430 J	23,900	34,100	21,600	26,900 J

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Table B-5
Sediment Sample Analytical Results - Physical Properties
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

	Location ID	LMR11-84	LMR11-84	LMR11-84	LMR11-85	LMR11-85	LMR11-85
	Field Sample ID	LMR11-84-072DP	LMR11-84-096	LMR11-84-115	LMR11-85-006	LMR11-85-024	LMR11-85-048
	Sample Date	8/5/2011	8/5/2011	8/5/2011	8/5/2011	8/5/2011	8/5/2011
	Depth Interval (in bss)	48- 72	72- 96	96- 115	0- 6	6- 24	24- 48
Chemical Name	**Unit**						
Grain Size							
Gravel	%	NA	7	0.2	1.5	0	0
Sand	%	NA	53.7	44.3	40	28.4	6
Silt	%	NA	18.4	28	22	23.3	39.4
Clay	%	NA	20.9	27.5	36.5	48.3	54.6
Coarse Sand	%	NA	3.2	0.9	0.5	0	0
Medium Sand	%	NA	16.4	8.3	5.8	3.6	0.7
Fine Sand	%	NA	34.1	35.1	33.7	24.8	5.3
Sieve Size 3 inch - Percent Finer	% PASSED	NA	100	100	100	100	100
Sieve Size 2 inch - Percent Finer	% PASSED	NA	100	100	100	100	100
Sieve Size 1.5 inch - Percent Finer	% PASSED	NA	100	100	100	100	100
Sieve Size 1 inch - Percent Finer	% PASSED	NA	100	100	100	100	100
Sieve Size 0.75 inch - Percent Finer	% PASSED	NA	100	100	100	100	100
Sieve Size 0.375 inch - Percent Finer	% PASSED	NA	96	100	100	100	100
Sieve Size #4 - Percent Finer	% PASSED	NA	93	99.8	98.5	100	100
Sieve Size #10 - Percent Finer	% PASSED	NA	89.8	98.9	98	100	100
Sieve Size #20 - Percent Finer	% PASSED	NA	85.2	97	96.5	98.6	99.8
Sieve Size #40 - Percent Finer	% PASSED	NA	73.4	90.6	92.2	96.4	99.3
Sieve Size #60 - Percent Finer	% PASSED	NA	55.6	76.8	83	92	98.3
Sieve Size #80 - Percent Finer	% PASSED	NA	49.6	71.1	70.5	81.9	96.2
Sieve Size #100 - Percent Finer	% PASSED	NA	46.8	68.3	67.2	78.5	95.7
Sieve Size #200 - Percent Finer	% PASSED	NA	39.3	55.5	58.5	71.6	94
Hydrometer Reading 1 - Percent Finer	% PASSED	NA	31.8	45.3	54.1	70.1	91.1
Hydrometer Reading 2 - Percent Finer	% PASSED	NA	29	39	50.2	65.7	81.6
Hydrometer Reading 3 - Percent Finer	% PASSED	NA	26.3	37.7	44.4	59.2	70.8
Hydrometer Reading 4 - Percent Finer	% PASSED	NA	22.9	32.6	39.5	52.7	62.7
Hydrometer Reading 5 - Percent Finer	% PASSED	NA	20.9	27.5	36.5	48.3	54.6
Hydrometer Reading 6 - Percent Finer	% PASSED	NA	16	21.1	29.7	38.5	42.4
Hydrometer Reading 7 - Percent Finer	% PASSED	NA	12.6	16	21.9	28.8	31.7
TOC							
TOC	mg/kg	169,000 J	74,000	52,700	20,400	17,000	39,900

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Table B-5
Sediment Sample Analytical Results - Physical Properties
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

	Location ID	LMR11-85
	Field Sample ID	LMR11-85-074
	Sample Date	8/5/2011
	Depth Interval (in bss)	48- 74
Chemical Name	**Unit**	
Grain Size		
Gravel	%	0.7
Sand	%	41.3
Silt	%	27.5
Clay	%	30.5
Coarse Sand	%	0.9
Medium Sand	%	14.2
Fine Sand	%	26.2
Sieve Size 3 inch - Percent Finer	% PASSED	100
Sieve Size 2 inch - Percent Finer	% PASSED	100
Sieve Size 1.5 inch - Percent Finer	% PASSED	100
Sieve Size 1 inch - Percent Finer	% PASSED	100
Sieve Size 0.75 inch - Percent Finer	% PASSED	100
Sieve Size 0.375 inch - Percent Finer	% PASSED	100
Sieve Size #4 - Percent Finer	% PASSED	99.3
Sieve Size #10 - Percent Finer	% PASSED	98.4
Sieve Size #20 - Percent Finer	% PASSED	95.4
Sieve Size #40 - Percent Finer	% PASSED	84.2
Sieve Size #60 - Percent Finer	% PASSED	76.1
Sieve Size #80 - Percent Finer	% PASSED	68.5
Sieve Size #100 - Percent Finer	% PASSED	65.5
Sieve Size #200 - Percent Finer	% PASSED	58
Hydrometer Reading 1 - Percent Finer	% PASSED	51.8
Hydrometer Reading 2 - Percent Finer	% PASSED	47
Hydrometer Reading 3 - Percent Finer	% PASSED	40.2
Hydrometer Reading 4 - Percent Finer	% PASSED	34.4
Hydrometer Reading 5 - Percent Finer	% PASSED	30.5
Hydrometer Reading 6 - Percent Finer	% PASSED	24.7
Hydrometer Reading 7 - Percent Finer	% PASSED	18.9
TOC		
TOC	mg/kg	22,900

Notes:
% - Percent
DP - Duplicate
FS - Field Split
ID - Identification
in bss - Inches below sediment surface
J - Concentration estimated
mg/kg - Milligram per kilogram
NA - Not Analyzed
TOC - Total Organic Carbon

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APPENDIX C
PHOTOGRAPHIC LOG



Site: Lower Maumee River
Photograph No.: 1 **Date:** 08/05/11
Direction: Northeast **Photographer:** Mark Loomis
Subject: Recovery of core at sampling location LMR11-74



Site: Lower Maumee River
Photograph No.: 2 **Date:** 08/06/11
Direction: West **Photographer:** Mark Loomis
Subject: Recovery of core from sampling location LMR11-59

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Site: Lower Maumee River
Photograph No.: 3 **Date:** 08/06/11
Direction: West **Photographer:** Mark Loomis
Subject: Set-up at sampling location LMR11-69



Site: Lower Maumee River
Photograph No.: 4 **Date:** 08/06/11
Direction: East **Photographer:** Mark Loomis
Subject: Collection of core at LMR11-69 near mouth of Swan Creek; poor sediment recovery at this location

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Site: Lower Maumee River
Photograph No.: 5 **Date:** 08/07/11
Direction: Southeast **Photographer:** Mark Loomis
Subject: CSO on north side of grain elevators near sampling location LMR11-73



Site: Lower Maumee River
Photograph No.: 6 **Date:** 08/08/11
Direction: Southeast **Photographer:** Mark Loomis
Subject: CSO on east bank of river south of grain elevators

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Site: Lower Maumee River
Photograph No.: 7 **Date:** 08/08/11
Direction: South **Photographer:** Mark Loomis
Subject: CSO on south bank near sampling location LMR11-50



Site: Lower Maumee River
Photograph No.: 8 **Date:** 08/08/11
Direction: South **Photographer:** Mark Loomis
Subject: Core collected from LMR11-50 near CSO; odor and sheen observed

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Site: Lower Maumee River
Photograph No.: 9 **Date:** 08/08/11
Direction: East **Photographer:** Jonathan Colomb
Subject: Opened core from location LMR11-50



Site: Lower Maumee River
Photograph No.: 10 **Date:** 08/09/11
Direction: South **Photographer:** Mark Loomis
Subject: Libbey Owens Ford glassmaking company from sampling location LMR11-15

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Site: Lower Maumee River
Photograph No.: 11 **Date:** 08/09/11
Direction: South **Photographer:** Mark Loomis
Subject: CSO on south bank near sampling location LMR11-16



Site: Lower Maumee River
Photograph No.: 12 **Date:** 08/09/11
Direction: Not applicable **Photographer:** Mark Loomis
Subject: Sediment core being opened prior to sampling

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SEDIMENT ASSESSMENT REPORT
LOWER MAUMEE RIVER
MAUMEE RIVER AREA OF CONCERN
TOLEDO, LUCAS COUNTY, OHIO

Prepared for

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
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ACRONYMS AND ABBREVIATIONS

%	Percent
µg/kg	Microgram per kilogram
ADR	Automated Data Review
AOC	Area of Concern
ATSDR	Agency for Toxic Substances and Disease Registry
bss	Below sediment surface
BUI	Beneficial use impairment
cfs	Cubic foot per second
CLP	Contract Laboratory Program
COPC	Contaminant of potential concern
CSO	Combined sewer overflow
ESL	Ecological Screening Level
EXES	Exchange and Evaluation System
GLLA	Great Lakes Legacy Act
GLNPO	Great Lakes National Program Office
mg/kg	Milligram per kilogram
NFG	National Functional Guideline
Ohio EPA	Ohio Environmental Protection Agency
PAH	Polycyclic aromatic hydrocarbon
PCB	Polychlorinated biphenyl
PEC	Probable Effect Concentration
QA	Quality assurance
QC	Quality control
QAPP	Quality Assurance Project Plan
RAP	Remedial Action Plan
R/V	research vessel
RPD	relative percent difference
Shaw	Shaw Environmental and Infrastructure Inc.,
SMO	Sample Management Office
SOP	Standard Operating Procedure
SRV	Sediment Reference Value
START	Superfund Technical Assistance and Response Team
SVOC	Semivolatile organic compound
TAL	Target Analyte List
TCL	Target Compound List
TDD	Technical Direction Document
TOC	Total organic carbon
U.S. EPA	United States Environmental Protection Agency
VSP	Visual Sampling Plan
WESTON	Weston Solutions, Inc.

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EXECUTIVE SUMMARY

Weston Solutions, Inc. (WESTON®) has prepared this Sediment Assessment Report to summarize site characterization activities conducted for the Lower Maumee River project area in Toledo, Lucas County, Ohio as part of the Maumee River Area of Concern (AOC) United States Environmental Protection Agency (U.S. EPA) Great Lakes National Program Office (GLNPO) Great Lakes Legacy Act (GLLA) Project. The purpose of the GLLA project is to further define chemical contaminants in sediment, locate contaminated areas for additional evaluation, delineate hotspots, and attempt to identify any ongoing sources. The objective of this site characterization was to collect samples for chemical and physical properties analysis needed to support project area assessment and potential remediation activities.

When the Maumee River AOC was designated, it was primarily due to the large problem of agricultural runoff. However, upon further investigation, more problems were discovered, including former dumps and contaminated industrial sites, combined sewer overflows (CSO), and disposal of dredged materials. The biological communities in the Lower Maumee River have been identified as impaired. The land surrounding the Lower Maumee River project area is primarily industrial and commercial, with both current and historical sources of contamination. These sources of contaminants include various industries, chemical plants, petroleum production, and wastewater outfalls. The "Maumee Area of Concern Stage 2 Watershed Restoration Plan" dated 2006 indicated elevated concentrations of polychlorinated biphenyls (PCB), polycyclic aromatic hydrocarbons (PAH), and heavy metals in surface sediment in the Lower Maumee River project area.

The Lower Maumee River project area extends 5 river miles and is bound on the downstream edge by the Interstate 280 bridge (Veterans' Glass City Skyway) and on the upstream edge just downstream of Walbridge Park in Toledo, Ohio. During the site characterization, a total of 337 sediment samples (including 303 investigative, 17 field split, and 17 duplicate samples) were collected from 84 sampling locations in the Lower Maumee River project area. The sample design was based on detecting "hot spots" (local areas of elevated concentration) with a 646-foot-radius and a 95% confidence probability.

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Where sediment recovery was adequate, samples typically were collected from the following intervals: 0 to 6, 6 to 24, 24 to 48, 48 to 72, 72 to 96, 96 to 120, 120 to 144, and 144 to 168 inches below sediment surface (bss). Sediment volume was not expected to be adequate to allow collection of a sediment core at sampling locations near the center of the river upstream of Interstate 75. Therefore, only a surface sample from 0 to 6 inches bss was planned for collection using a ponar device at these locations. However, during site characterization activities, adequate core recovery was unexpectedly achieved at several locations near the center of the river upstream of Interstate 75. Samples were collected using a ponar device at many of these locations, and then the sampling team returned to several locations to collect a sediment core on a later date. Sediment cores were collected to depth of refusal or until native material was encountered. Sediment cores typically were collected using the GLNPO research vessel (R/V) Mudpuppy II. However, due to equipment problems with the Mudpuppy II, some sediment samples were collected using a vibracore device mounted to a pontoon boat.

All sediment samples were analyzed for the contaminants of potential concern (COPC): Target Analyte List (TAL) metals (including mercury) and semivolatile organic compounds (SVOC). In addition, approximately 10 percent (%) of all sediment samples collected were analyzed for Target Compound List (TCL) pesticides and PCB Aroclors. All sediment samples also were analyzed for physical properties, including % moisture, total organic carbon (TOC), and grain size.

The sample results for SVOCs, metals, PCBs, and pesticides were compared to Probable Effect Concentrations (PEC) set forth in the document "Development and Evaluation of Consensus-Based Sediment Quality Guidelines for Freshwater Ecosystems" (by D.D. MacDonald, et. al., dated 2000). The metals results were also compared to Ohio-specific Sediment Reference Values (SRV) set forth in the "Ohio Ecological Risk Assessment Guidance Document" dated February 2003, revised April 2008. Ecological Screening Levels (ESL) for sediment as set forth in U.S. EPA Region 5's "Ecological Screening Levels" dated 2003 were presented as a secondary source of screening criteria for SVOCs, metals, PCBs, and pesticides that do not have a developed PEC.

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The PECs and ESLs provide screening criteria to evaluate sediment chemistry data. PECs are defined as concentrations above which adverse effects are expected to occur and are the primary screening criteria for this characterization project. The ESLs represent a protective benchmark (for example, water quality criteria, sediment quality guidelines and criteria, and chronic no adverse effect levels) and are the secondary screening criteria. The Ohio-specific SRVs were developed to identify representative background sediment concentrations for lotic (flowing) water bodies.

The paragraphs below summarize the comparison of the analytical data to the screening levels, when available, for SVOCs, TAL metals, PCBs, and TCL pesticides.

SVOCs

Total PAH 17 and several individual PAHs (anthracene, benzo(a)anthracene, benzo(a)pyrene, chrysene, fluoranthene, fluorene, naphthalene, phenanthrene, and pyrene) were detected at concentrations exceeding PECs.

Anthracene, benzo(a)anthracene, benzo(a)pyrene, chrysene, fluoranthene, phenanthrene, and pyrene exceeded their respective PECs in the sample collected from location LMR11-14 from 0 to 6 inches bss. The calculated total PAH 17 concentration for sample LMR11-14-006 was 92,474.2 micrograms per kilogram (µg/kg), which exceeds the total PAH PEC of 22,800 µg/kg. LMR11-14 is near Corbutt Island in the upstream portion of the project area. Concentrations of PAHs exceeding PECs were detected only in the upper 6 inches of sediment at LMR11-14, which may be attributable to sediment deposited from upstream areas. The downstream side of Corbutt Island, where LMR11-14 is located, is a depositional zone for sediments. Sediment samples collected from deeper intervals at LMR11-14 did not contain PAHs at concentrations exceeding PECs. The 0 to 6 inch bss sample at LMR11-14 consisted primarily of sand (greater than 75%) whereas deeper samples at LMR11-14 consisted of higher percentages of silt and clay.

Anthracene, benzo(a)anthracene, benzo(a)pyrene, chrysene, fluoranthene, fluorene, naphthalene, phenanthrene, and pyrene exceeded their respective PECs in the sample collected from LMR11-

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69 from 0 to 6 inches bss. The calculated total PAH 17 concentration for sample LMR11-69-006 was 297,600 µg/kg, which exceeds the total PAH PEC of 22,800 µg/kg. Sediment recovery was poor at location LMR11-69 so deeper samples were not collected from this location. Therefore, the vertical extent of PAHs at concentrations exceeding the PECs is not defined. LMR11-69 was located near the mouth where Swan Creek discharges into the Maumee River. Elevated concentrations of PAHs have been detected in Swan Creek. The 0 to 6 inch bss sample at LMR11-69 consisted primarily of sand (greater than 75%).

Naphthalene and phenanthrene were detected at concentrations exceeding their PECs at sample location LMR11-50 at a depth of 72 to 96 inches bss. LMR11-50 was located near a CSO, which may be the source of PAHs detected in this area of the river.

TAL METALS

Metals exceeding PECs were noted throughout the investigation area, mostly in samples collected closer to the shores. The following TAL metals were detected at concentrations exceeding their respective PECs in at least one sample: arsenic, cadmium, chromium, lead, mercury, and zinc. The maximum concentration of lead in sediment, 419 milligrams per kilogram (mg/kg), was detected in a sample collected from location LMR11-69 from 0 to 6 inches bss. Elevated concentrations of PAHs also were detected in this sample which is located near the mouth of Swan Creek. High concentrations of lead also were detected in samples collected from LMR11-63 and LMR11-64 near the Clayton Street/Woodville Road bridge (Anthony Wayne High Level Bridge).

The maximum concentration of mercury in sediment, 5.6 mg/kg, was detected in a sample collected from LMR11-72 from 0 to 6 inches bss. A petroleum odor and a blue sheen on the water were noticed as the core at LMR11-72 was recovered. Sampling location LMR11-72 was placed at a historic sampling location previously identified as MAUMEE R AT PORTSIDE DOCKS, where elevated metals concentrations have been detected.

Sample location LMR11-72 is directly downstream from sample location LMR11-69 which also showed elevated concentrations of metals.

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PCBs

PCBs were not identified as a contaminant of concern for this site. While a subset of sediment samples were analyzed for PCBs, they were not detected in any sediment samples collected during site characterization activities.

TCL PESTICIDES

Detected concentrations of pesticides did not exceed their respective PECs in any samples collected during site characterization activities.

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1. INTRODUCTION

Weston Solutions, Inc. (WESTON®), has prepared this Sediment Assessment Report to summarize site characterization activities conducted for the Lower Maumee River project area in Toledo, Lucas County, Ohio (**Figure 1-1**). WESTON prepared the Sediment Assessment Report in response to a request from the United States Environmental Protection Agency (U.S. EPA) Great Lakes National Program Office (GLNPO) under Superfund Technical Assessment and Response Team (START) III Contract No. EP-S5-06-04, Technical Direction Document (TDD) No. S05-0008-1103-006. The site characterization activities were conducted as part of the Maumee River Area of Concern (AOC) Great Lakes Legacy Act (GLLA) project. The purpose of the GLLA project is to define chemical contaminants in sediment, locate contaminated areas for additional evaluation, delineate hotspots, and attempt to identify any ongoing sources. The data collection activities were conducted in accordance with WESTON's approved Quality Assurance Project Plan (QAPP) dated July 2011.

The sections below discuss the report organization, site description, site background and history, possible sources of contamination, the purpose of the study and project objectives, and contaminants of potential concern (COPC) and target analytes.

1.1 REPORT ORGANIZATION

This Sediment Assessment Report is organized as follows:

- Section 1 – Introduction
- Section 2 – Site Characterization Activities
- Section 3 – Sample Analytical Results
- Section 4 – Data Completeness
- Section 5 – Summary

Tables and figures are included after Section 5. **Appendix A** provides the sediment core logs, **Appendix B** provides analytical data tables for all samples collected, and **Appendix C** provides a photographic log of site conditions and sampling activities.

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1.2 SITE DESCRIPTION

The "Maumee Area of Concern Stage 2 Watershed Restoration Plan" states that the Maumee River begins in Fort Wayne at the confluence of the St. Joseph and St. Mary's Rivers and flows through Defiance and Napoleon and then on toward Toledo. Two major tributaries join the Maumee River: the Tiffin and Auglaize Rivers. In Wood and Lucas Counties, several smaller streams flow into the Maumee River: Beaver and Tontogany Creeks from the south and Swan Creek, which join the Maumee River in downtown Toledo.

The Maumee River travels more than 130 river miles to Lake Erie, 108 miles of which are located in Ohio. The Maumee River AOC does not include the entire Maumee River watershed. Instead, it includes the river's lower reach and tributaries as well as some neighboring watersheds (**Figure 1-1**). The boundaries of the Maumee River AOC originally were identified as the area extending from the Bowling Green water intake near Waterville (River Mile 22.8) along the Lower Maumee River downstream to Maumee Bay. The area includes direct drainage into the waters that are within Lucas, Ottawa, and Wood Counties and includes Swan Creek, Ottawa River (Tenmile Creek), Duck Creek, Otter Creek, Grassy Creek, Cedar Creek, and Crane Creek. In 1992, the AOC was expanded to include Packer Creek, Turtle Creek, Rusha Creek, and the Toussaint River. In 2010, the AOC boundaries were formally realigned to match the associated hydrologic units (**Figure 1-1**). The AOC's drainage area covers nearly all of Lucas County and parts of Fulton, Wood, Ottawa, and Sandusky Counties. The Maumee River AOC covers 787 square miles. The Maumee River has the largest drainage area of any Great Lakes river, with 3,942 stream miles.

The Lower Maumee River project area is located in the Maumee River AOC in Toledo, Lucas County, Ohio. The investigation area extends 5 river miles and is bound on the downstream edge by the Interstate 280 bridge (Veterans' Glass City Skyway) and on the upstream edge just downstream of Walbridge Park in Toledo, Ohio (**Figure 1-2**). The Ohio Environmental Protection Agency's (Ohio EPA) "Maumee Remedial Action Plan (RAP) Stage 1 Investigation Report" dated 1990 identified 10 beneficial use impairments (BUI) for the Maumee River AOC that also apply to the Lower Maumee River project area.

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The Maumee River subsurface consists of layers of bedrock with overlying layers of gravel, sand, silt, and clay left behind by glaciers and glacial lakes. Most regional bedrock is dolomite, a magnesium-bearing form of limestone. Smaller areas of sandstone and shale are present, especially in northwestern Lucas County.

The soils of the Maumee River are level to gently sloping and are very poorly to somewhat poorly drained. Lucas County formed in clayey and loamy, lake-laid sediment and water-reworked glacial till on broad flats of an old glacial lake.

The land area, or the watershed, that the Maumee River drains is 6,586 square miles, of which about 85 percent (%) is agricultural land. Daily average discharge ranges from a high of 94,000 cubic feet per second (cfs) to a low of 32 cfs and contributes about 25% of the total tributary discharge into Lake Erie exclusive of the Detroit River. The average annual rainfall in the river basin is 34.5 inches. The area in Wood and Lucas counties draining directly into the Maumee River is comparatively small. Most drainage flows into other rivers, Maumee Bay, or Lake Erie.

1.3 SITE BACKGROUND AND HISTORY

The "Maumee Area of Concern Stage 2 Watershed Restoration Plan" states that when the Maumee River AOC was designated, it was primarily due to the large problem of agricultural runoff. However, upon further investigation, more problems were discovered, including former dumps and contaminated industrial sites, combined sewer overflows (CSO), and disposal of dredged materials.

Originally the delisting of the Maumee River AOC was based on restoration of 14 BUIs for the entire AOC. Impairment of beneficial use means a change in the chemical, physical, or biological integrity of the Great Lakes ecosystem. According to the Ohio EPA's Maumee RAP dated 1990, 10 of the 14 BUIs in the Maumee River AOC required restoration. These BUIs included the following:

- Restrictions on fish and wildlife consumption
- Eutrophication or undesirable algae

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- Restrictions on drinking water consumption or taste and odor
- Degradation of fish and wildlife populations
- Beach closings (Recreational Contact)
- Fish tumors or other deformities
- Degradation of aesthetics
- Degradation of benthos
- Restriction on dredging activities
- Loss of fish and wildlife habitat

The Maumee RAP does not identify BUIs by watershed but for the entire Maumee River AOC because the only means of delisting in 1990 was through total restoration of the entire AOC. Since an incremental approach to delisting was adopted in 2001 by the U.S. Policy Committee, the 1990 RAP and its BUIs were re-evaluated with the help of other community partners. This re-evaluation was conducted based on data and information available in the late 1980s and early 1990s and resulted in the preparation of a BUI summary table for each watershed in the Maumee River AOC. These new tables allowed better determination of progress toward restoration of a watershed or a beneficial use.

1.4 POSSIBLE SOURCES OF CONTAMINATION

The biological communities in the Lower Maumee River have been identified as impaired. The land surrounding the Lower Maumee River project area is primarily industrial and commercial, with both current and historical contamination (**Figure 1-3**). These sources of contaminants include various industries, chemical plants, petroleum production, and wastewater outfalls. The "Maumee Area of Concern Stage 2 Watershed Restoration Plan" dated 2006 indicated elevated concentrations of polychlorinated biphenyls (PCB), polycyclic aromatic hydrocarbons (PAH), and heavy metals in surface sediment in the Lower Maumee River project area.

From 1910 to 1990, Jennison Wright ran a creosote operation and manufactured asphalt pavement sealer at an approximately 23-acre site located at 2332 Broadway Avenue in Toledo that it leased from two railroad companies (**Figure 1-3**). From October 1994 to April 1995, the

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Norfolk Southern Railway and Conrail railroads performed an initial cleanup called an "interim removal action." The cleanup was conducted to remove all vessels, structures, drums, waste piles, and residuals of creosote-contaminated soils (PAHs) for off-site disposal. A more detailed investigation by the railroads identified pollutants in soil and groundwater. In soil, these pollutants included PAHs, 1-methylnaphthalene, 2-methylnaphthalene, arsenic, barium, chromium, and mercury. Pollutants in shallow rock and bedrock groundwater included benzene, ethylbenzene, toluene, xylene, arsenic, barium, and PAHs.

The property located at 1968 Miami Street had been owned by the Pilkington North America and Libbey Owens Ford glassmaking companies (**Figure 1-3**). A site assessment indicated soil contaminated with arsenic and groundwater contaminated with arsenic, nickel, chromium, lead, and bis(2-ethylhexyl)phthalate at concentrations exceeding standards allowed for residential and commercial/industrial use. The current property owner voluntarily assessed the property and then conducted a site cleanup of sand ponds that had been used until the 1970s to dispose of wastewater from glassmaking operations.

1.5 PURPOSE OF STUDY AND PROJECT OBJECTIVE

The purpose of the Lower Maumee River GLLA project is to further define chemical contaminants in sediment, locate contaminated areas for additional evaluation, delineate hot spots, and attempt to identify any ongoing sources. The objective of this site characterization was to collect samples for chemical and physical properties analysis needed to support project area assessment and potential remediation activities.

1.6 COPCs AND TARGET ANALYTES

All sediment samples were analyzed for the following COPCs: Target Analyte List (TAL) metals (including mercury) and semivolatile organic compounds (SVOC). In addition, approximately 10% of all sediment samples collected were analyzed for Target Compound List (TCL) pesticides and PCB Aroclors. All sediment samples also were analyzed for physical properties, including % moisture, total organic carbon (TOC), and grain size.

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2. SITE CHARACTERIZATION ACTIVITIES

Site characterization activities were conducted from August 1 through 11, 2011, and included sediment sample collection and sediment characterization as discussed below.

2.1 SEDIMENT SAMPLE COLLECTION

The sample collection procedures are detailed in WESTON's QAPP dated July 2011. The data collected during characterization activities will be used to (1) evaluate the locations of the most heavily contaminated sediment and (2) focus areas for further evaluation and remediation.

The Lower Maumee River project area extends 5 river miles, bound on the downstream edge by the Interstate 280 bridge (Veterans' Glass City Skyway) and on the upstream edge just downstream of Walbridge Park in Toledo, Ohio (**Figure 1-2**). Most sediment sampling locations were selected using Visual Sampling Plan (VSP) software with a sample design based on detecting "hot spots" (local areas of elevated concentrations) with a 646-foot-radius and 95% confidence probability. Two sampling locations (LMR11-50 and LMR11-72) were chosen at two historic sampling locations within the project area boundaries previously identified as MAUMEE R DST LOF PONDS ADJ SUNKEN BARGE and MAUMEE R AT PORTSIDE DOCKS, respectively. However, proposed location LMR11-50 was moved closer to a nearby CSO location. Five sampling locations (LMR11-57, LMR11-59, LMR11-60, LMR11-62, and LMR11-63) were biased in an area where the City of Toledo is planning future development. Additionally, samples were not collected from the navigation channel.

A total of 337 sediment samples (including 303 investigative, 17 field split, and 17 duplicate samples) were collected from 84 sampling locations in the Lower Maumee River project area. **Table 2-1** presents the sampling location coordinates, and **Figure 2-1** shows the sediment sampling locations.

Where sediment recovery was adequate, samples typically were collected from the following intervals: 0 to 6, 6 to 24, 24 to 48, 48 to 72, 72 to 96, 96 to 120, 120 to 144, and 144 to 168 inches below sediment surface (bss). Except for the surface interval, each sampling interval was

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typically 24 inches long. If less than 12 inches of sediment was encountered in the bottom interval, it typically was included with the previous interval. Location LMR11-09 was not sampled because of poor recovery. In addition, poor recovery was noted in the upper 24 inches of sediment at location LMR11-43. Sediment collected from each sampling depth interval was homogenized, and an aliquot of each sediment sample was submitted for laboratory analysis.

Upstream of Interstate 75, sediment volume was not expected to be adequate to allow collection of a sediment core at sampling locations near the center of the river. Therefore, only a surface sample from 0 to 6 inches bss was planned for collection using a ponar device at these locations. However, during site characterization activities, adequate core recovery was unexpectedly achieved at several locations near the center of the river upstream of Interstate 75. Samples were collected using a ponar device at many of these locations, and then the sampling team returned to several locations to collect a sediment core on a later date. **Table 2-2** presents the sampling and analysis summary, including the sample collection device (ponar or vibracore) for each sediment sample. **Figure 2-2** shows the sediment thickness at each sampling location during the sediment sampling activities.

Sediment cores were collected to depth of refusal or until native material was encountered. Sediment cores typically were collected using the GLNPO research vessel (R/V) Mudpuppy II. However, due to equipment problems with the Mudpuppy II, some sediment samples were collected using a vibracore device mounted to a pontoon boat.

A U.S. EPA Contract Laboratory Program (CLP) laboratory analyzed the samples for SVOCs, TAL metals (including mercury), PCB Aroclors, TCL pesticides, and % moisture. A WESTON-procured subcontracted laboratory, TestAmerica Burlington of Burlington, Vermont, analyzed the samples for grain size and TOC (**Table 2-2**). Section 3 discusses the sample analytical results.

2.2 SEDIMENT CHARACTERISTICS

During site characterization activities, sediment throughout the Lower Maumee River project area largely was uniform. Sediment consisted of dark-brown to black, silty sand and sandy silt

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with fine to medium grains throughout. Areas near the shoreline and Corbutt Island also had a surface deposit of well-graded gravel and cobbles. Organic materials were observed throughout much of the top 24 inches of sediment. An oily sheen was observed at location LMR11-69 as the core was extracted. Poor recovery (12 of 60 inches) was noted for this core, and woody debris was noted on the top of the core. A petroleum odor was noticed as cores were recovered from LMR11-50 and LMR11-72. A blue sheen was noted on the water surface as the core from LMR11-72 was recovered.

The maximum water depth encountered during sediment sampling was 22.5 feet. The maximum sediment depth measured was 175 inches at location LMR11-50. **Figure 2-2** shows the sediment thickness recovered at each core location during sediment sampling. **Appendix A** presents the sediment core logs, which provide additional detail regarding the geologic profile and water and sediment depth at each sampling location.

3. SAMPLE ANALYTICAL RESULTS

This section summarizes analytical results for the site characterization samples collected from August 1 through 11, 2011. A total of 337 sediment samples (303 investigative, 17 field split, and 17 duplicate samples) were collected from 84 sampling locations in the Lower Maumee River project area. The table below summarizes the analytical parameters for the investigative samples collected.

Analysis	Sampling Depth (inches bss)							
	0- 6	6- 24	24- 48	48- 72	72- 96	96- 120	120- 144	144- 168
SVOCs	83	66	58	45	30	16	3	2
TAL Metals	83	66	58	45	30	16	3	2
PCB Aroclors	7	13	6	2	1	0	0	0
Pesticides	7	13	6	2	1	0	0	0
Grain Size	81	66	58	45	30	16	3	2
TOC	83	66	58	45	30	16	3	2

The sample results for SVOCs, metals (including mercury), PCBs, and pesticides were compared to Probable Effect Concentrations (PEC) set forth in the document "Development and Evaluation of Consensus-Based Sediment Quality Guidelines for Freshwater Ecosystems" (by D.D. MacDonald, et. al., dated 2000). The metals results were also compared to Ohio-specific

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Sediment Reference Values (SRV) set forth in the "Ohio Ecological Risk Assessment Guidance Document" dated February 2003 and revised in April 2008. Ecological Screening Levels (ESL) for sediment as set forth in U.S. EPA Region 5's "Ecological Screening Levels" dated 2003 are also presented as a secondary source of screening criteria and are used for comparison when PECs are not available.

The PECs and ESLs provide screening criteria to evaluate sediment chemistry data. PECs are defined as concentrations above which adverse effects are expected to occur and are the primary screening criteria for this characterization project. The ESLs represent a protective benchmark (for example, water quality criteria, sediment quality guidelines and criteria, and chronic no adverse effect levels) and are the secondary screening criteria. Sample results are compared to ESLs for chemicals that do not have a developed PEC, as discussed in sections 3.1 through 3.4. The Ohio-specific SRVs were developed to identify representative background sediment concentrations for lotic (flowing) water bodies. The SRVs may be used in conjunction with or instead of generating site-specific background concentrations for metals to determine if sediment potentially has been impacted. The SRVs are used as a screening tool for sites that have identified potential sediment contamination in lotic water bodies. Metals concentrations are compared to SRVs for chemicals that do not have a developed PEC as discussed in section 3.2.

Tables 3-1, 3-2, and 3-3 summarize the analytical results for SVOCs, TAL metals, and pesticides, respectively, by sediment depth sampling interval. These tables include the number of samples analyzed per depth interval; the number and percent of detected results; minimum and maximum detected concentrations; screening criteria; and the number of samples exceeding the screening criteria. **Appendix B** presents tables of the complete analytical results compared to PECs. The **Appendix B** tables summarize the sample results for % moisture, TOC, and grain size but do not compare these results to numerical screening criteria. **Appendix C** provides a photographic log of site conditions and sampling activities.

The sections below compare the analytical data to the screening criteria, when available, for SVOCs, TAL metals, PCBs, TCL pesticides, and physical properties.

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3.1 SVOCs

A total of 337 (303 investigative, 17 field split, and 17 duplicate) sediment samples were analyzed for SVOCs. **Table 3-1** summarizes the analytical results for SVOCs by sediment depth sampling interval. **Table B-1** in **Appendix B** provides the complete analytical results. Thirty SVOCs were detected in the sediment samples:

- 1,1'-Biphenyl
- 2-Methylnaphthalene
- 2-Methylphenol
- 4-Chloroaniline
- 4-Methylphenol
- Acenaphthene
- Acenaphthylene
- Acetophenone
- Anthracene
- Benzo(a)anthracene
- Benzo(a)pyrene
- Benzo(b)fluoranthene
- Benzo(g,h,i)perylene
- Benzo(k)fluoranthene
- Bis(2-ethylhexyl)phthalate
- Butylbenzylphthalate
- Caprolactam
- Carbazole
- Chrysene
- Dibenzo(a,h)anthracene
- Dibenzofuran
- Di-n-butylphthalate
- Di-n-octylphthalate
- Fluoranthene
- Fluorene
- Indeno(1,2,3-cd)pyrene
- Naphthalene
- Pentachlorophenol
- Phenanthrene
- Pyrene

Of the 30 SVOCs detected, the following PAHs were detected at concentrations that exceeded their respective PECs: anthracene, benzo(a)anthracene, benzo(a)pyrene, chrysene, fluoranthene, fluorene, naphthalene, phenanthrene, and pyrene.

A total PAH 17 concentration was calculated for each sample by summing the concentration of each detected PAH in addition to all non-detect concentrations at one-half the detection limit for comparison to the total PAH PEC. Total PAH 17 and individual PAH concentrations exceeded the PECs at samples collected from locations LMR11-14 and LMR11-69 at the surface interval of 0 to 6 inches bss. **Figure 3-1** shows the locations where total PAH results exceeded the PEC

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of 22,800 micrograms per kilogram (µg/kg). Anthracene, benzo(a)anthracene, benzo(a)pyrene, chrysene, fluoranthene, phenanthrene, and pyrene exceeded their respective PECs in the sample collected from location LMR11-14 from 0 to 6 inches bss. The calculated total PAH 17 concentration for sample LMR11-14-006 was 92,474.2 µg/kg, which exceeds the total PAH PEC of 22,800 µg/kg. LMR11-14 is near Corbutt Island in the upstream portion of the project area. Concentrations of PAHs exceeding PECs were detected only in the upper 6 inches of sediment at LMR11-14. The downstream side of Corbutt Island, where LMR11-14 is located, is a depositional zone for sediments. Sediment samples collected from deeper intervals at LMR11-14 did not contain PAHs at concentrations exceeding PECs.

The calculated total PAH 17 concentration for sample LMR11-69-006 was 297,600 µg/kg, which exceeds the total PAH PEC of 22,800 µg/kg. Anthracene, benzo(a)anthracene, benzo(a)pyrene, chrysene, fluoranthene, fluorene, naphthalene, phenanthrene, and pyrene exceeded their respective PECs in the sample collected from LMR11-69 from 0 to 6 inches bss. Sediment recovery was poor at location LMR11-69 so deeper samples were not collected from this location. Therefore, the vertical extent of PAHs at concentrations exceeding the PECs is not defined at this location. LMR11-69 was located near the mouth where Swan Creek discharges into the Maumee River. Concurrent sampling by GLNPO detected elevated concentrations of PAHs in Swan Creek (WESTON's Sediment Assessment Report-Swan Creek dated January 6, 2012).

Samples collected from 0 to 6 inches bss at LMR11-14 and LMR11-69 primarily consisted of sand (greater than 75%). Deeper samples from LMR11-14 consisted of higher percentages of silt and clay than samples from the surface interval. Grain size results are discussed in Section 3.5.

Additionally, although the total PAH value did not exceed the PEC, naphthalene and phenanthrene were detected at concentrations exceeding their PECs at sample location LMR11-50 at a depth of 72 to 96 inches bss. LMR11-50 was located near a CSO, which may be the source of PAHs detected in this area of the river.

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PECs have not been developed for the following detected SVOCs that are not PAHs: 1,1'-biphenyl, 2-methylphenol, 4-chloroaniline, 4-methylphenol, acetophenone, bis(2-ethylhexyl)phthalate, butylbenzylphthalate, caprolactam, carbazole, dibenzofuran, di-n-butylphthalate, di-n-octylphthalate, and pentachlorophenol. ESLs are available for comparison for all of these chemicals except 1,1-biphenyl, acetophenone, caprolactam, and carbazole. Concentrations of the following exceeded their respective ESLs: 4-methylphenol, bis(2-ethylhexyl)phthalate, butylbenzylphthalate, and dibenzofuran. Detected concentrations of the following did not exceed their respective ESLs: 2-methylphenol, 4-chloroaniline, di-n-butylphthalate, di-n-octylphthalate, and pentachlorophenol.

The highest concentration of bis(2-ethylhexyl)phthalate (1,500 µg/kg) and the only concentration of dibenzofuran (3,200 µg/kg) exceeding their respective ESLs of 182 and 449 µg/kg were detected in sample LMR11-69-006 where elevated concentrations of PAHs were detected. The highest concentrations of 4-methylphenol were detected in samples collected from LMR11-50, which is located near a CSO. Butylbenzylphthalate concentrations exceeded the ESL of 1,970 µg/kg in only one sample, LMR11-63-006 at a concentration of 7,100 µg/kg. Per the Agency for Toxic Substances and Disease Registry (ATSDR) *Toxicological Profile for Wood Creosote, Coal Tar Creosote, Coal Tar, Coal Tar Pitch, and Coal Tar Pitch Volatiles* (September 2002), 4-methylphenol is an component of wood creosote and dibenzofuran is an component of coal tar creosote.

3.2 TAL METALS

A total of 337 (303 investigative, 17 field split, and 17 duplicate) sediment samples were analyzed for metals. **Table 3-2** summarizes the analytical results for metals by sediment depth sampling interval. **Table B-2** in **Appendix B** provides the complete analytical results. Twenty-two TAL metals were detected in the sediment samples:

- Aluminum
- Antimony
- Arsenic
- Barium
- Beryllium
- Cadmium
- Calcium
- Chromium
- Cobalt
- Copper

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- Iron
- Lead
- Magnesium
- Manganese
- Mercury
- Nickel
- Potassium
- Selenium
- Silver
- Sodium
- Vanadium
- Zinc

Thallium was the only TAL metal not detected in at least one sediment sample. Of the 22 TAL metals detected, PECs have been developed for the following nine TAL metals: arsenic, cadmium, chromium, copper, lead, mercury, nickel, and zinc. The following TAL metals were detected at concentrations exceeding their respective PECs in at least one sample: arsenic, cadmium, chromium, lead, mercury, and zinc. **Figure 3-2** shows the locations where TAL metals results exceeded the PECs. Metals exceeding PECs were noted throughout the investigation area in mostly samples collected closer to the shores. The maximum concentration of lead in sediment, 419 milligrams per kilogram (mg/kg), was detected in a sample collected from location LMR11-69 from 0 to 6 inches bss. Elevated concentrations of PAHs also were detected in this sample which is located near the mouth of Swan Creek. High concentrations of lead also were detected in samples collected from LMR11-63 and LMR11-64 near the Clayton Street/Woodville Road Bridge (Anthony Wayne High Level Bridge).

The maximum concentration of mercury in sediment, 5.6 mg/kg, was detected in a sample collected from LMR11-72 from 0 to 6 inches bss. A petroleum odor and a blue sheen on the water were noticed as the core at LMR11-72 was recovered. Sampling location LMR11-72 was placed at a historic sampling location previously identified as MAUMEE R AT PORTSIDE DOCKS, where elevated metals concentrations have been detected.

PECs have not been developed for the following metals: aluminum, antimony, barium, beryllium, calcium, cobalt, iron, magnesium, manganese, potassium, selenium, silver, sodium, thallium, and vanadium. Ohio-specific SRVs representing background sediment concentrations for lotic (flowing) water bodies are available for the following TAL metals without PECs: aluminum, antimony, barium, calcium, iron, magnesium, manganese, potassium, and selenium. **Figure 3-3** shows locations where results for TAL metals without PECs exceeded the SRVs.

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3.3 PCBs

A total of 33 (29 investigative, 2 field split, and 2 duplicate) sediment samples were analyzed for PCB Aroclors. **Table B-3** in **Appendix B** provides the complete analytical results. PCB Aroclors were not detected in any sediment sample. PCBs were not originally identified as a major contaminant of concern, and more sampling may be needed to identify the nature and extent of PCB contamination.

3.4 TCL PESTICIDES

A total of 33 (29 investigative, 2 field split, and 2 duplicate) sediment samples were analyzed for TCL pesticides. **Table 3-3** summarizes the analytical results for pesticides by sediment depth sampling interval. **Table B-4** in **Appendix B** provides the complete analytical results. Six TCL pesticides were detected in the sediment samples:

- Aldrin
- Beta-BHC
- Endrin aldehyde
- Gamma-BHC (Lindane)
- Gamma-chlordane
- Heptachlor

Of the six detected pesticides, PECs have been developed for gamma-BHC and gamma-chlordane. Detected concentrations of gamma-BHC and gamma-chlordane did not exceed their respective PECs. PECs have not been developed for aldrin, beta-BHC, endrin aldehyde, or heptachlor. ESLs are available for these chemicals. Of these chemicals, heptachlor was the only chemical detected at concentrations exceeding the ESL. Heptachlor concentrations exceeded the ESL of 0.6 µg/kg in two samples, LMR11-12-006 at a concentration of 2.7 µg/kg and LMR11-26-024 at a concentration of 1.9 µg/kg.

3.5 PHYSICAL PROPERTIES

Grain size analysis was conducted on a total of 318 (301 investigative and 17 field split) sediment samples, and TOC analysis was conducted on a total of 337 (303 investigative, 17 field split, and 17 duplicate) sediment samples. **Table B-5** of **Appendix B** provides the complete analytical results. The geotechnical results for the 318 samples collected for grain size analysis

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indicate that the material sampled consisted of a mixture of fine sand, silt, and clay. The average composition was 27% sand, 28% silt, and 42% clay.

4. DATA COMPLETENESS

Data validation summaries were produced for each chemical analyte group. Data generated through the U.S. EPA CLP underwent an initial performance assessment and compliance screening check performed and uploaded by the Sample Management Office (SMO) to the Electronic Data Exchange and Evaluation System (EXES) website. These checks were conducted to confirm conformance with the U.S. EPA CLP National Functional Guidelines (NFG). After this assessment, Shaw Environmental and Infrastructure Inc., (Shaw) under subcontract to GLNPO, completed validation of the data generated by the U.S. EPA CLP (for SVOCs, TAL metals and mercury, PCB Aroclors, TCL pesticides, and % moisture analyses). Shaw performed Tier 2 validation on 5 to 10% of the samples and Tier 1 validation on the remaining 90 to 95%.

During the validation process, Shaw may have removed data qualifiers for following reasons:

- The EXES Software often J or R flag analytical results for temperature more precisely than U.S. CLP NFG standards. Data flags may have been removed in some instances where temperature was not out of range, but the software indicated it was.
- EXES generated flags may have been removed by validators because EXES does not decipher between multiple columns/calibrations.
- U.S. CLP NFG does not qualify for matrix spikes; EXES qualifies for spikes based on R2 guidance. Validation was conducted following U.S. EPA CLP NFGs and some flags may have been removed by the validator.
- Relative percent difference (RPD) over 40 are noted by validators and flagged with the dataset.

Data received from the subcontracted laboratory (TestAmerica Burlington) for all parameters except grain size were run through the Automated Data Review (ADR) checker. WESTON completed a 5% full manual data validation for all analyses conducted by the WESTON-

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procured subcontractor laboratory (grain size and TOC). The following are the general guidelines used for the data validation:

- NFGs for Superfund Organic Methods Data Review, U.S. EPA, June 2008
- NFGs for Inorganic Superfund Data Review, U.S. EPA, January 2010

Data not covered in the NFGs were compared to applicable analytical method guidelines, the laboratory standard operating procedures (SOP), and guidelines described in the WESTON QAPP dated July 2011.

The data validation consisted of completing the GLNPO Quality Assurance/Quality Control (QA/QC) checklist and preparing a data narrative summary report for each chemical parameter, which included the following completeness and usability components:

- Summary of data review
- Minor problems (as applicable)
  - Holding times
  - Method blanks
  - Matrix spike/matrix spike duplicates
  - Surrogates
  - Calibration
  - Laboratory control samples
  - Laboratory duplicates
  - Field duplicate results
- Data quality indicator review
  - Sensitivity
  - Precision
  - Accuracy
  - Completeness

Based on the data validation and data usability assessment, all data are considered suitable for project decisions per the QAPP. All the data validation summaries have been submitted to GLNPO under separate cover along with all of the Shaw and WESTON Data Validation Summaries for inclusion into GLNPO's GLSED.

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5. SUMMARY

During the sediment investigation, a total of 337 sediment samples (including field split and duplicate samples) were collected from 84 sampling locations in the Lower Maumee project area. Where sediment recovery was adequate, samples typically were collected from the following intervals: 0 to 6, 6 to 24, 24 to 48, 48 to 72, 72 to 96, 96 to 120, 120 to 144, and 144 to 168 inches bss.

All sediment samples were analyzed for the COPCs TAL metals (including mercury) and SVOCs. In addition, approximately 10% of all sediment samples collected were analyzed for TCL pesticides and PCB Aroclors. All sediment samples also were analyzed for physical properties, including % moisture, TOC, and grain size.

The sample results for SVOCs, metals, PCBs, and pesticides were compared to PECs set forth in the document "Development and Evaluation of Consensus-Based Sediment Quality Guidelines for Freshwater Ecosystems" (by D.D. MacDonald, et. al., dated 2000). The metals results were also compared to Ohio-specific SRVs set forth in the "Ohio Ecological Risk Assessment Guidance Document" dated February 2003, revised April 2008. ESLs for sediment as set forth in U.S. EPA Region 5's "Ecological Screening Levels" dated 2003 were presented as a secondary source of screening criteria for chemicals that do not have a developed PEC.

The PECs and ESLs provide screening criteria to evaluate sediment chemistry data. PECs are defined as concentrations above which adverse effects are expected to occur and are the primary screening criteria for this characterization project. The ESLs represent a protective benchmark (for example, water quality criteria, sediment quality guidelines and criteria, and chronic no adverse effect levels) and are the secondary screening criteria. The Ohio-specific SRVs were developed to identify representative background sediment concentrations for lotic (flowing) water bodies.

The sections below summarize the comparison of the analytical data to the screening levels, when available, for SVOCs, TAL metals (including mercury), PCBs, and TCL pesticides.

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5.1 SVOCs

Total PAH 17 and several individual PAHs (anthracene, benzo(a)anthracene, benzo(a)pyrene, chrysene, fluoranthene, fluorene, naphthalene, phenanthrene, and pyrene) were detected at concentrations exceeding PECs.

Anthracene, benzo(a)anthracene, benzo(a)pyrene, chrysene, fluoranthene, phenanthrene, and pyrene exceeded their respective PECs in the sample collected from location LMR11-14 from 0 to 6 inches bss. The calculated total PAH 17 concentration for sample LMR11-14-006 was 92,474.2 µg/kg, which exceeds the total PAH PEC of 22,800 µg/kg. LMR11-14 is near Corbutt Island in the upstream portion of the project area. Concentrations of PAHs exceeding PECs were detected only in the upper 6 inches of sediment at LMR11-14. The downstream side of Corbutt Island, where LMR11-14 is located, is a depositional zone for sediments. Sediment samples collected from deeper intervals at LMR11-14 did not contain PAHs at concentrations exceeding PECs. The 0 to 6 inch bss sample at LMR11-14 consisted primarily of sand (greater than 75%) whereas deeper samples at LMR11-14 consisted of higher percentages of silt and clay.

Anthracene, benzo(a)anthracene, benzo(a)pyrene, chrysene, fluoranthene, fluorene, naphthalene, phenanthrene, and pyrene exceeded their respective PECs in the sample collected from LMR11-69 from 0 to 6 inches bss. The calculated total PAH 17 concentration for sample LMR11-69-006 was 297,600 µg/kg, which exceeds the total PAH PEC of 22,800 µg/kg. Sediment recovery was poor at location LMR11-69 so deeper samples were not collected from this location. Therefore, the vertical extent of PAHs at concentrations exceeding the PECs is not defined. LMR11-69 was located near the mouth where Swan Creek discharges into the Maumee River. Elevated concentrations of PAHs have been detected in Swan Creek. The 0 to 6 inch bss sample at LMR11-69 consisted primarily of sand (greater than 75%).

Naphthalene and phenanthrene were detected at concentrations exceeding their PECs at sample location LMR11-50 at a depth of 72 to 96 inches bss. LMR11-50 was located near a CSO, which may be the source of PAHs detected in this area of the river.

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5.2 TAL METALS

Metals exceeding PECs were noted throughout the investigation area, mostly in samples collected closer to the shores. The following TAL metals were detected at concentrations exceeding their respective PECs in at least one sample: arsenic, cadmium, chromium, lead, mercury, and zinc. The maximum concentration of lead in sediment, 419 mg/kg, was detected in a sample collected from location LMR11-69 from 0 to 6 inches bss. Elevated concentrations of PAHs also were detected in this sample which is located near the mouth of Swan Creek. High concentrations of lead also were detected in samples collected from LMR11-63 and LMR11-64 near the Clayton Street / Woodville Road Bridge (Anthony Wayne High Level Bridge).

The maximum concentration of mercury in sediment, 5.6 mg/kg, was detected in a sample collected from LMR11-72 from 0 to 6 inches bss. A petroleum odor and a blue sheen on the water were noticed as the core at LMR11-72 was recovered. Sampling location LMR11-72 was placed at a historic sampling location previously identified as MAUMEE R AT PORTSIDE DOCKS, where elevated metals concentrations have been detected.

Sample location LMR11-72 is directly downstream from sample location LMR11-69 which also showed elevated concentrations of metals.

5.3 PCBs

PCBs were not identified as a contaminant of concern for this site. While a subset of sediment samples were analyzed for PCBs, they were not detected in any sediment samples collected during site characterization activities.

5.4 TCL PESTICIDES

Detected concentrations of pesticides did not exceed their respective PECs in any samples collected during the site characterization activities.

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6. NEXT STEPS

The purpose of the Lower Maumee River GLLA project is to further define chemical contaminants in sediment, locate contaminated areas for additional evaluation, delineate hot spots, and attempt to identify any ongoing sources. The objective of this site characterization was to collect samples for chemical and physical properties analysis needed to support project area assessment and potential remediation activities.

The data collected during the site characterization activities conducted for the Lower Maumee River project area is sufficient to meet the site characterization objectives. The data gaps and recommendations for future work to meet the objectives of the GLLA project are as follows:

- Delineate hot spots of contamination and determine the nature and extent of PAH and metal contamination in the Lower Maumee River project area.
- Identify any on-going sources of contamination.
    - Determine sources of potential upstream contamination.
    - Determine the influence of contamination from Swan Creek on the project area.
    - Determine the impact of CSOs on the project area.
- Estimate the bioavailability of contaminants of concern using Equilibrium Partitioning Sediment Benchmarks (ESBs) and determine ESB Toxic Units (ESBTU).
- Where bioaccumulative chemicals are present in sediment, it may be necessary to evaluate fish tissue and/or water column data in addition to sediment data in order to determine appropriate sediment management options.
- Evaluate metal toxicity through an indirect estimate of bioavailability based on concentrations of Simultaneously Extracted Metals (SEM).
- Estimate the volume of contaminated sediments.

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TABLES

Table 2-1
Sampling Location Coordinates
Lower Maumee River - Maumee River AOC
Toledo, Lucas County, Ohio

Location ID	Latitude (D.d)	Longitude (D.d)	Location ID	Latitude (D.d)	Longitude (D.d)
LMR11-01	41.62089	-83.57261	LMR11-44	41.62418	-83.53952
LMR11-02	41.61784	-83.57018	LMR11-45	41.62699	-83.53946
LMR11-03	41.62091	-83.57023	LMR11-46	41.62571	-83.53834
LMR11-04	41.61786	-83.56781	LMR11-47	41.62422	-83.53703
LMR11-05	41.61634	-83.56661	LMR11-48	41.62742	-83.53724
LMR11-06	41.62246	-83.56907	LMR11-49	41.62576	-83.53614
LMR11-07	41.61789	-83.56545	LMR11-50	41.62450	-83.53336
LMR11-08	41.62248	-83.56671	LMR11-51	41.62742	-83.53495
LMR11-10	41.62250	-83.56434	LMR11-52	41.62567	-83.53392
LMR11-11	41.62098	-83.56314	LMR11-53	41.62923	-83.53318
LMR11-12	41.61945	-83.56193	LMR11-54	41.62677	-83.53375
LMR11-13	41.62405	-83.56319	LMR11-55	41.63052	-83.53230
LMR11-14	41.62253	-83.56198	LMR11-56	41.63045	-83.53033
LMR11-15	41.62097	-83.56058	LMR11-57	41.63355	-83.53268
LMR11-16	41.61937	-83.55905	LMR11-58	41.63290	-83.53024
LMR11-17	41.62407	-83.56082	LMR11-59	41.63531	-83.53322
LMR11-18	41.62255	-83.55962	LMR11-60	41.63705	-83.53373
LMR11-19	41.62090	-83.55844	LMR11-61	41.63812	-83.53187
LMR11-20	41.62409	-83.55846	LMR11-62	41.63887	-83.53414
LMR11-21	41.62257	-83.55725	LMR11-63	41.64059	-83.53454
LMR11-22	41.62104	-83.55605	LMR11-64	41.64170	-83.53417
LMR11-23	41.62409	-83.55611	LMR11-65	41.64428	-83.53394
LMR11-24	41.62259	-83.55489	LMR11-66	41.64424	-83.53168
LMR11-25	41.62107	-83.55368	LMR11-67	41.64726	-83.53336
LMR11-26	41.62408	-83.55370	LMR11-68	41.64735	-83.53081
LMR11-27	41.62261	-83.55253	LMR11-69	41.64899	-83.53292
LMR11-28	41.62108	-83.55134	LMR11-70	41.64912	-83.52997
LMR11-29	41.62416	-83.55137	LMR11-71	41.64924	-83.52784
LMR11-30	41.62263	-83.55016	LMR11-72	41.65105	-83.53065
LMR11-31	41.62195	-83.54921	LMR11-73	41.62905	-83.53032
LMR11-32	41.62569	-83.55012	LMR11-74	41.65173	-83.52810
LMR11-33	41.62418	-83.54900	LMR11-75	41.65209	-83.52589
LMR11-34	41.62266	-83.54780	LMR11-76	41.65354	-83.52470
LMR11-35	41.62573	-83.54794	LMR11-77	41.65391	-83.52263
LMR11-36	41.62420	-83.54664	LMR11-78	41.65501	-83.52130
LMR11-37	41.62261	-83.54536	LMR11-79	41.65688	-83.52217
LMR11-38	41.62565	-83.54551	LMR11-80	41.65533	-83.51945
LMR11-39	41.62422	-83.54428	LMR11-81	41.65668	-83.51992
LMR11-40	41.62260	-83.54293	LMR11-82	41.65665	-83.51760
LMR11-41	41.62577	-83.54312	LMR11-83	41.62488	-83.51631
LMR11-42	41.62376	-83.54119	LMR11-84	41.65812	-83.51412
LMR11-43	41.62585	-83.54126	LMR11-85	41.65975	-83.51286

Notes:
D.d - Decimal degrees
ID - Identification

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Table 2-2
Sampling and Analysis Summary
Lower Maumee River - Maumee River AOC
Toledo, Lucas County, Ohio

Location ID	Field Sample ID	Sample Collection Device	Depth (inches bss)	Sampling Date	Analyses					
					SVOCs	TAL Metals	PCB Aroclors	TCL Pesticides	Grain Size	TOC
LMR11-01	LMR11-01-006	Ponar	0 - 6	8/2/2011	X	X			X	X
	LMR11-01-024	Vibracore	6 - 24	8/5/2011	X	X			X	X
	LMR11-01-048	Vibracore	24 - 48	8/5/2011	X	X			X	X
	LMR11-01-060	Vibracore	48 - 60	8/5/2011	X	X			X	X
LMR11-02	LMR11-02-006	Ponar	0 - 6	8/2/2011	X	X	X	X	X	X
LMR11-03	LMR11-03-006	Ponar	0 - 6	8/3/2011	X	X			X	X
	LMR11-03-024	Vibracore	6 - 24	8/3/2011	X	X			X	X
	LMR11-03-048	Vibracore	24 - 48	8/3/2011	X	X			X	X
	LMR11-03-059	Vibracore	48 - 59	8/3/2011	X	X			X	X
LMR11-04	LMR11-04-006	Ponar	0 - 6	8/3/2011	X	X			X	X
LMR11-05	LMR11-05-006	Ponar	0 - 6	8/4/2011	X	X			X	X
	LMR11-05-018	Vibracore	6 - 18	8/4/2011	X	X			X	X
LMR11-06	LMR11-06-006	Ponar	0 - 6	8/3/2011	X	X			X	X
	LMR11-06-024	Vibracore	6 - 24	8/3/2011	X	X			X	X
	LMR11-06-052	Vibracore	24 - 52	8/3/2011	X	X			X	X
LMR11-07	LMR11-07-006	Ponar	0 - 6	8/3/2011	X	X			X	X
LMR11-08	LMR11-08-006	Ponar	0 - 6	8/3/2011	X	X			X	X
	LMR11-08-024	Vibracore	6 - 24	8/5/2011	X	X			X	X
	LMR11-08-052	Vibracore	24 - 52	8/5/2011	X	X			X	X
LMR11-10	LMR11-10-006	Ponar	0 - 6	8/4/2011	X	X			X	X
	LMR11-10-024	Vibracore	6 - 24	8/4/2011	X	X			X	X
	LMR11-10-045	Vibracore	24 - 45	8/4/2011	X	X			X	X
LMR11-11	LMR11-11-006	Ponar	0 - 6	8/5/2011	X	X				X
	LMR11-11-024	Vibracore	6 - 24	8/5/2011	X	X			X	X
	LMR11-11-037	Vibracore	24 - 37	8/5/2011	X	X			X	X
LMR11-12	LMR11-12-006	Ponar	0 - 6	8/3/2011	X	X	X	X	X	X
LMR11-13	LMR11-13-006	Ponar	0 - 6	8/3/2011	X	X			X	X
	LMR11-13-026	hand-drive	6 - 26	8/3/2011	X	X			X	X
LMR11-14	LMR11-14-006	Ponar	0 - 6	8/5/2011	X	X			X	X
	LMR11-14-024	Vibracore	6 - 24	8/5/2011	X	X			X	X
	LMR11-14-045	Vibracore	24 - 45	8/5/2011	X	X			X	X
LMR11-15	LMR11-15-006	Vibracore	0 - 6	8/9/2011	X	X			X	X
	LMR11-15-006-DP	Vibracore	0 - 6	8/9/2011	X	X				X
	LMR11-15-024	Vibracore	6 - 24	8/9/2011	X	X			X	X
	LMR11-15-024-DP	Vibracore	6 - 24	8/9/2011	X	X				X
	LMR11-15-048	Vibracore	24 - 48	8/9/2011	X	X	X	X	X	X
	LMR11-15-048-DP	Vibracore	24 - 48	8/9/2011	X	X	X	X		X
	LMR11-15-072	Vibracore	48 - 72	8/9/2011	X	X			X	X
	LMR11-15-104	Vibracore	72 - 104	8/9/2011	X	X			X	X
LMR11-16	LMR11-16-006	Vibracore	0 - 6	8/9/2011	X	X			X	X
	LMR11-16-024	Vibracore	6 - 24	8/9/2011	X	X	X	X	X	X
	LMR11-16-048	Vibracore	24 - 48	8/9/2011	X	X			X	X
	LMR11-16-072	Vibracore	48 - 72	8/9/2011	X	X			X	X
LMR11-17	LMR11-17-006	Ponar	0 - 6	8/4/2011	X	X			X	X
	LMR11-17-021	Vibracore	6 - 21	8/4/2011	X	X			X	X
LMR11-18	LMR11-18-006	Ponar	0 - 6	8/3/2011	X	X			X	X
	LMR11-18-024	Vibracore	6 - 24	8/5/2011	X	X			X	X
	LMR11-18-048	Vibracore	24 - 48	8/5/2011	X	X			X	X

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Toledo, Lucas County, Ohio

Location ID	Field Sample ID	Sample Collection Device	Depth (inches bss)	Sampling Date	Analyses					
					SVOCs	TAL Metals	PCB Aroclors	TCL Pesticides	Grain Size	TOC
LMR11-19	LMR11-19-006	Ponar	0 - 6	8/3/2011	X	X			X	X
	LMR11-19-014	Vibracore	6 - 14	8/3/2011	X	X			X	X
LMR11-20	LMR11-20-006	Ponar	0 - 6	8/2/2011	X	X			X	X
	LMR11-20-006FS	Ponar	0 - 6	8/2/2011	X	X			X	X
	LMR11-20-024	Vibracore	6 - 24	8/5/2011	X	X	X	X	X	X
	LMR11-20-048	Vibracore	24 - 48	8/5/2011	X	X			X	X
	LMR11-20-060	Vibracore	48 - 60	8/5/2011	X	X			X	X
LMR11-21	LMR11-21-006	Ponar	0 - 6	8/3/2011	X	X			X	X
LMR11-22	LMR11-22-006	Ponar	0 - 6	8/4/2011	X	X			X	X
LMR11-23	LMR11-23-006	Vibracore	0 - 6	8/11/2011	X	X	X	X	X	X
	LMR11-23-024	Vibracore	6 - 24	8/11/2011	X	X	X	X	X	X
	LMR11-23-048	Vibracore	24 - 48	8/11/2011	X	X			X	X
	LMR11-23-072	Vibracore	48 - 72	8/11/2011	X	X			X	X
	LMR11-23-096	Vibracore	72 - 96	8/11/2011	X	X			X	X
	LMR11-23-115	Vibracore	96 - 115	8/11/2011	X	X			X	X
LMR11-24	LMR11-24-006	Ponar	0 - 6	8/4/2011	X	X			X	X
	LMR11-24-024	Vibracore	6 - 24	8/11/2011	X	X			X	X
	LMR11-24-048	Vibracore	24 - 48	8/11/2011	X	X	X	X	X	X
	LMR11-24-072	Vibracore	48 - 72	8/11/2011	X	X			X	X
	LMR11-24-096	Vibracore	72 - 96	8/11/2011	X	X			X	X
LMR11-25	LMR11-25-006	Vibracore	0 - 6	8/11/2011	X	X	X	X	X	X
	LMR11-25-024	Vibracore	6 - 24	8/11/2011	X	X			X	X
	LMR11-25-048	Vibracore	24 - 48	8/11/2011	X	X	X	X	X	X
	LMR11-25-072	Vibracore	48 - 72	8/11/2011	X	X			X	X
	LMR11-25-096	Vibracore	72 - 96	8/11/2011	X	X			X	X
LMR11-26	LMR11-26-006	Vibracore	0 - 6	8/10/2011	X	X			X	X
	LMR11-26-024	Vibracore	6 - 24	8/10/2011	X	X	X	X	X	X
	LMR11-26-048	Vibracore	24 - 48	8/10/2011	X	X			X	X
	LMR11-26-072	Vibracore	48 - 72	8/10/2011	X	X			X	X
	LMR11-26-096	Vibracore	72 - 96	8/10/2011	X	X			X	X
	LMR11-26-117	Vibracore	96 - 117	8/10/2011	X	X			X	X
LMR11-27	LMR11-27-006	Ponar	0 - 6	8/4/2011	X	X			X	X
	LMR11-27-024	Vibracore	6 - 24	8/11/2011	X	X			X	X
	LMR11-27-048	Vibracore	24 - 48	8/11/2011	X	X	X	X	X	X
	LMR11-27-072	Vibracore	48 - 72	8/11/2011	X	X			X	X
	LMR11-27-096	Vibracore	72 - 96	8/11/2011	X	X			X	X
	LMR11-27-115	Vibracore	96 - 115	8/11/2011	X	X			X	X
LMR11-28	LMR11-28-006	Vibracore	0 - 6	8/10/2011	X	X			X	X
	LMR11-28-034	Vibracore	6 - 34	8/10/2011	X	X	X	X	X	X
LMR11-29	LMR11-29-006	Ponar	0 - 6	8/4/2011	X	X			X	X
LMR11-30	LMR11-30-006	Ponar	0 - 6	8/4/2011	X	X			X	X
LMR11-31	LMR11-31-006	Ponar	0 - 6	8/4/2011	X	X			X	X
LMR11-32	LMR11-32-006	Vibracore	0 - 6	8/10/2011	X	X			X	X
	LMR11-32-024	Vibracore	6 - 24	8/10/2011	X	X			X	X
	LMR11-32-048	Vibracore	24 - 48	8/10/2011	X	X			X	X
	LMR11-32-072	Vibracore	48 - 72	8/10/2011	X	X	X	X	X	X
	LMR11-32-096	Vibracore	72 - 96	8/10/2011	X	X	X	X	X	X
	LMR11-32-116	Vibracore	96 - 116	8/10/2011	X	X			X	X
LMR11-33	LMR11-33-006	Ponar	0 - 6	8/4/2011	X	X			X	X

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Toledo, Lucas County, Ohio

Location ID	Field Sample ID	Sample Collection Device	Depth (inches bss)	Sampling Date	Analyses					
					SVOCs	TAL Metals	PCB Aroclors	TCL Pesticides	Grain Size	TOC
LMR11-34	LMR11-34-006	Ponar	0 - 6	8/4/2011	X	X			X	X
LMR11-35	LMR11-35-006	Vibracore	0 - 6	8/10/2011	X	X	X	X	X	X
	LMR11-35-024	Vibracore	6 - 24	8/10/2011	X	X			X	X
	LMR11-35-024FS	Vibracore	6 - 24	8/10/2011	X	X			X	X
	LMR11-35-048	Vibracore	24 - 48	8/10/2011	X	X			X	X
	LMR11-35-072	Vibracore	48 - 72	8/10/2011	X	X	X	X	X	X
	LMR11-35-096	Vibracore	72 - 96	8/10/2011	X	X			X	X
	LMR11-35-116	Vibracore	96 - 116	8/10/2011	X	X			X	X
LMR11-36	LMR11-36-006	Ponar	0 - 6	8/4/2011	X	X	X	X	X	X
LMR11-37	LMR11-37-006	Vibracore	0 - 6	8/10/2011	X	X			X	X
	LMR11-37-024	Vibracore	6 - 24	8/10/2011	X	X			X	X
	LMR11-37-048	Vibracore	24 - 48	8/10/2011	X	X	X	X	X	X
	LMR11-37-048-DP	Vibracore	24 - 48	8/10/2011	X	X	X	X		X
	LMR11-37-072	Vibracore	48 - 72	8/10/2011	X	X			X	X
LMR11-38	LMR11-38-006	Vibracore	0 - 6	8/9/2011	X	X			X	X
	LMR11-38-024	Vibracore	6 - 24	8/9/2011	X	X			X	X
	LMR11-38-024-DP	Vibracore	6 - 24	8/9/2011	X	X				X
	LMR11-38-024FS	Vibracore	6 - 24	8/9/2011	X	X			X	X
	LMR11-38-048	Vibracore	24 - 48	8/9/2011	X	X			X	X
	LMR11-38-048-DP	Vibracore	24 - 48	8/9/2011	X	X				X
	LMR11-38-072	Vibracore	48 - 72	8/9/2011	X	X			X	X
	LMR11-38-072-DP	Vibracore	48 - 72	8/9/2011	X	X				X
LMR11-39	LMR11-39-006	Ponar	0 - 6	8/4/2011	X	X			X	X
LMR11-40	LMR11-40-006	Vibracore	0 - 6	8/10/2011	X	X			X	X
	LMR11-40-024	Vibracore	6 - 24	8/10/2011	X	X	X	X	X	X
	LMR11-40-048	Vibracore	24 - 48	8/10/2011	X	X			X	X
	LMR11-40-084	Vibracore	48 - 84	8/10/2011	X	X			X	X
LMR11-41	LMR11-41-006	Ponar	0 - 6	8/4/2011	X	X			X	X
LMR11-42	LMR11-42-006	Vibracore	0 - 6	8/9/2011	X	X			X	X
	LMR11-42-024	Vibracore	6 - 24	8/9/2011	X	X			X	X
	LMR11-42-048	Vibracore	24 - 48	8/9/2011	X	X			X	X
	LMR11-42-048FS	Vibracore	24 - 48	8/9/2011	X	X			X	X
	LMR11-42-072	Vibracore	48 - 72	8/9/2011	X	X			X	X
	LMR11-42-096	Vibracore	72 - 96	8/9/2011	X	X			X	X
	LMR11-42-129	Vibracore	96 - 129	8/9/2011	X	X			X	X
LMR11-43	LMR11-43-030	Vibracore	24 - 30	8/9/2011	X	X			X	X
LMR11-44	LMR11-44-006	Vibracore	0 - 6	8/9/2011	X	X			X	X
	LMR11-44-024	Vibracore	6 - 24	8/9/2011	X	X			X	X
	LMR11-44-024FS	Vibracore	6 - 24	8/9/2011	X	X			X	X
	LMR11-44-048	Vibracore	24 - 48	8/9/2011	X	X			X	X
	LMR11-44-072	Vibracore	48 - 72	8/9/2011	X	X			X	X
	LMR11-44-096	Vibracore	72 - 96	8/9/2011	X	X			X	X
LMR11-45	LMR11-45-006	Vibracore	0 - 6	8/8/2011	X	X			X	X
	LMR11-45-024	Vibracore	6 - 24	8/8/2011	X	X			X	X
	LMR11-45-048	Vibracore	24 - 48	8/8/2011	X	X			X	X
	LMR11-45-048FS	Vibracore	24 - 48	8/8/2011	X	X			X	X
	LMR11-45-072	Vibracore	48 - 72	8/8/2011	X	X			X	X
	LMR11-45-096	Vibracore	72 - 96	8/8/2011	X	X			X	X

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Table 2-2
Sampling and Analysis Summary
Lower Maumee River - Maumee River AOC
Toledo, Lucas County, Ohio

Location ID	Field Sample ID	Sample Collection Device	Depth (inches bss)	Sampling Date	Analyses					
					SVOCs	TAL Metals	PCB Aroclors	TCL Pesticides	Grain Size	TOC
LMR11-46	LMR11-46-006	Vibracore	0 - 6	8/8/2011	X	X			X	X
	LMR11-46-024	Vibracore	6 - 24	8/8/2011	X	X			X	X
	LMR11-46-024FS	Vibracore	6 - 24	8/8/2011	X	X			X	X
	LMR11-46-048	Vibracore	24 - 48	8/8/2011	X	X			X	X
	LMR11-46-072	Vibracore	48 - 72	8/8/2011	X	X			X	X
	LMR11-46-093	Vibracore	72 - 93	8/8/2011	X	X			X	X
LMR11-47	LMR11-47-006	Vibracore	0 - 6	8/8/2011	X	X			X	X
	LMR11-47-024	Vibracore	6 - 24	8/8/2011	X	X			X	X
	LMR11-47-048	Vibracore	24 - 48	8/8/2011	X	X			X	X
	LMR11-47-072	Vibracore	48 - 72	8/8/2011	X	X			X	X
	LMR11-47-096	Vibracore	72 - 96	8/8/2011	X	X			X	X
	LMR11-47-120	Vibracore	96 - 120	8/8/2011	X	X			X	X
	LMR11-47-144	Vibracore	120 - 144	8/8/2011	X	X			X	X
LMR11-48	LMR11-48-006	Vibracore	0 - 6	8/8/2011	X	X			X	X
	LMR11-48-024	Vibracore	6 - 24	8/8/2011	X	X			X	X
	LMR11-48-024FS	Vibracore	6 - 24	8/8/2011	X	X			X	X
	LMR11-48-048	Vibracore	24 - 48	8/8/2011	X	X	X	X	X	X
	LMR11-48-061	Vibracore	48 - 61	8/8/2011	X	X			X	X
LMR11-49	LMR11-49-006	Vibracore	0 - 6	8/8/2011	X	X			X	X
	LMR11-49-024	Vibracore	6 - 24	8/8/2011	X	X			X	X
	LMR11-49-048	Vibracore	24 - 48	8/8/2011	X	X			X	X
	LMR11-49-072	Vibracore	48 - 72	8/8/2011	X	X			X	X
	LMR11-49-096	Vibracore	72 - 96	8/8/2011	X	X			X	X
	LMR11-49-115	Vibracore	96 - 115	8/8/2011	X	X			X	X
LMR11-50	LMR11-50-006	Vibracore	0 - 6	8/8/2011	X	X	X	X	X	X
	LMR11-50-006-DP	Vibracore	0 - 6	8/8/2011	X	X				X
	LMR11-50-024	Vibracore	6 - 24	8/8/2011	X	X			X	X
	LMR11-50-024-DP	Vibracore	6 - 24	8/8/2011	X	X				X
	LMR11-50-048	Vibracore	24 - 48	8/8/2011	X	X			X	X
	LMR11-50-048-DP	Vibracore	24 - 48	8/8/2011	X	X				X
	LMR11-50-072	Vibracore	48 - 72	8/8/2011	X	X			X	X
	LMR11-50-096	Vibracore	72 - 96	8/8/2011	X	X			X	X
	LMR11-50-120	Vibracore	96 - 120	8/8/2011	X	X			X	X
	LMR11-50-144	Vibracore	120 - 144	8/8/2011	X	X			X	X
	LMR11-50-175	Vibracore	144 - 175	8/8/2011	X	X			X	X
LMR11-51	LMR11-51-006	Vibracore	0 - 6	8/7/2011	X	X			X	X
	LMR11-51-024	Vibracore	6 - 24	8/7/2011	X	X			X	X
	LMR11-51-048	Vibracore	24 - 48	8/7/2011	X	X			X	X
	LMR11-51-075	Vibracore	48 - 75	8/7/2011	X	X			X	X
LMR11-52	LMR11-52-006	Vibracore	0 - 6	8/8/2011	X	X			X	X
	LMR11-52-024	Vibracore	6 - 24	8/8/2011	X	X			X	X
	LMR11-52-048	Vibracore	24 - 48	8/8/2011	X	X			X	X
	LMR11-52-048FS	Vibracore	24 - 48	8/8/2011	X	X			X	X
	LMR11-52-072	Vibracore	48 - 72	8/8/2011	X	X			X	X
LMR11-53	LMR11-53-006	Vibracore	0 - 6	8/7/2011	X	X			X	X
	LMR11-53-024	Vibracore	6 - 24	8/7/2011	X	X			X	X
	LMR11-53-048	Vibracore	24 - 48	8/7/2011	X	X			X	X
	LMR11-53-073	Vibracore	48 - 73	8/7/2011	X	X			X	X

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Table 2-2
Sampling and Analysis Summary
Lower Maumee River - Maumee River AOC
Toledo, Lucas County, Ohio

Location ID	Field Sample ID	Sample Collection Device	Depth (inches bss)	Sampling Date	Analyses					
					SVOCs	TAL Metals	PCB Aroclors	TCL Pesticides	Grain Size	TOC
LMR11-54	LMR11-54-006	Vibracore	0 - 6	8/8/2011	X	X			X	X
	LMR11-54-006-DP	Vibracore	0 - 6	8/8/2011	X	X				X
	LMR11-54-024	Vibracore	6 - 24	8/8/2011	X	X			X	X
	LMR11-54-024-DP	Vibracore	6 - 24	8/8/2011	X	X				X
	LMR11-54-048	Vibracore	24 - 48	8/8/2011	X	X			X	X
	LMR11-54-048-DP	Vibracore	24 - 48	8/8/2011	X	X				X
	LMR11-54-072	Vibracore	48 - 72	8/8/2011	X	X			X	X
	LMR11-54-086	Vibracore	72 - 86	8/8/2011	X	X			X	X
LMR11-55	LMR11-55-006	Vibracore	0 - 6	8/7/2011	X	X			X	X
	LMR11-55-006-DP	Vibracore	0 - 6	8/7/2011	X	X				X
	LMR11-55-030	Vibracore	6 - 30	8/7/2011	X	X			X	X
	LMR11-55-030-DP	Vibracore	6 - 30	8/7/2011	X	X				X
LMR11-56	LMR11-56-006	Vibracore	0 - 6	8/7/2011	X	X			X	X
	LMR11-56-024	Vibracore	6 - 24	8/7/2011	X	X			X	X
	LMR11-56-036	Vibracore	24 - 36	8/7/2011	X	X			X	X
LMR11-57	LMR11-57-006	Vibracore	0 - 6	8/6/2011	X	X			X	X
	LMR11-57-024	Vibracore	6 - 24	8/6/2011	X	X			X	X
	LMR11-57-048	Vibracore	24 - 48	8/6/2011	X	X			X	X
	LMR11-57-062	Vibracore	48 - 62	8/6/2011	X	X			X	X
LMR11-58	LMR11-58-010	Vibracore	0 - 10	8/6/2011	X	X			X	X
LMR11-59	LMR11-59-006	Vibracore	0 - 6	8/6/2011	X	X			X	X
	LMR11-59-024	Vibracore	6 - 24	8/6/2011	X	X	X	X	X	X
	LMR11-59-048	Vibracore	24 - 48	8/6/2011	X	X			X	X
	LMR11-59-072	Vibracore	48 - 72	8/6/2011	X	X			X	X
	LMR11-59-096	Vibracore	72 - 96	8/6/2011	X	X			X	X
	LMR11-59-116	Vibracore	96 - 116	8/6/2011	X	X			X	X
LMR11-60	LMR11-60-006	Vibracore	0 - 6	8/6/2011	X	X			X	X
	LMR11-60-024	Vibracore	6 - 24	8/6/2011	X	X			X	X
	LMR11-60-048	Vibracore	24 - 48	8/6/2011	X	X			X	X
	LMR11-60-048FS	Vibracore	24 - 48	8/6/2011	X	X			X	X
	LMR11-60-072	Vibracore	48 - 72	8/6/2011	X	X			X	X
	LMR11-60-092	Vibracore	72 - 92	8/6/2011	X	X			X	X
LMR11-61	LMR11-61-006	Vibracore	0 - 6	8/6/2011	X	X			X	X
	LMR11-61-030	Vibracore	6 - 30	8/6/2011	X	X			X	X
LMR11-62	LMR11-62-006	Vibracore	0 - 6	8/6/2011	X	X			X	X
	LMR11-62-024	Vibracore	6 - 24	8/6/2011	X	X			X	X
	LMR11-62-024DP	Vibracore	6 - 24	8/6/2011	X	X				X
	LMR11-62-048	Vibracore	24 - 48	8/6/2011	X	X			X	X
	LMR11-62-072	Vibracore	48 - 72	8/6/2011	X	X			X	X
	LMR11-62-096	Vibracore	72 - 96	8/6/2011	X	X			X	X
	LMR11-62-108	Vibracore	96 - 108	8/6/2011	X	X			X	X
LMR11-63	LMR11-63-006	Vibracore	0 - 6	8/8/2011	X	X			X	X
	LMR11-63-024	Vibracore	6 - 24	8/8/2011	X	X			X	X
	LMR11-63-048	Vibracore	24 - 48	8/8/2011	X	X			X	X
	LMR11-63-048FS	Vibracore	24 - 48	8/8/2011	X	X			X	X
	LMR11-63-072	Vibracore	48 - 72	8/8/2011	X	X			X	X
	LMR11-63-096	Vibracore	72 - 96	8/8/2011	X	X			X	X
	LMR11-63-115	Vibracore	96 - 115	8/8/2011	X	X			X	X

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Table 2-2
Sampling and Analysis Summary
Lower Maumee River - Maumee River AOC
Toledo, Lucas County, Ohio

Location ID	Field Sample ID	Sample Collection Device	Depth (inches bss)	Sampling Date	Analyses					
					SVOCs	TAL Metals	PCB Aroclors	TCL Pesticides	Grain Size	TOC
LMR11-64	LMR11-88-006	Vibracore	0 - 6	8/7/2011	X	X			X	X
	LMR11-88-024	Vibracore	6 - 24	8/7/2011	X	X			X	X
	LMR11-88-048	Vibracore	24 - 48	8/7/2011	X	X			X	X
	LMR11-88-072	Vibracore	48 - 72	8/7/2011	X	X			X	X
	LMR11-88-088	Vibracore	72 - 88	8/7/2011	X	X			X	X
LMR11-65	LMR11-65-006	Vibracore	0 - 6	8/6/2011	X	X			X	X
	LMR11-65-024	Vibracore	6 - 24	8/6/2011	X	X			X	X
LMR11-66	LMR11-66-006	Vibracore	0 - 6	8/7/2011	X	X			X	X
	LMR11-66-024	Vibracore	6 - 24	8/7/2011	X	X	X	X	X	X
	LMR11-66-048	Vibracore	24 - 48	8/7/2011	X	X			X	X
	LMR11-66-048FS	Vibracore	24 - 48	8/7/2011	X	X			X	X
	LMR11-66-072	Vibracore	48 - 72	8/7/2011	X	X			X	X
	LMR11-66-096	Vibracore	72 - 96	8/7/2011	X	X			X	X
	LMR11-66-117	Vibracore	96 - 117	8/7/2011	X	X			X	X
LMR11-67	LMR11-67-006	Vibracore	0 - 6	8/6/2011	X	X			X	X
	LMR11-67-024	Vibracore	6 - 24	8/6/2011	X	X			X	X
	LMR11-67-048	Vibracore	24 - 48	8/6/2011	X	X			X	X
	LMR11-67-077	Vibracore	48 - 77	8/6/2011	X	X			X	X
LMR11-68	LMR11-68-006	Vibracore	0 - 6	8/7/2011	X	X			X	X
	LMR11-68-024	Vibracore	6 - 24	8/7/2011	X	X			X	X
	LMR11-68-048	Vibracore	24 - 48	8/7/2011	X	X			X	X
	LMR11-68-072	Vibracore	48 - 72	8/7/2011	X	X			X	X
	LMR11-68-096	Vibracore	72 - 96	8/7/2011	X	X			X	X
LMR11-69	LMR11-69-006	Vibracore	0 - 6	8/6/2011	X	X			X	X
LMR11-70	LMR11-70-006	Vibracore	0 - 6	8/7/2011	X	X			X	X
	LMR11-70-024	Vibracore	6 - 24	8/7/2011	X	X	X	X	X	X
	LMR11-70-048	Vibracore	24 - 48	8/7/2011	X	X			X	X
	LMR11-70-072	Vibracore	48 - 72	8/7/2011	X	X			X	X
	LMR11-70-072FS	Vibracore	48 - 72	8/7/2011	X	X			X	X
	LMR11-70-085	Vibracore	72 - 85	8/7/2011	X	X			X	X
LMR11-71	LMR11-71-006	Vibracore	0 - 6	8/6/2011	X	X			X	X
	LMR11-71-024	Vibracore	6 - 24	8/6/2011	X	X	X	X	X	X
	LMR11-71-024FS	Vibracore	6 - 24	8/6/2011	X	X	X	X	X	X
	LMR11-71-048	Vibracore	24 - 48	8/6/2011	X	X			X	X
	LMR11-71-072	Vibracore	48 - 72	8/6/2011	X	X			X	X
	LMR11-71-096	Vibracore	72 - 96	8/6/2011	X	X			X	X
	LMR11-71-120	Vibracore	96 - 120	8/6/2011	X	X			X	X
	LMR11-71-144	Vibracore	120 - 144	8/6/2011	X	X			X	X
	LMR11-71-161	Vibracore	144 - 161	8/6/2011	X	X			X	X
LMR11-72	LMR11-72-006	Vibracore	0 - 6	8/5/2011	X	X			X	X
	LMR11-72-024	Vibracore	6 - 24	8/5/2011	X	X			X	X
	LMR11-72-035	Vibracore	24 - 35	8/5/2011	X	X			X	X
LMR11-73	LMR11-73-006	Vibracore	0 - 6	8/7/2011	X	X			X	X
	LMR11-73-024	Vibracore	6 - 24	8/7/2011	X	X			X	X
	LMR11-73-042	Vibracore	24 - 42	8/7/2011	X	X			X	X

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Table 2-2
Sampling and Analysis Summary
Lower Maumee River - Maumee River AOC
Toledo, Lucas County, Ohio

Location ID	Field Sample ID	Sample Collection Device	Depth (inches bss)	Sampling Date	Analyses					
					SVOCs	TAL Metals	PCB Aroclors	TCL Pesticides	Grain Size	TOC
LMR11-74	LMR11-74-006	Vibracore	0 - 6	8/5/2011	X	X			X	X
	LMR11-74-024	Vibracore	6 - 24	8/5/2011	X	X			X	X
	LMR11-74-048	Vibracore	24 - 48	8/5/2011	X	X			X	X
	LMR11-74-048FS	Vibracore	24 - 48	8/5/2011	X	X			X	X
	LMR11-74-072	Vibracore	48 - 72	8/5/2011	X	X			X	X
	LMR11-74-085	Vibracore	72 - 85	8/5/2011	X	X			X	X
LMR11-75	LMR11-75-006	Vibracore	0 - 6	8/5/2011	X	X			X	X
	LMR11-75-024	Vibracore	6 - 24	8/5/2011	X	X	X	X	X	X
	LMR11-75-048	Vibracore	24 - 48	8/5/2011	X	X			X	X
	LMR11-75-048FS	Vibracore	24 - 48	8/5/2011	X	X			X	X
	LMR11-75-080	Vibracore	48 - 80	8/5/2011	X	X			X	X
LMR11-76	LMR11-76-006	Vibracore	0 - 6	8/5/2011	X	X			X	X
	LMR11-76-024	Vibracore	6 - 24	8/5/2011	X	X	X	X	X	X
	LMR11-76-048	Vibracore	24 - 48	8/5/2011	X	X			X	X
	LMR11-76-072	Vibracore	48 - 72	8/5/2011	X	X			X	X
	LMR11-76-096	Vibracore	72 - 96	8/5/2011	X	X			X	X
	LMR11-76-120	Vibracore	96 - 120	8/5/2011	X	X			X	X
LMR11-77	LMR11-77-006	Vibracore	0 - 6	8/5/2011	X	X				X
	LMR11-77-024	Vibracore	6 - 24	8/5/2011	X	X			X	X
	LMR11-77-048	Vibracore	24 - 48	8/5/2011	X	X			X	X
	LMR11-77-072	Vibracore	48 - 72	8/5/2011	X	X			X	X
	LMR11-77-120	Vibracore	72 - 120	8/5/2011	X	X			X	X
LMR11-78	LMR11-78-014	Vibracore	0 - 14	8/5/2011	X	X			X	X
LMR11-79	LMR11-79-006	Vibracore	0 - 6	8/4/2011	X	X			X	X
	LMR11-79-024	Vibracore	6 - 24	8/4/2011	X	X	X	X	X	X
	LMR11-79-024FS	Vibracore	6 - 24	8/4/2011	X	X	X	X	X	X
	LMR11-79-054	Vibracore	24 - 54	8/4/2011	X	X			X	X
LMR11-80	LMR11-80-006	Vibracore	0 - 6	8/5/2011	X	X			X	X
	LMR11-80-024	Vibracore	6 - 24	8/5/2011	X	X			X	X
	LMR11-80-056	Vibracore	24 - 56	8/5/2011	X	X			X	X
LMR11-81	LMR11-81-006	Vibracore	0 - 6	8/5/2011	X	X			X	X
	LMR11-81-019	Vibracore	6 - 19	8/5/2011	X	X			X	X
LMR11-82	LMR11-82-006	Vibracore	0 - 6	8/5/2011	X	X			X	X
	LMR11-82-024	Vibracore	6 - 24	8/5/2011	X	X			X	X
	LMR11-82-055	Vibracore	24 - 55	8/5/2011	X	X			X	X
LMR11-83	LMR11-83-006	Vibracore	0 - 6	8/5/2011	X	X			X	X
	LMR11-83-024	Vibracore	6 - 24	8/5/2011	X	X			X	X
	LMR11-83-048	Vibracore	24 - 48	8/5/2011	X	X			X	X
	LMR11-83-072	Vibracore	48 - 72	8/5/2011	X	X			X	X
	LMR11-83-087	Vibracore	72 - 87	8/5/2011	X	X			X	X
LMR11-84	LMR11-84-006	Vibracore	0 - 6	8/5/2011	X	X			X	X
	LMR11-84-024	Vibracore	6 - 24	8/5/2011	X	X			X	X
	LMR11-84-048	Vibracore	24 - 48	8/5/2011	X	X			X	X
	LMR11-84-072	Vibracore	48 - 72	8/5/2011	X	X			X	X
	LMR11-84-072DP	Vibracore	48 - 72	8/5/2011	X	X				X
	LMR11-84-096	Vibracore	72 - 96	8/5/2011	X	X			X	X
	LMR11-84-115	Vibracore	96 - 115	8/5/2011	X	X			X	X

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Table 2-2
Sampling and Analysis Summary
Lower Maumee River - Maumee River AOC
Toledo, Lucas County, Ohio

Location ID	Field Sample ID	Sample Collection Device	Depth (inches bss)	Sampling Date	Analyses					
					SVOCs	TAL Metals	PCB Aroclors	TCL Pesticides	Grain Size	TOC
LMR11-85	LMR11-85-006	Vibracore	0 - 6	8/5/2011	X	X			X	X
	LMR11-85-024	Vibracore	6 - 24	8/5/2011	X	X			X	X
	LMR11-85-048	Vibracore	24 - 48	8/5/2011	X	X			X	X
	LMR11-85-074	Vibracore	48 - 74	8/5/2011	X	X			X	X
Total number of samples analyzed:					337	337	33	33	318	337

Notes:
bss - Below sediment surface
DP - Duplicate
FS - Field split
ID - Identification
PCB - Polychlorinated biphenyl
SVOC - Semivolatile organic compound
TOC - Total organic carbon
TAL - Target Analyte List
TCL - Target Compound List

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Table 3-1
Summary of SVOC Sediment Sample Results
Lower Maumee River - Maumee River AOC
Toledo, Lucas County, Ohio

Analyte	Sampling Depth (inches bss)	No. of Results	No. of Detects	% Detects	Minimum Detection (µg/kg)	Maximum Detection (µg/kg)	PEC [1] (µg/kg)	No. of Results Above PEC	ESL [2] (µg/kg)	No. of Results Above ESL
1,1'-Biphenyl	0-6	88	1	1%	390	390	NL	--	NL	--
	6-24	79	0	0%	--	--	NL	--	NL	--
	24-48	71	0	0%	--	--	NL	--	NL	--
	48-72	48	0	0%	--	--	NL	--	NL	--
	72-96	29	0	0%	--	--	NL	--	NL	--
	96-120	17	1	6%	31	31	NL	--	NL	--
	120-144	3	0	0%	--	--	NL	--	NL	--
	144 - 168	2	0	0%	--	--	NL	--	NL	--
1,2,4,5-Tetrachlorobenzene	0-6	88	0	0%	--	--	NL	--	1,252	--
	6-24	79	0	0%	--	--	NL	--	1,252	--
	24-48	71	0	0%	--	--	NL	--	1,252	--
	48-72	48	0	0%	--	--	NL	--	1,252	--
	72-96	29	0	0%	--	--	NL	--	1,252	--
	96-120	17	0	0%	--	--	NL	--	1,252	--
	120-144	3	0	0%	--	--	NL	--	1,252	--
	144 - 168	2	0	0%	--	--	NL	--	1,252	--
2,2'-Oxybis(1-chloropropane)	0-6	88	0	0%	--	--	NL	--	NL	--
	6-24	79	0	0%	--	--	NL	--	NL	--
	24-48	71	0	0%	--	--	NL	--	NL	--
	48-72	48	0	0%	--	--	NL	--	NL	--
	72-96	29	0	0%	--	--	NL	--	NL	--
	96-120	17	0	0%	--	--	NL	--	NL	--
	120-144	3	0	0%	--	--	NL	--	NL	--
	144 - 168	2	0	0%	--	--	NL	--	NL	--
2,3,4,6-Tetrachlorophenol	0-6	88	0	0%	--	--	NL	--	129	--
	6-24	79	0	0%	--	--	NL	--	129	--
	24-48	71	0	0%	--	--	NL	--	129	--
	48-72	48	0	0%	--	--	NL	--	129	--
	72-96	29	0	0%	--	--	NL	--	129	--
	96-120	17	0	0%	--	--	NL	--	129	--
	120-144	3	0	0%	--	--	NL	--	129	--
	144 - 168	2	0	0%	--	--	NL	--	129	--
2,4,5-Trichlorophenol	0-6	88	0	0%	--	--	NL	--	NL	--
	6-24	79	0	0%	--	--	NL	--	NL	--
	24-48	71	0	0%	--	--	NL	--	NL	--
	48-72	48	0	0%	--	--	NL	--	NL	--
	72-96	29	0	0%	--	--	NL	--	NL	--
	96-120	17	0	0%	--	--	NL	--	NL	--
	120-144	3	0	0%	--	--	NL	--	NL	--
	144 - 168	2	0	0%	--	--	NL	--	NL	--
2,4,6-Trichlorophenol	0-6	88	0	0%	--	--	NL	--	208	--
	6-24	79	0	0%	--	--	NL	--	208	--
	24-48	71	0	0%	--	--	NL	--	208	--
	48-72	48	0	0%	--	--	NL	--	208	--
	72-96	29	0	0%	--	--	NL	--	208	--
	96-120	17	0	0%	--	--	NL	--	208	--
	120-144	3	0	0%	--	--	NL	--	208	--
	144 - 168	2	0	0%	--	--	NL	--	208	--

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Table 3-1
Summary of SVOC Sediment Sample Results
Lower Maumee River - Maumee River AOC
Toledo, Lucas County, Ohio

Analyte	Sampling Depth (inches bss)	No. of Results	No. of Detects	% Detects	Minimum Detection (µg/kg)	Maximum Detection (µg/kg)	PEC [1] (µg/kg)	No. of Results Above PEC	ESL [2] (µg/kg)	No. of Results Above ESL
2,4-Dichlorophenol	0-6	88	0	0%	--	--	NL	--	81.7	--
	6-24	79	0	0%	--	--	NL	--	81.7	--
	24-48	71	0	0%	--	--	NL	--	81.7	--
	48-72	48	0	0%	--	--	NL	--	81.7	--
	72-96	29	0	0%	--	--	NL	--	81.7	--
	96-120	17	0	0%	--	--	NL	--	81.7	--
	120-144	3	0	0%	--	--	NL	--	81.7	--
	144 - 168	2	0	0%	--	--	NL	--	81.7	--
2,4-Dimethylphenol	0-6	88	0	0%	--	--	NL	--	304	--
	6-24	79	0	0%	--	--	NL	--	304	--
	24-48	71	0	0%	--	--	NL	--	304	--
	48-72	48	0	0%	--	--	NL	--	304	--
	72-96	29	0	0%	--	--	NL	--	304	--
	96-120	17	0	0%	--	--	NL	--	304	--
	120-144	3	0	0%	--	--	NL	--	304	--
	144 - 168	2	0	0%	--	--	NL	--	304	--
2,4-Dinitrophenol	0-6	88	0	0%	--	--	NL	--	6.21	--
	6-24	79	0	0%	--	--	NL	--	6.21	--
	24-48	71	0	0%	--	--	NL	--	6.21	--
	48-72	48	0	0%	--	--	NL	--	6.21	--
	72-96	29	0	0%	--	--	NL	--	6.21	--
	96-120	17	0	0%	--	--	NL	--	6.21	--
	120-144	3	0	0%	--	--	NL	--	6.21	--
	144 - 168	2	0	0%	--	--	NL	--	6.21	--
2,4-Dinitrotoluene	0-6	88	0	0%	--	--	NL	--	14.4	--
	6-24	79	0	0%	--	--	NL	--	14.4	--
	24-48	71	0	0%	--	--	NL	--	14.4	--
	48-72	48	0	0%	--	--	NL	--	14.4	--
	72-96	29	0	0%	--	--	NL	--	14.4	--
	96-120	17	0	0%	--	--	NL	--	14.4	--
	120-144	3	0	0%	--	--	NL	--	14.4	--
	144 - 168	2	0	0%	--	--	NL	--	14.4	--
2,6-Dinitrotoluene	0-6	88	0	0%	--	--	NL	--	39.8	--
	6-24	79	0	0%	--	--	NL	--	39.8	--
	24-48	71	0	0%	--	--	NL	--	39.8	--
	48-72	48	0	0%	--	--	NL	--	39.8	--
	72-96	29	0	0%	--	--	NL	--	39.8	--
	96-120	17	0	0%	--	--	NL	--	39.8	--
	120-144	3	0	0%	--	--	NL	--	39.8	--
	144 - 168	2	0	0%	--	--	NL	--	39.8	--
2-Chloronaphthalene	0-6	88	0	0%	--	--	NL	--	417	--
	6-24	79	0	0%	--	--	NL	--	417	--
	24-48	71	0	0%	--	--	NL	--	417	--
	48-72	48	0	0%	--	--	NL	--	417	--
	72-96	29	0	0%	--	--	NL	--	417	--
	96-120	17	0	0%	--	--	NL	--	417	--
	120-144	3	0	0%	--	--	NL	--	417	--
	144 - 168	2	0	0%	--	--	NL	--	417	--

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Table 3-1
Summary of SVOC Sediment Sample Results
Lower Maumee River - Maumee River AOC
Toledo, Lucas County, Ohio

Analyte	Sampling Depth (inches bss)	No. of Results	No. of Detects	% Detects	Minimum Detection (µg/kg)	Maximum Detection (µg/kg)	PEC [1] (µg/kg)	No. of Results Above PEC	ESL [2] (µg/kg)	No. of Results Above ESL
2-Chlorophenol	0-6	88	0	0%	--	--	NL	--	31.9	--
	6-24	79	0	0%	--	--	NL	--	31.9	--
	24-48	71	0	0%	--	--	NL	--	31.9	--
	48-72	48	0	0%	--	--	NL	--	31.9	--
	72-96	29	0	0%	--	--	NL	--	31.9	--
	96-120	17	0	0%	--	--	NL	--	31.9	--
	120-144	3	0	0%	--	--	NL	--	31.9	--
	144 - 168	2	0	0%	--	--	NL	--	31.9	--
2-Methylnaphthalene	0-6	88	10	11%	3.6	1400	NL	--	20.2	4
	6-24	79	18	23%	3.3	200	NL	--	20.2	4
	24-48	71	20	28%	2.9	150	NL	--	20.2	4
	48-72	48	16	33%	3.7	580	NL	--	20.2	3
	72-96	29	15	52%	2.8	660	NL	--	20.2	4
	96-120	17	6	35%	5.1	690	NL	--	20.2	3
	120-144	3	2	67%	6.2	9.8	NL	--	20.2	0
	144 - 168	2	2	100%	12	220	NL	--	20.2	1
2-Methylphenol	0-6	88	0	0%	--	--	NL	--	55.4	--
	6-24	79	0	0%	--	--	NL	--	55.4	--
	24-48	71	0	0%	--	--	NL	--	55.4	--
	48-72	48	0	0%	--	--	NL	--	55.4	--
	72-96	29	0	0%	--	--	NL	--	55.4	--
	96-120	17	1	6%	51	51	NL	--	55.4	0
	120-144	3	0	0%	--	--	NL	--	55.4	--
	144 - 168	2	0	0%	--	--	NL	--	55.4	--
2-Nitroaniline	0-6	88	0	0%	--	--	NL	--	NL	--
	6-24	79	0	0%	--	--	NL	--	NL	--
	24-48	71	0	0%	--	--	NL	--	NL	--
	48-72	48	0	0%	--	--	NL	--	NL	--
	72-96	29	0	0%	--	--	NL	--	NL	--
	96-120	17	0	0%	--	--	NL	--	NL	--
	120-144	3	0	0%	--	--	NL	--	NL	--
	144 - 168	2	0	0%	--	--	NL	--	NL	--
2-Nitrophenol	0-6	88	0	0%	--	--	NL	--	NL	--
	6-24	79	0	0%	--	--	NL	--	NL	--
	24-48	71	0	0%	--	--	NL	--	NL	--
	48-72	48	0	0%	--	--	NL	--	NL	--
	72-96	29	0	0%	--	--	NL	--	NL	--
	96-120	17	0	0%	--	--	NL	--	NL	--
	120-144	3	0	0%	--	--	NL	--	NL	--
	144 - 168	2	0	0%	--	--	NL	--	NL	--
3,3'-Dichlorobenzidine	0-6	88	0	0%	--	--	NL	--	127	--
	6-24	79	0	0%	--	--	NL	--	127	--
	24-48	71	0	0%	--	--	NL	--	127	--
	48-72	48	0	0%	--	--	NL	--	127	--
	72-96	29	0	0%	--	--	NL	--	127	--
	96-120	17	0	0%	--	--	NL	--	127	--
	120-144	3	0	0%	--	--	NL	--	127	--
	144 - 168	2	0	0%	--	--	NL	--	127	--

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Summary of SVOC Sediment Sample Results
Lower Maumee River - Maumee River AOC
Toledo, Lucas County, Ohio

Analyte	Sampling Depth (inches bss)	No. of Results	No. of Detects	% Detects	Minimum Detection (µg/kg)	Maximum Detection (µg/kg)	PEC [1] (µg/kg)	No. of Results Above PEC	ESL [2] (µg/kg)	No. of Results Above ESL
3-Nitroaniline	0-6	88	0	0%	--	--	NL	--	NL	--
	6-24	79	0	0%	--	--	NL	--	NL	--
	24-48	71	0	0%	--	--	NL	--	NL	--
	48-72	48	0	0%	--	--	NL	--	NL	--
	72-96	29	0	0%	--	--	NL	--	NL	--
	96-120	17	0	0%	--	--	NL	--	NL	--
	120-144	3	0	0%	--	--	NL	--	NL	--
	144 - 168	2	0	0%	--	--	NL	--	NL	--
4,6-Dinitro-2-methylphenol	0-6	88	0	0%	--	--	NL	--	104	--
	6-24	79	0	0%	--	--	NL	--	104	--
	24-48	71	0	0%	--	--	NL	--	104	--
	48-72	48	0	0%	--	--	NL	--	104	--
	72-96	29	0	0%	--	--	NL	--	104	--
	96-120	17	0	0%	--	--	NL	--	104	--
	120-144	3	0	0%	--	--	NL	--	104	--
	144 - 168	2	0	0%	--	--	NL	--	104	--
4-Bromophenyl-phenylether	0-6	88	0	0%	--	--	NL	--	1,550	--
	6-24	79	0	0%	--	--	NL	--	1,550	--
	24-48	71	0	0%	--	--	NL	--	1,550	--
	48-72	48	0	0%	--	--	NL	--	1,550	--
	72-96	29	0	0%	--	--	NL	--	1,550	--
	96-120	17	0	0%	--	--	NL	--	1,550	--
	120-144	3	0	0%	--	--	NL	--	1,550	--
	144 - 168	2	0	0%	--	--	NL	--	1,550	--
4-Chloro-3-methylphenol	0-6	88	0	0%	--	--	NL	--	388	--
	6-24	79	0	0%	--	--	NL	--	388	--
	24-48	71	0	0%	--	--	NL	--	388	--
	48-72	48	0	0%	--	--	NL	--	388	--
	72-96	29	0	0%	--	--	NL	--	388	--
	96-120	17	0	0%	--	--	NL	--	388	--
	120-144	3	0	0%	--	--	NL	--	388	--
	144 - 168	2	0	0%	--	--	NL	--	388	--
4-Chloroaniline	0-6	88	1	1%	44	44	NL	--	146	0
	6-24	79	0	0%	--	--	NL	--	146	--
	24-48	71	0	0%	--	--	NL	--	146	--
	48-72	48	0	0%	--	--	NL	--	146	--
	72-96	29	0	0%	--	--	NL	--	146	--
	96-120	17	0	0%	--	--	NL	--	146	--
	120-144	3	0	0%	--	--	NL	--	146	--
	144 - 168	2	0	0%	--	--	NL	--	146	--
4-Chlorophenyl-phenylether	0-6	88	0	0%	--	--	NL	--	NL	--
	6-24	79	0	0%	--	--	NL	--	NL	--
	24-48	71	0	0%	--	--	NL	--	NL	--
	48-72	48	0	0%	--	--	NL	--	NL	--
	72-96	29	0	0%	--	--	NL	--	NL	--
	96-120	17	0	0%	--	--	NL	--	NL	--
	120-144	3	0	0%	--	--	NL	--	NL	--
	144 - 168	2	0	0%	--	--	NL	--	NL	--

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Summary of SVOC Sediment Sample Results
Lower Maumee River - Maumee River AOC
Toledo, Lucas County, Ohio

Analyte	Sampling Depth (inches bss)	No. of Results	No. of Detects	% Detects	Minimum Detection (µg/kg)	Maximum Detection (µg/kg)	PEC [1] (µg/kg)	No. of Results Above PEC	ESL [2] (µg/kg)	No. of Results Above ESL
4-Methylphenol	0-6	88	15	17%	30	110	NL	--	20.2	15
	6-24	79	9	11%	38	140	NL	--	20.2	9
	24-48	71	11	15%	30	130	NL	--	20.2	11
	48-72	48	7	15%	34	90	NL	--	20.2	7
	72-96	29	4	14%	32	120	NL	--	20.2	4
	96-120	17	3	18%	64	480	NL	--	20.2	3
	120-144	3	1	33%	51	51	NL	--	20.2	1
	144 - 168	2	2	100%	51	850	NL	--	20.2	2
4-Nitroaniline	0-6	88	0	0%	--	--	NL	--	NL	--
	6-24	79	0	0%	--	--	NL	--	NL	--
	24-48	71	0	0%	--	--	NL	--	NL	--
	48-72	48	0	0%	--	--	NL	--	NL	--
	72-96	29	0	0%	--	--	NL	--	NL	--
	96-120	17	0	0%	--	--	NL	--	NL	--
	120-144	3	0	0%	--	--	NL	--	NL	--
	144 - 168	2	0	0%	--	--	NL	--	NL	--
4-Nitrophenol	0-6	88	0	0%	--	--	NL	--	13.3	--
	6-24	79	0	0%	--	--	NL	--	13.3	--
	24-48	71	0	0%	--	--	NL	--	13.3	--
	48-72	48	0	0%	--	--	NL	--	13.3	--
	72-96	29	0	0%	--	--	NL	--	13.3	--
	96-120	17	0	0%	--	--	NL	--	13.3	--
	120-144	3	0	0%	--	--	NL	--	13.3	--
	144 - 168	2	0	0%	--	--	NL	--	13.3	--
Acenaphthene	0-6	88	9	10%	3.5	13,000	NL	--	6.71	7
	6-24	79	16	20%	2.9	89	NL	--	6.71	6
	24-48	71	13	18%	2.8	88	NL	--	6.71	5
	48-72	48	11	23%	4.9	60	NL	--	6.71	7
	72-96	29	13	45%	3	190	NL	--	6.71	6
	96-120	17	6	35%	3.1	58	NL	--	6.71	3
	120-144	3	1	33%	3.7	3.7	NL	--	6.71	0
	144 - 168	2	2	100%	3.1	26	NL	--	6.71	1
Acenaphthylene	0-6	88	10	11%	3.8	2,700	NL	--	5.87	7
	6-24	79	15	19%	2.7	9.9	NL	--	5.87	8
	24-48	71	17	24%	3.1	34	NL	--	5.87	12
	48-72	48	11	23%	4	41	NL	--	5.87	6
	72-96	29	12	41%	2.7	52	NL	--	5.87	6
	96-120	17	7	41%	3.3	29	NL	--	5.87	4
	120-144	3	0	0%	--	--	NL	--	5.87	--
	144 - 168	2	1	50%	11	11	NL	--	5.87	1
Acetophenone	0-6	88	1	1%	51	51	NL	--	NL	--
	6-24	79	1	1%	70	70	NL	--	NL	--
	24-48	71	0	0%	--	--	NL	--	NL	--
	48-72	48	0	0%	--	--	NL	--	NL	--
	72-96	29	0	0%	--	--	NL	--	NL	--
	96-120	17	1	6%	62	62	NL	--	NL	--
	120-144	3	0	0%	--	--	NL	--	NL	--
	144 - 168	2	0	0%	--	--	NL	--	NL	--

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Lower Maumee River - Maumee River AOC
Toledo, Lucas County, Ohio

Analyte	Sampling Depth (inches bss)	No. of Results	No. of Detects	% Detects	Minimum Detection (µg/kg)	Maximum Detection (µg/kg)	PEC [1] (µg/kg)	No. of Results Above PEC	ESL [2] (µg/kg)	No. of Results Above ESL
Anthracene	0-6	88	23	26%	3.1	21,000	845	2	57.2	4
	6-24	79	29	37%	3.3	70	845	0	57.2	1
	24-48	71	26	37%	3.7	62	845	0	57.2	1
	48-72	48	21	44%	3.4	76	845	0	57.2	3
	72-96	29	18	62%	3.7	210	845	0	57.2	3
	96-120	17	11	65%	3.7	93	845	0	57.2	1
	120-144	3	2	67%	5.7	6.8	845	0	57.2	0
	144 - 168	2	2	100%	5.1	97	845	0	57.2	1
Atrazine	0-6	88	0	0%	--	--	NL	--	NL	--
	6-24	79	0	0%	--	--	NL	--	NL	--
	24-48	71	0	0%	--	--	NL	--	NL	--
	48-72	48	0	0%	--	--	NL	--	NL	--
	72-96	29	0	0%	--	--	NL	--	NL	--
	96-120	17	0	0%	--	--	NL	--	NL	--
	120-144	3	0	0%	--	--	NL	--	NL	--
	144 - 168	2	0	0%	--	--	NL	--	NL	--
Benzaldehyde	0-6	88	0	0%	--	--	NL	--	NL	--
	6-24	79	0	0%	--	--	NL	--	NL	--
	24-48	71	0	0%	--	--	NL	--	NL	--
	48-72	48	0	0%	--	--	NL	--	NL	--
	72-96	29	0	0%	--	--	NL	--	NL	--
	96-120	17	0	0%	--	--	NL	--	NL	--
	120-144	3	0	0%	--	--	NL	--	NL	--
	144 - 168	2	0	0%	--	--	NL	--	NL	--
Benzo(a)anthracene	0-6	88	51	58%	3.1	22,000	1,050	2	108	4
	6-24	79	53	67%	3.6	330	1,050	0	108	1
	24-48	71	48	68%	3.3	160	1,050	0	108	2
	48-72	48	33	69%	3.2	290	1,050	0	108	3
	72-96	29	22	76%	5.9	670	1,050	0	108	4
	96-120	17	13	76%	6.2	200	1,050	0	108	1
	120-144	3	3	100%	11	17	1,050	0	108	0
	144 - 168	2	2	100%	10	180	1,050	0	108	1
Benzo(a)pyrene	0-6	88	58	66%	4.4	14,000	1,450	2	150	3
	6-24	79	54	68%	2.8	280	1,450	0	150	1
	24-48	71	47	66%	3.8	160	1,450	0	150	1
	48-72	48	32	67%	4.3	240	1,450	0	150	1
	72-96	29	22	76%	6.1	540	1,450	0	150	3
	96-120	17	12	71%	8.8	160	1,450	0	150	1
	120-144	3	3	100%	14	22	1,450	0	150	0
	144 - 168	2	2	100%	11	140	1,450	0	150	0
Benzo(b)fluoranthene	0-6	88	58	66%	3.1	17,000	NL	--	10,400	2
	6-24	79	61	77%	4	440	NL	--	10,400	0
	24-48	71	48	68%	4.2	190	NL	--	10,400	0
	48-72	48	35	73%	4	320	NL	--	10,400	0
	72-96	29	26	90%	6.2	710	NL	--	10,400	0
	96-120	17	13	76%	9.7	220	NL	--	10,400	0
	120-144	3	3	100%	13	28	NL	--	10,400	0
	144 - 168	2	2	100%	16	210	NL	--	10,400	0

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Table 3-1
Summary of SVOC Sediment Sample Results
Lower Maumee River - Maumee River AOC
Toledo, Lucas County, Ohio

Analyte	Sampling Depth (inches bss)	No. of Results	No. of Detects	% Detects	Minimum Detection (µg/kg)	Maximum Detection (µg/kg)	PEC [1] (µg/kg)	No. of Results Above PEC	ESL [2] (µg/kg)	No. of Results Above ESL
Benzo(g,h,i)perylene	0-6	88	29	33%	3.4	5,800	NL	--	170	2
	6-24	79	38	48%	2.7	180	NL	--	170	1
	24-48	71	33	46%	4.8	120	NL	--	170	0
	48-72	48	27	56%	4.5	110	NL	--	170	0
	72-96	29	19	66%	5	360	NL	--	170	2
	96-120	17	11	65%	4.4	94	NL	--	170	0
	120-144	3	3	100%	6.6	12	NL	--	170	0
	144 - 168	2	2	100%	7.3	92	NL	--	170	0
Benzo(k)fluoranthene	0-6	88	34	39%	3.1	11,000	NL	--	240	2
	6-24	79	36	46%	3	150	NL	--	240	0
	24-48	71	37	52%	2.9	72	NL	--	240	0
	48-72	48	25	52%	3.6	110	NL	--	240	0
	72-96	29	19	66%	5.4	330	NL	--	240	1
	96-120	17	12	71%	4.8	60	NL	--	240	0
	120-144	3	2	67%	7.4	9	NL	--	240	0
	144 - 168	2	2	100%	5.7	72	NL	--	240	0
Bis(2-chloroethoxy)methane	0-6	88	0	0%	--	--	NL	--	NL	--
	6-24	79	0	0%	--	--	NL	--	NL	--
	24-48	71	0	0%	--	--	NL	--	NL	--
	48-72	48	0	0%	--	--	NL	--	NL	--
	72-96	29	0	0%	--	--	NL	--	NL	--
	96-120	17	0	0%	--	--	NL	--	NL	--
	120-144	3	0	0%	--	--	NL	--	NL	--
	144 - 168	2	0	0%	--	--	NL	--	NL	--
Bis(2-chloroethyl)ether	0-6	88	0	0%	--	--	NL	--	3,520	--
	6-24	79	0	0%	--	--	NL	--	3,520	--
	24-48	71	0	0%	--	--	NL	--	3,520	--
	48-72	48	0	0%	--	--	NL	--	3,520	--
	72-96	29	0	0%	--	--	NL	--	3,520	--
	96-120	17	0	0%	--	--	NL	--	3,520	--
	120-144	3	0	0%	--	--	NL	--	3,520	--
	144 - 168	2	0	0%	--	--	NL	--	3,520	--
Bis(2-ethylhexyl)phthalate	0-6	88	8	9%	45	1,500	NL	--	182	1
	6-24	79	12	15%	36	260	NL	--	182	2
	24-48	71	8	11%	43	230	NL	--	182	2
	48-72	48	4	8%	49	1,100	NL	--	182	1
	72-96	29	2	7%	38	200	NL	--	182	1
	96-120	17	3	18%	33	130	NL	--	182	0
	120-144	3	0	0%	--	--	NL	--	182	--
	144 - 168	2	1	50%	190	190	NL	--	182	1
Butylbenzylphthalate	0-6	88	1	1%	7,100	7,100	NL	--	1,970	1
	6-24	79	0	0%	--	--	NL	--	1,970	--
	24-48	71	0	0%	--	--	NL	--	1,970	--
	48-72	48	0	0%	--	--	NL	--	1,970	--
	72-96	29	0	0%	--	--	NL	--	1,970	--
	96-120	17	0	0%	--	--	NL	--	1,970	--
	120-144	3	0	0%	--	--	NL	--	1,970	--
	144 - 168	2	0	0%	--	--	NL	--	1,970	--

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Table 3-1
Summary of SVOC Sediment Sample Results
Lower Maumee River - Maumee River AOC
Toledo, Lucas County, Ohio

Analyte	Sampling Depth (inches bss)	No. of Results	No. of Detects	% Detects	Minimum Detection (µg/kg)	Maximum Detection (µg/kg)	PEC [1] (µg/kg)	No. of Results Above PEC	ESL [2] (µg/kg)	No. of Results Above ESL
Caprolactam	0-6	88	0	0%	--	--	NL	--	NL	--
	6-24	79	1	1%	130	130	NL	--	NL	--
	24-48	71	0	0%	--	--	NL	--	NL	--
	48-72	48	1	2%	98	98	NL	--	NL	--
	72-96	29	0	0%	--	--	NL	--	NL	--
	96-120	17	0	0%	--	--	NL	--	NL	--
	120-144	3	0	0%	--	--	NL	--	NL	--
	144 - 168	2	0	0%	--	--	NL	--	NL	--
Carbazole	0-6	88	2	2%	880	2000	NL	--	NL	--
	6-24	79	1	1%	88	88	NL	--	NL	--
	24-48	71	0	0%	--	--	NL	--	NL	--
	48-72	48	1	2%	85	85	NL	--	NL	--
	72-96	29	2	7%	64	200	NL	--	NL	--
	96-120	17	0	0%	--	--	NL	--	NL	--
	120-144	3	0	0%	--	--	NL	--	NL	--
	144 - 168	2	0	0%	--	--	NL	--	NL	--
Chrysene	0-6	88	60	68%	3.2	23,000	1,290	2	166	3
	6-24	79	62	78%	3.6	340	1,290	0	166	1
	24-48	71	53	75%	3.8	180	1,290	0	166	1
	48-72	48	35	73%	4.2	270	1,290	0	166	2
	72-96	29	26	90%	5.6	640	1,290	0	166	2
	96-120	17	14	82%	5.2	200	1,290	0	166	1
	120-144	3	3	100%	12	17	1,290	0	166	0
	144 - 168	2	2	100%	12	220	1,290	0	166	1
Dibenzo(a,h)anthracene	0-6	88	13	15%	2.8	1,900	NL	--	33	3
	6-24	79	15	19%	3.4	50	NL	--	33	1
	24-48	71	18	25%	3.3	41	NL	--	33	1
	48-72	48	12	25%	3.5	39	NL	--	33	1
	72-96	29	11	38%	5	80	NL	--	33	3
	96-120	17	6	35%	3.9	39	NL	--	33	1
	120-144	3	1	33%	3.7	3.7	NL	--	33	0
	144 - 168	2	1	50%	33	33	NL	--	33	0
Dibenzofuran	0-6	88	3	3%	74	3,200	NL	--	449	1
	6-24	79	0	0%	--	--	NL	--	449	--
	24-48	71	1	1%	29	29	NL	--	449	0
	48-72	48	2	4%	33	160	NL	--	449	0
	72-96	29	2	7%	50	230	NL	--	449	0
	96-120	17	2	12%	55	92	NL	--	449	0
	120-144	3	0	0%	--	--	NL	--	449	--
	144 - 168	2	1	50%	83	83	NL	--	449	0
Diethylphthalate	0-6	88	0	0%	--	--	NL	--	295	--
	6-24	79	0	0%	--	--	NL	--	295	--
	24-48	71	0	0%	--	--	NL	--	295	--
	48-72	48	0	0%	--	--	NL	--	295	--
	72-96	29	0	0%	--	--	NL	--	295	--
	96-120	17	0	0%	--	--	NL	--	295	--
	120-144	3	0	0%	--	--	NL	--	295	--
	144 - 168	2	0	0%	--	--	NL	--	295	--

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Table 3-1
Summary of SVOC Sediment Sample Results
Lower Maumee River - Maumee River AOC
Toledo, Lucas County, Ohio

Analyte	Sampling Depth (inches bss)	No. of Results	No. of Detects	% Detects	Minimum Detection (µg/kg)	Maximum Detection (µg/kg)	PEC [1] (µg/kg)	No. of Results Above PEC	ESL [2] (µg/kg)	No. of Results Above ESL
Dimethylphthalate	0-6	88	0	0%	--	--	NL	--	NL	--
	6-24	79	0	0%	--	--	NL	--	NL	--
	24-48	71	0	0%	--	--	NL	--	NL	--
	48-72	48	0	0%	--	--	NL	--	NL	--
	72-96	29	0	0%	--	--	NL	--	NL	--
	96-120	17	0	0%	--	--	NL	--	NL	--
	120-144	3	0	0%	--	--	NL	--	NL	--
	144 - 168	2	0	0%	--	--	NL	--	NL	--
Di-n-butylphthalate	0-6	88	3	3%	39	500	NL	--	1,114	0
	6-24	79	3	4%	34	82	NL	--	1,114	0
	24-48	71	2	3%	85	130	NL	--	1,114	0
	48-72	48	1	2%	210	210	NL	--	1,114	0
	72-96	29	1	3%	65	65	NL	--	1,114	0
	96-120	17	0	0%	--	--	NL	--	1,114	--
	120-144	3	0	0%	--	--	NL	--	1,114	--
	144 - 168	2	0	0%	--	--	NL	--	1,114	--
Di-n-octylphthalate	0-6	88	1	1%	470	470	NL	--	40,600	0
	6-24	79	1	1%	82	82	NL	--	40,600	0
	24-48	71	0	0%	--	--	NL	--	40,600	--
	48-72	48	0	0%	--	--	NL	--	40,600	--
	72-96	29	0	0%	--	--	NL	--	40,600	--
	96-120	17	0	0%	--	--	NL	--	40,600	--
	120-144	3	0	0%	--	--	NL	--	40,600	--
	144 - 168	2	0	0%	--	--	NL	--	40,600	--
Fluoranthene	0-6	88	80	91%	3.4	59,000	2,230	2	423	3
	6-24	79	75	95%	3.8	940	2,230	0	423	1
	24-48	71	64	90%	2.6	320	2,230	0	423	0
	48-72	48	41	85%	2.9	690	2,230	0	423	1
	72-96	29	27	93%	8	1,700	2,230	0	423	2
	96-120	17	14	82%	5.2	530	2,230	0	423	1
	120-144	3	3	100%	21	29	2,230	0	423	0
	144 - 168	2	2	100%	22	450	2,230	0	423	1
Fluorene	0-6	88	12	14%	2.5	14,000	536	1	77.4	3
	6-24	79	17	22%	3.8	57	536	0	77.4	0
	24-48	71	19	27%	3.7	46	536	0	77.4	0
	48-72	48	14	29%	4.5	87	536	0	77.4	1
	72-96	29	16	55%	3	190	536	0	77.4	2
	96-120	17	7	41%	2.6	71	536	0	77.4	0
	120-144	3	1	33%	3.8	3.8	536	0	77.4	0
	144 - 168	2	2	100%	3.7	48	536	0	77.4	0
Hexachlorobenzene	0-6	88	0	0%	--	--	NL	--	20	--
	6-24	79	0	0%	--	--	NL	--	20	--
	24-48	71	0	0%	--	--	NL	--	20	--
	48-72	48	0	0%	--	--	NL	--	20	--
	72-96	29	0	0%	--	--	NL	--	20	--
	96-120	17	0	0%	--	--	NL	--	20	--
	120-144	3	0	0%	--	--	NL	--	20	--
	144 - 168	2	0	0%	--	--	NL	--	20	--

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Table 3-1
Summary of SVOC Sediment Sample Results
Lower Maumee River - Maumee River AOC
Toledo, Lucas County, Ohio

Analyte	Sampling Depth (inches bss)	No. of Results	No. of Detects	% Detects	Minimum Detection (µg/kg)	Maximum Detection (µg/kg)	PEC [1] (µg/kg)	No. of Results Above PEC	ESL [2] (µg/kg)	No. of Results Above ESL
Hexachlorobutadiene	0-6	88	0	0%	--	--	NL	--	26.5	--
	6-24	79	0	0%	--	--	NL	--	26.5	--
	24-48	71	0	0%	--	--	NL	--	26.5	--
	48-72	48	0	0%	--	--	NL	--	26.5	--
	72-96	29	0	0%	--	--	NL	--	26.5	--
	96-120	17	0	0%	--	--	NL	--	26.5	--
	120-144	3	0	0%	--	--	NL	--	26.5	--
	144 - 168	2	0	0%	--	--	NL	--	26.5	--
Hexachlorocyclopentadiene	0-6	88	0	0%	--	--	NL	--	901	--
	6-24	79	0	0%	--	--	NL	--	901	--
	24-48	71	0	0%	--	--	NL	--	901	--
	48-72	48	0	0%	--	--	NL	--	901	--
	72-96	29	0	0%	--	--	NL	--	901	--
	96-120	17	0	0%	--	--	NL	--	901	--
	120-144	3	0	0%	--	--	NL	--	901	--
	144 - 168	2	0	0%	--	--	NL	--	901	--
Hexachloroethane	0-6	88	0	0%	--	--	NL	--	584	--
	6-24	79	0	0%	--	--	NL	--	584	--
	24-48	71	0	0%	--	--	NL	--	584	--
	48-72	48	0	0%	--	--	NL	--	584	--
	72-96	29	0	0%	--	--	NL	--	584	--
	96-120	17	0	0%	--	--	NL	--	584	--
	120-144	3	0	0%	--	--	NL	--	584	--
	144 - 168	2	0	0%	--	--	NL	--	584	--
Indeno(1,2,3-cd)pyrene	0-6	88	32	36%	2.7	6,200	NL	--	200	2
	6-24	79	36	46%	3.1	170	NL	--	200	0
	24-48	71	34	48%	2.7	81	NL	--	200	0
	48-72	48	25	52%	4.1	110	NL	--	200	0
	72-96	29	19	66%	6	340	NL	--	200	1
	96-120	17	11	65%	4.9	84	NL	--	200	0
	120-144	3	2	67%	6.1	11	NL	--	200	0
	144 - 168	2	2	100%	6.6	80	NL	--	200	0
Isophorone	0-6	88	0	0%	--	--	NL	--	432	--
	6-24	79	0	0%	--	--	NL	--	432	--
	24-48	71	0	0%	--	--	NL	--	432	--
	48-72	48	0	0%	--	--	NL	--	432	--
	72-96	29	0	0%	--	--	NL	--	432	--
	96-120	17	0	0%	--	--	NL	--	432	--
	120-144	3	0	0%	--	--	NL	--	432	--
	144 - 168	2	0	0%	--	--	NL	--	432	--
Naphthalene	0-6	88	19	22%	3.4	3,700	561	1	176	1
	6-24	78	20	26%	4.1	110	561	0	176	0
	24-48	71	25	35%	3.3	140	561	0	176	0
	48-72	48	20	42%	4	350	561	0	176	1
	72-96	29	19	66%	3.7	570	561	1	176	1
	96-120	17	9	53%	4.7	360	561	0	176	1
	120-144	3	3	100%	5.7	7	561	0	176	0
	144 - 168	2	2	100%	10	170	561	0	176	0

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Table 3-1
Summary of SVOC Sediment Sample Results
Lower Maumee River - Maumee River AOC
Toledo, Lucas County, Ohio

Analyte	Sampling Depth (inches bss)	No. of Results	No. of Detects	% Detects	Minimum Detection (µg/kg)	Maximum Detection (µg/kg)	PEC [1] (µg/kg)	No. of Results Above PEC	ESL [2] (µg/kg)	No. of Results Above ESL
Nitrobenzene	0-6	88	0	0%	--	--	NL	--	145	--
	6-24	79	0	0%	--	--	NL	--	145	--
	24-48	71	0	0%	--	--	NL	--	145	--
	48-72	48	0	0%	--	--	NL	--	145	--
	72-96	29	0	0%	--	--	NL	--	145	--
	96-120	17	0	0%	--	--	NL	--	145	--
	120-144	3	0	0%	--	--	NL	--	145	--
	144 - 168	2	0	0%	--	--	NL	--	145	--
N-Nitroso-di-n-propylamine	0-6	88	0	0%	--	--	NL	--	NL	--
	6-24	79	0	0%	--	--	NL	--	NL	--
	24-48	71	0	0%	--	--	NL	--	NL	--
	48-72	48	0	0%	--	--	NL	--	NL	--
	72-96	29	0	0%	--	--	NL	--	NL	--
	96-120	17	0	0%	--	--	NL	--	NL	--
	120-144	3	0	0%	--	--	NL	--	NL	--
	144 - 168	2	0	0%	--	--	NL	--	NL	--
N-Nitrosodiphenylamine	0-6	88	0	0%	--	--	NL	--	NL	--
	6-24	79	0	0%	--	--	NL	--	NL	--
	24-48	71	0	0%	--	--	NL	--	NL	--
	48-72	48	0	0%	--	--	NL	--	NL	--
	72-96	29	0	0%	--	--	NL	--	NL	--
	96-120	17	0	0%	--	--	NL	--	NL	--
	120-144	3	0	0%	--	--	NL	--	NL	--
	144 - 168	2	0	0%	--	--	NL	--	NL	--
Pentachlorophenol	0-6	88	0	0%	--	--	NL	--	23,000	--
	6-24	79	0	0%	--	--	NL	--	23,000	--
	24-48	71	0	0%	--	--	NL	--	23,000	--
	48-72	48	1	2%	13	13	NL	--	23,000	0
	72-96	29	0	0%	--	--	NL	--	23,000	--
	96-120	17	0	0%	--	--	NL	--	23,000	--
	120-144	3	0	0%	--	--	NL	--	23,000	--
	144 - 168	2	0	0%	--	--	NL	--	23,000	--
Phenanthrene	0-6	88	63	72%	2.8	38000	1,170	2	204	4
	6-24	79	74	94%	2.6	440	1,170	0	204	2
	24-48	71	63	89%	3	280	1,170	0	204	2
	48-72	48	40	83%	4.2	930	1,170	0	204	3
	72-96	29	26	90%	8.8	1600	1,170	1	204	3
	96-120	17	15	88%	4.2	460	1,170	0	204	3
	120-144	3	3	100%	14	28	1,170	0	204	0
	144 - 168	2	2	100%	21	430	1,170	0	204	1
Phenol	0-6	88	1	1%	51	51	NL	--	49.1	1
	6-24	79	0	0%	--	--	NL	--	49.1	--
	24-48	71	0	0%	--	--	NL	--	49.1	--
	48-72	48	0	0%	--	--	NL	--	49.1	--
	72-96	29	0	0%	--	--	NL	--	49.1	--
	96-120	17	0	0%	--	--	NL	--	49.1	--
	120-144	3	0	0%	--	--	NL	--	49.1	--
	144 - 168	2	0	0%	--	--	NL	--	49.1	--

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Table 3-1
Summary of SVOC Sediment Sample Results
Lower Maumee River - Maumee River AOC
Toledo, Lucas County, Ohio

Analyte	Sampling Depth (inches bss)	No. of Results	No. of Detects	% Detects	Minimum Detection (µg/kg)	Maximum Detection (µg/kg)	PEC [1] (µg/kg)	No. of Results Above PEC	ESL [2] (µg/kg)	No. of Results Above ESL
Pyrene	0-6	88	83	94%	3.3	45,000	1,520	2	195	4
	6-24	79	77	97%	3	790	1,520	0	195	1
	24-48	71	66	93%	2.9	290	1,520	0	195	2
	48-72	48	40	83%	3.1	400	1,520	0	195	4
	72-96	29	28	97%	9.6	1,200	1,520	0	195	3
	96-120	17	15	88%	4.7	430	1,520	0	195	1
	120-144	3	3	100%	22	28	1,520	0	195	0
	144 - 168	2	2	100%	18	380	1,520	0	195	1
Total PAH 17 [3]	0-6	88	88	100%	19.55	297,600	22,800	2	NL	--
	6-24	79	79	100%	22.1	4,388.30	22,800	0	NL	--
	24-48	71	71	100%	21.25	2,037	22,800	0	NL	--
	48-72	48	48	100%	19.55	4,030.35	22,800	0	NL	--
	72-96	29	29	100%	42.5	9,952.55	22,800	0	NL	--
	96-120	17	17	100%	24.65	2,800	22,800	0	NL	--
	120-144	3	3	100%	144.4	229.6	22,800	0	NL	--
	144 - 168	2	2	100%	166.5	2,859	22,800	0	NL	--

Notes:
% - Percent
"--" - Not applicable
µg/kg - Microgram per kilogram
bss - Below sediment surface
ESL - Ecological Screening Level
NL - Not listed
PEC - Probable Effect Concentration
SRV - Sediment Reference Value
1 From "Development and Evaluation of Consensus-Based Sediment Quality Guidelines for Freshwater Ecosystems" (MacDonald, et. al., 2000)
2 From U.S. Environmental Protection Agency Region 5 Ecological Screening Levels, 2003
3 Total PAH 17 - Calculated as sum of detections plus one-half the detection limit for nondetected results

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Table 3-2
Summary of TAL Metals Sediment Sample Results
Lower Maumee River - Maumee River AOC
Toledo, Lucas County, Ohio

Analyte	Sampling Depth (inches bss)	No. of Results	No. of Detects	% Detects	Minimum Detection (mg/kg)	Maximum Detection (mg/kg)	PEC [1] (mg/kg)	No. of Results Above PEC	ESL[2] (mg/kg)	No. of Results Above ESL	SRV [3] (mg/kg)	No. of Results Above SRV
Aluminum	0 - 6	88	88	100%	3,020	24,900	NL	--	NL	--	42,000	0
	6 - 24	79	79	100%	2,100	27,100	NL	--	NL	--	42,000	0
	24 - 48	71	71	100%	4,110	27,800	NL	--	NL	--	42,000	0
	48 - 72	48	48	100%	2,940	27,800	NL	--	NL	--	42,000	0
	72 - 96	29	29	100%	4,040	29,300	NL	--	NL	--	42,000	0
	96 - 120	17	17	100%	5,230	24,200	NL	--	NL	--	42,000	0
	120 - 144	3	3	100%	15,700	17,000	NL	--	NL	--	42,000	0
	144 - 168	2	2	100%	14,500	14,600	NL	--	NL	--	42,000	0
Antimony	0 - 6	88	15	17%	0.25	0.91	NL	--	NL	--	0.84	2
	6 - 24	79	9	11%	0.23	1.3	NL	--	NL	--	0.84	3
	24 - 48	71	12	17%	0.24	1.1	NL	--	NL	--	0.84	2
	48 - 72	48	5	10%	0.38	0.93	NL	--	NL	--	0.84	2
	72 - 96	29	3	10%	0.31	1	NL	--	NL	--	0.84	2
	96 - 120	17	3	18%	0.38	0.8	NL	--	NL	--	0.84	0
	120 - 144	3	0	0%	--	--	NL	--	NL	--	0.84	--
	144 - 168	2	0	0%	--	--	NL	--	NL	--	0.84	--
Arsenic	0 - 6	88	88	100%	2.3	45.4	33	2	9.79	28	11	14
	6 - 24	79	79	100%	1.7	25.4	33	0	9.79	39	11	27
	24 - 48	71	71	100%	2.6	40.5	33	1	9.79	44	11	26
	48 - 72	48	48	100%	2.8	63.2	33	1	9.79	38	11	23
	72 - 96	29	29	100%	3.2	33.1	33	1	9.79	24	11	19
	96 - 120	17	17	100%	4.3	29.9	33	0	9.79	10	11	10
	120 - 144	3	3	100%	13.1	15.8	33	0	9.79	3	11	3
	144 - 168	2	2	100%	10.8	13.9	33	0	9.79	2	11	1
Barium	0 - 6	88	86	98%	27.4	265	NL	--	NL	--	210	1
	6 - 24	79	75	95%	22.2	305	NL	--	NL	--	210	1
	24 - 48	71	71	100%	28	840	NL	--	NL	--	210	1
	48 - 72	48	47	98%	26.1	179	NL	--	NL	--	210	0
	72 - 96	29	29	100%	27.9	185	NL	--	NL	--	210	0
	96 - 120	17	17	100%	32.8	174	NL	--	NL	--	210	0
	120 - 144	3	3	100%	122	181	NL	--	NL	--	210	0
	144 - 168	2	2	100%	116	187	NL	--	NL	--	210	0

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Table 3-2
Summary of TAL Metals Sediment Sample Results
Lower Maumee River - Maumee River AOC
Toledo, Lucas County, Ohio

Analyte	Sampling Depth (inches bss)	No. of Results	No. of Detects	% Detects	Minimum Detection (mg/kg)	Maximum Detection (mg/kg)	PEC [1] (mg/kg)	No. of Results Above PEC	ESL[2] (mg/kg)	No. of Results Above ESL	SRV [3] (mg/kg)	No. of Results Above SRV
Beryllium	0 - 6	88	42	48%	0.44	1.3	NL	--	NL	--	NL	--
	6 - 24	79	59	75%	0.51	1.2	NL	--	NL	--	NL	--
	24 - 48	71	51	72%	0.44	1.2	NL	--	NL	--	NL	--
	48 - 72	48	34	71%	0.53	1.1	NL	--	NL	--	NL	--
	72 - 96	29	18	62%	0.53	1.2	NL	--	NL	--	NL	--
	96 - 120	17	10	59%	0.55	1.1	NL	--	NL	--	NL	--
	120 - 144	3	3	100%	0.73	1	NL	--	NL	--	NL	--
	144 - 168	2	2	100%	0.67	0.84	NL	--	NL	--	NL	--
Cadmium	0 - 6	88	81	92%	0.49	5.2	4.98	1	0.99	71	0.96	72
	6 - 24	79	73	92%	0.66	7.2	4.98	2	0.99	67	0.96	67
	24 - 48	71	69	97%	0.5	6.5	4.98	2	0.99	62	0.96	62
	48 - 72	48	45	94%	0.41	7	4.98	1	0.99	43	0.96	43
	72 - 96	29	28	97%	0.61	5	4.98	1	0.99	25	0.96	25
	96 - 120	17	17	100%	0.46	6.4	4.98	2	0.99	13	0.96	13
	120 - 144	3	3	100%	3	5.7	4.98	1	0.99	3	0.96	3
	144 - 168	2	2	100%	3.5	3.6	4.98	0	0.99	2	0.96	2
Calcium	0 - 6	88	88	100%	22,700	204,000	NL	--	NL	--	110,000	1
	6 - 24	79	79	100%	23,300	99,900	NL	--	NL	--	110,000	0
	24 - 48	71	71	100%	24,800	221,000	NL	--	NL	--	110,000	1
	48 - 72	48	48	100%	31,400	77,200	NL	--	NL	--	110,000	0
	72 - 96	29	29	100%	28,600	68,500	NL	--	NL	--	110,000	0
	96 - 120	17	17	100%	33,100	71,500	NL	--	NL	--	110,000	0
	120 - 144	3	3	100%	34,000	66,400	NL	--	NL	--	110,000	0
	144 - 168	2	2	100%	33,800	35,400	NL	--	NL	--	110,000	0
Chromium	0 - 6	88	88	100%	7.1	77.8	111	0	43.4	5	51	2
	6 - 24	79	79	100%	5.2	56.8	111	0	43.4	6	51	5
	24 - 48	71	71	100%	8.3	59.9	111	0	43.4	5	51	3
	48 - 72	48	48	100%	6.5	136	111	1	43.4	2	51	2
	72 - 96	29	29	100%	7.7	63.4	111	0	43.4	4	51	1
	96 - 120	17	17	100%	9	44.8	111	0	43.4	2	51	0
	120 - 144	3	3	100%	30.5	53.1	111	0	43.4	1	51	1
	144 - 168	2	2	100%	25.7	36.8	111	0	43.4	0	51	0

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Table 3-2
Summary of TAL Metals Sediment Sample Results
Lower Maumee River - Maumee River AOC
Toledo, Lucas County, Ohio

Analyte	Sampling Depth (inches bss)	No. of Results	No. of Detects	% Detects	Minimum Detection (mg/kg)	Maximum Detection (mg/kg)	PEC [1] (mg/kg)	No. of Results Above PEC	ESL [2] (mg/kg)	No. of Results Above ESL	SRV [3] (mg/kg)	No. of Results Above SRV
Cobalt	0 - 6	88	72	82%	5.9	12.9	NL	--	50	0	NL	--
	6 - 24	79	74	94%	4.9	14.4	NL	--	50	0	NL	--
	24 - 48	71	67	94%	5.1	14.2	NL	--	50	0	NL	--
	48 - 72	48	45	94%	4.9	12.5	NL	--	50	0	NL	--
	72 - 96	29	28	97%	5.4	13.7	NL	--	50	0	NL	--
	96 - 120	17	14	82%	5.2	12.8	NL	--	50	0	NL	--
	120 - 144	3	3	100%	9	10.1	NL	--	50	0	NL	--
	144 - 168	2	2	100%	8.3	9.4	NL	--	50	0	NL	--
Copper	0 - 6	88	88	100%	2.8	120	149	0	31.6	45	42	13
	6 - 24	79	79	100%	2.5	102	149	0	31.6	55	42	15
	24 - 48	71	71	100%	7.6	68.4	149	0	31.6	50	42	16
	48 - 72	48	48	100%	6.3	92.2	149	0	31.6	32	42	9
	72 - 96	29	29	100%	9.9	96.8	149	0	31.6	19	42	9
	96 - 120	17	17	100%	8.1	79.7	149	0	31.6	9	42	6
	120 - 144	3	3	100%	42.9	79.8	149	0	31.6	3	42	3
	144 - 168	2	2	100%	47.9	61.9	149	0	31.6	2	42	2
Iron	0 - 6	88	88	100%	6,710	33,700	NL	--	NL	--	44,000	0
	6 - 24	79	79	100%	5,940	35,300	NL	--	NL	--	44,000	0
	24 - 48	71	71	100%	8,240	34,500	NL	--	NL	--	44,000	0
	48 - 72	48	48	100%	7,360	34,200	NL	--	NL	--	44,000	0
	72 - 96	29	29	100%	9,070	34,300	NL	--	NL	--	44,000	0
	96 - 120	17	17	100%	8,180	41,400	NL	--	NL	--	44,000	0
	120 - 144	3	3	100%	25,400	29,600	NL	--	NL	--	44,000	0
	144 - 168	2	2	100%	21,000	23,800	NL	--	NL	--	44,000	0
Lead	0 - 6	88	88	100%	3.8	419	128	3	35.8	14	NL	--
	6 - 24	79	79	100%	3.2	167	128	4	35.8	19	NL	--
	24 - 48	71	71	100%	5.1	410	128	5	35.8	21	NL	--
	48 - 72	48	48	100%	4	171	128	2	35.8	10	NL	--
	72 - 96	29	29	100%	4.6	205	128	2	35.8	12	NL	--
	96 - 120	17	17	100%	5.1	100	128	0	35.8	7	NL	--
	120 - 144	3	3	100%	64.6	136	128	1	35.8	3	NL	--
	144 - 168	2	2	100%	40.5	97.3	128	0	35.8	2	NL	--

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Table 3-2
Summary of TAL Metals Sediment Sample Results
Lower Maumee River - Maumee River AOC
Toledo, Lucas County, Ohio

Analyte	Sampling Depth (inches bss)	No. of Results	No. of Detects	% Detects	Minimum Detection (mg/kg)	Maximum Detection (mg/kg)	PEC [1] (mg/kg)	No. of Results Above PEC	ESL[2] (mg/kg)	No. of Results Above ESL	SRV [3] (mg/kg)	No. of Results Above SRV
Magnesium	0 - 6	88	88	100%	7,290	24,300	NL	--	NL	--	29,000	0
	6 - 24	79	79	100%	8,180	22,500	NL	--	NL	--	29,000	0
	24 - 48	71	71	100%	9,200	17,200	NL	--	NL	--	29,000	0
	48 - 72	48	48	100%	9,960	24,500	NL	--	NL	--	29,000	0
	72 - 96	29	29	100%	8,800	19,700	NL	--	NL	--	29,000	0
	96 - 120	17	17	100%	8,480	16,600	NL	--	NL	--	29,000	0
	120 - 144	3	3	100%	9,510	12,700	NL	--	NL	--	29,000	0
	144 - 168	2	2	100%	8,460	8,640	NL	--	NL	--	29,000	0
Manganese	0 - 6	88	88	100%	146	868	NL	--	NL	--	1,000	0
	6 - 24	79	79	100%	129	719	NL	--	NL	--	1,000	0
	24 - 48	71	71	100%	176	652	NL	--	NL	--	1,000	0
	48 - 72	48	48	100%	207	665	NL	--	NL	--	1,000	0
	72 - 96	29	29	100%	189	635	NL	--	NL	--	1,000	0
	96 - 120	17	17	100%	179	649	NL	--	NL	--	1,000	0
	120 - 144	3	3	100%	448	920	NL	--	NL	--	1,000	0
	144 - 168	2	2	100%	358	403	NL	--	NL	--	1,000	0
Mercury	0 - 6	88	80	91%	0.0052	5.6	1.06	1	0.174	9	NL	--
	6 - 24	79	71	90%	0.0052	0.94	1.06	0	0.174	13	NL	--
	24 - 48	71	66	93%	0.0097	1.7	1.06	2	0.174	13	NL	--
	48 - 72	48	42	88%	0.01	0.81	1.06	0	0.174	12	NL	--
	72 - 96	29	26	90%	0.017	0.75	1.06	0	0.174	11	NL	--
	96 - 120	17	16	94%	0.0088	0.89	1.06	0	0.174	7	NL	--
	120 - 144	3	2	67%	0.23	1.1	1.06	1	0.174	2	NL	--
	144 - 168	2	2	100%	0.18	0.85	1.06	0	0.174	2	NL	--
Nickel	0 - 6	88	88	100%	7.1	38.9	48.6	0	22.7	59	36	5
	6 - 24	79	79	100%	6.2	39.9	48.6	0	22.7	62	36	13
	24 - 48	71	71	100%	9.8	40.1	48.6	0	22.7	56	36	9
	48 - 72	48	48	100%	7.6	41.5	48.6	0	22.7	35	36	10
	72 - 96	29	29	100%	10.9	42.6	48.6	0	22.7	21	36	7
	96 - 120	17	17	100%	10	40.8	48.6	0	22.7	9	36	5
	120 - 144	3	3	100%	28.1	39.8	48.6	0	22.7	3	36	1
	144 - 168	2	2	100%	27.9	27.9	48.6	0	22.7	2	36	0

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Table 3-2
Summary of TAL Metals Sediment Sample Results
Lower Maumee River - Maumee River AOC
Toledo, Lucas County, Ohio

Analyte	Sampling Depth (inches bss)	No. of Results	No. of Detects	% Detects	Minimum Detection (mg/kg)	Maximum Detection (mg/kg)	PEC [1] (mg/kg)	No. of Results Above PEC	ESL[2] (mg/kg)	No. of Results Above ESL	SRV [3] (mg/kg)	No. of Results Above SRV
Potassium	0 - 6	88	87	99%	415	4,450	NL	--	NL	--	12,000	0
	6 - 24	79	78	99%	453	4,820	NL	--	NL	--	12,000	0
	24 - 48	71	71	100%	617	4,740	NL	--	NL	--	12,000	0
	48 - 72	48	48	100%	634	5,080	NL	--	NL	--	12,000	0
	72 - 96	29	29	100%	756	5,140	NL	--	NL	--	12,000	0
	96 - 120	17	17	100%	933	4,030	NL	--	NL	--	12,000	0
	120 - 144	3	3	100%	2,350	2,570	NL	--	NL	--	12,000	0
	144 - 168	2	2	100%	2,280	2,410	NL	--	NL	--	12,000	0
Selenium	0 - 6	88	1	1%	0.49	0.49	NL	--	NL	--	1.4	0
	6 - 24	79	0	0%	--	--	NL	--	NL	--	1.4	--
	24 - 48	71	1	1%	0.33	0.33	NL	--	NL	--	1.4	0
	48 - 72	48	2	4%	0.53	1.2	NL	--	NL	--	1.4	0
	72 - 96	29	2	7%	0.38	0.5	NL	--	NL	--	1.4	0
	96 - 120	17	0	0%	--	--	NL	--	NL	--	1.4	--
	120 - 144	3	1	33%	0.42	0.42	NL	--	NL	--	1.4	0
	144 - 168	2	0	0%	--	--	NL	--	NL	--	1.4	--
Silver	0 - 6	88	46	52%	0.036	3.1	NL	--	0.5	11	NL	--
	6 - 24	79	44	56%	0.062	2.3	NL	--	0.5	10	NL	--
	24 - 48	71	41	58%	0.057	2.1	NL	--	0.5	6	NL	--
	48 - 72	48	28	58%	0.1	1.6	NL	--	0.5	6	NL	--
	72 - 96	29	18	62%	0.11	3.3	NL	--	0.5	7	NL	--
	96 - 120	17	9	53%	0.045	1	NL	--	0.5	4	NL	--
	120 - 144	3	2	67%	0.53	2.8	NL	--	0.5	2	NL	--
	144 - 168	2	1	50%	0.66	0.66	NL	--	0.5	1	NL	--
Sodium	0 - 6	88	2	2%	1,570	6,620	NL	--	NL	--	NL	--
	6 - 24	79	2	3%	1,190	2,730	NL	--	NL	--	NL	--
	24 - 48	71	2	3%	980	1,050	NL	--	NL	--	NL	--
	48 - 72	48	2	4%	1,030	1,700	NL	--	NL	--	NL	--
	72 - 96	29	1	3%	1,540	1,540	NL	--	NL	--	NL	--
	96 - 120	17	1	6%	559	559	NL	--	NL	--	NL	--
	120 - 144	3	0	0%	--	--	NL	--	NL	--	NL	--
	144 - 168	2	0	0%	--	--	NL	--	NL	--	NL	--

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Table 3-2
Summary of TAL Metals Sediment Sample Results
Lower Maumee River - Maumee River AOC
Toledo, Lucas County, Ohio

Analyte	Sampling Depth (inches bss)	No. of Results	No. of Detects	% Detects	Minimum Detection (mg/kg)	Maximum Detection (mg/kg)	PEC [1] (mg/kg)	No. of Results Above PEC	ESL [2] (mg/kg)	No. of Results Above ESL	SRV [3] (mg/kg)	No. of Results Above SRV
Thallium	0 - 6	88	0	0%	--	--	NL	--	NL	--	NL	--
	6 - 24	79	0	0%	--	--	NL	--	NL	--	NL	--
	24 - 48	71	0	0%	--	--	NL	--	NL	--	NL	--
	48 - 72	48	0	0%	--	--	NL	--	NL	--	NL	--
	72 - 96	29	0	0%	--	--	NL	--	NL	--	NL	--
	96 - 120	17	0	0%	--	--	NL	--	NL	--	NL	--
	120 - 144	3	0	0%	--	--	NL	--	NL	--	NL	--
	144 - 168	2	0	0%	--	--	NL	--	NL	--	NL	--
Vanadium	0 - 6	88	88	100%	10.4	51.3	NL	--	NL	--	NL	--
	6 - 24	79	79	100%	7.7	54.6	NL	--	NL	--	NL	--
	24 - 48	71	71	100%	12.8	57.5	NL	--	NL	--	NL	--
	48 - 72	48	48	100%	13.2	57.9	NL	--	NL	--	NL	--
	72 - 96	29	29	100%	16.6	60.3	NL	--	NL	--	NL	--
	96 - 120	17	17	100%	15.6	50.5	NL	--	NL	--	NL	--
	120 - 144	3	3	100%	35	38.1	NL	--	NL	--	NL	--
	144 - 168	2	2	100%	32	35.3	NL	--	NL	--	NL	--
Zinc	0 - 6	88	88	100%	18.9	339	459	0	121	37	190	7
	6 - 24	79	79	100%	15.3	332	459	0	121	52	190	12
	24 - 48	71	71	100%	27.9	714	459	1	121	44	190	16
	48 - 72	48	48	100%	21.6	273	459	0	121	27	190	4
	72 - 96	29	29	100%	30.7	308	459	0	121	17	190	4
	96 - 120	17	17	100%	33	217	459	0	121	7	190	2
	120 - 144	3	3	100%	133	268	459	0	121	3	190	1
	144 - 168	2	2	100%	134	256	459	0	121	2	190	1

Notes:

% - Percent mg/kg - Milligram per kilogram PEC - Probable Effect Concentration TAL - Target Analyte List

"--" - Not applicable bss - Below sediment surface SRV - Sediment Reference Value

1 From "Development and Evaluation of Consensus-Based Sediment Quality Guidelines for Freshwater Ecosystems" (MacDonald, et. al., 2000)

2 From U.S. Environmental Protection Agency Region 5 Ecological Screening Levels, 2003

3 From "Ohio Ecological Risk Assessment Guidance Document," February 2003, revised April 2008

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Table 3-3
Summary of Pesticides Sediment Sample Results
Lower Maumee River - Maumee River AOC
Toledo, Lucas County, Ohio

Analyte	Sampling Depth (inches bss)	No. of Results	No. of Detects	% Detects	Minimum Detection (µg/kg)	Maximum Detection (µg/kg)	PEC [1] (µg/kg)	No. of Results Above PEC	ESL [2] (µg/kg)	No. of Results Above ESL
1,1,1-Trichloro-2,2-bis(p-methoxphenyl)ethane	0-6	7	0	0%	--	--	NL	--	13.6	--
	6-24	15	0	0%	--	--	NL	--	13.6	--
	24-48	8	0	0%	--	--	NL	--	13.6	--
	48-72	2	0	0%	--	--	NL	--	13.6	--
	72-96	1	0	0%	--	--	NL	--	13.6	--
4,4'-DDD	0-6	7	0	0%	--	--	28	--	4.88	--
	6-24	15	0	0%	--	--	28	--	4.88	--
	24-48	8	0	0%	--	--	28	--	4.88	--
	48-72	2	0	0%	--	--	28	--	4.88	--
	72-96	1	0	0%	--	--	28	--	4.88	--
4,4'-DDE	0-6	7	0	0%	--	--	31.3	--	3.16	--
	6-24	15	0	0%	--	--	31.3	--	3.16	--
	24-48	8	0	0%	--	--	31.3	--	3.16	--
	48-72	2	0	0%	--	--	31.3	--	3.16	--
	72-96	1	0	0%	--	--	31.3	--	3.16	--
4,4'-DDT	0-6	7	0	0%	--	--	62.9	--	4.16	--
	6-24	15	0	0%	--	--	62.9	--	4.16	--
	24-48	8	0	0%	--	--	62.9	--	4.16	--
	48-72	2	0	0%	--	--	62.9	--	4.16	--
	72-96	1	0	0%	--	--	62.9	--	4.16	--
Aldrin	0-6	7	1	14%	2	2	NL	--	2	0
	6-24	15	0	0%	--	--	NL	--	2	--
	24-48	8	0	0%	--	--	NL	--	2	--
	48-72	2	0	0%	--	--	NL	--	2	--
	72-96	1	0	0%	--	--	NL	--	2	--
Alpha-BHC	0-6	7	0	0%	--	--	NL	--	6	--
	6-24	15	0	0%	--	--	NL	--	6	--
	24-48	8	0	0%	--	--	NL	--	6	--
	48-72	2	0	0%	--	--	NL	--	6	--
	72-96	1	0	0%	--	--	NL	--	6	--
Alpha-Chlordane	0-6	7	0	0%	--	--	17.6	--	3.24	--
	6-24	15	0	0%	--	--	17.6	--	3.24	--
	24-48	8	0	0%	--	--	17.6	--	3.24	--
	48-72	2	0	0%	--	--	17.6	--	3.24	--
	72-96	1	0	0%	--	--	17.6	--	3.24	--
Beta-BHC	0-6	7	1	14%	1.7	1.7	NL	--	5	0
	6-24	15	2	13%	1.8	2.4	NL	--	5	0
	24-48	8	1	13%	2.6	2.6	NL	--	5	0
	48-72	2	0	0%	--	--	NL	--	5	--
	72-96	1	0	0%	--	--	NL	--	5	--
Camphechlor	0-6	7	0	0%	--	--	NL	--	0.077	--
	6-24	15	0	0%	--	--	NL	--	0.077	--
	24-48	8	0	0%	--	--	NL	--	0.077	--
	48-72	2	0	0%	--	--	NL	--	0.077	--
	72-96	1	0	0%	--	--	NL	--	0.077	--
Delta-BHC	0-6	7	0	0%	--	--	NL	--	71,500	--
	6-24	15	0	0%	--	--	NL	--	71,500	--
	24-48	8	0	0%	--	--	NL	--	71,500	--
	48-72	2	0	0%	--	--	NL	--	71,500	--
	72-96	1	0	0%	--	--	NL	--	71,500	--

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Table 3-3
Summary of Pesticides Sediment Sample Results
Lower Maumee River - Maumee River AOC
Toledo, Lucas County, Ohio

Analyte	Sampling Depth (inches bss)	No. of Results	No. of Detects	% Detects	Minimum Detection (µg/kg)	Maximum Detection (µg/kg)	PEC [1] (µg/kg)	No. of Results Above PEC	ESL [2] (µg/kg)	No. of Results Above ESL
Dieldrin	0-6	7	0	0%	--	--	61.8	--	295	--
	6-24	15	0	0%	--	--	61.8	--	295	--
	24-48	8	0	0%	--	--	61.8	--	295	--
	48-72	2	0	0%	--	--	61.8	--	295	--
	72-96	1	0	0%	--	--	61.8	--	295	--
Endosulfan I	0-6	7	0	0%	--	--	NL	--	3.26	--
	6-24	15	0	0%	--	--	NL	--	3.26	--
	24-48	8	0	0%	--	--	NL	--	3.26	--
	48-72	2	0	0%	--	--	NL	--	3.26	--
	72-96	1	0	0%	--	--	NL	--	3.26	--
Endosulfan II	0-6	7	0	0%	--	--	NL	--	1.94	--
	6-24	15	0	0%	--	--	NL	--	1.94	--
	24-48	8	0	0%	--	--	NL	--	1.94	--
	48-72	2	0	0%	--	--	NL	--	1.94	--
	72-96	1	0	0%	--	--	NL	--	1.94	--
Endosulfan sulfate	0-6	7	0	0%	--	--	NL	--	34.6	--
	6-24	15	0	0%	--	--	NL	--	34.6	--
	24-48	8	0	0%	--	--	NL	--	34.6	--
	48-72	2	0	0%	--	--	NL	--	34.6	--
	72-96	1	0	0%	--	--	NL	--	34.6	--
Endrin	0-6	7	0	0%	--	--	207	--	2.22	--
	6-24	15	0	0%	--	--	207	--	2.22	--
	24-48	8	0	0%	--	--	207	--	2.22	--
	48-72	2	0	0%	--	--	207	--	2.22	--
	72-96	1	0	0%	--	--	207	--	2.22	--
Endrin aldehyde	0-6	7	0	0%	--	--	NL	--	480	--
	6-24	15	1	7%	3.4	3.4	NL	--	480	0
	24-48	8	0	0%	--	--	NL	--	480	--
	48-72	2	0	0%	--	--	NL	--	480	--
	72-96	1	0	0%	--	--	NL	--	480	--
Endrin ketone	0-6	7	0	0%	--	--	NL	--	NL	--
	6-24	15	0	0%	--	--	NL	--	NL	--
	24-48	8	0	0%	--	--	NL	--	NL	--
	48-72	2	0	0%	--	--	NL	--	NL	--
	72-96	1	0	0%	--	--	NL	--	NL	--
Gamma-BHC (Lindane)	0-6	7	0	0%	--	--	4.99	--	2.37	--
	6-24	15	0	0%	--	--	4.99	--	2.37	--
	24-48	8	0	0%	--	--	4.99	--	2.37	--
	48-72	2	0	0%	--	--	4.99	--	2.37	--
	72-96	1	1	100%	2.2	2.2	4.99	0	2.37	0
Gamma-chlordane	0-6	7	2	29%	5.1	12	17.6	0	3.24	2
	6-24	15	0	0%	--	--	17.6	--	3.24	--
	24-48	8	0	0%	--	--	17.6	--	3.24	--
	48-72	2	0	0%	--	--	17.6	--	3.24	--
	72-96	1	0	0%	--	--	17.6	--	3.24	--
Heptachlor	0-6	7	1	14%	2.7	2.7	NL	--	0.6	1
	6-24	15	1	7%	1.9	1.9	NL	--	0.6	1
	24-48	8	0	0%	--	--	NL	--	0.6	--
	48-72	2	0	0%	--	--	NL	--	0.6	--
	72-96	1	0	0%	--	--	NL	--	0.6	--

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Table 3-3
Summary of Pesticides Sediment Sample Results
Lower Maumee River - Maumee River AOC
Toledo, Lucas County, Ohio

Analyte	Sampling Depth (inches bss)	No. of Results	No. of Detects	% Detects	Minimum Detection (µg/kg)	Maximum Detection (µg/kg)	PEC [1] (µg/kg)	No. of Results Above PEC	ESL [2] (µg/kg)	No. of Results Above ESL
Heptaclor epoxide	0-6	7	0	0%	--	--	16	--	2.47	--
	6-24	15	0	0%	--	--	16	--	2.47	--
	24-48	8	0	0%	--	--	16	--	2.47	--
	48-72	2	0	0%	--	--	16	--	2.47	--
	72-96	1	0	0%	--	--	16	--	2.47	--

Notes:
% - Percent
"--" - Not applicable
µg/kg - Microgram per kilogram
bss - Below sediment surface
ESL - Ecological Screening Level
NL - Not listed
PEC - Probable Effect Concentration
1 From "Development and Evaluation of Consensus-Based Sediment Quality Guidelines for Freshwater Ecosystems" (MacDonald, et. al., 2000)
2 From U.S. Environmental Protection Agency Region 5 Ecological Screening Levels, 2003

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FIGURES



FILE: D:\Lower_Maumee\mxd\SAR\SAR_F1-1_Site_Location.mxd 2:44:20 PM 6/13/2012 wojdakon

Legend

0 8 Miles

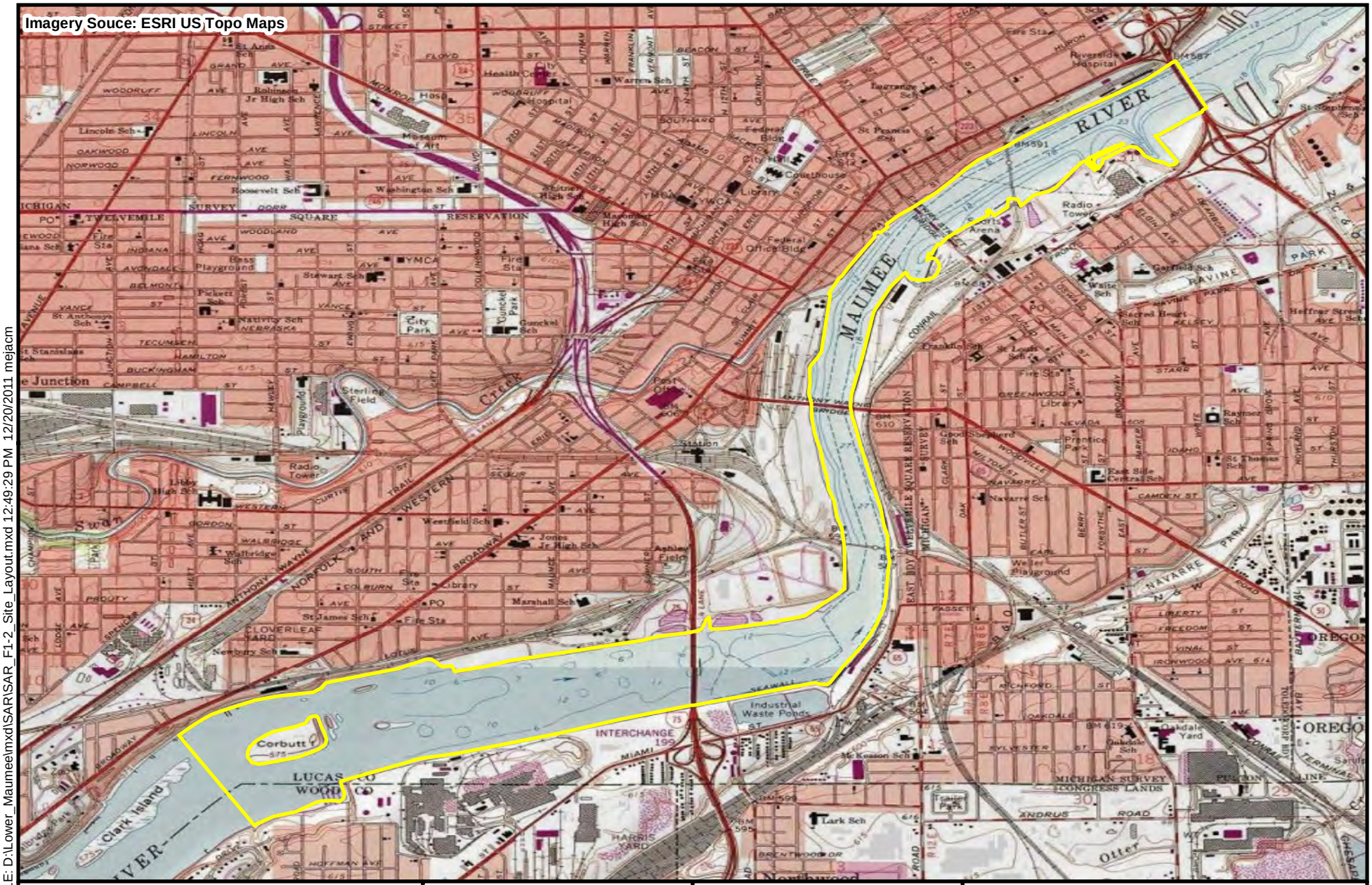
N

- Lower Maumee River Project Area
- Maumee AOC Boundary

Prepared For:
U.S. EPA REGION V
Contract No.: EP-S5-06-04
TDD: S05-0008-1103-006
DCN: 1395-2A-ASFS

Prepared By:
WESTON SOLUTIONS
750 E. Bunker Court
Suite 500
Vernon Hills, Illinois 60061

Figure 1-1
Site Location Map
Lower Maumee River
Toledo, Lucas County, Ohio



FILE: D:\Lower_Maumee\mxd\SAR\SAR_F1-2_Site_Layout.mxd 12:49:29 PM 12/20/2011 mejacm

Legend

Lower Maumee River Project Area

0 3,000 Feet

N

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DCN: 1395-2A-ASFS

Prepared By:
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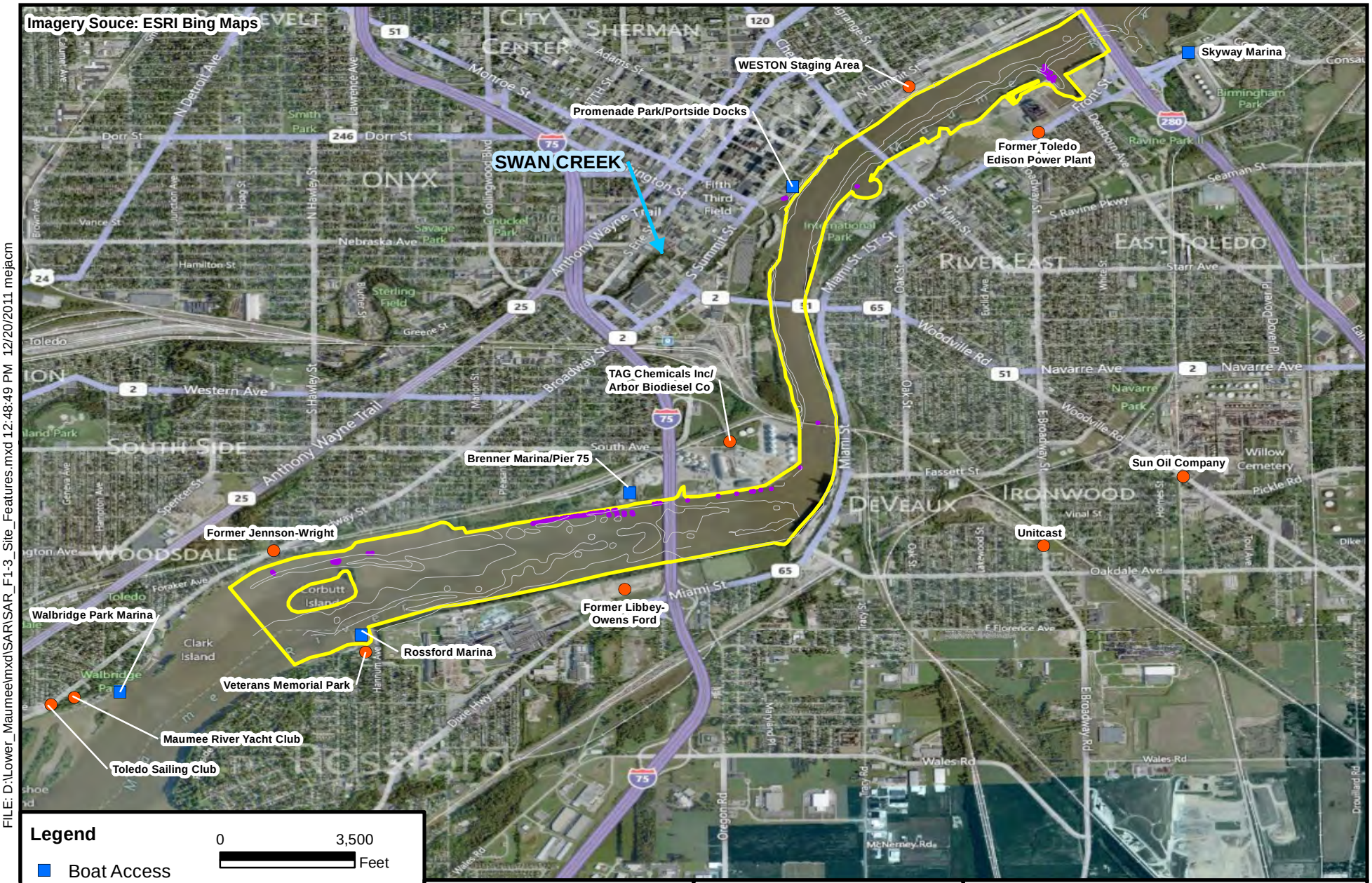
750 E. Bunker Court
Suite 500
Vernon Hills, Illinois 60061

Figure 1-2
Site Layout Map
Lower Maumee River
Toledo, Lucas County, Ohio



FILE: D:\Lower_Maumee\mxd\SAR\SAR_F1-3_Site_Features.mxd 12:48:49 PM 12/20/2011 mejacm

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Suite 500
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Figure 1-3
Site Features Map
Lower Maumee River
Toledo, Lucas County, Ohio

Imagery Source: ESRI Bing Maps

Note:
Standard Analysis includes Semivolatiles, Metals, Grain Size, and TOC
Extended Analysis includes Semivolatiles, Metals, Grain Size, TOC, PCBs, and Pesticides

Legend
- Sampling Location with Standard Analysis
- Sampling Location with Extended Analysis
- Lower Maumee River Project Area

0 2,500 Feet

N

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Figure 2-1
Sampling Location Map
Lower Maumee River
Toledo, Lucas County, Ohio

FILE: D:\Lower_Maumee\mxd\SAR\SAR_F2-1_Sampling_Location.mxd 1/5/2012 2:47:58 PM mejacm

Imagery Source: ESRI Bing Maps

5-foot penetration, poor recovery, woody debris on top of core

6-foot penetration, poor recovery

Legend

- Ponar Only
- No Refusal at Depth
- Lower Maumee River Project Area

- 0 - 6
- 6 - 24
- 24 - 48
- 48 - 72
- 72 - 96
- 96 - 120
- 120 - 144
- 144 - 168
- 168 and Above

Note: All depths are listed in inches below surface

N

0 2,500 Feet

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Figure 2-2
Sediment Thickness Map
Lower Maumee River
Toledo, Lucas County, Ohio

FILE: D:\Lower_Maumee\mxd\SAR\SAR_F2-2_Sediment_Thickness.mxd 1/5/2012 2:50:53 PM mejacm

Imagery Source: ESRI Bing Maps

LMR11-69 08/06/11

Depth	Parameter	Result	Units [Criteria]
0-6	Total PAH 17	297600	ug/Kg [22800]

LMR11-14 08/05/11

Depth	Parameter	Result	Units [Criteria]
0-6	Total PAH 17	92474.2	ug/Kg [22800]

Legend

- Result Below Criteria
- Result Above Criteria

0 - 6 in
6 - 24 in
24 - 48 in
48 - 72 in
72 - 96 in
96 - 120 in
120 - 144 in
144 - 168 in

N

Prepared For:
US EPA Region V
Contract No.: EP-S5-06-04
TDD: S05-0008-1103-006
DCN: 1395-2A-ASFS

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Suite 500
Vernon Hills, Illinois 60061

Figure 3-1
Sampling Results Exceeding PECs - Total PAHs
Lower Maumee River
Toledo, Lucas County, Ohio

FILE: D:\Lower_Maumee\mxd\SAR\SAR_F3-1_Total_PAH_PEC.mxd 1/5/2012 2:57:27 PM mejacm

Imagery Source: ESRI Bing Maps

LMR11-72 08/05/11

Depth	Parameter	Result	Units	[Criteria]
0-6	Lead	205 J-	mg/kg	[128]
0-6	Mercury	5.6 J-	mg/kg	[1.06]

LMR11-69 08/06/11

Depth	Parameter	Result	Units	[Criteria]
0-6	Lead	419	mg/kg	[128]

LMR11-67 08/06/11

Depth	Parameter	Result	Units	[Criteria]
24-48	Cadmium	6.2	mg/kg	[4.98]

LMR11-65 08/06/11

Depth	Parameter	Result	Units	[Criteria]
6-24	Lead	161	mg/kg	[128]

LMR11-64 08/07/11

Depth	Parameter	Result	Units	[Criteria]
0-6	Lead	406	mg/kg	[128]
48-72	Lead	171	mg/kg	[128]

LMR11-63 08/08/11

Depth	Parameter	Result	Units	[Criteria]
24-48	Lead	410	mg/kg	[128]
24-48	Lead	284	mg/kg	[128]
24-48	Zinc	714	mg/kg	[459]
48-72	Lead	156	mg/kg	[128]
72-96	Arsenic	33.1	mg/kg	[33]
72-96	Lead	129	mg/kg	[128]

LMR11-79 08/04/11

Depth	Parameter	Result	Units	[Criteria]
0-6	Cadmium	5.2	mg/kg	[4.98]
6-24	Cadmium	7.2	mg/kg	[4.98]
6-24	Cadmium	5.5	mg/kg	[4.98]
6-24	Lead	167 J	mg/kg	[128]
6-24	Lead	160 J	mg/kg	[128]
24-54	Lead	143 J	mg/kg	[128]
24-54	Mercury	1.4	mg/kg	[1.06]

LMR11-76 08/05/11

Depth	Parameter	Result	Units	[Criteria]
0-6	Arsenic	45.4 J	mg/kg	[33]

LMR11-74 08/05/11

Depth	Parameter	Result	Units	[Criteria]
6-24	Lead	139 J	mg/kg	[128]
48-72	Chromium	136	mg/kg	[111]

LMR11-66 08/07/11

Depth	Parameter	Result	Units	[Criteria]
96-117	Cadmium	5.3	mg/kg	[4.98]

LMR11-32 08/10/11

Depth	Parameter	Result	Units	[Criteria]
24-48	Lead	244 J-	mg/kg	[128]
48-72	Cadmium	7 J-	mg/kg	[4.98]

LMR11-50 08/08/11

Depth	Parameter	Result	Units	[Criteria]
24-48	Lead	306	mg/kg	[128]
24-48	Mercury	1.7	mg/kg	[1.06]
72-96	Lead	205	mg/kg	[128]
120-144	Lead	136	mg/kg	[128]
120-144	Mercury	1.1	mg/kg	[1.06]

LMR11-47 08/08/11

Depth	Parameter	Result	Units	[Criteria]
72-96	Cadmium	5	mg/kg	[4.98]
96-120	Cadmium	6.4	mg/kg	[4.98]
120-144	Cadmium	5.7	mg/kg	[4.98]

LMR11-16 08/09/11

Depth	Parameter	Result	Units	[Criteria]
48-72	Arsenic	63.2	mg/kg	[33]

LMR11-28 08/10/11

Depth	Parameter	Result	Units	[Criteria]
0-6	Arsenic	35.8 J-	mg/kg	[33]

LMR11-42 08/09/11

Depth	Parameter	Result	Units	[Criteria]
24-48	Arsenic	40.5	mg/kg	[33]
24-48	Cadmium	6.5	mg/kg	[4.98]

Legend

- Result Below Criteria
- Result Above Criteria

0 - 6 in
6 - 24 in
24 - 48 in
48 - 72 in
72 - 96 in
96 - 120 in
120 - 144 in
144 - 168 in

N

Prepared For:
US EPA Region V
Contract No.: EP-S5-06-04
TDD: S05-0008-1103-006
DCN: 1395-2A-ASFS

Prepared By:
WESTON SOLUTIONS, INC.
750 E. Bunker Court
Suite 500
Vernon Hills, Illinois 60061

Figure 3-2
Sampling Results Exceeding PECs - Total Metals
Lower Maumee River
Toledo, Lucas County, Ohio

FILE: D:\Lower_Maumee\mxd\SAR\SAR_F3-2_Total_Metals_PEC.mxd 1/5/2012 3:01:26 PM mejacm

Imagery Source: ESRI Bing Maps

LMR11-74 08/05/11

Depth	Parameter	Result		Units	[Criteria]
6-24	Antimony	1.3	J	mg/kg	[0.84]
24-48	Antimony	0.88	J	mg/kg	[0.84]
24-48	Antimony	1.1	J	mg/kg	[0.84]
48-72	Antimony	0.92	J	mg/kg	[0.84]
72-85	Antimony	0.86	J	mg/kg	[0.84]

LMR11-72 08/05/11

Depth	Parameter	Result		Units	[Criteria]
0-6	Antimony	0.91	J-	mg/kg	[0.84]

LMR11-77 08/05/11

Depth	Parameter	Result		Units	[Criteria]
48-72	Antimony	0.93	J-	mg/kg	[0.84]

LMR11-76 08/05/11

Depth	Parameter	Result	Units	[Criteria]
72-96	Antimony	1 J	mg/kg	[0.84]

LMR11-75 08/05/11

Depth	Parameter	Result		Units	[Criteria]
6-24	Antimony	1	J-	mg/kg	[0.84]

LMR11-63 08/08/11

Depth	Parameter	Result	Units	[Criteria]
24-48	Barium	840	mg/kg	[210]

LMR11-43 08/09/11

Depth	Parameter	Result	Units	[Criteria]
24-30	Calcium	221000	mg/kg	[110000]

LMR11-56 08/07/11

Depth	Parameter	Result	Units	[Criteria]
0-6	Barium	265	mg/kg	[210]

LMR11-73 08/07/11

Depth	Parameter	Result	Units	[Criteria]
6-24	Barium	305	mg/kg	[210]

LMR11-50 08/08/11

Depth	Parameter	Result		Units	[Criteria]
0-6	Antimony	0.85	J	mg/kg	[0.84]
6-24	Antimony	0.91	J	mg/kg	[0.84]

LMR11-05 08/04/11

Depth	Parameter	Result	Units	[Criteria]
0-6	Calcium	204000	mg/kg	[110000]

Note: Results for aluminum, antimony, barium, calcium, iron, magnesium, manganese, potassium, and selenium were compared to their respective SRVs because no PECs are available.

Legend

- Result Below Criteria
- Result Above Criteria

0 - 6 in
6 - 24 in
24 - 48 in
48 - 72 in
72 - 96 in
96 - 120 in
120 - 144 in
144 - 168 in

N

Prepared For:
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Contract No.: EP-S5-06-04
TDD: S05-0008-1103-006
DCN: 1395-2A-ASFS

Prepared By:
WESTON SOLUTIONS, INC.
750 E. Bunker Court
Suite 500
Vernon Hills, Illinois 60061

Figure 3-3
Sampling Results Exceeding SRVs -
Total Metals without PECs
Lower Maumee River
Toledo, Lucas County, Ohio

FILE: D:\Lower_Maumee\mxd\SAR\SAR_F3-3_Total_Metals_SRV.mxd 1/5/2012 3:03:55 PM mejacm

APPENDIX A
SEDIMENT CORE LOGS

SEDIMENT LOG OF LMR11-01

U.S. EPA Region V
Contract: EP-S5-06-04

Lower Maumee River
Toledo, Lucas County, Ohio

Collection Date	: 08-02-11/08-05-11	WESTON Geologist	: J. Colomb
Sample Date	: 08-02-11/08-05-11	X Coordinates	: 41 37.253
Collector	: WESTON	Y Coordinates	: 83 34.357
Collection Method	: Ponar/Vibracore		
Total Depth	: 60"		

Samples Collected
- Investigative Sample
- Duplicate Sample
- MS/MSD Sample

Analyses Performed
SVOCs, Total Metals/Hg, TOC, Grain Size (TA)

DEPTH (ft)	GRAPHIC	USCS	DESCRIPTION	SAMPLE INTERVAL	REMARKS
0		ML	CLAYEY SILT, dark brown, trace fine grained sand		LMR11-01-06 (SVOCs, Total Metals/Hg, TOC, Grain Size)
1					LMR11-01-24 (SVOCs, Total Metals/Hg, TOC, Grain Size)
2					
3					LMR11-01-48 (SVOCs, Total Metals/Hg, TOC, Grain Size)
4		SM	SAND, with silt, fine to medium grained, dark brown, some shells		LMR11-01-60 (SVOCs, Total Metals/Hg, TOC, Grain Size)
5			END OF SEDIMENT BORING AT 60" bgs Ponar collected independent of vibracore		
6					

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SEDIMENT LOG OF LMR11-02

U.S. EPA Region V
Contract: EP-S5-06-04

Lower Maumee River
Toledo, Lucas County, Ohio

Collection Date	: 08-02-11	WESTON Geologist	: M. Beer
Sample Date	: 08-02-11	X Coordinates	: 41 37.071
Collector	: WESTON	Y Coordinates	: 83 34.211
Collection Method	: Ponar		
Total Depth	: 06"		

Samples Collected
- Investigative Sample
- Duplicate Sample
- MS/MSD Sample

Analyses Performed
SVOCs, Total Metals/Hg,
PCB Aroclors, Pesticides (CLP)
TOC, Grain Size (TA)

DEPTH (ft)	GRAPHIC	USCS	DESCRIPTION	SAMPLE INTERVAL	REMARKS
0		MH	SILT with trace fine sand, dark green/brown, some wood chips		LMR11-02-06 (SVOCs, Total Metals/Hg, PCB Aroclors, Pesticides) LMR11-02-06MS (PCB Aroclors, Pesticides) LMR11-02-06MSD (PCB Aroclors, Pesticides)
			END OF SEDIMENT BORING AT 6"		
			Ponar collected independently of vibracore		
1					

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SEDIMENT LOG OF LMR11-03

U.S. EPA Region V
Contract: EP-S5-06-04

Lower Maumee River
Toledo, Lucas County, Ohio

Collection Date	: 08-03-11	WESTON Geologist	: J. Colomb
Sample Date	: 08-03-11	X Coordinates	: 41 37.255
Collector	: WESTON	Y Coordinates	: 83 34.213
Collection Method	: Ponar/Vibracore		
Total Depth	: 59"		

Samples Collected
- Investigative Sample
- Duplicate Sample
- MS/MSD Sample

Analyses Performed
SVOCs, Total Metals/Hg, TOC, Grain Size (TA)

DEPTH (ft)	GRAPHIC	USCS	DESCRIPTION	SAMPLE INTERVAL	REMARKS
0		ML	SILT with fine sand, some gravel, some detritus, saturated, dark brown, no odor		LMR11-03-06 (SVOCs, Total Metals/Hg, TOC, Grain Size)
1		ML	CLAYEY SILT, trace fine sand, dark brown banding, some detritus, saturated, no odor		LMR11-03-24 (SVOCs, Total Metals/Hg, TOC, Grain Size)
2		ML	SILT, with some fine sand, light brown, dark brown banding, some detritus, no odor, wet		
3		ML			LMR11-03-48(SVOCs, Total Metals/Hg, TOC, Grain Size)
4		SP	SAND, Well Graded, light brown, some detritus, wet, no odor		
		ML	SILT, with some fine sand, light brown, dark brown banding, some detritus, no odor, wet		LMR11-03-59 (SVOCs, Total Metals/Hg, TOC, Grain Size)
5			END OF SEDIMENT BORING AT 59" bgs		
			Ponar collected independent of vibracore		
6					

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SEDIMENT LOG OF LMR11-04

U.S. EPA Region V
Contract: EP-S5-06-04

Lower Maumee River
Toledo, Lucas County, Ohio

Collection Date	: 08-04-11	WESTON Geologist	: J. Colomb
Sample Date	: 08-04-11	X Coordinates	: 41 37.072
Collector	: WESTON	Y Coordinates	: 83 34.069
Collection Method	: Ponar		
Total Depth	: 06"		

Samples Collected
- Investigative Sample
- Duplicate Sample
- MS/MSD Sample

Analyses Performed
SVOCs, Total Metals/Hg, TOC, Grain Size (TA)

DEPTH (ft)	GRAPHIC	USCS	DESCRIPTION	SAMPLE INTERVAL	REMARKS
0		SM	SILTY SAND, fine to medium grained, some silt, trace clay, grey, decay-like odor		LMR11-04-06 (SVOCs, Total Metals/Hg, TOC, Grain Size)
			END OF SEDIMENT BORING AT 6" bgs Ponar collected independent of vibracore		
1					

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SEDIMENT LOG OF LMR11-05

U.S. EPA Region V
Contract: EP-S5-06-04

Lower Maumee River
Toledo, Lucas County, Ohio

Collection Date	: 08-04-11	WESTON Geologist	: J. Colomb
Sample Date	: 08-04-11	X Coordinates	: 41 36.980
Collector	: WESTON	Y Coordinates	: 83 33.996
Collection Method	: Ponar/Vibracore		
Total Depth	: 24"		

Samples Collected
- Investigative Sample
- Duplicate Sample
- MS/MSD Sample

Analyses Performed
SVOCs, Total Metals/Hg, TOC, Grain Size (TA)

DEPTH (ft)	GRAPHIC	USCS	DESCRIPTION	SAMPLE INTERVAL	REMARKS
0		ML	CLAYEY SILT, trace fine sand, gray/brown, some detritus, saturated, no odor		LMR11-05-06 (SVOCs, Total Metals/Hg, TOC, Grain Size)
1		ML	CLAYEY SILT, trace fine sand, gray/brown, some detritus, saturated, no odor		LMR11-05-18 (SVOCs, Total Metals/Hg, TOC, Grain Size)
2			END OF SEDIMENT BORING AT 24" bgs Ponar collected independent of vibracore		
3					
4					
5					
6					

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SEDIMENT LOG OF LMR11-06

U.S. EPA Region V
Contract: EP-S5-06-04

Lower Maumee River
Toledo, Lucas County, Ohio

Collection Date	: 08-03-11	WESTON Geologist	: J. Colomb
Sample Date	: 08-03-11	X Coordinates	: 41 37.348
Collector	: WESTON	Y Coordinates	: 83 34.144
Collection Method	: Ponar/Vibracore		
Total Depth	: 52"		

Samples Collected
- Investigative Sample
- Duplicate Sample
- MS/MSD Sample

Analyses Performed
SVOCs, Total Metals/Hg, TOC, Grain Size (TA)

DEPTH (ft)	GRAPHIC	USCS	DESCRIPTION	SAMPLE INTERVAL	REMARKS
0		ML	SILT with some fine sand, saturated, dark brown, no odor		LMR11-06-06 (SVOCs, Total Metals/Hg, TOC, Grain Size)
1		ML	SILT, with trace fine sand, some detritus, light brown, saturated, no odor		LMR11-06-24 (SVOCs, Total Metals/Hg, TOC, Grain Size)
2		ML	CLAYEY SILT, trace fine sand, grey/light brown, saturated, no odor		LMR11-06-52 (SVOCs, Total Metals/Hg, TOC, Grain Size)
3					
4			END OF SEDIMENT BORING AT 52" bgs		
5					
6					

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SEDIMENT LOG OF LMR11-07

U.S. EPA Region V
Contract: EP-S5-06-04

Lower Maumee River
Toledo, Lucas County, Ohio

Collection Date	: 08-03-11	WESTON Geologist	: J. Colomb
Sample Date	: 08-03-11	X Coordinates	: 41 37.073
Collector	: WESTON	Y Coordinates	: 83 33.927
Collection Method	: Ponar/Vibracore		
Total Depth	: 06"		

Samples Collected
- Investigative Sample
- Duplicate Sample
- MS/MSD Sample

Analyses Performed
SVOCs, Total Metals/Hg, TOC, Grain Size (TA)

DEPTH (ft)	GRAPHIC	USCS	DESCRIPTION	SAMPLE INTERVAL	REMARKS
0		SW	SAND, Well Graded, fine to medium grain, some silt, some gravel, grey/brown, saturated, no odor, wood chips.		LMR11-07-06 (SVOCs, Total Metals/Hg, TOC, Grain Size)
			END OF SEDIMENT BORING AT 6" bgs		
1					

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SEDIMENT LOG OF LMR11- 08

U.S. EPA Region V
Contract: EP-S5-06-04

Lower Maumee River
Toledo, Lucas County, Ohio

Collection Date	: 08-03-1/08-05-11	WESTON Geologist	: J. Colomb
Sample Date	: 08-03-11/08-05-11	X Coordinates	: 41 37.349
Collector	: WESTON	Y Coordinates	: 83 34.002
Collection Method	: Ponar/Vibracore		
Total Depth	: 52"		

Samples Collected
- Investigative Sample
- Duplicate Sample
- MS/MSD Sample

Analyses Performed
SVOCs, Total Metals/Hg, TOC, Grain Size (TA)

DEPTH (ft)	GRAPHIC	USCS	DESCRIPTION	SAMPLE INTERVAL	REMARKS
0		ML	CLAYEY SILT, trace coarse gravel, gray, loose, trace organics, decay-like odor, saturated.		LMR11-08-06 (SVOCs, Total Metals/Hg, TOC, Grain Size)
1		ML	CLAYEY SILT, trace fine sand, grey-brown, trace organics, saturated, no odor.		LMR-11-08-24 (SVOCs, Total Metals/Hg, TOC, Grain Size)
2					
3					LMR-11-08-52 (SVOCs, Total Metals/Hg, TOC, Grain Size)
4					
			END OF SEDIMENT BORING AT 52" bgs		
5					
6					

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SEDIMENT LOG OF LMR11-10

U.S. EPA Region V
Contract: EP-S5-06-04

Lower Maumee River
Toledo, Lucas County, Ohio

Collection Date	: 08-04-11	WESTON Geologist	: J. Colomb
Sample Date	: 08-04-11	X Coordinates	: 41 37.350
Collector	: WESTON	Y Coordinates	: 83 33.861
Collection Method	: Ponar/Vibracore		
Total Depth	: 45"		

Samples Collected
- Investigative Sample
- Duplicate Sample
- MS/MSD Sample

Analyses Performed
SVOCs, Total Metals/Hg, TOC, Grain Size (TA)

DEPTH (ft)	GRAPHIC	USCS	DESCRIPTION	SAMPLE INTERVAL	REMARKS
0		SP	SAND, Poorly Graded, fine to medium grained, light brown, wet, organic odor, no visible organic material		LMR11-10-06 (SVOCs, Total Metals/Hg, TOC, Grain Size)
1		SP	SAND, Poorly Graded, fine to medium grained, light brown, wet, organic odor, no visible organic material		LMR11-10-24 (SVOCs, Total Metals/Hg, TOC, Grain Size)
2		SP	SAND, Poorly Graded, fine to medium grained, some clay, light brown, wet, organic odor, no visible organic material		LMR11-10-45 (SVOCs, Total Metals/Hg, TOC, Grain Size)
3					
4			END OF SEDIMENT BORING AT 45" bgs		
5					
6					

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SEDIMENT LOG OF LMR11-11

U.S. EPA Region V
Contract: EP-S5-06-04

Lower Maumee River
Toledo, Lucas County, Ohio

Collection Date	: 08-05-11	WESTON Geologist	: J. Colomb
Sample Date	: 08-05-11	X Coordinates	: 41 37.259
Collector	: WESTON	Y Coordinates	: 83 33.788
Collection Method	: Ponar/Vibracore		
Total Depth	: 37"		

Samples Collected
- Investigative Sample
- Duplicate Sample
- MS/MSD Sample

Analyses Performed
SVOCs, Total Metals/Hg, TOC, Grain Size (TA)

DEPTH (ft)	GRAPHIC	USCS	DESCRIPTION	SAMPLE INTERVAL	REMARKS
0		SP	SAND, Poorly Graded, fine to medium grained, dark brown, wet, no odor		LMR11-11-06 (SVOCs, Total Metals/Hg, TOC)
1		SW	SAND, Well Graded, fine to coarse grained, some cobbles, dark brown, wet, no odor		LMR11-11-24 (SVOCs, Total Metals/Hg, TOC, Grain Size)
2		SP	SAND, Poorly Graded, fine to medium grained, dark brown, damp, no odor		LMR11-11-37 (SVOCs, Total Metals/Hg, TOC, Grain Size)
3			END OF SEDIMENT BORING AT 37" bgs		
4					
5					
6					

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SEDIMENT LOG OF LMR11-12

U.S. EPA Region V
Contract: EP-S5-06-04

Lower Maumee River
Toledo, Lucas County, Ohio

Collection Date	: 08-03-11	WESTON Geologist	: J. Colomb
Sample Date	: 08-03-11	X Coordinates	: 41 37.167
Collector	: WESTON	Y Coordinates	: 83 33.716
Collection Method	: Ponar		
Total Depth	: 6"		

Samples Collected
- Investigative Sample
- Duplicate Sample
- MS/MSD Sample

Analyses Performed
SVOCs, Total Metals/Hg,
TOC, Grain Size (TA)
PCB Aroclors, Pesticides (CLP)

DEPTH (ft)	GRAPHIC	USCS	DESCRIPTION	SAMPLE INTERVAL	REMARKS
0		ML	CLAYEY SILT, no odor, some organics		LMR11-12-06 (SVOCs, Total Metals/Hg, TOC, Grain Size, PCB Aroclors, Pesticides)
			END OF SEDIMENT BORING AT 06" bgs Ponar collected independent of vibracore		
1					

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SEDIMENT LOG OF LMR11-13

Restoring Resource Efficiency

U.S. EPA Region V
Contract: EP-S5-06-04

Lower Maumee River
Toledo, Lucas County, Ohio

Collection Date	: 08-03-11	WESTON Geologist	: J. Colomb
Sample Date	: 08-03-11	X Coordinates	: 41 37.443
Collector	: WESTON	Y Coordinates	: 83 33.791
Collection Method	: Ponar/Hand Core		
Total Depth	: 26"		

Samples Collected
- Investigative Sample
- Duplicate Sample
- MS/MSD Sample

Analyses Performed
SVOCs, Total Metals/Hg, TOC, Grain Size (TA)

DEPTH (ft)	GRAPHIC	USCS	DESCRIPTION	SAMPLE INTERVAL	REMARKS
0		ML	CLAYEY SILT, with fine to medium sand, light brown, wet, no odor		LMR11-12-06 (SVOCs, Total Metals/Hg, TOC)
1		ML	CLAYEY SILT, trace fine sand, light brown, wet, no odor, grades to fine to medium sand		LMR11-12-26 (SVOCs, Total Metals/Hg, TOC, Grain Size)
2			END OF SEDIMENT BORING AT 26" bgs		
3					
4					
5					
6					

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SEDIMENT LOG OF LMR11-14

U.S. EPA Region V
Contract: EP-S5-06-04

Lower Maumee River
Toledo, Lucas County, Ohio

Collection Date	: 08-05-11	WESTON Geologist	: J. Colomb
Sample Date	: 08-05-11	X Coordinates	: 41 37.352
Collector	: WESTON	Y Coordinates	: 83 33.719
Collection Method	: Ponar/Vibracore		
Total Depth	: 45"		

Samples Collected
- Investigative Sample
- Duplicate Sample
- MS/MSD Sample

Analyses Performed
SVOCs, Total Metals/Hg, TOC, Grain Size (TA)

DEPTH (ft)	GRAPHIC	USCS	DESCRIPTION	SAMPLE INTERVAL	REMARKS
0		ML	SANDY SILT, fine grained sand, dark brown, some black banding, wet, no odor		LMR11-14-06 (SVOCs, Total Metals/Hg, TOC, Grain Size)
1		ML	SILT, with some fine sand, brown, wet, no odor		LMR11-14-24 (SVOCs, Total Metals/Hg, TOC, Grain Size)
2		ML	SILT, with some fine sand, dark brown, some black banding, wet, no odor		LMR11-14-45 (SVOCs, Total Metals/Hg, TOC, Grain Size)
3					
4			END OF SEDIMENT BORING AT 45" bgs		
5					
6					

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SEDIMENT LOG OF LMR11-15

U.S. EPA Region V
Contract: EP-S5-06-04

Lower Maumee River
Toledo, Lucas County, Ohio

Collection Date	: 08-09-11	WESTON Geologist	: J. Colomb
Sample Date	: 08-09-11	X Coordinates	: 41 37.257981
Collector	: WESTON	Y Coordinates	: 83 33.635086
Collection Method	: Ponar/Vibracore		
Total Depth	: 104"		

Samples Collected
- Investigative Sample
- Duplicate Sample
- MS/MSD Sample

Analyses Performed
SVOCs, Total Metals/Hg, TOC, Grain Size (TA)
PCB Aroclors, Pesticides (CLP)

DEPTH (ft)	USCS	DESCRIPTION	SAMPLE INTERVAL	REMARKS
0	ML	SANDY SILT, fine grained sand, saturated, no odor		LMR11-15-06 (SVOCs, Total Metals/Hg, TOC, Grain Size) LMR11-15-06-DP (SVOCs, Total Metals/Hg, TOC)
1	SP	SAND, Poorly Graded, fine to medium grained, some silt, some organics, wet, no odor		LMR11-15-24 (SVOCs, Total Metals/Hg, TOC, Grain Size) LMR11-15-24-DP (SVOCs, Total Metals/Hg, TOC)
2	ML	SILT, trace fine grained sand, saturated, no odor		LMR11-15-48 (SVOCs, Total Metals/Hg, TOC, Grain Size, PCB Aroclors, Pesticides) LMR11-15-48-DP (SVOCs, Total Metals/Hg, TOC, PCB Aroclors, Pesticides)
3				
4	ML	CLAYEY SILT, trace fine grained sand, light brown, saturated, no odor		LMR11-15-72 (SVOCs, Total Metals/Hg, TOC, Grain Size)
5				
6				
7				LMR11-15-104 (SVOCs, Total Metals/Hg, TOC, Grain Size)
8				
9		END OF SEDIMENT BORING AT 104" bgs		

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SEDIMENT LOG OF LMR11-16

U.S. EPA Region V
Contract: EP-S5-06-04

Lower Maumee River
Toledo, Lucas County, Ohio

Collection Date	: 08-09-11	WESTON Geologist	: J. Colomb
Sample Date	: 08-09-11	X Coordinates	: 41 37.162291
Collector	: WESTON	Y Coordinates	: 83 33.543026
Collection Method	: Ponar/Vibracore		
Total Depth	: 72"		

Samples Collected
- Investigative Sample
- Duplicate Sample
- MS/MSD Sample

Analyses Performed
SVOCs, Total Metals/Hg,
TOC, Grain Size (TA)
PCB Aroclors, Pesticides (CLP)

DEPTH (ft)	GRAPHIC	USCS	DESCRIPTION	SAMPLE INTERVAL	REMARKS
0		ML	SILT, trace fine grained sand, some gravel, light brown, saturated, no odor		LMR11-16-06 (SVOCs, Total Metals/Hg, TOC, Grain Size)
1		ML	SILT, trace fine sands, saturated, no odor		LMR-11-16-24 (SVOCs, Total Metals/Hg, TOC, Grain Size, PCB Aroclors, Pesticides)
2					
3					LMR-11-16-48 (SVOCs, Total Metals/Hg, TOC, Grain Size)
4		SW	SAND, Well Graded, fine to medium grained, some gravel, shell fragments, saturated, no odor		
5					LMR-11-16-72 (SVOCs, Total Metals/Hg, TOC, Grain Size)
6			END OF SEDIMENT BORING AT 72" bgs		

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SEDIMENT LOG OF LMR11-17

U.S. EPA Region V
Contract: EP-S5-06-04

Lower Maumee River
Toledo, Lucas County, Ohio

Collection Date	: 08-04-11	WESTON Geologist	: J. Colomb
Sample Date	: 08-04-11	X Coordinates	: 41 37.444
Collector	: WESTON	Y Coordinates	: 83 33.649
Collection Method	: Ponar/Vibracore		
Total Depth	: 21"		

Samples Collected
- Investigative Sample
- Duplicate Sample
- MS/MSD Sample

Analyses Performed
SVOCs, Total Metals/Hg, TOC, Grain Size (TA)

DEPTH (ft)	GRAPHIC	USCS	DESCRIPTION	SAMPLE INTERVAL	REMARKS
0		SP	SAND, Poorly Graded, fine to medium grained, some silt, some organics, light brown, wet, no odor		LMR11-17-06 (SVOCs, Total Metals/Hg, TOC, Grain Size)
1		SP	SAND, Poorly Graded, some silt, light brown, wet, no odor		LMR11-17-21 (SVOCs, Total Metals/Hg, TOC, Grain Size)
2			END OF SEDIMENT BORING AT 21" bgs		
3					
4					
5					
6					

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SEDIMENT LOG OF LMR11-18

U.S. EPA Region V
Contract: EP-S5-06-04

Lower Maumee River
Toledo, Lucas County, Ohio

Collection Date	: 08-03-11/08-05-11	WESTON Geologist	: J. Colomb
Sample Date	: 08-03-11/08-05-11	X Coordinates	: 41 37.353
Collector	: WESTON	Y Coordinates	: 83 33.577
Collection Method	: Ponar/Vibracore		
Total Depth	: 48"		

Samples Collected
- Investigative Sample
- Duplicate Sample
- MS/MSD Sample

Analyses Performed
SVOCs, Total Metals/Hg, TOC, Grain Size (TA)

DEPTH (ft)	USCS	DESCRIPTION	SAMPLE INTERVAL	REMARKS
0	ML	SILT, trace fine grained sand, trace organics, gray, wet, decay odor		LMR11-18-06 (SVOCs, Total Metals/Hg, TOC, Grain Size)
1	SP	SAND, Poorly Graded, fine to medium grained, some silt, dark brown, wet, no odor		LMR11-18-24 (SVOCs, Total Metals/Hg, TOC, Grain Size)
2	ML	CLAYEY SILT, with fine grained sand, dark brown, wet, no odor		LMR11-18-48 (SVOCs, Total Metals/Hg, TOC, Grain Size)
3				
4		END OF SEDIMENT BORING AT 48" bgs Ponar collected independent of Vibracore		
5				
6				

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SEDIMENT LOG OF LMR11-19

U.S. EPA Region V
Contract: EP-S5-06-04

Lower Maumee River
Toledo, Lucas County, Ohio

Collection Date	: 08-03-11	WESTON Geologist	: J. Colomb
Sample Date	: 08-03-11	X Coordinates	: 41 37.154
Collector	: WESTON	Y Coordinates	: 83 33.506
Collection Method	: Ponar/Vibracore		
Total Depth	: 14"		

Samples Collected
- Investigative Sample
- Duplicate Sample
- MS/MSD Sample

Analyses Performed
SVOCs, Total Metals/Hg, TOC, Grain Size (TA)

DEPTH (ft)	GRAPHIC	USCS	DESCRIPTION	SAMPLE INTERVAL	REMARKS
0		ML	SILT, some fine to medium sand, grey-brown, organics, saturated, no odor		LMR11-19-06 (SVOCs, Total Metals/Hg, TOC, Grain Size)
1		ML	SANDY SILT, fine to medium sand, some cobbles, dark brown, saturated, no odors		LMR11-19-14 (SVOCs, Total Metals/Hg, TOC, Grain Size)

END OF SEDIMENT BORING AT 14" bgs

Ponar collected independent of Vibracore

2
3
4
5
6

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SEDIMENT LOG OF LMR11-20

U.S. EPA Region V
Contract: EP-S5-06-04

Lower Maumee River
Toledo, Lucas County, Ohio

Collection Date	: 08-02-11/08-05-11	WESTON Geologist	: J. Colomb
Sample Date	: 08-02-11/08-05-11	X Coordinates	: 41 37.446
Collector	: WESTON	Y Coordinates	: 83 33.508
Collection Method	: Ponar/Vibracore		
Total Depth	: 60"		

Samples Collected
- Investigative Sample
- Duplicate Sample
- MS/MSD Sample

Analyses Performed
SVOCs, Total Metals/Hg,
TOC, Grain Size (TA)
PCB Aroclors, Pesticides (CLP)

DEPTH (ft)	USCS	DESCRIPTION	SAMPLE INTERVAL	REMARKS
0	ML	CLAYEY SILT, trace fine sand, grey-brown, saturated, no odor		LMR11-20-06 (SVOCs, Total Metals/Hg, TOC, Grain Size) LMR11-20-06-FS (SVOCs, Total Metals/Hg, TOC. Grain Size)
1	ML	SILT, trace fine sand, some clay, brown, saturated, no odor		LMR11-20-24 (SVOCs, Total Metals/Hg, TOC, Grain Size, PCB Aroclors, Pesticides)
2	ML	SILT, trace fine sand, brown, saturated, no odor		LMR11-20-48 (SVOCs, Total Metals/Hg, TOC, Grain Size)
3	ML	SILT, trace fine sand, grading from fine to medium, trace organics, brown, wet, no odor		LMR11-20-60 (SVOCs, Total Metals/Hg, TOC, Grain Size)
4				
5		END OF SEDIMENT BORING AT 60" bgs Ponar collected independent of Vibracore		
6				

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SEDIMENT LOG OF LMR11-21

U.S. EPA Region V
Contract: EP-S5-06-04

Lower Maumee River
Toledo, Lucas County, Ohio

Collection Date	: 08-04-11	WESTON Geologist	: J. Colomb
Sample Date	: 08-04-11	X Coordinates	: 41 37.354
Collector	: WESTON	Y Coordinates	: 83 33.435
Collection Method	: Ponar		
Total Depth	: 6"		

Samples Collected
- Investigative Sample
- Duplicate Sample
- MS/MSD Sample

Analyses Performed
SVOCs, Total Metals/Hg, TOC, Grain Size (TA)

DEPTH (ft)	GRAPHIC	USCS	DESCRIPTION	SAMPLE INTERVAL	REMARKS
0		ML	SILT, some fine grained sand, trace cobbles, trace organics, grey-brown, saturated, no odor		LMR11-21-06 (SVOCs, Total Metals/Hg, TOC, Grain Size)
			END OF SEDIMENT BORING AT 6" bgs Ponar collected independent of vibracore		
1					

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SEDIMENT LOG OF LMR11-22

U.S. EPA Region V
Contract: EP-S5-06-04

Lower Maumee River
Toledo, Lucas County, Ohio

Collection Date	: 08-04-11	WESTON Geologist	: J. Colomb
Sample Date	: 08-04-11	X Coordinates	: 41 37.263
Collector	: WESTON	Y Coordinates	: 83 33.363
Collection Method	: Ponar		
Total Depth	: 6"		

Samples Collected
- Investigative Sample
- Duplicate Sample
- MS/MSD Sample

Analyses Performed
SVOCs, Total Metals/Hg, TOC, Grain Size (TA)

DEPTH (ft)	GRAPHIC	USCS	DESCRIPTION	SAMPLE INTERVAL	REMARKS
0		ML	SILT, some fine grained sand, some gravel, trace organics, brown, saturated, no odor		LMR11-22-06 (SVOCs, Total Metals/Hg, TOC, Grain Size)
			END OF SEDIMENT BORING AT 6" bgs Ponar collected independently of vibracore		
1					

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SEDIMENT LOG OF LMR11-23

U.S. EPA Region V
Contract: EP-S5-06-04

Lower Maumee River
Toledo, Lucas County, Ohio

Collection Date	: 08-11-11	WESTON Geologist	: J. Colomb
Sample Date	: 08-11-11	X Coordinates	: 41 37.446
Collector	: WESTON	Y Coordinates	: 83 33.366
Collection Method	: Ponar		
Total Depth	: 115"		

Samples Collected
- Investigative Sample
- Duplicate Sample
- MS/MSD Sample

Analyses Performed
SVOCs, Total Metals/Hg, TOC, Grain Size (TA)
PCB Aroclors, Pesticides (CLP)

DEPTH (ft)	USCS	DESCRIPTION	SAMPLE INTERVAL	REMARKS
0	ML	SILT, trace fine grained sand, dark brown, saturated, no odor		LMR11-23-06 (SVOCs, Total Metals/Hg, TOC, Grain Size, PCB Aroclors, Pesticides)
1	ML	SILT, trace fine grained sand, dark brown, saturated, no odor		LMR11-23-24 (SVOCs, Total Metals/Hg, TOC, Grain Size, PCB Aroclors, Pesticides) LMR11-23-24-MS (PCB Aroclors, Pesticides) LMR11-23-24-MSD (PCB Aroclors, Pesticides)
2	ML	CLAYEY SILT, trace fine grained sand, dark brown, saturated, no odor		
3				LMR11-23-48 (SVOCs, Total Metals/Hg, TOC, Grain Size)
4				
5				LMR11-23-72 (SVOCs, Total Metals/Hg, TOC, Grain Size)
6				
7				LMR11-23-96 (SVOCs, Total Metals/Hg, TOC, Grain Size)
8				
9				LMR11-23-115 (SVOCs, Total Metals/Hg, TOC, Grain Size)

END OF SEDIMENT BORING AT 115" bgs

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SEDIMENT LOG OF LMR11-24

U.S. EPA Region V
Contract: EP-S5-06-04

Lower Maumee River
Toledo, Lucas County, Ohio

Collection Date	: 08-04-11/08-11-11	WESTON Geologist	: J. Colomb
Sample Date	: 08-04-11/08-11-11	X Coordinates	: 41 37.363
Collector	: WESTON	Y Coordinates	: 83 33.305
Collection Method	: Ponar/Vibracore		
Total Depth	: 96"		

Samples Collected
- Investigative Sample
- Duplicate Sample
- MS/MSD Sample

Analyses Performed
SVOCs, Total Metals/Hg, TOC, Grain Size (TA)
PCB Aroclors, Pesticides (CLP)

DEPTH (ft)	GRAPHIC	USCS	DESCRIPTION	SAMPLE INTERVAL	REMARKS
0		ML	SILT, trace fine grained sand, grey-brown, saturated, no odor		LMR11-24-06 (SVOCs, Total Metals/Hg, TOC, Grain Size)
1		ML	SILT, trace fine grained sand, dark brown, saturated, no odor		LMR11-24-24 (SVOCs, Total Metals/Hg, TOC, Grain Size)
2		ML	CLAYEY SILT, trace fine grained sand, dark brown, saturated, no odor		LMR11-24-48 (SVOCs, Total Metals/Hg, TOC, Grain Size, PCB Aroclors, Pesticides)
4		ML	CLAYEY SILT, trace fine grained sand, dark brown, wet, no odor		LMR11-24-72 (SVOCs, Total Metals/Hg, TOC, Grain Size)
6		ML	CLAYEY SILT, trace fine to medium grained sand, dark brown, wet, no odor		LMR11-24-96 (SVOCs, Total Metals/Hg, TOC, Grain Size)
8			END OF SEDIMENT BORING AT 96" bgs Ponar collected independently of vibracore		

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SEDIMENT LOG OF LMR11-25

U.S. EPA Region V
Contract: EP-S5-06-04

Lower Maumee River
Toledo, Lucas County, Ohio

Collection Date	: 08-11-11	WESTON Geologist	: J. Colomb
Sample Date	: 08-11-11	X Coordinates	: 41 37.264
Collector	: WESTON	Y Coordinates	: 83 33.221
Collection Method	: Ponar/Vibracore		
Total Depth	: 96"		

Samples Collected
- Investigative Sample
- Duplicate Sample
- MS/MSD Sample

Analyses Performed
SVOCs, Total Metals/Hg, TOC, Grain Size (TA)
PCB Aroclors, Pesticides (CLP)

DEPTH (ft)	GRAPHIC	USCS	DESCRIPTION	SAMPLE INTERVAL	REMARKS
0		ML	SILT, trace fine grained sand, grey-brown, saturated, no odor		LMR11-25-06 (SVOCs, Total Metals/Hg, TOC, Grain Size, PCB Aroclors, Pesticides)
1		ML	SILT, trace fine grained sand, dark brown, saturated, no odor		LMR11-25-24 (SVOCs, Total Metals/Hg, TOC, Grain Size)
2		ML	CLAYEY SILT, trace fine grained sand, dark brown, saturated, no odor		LMR11-25-48 (SVOCs, Total Metals/Hg, TOC, Grain Size, PCB Aroclors, Pesticides)
4					LMR11-25-72 (SVOCs, Total Metals/Hg, TOC, Grain Size)
6		ML	CLAYEY SILT, trace fine grained sand, dark brown, wet, no odor		LMR11-25-96 (SVOCs, Total Metals/Hg, TOC, Grain Size)
8			END OF SEDIMENT BORING AT 96" bgs		

Ponar and vibracore collected independently

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SEDIMENT LOG OF LMR11-26

U.S. EPA Region V
Contract: EP-S5-06-04

Lower Maumee River
Toledo, Lucas County, Ohio

Collection Date	: 08-10-11	WESTON Geologist	: J. Colomb
Sample Date	: 08-10-11	X Coordinates	: 41 37.4448
Collector	: WESTON	Y Coordinates	: 83 33.2218
Collection Method	: Ponar/Vibracore		
Total Depth	: 117"		

Samples Collected
- Investigative Sample
- Duplicate Sample
- MS/MSD Sample

Analyses Performed
SVOCs, Total Metals/Hg, TOC, Grain Size (TA)
PCB Aroclors, Pesticides (CLP)

DEPTH (ft)	USCS	DESCRIPTION	SAMPLE INTERVAL	REMARKS
0	ML	SILT, trace fine grained sand, grey-brown, saturated, no odor		LMR11-26-06 (SVOCs, Total Metals/Hg, TOC, Grain Size)
1	ML	SILT, trace fine grained sand, dark brown, saturated, no odor		LMR11-26-24 (SVOCs, Total Metals/Hg, TOC, Grain Size, PCB Aroclors, Pesticides)
2	ML	CLAYEY SILT, trace fine grained sand, dark brown, saturated, no odor		LMR11-26-48 (SVOCs, Total Metals/Hg, TOC, Grain Size)
4	ML	CLAYEY SILT, trace fine grained sand, dark brown, wet, no odor		LMR11-26-72 (SVOCs, Total Metals/Hg, TOC, Grain Size)
6	ML	CLAYEY SILT, trace fine to medium grained sand, dark brown, wet, no odor		LMR11-26-96 (SVOCs, Total Metals/Hg, TOC, Grain Size)
8				LMR11-26-117 (SVOCs, Total Metals/Hg, TOC, Grain Size)
9				
10		END OF SEDIMENT BORING AT 117" bgs		

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SEDIMENT LOG OF LMR11-27

U.S. EPA Region V
Contract: EP-S5-06-04

Lower Maumee River
Toledo, Lucas County, Ohio

Collection Date	: 08-04-11/08-11-11	WESTON Geologist	: J. Colomb
Sample Date	: 08-04-11/08-11-11	X Coordinates	: 41 37.3599
Collector	: WESTON	Y Coordinates	: 83 33.1628
Collection Method	: Ponar/Vibracore		
Total Depth	: 115"		

Samples Collected
- Investigative Sample
- Duplicate Sample
- MS/MSD Sample

Analyses Performed
SVOCs, Total Metals/Hg, TOC, Grain Size (TA)
PCB Aroclors, Pesticides (CLP)

DEPTH (ft)	USCS	DESCRIPTION	SAMPLE INTERVAL	REMARKS
0	ML	SILT, trace fine grained sand, grey-brown, saturated, no odor		LMR11-27-06 (SVOCs, Total Metals/Hg, TOC, Grain Size)
1	SP	SAND, Poorly Graded, fine to medium grained, light brown, saturated, no odor		LMR11-27-24 (SVOCs, Total Metals/Hg, TOC, Grain Size)
2	ML	CLAYEY SILT, trace fine grained sand, dark brown, saturated, no odor		LMR11-27-48 (SVOCs, Total Metals/Hg, TOC, Grain Size, PCB Aroclors, Pesticides)
4	ML	CLAYEY SILT, trace fine grained sand, dark brown, wet, no odor		LMR11-27-72 (SVOCs, Total Metals/Hg, TOC, Grain Size)
6	ML	CLAYEY SILT, trace fine to medium grained sand, dark brown, wet, no odor		LMR11-27-96 (SVOCs, Total Metals/Hg, TOC, Grain Size)
8	ML	SILT, trace fine grained sand, light brown, wet, no odor		LMR11-27-115 (SVOCs, Total Metals/Hg, TOC, Grain Size)
10		END OF SEDIMENT BORING AT 115" bgs Ponar and vibracore collected independently		

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SEDIMENT LOG OF LMR11-28

U.S. EPA Region V
Contract: EP-S5-06-04

Lower Maumee River
Toledo, Lucas County, Ohio

Collection Date	: 08-10-11	WESTON Geologist	: J. Colomb
Sample Date	: 08-10-11	X Coordinates	: 41 37.2645
Collector	: WESTON	Y Coordinates	: 83 33.0803
Collection Method	: Ponar/Vibracore		
Total Depth	: 34"		

Samples Collected
- Investigative Sample
- Duplicate Sample
- MS/MSD Sample

Analyses Performed
SVOCs, Total Metals/Hg,
TOC, Grain Size (TA)
PCB Aroclors, Pesticides (CLP)

DEPTH (ft)	GRAPHIC	USCS	DESCRIPTION	SAMPLE INTERVAL	REMARKS
0		ML	CLAYEY SILT, some fine to medium grained sand, grey-brown, trace organics, saturated, no odor		LMR11-28-06 (SVOCs, Total Metals/Hg, TOC, Grain Size)
1		ML	CLAYEY SILT, trace fine to medium grained sand, light brown, saturated, no odor		LMR11-28-34 (SVOCs, Total Metals/Hg, TOC, Grain Size, PCB Aroclors, Pesticides)
2					
3			END OF SEDIMENT BORING AT 34" bgs		
4					
5					
6					

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SEDIMENT LOG OF LMR11-29

U.S. EPA Region V
Contract: EP-S5-06-04

Lower Maumee River
Toledo, Lucas County, Ohio

Collection Date	: 08-04-11	WESTON Geologist	: J. Colomb
Sample Date	: 08-04-11	X Coordinates	: 41 37.449
Collector	: WESTON	Y Coordinates	: 83 33.082
Collection Method	: Ponar		
Total Depth	: 6"		

Samples Collected
- Investigative Sample
- Duplicate Sample
- MS/MSD Sample

Analyses Performed
SVOCs, Total Metals/Hg, TOC, Grain Size (TA)

DEPTH (ft)	GRAPHIC	USCS	DESCRIPTION	SAMPLE INTERVAL	REMARKS
0		ML	SILT, trace fine grained sand, dark brown, saturated, no odor		LMR11-29-06 (SVOCs, Total Metals/Hg, TOC, Grain Size)
			END OF SEDIMENT BORING AT 6" bgs Ponar only collected at this location		
1					

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SEDIMENT LOG OF LMR11-30

U.S. EPA Region V
Contract: EP-S5-06-04

Lower Maumee River
Toledo, Lucas County, Ohio

Collection Date	: 08-04-11	WESTON Geologist	: J. Colomb
Sample Date	: 08-04-11	X Coordinates	: 41 37.358
Collector	: WESTON	Y Coordinates	: 83 33.010
Collection Method	: Ponar		
Total Depth	: 6"		

Samples Collected
- Investigative Sample
- Duplicate Sample
- MS/MSD Sample

Analyses Performed
SVOCs, Total Metals/Hg, TOC, Grain Size (TA)

DEPTH (ft)	GRAPHIC	USCS	DESCRIPTION	SAMPLE INTERVAL	REMARKS
0		ML	CLAYEY SILT, some fine grained sand, trace organics, dark brown, saturated, no odor		LMR11-30-06 (SVOCs, Total Metals/Hg, TOC, Grain Size)
			END OF SEDIMENT BORING AT 6" bgs Ponar only collected at this location		
1					

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SEDIMENT LOG OF LMR11-31

U.S. EPA Region V
Contract: EP-S5-06-04

Lower Maumee River
Toledo, Lucas County, Ohio

Collection Date	: 08-04-11	WESTON Geologist	: J. Colomb
Sample Date	: 08-04-11	X Coordinates	: 41 37.371
Collector	: WESTON	Y Coordinates	: 83 32.953
Collection Method	: Ponar		
Total Depth	: 6"		

Samples Collected
- Investigative Sample
- Duplicate Sample
- MS/MSD Sample

Analyses Performed
SVOCs, Total Metals/Hg, TOC, Grain Size (TA)

DEPTH (ft)	GRAPHIC	USCS	DESCRIPTION	SAMPLE INTERVAL	REMARKS
0		ML	SILT, very fine silt, trace clay, trace organics, grey, saturated, no odor		LMR11-31-06 (SVOCs, Total Metals/Hg, TOC, Grain Size)
			END OF SEDIMENT BORING AT 6" bgs Ponar only collected at this location		
1					

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SEDIMENT LOG OF LMR11-32

U.S. EPA Region V
Contract: EP-S5-06-04

Lower Maumee River
Toledo, Lucas County, Ohio

Collection Date	: 08-10-11	WESTON Geologist	: J. Colomb
Sample Date	: 08-10-11	X Coordinates	: 41 37.5415
Collector	: WESTON	Y Coordinates	: 83 33.0072
Collection Method	: Ponar/Vibracore		
Total Depth	: 116"		

Samples Collected
- Investigative Sample
- Duplicate Sample
- MS/MSD Sample

Analyses Performed
SVOCs, Total Metals/Hg, TOC, Grain Size (TA)
PCB Aroclors, Pesticides (CLP)

DEPTH (ft)	USCS	DESCRIPTION	SAMPLE INTERVAL	REMARKS
0	ML	SILT, trace fine grained sand, grey-brown, saturated, no odor		LMR11-32-06 (SVOCs, Total Metals/Hg, TOC, Grain Size)
1	ML	SILT, trace fine grained sand, dark brown, saturated, no odor		LMR11-32-24 (SVOCs, Total Metals/Hg, TOC, Grain Size)
2	ML	CLAYEY SILT, trace fine grained sand, dark brown, saturated, no odor		LMR11-32-48 (SVOCs, Total Metals/Hg, TOC, Grain Size)
4	ML	CLAYEY SILT, trace fine grained sand, dark brown, wet, no odor		LMR11-32-72 (SVOCs, Total Metals/Hg, TOC, Grain Size, PCB Aroclors, Pesticides)
6	ML	CLAYEY SILT, trace fine to medium grained sand, dark brown, wet, no odor		LMR11-32-96 (SVOCs, Total Metals/Hg, TOC, Grain Size, PCB Aroclors, Pesticides)
8				LMR11-32-116 (SVOCs, Total Metals/Hg, TOC, Grain Size)
10		END OF SEDIMENT BORING AT 116" bgs		

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SEDIMENT LOG OF LMR11-33

U.S. EPA Region V
Contract: EP-S5-06-04

Lower Maumee River
Toledo, Lucas County, Ohio

Collection Date	: 08-04-11	WESTON Geologist	: J. Colomb
Sample Date	: 08-04-11	X Coordinates	: 41 37.451
Collector	: WESTON	Y Coordinates	: 83 32.940
Collection Method	: Ponar		
Total Depth	: 6"		

Samples Collected
- Investigative Sample
- Duplicate Sample
- MS/MSD Sample

Analyses Performed
SVOCs, Total Metals/Hg, TOC, Grain Size (TA)

DEPTH (ft)	GRAPHIC	USCS	DESCRIPTION	SAMPLE INTERVAL	REMARKS
0		ML	SILT, very fine silt, trace clay, trace organics, grey, saturated, no odor		LMR11-33-06 (SVOCs, Total Metals/Hg, TOC, Grain Size)
			END OF SEDIMENT BORING AT 6" bgs Ponar only collected at this location		
1					

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SEDIMENT LOG OF LMR11-34

U.S. EPA Region V
Contract: EP-S5-06-04

Lower Maumee River
Toledo, Lucas County, Ohio

Collection Date	: 08-04-11	WESTON Geologist	: J. Colomb
Sample Date	: 08-04-11	X Coordinates	: 41 37.359
Collector	: WESTON	Y Coordinates	: 83 32.868
Collection Method	: Ponar		
Total Depth	: 6"		

Samples Collected
- Investigative Sample
- Duplicate Sample
- MS/MSD Sample

Analyses Performed
SVOCs, Total Metals/Hg, TOC, Grain Size (TA)

DEPTH (ft)	GRAPHIC	USCS	DESCRIPTION	SAMPLE INTERVAL	REMARKS
0		ML	SANDY SILT, fine grained sand, grey-brown, saturated, no odor		LMR11-34-06 (SVOCs, Total Metals/Hg, TOC, Grain Size)
			END OF SEDIMENT BORING AT 6" bgs Ponar only collected at this location		
1					

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SEDIMENT LOG OF LMR11-35

U.S. EPA Region V
Contract: EP-S5-06-04

Lower Maumee River
Toledo, Lucas County, Ohio

Collection Date	: 08-10-11	WESTON Geologist	: J. Colomb
Sample Date	: 08-10-11	X Coordinates	: 41 37.5436' N
Collector	: WESTON	Y Coordinates	: 83 32.8763' W
Collection Method	: Ponar/Vibracore		
Total Depth	: 116"		

Samples Collected
- Investigative Sample
- Duplicate Sample
- MS/MSD Sample

Analyses Performed
SVOCs, Total Metals/Hg, TOC, Grain Size (TA)
PCB Aroclors, Pesticides (CLP)

DEPTH (ft)	USCS	DESCRIPTION	SAMPLE INTERVAL	REMARKS
0	ML	SILT, trace fine grained sand, dark brown, saturated, no odor		LMR11-35-06 (SVOCs, Total Metals/Hg, TOC, Grain Size, PCB Aroclors, Pesticides)
1	ML	SILT, trace fine grained sand, dark brown, saturated, no odor		LMR11-35-24 (SVOCs, Total Metals/Hg, TOC, Grain Size) LMR11-35-24-FS (SVOCs, Total Metals/Hg, TOC, Grain Size)
2	ML	SILT, trace fine grained sand, dark brown, wet, no odor		LMR11-35-48 (SVOCs, Total Metals/Hg, TOC, Grain Size)
3				
4	ML	CLAYEY SILT, trace fine grained sand, dark brown, wet, no odor		LMR11-35-72 (SVOCs, Total Metals/Hg, TOC, Grain Size, PCB Aroclors, Pesticides)
5				
6				LMR11-35-96 (SVOCs, Total Metals/Hg, TOC, Grain Size)
7				
8	ML	CLAYEY SILT, trace fine to medium grained sand, dark brown, wet, no odor, fine sand lens at 113"		LMR11-35-116 (SVOCs, Total Metals/Hg, TOC, Grain Size)
9				
10		END OF SEDIMENT BORING AT 116" bgs		

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SEDIMENT LOG OF LMR11-36

U.S. EPA Region V
Contract: EP-S5-06-04

Lower Maumee River
Toledo, Lucas County, Ohio

Collection Date	: 08-04-11	WESTON Geologist	: J. Colomb
Sample Date	: 08-04-11	X Coordinates	: 41 37.452' N
Collector	: WESTON	Y Coordinates	: 83 32.799' W
Collection Method	: Ponar		
Total Depth	: 6"		

Samples Collected
- Investigative Sample
- Duplicate Sample
- MS/MSD Sample

Analyses Performed
SVOCs, Total Metals/Hg, TOC, Grain Size (TA)
PCB Aroclors, Pesticides (CLP)

DEPTH (ft)	GRAPHIC	USCS	DESCRIPTION	SAMPLE INTERVAL	REMARKS
0		ML	SILT, trace fine grained sand, some gravel, trace organics, saturated, no odor		LMR11-36-06 (SVOCs, Total Metals/Hg, TOC, Grain Size, PCB Aroclors, Pesticides) LMR11-36-06-MS (PCB Aroclors, Pesticides) LMR11-36-06-MSD (PCB Aroclors, Pesticides)
			END OF SEDIMENT BORING AT 6" bgs Ponar only collected at this location		
1					

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SEDIMENT LOG OF LMR11-37

U.S. EPA Region V
Contract: EP-S5-06-04

Lower Maumee River
Toledo, Lucas County, Ohio

Collection Date	: 08-10-11	WESTON Geologist	: J. Colomb
Sample Date	: 08-10-11	X Coordinates	: 41 37.3567
Collector	: WESTON	Y Coordinates	: 83 32.7215
Collection Method	: Ponar/Vibracore		
Total Depth	: 72"		

Samples Collected
- Investigative Sample
- Duplicate Sample
- MS/MSD Sample

Analyses Performed
SVOCs, Total Metals/Hg,
TOC, Grain Size (TA)
PCB Aroclors, Pesticides (CLP)

DEPTH (ft)	USCS	DESCRIPTION	SAMPLE INTERVAL	REMARKS
0	ML	SILT, trace fine grained sand, light brown, saturated, no odor		LMR11-37-06 (SVOCs, Total Metals/Hg, TOC, Grain Size)
1	ML	SILT, trace fine grained sand, light brown, saturated, no odor		LMR11-37-24 (SVOCs, Total Metals/Hg, TOC, Grain Size)
2	ML	CLAYEY SILT, some fine grained sand, dark brown, wet, no odor		LMR11-37-48 (SVOCs, Total Metals/Hg, TOC, Grain Size, PCB Aroclors, Pesticides) LMR11-37-48-DP (PCB Aroclors, Pesticides)
3				
4	ML	CLAYEY SILT, trace fine grained sand, dark brown, wet, no odor		
5				LMR11-37-72 (SVOCs, Total Metals/Hg, TOC, Grain Size)
6		END OF SEDIMENT BORING AT 72" bgs		

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SEDIMENT LOG OF LMR11-38

U.S. EPA Region V
Contract: EP-S5-06-04

Lower Maumee River
Toledo, Lucas County, Ohio

Collection Date	: 08-09-11	WESTON Geologist	: J. Colomb
Sample Date	: 08-09-11	X Coordinates	: 41 37.538953
Collector	: WESTON	Y Coordinates	: 83 32.730710
Collection Method	: Ponar/Vibracore		
Total Depth	: 72"		

Samples Collected
- Investigative Sample
- Duplicate Sample
- MS/MSD Sample

Analyses Performed
SVOCs, Total Metals/Hg, TOC, Grain Size (TA)

DEPTH (ft)	GRAPHIC	USCS	DESCRIPTION	SAMPLE INTERVAL	REMARKS
0		ML	SILT, trace fine grained sand, light brown, wet, no odor		LMR11-38-06 (SVOCs, Total Metals/Hg, TOC, Grain Size)
1		ML	SILTY CLAY, trace fine grained sand, light brown, wet, no odor		LMR11-38-24 (SVOCs, Total Metals/Hg, TOC, Grain Size) LMR11-38-24-DP (SVOCs, Total Metals/Hg, TOC) LMR11-38-24-FS (SVOCs, Total Metals/Hg, TOC, Grain Size)
2		ML	CLAYEY SILT, some fine grained sand, dark brown, wet, no odor		
3		ML			LMR11-38-48 (SVOCs, Total Metals/Hg, TOC, Grain Size) LMR11-38-48-DP (SVOCs, Total Metals/Hg, TOC)
4		ML	CLAYEY SILT, trace fine grained sand, dark brown, wet, no odor		
5		ML			LMR11-38-72 (SVOCs, Total Metals/Hg, TOC, Grain Size) LMR11-38-72-DP (SVOCs, Total Metals/Hg, TOC)
6			END OF SEDIMENT BORING AT 72" bgs		

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SEDIMENT LOG OF LMR11-39

U.S. EPA Region V
Contract: EP-S5-06-04

Lower Maumee River
Toledo, Lucas County, Ohio

Collection Date	: 08-09-11	WESTON Geologist	: J. Colomb
Sample Date	: 08-09-11	X Coordinates	: 41 37.453' N
Collector	: WESTON	Y Coordinates	: 83 32.657' W
Collection Method	: Ponar		
Total Depth	: 6"		

Samples Collected
- Investigative Sample
- Duplicate Sample
- MS/MSD Sample

Analyses Performed
SVOCs, Total Metals/Hg, TOC, Grain Size (TA)

DEPTH (ft)	GRAPHIC	USCS	DESCRIPTION	SAMPLE INTERVAL	REMARKS
0		ML	SANDY SILT, with fine to medium grained sand, trace organics, light brown, saturated, no odor		LMR11-39-06 (SVOCs, Total Metals/Hg, TOC, Grain Size)
			END OF SEDIMENT BORING AT 6" bgs Ponar only collected at this location		
1					

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SEDIMENT LOG OF LMR11-40

U.S. EPA Region V
Contract: EP-S5-06-04

Lower Maumee River
Toledo, Lucas County, Ohio

Collection Date	: 08-10-11	WESTON Geologist	: J. Colomb
Sample Date	: 08-10-11	X Coordinates	: 41 37.35629
Collector	: WESTON	Y Coordinates	: 83 32.57583
Collection Method	: Ponar/Vibracore		
Total Depth	: 84"		

Samples Collected
- Investigative Sample
- Duplicate Sample
- MS/MSD Sample

Analyses Performed
SVOCs, Total Metals/Hg, TOC, Grain Size (TA)
PCB Aroclors, Pesticides

DEPTH (ft)	GRAPHIC	USCS	DESCRIPTION	SAMPLE INTERVAL	REMARKS
0		ML	SANDY SILT, fine grained sand, light brown, wet, no odor		LMR11-40-06 (SVOCs, Total Metals/Hg, TOC, Grain Size)
1		ML	SANDY SILT, fine to medium sand, trace gravel, wet, no odor, fine to medium sand lens at 18"		LMR11-40-24 (SVOCs, Total Metals/Hg, TOC, Grain Size, PCB Aroclors, Pesticides)
2		ML	CLAYEY SILT, trace fine grained sand, dark brown, wet, no odor		
3					LMR11-40-48 (SVOCs, Total Metals/Hg, TOC, Grain Size)
4		SP	SAND, Poorly Graded, fine to medium grained sand, dark brown, wet, no odor		
5					LMR11-40-72 (SVOCs, Total Metals/Hg, TOC, Grain Size)
6					
7			END OF SEDIMENT BORING AT 84" bgs		

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SEDIMENT LOG OF LMR11-41

U.S. EPA Region V
Contract: EP-S5-06-04

Lower Maumee River
Toledo, Lucas County, Ohio

Collection Date	: 08-04-11	WESTON Geologist	: J. Colomb
Sample Date	: 08-04-11	X Coordinates	: 41 37.546' N
Collector	: WESTON	Y Coordinates	: 83 32.587' W
Collection Method	: Ponar		
Total Depth	: 6"		

Samples Collected
- Investigative Sample
- Duplicate Sample
- MS/MSD Sample

Analyses Performed
SVOCs, Total Metals/Hg, TOC, Grain Size (TA)

DEPTH (ft)	GRAPHIC	USCS	DESCRIPTION	SAMPLE INTERVAL	REMARKS
0		ML	SANDY SILT, with fine to medium grained sand, organics, dark brown, saturated, decay odor		LMR11-41-06 (SVOCs, Total Metals/Hg, TOC, Grain Size)
			END OF SEDIMENT BORING AT 6" bgs Ponar only collected at this location		
1					

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SEDIMENT LOG OF LMR11-42

U.S. EPA Region V
Contract: EP-S5-06-04

Lower Maumee River
Toledo, Lucas County, Ohio

Collection Date	: 08-09-11	WESTON Geologist	: J. Colomb
Sample Date	: 08-09-11	X Coordinates	: 41 37.425541
Collector	: WESTON	Y Coordinates	: 83 32.471639
Collection Method	: Ponar/Vibracore		
Total Depth	: 129"		

Samples Collected
- Investigative Sample
- Duplicate Sample
- MS/MSD Sample

Analyses Performed
SVOCs, Total Metals/Hg, TOC, Grain Size (TA)

DEPTH (ft)	USCS	DESCRIPTION	SAMPLE INTERVAL	REMARKS
0	ML	SILT, trace fine grained sand, dark brown, saturated, no odor		LMR11-42-06 (SVOCs, Total Metals/Hg, TOC, Grain Size)
1	ML	SILT, trace fine grained sand, dark brown, saturated, no odor		LMR11-42-24 (SVOCs, Total Metals/Hg, TOC, Grain Size, PCB Aroclors, Pesticides)
2	ML	CLAYEY SILT, some fine grained sand, dark brown, saturated, no odor		LMR11-42-48 (SVOCs, Total Metals/Hg, TOC, Grain Size) LMR11-42-48FS (SVOCs, Total Metals/Hg, TOC, Grain Size)
3				
4	ML	CLAYEY SILT, some fine grained sand, dark brown, wet, no odor, fine to medium grained sand lens at 44"-48"		LMR11-42-72 (SVOCs, Total Metals/Hg, TOC, Grain Size)
5				
6	SC	SANDY CLAY, fine grained sand, dark brown, no odor		LMR11-42-96 (SVOCs, Total Metals/Hg, TOC, Grain Size)
7				
8	ML	CLAYEY SILT, with fine grained sand, grades to fine to medium sand, shell fragments, dark brown, saturated, no odor		LMR11-42-129 (SVOCs, Total Metals/Hg, TOC, Grain Size)
9				
10				
11		END OF SEDIMENT BORING AT 129" bgs		

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SEDIMENT LOG OF LMR11-43

U.S. EPA Region V
Contract: EP-S5-06-04

Lower Maumee River
Toledo, Lucas County, Ohio

Collection Date	: 08-09-11	WESTON Geologist	: J. Colomb
Sample Date	: 08-09-11	X Coordinates	: 41 37.551' N
Collector	: WESTON	Y Coordinates	: 83 32.476' W
Collection Method	: Ponar/Vibracore		
Total Depth	: 30"		

Samples Collected
- Investigative Sample
- Duplicate Sample
- MS/MSD Sample

Analyses Performed
SVOCs, Total Metals/Hg, TOC, Grain Size (TA)

DEPTH (ft)	GRAPHIC	USCS	DESCRIPTION	SAMPLE INTERVAL	REMARKS
0		GW	GRAVEL, Well Graded, some cobbles, some fine to medium sand, sark brown, saturated, no odor		
1					LMR11-43-30 (SVOCs, Total Metals/Hg, TOC, Grain Size)
2		SW	SAND, Well Graded, fine to medium sand, with silt, some gravel, light brown, wet, no odor		
			END OF SEDIMENT BORING AT 30" bgs		
3					
4					
5					
6					

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SEDIMENT LOG OF LMR11-44

U.S. EPA Region V
Contract: EP-S5-06-04

Lower Maumee River
Toledo, Lucas County, Ohio

Collection Date.	: 08-09-11	WESTON Geologist	: J. Colomb
Sample Date	: 08-09-11	X Coordinates	: 41 37.451073
Collector	: WESTON	Y Coordinates	: 83 32.371480
Collection Method	: Ponar/Vibracore		
Total Depth	: 96"		

Samples Collected
- Investigative Sample
- Duplicate Sample
- MS/MSD Sample

Analyses Performed
SVOCs, Total Metals/Hg, TOC, Grain Size (TA)

DEPTH (ft)	GRAPHIC	USCS	DESCRIPTION	SAMPLE INTERVAL	REMARKS
0		ML	SILT, trace fine grained sand, grey-brown, saturated, no odor		LMR11-44-06 (SVOCs, Total Metals/Hg, TOC, Grain Size)
1		ML	SANDY SILT, with fine to medium grained sand, grey-brown, saturated, no odor		LMR11-44-24 (SVOCs, Total Metals/Hg, TOC, Grain Size) LMR11-44-24FS (SVOCs, Total Metals/Hg, TOC, Grain Size)
2		ML	CLAYEY SILT, some fine grained sand, grey-brown, saturated, no odor		LMR11-44-48 (SVOCs, Total Metals/Hg, TOC, Grain Size)
3		ML			
4		ML	CLAYEY SILT, some fine grained sand, dark brown, wet, no odor, fine to medium grained sand lens with shell fragments at 49"-55"		LMR11-44-72 (SVOCs, Total Metals/Hg, TOC, Grain Size)
5		ML			
6		ML	CLAYEY SILT, trace fine grained sand, dark brown, wet, no odor		LMR11-44-96 (SVOCs, Total Metals/Hg, TOC, Grain Size)
7		ML			
8			END OF SEDIMENT BORING AT 96" bgs		

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SEDIMENT LOG OF LMR11-45

Restoring Resource Efficiency

U.S. EPA Region V
Contract: EP-S5-06-04

Lower Maumee River
Toledo, Lucas County, Ohio

Collection Date.	: 08-09-11	WESTON Geologist	: J. Colomb
Sample Date	: 08-09-11	X Coordinates	: 41 37.619347
Collector	: WESTON	Y Coordinates	: 83 32.367734
Collection Method	: Ponar/Vibracore		
Total Depth	: 96"		

Samples Collected
- Investigative Sample
- Duplicate Sample
- MS/MSD Sample

Analyses Performed
SVOCs, Total Metals/Hg, TOC, Grain Size (TA)

DEPTH (ft)	GRAPHIC	USCS	DESCRIPTION	SAMPLE INTERVAL	REMARKS
0		ML	SILT, trace fine grained sand, light brown, saturated, no odor		LMR11-45-06 (SVOCs, Total Metals/Hg, TOC, Grain Size)
1		ML	CLAYEY SILT, trace fine grained sand, llight brown, wet, no odor		LMR11-45-24 (SVOCs, Total Metals/Hg, TOC, Grain Size)
2		ML	CLAYEY SILT, trace fine grained sand, light brown, wet, no odor		LMR11-45-48 (SVOCs, Total Metals/Hg, TOC, Grain Size) LMR11-45-48FS (SVOCs, Total Metals/Hg, TOC, Grain Size)
3					
4		ML	CLAYEY SILT, trace fine grained sand, light brown, wet, no odor		LMR11-45-72 (SVOCs, Total Metals/Hg, TOC, Grain Size)
5					
6		ML	CLAYEY SILT, trace fine grained sand, light brown, damp, no odor		LMR11-45-96 (SVOCs, Total Metals/Hg, TOC, Grain Size)
7					
8			END OF SEDIMENT BORING AT 96" bgs		

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SEDIMENT LOG OF LMR11-46

U.S. EPA Region V
Contract: EP-S5-06-04

Lower Maumee River
Toledo, Lucas County, Ohio

Collection Date.	: 08-08-11	WESTON Geologist	: J. Colomb
Sample Date	: 08-08-11	X Coordinates	: 41 37.542306
Collector	: WESTON	Y Coordinates	: 83 32.300440
Collection Method	: Ponar/Vibracore		
Total Depth	: 93"		

Samples Collected
- Investigative Sample
- Duplicate Sample
- MS/MSD Sample

Analyses Performed
SVOCs, Total Metals/Hg, TOC, Grain Size (TA)

DEPTH (ft)	USCS	DESCRIPTION	SAMPLE INTERVAL	REMARKS
0	ML	SILT, trace fine grained sand, dark brown, saturated, no odor		LMR11-46-06 (SVOCs, Total Metals/Hg, TOC, Grain Size)
1	ML	SILT, trace fine grained sand, dark brown, saturated, no odor		LMR11-46-24 (SVOCs, Total Metals/Hg, TOC, Grain Size) LMR11-46-24FS (SVOCs, Total Metals/Hg, TOC, Grain Size)
2	ML	SANDY SILT, fine grained sand, dark brown, saturated, no odor, fine to medium sand lens at 40"		
3				LMR11-46-48 (SVOCs, Total Metals/Hg, TOC, Grain Size)
4	SP	SAND, Poorly Graded, fine to medium sand, shell fragments, light brown, damp, no odor		
5				LMR11-46-72 (SVOCs, Total Metals/Hg, TOC, Grain Size)
6	SP	SAND, Poorly Graded, fine to medium grained, dark brown, saturated, no odor, grades to CLAYEY SILT, trace fine sand		
7				LMR11-46-93 (SVOCs, Total Metals/Hg, TOC, Grain Size)
8		END OF SEDIMENT BORING AT 93" bgs		

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SEDIMENT LOG OF LMR11-47

U.S. EPA Region V
Contract: EP-S5-06-04

Lower Maumee River
Toledo, Lucas County, Ohio

Collection Date.	: 08-08-11	WESTON Geologist	: J. Colomb
Sample Date	: 08-08-11	X Coordinates	: 41 37.453409
Collector	: WESTON	Y Coordinates	: 83 32.222064
Collection Method	: Ponar/Vibracore		
Total Depth	: 144"		

Samples Collected
- Investigative Sample
- Duplicate Sample
- MS/MSD Sample

Analyses Performed
SVOCs, Total Metals/Hg, TOC, Grain Size (TA)

DEPTH (ft)	GRAPHIC	USCS	DESCRIPTION	SAMPLE INTERVAL	REMARKS
0		ML	SILT, trace fine grained sand, dark brown, saturated, product odor		LMR11-47-06 (SVOCs, Total Metals/Hg, TOC, Grain Size)
1		ML	SILT, trace fine grained sand, trace gravel, dark brown, saturated, product odor		LMR11-47-24 (SVOCs, Total Metals/Hg, TOC, Grain Size)
2		ML	SANDY SILT, fine grained sand, dark brown, saturated, product odor, fine to medium sand lens at 44"-48"		LMR11-47-48 (SVOCs, Total Metals/Hg, TOC, Grain Size)
4		ML	SANDY SILT, fine to medium sand, dark brown, saturated, faint product odor		LMR11-47-72 (SVOCs, Total Metals/Hg, TOC, Grain Size)
6		ML	CLAYEY SILT, trace fine grained sand, dark brown, wet, no odor		LMR11-47-96 (SVOCs, Total Metals/Hg, TOC, Grain Size)
8		SP	SAND, Poorly Graded, fine to medium sand, light brown, wet, no odor		LMR11-47-120 (SVOCs, Total Metals/Hg, TOC, Grain Size)
10		ML	CLAYEY SILT, trace fine to medium sand, dark brown, wet, no odor		LMR11-47-144 (SVOCs, Total Metals/Hg, TOC, Grain Size)
12			END OF SEDIMENT BORING AT 144" bgs		

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SEDIMENT LOG OF LMR11-48

U.S. EPA Region V
Contract: EP-S5-06-04

Lower Maumee River
Toledo, Lucas County, Ohio

Collection Date.	: 08-08-11	WESTON Geologist	: J. Colomb
Sample Date	: 08-08-11	X Coordinates	: 41 37.645074
Collector	: WESTON	Y Coordinates	: 83 32.234111
Collection Method	: Ponar/Vibracore		
Total Depth	: 61"		

Samples Collected
- Investigative Sample
- Duplicate Sample
- MS/MSD Sample

Analyses Performed
SVOCs, Total Metals/Hg,
TOC, Grain Size (TA)
PCB Aroclors, Pesticides (CLP)

DEPTH (ft)	GRAPHIC	USCS	DESCRIPTION	SAMPLE INTERVAL	REMARKS
0		ML	SILT, trace fine grained sand, dark brown, saturated, no odor		LMR11-48-06 (SVOCs, Total Metals/Hg, TOC, Grain Size)
1		ML	SILT, trace fine grained sand, dark brown, saturated, no odor		LMR11-48-24 (SVOCs, Total Metals/Hg, TOC, Grain Size) LMR11-48-24FS (SVOCs, Total Metals/Hg, TOC, Grain Size)
2		ML	CLAYEY SILT, trace fine grained sand, light brown, wet, no odor		
3		ML			LMR11-48-48 (SVOCs, Total Metals/Hg, TOC, Grain Size, PCB Aroclors, Pesticides)
4		ML	CLAYEY SILT, trace fine grained sand, dark brown, wet, no odor		LMR11-48-61 (SVOCs, Total Metals/Hg, TOC, Grain Size)
5					
6			END OF SEDIMENT BORING AT 61" bgs		

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SEDIMENT LOG OF LMR11-49

U.S. EPA Region V
Contract: EP-S5-06-04

Lower Maumee River
Toledo, Lucas County, Ohio

Collection Date.	: 08-08-11	WESTON Geologist	: J. Colomb
Sample Date	: 08-08-11	X Coordinates	: 41 37.545' N
Collector	: WESTON	Y Coordinates	: 83 32.168' W
Collection Method	: Ponar/Vibracore		
Total Depth	: 115"		

Samples Collected
- Investigative Sample
- Duplicate Sample
- MS/MSD Sample

Analyses Performed
SVOCs, Total Metals/Hg, TOC, Grain Size (TA)

DEPTH (ft)	GRAPHIC	USCS	DESCRIPTION	SAMPLE INTERVAL	REMARKS
0		ML	SILT, trace fine grained sand, dark brown, saturated, no odor		LMR11-49-06 (SVOCs, Total Metals/Hg, TOC, Grain Size)
1		ML	SILT, trace fine grained sand, dark brown, saturated, no odor		LMR11-49-24 (SVOCs, Total Metals/Hg, TOC, Grain Size)
2		ML	SILT, trace fine grained sand, dark brown, saturated, no odor		LMR11-49-48 (SVOCs, Total Metals/Hg, TOC, Grain Size, PCB Aroclors, Pesticides)
3					
4		ML	CLAYEY SILT, trace fine grained sand, dark brown, wet, no odor, fine to medium grained sand lens 68"-70"		LMR11-49-72 (SVOCs, Total Metals/Hg, TOC, Grain Size)
5					
6		ML	SANDY SILT, fine to medium grained sand, trace organics, dark brown, no odor		LMR11-49-96 (SVOCs, Total Metals/Hg, TOC, Grain Size)
7					
8					LMR11-49-115 (SVOCs, Total Metals/Hg, TOC, Grain Size)
9					
10			END OF SEDIMENT BORING AT 115" bgs		

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SEDIMENT LOG OF LMR11-50

U.S. EPA Region V
Contract: EP-S5-06-04

Lower Maumee River
Toledo, Lucas County, Ohio

Collection Date.	: 08-08-11	WESTON Geologist	: J. Colomb
Sample Date	: 08-08-11	X Coordinates	: 41 37.470024
Collector	: WESTON	Y Coordinates	: 83 32.001309
Collection Method	: Ponar/Vibracore		
Total Depth	: 175"		

Samples Collected
- Investigative Sample
- Duplicate Sample
- MS/MSD Sample

Analyses Performed
SVOCs, Total Metals/Hg, TOC, Grain Size (TA) PCB Aroclors, Pesticides (CLP)

DEPTH (ft)	USCS	DESCRIPTION	SAMPLE INTERVAL	REMARKS
0	ML	SILT, trace fine grained sand, organics, dark brown with black banding, saturated, product odor		LMR11-50-06 (SVOCs, Total Metals/Hg, TOC, Grain Size, PCB Aroclors, Pesticides)
1	ML	SILT, trace fine grained sand, dark brown with black banding, saturated, product odor		LMR11-50-06-DP (SVOCs, Total Metals/Hg, TOC) LMR11-50-06-MS (PCB Aroclors, Pesticides) LMR11-50-06-MSD (PCB Aroclors, Pesticides) LMR11-50-24 (SVOCs, Total Metals/Hg, TOC, Grain Size)
2	ML	CLAYEY SILT, with fine grained sand, organics, dark brown with black banding, saturated, black banding		LMR11-50-24-DP (SVOCs, Total Metals/Hg, TOC)
3				LMR11-50-48 (SVOCs, Total Metals/Hg, TOC, Grain Size) LMR11-50-48-DP (SVOCs, Total Metals/Hg, TOC)
4	ML	CLAYEY SILT, trace fine grained sand, dark brown with black banding, saturated, product odor		
5				LMR11-50-72 (SVOCs, Total Metals/Hg, TOC, Grain Size)
6	ML	CLAYEY SILT, with fine grained sand, organics, dark brown with black banding, saturated, product odor		
7				LMR11-50-96 (SVOCs, Total Metals/Hg, TOC, Grain Size)
8	ML	CLAYEY SILT, trace fine grained sand, organics, dark brown with black banding, saturated, product odor, fine to medium sand lens ar 96"-100"		
9				LMR11-50-120 (SVOCs, Total Metals/Hg, TOC, Grain Size)
10	ML	CLAYEY SILT, trace fine grained sand, dark brown with black banding, wet, no odor		
11				LMR11-50-144 (SVOCs, Total Metals/Hg, TOC, Grain Size)
12				
13				LMR11-50-175 (SVOCs, Total Metals/Hg, TOC, Grain Size)
14				
15		END OF SEDIMENT BORING AT 175" bgs		

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SEDIMENT LOG OF LMR11-51

U.S. EPA Region V
Contract: EP-S5-06-04

Lower Maumee River
Toledo, Lucas County, Ohio

Collection Date.	: 08-07-11	WESTON Geologist	: J. Colomb
Sample Date	: 08-07-11	X Coordinates	: 41 37.645242
Collector	: WESTON	Y Coordinates	: 83 32.096709
Collection Method	: Ponar/Vibracore		
Total Depth	: 75"		

Samples Collected
- Investigative Sample
- Duplicate Sample
- MS/MSD Sample

Analyses Performed
SVOCs, Total Metals/Hg, TOC, Grain Size (TA)

DEPTH (ft)	USCS	DESCRIPTION	SAMPLE INTERVAL	REMARKS
0	ML	SILT, trace fine grained sand, dark brown, saturated, no odor		LMR11-51-06 (SVOCs, Total Metals/Hg, TOC, Grain Size)
1	ML	CLAYEY SILT, trace fine grained sand, dark brown, saturated, no odor		LMR11-51-24 (SVOCs, Total Metals/Hg, TOC, Grain Size)
2	ML	CLAYEY SILT, trace fine grained sand, dark brown, saturated, no odor		LMR11-51-48 (SVOCs, Total Metals/Hg, TOC, Grain Size)
3				
4	ML	CLAYEY SILT, trace fine grained sand, dark brown, saturated, no odor		LMR11-51-75 (SVOCs, Total Metals/Hg, TOC, Grain Size)
5				
6		END OF SEDIMENT BORING AT 75" bgs		

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SEDIMENT LOG OF LMR11-52

U.S. EPA Region V
Contract: EP-S5-06-04

Lower Maumee River
Toledo, Lucas County, Ohio

Collection Date.	: 08-08-11	WESTON Geologist	: J. Colomb
Sample Date	: 08-08-11	X Coordinates	: 41 37.540146
Collector	: WESTON	Y Coordinates	: 83 32.035280
Collection Method	: Ponar/Vibracore		
Total Depth	: 72"		

Samples Collected
- Investigative Sample
- Duplicate Sample
- MS/MSD Sample

Analyses Performed
SVOCs, Total Metals/Hg, TOC, Grain Size (TA)

DEPTH (ft)	USCS	DESCRIPTION	SAMPLE INTERVAL	REMARKS
0	ML	SILT, trace fine grained sand, dark brown, saturated, no odor		LMR11-52-06 (SVOCs, Total Metals/Hg, TOC, Grain Size)
1	ML	CLAYEY SILT, trace fine grained sand, dark brown, saturated, no odor		LMR11-52-24 (SVOCs, Total Metals/Hg, TOC, Grain Size)
2	ML	CLAYEY SILT, trace fine grained sand, dark brown, saturated, no odor		LMR11-52-48 (SVOCs, Total Metals/Hg, TOC, Grain Size) LMR11-52-48FS (SVOCs, Total Metals/Hg, TOC, Grain Size)
3				
4	ML	CLAYEY SILT, trace fine grained sand, dark brown, saturated, no odor		LMR11-52-72 (SVOCs, Total Metals/Hg, TOC, Grain Size)
5				
6		END OF SEDIMENT BORING AT 72" bgs		

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SEDIMENT LOG OF LMR11-53

U.S. EPA Region V
Contract: EP-S5-06-04

Lower Maumee River
Toledo, Lucas County, Ohio

Collection Date.	: 08-07-11	WESTON Geologist	: J. Colomb
Sample Date	: 08-07-11	X Coordinates	: 41 37.75377
Collector	: WESTON	Y Coordinates	: 83 31.99104
Collection Method	: Ponar/Vibracore		
Total Depth	: 73"		

Samples Collected
- Investigative Sample
- Duplicate Sample
- MS/MSD Sample

Analyses Performed
SVOCs, Total Metals/Hg, TOC, Grain Size (TA)

DEPTH (ft)	USCS	DESCRIPTION	SAMPLE INTERVAL	REMARKS
0	ML	SANDY SILT, some fine grained sand, organics, dark brown, saturated, no odor		LMR11-53-06 (SVOCs, Total Metals/Hg, TOC, Grain Size)
1	ML	SANDY SILT, some fine grained sand, some clay, dark brown, saturated, no odor		LMR11-53-24 (SVOCs, Total Metals/Hg, TOC, Grain Size)
2	ML	SANDY SILT, some fine grained sand, some clay, some gravel, dark brown, no odor		LMR11-53-48 (SVOCs, Total Metals/Hg, TOC, Grain Size)
3	ML	SANDY SILT, fine to medium sand, light brown, wet, no odor, fine to medium sand lens 50"-53"		LMR11-53-72 (SVOCs, Total Metals/Hg, TOC, Grain Size)
4				
5				
6		END OF SEDIMENT BORING AT 73" bgs		

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SEDIMENT LOG OF LMR11-54

U.S. EPA Region V
Contract: EP-S5-06-04

Lower Maumee River
Toledo, Lucas County, Ohio

Collection Date.	: 08-08-11	WESTON Geologist	: J. Colomb
Sample Date	: 08-08-11	X Coordinates	: 41 37.606430
Collector	: WESTON	Y Coordinates	: 83 32.024905
Collection Method	: Ponar/Vibracore		
Total Depth	: 72"		

Samples Collected
- Investigative Sample
- Duplicate Sample
- MS/MSD Sample

Analyses Performed
SVOCs, Total Metals/Hg, TOC, Grain Size (TA)

DEPTH (ft)	GRAPHIC	USCS	DESCRIPTION	SAMPLE INTERVAL	REMARKS
0		ML	SANDY SILT, fine grained sand, shell fragments, light brown, saturated, no odor		LMR11-54-06 (SVOCs, Total Metals/Hg, TOC, Grain Size) LMR11-54-06DP (SVOCs, Total Metals/Hg, TOC)
1		ML	SANDY SILT, fine grained sand, shell fragments, light brown, saturated, no odor		LMR11-54-24 (SVOCs, Total Metals/Hg, TOC, Grain Size) LMR11-54-24DP (SVOCs, Total Metals/Hg, TOC)
2		ML	SANDY SILT, some fine grained sand, organics, light brown with black banding, no odor, fine to medium sand grained lens at 23"-35"		LMR11-54-48 (SVOCs, Total Metals/Hg, TOC, Grain Size) LMR11-54-48DP (SVOCs, Total Metals/Hg, TOC)
3					
4		ML	CLAYEY SILT, trace fine grained sand, organics, dark brown, damp, no odor		LMR11-54-72 (SVOCs, Total Metals/Hg, TOC, Grain Size)
5					
6		ML	CLAYEY SILT, trace fine grained sand, light brown, wet, no odor, fine to medium grained sand lens at 84"-86"		LMR11-54-86 (SVOCs, Total Metals/Hg, TOC, Grain Size)
7			END OF SEDIMENT BORING AT 86" bgs		

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SEDIMENT LOG OF LMR11-55

U.S. EPA Region V
Contract: EP-S5-06-04

Lower Maumee River
Toledo, Lucas County, Ohio

Collection Date.	: 08-07-11	WESTON Geologist	: J. Colomb
Sample Date	: 08-07-11	X Coordinates	: 41 37.831066
Collector	: WESTON	Y Coordinates	: 83 31.937833
Collection Method	: Ponar/Vibracore		
Total Depth	: 30"		

Samples Collected
- Investigative Sample
- Duplicate Sample
- MS/MSD Sample

Analyses Performed
SVOCs, Total Metals/Hg, TOC, Grain Size (TA)

DEPTH (ft)	GRAPHIC	USCS	DESCRIPTION	SAMPLE INTERVAL	REMARKS
0		ML	SILT, trace fine grained sand, some gravel, organics, saturated, no odor		LMR11-55-06 (SVOCs, Total Metals/Hg, TOC, Grain Size) LMR11-55-06DP (SVOCs, Total Metals/Hg, TOC)
1		ML	SANDY SILT, trace fine grained sand, organics, dark brown, saturated, no odor, grades to fine to medium sand		LMR11-55-30 (SVOCs, Total Metals/Hg, TOC, Grain Size) LMR11-55-30DP (SVOCs, Total Metals/Hg, TOC)
2			END OF SEDIMENT BORING AT 30" bgs		
3					
4					
5					
6					

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SEDIMENT LOG OF LMR11-56

U.S. EPA Region V
Contract: EP-S5-06-04

Lower Maumee River
Toledo, Lucas County, Ohio

Collection Date.	: 08-07-11	WESTON Geologist	: J. Colomb
Sample Date	: 08-07-11	X Coordinates	: 41 37.826741
Collector	: WESTON	Y Coordinates	: 83 31.819791
Collection Method	: Ponar/Vibracore		
Total Depth	: 36"		

Samples Collected
- Investigative Sample
- Duplicate Sample
- MS/MSD Sample

Analyses Performed
SVOCs, Total Metals/Hg, TOC, Grain Size (TA)

DEPTH (ft)	GRAPHIC	USCS	DESCRIPTION	SAMPLE INTERVAL	REMARKS
0		ML	SILT, trace fine grained sand, grey-brown, saturated, no odor		LMR11-56-06 (SVOCs, Total Metals/Hg, TOC, Grain Size)
1		ML	SILT, trace fine grained sand, grey-brown, saturated, no odor		LMR11-56-24 (SVOCs, Total Metals/Hg, TOC, Grain Size)
2		ML	SANDY SILT, with fine grained sand, grey-brown, no odor		LMR11-56-30 (SVOCs, Total Metals/Hg, TOC, Grain Size)
3			END OF SEDIMENT BORING AT 36" bgs		
4					
5					
6					

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SEDIMENT LOG OF LMR11-57

U.S. EPA Region V
Contract: EP-S5-06-04

Lower Maumee River
Toledo, Lucas County, Ohio

Collection Date.	: 08-06-11	WESTON Geologist	: J. Colomb
Sample Date	: 08-06-11	X Coordinates	: 41 38.012891
Collector	: WESTON	Y Coordinates	: 83 31.961009
Collection Method	: Ponar/Vibracore		
Total Depth	: 62"		

Samples Collected
- Investigative Sample
- Duplicate Sample
- MS/MSD Sample

Analyses Performed
SVOCs, Total Metals/Hg, TOC, Grain Size (TA)

DEPTH (ft)	GRAPHIC	USCS	DESCRIPTION	SAMPLE INTERVAL	REMARKS
0		ML	SANDY SILT, fine to medium grained sand, grey-brown, saturated, no odor		LMR11-57-06 (SVOCs, Total Metals/Hg, TOC, Grain Size)
1		ML	SANDY SILT, fine to medium grained sand, grey-brown, saturated, no odor		LMR11-57-24 (SVOCs, Total Metals/Hg, TOC, Grain Size)
2		SP	SAND, Poorly Graded, fine to medium grained, with silt, grey-brown, saturated, no odor		
3					LMR11-57-48 (SVOCs, Total Metals/Hg, TOC, Grain Size)
4		SP	SAND, Poorly Graded, fine to medium grained, with silt, wet, no odor, grades to CLAYEY SILT		LMR11-57-62 (SVOCs, Total Metals/Hg, TOC, Grain Size)
5			END OF SEDIMENT BORING AT 62" bgs		

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SEDIMENT LOG OF LMR11-58

U.S. EPA Region V
Contract: EP-S5-06-04

Lower Maumee River
Toledo, Lucas County, Ohio

Collection Date.	: 08-06-11	WESTON Geologist	: J. Colomb
Sample Date	: 08-06-11	X Coordinates	: 41 37.974137
Collector	: WESTON	Y Coordinates	: 83 31.814191
Collection Method	: Vibracore		
Total Depth	: 10"		

Samples Collected
- Investigative Sample
- Duplicate Sample
- MS/MSD Sample

Analyses Performed
SVOCs, Total Metals/Hg, TOC, Grain Size (TA)

DEPTH (ft)	GRAPHIC	USCS	DESCRIPTION	SAMPLE INTERVAL	REMARKS
0		CH	FAT CLAY, with some gravel, high plasticity, reddish brown, damp, no odor		LMR11-58-10 (SVOCs, Total Metals/Hg, TOC, Grain Size)
1			END OF SEDIMENT BORING AT 10" bgs		
2					
3					
4					
5					
6					

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SEDIMENT LOG OF LMR11-59

U.S. EPA Region V
Contract: EP-S5-06-04

Lower Maumee River
Toledo, Lucas County, Ohio

Collection Date.	: 08-06-11	WESTON Geologist	: J. Colomb
Sample Date	: 08-06-11	X Coordinates	: 41 38.118656
Collector	: WESTON	Y Coordinates	: 83 31.993105
Collection Method	: Ponar/Vibracore		
Total Depth	: 116"		

Samples Collected
- Investigative Sample
- Duplicate Sample
- MS/MSD Sample

Analyses Performed
SVOCs, Total Metals/Hg, TOC, Grain Size (TA)
PCB Aroclors, Pesticides (CLP)

DEPTH (ft)	GRAPHIC	USCS	DESCRIPTION	SAMPLE INTERVAL	REMARKS
0		ML	SILT, trace fine grained sand, dark brown, saturated, no odor		LMR11-59-06 (SVOCs, Total Metals/Hg, TOC, Grain Size)
1		ML	CLAYEY SILT, trace fine grained, dark brown, saturated, no odor		LMR11-59-24 (SVOCs, Total Metals/Hg, TOC, Grain Size, PCB Aroclors, Pesticides)
2		ML	CLAYEY SILT, trace fine grained sand, dark brown, saturated, no odor		LMR11-59-48 (SVOCs, Total Metals/Hg, TOC, Grain Size)
3					
4		ML	CLAYEY SILT, trace fine grained sand, dark brown, saturated, no odor		LMR11-59-72 (SVOCs, Total Metals/Hg, TOC, Grain Size)
5					
6		ML	SANDY SILT, fine to medium grained sand, dark brown, saturated, no odor, fine to medium grained sand seam at 72"-73"		LMR11-59-96 (SVOCs, Total Metals/Hg, TOC, Grain Size)
7					
8		SP	SAND, Poorly Graded, fine to medium grained sand, dark brown, wet, no odor		LMR11-59-116 (SVOCs, Total Metals/Hg, TOC, Grain Size)
9					
10			END OF SEDIMENT BORING AT 116"" bgs		

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SEDIMENT LOG OF LMR11-60

Restoring Resource Efficiency

U.S. EPA Region V
Contract: EP-S5-06-04

Lower Maumee River
Toledo, Lucas County, Ohio

Collection Date.	: 08-06-11	WESTON Geologist	: J. Colomb
Sample Date	: 08-06-11	X Coordinates	: 41 38.222882
Collector	: WESTON	Y Coordinates	: 83 32.02351
Collection Method	: Ponar/Vibracore		
Total Depth	: 92"		

Samples Collected
- Investigative Sample
- Duplicate Sample
- MS/MSD Sample

Analyses Performed
SVOCs, Total Metals/Hg, TOC, Grain Size (TA)

DEPTH (ft)	USCS	DESCRIPTION	SAMPLE INTERVAL	REMARKS
0	ML	SILT, trace fine grained sand, dark brown, saturated, no odor		LMR11-60-06 (SVOCs, Total Metals/Hg, TOC, Grain Size)
1	ML	SILT, trace fine grained, dark brown, saturated, no odor		LMR11-60-24 (SVOCs, Total Metals/Hg, TOC, Grain Size, PCB Aroclors, Pesticides)
2	ML	CLAYEY SILT, trace fine grained sand, dark brown, saturated, no odor		LMR11-60-48 (SVOCs, Total Metals/Hg, TOC, Grain Size) LMR11-60-48FS (SVOCs, Total Metals/Hg, TOC, Grain Size)
3				
4	ML	SANDY SILT, fine to medium grained sand, dark brown, saturated, no odor		LMR11-60-72 (SVOCs, Total Metals/Hg, TOC, Grain Size)
5				
6	ML	CLAYEY SILT, fine to medium grained sand, brown with block banding, wet, no odor		LMR11-60-92 (SVOCs, Total Metals/Hg, TOC, Grain Size)
7				
8		END OF SEDIMENT BORING AT 92"" bgs		

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SEDIMENT LOG OF LMR11-61

U.S. EPA Region V
Contract: EP-S5-06-04

Lower Maumee River
Toledo, Lucas County, Ohio

Collection Date.	: 08-06-11	WESTON Geologist	: J. Colomb
Sample Date	: 08-06-11	X Coordinates	: 41 38.286946
Collector	: WESTON	Y Coordinates	: 83 31.911951
Collection Method	: Ponar/Vibracore		
Total Depth	: 30"		

Samples Collected
- Investigative Sample
- Duplicate Sample
- MS/MSD Sample

Analyses Performed
SVOCs, Total Metals/Hg, TOC, Grain Size (TA)

DEPTH (ft)	GRAPHIC	USCS	DESCRIPTION	SAMPLE INTERVAL	REMARKS
0		ML	SILT, some fine sand, some cobbles, grey-brown, saturated, no odor		LMR11-61-06 (SVOCs, Total Metals/Hg, TOC, Grain Size)
1		SP	SAND, Poorly Graded, fine to medium sand, grey-brown, damp, no odor, grading to SILTY CLAY, with trace fine sand		LMR11-61-30 (SVOCs, Total Metals/Hg, TOC, Grain Size)
2					
			END OF SEDIMENT BORING AT 30" bgs		
3					
4					
5					
6					

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SEDIMENT LOG OF LMR11-62

U.S. EPA Region V
Contract: EP-S5-06-04

Lower Maumee River
Toledo, Lucas County, Ohio

Collection Date.	: 08-06-11	WESTON Geologist	: J. Colomb
Sample Date	: 08-06-11	X Coordinates	: 41 38.332252
Collector	: WESTON	Y Coordinates	: 83 32.048572
Collection Method	: Ponar/Vibracore		
Total Depth	: 108"		

Samples Collected
- Investigative Sample
- Duplicate Sample
- MS/MSD Sample

Analyses Performed
SVOCs, Total Metals/Hg, TOC, Grain Size (TA)

DEPTH (ft)	GRAPHIC	USCS	DESCRIPTION	SAMPLE INTERVAL	REMARKS
0		ML	SILT, trace fine sand, dark brown, saturated, no odor		LMR11-62-06 (SVOCs, Total Metals/Hg, TOC, Grain Size)
1		ML	CLAYEY SILT, trace fine sand, dark brown, wet, no odor		LMR11-62-24 (SVOCs, Total Metals/Hg, TOC, Grain Size) LMR11-62-24-DP (SVOCs, Total Metals/Hg, TOC)
2		ML	CLAYEY SILT, trace fine sand, dark brown with black banding, wet, no odor		LMR11-62-48 (SVOCs, Total Metals/Hg, TOC, Grain Size)
3					
4		SM	SANDY SILT, fine to medium grained sand, dark brown, wet, no odor; fine to medium sand lens at 48" - 54"		LMR11-62-72 (SVOCs, Total Metals/Hg, TOC, Grain Size)
5					
6		SP	SANDY SILT, fine to medium sand, some shell fragments, dark brown, wet, no odor; fine to medium sand lens at 76" to 82"		LMR11-62-96 (SVOCs, Total Metals/Hg, TOC, Grain Size)
7					
8		ML	SANDY SILT, fine to medium sand, dark brown with black banding, wet, no odor		LMR11-62-108 (SVOCs, Total Metals/Hg, TOC, Grain Size)
9			END OF SEDIMENT BORING AT 108" bgs		

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SEDIMENT LOG OF LMR11-63

U.S. EPA Region V
Contract: EP-S5-06-04

Lower Maumee River
Toledo, Lucas County, Ohio

Collection Date.	: 08-08-11	WESTON Geologist	: J. Colomb
Sample Date	: 08-08-11	X Coordinates	: 41 38.435198
Collector	: WESTON	Y Coordinates	: 83 32.072600
Collection Method	: Ponar/Vibracore		
Total Depth	: 115"		

Samples Collected
- Investigative Sample
- Duplicate Sample
- MS/MSD Sample

Analyses Performed
SVOCs, Total Metals/Hg, TOC, Grain Size (TA)

DEPTH (ft)	USCS	DESCRIPTION	SAMPLE INTERVAL	REMARKS
0	ML	SILT, trace fine sand, dark brown, saturated, slight product odor		LMR11-63-06 (SVOCs, Total Metals/Hg, TOC, Grain Size)
1	ML	SILT, trace fine sand, dark brown, saturated, slight product odor		LMR11-63-24 (SVOCs, Total Metals/Hg, TOC, Grain Size)
2	ML	CLAYEY SILT, some fine sand, dark brown, wet, slight product odor		LMR11-63-48 (SVOCs, Total Metals/Hg, TOC, Grain Size) LMR11-63-48-FS (SVOCs, Total Metals/Hg, TOC, Grain Size)
3				
4	ML	CLAYEY SILT, fine grained sand, dark brown, wet, slight product odor		LMR11-63-72 (SVOCs, Total Metals/Hg, TOC, Grain Size)
5				
6	ML	CLAYEY SILT, trace fine sand, dark brown, wet, slight product odor		LMR11-63-96 (SVOCs, Total Metals/Hg, TOC, Grain Size)
7				
8	ML	CLAYEY SILT, trace fine to medium sand, shell fragments, some organics, dark brown, slight product odor		LMR11-63-115 (SVOCs, Total Metals/Hg, TOC, Grain Size)
9				
10		END OF SEDIMENT BORING AT 115" bgs		

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SEDIMENT LOG OF LMR11-64

U.S. EPA Region V
Contract: EP-S5-06-04

Lower Maumee River
Toledo, Lucas County, Ohio

Collection Date.	: 08-07-11	WESTON Geologist	: J. Colomb
Sample Date	: 08-07-11	X Coordinates	: 41 38.502149
Collector	: WESTON	Y Coordinates	: 83 32.050110
Collection Method	: Ponar/Vibracore		
Total Depth	: 88"		

Samples Collected
- Investigative Sample
- Duplicate Sample
- MS/MSD Sample

Analyses Performed
SVOCs, Total Metals/Hg, TOC, Grain Size (TA)

DEPTH (ft)	GRAPHIC	USCS	DESCRIPTION	SAMPLE INTERVAL	REMARKS
0		ML	SILT, trace fine sand, dark brown, saturated, mild organic odor		LMR11-64-06 (SVOCs, Total Metals/Hg, TOC, Grain Size)
1		ML	SILT, trace fine sand, dark brown, saturated, mild organic odor		LMR11-64-24 (SVOCs, Total Metals/Hg, TOC, Grain Size)
2		ML	SILT, trace fine sand, dark brown, saturated, mild organic odor		LMR11-64-48 (SVOCs, Total Metals/Hg, TOC, Grain Size)
3					
4		ML	CLAYEY SILT, trace fine grained sand and gravel, dark brown, saturated, no odor		LMR11-64-72 (SVOCs, Total Metals/Hg, TOC, Grain Size)
5					
6		ML	CLAYEY SILT, trace fine sand, dark brown, wet, slight product odor; native clay at 88"		LMR11-64-88 (SVOCs, Total Metals/Hg, TOC, Grain Size)
7			END OF SEDIMENT BORING AT 88" bgs		
8					

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SEDIMENT LOG OF LMR11-65

U.S. EPA Region V
Contract: EP-S5-06-04

Lower Maumee River
Toledo, Lucas County, Ohio

Collection Date.	: 08-06-11	WESTON Geologist	: J. Colomb
Sample Date	: 08-06-11	X Coordinates	: 41 38.656585
Collector	: WESTON	Y Coordinates	: 83 32.036331
Collection Method	: Ponar/Vibracore		
Total Depth	: 24"		

Samples Collected
- Investigative Sample
- Duplicate Sample
- MS/MSD Sample

Analyses Performed
SVOCs, Total Metals/Hg, TOC, Grain Size (TA)

DEPTH (ft)	GRAPHIC	USCS	DESCRIPTION	SAMPLE INTERVAL	REMARKS
0		SM	SANDY SILT, fine to medium sand, dark brown, saturated, no odor		LMR11-65-06 (SVOCs, Total Metals/Hg, TOC, Grain Size)
1		SM	SANDY SILT, fine to medium grained sand, dark brown, saturated, no odor		LMR11-65-24 (SVOCs, Total Metals/Hg, TOC, Grain Size)
2			END OF SEDIMENT BORING AT 24" bgs		
3					
4					
5					
6					

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SEDIMENT LOG OF LMR11-66

U.S. EPA Region V
Contract: EP-S5-06-04

Lower Maumee River
Toledo, Lucas County, Ohio

Collection Date.	: 08-07-11	WESTON Geologist	: J. Colomb
Sample Date	: 08-07-11	X Coordinates	: 41 38.654401
Collector	: WESTON	Y Coordinates	: 83 31.900787
Collection Method	: Ponar/Vibracore		
Total Depth	: 117"		

Samples Collected
- Investigative Sample
- Duplicate Sample
- MS/MSD Sample

Analyses Performed
SVOCs, Total Metals/Hg, TOC, Grain Size (TA)
PCB Aroclors, Pesticides (CLP)

DEPTH (ft)	GRAPHIC	USCS	DESCRIPTION	SAMPLE INTERVAL	REMARKS
0		ML	SILT, trace fine sand, dark brown, saturated, no odor		LMR11-66-06 (SVOCs, Total Metals/Hg, TOC, Grain Size)
1		ML	SILT, trace fine sand, dark brown, saturated, no odor		LMR11-66-24 (SVOCs, Total Metals/Hg, TOC, Grain Size, PCB Aroclors, Pesticides)
2		ML	CLAYEY SILT, trace fine sand, dark brown, saturated, no odor		LMR11-66-48 (SVOCs, Total Metals/Hg, TOC, Grain Size) LMR11-66-48-FS (SVOCs, Total Metals/Hg, TOC, Grain Size)
3					
4		ML	CLAYEY SILT, trace fine grained sand, dark brown, saturated, no odor		LMR11-66-72 (SVOCs, Total Metals/Hg, TOC, Grain Size)
5					
6		ML	CLAYEY SILT, trace fine sand, dark brown, saturated, no odor		LMR11-66-96 (SVOCs, Total Metals/Hg, TOC, Grain Size)
7					
8		SP	SAND, Poorly Graded, fine to medium grained, dark brown, saturated, no odor		LMR11-66-117 (SVOCs, Total Metals/Hg, TOC, Grain Size)
9					
10			END OF SEDIMENT BORING AT 117" bgs		

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SEDIMENT LOG OF LMR11-67

U.S. EPA Region V
Contract: EP-S5-06-04

Lower Maumee River
Toledo, Lucas County, Ohio

Collection Date.	: 08-06-11	WESTON Geologist	: J. Colomb
Sample Date	: 08-06-11	X Coordinates	: 41 38.835492
Collector	: WESTON	Y Coordinates	: 83 32.001339
Collection Method	: Ponar/Vibracore		
Total Depth	: 77"		

Samples Collected
- Investigative Sample
- Duplicate Sample
- MS/MSD Sample

Analyses Performed
SVOCs, Total Metals/Hg, TOC, Grain Size (TA)

DEPTH (ft)	USCS	DESCRIPTION	SAMPLE INTERVAL	REMARKS
0	ML	SILT, trace fine sand, dark brown, saturated, no odor		LMR11-67-06 (SVOCs, Total Metals/Hg, TOC, Grain Size)
1	ML	SILT, trace fine sand, dark brown, saturated, no odor		LMR11-67-24 (SVOCs, Total Metals/Hg, TOC, Grain Size)
2	ML	CLAYEY SILT, trace fine sand, dark brown, saturated, no odor		LMR11-67-48 (SVOCs, Total Metals/Hg, TOC, Grain Size)
3				
4	ML	CLAYEY SILT, trace fine grained sand, dark brown, saturated, no odor		LMR11-67-77 (SVOCs, Total Metals/Hg, TOC, Grain Size)
5				
6		END OF SEDIMENT BORING AT 77" bgs		
7				

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SEDIMENT LOG OF LMR11-68

U.S. EPA Region V
Contract: EP-S5-06-04

Lower Maumee River
Toledo, Lucas County, Ohio

Collection Date.	: 08-07-11	WESTON Geologist	: J. Colomb
Sample Date	: 08-07-11	X Coordinates	: 41 38.840761
Collector	: WESTON	Y Coordinates	: 83 31.848410
Collection Method	: Ponar/Vibracore		
Total Depth	: 96"		

Samples Collected
- Investigative Sample
- Duplicate Sample
- MS/MSD Sample

Analyses Performed
SVOCs, Total Metals/Hg, TOC, Grain Size (TA)

DEPTH (ft)	GRAPHIC	USCS	DESCRIPTION	SAMPLE INTERVAL	REMARKS
0		ML	SILT, trace fine sand, dark brown, saturated, organic odor		LMR11-68-06 (SVOCs, Total Metals/Hg, TOC, Grain Size)
1		ML	SILT, trace fine sand, dark brown, saturated, organic odor		LMR11-68-24 (SVOCs, Total Metals/Hg, TOC, Grain Size)
2		ML	SILT, trace fine sand, dark brown, saturated, organic odor		LMR11-68-48 (SVOCs, Total Metals/Hg, TOC, Grain Size)
3					
4		ML	CLAYEY SILT, trace fine grained sand, dark brown, saturated, no odor		LMR11-68-72 (SVOCs, Total Metals/Hg, TOC, Grain Size)
5					
6		ML	CLAYEY SILT, trace fine sand, dark brown, saturated, no odor		LMR11-68-96 (SVOCs, Total Metals/Hg, TOC, Grain Size)
7					
8			END OF SEDIMENT BORING AT 96" bgs		

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SEDIMENT LOG OF LMR11-70

U.S. EPA Region V
Contract: EP-S5-06-04

Lower Maumee River
Toledo, Lucas County, Ohio

Collection Date.	: 08-07-11	WESTON Geologist	: J. Colomb
Sample Date	: 08-07-11	X Coordinates	: 41 38.947150
Collector	: WESTON	Y Coordinates	: 83 31.798020
Collection Method	: Ponar/Vibracore		
Total Depth	: 85"		

Samples Collected
- Investigative Sample
- Duplicate Sample
- MS/MSD Sample

Analyses Performed
SVOCs, Total Metals/Hg,
TOC, Grain Size (TA)
PCB Aroclors, Pesticides (CLP)

DEPTH (ft)	USCS	DESCRIPTION	SAMPLE INTERVAL	REMARKS
0	ML	SILT, trace fine sand, dark brown, saturated, no odor		LMR11-70-06 (SVOCs, Total Metals/Hg, TOC, Grain Size)
1	ML	SILT, trace fine sand, dark brown, saturated, no odor		LMR11-70-24 (SVOCs, Total Metals/Hg, TOC, Grain Size, PCB Aroclors, Pesticides)
2	ML	SILT, trace fine sand, dark brown, saturated, no odor		LMR11-70-48 (SVOCs, Total Metals/Hg, TOC, Grain Size)
3				
4	SP	SAND, Poorly Graded, fine to medium grained, some organics, black, wet, no odor; grades to CLAYEY SILT		LMR11-70-72 (SVOCs, Total Metals/Hg, TOC, Grain Size) LMR11-70-72-FS (SVOCs, Total Metals/Hg, TOC, Grain Size)
5				
6	ML	CLAYEY SILT, some fine sand, dark brown, wet, no odor; native clay at 85"		LMR11-70-85 (SVOCs, Total Metals/Hg, TOC, Grain Size)
7		END OF SEDIMENT BORING AT 85" bgs		
8				

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SEDIMENT LOG OF LMR11-71

U.S. EPA Region V
Contract: EP-S5-06-04

Lower Maumee River
Toledo, Lucas County, Ohio

Collection Date.	: 08-06-11	WESTON Geologist	: J. Colomb
Sample Date	: 08-06-11	X Coordinates	: 41 38.954561
Collector	: WESTON	Y Coordinates	: 83 31.670261
Collection Method	: Ponar/Vibracore		
Total Depth	: 161"		

Samples Collected
- Investigative Sample
- Duplicate Sample
- MS/MSD Sample

Analyses Performed
SVOCs, Total Metals/Hg, TOC, Grain Size (TA)
PCB Aroclors, Pesticides (CLP)

DEPTH (ft)	USCS	DESCRIPTION	SAMPLE INTERVAL	REMARKS
0	ML	SILT, trace fine sand, dark brown, saturated, no odor		LMR11-71-06 (SVOCs, Total Metals/Hg, TOC, Grain Size)
1	ML	SILT, trace fine sand, dark brown, saturated, no odor		LMR11-71-24 (SVOCs, Total Metals/Hg, TOC, Grain Size, PCB Aroclors, Pesticides) LMR11-71-24-FS (PCB Aroclors, Pesticides)
2	ML	CLAYEY SILT, trace fine sand, dark brown, saturated, no odor		
3				LMR11-71-48 (SVOCs, Total Metals/Hg, TOC, Grain Size)
4	ML	CLAYEY SILT, trace fine sand, dark brown, saturated, no odor		
5				LMR11-71-72 (SVOCs, Total Metals/Hg, TOC, Grain Size)
6	ML	CLAYEY SILT, trace fine sand, dark brown, saturated, no odor		
7				LMR11-71-96 (SVOCs, Total Metals/Hg, TOC, Grain Size)
8	ML	CLAYEY SILT, some fine sand, dark brown, wet, no odor		
9				LMR11-71-120 (SVOCs, Total Metals/Hg, TOC, Grain Size)
10	SM	SANDY SILT, fine grained sand, dark brown, wet, no odor		
11				LMR11-71-148 (SVOCs, Total Metals/Hg, TOC, Grain Size)
12	ML	CLAYEY SILT, some fine sand, wet, dark brown, no odor		
13				LMR11-71-161 (SVOCs, Total Metals/Hg, TOC, Grain Size)
		END OF SEDIMENT BORING AT 161" bgs		

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SEDIMENT LOG OF LMR11-72

U.S. EPA Region V
Contract: EP-S5-06-04

Lower Maumee River
Toledo, Lucas County, Ohio

Collection Date.	: 08-05-11	WESTON Geologist	: J. Colomb
Sample Date	: 08-05-11	X Coordinates	: 41 39.063258
Collector	: WESTON	Y Coordinates	: 83 31.839265
Collection Method	: Ponar/Vibracore		
Total Depth	: 35"		

Samples Collected
- Investigative Sample
- Duplicate Sample
- MS/MSD Sample

Analyses Performed
SVOCs, Total Metals/Hg, TOC, Grain Size (TA)

DEPTH (ft)	GRAPHIC	USCS	DESCRIPTION	SAMPLE INTERVAL	REMARKS
0		ML	SILT, trace fine sand, dark brown, saturated, no odor		LMR11-72-06 (SVOCs, Total Metals/Hg, TOC, Grain Size)
1		SW	SAND, Well Graded, fine to coarse grained sand, some gravel, some silt, brown, saturated, no odor		LMR11-72-24 (SVOCs, Total Metals/Hg, TOC, Grain Size)
2		SM	SILTY SAND, fine grained sand, brown, damp, no odor		LMR11-72-35 (SVOCs, Total Metals/Hg, TOC, Grain Size)
3			END OF SEDIMENT BORING AT 35" bgs		
4					
5					
6					

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SEDIMENT LOG OF LMR11-73

Restoring Resource Efficiency

U.S. EPA Region V
Contract: EP-S5-06-04

Lower Maumee River
Toledo, Lucas County, Ohio

Collection Date.	: 08-07-11	WESTON Geologist	: J. Colomb
Sample Date	: 08-07-11	X Coordinates	: 41 37.743010
Collector	: WESTON	Y Coordinates	: 83 31.819121
Collection Method	: Ponar/Vibracore		
Total Depth	: 42"		

Samples Collected
- Investigative Sample
- Duplicate Sample
- MS/MSD Sample

Analyses Performed
SVOCs, Total Metals/Hg, TOC, Grain Size (TA)

DEPTH (ft)	GRAPHIC	USCS	DESCRIPTION	SAMPLE INTERVAL	REMARKS
0		ML	SILT, trace fine sand, dark brown, saturated, no odor		LMR11-73-06 (SVOCs, Total Metals/Hg, TOC, Grain Size)
1		ML	CLAYEY SILT, trace fine sand, trace organics, dark brown, saturated, no odor		LMR11-73-24 (SVOCs, Total Metals/Hg, TOC, Grain Size)
2		ML	CLAYEY SILT, trace fine sand, dark brown, wet, no odor; fine to medium sand lens at 32" to 37".		LMR11-73-42 (SVOCs, Total Metals/Hg, TOC, Grain Size)
3			END OF SEDIMENT BORING AT 42" bgs		
4					

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SEDIMENT LOG OF LMR11-74

U.S. EPA Region V
Contract: EP-S5-06-04

Lower Maumee River
Toledo, Lucas County, Ohio

Collection Date.	: 08-05-11	WESTON Geologist	: J. Colomb
Sample Date	: 08-05-11	X Coordinates	: 41 39.103658
Collector	: WESTON	Y Coordinates	: 83 31.686007
Collection Method	: Ponar/Vibracore		
Total Depth	: 85"		

Samples Collected
- Investigative Sample
- Duplicate Sample
- MS/MSD Sample

Analyses Performed
SVOCs, Total Metals/Hg, TOC, Grain Size (TA)

DEPTH (ft)	GRAPHIC	USCS	DESCRIPTION	SAMPLE INTERVAL	REMARKS
0		ML	CLAYEY SILT, trace fine grained sand, dark brown, wet, no odor		LMR11-74-06 (SVOCs, Total Metals/Hg, TOC, Grain Size)
1		ML	CLAYEY SILT, trace fine sand, dark brown, wet, no odor		LMR11-74-24 (SVOCs, Total Metals/Hg, TOC, Grain Size)
2		ML	CLAYEY SILT, trace fine sand, dark brown, wet, no odor		LMR11-74-48 (SVOCs, Total Metals/Hg, TOC, Grain Size) LMR11-74-48FS (SVOCs, Total Metals/Hg, TOC, Grain Size)
3					
4		ML	CLAYEY SILT, trace fine sand, dark brown, wet, no odor; fine to medium grained sand lens at 68" to 69"		LMR11-74-72 (SVOCs, Total Metals/Hg, TOC, Grain Size)
5					
6		SP	SAND, Well Graded, fine to coarse, with some gravel, dark brown, saturated, no odor		LMR11-74-85 (SVOCs, Total Metals/Hg, TOC, Grain Size)
7			END OF SEDIMENT BORING AT 85" bgs		

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SEDIMENT LOG OF LMR11-75

Restoring Resource Efficiency

U.S. EPA Region V
Contract: EP-S5-06-04

Lower Maumee River
Toledo, Lucas County, Ohio

Collection Date.	: 08-05-11	WESTON Geologist	: J. Colomb
Sample Date	: 08-05-11	X Coordinates	: 41 39.1253698
Collector	: WESTON	Y Coordinates	: 83 31.553229
Collection Method	: Ponar/Vibracore		
Total Depth	: 80"		

Samples Collected
- Investigative Sample
- Duplicate Sample
- MS/MSD Sample

Analyses Performed
SVOCs, Total Metals/Hg, TOC, Grain Size (TA)
PCB Aroclors, Pesticides

DEPTH (ft)	GRAPHIC	USCS	DESCRIPTION	SAMPLE INTERVAL	REMARKS
0		ML	CLAYEY SILT, trace fine grained sand, dark brown, saturated, no odor		LMR11-75-06 (SVOCs, Total Metals/Hg, TOC, Grain Size)
1		ML	CLAYEY SILT, trace fine sand, dark brown, saturated, no odor		LMR11-75-24 (SVOCs, Total Metals/Hg, TOC, Grain Size, PCB Aroclors, Pesticides)
2		ML	CLAYEY SILT, trace fine sand, dark brown, saturated, no odor		LMR11-75-48 (SVOCs, Total Metals/Hg, TOC, Grain Size) LMR11-75-48FS (SVOCs, Total Metals/Hg, TOC, Grain Size)
3					
4		ML	CLAYEY SILT, trace fine to medium sand, dark brown, saturated, no odor; grades to fine to coarse sand and gravel, with shell fragments		LMR11-75-80 (SVOCs, Total Metals/Hg, TOC, Grain Size)
5					
6					
7			END OF SEDIMENT BORING AT 80" bgs		

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SEDIMENT LOG OF LMR11-76

U.S. EPA Region V
Contract: EP-S5-06-04

Lower Maumee River
Toledo, Lucas County, Ohio

Collection Date.	: 08-05-11	WESTON Geologist	: J. Colomb
Sample Date	: 08-05-11	X Coordinates	: 41 39.212416
Collector	: WESTON	Y Coordinates	: 83 31.482172
Collection Method	: Ponar/Vibracore		
Total Depth	: 120"		

Samples Collected
- Investigative Sample
- Duplicate Sample
- MS/MSD Sample

Analyses Performed
SVOCs, Total Metals/Hg, TOC, Grain Size (TA) PCB Aroclors, Pesticides

DEPTH (ft)	GRAPHIC	USCS	DESCRIPTION	SAMPLE INTERVAL	REMARKS
0		ML	CLAYEY SILT, trace fine grained sand, grey-black, saturated, no odor		LMR11-76-06 (SVOCs, Total Metals/Hg, TOC, Grain Size)
1		ML	CLAYEY SILT, trace fine sand, grey-brown, saturated, no odor; fine to medium sand lens at 16" -20"		LMR11-76-24 (SVOCs, Total Metals/Hg, TOC, Grain Size, PCB Aroclors, Pesticides)
2		ML	CLAYEY SILT, trace fine sand, grey-brown, wet, no odor		LMR11-76-48 (SVOCs, Total Metals/Hg, TOC, Grain Size)
3					
4		ML	CLAYEY SILT, trace fine sand, grey-brown, wet, no odor		LMR11-76-72 (SVOCs, Total Metals/Hg, TOC, Grain Size)
5					
6		ML	CLAYEY SILT, trace fine sand, grey-brown with black banding; wet, no odor		LMR11-76-96 (SVOCs, Total Metals/Hg, TOC, Grain Size)
7					
8		ML	CLAYEY SILT, trace fine sand, grey-brown with black banding, wet, no odor; fine to medium sand lens with shell fragments at 118"		LMR11-76-120 (SVOCs, Total Metals/Hg, TOC, Grain Size)
9					
10			END OF SEDIMENT BORING AT 120" bgs		

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SEDIMENT LOG OF LMR11-77

U.S. EPA Region V
Contract: EP-S5-06-04

Lower Maumee River
Toledo, Lucas County, Ohio

Collection Date.	: 08-05-11	WESTON Geologist	: J. Colomb
Sample Date	: 08-05-11	X Coordinates	: 41 39.234551
Collector	: WESTON	Y Coordinates	: 83 31.357649
Collection Method	: Ponar/Vibracore		
Total Depth	: 120"		

Samples Collected
- Investigative Sample
- Duplicate Sample
- MS/MSD Sample

Analyses Performed
SVOCs, Total Metals/Hg, TOC, Grain Size (TA)

DEPTH (ft)	GRAPHIC	USCS	DESCRIPTION	SAMPLE INTERVAL	REMARKS
0		ML	SILT, trace fine grained sand, dark brown, saturated, no odor		LMR11-77-06 (SVOCs, Total Metals/Hg, TOC, Grain Size)
1		ML	SILT, trace fine sand, dark brown, saturated, no odor		LMR11-77-24 (SVOCs, Total Metals/Hg, TOC, Grain Size)
2		ML	SILT, trace fine sand, dark brown, saturated, no odor		LMR11-77-48 (SVOCs, Total Metals/Hg, TOC, Grain Size)
3		ML	SILT, trace fine sand, dark brown, saturated, no odor		LMR11-77-72 (SVOCs, Total Metals/Hg, TOC, Grain Size)
4		ML	SILT, trace fine sand, dark brown, saturated, no odor		
5		ML	SILT, trace fine sand, dark brown, saturated, no odor		
6		ML	CLAYEY SILT, trace fine sand, dark brown, wet, no odor		LMR11-77-96 (SVOCs, Total Metals/Hg, TOC, Grain Size)
7		ML	CLAYEY SILT, trace fine sand, dark brown, wet, no odor		
8		ML	CLAYEY SILT, trace fine sand, dark brown, wet, no odor		LMR11-77-120 (SVOCs, Total Metals/Hg, TOC, Grain Size)
9					
10			END OF SEDIMENT BORING AT 120" bgs		

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SEDIMENT LOG OF LMR11-78

U.S. EPA Region V
Contract: EP-S5-06-04

Lower Maumee River
Toledo, Lucas County, Ohio

Collection Date.	: 08-05-11	WESTON Geologist	: J. Colomb
Sample Date	: 08-05-11	X Coordinates	: 41 39.300659
Collector	: WESTON	Y Coordinates	: 83 31.277895
Collection Method	: Vibracore		
Total Depth	: 14"		

Samples Collected
- Investigative Sample
- Duplicate Sample
- MS/MSD Sample

Analyses Performed
SVOCs, Total Metals/Hg, TOC, Grain Size (TA)

DEPTH (ft)	GRAPHIC	USCS	DESCRIPTION	SAMPLE INTERVAL	REMARKS
0		ML	SILT, trace fine grained sand, dark brown, wet, no odor; grades to fine to coarse sand with shell fragments, poorly graded		LMR11-78-14 (SVOCs, Total Metals/Hg, TOC, Grain Size)
1			END OF SEDIMENT BORING AT 14" bgs		

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SEDIMENT LOG OF LMR11-79

U.S. EPA Region V
Contract: EP-S5-06-04

Lower Maumee River
Toledo, Lucas County, Ohio

Collection Date.	: 08-04-11	WESTON Geologist	: J. Colomb
Sample Date	: 08-04-11	X Coordinates	: 41 39.412993
Collector	: WESTON	Y Coordinates	: 83 31.329944
Collection Method	: Ponar/Vibracore		
Total Depth	: 54"		

Samples Collected
- Investigative Sample
- Duplicate Sample
- MS/MSD Sample

Analyses Performed
SVOCs, Total Metals/Hg, TOC, Grain Size (TA)
PCB Aroclors, Pesticides (CLP)

DEPTH (ft)	USCS	DESCRIPTION	SAMPLE INTERVAL	REMARKS
0	ML	SILT, trace fine grained sand, dark brown, saturated, no odor		LMR11-79-06 (SVOCs, Total Metals/Hg, TOC, Grain Size)
1	ML	SILT, trace fine grained sand, trace clayey silt, dark brown, saturated, no odor,		LMR11-79-24 (SVOCs, Total Metals/Hg, TOC, Grain Size, PCB Aroclors, Pesticides) LMR11-79-24-FS (PCB Aroclors, Pesticides)
2	ML	CLAYEY SILT, trace fine sand, dark brown, saturated, no odor		
3				LMR11-79-54 (SVOCs, Total Metals/Hg, TOC, Grain Size)
4	CH	CLAY, high plasticity, trace fine sand, dark brown, wet, product odor		
		END OF SEDIMENT BORING AT 54" bgs		
5				
6				

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SEDIMENT LOG OF LMR11-80

U.S. EPA Region V
Contract: EP-S5-06-04

Lower Maumee River
Toledo, Lucas County, Ohio

Collection Date.	: 08-05-11	WESTON Geologist	: J. Colomb
Sample Date	: 08-05-11	X Coordinates	: 41 39.319786
Collector	: WESTON	Y Coordinates	: 83 31.166921
Collection Method	: Ponar/Vibracore		
Total Depth	: 56"		

Samples Collected
- Investigative Sample
- Duplicate Sample
- MS/MSD Sample

Analyses Performed
SVOCs, Total Metals/Hg, TOC, Grain Size (TA)

DEPTH (ft)	GRAPHIC	USCS	DESCRIPTION	SAMPLE INTERVAL	REMARKS
0		SM	SANDY SILT, fine grained sand, dark brown, saturated, no odor		LMR11-80-06 (SVOCs, Total Metals/Hg, TOC, Grain Size)
1		ML	SILT, some fine grained sand, dark brown, wet, no odor,		LMR11-80-24 (SVOCs, Total Metals/Hg, TOC, Grain Size)
2		ML	SILT, some fine sand, dark brown, wet, no odor; sand lens at 35" - 38"		LMR11-80-56 (SVOCs, Total Metals/Hg, TOC, Grain Size)
3					
4					
			END OF SEDIMENT BORING AT 56" bgs		
5					

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SEDIMENT LOG OF LMR11-81

U.S. EPA Region V
Contract: EP-S5-06-04

Lower Maumee River
Toledo, Lucas County, Ohio

Collection Date.	: 08-05-11	WESTON Geologist	: J. Colomb
Sample Date	: 08-05-11	X Coordinates	: 41 39.4007
Collector	: WESTON	Y Coordinates	: 83 31.195262
Collection Method	: Ponar/Vibracore		
Total Depth	: 19"		

Samples Collected
- Investigative Sample
- Duplicate Sample
- MS/MSD Sample

Analyses Performed
SVOCs, Total Metals/Hg, TOC, Grain Size (TA)

DEPTH (ft)	GRAPHIC	USCS	DESCRIPTION	SAMPLE INTERVAL	REMARKS
0		ML	SILT, fine grained sand, trace gravel, light brown, saturated, no odor		LMR11-81-06 (SVOCs, Total Metals/Hg, TOC, Grain Size)
1		SP	SAND, Poorly Graded, fine to medium grained, some shell fragments, light brown, damp, no odor		LMR11-81-19 (SVOCs, Total Metals/Hg, TOC, Grain Size)
2			END OF SEDIMENT BORING AT 19" bgs		

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SEDIMENT LOG OF LMR11-82

U.S. EPA Region V
Contract: EP-S5-06-04

Lower Maumee River
Toledo, Lucas County, Ohio

Collection Date.	: 08-05-11	WESTON Geologist	: J. Colomb
Sample Date	: 08-05-11	X Coordinates	: 41 39.399073
Collector	: WESTON	Y Coordinates	: 83 31.056224
Collection Method	: Ponar/Vibracore		
Total Depth	: 55"		

Samples Collected
- Investigative Sample
- Duplicate Sample
- MS/MSD Sample

Analyses Performed
SVOCs, Total Metals/Hg, TOC, Grain Size (TA)

DEPTH (ft)	GRAPHIC	USCS	DESCRIPTION	SAMPLE INTERVAL	REMARKS
0		SP	SAND, Poorly Graded, fine to medium grained, some silt, dark brown, saturated, no odor		LMR11-82-06 (SVOCs, Total Metals/Hg, TOC, Grain Size)
1		SP	SAND, Poorly Graded, fine to medium grained, some silt, dark brown, saturated, no odor		LMR11-82-24 (SVOCs, Total Metals/Hg, TOC, Grain Size)
2		SP	SAND, Poorly Graded, fine to medium grained, some silt, dark brown, saturated, no odor		LMR11-82-55 (SVOCs, Total Metals/Hg, TOC, Grain Size)
3					
4					
			END OF SEDIMENT BORING AT 55" bgs		
5					

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SEDIMENT LOG OF LMR11-83

U.S. EPA Region V
Contract: EP-S5-06-04

Lower Maumee River
Toledo, Lucas County, Ohio

Collection Date.	: 08-05-11	WESTON Geologist	: J. Colomb
Sample Date	: 08-05-11	X Coordinates	: 41 39.492565
Collector	: WESTON	Y Coordinates	: 83 30.978776
Collection Method	: Ponar/Vibracore		
Total Depth	: 87"		

Samples Collected
- Investigative Sample
- Duplicate Sample
- MS/MSD Sample

Analyses Performed
SVOCs, Total Metals/Hg, TOC, Grain Size (TA)

DEPTH (ft)	GRAPHIC	USCS	DESCRIPTION	SAMPLE INTERVAL	REMARKS
0		ML	SILT, trace fine sand, dark brown, saturated, no odor		LMR11-83-06 (SVOCs, Total Metals/Hg, TOC, Grain Size)
1		ML	SILT, trace fine sand, dark brown, saturated, no odor		LMR11-83-24 (SVOCs, Total Metals/Hg, TOC, Grain Size)
2		ML	CLAYEY SILT, trace fine sand, dark brown, wet, no odor; fine to medium sand lens at 26" - 34"		LMR11-83-48 (SVOCs, Total Metals/Hg, TOC, Grain Size)
4		SM	SANDY SILT, fine to coarse grained sand, dark brown, saturated, no odor		LMR11-83-72 (SVOCs, Total Metals/Hg, TOC, Grain Size)
6		SW	SAND, Well Graded, fine to coarse grained, some silt, shell fragments, dark brown, no odor		LMR11-83-87 (SVOCs, Total Metals/Hg, TOC, Grain Size)
7			END OF SEDIMENT BORING AT 87" bgs		

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SEDIMENT LOG OF LMR11-84

U.S. EPA Region V
Contract: EP-S5-06-04

Lower Maumee River
Toledo, Lucas County, Ohio

Collection Date.	: 08-05-11	WESTON Geologist	: J. Colomb
Sample Date	: 08-05-11	X Coordinates	: 41 39.487490
Collector	: WESTON	Y Coordinates	: 83 30.847300
Collection Method	: Ponar/Vibracore		
Total Depth	: 115"		

Samples Collected
- Investigative Sample
- Duplicate Sample
- MS/MSD Sample

Analyses Performed
SVOCs, Total Metals/Hg, TOC, Grain Size (TA)

DEPTH (ft)	GRAPHIC	USCS	DESCRIPTION	SAMPLE INTERVAL	REMARKS
0		ML	SILT, fine grained sand, dark brown, saturated, no odor		LMR11-84-06 (SVOCs, Total Metals/Hg, TOC, Grain Size)
1		ML	SILT, fine grained sand, dark brown, saturated, no odor		LMR11-84-24 (SVOCs, Total Metals/Hg, TOC, Grain Size)
2		ML	CLAYEY SILT, fine sand, dark brown, saturated, no odor		LMR11-84-48 (SVOCs, Total Metals/Hg, TOC, Grain Size)
4		SM	SANDY SILT, fine to medium grained sand, dark brown, saturated, no odor		LMR11-84-72 (SVOCs, Total Metals/Hg, TOC, Grain Size) LMR11-84-72-DP (SVOCs, Total Metals/Hg, TOC)
6		SM	SANDY SILT, fine to coarse grained, dark brown, saturated, no odor		LMR11-84-96 (SVOCs, Total Metals/Hg, TOC, Grain Size)
8		SP	SAND, Poorly Graded, fine to coarse grained, some shell fragments, dark brown, saturated, no odor		LMR11-84-115 (SVOCs, Total Metals/Hg, TOC, Grain Size)
10			END OF SEDIMENT BORING AT 115" bgs		

12-01-2011 C:\Documents and Settings\colomb\Desktop\Work Documents\LMR_Logs\LMR11_84.bor

SEDIMENT LOG OF LMR11-85

U.S. EPA Region V
Contract: EP-S5-06-04

Lower Maumee River
Toledo, Lucas County, Ohio

Collection Date.	: 08-05-11	WESTON Geologist	: J. Colomb
Sample Date	: 08-05-11	X Coordinates	: 41 39.585142
Collector	: WESTON	Y Coordinates	: 83 30.771467
Collection Method	: Ponar/Vibracore		
Total Depth	: 74"		

Samples Collected
- Investigative Sample
- Duplicate Sample
- MS/MSD Sample

Analyses Performed
SVOCs, Total Metals/Hg, TOC, Grain Size (TA)

DEPTH (ft)	USCS	DESCRIPTION	SAMPLE INTERVAL	REMARKS
0	ML	SILT, trace fine grained sand, some detritus, light brown, saturated, no odor		LMR11-85-06 (SVOCs, Total Metals/Hg, TOC, Grain Size)
1	ML	SILT, trace fine grained sand, some detritus, light brown, saturated, no odor		LMR11-85-24 (SVOCs, Total Metals/Hg, TOC, Grain Size)
2	ML	CLAYEY SILT, trace fine sand, light brown, saturated, no odor		LMR11-85-48 (SVOCs, Total Metals/Hg, TOC, Grain Size)
3				
4	SM	SANDY SILT, trace fine grained sand, some shell fragments, light brown, saturated, no odor		LMR11-85-74 (SVOCs, Total Metals/Hg, TOC, Grain Size)
5				
6		END OF SEDIMENT BORING AT 74" bgs		
7				
8				

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APPENDIX B
ANALYTICAL DATA TABLES

Table B-1
Sediment Sample Analytical Results - SVOCs
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-01	LMR11-01	LMR11-01	LMR11-01	LMR11-02
		Field Sample ID	LMR11-01-006	LMR11-01-024	LMR11-01-048	LMR11-01-060	LMR11-02-006
		Sample Date	8/2/2011	8/5/2011	8/5/2011	8/5/2011	8/2/2011
		Depth Interval (in bss)	0- 6	6- 24	24- 48	48- 60	0- 6
Chemical Name	**PEC[1]**	**Unit**					
1,1'-Biphenyl	NL	µg/kg	240 U	190 U	150 UJ	120 UJ	140 U
1,2,4,5-Tetrachlorobenzene	NL	µg/kg	240 U	190 U	150 UJ	120 UJ	140 U
2,2'-Oxybis(1-chloropropane)	NL	µg/kg	240 U	190 U	150 UJ	120 UJ	140 U
2,3,4,6-Tetrachlorophenol	NL	µg/kg	240 U	190 U	150 UJ	120 UJ	140 U
2,4,5-Trichlorophenol	NL	µg/kg	240 U	190 U	150 UJ	120 UJ	140 U
2,4,6-Trichlorophenol	NL	µg/kg	240 U	190 U	150 UJ	120 UJ	140 U
2,4-Dichlorophenol	NL	µg/kg	240 U	190 U	150 UJ	120 UJ	140 U
2,4-Dimethylphenol	NL	µg/kg	240 U	190 U	150 UJ	120 UJ	140 U
2,4-Dinitrophenol	NL	µg/kg	470 U	360 U	290 UJ	230 UJ	270 U
2,4-Dinitrotoluene	NL	µg/kg	240 U	190 U	150 UJ	120 UJ	140 U
2,6-Dinitrotoluene	NL	µg/kg	240 U	190 U	150 UJ	120 UJ	140 U
2-Chloronaphthalene	NL	µg/kg	240 U	190 U	150 UJ	120 UJ	140 U
2-Chlorophenol	NL	µg/kg	240 U	190 U	150 UJ	120 UJ	140 U
2-Methylnaphthalene	NL	µg/kg	4.7 UJ	3.6 U	2.9 UJ	2.3 UJ	2.7 UJ
2-Methylphenol	NL	µg/kg	240 U	190 U	150 UJ	120 UJ	140 U
2-Nitroaniline	NL	µg/kg	470 U	360 U	290 UJ	230 UJ	270 U
2-Nitrophenol	NL	µg/kg	240 U	190 U	150 UJ	120 UJ	140 U
3,3'-Dichlorobenzidine	NL	µg/kg	240 U	190 U	150 UJ	120 UJ	140 U
3-Nitroaniline	NL	µg/kg	470 U	360 U	290 UJ	230 UJ	270 U
4,6-Dinitro-2-methylphenol	NL	µg/kg	470 U	360 U	290 UJ	230 UJ	270 U
4-Bromophenyl-phenylether	NL	µg/kg	240 U	190 U	150 UJ	120 UJ	140 U
4-Chloro-3-methylphenol	NL	µg/kg	240 U	190 U	150 UJ	120 UJ	140 U
4-Chloroaniline	NL	µg/kg	240 U	190 U	150 UJ	120 UJ	140 U
4-Chlorophenyl-phenylether	NL	µg/kg	240 U	190 U	150 UJ	120 UJ	140 U
4-Methylphenol	NL	µg/kg	240 U	190 U	30 J	120 UJ	140 U
4-Nitroaniline	NL	µg/kg	470 U	360 U	290 UJ	230 UJ	270 U
4-Nitrophenol	NL	µg/kg	470 U	360 U	290 UJ	230 UJ	270 U
Acenaphthene	NL	µg/kg	4.7 U	3.6 U	2.9 UJ	2.3 UJ	2.7 U
Acenaphthylene	NL	µg/kg	4.7 U	3.6 U	2.9 UJ	2.3 UJ	2.7 U
Acetophenone	NL	µg/kg	240 U	190 U	150 UJ	120 UJ	140 U
Anthracene	845	µg/kg	4.7 U	3.6 U	2.9 UJ	2.3 UJ	2.7 U
Atrazine	NL	µg/kg	240 U	190 U	150 UJ	120 UJ	140 U
Benzaldehyde	NL	µg/kg	240 U	190 U	150 UJ	120 UJ	140 U
Benzo(a)anthracene	1050	µg/kg	5.3	3.6 U	5.9 J	2.3 UJ	3.1
Benzo(a)pyrene	1450	µg/kg	8.3	3.6 U	2.9 UJ	2.3 UJ	2.7 U

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Table B-1
Sediment Sample Analytical Results - SVOCs
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-01	LMR11-01	LMR11-01	LMR11-01	LMR11-02
		Field Sample ID	LMR11-01-006	LMR11-01-024	LMR11-01-048	LMR11-01-060	LMR11-02-006
		Sample Date	8/2/2011	8/5/2011	8/5/2011	8/5/2011	8/2/2011
		Depth Interval (in bss)	0- 6	6- 24	24- 48	48- 60	0- 6
Chemical Name	**PEC[1]**	**Unit**					
Benzo(b)fluoranthene	NL	µg/kg	5	5.6	2.9 UJ	2.3 UJ	2.7 U
Benzo(g,h,i)perylene	NL	µg/kg	4.7 U	3.6 U	2.9 UJ	2.3 UJ	2.7 U
Benzo(k)fluoranthene	NL	µg/kg	4.7 U	3.6 U	2.9 UJ	2.3 UJ	2.7 U
Bis(2-chloroethoxy)methane	NL	µg/kg	240 U	190 U	150 UJ	120 UJ	140 U
Bis(2-chloroethyl)ether	NL	µg/kg	240 U	190 U	150 UJ	120 UJ	140 U
Bis(2-ethylhexyl)phthalate	NL	µg/kg	240 U	190 U	150 UJ	120 UJ	140 U
Butylbenzylphthalate	NL	µg/kg	240 U	190 U	150 UJ	120 UJ	140 U
Caprolactam	NL	µg/kg	240 U	190 U	150 UJ	120 UJ	140 U
Carbazole	NL	µg/kg	240 U	190 U	150 UJ	120 UJ	140 U
Chrysene	1290	µg/kg	6.4	3.6 U	6.1 J	2.3 UJ	3.2
Dibenzo(a,h)anthracene	NL	µg/kg	4.7 U	3.6 U	2.9 UJ	2.3 UJ	2.7 U
Dibenzofuran	NL	µg/kg	240 U	190 U	150 UJ	120 UJ	140 U
Diethylphthalate	NL	µg/kg	240 U	190 U	150 UJ	120 UJ	140 U
Dimethylphthalate	NL	µg/kg	240 U	190 U	150 UJ	120 UJ	140 U
Di-n-butylphthalate	NL	µg/kg	240 U	190 U	150 UJ	120 UJ	140 U
Di-n-octylphthalate	NL	µg/kg	240 U	190 U	150 UJ	120 UJ	140 U
Fluoranthene	2230	µg/kg	11	7.9	13 J	2.9 J	5.8
Fluorene	536	µg/kg	4.7 U	3.6 U	2.9 UJ	2.3 UJ	2.7 U
Hexachlorobenzene	NL	µg/kg	240 U	190 U	150 UJ	120 UJ	140 U
Hexachlorobutadiene	NL	µg/kg	240 U	190 U	150 UJ	120 UJ	140 U
Hexachlorocyclopentadiene	NL	µg/kg	240 U	190 U	150 UJ	120 UJ	140 U
Hexachloroethane	NL	µg/kg	240 U	190 U	150 UJ	120 UJ	140 U
Indeno(1,2,3-cd)pyrene	NL	µg/kg	4.7 U	3.6 U	2.9 UJ	2.3 UJ	2.7 U
Isophorone	NL	µg/kg	240 U	190 U	150 UJ	120 UJ	140 U
Naphthalene	561	µg/kg	4.7 U	3.6 U	2.9 UJ	2.3 UJ	2.7 U
Nitrobenzene	NL	µg/kg	240 U	190 U	150 UJ	120 UJ	140 U
N-Nitroso-di-n-propylamine	NL	µg/kg	240 U	190 U	150 UJ	120 UJ	140 U
N-Nitrosodiphenylamine	NL	µg/kg	240 U	190 U	150 UJ	120 UJ	140 U
Pentachlorophenol	NL	µg/kg	9.5 U	7.4 UJ	5.9 UJ	4.7 UJ	5.4 U
Phenanthrene	1170	µg/kg	5.2	5.6	9.4 J	4.2 J	2.8
Phenol	NL	µg/kg	240 U	190 U	150 UJ	120 UJ	140 U
Pyrene	1520	µg/kg	14	6.8	12 J	3.1 J	5.6 J
Total PAH 17	22800	µg/kg	78.7	49.3	63.8	26.3	36.7
TOC	NL	mg/kg	25,000	23,600	18,800	11,300	10,900 J

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Table B-1
Sediment Sample Analytical Results - SVOCs
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-03	LMR11-03	LMR11-03	LMR11-03	LMR11-04
		Field Sample ID	LMR11-03-006	LMR11-03-024	LMR11-03-048	LMR11-03-059	LMR11-04-006
		Sample Date	8/3/2011	8/3/2011	8/3/2011	8/3/2011	8/3/2011
		Depth Interval (in bss)	0- 6	6- 24	24- 48	48- 59	0- 6
Chemical Name	**PEC[1]**	**Unit**					
1,1'-Biphenyl	NL	µg/kg	180 UJ	180 U	170 U	160 U	140 UJ
1,2,4,5-Tetrachlorobenzene	NL	µg/kg	180 U	180 U	170 U	160 U	140 U
2,2'-Oxybis(1-chloropropane)	NL	µg/kg	180 U	180 U	170 U	160 U	140 U
2,3,4,6-Tetrachlorophenol	NL	µg/kg	180 U	180 U	170 U	160 U	140 U
2,4,5-Trichlorophenol	NL	µg/kg	180 U	180 U	170 U	160 U	140 U
2,4,6-Trichlorophenol	NL	µg/kg	180 U	180 U	170 U	160 U	140 U
2,4-Dichlorophenol	NL	µg/kg	180 U	180 U	170 U	160 U	140 U
2,4-Dimethylphenol	NL	µg/kg	180 U	180 U	170 U	160 U	140 U
2,4-Dinitrophenol	NL	µg/kg	360 U	350 U	330 U	300 U	280 U
2,4-Dinitrotoluene	NL	µg/kg	180 U	180 U	170 U	160 U	140 U
2,6-Dinitrotoluene	NL	µg/kg	180 U	180 U	170 U	160 U	140 U
2-Chloronaphthalene	NL	µg/kg	180 U	180 U	170 U	160 U	140 U
2-Chlorophenol	NL	µg/kg	180 U	180 U	170 U	160 U	140 U
2-Methylnaphthalene	NL	µg/kg	3.6 UJ	3.5 U	3.3 U	3 U	2.8 UJ
2-Methylphenol	NL	µg/kg	180 U	180 U	170 U	160 U	140 U
2-Nitroaniline	NL	µg/kg	360 U	350 U	330 U	300 U	280 U
2-Nitrophenol	NL	µg/kg	180 U	180 U	170 U	160 U	140 U
3,3'-Dichlorobenzidine	NL	µg/kg	180 U	180 U	170 U	160 U	140 U
3-Nitroaniline	NL	µg/kg	360 U	350 U	330 U	300 U	280 U
4,6-Dinitro-2-methylphenol	NL	µg/kg	360 U	350 U	330 U	300 U	280 U
4-Bromophenyl-phenylether	NL	µg/kg	180 UJ	180 U	170 U	160 U	140 UJ
4-Chloro-3-methylphenol	NL	µg/kg	180 U	180 U	170 U	160 U	140 U
4-Chloroaniline	NL	µg/kg	180 U	180 U	170 U	160 U	140 U
4-Chlorophenyl-phenylether	NL	µg/kg	180 UJ	180 U	170 U	160 U	140 UJ
4-Methylphenol	NL	µg/kg	180 U	180 U	170 U	160 U	140 U
4-Nitroaniline	NL	µg/kg	360 U	350 U	330 U	300 U	280 U
4-Nitrophenol	NL	µg/kg	360 U	350 U	330 U	300 U	280 U
Acenaphthene	NL	µg/kg	3.6 U	3.5 U	3.3 U	3 U	2.8 U
Acenaphthylene	NL	µg/kg	3.6 U	3.5 U	3.3 U	3 U	2.8 U
Acetophenone	NL	µg/kg	180 U	180 U	170 U	160 U	140 U
Anthracene	845	µg/kg	4.8	3.5 U	3.3 U	3.7	4.9
Atrazine	NL	µg/kg	180 U	180 U	170 U	160 U	140 U
Benzaldehyde	NL	µg/kg	180 U	180 U	170 U	160 U	140 U
Benzo(a)anthracene	1050	µg/kg	15	4.6	9.7	10	19
Benzo(a)pyrene	1450	µg/kg	12	8.9	12	12	10

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Table B-1
Sediment Sample Analytical Results - SVOCs
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-03	LMR11-03	LMR11-03	LMR11-03	LMR11-04
		Field Sample ID	LMR11-03-006	LMR11-03-024	LMR11-03-048	LMR11-03-059	LMR11-04-006
		Sample Date	8/3/2011	8/3/2011	8/3/2011	8/3/2011	8/3/2011
		Depth Interval (in bss)	0- 6	6- 24	24- 48	48- 59	0- 6
Chemical Name	**PEC[1]**	**Unit**					
Benzo(b)fluoranthene	NL	µg/kg	16	7.6	12	13	16
Benzo(g,h,i)perylene	NL	µg/kg	3.6 U	3.5 U	4.8	5.1	2.8 U
Benzo(k)fluoranthene	NL	µg/kg	10	3.5 U	5.7	5	15
Bis(2-chloroethoxy)methane	NL	µg/kg	180 U	180 U	170 U	160 U	140 U
Bis(2-chloroethyl)ether	NL	µg/kg	180 U	180 U	170 U	160 U	140 U
Bis(2-ethylhexyl)phthalate	NL	µg/kg	180 UJ	180 U	170 U	1100	140 UJ
Butylbenzylphthalate	NL	µg/kg	180 UJ	180 U	170 U	160 U	140 UJ
Caprolactam	NL	µg/kg	180 UJ	180 U	170 U	160 U	140 UJ
Carbazole	NL	µg/kg	180 UJ	180 U	170 U	160 U	140 UJ
Chrysene	1290	µg/kg	15	5.8	9.8	12	22
Dibenzo(a,h)anthracene	NL	µg/kg	3.6 U	3.5 U	3.3 U	3 U	2.8 U
Dibenzofuran	NL	µg/kg	180 UJ	180 U	170 U	160 U	140 UJ
Diethylphthalate	NL	µg/kg	180 UJ	180 U	170 U	160 U	140 UJ
Dimethylphthalate	NL	µg/kg	180 UJ	180 U	170 U	160 U	140 UJ
Di-n-butylphthalate	NL	µg/kg	180 UJ	180 U	170 U	160 U	140 UJ
Di-n-octylphthalate	NL	µg/kg	180 UJ	180 U	170 U	160 U	140 UJ
Fluoranthene	2230	µg/kg	33	9.1	15	19	51
Fluorene	536	µg/kg	3.6 U	3.5 U	3.3 U	3 U	2.8 U
Hexachlorobenzene	NL	µg/kg	180 U	180 U	170 U	160 U	140 U
Hexachlorobutadiene	NL	µg/kg	180 U	180 U	170 U	160 U	140 U
Hexachlorocyclopentadiene	NL	µg/kg	180 U	180 U	170 U	160 U	140 U
Hexachloroethane	NL	µg/kg	180 U	180 U	170 U	160 U	140 U
Indeno(1,2,3-cd)pyrene	NL	µg/kg	3.6 U	3.5 U	5.7	5.7	7.4
Isophorone	NL	µg/kg	180 U	180 U	170 U	160 U	140 U
Naphthalene	561	µg/kg	3.6 U	3.5 U	3.3 U	3 U	2.8 U
Nitrobenzene	NL	µg/kg	180 U	180 U	170 U	160 U	140 U
N-Nitroso-di-n-propylamine	NL	µg/kg	180 U	180 U	170 U	160 U	140 U
N-Nitrosodiphenylamine	NL	µg/kg	180 U	180 U	170 U	160 U	140 U
Pentachlorophenol	NL	µg/kg	7.2 U	7.2 U	6.7 U	6.2 U	5.6 U
Phenanthrene	1170	µg/kg	16	5.4	6.8	14	14
Phenol	NL	µg/kg	180 U	180 U	170 U	160 U	140 U
Pyrene	1520	µg/kg	24	8.8	14	21	42
Total PAH 17	22800	µg/kg	160.2	67.7	107.05	129.5	210.75
TOC	NL	mg/kg	28,600	33,900	46,000	36,200	18,100

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Table B-1
Sediment Sample Analytical Results - SVOCs
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-05	LMR11-05	LMR11-06	LMR11-06	LMR11-06
		Field Sample ID	LMR11-05-006	LMR11-05-018	LMR11-06-006	LMR11-06-024	LMR11-06-052
		Sample Date	8/4/2011	8/4/2011	8/3/2011	8/3/2011	8/3/2011
		Depth Interval (in bss)	0- 6	6- 18	0- 6	6- 24	24- 52
Chemical Name	**PEC[1]**	**Unit**					
1,1'-Biphenyl	NL	µg/kg	170 U	160 U	240 U	210 U	180 U
1,2,4,5-Tetrachlorobenzene	NL	µg/kg	170 U	160 U	240 U	210 U	180 U
2,2'-Oxybis(1-chloropropane)	NL	µg/kg	170 U	160 U	240 U	210 U	180 U
2,3,4,6-Tetrachlorophenol	NL	µg/kg	170 U	160 U	240 U	210 U	180 U
2,4,5-Trichlorophenol	NL	µg/kg	170 U	160 U	240 U	210 U	180 U
2,4,6-Trichlorophenol	NL	µg/kg	170 U	160 U	240 U	210 U	180 U
2,4-Dichlorophenol	NL	µg/kg	170 U	160 U	240 U	210 U	180 U
2,4-Dimethylphenol	NL	µg/kg	170 U	160 U	240 U	210 U	180 U
2,4-Dinitrophenol	NL	µg/kg	320 U	320 U	460 U	400 U	360 U
2,4-Dinitrotoluene	NL	µg/kg	170 U	160 U	240 U	210 U	180 U
2,6-Dinitrotoluene	NL	µg/kg	170 U	160 U	240 U	210 U	180 U
2-Chloronaphthalene	NL	µg/kg	170 U	160 U	240 U	210 U	180 U
2-Chlorophenol	NL	µg/kg	170 U	160 U	240 U	210 U	180 U
2-Methylnaphthalene	NL	µg/kg	3.2 U	3.2 U	4.6 UJ	4 U	3.6 U
2-Methylphenol	NL	µg/kg	170 U	160 U	240 U	210 U	180 U
2-Nitroaniline	NL	µg/kg	320 U	320 U	460 U	400 U	360 U
2-Nitrophenol	NL	µg/kg	170 U	160 U	240 U	210 U	180 U
3,3'-Dichlorobenzidine	NL	µg/kg	170 U	160 U	240 U	210 U	180 U
3-Nitroaniline	NL	µg/kg	320 U	320 U	460 U	400 U	360 U
4,6-Dinitro-2-methylphenol	NL	µg/kg	320 U	320 U	460 U	400 U	360 U
4-Bromophenyl-phenylether	NL	µg/kg	170 U	160 U	240 U	210 U	180 U
4-Chloro-3-methylphenol	NL	µg/kg	170 U	160 U	240 U	210 U	180 U
4-Chloroaniline	NL	µg/kg	170 U	160 U	240 U	210 U	180 U
4-Chlorophenyl-phenylether	NL	µg/kg	170 U	160 U	240 U	210 U	180 U
4-Methylphenol	NL	µg/kg	170 U	160 U	240 U	210 U	180 U
4-Nitroaniline	NL	µg/kg	320 U	320 U	460 U	400 U	360 U
4-Nitrophenol	NL	µg/kg	320 U	320 U	460 U	400 U	360 U
Acenaphthene	NL	µg/kg	3.2 U	3.2 U	4.6 U	4 U	3.6 U
Acenaphthylene	NL	µg/kg	3.2 U	3.2 U	4.6 U	4 U	3.6 U
Acetophenone	NL	µg/kg	170 U	160 U	240 U	210 U	180 U
Anthracene	845	µg/kg	3.2 U	3.2 U	4.6 U	4 U	5.6
Atrazine	NL	µg/kg	170 U	160 U	240 U	210 U	180 U
Benzaldehyde	NL	µg/kg	170 U	160 U	240 U	210 U	180 U
Benzo(a)anthracene	1050	µg/kg	3.2 U	3.6	6.8	4.3	4.6
Benzo(a)pyrene	1450	µg/kg	5.7	5.5	5.7	8.4	6.4

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Table B-1
Sediment Sample Analytical Results - SVOCs
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-05	LMR11-05	LMR11-06	LMR11-06	LMR11-06
		Field Sample ID	LMR11-05-006	LMR11-05-018	LMR11-06-006	LMR11-06-024	LMR11-06-052
		Sample Date	8/4/2011	8/4/2011	8/3/2011	8/3/2011	8/3/2011
		Depth Interval (in bss)	0- 6	6- 18	0- 6	6- 24	24- 52
Chemical Name	**PEC[1]**	**Unit**					
Benzo(b)fluoranthene	NL	µg/kg	4.5	4.1	4.6 U	6.3	4.9
Benzo(g,h,i)perylene	NL	µg/kg	3.2 U	3.2 U	4.6 U	4 U	3.6 U
Benzo(k)fluoranthene	NL	µg/kg	3.2 U	3.2 U	4.6 U	4 U	3.6 U
Bis(2-chloroethoxy)methane	NL	µg/kg	170 U	160 U	240 U	210 U	180 U
Bis(2-chloroethyl)ether	NL	µg/kg	170 U	160 U	240 U	210 U	180 U
Bis(2-ethylhexyl)phthalate	NL	µg/kg	65 J	160 U	240 U	210 U	180 U
Butylbenzylphthalate	NL	µg/kg	170 U	160 U	240 U	210 U	180 U
Caprolactam	NL	µg/kg	170 U	160 U	240 U	210 U	180 U
Carbazole	NL	µg/kg	170 U	160 U	240 U	210 U	180 U
Chrysene	1290	µg/kg	3.6	3.6	7	5.1	4.9
Dibenzo(a,h)anthracene	NL	µg/kg	3.2 U	3.2 U	4.6 U	4 U	3.6 U
Dibenzofuran	NL	µg/kg	170 U	160 U	240 U	210 U	180 U
Diethylphthalate	NL	µg/kg	170 U	160 U	240 U	210 U	180 U
Dimethylphthalate	NL	µg/kg	170 U	160 U	240 U	210 U	180 U
Di-n-butylphthalate	NL	µg/kg	170 U	160 U	240 U	210 U	180 U
Di-n-octylphthalate	NL	µg/kg	170 U	160 U	240 U	210 U	180 U
Fluoranthene	2230	µg/kg	7.3	6.9	19	11	11
Fluorene	536	µg/kg	3.2 U	3.2 U	4.6 U	4 U	3.6 U
Hexachlorobenzene	NL	µg/kg	170 U	160 U	240 U	210 U	180 U
Hexachlorobutadiene	NL	µg/kg	170 U	160 U	240 U	210 U	180 U
Hexachlorocyclopentadiene	NL	µg/kg	170 U	160 U	240 U	210 U	180 U
Hexachloroethane	NL	µg/kg	170 U	160 U	240 U	210 U	180 U
Indeno(1,2,3-cd)pyrene	NL	µg/kg	3.2 U	3.2 U	4.6 U	4 U	3.6 U
Isophorone	NL	µg/kg	170 U	160 U	240 U	210 U	180 U
Naphthalene	561	µg/kg	3.2 U	3.2 U	4.6 U	4 U	4.5
Nitrobenzene	NL	µg/kg	170 U	160 U	240 U	210 U	180 U
N-Nitroso-di-n-propylamine	NL	µg/kg	170 U	160 U	240 U	210 U	180 U
N-Nitrosodiphenylamine	NL	µg/kg	170 U	160 U	240 U	210 U	180 U
Pentachlorophenol	NL	µg/kg	6.5 U	6.5 U	9.4 U	8.1 U	7.2 U
Phenanthrene	1170	µg/kg	3.8	4.3	12	5.9	12
Phenol	NL	µg/kg	170 U	160 U	240 U	210 U	180 U
Pyrene	1520	µg/kg	6.3	7.1	19	9.4	9.5
Total PAH 17	22800	µg/kg	48.8	51.1	94.8	70.4	77.8
TOC	NL	mg/kg	16,900	18,000	35,800	24,400	23,900

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Table B-1
Sediment Sample Analytical Results - SVOCs
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-07	LMR11-08	LMR11-08	LMR11-08	LMR11-10
		Field Sample ID	LMR11-07-006	LMR11-08-006	LMR11-08-024	LMR11-08-052	LMR11-10-006
		Sample Date	8/3/2011	8/3/2011	8/5/2011	8/5/2011	8/4/2011
		Depth Interval (in bss)	0- 6	0- 6	6- 24	24- 52	0- 6
Chemical Name	**PEC[1]**	**Unit**					
1,1'-Biphenyl	NL	µg/kg	160 UJ	250 UJ	21 UJ	180 UJ	130 U
1,2,4,5-Tetrachlorobenzene	NL	µg/kg	160 U	250 U	25 UJ	180 UJ	130 U
2,2'-Oxybis(1-chloropropane)	NL	µg/kg	160 U	250 U	29 UJ	180 UJ	130 U
2,3,4,6-Tetrachlorophenol	NL	µg/kg	160 U	250 U	29 UJ	180 UJ	130 U
2,4,5-Trichlorophenol	NL	µg/kg	160 U	250 U	37 UJ	180 UJ	130 U
2,4,6-Trichlorophenol	NL	µg/kg	160 U	250 U	43 UJ	180 UJ	130 U
2,4-Dichlorophenol	NL	µg/kg	160 U	250 U	43 UJ	180 UJ	130 U
2,4-Dimethylphenol	NL	µg/kg	160 U	250 U	37 UJ	180 UJ	130 U
2,4-Dinitrophenol	NL	µg/kg	320 U	480 U	57 UJ	350 UJ	250 U
2,4-Dinitrotoluene	NL	µg/kg	160 U	250 U	27 UJ	180 UJ	130 U
2,6-Dinitrotoluene	NL	µg/kg	160 U	250 U	38 UJ	180 UJ	130 U
2-Chloronaphthalene	NL	µg/kg	160 U	250 U	28 UJ	180 UJ	130 U
2-Chlorophenol	NL	µg/kg	160 U	250 U	30 UJ	180 UJ	130 U
2-Methylnaphthalene	NL	µg/kg	3.2 UJ	4.8 UJ	1.3 UJ	3.5 UJ	2.5 U
2-Methylphenol	NL	µg/kg	160 U	250 U	38 UJ	180 UJ	130 U
2-Nitroaniline	NL	µg/kg	320 U	480 U	38 UJ	350 UJ	250 U
2-Nitrophenol	NL	µg/kg	160 U	250 U	35 UJ	180 UJ	130 U
3,3'-Dichlorobenzidine	NL	µg/kg	160 U	250 U	9.1 UJ	180 UJ	130 U
3-Nitroaniline	NL	µg/kg	320 U	480 U	39 UJ	350 UJ	250 U
4,6-Dinitro-2-methylphenol	NL	µg/kg	320 U	480 U	48 UJ	350 UJ	250 U
4-Bromophenyl-phenylether	NL	µg/kg	160 UJ	250 UJ	30 UJ	180 UJ	130 U
4-Chloro-3-methylphenol	NL	µg/kg	160 U	250 U	37 UJ	180 UJ	130 U
4-Chloroaniline	NL	µg/kg	160 U	250 U	31 UJ	180 UJ	130 U
4-Chlorophenyl-phenylether	NL	µg/kg	160 UJ	250 UJ	29 UJ	180 UJ	130 U
4-Methylphenol	NL	µg/kg	160 U	250 U	32 UJ	180 UJ	130 U
4-Nitroaniline	NL	µg/kg	320 U	480 U	59 UJ	350 UJ	250 U
4-Nitrophenol	NL	µg/kg	320 U	480 U	71 UJ	350 UJ	250 U
Acenaphthene	NL	µg/kg	3.2 U	4.8 U	1.1 UJ	3.5 UJ	2.5 U
Acenaphthylene	NL	µg/kg	3.2 U	4.8 U	1.1 UJ	3.5 UJ	2.5 U
Acetophenone	NL	µg/kg	160 U	250 U	52 UJ	180 UJ	130 U
Anthracene	845	µg/kg	3.2 U	4.8 U	1.1 UJ	3.5 UJ	3.1
Atrazine	NL	µg/kg	160 U	250 U	31 UJ	180 UJ	130 U
Benzaldehyde	NL	µg/kg	160 U	250 U	27 UJ	180 UJ	130 U
Benzo(a)anthracene	1050	µg/kg	3.2 U	4.8 U	6.7 J	3.5 UJ	9.8
Benzo(a)pyrene	1450	µg/kg	3.2 U	4.8 U	9.3 J	3.5 UJ	8.4

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Table B-1
Sediment Sample Analytical Results - SVOCs
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-07	LMR11-08	LMR11-08	LMR11-08	LMR11-10
		Field Sample ID	LMR11-07-006	LMR11-08-006	LMR11-08-024	LMR11-08-052	LMR11-10-006
		Sample Date	8/3/2011	8/3/2011	8/5/2011	8/5/2011	8/4/2011
		Depth Interval (in bss)	0- 6	0- 6	6- 24	24- 52	0- 6
Chemical Name	**PEC[1]**	**Unit**					
Benzo(b)fluoranthene	NL	µg/kg	3.2 U	4.8 U	9.3 J	3.5 UJ	10
Benzo(g,h,i)perylene	NL	µg/kg	3.2 U	4.8 U	4.8 J	3.5 UJ	3.4
Benzo(k)fluoranthene	NL	µg/kg	3.2 U	4.8 U	1.2 UJ	3.5 UJ	5.8
Bis(2-chloroethoxy)methane	NL	µg/kg	160 U	250 U	48 UJ	180 UJ	130 U
Bis(2-chloroethyl)ether	NL	µg/kg	160 U	250 U	25 UJ	180 UJ	130 U
Bis(2-ethylhexyl)phthalate	NL	µg/kg	160 UJ	250 UJ	47 UJ	180 UJ	93 J
Butylbenzylphthalate	NL	µg/kg	160 UJ	250 UJ	45 UJ	180 UJ	130 U
Caprolactam	NL	µg/kg	160 UJ	250 UJ	63 UJ	180 UJ	130 U
Carbazole	NL	µg/kg	160 UJ	250 UJ	43 UJ	180 UJ	130 U
Chrysene	1290	µg/kg	4.4	4.8 U	7.1 J	3.5 UJ	11
Dibenzo(a,h)anthracene	NL	µg/kg	3.2 U	4.8 U	0.83 UJ	3.5 UJ	2.5 U
Dibenzofuran	NL	µg/kg	160 UJ	250 UJ	25 UJ	180 UJ	130 U
Diethylphthalate	NL	µg/kg	160 UJ	250 UJ	34 UJ	180 UJ	130 U
Dimethylphthalate	NL	µg/kg	160 UJ	250 UJ	39 UJ	180 UJ	130 U
Di-n-butylphthalate	NL	µg/kg	160 UJ	250 UJ	25 UJ	180 UJ	130 U
Di-n-octylphthalate	NL	µg/kg	160 UJ	250 UJ	27 UJ	180 UJ	130 U
Fluoranthene	2230	µg/kg	8.9	4.8 U	9.9 J	6.6 J	21
Fluorene	536	µg/kg	3.2 U	4.8 U	1 UJ	3.5 UJ	2.5 U
Hexachlorobenzene	NL	µg/kg	160 U	250 U	46 UJ	180 UJ	130 U
Hexachlorobutadiene	NL	µg/kg	160 U	250 U	46 UJ	180 UJ	130 U
Hexachlorocyclopentadiene	NL	µg/kg	160 U	250 U	28 UJ	180 UJ	130 U
Hexachloroethane	NL	µg/kg	160 U	250 U	35 UJ	180 UJ	130 U
Indeno(1,2,3-cd)pyrene	NL	µg/kg	3.2 U	4.8 U	4.2 J	3.5 UJ	4.6
Isophorone	NL	µg/kg	160 U	250 U	35 UJ	180 UJ	130 U
Naphthalene	561	µg/kg	3.2 U	4.8 U	2 UJ	3.5 UJ	2.5 U
Nitrobenzene	NL	µg/kg	160 U	250 U	25 UJ	180 UJ	130 U
N-Nitroso-di-n-propylamine	NL	µg/kg	160 U	250 U	48 UJ	180 UJ	130 U
N-Nitrosodiphenylamine	NL	µg/kg	160 U	250 U	25 UJ	180 UJ	130 U
Pentachlorophenol	NL	µg/kg	6.4 U	9.7 U	6.4 UJ	7 UJ	5.1 U
Phenanthrene	1170	µg/kg	6	4.8 U	5.2 J	4.9 J	11
Phenol	NL	µg/kg	160 U	250 U	41 UJ	180 UJ	130 U
Pyrene	1520	µg/kg	7.9	7.1	12 J	6 J	19
Total PAH 17	22800	µg/kg	48	45.5	83.3	42	114.6
TOC	NL	mg/kg	7,180	27,700	27,500	22,200	9,830

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Table B-1
Sediment Sample Analytical Results - SVOCs
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-10	LMR11-10	LMR11-11	LMR11-11	LMR11-11
		Field Sample ID	LMR11-10-024	LMR11-10-045	LMR11-11-006	LMR11-11-024	LMR11-11-037
		Sample Date	8/4/2011	8/4/2011	8/5/2011	8/5/2011	8/5/2011
		Depth Interval (in bss)	6- 24	24- 45	0- 6	6- 24	24- 37
Chemical Name	**PEC[1]**	**Unit**					
1,1'-Biphenyl	NL	µg/kg	120 U	120 U	120 UJ	150 UJ	130 UJ
1,2,4,5-Tetrachlorobenzene	NL	µg/kg	120 U	120 U	120 UJ	150 UJ	130 UJ
2,2'-Oxybis(1-chloropropane)	NL	µg/kg	120 U	120 U	120 UJ	150 UJ	130 UJ
2,3,4,6-Tetrachlorophenol	NL	µg/kg	120 U	120 U	120 UJ	150 UJ	130 UJ
2,4,5-Trichlorophenol	NL	µg/kg	120 U	120 U	120 UJ	150 UJ	130 UJ
2,4,6-Trichlorophenol	NL	µg/kg	120 U	120 U	120 UJ	150 UJ	130 UJ
2,4-Dichlorophenol	NL	µg/kg	120 U	120 U	120 UJ	150 UJ	130 UJ
2,4-Dimethylphenol	NL	µg/kg	120 U	120 U	120 UJ	150 UJ	130 UJ
2,4-Dinitrophenol	NL	µg/kg	240 U	240 U	230 UJ	290 UJ	250 UJ
2,4-Dinitrotoluene	NL	µg/kg	120 U	120 U	120 UJ	150 UJ	130 UJ
2,6-Dinitrotoluene	NL	µg/kg	120 U	120 U	120 UJ	150 UJ	130 UJ
2-Chloronaphthalene	NL	µg/kg	120 U	120 U	120 UJ	150 UJ	130 UJ
2-Chlorophenol	NL	µg/kg	120 U	120 U	120 UJ	150 UJ	130 UJ
2-Methylnaphthalene	NL	µg/kg	2.4 U	2.4 U	2.3 UJ	29 UJ	2.9 J
2-Methylphenol	NL	µg/kg	120 U	120 U	120 UJ	150 UJ	130 UJ
2-Nitroaniline	NL	µg/kg	240 U	240 U	230 UJ	290 UJ	250 UJ
2-Nitrophenol	NL	µg/kg	120 U	120 U	120 UJ	150 UJ	130 UJ
3,3'-Dichlorobenzidine	NL	µg/kg	120 U	120 U	120 UJ	150 UJ	130 UJ
3-Nitroaniline	NL	µg/kg	240 U	240 U	230 UJ	290 UJ	250 UJ
4,6-Dinitro-2-methylphenol	NL	µg/kg	240 U	240 U	230 UJ	290 UJ	250 UJ
4-Bromophenyl-phenylether	NL	µg/kg	120 U	120 U	120 UJ	150 UJ	130 UJ
4-Chloro-3-methylphenol	NL	µg/kg	120 U	120 U	120 UJ	150 UJ	130 UJ
4-Chloroaniline	NL	µg/kg	120 U	120 U	120 UJ	150 UJ	130 UJ
4-Chlorophenyl-phenylether	NL	µg/kg	120 U	120 U	120 UJ	150 UJ	130 UJ
4-Methylphenol	NL	µg/kg	120 U	120 U	120 UJ	150 UJ	130 UJ
4-Nitroaniline	NL	µg/kg	240 U	240 U	230 UJ	290 UJ	250 UJ
4-Nitrophenol	NL	µg/kg	240 U	240 U	230 UJ	290 UJ	250 UJ
Acenaphthene	NL	µg/kg	2.4 U	2.4 U	2.3 UJ	29 UJ	2.8 J
Acenaphthylene	NL	µg/kg	2.7	2.4 U	2.3 UJ	29 UJ	2.5 UJ
Acetophenone	NL	µg/kg	120 U	120 U	120 UJ	150 UJ	130 UJ
Anthracene	845	µg/kg	4.2	2.4 U	2.3 UJ	29 UJ	9.5 J
Atrazine	NL	µg/kg	120 U	120 U	120 UJ	150 UJ	130 UJ
Benzaldehyde	NL	µg/kg	120 U	120 U	120 UJ	150 UJ	130 UJ
Benzo(a)anthracene	1050	µg/kg	15	7.2	4.5 J	60 J	27 J
Benzo(a)pyrene	1450	µg/kg	14	8.2	5.2 J	85 J	25 J

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Table B-1
Sediment Sample Analytical Results - SVOCs
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-10	LMR11-10	LMR11-11	LMR11-11	LMR11-11
		Field Sample ID	LMR11-10-024	LMR11-10-045	LMR11-11-006	LMR11-11-024	LMR11-11-037
		Sample Date	8/4/2011	8/4/2011	8/5/2011	8/5/2011	8/5/2011
		Depth Interval (in bss)	6- 24	24- 45	0- 6	6- 24	24- 37
Chemical Name	**PEC[1]**	**Unit**					
Benzo(b)fluoranthene	NL	µg/kg	16	6	6.2 J	86 J	27 J
Benzo(g,h,i)perylene	NL	µg/kg	4.6	2.4 U	2.3 UJ	29 UJ	15 J
Benzo(k)fluoranthene	NL	µg/kg	8.8	2.9	3.1 J	36 J	16 J
Bis(2-chloroethoxy)methane	NL	µg/kg	120 U	120 U	120 UJ	150 UJ	130 UJ
Bis(2-chloroethyl)ether	NL	µg/kg	120 U	120 U	120 UJ	150 UJ	130 UJ
Bis(2-ethylhexyl)phthalate	NL	µg/kg	120 U	120 U	120 UJ	37 J	130 UJ
Butylbenzylphthalate	NL	µg/kg	120 U	120 U	120 UJ	150 UJ	130 UJ
Caprolactam	NL	µg/kg	120 U	120 U	120 UJ	150 UJ	130 UJ
Carbazole	NL	µg/kg	120 U	120 U	120 UJ	150 UJ	130 UJ
Chrysene	1290	µg/kg	15	6.8	6 J	77 J	27 J
Dibenzo(a,h)anthracene	NL	µg/kg	2.4 U	2.4 U	2.3 UJ	29 UJ	3.8 J
Dibenzofuran	NL	µg/kg	120 U	120 U	120 UJ	150 UJ	130 UJ
Diethylphthalate	NL	µg/kg	120 U	120 U	120 UJ	150 UJ	130 UJ
Dimethylphthalate	NL	µg/kg	120 U	120 U	120 UJ	150 UJ	130 UJ
Di-n-butylphthalate	NL	µg/kg	120 U	120 U	120 UJ	150 UJ	130 UJ
Di-n-octylphthalate	NL	µg/kg	120 U	120 U	120 UJ	150 UJ	130 UJ
Fluoranthene	2230	µg/kg	22	9.6	9.3 J	100 J	51 J
Fluorene	536	µg/kg	2.4 U	2.4 U	2.3 UJ	29 UJ	4 J
Hexachlorobenzene	NL	µg/kg	120 U	120 U	120 UJ	150 UJ	130 UJ
Hexachlorobutadiene	NL	µg/kg	120 U	120 U	120 UJ	150 UJ	130 UJ
Hexachlorocyclopentadiene	NL	µg/kg	120 U	120 U	120 UJ	150 UJ	130 UJ
Hexachloroethane	NL	µg/kg	120 U	120 U	120 UJ	150 UJ	130 UJ
Indeno(1,2,3-cd)pyrene	NL	µg/kg	6.7	2.7	2.7 J	36 J	14 J
Isophorone	NL	µg/kg	120 U	120 U	120 UJ	150 UJ	130 UJ
Naphthalene	561	µg/kg	2.4 U	2.4 U	2.3 UJ	29 UJ	4.1 J
Nitrobenzene	NL	µg/kg	120 U	120 U	120 UJ	150 UJ	130 UJ
N-Nitroso-di-n-propylamine	NL	µg/kg	120 U	120 U	120 UJ	150 UJ	130 UJ
N-Nitrosodiphenylamine	NL	µg/kg	120 U	120 U	120 UJ	150 UJ	130 UJ
Pentachlorophenol	NL	µg/kg	4.9 U	4.8 U	4.8 UJ	59 UJ	5.1 UJ
Phenanthrene	1170	µg/kg	11	5.6	4.9 J	52 J	34 J
Phenol	NL	µg/kg	120 U	120 U	120 UJ	150 UJ	130 UJ
Pyrene	1520	µg/kg	21	10	9.9 J	110 J	48 J
Total PAH 17	22800	µg/kg	147	68.6	61	758	312.35
TOC	NL	mg/kg	11,300	16,100	9,010	19,200	13,800

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Table B-1
Sediment Sample Analytical Results - SVOCs
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-12	LMR11-13	LMR11-13	LMR11-14	LMR11-14
		Field Sample ID	LMR11-12-006	LMR11-13-006	LMR11-13-026	LMR11-14-006	LMR11-14-024
		Sample Date	8/3/2011	8/3/2011	8/3/2011	8/5/2011	8/5/2011
		Depth Interval (in bss)	0- 6	0- 6	6- 26	0- 6	6- 24
Chemical Name	**PEC[1]**	**Unit**					
1,1'-Biphenyl	NL	µg/kg	230 U	170 U	140 U	130 UJ	160 UJ
1,2,4,5-Tetrachlorobenzene	NL	µg/kg	230 U	170 U	140 U	130 UJ	160 UJ
2,2'-Oxybis(1-chloropropane)	NL	µg/kg	230 U	170 U	140 U	130 UJ	160 UJ
2,3,4,6-Tetrachlorophenol	NL	µg/kg	230 U	170 U	140 U	130 UJ	160 UJ
2,4,5-Trichlorophenol	NL	µg/kg	230 U	170 U	140 U	130 UJ	160 UJ
2,4,6-Trichlorophenol	NL	µg/kg	230 U	170 U	140 U	130 UJ	160 UJ
2,4-Dichlorophenol	NL	µg/kg	230 U	170 U	140 U	130 UJ	160 UJ
2,4-Dimethylphenol	NL	µg/kg	230 U	170 U	140 U	130 UJ	160 UJ
2,4-Dinitrophenol	NL	µg/kg	440 U	330 U	260 U	250 UJ	310 UJ
2,4-Dinitrotoluene	NL	µg/kg	230 U	170 U	140 U	130 UJ	160 UJ
2,6-Dinitrotoluene	NL	µg/kg	230 U	170 U	140 U	130 UJ	160 UJ
2-Chloronaphthalene	NL	µg/kg	230 U	170 U	140 U	130 UJ	160 UJ
2-Chlorophenol	NL	µg/kg	230 U	170 U	140 U	130 UJ	160 UJ
2-Methylnaphthalene	NL	µg/kg	4.4 UJ	3.3 U	2.6 U	39 J	3.1 UJ
2-Methylphenol	NL	µg/kg	230 U	170 U	140 U	130 UJ	160 UJ
2-Nitroaniline	NL	µg/kg	440 U	330 U	260 U	250 UJ	310 UJ
2-Nitrophenol	NL	µg/kg	230 U	170 U	140 U	130 UJ	160 UJ
3,3'-Dichlorobenzidine	NL	µg/kg	230 U	170 U	140 U	130 UJ	160 UJ
3-Nitroaniline	NL	µg/kg	440 U	330 U	260 U	250 UJ	310 UJ
4,6-Dinitro-2-methylphenol	NL	µg/kg	440 U	330 U	260 U	250 UJ	310 UJ
4-Bromophenyl-phenylether	NL	µg/kg	230 U	170 U	140 U	130 UJ	160 UJ
4-Chloro-3-methylphenol	NL	µg/kg	230 U	170 U	140 U	130 UJ	160 UJ
4-Chloroaniline	NL	µg/kg	230 U	170 U	140 U	130 UJ	160 UJ
4-Chlorophenyl-phenylether	NL	µg/kg	230 U	170 U	140 U	130 UJ	160 UJ
4-Methylphenol	NL	µg/kg	230 U	37 J	140 U	77 J	160 UJ
4-Nitroaniline	NL	µg/kg	440 U	330 U	260 U	250 UJ	310 UJ
4-Nitrophenol	NL	µg/kg	440 U	330 U	260 U	250 UJ	310 UJ
Acenaphthene	NL	µg/kg	4.4 U	3.3 U	2.6 U	300 J	3.1 UJ
Acenaphthylene	NL	µg/kg	4.4 U	3.3 U	2.6 U	6.2 J	3.1 UJ
Acetophenone	NL	µg/kg	230 U	170 U	140 U	51 J	160 UJ
Anthracene	845	µg/kg	4.4 U	3.3 U	2.6 U	1,100 J	3.3 J
Atrazine	NL	µg/kg	230 U	170 U	140 U	130 UJ	160 UJ
Benzaldehyde	NL	µg/kg	230 U	170 U	140 U	130 UJ	160 UJ
Benzo(a)anthracene	1050	µg/kg	4.4 U	4.3	2.6 U	10,000 J	12 J
Benzo(a)pyrene	1450	µg/kg	4.4 U	7	2.6 U	9,600 J	3.1 UJ

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Table B-1
Sediment Sample Analytical Results - SVOCs
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-12	LMR11-13	LMR11-13	LMR11-14	LMR11-14
		Field Sample ID	LMR11-12-006	LMR11-13-006	LMR11-13-026	LMR11-14-006	LMR11-14-024
		Sample Date	8/3/2011	8/3/2011	8/3/2011	8/5/2011	8/5/2011
		Depth Interval (in bss)	0- 6	0- 6	6- 26	0- 6	6- 24
Chemical Name	**PEC[1]**	**Unit**					
Benzo(b)fluoranthene	NL	µg/kg	4.4 U	5.2	2.6 U	11,000 J	3.1 UJ
Benzo(g,h,i)perylene	NL	µg/kg	4.4 U	3.3 U	2.6 U	5800 J	3.1 UJ
Benzo(k)fluoranthene	NL	µg/kg	4.4 U	3.3 U	2.6 U	5,600 J	3.1 UJ
Bis(2-chloroethoxy)methane	NL	µg/kg	230 U	170 U	140 U	130 UJ	160 UJ
Bis(2-chloroethyl)ether	NL	µg/kg	230 U	170 U	140 U	130 UJ	160 UJ
Bis(2-ethylhexyl)phthalate	NL	µg/kg	230 U	170 U	36 J	130 UJ	160 UJ
Butylbenzylphthalate	NL	µg/kg	230 U	170 U	140 U	130 UJ	160 UJ
Caprolactam	NL	µg/kg	230 U	170 U	140 U	130 UJ	160 UJ
Carbazole	NL	µg/kg	230 U	170 U	140 U	880 J	160 UJ
Chrysene	1290	µg/kg	4.8	5	2.6 U	9,500 J	13 J
Dibenzo(a,h)anthracene	NL	µg/kg	4.4 U	3.3 U	2.6 U	1,400 J	3.1 UJ
Dibenzofuran	NL	µg/kg	230 U	170 U	140 U	130 J	160 UJ
Diethylphthalate	NL	µg/kg	230 U	170 U	140 U	130 UJ	160 UJ
Dimethylphthalate	NL	µg/kg	230 U	170 U	140 U	130 UJ	160 UJ
Di-n-butylphthalate	NL	µg/kg	230 U	170 U	140 U	130 UJ	160 UJ
Di-n-octylphthalate	NL	µg/kg	230 U	170 U	140 U	130 UJ	160 UJ
Fluoranthene	2230	µg/kg	9	11	2.6 U	13,000 J	20 J
Fluorene	536	µg/kg	4.4 U	3.3 U	2.6 U	260 J	3.1 UJ
Hexachlorobenzene	NL	µg/kg	230 U	170 U	140 U	130 UJ	160 UJ
Hexachlorobutadiene	NL	µg/kg	230 U	170 U	140 U	130 UJ	160 UJ
Hexachlorocyclopentadiene	NL	µg/kg	230 U	170 U	140 U	130 UJ	160 UJ
Hexachloroethane	NL	µg/kg	230 U	170 U	140 U	130 UJ	160 UJ
Indeno(1,2,3-cd)pyrene	NL	µg/kg	4.4 U	3.3 U	2.6 U	6,100 J	3.1 UJ
Isophorone	NL	µg/kg	230 U	170 U	140 U	130 UJ	160 UJ
Naphthalene	561	µg/kg	4.4 U	3.4	2.6 U	69 J	3.1 UJ
Nitrobenzene	NL	µg/kg	230 U	170 U	140 U	130 UJ	160 UJ
N-Nitroso-di-n-propylamine	NL	µg/kg	230 U	170 U	140 U	130 UJ	160 UJ
N-Nitrosodiphenylamine	NL	µg/kg	230 U	170 U	140 U	130 UJ	160 UJ
Pentachlorophenol	NL	µg/kg	9 U	6.7 U	5.4 U	5.1 UJ	6.2 UJ
Phenanthrene	1170	µg/kg	4.4 U	8.7	2.6 U	4,700 J	11 J
Phenol	NL	µg/kg	230 U	170 U	140 U	130 UJ	160 UJ
Pyrene	1520	µg/kg	12	10	2.6 U	14,000 J	23 J
Total PAH 17	22800	µg/kg	56.6	69.45	22.1	92474.2	99.35
TOC	NL	mg/kg	34,400	24,200	19,400	11,400	18,500

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Table B-1
Sediment Sample Analytical Results - SVOCs
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-14	LMR11-15	LMR11-15	LMR11-15	LMR11-15
		Field Sample ID	LMR11-14-045	LMR11-15-006	LMR11-15-006-DP	LMR11-15-024	LMR11-15-024-DP
		Sample Date	8/5/2011	8/9/2011	8/9/2011	8/9/2011	8/9/2011
		Depth Interval (in bss)	24- 45	0- 6	0- 6	6- 24	6- 24
Chemical Name	**PEC[1]**	**Unit**					
1,1'-Biphenyl	NL	µg/kg	150 UJ	320 U	340 U	280 U	280 U
1,2,4,5-Tetrachlorobenzene	NL	µg/kg	150 UJ	320 U	340 U	280 U	280 U
2,2'-Oxybis(1-chloropropane)	NL	µg/kg	150 UJ	320 U	340 U	280 U	280 U
2,3,4,6-Tetrachlorophenol	NL	µg/kg	150 UJ	320 U	340 U	280 U	280 U
2,4,5-Trichlorophenol	NL	µg/kg	150 UJ	320 U	340 U	280 U	280 U
2,4,6-Trichlorophenol	NL	µg/kg	150 UJ	320 U	340 U	280 U	280 U
2,4-Dichlorophenol	NL	µg/kg	150 UJ	320 U	340 U	280 U	280 U
2,4-Dimethylphenol	NL	µg/kg	150 UJ	320 U	340 U	280 U	280 U
2,4-Dinitrophenol	NL	µg/kg	300 UJ	620 U	660 U	550 U	550 U
2,4-Dinitrotoluene	NL	µg/kg	150 UJ	320 U	340 U	280 U	280 U
2,6-Dinitrotoluene	NL	µg/kg	150 UJ	320 U	340 U	280 U	280 U
2-Chloronaphthalene	NL	µg/kg	150 UJ	320 U	340 U	280 U	280 U
2-Chlorophenol	NL	µg/kg	150 UJ	320 U	340 U	280 U	280 U
2-Methylnaphthalene	NL	µg/kg	3 UJ	6.2 U	6.6 U	5.5 U	5.5 U
2-Methylphenol	NL	µg/kg	150 UJ	320 U	340 U	280 U	280 U
2-Nitroaniline	NL	µg/kg	300 UJ	620 U	660 U	550 U	550 U
2-Nitrophenol	NL	µg/kg	150 UJ	320 U	340 U	280 U	280 U
3,3'-Dichlorobenzidine	NL	µg/kg	150 UJ	320 U	340 U	280 U	280 U
3-Nitroaniline	NL	µg/kg	300 UJ	620 U	660 U	550 U	550 U
4,6-Dinitro-2-methylphenol	NL	µg/kg	300 UJ	620 U	660 U	550 U	550 U
4-Bromophenyl-phenylether	NL	µg/kg	150 UJ	320 U	340 U	280 U	280 U
4-Chloro-3-methylphenol	NL	µg/kg	150 UJ	320 U	340 U	280 U	280 U
4-Chloroaniline	NL	µg/kg	150 UJ	320 U	340 U	280 U	280 U
4-Chlorophenyl-phenylether	NL	µg/kg	150 UJ	320 U	340 U	280 U	280 U
4-Methylphenol	NL	µg/kg	150 UJ	320 U	340 U	280 U	280 U
4-Nitroaniline	NL	µg/kg	300 UJ	620 U	660 U	550 U	550 U
4-Nitrophenol	NL	µg/kg	300 UJ	620 U	660 U	550 U	550 U
Acenaphthene	NL	µg/kg	3 UJ	6.2 U	6.6 U	5.5 U	5.5 U
Acenaphthylene	NL	µg/kg	3 UJ	6.2 U	6.6 U	5.5 U	5.5 U
Acetophenone	NL	µg/kg	150 UJ	320 U	340 U	280 U	280 U
Anthracene	845	µg/kg	3 UJ	6.2 U	6.6 U	5.5 U	5.5 U
Atrazine	NL	µg/kg	150 UJ	320 U	340 U	280 U	280 U
Benzaldehyde	NL	µg/kg	150 UJ	320 U	340 U	280 U	280 U
Benzo(a)anthracene	1050	µg/kg	8.2 J	6.2 U	6.6 U	5.5 U	5.5 U
Benzo(a)pyrene	1450	µg/kg	14 J	6.2 U	6.6 U	5.5 U	5.5 U

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Table B-1
Sediment Sample Analytical Results - SVOCs
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-14	LMR11-15	LMR11-15	LMR11-15	LMR11-15
		Field Sample ID	LMR11-14-045	LMR11-15-006	LMR11-15-006-DP	LMR11-15-024	LMR11-15-024-DP
		Sample Date	8/5/2011	8/9/2011	8/9/2011	8/9/2011	8/9/2011
		Depth Interval (in bss)	24- 45	0- 6	0- 6	6- 24	6- 24
Chemical Name	**PEC[1]**	**Unit**					
Benzo(b)fluoranthene	NL	µg/kg	11 J	6.2 U	6.6 U	7.9	8.5
Benzo(g,h,i)perylene	NL	µg/kg	6.7 J	6.2 U	6.6 U	5.5 U	5.5 U
Benzo(k)fluoranthene	NL	µg/kg	6.3 J	6.2 U	6.6 U	5.5 U	5.5 U
Bis(2-chloroethoxy)methane	NL	µg/kg	150 UJ	320 U	340 U	280 U	280 U
Bis(2-chloroethyl)ether	NL	µg/kg	150 UJ	320 U	340 U	280 U	280 U
Bis(2-ethylhexyl)phthalate	NL	µg/kg	150 UJ	320 U	340 U	280 U	280 U
Butylbenzylphthalate	NL	µg/kg	150 UJ	320 U	340 U	280 U	280 U
Caprolactam	NL	µg/kg	150 UJ	320 U	340 U	280 U	280 U
Carbazole	NL	µg/kg	150 UJ	320 U	340 U	280 U	280 U
Chrysene	1290	µg/kg	9.4 J	6.2 U	6.6 U	5.6	5.6
Dibenzo(a,h)anthracene	NL	µg/kg	3 UJ	6.2 U	6.6 U	5.5 U	5.5 U
Dibenzofuran	NL	µg/kg	150 UJ	320 U	340 U	280 U	280 U
Diethylphthalate	NL	µg/kg	150 UJ	320 U	340 U	280 U	280 U
Dimethylphthalate	NL	µg/kg	150 UJ	320 U	340 U	280 U	280 U
Di-n-butylphthalate	NL	µg/kg	150 UJ	320 U	340 U	280 U	280 U
Di-n-octylphthalate	NL	µg/kg	150 UJ	320 U	340 U	280 U	280 U
Fluoranthene	2230	µg/kg	15 J	6.2 U	6.6 U	15	13
Fluorene	536	µg/kg	3 UJ	6.2 U	6.6 U	5.5 U	5.5 U
Hexachlorobenzene	NL	µg/kg	150 UJ	320 U	340 U	280 U	280 U
Hexachlorobutadiene	NL	µg/kg	150 UJ	320 U	340 U	280 U	280 U
Hexachlorocyclopentadiene	NL	µg/kg	150 UJ	320 U	340 U	280 U	280 U
Hexachloroethane	NL	µg/kg	150 UJ	320 U	340 U	280 U	280 U
Indeno(1,2,3-cd)pyrene	NL	µg/kg	5.1 J	6.2 U	6.6 U	5.5 U	5.5 U
Isophorone	NL	µg/kg	150 UJ	320 U	340 U	280 U	280 U
Naphthalene	561	µg/kg	3.4 J	6.2 U	6.6 U	5.5 U	5.5 U
Nitrobenzene	NL	µg/kg	150 UJ	320 U	340 U	280 U	280 U
N-Nitroso-di-n-propylamine	NL	µg/kg	150 UJ	320 U	340 U	280 U	280 U
N-Nitrosodiphenylamine	NL	µg/kg	150 UJ	320 U	340 U	280 U	280 U
Pentachlorophenol	NL	µg/kg	6.1 UJ	13 UJ	13 U	11 U	11 U
Phenanthrene	1170	µg/kg	11 J	6.2 U	6.6 U	12	7.3
Phenol	NL	µg/kg	150 UJ	320 U	340 U	280 U	280 U
Pyrene	1520	µg/kg	21 J	6.2 U	6.6 U	13	9.9
Total PAH 17	22800	µg/kg	120.1	52.7	56.1	86.5	77.3
TOC	NL	mg/kg	25,800	15,000 J	32,500 J	24,600 J	14,200 J

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Table B-1
Sediment Sample Analytical Results - SVOCs
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-15	LMR11-15	LMR11-15	LMR11-15	LMR11-16
		Field Sample ID	LMR11-15-048	LMR11-15-048-DP	LMR11-15-072	LMR11-15-104	LMR11-16-006
		Sample Date	8/9/2011	8/9/2011	8/9/2011	8/9/2011	8/9/2011
		Depth Interval (in bss)	24- 48	24- 48	48- 72	72- 104	0- 6
Chemical Name	**PEC[1]**	**Unit**					
1,1'-Biphenyl	NL	µg/kg	280 U	270 U	260 U	270 U	320 U
1,2,4,5-Tetrachlorobenzene	NL	µg/kg	280 U	270 U	260 U	270 U	320 U
2,2'-Oxybis(1-chloropropane)	NL	µg/kg	280 U	270 U	260 U	270 U	320 U
2,3,4,6-Tetrachlorophenol	NL	µg/kg	280 U	270 U	260 U	270 U	320 U
2,4,5-Trichlorophenol	NL	µg/kg	280 U	270 U	260 U	270 U	320 U
2,4,6-Trichlorophenol	NL	µg/kg	280 U	270 U	260 U	270 U	320 U
2,4-Dichlorophenol	NL	µg/kg	280 U	270 U	260 U	270 U	320 U
2,4-Dimethylphenol	NL	µg/kg	280 U	270 U	260 U	270 U	320 U
2,4-Dinitrophenol	NL	µg/kg	540 U	530 U	510 U	520 U	620 U
2,4-Dinitrotoluene	NL	µg/kg	280 U	270 U	260 U	270 U	320 U
2,6-Dinitrotoluene	NL	µg/kg	280 U	270 U	260 U	270 U	320 U
2-Chloronaphthalene	NL	µg/kg	280 U	270 U	260 U	270 U	320 U
2-Chlorophenol	NL	µg/kg	280 U	270 U	260 U	270 U	320 U
2-Methylnaphthalene	NL	µg/kg	5.4 U	5.3 U	5.1 U	5.2 U	6.2 U
2-Methylphenol	NL	µg/kg	280 U	270 U	260 U	270 U	320 U
2-Nitroaniline	NL	µg/kg	540 U	530 U	510 U	520 U	620 U
2-Nitrophenol	NL	µg/kg	280 U	270 U	260 U	270 U	320 U
3,3'-Dichlorobenzidine	NL	µg/kg	280 U	270 U	260 U	270 U	320 U
3-Nitroaniline	NL	µg/kg	540 U	530 U	510 U	520 U	620 U
4,6-Dinitro-2-methylphenol	NL	µg/kg	540 U	530 U	510 U	520 U	620 U
4-Bromophenyl-phenylether	NL	µg/kg	280 U	270 U	260 U	270 U	320 U
4-Chloro-3-methylphenol	NL	µg/kg	280 U	270 U	260 U	270 U	320 U
4-Chloroaniline	NL	µg/kg	280 U	270 U	260 U	270 U	320 U
4-Chlorophenyl-phenylether	NL	µg/kg	280 U	270 U	260 U	270 U	320 U
4-Methylphenol	NL	µg/kg	280 U	270 U	260 U	270 U	320 U
4-Nitroaniline	NL	µg/kg	540 U	530 U	510 U	520 U	620 U
4-Nitrophenol	NL	µg/kg	540 U	530 U	510 U	520 U	620 U
Acenaphthene	NL	µg/kg	5.4 U	5.3 U	5.1 U	5.2 U	6.2 U
Acenaphthylene	NL	µg/kg	5.4 U	5.3 U	5.1 U	5.2 U	6.2 U
Acetophenone	NL	µg/kg	280 U	270 U	260 U	270 U	320 U
Anthracene	845	µg/kg	5.4 U	5.3 U	5.1 U	5.2 U	6.2 U
Atrazine	NL	µg/kg	280 U	270 U	260 U	270 U	320 U
Benzaldehyde	NL	µg/kg	280 U	270 U	260 U	270 U	320 U
Benzo(a)anthracene	1050	µg/kg	5.4 U	6.8	10	5.2 U	6.7
Benzo(a)pyrene	1450	µg/kg	5.4 U	7.3	12	5.2 U	7

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Table B-1
Sediment Sample Analytical Results - SVOCs
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-15	LMR11-15	LMR11-15	LMR11-15	LMR11-16
		Field Sample ID	LMR11-15-048	LMR11-15-048-DP	LMR11-15-072	LMR11-15-104	LMR11-16-006
		Sample Date	8/9/2011	8/9/2011	8/9/2011	8/9/2011	8/9/2011
		Depth Interval (in bss)	24- 48	24- 48	48- 72	72- 104	0- 6
Chemical Name	**PEC[1]**	**Unit**					
Benzo(b)fluoranthene	NL	µg/kg	5.4 U	11	16	5.2 U	6.2 U
Benzo(g,h,i)perylene	NL	µg/kg	5.4 U	5.3 U	7.4	5.2 U	6.2 U
Benzo(k)fluoranthene	NL	µg/kg	5.4 U	5.3 U	5.6	5.2 U	6.2 U
Bis(2-chloroethoxy)methane	NL	µg/kg	280 U	270 U	260 U	270 U	320 U
Bis(2-chloroethyl)ether	NL	µg/kg	280 U	270 U	260 U	270 U	320 U
Bis(2-ethylhexyl)phthalate	NL	µg/kg	280 U	270 U	260 U	270 U	320 U
Butylbenzylphthalate	NL	µg/kg	280 U	270 U	260 U	270 U	320 U
Caprolactam	NL	µg/kg	280 U	270 U	260 U	270 U	320 U
Carbazole	NL	µg/kg	280 U	270 U	260 U	270 U	320 U
Chrysene	1290	µg/kg	5.4 U	7.1	11	5.6	9.3
Dibenzo(a,h)anthracene	NL	µg/kg	5.4 U	5.3 U	5.1 U	5.2 U	6.2 U
Dibenzofuran	NL	µg/kg	280 U	270 U	260 U	270 U	320 U
Diethylphthalate	NL	µg/kg	280 U	270 U	260 U	270 U	320 U
Dimethylphthalate	NL	µg/kg	280 U	270 U	260 U	270 U	320 U
Di-n-butylphthalate	NL	µg/kg	280 U	270 U	260 U	270 U	320 U
Di-n-octylphthalate	NL	µg/kg	280 U	270 U	260 U	270 U	320 U
Fluoranthene	2230	µg/kg	8.5	20	24	19	21
Fluorene	536	µg/kg	5.4 U	5.3 U	5.1 U	5.2 U	6.2 U
Hexachlorobenzene	NL	µg/kg	280 U	270 U	260 U	270 U	320 U
Hexachlorobutadiene	NL	µg/kg	280 U	270 U	260 U	270 U	320 U
Hexachlorocyclopentadiene	NL	µg/kg	280 U	270 U	260 U	270 U	320 U
Hexachloroethane	NL	µg/kg	280 U	270 U	260 U	270 U	320 U
Indeno(1,2,3-cd)pyrene	NL	µg/kg	5.4 U	5.3 U	6.4	5.2 U	6.2 U
Isophorone	NL	µg/kg	280 U	270 U	260 U	270 U	320 U
Naphthalene	561	µg/kg	5.4 U	5.3 U	5.1 U	5.2 U	6.2 U
Nitrobenzene	NL	µg/kg	280 U	270 U	260 U	270 U	320 U
N-Nitroso-di-n-propylamine	NL	µg/kg	280 U	270 U	260 U	270 U	320 U
N-Nitrosodiphenylamine	NL	µg/kg	280 U	270 U	260 U	270 U	320 U
Pentachlorophenol	NL	µg/kg	11 UJ	11 U	10 U	11 U	13 UJ
Phenanthrene	1170	µg/kg	6	9.6	18	19	17
Phenol	NL	µg/kg	280 U	270 U	260 U	270 U	320 U
Pyrene	1520	µg/kg	10	14	22	14	19
Total PAH 17	22800	µg/kg	62.3	102.3	150.25	91.4	114.1
TOC	NL	mg/kg	26,000	22,600	27,300	44,200	27,800

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Table B-1
Sediment Sample Analytical Results - SVOCs
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-16	LMR11-16	LMR11-16	LMR11-17	LMR11-17
		Field Sample ID	LMR11-16-024	LMR11-16-048	LMR11-16-072	LMR11-17-006	LMR11-17-021
		Sample Date	8/9/2011	8/9/2011	8/9/2011	8/4/2011	8/4/2011
		Depth Interval (in bss)	6- 24	24- 48	48- 72	0- 6	6- 21
Chemical Name	**PEC[1]**	**Unit**					
1,1'-Biphenyl	NL	µg/kg	320 U	310 U	290 U	130 U	120 U
1,2,4,5-Tetrachlorobenzene	NL	µg/kg	320 U	310 U	290 U	130 U	120 U
2,2'-Oxybis(1-chloropropane)	NL	µg/kg	320 U	310 U	290 U	130 U	120 U
2,3,4,6-Tetrachlorophenol	NL	µg/kg	320 U	310 U	290 U	130 U	120 U
2,4,5-Trichlorophenol	NL	µg/kg	320 U	310 U	290 U	130 U	120 U
2,4,6-Trichlorophenol	NL	µg/kg	320 U	310 U	290 U	130 U	120 U
2,4-Dichlorophenol	NL	µg/kg	320 U	310 U	290 U	130 U	120 U
2,4-Dimethylphenol	NL	µg/kg	320 U	310 U	290 U	130 U	120 U
2,4-Dinitrophenol	NL	µg/kg	630 U	600 U	550 U	250 U	230 U
2,4-Dinitrotoluene	NL	µg/kg	320 U	310 U	290 U	130 U	120 U
2,6-Dinitrotoluene	NL	µg/kg	320 U	310 U	290 U	130 U	120 U
2-Chloronaphthalene	NL	µg/kg	320 U	310 U	290 U	130 U	120 U
2-Chlorophenol	NL	µg/kg	320 U	310 U	290 U	130 U	120 U
2-Methylnaphthalene	NL	µg/kg	6.3 U	6 U	5.5 U	2.5 U	2.3 U
2-Methylphenol	NL	µg/kg	320 U	310 U	290 U	130 U	120 U
2-Nitroaniline	NL	µg/kg	630 U	600 U	550 U	250 U	230 U
2-Nitrophenol	NL	µg/kg	320 U	310 U	290 U	130 UJ	120 UJ
3,3'-Dichlorobenzidine	NL	µg/kg	320 U	310 U	290 U	130 U	120 U
3-Nitroaniline	NL	µg/kg	630 U	600 U	550 U	250 U	230 U
4,6-Dinitro-2-methylphenol	NL	µg/kg	630 U	600 U	550 U	250 U	230 U
4-Bromophenyl-phenylether	NL	µg/kg	320 U	310 U	290 U	130 U	120 U
4-Chloro-3-methylphenol	NL	µg/kg	320 U	310 U	290 U	130 U	120 U
4-Chloroaniline	NL	µg/kg	320 U	310 U	290 U	130 U	120 U
4-Chlorophenyl-phenylether	NL	µg/kg	320 U	310 U	290 U	130 U	120 U
4-Methylphenol	NL	µg/kg	320 U	310 U	290 U	130 U	120 U
4-Nitroaniline	NL	µg/kg	630 U	600 U	550 U	250 U	230 U
4-Nitrophenol	NL	µg/kg	630 U	600 U	550 U	250 U	230 U
Acenaphthene	NL	µg/kg	6.3 U	6 U	5.5 U	2.5 U	2.3 U
Acenaphthylene	NL	µg/kg	6.3 U	6 U	5.5 U	2.5 U	2.3 U
Acetophenone	NL	µg/kg	320 U	310 U	290 U	130 U	120 U
Anthracene	845	µg/kg	6.3 U	6 U	5.5 U	8.1	4.1
Atrazine	NL	µg/kg	320 U	310 U	290 U	130 U	120 U
Benzaldehyde	NL	µg/kg	320 U	310 U	290 U	130 U	120 U
Benzo(a)anthracene	1050	µg/kg	8.6	13	5.5 U	25	11
Benzo(a)pyrene	1450	µg/kg	7.1	9.5	5.5 U	18	6.1

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Table B-1
Sediment Sample Analytical Results - SVOCs
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-16	LMR11-16	LMR11-16	LMR11-17	LMR11-17
		Field Sample ID	LMR11-16-024	LMR11-16-048	LMR11-16-072	LMR11-17-006	LMR11-17-021
		Sample Date	8/9/2011	8/9/2011	8/9/2011	8/4/2011	8/4/2011
		Depth Interval (in bss)	6- 24	24- 48	48- 72	0- 6	6- 21
Chemical Name	**PEC[1]**	**Unit**					
Benzo(b)fluoranthene	NL	µg/kg	6.3 U	11	5.5 U	21	7.3
Benzo(g,h,i)perylene	NL	µg/kg	6.3 U	6 U	5.5 U	8.9	2.7
Benzo(k)fluoranthene	NL	µg/kg	6.3 U	6 U	5.5 U	8.2	3
Bis(2-chloroethoxy)methane	NL	µg/kg	320 U	310 U	290 U	130 U	120 U
Bis(2-chloroethyl)ether	NL	µg/kg	320 U	310 U	290 U	130 U	120 U
Bis(2-ethylhexyl)phthalate	NL	µg/kg	320 U	310 U	290 U	130 U	190
Butylbenzylphthalate	NL	µg/kg	320 U	310 U	290 U	130 U	120 U
Caprolactam	NL	µg/kg	320 U	310 U	290 U	130 U	120 U
Carbazole	NL	µg/kg	320 U	310 U	290 U	130 U	120 U
Chrysene	1290	µg/kg	12	14	5.5 U	29	10
Dibenzo(a,h)anthracene	NL	µg/kg	6.3 U	6 U	5.5 U	2.8	2.3 U
Dibenzofuran	NL	µg/kg	320 U	310 U	290 U	130 U	120 U
Diethylphthalate	NL	µg/kg	320 U	310 U	290 U	130 U	120 U
Dimethylphthalate	NL	µg/kg	320 U	310 U	290 U	130 U	120 U
Di-n-butylphthalate	NL	µg/kg	320 U	310 U	290 U	130 U	120 U
Di-n-octylphthalate	NL	µg/kg	320 U	310 U	290 U	130 U	120 U
Fluoranthene	2230	µg/kg	21	22	5.5 U	53	20
Fluorene	536	µg/kg	6.3 U	6 U	5.5 U	2.5	2.3 U
Hexachlorobenzene	NL	µg/kg	320 U	310 U	290 U	130 U	120 U
Hexachlorobutadiene	NL	µg/kg	320 U	310 U	290 U	130 U	120 U
Hexachlorocyclopentadiene	NL	µg/kg	320 U	310 U	290 U	130 U	120 U
Hexachloroethane	NL	µg/kg	320 U	310 U	290 U	130 U	120 U
Indeno(1,2,3-cd)pyrene	NL	µg/kg	6.3 U	6 U	5.5 U	9.7	3.1
Isophorone	NL	µg/kg	320 U	310 U	290 U	130 U	120 U
Naphthalene	561	µg/kg	6.3 U	6 U	5.5 U	2.5 U	2.3 U
Nitrobenzene	NL	µg/kg	320 U	310 U	290 U	130 U	120 U
N-Nitroso-di-n-propylamine	NL	µg/kg	320 U	310 U	290 U	130 U	120 U
N-Nitrosodiphenylamine	NL	µg/kg	320 U	310 U	290 U	130 U	120 U
Pentachlorophenol	NL	µg/kg	13 U	12 UJ	11 UJ	25 U	9.4 U
Phenanthrene	1170	µg/kg	14	12	5.5 U	20	13
Phenol	NL	µg/kg	320 U	310 U	290 U	130 U	120 U
Pyrene	1520	µg/kg	23	23	5.5 U	52	21
Total PAH 17	22800	µg/kg	120.35	134.5	46.75	263.2	108.2
TOC	NL	mg/kg	28,400	21,900	116,000	20,400	5,510

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Table B-1
Sediment Sample Analytical Results - SVOCs
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-18	LMR11-18	LMR11-18	LMR11-19	LMR11-19
		Field Sample ID	LMR11-18-006	LMR11-18-024	LMR11-18-048	LMR11-19-006	LMR11-19-014
		Sample Date	8/3/2011	8/5/2011	8/5/2011	8/3/2011	8/3/2011
		Depth Interval (in bss)	0- 6	6- 24	24- 48	0- 6	6- 14
Chemical Name	**PEC[1]**	**Unit**					
1,1'-Biphenyl	NL	µg/kg	230 U	160 UJ	160 UJ	180 U	210 UJ
1,2,4,5-Tetrachlorobenzene	NL	µg/kg	230 U	160 UJ	160 UJ	180 U	210 UJ
2,2'-Oxybis(1-chloropropane)	NL	µg/kg	230 U	160 UJ	160 UJ	180 U	210 UJ
2,3,4,6-Tetrachlorophenol	NL	µg/kg	230 U	160 UJ	160 UJ	180 U	210 UJ
2,4,5-Trichlorophenol	NL	µg/kg	230 U	160 UJ	160 UJ	180 U	210 UJ
2,4,6-Trichlorophenol	NL	µg/kg	230 U	160 UJ	160 UJ	180 U	210 UJ
2,4-Dichlorophenol	NL	µg/kg	230 U	160 UJ	160 UJ	180 U	210 UJ
2,4-Dimethylphenol	NL	µg/kg	230 U	160 UJ	160 UJ	180 U	210 UJ
2,4-Dinitrophenol	NL	µg/kg	450 U	300 UJ	310 UJ	350 U	410 UJ
2,4-Dinitrotoluene	NL	µg/kg	230 U	160 UJ	160 UJ	180 U	210 UJ
2,6-Dinitrotoluene	NL	µg/kg	230 U	160 UJ	160 UJ	180 U	210 UJ
2-Chloronaphthalene	NL	µg/kg	230 U	160 UJ	160 UJ	180 U	210 UJ
2-Chlorophenol	NL	µg/kg	230 U	160 UJ	160 UJ	180 U	210 UJ
2-Methylnaphthalene	NL	µg/kg	4.5 UJ	3 UJ	3.1 UJ	3.5 UJ	4.1 UJ
2-Methylphenol	NL	µg/kg	230 U	160 UJ	160 UJ	180 U	210 UJ
2-Nitroaniline	NL	µg/kg	450 U	300 UJ	310 UJ	350 U	410 UJ
2-Nitrophenol	NL	µg/kg	230 U	160 UJ	160 UJ	180 U	210 UJ
3,3'-Dichlorobenzidine	NL	µg/kg	230 U	160 UJ	160 UJ	180 U	210 UJ
3-Nitroaniline	NL	µg/kg	450 U	300 UJ	310 UJ	350 U	410 UJ
4,6-Dinitro-2-methylphenol	NL	µg/kg	450 U	300 UJ	310 UJ	350 U	410 UJ
4-Bromophenyl-phenylether	NL	µg/kg	230 U	160 UJ	160 UJ	180 U	210 UJ
4-Chloro-3-methylphenol	NL	µg/kg	230 U	160 UJ	160 UJ	180 U	210 UJ
4-Chloroaniline	NL	µg/kg	230 U	160 UJ	160 UJ	180 U	210 UJ
4-Chlorophenyl-phenylether	NL	µg/kg	230 U	160 UJ	160 UJ	180 U	210 UJ
4-Methylphenol	NL	µg/kg	230 U	160 UJ	46 J	180 U	210 UJ
4-Nitroaniline	NL	µg/kg	450 U	300 UJ	310 UJ	350 U	410 UJ
4-Nitrophenol	NL	µg/kg	450 U	300 UJ	310 UJ	350 U	410 UJ
Acenaphthene	NL	µg/kg	4.5 U	3 UJ	3.1 UJ	3.5 U	4.1 UJ
Acenaphthylene	NL	µg/kg	4.5 U	3 UJ	3.1 UJ	3.5 U	4.1 UJ
Acetophenone	NL	µg/kg	230 U	160 UJ	160 UJ	180 U	210 UJ
Anthracene	845	µg/kg	5.2	3 UJ	3.7 J	3.5 U	5.5 J
Atrazine	NL	µg/kg	230 U	160 UJ	160 UJ	180 U	210 UJ
Benzaldehyde	NL	µg/kg	230 U	160 UJ	160 UJ	180 U	210 UJ
Benzo(a)anthracene	1050	µg/kg	18	10 J	11 J	3.5 U	7.4 J
Benzo(a)pyrene	1450	µg/kg	11	12 J	15 J	3.5 U	7.8 J

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Table B-1
Sediment Sample Analytical Results - SVOCs
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-18	LMR11-18	LMR11-18	LMR11-19	LMR11-19
		Field Sample ID	LMR11-18-006	LMR11-18-024	LMR11-18-048	LMR11-19-006	LMR11-19-014
		Sample Date	8/3/2011	8/5/2011	8/5/2011	8/3/2011	8/3/2011
		Depth Interval (in bss)	0- 6	6- 24	24- 48	0- 6	6- 14
Chemical Name	**PEC[1]**	**Unit**					
Benzo(b)fluoranthene	NL	µg/kg	16	12 J	16 J	3.5 U	13 J
Benzo(g,h,i)perylene	NL	µg/kg	4.5 U	5.4 J	8.3 J	3.5 U	5.1 J
Benzo(k)fluoranthene	NL	µg/kg	13	4.9 J	7.4 J	3.5 U	4.1 UJ
Bis(2-chloroethoxy)methane	NL	µg/kg	230 U	160 UJ	160 UJ	180 U	210 UJ
Bis(2-chloroethyl)ether	NL	µg/kg	230 U	160 UJ	160 UJ	180 U	210 UJ
Bis(2-ethylhexyl)phthalate	NL	µg/kg	230 U	160 UJ	160 UJ	180 U	210 UJ
Butylbenzylphthalate	NL	µg/kg	230 U	160 UJ	160 UJ	180 U	210 UJ
Caprolactam	NL	µg/kg	230 U	160 UJ	160 UJ	180 U	210 UJ
Carbazole	NL	µg/kg	230 U	160 UJ	160 UJ	180 U	210 UJ
Chrysene	1290	µg/kg	20	9.9 J	14 J	3.5 U	12 J
Dibenzo(a,h)anthracene	NL	µg/kg	4.5 U	3 UJ	3.1 UJ	3.5 U	4.1 UJ
Dibenzofuran	NL	µg/kg	230 U	160 UJ	160 UJ	180 U	210 UJ
Diethylphthalate	NL	µg/kg	230 U	160 UJ	160 UJ	180 U	210 UJ
Dimethylphthalate	NL	µg/kg	230 U	160 UJ	160 UJ	180 U	210 UJ
Di-n-butylphthalate	NL	µg/kg	230 U	160 UJ	160 UJ	180 U	210 UJ
Di-n-octylphthalate	NL	µg/kg	230 U	160 UJ	160 UJ	180 U	210 UJ
Fluoranthene	2230	µg/kg	37	18 J	22 J	4.4	27 J
Fluorene	536	µg/kg	4.5 U	3 UJ	3.1 UJ	3.5 U	4.1 UJ
Hexachlorobenzene	NL	µg/kg	230 U	160 UJ	160 UJ	180 U	210 UJ
Hexachlorobutadiene	NL	µg/kg	230 U	160 UJ	160 UJ	180 U	210 UJ
Hexachlorocyclopentadiene	NL	µg/kg	230 U	160 UJ	160 UJ	180 U	210 UJ
Hexachloroethane	NL	µg/kg	230 U	160 UJ	160 UJ	180 U	210 UJ
Indeno(1,2,3-cd)pyrene	NL	µg/kg	4.5 U	4.7 J	6.8 J	3.5 U	4.1 UJ
Isophorone	NL	µg/kg	230 U	160 UJ	160 UJ	180 U	210 UJ
Naphthalene	561	µg/kg	4.5 U	3 UJ	3.9 J	3.5 U	4.1 UJ
Nitrobenzene	NL	µg/kg	230 U	160 UJ	160 UJ	180 U	210 UJ
N-Nitroso-di-n-propylamine	NL	µg/kg	230 U	160 UJ	160 UJ	180 U	210 UJ
N-Nitrosodiphenylamine	NL	µg/kg	230 U	160 UJ	160 UJ	180 U	210 UJ
Pentachlorophenol	NL	µg/kg	9 U	6.2 UJ	6.3 UJ	7.1 U	8.3 UJ
Phenanthrene	1170	µg/kg	14	7.3 J	17 J	3.5 U	22 J
Phenol	NL	µg/kg	230 U	160 UJ	160 UJ	180 U	210 UJ
Pyrene	1520	µg/kg	45	17 J	23 J	6	28 J
Total PAH 17	22800	µg/kg	197.2	111.7	155.85	36.65	144.2
TOC	NL	mg/kg	33,100	19,000	53,600 J	26,800	10,500

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Table B-1
Sediment Sample Analytical Results - SVOCs
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-20	LMR11-20	LMR11-20	LMR11-20	LMR11-20
		Field Sample ID	LMR11-20-006	LMR11-20-006FS	LMR11-20-024	LMR11-20-048	LMR11-20-060
		Sample Date	8/2/2011	8/2/2011	8/5/2011	8/5/2011	8/5/2011
		Depth Interval (in bss)	0- 6	0- 6	6- 24	24- 48	48- 60
Chemical Name	**PEC[1]**	**Unit**					
1,1'-Biphenyl	NL	µg/kg	230 U	240 U	190 UJ	160 UJ	140 UJ
1,2,4,5-Tetrachlorobenzene	NL	µg/kg	230 U	240 U	190 UJ	160 UJ	140 UJ
2,2'-Oxybis(1-chloropropane)	NL	µg/kg	230 U	240 U	190 UJ	160 UJ	140 UJ
2,3,4,6-Tetrachlorophenol	NL	µg/kg	230 U	240 U	190 UJ	160 UJ	140 UJ
2,4,5-Trichlorophenol	NL	µg/kg	230 U	240 U	190 UJ	160 UJ	140 UJ
2,4,6-Trichlorophenol	NL	µg/kg	230 U	240 U	190 UJ	160 UJ	140 UJ
2,4-Dichlorophenol	NL	µg/kg	230 U	240 U	190 UJ	160 UJ	140 UJ
2,4-Dimethylphenol	NL	µg/kg	230 U	240 U	190 UJ	160 UJ	140 UJ
2,4-Dinitrophenol	NL	µg/kg	450 U	460 U	380 UJ	320 UJ	270 UJ
2,4-Dinitrotoluene	NL	µg/kg	230 U	240 U	190 UJ	160 UJ	140 UJ
2,6-Dinitrotoluene	NL	µg/kg	230 U	240 U	190 UJ	160 UJ	140 UJ
2-Chloronaphthalene	NL	µg/kg	230 U	240 U	190 UJ	160 UJ	140 UJ
2-Chlorophenol	NL	µg/kg	230 U	240 U	190 UJ	160 UJ	140 UJ
2-Methylnaphthalene	NL	µg/kg	4.5 UJ	4.6 UJ	3.8 UJ	3.2 UJ	2.7 UJ
2-Methylphenol	NL	µg/kg	230 U	240 U	190 UJ	160 UJ	140 UJ
2-Nitroaniline	NL	µg/kg	450 U	460 U	380 UJ	320 UJ	270 UJ
2-Nitrophenol	NL	µg/kg	230 U	240 U	190 UJ	160 UJ	140 UJ
3,3'-Dichlorobenzidine	NL	µg/kg	230 U	240 U	190 UJ	160 UJ	140 UJ
3-Nitroaniline	NL	µg/kg	450 U	460 U	380 UJ	320 UJ	270 UJ
4,6-Dinitro-2-methylphenol	NL	µg/kg	450 U	460 U	380 UJ	320 UJ	270 UJ
4-Bromophenyl-phenylether	NL	µg/kg	230 U	240 U	190 UJ	160 UJ	140 UJ
4-Chloro-3-methylphenol	NL	µg/kg	230 U	240 U	190 UJ	160 UJ	140 UJ
4-Chloroaniline	NL	µg/kg	230 U	240 U	190 UJ	160 UJ	140 UJ
4-Chlorophenyl-phenylether	NL	µg/kg	230 U	240 U	190 UJ	160 UJ	140 UJ
4-Methylphenol	NL	µg/kg	230 U	240 U	190 UJ	160 UJ	140 UJ
4-Nitroaniline	NL	µg/kg	450 U	460 U	380 UJ	320 UJ	270 UJ
4-Nitrophenol	NL	µg/kg	450 U	460 U	380 UJ	320 UJ	270 UJ
Acenaphthene	NL	µg/kg	4.5 U	4.6 U	3.8 UJ	3.2 UJ	5.1 J
Acenaphthylene	NL	µg/kg	4.5 U	4.6 U	3.8 UJ	3.2 UJ	4.9 J
Acetophenone	NL	µg/kg	230 U	240 U	190 UJ	160 UJ	140 UJ
Anthracene	845	µg/kg	4.5 U	4.6 U	3.8 UJ	3.2 UJ	19 J
Atrazine	NL	µg/kg	230 U	240 U	190 UJ	160 UJ	140 UJ
Benzaldehyde	NL	µg/kg	230 U	240 U	190 UJ	160 UJ	140 UJ
Benzo(a)anthracene	1050	µg/kg	4.5 U	4.6 U	3.8 UJ	4.1 J	52 J
Benzo(a)pyrene	1450	µg/kg	10	4.6 U	3.8 UJ	5.2 J	44 J

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Table B-1
Sediment Sample Analytical Results - SVOCs
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-20	LMR11-20	LMR11-20	LMR11-20	LMR11-20
		Field Sample ID	LMR11-20-006	LMR11-20-006FS	LMR11-20-024	LMR11-20-048	LMR11-20-060
		Sample Date	8/2/2011	8/2/2011	8/5/2011	8/5/2011	8/5/2011
		Depth Interval (in bss)	0- 6	0- 6	6- 24	24- 48	48- 60
Chemical Name	**PEC[1]**	**Unit**					
Benzo(b)fluoranthene	NL	µg/kg	4.5 U	4.6 U	3.8 UJ	5.8 J	50 J
Benzo(g,h,i)perylene	NL	µg/kg	4.5 U	4.6 U	3.8 UJ	3.2 UJ	17 J
Benzo(k)fluoranthene	NL	µg/kg	4.5 U	4.6 U	3.8 UJ	3.2 UJ	29 J
Bis(2-chloroethoxy)methane	NL	µg/kg	230 U	240 U	190 UJ	160 UJ	140 UJ
Bis(2-chloroethyl)ether	NL	µg/kg	230 U	240 U	190 UJ	160 UJ	140 UJ
Bis(2-ethylhexyl)phthalate	NL	µg/kg	230 U	240 U	190 UJ	160 UJ	49 J
Butylbenzylphthalate	NL	µg/kg	230 U	240 U	190 UJ	160 UJ	140 UJ
Caprolactam	NL	µg/kg	230 U	240 U	190 UJ	160 UJ	140 UJ
Carbazole	NL	µg/kg	230 U	240 U	190 UJ	160 UJ	140 UJ
Chrysene	1290	µg/kg	4.5 U	4.6 U	3.8 UJ	5.6 J	53 J
Dibenzo(a,h)anthracene	NL	µg/kg	4.5 U	4.6 U	3.8 UJ	3.2 UJ	7.4 J
Dibenzofuran	NL	µg/kg	230 U	240 U	190 UJ	160 UJ	140 UJ
Diethylphthalate	NL	µg/kg	230 U	240 U	190 UJ	160 UJ	140 UJ
Dimethylphthalate	NL	µg/kg	230 U	240 U	190 UJ	160 UJ	140 UJ
Di-n-butylphthalate	NL	µg/kg	230 U	240 U	190 UJ	160 UJ	140 UJ
Di-n-octylphthalate	NL	µg/kg	230 U	240 U	190 UJ	160 UJ	140 UJ
Fluoranthene	2230	µg/kg	6.5	4.6 U	3.8 UJ	5.3 J	88 J
Fluorene	536	µg/kg	4.5 U	4.6 U	3.8 UJ	3.2 UJ	4.9 J
Hexachlorobenzene	NL	µg/kg	230 U	240 U	190 UJ	160 UJ	140 UJ
Hexachlorobutadiene	NL	µg/kg	230 U	240 U	190 UJ	160 UJ	140 UJ
Hexachlorocyclopentadiene	NL	µg/kg	230 U	240 U	190 UJ	160 UJ	140 UJ
Hexachloroethane	NL	µg/kg	230 U	240 U	190 UJ	160 UJ	140 UJ
Indeno(1,2,3-cd)pyrene	NL	µg/kg	4.5 U	4.6 U	3.8 UJ	3.2 UJ	24 J
Isophorone	NL	µg/kg	230 U	240 U	190 UJ	160 UJ	140 UJ
Naphthalene	561	µg/kg	4.5 U	4.6 U	3.8 UJ	3.2 UJ	5.5 J
Nitrobenzene	NL	µg/kg	230 U	240 U	190 UJ	160 UJ	140 UJ
N-Nitroso-di-n-propylamine	NL	µg/kg	230 U	240 U	190 UJ	160 UJ	140 UJ
N-Nitrosodiphenylamine	NL	µg/kg	230 U	240 U	190 UJ	160 UJ	140 UJ
Pentachlorophenol	NL	µg/kg	9.2 U	9.4 U	7.6 UJ	6.5 UJ	5.5 UJ
Phenanthrene	1170	µg/kg	4.5 U	4.6 U	3.8 UJ	3.2 UJ	59 J
Phenol	NL	µg/kg	230 U	240 U	190 UJ	160 UJ	140 UJ
Pyrene	1520	µg/kg	8.8	4.6 U	5.1 J	6.5 J	87 J
Total PAH 17	22800	µg/kg	56.8	39.1	35.5	50.1	551.15
TOC	NL	mg/kg	23,100	19,600	23,800	22,100	12,700

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Table B-1
Sediment Sample Analytical Results - SVOCs
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-21	LMR11-22	LMR11-23	LMR11-23	LMR11-23
		Field Sample ID	LMR11-21-006	LMR11-22-006	LMR11-23-006	LMR11-23-024	LMR11-23-048
		Sample Date	8/3/2011	8/4/2011	8/11/2011	8/11/2011	8/11/2011
		Depth Interval (in bss)	0- 6	0- 6	0- 6	6- 24	24- 48
Chemical Name	**PEC[1]**	**Unit**					
1,1'-Biphenyl	NL	µg/kg	200 U	210 U	360 U	330 U	320 U
1,2,4,5-Tetrachlorobenzene	NL	µg/kg	200 U	210 U	360 U	330 U	320 U
2,2'-Oxybis(1-chloropropane)	NL	µg/kg	200 U	210 U	360 U	330 U	320 U
2,3,4,6-Tetrachlorophenol	NL	µg/kg	200 U	210 U	360 U	330 U	320 U
2,4,5-Trichlorophenol	NL	µg/kg	200 U	210 U	360 U	330 UJ	320 UJ
2,4,6-Trichlorophenol	NL	µg/kg	200 U	210 U	360 U	330 U	320 U
2,4-Dichlorophenol	NL	µg/kg	200 U	210 U	360 U	330 U	320 U
2,4-Dimethylphenol	NL	µg/kg	200 U	210 U	360 U	330 U	320 U
2,4-Dinitrophenol	NL	µg/kg	380 U	410 U	690 U	650 U	630 U
2,4-Dinitrotoluene	NL	µg/kg	200 U	210 U	360 U	330 UJ	320 UJ
2,6-Dinitrotoluene	NL	µg/kg	200 U	210 U	360 U	330 U	320 U
2-Chloronaphthalene	NL	µg/kg	200 U	210 U	360 U	330 U	320 U
2-Chlorophenol	NL	µg/kg	200 U	210 U	360 U	330 U	320 U
2-Methylnaphthalene	NL	µg/kg	3.8 UJ	4.1 UJ	6.9 U	6.5 U	6.3 U
2-Methylphenol	NL	µg/kg	200 U	210 U	360 UJ	330 U	320 U
2-Nitroaniline	NL	µg/kg	380 U	410 U	690 U	650 U	630 U
2-Nitrophenol	NL	µg/kg	200 U	210 U	360 U	330 U	320 U
3,3'-Dichlorobenzidine	NL	µg/kg	200 U	210 U	360 U	330 U	320 U
3-Nitroaniline	NL	µg/kg	380 U	410 U	690 U	650 U	630 U
4,6-Dinitro-2-methylphenol	NL	µg/kg	380 U	410 U	690 U	650 U	630 U
4-Bromophenyl-phenylether	NL	µg/kg	200 U	210 U	360 U	330 U	320 U
4-Chloro-3-methylphenol	NL	µg/kg	200 U	210 U	360 U	330 U	320 U
4-Chloroaniline	NL	µg/kg	200 U	210 U	360 U	330 U	320 U
4-Chlorophenyl-phenylether	NL	µg/kg	200 U	210 U	360 U	330 U	320 U
4-Methylphenol	NL	µg/kg	200 U	210 U	360 U	330 U	320 U
4-Nitroaniline	NL	µg/kg	380 U	410 U	690 U	650 U	630 U
4-Nitrophenol	NL	µg/kg	380 U	410 U	690 U	650 U	630 U
Acenaphthene	NL	µg/kg	3.8 U	4.1 U	6.9 U	6.5 U	6.3 U
Acenaphthylene	NL	µg/kg	3.8 U	4.1 U	6.9 U	6.5 U	6.3 U
Acetophenone	NL	µg/kg	200 U	210 U	360 U	330 U	320 U
Anthracene	845	µg/kg	3.8 U	4.1 U	6.9 U	6.5 U	6.3 U
Atrazine	NL	µg/kg	200 U	210 U	360 U	330 U	320 U
Benzaldehyde	NL	µg/kg	200 U	210 U	360 U	330 U	320 U
Benzo(a)anthracene	1050	µg/kg	3.8 U	4.1 U	6.9 U	11	6.3 U
Benzo(a)pyrene	1450	µg/kg	3.8 U	4.1 U	6.9 U	15	6.3 U

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Table B-1
Sediment Sample Analytical Results - SVOCs
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-21	LMR11-22	LMR11-23	LMR11-23	LMR11-23
		Field Sample ID	LMR11-21-006	LMR11-22-006	LMR11-23-006	LMR11-23-024	LMR11-23-048
		Sample Date	8/3/2011	8/4/2011	8/11/2011	8/11/2011	8/11/2011
		Depth Interval (in bss)	0- 6	0- 6	0- 6	6- 24	24- 48
Chemical Name	**PEC[1]**	**Unit**					
Benzo(b)fluoranthene	NL	µg/kg	3.8 U	4.1 U	6.9 U	19	6.3 U
Benzo(g,h,i)perylene	NL	µg/kg	3.8 U	4.1 U	6.9 U	11	6.3 U
Benzo(k)fluoranthene	NL	µg/kg	3.8 U	4.1 U	6.9 U	6.5 U	6.3 U
Bis(2-chloroethoxy)methane	NL	µg/kg	200 U	210 U	360 U	330 U	320 U
Bis(2-chloroethyl)ether	NL	µg/kg	200 U	210 U	360 U	330 U	320 U
Bis(2-ethylhexyl)phthalate	NL	µg/kg	200 U	210 U	360 U	330 U	320 U
Butylbenzylphthalate	NL	µg/kg	200 U	210 U	360 U	330 U	320 U
Caprolactam	NL	µg/kg	200 U	210 U	360 U	330 U	320 U
Carbazole	NL	µg/kg	200 U	210 U	360 U	330 U	320 U
Chrysene	1290	µg/kg	4.2	4.1 U	6.9 U	14	6.3 U
Dibenzo(a,h)anthracene	NL	µg/kg	3.8 U	4.1 U	6.9 U	6.5 U	6.3 U
Dibenzofuran	NL	µg/kg	200 U	210 U	360 U	330 U	320 U
Diethylphthalate	NL	µg/kg	200 U	210 U	360 U	330 U	320 U
Dimethylphthalate	NL	µg/kg	200 U	210 U	360 U	330 U	320 U
Di-n-butylphthalate	NL	µg/kg	200 U	210 U	360 U	330 U	320 U
Di-n-octylphthalate	NL	µg/kg	200 U	210 U	360 U	330 U	320 U
Fluoranthene	2230	µg/kg	9	10	15	48	15
Fluorene	536	µg/kg	3.8 U	4.1 U	6.9 U	6.5 U	6.3 U
Hexachlorobenzene	NL	µg/kg	200 U	210 U	360 U	330 U	320 U
Hexachlorobutadiene	NL	µg/kg	200 U	210 U	360 U	330 U	320 U
Hexachlorocyclopentadiene	NL	µg/kg	200 U	210 U	360 U	330 U	320 U
Hexachloroethane	NL	µg/kg	200 U	210 U	360 U	330 U	320 U
Indeno(1,2,3-cd)pyrene	NL	µg/kg	3.8 U	4.1 U	6.9 U	7.6	6.3 U
Isophorone	NL	µg/kg	200 U	210 U	360 U	330 U	320 U
Naphthalene	561	µg/kg	3.8 U	4.1 U	6.9 U	6.5 U	6.3 U
Nitrobenzene	NL	µg/kg	200 U	210 U	360 U	330 U	320 U
N-Nitroso-di-n-propylamine	NL	µg/kg	200 U	210 U	360 U	330 U	320 U
N-Nitrosodiphenylamine	NL	µg/kg	200 U	210 U	360 U	330 U	320 U
Pentachlorophenol	NL	µg/kg	7.8 U	8.4 U	14 U	13 UJ	13 UJ
Phenanthrene	1170	µg/kg	4.5	6.3	9.8	34	15
Phenol	NL	µg/kg	200 U	210 U	360 U	330 U	320 U
Pyrene	1520	µg/kg	11	12	13	25 J	11
Total PAH 17	22800	µg/kg	53.4	57	86.1	210.6	85.1
TOC	NL	mg/kg	21,400	25,300	24,300	22,900	23,500

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Table B-1
Sediment Sample Analytical Results - SVOCs
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-23	LMR11-23	LMR11-23	LMR11-24	LMR11-24
		Field Sample ID	LMR11-23-072	LMR11-23-096	LMR11-23-115	LMR11-24-006	LMR11-24-024
		Sample Date	8/11/2011	8/11/2011	8/11/2011	8/4/2011	8/11/2011
		Depth Interval (in bss)	48- 72	72- 96	96- 115	0- 6	6- 24
Chemical Name	**PEC[1]**	**Unit**					
1,1'-Biphenyl	NL	µg/kg	300 U	290 U	210 U	130 U	270 U
1,2,4,5-Tetrachlorobenzene	NL	µg/kg	300 U	290 U	210 U	130 U	270 U
2,2'-Oxybis(1-chloropropane)	NL	µg/kg	300 U	290 U	210 U	130 U	270 U
2,3,4,6-Tetrachlorophenol	NL	µg/kg	300 U	290 U	210 U	130 U	270 U
2,4,5-Trichlorophenol	NL	µg/kg	300 UJ	290 UJ	210 UJ	130 U	270 UJ
2,4,6-Trichlorophenol	NL	µg/kg	300 U	290 U	210 U	130 U	270 U
2,4-Dichlorophenol	NL	µg/kg	300 U	290 U	210 U	130 U	270 U
2,4-Dimethylphenol	NL	µg/kg	300 U	290 U	210 U	130 U	270 U
2,4-Dinitrophenol	NL	µg/kg	580 U	560 U	420 U	260 U	520 U
2,4-Dinitrotoluene	NL	µg/kg	300 UJ	290 UJ	210 UJ	130 U	270 UJ
2,6-Dinitrotoluene	NL	µg/kg	300 U	290 U	210 U	130 U	270 U
2-Chloronaphthalene	NL	µg/kg	300 U	290 U	210 U	130 U	270 U
2-Chlorophenol	NL	µg/kg	300 U	290 U	210 U	130 U	270 U
2-Methylnaphthalene	NL	µg/kg	5.8 U	5.6 U	4.2 U	2.6 U	5.2 U
2-Methylphenol	NL	µg/kg	300 U	290 U	210 U	130 U	270 U
2-Nitroaniline	NL	µg/kg	580 U	560 U	420 U	260 U	520 U
2-Nitrophenol	NL	µg/kg	300 U	290 U	210 U	130 U	270 U
3,3'-Dichlorobenzidine	NL	µg/kg	300 U	290 U	210 U	130 U	270 U
3-Nitroaniline	NL	µg/kg	580 U	560 U	420 U	260 U	520 U
4,6-Dinitro-2-methylphenol	NL	µg/kg	580 U	560 U	420 U	260 U	520 U
4-Bromophenyl-phenylether	NL	µg/kg	300 U	290 U	210 U	130 U	270 U
4-Chloro-3-methylphenol	NL	µg/kg	300 U	290 U	210 U	130 U	270 U
4-Chloroaniline	NL	µg/kg	300 U	290 U	210 U	130 U	270 U
4-Chlorophenyl-phenylether	NL	µg/kg	300 U	290 U	210 U	130 U	270 U
4-Methylphenol	NL	µg/kg	300 U	290 U	210 U	130 U	270 U
4-Nitroaniline	NL	µg/kg	580 U	560 U	420 U	260 U	520 U
4-Nitrophenol	NL	µg/kg	580 U	560 U	420 U	260 U	520 U
Acenaphthene	NL	µg/kg	5.8 U	5.6 U	4.2 U	2.6 U	5.2 U
Acenaphthylene	NL	µg/kg	5.8 U	5.6 U	4.2 U	2.6 U	5.2 U
Acetophenone	NL	µg/kg	300 U	290 U	210 U	130 U	270 U
Anthracene	845	µg/kg	6.4	5.6 U	4.8	2.6 U	5.2 U
Atrazine	NL	µg/kg	300 U	290 U	210 U	130 U	270 U
Benzaldehyde	NL	µg/kg	300 U	290 U	210 U	130 U	270 U
Benzo(a)anthracene	1050	µg/kg	9.5	5.6 U	10	2.6 U	5.2 U
Benzo(a)pyrene	1450	µg/kg	10	5.6 U	4.2 U	4.4	5.2 U

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Table B-1
Sediment Sample Analytical Results - SVOCs
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-23	LMR11-23	LMR11-23	LMR11-24	LMR11-24
		Field Sample ID	LMR11-23-072	LMR11-23-096	LMR11-23-115	LMR11-24-006	LMR11-24-024
		Sample Date	8/11/2011	8/11/2011	8/11/2011	8/4/2011	8/11/2011
		Depth Interval (in bss)	48- 72	72- 96	96- 115	0- 6	6- 24
Chemical Name	**PEC[1]**	**Unit**					
Benzo(b)fluoranthene	NL	µg/kg	16	7.4	14	3.1	5.2 U
Benzo(g,h,i)perylene	NL	µg/kg	6.3	5.6 U	5.1	2.6 U	5.2 U
Benzo(k)fluoranthene	NL	µg/kg	6	5.6 U	4.9	2.6 U	5.2 U
Bis(2-chloroethoxy)methane	NL	µg/kg	300 U	290 U	210 U	130 U	270 U
Bis(2-chloroethyl)ether	NL	µg/kg	300 U	290 U	210 U	130 U	270 U
Bis(2-ethylhexyl)phthalate	NL	µg/kg	300 U	290 U	65 J	130 U	270 U
Butylbenzylphthalate	NL	µg/kg	300 U	290 U	210 U	130 U	270 U
Caprolactam	NL	µg/kg	300 U	290 U	210 U	130 U	270 U
Carbazole	NL	µg/kg	300 U	290 U	210 U	130 U	270 U
Chrysene	1290	µg/kg	12	5.6 U	13	2.6 U	5.2 U
Dibenzo(a,h)anthracene	NL	µg/kg	5.8 U	5.6 U	4.2 U	2.6 U	5.2 U
Dibenzofuran	NL	µg/kg	300 U	290 U	210 U	130 U	270 U
Diethylphthalate	NL	µg/kg	300 U	290 U	210 U	130 U	270 U
Dimethylphthalate	NL	µg/kg	300 U	290 U	210 U	130 U	270 U
Di-n-butylphthalate	NL	µg/kg	300 U	290 U	210 U	39 J	270 U
Di-n-octylphthalate	NL	µg/kg	300 U	290 U	210 U	130 U	270 U
Fluoranthene	2230	µg/kg	36	5.6 U	29	4.8	6.3
Fluorene	536	µg/kg	5.8 U	5.6 U	4.2 U	2.6 U	5.2 U
Hexachlorobenzene	NL	µg/kg	300 U	290 U	210 U	130 U	270 U
Hexachlorobutadiene	NL	µg/kg	300 U	290 U	210 U	130 U	270 U
Hexachlorocyclopentadiene	NL	µg/kg	300 U	290 U	210 U	130 U	270 U
Hexachloroethane	NL	µg/kg	300 U	290 U	210 U	130 U	270 U
Indeno(1,2,3-cd)pyrene	NL	µg/kg	5.8 U	5.6 U	4.9	2.6 U	5.2 U
Isophorone	NL	µg/kg	300 U	290 U	210 U	130 U	270 U
Naphthalene	561	µg/kg	5.8 U	5.6 U	4.2 U	2.6 U	5.2 U
Nitrobenzene	NL	µg/kg	300 U	290 U	210 U	130 U	270 U
N-Nitroso-di-n-propylamine	NL	µg/kg	300 U	290 U	210 U	130 U	270 U
N-Nitrosodiphenylamine	NL	µg/kg	300 U	290 U	210 U	130 U	270 U
Pentachlorophenol	NL	µg/kg	12 UJ	11 UJ	8.4 UJ	5.3 U	11 UJ
Phenanthrene	1170	µg/kg	30	5.6 U	26	2.6 U	5.2 U
Phenol	NL	µg/kg	300 U	290 U	210 U	130 U	270 U
Pyrene	1520	µg/kg	26	10	25	4.9	5.6
Total PAH 17	22800	µg/kg	178.5	59.4	151.4	34.1	50.9
TOC	NL	mg/kg	24,800	18,300	13,400	16,200	14,100

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Table B-1
Sediment Sample Analytical Results - SVOCs
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-24	LMR11-24	LMR11-24	LMR11-25	LMR11-25
		Field Sample ID	LMR11-24-048	LMR11-24-072	LMR11-24-096	LMR11-25-006	LMR11-25-024
		Sample Date	8/11/2011	8/11/2011	8/11/2011	8/11/2011	8/11/2011
		Depth Interval (in bss)	24- 48	48- 72	72- 96	0- 6	6- 24
Chemical Name	**PEC[1]**	**Unit**					
1,1'-Biphenyl	NL	µg/kg	310 U	270 U	300 U	340 U	320 U
1,2,4,5-Tetrachlorobenzene	NL	µg/kg	310 U	270 U	300 U	340 U	320 U
2,2'-Oxybis(1-chloropropane)	NL	µg/kg	310 U	270 U	300 U	340 U	320 U
2,3,4,6-Tetrachlorophenol	NL	µg/kg	310 U	270 U	300 U	340 U	320 U
2,4,5-Trichlorophenol	NL	µg/kg	310 UJ	270 UJ	300 UJ	340 U	320 U
2,4,6-Trichlorophenol	NL	µg/kg	310 U	270 U	300 U	340 U	320 U
2,4-Dichlorophenol	NL	µg/kg	310 U	270 U	300 U	340 U	320 U
2,4-Dimethylphenol	NL	µg/kg	310 U	270 U	300 U	340 U	320 U
2,4-Dinitrophenol	NL	µg/kg	600 U	530 U	590 U	660 U	620 U
2,4-Dinitrotoluene	NL	µg/kg	310 UJ	270 UJ	300 UJ	340 U	320 U
2,6-Dinitrotoluene	NL	µg/kg	310 U	270 U	300 U	340 U	320 U
2-Chloronaphthalene	NL	µg/kg	310 U	270 U	300 U	340 U	320 U
2-Chlorophenol	NL	µg/kg	310 U	270 U	300 U	340 U	320 U
2-Methylnaphthalene	NL	µg/kg	6 U	5.3 U	5.9 U	6.6 U	6.2 U
2-Methylphenol	NL	µg/kg	310 U	270 U	300 U	340 UJ	320 UJ
2-Nitroaniline	NL	µg/kg	600 U	530 U	590 U	660 U	620 U
2-Nitrophenol	NL	µg/kg	310 U	270 U	300 U	340 U	320 U
3,3'-Dichlorobenzidine	NL	µg/kg	310 U	270 U	300 U	340 U	320 U
3-Nitroaniline	NL	µg/kg	600 U	530 U	590 U	660 U	620 U
4,6-Dinitro-2-methylphenol	NL	µg/kg	600 U	530 U	590 U	660 U	620 U
4-Bromophenyl-phenylether	NL	µg/kg	310 U	270 U	300 U	340 U	320 U
4-Chloro-3-methylphenol	NL	µg/kg	310 U	270 U	300 U	340 U	320 U
4-Chloroaniline	NL	µg/kg	310 U	270 U	300 U	340 U	320 U
4-Chlorophenyl-phenylether	NL	µg/kg	310 U	270 U	300 U	340 U	320 U
4-Methylphenol	NL	µg/kg	310 U	270 U	300 U	340 U	320 U
4-Nitroaniline	NL	µg/kg	600 U	530 U	590 U	660 U	620 U
4-Nitrophenol	NL	µg/kg	600 U	530 U	590 U	660 U	620 U
Acenaphthene	NL	µg/kg	6 U	5.3 U	5.9 U	6.6 U	6.2 U
Acenaphthylene	NL	µg/kg	6 U	5.3 U	5.9 U	6.6 U	6.2 U
Acetophenone	NL	µg/kg	310 U	270 U	300 U	340 U	320 U
Anthracene	845	µg/kg	6 U	5.3 U	5.9 U	6.6 U	6.2 U
Atrazine	NL	µg/kg	310 U	270 U	300 U	340 U	320 U
Benzaldehyde	NL	µg/kg	310 U	270 U	300 U	340 U	320 U
Benzo(a)anthracene	1050	µg/kg	6 U	5.3 U	5.9 U	6.6 U	6.2 U
Benzo(a)pyrene	1450	µg/kg	6 U	5.3 U	5.9 U	6.6 U	6.2 U

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Table B-1
Sediment Sample Analytical Results - SVOCs
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-24	LMR11-24	LMR11-24	LMR11-25	LMR11-25
		Field Sample ID	LMR11-24-048	LMR11-24-072	LMR11-24-096	LMR11-25-006	LMR11-25-024
		Sample Date	8/11/2011	8/11/2011	8/11/2011	8/11/2011	8/11/2011
		Depth Interval (in bss)	24- 48	48- 72	72- 96	0- 6	6- 24
Chemical Name	**PEC[1]**	**Unit**					
Benzo(b)fluoranthene	NL	µg/kg	6 U	5.8	6.2	6.6 U	6.2 U
Benzo(g,h,i)perylene	NL	µg/kg	6 U	5.3 U	5.9 U	6.6 U	6.2 U
Benzo(k)fluoranthene	NL	µg/kg	6 U	5.3 U	5.9 U	6.6 U	6.2 U
Bis(2-chloroethoxy)methane	NL	µg/kg	310 U	270 U	300 U	340 U	320 U
Bis(2-chloroethyl)ether	NL	µg/kg	310 U	270 U	300 U	340 U	320 U
Bis(2-ethylhexyl)phthalate	NL	µg/kg	310 U	270 U	300 U	340 U	320 U
Butylbenzylphthalate	NL	µg/kg	310 U	270 U	300 U	340 U	320 U
Caprolactam	NL	µg/kg	310 U	270 U	300 U	340 U	320 U
Carbazole	NL	µg/kg	310 U	270 U	300 U	340 U	320 U
Chrysene	1290	µg/kg	6 U	5.3 U	6.3	6.6 U	6.2 U
Dibenzo(a,h)anthracene	NL	µg/kg	6 U	5.3 U	5.9 U	6.6 U	6.2 U
Dibenzofuran	NL	µg/kg	310 U	270 U	300 U	340 U	320 U
Diethylphthalate	NL	µg/kg	310 U	270 U	300 U	340 U	320 U
Dimethylphthalate	NL	µg/kg	310 U	270 U	300 U	340 U	320 U
Di-n-butylphthalate	NL	µg/kg	130 J	270 U	300 U	340 U	320 U
Di-n-octylphthalate	NL	µg/kg	310 U	270 U	300 U	340 U	320 U
Fluoranthene	2230	µg/kg	11	13	22	10	9.9
Fluorene	536	µg/kg	6 U	5.3 U	5.9 U	6.6 U	6.2 U
Hexachlorobenzene	NL	µg/kg	310 U	270 U	300 U	340 U	320 U
Hexachlorobutadiene	NL	µg/kg	310 U	270 U	300 U	340 U	320 U
Hexachlorocyclopentadiene	NL	µg/kg	310 U	270 U	300 U	340 U	320 U
Hexachloroethane	NL	µg/kg	310 U	270 U	300 U	340 U	320 U
Indeno(1,2,3-cd)pyrene	NL	µg/kg	6 U	5.3 U	5.9 U	6.6 U	6.2 U
Isophorone	NL	µg/kg	310 U	270 U	300 U	340 U	320 U
Naphthalene	561	µg/kg	6 U	5.3 U	5.9 U	6.6 U	6.2 U
Nitrobenzene	NL	µg/kg	310 U	270 U	300 U	340 U	320 U
N-Nitroso-di-n-propylamine	NL	µg/kg	310 U	270 U	300 U	340 U	320 U
N-Nitrosodiphenylamine	NL	µg/kg	310 U	270 U	300 U	340 U	320 U
Pentachlorophenol	NL	µg/kg	12 UJ	11 UJ	12 UJ	13 U	13 U
Phenanthrene	1170	µg/kg	9.5	11	16	6.6 U	8.3
Phenol	NL	µg/kg	310 U	270 U	300 U	340 U	320 U
Pyrene	1520	µg/kg	7.8	9.4	14	8.9	8.6
Total PAH 17	22800	µg/kg	70.3	73.65	99.9	68.4	70.2
TOC	NL	mg/kg	22,600	31,100	27,100	23,100	21,300

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Table B-1
Sediment Sample Analytical Results - SVOCs
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-25	LMR11-25	LMR11-25	LMR11-26	LMR11-26
		Field Sample ID	LMR11-25-048	LMR11-25-072	LMR11-25-096	LMR11-26-006	LMR11-26-024
		Sample Date	8/11/2011	8/11/2011	8/11/2011	8/10/2011	8/10/2011
		Depth Interval (in bss)	24- 48	48- 72	72- 96	0- 6	6- 24
Chemical Name	**PEC[1]**	**Unit**					
1,1'-Biphenyl	NL	µg/kg	300 U	290 U	260 U	340 U	300 UJ
1,2,4,5-Tetrachlorobenzene	NL	µg/kg	300 U	290 U	260 U	340 U	300 U
2,2'-Oxybis(1-chloropropane)	NL	µg/kg	300 U	290 U	260 U	340 U	300 U
2,3,4,6-Tetrachlorophenol	NL	µg/kg	300 U	290 U	260 U	340 U	300 U
2,4,5-Trichlorophenol	NL	µg/kg	300 U	290 U	260 U	340 U	300 U
2,4,6-Trichlorophenol	NL	µg/kg	300 U	290 U	260 U	340 U	300 U
2,4-Dichlorophenol	NL	µg/kg	300 U	290 U	260 U	340 U	300 U
2,4-Dimethylphenol	NL	µg/kg	300 U	290 U	260 U	340 U	300 U
2,4-Dinitrophenol	NL	µg/kg	580 U	570 U	500 U	650 U	570 U
2,4-Dinitrotoluene	NL	µg/kg	300 U	290 U	260 U	340 U	300 U
2,6-Dinitrotoluene	NL	µg/kg	300 U	290 U	260 U	340 U	300 U
2-Chloronaphthalene	NL	µg/kg	300 U	290 U	260 U	340 U	300 U
2-Chlorophenol	NL	µg/kg	300 U	290 U	260 U	340 U	300 U
2-Methylnaphthalene	NL	µg/kg	5.8 U	5.7 U	5 U	6.5 U	5.7 U
2-Methylphenol	NL	µg/kg	300 UJ	290 UJ	260 UJ	340 UJ	300 U
2-Nitroaniline	NL	µg/kg	580 U	570 U	500 U	650 U	570 U
2-Nitrophenol	NL	µg/kg	300 U	290 U	260 U	340 U	300 U
3,3'-Dichlorobenzidine	NL	µg/kg	300 U	290 U	260 U	340 U	300 U
3-Nitroaniline	NL	µg/kg	580 U	570 U	500 U	650 U	570 U
4,6-Dinitro-2-methylphenol	NL	µg/kg	580 U	570 U	500 U	650 U	570 U
4-Bromophenyl-phenylether	NL	µg/kg	300 U	290 U	260 U	340 U	300 UJ
4-Chloro-3-methylphenol	NL	µg/kg	300 U	290 U	260 U	340 U	300 U
4-Chloroaniline	NL	µg/kg	300 U	290 U	260 U	340 U	300 U
4-Chlorophenyl-phenylether	NL	µg/kg	300 U	290 U	260 U	340 U	300 UJ
4-Methylphenol	NL	µg/kg	300 U	290 U	260 U	340 U	300 U
4-Nitroaniline	NL	µg/kg	580 U	570 U	500 U	650 U	570 U
4-Nitrophenol	NL	µg/kg	580 U	570 U	500 U	650 U	570 U
Acenaphthene	NL	µg/kg	5.8 U	5.7 U	5 U	6.5 U	5.7 U
Acenaphthylene	NL	µg/kg	5.8 U	5.7 U	5 U	6.5 U	5.7 U
Acetophenone	NL	µg/kg	300 U	290 U	260 U	340 U	300 U
Anthracene	845	µg/kg	5.8 U	5.7 U	5 U	6.5 U	5.7 U
Atrazine	NL	µg/kg	300 U	290 U	260 U	340 U	300 U
Benzaldehyde	NL	µg/kg	300 U	290 U	260 U	340 U	300 U
Benzo(a)anthracene	1050	µg/kg	7.3	5.7 U	5 U	9.7	5.7 U
Benzo(a)pyrene	1450	µg/kg	16	5.7 U	5 U	13	5.7 U

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Table B-1
Sediment Sample Analytical Results - SVOCs
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-25	LMR11-25	LMR11-25	LMR11-26	LMR11-26
		Field Sample ID	LMR11-25-048	LMR11-25-072	LMR11-25-096	LMR11-26-006	LMR11-26-024
		Sample Date	8/11/2011	8/11/2011	8/11/2011	8/10/2011	8/10/2011
		Depth Interval (in bss)	24- 48	48- 72	72- 96	0- 6	6- 24
Chemical Name	**PEC[1]**	**Unit**					
Benzo(b)fluoranthene	NL	µg/kg	17	5.7 U	5 U	19	5.7 U
Benzo(g,h,i)perylene	NL	µg/kg	5.8 U	5.7 U	5 U	9.7	5.7 U
Benzo(k)fluoranthene	NL	µg/kg	6.1	5.7 U	5 U	8.1	5.7 U
Bis(2-chloroethoxy)methane	NL	µg/kg	300 U	290 U	260 U	340 U	300 U
Bis(2-chloroethyl)ether	NL	µg/kg	300 U	290 U	260 U	340 U	300 U
Bis(2-ethylhexyl)phthalate	NL	µg/kg	300 U	290 U	260 U	340 U	300 UJ
Butylbenzylphthalate	NL	µg/kg	300 U	290 U	260 U	340 U	300 UJ
Caprolactam	NL	µg/kg	300 U	290 U	260 U	340 U	300 UJ
Carbazole	NL	µg/kg	300 U	290 U	260 U	340 U	300 UJ
Chrysene	1290	µg/kg	9.5	5.7 U	5 U	11	5.7 U
Dibenzo(a,h)anthracene	NL	µg/kg	5.8 U	5.7 U	5 U	6.5 U	5.7 U
Dibenzofuran	NL	µg/kg	300 U	290 U	260 U	340 U	300 UJ
Diethylphthalate	NL	µg/kg	300 U	290 U	260 U	340 U	300 UJ
Dimethylphthalate	NL	µg/kg	300 U	290 U	260 U	340 U	300 UJ
Di-n-butylphthalate	NL	µg/kg	300 U	290 U	260 U	340 U	300 UJ
Di-n-octylphthalate	NL	µg/kg	300 U	290 U	260 U	340 U	300 UJ
Fluoranthene	2230	µg/kg	19	5.7 U	5 U	21	5.7 U
Fluorene	536	µg/kg	5.8 U	5.7 U	5 U	4.4 J	5.7 U
Hexachlorobenzene	NL	µg/kg	300 U	290 U	260 U	340 U	300 U
Hexachlorobutadiene	NL	µg/kg	300 U	290 U	260 U	340 U	300 U
Hexachlorocyclopentadiene	NL	µg/kg	300 U	290 U	260 U	340 U	300 U
Hexachloroethane	NL	µg/kg	300 U	290 U	260 U	340 U	300 U
Indeno(1,2,3-cd)pyrene	NL	µg/kg	5.8 U	5.7 U	5 U	8.5	5.7 U
Isophorone	NL	µg/kg	300 U	290 U	260 U	340 U	300 U
Naphthalene	561	µg/kg	5.8 U	5.7 U	5 U	6.5 U	5.7 U
Nitrobenzene	NL	µg/kg	300 U	290 U	260 U	340 U	300 U
N-Nitroso-di-n-propylamine	NL	µg/kg	300 U	290 U	260 U	340 U	300 U
N-Nitrosodiphenylamine	NL	µg/kg	300 U	290 U	260 U	340 U	300 U
Pentachlorophenol	NL	µg/kg	12 U	12 U	10 U	13 U	12 U
Phenanthrene	1170	µg/kg	13	5.7 U	5 U	8.9	7
Phenol	NL	µg/kg	300 U	290 U	260 U	340 U	300 U
Pyrene	1520	µg/kg	16	5.7 U	5 U	18	5.7 U
Total PAH 17	22800	µg/kg	130	48.45	42.5	150.8	52.6
TOC	NL	mg/kg	22,800	19,800	28,100	23,300 J	22,800

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Table B-1
Sediment Sample Analytical Results - SVOCs
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-26	LMR11-26	LMR11-26	LMR11-26	LMR11-27
		Field Sample ID	LMR11-26-048	LMR11-26-072	LMR11-26-096	LMR11-26-117	LMR11-27-006
		Sample Date	8/10/2011	8/10/2011	8/10/2011	8/10/2011	8/4/2011
		Depth Interval (in bss)	24- 48	48- 72	72- 96	96- 117	0- 6
Chemical Name	**PEC[1]**	**Unit**					
1,1'-Biphenyl	NL	µg/kg	310 U	290 U	270 U	230 U	190 U
1,2,4,5-Tetrachlorobenzene	NL	µg/kg	310 U	290 U	270 U	230 U	190 U
2,2'-Oxybis(1-chloropropane)	NL	µg/kg	310 U	290 U	270 U	230 U	190 U
2,3,4,6-Tetrachlorophenol	NL	µg/kg	310 U	290 U	270 U	230 U	190 U
2,4,5-Trichlorophenol	NL	µg/kg	310 U	290 U	270 U	230 U	190 U
2,4,6-Trichlorophenol	NL	µg/kg	310 U	290 U	270 U	230 U	190 U
2,4-Dichlorophenol	NL	µg/kg	310 U	290 U	270 U	230 U	190 U
2,4-Dimethylphenol	NL	µg/kg	310 U	290 U	270 U	230 U	190 U
2,4-Dinitrophenol	NL	µg/kg	590 U	570 U	530 U	460 U	360 U
2,4-Dinitrotoluene	NL	µg/kg	310 U	290 U	270 U	230 U	190 U
2,6-Dinitrotoluene	NL	µg/kg	310 U	290 U	270 U	230 U	190 U
2-Chloronaphthalene	NL	µg/kg	310 U	290 U	270 U	230 U	190 U
2-Chlorophenol	NL	µg/kg	310 U	290 U	270 U	230 U	190 U
2-Methylnaphthalene	NL	µg/kg	5.9 U	5.7 U	5.3 U	10	3.6 UJ
2-Methylphenol	NL	µg/kg	310 U	290 UJ	270 UJ	230 UJ	190 U
2-Nitroaniline	NL	µg/kg	590 U	570 U	530 U	460 U	360 U
2-Nitrophenol	NL	µg/kg	310 U	290 U	270 U	230 U	190 U
3,3'-Dichlorobenzidine	NL	µg/kg	310 U	290 U	270 U	230 U	190 U
3-Nitroaniline	NL	µg/kg	590 U	570 U	530 U	460 U	360 U
4,6-Dinitro-2-methylphenol	NL	µg/kg	590 U	570 U	530 U	460 U	360 U
4-Bromophenyl-phenylether	NL	µg/kg	310 U	290 U	270 U	230 U	190 U
4-Chloro-3-methylphenol	NL	µg/kg	310 U	290 U	270 U	230 U	190 U
4-Chloroaniline	NL	µg/kg	310 U	290 U	270 U	230 U	190 U
4-Chlorophenyl-phenylether	NL	µg/kg	310 U	290 U	270 U	230 U	190 U
4-Methylphenol	NL	µg/kg	310 U	290 U	270 U	230 U	190 U
4-Nitroaniline	NL	µg/kg	590 U	570 U	530 U	460 U	360 U
4-Nitrophenol	NL	µg/kg	590 U	570 U	530 U	460 U	360 U
Acenaphthene	NL	µg/kg	5.9 U	5.7 U	5.3 U	8.8	3.6 U
Acenaphthylene	NL	µg/kg	5.9 U	5.7 U	5.3 U	6.6	3.6 U
Acetophenone	NL	µg/kg	310 U	290 U	270 U	230 U	190 U
Anthracene	845	µg/kg	5.9 U	5.7 U	5.3 U	37	3.6 U
Atrazine	NL	µg/kg	310 U	290 U	270 U	230 U	190 U
Benzaldehyde	NL	µg/kg	310 U	290 U	270 U	230 U	190 U
Benzo(a)anthracene	1050	µg/kg	5.9 U	7.8	14	54	7.7
Benzo(a)pyrene	1450	µg/kg	5.9 U	8.4	24	49	7.2

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Table B-1
Sediment Sample Analytical Results - SVOCs
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-26	LMR11-26	LMR11-26	LMR11-26	LMR11-27
		Field Sample ID	LMR11-26-048	LMR11-26-072	LMR11-26-096	LMR11-26-117	LMR11-27-006
		Sample Date	8/10/2011	8/10/2011	8/10/2011	8/10/2011	8/4/2011
		Depth Interval (in bss)	24- 48	48- 72	72- 96	96- 117	0- 6
Chemical Name	**PEC[1]**	**Unit**					
Benzo(b)fluoranthene	NL	µg/kg	5.9 U	14	29	73	5.7
Benzo(g,h,i)perylene	NL	µg/kg	5.9 U	6.7	12	36	3.6 U
Benzo(k)fluoranthene	NL	µg/kg	5.9 U	5.7 U	8.8	26	4
Bis(2-chloroethoxy)methane	NL	µg/kg	310 U	290 U	270 U	230 U	190 U
Bis(2-chloroethyl)ether	NL	µg/kg	310 U	290 U	270 U	230 U	190 U
Bis(2-ethylhexyl)phthalate	NL	µg/kg	310 U	290 U	270 U	230 U	190 U
Butylbenzylphthalate	NL	µg/kg	310 U	290 U	270 U	230 U	190 U
Caprolactam	NL	µg/kg	310 U	290 U	270 U	230 U	190 U
Carbazole	NL	µg/kg	310 U	290 U	270 U	230 U	190 U
Chrysene	1290	µg/kg	7.6	9.8	19	61	9.6
Dibenzo(a,h)anthracene	NL	µg/kg	5.9 U	5.7 U	5.3 U	11	3.6 U
Dibenzofuran	NL	µg/kg	310 U	290 U	270 U	230 U	190 U
Diethylphthalate	NL	µg/kg	310 U	290 U	270 U	230 U	190 U
Dimethylphthalate	NL	µg/kg	310 U	290 U	270 U	230 U	190 U
Di-n-butylphthalate	NL	µg/kg	310 U	290 U	270 U	230 U	190 U
Di-n-octylphthalate	NL	µg/kg	310 U	290 U	270 U	230 U	190 U
Fluoranthene	2230	µg/kg	22	21	38	130	17
Fluorene	536	µg/kg	5.9 U	5.7 U	5.3 U	15	3.6 U
Hexachlorobenzene	NL	µg/kg	310 U	290 U	270 U	230 U	190 U
Hexachlorobutadiene	NL	µg/kg	310 U	290 U	270 U	230 U	190 U
Hexachlorocyclopentadiene	NL	µg/kg	310 U	290 U	270 U	230 U	190 U
Hexachloroethane	NL	µg/kg	310 U	290 U	270 U	230 U	190 U
Indeno(1,2,3-cd)pyrene	NL	µg/kg	5.9 U	6.1	11	33	3.6 U
Isophorone	NL	µg/kg	310 U	290 U	270 U	230 U	190 U
Naphthalene	561	µg/kg	5.9 U	6.1	5.3 U	11	3.6 U
Nitrobenzene	NL	µg/kg	310 U	290 U	270 U	230 U	190 U
N-Nitroso-di-n-propylamine	NL	µg/kg	310 U	290 U	270 U	230 U	190 U
N-Nitrosodiphenylamine	NL	µg/kg	310 U	290 U	270 U	230 U	190 U
Pentachlorophenol	NL	µg/kg	12 U	12 U	11 U	9.3 U	7.4 U
Phenanthrene	1170	µg/kg	14	14	28	92	5.1
Phenol	NL	µg/kg	310 U	290 U	270 U	230 U	190 U
Pyrene	1520	µg/kg	16	17	32	100	21
Total PAH 17	22800	µg/kg	97.95	130.85	234.35	753.4	93.5
TOC	NL	mg/kg	23,300	23,100	24,100	19,400	11,400

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Table B-1
Sediment Sample Analytical Results - SVOCs
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-27	LMR11-27	LMR11-27	LMR11-27	LMR11-27
		Field Sample ID	LMR11-27-024	LMR11-27-048	LMR11-27-072	LMR11-27-096	LMR11-27-115
		Sample Date	8/11/2011	8/11/2011	8/11/2011	8/11/2011	8/11/2011
		Depth Interval (in bss)	6- 24	24- 48	48- 72	72- 96	96- 115
Chemical Name	**PEC[1]**	**Unit**					
1,1'-Biphenyl	NL	µg/kg	300 U	270 U	260 U	280 U	280 U
1,2,4,5-Tetrachlorobenzene	NL	µg/kg	300 U	270 U	260 U	280 U	280 U
2,2'-Oxybis(1-chloropropane)	NL	µg/kg	300 U	270 U	260 U	280 U	280 U
2,3,4,6-Tetrachlorophenol	NL	µg/kg	300 U	270 U	260 U	280 U	280 U
2,4,5-Trichlorophenol	NL	µg/kg	300 UJ	270 UJ	260 UJ	280 UJ	280 UJ
2,4,6-Trichlorophenol	NL	µg/kg	300 U	270 U	260 U	280 U	280 U
2,4-Dichlorophenol	NL	µg/kg	300 U	270 U	260 U	280 U	280 U
2,4-Dimethylphenol	NL	µg/kg	300 U	270 U	260 U	280 U	280 U
2,4-Dinitrophenol	NL	µg/kg	590 U	530 U	510 U	540 U	550 U
2,4-Dinitrotoluene	NL	µg/kg	300 UJ	270 UJ	260 UJ	280 UJ	280 UJ
2,6-Dinitrotoluene	NL	µg/kg	300 U	270 U	260 U	280 U	280 U
2-Chloronaphthalene	NL	µg/kg	300 U	270 U	260 U	280 U	280 U
2-Chlorophenol	NL	µg/kg	300 U	270 U	260 U	280 U	280 U
2-Methylnaphthalene	NL	µg/kg	5.9 U	5.3 U	5.1 U	5.4 U	5.5 U
2-Methylphenol	NL	µg/kg	300 U	270 U	260 U	280 U	280 U
2-Nitroaniline	NL	µg/kg	590 U	530 U	510 U	540 U	550 U
2-Nitrophenol	NL	µg/kg	300 U	270 U	260 U	280 U	280 U
3,3'-Dichlorobenzidine	NL	µg/kg	300 U	270 U	260 U	280 U	280 U
3-Nitroaniline	NL	µg/kg	590 U	530 U	510 U	540 U	550 U
4,6-Dinitro-2-methylphenol	NL	µg/kg	590 U	530 U	510 U	540 U	550 U
4-Bromophenyl-phenylether	NL	µg/kg	300 U	270 U	260 U	280 U	280 U
4-Chloro-3-methylphenol	NL	µg/kg	300 U	270 U	260 U	280 U	280 U
4-Chloroaniline	NL	µg/kg	300 U	270 U	260 U	280 U	280 U
4-Chlorophenyl-phenylether	NL	µg/kg	300 U	270 U	260 U	280 U	280 U
4-Methylphenol	NL	µg/kg	300 U	270 U	260 U	280 U	280 U
4-Nitroaniline	NL	µg/kg	590 U	530 U	510 U	540 U	550 U
4-Nitrophenol	NL	µg/kg	590 U	530 U	510 U	540 U	550 U
Acenaphthene	NL	µg/kg	5.9 U	5.3 U	5.1 U	5.4 U	5.5 U
Acenaphthylene	NL	µg/kg	5.9 U	5.3 U	5.1 U	5.4 U	5.5 U
Acetophenone	NL	µg/kg	300 U	270 U	260 U	280 U	280 U
Anthracene	845	µg/kg	5.9 U	5.3 U	5.1 U	5.4 U	8.8
Atrazine	NL	µg/kg	300 U	270 U	260 U	280 U	280 U
Benzaldehyde	NL	µg/kg	300 U	270 U	260 U	280 U	280 U
Benzo(a)anthracene	1050	µg/kg	5.9 U	8.2	5.1 U	5.9	22
Benzo(a)pyrene	1450	µg/kg	5.9 U	11	5.1 U	9.3	21

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Table B-1
Sediment Sample Analytical Results - SVOCs
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-27	LMR11-27	LMR11-27	LMR11-27	LMR11-27
		Field Sample ID	LMR11-27-024	LMR11-27-048	LMR11-27-072	LMR11-27-096	LMR11-27-115
		Sample Date	8/11/2011	8/11/2011	8/11/2011	8/11/2011	8/11/2011
		Depth Interval (in bss)	6- 24	24- 48	48- 72	72- 96	96- 115
Chemical Name	**PEC[1]**	**Unit**					
Benzo(b)fluoranthene	NL	µg/kg	5.9 U	15	5.1 U	12	30
Benzo(g,h,i)perylene	NL	µg/kg	5.9 U	5.9	5.1 U	5.4 U	11
Benzo(k)fluoranthene	NL	µg/kg	5.9 U	6.5	5.1 U	5.4 U	11
Bis(2-chloroethoxy)methane	NL	µg/kg	300 U	270 U	260 U	280 U	280 U
Bis(2-chloroethyl)ether	NL	µg/kg	300 U	270 U	260 U	280 U	280 U
Bis(2-ethylhexyl)phthalate	NL	µg/kg	300 U	270 U	260 U	280 U	280 U
Butylbenzylphthalate	NL	µg/kg	300 U	270 U	260 U	280 U	280 U
Caprolactam	NL	µg/kg	300 U	270 U	98 J	280 U	280 U
Carbazole	NL	µg/kg	300 U	270 U	260 U	280 U	280 U
Chrysene	1290	µg/kg	5.9 U	10	5.1 U	6.1	22
Dibenzo(a,h)anthracene	NL	µg/kg	5.9 U	5.3 U	5.1 U	5.4 U	5.5 U
Dibenzofuran	NL	µg/kg	300 U	270 U	260 U	280 U	280 U
Diethylphthalate	NL	µg/kg	300 U	270 U	260 U	280 U	280 U
Dimethylphthalate	NL	µg/kg	300 U	270 U	260 U	280 U	280 U
Di-n-butylphthalate	NL	µg/kg	300 U	270 U	260 U	280 U	280 U
Di-n-octylphthalate	NL	µg/kg	300 U	270 U	260 U	280 U	280 U
Fluoranthene	2230	µg/kg	5.9 U	33	6.3	17	48
Fluorene	536	µg/kg	5.9 U	5.3 U	5.1 U	5.4 U	5.5 U
Hexachlorobenzene	NL	µg/kg	300 U	270 U	260 U	280 U	280 U
Hexachlorobutadiene	NL	µg/kg	300 U	270 U	260 U	280 U	280 U
Hexachlorocyclopentadiene	NL	µg/kg	300 U	270 U	260 U	280 U	280 U
Hexachloroethane	NL	µg/kg	300 U	270 U	260 U	280 U	280 U
Indeno(1,2,3-cd)pyrene	NL	µg/kg	5.9 U	6	5.1 U	5.4 U	10
Isophorone	NL	µg/kg	300 U	270 U	260 U	280 U	280 U
Naphthalene	561	µg/kg	5.9 U	5.3 U	5.1 U	5.4 U	5.5 U
Nitrobenzene	NL	µg/kg	300 U	270 U	260 U	280 U	280 U
N-Nitroso-di-n-propylamine	NL	µg/kg	300 U	270 U	260 U	280 U	280 U
N-Nitrosodiphenylamine	NL	µg/kg	300 U	270 U	260 U	280 U	280 U
Pentachlorophenol	NL	µg/kg	12 UJ	11 UJ	10 UJ	11 UJ	11 UJ
Phenanthrene	1170	µg/kg	5.9 U	21	5.2	9.3	21
Phenol	NL	µg/kg	300 U	270 U	260 U	280 U	280 U
Pyrene	1520	µg/kg	7.1	19	5.1 U	12	37
Total PAH 17	22800	µg/kg	54.3	154.15	49.75	98.6	258.3
TOC	NL	mg/kg	21,500	22,600	25,500	26,100	28,400

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Table B-1
Sediment Sample Analytical Results - SVOCs
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-28	LMR11-28	LMR11-29	LMR11-30	LMR11-31
		Field Sample ID	LMR11-28-006	LMR11-28-034	LMR11-29-006	LMR11-30-006	LMR11-31-006
		Sample Date	8/10/2011	8/10/2011	8/4/2011	8/4/2011	8/4/2011
		Depth Interval (in bss)	0- 6	6- 34	0- 6	0- 6	0- 6
Chemical Name	**PEC[1]**	**Unit**					
1,1'-Biphenyl	NL	µg/kg	380 U	210 U	210 U	240 U	230 U
1,2,4,5-Tetrachlorobenzene	NL	µg/kg	380 U	210 U	210 U	240 U	230 U
2,2'-Oxybis(1-chloropropane)	NL	µg/kg	380 U	210 U	210 U	240 U	230 U
2,3,4,6-Tetrachlorophenol	NL	µg/kg	380 U	210 U	210 U	240 U	230 U
2,4,5-Trichlorophenol	NL	µg/kg	380 UJ	210 UJ	210 U	240 U	230 U
2,4,6-Trichlorophenol	NL	µg/kg	380 U	210 U	210 U	240 U	230 U
2,4-Dichlorophenol	NL	µg/kg	380 U	210 U	210 U	240 U	230 U
2,4-Dimethylphenol	NL	µg/kg	380 U	210 U	210 U	240 U	230 U
2,4-Dinitrophenol	NL	µg/kg	730 U	410 U	400 U	470 U	450 U
2,4-Dinitrotoluene	NL	µg/kg	380 UJ	210 UJ	210 U	240 U	230 U
2,6-Dinitrotoluene	NL	µg/kg	380 U	210 U	210 U	240 U	230 U
2-Chloronaphthalene	NL	µg/kg	380 U	210 U	210 U	240 U	230 U
2-Chlorophenol	NL	µg/kg	380 U	210 U	210 U	240 U	230 U
2-Methylnaphthalene	NL	µg/kg	7.3 U	4.1 U	4 U	4.7 U	4.5 U
2-Methylphenol	NL	µg/kg	380 U	210 U	210 U	240 U	230 U
2-Nitroaniline	NL	µg/kg	730 U	410 U	400 U	470 U	450 U
2-Nitrophenol	NL	µg/kg	380 U	210 U	210 U	240 U	230 U
3,3'-Dichlorobenzidine	NL	µg/kg	380 U	210 U	210 U	240 U	230 U
3-Nitroaniline	NL	µg/kg	730 U	410 U	400 U	470 U	450 U
4,6-Dinitro-2-methylphenol	NL	µg/kg	730 U	410 U	400 U	470 U	450 U
4-Bromophenyl-phenylether	NL	µg/kg	380 U	210 U	210 U	240 U	230 U
4-Chloro-3-methylphenol	NL	µg/kg	380 U	210 U	210 U	240 U	230 U
4-Chloroaniline	NL	µg/kg	380 U	210 U	210 U	240 U	230 U
4-Chlorophenyl-phenylether	NL	µg/kg	380 U	210 U	210 U	240 U	230 U
4-Methylphenol	NL	µg/kg	380 U	210 U	210 U	240 U	230 U
4-Nitroaniline	NL	µg/kg	730 U	410 U	400 U	470 U	450 U
4-Nitrophenol	NL	µg/kg	730 U	410 U	400 U	470 U	450 U
Acenaphthene	NL	µg/kg	7.3 U	4.1 U	4 U	4.7 U	4.5 U
Acenaphthylene	NL	µg/kg	7.3 U	4.1 U	4 U	4.7 U	4.5 U
Acetophenone	NL	µg/kg	380 U	210 U	210 U	240 U	230 U
Anthracene	845	µg/kg	7.3 U	4.1 U	4 U	4.7 U	4.5 U
Atrazine	NL	µg/kg	380 U	210 U	210 U	240 U	230 U
Benzaldehyde	NL	µg/kg	380 U	210 U	210 U	240 U	230 U
Benzo(a)anthracene	1050	µg/kg	13	4.1 U	6.7	6.8	4.5 U
Benzo(a)pyrene	1450	µg/kg	18	4.1 U	12	13	8.2

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Table B-1
Sediment Sample Analytical Results - SVOCs
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-28	LMR11-28	LMR11-29	LMR11-30	LMR11-31
		Field Sample ID	LMR11-28-006	LMR11-28-034	LMR11-29-006	LMR11-30-006	LMR11-31-006
		Sample Date	8/10/2011	8/10/2011	8/4/2011	8/4/2011	8/4/2011
		Depth Interval (in bss)	0- 6	6- 34	0- 6	0- 6	0- 6
Chemical Name	**PEC[1]**	**Unit**					
Benzo(b)fluoranthene	NL	µg/kg	31	4.1 U	10	9	5.2
Benzo(g,h,i)perylene	NL	µg/kg	14	4.1 U	4.3	4.7 U	4.5 U
Benzo(k)fluoranthene	NL	µg/kg	12	4.1 U	5	5.5	4.5 U
Bis(2-chloroethoxy)methane	NL	µg/kg	380 U	210 U	210 U	240 U	230 U
Bis(2-chloroethyl)ether	NL	µg/kg	380 U	210 U	210 U	240 U	230 U
Bis(2-ethylhexyl)phthalate	NL	µg/kg	100 J	210 U	210 U	240 U	230 U
Butylbenzylphthalate	NL	µg/kg	380 U	210 U	210 U	240 U	230 U
Caprolactam	NL	µg/kg	380 U	210 U	210 U	240 U	230 U
Carbazole	NL	µg/kg	380 U	210 U	210 U	240 U	230 U
Chrysene	1290	µg/kg	18	5.8	6.8	7.9	4.5 U
Dibenzo(a,h)anthracene	NL	µg/kg	7.3 U	4.1 U	4 U	4.7 U	4.5 U
Dibenzofuran	NL	µg/kg	380 U	210 U	210 U	240 U	230 U
Diethylphthalate	NL	µg/kg	380 U	210 U	210 U	240 U	230 U
Dimethylphthalate	NL	µg/kg	380 U	210 U	210 U	240 U	230 U
Di-n-butylphthalate	NL	µg/kg	380 U	210 U	210 U	240 U	230 U
Di-n-octylphthalate	NL	µg/kg	380 U	210 U	210 U	240 U	230 U
Fluoranthene	2230	µg/kg	49	9	12	11	5.9
Fluorene	536	µg/kg	7.3 U	4.1 U	4 U	4.7 U	4.5 U
Hexachlorobenzene	NL	µg/kg	380 U	210 U	210 U	240 U	230 U
Hexachlorobutadiene	NL	µg/kg	380 U	210 U	210 U	240 U	230 U
Hexachlorocyclopentadiene	NL	µg/kg	380 U	210 U	210 U	240 U	230 U
Hexachloroethane	NL	µg/kg	380 U	210 U	210 U	240 U	230 U
Indeno(1,2,3-cd)pyrene	NL	µg/kg	12	4.1 U	5.3	4.7 U	4.5 U
Isophorone	NL	µg/kg	380 U	210 U	210 U	240 U	230 U
Naphthalene	561	µg/kg	7.3 U	4.1 U	4 U	4.7 U	4.5 U
Nitrobenzene	NL	µg/kg	380 U	210 U	210 U	240 U	230 U
N-Nitroso-di-n-propylamine	NL	µg/kg	380 U	210 U	210 U	240 U	230 U
N-Nitrosodiphenylamine	NL	µg/kg	380 U	210 U	210 U	240 U	230 U
Pentachlorophenol	NL	µg/kg	15 UJ	8.2 UJ	8.2 U	9.6 U	9 U
Phenanthrene	1170	µg/kg	30	16	4.9	6.9	4.5 U
Phenol	NL	µg/kg	380 U	210 U	210 U	240 U	230 U
Pyrene	1520	µg/kg	30	6.4	11	11	7.2
Total PAH 17	22800	µg/kg	252.55	63.85	92	92.25	55.75
TOC	NL	mg/kg	20,000	4,270	19,700	22,200	27,900

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Table B-1
Sediment Sample Analytical Results - SVOCs
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-32	LMR11-32	LMR11-32	LMR11-32	LMR11-32
		Field Sample ID	LMR11-32-006	LMR11-32-024	LMR11-32-048	LMR11-32-072	LMR11-32-096
		Sample Date	8/10/2011	8/10/2011	8/10/2011	8/10/2011	8/10/2011
		Depth Interval (in bss)	0- 6	6- 24	24- 48	48- 72	72- 96
Chemical Name	**PEC[1]**	**Unit**					
1,1'-Biphenyl	NL	µg/kg	340 U	290 U	280 U	230 U	230 U
1,2,4,5-Tetrachlorobenzene	NL	µg/kg	340 U	290 U	280 U	230 U	230 U
2,2'-Oxybis(1-chloropropane)	NL	µg/kg	340 U	290 U	280 U	230 U	230 U
2,3,4,6-Tetrachlorophenol	NL	µg/kg	340 U	290 U	280 U	230 U	230 U
2,4,5-Trichlorophenol	NL	µg/kg	340 U	290 U	280 U	230 U	230 U
2,4,6-Trichlorophenol	NL	µg/kg	340 U	290 U	280 U	230 U	230 U
2,4-Dichlorophenol	NL	µg/kg	340 U	290 U	280 U	230 U	230 U
2,4-Dimethylphenol	NL	µg/kg	340 U	290 U	280 U	230 U	230 U
2,4-Dinitrophenol	NL	µg/kg	650 U	570 U	550 U	450 U	440 U
2,4-Dinitrotoluene	NL	µg/kg	340 U	290 U	280 U	230 U	230 U
2,6-Dinitrotoluene	NL	µg/kg	340 U	290 U	280 U	230 U	230 U
2-Chloronaphthalene	NL	µg/kg	340 U	290 U	280 U	230 U	230 U
2-Chlorophenol	NL	µg/kg	340 U	290 U	280 U	230 U	230 U
2-Methylnaphthalene	NL	µg/kg	6.5 U	5.7 U	5.5 U	18	62
2-Methylphenol	NL	µg/kg	340 UJ	290 UJ	280 UJ	230 UJ	230 UJ
2-Nitroaniline	NL	µg/kg	650 U	570 U	550 U	450 U	440 U
2-Nitrophenol	NL	µg/kg	340 U	290 U	280 U	230 U	230 U
3,3'-Dichlorobenzidine	NL	µg/kg	340 U	290 U	280 U	230 U	230 U
3-Nitroaniline	NL	µg/kg	650 U	570 U	550 U	450 U	440 U
4,6-Dinitro-2-methylphenol	NL	µg/kg	650 U	570 U	550 U	450 U	440 U
4-Bromophenyl-phenylether	NL	µg/kg	340 U	290 U	280 U	230 U	230 U
4-Chloro-3-methylphenol	NL	µg/kg	340 U	290 U	280 U	230 U	230 U
4-Chloroaniline	NL	µg/kg	340 U	290 U	280 U	230 U	230 U
4-Chlorophenyl-phenylether	NL	µg/kg	340 U	290 U	280 U	230 U	230 U
4-Methylphenol	NL	µg/kg	340 U	290 U	280 U	230 U	230 U
4-Nitroaniline	NL	µg/kg	650 U	570 U	550 U	450 U	440 U
4-Nitrophenol	NL	µg/kg	650 U	570 U	550 U	450 U	440 U
Acenaphthene	NL	µg/kg	6.5 U	5.7 U	5.5 U	14	89
Acenaphthylene	NL	µg/kg	6.5 U	5.7 U	6.7	20	35
Acetophenone	NL	µg/kg	340 U	290 U	280 U	230 U	230 U
Anthracene	845	µg/kg	15	16	16	31	210
Atrazine	NL	µg/kg	340 U	290 U	280 U	230 U	230 U
Benzaldehyde	NL	µg/kg	340 U	290 U	280 U	230 U	230 U
Benzo(a)anthracene	1050	µg/kg	64	37	40	130	450
Benzo(a)pyrene	1450	µg/kg	80	50	49	110	320

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Table B-1
Sediment Sample Analytical Results - SVOCs
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-32	LMR11-32	LMR11-32	LMR11-32	LMR11-32
		Field Sample ID	LMR11-32-006	LMR11-32-024	LMR11-32-048	LMR11-32-072	LMR11-32-096
		Sample Date	8/10/2011	8/10/2011	8/10/2011	8/10/2011	8/10/2011
		Depth Interval (in bss)	0- 6	6- 24	24- 48	48- 72	72- 96
Chemical Name	**PEC[1]**	**Unit**					
Benzo(b)fluoranthene	NL	µg/kg	130	66	56	150	420
Benzo(g,h,i)perylene	NL	µg/kg	54	29	35	68	220
Benzo(k)fluoranthene	NL	µg/kg	43	25	25	55	180
Bis(2-chloroethoxy)methane	NL	µg/kg	340 U	290 U	280 U	230 U	230 U
Bis(2-chloroethyl)ether	NL	µg/kg	340 U	290 U	280 U	230 U	230 U
Bis(2-ethylhexyl)phthalate	NL	µg/kg	340 U	180 J	230 J	230 U	230 U
Butylbenzylphthalate	NL	µg/kg	340 U	290 U	280 U	230 U	230 U
Caprolactam	NL	µg/kg	340 U	290 U	280 U	230 U	230 U
Carbazole	NL	µg/kg	340 U	290 U	280 U	230 U	64 J
Chrysene	1290	µg/kg	83	42	44	130	390
Dibenzo(a,h)anthracene	NL	µg/kg	16	5.7 U	10	31	74
Dibenzofuran	NL	µg/kg	340 U	290 U	280 U	230 U	50 J
Diethylphthalate	NL	µg/kg	340 U	290 U	280 U	230 U	230 U
Dimethylphthalate	NL	µg/kg	340 U	290 U	280 U	230 U	230 U
Di-n-butylphthalate	NL	µg/kg	340 U	290 U	280 U	230 U	230 U
Di-n-octylphthalate	NL	µg/kg	340 U	290 U	280 U	230 U	230 U
Fluoranthene	2230	µg/kg	180	100	92	220	940
Fluorene	536	µg/kg	6.5 U	5.7 U	5.7	15	100
Hexachlorobenzene	NL	µg/kg	340 U	290 U	280 U	230 U	230 U
Hexachlorobutadiene	NL	µg/kg	340 U	290 U	280 U	230 U	230 U
Hexachlorocyclopentadiene	NL	µg/kg	340 U	290 U	280 U	230 U	230 U
Hexachloroethane	NL	µg/kg	340 U	290 U	280 U	230 U	230 U
Indeno(1,2,3-cd)pyrene	NL	µg/kg	52	27	32	63	190
Isophorone	NL	µg/kg	340 U	290 U	280 U	230 U	230 U
Naphthalene	561	µg/kg	6.5 U	5.7 U	6	22	73
Nitrobenzene	NL	µg/kg	340 U	290 U	280 U	230 U	230 U
N-Nitroso-di-n-propylamine	NL	µg/kg	340 U	290 U	280 U	230 U	230 U
N-Nitrosodiphenylamine	NL	µg/kg	340 U	290 U	280 U	230 U	230 U
Pentachlorophenol	NL	µg/kg	13 U	12 U	11 U	9.2 U	8.9 U
Phenanthrene	1170	µg/kg	81	73	62	130	740
Phenol	NL	µg/kg	340 U	290 U	280 U	230 U	230 U
Pyrene	1520	µg/kg	120	73	59	210	710
Total PAH 17	22800	µg/kg	934.25	555.1	543.9	1,417	5,203
TOC	NL	mg/kg	29,600	33,500	22,900	21,400	66,200

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Table B-1
Sediment Sample Analytical Results - SVOCs
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-32	LMR11-33	LMR11-34	LMR11-35	LMR11-35
		Field Sample ID	LMR11-32-116	LMR11-33-006	LMR11-34-006	LMR11-35-006	LMR11-35-024
		Sample Date	8/10/2011	8/4/2011	8/4/2011	8/10/2011	8/10/2011
		Depth Interval (in bss)	96- 116	0- 6	0- 6	0- 6	6- 24
Chemical Name	**PEC[1]**	**Unit**					
1,1'-Biphenyl	NL	µg/kg	240 U	190 U	240 U	340 U	300 U
1,2,4,5-Tetrachlorobenzene	NL	µg/kg	240 U	190 U	240 U	340 U	300 U
2,2'-Oxybis(1-chloropropane)	NL	µg/kg	240 U	190 U	240 U	340 U	300 U
2,3,4,6-Tetrachlorophenol	NL	µg/kg	240 U	190 U	240 U	340 U	300 U
2,4,5-Trichlorophenol	NL	µg/kg	240 U	190 U	240 U	340 U	300 U
2,4,6-Trichlorophenol	NL	µg/kg	240 U	190 U	240 U	340 U	300 U
2,4-Dichlorophenol	NL	µg/kg	240 U	190 U	240 U	340 U	300 U
2,4-Dimethylphenol	NL	µg/kg	240 U	190 U	240 U	340 U	300 U
2,4-Dinitrophenol	NL	µg/kg	470 U	360 U	470 U	650 U	590 U
2,4-Dinitrotoluene	NL	µg/kg	240 U	190 U	240 U	340 U	300 U
2,6-Dinitrotoluene	NL	µg/kg	240 U	190 U	240 U	340 U	300 U
2-Chloronaphthalene	NL	µg/kg	240 U	190 U	240 U	340 U	300 U
2-Chlorophenol	NL	µg/kg	240 U	190 U	240 U	340 U	300 U
2-Methylnaphthalene	NL	µg/kg	38	3.6 U	4.7 U	6.5 U	5.9 U
2-Methylphenol	NL	µg/kg	240 UJ	190 U	240 U	340 U	300 U
2-Nitroaniline	NL	µg/kg	470 U	360 U	470 U	650 U	590 U
2-Nitrophenol	NL	µg/kg	240 U	190 U	240 U	340 U	300 U
3,3'-Dichlorobenzidine	NL	µg/kg	240 U	190 U	240 U	340 U	300 U
3-Nitroaniline	NL	µg/kg	470 U	360 U	470 U	650 U	590 U
4,6-Dinitro-2-methylphenol	NL	µg/kg	470 U	360 U	470 U	650 U	590 U
4-Bromophenyl-phenylether	NL	µg/kg	240 U	190 U	240 U	340 U	300 U
4-Chloro-3-methylphenol	NL	µg/kg	240 U	190 U	240 U	340 U	300 U
4-Chloroaniline	NL	µg/kg	240 U	190 U	240 U	340 U	300 U
4-Chlorophenyl-phenylether	NL	µg/kg	240 U	190 U	240 U	340 U	300 U
4-Methylphenol	NL	µg/kg	240 U	190 U	240 U	340 U	300 U
4-Nitroaniline	NL	µg/kg	470 U	360 U	470 U	650 U	590 U
4-Nitrophenol	NL	µg/kg	470 U	360 U	470 U	650 U	590 U
Acenaphthene	NL	µg/kg	58	3.6 U	4.7 U	6.5 U	5.9 U
Acenaphthylene	NL	µg/kg	29	3.6 U	4.7 U	6.5 U	5.9 U
Acetophenone	NL	µg/kg	240 U	190 U	240 U	340 U	300 U
Anthracene	845	µg/kg	93	3.6 U	4.7 U	6.5 U	5.9 U
Atrazine	NL	µg/kg	240 U	190 U	240 U	340 U	300 U
Benzaldehyde	NL	µg/kg	240 U	190 U	240 U	340 U	300 U
Benzo(a)anthracene	1050	µg/kg	200	3.6 U	4.7 U	6.5 U	6.5
Benzo(a)pyrene	1450	µg/kg	160	6.6	4.7 U	6.5 U	7.4

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Table B-1
Sediment Sample Analytical Results - SVOCs
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-32	LMR11-33	LMR11-34	LMR11-35	LMR11-35
		Field Sample ID	LMR11-32-116	LMR11-33-006	LMR11-34-006	LMR11-35-006	LMR11-35-024
		Sample Date	8/10/2011	8/4/2011	8/4/2011	8/10/2011	8/10/2011
		Depth Interval (in bss)	96- 116	0- 6	0- 6	0- 6	6- 24
Chemical Name	**PEC[1]**	**Unit**					
Benzo(b)fluoranthene	NL	µg/kg	220	3.6 U	4.7 U	7	11
Benzo(g,h,i)perylene	NL	µg/kg	94	3.6 U	4.7 U	6.5 U	5.9 U
Benzo(k)fluoranthene	NL	µg/kg	60	3.6 U	4.7 U	6.5 U	5.9 U
Bis(2-chloroethoxy)methane	NL	µg/kg	240 U	190 U	240 U	340 U	300 U
Bis(2-chloroethyl)ether	NL	µg/kg	240 U	190 U	240 U	340 U	300 U
Bis(2-ethylhexyl)phthalate	NL	µg/kg	240 U	190 U	240 U	340 U	300 U
Butylbenzylphthalate	NL	µg/kg	240 U	190 U	240 U	340 U	300 U
Caprolactam	NL	µg/kg	240 U	190 U	240 U	340 U	300 U
Carbazole	NL	µg/kg	240 U	190 U	240 U	340 U	300 U
Chrysene	1290	µg/kg	200	3.6 U	4.7 U	7.9	7.5
Dibenzo(a,h)anthracene	NL	µg/kg	39	3.6 U	4.7 U	6.5 U	5.9 U
Dibenzofuran	NL	µg/kg	240 U	190 U	240 U	340 U	300 U
Diethylphthalate	NL	µg/kg	240 U	190 U	240 U	340 U	300 U
Dimethylphthalate	NL	µg/kg	240 U	190 U	240 U	340 U	300 U
Di-n-butylphthalate	NL	µg/kg	240 U	190 U	240 U	340 U	300 U
Di-n-octylphthalate	NL	µg/kg	240 U	190 U	240 U	340 U	300 U
Fluoranthene	2230	µg/kg	530	3.8	5.1	25	22
Fluorene	536	µg/kg	71	3.6 U	4.7 U	6.5 U	5.9 U
Hexachlorobenzene	NL	µg/kg	240 U	190 U	240 U	340 U	300 U
Hexachlorobutadiene	NL	µg/kg	240 U	190 U	240 U	340 U	300 U
Hexachlorocyclopentadiene	NL	µg/kg	240 U	190 U	240 U	340 U	300 U
Hexachloroethane	NL	µg/kg	240 U	190 U	240 U	340 U	300 U
Indeno(1,2,3-cd)pyrene	NL	µg/kg	84	3.6 U	4.7 U	6.5 U	5.9 U
Isophorone	NL	µg/kg	240 U	190 U	240 U	340 U	300 U
Naphthalene	561	µg/kg	34	3.6 U	4.7 U	6.5 U	5.9 U
Nitrobenzene	NL	µg/kg	240 U	190 U	240 U	340 U	300 U
N-Nitroso-di-n-propylamine	NL	µg/kg	240 U	190 U	240 U	340 U	300 U
N-Nitrosodiphenylamine	NL	µg/kg	240 U	190 U	240 U	340 U	300 U
Pentachlorophenol	NL	µg/kg	9.5 U	7.4 U	9.4 U	13 U	12 U
Phenanthrene	1170	µg/kg	460	3.6 U	4.7 U	19	16
Phenol	NL	µg/kg	240 U	190 U	240 U	340 U	300 U
Pyrene	1520	µg/kg	430	5.2	5.7	17	15
Total PAH 17	22800	µg/kg	2,800	40.8	46.05	114.9	114.9
TOC	NL	mg/kg	17,700	19,700	18,300	36,000	27,700

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Table B-1
Sediment Sample Analytical Results - SVOCs
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-35	LMR11-35	LMR11-35	LMR11-35	LMR11-35
		Field Sample ID	LMR11-35-024FS	LMR11-35-048	LMR11-35-072	LMR11-35-096	LMR11-35-116
		Sample Date	8/10/2011	8/10/2011	8/10/2011	8/10/2011	8/10/2011
		Depth Interval (in bss)	6- 24	24- 48	48- 72	72- 96	96- 116
Chemical Name	**PEC[1]**	**Unit**					
1,1'-Biphenyl	NL	µg/kg	310 U	330 U	290 U	310 U	260 U
1,2,4,5-Tetrachlorobenzene	NL	µg/kg	310 U	330 U	290 U	310 U	260 U
2,2'-Oxybis(1-chloropropane)	NL	µg/kg	310 U	330 U	290 U	310 U	260 U
2,3,4,6-Tetrachlorophenol	NL	µg/kg	310 U	330 U	290 U	310 U	260 U
2,4,5-Trichlorophenol	NL	µg/kg	310 U	330 U	290 U	310 U	260 U
2,4,6-Trichlorophenol	NL	µg/kg	310 U	330 U	290 U	310 U	260 U
2,4-Dichlorophenol	NL	µg/kg	310 U	330 U	290 U	310 U	260 U
2,4-Dimethylphenol	NL	µg/kg	310 U	330 U	290 U	310 U	260 U
2,4-Dinitrophenol	NL	µg/kg	600 U	630 U	570 U	590 U	500 U
2,4-Dinitrotoluene	NL	µg/kg	310 U	330 U	290 U	310 U	260 U
2,6-Dinitrotoluene	NL	µg/kg	310 U	330 U	290 U	310 U	260 U
2-Chloronaphthalene	NL	µg/kg	310 U	330 U	290 U	310 U	260 U
2-Chlorophenol	NL	µg/kg	310 U	330 U	290 U	310 U	260 U
2-Methylnaphthalene	NL	µg/kg	6 U	6.3 U	5.7 U	5.9 U	5 U
2-Methylphenol	NL	µg/kg	310 U	330 U	290 U	310 U	260 U
2-Nitroaniline	NL	µg/kg	600 U	630 U	570 U	590 U	500 U
2-Nitrophenol	NL	µg/kg	310 U	330 U	290 U	310 U	260 U
3,3'-Dichlorobenzidine	NL	µg/kg	310 U	330 U	290 U	310 U	260 U
3-Nitroaniline	NL	µg/kg	600 U	630 U	570 U	590 U	500 U
4,6-Dinitro-2-methylphenol	NL	µg/kg	600 U	630 U	570 U	590 U	500 U
4-Bromophenyl-phenylether	NL	µg/kg	310 U	330 U	290 U	310 U	260 U
4-Chloro-3-methylphenol	NL	µg/kg	310 U	330 U	290 U	310 U	260 U
4-Chloroaniline	NL	µg/kg	310 U	330 U	290 U	310 U	260 U
4-Chlorophenyl-phenylether	NL	µg/kg	310 U	330 U	290 U	310 U	260 U
4-Methylphenol	NL	µg/kg	310 U	330 U	290 U	310 U	260 U
4-Nitroaniline	NL	µg/kg	600 U	630 U	570 U	590 U	500 U
4-Nitrophenol	NL	µg/kg	600 U	630 U	570 U	590 U	500 U
Acenaphthene	NL	µg/kg	6 U	6.3 U	5.7 U	5.9 U	5 U
Acenaphthylene	NL	µg/kg	6 U	6.3 U	5.7 U	5.9 U	5 U
Acetophenone	NL	µg/kg	310 U	330 U	290 U	310 U	260 U
Anthracene	845	µg/kg	6 U	6.3 U	5.7 U	5.9 U	5.5
Atrazine	NL	µg/kg	310 U	330 U	290 U	310 U	260 U
Benzaldehyde	NL	µg/kg	310 U	330 U	290 U	310 U	260 U
Benzo(a)anthracene	1050	µg/kg	6 U	6.3 U	5.7 U	7.2	27
Benzo(a)pyrene	1450	µg/kg	6 U	6.3 U	5.7 U	5.9 U	34

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Table B-1
Sediment Sample Analytical Results - SVOCs
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-35	LMR11-35	LMR11-35	LMR11-35	LMR11-35
		Field Sample ID	LMR11-35-024FS	LMR11-35-048	LMR11-35-072	LMR11-35-096	LMR11-35-116
		Sample Date	8/10/2011	8/10/2011	8/10/2011	8/10/2011	8/10/2011
		Depth Interval (in bss)	6- 24	24- 48	48- 72	72- 96	96- 116
Chemical Name	**PEC[1]**	**Unit**					
Benzo(b)fluoranthene	NL	µg/kg	6.2	6.9	5.7 U	7.1	42
Benzo(g,h,i)perylene	NL	µg/kg	6 U	6.3 U	5.7 U	5.9 U	16
Benzo(k)fluoranthene	NL	µg/kg	6 U	6.3 U	5.7 U	5.9 U	15
Bis(2-chloroethoxy)methane	NL	µg/kg	310 U	330 U	290 U	310 U	260 U
Bis(2-chloroethyl)ether	NL	µg/kg	310 U	330 U	290 U	310 U	260 U
Bis(2-ethylhexyl)phthalate	NL	µg/kg	310 U	330 U	290 U	310 U	260 U
Butylbenzylphthalate	NL	µg/kg	310 U	330 U	290 U	310 U	260 U
Caprolactam	NL	µg/kg	130 J	330 U	290 U	310 U	260 U
Carbazole	NL	µg/kg	310 U	330 U	290 U	310 U	260 U
Chrysene	1290	µg/kg	7.2	6.3 U	5.7 U	9.5	27
Dibenzo(a,h)anthracene	NL	µg/kg	6 U	6.3 U	5.7 U	5.9 U	5.1
Dibenzofuran	NL	µg/kg	310 U	330 U	290 U	310 U	260 U
Diethylphthalate	NL	µg/kg	310 U	330 U	290 U	310 U	260 U
Dimethylphthalate	NL	µg/kg	310 U	330 U	290 U	310 U	260 U
Di-n-butylphthalate	NL	µg/kg	310 U	330 U	290 U	310 U	260 U
Di-n-octylphthalate	NL	µg/kg	310 U	330 U	290 U	310 U	260 U
Fluoranthene	2230	µg/kg	24	13	6.1	30	37
Fluorene	536	µg/kg	6 U	6.3 U	5.7 U	5.9 U	5 U
Hexachlorobenzene	NL	µg/kg	310 U	330 U	290 U	310 U	260 U
Hexachlorobutadiene	NL	µg/kg	310 U	330 U	290 U	310 U	260 U
Hexachlorocyclopentadiene	NL	µg/kg	310 U	330 U	290 U	310 U	260 U
Hexachloroethane	NL	µg/kg	310 U	330 U	290 U	310 U	260 U
Indeno(1,2,3-cd)pyrene	NL	µg/kg	6 U	6.3 U	5.7 U	5.9 U	16
Isophorone	NL	µg/kg	310 U	330 U	290 U	310 U	260 U
Naphthalene	561	µg/kg	6 U	6.3 U	5.7 U	5.9 U	5 U
Nitrobenzene	NL	µg/kg	310 U	330 U	290 U	310 U	260 U
N-Nitroso-di-n-propylamine	NL	µg/kg	310 U	330 U	290 U	310 U	260 U
N-Nitrosodiphenylamine	NL	µg/kg	310 U	330 U	290 U	310 U	260 U
Pentachlorophenol	NL	µg/kg	12 U	13 U	11 U	12 U	10 U
Phenanthrene	1170	µg/kg	17	9	5.7 U	21	22
Phenol	NL	µg/kg	310 U	330 U	290 U	310 U	260 U
Pyrene	1520	µg/kg	17	9.8	5.7 U	19	43
Total PAH 17	22800	µg/kg	107.4	79.65	51.7	126.25	302.1
TOC	NL	mg/kg	27,000	27,500	22,100	25,400	26,700

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Table B-1
Sediment Sample Analytical Results - SVOCs
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-36	LMR11-37	LMR11-37	LMR11-37	LMR11-37
		Field Sample ID	LMR11-36-006	LMR11-37-006	LMR11-37-024	LMR11-37-048	LMR11-37-048-DP
		Sample Date	8/4/2011	8/10/2011	8/10/2011	8/10/2011	8/10/2011
		Depth Interval (in bss)	0- 6	0- 6	6- 24	24- 48	24- 48
Chemical Name	**PEC[1]**	**Unit**					
1,1'-Biphenyl	NL	µg/kg	160 U	320 U	320 U	310 U	300 U
1,2,4,5-Tetrachlorobenzene	NL	µg/kg	160 U	320 U	320 U	310 U	300 U
2,2'-Oxybis(1-chloropropane)	NL	µg/kg	160 U	320 U	320 U	310 U	300 U
2,3,4,6-Tetrachlorophenol	NL	µg/kg	160 U	320 U	320 U	310 U	300 U
2,4,5-Trichlorophenol	NL	µg/kg	160 U	320 U	320 U	310 U	300 U
2,4,6-Trichlorophenol	NL	µg/kg	160 U	320 U	320 U	310 U	300 U
2,4-Dichlorophenol	NL	µg/kg	160 U	320 U	320 U	310 U	300 U
2,4-Dimethylphenol	NL	µg/kg	160 U	320 U	320 U	310 U	300 U
2,4-Dinitrophenol	NL	µg/kg	310 U	620 U	630 U	590 U	590 U
2,4-Dinitrotoluene	NL	µg/kg	160 U	320 U	320 U	310 U	300 U
2,6-Dinitrotoluene	NL	µg/kg	160 U	320 U	320 U	310 U	300 U
2-Chloronaphthalene	NL	µg/kg	160 U	320 U	320 U	310 U	300 U
2-Chlorophenol	NL	µg/kg	160 U	320 U	320 U	310 U	300 U
2-Methylnaphthalene	NL	µg/kg	3.1 U	6.2 U	6.3 U	5.9 U	5.9 U
2-Methylphenol	NL	µg/kg	160 U	320 U	320 U	310 U	300 U
2-Nitroaniline	NL	µg/kg	310 U	620 U	630 U	590 U	590 U
2-Nitrophenol	NL	µg/kg	160 U	320 U	320 U	310 U	300 U
3,3'-Dichlorobenzidine	NL	µg/kg	160 U	320 U	320 U	310 U	300 U
3-Nitroaniline	NL	µg/kg	310 U	620 U	630 U	590 U	590 U
4,6-Dinitro-2-methylphenol	NL	µg/kg	310 U	620 U	630 U	590 U	590 U
4-Bromophenyl-phenylether	NL	µg/kg	160 U	320 U	320 U	310 U	300 U
4-Chloro-3-methylphenol	NL	µg/kg	160 U	320 U	320 U	310 U	300 U
4-Chloroaniline	NL	µg/kg	160 U	320 U	320 U	310 U	300 U
4-Chlorophenyl-phenylether	NL	µg/kg	160 U	320 U	320 U	310 U	300 U
4-Methylphenol	NL	µg/kg	160 U	320 U	320 U	310 U	300 U
4-Nitroaniline	NL	µg/kg	310 U	620 U	630 U	590 U	590 U
4-Nitrophenol	NL	µg/kg	310 U	620 U	630 U	590 U	590 U
Acenaphthene	NL	µg/kg	3.1 U	6.2 U	6.3 U	5.9 U	5.9 U
Acenaphthylene	NL	µg/kg	3.1 U	6.2 U	6.3 U	5.9 U	5.9 U
Acetophenone	NL	µg/kg	160 U	320 U	320 U	310 U	300 U
Anthracene	845	µg/kg	3.1 U	6.2 U	6.3 U	5.9 U	5.9 U
Atrazine	NL	µg/kg	160 U	320 U	320 U	310 U	300 U
Benzaldehyde	NL	µg/kg	160 U	320 U	320 U	310 U	300 U
Benzo(a)anthracene	1050	µg/kg	3.1 U	6.2 U	6.3 U	5.9 U	5.9 U
Benzo(a)pyrene	1450	µg/kg	3.1 U	6.2 U	7.5	5.9 U	5.9 U

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Table B-1
Sediment Sample Analytical Results - SVOCs
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-36	LMR11-37	LMR11-37	LMR11-37	LMR11-37
		Field Sample ID	LMR11-36-006	LMR11-37-006	LMR11-37-024	LMR11-37-048	LMR11-37-048-DP
		Sample Date	8/4/2011	8/10/2011	8/10/2011	8/10/2011	8/10/2011
		Depth Interval (in bss)	0- 6	0- 6	6- 24	24- 48	24- 48
Chemical Name	**PEC[1]**	**Unit**					
Benzo(b)fluoranthene	NL	µg/kg	3.1 U	11	9.2	5.9 U	5.9 U
Benzo(g,h,i)perylene	NL	µg/kg	3.1 U	6.2 U	6.3 U	5.9 U	5.9 U
Benzo(k)fluoranthene	NL	µg/kg	3.1 U	6.2 U	6.3 U	5.9 U	5.9 U
Bis(2-chloroethoxy)methane	NL	µg/kg	160 U	320 U	320 U	310 U	300 U
Bis(2-chloroethyl)ether	NL	µg/kg	160 U	320 U	320 U	310 U	300 U
Bis(2-ethylhexyl)phthalate	NL	µg/kg	160 U	320 U	320 U	310 U	300 U
Butylbenzylphthalate	NL	µg/kg	160 U	320 U	320 U	310 U	300 U
Caprolactam	NL	µg/kg	160 U	320 U	320 U	310 U	300 U
Carbazole	NL	µg/kg	160 U	320 U	320 U	310 U	300 U
Chrysene	1290	µg/kg	3.1 U	6.4	6.3 U	5.9 U	5.9 U
Dibenzo(a,h)anthracene	NL	µg/kg	3.1 U	6.2 U	6.3 U	5.9 U	5.9 U
Dibenzofuran	NL	µg/kg	160 U	320 U	320 U	310 U	300 U
Diethylphthalate	NL	µg/kg	160 U	320 U	320 U	310 U	300 U
Dimethylphthalate	NL	µg/kg	160 U	320 U	320 U	310 U	300 U
Di-n-butylphthalate	NL	µg/kg	160 U	320 U	320 U	310 U	300 U
Di-n-octylphthalate	NL	µg/kg	160 U	320 U	320 U	310 U	300 U
Fluoranthene	2230	µg/kg	4.4	21	14	6.4	5.9 U
Fluorene	536	µg/kg	3.1 U	6.2 U	6.3 U	5.9 U	5.9 U
Hexachlorobenzene	NL	µg/kg	160 U	320 U	320 U	310 U	300 U
Hexachlorobutadiene	NL	µg/kg	160 U	320 U	320 U	310 U	300 U
Hexachlorocyclopentadiene	NL	µg/kg	160 U	320 U	320 U	310 U	300 U
Hexachloroethane	NL	µg/kg	160 U	320 U	320 U	310 U	300 U
Indeno(1,2,3-cd)pyrene	NL	µg/kg	3.1 U	6.2 U	6.3 U	5.9 U	5.9 U
Isophorone	NL	µg/kg	160 U	320 U	320 U	310 U	300 U
Naphthalene	561	µg/kg	3.1 U	6.2 U	6.3 U	5.9 U	5.9 U
Nitrobenzene	NL	µg/kg	160 U	320 U	320 U	310 U	300 U
N-Nitroso-di-n-propylamine	NL	µg/kg	160 U	320 U	320 U	310 U	300 U
N-Nitrosodiphenylamine	NL	µg/kg	160 U	320 U	320 U	310 U	300 U
Pentachlorophenol	NL	µg/kg	6.3 U	13 U	13 U	12 U	12 U
Phenanthrene	1170	µg/kg	3.1 U	15	9.9	5.9 U	5.9 U
Phenol	NL	µg/kg	160 U	320 U	320 U	310 U	300 U
Pyrene	1520	µg/kg	4.7 J	14	9.4	6.2	5.9 U
Total PAH 17	22800	µg/kg	32.35	104.6	87.8	56.85	50.15
TOC	NL	mg/kg	20,100	22,400	22,700	24,500	22,200

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Table B-1
Sediment Sample Analytical Results - SVOCs
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-37	LMR11-38	LMR11-38	LMR11-38	LMR11-38
		Field Sample ID	LMR11-37-072	LMR11-38-006	LMR11-38-024	LMR11-38-024-DP	LMR11-38-024FS
		Sample Date	8/10/2011	8/9/2011	8/9/2011	8/9/2011	8/9/2011
		Depth Interval (in bss)	48- 72	0- 6	6- 24	6- 24	6- 24
Chemical Name	**PEC[1]**	**Unit**					
1,1'-Biphenyl	NL	µg/kg	290 U	320 U	280 U	280 U	300 U
1,2,4,5-Tetrachlorobenzene	NL	µg/kg	290 U	320 U	280 U	280 U	300 U
2,2'-Oxybis(1-chloropropane)	NL	µg/kg	290 U	320 U	280 U	280 U	300 U
2,3,4,6-Tetrachlorophenol	NL	µg/kg	290 U	320 U	280 U	280 U	300 U
2,4,5-Trichlorophenol	NL	µg/kg	290 U	320 U	280 U	280 U	300 U
2,4,6-Trichlorophenol	NL	µg/kg	290 U	320 U	280 U	280 U	300 U
2,4-Dichlorophenol	NL	µg/kg	290 U	320 U	280 U	280 U	300 U
2,4-Dimethylphenol	NL	µg/kg	290 U	320 U	280 U	280 U	300 U
2,4-Dinitrophenol	NL	µg/kg	560 U	620 U	540 U	540 U	590 U
2,4-Dinitrotoluene	NL	µg/kg	290 U	320 U	280 U	280 U	300 U
2,6-Dinitrotoluene	NL	µg/kg	290 U	320 U	280 U	280 U	300 U
2-Chloronaphthalene	NL	µg/kg	290 U	320 U	280 U	280 U	300 U
2-Chlorophenol	NL	µg/kg	290 U	320 U	280 U	280 U	300 U
2-Methylnaphthalene	NL	µg/kg	5.6 U	6.2 U	5.4 U	5.4 U	5.9 U
2-Methylphenol	NL	µg/kg	290 U	320 U	280 U	280 U	300 U
2-Nitroaniline	NL	µg/kg	560 U	620 U	540 U	540 U	590 U
2-Nitrophenol	NL	µg/kg	290 U	320 U	280 U	280 U	300 U
3,3'-Dichlorobenzidine	NL	µg/kg	290 U	320 U	280 U	280 U	300 U
3-Nitroaniline	NL	µg/kg	560 U	620 U	540 U	540 U	590 U
4,6-Dinitro-2-methylphenol	NL	µg/kg	560 U	620 U	540 U	540 U	590 U
4-Bromophenyl-phenylether	NL	µg/kg	290 U	320 U	280 U	280 U	300 U
4-Chloro-3-methylphenol	NL	µg/kg	290 U	320 U	280 U	280 U	300 U
4-Chloroaniline	NL	µg/kg	290 U	320 U	280 U	280 U	300 U
4-Chlorophenyl-phenylether	NL	µg/kg	290 U	320 U	280 U	280 U	300 U
4-Methylphenol	NL	µg/kg	290 U	320 U	280 U	280 U	300 U
4-Nitroaniline	NL	µg/kg	560 U	620 U	540 U	540 U	590 U
4-Nitrophenol	NL	µg/kg	560 U	620 U	540 U	540 U	590 U
Acenaphthene	NL	µg/kg	5.6 U	6.2 U	5.4 U	5.4 U	5.9 U
Acenaphthylene	NL	µg/kg	5.6 U	6.2 U	5.4 U	5.4 U	5.9 U
Acetophenone	NL	µg/kg	290 U	320 U	280 U	280 U	300 U
Anthracene	845	µg/kg	5.6 U	6.2 U	5.9	5.4 U	5.9 U
Atrazine	NL	µg/kg	290 U	320 U	280 U	280 U	300 U
Benzaldehyde	NL	µg/kg	290 U	320 U	280 U	280 U	300 U
Benzo(a)anthracene	1050	µg/kg	5.6 U	6.7	21	10	14
Benzo(a)pyrene	1450	µg/kg	5.6 U	7	15	9.6	13

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Table B-1
Sediment Sample Analytical Results - SVOCs
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-37	LMR11-38	LMR11-38	LMR11-38	LMR11-38
		Field Sample ID	LMR11-37-072	LMR11-38-006	LMR11-38-024	LMR11-38-024-DP	LMR11-38-024FS
		Sample Date	8/10/2011	8/9/2011	8/9/2011	8/9/2011	8/9/2011
		Depth Interval (in bss)	48- 72	0- 6	6- 24	6- 24	6- 24
Chemical Name	**PEC[1]**	**Unit**					
Benzo(b)fluoranthene	NL	µg/kg	5.6 U	6.2 U	18	7.4	10
Benzo(g,h,i)perylene	NL	µg/kg	5.6 U	6.2 U	8.8	5.4 U	5.9 U
Benzo(k)fluoranthene	NL	µg/kg	5.6 U	6.2 U	7.6	5.4	6.9
Bis(2-chloroethoxy)methane	NL	µg/kg	290 U	320 U	280 U	280 U	300 U
Bis(2-chloroethyl)ether	NL	µg/kg	290 U	320 U	280 U	280 U	300 U
Bis(2-ethylhexyl)phthalate	NL	µg/kg	290 U	320 U	280 U	280 U	300 U
Butylbenzylphthalate	NL	µg/kg	290 U	320 U	280 U	280 U	300 U
Caprolactam	NL	µg/kg	290 U	320 U	280 U	280 U	300 U
Carbazole	NL	µg/kg	290 U	320 U	280 U	280 U	300 U
Chrysene	1290	µg/kg	5.6 U	7.8	24	11	15
Dibenzo(a,h)anthracene	NL	µg/kg	5.6 U	6.2 U	5.4 U	5.4 U	5.9 U
Dibenzofuran	NL	µg/kg	290 U	320 U	280 U	280 U	300 U
Diethylphthalate	NL	µg/kg	290 U	320 U	280 U	280 U	300 U
Dimethylphthalate	NL	µg/kg	290 U	320 U	280 U	280 U	300 U
Di-n-butylphthalate	NL	µg/kg	290 U	320 U	280 U	280 U	300 U
Di-n-octylphthalate	NL	µg/kg	290 U	320 U	280 U	280 U	300 U
Fluoranthene	2230	µg/kg	5.7	16	42	13	28
Fluorene	536	µg/kg	5.6 U	6.2 U	5.4 U	5.4 U	5.9 U
Hexachlorobenzene	NL	µg/kg	290 U	320 U	280 U	280 U	300 U
Hexachlorobutadiene	NL	µg/kg	290 U	320 U	280 U	280 U	300 U
Hexachlorocyclopentadiene	NL	µg/kg	290 U	320 U	280 U	280 U	300 U
Hexachloroethane	NL	µg/kg	290 U	320 U	280 U	280 U	300 U
Indeno(1,2,3-cd)pyrene	NL	µg/kg	5.6 U	6.2 U	7.8	5.4 U	5.9 U
Isophorone	NL	µg/kg	290 U	320 U	280 U	280 U	300 U
Naphthalene	561	µg/kg	5.6 U	6.2 U	5.4 U	5.4 U	5.9 U
Nitrobenzene	NL	µg/kg	290 U	320 U	280 U	280 U	300 U
N-Nitroso-di-n-propylamine	NL	µg/kg	290 U	320 U	280 U	280 U	300 U
N-Nitrosodiphenylamine	NL	µg/kg	290 U	320 U	280 U	280 U	300 U
Pentachlorophenol	NL	µg/kg	11 U	13 U	11 U	11 UJ	12 U
Phenanthrene	1170	µg/kg	5.6 U	9.1	22	5.8	18
Phenol	NL	µg/kg	290 U	320 U	280 U	280 U	300 U
Pyrene	1520	µg/kg	6	16	38	14	26
Total PAH 17	22800	µg/kg	53.7	96.7	226.3	100.5	157.45
TOC	NL	mg/kg	19,600	37,700	21,000	24,700	18,500

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Table B-1
Sediment Sample Analytical Results - SVOCs
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-38	LMR11-38	LMR11-38	LMR11-38	LMR11-39
		Field Sample ID	LMR11-38-048	LMR11-38-048-DP	LMR11-38-072	LMR11-38-072-DP	LMR11-39-006
		Sample Date	8/9/2011	8/9/2011	8/9/2011	8/9/2011	8/4/2011
		Depth Interval (in bss)	24- 48	24- 48	48- 72	48- 72	0- 6
Chemical Name	**PEC[1]**	**Unit**					
1,1'-Biphenyl	NL	µg/kg	290 U	290 U	290 U	310 U	150 U
1,2,4,5-Tetrachlorobenzene	NL	µg/kg	290 U	290 U	290 U	310 U	150 U
2,2'-Oxybis(1-chloropropane)	NL	µg/kg	290 U	290 U	290 U	310 U	150 U
2,3,4,6-Tetrachlorophenol	NL	µg/kg	290 U	290 U	290 U	310 U	150 U
2,4,5-Trichlorophenol	NL	µg/kg	290 U	290 U	290 U	310 U	150 U
2,4,6-Trichlorophenol	NL	µg/kg	290 U	290 U	290 U	310 U	150 U
2,4-Dichlorophenol	NL	µg/kg	290 U	290 U	290 U	310 U	150 U
2,4-Dimethylphenol	NL	µg/kg	290 U	290 U	290 U	310 U	150 U
2,4-Dinitrophenol	NL	µg/kg	560 U	560 U	570 U	610 U	290 U
2,4-Dinitrotoluene	NL	µg/kg	290 U	290 U	290 U	310 U	150 U
2,6-Dinitrotoluene	NL	µg/kg	290 U	290 U	290 U	310 U	150 U
2-Chloronaphthalene	NL	µg/kg	290 U	290 U	290 U	310 U	150 U
2-Chlorophenol	NL	µg/kg	290 U	290 U	290 U	310 U	150 U
2-Methylnaphthalene	NL	µg/kg	5.6 U	5.6 U	5.7 U	6.1 U	2.9 U
2-Methylphenol	NL	µg/kg	290 U	290 U	290 U	310 U	150 U
2-Nitroaniline	NL	µg/kg	560 U	560 U	570 U	610 U	290 U
2-Nitrophenol	NL	µg/kg	290 U	290 U	290 U	310 U	150 U
3,3'-Dichlorobenzidine	NL	µg/kg	290 U	290 U	290 U	310 U	150 U
3-Nitroaniline	NL	µg/kg	560 U	560 U	570 U	610 U	290 U
4,6-Dinitro-2-methylphenol	NL	µg/kg	560 U	560 U	570 U	610 U	290 U
4-Bromophenyl-phenylether	NL	µg/kg	290 U	290 U	290 U	310 U	150 U
4-Chloro-3-methylphenol	NL	µg/kg	290 U	290 U	290 U	310 U	150 U
4-Chloroaniline	NL	µg/kg	290 U	290 U	290 U	310 U	150 U
4-Chlorophenyl-phenylether	NL	µg/kg	290 U	290 U	290 U	310 U	150 U
4-Methylphenol	NL	µg/kg	290 U	290 U	290 U	310 U	150 U
4-Nitroaniline	NL	µg/kg	560 U	560 U	570 U	610 U	290 U
4-Nitrophenol	NL	µg/kg	560 U	560 U	570 U	610 U	290 U
Acenaphthene	NL	µg/kg	5.6 U	5.6 U	5.7 U	6.1 U	2.9 U
Acenaphthylene	NL	µg/kg	20	5.6 U	5.7 U	6.1 U	2.9 U
Acetophenone	NL	µg/kg	290 U	290 U	290 U	310 U	150 U
Anthracene	845	µg/kg	9.1	5.6 U	5.7 U	6.1 U	2.9 U
Atrazine	NL	µg/kg	290 U	290 U	290 U	310 U	150 U
Benzaldehyde	NL	µg/kg	290 U	290 U	290 U	310 U	150 U
Benzo(a)anthracene	1050	µg/kg	50	16	5.7 U	6.1 U	2.9 U
Benzo(a)pyrene	1450	µg/kg	31	12	5.7 U	6.1 U	5.3

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Table B-1
Sediment Sample Analytical Results - SVOCs
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-38	LMR11-38	LMR11-38	LMR11-38	LMR11-39
		Field Sample ID	LMR11-38-048	LMR11-38-048-DP	LMR11-38-072	LMR11-38-072-DP	LMR11-39-006
		Sample Date	8/9/2011	8/9/2011	8/9/2011	8/9/2011	8/4/2011
		Depth Interval (in bss)	24- 48	24- 48	48- 72	48- 72	0- 6
Chemical Name	**PEC[1]**	**Unit**					
Benzo(b)fluoranthene	NL	µg/kg	28	17	5.7 U	6.1 U	3.9
Benzo(g,h,i)perylene	NL	µg/kg	15	5.6 U	5.7 U	6.1 U	2.9 U
Benzo(k)fluoranthene	NL	µg/kg	12	8.7	5.7 U	6.1 U	2.9 U
Bis(2-chloroethoxy)methane	NL	µg/kg	290 U	290 U	290 U	310 U	150 U
Bis(2-chloroethyl)ether	NL	µg/kg	290 U	290 U	290 U	310 U	150 U
Bis(2-ethylhexyl)phthalate	NL	µg/kg	290 U	290 U	290 U	310 U	150 U
Butylbenzylphthalate	NL	µg/kg	290 U	290 U	290 U	310 U	150 U
Caprolactam	NL	µg/kg	290 U	290 U	290 U	310 U	150 U
Carbazole	NL	µg/kg	290 U	290 U	290 U	310 U	150 U
Chrysene	1290	µg/kg	47	20	5.7 U	7.1	3.8
Dibenzo(a,h)anthracene	NL	µg/kg	5.6 U	5.6 U	5.7 U	6.1 U	2.9 U
Dibenzofuran	NL	µg/kg	290 U	290 U	290 U	310 U	150 U
Diethylphthalate	NL	µg/kg	290 U	290 U	290 U	310 U	150 U
Dimethylphthalate	NL	µg/kg	290 U	290 U	290 U	310 U	150 U
Di-n-butylphthalate	NL	µg/kg	290 U	290 U	290 U	310 U	150 U
Di-n-octylphthalate	NL	µg/kg	290 U	290 U	290 U	310 U	150 U
Fluoranthene	2230	µg/kg	50	17	7.8	9.5	6.6
Fluorene	536	µg/kg	5.6 U	5.6 U	5.7 U	6.1 U	2.9 U
Hexachlorobenzene	NL	µg/kg	290 U	290 U	290 U	310 U	150 U
Hexachlorobutadiene	NL	µg/kg	290 U	290 U	290 U	310 U	150 U
Hexachlorocyclopentadiene	NL	µg/kg	290 U	290 U	290 U	310 U	150 U
Hexachloroethane	NL	µg/kg	290 U	290 U	290 U	310 U	150 U
Indeno(1,2,3-cd)pyrene	NL	µg/kg	12	5.6 U	5.7 U	6.1 U	2.9 U
Isophorone	NL	µg/kg	290 U	290 U	290 U	310 U	150 U
Naphthalene	561	µg/kg	5.6 U	5.6 U	5.7 U	6.1 U	2.9 U
Nitrobenzene	NL	µg/kg	290 U	290 U	290 U	310 U	150 U
N-Nitroso-di-n-propylamine	NL	µg/kg	290 U	290 U	290 U	310 U	150 U
N-Nitrosodiphenylamine	NL	µg/kg	290 U	290 U	290 U	310 U	150 U
Pentachlorophenol	NL	µg/kg	11 U	11 U	11 U	12 UJ	6 U
Phenanthrene	1170	µg/kg	10	11	5.7	7.3	4.4
Phenol	NL	µg/kg	290 U	290 U	290 U	310 U	150 U
Pyrene	1520	µg/kg	86	20	9.3	10 J	6.3
Total PAH 17	22800	µg/kg	384.1	146.9	62.7	73.55	46.25
TOC	NL	mg/kg	25,700	35,500	26,900	27,000	13,500

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Table B-1
Sediment Sample Analytical Results - SVOCs
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-40	LMR11-40	LMR11-40	LMR11-40	LMR11-41
		Field Sample ID	LMR11-40-006	LMR11-40-024	LMR11-40-048	LMR11-40-084	LMR11-41-006
		Sample Date	8/10/2011	8/10/2011	8/10/2011	8/10/2011	8/4/2011
		Depth Interval (in bss)	0- 6	6- 24	24- 48	48- 84	0- 6
Chemical Name	**PEC[1]**	**Unit**					
1,1'-Biphenyl	NL	µg/kg	220 U	220 U	240 U	210 U	200 U
1,2,4,5-Tetrachlorobenzene	NL	µg/kg	220 U	220 U	240 U	210 U	200 U
2,2'-Oxybis(1-chloropropane)	NL	µg/kg	220 U	220 U	240 U	210 U	200 U
2,3,4,6-Tetrachlorophenol	NL	µg/kg	220 U	220 U	240 U	210 U	200 U
2,4,5-Trichlorophenol	NL	µg/kg	220 U	220 U	240 U	210 U	200 U
2,4,6-Trichlorophenol	NL	µg/kg	220 U	220 U	240 U	210 U	200 U
2,4-Dichlorophenol	NL	µg/kg	220 U	220 U	240 U	210 U	200 U
2,4-Dimethylphenol	NL	µg/kg	220 U	220 U	240 U	210 U	200 U
2,4-Dinitrophenol	NL	µg/kg	420 U	420 U	460 U	410 U	400 U
2,4-Dinitrotoluene	NL	µg/kg	220 U	220 U	240 U	210 U	200 U
2,6-Dinitrotoluene	NL	µg/kg	220 U	220 U	240 U	210 U	200 U
2-Chloronaphthalene	NL	µg/kg	220 U	220 U	240 U	210 U	200 U
2-Chlorophenol	NL	µg/kg	220 U	220 U	240 U	210 U	200 U
2-Methylnaphthalene	NL	µg/kg	4.2 U	4.2 U	4.6 U	4.1 U	4 U
2-Methylphenol	NL	µg/kg	220 UJ	220 UJ	240 UJ	210 UJ	200 U
2-Nitroaniline	NL	µg/kg	420 U	420 U	460 U	410 U	400 U
2-Nitrophenol	NL	µg/kg	220 U	220 U	240 U	210 U	200 U
3,3'-Dichlorobenzidine	NL	µg/kg	220 U	220 U	240 U	210 U	200 U
3-Nitroaniline	NL	µg/kg	420 U	420 U	460 U	410 U	400 U
4,6-Dinitro-2-methylphenol	NL	µg/kg	420 U	420 U	460 U	410 U	400 U
4-Bromophenyl-phenylether	NL	µg/kg	220 U	220 U	240 U	210 U	200 U
4-Chloro-3-methylphenol	NL	µg/kg	220 U	220 U	240 U	210 U	200 U
4-Chloroaniline	NL	µg/kg	220 U	220 U	240 U	210 U	200 U
4-Chlorophenyl-phenylether	NL	µg/kg	220 U	220 U	240 U	210 U	200 U
4-Methylphenol	NL	µg/kg	220 U	220 U	240 U	210 U	200 U
4-Nitroaniline	NL	µg/kg	420 U	420 U	460 U	410 U	400 U
4-Nitrophenol	NL	µg/kg	420 U	420 U	460 U	410 U	400 U
Acenaphthene	NL	µg/kg	4.2 U	4.2 U	4.6 U	4.1 U	4 U
Acenaphthylene	NL	µg/kg	4.2 U	4.2 U	4.6 U	4.1 U	4 U
Acetophenone	NL	µg/kg	220 U	220 U	240 U	210 U	200 U
Anthracene	845	µg/kg	4.2 U	4.2 U	4.6 U	4.1 U	4 U
Atrazine	NL	µg/kg	220 U	220 U	240 U	210 U	200 U
Benzaldehyde	NL	µg/kg	220 U	220 U	240 U	210 U	200 U
Benzo(a)anthracene	1050	µg/kg	4.7	4.2 U	4.6 U	4.1 U	4.9
Benzo(a)pyrene	1450	µg/kg	4.6	4.2 U	4.6 U	4.1 U	9.4

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Table B-1
Sediment Sample Analytical Results - SVOCs
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-40	LMR11-40	LMR11-40	LMR11-40	LMR11-41
		Field Sample ID	LMR11-40-006	LMR11-40-024	LMR11-40-048	LMR11-40-084	LMR11-41-006
		Sample Date	8/10/2011	8/10/2011	8/10/2011	8/10/2011	8/4/2011
		Depth Interval (in bss)	0- 6	6- 24	24- 48	48- 84	0- 6
Chemical Name	**PEC[1]**	**Unit**					
Benzo(b)fluoranthene	NL	µg/kg	7.1	4.2 U	4.6 U	4.1 U	8
Benzo(g,h,i)perylene	NL	µg/kg	4.2 U	4.2 U	4.6 U	4.1 U	4 U
Benzo(k)fluoranthene	NL	µg/kg	4.2 U	4.2 U	4.6 U	4.1 U	4 U
Bis(2-chloroethoxy)methane	NL	µg/kg	220 U	220 U	240 U	210 U	200 U
Bis(2-chloroethyl)ether	NL	µg/kg	220 U	220 U	240 U	210 U	200 U
Bis(2-ethylhexyl)phthalate	NL	µg/kg	220 U	220 U	240 U	210 U	200 U
Butylbenzylphthalate	NL	µg/kg	220 U	220 U	240 U	210 U	200 U
Caprolactam	NL	µg/kg	220 U	220 U	240 U	210 U	200 U
Carbazole	NL	µg/kg	220 U	220 U	240 U	210 U	200 U
Chrysene	1290	µg/kg	5.7	5.5	4.6 U	4.1 U	6.3
Dibenzo(a,h)anthracene	NL	µg/kg	4.2 U	4.2 U	4.6 U	4.1 U	4 U
Dibenzofuran	NL	µg/kg	220 U	220 U	240 U	210 U	200 U
Diethylphthalate	NL	µg/kg	220 U	220 U	240 U	210 U	200 U
Dimethylphthalate	NL	µg/kg	220 U	220 U	240 U	210 U	200 U
Di-n-butylphthalate	NL	µg/kg	220 U	220 U	240 U	210 U	200 U
Di-n-octylphthalate	NL	µg/kg	220 U	220 U	240 U	210 U	200 U
Fluoranthene	2230	µg/kg	14	10	4.6 U	4.1 U	9
Fluorene	536	µg/kg	4.2 U	4.2 U	4.6 U	4.1 U	4 U
Hexachlorobenzene	NL	µg/kg	220 U	220 U	240 U	210 U	200 U
Hexachlorobutadiene	NL	µg/kg	220 U	220 U	240 U	210 U	200 U
Hexachlorocyclopentadiene	NL	µg/kg	220 U	220 U	240 U	210 U	200 U
Hexachloroethane	NL	µg/kg	220 U	220 U	240 U	210 U	200 U
Indeno(1,2,3-cd)pyrene	NL	µg/kg	4.2 U	4.2 U	4.6 U	4.1 U	4 U
Isophorone	NL	µg/kg	220 U	220 U	240 U	210 U	200 U
Naphthalene	561	µg/kg	4.2 U	4.2 U	4.6 U	4.1 U	4 U
Nitrobenzene	NL	µg/kg	220 U	220 U	240 U	210 U	200 U
N-Nitroso-di-n-propylamine	NL	µg/kg	220 U	220 U	240 U	210 U	200 U
N-Nitrosodiphenylamine	NL	µg/kg	220 U	220 U	240 U	210 U	200 U
Pentachlorophenol	NL	µg/kg	8.5 U	8.5 U	9.3 U	8.3 U	8.1 U
Phenanthrene	1170	µg/kg	8.6	12	4.6 U	6.5	4.8
Phenol	NL	µg/kg	220 U	220 U	240 U	210 U	200 U
Pyrene	1520	µg/kg	10	7.1	4.6 U	4.1 U	9.8
Total PAH 17	22800	µg/kg	75.7	61.9	39.1	39.3	72.2
TOC	NL	mg/kg	12,100	5,150	14,100	21,800	25,500

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Table B-1
Sediment Sample Analytical Results - SVOCs
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-42	LMR11-42	LMR11-42	LMR11-42	LMR11-42
		Field Sample ID	LMR11-42-006	LMR11-42-024	LMR11-42-048	LMR11-42-048FS	LMR11-42-072
		Sample Date	8/9/2011	8/9/2011	8/9/2011	8/9/2011	8/9/2011
		Depth Interval (in bss)	0- 6	6- 24	24- 48	24- 48	48- 72
Chemical Name	**PEC[1]**	**Unit**					
1,1'-Biphenyl	NL	µg/kg	260 U	270 UJ	280 U	260 U	220 U
1,2,4,5-Tetrachlorobenzene	NL	µg/kg	260 U	270 UJ	280 U	260 U	220 U
2,2'-Oxybis(1-chloropropane)	NL	µg/kg	260 U	270 UJ	280 U	260 U	220 U
2,3,4,6-Tetrachlorophenol	NL	µg/kg	260 U	270 UJ	280 U	260 U	220 U
2,4,5-Trichlorophenol	NL	µg/kg	260 U	270 UJ	280 U	260 U	220 U
2,4,6-Trichlorophenol	NL	µg/kg	260 U	270 UJ	280 U	260 U	220 U
2,4-Dichlorophenol	NL	µg/kg	260 U	270 UJ	280 U	260 U	220 U
2,4-Dimethylphenol	NL	µg/kg	260 U	270 UJ	280 U	260 U	220 U
2,4-Dinitrophenol	NL	µg/kg	510 U	520 UJ	530 U	500 U	440 U
2,4-Dinitrotoluene	NL	µg/kg	260 U	270 UJ	280 U	260 U	220 U
2,6-Dinitrotoluene	NL	µg/kg	260 U	270 UJ	280 U	260 U	220 U
2-Chloronaphthalene	NL	µg/kg	260 U	270 UJ	280 U	260 U	220 U
2-Chlorophenol	NL	µg/kg	260 U	270 UJ	280 U	260 U	220 U
2-Methylnaphthalene	NL	µg/kg	5.1 U	44 J	5.3 U	5 U	4.4 U
2-Methylphenol	NL	µg/kg	260 U	270 UJ	280 U	260 U	220 U
2-Nitroaniline	NL	µg/kg	510 U	520 UJ	530 U	500 U	440 U
2-Nitrophenol	NL	µg/kg	260 U	270 UJ	280 U	260 U	220 U
3,3'-Dichlorobenzidine	NL	µg/kg	260 U	270 UJ	280 U	260 U	220 U
3-Nitroaniline	NL	µg/kg	510 U	520 UJ	530 U	500 U	440 U
4,6-Dinitro-2-methylphenol	NL	µg/kg	510 U	520 UJ	530 U	500 U	440 U
4-Bromophenyl-phenylether	NL	µg/kg	260 U	270 UJ	280 U	260 U	220 U
4-Chloro-3-methylphenol	NL	µg/kg	260 U	270 UJ	280 U	260 U	220 U
4-Chloroaniline	NL	µg/kg	260 U	270 UJ	280 U	260 U	220 U
4-Chlorophenyl-phenylether	NL	µg/kg	260 U	270 UJ	280 U	260 U	220 U
4-Methylphenol	NL	µg/kg	260 U	270 UJ	280 U	260 U	220 U
4-Nitroaniline	NL	µg/kg	510 U	520 UJ	530 U	500 U	440 U
4-Nitrophenol	NL	µg/kg	510 U	520 UJ	530 U	500 U	440 U
Acenaphthene	NL	µg/kg	5.1 U	12 J	5.3 U	5 U	4.4 U
Acenaphthylene	NL	µg/kg	5.1 U	9.4 J	5.3 U	5 U	4.4 U
Acetophenone	NL	µg/kg	260 U	270 UJ	280 U	260 U	220 U
Anthracene	845	µg/kg	5.1 U	34 J	5.3 U	5 U	4.4 U
Atrazine	NL	µg/kg	260 U	270 UJ	280 U	260 U	220 U
Benzaldehyde	NL	µg/kg	260 U	270 UJ	280 U	260 U	220 U
Benzo(a)anthracene	1050	µg/kg	5.1 U	73 J	6.2	5 U	5.9
Benzo(a)pyrene	1450	µg/kg	5.1 U	60 J	5.7	5 U	5.5

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Table B-1
Sediment Sample Analytical Results - SVOCs
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-42	LMR11-42	LMR11-42	LMR11-42	LMR11-42
		Field Sample ID	LMR11-42-006	LMR11-42-024	LMR11-42-048	LMR11-42-048FS	LMR11-42-072
		Sample Date	8/9/2011	8/9/2011	8/9/2011	8/9/2011	8/9/2011
		Depth Interval (in bss)	0- 6	6- 24	24- 48	24- 48	48- 72
Chemical Name	**PEC[1]**	**Unit**					
Benzo(b)fluoranthene	NL	µg/kg	5.1 U	120 J	5.3 U	5 U	4.9
Benzo(g,h,i)perylene	NL	µg/kg	5.1 U	48 J	5.3 U	5 U	4.4 U
Benzo(k)fluoranthene	NL	µg/kg	5.1 U	29 J	5.3 U	5 U	4.4 U
Bis(2-chloroethoxy)methane	NL	µg/kg	260 U	270 UJ	280 U	260 U	220 U
Bis(2-chloroethyl)ether	NL	µg/kg	260 U	270 UJ	280 U	260 U	220 U
Bis(2-ethylhexyl)phthalate	NL	µg/kg	260 U	140 J	280 U	260 U	220 U
Butylbenzylphthalate	NL	µg/kg	260 U	270 UJ	280 U	260 U	220 U
Caprolactam	NL	µg/kg	260 U	270 UJ	280 U	260 U	220 U
Carbazole	NL	µg/kg	260 U	270 UJ	280 U	260 U	220 U
Chrysene	1290	µg/kg	5.1 U	90 J	6.6	5 U	8.9
Dibenzo(a,h)anthracene	NL	µg/kg	5.1 U	16 J	5.3 U	5 U	4.4 U
Dibenzofuran	NL	µg/kg	260 U	270 UJ	280 U	260 U	220 U
Diethylphthalate	NL	µg/kg	260 U	270 UJ	280 U	260 U	220 U
Dimethylphthalate	NL	µg/kg	260 U	270 UJ	280 U	260 U	220 U
Di-n-butylphthalate	NL	µg/kg	260 U	270 UJ	280 U	260 U	220 U
Di-n-octylphthalate	NL	µg/kg	260 U	270 UJ	280 U	260 U	220 U
Fluoranthene	2230	µg/kg	5.2	210 J	13	5.1	14
Fluorene	536	µg/kg	5.1 U	21 J	5.3 U	5 U	4.4 U
Hexachlorobenzene	NL	µg/kg	260 U	270 UJ	280 U	260 U	220 U
Hexachlorobutadiene	NL	µg/kg	260 U	270 UJ	280 U	260 U	220 U
Hexachlorocyclopentadiene	NL	µg/kg	260 U	270 UJ	280 U	260 U	220 U
Hexachloroethane	NL	µg/kg	260 U	270 UJ	280 U	260 U	220 U
Indeno(1,2,3-cd)pyrene	NL	µg/kg	5.1 U	44 J	5.3 U	5 U	4.4 U
Isophorone	NL	µg/kg	260 U	270 UJ	280 U	260 U	220 U
Naphthalene	561	µg/kg	5.1 U	34 J	5.3 U	5 U	4.4 U
Nitrobenzene	NL	µg/kg	260 U	270 UJ	280 U	260 U	220 U
N-Nitroso-di-n-propylamine	NL	µg/kg	260 U	270 UJ	280 U	260 U	220 U
N-Nitrosodiphenylamine	NL	µg/kg	260 U	270 UJ	280 U	260 U	220 U
Pentachlorophenol	NL	µg/kg	10 U	11 UJ	11 U	10 UJ	8.9 UJ
Phenanthrene	1170	µg/kg	5.1 U	150 J	12	5.2	12
Phenol	NL	µg/kg	260 U	270 UJ	280 U	260 U	220 U
Pyrene	1520	µg/kg	6.5	160 J	13	6.3	15
Total PAH 17	22800	µg/kg	49.95	1,154	85.65	51.6	88.2
TOC	NL	mg/kg	47,600	14,700	37,400	29,900	16,800

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Table B-1
Sediment Sample Analytical Results - SVOCs
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-42	LMR11-42	LMR11-43	LMR11-44	LMR11-44
		Field Sample ID	LMR11-42-096	LMR11-42-129	LMR11-43-030	LMR11-44-006	LMR11-44-024
		Sample Date	8/9/2011	8/9/2011	8/9/2011	8/9/2011	8/9/2011
		Depth Interval (in bss)	72- 96	96- 129	24- 30	0- 6	6- 24
Chemical Name	**PEC[1]**	**Unit**					
1,1'-Biphenyl	NL	µg/kg	230 U	210 U	200 U	320 U	310 U
1,2,4,5-Tetrachlorobenzene	NL	µg/kg	230 U	210 U	200 U	320 U	310 U
2,2'-Oxybis(1-chloropropane)	NL	µg/kg	230 U	210 U	200 U	320 U	310 U
2,3,4,6-Tetrachlorophenol	NL	µg/kg	230 U	210 U	200 U	320 U	310 U
2,4,5-Trichlorophenol	NL	µg/kg	230 U	210 U	200 U	320 U	310 U
2,4,6-Trichlorophenol	NL	µg/kg	230 U	210 U	200 U	320 U	310 U
2,4-Dichlorophenol	NL	µg/kg	230 U	210 U	200 U	320 U	310 U
2,4-Dimethylphenol	NL	µg/kg	230 U	210 U	200 U	320 U	310 U
2,4-Dinitrophenol	NL	µg/kg	460 U	400 U	390 U	610 U	600 U
2,4-Dinitrotoluene	NL	µg/kg	230 U	210 U	200 U	320 U	310 U
2,6-Dinitrotoluene	NL	µg/kg	230 U	210 U	200 U	320 U	310 U
2-Chloronaphthalene	NL	µg/kg	230 U	210 U	200 U	320 U	310 U
2-Chlorophenol	NL	µg/kg	230 U	210 U	200 U	320 U	310 U
2-Methylnaphthalene	NL	µg/kg	5.8	4 U	4.5	6.1 U	6 U
2-Methylphenol	NL	µg/kg	230 U	210 U	200 U	320 U	310 U
2-Nitroaniline	NL	µg/kg	460 U	400 U	390 U	610 U	600 U
2-Nitrophenol	NL	µg/kg	230 U	210 U	200 U	320 U	310 U
3,3'-Dichlorobenzidine	NL	µg/kg	230 U	210 U	200 U	320 U	310 U
3-Nitroaniline	NL	µg/kg	460 U	400 U	390 U	610 U	600 U
4,6-Dinitro-2-methylphenol	NL	µg/kg	460 U	400 U	390 U	610 U	600 U
4-Bromophenyl-phenylether	NL	µg/kg	230 U	210 U	200 U	320 U	310 U
4-Chloro-3-methylphenol	NL	µg/kg	230 U	210 U	200 U	320 U	310 U
4-Chloroaniline	NL	µg/kg	230 U	210 U	200 U	320 U	310 U
4-Chlorophenyl-phenylether	NL	µg/kg	230 U	210 U	200 U	320 U	310 U
4-Methylphenol	NL	µg/kg	230 U	210 U	200 U	320 U	310 U
4-Nitroaniline	NL	µg/kg	460 U	400 U	390 U	610 U	600 U
4-Nitrophenol	NL	µg/kg	460 U	400 U	390 U	610 U	600 U
Acenaphthene	NL	µg/kg	5.3	4 U	3.9 U	6.1 U	6 U
Acenaphthylene	NL	µg/kg	4.6 U	4 U	3.9 U	6.1 U	6 U
Acetophenone	NL	µg/kg	230 U	210 U	200 U	320 U	310 U
Anthracene	845	µg/kg	20	4 U	7.1	6.1 U	6 U
Atrazine	NL	µg/kg	230 U	210 U	200 U	320 U	310 U
Benzaldehyde	NL	µg/kg	230 U	210 U	200 U	320 U	310 U
Benzo(a)anthracene	1050	µg/kg	36	4 U	17	6.1 U	6 U
Benzo(a)pyrene	1450	µg/kg	20	4 U	11	6.1 U	6 U

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Table B-1
Sediment Sample Analytical Results - SVOCs
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-42	LMR11-42	LMR11-43	LMR11-44	LMR11-44
		Field Sample ID	LMR11-42-096	LMR11-42-129	LMR11-43-030	LMR11-44-006	LMR11-44-024
		Sample Date	8/9/2011	8/9/2011	8/9/2011	8/9/2011	8/9/2011
		Depth Interval (in bss)	72- 96	96- 129	24- 30	0- 6	6- 24
Chemical Name	**PEC[1]**	**Unit**					
Benzo(b)fluoranthene	NL	µg/kg	23	4 U	16	6.1 U	6 U
Benzo(g,h,i)perylene	NL	µg/kg	12	4 U	7.3	6.1 U	6 U
Benzo(k)fluoranthene	NL	µg/kg	11	4 U	4.9	6.1 U	6 U
Bis(2-chloroethoxy)methane	NL	µg/kg	230 U	210 U	200 U	320 U	310 U
Bis(2-chloroethyl)ether	NL	µg/kg	230 U	210 U	200 U	320 U	310 U
Bis(2-ethylhexyl)phthalate	NL	µg/kg	230 U	210 U	200 U	320 U	310 U
Butylbenzylphthalate	NL	µg/kg	230 U	210 U	200 U	320 U	310 U
Caprolactam	NL	µg/kg	230 U	210 U	200 U	320 U	310 U
Carbazole	NL	µg/kg	230 U	210 U	200 U	320 U	310 U
Chrysene	1290	µg/kg	35	4 U	25	7.8	6 U
Dibenzo(a,h)anthracene	NL	µg/kg	4.6 U	4 U	3.9 U	6.1 U	6 U
Dibenzofuran	NL	µg/kg	230 U	210 U	200 U	320 U	310 U
Diethylphthalate	NL	µg/kg	230 U	210 U	200 U	320 U	310 U
Dimethylphthalate	NL	µg/kg	230 U	210 U	200 U	320 U	310 U
Di-n-butylphthalate	NL	µg/kg	230 U	210 U	200 U	320 U	310 U
Di-n-octylphthalate	NL	µg/kg	230 U	210 U	200 U	320 U	310 U
Fluoranthene	2230	µg/kg	73	4 U	40	13	9.2
Fluorene	536	µg/kg	8.3	4 U	4.1	6.1 U	6 U
Hexachlorobenzene	NL	µg/kg	230 U	210 U	200 U	320 U	310 U
Hexachlorobutadiene	NL	µg/kg	230 U	210 U	200 U	320 U	310 U
Hexachlorocyclopentadiene	NL	µg/kg	230 U	210 U	200 U	320 U	310 U
Hexachloroethane	NL	µg/kg	230 U	210 U	200 U	320 U	310 U
Indeno(1,2,3-cd)pyrene	NL	µg/kg	10	4 U	5.6	6.1 U	6 U
Isophorone	NL	µg/kg	230 U	210 U	200 U	320 U	310 U
Naphthalene	561	µg/kg	6.4	4 U	4.7	6.1 U	6 U
Nitrobenzene	NL	µg/kg	230 U	210 U	200 U	320 U	310 U
N-Nitroso-di-n-propylamine	NL	µg/kg	230 U	210 U	200 U	320 U	310 U
N-Nitrosodiphenylamine	NL	µg/kg	230 U	210 U	200 U	320 U	310 U
Pentachlorophenol	NL	µg/kg	9.3 UJ	8.2 UJ	7.9 UJ	12 UJ	12 UJ
Phenanthrene	1170	µg/kg	57	4.2	26	8.7	6.6
Phenol	NL	µg/kg	230 U	210 U	200 U	320 U	310 U
Pyrene	1520	µg/kg	67	4.7	50	13	10
Total PAH 17	22800	µg/kg	394.4	38.9	229.05	82.15	67.8
TOC	NL	mg/kg	38,600	11,700	24,800	24,000	35,400

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Table B-1
Sediment Sample Analytical Results - SVOCs
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-44	LMR11-44	LMR11-44	LMR11-44	LMR11-45
		Field Sample ID	LMR11-44-024FS	LMR11-44-048	LMR11-44-072	LMR11-44-096	LMR11-45-006
		Sample Date	8/9/2011	8/9/2011	8/9/2011	8/9/2011	8/8/2011
		Depth Interval (in bss)	6- 24	24- 48	48- 72	72- 96	0- 6
Chemical Name	**PEC[1]**	**Unit**					
1,1'-Biphenyl	NL	µg/kg	310 U	270 U	240 U	250 U	350 U
1,2,4,5-Tetrachlorobenzene	NL	µg/kg	310 U	270 U	240 U	250 U	350 U
2,2'-Oxybis(1-chloropropane)	NL	µg/kg	310 U	270 U	240 U	250 U	350 U
2,3,4,6-Tetrachlorophenol	NL	µg/kg	310 U	270 U	240 U	250 U	350 U
2,4,5-Trichlorophenol	NL	µg/kg	310 U	270 U	240 U	250 U	350 U
2,4,6-Trichlorophenol	NL	µg/kg	310 U	270 U	240 U	250 U	350 U
2,4-Dichlorophenol	NL	µg/kg	310 U	270 U	240 U	250 U	350 U
2,4-Dimethylphenol	NL	µg/kg	310 U	270 U	240 U	250 U	350 U
2,4-Dinitrophenol	NL	µg/kg	600 U	520 U	460 U	490 U	670 U
2,4-Dinitrotoluene	NL	µg/kg	310 U	270 U	240 U	250 U	350 U
2,6-Dinitrotoluene	NL	µg/kg	310 U	270 U	240 U	250 U	350 U
2-Chloronaphthalene	NL	µg/kg	310 U	270 U	240 U	250 U	350 U
2-Chlorophenol	NL	µg/kg	310 U	270 U	240 U	250 U	350 U
2-Methylnaphthalene	NL	µg/kg	6 U	5.2 U	12	4.9 U	6.7 U
2-Methylphenol	NL	µg/kg	310 U	270 U	240 U	250 U	350 U
2-Nitroaniline	NL	µg/kg	600 U	520 U	460 U	490 U	670 U
2-Nitrophenol	NL	µg/kg	310 U	270 U	240 U	250 U	350 U
3,3'-Dichlorobenzidine	NL	µg/kg	310 U	270 U	240 U	250 U	350 U
3-Nitroaniline	NL	µg/kg	600 U	520 U	460 U	490 U	670 U
4,6-Dinitro-2-methylphenol	NL	µg/kg	600 U	520 U	460 U	490 U	670 U
4-Bromophenyl-phenylether	NL	µg/kg	310 U	270 U	240 U	250 U	350 U
4-Chloro-3-methylphenol	NL	µg/kg	310 U	270 U	240 U	250 U	350 U
4-Chloroaniline	NL	µg/kg	310 U	270 U	240 U	250 U	350 U
4-Chlorophenyl-phenylether	NL	µg/kg	310 U	270 U	240 U	250 U	350 U
4-Methylphenol	NL	µg/kg	310 U	270 U	240 U	250 U	350 U
4-Nitroaniline	NL	µg/kg	600 U	520 U	460 U	490 U	670 U
4-Nitrophenol	NL	µg/kg	600 U	520 U	460 U	490 U	670 U
Acenaphthene	NL	µg/kg	6 U	5.2 U	4.6 U	4.9 U	6.7 U
Acenaphthylene	NL	µg/kg	6 U	5.2 U	4.6 U	4.9 U	6.7 U
Acetophenone	NL	µg/kg	310 U	270 U	240 U	250 U	350 U
Anthracene	845	µg/kg	8.1	5.2 U	6.4	4.9 U	6.7 U
Atrazine	NL	µg/kg	310 U	270 U	240 U	250 U	350 U
Benzaldehyde	NL	µg/kg	310 U	270 U	240 U	250 U	350 U
Benzo(a)anthracene	1050	µg/kg	26	5.2 U	12	12	9.8
Benzo(a)pyrene	1450	µg/kg	15	5.2 U	7.1	8.4	9

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Table B-1
Sediment Sample Analytical Results - SVOCs
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-44	LMR11-44	LMR11-44	LMR11-44	LMR11-45
		Field Sample ID	LMR11-44-024FS	LMR11-44-048	LMR11-44-072	LMR11-44-096	LMR11-45-006
		Sample Date	8/9/2011	8/9/2011	8/9/2011	8/9/2011	8/8/2011
		Depth Interval (in bss)	6- 24	24- 48	48- 72	72- 96	0- 6
Chemical Name	**PEC[1]**	**Unit**					
Benzo(b)fluoranthene	NL	µg/kg	18	5.2 U	6.8	8.3	7.9
Benzo(g,h,i)perylene	NL	µg/kg	7.8	5.2 U	4.6 U	4.9 U	6.7 U
Benzo(k)fluoranthene	NL	µg/kg	6.6	5.2 U	4.6 U	4.9 U	6.7 U
Bis(2-chloroethoxy)methane	NL	µg/kg	310 U	270 U	240 U	250 U	350 U
Bis(2-chloroethyl)ether	NL	µg/kg	310 U	270 U	240 U	250 U	350 U
Bis(2-ethylhexyl)phthalate	NL	µg/kg	310 U	270 U	240 U	250 U	350 U
Butylbenzylphthalate	NL	µg/kg	310 U	270 U	240 U	250 U	350 U
Caprolactam	NL	µg/kg	310 U	270 U	240 U	250 U	350 U
Carbazole	NL	µg/kg	310 U	270 U	240 U	250 U	350 U
Chrysene	1290	µg/kg	25	5.2 U	15	14	11
Dibenzo(a,h)anthracene	NL	µg/kg	6 U	5.2 U	4.6 U	4.9 U	6.7 U
Dibenzofuran	NL	µg/kg	310 U	270 U	240 U	250 U	350 U
Diethylphthalate	NL	µg/kg	310 U	270 U	240 U	250 U	350 U
Dimethylphthalate	NL	µg/kg	310 U	270 U	240 U	250 U	350 U
Di-n-butylphthalate	NL	µg/kg	310 U	270 U	240 U	250 U	350 U
Di-n-octylphthalate	NL	µg/kg	310 U	270 U	240 U	250 U	350 U
Fluoranthene	2230	µg/kg	47	9.8	27	27	18
Fluorene	536	µg/kg	6 U	5.2 U	5	4.9 U	6.7 U
Hexachlorobenzene	NL	µg/kg	310 U	270 U	240 U	250 U	350 U
Hexachlorobutadiene	NL	µg/kg	310 U	270 U	240 U	250 U	350 U
Hexachlorocyclopentadiene	NL	µg/kg	310 U	270 U	240 U	250 U	350 U
Hexachloroethane	NL	µg/kg	310 U	270 U	240 U	250 U	350 U
Indeno(1,2,3-cd)pyrene	NL	µg/kg	6.8	5.2 U	4.6 U	4.9 U	6.7 U
Isophorone	NL	µg/kg	310 U	270 U	240 U	250 U	350 U
Naphthalene	561	µg/kg	6.4	5.2 U	11	5.5	6.7 U
Nitrobenzene	NL	µg/kg	310 U	270 U	240 U	250 U	350 U
N-Nitroso-di-n-propylamine	NL	µg/kg	310 U	270 U	240 U	250 U	350 U
N-Nitrosodiphenylamine	NL	µg/kg	310 U	270 U	240 U	250 U	350 U
Pentachlorophenol	NL	µg/kg	12 UJ	11 UJ	9.4 UJ	9.9 UJ	14 U
Phenanthrene	1170	µg/kg	29	9.6	28	21	8.1
Phenol	NL	µg/kg	310 U	270 U	240 U	250 U	350 U
Pyrene	1520	µg/kg	43	11	27	26	19 J
Total PAH 17	22800	µg/kg	253.7	66.8	171.1	144.25	116.3
TOC	NL	mg/kg	27,600	27,100	26,200	19,500	26,900

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Table B-1
Sediment Sample Analytical Results - SVOCs
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-45	LMR11-45	LMR11-45	LMR11-45	LMR11-45
		Field Sample ID	LMR11-45-024	LMR11-45-048	LMR11-45-048FS	LMR11-45-072	LMR11-45-096
		Sample Date	8/8/2011	8/8/2011	8/8/2011	8/8/2011	8/8/2011
		Depth Interval (in bss)	6- 24	24- 48	24- 48	48- 72	72- 96
Chemical Name	**PEC[1]**	**Unit**					
1,1'-Biphenyl	NL	µg/kg	310 U	300 U	300 U	300 U	300 U
1,2,4,5-Tetrachlorobenzene	NL	µg/kg	310 U	300 U	300 U	300 U	300 U
2,2'-Oxybis(1-chloropropane)	NL	µg/kg	310 UJ	300 U	300 U	300 U	300 U
2,3,4,6-Tetrachlorophenol	NL	µg/kg	310 U	300 U	300 U	300 U	300 U
2,4,5-Trichlorophenol	NL	µg/kg	310 U	300 U	300 U	300 U	300 U
2,4,6-Trichlorophenol	NL	µg/kg	310 U	300 U	300 U	300 U	300 U
2,4-Dichlorophenol	NL	µg/kg	310 U	300 U	300 U	300 U	300 U
2,4-Dimethylphenol	NL	µg/kg	310 U	300 U	300 U	300 U	300 U
2,4-Dinitrophenol	NL	µg/kg	600 U	570 U	570 U	580 U	580 U
2,4-Dinitrotoluene	NL	µg/kg	310 U	300 U	300 U	300 U	300 U
2,6-Dinitrotoluene	NL	µg/kg	310 U	300 U	300 U	300 U	300 U
2-Chloronaphthalene	NL	µg/kg	310 U	300 U	300 U	300 U	300 U
2-Chlorophenol	NL	µg/kg	310 U	300 U	300 U	300 U	300 U
2-Methylnaphthalene	NL	µg/kg	6 U	5.7 U	5.7 U	5.8 U	5.8 U
2-Methylphenol	NL	µg/kg	310 U	300 U	300 U	300 U	300 U
2-Nitroaniline	NL	µg/kg	600 U	570 U	570 U	580 U	580 U
2-Nitrophenol	NL	µg/kg	310 U	300 U	300 U	300 U	300 U
3,3'-Dichlorobenzidine	NL	µg/kg	310 U	300 U	300 U	300 U	300 U
3-Nitroaniline	NL	µg/kg	600 U	570 U	570 U	580 U	580 U
4,6-Dinitro-2-methylphenol	NL	µg/kg	600 U	570 U	570 U	580 U	580 U
4-Bromophenyl-phenylether	NL	µg/kg	310 U	300 U	300 U	300 U	300 U
4-Chloro-3-methylphenol	NL	µg/kg	310 U	300 U	300 U	300 U	300 U
4-Chloroaniline	NL	µg/kg	310 U	300 U	300 U	300 U	300 U
4-Chlorophenyl-phenylether	NL	µg/kg	310 U	300 U	300 U	300 U	300 U
4-Methylphenol	NL	µg/kg	310 U	300 U	300 U	300 U	300 U
4-Nitroaniline	NL	µg/kg	600 U	570 U	570 U	580 U	580 U
4-Nitrophenol	NL	µg/kg	600 U	570 U	570 U	580 U	580 U
Acenaphthene	NL	µg/kg	6 U	5.7 U	5.7 U	5.8 U	5.8 U
Acenaphthylene	NL	µg/kg	6 U	5.7 U	5.7 U	5.8 U	5.8 U
Acetophenone	NL	µg/kg	310 U	300 U	300 U	300 U	300 U
Anthracene	845	µg/kg	6 U	5.7 U	5.7 U	5.8 U	5.8 U
Atrazine	NL	µg/kg	310 U	300 U	300 U	300 U	300 U
Benzaldehyde	NL	µg/kg	310 U	300 U	300 U	300 U	300 U
Benzo(a)anthracene	1050	µg/kg	6 U	5.7 U	5.7 U	5.8 U	5.8 U
Benzo(a)pyrene	1450	µg/kg	6 U	5.7 U	5.7 U	5.8 U	6.1

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Table B-1
Sediment Sample Analytical Results - SVOCs
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-45	LMR11-45	LMR11-45	LMR11-45	LMR11-45
		Field Sample ID	LMR11-45-024	LMR11-45-048	LMR11-45-048FS	LMR11-45-072	LMR11-45-096
		Sample Date	8/8/2011	8/8/2011	8/8/2011	8/8/2011	8/8/2011
		Depth Interval (in bss)	6- 24	24- 48	24- 48	48- 72	72- 96
Chemical Name	**PEC[1]**	**Unit**					
Benzo(b)fluoranthene	NL	µg/kg	6 U	5.7 U	5.7 U	5.8 U	5.8 U
Benzo(g,h,i)perylene	NL	µg/kg	6 U	5.7 U	5.7 U	5.8 U	5.8 U
Benzo(k)fluoranthene	NL	µg/kg	6 U	5.7 U	5.7 U	5.8 U	5.8 U
Bis(2-chloroethoxy)methane	NL	µg/kg	310 UJ	300 U	300 U	300 U	300 U
Bis(2-chloroethyl)ether	NL	µg/kg	310 UJ	300 U	300 U	300 U	300 U
Bis(2-ethylhexyl)phthalate	NL	µg/kg	310 U	300 U	300 U	300 U	300 U
Butylbenzylphthalate	NL	µg/kg	310 U	300 U	300 U	300 U	300 U
Caprolactam	NL	µg/kg	310 U	300 U	300 U	300 U	300 U
Carbazole	NL	µg/kg	310 U	300 U	300 U	300 U	300 U
Chrysene	1290	µg/kg	7.2	6.4	7.3	5.8 U	6.7
Dibenzo(a,h)anthracene	NL	µg/kg	6 U	5.7 U	5.7 U	5.8 U	5.8 U
Dibenzofuran	NL	µg/kg	310 U	300 U	300 U	300 U	300 U
Diethylphthalate	NL	µg/kg	310 U	300 U	300 U	300 U	300 U
Dimethylphthalate	NL	µg/kg	310 U	300 U	300 U	300 U	300 U
Di-n-butylphthalate	NL	µg/kg	310 U	300 U	300 U	300 U	300 U
Di-n-octylphthalate	NL	µg/kg	82 J	300 U	300 U	300 U	300 U
Fluoranthene	2230	µg/kg	14	13	13	5.8 U	12
Fluorene	536	µg/kg	6 U	5.7 U	5.7 U	5.8 U	5.8 U
Hexachlorobenzene	NL	µg/kg	310 U	300 U	300 U	300 U	300 U
Hexachlorobutadiene	NL	µg/kg	310 U	300 U	300 U	300 U	300 U
Hexachlorocyclopentadiene	NL	µg/kg	310 U	300 U	300 U	300 U	300 U
Hexachloroethane	NL	µg/kg	310 U	300 U	300 U	300 U	300 U
Indeno(1,2,3-cd)pyrene	NL	µg/kg	6 U	5.7 U	5.7 U	5.8 U	5.8 U
Isophorone	NL	µg/kg	310 U	300 U	300 U	300 U	300 U
Naphthalene	561	µg/kg	6 U	5.7 U	5.7 U	5.8 U	5.8 U
Nitrobenzene	NL	µg/kg	310 U	300 U	300 U	300 U	300 U
N-Nitroso-di-n-propylamine	NL	µg/kg	310 U	300 U	300 U	300 U	300 U
N-Nitrosodiphenylamine	NL	µg/kg	310 U	300 U	300 U	300 U	300 U
Pentachlorophenol	NL	µg/kg	12 UJ	12 U	12 U	12 U	12 U
Phenanthrene	1170	µg/kg	9.1	10	9.6	5.8 U	8.8
Phenol	NL	µg/kg	310 U	300 U	300 U	300 U	300 U
Pyrene	1520	µg/kg	15	15	15	7.3	14
Total PAH 17	22800	µg/kg	84.3	81.45	81.95	53.7	82.4
TOC	NL	mg/kg	23,500	33,800	26,500	33,100	34,300

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Table B-1
Sediment Sample Analytical Results - SVOCs
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-46	LMR11-46	LMR11-46	LMR11-46	LMR11-46
		Field Sample ID	LMR11-46-006	LMR11-46-024	LMR11-46-024FS	LMR11-46-048	LMR11-46-072
		Sample Date	8/8/2011	8/8/2011	8/8/2011	8/8/2011	8/8/2011
		Depth Interval (in bss)	0- 6	6- 24	6- 24	24- 48	48- 72
Chemical Name	**PEC[1]**	**Unit**					
1,1'-Biphenyl	NL	µg/kg	330 U	320 U	300 U	280 U	210 UJ
1,2,4,5-Tetrachlorobenzene	NL	µg/kg	330 U	320 U	300 U	280 U	210 U
2,2'-Oxybis(1-chloropropane)	NL	µg/kg	330 U	320 U	300 U	280 U	210 U
2,3,4,6-Tetrachlorophenol	NL	µg/kg	330 U	320 U	300 U	280 U	210 U
2,4,5-Trichlorophenol	NL	µg/kg	330 U	320 U	300 U	280 U	210 U
2,4,6-Trichlorophenol	NL	µg/kg	330 U	320 U	300 U	280 U	210 U
2,4-Dichlorophenol	NL	µg/kg	330 U	320 U	300 U	280 U	210 U
2,4-Dimethylphenol	NL	µg/kg	330 U	320 U	300 U	280 U	210 U
2,4-Dinitrophenol	NL	µg/kg	650 U	630 U	590 U	550 U	400 U
2,4-Dinitrotoluene	NL	µg/kg	330 U	320 U	300 U	280 U	210 U
2,6-Dinitrotoluene	NL	µg/kg	330 U	320 U	300 U	280 U	210 U
2-Chloronaphthalene	NL	µg/kg	330 U	320 U	300 U	280 U	210 U
2-Chlorophenol	NL	µg/kg	330 U	320 U	300 U	280 U	210 U
2-Methylnaphthalene	NL	µg/kg	6.5 U	6.3 U	5.9 U	5.5 U	4 U
2-Methylphenol	NL	µg/kg	330 U	320 U	300 U	280 U	210 U
2-Nitroaniline	NL	µg/kg	650 U	630 U	590 U	550 U	400 U
2-Nitrophenol	NL	µg/kg	330 U	320 U	300 U	280 U	210 U
3,3'-Dichlorobenzidine	NL	µg/kg	330 U	320 U	300 U	280 U	210 U
3-Nitroaniline	NL	µg/kg	650 U	630 U	590 U	550 U	400 U
4,6-Dinitro-2-methylphenol	NL	µg/kg	650 U	630 U	590 U	550 U	400 U
4-Bromophenyl-phenylether	NL	µg/kg	330 U	320 U	300 U	280 U	210 U
4-Chloro-3-methylphenol	NL	µg/kg	330 U	320 U	300 U	280 U	210 U
4-Chloroaniline	NL	µg/kg	330 U	320 U	300 U	280 U	210 U
4-Chlorophenyl-phenylether	NL	µg/kg	330 U	320 U	300 U	280 U	210 U
4-Methylphenol	NL	µg/kg	330 U	320 U	300 U	280 U	210 U
4-Nitroaniline	NL	µg/kg	650 U	630 U	590 U	550 U	400 U
4-Nitrophenol	NL	µg/kg	650 U	630 U	590 U	550 U	400 U
Acenaphthene	NL	µg/kg	6.5 U	6.3 U	5.9 U	5.5 U	4 U
Acenaphthylene	NL	µg/kg	6.5 U	6.3 U	5.9 U	5.5 U	4 U
Acetophenone	NL	µg/kg	330 U	320 U	300 U	280 U	210 U
Anthracene	845	µg/kg	6.5 U	6.3 U	5.9 U	5.5 U	6.6
Atrazine	NL	µg/kg	330 U	320 U	300 U	280 U	210 U
Benzaldehyde	NL	µg/kg	330 U	320 U	300 U	280 U	210 U
Benzo(a)anthracene	1050	µg/kg	6.5 U	11	11	5.5 U	11
Benzo(a)pyrene	1450	µg/kg	14	22	23	12	12

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Table B-1
Sediment Sample Analytical Results - SVOCs
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-46	LMR11-46	LMR11-46	LMR11-46	LMR11-46
		Field Sample ID	LMR11-46-006	LMR11-46-024	LMR11-46-024FS	LMR11-46-048	LMR11-46-072
		Sample Date	8/8/2011	8/8/2011	8/8/2011	8/8/2011	8/8/2011
		Depth Interval (in bss)	0- 6	6- 24	6- 24	24- 48	48- 72
Chemical Name	**PEC[1]**	**Unit**					
Benzo(b)fluoranthene	NL	µg/kg	6.5 U	18	19	5.9	14
Benzo(g,h,i)perylene	NL	µg/kg	6.5 U	7.4	8.3	5.5 U	4.9
Benzo(k)fluoranthene	NL	µg/kg	6.5 U	6.3 U	6.9	5.5 U	4.8
Bis(2-chloroethoxy)methane	NL	µg/kg	330 U	320 U	300 U	280 U	210 U
Bis(2-chloroethyl)ether	NL	µg/kg	330 U	320 U	300 U	280 U	210 U
Bis(2-ethylhexyl)phthalate	NL	µg/kg	330 U	320 U	300 U	280 U	210 UJ
Butylbenzylphthalate	NL	µg/kg	330 U	320 U	300 U	280 U	210 UJ
Caprolactam	NL	µg/kg	330 U	320 U	300 U	280 U	210 UJ
Carbazole	NL	µg/kg	330 U	320 U	300 U	280 U	210 U
Chrysene	1290	µg/kg	6.5 U	13	12	5.5 U	16
Dibenzo(a,h)anthracene	NL	µg/kg	6.5 U	6.3 U	5.9 U	5.5 U	4 U
Dibenzofuran	NL	µg/kg	330 U	320 U	300 U	280 U	210 U
Diethylphthalate	NL	µg/kg	330 U	320 U	300 U	280 U	210 UJ
Dimethylphthalate	NL	µg/kg	330 U	320 U	300 U	280 U	210 UJ
Di-n-butylphthalate	NL	µg/kg	330 U	320 U	300 U	280 U	210 UJ
Di-n-octylphthalate	NL	µg/kg	330 U	320 U	300 U	280 U	210 UJ
Fluoranthene	2230	µg/kg	6.5 U	25	23	8	32
Fluorene	536	µg/kg	6.5 U	6.3 U	5.9 U	5.5 U	4 U
Hexachlorobenzene	NL	µg/kg	330 U	320 U	300 U	280 U	210 U
Hexachlorobutadiene	NL	µg/kg	330 U	320 U	300 U	280 U	210 U
Hexachlorocyclopentadiene	NL	µg/kg	330 U	320 U	300 U	280 U	210 U
Hexachloroethane	NL	µg/kg	330 U	320 U	300 U	280 U	210 U
Indeno(1,2,3-cd)pyrene	NL	µg/kg	6.5 U	7.1	7.4	5.5 U	4 U
Isophorone	NL	µg/kg	330 U	320 U	300 U	280 U	210 U
Naphthalene	561	µg/kg	6.5 U	6.3 U	5.9 U	5.5 U	4 U
Nitrobenzene	NL	µg/kg	330 U	320 U	300 U	280 U	210 U
N-Nitroso-di-n-propylamine	NL	µg/kg	330 U	320 U	300 U	280 U	210 U
N-Nitrosodiphenylamine	NL	µg/kg	330 U	320 U	300 U	280 U	210 U
Pentachlorophenol	NL	µg/kg	13 U	13 U	12 U	11 U	8.2 U
Phenanthrene	1170	µg/kg	6.5 U	16	11	5.8	26
Phenol	NL	µg/kg	330 U	320 U	300 U	280 U	210 U
Pyrene	1520	µg/kg	8	25	25	9.5	31
Total PAH 17	22800	µg/kg	70.75	169.7	167.25	74.2	172.3
TOC	NL	mg/kg	43,300	19,700	24,900	28,300	20,300

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Table B-1
Sediment Sample Analytical Results - SVOCs
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-46	LMR11-47	LMR11-47	LMR11-47	LMR11-47
		Field Sample ID	LMR11-46-093	LMR11-47-006	LMR11-47-024	LMR11-47-048	LMR11-47-072
		Sample Date	8/8/2011	8/8/2011	8/8/2011	8/8/2011	8/8/2011
		Depth Interval (in bss)	72- 93	0- 6	6- 24	24- 48	48- 72
Chemical Name	**PEC[1]**	**Unit**					
1,1'-Biphenyl	NL	µg/kg	250 U	340 U	310 U	290 U	290 U
1,2,4,5-Tetrachlorobenzene	NL	µg/kg	250 U	340 U	310 U	290 U	290 U
2,2'-Oxybis(1-chloropropane)	NL	µg/kg	250 U	340 U	310 U	290 U	290 U
2,3,4,6-Tetrachlorophenol	NL	µg/kg	250 U	340 U	310 U	290 U	290 U
2,4,5-Trichlorophenol	NL	µg/kg	250 U	340 U	310 U	290 U	290 U
2,4,6-Trichlorophenol	NL	µg/kg	250 U	340 U	310 U	290 U	290 U
2,4-Dichlorophenol	NL	µg/kg	250 U	340 U	310 U	290 U	290 U
2,4-Dimethylphenol	NL	µg/kg	250 U	340 U	310 U	290 U	290 U
2,4-Dinitrophenol	NL	µg/kg	480 U	660 U	610 U	560 U	560 U
2,4-Dinitrotoluene	NL	µg/kg	250 U	340 U	310 U	290 U	290 U
2,6-Dinitrotoluene	NL	µg/kg	250 U	340 U	310 U	290 U	290 U
2-Chloronaphthalene	NL	µg/kg	250 U	340 U	310 U	290 U	290 U
2-Chlorophenol	NL	µg/kg	250 U	340 U	310 U	290 U	290 U
2-Methylnaphthalene	NL	µg/kg	11	6.6 U	6.1 U	5.6 U	5.6 U
2-Methylphenol	NL	µg/kg	250 U	340 U	310 U	290 U	290 U
2-Nitroaniline	NL	µg/kg	480 U	660 U	610 U	560 U	560 U
2-Nitrophenol	NL	µg/kg	250 U	340 U	310 U	290 U	290 U
3,3'-Dichlorobenzidine	NL	µg/kg	250 U	340 U	310 U	290 U	290 U
3-Nitroaniline	NL	µg/kg	480 U	660 U	610 U	560 U	560 U
4,6-Dinitro-2-methylphenol	NL	µg/kg	480 U	660 U	610 U	560 U	560 U
4-Bromophenyl-phenylether	NL	µg/kg	250 U	340 U	310 U	290 U	290 U
4-Chloro-3-methylphenol	NL	µg/kg	250 U	340 U	310 U	290 U	290 U
4-Chloroaniline	NL	µg/kg	250 U	340 U	310 U	290 U	290 U
4-Chlorophenyl-phenylether	NL	µg/kg	250 U	340 U	310 U	290 U	290 U
4-Methylphenol	NL	µg/kg	250 U	340 U	310 U	290 U	290 U
4-Nitroaniline	NL	µg/kg	480 U	660 U	610 U	560 U	560 U
4-Nitrophenol	NL	µg/kg	480 U	660 U	610 U	560 U	560 U
Acenaphthene	NL	µg/kg	5.4	6.6 U	6.1 U	5.6 U	5.6 U
Acenaphthylene	NL	µg/kg	5.3	6.6 U	6.1 U	5.6 U	5.6 U
Acetophenone	NL	µg/kg	250 U	340 U	310 U	290 U	290 U
Anthracene	845	µg/kg	43	6.6 U	6.1 U	5.6 U	5.6
Atrazine	NL	µg/kg	250 U	340 U	310 U	290 U	290 U
Benzaldehyde	NL	µg/kg	250 U	340 U	310 U	290 U	290 U
Benzo(a)anthracene	1050	µg/kg	98	6.6 U	6.1 U	6	15
Benzo(a)pyrene	1450	µg/kg	91	24	9.4	15	21

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Table B-1
Sediment Sample Analytical Results - SVOCs
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-46	LMR11-47	LMR11-47	LMR11-47	LMR11-47
		Field Sample ID	LMR11-46-093	LMR11-47-006	LMR11-47-024	LMR11-47-048	LMR11-47-072
		Sample Date	8/8/2011	8/8/2011	8/8/2011	8/8/2011	8/8/2011
		Depth Interval (in bss)	72- 93	0- 6	6- 24	24- 48	48- 72
Chemical Name	**PEC[1]**	**Unit**					
Benzo(b)fluoranthene	NL	µg/kg	97	16	9	10	21
Benzo(g,h,i)perylene	NL	µg/kg	50	7.8	6.1 U	5.6 U	8.8
Benzo(k)fluoranthene	NL	µg/kg	52	6.6 U	6.1 U	5.6 U	7.5
Bis(2-chloroethoxy)methane	NL	µg/kg	250 U	340 U	310 U	290 U	290 U
Bis(2-chloroethyl)ether	NL	µg/kg	250 U	340 U	310 U	290 U	290 U
Bis(2-ethylhexyl)phthalate	NL	µg/kg	250 U	340 U	310 U	290 U	290 U
Butylbenzylphthalate	NL	µg/kg	250 U	340 U	310 U	290 U	290 U
Caprolactam	NL	µg/kg	250 U	340 U	310 U	290 U	290 U
Carbazole	NL	µg/kg	250 U	340 U	310 U	290 U	290 U
Chrysene	1290	µg/kg	94	9.1	6.3	6.8	16
Dibenzo(a,h)anthracene	NL	µg/kg	19	6.6 U	6.1 U	5.6 U	5.6 U
Dibenzofuran	NL	µg/kg	250 U	340 U	310 U	290 U	290 U
Diethylphthalate	NL	µg/kg	250 U	340 U	310 U	290 U	290 U
Dimethylphthalate	NL	µg/kg	250 U	340 U	310 U	290 U	290 U
Di-n-butylphthalate	NL	µg/kg	65 J	340 U	310 U	290 U	290 U
Di-n-octylphthalate	NL	µg/kg	250 U	340 U	310 U	290 U	290 U
Fluoranthene	2230	µg/kg	170	13	14	12	30
Fluorene	536	µg/kg	8.4	6.6 U	6.1 U	5.6 U	5.6 U
Hexachlorobenzene	NL	µg/kg	250 U	340 U	310 U	290 U	290 U
Hexachlorobutadiene	NL	µg/kg	250 U	340 U	310 U	290 U	290 U
Hexachlorocyclopentadiene	NL	µg/kg	250 U	340 U	310 U	290 U	290 U
Hexachloroethane	NL	µg/kg	250 U	340 U	310 U	290 U	290 U
Indeno(1,2,3-cd)pyrene	NL	µg/kg	42	7.1	6.1 U	5.6 U	8.3
Isophorone	NL	µg/kg	250 U	340 U	310 U	290 U	290 U
Naphthalene	561	µg/kg	13	6.6 U	6.1 U	5.6 U	5.6 U
Nitrobenzene	NL	µg/kg	250 U	340 U	310 U	290 U	290 U
N-Nitroso-di-n-propylamine	NL	µg/kg	250 U	340 U	310 U	290 U	290 U
N-Nitrosodiphenylamine	NL	µg/kg	250 U	340 U	310 U	290 U	290 U
Pentachlorophenol	NL	µg/kg	9.7 U	13 U	12 U	11 U	11 U
Phenanthrene	1170	µg/kg	76	6.6 U	9.7	6.7	17
Phenol	NL	µg/kg	250 U	340 U	310 U	290 U	290 U
Pyrene	1520	µg/kg	170	16	13	13	28
Total PAH 17	22800	µg/kg	1045.1	126	94.95	97.5	195
TOC	NL	mg/kg	29,600	26,000	22,600	17,300	28,000

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Table B-1
Sediment Sample Analytical Results - SVOCs
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-47	LMR11-47	LMR11-47	LMR11-48	LMR11-48
		Field Sample ID	LMR11-47-096	LMR11-47-120	LMR11-47-144	LMR11-48-006	LMR11-48-024
		Sample Date	8/8/2011	8/8/2011	8/8/2011	8/8/2011	8/8/2011
		Depth Interval (in bss)	72- 96	96- 120	120- 144	0- 6	6- 24
Chemical Name	**PEC[1]**	**Unit**					
1,1'-Biphenyl	NL	µg/kg	290 U	270 U	300 U	390 U	330 U
1,2,4,5-Tetrachlorobenzene	NL	µg/kg	290 U	270 U	300 U	390 U	330 U
2,2'-Oxybis(1-chloropropane)	NL	µg/kg	290 U	270 U	300 U	390 U	330 U
2,3,4,6-Tetrachlorophenol	NL	µg/kg	290 U	270 U	300 U	390 U	330 U
2,4,5-Trichlorophenol	NL	µg/kg	290 U	270 U	300 U	390 U	330 U
2,4,6-Trichlorophenol	NL	µg/kg	290 U	270 U	300 U	390 U	330 U
2,4-Dichlorophenol	NL	µg/kg	290 U	270 U	300 U	390 U	330 U
2,4-Dimethylphenol	NL	µg/kg	290 U	270 U	300 U	390 U	330 U
2,4-Dinitrophenol	NL	µg/kg	570 U	530 U	570 U	760 U	650 U
2,4-Dinitrotoluene	NL	µg/kg	290 U	270 U	300 U	390 U	330 U
2,6-Dinitrotoluene	NL	µg/kg	290 U	270 U	300 U	390 U	330 U
2-Chloronaphthalene	NL	µg/kg	290 U	270 U	300 U	390 U	330 U
2-Chlorophenol	NL	µg/kg	290 U	270 U	300 U	390 U	330 U
2-Methylnaphthalene	NL	µg/kg	5.7 U	5.3 U	5.7 U	7.6 U	6.5 U
2-Methylphenol	NL	µg/kg	290 U	270 U	300 U	390 U	330 U
2-Nitroaniline	NL	µg/kg	570 U	530 U	570 U	760 U	650 U
2-Nitrophenol	NL	µg/kg	290 U	270 U	300 U	390 U	330 U
3,3'-Dichlorobenzidine	NL	µg/kg	290 U	270 U	300 U	390 U	330 U
3-Nitroaniline	NL	µg/kg	570 U	530 U	570 U	760 U	650 U
4,6-Dinitro-2-methylphenol	NL	µg/kg	570 U	530 U	570 U	760 U	650 U
4-Bromophenyl-phenylether	NL	µg/kg	290 U	270 U	300 U	390 U	330 U
4-Chloro-3-methylphenol	NL	µg/kg	290 U	270 U	300 U	390 U	330 U
4-Chloroaniline	NL	µg/kg	290 U	270 U	300 U	390 U	330 U
4-Chlorophenyl-phenylether	NL	µg/kg	290 U	270 U	300 U	390 U	330 U
4-Methylphenol	NL	µg/kg	290 U	270 U	300 U	390 U	330 U
4-Nitroaniline	NL	µg/kg	570 U	530 U	570 U	760 U	650 U
4-Nitrophenol	NL	µg/kg	570 U	530 U	570 U	760 U	650 U
Acenaphthene	NL	µg/kg	5.7 U	5.3 U	5.7 U	7.6 U	6.5 U
Acenaphthylene	NL	µg/kg	5.7 U	5.3 U	5.7 U	7.6 U	6.5 U
Acetophenone	NL	µg/kg	290 U	270 U	300 U	390 U	330 U
Anthracene	845	µg/kg	5.7 U	5.3 U	5.7 U	7.6 U	6.5 U
Atrazine	NL	µg/kg	290 U	270 U	300 U	390 U	330 U
Benzaldehyde	NL	µg/kg	290 U	270 U	300 U	390 U	330 U
Benzo(a)anthracene	1050	µg/kg	5.7 U	6.2	11	7.6 U	6.5 U
Benzo(a)pyrene	1450	µg/kg	5.7 U	13	14	7.6 U	7

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Table B-1
Sediment Sample Analytical Results - SVOCs
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-47	LMR11-47	LMR11-47	LMR11-48	LMR11-48
		Field Sample ID	LMR11-47-096	LMR11-47-120	LMR11-47-144	LMR11-48-006	LMR11-48-024
		Sample Date	8/8/2011	8/8/2011	8/8/2011	8/8/2011	8/8/2011
		Depth Interval (in bss)	72- 96	96- 120	120- 144	0- 6	6- 24
Chemical Name	**PEC[1]**	**Unit**					
Benzo(b)fluoranthene	NL	µg/kg	6.7	9.7	14	7.6 U	6.5 U
Benzo(g,h,i)perylene	NL	µg/kg	5.7 U	5.3 U	6.6	7.6 U	6.5 U
Benzo(k)fluoranthene	NL	µg/kg	5.7 U	5.3 U	5.7 U	7.6 U	6.5 U
Bis(2-chloroethoxy)methane	NL	µg/kg	290 U	270 U	300 U	390 U	330 U
Bis(2-chloroethyl)ether	NL	µg/kg	290 U	270 U	300 U	390 U	330 U
Bis(2-ethylhexyl)phthalate	NL	µg/kg	290 U	270 U	300 U	390 U	330 U
Butylbenzylphthalate	NL	µg/kg	290 U	270 U	300 U	390 U	330 U
Caprolactam	NL	µg/kg	290 U	270 U	300 U	390 U	330 U
Carbazole	NL	µg/kg	290 U	270 U	300 U	390 U	330 U
Chrysene	1290	µg/kg	5.7 U	7.5	12	7.6 U	8.3
Dibenzo(a,h)anthracene	NL	µg/kg	5.7 U	5.3 U	5.7 U	7.6 U	6.5 U
Dibenzofuran	NL	µg/kg	290 U	270 U	300 U	390 U	330 U
Diethylphthalate	NL	µg/kg	290 U	270 U	300 U	390 U	330 U
Dimethylphthalate	NL	µg/kg	290 U	270 U	300 U	390 U	330 U
Di-n-butylphthalate	NL	µg/kg	290 U	270 U	300 U	500	330 U
Di-n-octylphthalate	NL	µg/kg	290 U	270 U	300 U	390 U	330 U
Fluoranthene	2230	µg/kg	8	15	21	8.8	15
Fluorene	536	µg/kg	5.7 U	5.3 U	5.7 U	7.6 U	6.5 U
Hexachlorobenzene	NL	µg/kg	290 U	270 U	300 U	390 U	330 U
Hexachlorobutadiene	NL	µg/kg	290 U	270 U	300 U	390 U	330 U
Hexachlorocyclopentadiene	NL	µg/kg	290 U	270 U	300 U	390 U	330 U
Hexachloroethane	NL	µg/kg	290 U	270 U	300 U	390 U	330 U
Indeno(1,2,3-cd)pyrene	NL	µg/kg	5.7 U	5.3 U	5.7 U	7.6 U	6.5 U
Isophorone	NL	µg/kg	290 U	270 U	300 U	390 U	330 U
Naphthalene	561	µg/kg	5.7 U	5.3 U	7	7.6 U	6.5 U
Nitrobenzene	NL	µg/kg	290 U	270 U	300 U	390 U	330 U
N-Nitroso-di-n-propylamine	NL	µg/kg	290 U	270 U	300 U	390 U	330 U
N-Nitrosodiphenylamine	NL	µg/kg	290 U	270 U	300 U	390 U	330 U
Pentachlorophenol	NL	µg/kg	12 U	11 U	12 U	15 U	13 U
Phenanthrene	1170	µg/kg	5.7 U	11	14	7.6 U	12
Phenol	NL	µg/kg	290 U	270 U	300 U	390 U	330 U
Pyrene	1520	µg/kg	9.6	14	22	11	16
Total PAH 17	22800	µg/kg	64.2	102.9	144.4	76.8	97.3
TOC	NL	mg/kg	29,300	31,000	37,800	30,000	39,400

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Table B-1
Sediment Sample Analytical Results - SVOCs
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-48	LMR11-48	LMR11-48	LMR11-49	LMR11-49
		Field Sample ID	LMR11-48-024FS	LMR11-48-048	LMR11-48-061	LMR11-49-006	LMR11-49-024
		Sample Date	8/8/2011	8/8/2011	8/8/2011	8/8/2011	8/8/2011
		Depth Interval (in bss)	6- 24	24- 48	48- 61	0- 6	6- 24
Chemical Name	**PEC[1]**	**Unit**					
1,1'-Biphenyl	NL	µg/kg	330 U	310 U	290 U	320 UJ	310 UJ
1,2,4,5-Tetrachlorobenzene	NL	µg/kg	330 U	310 U	290 U	320 UJ	310 UJ
2,2'-Oxybis(1-chloropropane)	NL	µg/kg	330 U	310 U	290 U	320 UJ	310 UJ
2,3,4,6-Tetrachlorophenol	NL	µg/kg	330 U	310 U	290 U	320 UJ	310 UJ
2,4,5-Trichlorophenol	NL	µg/kg	330 U	310 U	290 U	320 UJ	310 UJ
2,4,6-Trichlorophenol	NL	µg/kg	330 U	310 U	290 U	320 UJ	310 UJ
2,4-Dichlorophenol	NL	µg/kg	330 U	310 U	290 U	320 UJ	310 UJ
2,4-Dimethylphenol	NL	µg/kg	330 U	310 U	290 U	320 UJ	310 UJ
2,4-Dinitrophenol	NL	µg/kg	650 U	610 U	570 U	620 UJ	600 UJ
2,4-Dinitrotoluene	NL	µg/kg	330 U	310 U	290 U	320 UJ	310 UJ
2,6-Dinitrotoluene	NL	µg/kg	330 U	310 U	290 U	320 UJ	310 UJ
2-Chloronaphthalene	NL	µg/kg	330 U	310 U	290 U	320 UJ	310 UJ
2-Chlorophenol	NL	µg/kg	330 U	310 U	290 U	320 UJ	310 UJ
2-Methylnaphthalene	NL	µg/kg	6.5 U	6.1 U	5.7 U	6.2 UJ	6 UJ
2-Methylphenol	NL	µg/kg	330 U	310 U	290 U	320 UJ	310 UJ
2-Nitroaniline	NL	µg/kg	650 U	610 U	570 U	620 UJ	600 UJ
2-Nitrophenol	NL	µg/kg	330 U	310 U	290 U	320 UJ	310 UJ
3,3'-Dichlorobenzidine	NL	µg/kg	330 U	310 U	290 U	320 UJ	310 UJ
3-Nitroaniline	NL	µg/kg	650 U	610 U	570 U	620 UJ	600 UJ
4,6-Dinitro-2-methylphenol	NL	µg/kg	650 U	610 U	570 U	620 UJ	600 UJ
4-Bromophenyl-phenylether	NL	µg/kg	330 U	310 U	290 U	320 UJ	310 UJ
4-Chloro-3-methylphenol	NL	µg/kg	330 U	310 U	290 U	320 UJ	310 UJ
4-Chloroaniline	NL	µg/kg	330 U	310 U	290 U	320 UJ	310 UJ
4-Chlorophenyl-phenylether	NL	µg/kg	330 U	310 U	290 U	320 UJ	310 UJ
4-Methylphenol	NL	µg/kg	330 U	310 U	290 U	320 UJ	310 UJ
4-Nitroaniline	NL	µg/kg	650 U	610 U	570 U	620 UJ	600 UJ
4-Nitrophenol	NL	µg/kg	650 U	610 U	570 U	620 UJ	600 UJ
Acenaphthene	NL	µg/kg	6.5 U	6.1 U	5.7 U	6.2 UJ	6 UJ
Acenaphthylene	NL	µg/kg	6.5 U	6.1 U	5.7 U	6.2 UJ	6 UJ
Acetophenone	NL	µg/kg	330 U	310 U	290 U	320 UJ	310 UJ
Anthracene	845	µg/kg	6.5 U	6.1 U	5.7 U	6.2 UJ	6 UJ
Atrazine	NL	µg/kg	330 U	310 U	290 U	320 UJ	310 UJ
Benzaldehyde	NL	µg/kg	330 U	310 U	290 U	320 UJ	310 UJ
Benzo(a)anthracene	1050	µg/kg	7.7	6.1 U	9.9	6.2 UJ	6 UJ
Benzo(a)pyrene	1450	µg/kg	9.5	6.1 U	7.6	11 J	6 UJ

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Table B-1
Sediment Sample Analytical Results - SVOCs
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-48	LMR11-48	LMR11-48	LMR11-49	LMR11-49
		Field Sample ID	LMR11-48-024FS	LMR11-48-048	LMR11-48-061	LMR11-49-006	LMR11-49-024
		Sample Date	8/8/2011	8/8/2011	8/8/2011	8/8/2011	8/8/2011
		Depth Interval (in bss)	6- 24	24- 48	48- 61	0- 6	6- 24
Chemical Name	**PEC[1]**	**Unit**					
Benzo(b)fluoranthene	NL	µg/kg	8.4	6.1 U	9.4	6.9 J	7.7 J
Benzo(g,h,i)perylene	NL	µg/kg	6.5 U	6.1 U	6.8	6.2 UJ	6 UJ
Benzo(k)fluoranthene	NL	µg/kg	6.5 U	6.1 U	5.7 U	6.2 UJ	6 UJ
Bis(2-chloroethoxy)methane	NL	µg/kg	330 U	310 U	290 U	320 UJ	310 UJ
Bis(2-chloroethyl)ether	NL	µg/kg	330 U	310 U	290 U	320 UJ	310 UJ
Bis(2-ethylhexyl)phthalate	NL	µg/kg	330 U	310 U	290 U	320 UJ	310 UJ
Butylbenzylphthalate	NL	µg/kg	330 U	310 U	290 U	320 UJ	310 UJ
Caprolactam	NL	µg/kg	330 U	310 U	290 U	320 UJ	310 UJ
Carbazole	NL	µg/kg	330 U	310 U	290 U	320 UJ	310 UJ
Chrysene	1290	µg/kg	13	7.1	12	6.2 UJ	6.3 J
Dibenzo(a,h)anthracene	NL	µg/kg	6.5 U	6.1 U	5.7 U	6.2 UJ	6 UJ
Dibenzofuran	NL	µg/kg	330 U	310 U	290 U	320 UJ	310 UJ
Diethylphthalate	NL	µg/kg	330 U	310 U	290 U	320 UJ	310 UJ
Dimethylphthalate	NL	µg/kg	330 U	310 U	290 U	320 UJ	310 UJ
Di-n-butylphthalate	NL	µg/kg	330 U	310 U	210 J	320 UJ	310 UJ
Di-n-octylphthalate	NL	µg/kg	330 U	310 U	290 U	320 UJ	310 UJ
Fluoranthene	2230	µg/kg	21	11	14	7.8 J	12 J
Fluorene	536	µg/kg	6.5 U	6.1 U	5.7 U	6.2 UJ	6 UJ
Hexachlorobenzene	NL	µg/kg	330 U	310 U	290 U	320 UJ	310 UJ
Hexachlorobutadiene	NL	µg/kg	330 U	310 U	290 U	320 UJ	310 UJ
Hexachlorocyclopentadiene	NL	µg/kg	330 U	310 U	290 U	320 UJ	310 UJ
Hexachloroethane	NL	µg/kg	330 U	310 U	290 U	320 UJ	310 UJ
Indeno(1,2,3-cd)pyrene	NL	µg/kg	6.5 U	6.1 U	6.9	6.2 UJ	6 UJ
Isophorone	NL	µg/kg	330 U	310 U	290 U	320 UJ	310 UJ
Naphthalene	561	µg/kg	6.5 U	6.1 U	5.7 U	6.2 UJ	6 UJ
Nitrobenzene	NL	µg/kg	330 U	310 U	290 U	320 UJ	310 UJ
N-Nitroso-di-n-propylamine	NL	µg/kg	330 U	310 U	290 U	320 UJ	310 UJ
N-Nitrosodiphenylamine	NL	µg/kg	330 U	310 U	290 U	320 UJ	310 UJ
Pentachlorophenol	NL	µg/kg	13 U	12 U	13	13 UJ	12 UJ
Phenanthrene	1170	µg/kg	14	6.6	9.3	6.2 UJ	8.8 J
Phenol	NL	µg/kg	330 U	310 U	290 U	320 UJ	310 UJ
Pyrene	1520	µg/kg	21	12	16	9.6 J	13 J
Total PAH 17	22800	µg/kg	127.1	76.35	114.7	75.6	83.8
TOC	NL	mg/kg	26,600	26,400	30,300	23,800	21,000

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Table B-1
Sediment Sample Analytical Results - SVOCs
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-49	LMR11-49	LMR11-49	LMR11-49	LMR11-50
		Field Sample ID	LMR11-49-048	LMR11-49-072	LMR11-49-096	LMR11-49-115	LMR11-50-006
		Sample Date	8/8/2011	8/8/2011	8/8/2011	8/8/2011	8/8/2011
		Depth Interval (in bss)	24- 48	48- 72	72- 96	96- 115	0- 6
Chemical Name	**PEC[1]**	**Unit**					
1,1'-Biphenyl	NL	µg/kg	270 UJ	260 UJ	250 UJ	230 UJ	370 U
1,2,4,5-Tetrachlorobenzene	NL	µg/kg	270 UJ	260 UJ	250 UJ	230 UJ	370 U
2,2'-Oxybis(1-chloropropane)	NL	µg/kg	270 UJ	260 UJ	250 UJ	230 UJ	370 U
2,3,4,6-Tetrachlorophenol	NL	µg/kg	270 UJ	260 UJ	250 UJ	230 UJ	370 U
2,4,5-Trichlorophenol	NL	µg/kg	270 UJ	260 UJ	250 UJ	230 UJ	370 U
2,4,6-Trichlorophenol	NL	µg/kg	270 UJ	260 UJ	250 UJ	230 UJ	370 U
2,4-Dichlorophenol	NL	µg/kg	270 UJ	260 UJ	250 UJ	230 UJ	370 U
2,4-Dimethylphenol	NL	µg/kg	270 UJ	260 UJ	250 UJ	230 UJ	370 U
2,4-Dinitrophenol	NL	µg/kg	520 UJ	500 UJ	480 UJ	450 UJ	720 U
2,4-Dinitrotoluene	NL	µg/kg	270 UJ	260 UJ	250 UJ	230 UJ	370 U
2,6-Dinitrotoluene	NL	µg/kg	270 UJ	260 UJ	250 UJ	230 UJ	370 U
2-Chloronaphthalene	NL	µg/kg	270 UJ	260 UJ	250 UJ	230 UJ	370 U
2-Chlorophenol	NL	µg/kg	270 UJ	260 UJ	250 UJ	230 UJ	370 U
2-Methylnaphthalene	NL	µg/kg	5.2 UJ	5 UJ	7.9 J	4.5 UJ	7.2 U
2-Methylphenol	NL	µg/kg	270 UJ	260 UJ	250 UJ	230 UJ	370 U
2-Nitroaniline	NL	µg/kg	520 UJ	500 UJ	480 UJ	450 UJ	720 U
2-Nitrophenol	NL	µg/kg	270 UJ	260 UJ	250 UJ	230 UJ	370 U
3,3'-Dichlorobenzidine	NL	µg/kg	270 UJ	260 UJ	250 UJ	230 UJ	370 U
3-Nitroaniline	NL	µg/kg	520 UJ	500 UJ	480 UJ	450 UJ	720 U
4,6-Dinitro-2-methylphenol	NL	µg/kg	520 UJ	500 UJ	480 UJ	450 UJ	720 U
4-Bromophenyl-phenylether	NL	µg/kg	270 UJ	260 UJ	250 UJ	230 UJ	370 U
4-Chloro-3-methylphenol	NL	µg/kg	270 UJ	260 UJ	250 UJ	230 UJ	370 U
4-Chloroaniline	NL	µg/kg	270 UJ	260 UJ	250 UJ	230 UJ	370 U
4-Chlorophenyl-phenylether	NL	µg/kg	270 UJ	260 UJ	250 UJ	230 UJ	370 U
4-Methylphenol	NL	µg/kg	270 UJ	260 UJ	250 UJ	230 UJ	370 U
4-Nitroaniline	NL	µg/kg	520 UJ	500 UJ	480 UJ	450 UJ	720 U
4-Nitrophenol	NL	µg/kg	520 UJ	500 UJ	480 UJ	450 UJ	720 U
Acenaphthene	NL	µg/kg	5.2 UJ	5 UJ	4.8 UJ	4.5 UJ	7.2 U
Acenaphthylene	NL	µg/kg	5.2 UJ	5 UJ	10 J	4.5 UJ	7.2 U
Acetophenone	NL	µg/kg	270 UJ	260 UJ	250 UJ	230 UJ	370 U
Anthracene	845	µg/kg	5.2 UJ	5 UJ	25 J	4.5 UJ	7.2 U
Atrazine	NL	µg/kg	270 UJ	260 UJ	250 UJ	230 UJ	370 U
Benzaldehyde	NL	µg/kg	270 UJ	260 UJ	250 UJ	230 UJ	370 U
Benzo(a)anthracene	1050	µg/kg	5.2 UJ	5.3 J	120 J	7.9 J	28
Benzo(a)pyrene	1450	µg/kg	5.2 UJ	5 UJ	100 J	8.8 J	49

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Table B-1
Sediment Sample Analytical Results - SVOCs
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-49	LMR11-49	LMR11-49	LMR11-49	LMR11-50
		Field Sample ID	LMR11-49-048	LMR11-49-072	LMR11-49-096	LMR11-49-115	LMR11-50-006
		Sample Date	8/8/2011	8/8/2011	8/8/2011	8/8/2011	8/8/2011
		Depth Interval (in bss)	24- 48	48- 72	72- 96	96- 115	0- 6
Chemical Name	**PEC[1]**	**Unit**					
Benzo(b)fluoranthene	NL	µg/kg	5.2 UJ	7.4 J	110 J	10 J	62
Benzo(g,h,i)perylene	NL	µg/kg	5.2 UJ	5 UJ	57 J	4.5 UJ	38
Benzo(k)fluoranthene	NL	µg/kg	5.2 UJ	5 UJ	57 J	5.7 J	38
Bis(2-chloroethoxy)methane	NL	µg/kg	270 UJ	260 UJ	250 UJ	230 UJ	370 U
Bis(2-chloroethyl)ether	NL	µg/kg	270 UJ	260 UJ	250 UJ	230 UJ	370 U
Bis(2-ethylhexyl)phthalate	NL	µg/kg	270 UJ	260 UJ	250 UJ	230 UJ	370 U
Butylbenzylphthalate	NL	µg/kg	270 UJ	260 UJ	250 UJ	230 UJ	370 U
Caprolactam	NL	µg/kg	270 UJ	260 UJ	250 UJ	230 UJ	370 U
Carbazole	NL	µg/kg	270 UJ	260 UJ	250 UJ	230 UJ	370 U
Chrysene	1290	µg/kg	5.2 UJ	7 J	100 J	9.5 J	41
Dibenzo(a,h)anthracene	NL	µg/kg	5.2 UJ	5 UJ	16 J	4.5 UJ	8.7
Dibenzofuran	NL	µg/kg	270 UJ	260 UJ	250 UJ	230 UJ	370 U
Diethylphthalate	NL	µg/kg	270 UJ	260 UJ	250 UJ	230 UJ	370 U
Dimethylphthalate	NL	µg/kg	270 UJ	260 UJ	250 UJ	230 UJ	370 U
Di-n-butylphthalate	NL	µg/kg	270 UJ	260 UJ	250 UJ	230 UJ	370 U
Di-n-octylphthalate	NL	µg/kg	270 UJ	260 UJ	250 UJ	230 UJ	370 U
Fluoranthene	2230	µg/kg	5.2 UJ	11 J	180 J	17 J	72
Fluorene	536	µg/kg	5.2 UJ	5 UJ	7 J	4.5 UJ	7.2 U
Hexachlorobenzene	NL	µg/kg	270 UJ	260 UJ	250 UJ	230 UJ	370 U
Hexachlorobutadiene	NL	µg/kg	270 UJ	260 UJ	250 UJ	230 UJ	370 U
Hexachlorocyclopentadiene	NL	µg/kg	270 UJ	260 UJ	250 UJ	230 UJ	370 U
Hexachloroethane	NL	µg/kg	270 UJ	260 UJ	250 UJ	230 UJ	370 U
Indeno(1,2,3-cd)pyrene	NL	µg/kg	5.2 UJ	5 UJ	51 J	4.5 UJ	30
Isophorone	NL	µg/kg	270 UJ	260 UJ	250 UJ	230 UJ	370 U
Naphthalene	561	µg/kg	5.2 UJ	5 UJ	13 J	4.5 UJ	9
Nitrobenzene	NL	µg/kg	270 UJ	260 UJ	250 UJ	230 UJ	370 U
N-Nitroso-di-n-propylamine	NL	µg/kg	270 UJ	260 UJ	250 UJ	230 UJ	370 U
N-Nitrosodiphenylamine	NL	µg/kg	270 UJ	260 UJ	250 UJ	230 UJ	370 U
Pentachlorophenol	NL	µg/kg	11 UJ	10 UJ	9.8 UJ	9.2 UJ	15 UJ
Phenanthrene	1170	µg/kg	5.2 UJ	8 J	72 J	14 J	35
Phenol	NL	µg/kg	270 UJ	260 UJ	250 UJ	230 UJ	370 U
Pyrene	1520	µg/kg	6.3 J	12 J	190 J	21 J	65 J
Total PAH 17	22800	µg/kg	47.9	78.2	1,118	114.15	493.7
TOC	NL	mg/kg	26,500	29,600	19,600	26,900 J	34,800

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Table B-1
Sediment Sample Analytical Results - SVOCs
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-50	LMR11-50	LMR11-50	LMR11-50	LMR11-50
		Field Sample ID	LMR11-50-006-DP	LMR11-50-024	LMR11-50-024-DP	LMR11-50-048	LMR11-50-048-DP
		Sample Date	8/8/2011	8/8/2011	8/8/2011	8/8/2011	8/8/2011
		Depth Interval (in bss)	0- 6	6- 24	6- 24	24- 48	24- 48
Chemical Name	**PEC[1]**	**Unit**					
1,1'-Biphenyl	NL	µg/kg	360 U	360 U	300 U	270 U	240 U
1,2,4,5-Tetrachlorobenzene	NL	µg/kg	360 U	360 U	300 U	270 U	240 U
2,2'-Oxybis(1-chloropropane)	NL	µg/kg	360 U	360 U	300 U	270 U	240 U
2,3,4,6-Tetrachlorophenol	NL	µg/kg	360 U	360 U	300 U	270 U	240 U
2,4,5-Trichlorophenol	NL	µg/kg	360 U	360 U	300 U	270 U	240 U
2,4,6-Trichlorophenol	NL	µg/kg	360 U	360 U	300 U	270 U	240 U
2,4-Dichlorophenol	NL	µg/kg	360 U	360 U	300 U	270 U	240 U
2,4-Dimethylphenol	NL	µg/kg	360 U	360 U	300 U	270 U	240 U
2,4-Dinitrophenol	NL	µg/kg	710 U	700 U	580 U	530 U	470 U
2,4-Dinitrotoluene	NL	µg/kg	360 U	360 U	300 U	270 U	240 U
2,6-Dinitrotoluene	NL	µg/kg	360 U	360 U	300 U	270 U	240 U
2-Chloronaphthalene	NL	µg/kg	360 U	360 U	300 U	270 U	240 U
2-Chlorophenol	NL	µg/kg	360 U	360 U	300 U	270 U	240 U
2-Methylnaphthalene	NL	µg/kg	7.1 U	12	46	8.5	36
2-Methylphenol	NL	µg/kg	360 U	360 U	300 U	270 U	240 U
2-Nitroaniline	NL	µg/kg	710 U	700 U	580 U	530 U	470 U
2-Nitrophenol	NL	µg/kg	360 U	360 U	300 U	270 U	240 U
3,3'-Dichlorobenzidine	NL	µg/kg	360 U	360 U	300 U	270 U	240 U
3-Nitroaniline	NL	µg/kg	710 U	700 U	580 U	530 U	470 U
4,6-Dinitro-2-methylphenol	NL	µg/kg	710 U	700 U	580 U	530 U	470 U
4-Bromophenyl-phenylether	NL	µg/kg	360 U	360 U	300 U	270 U	240 U
4-Chloro-3-methylphenol	NL	µg/kg	360 U	360 U	300 U	270 U	240 U
4-Chloroaniline	NL	µg/kg	360 U	360 U	300 U	270 U	240 U
4-Chlorophenyl-phenylether	NL	µg/kg	360 U	360 U	300 U	270 U	240 U
4-Methylphenol	NL	µg/kg	360 U	360 U	300 U	270 U	53 J
4-Nitroaniline	NL	µg/kg	710 U	700 U	580 U	530 U	470 U
4-Nitrophenol	NL	µg/kg	710 U	700 U	580 U	530 U	470 U
Acenaphthene	NL	µg/kg	7.1 U	7 U	46	7.2	4.7 U
Acenaphthylene	NL	µg/kg	7.1 U	7 U	9.3	5.3 U	15
Acetophenone	NL	µg/kg	360 U	360 U	300 U	270 U	240 U
Anthracene	845	µg/kg	27	22	70	19	54
Atrazine	NL	µg/kg	360 U	360 U	300 U	270 U	240 U
Benzaldehyde	NL	µg/kg	360 U	360 U	300 U	270 U	240 U
Benzo(a)anthracene	1050	µg/kg	93	91	330	66	160
Benzo(a)pyrene	1450	µg/kg	97	95	280	67	140

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Table B-1
Sediment Sample Analytical Results - SVOCs
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-50	LMR11-50	LMR11-50	LMR11-50	LMR11-50
		Field Sample ID	LMR11-50-006-DP	LMR11-50-024	LMR11-50-024-DP	LMR11-50-048	LMR11-50-048-DP
		Sample Date	8/8/2011	8/8/2011	8/8/2011	8/8/2011	8/8/2011
		Depth Interval (in bss)	0- 6	6- 24	6- 24	24- 48	24- 48
Chemical Name	**PEC[1]**	**Unit**					
Benzo(b)fluoranthene	NL	µg/kg	130	140	440	81	190
Benzo(g,h,i)perylene	NL	µg/kg	70	77	180	45	83
Benzo(k)fluoranthene	NL	µg/kg	77	66	150	48	71
Bis(2-chloroethoxy)methane	NL	µg/kg	360 U	360 U	300 U	270 U	240 U
Bis(2-chloroethyl)ether	NL	µg/kg	360 U	360 U	300 U	270 U	240 U
Bis(2-ethylhexyl)phthalate	NL	µg/kg	160 J	130 J	130 J	74 J	220 J
Butylbenzylphthalate	NL	µg/kg	360 U	360 U	300 U	270 U	240 U
Caprolactam	NL	µg/kg	360 U	360 U	300 U	270 U	240 U
Carbazole	NL	µg/kg	360 U	360 U	88 J	270 U	240 U
Chrysene	1290	µg/kg	110	120	340	69	180
Dibenzo(a,h)anthracene	NL	µg/kg	20	19	50	12	23
Dibenzofuran	NL	µg/kg	360 U	360 U	300 U	270 U	240 U
Diethylphthalate	NL	µg/kg	360 U	360 U	300 U	270 U	240 U
Dimethylphthalate	NL	µg/kg	360 U	360 U	300 U	270 U	240 U
Di-n-butylphthalate	NL	µg/kg	360 U	360 U	82 J	270 U	240 U
Di-n-octylphthalate	NL	µg/kg	360 U	360 U	300 U	270 U	240 U
Fluoranthene	2230	µg/kg	190	210	940	140	320
Fluorene	536	µg/kg	10	11	57	9.9	26
Hexachlorobenzene	NL	µg/kg	360 U	360 U	300 U	270 U	240 U
Hexachlorobutadiene	NL	µg/kg	360 U	360 U	300 U	270 U	240 U
Hexachlorocyclopentadiene	NL	µg/kg	360 U	360 U	300 U	270 U	240 U
Hexachloroethane	NL	µg/kg	360 U	360 U	300 U	270 U	240 U
Indeno(1,2,3-cd)pyrene	NL	µg/kg	58	66	170	52	76
Isophorone	NL	µg/kg	360 U	360 U	300 U	270 U	240 U
Naphthalene	561	µg/kg	7.4	14	50	10	23
Nitrobenzene	NL	µg/kg	360 U	360 U	300 U	270 U	240 U
N-Nitroso-di-n-propylamine	NL	µg/kg	360 U	360 U	300 U	270 U	240 U
N-Nitrosodiphenylamine	NL	µg/kg	360 U	360 U	300 U	270 U	240 U
Pentachlorophenol	NL	µg/kg	14 UJ	14 UJ	12 U	11 UJ	9.6 UJ
Phenanthrene	1170	µg/kg	110	110	440	96	220
Phenol	NL	µg/kg	360 U	360 U	300 U	270 U	240 U
Pyrene	1520	µg/kg	160	180	790	130	270
Total PAH 17	22800	µg/kg	1,170	1,240	4,388	863.25	1,889
TOC	NL	mg/kg	37,400	33,700	28,700	25,700	17,000

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Table B-1
Sediment Sample Analytical Results - SVOCs
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-50	LMR11-50	LMR11-50	LMR11-50	LMR11-50
		Field Sample ID	LMR11-50-072	LMR11-50-096	LMR11-50-120	LMR11-50-144	LMR11-50-175
		Sample Date	8/8/2011	8/8/2011	8/8/2011	8/8/2011	8/8/2011
		Depth Interval (in bss)	48- 72	72- 96	96- 120	120- 144	144- 175
Chemical Name	**PEC[1]**	**Unit**					
1,1'-Biphenyl	NL	µg/kg	240 U	260 U	280 U	280 U	260 U
1,2,4,5-Tetrachlorobenzene	NL	µg/kg	240 U	260 U	280 U	280 U	260 U
2,2'-Oxybis(1-chloropropane)	NL	µg/kg	240 U	260 U	280 U	280 U	260 U
2,3,4,6-Tetrachlorophenol	NL	µg/kg	240 U	260 U	280 U	280 U	260 U
2,4,5-Trichlorophenol	NL	µg/kg	240 U	260 U	280 U	280 U	260 U
2,4,6-Trichlorophenol	NL	µg/kg	240 U	260 U	280 U	280 U	260 U
2,4-Dichlorophenol	NL	µg/kg	240 U	260 U	280 U	280 U	260 U
2,4-Dimethylphenol	NL	µg/kg	240 U	260 U	280 U	280 U	260 U
2,4-Dinitrophenol	NL	µg/kg	470 U	510 U	540 U	550 U	510 U
2,4-Dinitrotoluene	NL	µg/kg	240 U	260 U	280 U	280 U	260 U
2,6-Dinitrotoluene	NL	µg/kg	240 U	260 U	280 U	280 U	260 U
2-Chloronaphthalene	NL	µg/kg	240 U	260 U	280 U	280 U	260 U
2-Chlorophenol	NL	µg/kg	240 U	260 U	280 U	280 U	260 U
2-Methylnaphthalene	NL	µg/kg	580	660	690	6.2	220
2-Methylphenol	NL	µg/kg	240 U	260 U	280 U	280 U	260 U
2-Nitroaniline	NL	µg/kg	470 U	510 U	540 U	550 U	510 U
2-Nitrophenol	NL	µg/kg	240 U	260 U	280 U	280 U	260 U
3,3'-Dichlorobenzidine	NL	µg/kg	240 U	260 U	280 U	280 U	260 U
3-Nitroaniline	NL	µg/kg	470 U	510 U	540 U	550 U	510 U
4,6-Dinitro-2-methylphenol	NL	µg/kg	470 U	510 U	540 U	550 U	510 U
4-Bromophenyl-phenylether	NL	µg/kg	240 U	260 U	280 U	280 U	260 U
4-Chloro-3-methylphenol	NL	µg/kg	240 U	260 U	280 U	280 U	260 U
4-Chloroaniline	NL	µg/kg	240 U	260 U	280 U	280 U	260 U
4-Chlorophenyl-phenylether	NL	µg/kg	240 U	260 U	280 U	280 U	260 U
4-Methylphenol	NL	µg/kg	240 U	260 U	480	280 U	850
4-Nitroaniline	NL	µg/kg	470 U	510 U	540 U	550 U	510 U
4-Nitrophenol	NL	µg/kg	470 U	510 U	540 U	550 U	510 U
Acenaphthene	NL	µg/kg	40	190	5.4 U	5.5 U	26
Acenaphthylene	NL	µg/kg	4.7 U	5.1 U	5.4 U	5.5 U	11
Acetophenone	NL	µg/kg	240 U	260 U	280 U	280 U	260 U
Anthracene	845	µg/kg	70	170	43	6.8	97
Atrazine	NL	µg/kg	240 U	260 U	280 U	280 U	260 U
Benzaldehyde	NL	µg/kg	240 U	260 U	280 U	280 U	260 U
Benzo(a)anthracene	1050	µg/kg	170	670	77	14	180
Benzo(a)pyrene	1450	µg/kg	120	540	46	16	140

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Table B-1
Sediment Sample Analytical Results - SVOCs
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-50	LMR11-50	LMR11-50	LMR11-50	LMR11-50
		Field Sample ID	LMR11-50-072	LMR11-50-096	LMR11-50-120	LMR11-50-144	LMR11-50-175
		Sample Date	8/8/2011	8/8/2011	8/8/2011	8/8/2011	8/8/2011
		Depth Interval (in bss)	48- 72	72- 96	96- 120	120- 144	144- 175
Chemical Name	**PEC[1]**	**Unit**					
Benzo(b)fluoranthene	NL	µg/kg	170	710	72	13	210
Benzo(g,h,i)perylene	NL	µg/kg	68	360	41	6.9	92
Benzo(k)fluoranthene	NL	µg/kg	75	330	51	9	72
Bis(2-chloroethoxy)methane	NL	µg/kg	240 U	260 U	280 U	280 U	260 U
Bis(2-chloroethyl)ether	NL	µg/kg	240 U	260 U	280 U	280 U	260 U
Bis(2-ethylhexyl)phthalate	NL	µg/kg	180 J	200 J	130 J	280 U	190 J
Butylbenzylphthalate	NL	µg/kg	240 U	260 U	280 U	280 U	260 U
Caprolactam	NL	µg/kg	240 U	260 U	280 U	280 U	260 U
Carbazole	NL	µg/kg	85 J	200 J	280 U	280 U	260 U
Chrysene	1290	µg/kg	190	640	97	14	220
Dibenzo(a,h)anthracene	NL	µg/kg	20	80	10	5.5 U	33
Dibenzofuran	NL	µg/kg	160 J	230 J	55 J	280 U	83 J
Diethylphthalate	NL	µg/kg	240 U	260 U	280 U	280 U	260 U
Dimethylphthalate	NL	µg/kg	240 U	260 U	280 U	280 U	260 U
Di-n-butylphthalate	NL	µg/kg	240 U	260 U	280 U	280 U	260 U
Di-n-octylphthalate	NL	µg/kg	240 U	260 U	280 U	280 U	260 U
Fluoranthene	2230	µg/kg	690	1,700	180	29	450
Fluorene	536	µg/kg	87	190	69	5.5 U	48
Hexachlorobenzene	NL	µg/kg	240 U	260 U	280 U	280 U	260 U
Hexachlorobutadiene	NL	µg/kg	240 U	260 U	280 U	280 U	260 U
Hexachlorocyclopentadiene	NL	µg/kg	240 U	260 U	280 U	280 U	260 U
Hexachloroethane	NL	µg/kg	240 U	260 U	280 U	280 U	260 U
Indeno(1,2,3-cd)pyrene	NL	µg/kg	68	340	33	6.1	80
Isophorone	NL	µg/kg	240 U	260 U	280 U	280 U	260 U
Naphthalene	561	µg/kg	350	570	100	5.7	170
Nitrobenzene	NL	µg/kg	240 U	260 U	280 U	280 U	260 U
N-Nitroso-di-n-propylamine	NL	µg/kg	240 U	260 U	280 U	280 U	260 U
N-Nitrosodiphenylamine	NL	µg/kg	240 U	260 U	280 U	280 U	260 U
Pentachlorophenol	NL	µg/kg	9.5 UJ	10 UJ	11 UJ	11 UJ	10 UJ
Phenanthrene	1170	µg/kg	930	1,600	310	28	430
Phenol	NL	µg/kg	240 U	260 U	280 U	280 U	260 U
Pyrene	1520	µg/kg	400	1200	160	28	380
Total PAH 17	22800	µg/kg	4,030	9,953	1,984	193.7	2,859
TOC	NL	mg/kg	36,200	48,500	32,200	54,500	39,900

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Table B-1
Sediment Sample Analytical Results - SVOCs
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-51	LMR11-51	LMR11-51	LMR11-51	LMR11-52
		Field Sample ID	LMR11-51-006	LMR11-51-024	LMR11-51-048	LMR11-51-075	LMR11-52-006
		Sample Date	8/7/2011	8/7/2011	8/7/2011	8/7/2011	8/8/2011
		Depth Interval (in bss)	0- 6	6- 24	24- 48	48- 75	0- 6
Chemical Name	**PEC[1]**	**Unit**					
1,1'-Biphenyl	NL	µg/kg	200 UJ	200 UJ	170 UJ	170 UJ	330 UJ
1,2,4,5-Tetrachlorobenzene	NL	µg/kg	200 UJ	200 UJ	170 UJ	170 UJ	330 UJ
2,2'-Oxybis(1-chloropropane)	NL	µg/kg	200 UJ	200 UJ	170 UJ	170 UJ	330 UJ
2,3,4,6-Tetrachlorophenol	NL	µg/kg	200 UJ	200 UJ	170 UJ	170 UJ	330 UJ
2,4,5-Trichlorophenol	NL	µg/kg	200 UJ	200 UJ	170 UJ	170 UJ	330 UJ
2,4,6-Trichlorophenol	NL	µg/kg	200 UJ	200 UJ	170 UJ	170 UJ	330 UJ
2,4-Dichlorophenol	NL	µg/kg	200 UJ	200 UJ	170 UJ	170 UJ	330 UJ
2,4-Dimethylphenol	NL	µg/kg	200 UJ	200 UJ	170 UJ	170 UJ	330 UJ
2,4-Dinitrophenol	NL	µg/kg	380 UJ	380 UJ	340 UJ	330 UJ	630 UJ
2,4-Dinitrotoluene	NL	µg/kg	200 UJ	200 UJ	170 UJ	170 UJ	330 UJ
2,6-Dinitrotoluene	NL	µg/kg	200 UJ	200 UJ	170 UJ	170 UJ	330 UJ
2-Chloronaphthalene	NL	µg/kg	200 UJ	200 UJ	170 UJ	170 UJ	330 UJ
2-Chlorophenol	NL	µg/kg	200 UJ	200 UJ	170 UJ	170 UJ	330 UJ
2-Methylnaphthalene	NL	µg/kg	3.8 UJ	3.8 UJ	3.4 UJ	3.3 UJ	6.3 UJ
2-Methylphenol	NL	µg/kg	200 UJ	200 UJ	170 UJ	170 UJ	330 UJ
2-Nitroaniline	NL	µg/kg	380 UJ	380 UJ	340 UJ	330 UJ	630 UJ
2-Nitrophenol	NL	µg/kg	200 UJ	200 UJ	170 UJ	170 UJ	330 UJ
3,3'-Dichlorobenzidine	NL	µg/kg	200 UJ	200 UJ	170 UJ	170 UJ	330 UJ
3-Nitroaniline	NL	µg/kg	380 UJ	380 UJ	340 UJ	330 UJ	630 UJ
4,6-Dinitro-2-methylphenol	NL	µg/kg	380 UJ	380 UJ	340 UJ	330 UJ	630 UJ
4-Bromophenyl-phenylether	NL	µg/kg	200 UJ	200 UJ	170 UJ	170 UJ	330 UJ
4-Chloro-3-methylphenol	NL	µg/kg	200 UJ	200 UJ	170 UJ	170 UJ	330 UJ
4-Chloroaniline	NL	µg/kg	200 UJ	200 UJ	170 UJ	170 UJ	330 UJ
4-Chlorophenyl-phenylether	NL	µg/kg	200 UJ	200 UJ	170 UJ	170 UJ	330 UJ
4-Methylphenol	NL	µg/kg	200 UJ	200 UJ	130 J	90 J	330 UJ
4-Nitroaniline	NL	µg/kg	380 UJ	380 UJ	340 UJ	330 UJ	630 UJ
4-Nitrophenol	NL	µg/kg	380 UJ	380 UJ	340 UJ	330 UJ	630 UJ
Acenaphthene	NL	µg/kg	3.8 UJ	3.8 UJ	3.4 UJ	3.3 UJ	6.3 UJ
Acenaphthylene	NL	µg/kg	3.8 UJ	3.8 UJ	3.4 UJ	3.3 UJ	6.3 UJ
Acetophenone	NL	µg/kg	200 UJ	200 UJ	170 UJ	170 UJ	330 UJ
Anthracene	845	µg/kg	3.8 UJ	3.8 UJ	3.4 UJ	3.3 UJ	6.3 UJ
Atrazine	NL	µg/kg	200 UJ	200 UJ	170 UJ	170 UJ	330 UJ
Benzaldehyde	NL	µg/kg	200 UJ	200 UJ	170 UJ	170 UJ	330 UJ
Benzo(a)anthracene	1050	µg/kg	3.8 UJ	3.8 UJ	3.7 J	3.3 UJ	11 J
Benzo(a)pyrene	1450	µg/kg	3.8 UJ	3.8 UJ	5 J	3.3 UJ	15 J

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Table B-1
Sediment Sample Analytical Results - SVOCs
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-51	LMR11-51	LMR11-51	LMR11-51	LMR11-52
		Field Sample ID	LMR11-51-006	LMR11-51-024	LMR11-51-048	LMR11-51-075	LMR11-52-006
		Sample Date	8/7/2011	8/7/2011	8/7/2011	8/7/2011	8/8/2011
		Depth Interval (in bss)	0- 6	6- 24	24- 48	48- 75	0- 6
Chemical Name	**PEC[1]**	**Unit**					
Benzo(b)fluoranthene	NL	µg/kg	3.8 UJ	3.8 UJ	6.6 J	4.8 J	14 J
Benzo(g,h,i)perylene	NL	µg/kg	3.8 UJ	3.8 UJ	3.4 UJ	3.3 UJ	6.3 UJ
Benzo(k)fluoranthene	NL	µg/kg	3.8 UJ	3.8 UJ	3.4 UJ	3.3 UJ	6.3 UJ
Bis(2-chloroethoxy)methane	NL	µg/kg	200 UJ	200 UJ	170 UJ	170 UJ	330 UJ
Bis(2-chloroethyl)ether	NL	µg/kg	200 UJ	200 UJ	170 UJ	170 UJ	330 UJ
Bis(2-ethylhexyl)phthalate	NL	µg/kg	200 UJ	200 UJ	170 UJ	170 UJ	330 UJ
Butylbenzylphthalate	NL	µg/kg	200 UJ	200 UJ	170 UJ	170 UJ	330 UJ
Caprolactam	NL	µg/kg	200 UJ	200 UJ	170 UJ	170 UJ	330 UJ
Carbazole	NL	µg/kg	200 UJ	200 UJ	170 UJ	170 UJ	330 UJ
Chrysene	1290	µg/kg	3.8 UJ	3.8 UJ	4.2 J	4.2 J	11 J
Dibenzo(a,h)anthracene	NL	µg/kg	3.8 UJ	3.8 UJ	3.4 UJ	3.3 UJ	6.3 UJ
Dibenzofuran	NL	µg/kg	200 UJ	200 UJ	170 UJ	170 UJ	330 UJ
Diethylphthalate	NL	µg/kg	200 UJ	200 UJ	170 UJ	170 UJ	330 UJ
Dimethylphthalate	NL	µg/kg	200 UJ	200 UJ	170 UJ	170 UJ	330 UJ
Di-n-butylphthalate	NL	µg/kg	200 UJ	200 UJ	170 UJ	170 UJ	330 UJ
Di-n-octylphthalate	NL	µg/kg	200 UJ	200 UJ	170 UJ	170 UJ	330 UJ
Fluoranthene	2230	µg/kg	3.8 UJ	6.9 J	8.8 J	7.1 J	24 J
Fluorene	536	µg/kg	3.8 UJ	3.8 UJ	3.4 UJ	3.3 UJ	6.3 UJ
Hexachlorobenzene	NL	µg/kg	200 UJ	200 UJ	170 UJ	170 UJ	330 UJ
Hexachlorobutadiene	NL	µg/kg	200 UJ	200 UJ	170 UJ	170 UJ	330 UJ
Hexachlorocyclopentadiene	NL	µg/kg	200 UJ	200 UJ	170 UJ	170 UJ	330 UJ
Hexachloroethane	NL	µg/kg	200 UJ	200 UJ	170 UJ	170 UJ	330 UJ
Indeno(1,2,3-cd)pyrene	NL	µg/kg	3.8 UJ	3.8 UJ	3.4 UJ	3.3 UJ	6.3 UJ
Isophorone	NL	µg/kg	200 UJ	200 UJ	170 UJ	170 UJ	330 UJ
Naphthalene	561	µg/kg	3.8 UJ	3.8 UJ	3.4 UJ	3.3 UJ	6.3 UJ
Nitrobenzene	NL	µg/kg	200 UJ	200 UJ	170 UJ	170 UJ	330 UJ
N-Nitroso-di-n-propylamine	NL	µg/kg	200 UJ	200 UJ	170 UJ	170 UJ	330 UJ
N-Nitrosodiphenylamine	NL	µg/kg	200 UJ	200 UJ	170 UJ	170 UJ	330 UJ
Pentachlorophenol	NL	µg/kg	7.7 UJ	7.7 UJ	6.8 UJ	6.6 UJ	13 UJ
Phenanthrene	1170	µg/kg	3.8 UJ	5.7 J	6.3 J	5.6 J	14 J
Phenol	NL	µg/kg	200 UJ	200 UJ	170 UJ	170 UJ	330 UJ
Pyrene	1520	µg/kg	3.8 UJ	6.2 J	7.9 J	7.7 J	22 J
Total PAH 17	22800	µg/kg	32.3	45.4	59.5	49.2	142.5
TOC	NL	mg/kg	21,400	19,400	21,100	18,200	18,300

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Table B-1
Sediment Sample Analytical Results - SVOCs
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-52	LMR11-52	LMR11-52	LMR11-52	LMR11-53
		Field Sample ID	LMR11-52-024	LMR11-52-048	LMR11-52-048FS	LMR11-52-072	LMR11-53-006
		Sample Date	8/8/2011	8/8/2011	8/8/2011	8/8/2011	8/7/2011
		Depth Interval (in bss)	6- 24	24- 48	24- 48	48- 72	0- 6
Chemical Name	**PEC[1]**	**Unit**					
1,1'-Biphenyl	NL	µg/kg	300 UJ	290 UJ	300 UJ	280 UJ	360 UJ
1,2,4,5-Tetrachlorobenzene	NL	µg/kg	300 UJ	290 UJ	300 UJ	280 UJ	360 UJ
2,2'-Oxybis(1-chloropropane)	NL	µg/kg	300 UJ	290 UJ	300 UJ	280 UJ	360 UJ
2,3,4,6-Tetrachlorophenol	NL	µg/kg	300 UJ	290 UJ	300 UJ	280 UJ	360 UJ
2,4,5-Trichlorophenol	NL	µg/kg	300 UJ	290 UJ	300 UJ	280 UJ	360 UJ
2,4,6-Trichlorophenol	NL	µg/kg	300 UJ	290 UJ	300 UJ	280 UJ	360 UJ
2,4-Dichlorophenol	NL	µg/kg	300 UJ	290 UJ	300 UJ	280 UJ	360 UJ
2,4-Dimethylphenol	NL	µg/kg	300 UJ	290 UJ	300 UJ	280 UJ	360 UJ
2,4-Dinitrophenol	NL	µg/kg	580 UJ	560 UJ	580 UJ	550 UJ	700 UJ
2,4-Dinitrotoluene	NL	µg/kg	300 UJ	290 UJ	300 UJ	280 UJ	360 UJ
2,6-Dinitrotoluene	NL	µg/kg	300 UJ	290 UJ	300 UJ	280 UJ	360 UJ
2-Chloronaphthalene	NL	µg/kg	300 UJ	290 UJ	300 UJ	280 UJ	360 UJ
2-Chlorophenol	NL	µg/kg	300 UJ	290 UJ	300 UJ	280 UJ	360 UJ
2-Methylnaphthalene	NL	µg/kg	5.8 UJ	5.6 UJ	5.8 UJ	5.5 UJ	7 UJ
2-Methylphenol	NL	µg/kg	300 UJ	290 UJ	300 UJ	280 UJ	360 UJ
2-Nitroaniline	NL	µg/kg	580 UJ	560 UJ	580 UJ	550 UJ	700 UJ
2-Nitrophenol	NL	µg/kg	300 UJ	290 UJ	300 UJ	280 UJ	360 UJ
3,3'-Dichlorobenzidine	NL	µg/kg	300 UJ	290 UJ	300 UJ	280 UJ	360 UJ
3-Nitroaniline	NL	µg/kg	580 UJ	560 UJ	580 UJ	550 UJ	700 UJ
4,6-Dinitro-2-methylphenol	NL	µg/kg	580 UJ	560 UJ	580 UJ	550 UJ	700 UJ
4-Bromophenyl-phenylether	NL	µg/kg	300 UJ	290 UJ	300 UJ	280 UJ	360 UJ
4-Chloro-3-methylphenol	NL	µg/kg	300 UJ	290 UJ	300 UJ	280 UJ	360 UJ
4-Chloroaniline	NL	µg/kg	300 UJ	290 UJ	300 UJ	280 UJ	360 UJ
4-Chlorophenyl-phenylether	NL	µg/kg	300 UJ	290 UJ	300 UJ	280 UJ	360 UJ
4-Methylphenol	NL	µg/kg	300 UJ	290 UJ	300 UJ	280 UJ	360 UJ
4-Nitroaniline	NL	µg/kg	580 UJ	560 UJ	580 UJ	550 UJ	700 UJ
4-Nitrophenol	NL	µg/kg	580 UJ	560 UJ	580 UJ	550 UJ	700 UJ
Acenaphthene	NL	µg/kg	5.8 UJ	5.6 UJ	5.8 UJ	5.5 UJ	7 UJ
Acenaphthylene	NL	µg/kg	5.8 UJ	5.6 UJ	5.8 UJ	5.5 UJ	7 UJ
Acetophenone	NL	µg/kg	300 UJ	290 UJ	300 UJ	280 UJ	360 UJ
Anthracene	845	µg/kg	5.8 UJ	5.6 UJ	5.8 UJ	5.5 UJ	7 UJ
Atrazine	NL	µg/kg	300 UJ	290 UJ	300 UJ	280 UJ	360 UJ
Benzaldehyde	NL	µg/kg	300 UJ	290 UJ	300 UJ	280 UJ	360 UJ
Benzo(a)anthracene	1050	µg/kg	7.9 J	28 J	8.4 J	10 J	13 J
Benzo(a)pyrene	1450	µg/kg	13 J	29 J	14 J	15 J	18 J

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Table B-1
Sediment Sample Analytical Results - SVOCs
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-52	LMR11-52	LMR11-52	LMR11-52	LMR11-53
		Field Sample ID	LMR11-52-024	LMR11-52-048	LMR11-52-048FS	LMR11-52-072	LMR11-53-006
		Sample Date	8/8/2011	8/8/2011	8/8/2011	8/8/2011	8/7/2011
		Depth Interval (in bss)	6- 24	24- 48	24- 48	48- 72	0- 6
Chemical Name	**PEC[1]**	**Unit**					
Benzo(b)fluoranthene	NL	µg/kg	12 J	24 J	12 J	13 J	26 J
Benzo(g,h,i)perylene	NL	µg/kg	6.2 J	11 J	5.9 J	6.7 J	12 J
Benzo(k)fluoranthene	NL	µg/kg	5.8 UJ	17 J	5.9 J	6.6 J	12 J
Bis(2-chloroethoxy)methane	NL	µg/kg	300 UJ	290 UJ	300 UJ	280 UJ	360 UJ
Bis(2-chloroethyl)ether	NL	µg/kg	300 UJ	290 UJ	300 UJ	280 UJ	360 UJ
Bis(2-ethylhexyl)phthalate	NL	µg/kg	300 UJ	290 UJ	300 UJ	280 UJ	360 UJ
Butylbenzylphthalate	NL	µg/kg	300 UJ	290 UJ	300 UJ	280 UJ	360 UJ
Caprolactam	NL	µg/kg	300 UJ	290 UJ	300 UJ	280 UJ	360 UJ
Carbazole	NL	µg/kg	300 UJ	290 UJ	300 UJ	280 UJ	360 UJ
Chrysene	1290	µg/kg	8.3 J	24 J	9.6 J	10 J	17 J
Dibenzo(a,h)anthracene	NL	µg/kg	5.8 UJ	5.6 UJ	5.8 UJ	5.5 UJ	7 UJ
Dibenzofuran	NL	µg/kg	300 UJ	290 UJ	300 UJ	280 UJ	360 UJ
Diethylphthalate	NL	µg/kg	300 UJ	290 UJ	300 UJ	280 UJ	360 UJ
Dimethylphthalate	NL	µg/kg	300 UJ	290 UJ	300 UJ	280 UJ	360 UJ
Di-n-butylphthalate	NL	µg/kg	300 UJ	290 UJ	300 UJ	280 UJ	360 UJ
Di-n-octylphthalate	NL	µg/kg	300 UJ	290 UJ	300 UJ	280 UJ	360 UJ
Fluoranthene	2230	µg/kg	13 J	39 J	18 J	18 J	33 J
Fluorene	536	µg/kg	5.8 UJ	5.6 UJ	5.8 UJ	5.5 UJ	7 UJ
Hexachlorobenzene	NL	µg/kg	300 UJ	290 UJ	300 UJ	280 UJ	360 UJ
Hexachlorobutadiene	NL	µg/kg	300 UJ	290 UJ	300 UJ	280 UJ	360 UJ
Hexachlorocyclopentadiene	NL	µg/kg	300 UJ	290 UJ	300 UJ	280 UJ	360 UJ
Hexachloroethane	NL	µg/kg	300 UJ	290 UJ	300 UJ	280 UJ	360 UJ
Indeno(1,2,3-cd)pyrene	NL	µg/kg	5.8 UJ	11 J	5.8 UJ	5.6 J	10 J
Isophorone	NL	µg/kg	300 UJ	290 UJ	300 UJ	280 UJ	360 UJ
Naphthalene	561	µg/kg	5.8 UJ	5.6 UJ	5.8 UJ	5.5 UJ	7 UJ
Nitrobenzene	NL	µg/kg	300 UJ	290 UJ	300 UJ	280 UJ	360 UJ
N-Nitroso-di-n-propylamine	NL	µg/kg	300 UJ	290 UJ	300 UJ	280 UJ	360 UJ
N-Nitrosodiphenylamine	NL	µg/kg	300 UJ	290 UJ	300 UJ	280 UJ	360 UJ
Pentachlorophenol	NL	µg/kg	12 UJ	11 UJ	12 UJ	11 UJ	14 UJ
Phenanthrene	1170	µg/kg	9.7 J	7.5 J	12 J	11 J	15 J
Phenol	NL	µg/kg	300 UJ	290 UJ	300 UJ	280 UJ	360 UJ
Pyrene	1520	µg/kg	15 J	42 J	17 J	19 J	29 J
Total PAH 17	22800	µg/kg	111.2	252.1	126	134.15	209.5
TOC	NL	mg/kg	27,700	22,900	22,500	20,800	34,900

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Table B-1
Sediment Sample Analytical Results - SVOCs
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-53	LMR11-53	LMR11-53	LMR11-54	LMR11-54
		Field Sample ID	LMR11-53-024	LMR11-53-048	LMR11-53-073	LMR11-54-006	LMR11-54-006-DP
		Sample Date	8/7/2011	8/7/2011	8/7/2011	8/8/2011	8/8/2011
		Depth Interval (in bss)	6- 24	24- 48	48- 73	0- 6	0- 6
Chemical Name	**PEC[1]**	**Unit**					
1,1'-Biphenyl	NL	µg/kg	250 UJ	250 UJ	240 UJ	310 UJ	300 UJ
1,2,4,5-Tetrachlorobenzene	NL	µg/kg	250 UJ	250 UJ	240 UJ	310 UJ	300 UJ
2,2'-Oxybis(1-chloropropane)	NL	µg/kg	250 UJ	250 UJ	240 UJ	310 UJ	300 UJ
2,3,4,6-Tetrachlorophenol	NL	µg/kg	250 UJ	250 UJ	240 UJ	310 UJ	300 UJ
2,4,5-Trichlorophenol	NL	µg/kg	250 UJ	250 UJ	240 UJ	310 UJ	300 UJ
2,4,6-Trichlorophenol	NL	µg/kg	250 UJ	250 UJ	240 UJ	310 UJ	300 UJ
2,4-Dichlorophenol	NL	µg/kg	250 UJ	250 UJ	240 UJ	310 UJ	300 UJ
2,4-Dimethylphenol	NL	µg/kg	250 UJ	250 UJ	240 UJ	310 UJ	300 UJ
2,4-Dinitrophenol	NL	µg/kg	490 UJ	480 UJ	460 UJ	600 UJ	590 UJ
2,4-Dinitrotoluene	NL	µg/kg	250 UJ	250 UJ	240 UJ	310 UJ	300 UJ
2,6-Dinitrotoluene	NL	µg/kg	250 UJ	250 UJ	240 UJ	310 UJ	300 UJ
2-Chloronaphthalene	NL	µg/kg	250 UJ	250 UJ	240 UJ	310 UJ	300 UJ
2-Chlorophenol	NL	µg/kg	250 UJ	250 UJ	240 UJ	310 UJ	300 UJ
2-Methylnaphthalene	NL	µg/kg	4.9 UJ	4.8 UJ	4.6 UJ	6 UJ	5.9 UJ
2-Methylphenol	NL	µg/kg	250 UJ	250 UJ	240 UJ	310 UJ	300 UJ
2-Nitroaniline	NL	µg/kg	490 UJ	480 UJ	460 UJ	600 UJ	590 UJ
2-Nitrophenol	NL	µg/kg	250 UJ	250 UJ	240 UJ	310 UJ	300 UJ
3,3'-Dichlorobenzidine	NL	µg/kg	250 UJ	250 UJ	240 UJ	310 UJ	300 UJ
3-Nitroaniline	NL	µg/kg	490 UJ	480 UJ	460 UJ	600 UJ	590 UJ
4,6-Dinitro-2-methylphenol	NL	µg/kg	490 UJ	480 UJ	460 UJ	600 UJ	590 UJ
4-Bromophenyl-phenylether	NL	µg/kg	250 UJ	250 UJ	240 UJ	310 UJ	300 UJ
4-Chloro-3-methylphenol	NL	µg/kg	250 UJ	250 UJ	240 UJ	310 UJ	300 UJ
4-Chloroaniline	NL	µg/kg	250 UJ	250 UJ	240 UJ	310 UJ	300 UJ
4-Chlorophenyl-phenylether	NL	µg/kg	250 UJ	250 UJ	240 UJ	310 UJ	300 UJ
4-Methylphenol	NL	µg/kg	250 UJ	250 UJ	240 UJ	310 UJ	300 UJ
4-Nitroaniline	NL	µg/kg	490 UJ	480 UJ	460 UJ	600 UJ	590 UJ
4-Nitrophenol	NL	µg/kg	490 UJ	480 UJ	460 UJ	600 UJ	590 UJ
Acenaphthene	NL	µg/kg	4.9 UJ	4.8 UJ	4.6 UJ	6 UJ	5.9 UJ
Acenaphthylene	NL	µg/kg	4.9 UJ	4.8 UJ	4.6 UJ	6 UJ	5.9 UJ
Acetophenone	NL	µg/kg	250 UJ	250 UJ	240 UJ	310 UJ	300 UJ
Anthracene	845	µg/kg	4.9 UJ	4.8 UJ	4.6 UJ	6 UJ	5.9 UJ
Atrazine	NL	µg/kg	250 UJ	250 UJ	240 UJ	310 UJ	300 UJ
Benzaldehyde	NL	µg/kg	250 UJ	250 UJ	240 UJ	310 UJ	300 UJ
Benzo(a)anthracene	1050	µg/kg	4.9 UJ	4.8 UJ	8.7 J	6 UJ	7.5 J
Benzo(a)pyrene	1450	µg/kg	4.9 UJ	4.8 UJ	11 J	6 UJ	9.7 J

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Table B-1
Sediment Sample Analytical Results - SVOCs
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-53	LMR11-53	LMR11-53	LMR11-54	LMR11-54
		Field Sample ID	LMR11-53-024	LMR11-53-048	LMR11-53-073	LMR11-54-006	LMR11-54-006-DP
		Sample Date	8/7/2011	8/7/2011	8/7/2011	8/8/2011	8/8/2011
		Depth Interval (in bss)	6- 24	24- 48	48- 73	0- 6	0- 6
Chemical Name	**PEC[1]**	**Unit**					
Benzo(b)fluoranthene	NL	µg/kg	4.9 UJ	4.8 UJ	12 J	6 UJ	30 J
Benzo(g,h,i)perylene	NL	µg/kg	4.9 UJ	4.8 UJ	5.5 J	6 UJ	6.8 J
Benzo(k)fluoranthene	NL	µg/kg	4.9 UJ	4.8 UJ	7.9 J	6 UJ	16 J
Bis(2-chloroethoxy)methane	NL	µg/kg	250 UJ	250 UJ	240 UJ	310 UJ	300 UJ
Bis(2-chloroethyl)ether	NL	µg/kg	250 UJ	250 UJ	240 UJ	310 UJ	300 UJ
Bis(2-ethylhexyl)phthalate	NL	µg/kg	250 UJ	250 UJ	240 UJ	310 UJ	300 UJ
Butylbenzylphthalate	NL	µg/kg	250 UJ	250 UJ	240 UJ	310 UJ	300 UJ
Caprolactam	NL	µg/kg	250 UJ	250 UJ	240 UJ	310 UJ	300 UJ
Carbazole	NL	µg/kg	250 UJ	250 UJ	240 UJ	310 UJ	300 UJ
Chrysene	1290	µg/kg	4.9 UJ	4.8 UJ	12 J	6 UJ	17 J
Dibenzo(a,h)anthracene	NL	µg/kg	4.9 UJ	4.8 UJ	4.6 UJ	6 UJ	5.9 UJ
Dibenzofuran	NL	µg/kg	250 UJ	250 UJ	240 UJ	310 UJ	300 UJ
Diethylphthalate	NL	µg/kg	250 UJ	250 UJ	240 UJ	310 UJ	300 UJ
Dimethylphthalate	NL	µg/kg	250 UJ	250 UJ	240 UJ	310 UJ	300 UJ
Di-n-butylphthalate	NL	µg/kg	250 UJ	250 UJ	240 UJ	310 UJ	300 UJ
Di-n-octylphthalate	NL	µg/kg	250 UJ	250 UJ	240 UJ	310 UJ	300 UJ
Fluoranthene	2230	µg/kg	8.7 J	4.8 UJ	20 J	8 J	12 J
Fluorene	536	µg/kg	4.9 UJ	4.8 UJ	4.6 UJ	6 UJ	5.9 UJ
Hexachlorobenzene	NL	µg/kg	250 UJ	250 UJ	240 UJ	310 UJ	300 UJ
Hexachlorobutadiene	NL	µg/kg	250 UJ	250 UJ	240 UJ	310 UJ	300 UJ
Hexachlorocyclopentadiene	NL	µg/kg	250 UJ	250 UJ	240 UJ	310 UJ	300 UJ
Hexachloroethane	NL	µg/kg	250 UJ	250 UJ	240 UJ	310 UJ	300 UJ
Indeno(1,2,3-cd)pyrene	NL	µg/kg	4.9 UJ	4.8 UJ	4.7 J	6 UJ	6.7 J
Isophorone	NL	µg/kg	250 UJ	250 UJ	240 UJ	310 UJ	300 UJ
Naphthalene	561	µg/kg	4.9 UJ	4.8 UJ	4.6 UJ	6 UJ	5.9 UJ
Nitrobenzene	NL	µg/kg	250 UJ	250 UJ	240 UJ	310 UJ	300 UJ
N-Nitroso-di-n-propylamine	NL	µg/kg	250 UJ	250 UJ	240 UJ	310 UJ	300 UJ
N-Nitrosodiphenylamine	NL	µg/kg	250 UJ	250 UJ	240 UJ	310 UJ	300 UJ
Pentachlorophenol	NL	µg/kg	10 UJ	9.7 UJ	9.4 UJ	12 UJ	12 UJ
Phenanthrene	1170	µg/kg	7.8 J	4.8 UJ	16 J	6 UJ	5.9 UJ
Phenol	NL	µg/kg	250 UJ	250 UJ	240 UJ	310 UJ	300 UJ
Pyrene	1520	µg/kg	9.1 J	5.2 J	20 J	9 J	14 J
Total PAH 17	22800	µg/kg	59.9	43.6	133.9	62	143.3
TOC	NL	mg/kg	28,200	23,400	19,800	16,600	22,400

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Table B-1
Sediment Sample Analytical Results - SVOCs
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-54	LMR11-54	LMR11-54	LMR11-54	LMR11-54
		Field Sample ID	LMR11-54-024	LMR11-54-024-DP	LMR11-54-048	LMR11-54-048-DP	LMR11-54-072
		Sample Date	8/8/2011	8/8/2011	8/8/2011	8/8/2011	8/8/2011
		Depth Interval (in bss)	6- 24	6- 24	24- 48	24- 48	48- 72
Chemical Name	**PEC[1]**	**Unit**					
1,1'-Biphenyl	NL	µg/kg	250 UJ	240 UJ	290 UJ	260 UJ	270 UJ
1,2,4,5-Tetrachlorobenzene	NL	µg/kg	250 UJ	240 UJ	290 UJ	260 UJ	270 UJ
2,2'-Oxybis(1-chloropropane)	NL	µg/kg	250 UJ	240 UJ	290 UJ	260 UJ	270 UJ
2,3,4,6-Tetrachlorophenol	NL	µg/kg	250 UJ	240 UJ	290 UJ	260 UJ	270 UJ
2,4,5-Trichlorophenol	NL	µg/kg	250 UJ	240 UJ	290 UJ	260 UJ	270 UJ
2,4,6-Trichlorophenol	NL	µg/kg	250 UJ	240 UJ	290 UJ	260 UJ	270 UJ
2,4-Dichlorophenol	NL	µg/kg	250 UJ	240 UJ	290 UJ	260 UJ	270 UJ
2,4-Dimethylphenol	NL	µg/kg	250 UJ	240 UJ	290 UJ	260 UJ	270 UJ
2,4-Dinitrophenol	NL	µg/kg	490 UJ	460 UJ	560 UJ	500 UJ	530 UJ
2,4-Dinitrotoluene	NL	µg/kg	250 UJ	240 UJ	290 UJ	260 UJ	270 UJ
2,6-Dinitrotoluene	NL	µg/kg	250 UJ	240 UJ	290 UJ	260 UJ	270 UJ
2-Chloronaphthalene	NL	µg/kg	250 UJ	240 UJ	290 UJ	260 UJ	270 UJ
2-Chlorophenol	NL	µg/kg	250 UJ	240 UJ	290 UJ	260 UJ	270 UJ
2-Methylnaphthalene	NL	µg/kg	4.9 UJ	4.6 UJ	7.2 J	5 UJ	13 J
2-Methylphenol	NL	µg/kg	250 UJ	240 UJ	290 UJ	260 UJ	270 UJ
2-Nitroaniline	NL	µg/kg	490 UJ	460 UJ	560 UJ	500 UJ	530 UJ
2-Nitrophenol	NL	µg/kg	250 UJ	240 UJ	290 UJ	260 UJ	270 UJ
3,3'-Dichlorobenzidine	NL	µg/kg	250 UJ	240 UJ	290 UJ	260 UJ	270 UJ
3-Nitroaniline	NL	µg/kg	490 UJ	460 UJ	560 UJ	500 UJ	530 UJ
4,6-Dinitro-2-methylphenol	NL	µg/kg	490 UJ	460 UJ	560 UJ	500 UJ	530 UJ
4-Bromophenyl-phenylether	NL	µg/kg	250 UJ	240 UJ	290 UJ	260 UJ	270 UJ
4-Chloro-3-methylphenol	NL	µg/kg	250 UJ	240 UJ	290 UJ	260 UJ	270 UJ
4-Chloroaniline	NL	µg/kg	250 UJ	240 UJ	290 UJ	260 UJ	270 UJ
4-Chlorophenyl-phenylether	NL	µg/kg	250 UJ	240 UJ	290 UJ	260 UJ	270 UJ
4-Methylphenol	NL	µg/kg	250 UJ	240 UJ	290 UJ	260 UJ	270 UJ
4-Nitroaniline	NL	µg/kg	490 UJ	460 UJ	560 UJ	500 UJ	530 UJ
4-Nitrophenol	NL	µg/kg	490 UJ	460 UJ	560 UJ	500 UJ	530 UJ
Acenaphthene	NL	µg/kg	4.9 UJ	4.6 UJ	5.6 UJ	5 UJ	22 J
Acenaphthylene	NL	µg/kg	4.9 UJ	4.6 UJ	5.6 UJ	7.6 J	41 J
Acetophenone	NL	µg/kg	250 UJ	240 UJ	290 UJ	260 UJ	270 UJ
Anthracene	845	µg/kg	4.9 UJ	4.6 UJ	18 J	14 J	76 J
Atrazine	NL	µg/kg	250 UJ	240 UJ	290 UJ	260 UJ	270 UJ
Benzaldehyde	NL	µg/kg	250 UJ	240 UJ	290 UJ	260 UJ	270 UJ
Benzo(a)anthracene	1050	µg/kg	8.7 J	6.5 J	52 J	79 J	290 J
Benzo(a)pyrene	1450	µg/kg	18 J	7 J	42 J	74 J	240 J

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Table B-1
Sediment Sample Analytical Results - SVOCs
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-54	LMR11-54	LMR11-54	LMR11-54	LMR11-54
		Field Sample ID	LMR11-54-024	LMR11-54-024-DP	LMR11-54-048	LMR11-54-048-DP	LMR11-54-072
		Sample Date	8/8/2011	8/8/2011	8/8/2011	8/8/2011	8/8/2011
		Depth Interval (in bss)	6- 24	6- 24	24- 48	24- 48	48- 72
Chemical Name	**PEC[1]**	**Unit**					
Benzo(b)fluoranthene	NL	µg/kg	23 J	9.2 J	55 J	84 J	320 J
Benzo(g,h,i)perylene	NL	µg/kg	6.8 J	4.6 UJ	23 J	40 J	110 J
Benzo(k)fluoranthene	NL	µg/kg	8.8 J	5.5 J	21 J	42 J	110 J
Bis(2-chloroethoxy)methane	NL	µg/kg	250 UJ	240 UJ	290 UJ	260 UJ	270 UJ
Bis(2-chloroethyl)ether	NL	µg/kg	250 UJ	240 UJ	290 UJ	260 UJ	270 UJ
Bis(2-ethylhexyl)phthalate	NL	µg/kg	250 UJ	240 UJ	290 UJ	260 UJ	270 UJ
Butylbenzylphthalate	NL	µg/kg	250 UJ	240 UJ	290 UJ	260 UJ	270 UJ
Caprolactam	NL	µg/kg	250 UJ	240 UJ	290 UJ	260 UJ	270 UJ
Carbazole	NL	µg/kg	250 UJ	240 UJ	290 UJ	260 UJ	270 UJ
Chrysene	1290	µg/kg	12 J	8.1 J	64 J	71 J	270 J
Dibenzo(a,h)anthracene	NL	µg/kg	4.9 UJ	4.6 UJ	8.7 J	8.9 J	39 J
Dibenzofuran	NL	µg/kg	250 UJ	240 UJ	290 UJ	260 UJ	270 UJ
Diethylphthalate	NL	µg/kg	250 UJ	240 UJ	290 UJ	260 UJ	270 UJ
Dimethylphthalate	NL	µg/kg	250 UJ	240 UJ	290 UJ	260 UJ	270 UJ
Di-n-butylphthalate	NL	µg/kg	250 UJ	240 UJ	290 UJ	260 UJ	270 UJ
Di-n-octylphthalate	NL	µg/kg	250 UJ	240 UJ	290 UJ	260 UJ	270 UJ
Fluoranthene	2230	µg/kg	14 J	17 J	120 J	110 J	370 J
Fluorene	536	µg/kg	4.9 UJ	4.6 UJ	13 J	5 UJ	23 J
Hexachlorobenzene	NL	µg/kg	250 UJ	240 UJ	290 UJ	260 UJ	270 UJ
Hexachlorobutadiene	NL	µg/kg	250 UJ	240 UJ	290 UJ	260 UJ	270 UJ
Hexachlorocyclopentadiene	NL	µg/kg	250 UJ	240 UJ	290 UJ	260 UJ	270 UJ
Hexachloroethane	NL	µg/kg	250 UJ	240 UJ	290 UJ	260 UJ	270 UJ
Indeno(1,2,3-cd)pyrene	NL	µg/kg	6.5 J	4.6 UJ	20 J	36 J	110 J
Isophorone	NL	µg/kg	250 UJ	240 UJ	290 UJ	260 UJ	270 UJ
Naphthalene	561	µg/kg	4.9 UJ	4.6 UJ	5.6 UJ	5 UJ	34 J
Nitrobenzene	NL	µg/kg	250 UJ	240 UJ	290 UJ	260 UJ	270 UJ
N-Nitroso-di-n-propylamine	NL	µg/kg	250 UJ	240 UJ	290 UJ	260 UJ	270 UJ
N-Nitrosodiphenylamine	NL	µg/kg	250 UJ	240 UJ	290 UJ	260 UJ	270 UJ
Pentachlorophenol	NL	µg/kg	9.9 UJ	9.3 UJ	11 UJ	10 UJ	11 UJ
Phenanthrene	1170	µg/kg	7.5 J	12 J	74 J	32 J	270 J
Phenol	NL	µg/kg	250 UJ	240 UJ	290 UJ	260 UJ	270 UJ
Pyrene	1520	µg/kg	17 J	18 J	140 J	120 J	380 J
Total PAH 17	22800	µg/kg	139.45	104	666.3	728.5	2,718
TOC	NL	mg/kg	17,500 J	33,400 J	18,100	20,800	30,700

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Table B-1
Sediment Sample Analytical Results - SVOCs
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-54	LMR11-55	LMR11-55	LMR11-55	LMR11-55
		Field Sample ID	LMR11-54-086	LMR11-55-006	LMR11-55-006-DP	LMR11-55-030	LMR11-55-030-DP
		Sample Date	8/8/2011	8/7/2011	8/7/2011	8/7/2011	8/7/2011
		Depth Interval (in bss)	72- 86	0- 6	0- 6	6- 30	6- 30
Chemical Name	**PEC[1]**	**Unit**					
1,1'-Biphenyl	NL	µg/kg	270 UJ	220 UJ	200 UJ	150 UJ	140 UJ
1,2,4,5-Tetrachlorobenzene	NL	µg/kg	270 UJ	220 UJ	200 UJ	150 UJ	140 UJ
2,2'-Oxybis(1-chloropropane)	NL	µg/kg	270 UJ	220 UJ	200 UJ	150 UJ	140 UJ
2,3,4,6-Tetrachlorophenol	NL	µg/kg	270 UJ	220 UJ	200 UJ	150 UJ	140 UJ
2,4,5-Trichlorophenol	NL	µg/kg	270 UJ	220 UJ	200 UJ	150 UJ	140 UJ
2,4,6-Trichlorophenol	NL	µg/kg	270 UJ	220 UJ	200 UJ	150 UJ	140 UJ
2,4-Dichlorophenol	NL	µg/kg	270 UJ	220 UJ	200 UJ	150 UJ	140 UJ
2,4-Dimethylphenol	NL	µg/kg	270 UJ	220 UJ	200 UJ	150 UJ	140 UJ
2,4-Dinitrophenol	NL	µg/kg	530 UJ	430 UJ	400 UJ	300 UJ	280 UJ
2,4-Dinitrotoluene	NL	µg/kg	270 UJ	220 UJ	200 UJ	150 UJ	140 UJ
2,6-Dinitrotoluene	NL	µg/kg	270 UJ	220 UJ	200 UJ	150 UJ	140 UJ
2-Chloronaphthalene	NL	µg/kg	270 UJ	220 UJ	200 UJ	150 UJ	140 UJ
2-Chlorophenol	NL	µg/kg	270 UJ	220 UJ	200 UJ	150 UJ	140 UJ
2-Methylnaphthalene	NL	µg/kg	7.4 J	4.3 UJ	4 UJ	3.5 J	2.8 UJ
2-Methylphenol	NL	µg/kg	270 UJ	220 UJ	200 UJ	150 UJ	140 UJ
2-Nitroaniline	NL	µg/kg	530 UJ	430 UJ	400 UJ	300 UJ	280 UJ
2-Nitrophenol	NL	µg/kg	270 UJ	220 UJ	200 UJ	150 UJ	140 UJ
3,3'-Dichlorobenzidine	NL	µg/kg	270 UJ	220 UJ	200 UJ	150 UJ	140 UJ
3-Nitroaniline	NL	µg/kg	530 UJ	430 UJ	400 UJ	300 UJ	280 UJ
4,6-Dinitro-2-methylphenol	NL	µg/kg	530 UJ	430 UJ	400 UJ	300 UJ	280 UJ
4-Bromophenyl-phenylether	NL	µg/kg	270 UJ	220 UJ	200 UJ	150 UJ	140 UJ
4-Chloro-3-methylphenol	NL	µg/kg	270 UJ	220 UJ	200 UJ	150 UJ	140 UJ
4-Chloroaniline	NL	µg/kg	270 UJ	220 UJ	200 UJ	150 UJ	140 UJ
4-Chlorophenyl-phenylether	NL	µg/kg	270 UJ	220 UJ	200 UJ	150 UJ	140 UJ
4-Methylphenol	NL	µg/kg	270 UJ	220 UJ	200 UJ	150 UJ	140 UJ
4-Nitroaniline	NL	µg/kg	530 UJ	430 UJ	400 UJ	300 UJ	280 UJ
4-Nitrophenol	NL	µg/kg	530 UJ	430 UJ	400 UJ	300 UJ	280 UJ
Acenaphthene	NL	µg/kg	6.4 J	4.3 UJ	4 UJ	5.6 J	2.8 UJ
Acenaphthylene	NL	µg/kg	6.6 J	4.3 UJ	4 UJ	3 UJ	2.8 UJ
Acetophenone	NL	µg/kg	270 UJ	220 UJ	200 UJ	150 UJ	70 J
Anthracene	845	µg/kg	8.7 J	4.3 UJ	4 UJ	7.3 J	2.8 UJ
Atrazine	NL	µg/kg	270 UJ	220 UJ	200 UJ	150 UJ	140 UJ
Benzaldehyde	NL	µg/kg	270 UJ	220 UJ	200 UJ	150 UJ	140 UJ
Benzo(a)anthracene	1050	µg/kg	11 J	4.3 UJ	4 UJ	21 J	8.5 J
Benzo(a)pyrene	1450	µg/kg	16 J	4.3 UJ	4 UJ	20 J	8.6 J

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Table B-1
Sediment Sample Analytical Results - SVOCs
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-54	LMR11-55	LMR11-55	LMR11-55	LMR11-55
		Field Sample ID	LMR11-54-086	LMR11-55-006	LMR11-55-006-DP	LMR11-55-030	LMR11-55-030-DP
		Sample Date	8/8/2011	8/7/2011	8/7/2011	8/7/2011	8/7/2011
		Depth Interval (in bss)	72- 86	0- 6	0- 6	6- 30	6- 30
Chemical Name	**PEC[1]**	**Unit**					
Benzo(b)fluoranthene	NL	µg/kg	19 J	4.3 UJ	4.3 J	25 J	12 J
Benzo(g,h,i)perylene	NL	µg/kg	9.7 J	4.3 UJ	4 UJ	11 J	5.6 J
Benzo(k)fluoranthene	NL	µg/kg	6.9 J	4.3 UJ	4 UJ	9.8 J	4.9 J
Bis(2-chloroethoxy)methane	NL	µg/kg	270 UJ	220 UJ	200 UJ	150 UJ	140 UJ
Bis(2-chloroethyl)ether	NL	µg/kg	270 UJ	220 UJ	200 UJ	150 UJ	140 UJ
Bis(2-ethylhexyl)phthalate	NL	µg/kg	270 UJ	220 UJ	200 UJ	150 UJ	140 UJ
Butylbenzylphthalate	NL	µg/kg	270 UJ	220 UJ	200 UJ	150 UJ	140 UJ
Caprolactam	NL	µg/kg	270 UJ	220 UJ	200 UJ	150 UJ	140 UJ
Carbazole	NL	µg/kg	270 UJ	220 UJ	200 UJ	150 UJ	140 UJ
Chrysene	1290	µg/kg	15 J	4.3 UJ	4 UJ	18 J	8.3 J
Dibenzo(a,h)anthracene	NL	µg/kg	5.3 UJ	4.3 UJ	4 UJ	3.4 J	2.8 UJ
Dibenzofuran	NL	µg/kg	270 UJ	220 UJ	200 UJ	150 UJ	140 UJ
Diethylphthalate	NL	µg/kg	270 UJ	220 UJ	200 UJ	150 UJ	140 UJ
Dimethylphthalate	NL	µg/kg	270 UJ	220 UJ	200 UJ	150 UJ	140 UJ
Di-n-butylphthalate	NL	µg/kg	270 UJ	220 UJ	200 UJ	150 UJ	34 J
Di-n-octylphthalate	NL	µg/kg	270 UJ	220 UJ	200 UJ	150 UJ	140 UJ
Fluoranthene	2230	µg/kg	29 J	11 J	6.8 J	53 J	17 J
Fluorene	536	µg/kg	9.9 J	4.3 UJ	4 UJ	4.6 J	2.8 UJ
Hexachlorobenzene	NL	µg/kg	270 UJ	220 UJ	200 UJ	150 UJ	140 UJ
Hexachlorobutadiene	NL	µg/kg	270 UJ	220 UJ	200 UJ	150 UJ	140 UJ
Hexachlorocyclopentadiene	NL	µg/kg	270 UJ	220 UJ	200 UJ	150 UJ	140 UJ
Hexachloroethane	NL	µg/kg	270 UJ	220 UJ	200 UJ	150 UJ	140 UJ
Indeno(1,2,3-cd)pyrene	NL	µg/kg	8.1 J	4.3 UJ	4 UJ	10 J	5 J
Isophorone	NL	µg/kg	270 UJ	220 UJ	200 UJ	150 UJ	140 UJ
Naphthalene	561	µg/kg	6.9 J	4.3 UJ	4 UJ	4.1 J	2.8 UJ
Nitrobenzene	NL	µg/kg	270 UJ	220 UJ	200 UJ	150 UJ	140 UJ
N-Nitroso-di-n-propylamine	NL	µg/kg	270 UJ	220 UJ	200 UJ	150 UJ	140 UJ
N-Nitrosodiphenylamine	NL	µg/kg	270 UJ	220 UJ	200 UJ	150 UJ	140 UJ
Pentachlorophenol	NL	µg/kg	11 UJ	8.7 UJ	8 UJ	6.1 UJ	5.6 UJ
Phenanthrene	1170	µg/kg	26 J	9.3 J	4.2 J	33 J	9.1 J
Phenol	NL	µg/kg	270 UJ	220 UJ	200 UJ	150 UJ	140 UJ
Pyrene	1520	µg/kg	30 J	8.2 J	5.5 J	29 J	13 J
Total PAH 17	22800	µg/kg	219.25	58.6	46.8	259.8	101.8
TOC	NL	mg/kg	28,600	26,700	26,200	20,600	23,200

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Table B-1
Sediment Sample Analytical Results - SVOCs
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-56	LMR11-56	LMR11-56	LMR11-57	LMR11-57
		Field Sample ID	LMR11-56-006	LMR11-56-024	LMR11-56-036	LMR11-57-006	LMR11-57-024
		Sample Date	8/7/2011	8/7/2011	8/7/2011	8/6/2011	8/6/2011
		Depth Interval (in bss)	0- 6	6- 24	24- 36	0- 6	6- 24
Chemical Name	**PEC[1]**	**Unit**					
1,1'-Biphenyl	NL	µg/kg	190 UJ	160 UJ	170 UJ	210 UJ	120 UJ
1,2,4,5-Tetrachlorobenzene	NL	µg/kg	190 UJ	160 UJ	170 UJ	210 UJ	120 UJ
2,2'-Oxybis(1-chloropropane)	NL	µg/kg	190 UJ	160 UJ	170 UJ	210 UJ	120 UJ
2,3,4,6-Tetrachlorophenol	NL	µg/kg	190 UJ	160 UJ	170 UJ	210 UJ	120 UJ
2,4,5-Trichlorophenol	NL	µg/kg	190 UJ	160 UJ	170 UJ	210 UJ	120 UJ
2,4,6-Trichlorophenol	NL	µg/kg	190 UJ	160 UJ	170 UJ	210 UJ	120 UJ
2,4-Dichlorophenol	NL	µg/kg	190 UJ	160 UJ	170 UJ	210 UJ	120 UJ
2,4-Dimethylphenol	NL	µg/kg	190 UJ	160 UJ	170 UJ	210 UJ	120 UJ
2,4-Dinitrophenol	NL	µg/kg	380 UJ	310 UJ	330 UJ	400 UJ	230 UJ
2,4-Dinitrotoluene	NL	µg/kg	190 UJ	160 UJ	170 UJ	210 UJ	120 UJ
2,6-Dinitrotoluene	NL	µg/kg	190 UJ	160 UJ	170 UJ	210 UJ	120 UJ
2-Chloronaphthalene	NL	µg/kg	190 UJ	160 UJ	170 UJ	210 UJ	120 UJ
2-Chlorophenol	NL	µg/kg	190 UJ	160 UJ	170 UJ	210 UJ	120 UJ
2-Methylnaphthalene	NL	µg/kg	3.8 UJ	3.1 UJ	3.7 J	4 UJ	2.3 UJ
2-Methylphenol	NL	µg/kg	190 UJ	160 UJ	170 UJ	210 UJ	120 UJ
2-Nitroaniline	NL	µg/kg	380 UJ	310 UJ	330 UJ	400 UJ	230 UJ
2-Nitrophenol	NL	µg/kg	190 UJ	160 UJ	170 UJ	210 UJ	120 UJ
3,3'-Dichlorobenzidine	NL	µg/kg	190 UJ	160 UJ	170 UJ	210 UJ	120 UJ
3-Nitroaniline	NL	µg/kg	380 UJ	310 UJ	330 UJ	400 UJ	230 UJ
4,6-Dinitro-2-methylphenol	NL	µg/kg	380 UJ	310 UJ	330 UJ	400 UJ	230 UJ
4-Bromophenyl-phenylether	NL	µg/kg	190 UJ	160 UJ	170 UJ	210 UJ	120 UJ
4-Chloro-3-methylphenol	NL	µg/kg	190 UJ	160 UJ	170 UJ	210 UJ	120 UJ
4-Chloroaniline	NL	µg/kg	190 UJ	160 UJ	170 UJ	210 UJ	120 UJ
4-Chlorophenyl-phenylether	NL	µg/kg	190 UJ	160 UJ	170 UJ	210 UJ	120 UJ
4-Methylphenol	NL	µg/kg	190 UJ	160 UJ	170 UJ	210 UJ	120 UJ
4-Nitroaniline	NL	µg/kg	380 UJ	310 UJ	330 UJ	400 UJ	230 UJ
4-Nitrophenol	NL	µg/kg	380 UJ	310 UJ	330 UJ	400 UJ	230 UJ
Acenaphthene	NL	µg/kg	3.8 UJ	3.1 UJ	3.3 UJ	4 UJ	2.3 UJ
Acenaphthylene	NL	µg/kg	3.8 UJ	3.1 UJ	3.3 UJ	16 J	5.7 J
Acetophenone	NL	µg/kg	190 UJ	160 UJ	170 UJ	210 UJ	120 UJ
Anthracene	845	µg/kg	3.8 UJ	5 J	3.8 J	4 UJ	2.3 UJ
Atrazine	NL	µg/kg	190 UJ	160 UJ	170 UJ	210 UJ	120 UJ
Benzaldehyde	NL	µg/kg	190 UJ	160 UJ	170 UJ	210 UJ	120 UJ
Benzo(a)anthracene	1050	µg/kg	3.6 J	13 J	9.6 J	4.7 J	2.3 UJ
Benzo(a)pyrene	1450	µg/kg	4.4 J	14 J	11 J	5.4 J	2.3 UJ

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Table B-1
Sediment Sample Analytical Results - SVOCs
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-56	LMR11-56	LMR11-56	LMR11-57	LMR11-57
		Field Sample ID	LMR11-56-006	LMR11-56-024	LMR11-56-036	LMR11-57-006	LMR11-57-024
		Sample Date	8/7/2011	8/7/2011	8/7/2011	8/6/2011	8/6/2011
		Depth Interval (in bss)	0- 6	6- 24	24- 36	0- 6	6- 24
Chemical Name	**PEC[1]**	**Unit**					
Benzo(b)fluoranthene	NL	µg/kg	6.7 J	18 J	15 J	7.1 J	2.3 UJ
Benzo(g,h,i)perylene	NL	µg/kg	3.8 UJ	8 J	6.9 J	4 UJ	2.3 UJ
Benzo(k)fluoranthene	NL	µg/kg	3.8 UJ	6.3 J	6.2 J	4 UJ	2.3 UJ
Bis(2-chloroethoxy)methane	NL	µg/kg	190 UJ	160 UJ	170 UJ	210 UJ	120 UJ
Bis(2-chloroethyl)ether	NL	µg/kg	190 UJ	160 UJ	170 UJ	210 UJ	120 UJ
Bis(2-ethylhexyl)phthalate	NL	µg/kg	190 UJ	160 UJ	170 UJ	210 UJ	120 UJ
Butylbenzylphthalate	NL	µg/kg	190 UJ	160 UJ	170 UJ	210 UJ	120 UJ
Caprolactam	NL	µg/kg	190 UJ	160 UJ	170 UJ	210 UJ	120 UJ
Carbazole	NL	µg/kg	190 UJ	160 UJ	170 UJ	210 UJ	120 UJ
Chrysene	1290	µg/kg	4.4 J	14 J	11 J	5.8 J	2.3 UJ
Dibenzo(a,h)anthracene	NL	µg/kg	3.8 UJ	3.1 UJ	3.3 UJ	4 UJ	2.3 UJ
Dibenzofuran	NL	µg/kg	190 UJ	160 UJ	170 UJ	210 UJ	120 UJ
Diethylphthalate	NL	µg/kg	190 UJ	160 UJ	170 UJ	210 UJ	120 UJ
Dimethylphthalate	NL	µg/kg	190 UJ	160 UJ	170 UJ	210 UJ	120 UJ
Di-n-butylphthalate	NL	µg/kg	190 UJ	160 UJ	170 UJ	210 UJ	120 UJ
Di-n-octylphthalate	NL	µg/kg	190 UJ	160 UJ	170 UJ	210 UJ	120 UJ
Fluoranthene	2230	µg/kg	10 J	32 J	26 J	11 J	3.8 J
Fluorene	536	µg/kg	3.8 UJ	3.1 UJ	3.3 UJ	4 UJ	2.3 UJ
Hexachlorobenzene	NL	µg/kg	190 UJ	160 UJ	170 UJ	210 UJ	120 UJ
Hexachlorobutadiene	NL	µg/kg	190 UJ	160 UJ	170 UJ	210 UJ	120 UJ
Hexachlorocyclopentadiene	NL	µg/kg	190 UJ	160 UJ	170 UJ	210 UJ	120 UJ
Hexachloroethane	NL	µg/kg	190 UJ	160 UJ	170 UJ	210 UJ	120 UJ
Indeno(1,2,3-cd)pyrene	NL	µg/kg	3.8 UJ	7.6 J	6.3 J	4 UJ	2.3 UJ
Isophorone	NL	µg/kg	190 UJ	160 UJ	170 UJ	210 UJ	120 UJ
Naphthalene	561	µg/kg	3.8 UJ	3.1 UJ	4.7 J	4 UJ	2.3 UJ
Nitrobenzene	NL	µg/kg	190 UJ	160 UJ	170 UJ	210 UJ	120 UJ
N-Nitroso-di-n-propylamine	NL	µg/kg	190 UJ	160 UJ	170 UJ	210 UJ	120 UJ
N-Nitrosodiphenylamine	NL	µg/kg	190 UJ	160 UJ	170 UJ	210 UJ	120 UJ
Pentachlorophenol	NL	µg/kg	7.6 UJ	6.4 UJ	6.7 UJ	8.1 UJ	4.7 UJ
Phenanthrene	1170	µg/kg	6.3 J	22 J	21 J	5.8 J	2.6 J
Phenol	NL	µg/kg	190 UJ	160 UJ	170 UJ	210 UJ	120 UJ
Pyrene	1520	µg/kg	7.4 J	19 J	19 J	8.5 J	3 J
Total PAH 17	22800	µg/kg	61.8	168.2	150.8	82.3	30.05
TOC	NL	mg/kg	21,700	19,700	23,200	29,200	6,000

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Table B-1
Sediment Sample Analytical Results - SVOCs
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-57	LMR11-57	LMR11-58	LMR11-59	LMR11-59
		Field Sample ID	LMR11-57-048	LMR11-57-062	LMR11-58-010	LMR11-59-006	LMR11-59-024
		Sample Date	8/6/2011	8/6/2011	8/6/2011	8/6/2011	8/6/2011
		Depth Interval (in bss)	24- 48	48- 62	0- 10	0- 6	6- 24
Chemical Name	**PEC[1]**	**Unit**					
1,1'-Biphenyl	NL	µg/kg	160 UJ	160 UJ	120 UJ	160 U	180 U
1,2,4,5-Tetrachlorobenzene	NL	µg/kg	160 UJ	160 UJ	120 UJ	160 U	180 U
2,2'-Oxybis(1-chloropropane)	NL	µg/kg	160 UJ	160 UJ	120 UJ	160 U	180 U
2,3,4,6-Tetrachlorophenol	NL	µg/kg	160 UJ	160 UJ	120 UJ	160 U	180 U
2,4,5-Trichlorophenol	NL	µg/kg	160 UJ	160 UJ	120 UJ	160 U	180 U
2,4,6-Trichlorophenol	NL	µg/kg	160 UJ	160 UJ	120 UJ	160 U	180 U
2,4-Dichlorophenol	NL	µg/kg	160 UJ	160 UJ	120 UJ	160 U	180 U
2,4-Dimethylphenol	NL	µg/kg	160 UJ	160 UJ	120 UJ	160 U	180 U
2,4-Dinitrophenol	NL	µg/kg	310 UJ	310 UJ	230 UJ	320 U	360 U
2,4-Dinitrotoluene	NL	µg/kg	160 UJ	160 UJ	120 UJ	160 U	180 U
2,6-Dinitrotoluene	NL	µg/kg	160 UJ	160 UJ	120 UJ	160 U	180 U
2-Chloronaphthalene	NL	µg/kg	160 UJ	160 UJ	120 UJ	160 U	180 U
2-Chlorophenol	NL	µg/kg	160 UJ	160 UJ	120 UJ	160 U	180 U
2-Methylnaphthalene	NL	µg/kg	3.1 UJ	3.1 UJ	2.3 UJ	3.2 U	3.6 U
2-Methylphenol	NL	µg/kg	160 UJ	160 UJ	120 UJ	160 U	180 U
2-Nitroaniline	NL	µg/kg	310 UJ	310 UJ	230 UJ	320 U	360 U
2-Nitrophenol	NL	µg/kg	160 UJ	160 UJ	120 UJ	160 U	180 U
3,3'-Dichlorobenzidine	NL	µg/kg	160 UJ	160 UJ	120 UJ	160 U	180 U
3-Nitroaniline	NL	µg/kg	310 UJ	310 UJ	230 UJ	320 U	360 U
4,6-Dinitro-2-methylphenol	NL	µg/kg	310 UJ	310 UJ	230 UJ	320 U	360 U
4-Bromophenyl-phenylether	NL	µg/kg	160 UJ	160 UJ	120 UJ	160 U	180 U
4-Chloro-3-methylphenol	NL	µg/kg	160 UJ	160 UJ	120 UJ	160 U	180 U
4-Chloroaniline	NL	µg/kg	160 UJ	160 UJ	120 UJ	160 U	180 U
4-Chlorophenyl-phenylether	NL	µg/kg	160 UJ	160 UJ	120 UJ	160 U	180 U
4-Methylphenol	NL	µg/kg	160 UJ	160 UJ	120 UJ	160 U	180 U
4-Nitroaniline	NL	µg/kg	310 UJ	310 UJ	230 UJ	320 U	360 U
4-Nitrophenol	NL	µg/kg	310 UJ	310 UJ	230 UJ	320 U	360 U
Acenaphthene	NL	µg/kg	3.1 UJ	3.1 UJ	2.3 UJ	3.2 U	3.6 U
Acenaphthylene	NL	µg/kg	5.2 J	3.1 UJ	2.3 UJ	3.2 U	3.6 U
Acetophenone	NL	µg/kg	160 UJ	160 UJ	120 UJ	160 U	180 U
Anthracene	845	µg/kg	3.1 UJ	3.6 J	2.3 UJ	3.2 U	3.6 U
Atrazine	NL	µg/kg	160 UJ	160 UJ	120 UJ	160 U	180 U
Benzaldehyde	NL	µg/kg	160 UJ	160 UJ	120 UJ	160 U	180 U
Benzo(a)anthracene	1050	µg/kg	3.1 UJ	3.2 J	2.3 UJ	4.9	3.6 U
Benzo(a)pyrene	1450	µg/kg	3.1 UJ	4.4 J	2.3 UJ	7.9	3.6 U

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Table B-1
Sediment Sample Analytical Results - SVOCs
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-57	LMR11-57	LMR11-58	LMR11-59	LMR11-59
		Field Sample ID	LMR11-57-048	LMR11-57-062	LMR11-58-010	LMR11-59-006	LMR11-59-024
		Sample Date	8/6/2011	8/6/2011	8/6/2011	8/6/2011	8/6/2011
		Depth Interval (in bss)	24- 48	48- 62	0- 10	0- 6	6- 24
Chemical Name	**PEC[1]**	**Unit**					
Benzo(b)fluoranthene	NL	µg/kg	3.1 UJ	4 J	2.3 UJ	11	5
Benzo(g,h,i)perylene	NL	µg/kg	3.1 UJ	34 J	2.3 UJ	4.8	3.6 U
Benzo(k)fluoranthene	NL	µg/kg	3.1 UJ	3.1 UJ	2.3 UJ	4	3.6 U
Bis(2-chloroethoxy)methane	NL	µg/kg	160 UJ	160 UJ	120 UJ	160 U	180 U
Bis(2-chloroethyl)ether	NL	µg/kg	160 UJ	160 UJ	120 UJ	160 U	180 U
Bis(2-ethylhexyl)phthalate	NL	µg/kg	160 UJ	160 UJ	120 UJ	160 U	180 U
Butylbenzylphthalate	NL	µg/kg	160 UJ	160 UJ	120 UJ	160 U	180 U
Caprolactam	NL	µg/kg	160 UJ	160 UJ	120 UJ	160 U	180 U
Carbazole	NL	µg/kg	160 UJ	160 UJ	120 UJ	160 U	180 U
Chrysene	1290	µg/kg	3.1 UJ	5.9 J	2.3 UJ	6.4	3.6 U
Dibenzo(a,h)anthracene	NL	µg/kg	3.1 UJ	3.1 UJ	2.3 UJ	3.2 U	3.6 U
Dibenzofuran	NL	µg/kg	160 UJ	160 UJ	120 UJ	160 U	180 U
Diethylphthalate	NL	µg/kg	160 UJ	160 UJ	120 UJ	160 U	180 U
Dimethylphthalate	NL	µg/kg	160 UJ	160 UJ	120 UJ	160 U	180 U
Di-n-butylphthalate	NL	µg/kg	160 UJ	160 UJ	120 UJ	160 U	180 U
Di-n-octylphthalate	NL	µg/kg	160 UJ	160 UJ	120 UJ	160 U	180 U
Fluoranthene	2230	µg/kg	3.1 UJ	8.6 J	2.3 UJ	13	6.4
Fluorene	536	µg/kg	3.1 UJ	3.1 UJ	2.3 UJ	3.2 U	3.6 U
Hexachlorobenzene	NL	µg/kg	160 UJ	160 UJ	120 UJ	160 U	180 U
Hexachlorobutadiene	NL	µg/kg	160 UJ	160 UJ	120 UJ	160 U	180 U
Hexachlorocyclopentadiene	NL	µg/kg	160 UJ	160 UJ	120 UJ	160 U	180 UJ
Hexachloroethane	NL	µg/kg	160 UJ	160 UJ	120 UJ	160 U	180 U
Indeno(1,2,3-cd)pyrene	NL	µg/kg	3.1 UJ	3.1 UJ	2.3 UJ	6.5	3.6 U
Isophorone	NL	µg/kg	160 UJ	160 UJ	120 UJ	160 U	180 U
Naphthalene	561	µg/kg	3.1 UJ	3.1 UJ	2.3 UJ	3.2 U	3.6 U
Nitrobenzene	NL	µg/kg	160 UJ	160 UJ	120 UJ	160 U	180 U
N-Nitroso-di-n-propylamine	NL	µg/kg	160 UJ	160 UJ	120 UJ	160 U	180 U
N-Nitrosodiphenylamine	NL	µg/kg	160 UJ	160 UJ	120 UJ	160 U	180 U
Pentachlorophenol	NL	µg/kg	6.3 UJ	6.2 UJ	4.6 UJ	320 U	7.2 U
Phenanthrene	1170	µg/kg	3.5 J	9.1 J	2.3 UJ	5.5	4.2
Phenol	NL	µg/kg	160 UJ	160 UJ	120 UJ	160 U	180 U
Pyrene	1520	µg/kg	3.1 UJ	9 J	2.3 UJ	11 J	5.5
Total PAH 17	22800	µg/kg	31.95	94.2	19.55	86.2	44.5
TOC	NL	mg/kg	23,300 J	25,900	26,300	27,900 J	22,000

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Table B-1
Sediment Sample Analytical Results - SVOCs
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-59	LMR11-59	LMR11-59	LMR11-59	LMR11-60
		Field Sample ID	LMR11-59-048	LMR11-59-072	LMR11-59-096	LMR11-59-116	LMR11-60-006
		Sample Date	8/6/2011	8/6/2011	8/6/2011	8/6/2011	8/6/2011
		Depth Interval (in bss)	24- 48	48- 72	72- 96	96- 116	0- 6
Chemical Name	**PEC[1]**	**Unit**					
1,1'-Biphenyl	NL	µg/kg	180 U	170 U	150 U	130 U	180 UJ
1,2,4,5-Tetrachlorobenzene	NL	µg/kg	180 U	170 U	150 U	130 U	180 UJ
2,2'-Oxybis(1-chloropropane)	NL	µg/kg	180 U	170 U	150 U	130 U	180 UJ
2,3,4,6-Tetrachlorophenol	NL	µg/kg	180 U	170 U	150 U	130 U	180 UJ
2,4,5-Trichlorophenol	NL	µg/kg	180 U	170 U	150 U	130 U	180 UJ
2,4,6-Trichlorophenol	NL	µg/kg	180 U	170 U	150 U	130 U	180 UJ
2,4-Dichlorophenol	NL	µg/kg	180 U	170 U	150 U	130 U	180 UJ
2,4-Dimethylphenol	NL	µg/kg	180 U	170 U	150 U	130 U	180 UJ
2,4-Dinitrophenol	NL	µg/kg	350 U	320 U	280 U	250 U	360 UJ
2,4-Dinitrotoluene	NL	µg/kg	180 U	170 U	150 U	130 U	180 UJ
2,6-Dinitrotoluene	NL	µg/kg	180 U	170 U	150 U	130 U	180 UJ
2-Chloronaphthalene	NL	µg/kg	180 U	170 U	150 U	130 U	180 UJ
2-Chlorophenol	NL	µg/kg	180 U	170 U	150 U	130 U	180 UJ
2-Methylnaphthalene	NL	µg/kg	3.5 U	3.2 U	2.8 U	2.5 U	3.6 UJ
2-Methylphenol	NL	µg/kg	180 U	170 U	150 U	130 U	180 UJ
2-Nitroaniline	NL	µg/kg	350 U	320 U	280 U	250 U	360 UJ
2-Nitrophenol	NL	µg/kg	180 U	170 U	150 U	130 U	180 UJ
3,3'-Dichlorobenzidine	NL	µg/kg	180 U	170 U	150 U	130 U	180 UJ
3-Nitroaniline	NL	µg/kg	350 U	320 U	280 U	250 U	360 UJ
4,6-Dinitro-2-methylphenol	NL	µg/kg	350 U	320 U	280 U	250 U	360 UJ
4-Bromophenyl-phenylether	NL	µg/kg	180 U	170 U	150 U	130 U	180 UJ
4-Chloro-3-methylphenol	NL	µg/kg	180 U	170 U	150 U	130 U	180 UJ
4-Chloroaniline	NL	µg/kg	180 U	170 U	150 U	130 U	180 UJ
4-Chlorophenyl-phenylether	NL	µg/kg	180 U	170 U	150 U	130 U	180 UJ
4-Methylphenol	NL	µg/kg	180 U	170 U	150 U	130 U	180 UJ
4-Nitroaniline	NL	µg/kg	350 U	320 U	280 U	250 U	360 UJ
4-Nitrophenol	NL	µg/kg	350 U	320 U	280 U	250 U	360 UJ
Acenaphthene	NL	µg/kg	3.5 U	3.2 U	2.8 U	3.1	3.6 UJ
Acenaphthylene	NL	µg/kg	3.5 U	3.2 U	2.8 U	4.4	3.6 UJ
Acetophenone	NL	µg/kg	180 U	170 U	150 U	130 U	180 UJ
Anthracene	845	µg/kg	3.5 U	3.2 U	4.1	6.6	3.6 UJ
Atrazine	NL	µg/kg	180 U	170 U	150 U	130 U	180 UJ
Benzaldehyde	NL	µg/kg	180 U	170 U	150 U	130 U	180 UJ
Benzo(a)anthracene	1050	µg/kg	8.8	6.1	12	15	5.3 J
Benzo(a)pyrene	1450	µg/kg	10	6.5	15	21	6.1 J

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Table B-1
Sediment Sample Analytical Results - SVOCs
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-59	LMR11-59	LMR11-59	LMR11-59	LMR11-60
		Field Sample ID	LMR11-59-048	LMR11-59-072	LMR11-59-096	LMR11-59-116	LMR11-60-006
		Sample Date	8/6/2011	8/6/2011	8/6/2011	8/6/2011	8/6/2011
		Depth Interval (in bss)	24- 48	48- 72	72- 96	96- 116	0- 6
Chemical Name	**PEC[1]**	**Unit**					
Benzo(b)fluoranthene	NL	µg/kg	16	10	18	23	9.3 J
Benzo(g,h,i)perylene	NL	µg/kg	4.9	3.2 U	7.4	12	3.6 UJ
Benzo(k)fluoranthene	NL	µg/kg	5.1	3.6	6.3	6.8	4 J
Bis(2-chloroethoxy)methane	NL	µg/kg	180 U	170 U	150 U	130 U	180 UJ
Bis(2-chloroethyl)ether	NL	µg/kg	180 U	170 U	150 U	130 U	180 UJ
Bis(2-ethylhexyl)phthalate	NL	µg/kg	49 J	170 U	38 J	33 J	45 J
Butylbenzylphthalate	NL	µg/kg	180 U	170 U	150 U	130 U	180 UJ
Caprolactam	NL	µg/kg	180 U	170 U	150 U	130 U	180 UJ
Carbazole	NL	µg/kg	180 U	170 U	150 U	130 U	180 UJ
Chrysene	1290	µg/kg	9.9	6.7	12	16	6.6 J
Dibenzo(a,h)anthracene	NL	µg/kg	3.5 U	3.2 U	2.8 U	3.9	3.6 UJ
Dibenzofuran	NL	µg/kg	180 U	170 U	150 U	130 U	180 UJ
Diethylphthalate	NL	µg/kg	180 U	170 U	150 U	130 U	180 UJ
Dimethylphthalate	NL	µg/kg	180 U	170 U	150 U	130 U	180 UJ
Di-n-butylphthalate	NL	µg/kg	180 U	170 U	150 U	130 U	180 UJ
Di-n-octylphthalate	NL	µg/kg	180 U	170 U	150 U	130 U	180 UJ
Fluoranthene	2230	µg/kg	16	14	22	26	16 J
Fluorene	536	µg/kg	3.5 U	3.2 U	2.8 U	2.6	3.6 UJ
Hexachlorobenzene	NL	µg/kg	180 U	170 U	150 U	130 U	180 UJ
Hexachlorobutadiene	NL	µg/kg	180 U	170 U	150 U	130 U	180 UJ
Hexachlorocyclopentadiene	NL	µg/kg	180 UJ	170 UJ	150 UJ	130 UJ	180 UJ
Hexachloroethane	NL	µg/kg	180 U	170 U	150 U	130 U	180 UJ
Indeno(1,2,3-cd)pyrene	NL	µg/kg	6.3	4.1	8.3	11	3.9 J
Isophorone	NL	µg/kg	180 U	170 U	150 U	130 U	180 UJ
Naphthalene	561	µg/kg	3.5 U	3.2 U	3.7	5.9	3.6 UJ
Nitrobenzene	NL	µg/kg	180 U	170 U	150 U	130 U	180 UJ
N-Nitroso-di-n-propylamine	NL	µg/kg	180 U	170 U	150 U	130 U	180 UJ
N-Nitrosodiphenylamine	NL	µg/kg	180 U	170 U	150 U	130 U	180 UJ
Pentachlorophenol	NL	µg/kg	7.1 U	6.6 U	5.7 U	5 U	7.3 UJ
Phenanthrene	1170	µg/kg	9.4	9.3	17	23	9.9 J
Phenol	NL	µg/kg	180 U	170 U	150 U	130 U	180 UJ
Pyrene	1520	µg/kg	14	12	21	27	13 J
Total PAH 17	22800	µg/kg	112.65	85.1	153.8	208.55	88.5
TOC	NL	mg/kg	31,300	20,600	22,100	18,600	18,400

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Table B-1
Sediment Sample Analytical Results - SVOCs
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-60	LMR11-60	LMR11-60	LMR11-60	LMR11-60
		Field Sample ID	LMR11-60-024	LMR11-60-048	LMR11-60-048FS	LMR11-60-072	LMR11-60-092
		Sample Date	8/6/2011	8/6/2011	8/6/2011	8/6/2011	8/6/2011
		Depth Interval (in bss)	6- 24	24- 48	24- 48	48- 72	72- 92
Chemical Name	**PEC[1]**	**Unit**					
1,1'-Biphenyl	NL	µg/kg	190 UJ	180 U	180 U	150 U	150 U
1,2,4,5-Tetrachlorobenzene	NL	µg/kg	190 UJ	180 U	180 U	150 U	150 U
2,2'-Oxybis(1-chloropropane)	NL	µg/kg	190 UJ	180 U	180 U	150 U	150 U
2,3,4,6-Tetrachlorophenol	NL	µg/kg	190 UJ	180 U	180 U	150 U	150 U
2,4,5-Trichlorophenol	NL	µg/kg	190 UJ	180 U	180 U	150 U	150 U
2,4,6-Trichlorophenol	NL	µg/kg	190 UJ	180 U	180 U	150 U	150 U
2,4-Dichlorophenol	NL	µg/kg	190 UJ	180 U	180 U	150 U	150 U
2,4-Dimethylphenol	NL	µg/kg	190 UJ	180 U	180 U	150 U	150 U
2,4-Dinitrophenol	NL	µg/kg	370 UJ	340 U	350 U	290 U	290 U
2,4-Dinitrotoluene	NL	µg/kg	190 UJ	180 U	180 U	150 U	150 U
2,6-Dinitrotoluene	NL	µg/kg	190 UJ	180 U	180 U	150 U	150 U
2-Chloronaphthalene	NL	µg/kg	190 UJ	180 U	180 U	150 U	150 U
2-Chlorophenol	NL	µg/kg	190 UJ	180 U	180 U	150 U	150 U
2-Methylnaphthalene	NL	µg/kg	3.7 UJ	3.4 U	3.5 U	6.3	10
2-Methylphenol	NL	µg/kg	190 UJ	180 U	180 U	150 U	150 U
2-Nitroaniline	NL	µg/kg	370 UJ	340 U	350 U	290 U	290 U
2-Nitrophenol	NL	µg/kg	190 UJ	180 U	180 U	150 U	150 U
3,3'-Dichlorobenzidine	NL	µg/kg	190 UJ	180 U	180 U	150 U	150 U
3-Nitroaniline	NL	µg/kg	370 UJ	340 U	350 U	290 U	290 U
4,6-Dinitro-2-methylphenol	NL	µg/kg	370 UJ	340 U	350 U	290 U	290 U
4-Bromophenyl-phenylether	NL	µg/kg	190 UJ	180 U	180 U	150 U	150 U
4-Chloro-3-methylphenol	NL	µg/kg	190 UJ	180 U	180 U	150 U	150 U
4-Chloroaniline	NL	µg/kg	190 UJ	180 U	180 U	150 U	150 U
4-Chlorophenyl-phenylether	NL	µg/kg	190 UJ	180 U	180 U	150 U	150 U
4-Methylphenol	NL	µg/kg	190 UJ	180 U	180 U	150 U	32 J
4-Nitroaniline	NL	µg/kg	370 UJ	340 U	350 U	290 U	290 U
4-Nitrophenol	NL	µg/kg	370 UJ	340 U	350 U	290 U	290 U
Acenaphthene	NL	µg/kg	3.7 UJ	3.4 U	3.5 U	2.9 U	12
Acenaphthylene	NL	µg/kg	3.7 UJ	3.4 U	3.5 U	2.9 U	10
Acetophenone	NL	µg/kg	190 UJ	180 U	180 U	150 U	150 U
Anthracene	845	µg/kg	3.7 UJ	3.4 U	3.5 U	4.5	26
Atrazine	NL	µg/kg	190 UJ	180 U	180 U	150 U	150 U
Benzaldehyde	NL	µg/kg	190 UJ	180 U	180 U	150 U	150 U
Benzo(a)anthracene	1050	µg/kg	7.6 J	6.3	4	11	60
Benzo(a)pyrene	1450	µg/kg	11 J	8.1	4.4	12	59

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Table B-1
Sediment Sample Analytical Results - SVOCs
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-60	LMR11-60	LMR11-60	LMR11-60	LMR11-60
		Field Sample ID	LMR11-60-024	LMR11-60-048	LMR11-60-048FS	LMR11-60-072	LMR11-60-092
		Sample Date	8/6/2011	8/6/2011	8/6/2011	8/6/2011	8/6/2011
		Depth Interval (in bss)	6- 24	24- 48	24- 48	48- 72	72- 92
Chemical Name	**PEC[1]**	**Unit**					
Benzo(b)fluoranthene	NL	µg/kg	14 J	11	6.9	17	77
Benzo(g,h,i)perylene	NL	µg/kg	3.8 J	3.4 U	3.5 U	6.3	33
Benzo(k)fluoranthene	NL	µg/kg	6 J	4.3	3.5 U	5.8	29
Bis(2-chloroethoxy)methane	NL	µg/kg	190 UJ	180 U	180 U	150 U	150 U
Bis(2-chloroethyl)ether	NL	µg/kg	190 UJ	180 U	180 U	150 U	150 U
Bis(2-ethylhexyl)phthalate	NL	µg/kg	50 J	180 U	54 J	56 J	150 U
Butylbenzylphthalate	NL	µg/kg	190 UJ	180 U	180 U	150 U	150 U
Caprolactam	NL	µg/kg	190 UJ	180 U	180 U	150 U	150 U
Carbazole	NL	µg/kg	190 UJ	180 U	180 U	150 U	150 U
Chrysene	1290	µg/kg	8.7 J	7.3	4.9	13	62
Dibenzo(a,h)anthracene	NL	µg/kg	3.7 UJ	3.4 U	3.5 U	2.9 U	13
Dibenzofuran	NL	µg/kg	190 UJ	180 U	180 U	150 U	150 U
Diethylphthalate	NL	µg/kg	190 UJ	180 U	180 U	150 U	150 U
Dimethylphthalate	NL	µg/kg	190 UJ	180 U	180 U	150 U	150 U
Di-n-butylphthalate	NL	µg/kg	190 UJ	180 U	180 U	150 U	150 U
Di-n-octylphthalate	NL	µg/kg	190 UJ	180 U	180 U	150 U	150 U
Fluoranthene	2230	µg/kg	19 J	12	9.3	26	120
Fluorene	536	µg/kg	3.7 UJ	3.4 U	3.5 U	2.9 U	14
Hexachlorobenzene	NL	µg/kg	190 UJ	180 U	180 U	150 U	150 U
Hexachlorobutadiene	NL	µg/kg	190 UJ	180 U	180 U	150 U	150 U
Hexachlorocyclopentadiene	NL	µg/kg	190 UJ	180 U	180 UJ	150 UJ	150 UJ
Hexachloroethane	NL	µg/kg	190 UJ	180 U	180 U	150 U	150 U
Indeno(1,2,3-cd)pyrene	NL	µg/kg	6.2 J	4.6	3.5 U	7	35
Isophorone	NL	µg/kg	190 UJ	180 U	180 U	150 U	150 U
Naphthalene	561	µg/kg	3.7 UJ	3.4 U	3.5 U	6.8	14
Nitrobenzene	NL	µg/kg	190 UJ	180 U	180 U	150 U	150 U
N-Nitroso-di-n-propylamine	NL	µg/kg	190 UJ	180 U	180 U	150 U	150 U
N-Nitrosodiphenylamine	NL	µg/kg	190 UJ	180 U	180 U	150 U	150 U
Pentachlorophenol	NL	µg/kg	7.5 UJ	340 U	7.2 U	6 U	5.9 U
Phenanthrene	1170	µg/kg	9.4 J	5.8	6.9	25	100
Phenol	NL	µg/kg	190 UJ	180 U	180 U	150 U	150 U
Pyrene	1520	µg/kg	15 J	12	8.6	24	110
Total PAH 17	22800	µg/kg	113.65	85	62.5	170.5	784
TOC	NL	mg/kg	28,100	31,400	23,100	19,500	24,900

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Table B-1
Sediment Sample Analytical Results - SVOCs
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-61	LMR11-61	LMR11-62	LMR11-62	LMR11-62
		Field Sample ID	LMR11-61-006	LMR11-61-030	LMR11-62-006	LMR11-62-024	LMR11-62-024DP
		Sample Date	8/6/2011	8/6/2011	8/6/2011	8/6/2011	8/6/2011
		Depth Interval (in bss)	0- 6	6- 30	0- 6	6- 24	6- 24
Chemical Name	**PEC[1]**	**Unit**					
1,1'-Biphenyl	NL	µg/kg	140 UJ	120 UJ	190 U	160 U	190 U
1,2,4,5-Tetrachlorobenzene	NL	µg/kg	140 UJ	120 UJ	190 U	160 U	190 U
2,2'-Oxybis(1-chloropropane)	NL	µg/kg	140 UJ	120 UJ	190 U	160 U	190 U
2,3,4,6-Tetrachlorophenol	NL	µg/kg	140 UJ	120 UJ	190 U	160 U	190 U
2,4,5-Trichlorophenol	NL	µg/kg	140 UJ	120 UJ	190 U	160 U	190 U
2,4,6-Trichlorophenol	NL	µg/kg	140 UJ	120 UJ	190 U	160 U	190 U
2,4-Dichlorophenol	NL	µg/kg	140 UJ	120 UJ	190 U	160 U	190 U
2,4-Dimethylphenol	NL	µg/kg	140 UJ	120 UJ	190 U	160 U	190 U
2,4-Dinitrophenol	NL	µg/kg	260 UJ	230 UJ	360 U	310 U	370 U
2,4-Dinitrotoluene	NL	µg/kg	140 UJ	120 UJ	190 U	160 U	190 U
2,6-Dinitrotoluene	NL	µg/kg	140 UJ	120 UJ	190 U	160 U	190 U
2-Chloronaphthalene	NL	µg/kg	140 UJ	120 UJ	190 U	160 U	190 U
2-Chlorophenol	NL	µg/kg	140 UJ	120 UJ	190 U	160 U	190 U
2-Methylnaphthalene	NL	µg/kg	260 J	2.3 UJ	11	3.1 U	3.7 U
2-Methylphenol	NL	µg/kg	140 UJ	120 UJ	190 U	160 U	190 U
2-Nitroaniline	NL	µg/kg	260 UJ	230 UJ	360 U	310 U	370 U
2-Nitrophenol	NL	µg/kg	140 UJ	120 UJ	190 U	160 U	190 U
3,3'-Dichlorobenzidine	NL	µg/kg	140 UJ	120 UJ	190 U	160 U	190 U
3-Nitroaniline	NL	µg/kg	260 UJ	230 UJ	360 U	310 U	370 U
4,6-Dinitro-2-methylphenol	NL	µg/kg	260 UJ	230 UJ	360 U	310 U	370 U
4-Bromophenyl-phenylether	NL	µg/kg	140 UJ	120 UJ	190 U	160 U	190 U
4-Chloro-3-methylphenol	NL	µg/kg	140 UJ	120 UJ	190 U	160 U	190 U
4-Chloroaniline	NL	µg/kg	140 UJ	120 UJ	190 U	160 U	190 U
4-Chlorophenyl-phenylether	NL	µg/kg	140 UJ	120 UJ	190 U	160 U	190 U
4-Methylphenol	NL	µg/kg	31 J	120 UJ	190 U	160 U	190 U
4-Nitroaniline	NL	µg/kg	260 UJ	230 UJ	360 U	310 U	370 U
4-Nitrophenol	NL	µg/kg	260 UJ	230 UJ	360 U	310 U	370 U
Acenaphthene	NL	µg/kg	49 J	3.3 J	20	6.2	3.7 U
Acenaphthylene	NL	µg/kg	22 J	2.3 UJ	3.6 U	3.1 U	3.7 U
Acetophenone	NL	µg/kg	140 UJ	120 UJ	190 U	160 U	190 U
Anthracene	845	µg/kg	85 J	8.8 J	17	7.2	3.7 U
Atrazine	NL	µg/kg	140 UJ	120 UJ	190 U	160 U	190 U
Benzaldehyde	NL	µg/kg	140 UJ	120 UJ	190 U	160 U	190 U
Benzo(a)anthracene	1050	µg/kg	170 J	11 J	14	18	4.9
Benzo(a)pyrene	1450	µg/kg	130 J	8.6 J	23	26	3.7 U

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Table B-1
Sediment Sample Analytical Results - SVOCs
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-61	LMR11-61	LMR11-62	LMR11-62	LMR11-62
		Field Sample ID	LMR11-61-006	LMR11-61-030	LMR11-62-006	LMR11-62-024	LMR11-62-024DP
		Sample Date	8/6/2011	8/6/2011	8/6/2011	8/6/2011	8/6/2011
		Depth Interval (in bss)	0- 6	6- 30	0- 6	6- 24	6- 24
Chemical Name	**PEC[1]**	**Unit**					
Benzo(b)fluoranthene	NL	µg/kg	170 J	11 J	24	26	8.5
Benzo(g,h,i)perylene	NL	µg/kg	80 J	3.1 J	10	9.4	3.7 U
Benzo(k)fluoranthene	NL	µg/kg	70 J	4.2 J	6.4	7.8	3.7 U
Bis(2-chloroethoxy)methane	NL	µg/kg	140 UJ	120 UJ	190 U	160 U	190 U
Bis(2-chloroethyl)ether	NL	µg/kg	140 UJ	120 UJ	190 U	160 U	190 U
Bis(2-ethylhexyl)phthalate	NL	µg/kg	140 UJ	260 J	190 U	160 U	190 U
Butylbenzylphthalate	NL	µg/kg	140 UJ	120 UJ	190 U	160 U	190 U
Caprolactam	NL	µg/kg	140 UJ	120 UJ	190 U	160 U	190 U
Carbazole	NL	µg/kg	140 UJ	120 UJ	190 U	160 U	190 U
Chrysene	1290	µg/kg	160 J	11 J	17	18	5.4
Dibenzo(a,h)anthracene	NL	µg/kg	26 UJ	2.3 UJ	3.9	3.9	3.7 U
Dibenzofuran	NL	µg/kg	74 J	120 UJ	190 U	160 U	190 U
Diethylphthalate	NL	µg/kg	140 UJ	120 UJ	190 U	160 U	190 U
Dimethylphthalate	NL	µg/kg	140 UJ	120 UJ	190 U	160 U	190 U
Di-n-butylphthalate	NL	µg/kg	140 UJ	120 UJ	190 U	160 U	190 U
Di-n-octylphthalate	NL	µg/kg	140 UJ	120 UJ	190 U	160 U	190 U
Fluoranthene	2230	µg/kg	330 J	35 J	35	31	9.4
Fluorene	536	µg/kg	62 J	6.3 J	9.7	3.1 U	3.7 U
Hexachlorobenzene	NL	µg/kg	140 UJ	120 UJ	190 U	160 U	190 U
Hexachlorobutadiene	NL	µg/kg	140 UJ	120 UJ	190 U	160 U	190 U
Hexachlorocyclopentadiene	NL	µg/kg	140 UJ	120 UJ	190 U	160 U	190 U
Hexachloroethane	NL	µg/kg	140 UJ	120 UJ	190 U	160 U	190 U
Indeno(1,2,3-cd)pyrene	NL	µg/kg	71 J	4 J	12	12	3.7 U
Isophorone	NL	µg/kg	140 UJ	120 UJ	190 U	160 U	190 U
Naphthalene	561	µg/kg	72 J	2.3 UJ	36	6.6	3.7 U
Nitrobenzene	NL	µg/kg	140 UJ	120 UJ	190 U	160 U	190 U
N-Nitroso-di-n-propylamine	NL	µg/kg	140 UJ	120 UJ	190 U	160 U	190 U
N-Nitrosodiphenylamine	NL	µg/kg	140 UJ	120 UJ	190 U	160 U	190 U
Pentachlorophenol	NL	µg/kg	5.4 UJ	4.7 UJ	22 UJ	13 UJ	370 U
Phenanthrene	1170	µg/kg	340 J	21 J	77	22	5.6
Phenol	NL	µg/kg	140 UJ	120 UJ	190 U	160 U	190 U
Pyrene	1520	µg/kg	260 J	20 J	43	38	9.9
Total PAH 17	22800	µg/kg	2344	151.9	360.8	236.75	64.05
TOC	NL	mg/kg	27,400	24,500	27,100	19,700	22,400

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Table B-1
Sediment Sample Analytical Results - SVOCs
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-62	LMR11-62	LMR11-62	LMR11-62	LMR11-63
		Field Sample ID	LMR11-62-048	LMR11-62-072	LMR11-62-096	LMR11-62-108	LMR11-63-006
		Sample Date	8/6/2011	8/6/2011	8/6/2011	8/6/2011	8/8/2011
		Depth Interval (in bss)	24- 48	48- 72	72- 96	96- 108	0- 6
Chemical Name	**PEC[1]**	**Unit**					
1,1'-Biphenyl	NL	µg/kg	130 U	120 U	140 U	150 U	380 U
1,2,4,5-Tetrachlorobenzene	NL	µg/kg	130 U	120 U	140 U	150 U	380 U
2,2'-Oxybis(1-chloropropane)	NL	µg/kg	130 U	120 U	140 U	150 U	380 U
2,3,4,6-Tetrachlorophenol	NL	µg/kg	130 U	120 U	140 U	150 U	380 U
2,4,5-Trichlorophenol	NL	µg/kg	130 U	120 U	140 U	150 U	380 U
2,4,6-Trichlorophenol	NL	µg/kg	130 U	120 U	140 U	150 U	380 U
2,4-Dichlorophenol	NL	µg/kg	130 U	120 U	140 U	150 U	380 U
2,4-Dimethylphenol	NL	µg/kg	130 U	120 U	140 U	150 U	380 U
2,4-Dinitrophenol	NL	µg/kg	250 U	230 U	280 U	290 U	750 U
2,4-Dinitrotoluene	NL	µg/kg	130 U	120 U	140 U	150 U	380 U
2,6-Dinitrotoluene	NL	µg/kg	130 U	120 U	140 U	150 U	380 U
2-Chloronaphthalene	NL	µg/kg	130 U	120 U	140 U	150 U	380 U
2-Chlorophenol	NL	µg/kg	130 U	120 U	140 U	150 U	380 U
2-Methylnaphthalene	NL	µg/kg	2.5 U	2.3 U	2.8	2.9 U	7.5 U
2-Methylphenol	NL	µg/kg	130 U	120 U	140 U	150 U	380 U
2-Nitroaniline	NL	µg/kg	250 U	230 U	280 U	290 U	750 U
2-Nitrophenol	NL	µg/kg	130 U	120 U	140 U	150 U	380 U
3,3'-Dichlorobenzidine	NL	µg/kg	130 U	120 U	140 U	150 U	380 U
3-Nitroaniline	NL	µg/kg	250 U	230 U	280 U	290 U	750 U
4,6-Dinitro-2-methylphenol	NL	µg/kg	250 U	230 U	280 U	290 U	750 U
4-Bromophenyl-phenylether	NL	µg/kg	130 U	120 U	140 U	150 U	380 U
4-Chloro-3-methylphenol	NL	µg/kg	130 U	120 U	140 U	150 U	380 U
4-Chloroaniline	NL	µg/kg	130 U	120 U	140 U	150 U	380 U
4-Chlorophenyl-phenylether	NL	µg/kg	130 U	120 U	140 U	150 U	380 U
4-Methylphenol	NL	µg/kg	130 U	120 U	140 U	150 U	380 U
4-Nitroaniline	NL	µg/kg	250 U	230 U	280 U	290 U	750 U
4-Nitrophenol	NL	µg/kg	250 U	230 U	280 U	290 U	750 U
Acenaphthene	NL	µg/kg	2.5 U	2.3 U	4.7	2.9 U	7.5 U
Acenaphthylene	NL	µg/kg	2.5 U	2.3 U	4	2.9 U	7.5 U
Acetophenone	NL	µg/kg	130 U	120 U	140 U	150 U	380 U
Anthracene	845	µg/kg	2.5 U	2.3 U	12	2.9 U	7.5 U
Atrazine	NL	µg/kg	130 U	120 U	140 U	150 U	380 U
Benzaldehyde	NL	µg/kg	130 U	120 U	140 U	150 U	380 U
Benzo(a)anthracene	1050	µg/kg	2.5 U	2.3 U	24	2.9 U	15
Benzo(a)pyrene	1450	µg/kg	2.5 U	2.3 U	27	2.9 U	30

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Table B-1
Sediment Sample Analytical Results - SVOCs
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-62	LMR11-62	LMR11-62	LMR11-62	LMR11-63
		Field Sample ID	LMR11-62-048	LMR11-62-072	LMR11-62-096	LMR11-62-108	LMR11-63-006
		Sample Date	8/6/2011	8/6/2011	8/6/2011	8/6/2011	8/8/2011
		Depth Interval (in bss)	24- 48	48- 72	72- 96	96- 108	0- 6
Chemical Name	**PEC[1]**	**Unit**					
Benzo(b)fluoranthene	NL	µg/kg	2.5 U	2.3 U	37	2.9 U	26
Benzo(g,h,i)perylene	NL	µg/kg	2.5 U	2.3 U	12	2.9 U	14
Benzo(k)fluoranthene	NL	µg/kg	2.5 U	2.3 U	15	2.9 U	14
Bis(2-chloroethoxy)methane	NL	µg/kg	130 U	120 U	140 U	150 U	380 U
Bis(2-chloroethyl)ether	NL	µg/kg	130 U	120 U	140 U	150 U	380 U
Bis(2-ethylhexyl)phthalate	NL	µg/kg	130 U	120 U	140 U	150 U	380 U
Butylbenzylphthalate	NL	µg/kg	130 U	120 U	140 U	150 U	7100
Caprolactam	NL	µg/kg	130 U	120 U	140 U	150 U	380 U
Carbazole	NL	µg/kg	130 U	120 U	140 U	150 U	380 U
Chrysene	1290	µg/kg	2.5 U	2.3 U	26	2.9 U	18
Dibenzo(a,h)anthracene	NL	µg/kg	2.5 U	2.3 U	5.5	2.9 U	7.5 U
Dibenzofuran	NL	µg/kg	130 U	120 U	140 U	150 U	380 U
Diethylphthalate	NL	µg/kg	130 U	120 U	140 U	150 U	380 U
Dimethylphthalate	NL	µg/kg	130 U	120 U	140 U	150 U	380 U
Di-n-butylphthalate	NL	µg/kg	130 U	120 U	140 U	150 U	380 U
Di-n-octylphthalate	NL	µg/kg	130 U	120 U	140 U	150 U	380 U
Fluoranthene	2230	µg/kg	2.5 U	2.3 U	54	2.9 U	30
Fluorene	536	µg/kg	2.5 U	2.3 U	6.1	2.9 U	7.5 U
Hexachlorobenzene	NL	µg/kg	130 U	120 U	140 U	150 U	380 U
Hexachlorobutadiene	NL	µg/kg	130 U	120 U	140 U	150 U	380 U
Hexachlorocyclopentadiene	NL	µg/kg	130 U	120 U	140 U	150 U	380 U
Hexachloroethane	NL	µg/kg	130 U	120 U	140 U	150 U	380 U
Indeno(1,2,3-cd)pyrene	NL	µg/kg	2.5 U	2.3 U	16	2.9 U	12
Isophorone	NL	µg/kg	130 U	120 U	140 U	150 U	380 U
Naphthalene	561	µg/kg	2.5 U	2.3 U	5.9	2.9 U	7.5 U
Nitrobenzene	NL	µg/kg	130 U	120 U	140 U	150 U	380 U
N-Nitroso-di-n-propylamine	NL	µg/kg	130 U	120 U	140 U	150 U	380 U
N-Nitrosodiphenylamine	NL	µg/kg	130 U	120 U	140 U	150 U	380 U
Pentachlorophenol	NL	µg/kg	250 U	230 U	17 UJ	290 U	15 U
Phenanthrene	1170	µg/kg	2.5 U	2.3 U	39	2.9 U	20
Phenol	NL	µg/kg	130 U	120 U	140 U	150 U	380 U
Pyrene	1520	µg/kg	2.5 U	2.3 U	44	2.9 U	30
Total PAH 17	22800	µg/kg	21.25	19.55	335	24.65	235.25
TOC	NL	mg/kg	21,900	6,430	26,900	14,500	26,800

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Table B-1
Sediment Sample Analytical Results - SVOCs
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-63	LMR11-63	LMR11-63	LMR11-63	LMR11-63
		Field Sample ID	LMR11-63-024	LMR11-63-048	LMR11-63-048FS	LMR11-63-072	LMR11-63-096
		Sample Date	8/8/2011	8/8/2011	8/8/2011	8/8/2011	8/8/2011
		Depth Interval (in bss)	6- 24	24- 48	24- 48	48- 72	72- 96
Chemical Name	**PEC[1]**	**Unit**					
1,1'-Biphenyl	NL	µg/kg	300 U	280 U	250 U	260 U	280 U
1,2,4,5-Tetrachlorobenzene	NL	µg/kg	300 U	280 U	250 U	260 U	280 U
2,2'-Oxybis(1-chloropropane)	NL	µg/kg	300 U	280 U	250 U	260 U	280 U
2,3,4,6-Tetrachlorophenol	NL	µg/kg	300 U	280 U	250 U	260 U	280 U
2,4,5-Trichlorophenol	NL	µg/kg	300 U	280 U	250 U	260 U	280 U
2,4,6-Trichlorophenol	NL	µg/kg	300 U	280 U	250 U	260 U	280 U
2,4-Dichlorophenol	NL	µg/kg	300 U	280 U	250 U	260 U	280 U
2,4-Dimethylphenol	NL	µg/kg	300 U	280 U	250 U	260 U	280 U
2,4-Dinitrophenol	NL	µg/kg	580 U	550 U	480 U	510 U	550 U
2,4-Dinitrotoluene	NL	µg/kg	300 U	280 U	250 U	260 U	280 U
2,6-Dinitrotoluene	NL	µg/kg	300 U	280 U	250 U	260 U	280 U
2-Chloronaphthalene	NL	µg/kg	300 U	280 U	250 U	260 U	280 U
2-Chlorophenol	NL	µg/kg	300 U	280 U	250 U	260 U	280 U
2-Methylnaphthalene	NL	µg/kg	62	38	7.1	40	74
2-Methylphenol	NL	µg/kg	300 U	280 U	250 U	260 U	280 U
2-Nitroaniline	NL	µg/kg	580 U	550 U	480 U	510 U	550 U
2-Nitrophenol	NL	µg/kg	300 U	280 U	250 U	260 U	280 U
3,3'-Dichlorobenzidine	NL	µg/kg	300 U	280 U	250 U	260 U	280 U
3-Nitroaniline	NL	µg/kg	580 U	550 U	480 U	510 U	550 U
4,6-Dinitro-2-methylphenol	NL	µg/kg	580 U	550 U	480 U	510 U	550 U
4-Bromophenyl-phenylether	NL	µg/kg	300 U	280 U	250 U	260 U	280 U
4-Chloro-3-methylphenol	NL	µg/kg	300 U	280 U	250 U	260 U	280 U
4-Chloroaniline	NL	µg/kg	300 U	280 U	250 U	260 U	280 U
4-Chlorophenyl-phenylether	NL	µg/kg	300 U	280 U	250 U	260 U	280 U
4-Methylphenol	NL	µg/kg	300 U	280 U	250 U	260 U	280 U
4-Nitroaniline	NL	µg/kg	580 U	550 U	480 U	510 U	550 U
4-Nitrophenol	NL	µg/kg	580 U	550 U	480 U	510 U	550 U
Acenaphthene	NL	µg/kg	11	88	9.7	60	51
Acenaphthylene	NL	µg/kg	8.1	34	21	20	52
Acetophenone	NL	µg/kg	300 U	280 U	250 U	260 U	280 U
Anthracene	845	µg/kg	37	62	19	60	75
Atrazine	NL	µg/kg	300 U	280 U	250 U	260 U	280 U
Benzaldehyde	NL	µg/kg	300 U	280 U	250 U	260 U	280 U
Benzo(a)anthracene	1050	µg/kg	93	150	64	92	120
Benzo(a)pyrene	1450	µg/kg	73	160	100	89	180

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Table B-1
Sediment Sample Analytical Results - SVOCs
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-63	LMR11-63	LMR11-63	LMR11-63	LMR11-63
		Field Sample ID	LMR11-63-024	LMR11-63-048	LMR11-63-048FS	LMR11-63-072	LMR11-63-096
		Sample Date	8/8/2011	8/8/2011	8/8/2011	8/8/2011	8/8/2011
		Depth Interval (in bss)	6- 24	24- 48	24- 48	48- 72	72- 96
Chemical Name	**PEC[1]**	**Unit**					
Benzo(b)fluoranthene	NL	µg/kg	91	140	71	88	130
Benzo(g,h,i)perylene	NL	µg/kg	45	120	74	65	140
Benzo(k)fluoranthene	NL	µg/kg	52	72	45	50	47
Bis(2-chloroethoxy)methane	NL	µg/kg	300 U	280 U	250 U	260 U	280 U
Bis(2-chloroethyl)ether	NL	µg/kg	300 U	280 U	250 U	260 U	280 U
Bis(2-ethylhexyl)phthalate	NL	µg/kg	300 U	280 U	250 U	260 U	280 U
Butylbenzylphthalate	NL	µg/kg	300 U	280 U	250 U	260 U	280 U
Caprolactam	NL	µg/kg	300 U	280 U	250 U	260 U	280 U
Carbazole	NL	µg/kg	300 U	280 U	250 U	260 U	280 U
Chrysene	1290	µg/kg	100	150	68	110	120
Dibenzo(a,h)anthracene	NL	µg/kg	21	41	22	28	34
Dibenzofuran	NL	µg/kg	300 U	280 U	250 U	260 U	280 U
Diethylphthalate	NL	µg/kg	300 U	280 U	250 U	260 U	280 U
Dimethylphthalate	NL	µg/kg	300 U	280 U	250 U	260 U	280 U
Di-n-butylphthalate	NL	µg/kg	300 U	85 J	250 U	260 U	280 U
Di-n-octylphthalate	NL	µg/kg	300 U	280 U	250 U	260 U	280 U
Fluoranthene	2230	µg/kg	180	220	44	200	150
Fluorene	536	µg/kg	16	46	7.3	47	48
Hexachlorobenzene	NL	µg/kg	300 U	280 U	250 U	260 U	280 U
Hexachlorobutadiene	NL	µg/kg	300 U	280 U	250 U	260 U	280 U
Hexachlorocyclopentadiene	NL	µg/kg	300 U	280 U	250 U	260 U	280 U
Hexachloroethane	NL	µg/kg	300 U	280 U	250 U	260 U	280 U
Indeno(1,2,3-cd)pyrene	NL	µg/kg	40	81	45	47	79
Isophorone	NL	µg/kg	300 U	280 U	250 U	260 U	280 U
Naphthalene	561	µg/kg	46	65	14	68	160
Nitrobenzene	NL	µg/kg	300 U	280 U	250 U	260 U	280 U
N-Nitroso-di-n-propylamine	NL	µg/kg	300 U	280 U	250 U	260 U	280 U
N-Nitrosodiphenylamine	NL	µg/kg	300 U	280 U	250 U	260 U	280 U
Pentachlorophenol	NL	µg/kg	12 U	11 U	9.7 U	10 U	11 U
Phenanthrene	1170	µg/kg	130	280	46	240	260
Phenol	NL	µg/kg	300 U	280 U	250 U	260 U	280 U
Pyrene	1520	µg/kg	180	290	63	240	270
Total PAH 17	22800	µg/kg	1,185	2,037	720.1	1,544	1,990
TOC	NL	mg/kg	40,800	31,800	36,400	46,700 J	36,800

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Table B-1
Sediment Sample Analytical Results - SVOCs
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-63	LMR11-64	LMR11-64	LMR11-64	LMR11-64
		Field Sample ID	LMR11-63-115	LMR11-88-006	LMR11-88-024	LMR11-88-048	LMR11-88-072
		Sample Date	8/8/2011	8/7/2011	8/7/2011	8/7/2011	8/7/2011
		Depth Interval (in bss)	96- 115	0- 6	6- 24	24- 48	48- 72
Chemical Name	**PEC[1]**	**Unit**					
1,1'-Biphenyl	NL	µg/kg	240 U	140 UJ	160 UJ	140 UJ	270 UJ
1,2,4,5-Tetrachlorobenzene	NL	µg/kg	240 U	140 UJ	160 UJ	140 UJ	270 UJ
2,2'-Oxybis(1-chloropropane)	NL	µg/kg	240 U	140 UJ	160 UJ	140 UJ	270 UJ
2,3,4,6-Tetrachlorophenol	NL	µg/kg	240 U	140 UJ	160 UJ	140 UJ	270 UJ
2,4,5-Trichlorophenol	NL	µg/kg	240 U	140 UJ	160 UJ	140 UJ	270 UJ
2,4,6-Trichlorophenol	NL	µg/kg	240 U	140 UJ	160 UJ	140 UJ	270 UJ
2,4-Dichlorophenol	NL	µg/kg	240 U	140 UJ	160 UJ	140 UJ	270 UJ
2,4-Dimethylphenol	NL	µg/kg	240 U	140 UJ	160 UJ	140 UJ	270 UJ
2,4-Dinitrophenol	NL	µg/kg	460 U	270 UJ	300 UJ	270 UJ	530 UJ
2,4-Dinitrotoluene	NL	µg/kg	240 U	140 UJ	160 UJ	140 UJ	270 UJ
2,6-Dinitrotoluene	NL	µg/kg	240 U	140 UJ	160 UJ	140 UJ	270 UJ
2-Chloronaphthalene	NL	µg/kg	240 U	140 UJ	160 UJ	140 UJ	270 UJ
2-Chlorophenol	NL	µg/kg	240 U	140 UJ	160 UJ	140 UJ	270 UJ
2-Methylnaphthalene	NL	µg/kg	5.1	2.7 UJ	4.8 J	5 J	7.2 J
2-Methylphenol	NL	µg/kg	240 U	140 UJ	160 UJ	140 UJ	270 UJ
2-Nitroaniline	NL	µg/kg	460 U	270 UJ	300 UJ	270 UJ	530 UJ
2-Nitrophenol	NL	µg/kg	240 U	140 UJ	160 UJ	140 UJ	270 UJ
3,3'-Dichlorobenzidine	NL	µg/kg	240 U	140 UJ	160 UJ	140 UJ	270 UJ
3-Nitroaniline	NL	µg/kg	460 U	270 UJ	300 UJ	270 UJ	530 UJ
4,6-Dinitro-2-methylphenol	NL	µg/kg	460 U	270 UJ	300 UJ	270 UJ	530 UJ
4-Bromophenyl-phenylether	NL	µg/kg	240 U	140 UJ	160 UJ	140 UJ	270 UJ
4-Chloro-3-methylphenol	NL	µg/kg	240 U	140 UJ	160 UJ	140 UJ	270 UJ
4-Chloroaniline	NL	µg/kg	240 U	140 UJ	160 UJ	140 UJ	270 UJ
4-Chlorophenyl-phenylether	NL	µg/kg	240 U	140 UJ	160 UJ	140 UJ	270 UJ
4-Methylphenol	NL	µg/kg	240 U	94 J	140 J	31 J	270 UJ
4-Nitroaniline	NL	µg/kg	460 U	270 UJ	300 UJ	270 UJ	530 UJ
4-Nitrophenol	NL	µg/kg	460 U	270 UJ	300 UJ	270 UJ	530 UJ
Acenaphthene	NL	µg/kg	4.6 U	3.5 J	4.7 J	2.7 UJ	5.3 UJ
Acenaphthylene	NL	µg/kg	4.6 U	2.7 UJ	3 UJ	3.1 J	17 J
Acetophenone	NL	µg/kg	240 U	140 UJ	160 UJ	140 UJ	270 UJ
Anthracene	845	µg/kg	4.6 U	3.2 J	5 J	6 J	14 J
Atrazine	NL	µg/kg	240 U	140 UJ	160 UJ	140 UJ	270 UJ
Benzaldehyde	NL	µg/kg	240 U	140 UJ	160 UJ	140 UJ	270 UJ
Benzo(a)anthracene	1050	µg/kg	4.6 U	3.7 J	9.6 J	18 J	64 J
Benzo(a)pyrene	1450	µg/kg	4.6 U	2.7 UJ	11 J	19 J	75 J

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Table B-1
Sediment Sample Analytical Results - SVOCs
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-63	LMR11-64	LMR11-64	LMR11-64	LMR11-64
		Field Sample ID	LMR11-63-115	LMR11-88-006	LMR11-88-024	LMR11-88-048	LMR11-88-072
		Sample Date	8/8/2011	8/7/2011	8/7/2011	8/7/2011	8/7/2011
		Depth Interval (in bss)	96- 115	0- 6	6- 24	24- 48	48- 72
Chemical Name	**PEC[1]**	**Unit**					
Benzo(b)fluoranthene	NL	µg/kg	4.6 U	4.7 J	15 J	23 J	110 J
Benzo(g,h,i)perylene	NL	µg/kg	4.6 U	2.7 UJ	7 J	11 J	40 J
Benzo(k)fluoranthene	NL	µg/kg	4.6 U	2.7 UJ	6.2 J	8.8 J	43 J
Bis(2-chloroethoxy)methane	NL	µg/kg	240 U	140 UJ	160 UJ	140 UJ	270 UJ
Bis(2-chloroethyl)ether	NL	µg/kg	240 U	140 UJ	160 UJ	140 UJ	270 UJ
Bis(2-ethylhexyl)phthalate	NL	µg/kg	240 U	130 J	160 UJ	140 UJ	270 UJ
Butylbenzylphthalate	NL	µg/kg	240 U	140 UJ	160 UJ	140 UJ	270 UJ
Caprolactam	NL	µg/kg	240 U	140 UJ	160 UJ	140 UJ	270 UJ
Carbazole	NL	µg/kg	240 U	140 UJ	160 UJ	140 UJ	270 UJ
Chrysene	1290	µg/kg	5.2	4.2 J	11 J	18 J	70 J
Dibenzo(a,h)anthracene	NL	µg/kg	4.6 U	2.7 UJ	3 UJ	3.8 J	11 J
Dibenzofuran	NL	µg/kg	240 U	140 UJ	160 UJ	140 UJ	270 UJ
Diethylphthalate	NL	µg/kg	240 U	140 UJ	160 UJ	140 UJ	270 UJ
Dimethylphthalate	NL	µg/kg	240 U	140 UJ	160 UJ	140 UJ	270 UJ
Di-n-butylphthalate	NL	µg/kg	240 U	140 UJ	160 UJ	140 UJ	270 UJ
Di-n-octylphthalate	NL	µg/kg	240 U	140 UJ	160 UJ	140 UJ	270 UJ
Fluoranthene	2230	µg/kg	5.2	10 J	24 J	33 J	50 J
Fluorene	536	µg/kg	4.6 U	2.7 UJ	5.1 J	3.7 J	6.3 J
Hexachlorobenzene	NL	µg/kg	240 U	140 UJ	160 UJ	140 UJ	270 UJ
Hexachlorobutadiene	NL	µg/kg	240 U	140 UJ	160 UJ	140 UJ	270 UJ
Hexachlorocyclopentadiene	NL	µg/kg	240 U	140 UJ	160 UJ	140 UJ	270 UJ
Hexachloroethane	NL	µg/kg	240 U	140 UJ	160 UJ	140 UJ	270 UJ
Indeno(1,2,3-cd)pyrene	NL	µg/kg	4.6 U	2.7 UJ	6.1 J	10 J	36 J
Isophorone	NL	µg/kg	240 U	140 UJ	160 UJ	140 UJ	270 UJ
Naphthalene	561	µg/kg	5.8	4.9 J	12 J	9.1 J	15 J
Nitrobenzene	NL	µg/kg	240 U	140 UJ	160 UJ	140 UJ	270 UJ
N-Nitroso-di-n-propylamine	NL	µg/kg	240 U	140 UJ	160 UJ	140 UJ	270 UJ
N-Nitrosodiphenylamine	NL	µg/kg	240 U	140 UJ	160 UJ	140 UJ	270 UJ
Pentachlorophenol	NL	µg/kg	9.3 U	5.5 UJ	6.1 UJ	5.5 UJ	11 UJ
Phenanthrene	1170	µg/kg	10	14 J	24 J	24 J	33 J
Phenol	NL	µg/kg	240 U	140 UJ	160 UJ	140 UJ	270 UJ
Pyrene	1520	µg/kg	9	9.6 J	21 J	27 J	48 J
Total PAH 17	22800	µg/kg	65.6	68.6	169.5	223.85	642.15
TOC	NL	mg/kg	26,700	24,100	25,400	25,200	30,600

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Table B-1
Sediment Sample Analytical Results - SVOCs
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-64	LMR11-65	LMR11-65	LMR11-66	LMR11-66
		Field Sample ID	LMR11-88-088	LMR11-65-006	LMR11-65-024	LMR11-66-006	LMR11-66-024
		Sample Date	8/7/2011	8/6/2011	8/6/2011	8/7/2011	8/7/2011
		Depth Interval (in bss)	72- 88	0- 6	6- 24	0- 6	6- 24
Chemical Name	**PEC[1]**	**Unit**					
1,1'-Biphenyl	NL	µg/kg	220 UJ	190 U	150 U	190 UJ	190 UJ
1,2,4,5-Tetrachlorobenzene	NL	µg/kg	220 UJ	190 U	150 U	190 UJ	190 UJ
2,2'-Oxybis(1-chloropropane)	NL	µg/kg	220 UJ	190 U	150 U	190 UJ	190 UJ
2,3,4,6-Tetrachlorophenol	NL	µg/kg	220 UJ	190 U	150 U	190 UJ	190 UJ
2,4,5-Trichlorophenol	NL	µg/kg	220 UJ	190 U	150 U	190 UJ	190 UJ
2,4,6-Trichlorophenol	NL	µg/kg	220 UJ	190 U	150 U	190 UJ	190 UJ
2,4-Dichlorophenol	NL	µg/kg	220 UJ	190 U	150 U	190 UJ	190 UJ
2,4-Dimethylphenol	NL	µg/kg	220 UJ	190 U	150 U	190 UJ	190 UJ
2,4-Dinitrophenol	NL	µg/kg	420 UJ	360 U	300 U	370 UJ	370 UJ
2,4-Dinitrotoluene	NL	µg/kg	220 UJ	190 U	150 U	190 UJ	190 UJ
2,6-Dinitrotoluene	NL	µg/kg	220 UJ	190 U	150 U	190 UJ	190 UJ
2-Chloronaphthalene	NL	µg/kg	220 UJ	190 U	150 U	190 UJ	190 UJ
2-Chlorophenol	NL	µg/kg	220 UJ	190 U	150 U	190 UJ	190 UJ
2-Methylnaphthalene	NL	µg/kg	8 J	3.6 U	13	3.7 UJ	3.7 UJ
2-Methylphenol	NL	µg/kg	220 UJ	190 U	150 U	190 UJ	190 UJ
2-Nitroaniline	NL	µg/kg	420 UJ	360 U	300 U	370 UJ	370 UJ
2-Nitrophenol	NL	µg/kg	220 UJ	190 U	150 U	190 UJ	190 UJ
3,3'-Dichlorobenzidine	NL	µg/kg	220 UJ	190 U	150 U	190 UJ	190 UJ
3-Nitroaniline	NL	µg/kg	420 UJ	360 U	300 U	370 UJ	370 UJ
4,6-Dinitro-2-methylphenol	NL	µg/kg	420 UJ	360 U	300 U	370 UJ	370 UJ
4-Bromophenyl-phenylether	NL	µg/kg	220 UJ	190 U	150 U	190 UJ	190 UJ
4-Chloro-3-methylphenol	NL	µg/kg	220 UJ	190 U	150 U	190 UJ	190 UJ
4-Chloroaniline	NL	µg/kg	220 UJ	190 U	150 U	190 UJ	190 UJ
4-Chlorophenyl-phenylether	NL	µg/kg	220 UJ	190 U	150 U	190 UJ	190 UJ
4-Methylphenol	NL	µg/kg	220 UJ	58 J	54 J	190 UJ	190 UJ
4-Nitroaniline	NL	µg/kg	420 UJ	360 U	300 U	370 UJ	370 UJ
4-Nitrophenol	NL	µg/kg	420 UJ	360 U	300 U	370 UJ	370 UJ
Acenaphthene	NL	µg/kg	4.2 UJ	3.6 U	4.5	3.7 UJ	3.7 UJ
Acenaphthylene	NL	µg/kg	4.2 UJ	3.6 U	4.8	3.7 UJ	3.7 UJ
Acetophenone	NL	µg/kg	220 UJ	190 U	150 U	190 UJ	190 UJ
Anthracene	845	µg/kg	8.9 J	3.6 U	7.4	3.7 UJ	3.7 UJ
Atrazine	NL	µg/kg	220 UJ	190 U	150 U	190 UJ	190 UJ
Benzaldehyde	NL	µg/kg	220 UJ	190 U	150 U	190 UJ	190 UJ
Benzo(a)anthracene	1050	µg/kg	16 J	4.7	24	3.7 UJ	4.6 J
Benzo(a)pyrene	1450	µg/kg	17 J	5	34	3.7 UJ	5.4 J

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Table B-1
Sediment Sample Analytical Results - SVOCs
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-64	LMR11-65	LMR11-65	LMR11-66	LMR11-66
		Field Sample ID	LMR11-88-088	LMR11-65-006	LMR11-65-024	LMR11-66-006	LMR11-66-024
		Sample Date	8/7/2011	8/6/2011	8/6/2011	8/7/2011	8/7/2011
		Depth Interval (in bss)	72- 88	0- 6	6- 24	0- 6	6- 24
Chemical Name	**PEC[1]**	**Unit**					
Benzo(b)fluoranthene	NL	µg/kg	22 J	7.2	45	4.6 J	8.6 J
Benzo(g,h,i)perylene	NL	µg/kg	9 J	3.6 U	18	3.7 UJ	3.7 UJ
Benzo(k)fluoranthene	NL	µg/kg	7.6 J	3.6 U	17	3.7 UJ	3.7 UJ
Bis(2-chloroethoxy)methane	NL	µg/kg	220 UJ	190 U	150 U	190 UJ	190 UJ
Bis(2-chloroethyl)ether	NL	µg/kg	220 UJ	190 U	150 U	190 UJ	190 UJ
Bis(2-ethylhexyl)phthalate	NL	µg/kg	220 UJ	190 U	44 J	190 UJ	190 UJ
Butylbenzylphthalate	NL	µg/kg	220 UJ	190 U	150 U	190 UJ	190 UJ
Caprolactam	NL	µg/kg	220 UJ	190 U	150 U	190 UJ	190 UJ
Carbazole	NL	µg/kg	220 UJ	190 U	150 U	190 UJ	190 UJ
Chrysene	1290	µg/kg	17 J	4.9	25	3.7 UJ	5.6 J
Dibenzo(a,h)anthracene	NL	µg/kg	4.2 UJ	3.6 U	7.6	3.7 UJ	3.7 UJ
Dibenzofuran	NL	µg/kg	220 UJ	190 U	150 U	190 UJ	190 UJ
Diethylphthalate	NL	µg/kg	220 UJ	190 U	150 U	190 UJ	190 UJ
Dimethylphthalate	NL	µg/kg	220 UJ	190 U	150 U	190 UJ	190 UJ
Di-n-butylphthalate	NL	µg/kg	220 UJ	190 U	150 U	190 UJ	190 UJ
Di-n-octylphthalate	NL	µg/kg	220 UJ	190 U	150 U	190 UJ	190 UJ
Fluoranthene	2230	µg/kg	33 J	10	43	6.7 J	15 J
Fluorene	536	µg/kg	5.9 J	3.6 U	5.3	3.7 UJ	3.7 UJ
Hexachlorobenzene	NL	µg/kg	220 UJ	190 U	150 U	190 UJ	190 UJ
Hexachlorobutadiene	NL	µg/kg	220 UJ	190 U	150 U	190 UJ	190 UJ
Hexachlorocyclopentadiene	NL	µg/kg	220 UJ	190 UJ	150 UJ	190 UJ	190 UJ
Hexachloroethane	NL	µg/kg	220 UJ	190 U	150 U	190 UJ	190 UJ
Indeno(1,2,3-cd)pyrene	NL	µg/kg	7.5 J	3.6 U	22	3.7 UJ	3.7 UJ
Isophorone	NL	µg/kg	220 UJ	190 U	150 U	190 UJ	190 UJ
Naphthalene	561	µg/kg	12 J	7.6		3.7 UJ	3.7 UJ
Nitrobenzene	NL	µg/kg	220 UJ	190 U	150 U	190 UJ	190 UJ
N-Nitroso-di-n-propylamine	NL	µg/kg	220 UJ	190 U	150 U	190 UJ	190 UJ
N-Nitrosodiphenylamine	NL	µg/kg	220 UJ	190 U	150 U	190 UJ	190 UJ
Pentachlorophenol	NL	µg/kg	8.6 UJ	7.3 U	6 U	7.5 UJ	7.6 UJ
Phenanthrene	1170	µg/kg	33 J	8.3	33	5.1 J	9.9 J
Phenol	NL	µg/kg	220 UJ	190 U	150 U	190 UJ	190 UJ
Pyrene	1520	µg/kg	33 J	8.9	35	5.7 J	10 J
Total PAH 17	22800	µg/kg	236.2	72.8	338.6	46.15	77.6
TOC	NL	mg/kg	20,500	17,700	22,000	28,000	26,500

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Table B-1
Sediment Sample Analytical Results - SVOCs
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-66	LMR11-66	LMR11-66	LMR11-66	LMR11-66
		Field Sample ID	LMR11-66-048	LMR11-66-048FS	LMR11-66-072	LMR11-66-096	LMR11-66-117
		Sample Date	8/7/2011	8/7/2011	8/7/2011	8/7/2011	8/7/2011
		Depth Interval (in bss)	24- 48	24- 48	48- 72	72- 96	96- 117
Chemical Name	**PEC[1]**	**Unit**					
1,1'-Biphenyl	NL	µg/kg	180 UJ	160 UJ	170 UJ	190 UJ	160 UJ
1,2,4,5-Tetrachlorobenzene	NL	µg/kg	180 UJ	160 UJ	170 UJ	190 UJ	160 UJ
2,2'-Oxybis(1-chloropropane)	NL	µg/kg	180 UJ	160 UJ	170 UJ	190 UJ	160 UJ
2,3,4,6-Tetrachlorophenol	NL	µg/kg	180 UJ	160 UJ	170 UJ	190 UJ	160 UJ
2,4,5-Trichlorophenol	NL	µg/kg	180 UJ	160 UJ	170 UJ	190 UJ	160 UJ
2,4,6-Trichlorophenol	NL	µg/kg	180 UJ	160 UJ	170 UJ	190 UJ	160 UJ
2,4-Dichlorophenol	NL	µg/kg	180 UJ	160 UJ	170 UJ	190 UJ	160 UJ
2,4-Dimethylphenol	NL	µg/kg	180 UJ	160 UJ	170 UJ	190 UJ	160 UJ
2,4-Dinitrophenol	NL	µg/kg	350 UJ	320 UJ	330 UJ	360 UJ	320 UJ
2,4-Dinitrotoluene	NL	µg/kg	180 UJ	160 UJ	170 UJ	190 UJ	160 UJ
2,6-Dinitrotoluene	NL	µg/kg	180 UJ	160 UJ	170 UJ	190 UJ	160 UJ
2-Chloronaphthalene	NL	µg/kg	180 UJ	160 UJ	170 UJ	190 UJ	160 UJ
2-Chlorophenol	NL	µg/kg	180 UJ	160 UJ	170 UJ	190 UJ	160 UJ
2-Methylnaphthalene	NL	µg/kg	3.5 UJ	3.2 UJ	3.3 UJ	13 J	3.2 UJ
2-Methylphenol	NL	µg/kg	180 UJ	160 UJ	170 UJ	190 UJ	160 UJ
2-Nitroaniline	NL	µg/kg	350 UJ	320 UJ	330 UJ	360 UJ	320 UJ
2-Nitrophenol	NL	µg/kg	180 UJ	160 UJ	170 UJ	190 UJ	160 UJ
3,3'-Dichlorobenzidine	NL	µg/kg	180 UJ	160 UJ	170 UJ	190 UJ	160 UJ
3-Nitroaniline	NL	µg/kg	350 UJ	320 UJ	330 UJ	360 UJ	320 UJ
4,6-Dinitro-2-methylphenol	NL	µg/kg	350 UJ	320 UJ	330 UJ	360 UJ	320 UJ
4-Bromophenyl-phenylether	NL	µg/kg	180 UJ	160 UJ	170 UJ	190 UJ	160 UJ
4-Chloro-3-methylphenol	NL	µg/kg	180 UJ	160 UJ	170 UJ	190 UJ	160 UJ
4-Chloroaniline	NL	µg/kg	180 UJ	160 UJ	170 UJ	190 UJ	160 UJ
4-Chlorophenyl-phenylether	NL	µg/kg	180 UJ	160 UJ	170 UJ	190 UJ	160 UJ
4-Methylphenol	NL	µg/kg	180 UJ	160 UJ	170 UJ	61 J	160 UJ
4-Nitroaniline	NL	µg/kg	350 UJ	320 UJ	330 UJ	360 UJ	320 UJ
4-Nitrophenol	NL	µg/kg	350 UJ	320 UJ	330 UJ	360 UJ	320 UJ
Acenaphthene	NL	µg/kg	3.5 UJ	3.2 UJ	3.3 UJ	3.6 UJ	3.2 UJ
Acenaphthylene	NL	µg/kg	3.5 UJ	3.2 UJ	3.3 UJ	3.6 UJ	3.2 UJ
Acetophenone	NL	µg/kg	180 UJ	160 UJ	170 UJ	190 UJ	160 UJ
Anthracene	845	µg/kg	3.5 UJ	3.2 UJ	3.3 UJ	11 J	3.2 UJ
Atrazine	NL	µg/kg	180 UJ	160 UJ	170 UJ	190 UJ	160 UJ
Benzaldehyde	NL	µg/kg	180 UJ	160 UJ	170 UJ	190 UJ	160 UJ
Benzo(a)anthracene	1050	µg/kg	15 J	11 J	6.1 J	36 J	3.2 UJ
Benzo(a)pyrene	1450	µg/kg	18 J	10 J	6.8 J	36 J	3.2 UJ

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Table B-1
Sediment Sample Analytical Results - SVOCs
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-66	LMR11-66	LMR11-66	LMR11-66	LMR11-66
		Field Sample ID	LMR11-66-048	LMR11-66-048FS	LMR11-66-072	LMR11-66-096	LMR11-66-117
		Sample Date	8/7/2011	8/7/2011	8/7/2011	8/7/2011	8/7/2011
		Depth Interval (in bss)	24- 48	24- 48	48- 72	72- 96	96- 117
Chemical Name	**PEC[1]**	**Unit**					
Benzo(b)fluoranthene	NL	µg/kg	27 J	20 J	10 J	40 J	3.2 UJ
Benzo(g,h,i)perylene	NL	µg/kg	10 J	6.7 J	5.1 J	21 J	3.2 UJ
Benzo(k)fluoranthene	NL	µg/kg	10 J	6.1 J	4 J	27 J	3.2 UJ
Bis(2-chloroethoxy)methane	NL	µg/kg	180 UJ	160 UJ	170 UJ	190 UJ	160 UJ
Bis(2-chloroethyl)ether	NL	µg/kg	180 UJ	160 UJ	170 UJ	190 UJ	160 UJ
Bis(2-ethylhexyl)phthalate	NL	µg/kg	180 UJ	66 J	170 UJ	190 UJ	160 UJ
Butylbenzylphthalate	NL	µg/kg	180 UJ	160 UJ	170 UJ	190 UJ	160 UJ
Caprolactam	NL	µg/kg	180 UJ	160 UJ	170 UJ	190 UJ	160 UJ
Carbazole	NL	µg/kg	180 UJ	160 UJ	170 UJ	190 UJ	160 UJ
Chrysene	1290	µg/kg	17 J	22 J	8.8 J	41 J	3.2 UJ
Dibenzo(a,h)anthracene	NL	µg/kg	3.5 UJ	3.2 UJ	3.3 UJ	5 J	3.2 UJ
Dibenzofuran	NL	µg/kg	180 UJ	160 UJ	170 UJ	190 UJ	160 UJ
Diethylphthalate	NL	µg/kg	180 UJ	160 UJ	170 UJ	190 UJ	160 UJ
Dimethylphthalate	NL	µg/kg	180 UJ	160 UJ	170 UJ	190 UJ	160 UJ
Di-n-butylphthalate	NL	µg/kg	180 UJ	160 UJ	170 UJ	190 UJ	160 UJ
Di-n-octylphthalate	NL	µg/kg	180 UJ	160 UJ	170 UJ	190 UJ	160 UJ
Fluoranthene	2230	µg/kg	24 J	25 J	19 J	73 J	3.2 UJ
Fluorene	536	µg/kg	3.5 UJ	3.2 UJ	3.3 UJ	5.8 J	3.2 UJ
Hexachlorobenzene	NL	µg/kg	180 UJ	160 UJ	170 UJ	190 UJ	160 UJ
Hexachlorobutadiene	NL	µg/kg	180 UJ	160 UJ	170 UJ	190 UJ	160 UJ
Hexachlorocyclopentadiene	NL	µg/kg	180 UJ	160 UJ	170 UJ	190 UJ	160 UJ
Hexachloroethane	NL	µg/kg	180 UJ	160 UJ	170 UJ	190 UJ	160 UJ
Indeno(1,2,3-cd)pyrene	NL	µg/kg	10 J	6.4 J	4.7 J	20 J	3.2 UJ
Isophorone	NL	µg/kg	180 UJ	160 UJ	170 UJ	190 UJ	160 UJ
Naphthalene	561	µg/kg	3.5 UJ	3.2 UJ	4 J	12 J	3.2 UJ
Nitrobenzene	NL	µg/kg	180 UJ	160 UJ	170 UJ	190 UJ	160 UJ
N-Nitroso-di-n-propylamine	NL	µg/kg	180 UJ	160 UJ	170 UJ	190 UJ	160 UJ
N-Nitrosodiphenylamine	NL	µg/kg	180 UJ	160 UJ	170 UJ	190 UJ	160 UJ
Pentachlorophenol	NL	µg/kg	7.1 UJ	6.4 UJ	6.7 UJ	7.3 UJ	6.4 UJ
Phenanthrene	1170	µg/kg	13 J	12 J	13 J	43 J	3.2 UJ
Phenol	NL	µg/kg	180 UJ	160 UJ	170 UJ	190 UJ	160 UJ
Pyrene	1520	µg/kg	18 J	16 J	13 J	66 J	3.2 UJ
Total PAH 17	22800	µg/kg	174.25	146.4	104.4	453.4	27.2
TOC	NL	mg/kg	23,800 J	24,500	25,600	24,500	34,900

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Table B-1
Sediment Sample Analytical Results - SVOCs
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-67	LMR11-67	LMR11-67	LMR11-67	LMR11-68
		Field Sample ID	LMR11-67-006	LMR11-67-024	LMR11-67-048	LMR11-67-077	LMR11-68-006
		Sample Date	8/6/2011	8/6/2011	8/6/2011	8/6/2011	8/7/2011
		Depth Interval (in bss)	0- 6	6- 24	24- 48	48- 77	0- 6
Chemical Name	**PEC[1]**	**Unit**					
1,1'-Biphenyl	NL	µg/kg	180 U	180 U	160 U	150 U	180 UJ
1,2,4,5-Tetrachlorobenzene	NL	µg/kg	180 U	180 U	160 U	150 U	180 UJ
2,2'-Oxybis(1-chloropropane)	NL	µg/kg	180 U	180 U	160 U	150 U	180 UJ
2,3,4,6-Tetrachlorophenol	NL	µg/kg	180 U	180 U	160 U	150 U	180 UJ
2,4,5-Trichlorophenol	NL	µg/kg	180 U	180 U	160 U	150 U	180 UJ
2,4,6-Trichlorophenol	NL	µg/kg	180 U	180 U	160 U	150 U	180 UJ
2,4-Dichlorophenol	NL	µg/kg	180 U	180 U	160 U	150 U	180 UJ
2,4-Dimethylphenol	NL	µg/kg	180 U	180 U	160 U	150 U	180 UJ
2,4-Dinitrophenol	NL	µg/kg	350 U	350 U	310 U	290 U	350 UJ
2,4-Dinitrotoluene	NL	µg/kg	180 U	180 U	160 U	150 U	180 UJ
2,6-Dinitrotoluene	NL	µg/kg	180 U	180 U	160 U	150 U	180 UJ
2-Chloronaphthalene	NL	µg/kg	180 U	180 U	160 U	150 U	180 UJ
2-Chlorophenol	NL	µg/kg	180 U	180 U	160 U	150 U	180 UJ
2-Methylnaphthalene	NL	µg/kg	3.5 U	4.2	5.3	15	3.5 UJ
2-Methylphenol	NL	µg/kg	180 U	180 U	160 U	150 U	180 UJ
2-Nitroaniline	NL	µg/kg	350 U	350 U	310 U	290 U	350 UJ
2-Nitrophenol	NL	µg/kg	180 U	180 U	160 U	150 U	180 UJ
3,3'-Dichlorobenzidine	NL	µg/kg	180 U	180 U	160 U	150 U	180 UJ
3-Nitroaniline	NL	µg/kg	350 U	350 U	310 U	290 U	350 UJ
4,6-Dinitro-2-methylphenol	NL	µg/kg	350 U	350 U	310 U	290 U	350 UJ
4-Bromophenyl-phenylether	NL	µg/kg	180 U	180 U	160 U	150 U	180 UJ
4-Chloro-3-methylphenol	NL	µg/kg	180 U	180 U	160 U	150 U	180 UJ
4-Chloroaniline	NL	µg/kg	180 U	180 U	160 U	150 U	180 UJ
4-Chlorophenyl-phenylether	NL	µg/kg	180 U	180 U	160 U	150 U	180 UJ
4-Methylphenol	NL	µg/kg	56 J	91 J	86 J	39 J	180 UJ
4-Nitroaniline	NL	µg/kg	350 U	350 U	310 U	290 U	350 UJ
4-Nitrophenol	NL	µg/kg	350 U	350 U	310 U	290 U	350 UJ
Acenaphthene	NL	µg/kg	3.5 U	3.5 U	3.1 U	15	3.5 UJ
Acenaphthylene	NL	µg/kg	3.5 U	3.5 U	6.1	15	3.5 UJ
Acetophenone	NL	µg/kg	180 U	180 U	160 U	150 U	180 UJ
Anthracene	845	µg/kg	5.2	4.4	9.6	29	3.5 UJ
Atrazine	NL	µg/kg	180 U	180 U	160 U	150 U	180 UJ
Benzaldehyde	NL	µg/kg	180 U	180 U	160 U	150 U	180 UJ
Benzo(a)anthracene	1050	µg/kg	13	11	48	88	6.1 J
Benzo(a)pyrene	1450	µg/kg	18	14	48	87	6.8 J

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Table B-1
Sediment Sample Analytical Results - SVOCs
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-67	LMR11-67	LMR11-67	LMR11-67	LMR11-68
		Field Sample ID	LMR11-67-006	LMR11-67-024	LMR11-67-048	LMR11-67-077	LMR11-68-006
		Sample Date	8/6/2011	8/6/2011	8/6/2011	8/6/2011	8/7/2011
		Depth Interval (in bss)	0- 6	6- 24	24- 48	48- 77	0- 6
Chemical Name	**PEC[1]**	**Unit**					
Benzo(b)fluoranthene	NL	µg/kg	21	19	53	100	11 J
Benzo(g,h,i)perylene	NL	µg/kg	7.6	6.7	20	39	5.2 J
Benzo(k)fluoranthene	NL	µg/kg	8.8	7.7	20	43	4.2 J
Bis(2-chloroethoxy)methane	NL	µg/kg	180 U	180 U	160 U	150 U	180 UJ
Bis(2-chloroethyl)ether	NL	µg/kg	180 U	180 U	160 U	150 U	180 UJ
Bis(2-ethylhexyl)phthalate	NL	µg/kg	160 J	68 J	43 J	150 U	180 UJ
Butylbenzylphthalate	NL	µg/kg	180 U	180 U	160 U	150 U	180 UJ
Caprolactam	NL	µg/kg	180 U	180 U	160 U	150 U	180 UJ
Carbazole	NL	µg/kg	180 U	180 U	160 U	150 U	180 UJ
Chrysene	1290	µg/kg	14	13	45	86	7.2 J
Dibenzo(a,h)anthracene	NL	µg/kg	3.5 U	3.5 U	8.1	19	3.5 UJ
Dibenzofuran	NL	µg/kg	180 U	180 U	160 U	150 U	180 UJ
Diethylphthalate	NL	µg/kg	180 U	180 U	160 U	150 U	180 UJ
Dimethylphthalate	NL	µg/kg	180 U	180 U	160 U	150 U	180 UJ
Di-n-butylphthalate	NL	µg/kg	180 U	180 U	160 U	150 U	180 UJ
Di-n-octylphthalate	NL	µg/kg	180 U	180 U	160 U	150 U	180 UJ
Fluoranthene	2230	µg/kg	25	22	75	140	17 J
Fluorene	536	µg/kg	3.5 U	3.5 U	4.2	15	3.5 UJ
Hexachlorobenzene	NL	µg/kg	180 U	180 U	160 U	150 U	180 UJ
Hexachlorobutadiene	NL	µg/kg	180 U	180 U	160 U	150 U	180 UJ
Hexachlorocyclopentadiene	NL	µg/kg	180 UJ	180 UJ	160 UJ	150 UJ	180 UJ
Hexachloroethane	NL	µg/kg	180 U	180 U	160 U	150 U	180 UJ
Indeno(1,2,3-cd)pyrene	NL	µg/kg	9.4	8.8	25	52	4.5 J
Isophorone	NL	µg/kg	180 U	180 U	160 U	150 U	180 UJ
Naphthalene	561	µg/kg	6.6	11	9.2	29	3.5 UJ
Nitrobenzene	NL	µg/kg	180 U	180 U	160 U	150 U	180 UJ
N-Nitroso-di-n-propylamine	NL	µg/kg	180 U	180 U	160 U	150 U	180 UJ
N-Nitrosodiphenylamine	NL	µg/kg	180 U	180 U	160 U	150 U	180 UJ
Pentachlorophenol	NL	µg/kg	7 U	7.1 U	6.4 U	5.9 U	7.2 UJ
Phenanthrene	1170	µg/kg	20	17	35	110	12 J
Phenol	NL	µg/kg	180 U	180 U	160 U	150 U	180 UJ
Pyrene	1520	µg/kg	22	19	77	120	14 J
Total PAH 17	22800	µg/kg	179.35	164.8	490.05	1,002	100.25
TOC	NL	mg/kg	24,400	27,300	29,400	32,800	27,000

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Table B-1
Sediment Sample Analytical Results - SVOCs
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-68	LMR11-68	LMR11-68	LMR11-68	LMR11-69
		Field Sample ID	LMR11-68-024	LMR11-68-048	LMR11-68-072	LMR11-68-096	LMR11-69-006
		Sample Date	8/7/2011	8/7/2011	8/7/2011	8/7/2011	8/6/2011
		Depth Interval (in bss)	6- 24	24- 48	48- 72	72- 96	0- 6
Chemical Name	**PEC[1]**	**Unit**					
1,1'-Biphenyl	NL	µg/kg	190 UJ	190 UJ	180 UJ	180 UJ	390 J
1,2,4,5-Tetrachlorobenzene	NL	µg/kg	190 UJ	190 UJ	180 UJ	180 UJ	120 UJ
2,2'-Oxybis(1-chloropropane)	NL	µg/kg	190 UJ	190 UJ	180 UJ	180 UJ	120 UJ
2,3,4,6-Tetrachlorophenol	NL	µg/kg	190 UJ	190 UJ	180 UJ	180 UJ	120 UJ
2,4,5-Trichlorophenol	NL	µg/kg	190 UJ	190 UJ	180 UJ	180 UJ	120 UJ
2,4,6-Trichlorophenol	NL	µg/kg	190 UJ	190 UJ	180 UJ	180 UJ	120 UJ
2,4-Dichlorophenol	NL	µg/kg	190 UJ	190 UJ	180 UJ	180 UJ	120 UJ
2,4-Dimethylphenol	NL	µg/kg	190 UJ	190 UJ	180 UJ	180 UJ	120 UJ
2,4-Dinitrophenol	NL	µg/kg	370 UJ	370 UJ	350 UJ	340 UJ	230 UJ
2,4-Dinitrotoluene	NL	µg/kg	190 UJ	190 UJ	180 UJ	180 UJ	120 UJ
2,6-Dinitrotoluene	NL	µg/kg	190 UJ	190 UJ	180 UJ	180 UJ	120 UJ
2-Chloronaphthalene	NL	µg/kg	190 UJ	190 UJ	180 UJ	180 UJ	120 UJ
2-Chlorophenol	NL	µg/kg	190 UJ	190 UJ	180 UJ	180 UJ	120 UJ
2-Methylnaphthalene	NL	µg/kg	3.7 UJ	3.7 UJ	3.5 UJ	3.4 UJ	1,400 J
2-Methylphenol	NL	µg/kg	190 UJ	190 UJ	180 UJ	180 UJ	120 UJ
2-Nitroaniline	NL	µg/kg	370 UJ	370 UJ	350 UJ	340 UJ	230 UJ
2-Nitrophenol	NL	µg/kg	190 UJ	190 UJ	180 UJ	180 UJ	120 UJ
3,3'-Dichlorobenzidine	NL	µg/kg	190 UJ	190 UJ	180 UJ	180 UJ	120 UJ
3-Nitroaniline	NL	µg/kg	370 UJ	370 UJ	350 UJ	340 UJ	230 UJ
4,6-Dinitro-2-methylphenol	NL	µg/kg	370 UJ	370 UJ	350 UJ	340 UJ	230 UJ
4-Bromophenyl-phenylether	NL	µg/kg	190 UJ	190 UJ	180 UJ	180 UJ	120 UJ
4-Chloro-3-methylphenol	NL	µg/kg	190 UJ	190 UJ	180 UJ	180 UJ	120 UJ
4-Chloroaniline	NL	µg/kg	190 UJ	190 UJ	180 UJ	180 UJ	44 J
4-Chlorophenyl-phenylether	NL	µg/kg	190 UJ	190 UJ	180 UJ	180 UJ	120 UJ
4-Methylphenol	NL	µg/kg	190 UJ	190 UJ	180 UJ	180 UJ	110 J
4-Nitroaniline	NL	µg/kg	370 UJ	370 UJ	350 UJ	340 UJ	230 UJ
4-Nitrophenol	NL	µg/kg	370 UJ	370 UJ	350 UJ	340 UJ	230 UJ
Acenaphthene	NL	µg/kg	3.7 UJ	3.7 UJ	3.5 UJ	3.4 UJ	13,000 J
Acenaphthylene	NL	µg/kg	3.7 UJ	3.7 UJ	3.5 UJ	3.4 UJ	2,700 J
Acetophenone	NL	µg/kg	190 UJ	190 UJ	180 UJ	180 UJ	120 UJ
Anthracene	845	µg/kg	3.7 UJ	3.7 UJ	3.5 UJ	3.7 J	21,000 J
Atrazine	NL	µg/kg	190 UJ	190 UJ	180 UJ	180 UJ	120 UJ
Benzaldehyde	NL	µg/kg	190 UJ	190 UJ	180 UJ	180 UJ	120 UJ
Benzo(a)anthracene	1050	µg/kg	3.7 UJ	3.7 UJ	3.5 UJ	8.4 J	22,000 J
Benzo(a)pyrene	1450	µg/kg	3.7 UJ	3.7 UJ	3.5 UJ	9.5 J	14,000 J

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Table B-1
Sediment Sample Analytical Results - SVOCs
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-68	LMR11-68	LMR11-68	LMR11-68	LMR11-69
		Field Sample ID	LMR11-68-024	LMR11-68-048	LMR11-68-072	LMR11-68-096	LMR11-69-006
		Sample Date	8/7/2011	8/7/2011	8/7/2011	8/7/2011	8/6/2011
		Depth Interval (in bss)	6- 24	24- 48	48- 72	72- 96	0- 6
Chemical Name	**PEC[1]**	**Unit**					
Benzo(b)fluoranthene	NL	µg/kg	5 J	3.7 UJ	3.5 UJ	15 J	17,000 J
Benzo(g,h,i)perylene	NL	µg/kg	3.7 UJ	3.7 UJ	3.5 UJ	6.6 J	4700 J
Benzo(k)fluoranthene	NL	µg/kg	3.7 UJ	3.7 UJ	3.5 UJ	5.9 J	11,000 J
Bis(2-chloroethoxy)methane	NL	µg/kg	190 UJ	190 UJ	180 UJ	180 UJ	120 UJ
Bis(2-chloroethyl)ether	NL	µg/kg	190 UJ	190 UJ	180 UJ	180 UJ	120 UJ
Bis(2-ethylhexyl)phthalate	NL	µg/kg	190 UJ	190 UJ	180 UJ	180 UJ	1,500 J
Butylbenzylphthalate	NL	µg/kg	190 UJ	190 UJ	180 UJ	180 UJ	120 UJ
Caprolactam	NL	µg/kg	190 UJ	190 UJ	180 UJ	180 UJ	120 UJ
Carbazole	NL	µg/kg	190 UJ	190 UJ	180 UJ	180 UJ	2,000 J
Chrysene	1290	µg/kg	3.7 UJ	3.7 UJ	3.5 UJ	11 J	23,000 J
Dibenzo(a,h)anthracene	NL	µg/kg	3.7 UJ	3.7 UJ	3.5 UJ	3.4 UJ	1,900 J
Dibenzofuran	NL	µg/kg	190 UJ	190 UJ	180 UJ	180 UJ	3,200 J
Diethylphthalate	NL	µg/kg	190 UJ	190 UJ	180 UJ	180 UJ	120 UJ
Dimethylphthalate	NL	µg/kg	190 UJ	190 UJ	180 UJ	180 UJ	120 UJ
Di-n-butylphthalate	NL	µg/kg	190 UJ	190 UJ	180 UJ	180 UJ	410 J
Di-n-octylphthalate	NL	µg/kg	190 UJ	190 UJ	180 UJ	180 UJ	470 J
Fluoranthene	2230	µg/kg	8.9 J	3.7 UJ	3.5 UJ	22 J	59,000 J
Fluorene	536	µg/kg	3.7 UJ	3.7 UJ	3.5 UJ	3.4 UJ	14,000 J
Hexachlorobenzene	NL	µg/kg	190 UJ	190 UJ	180 UJ	180 UJ	120 UJ
Hexachlorobutadiene	NL	µg/kg	190 UJ	190 UJ	180 UJ	180 UJ	120 UJ
Hexachlorocyclopentadiene	NL	µg/kg	190 UJ	190 UJ	180 UJ	180 UJ	120 UJ
Hexachloroethane	NL	µg/kg	190 UJ	190 UJ	180 UJ	180 UJ	120 UJ
Indeno(1,2,3-cd)pyrene	NL	µg/kg	3.7 UJ	3.7 UJ	3.5 UJ	6 J	6200 J
Isophorone	NL	µg/kg	190 UJ	190 UJ	180 UJ	180 UJ	120 UJ
Naphthalene	561	µg/kg	3.7 UJ	3.7 UJ	3.5 UJ	3.7 J	3,700 J
Nitrobenzene	NL	µg/kg	190 UJ	190 UJ	180 UJ	180 UJ	120 UJ
N-Nitroso-di-n-propylamine	NL	µg/kg	190 UJ	190 UJ	180 UJ	180 UJ	120 UJ
N-Nitrosodiphenylamine	NL	µg/kg	190 UJ	190 UJ	180 UJ	180 UJ	120 UJ
Pentachlorophenol	NL	µg/kg	7.6 UJ	7.4 UJ	7.1 UJ	6.9 UJ	46 UJ
Phenanthrene	1170	µg/kg	7 J	3.7 UJ	3.5 UJ	15 J	38,000 J
Phenol	NL	µg/kg	190 UJ	190 UJ	180 UJ	180 UJ	51 J
Pyrene	1520	µg/kg	7.1 J	3.7 UJ	3.5 UJ	18 J	45,000 J
Total PAH 17	22800	µg/kg	52.05	31.45	29.75	133.3	297,600
TOC	NL	mg/kg	23,600	23,800	22,400	23,000	45,400

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Table B-1
Sediment Sample Analytical Results - SVOCs
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-70	LMR11-70	LMR11-70	LMR11-70	LMR11-70
		Field Sample ID	LMR11-70-006	LMR11-70-024	LMR11-70-048	LMR11-70-072	LMR11-70-072FS
		Sample Date	8/7/2011	8/7/2011	8/7/2011	8/7/2011	8/7/2011
		Depth Interval (in bss)	0- 6	6- 24	24- 48	48- 72	48- 72
Chemical Name	**PEC[1]**	**Unit**					
1,1'-Biphenyl	NL	µg/kg	400 UJ	370 UJ	320 UJ	180 UJ	320 UJ
1,2,4,5-Tetrachlorobenzene	NL	µg/kg	400 UJ	370 UJ	320 UJ	180 UJ	320 UJ
2,2'-Oxybis(1-chloropropane)	NL	µg/kg	400 UJ	370 UJ	320 UJ	180 UJ	320 UJ
2,3,4,6-Tetrachlorophenol	NL	µg/kg	400 UJ	370 UJ	320 UJ	180 UJ	320 UJ
2,4,5-Trichlorophenol	NL	µg/kg	400 UJ	370 UJ	320 UJ	180 UJ	320 UJ
2,4,6-Trichlorophenol	NL	µg/kg	400 UJ	370 UJ	320 UJ	180 UJ	320 UJ
2,4-Dichlorophenol	NL	µg/kg	400 UJ	370 UJ	320 UJ	180 UJ	320 UJ
2,4-Dimethylphenol	NL	µg/kg	400 UJ	370 UJ	320 UJ	180 UJ	320 UJ
2,4-Dinitrophenol	NL	µg/kg	770 UJ	710 UJ	620 UJ	350 UJ	620 UJ
2,4-Dinitrotoluene	NL	µg/kg	400 UJ	370 UJ	320 UJ	180 UJ	320 UJ
2,6-Dinitrotoluene	NL	µg/kg	400 UJ	370 UJ	320 UJ	180 UJ	320 UJ
2-Chloronaphthalene	NL	µg/kg	400 UJ	370 UJ	320 UJ	180 UJ	320 UJ
2-Chlorophenol	NL	µg/kg	400 UJ	370 UJ	320 UJ	180 UJ	320 UJ
2-Methylnaphthalene	NL	µg/kg	7.7 UJ	7.1 UJ	6.2 UJ	3.5 UJ	6.7 J
2-Methylphenol	NL	µg/kg	400 UJ	370 UJ	320 UJ	180 UJ	320 UJ
2-Nitroaniline	NL	µg/kg	770 UJ	710 UJ	620 UJ	350 UJ	620 UJ
2-Nitrophenol	NL	µg/kg	400 UJ	370 UJ	320 UJ	180 UJ	320 UJ
3,3'-Dichlorobenzidine	NL	µg/kg	400 UJ	370 UJ	320 UJ	180 UJ	320 UJ
3-Nitroaniline	NL	µg/kg	770 UJ	710 UJ	620 UJ	350 UJ	620 UJ
4,6-Dinitro-2-methylphenol	NL	µg/kg	770 UJ	710 UJ	620 UJ	350 UJ	620 UJ
4-Bromophenyl-phenylether	NL	µg/kg	400 UJ	370 UJ	320 UJ	180 UJ	320 UJ
4-Chloro-3-methylphenol	NL	µg/kg	400 UJ	370 UJ	320 UJ	180 UJ	320 UJ
4-Chloroaniline	NL	µg/kg	400 UJ	370 UJ	320 UJ	180 UJ	320 UJ
4-Chlorophenyl-phenylether	NL	µg/kg	400 UJ	370 UJ	320 UJ	180 UJ	320 UJ
4-Methylphenol	NL	µg/kg	400 UJ	370 UJ	320 UJ	180 UJ	320 UJ
4-Nitroaniline	NL	µg/kg	770 UJ	710 UJ	620 UJ	350 UJ	620 UJ
4-Nitrophenol	NL	µg/kg	770 UJ	710 UJ	620 UJ	350 UJ	620 UJ
Acenaphthene	NL	µg/kg	7.7 UJ	7.1 UJ	6.2 UJ	3.5 UJ	6.2 UJ
Acenaphthylene	NL	µg/kg	7.7 UJ	7.1 UJ	6.2 UJ	3.5 UJ	6.2 UJ
Acetophenone	NL	µg/kg	400 UJ	370 UJ	320 UJ	180 UJ	320 UJ
Anthracene	845	µg/kg	7.7 UJ	7.1 UJ	6.2 UJ	3.5 UJ	6.2 UJ
Atrazine	NL	µg/kg	400 UJ	370 UJ	320 UJ	180 UJ	320 UJ
Benzaldehyde	NL	µg/kg	400 UJ	370 UJ	320 UJ	180 UJ	320 UJ
Benzo(a)anthracene	1050	µg/kg	7.7 UJ	7.1 UJ	6.2 UJ	4.1 J	13 J
Benzo(a)pyrene	1450	µg/kg	7.7 UJ	7.1 UJ	6.2 UJ	4.3 J	20 J

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Table B-1
Sediment Sample Analytical Results - SVOCs
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-70	LMR11-70	LMR11-70	LMR11-70	LMR11-70
		Field Sample ID	LMR11-70-006	LMR11-70-024	LMR11-70-048	LMR11-70-072	LMR11-70-072FS
		Sample Date	8/7/2011	8/7/2011	8/7/2011	8/7/2011	8/7/2011
		Depth Interval (in bss)	0- 6	6- 24	24- 48	48- 72	48- 72
Chemical Name	**PEC[1]**	**Unit**					
Benzo(b)fluoranthene	NL	µg/kg	7.7 UJ	7.1 UJ	6.2 UJ	7.2 J	25 J
Benzo(g,h,i)perylene	NL	µg/kg	7.7 UJ	7.1 UJ	6.2 UJ	3.5 UJ	11 J
Benzo(k)fluoranthene	NL	µg/kg	7.7 UJ	7.1 UJ	6.2 UJ	3.5 UJ	11 J
Bis(2-chloroethoxy)methane	NL	µg/kg	400 UJ	370 UJ	320 UJ	180 UJ	320 UJ
Bis(2-chloroethyl)ether	NL	µg/kg	400 UJ	370 UJ	320 UJ	180 UJ	320 UJ
Bis(2-ethylhexyl)phthalate	NL	µg/kg	400 UJ	370 UJ	320 UJ	180 UJ	320 UJ
Butylbenzylphthalate	NL	µg/kg	400 UJ	370 UJ	320 UJ	180 UJ	320 UJ
Caprolactam	NL	µg/kg	400 UJ	370 UJ	320 UJ	180 UJ	320 UJ
Carbazole	NL	µg/kg	400 UJ	370 UJ	320 UJ	180 UJ	320 UJ
Chrysene	1290	µg/kg	7.7 UJ	7.1 UJ	6.2 UJ	4.4 J	15 J
Dibenzo(a,h)anthracene	NL	µg/kg	7.7 UJ	7.1 UJ	6.2 UJ	3.5 UJ	6.2 UJ
Dibenzofuran	NL	µg/kg	400 UJ	370 UJ	320 UJ	180 UJ	320 UJ
Diethylphthalate	NL	µg/kg	400 UJ	370 UJ	320 UJ	180 UJ	320 UJ
Dimethylphthalate	NL	µg/kg	400 UJ	370 UJ	320 UJ	180 UJ	320 UJ
Di-n-butylphthalate	NL	µg/kg	400 UJ	370 UJ	320 UJ	180 UJ	320 UJ
Di-n-octylphthalate	NL	µg/kg	400 UJ	370 UJ	320 UJ	180 UJ	320 UJ
Fluoranthene	2230	µg/kg	13 J	13 J	11 J	8.4 J	32 J
Fluorene	536	µg/kg	7.7 UJ	7.1 UJ	6.2 UJ	3.5 UJ	6.2 UJ
Hexachlorobenzene	NL	µg/kg	400 UJ	370 UJ	320 UJ	180 UJ	320 UJ
Hexachlorobutadiene	NL	µg/kg	400 UJ	370 UJ	320 UJ	180 UJ	320 UJ
Hexachlorocyclopentadiene	NL	µg/kg	400 UJ	370 UJ	320 UJ	180 UJ	320 UJ
Hexachloroethane	NL	µg/kg	400 UJ	370 UJ	320 UJ	180 UJ	320 UJ
Indeno(1,2,3-cd)pyrene	NL	µg/kg	7.7 UJ	7.1 UJ	6.2 UJ	3.5 UJ	9.8 J
Isophorone	NL	µg/kg	400 UJ	370 UJ	320 UJ	180 UJ	320 UJ
Naphthalene	561	µg/kg	7.7 UJ	7.1 UJ	6.2 UJ	3.5 UJ	6.3 J
Nitrobenzene	NL	µg/kg	400 UJ	370 UJ	320 UJ	180 UJ	320 UJ
N-Nitroso-di-n-propylamine	NL	µg/kg	400 UJ	370 UJ	320 UJ	180 UJ	320 UJ
N-Nitrosodiphenylamine	NL	µg/kg	400 UJ	370 UJ	320 UJ	180 UJ	320 UJ
Pentachlorophenol	NL	µg/kg	16 UJ	14 UJ	12 UJ	7.2 UJ	13 UJ
Phenanthrene	1170	µg/kg	9 J	10 J	7.7 J	5 J	19 J
Phenol	NL	µg/kg	400 UJ	370 UJ	320 UJ	180 UJ	320 UJ
Pyrene	1520	µg/kg	13 J	13 J	11 J	7.5 J	28 J
Total PAH 17	22800	µg/kg	88.9	85.7	73.1	58.4	212.3
TOC	NL	mg/kg	23,600	25,500	29,000	37,000	35,800

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Table B-1
Sediment Sample Analytical Results - SVOCs
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-70	LMR11-71	LMR11-71	LMR11-71	LMR11-71
		Field Sample ID	LMR11-70-085	LMR11-71-006	LMR11-71-024	LMR11-71-024FS	LMR11-71-048
		Sample Date	8/7/2011	8/6/2011	8/6/2011	8/6/2011	8/6/2011
		Depth Interval (in bss)	72- 85	0- 6	6- 24	6- 24	24- 48
Chemical Name	**PEC[1]**	**Unit**					
1,1'-Biphenyl	NL	µg/kg	290 UJ	210 UJ	200 UJ	200 UJ	180 UJ
1,2,4,5-Tetrachlorobenzene	NL	µg/kg	290 UJ	210 UJ	200 UJ	200 UJ	180 UJ
2,2'-Oxybis(1-chloropropane)	NL	µg/kg	290 UJ	210 UJ	200 UJ	200 UJ	180 UJ
2,3,4,6-Tetrachlorophenol	NL	µg/kg	290 UJ	210 UJ	200 UJ	200 UJ	180 UJ
2,4,5-Trichlorophenol	NL	µg/kg	290 UJ	210 UJ	200 UJ	200 UJ	180 UJ
2,4,6-Trichlorophenol	NL	µg/kg	290 UJ	210 UJ	200 UJ	200 UJ	180 UJ
2,4-Dichlorophenol	NL	µg/kg	290 UJ	210 UJ	200 UJ	200 UJ	180 UJ
2,4-Dimethylphenol	NL	µg/kg	290 UJ	210 UJ	200 UJ	200 UJ	180 UJ
2,4-Dinitrophenol	NL	µg/kg	570 UJ	420 UJ	390 UJ	390 UJ	350 UJ
2,4-Dinitrotoluene	NL	µg/kg	290 UJ	210 UJ	200 UJ	200 UJ	180 UJ
2,6-Dinitrotoluene	NL	µg/kg	290 UJ	210 UJ	200 UJ	200 UJ	180 UJ
2-Chloronaphthalene	NL	µg/kg	290 UJ	210 UJ	200 UJ	200 UJ	180 UJ
2-Chlorophenol	NL	µg/kg	290 UJ	210 UJ	200 UJ	200 UJ	180 UJ
2-Methylnaphthalene	NL	µg/kg	5.7 UJ	4.2 UJ	3.9 UJ	3.9 UJ	3.5 UJ
2-Methylphenol	NL	µg/kg	290 UJ	210 UJ	200 UJ	200 UJ	180 UJ
2-Nitroaniline	NL	µg/kg	570 UJ	420 UJ	390 UJ	390 UJ	350 UJ
2-Nitrophenol	NL	µg/kg	290 UJ	210 UJ	200 UJ	200 UJ	180 UJ
3,3'-Dichlorobenzidine	NL	µg/kg	290 UJ	210 UJ	200 UJ	200 UJ	180 UJ
3-Nitroaniline	NL	µg/kg	570 UJ	420 UJ	390 UJ	390 UJ	350 UJ
4,6-Dinitro-2-methylphenol	NL	µg/kg	570 UJ	420 UJ	390 UJ	390 UJ	350 UJ
4-Bromophenyl-phenylether	NL	µg/kg	290 UJ	210 UJ	200 UJ	200 UJ	180 UJ
4-Chloro-3-methylphenol	NL	µg/kg	290 UJ	210 UJ	200 UJ	200 UJ	180 UJ
4-Chloroaniline	NL	µg/kg	290 UJ	210 UJ	200 UJ	200 UJ	180 UJ
4-Chlorophenyl-phenylether	NL	µg/kg	290 UJ	210 UJ	200 UJ	200 UJ	180 UJ
4-Methylphenol	NL	µg/kg	290 UJ	210 UJ	200 UJ	200 UJ	180 UJ
4-Nitroaniline	NL	µg/kg	570 UJ	420 UJ	390 UJ	390 UJ	350 UJ
4-Nitrophenol	NL	µg/kg	570 UJ	420 UJ	390 UJ	390 UJ	350 UJ
Acenaphthene	NL	µg/kg	5.7 UJ	4.2 UJ	3.9 UJ	3.9 UJ	3.5 UJ
Acenaphthylene	NL	µg/kg	5.7 UJ	4.2 UJ	3.9 UJ	3.9 UJ	3.5 UJ
Acetophenone	NL	µg/kg	290 UJ	210 UJ	200 UJ	200 UJ	180 UJ
Anthracene	845	µg/kg	5.7 UJ	4.2 UJ	3.9 UJ	3.9 UJ	3.5 UJ
Atrazine	NL	µg/kg	290 UJ	210 UJ	200 UJ	200 UJ	180 UJ
Benzaldehyde	NL	µg/kg	290 UJ	210 UJ	200 UJ	200 UJ	180 UJ
Benzo(a)anthracene	1050	µg/kg	5.7 UJ	4.2 UJ	3.9 UJ	3.9 UJ	3.3 J
Benzo(a)pyrene	1450	µg/kg	5.7 UJ	4.2 UJ	3.9 UJ	3.9 UJ	3.8 J

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Table B-1
Sediment Sample Analytical Results - SVOCs
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-70	LMR11-71	LMR11-71	LMR11-71	LMR11-71
		Field Sample ID	LMR11-70-085	LMR11-71-006	LMR11-71-024	LMR11-71-024FS	LMR11-71-048
		Sample Date	8/7/2011	8/6/2011	8/6/2011	8/6/2011	8/6/2011
		Depth Interval (in bss)	72- 85	0- 6	6- 24	6- 24	24- 48
Chemical Name	**PEC[1]**	**Unit**					
Benzo(b)fluoranthene	NL	µg/kg	7.4 J	4.2 J	4 J	3.9 UJ	6.2 J
Benzo(g,h,i)perylene	NL	µg/kg	5.7 UJ	4.2 UJ	3.9 UJ	3.9 UJ	3.5 UJ
Benzo(k)fluoranthene	NL	µg/kg	5.7 UJ	4.2 UJ	3.9 UJ	3.9 UJ	3.5 UJ
Bis(2-chloroethoxy)methane	NL	µg/kg	290 UJ	210 UJ	200 UJ	200 UJ	180 UJ
Bis(2-chloroethyl)ether	NL	µg/kg	290 UJ	210 UJ	200 UJ	200 UJ	180 UJ
Bis(2-ethylhexyl)phthalate	NL	µg/kg	290 UJ	210 UJ	200 UJ	200 UJ	180 UJ
Butylbenzylphthalate	NL	µg/kg	290 UJ	210 UJ	200 UJ	200 UJ	180 UJ
Caprolactam	NL	µg/kg	290 UJ	210 UJ	200 UJ	200 UJ	180 UJ
Carbazole	NL	µg/kg	290 UJ	210 UJ	200 UJ	200 UJ	180 UJ
Chrysene	1290	µg/kg	6.5 J	4.2 UJ	3.9 UJ	3.9 UJ	3.8 J
Dibenzo(a,h)anthracene	NL	µg/kg	5.7 UJ	210 UJ	200 UJ	200 UJ	180 UJ
Dibenzofuran	NL	µg/kg	290 UJ	4.2 UJ	3.9 UJ	3.9 UJ	3.5 UJ
Diethylphthalate	NL	µg/kg	290 UJ	210 UJ	200 UJ	200 UJ	180 UJ
Dimethylphthalate	NL	µg/kg	290 UJ	210 UJ	200 UJ	200 UJ	180 UJ
Di-n-butylphthalate	NL	µg/kg	290 UJ	210 UJ	200 UJ	200 UJ	180 UJ
Di-n-octylphthalate	NL	µg/kg	290 UJ	210 UJ	200 UJ	200 UJ	180 UJ
Fluoranthene	2230	µg/kg	14 J	6 J	6.3 J	5.2 J	8.6 J
Fluorene	536	µg/kg	5.7 UJ	4.2 UJ	3.9 UJ	3.9 UJ	3.5 UJ
Hexachlorobenzene	NL	µg/kg	290 UJ	210 UJ	200 UJ	200 UJ	180 UJ
Hexachlorobutadiene	NL	µg/kg	290 UJ	210 UJ	200 UJ	200 UJ	180 UJ
Hexachlorocyclopentadiene	NL	µg/kg	290 UJ	210 UJ	200 UJ	200 UJ	180 UJ
Hexachloroethane	NL	µg/kg	290 UJ	210 UJ	200 UJ	200 UJ	180 UJ
Indeno(1,2,3-cd)pyrene	NL	µg/kg	5.7 UJ	4.2 UJ	3.9 UJ	3.9 UJ	3.5 UJ
Isophorone	NL	µg/kg	290 UJ	210 UJ	200 UJ	200 UJ	180 UJ
Naphthalene	561	µg/kg	5.7 UJ	4.2 UJ	3.9 UJ	3.9 UJ	3.5 UJ
Nitrobenzene	NL	µg/kg	290 UJ	210 UJ	200 UJ	200 UJ	180 UJ
N-Nitroso-di-n-propylamine	NL	µg/kg	290 UJ	210 UJ	200 UJ	200 UJ	180 UJ
N-Nitrosodiphenylamine	NL	µg/kg	290 UJ	210 UJ	200 UJ	200 UJ	180 UJ
Pentachlorophenol	NL	µg/kg	11 UJ	8.5 UJ	8 UJ	7.8 UJ	7 UJ
Phenanthrene	1170	µg/kg	11 J	4.2 UJ	4.1 J	3.9 UJ	6.7 J
Phenol	NL	µg/kg	290 UJ	210 UJ	200 UJ	200 UJ	180 UJ
Pyrene	1520	µg/kg	15 J	5.1 J	5.4 J	4.5 J	7.5 J
Total PAH 17	22800	µg/kg	88.1	44.7	45.15	38.95	57.4
TOC	NL	mg/kg	29,000	27,700	21,600	19,800	20,200

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Table B-1
Sediment Sample Analytical Results - SVOCs
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-71	LMR11-71	LMR11-71	LMR11-71	LMR11-71
		Field Sample ID	LMR11-71-072	LMR11-71-096	LMR11-71-120	LMR11-71-144	LMR11-71-161
		Sample Date	8/6/2011	8/6/2011	8/6/2011	8/6/2011	8/6/2011
		Depth Interval (in bss)	48- 72	72- 96	96- 120	120- 144	144- 161
Chemical Name	**PEC[1]**	**Unit**					
1,1'-Biphenyl	NL	µg/kg	170 UJ	170 UJ	160 UJ	160 UJ	150 UJ
1,2,4,5-Tetrachlorobenzene	NL	µg/kg	170 UJ	170 UJ	160 UJ	160 UJ	150 UJ
2,2'-Oxybis(1-chloropropane)	NL	µg/kg	170 UJ	170 UJ	160 UJ	160 UJ	150 UJ
2,3,4,6-Tetrachlorophenol	NL	µg/kg	170 UJ	170 UJ	160 UJ	160 UJ	150 UJ
2,4,5-Trichlorophenol	NL	µg/kg	170 UJ	170 UJ	160 UJ	160 UJ	150 UJ
2,4,6-Trichlorophenol	NL	µg/kg	170 UJ	170 UJ	160 UJ	160 UJ	150 UJ
2,4-Dichlorophenol	NL	µg/kg	170 UJ	170 UJ	160 UJ	160 UJ	150 UJ
2,4-Dimethylphenol	NL	µg/kg	170 UJ	170 UJ	160 UJ	160 UJ	150 UJ
2,4-Dinitrophenol	NL	µg/kg	330 UJ	320 UJ	310 UJ	300 UJ	300 UJ
2,4-Dinitrotoluene	NL	µg/kg	170 UJ	170 UJ	160 UJ	160 UJ	150 UJ
2,6-Dinitrotoluene	NL	µg/kg	170 UJ	170 UJ	160 UJ	160 UJ	150 UJ
2-Chloronaphthalene	NL	µg/kg	170 UJ	170 UJ	160 UJ	160 UJ	150 UJ
2-Chlorophenol	NL	µg/kg	170 UJ	170 UJ	160 UJ	160 UJ	150 UJ
2-Methylnaphthalene	NL	µg/kg	4.7 J	8.6 J	3.1 UJ	9.8 J	12 J
2-Methylphenol	NL	µg/kg	170 UJ	170 UJ	160 UJ	160 UJ	150 UJ
2-Nitroaniline	NL	µg/kg	330 UJ	320 UJ	310 UJ	300 UJ	300 UJ
2-Nitrophenol	NL	µg/kg	170 UJ	170 UJ	160 UJ	160 UJ	150 UJ
3,3'-Dichlorobenzidine	NL	µg/kg	170 UJ	170 UJ	160 UJ	160 UJ	150 UJ
3-Nitroaniline	NL	µg/kg	330 UJ	320 UJ	310 UJ	300 UJ	300 UJ
4,6-Dinitro-2-methylphenol	NL	µg/kg	330 UJ	320 UJ	310 UJ	300 UJ	300 UJ
4-Bromophenyl-phenylether	NL	µg/kg	170 UJ	170 UJ	160 UJ	160 UJ	150 UJ
4-Chloro-3-methylphenol	NL	µg/kg	170 UJ	170 UJ	160 UJ	160 UJ	150 UJ
4-Chloroaniline	NL	µg/kg	170 UJ	170 UJ	160 UJ	160 UJ	150 UJ
4-Chlorophenyl-phenylether	NL	µg/kg	170 UJ	170 UJ	160 UJ	160 UJ	150 UJ
4-Methylphenol	NL	µg/kg	54 J	82 J	64 J	51 J	51 J
4-Nitroaniline	NL	µg/kg	330 UJ	320 UJ	310 UJ	300 UJ	300 UJ
4-Nitrophenol	NL	µg/kg	330 UJ	320 UJ	310 UJ	300 UJ	300 UJ
Acenaphthene	NL	µg/kg	6.7 J	5.3 J	3.1 UJ	3.7 J	3.1 J
Acenaphthylene	NL	µg/kg	4 J	5.3 J	5.8 J	3 UJ	3 UJ
Acetophenone	NL	µg/kg	170 UJ	170 UJ	160 UJ	160 UJ	150 UJ
Anthracene	845	µg/kg	8 J	10 J	3.7 J	5.7 J	5.1 J
Atrazine	NL	µg/kg	170 UJ	170 UJ	160 UJ	160 UJ	150 UJ
Benzaldehyde	NL	µg/kg	170 UJ	170 UJ	160 UJ	160 UJ	150 UJ
Benzo(a)anthracene	1050	µg/kg	26 J	27 J	9.2 J	17 J	10 J
Benzo(a)pyrene	1450	µg/kg	28 J	32 J	9.9 J	22 J	11 J

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Table B-1
Sediment Sample Analytical Results - SVOCs
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-71	LMR11-71	LMR11-71	LMR11-71	LMR11-71
		Field Sample ID	LMR11-71-072	LMR11-71-096	LMR11-71-120	LMR11-71-144	LMR11-71-161
		Sample Date	8/6/2011	8/6/2011	8/6/2011	8/6/2011	8/6/2011
		Depth Interval (in bss)	48- 72	72- 96	96- 120	120- 144	144- 161
Chemical Name	**PEC[1]**	**Unit**					
Benzo(b)fluoranthene	NL	µg/kg	39 J	46 J	15 J	28 J	16 J
Benzo(g,h,i)perylene	NL	µg/kg	15 J	20 J	4.7 J	12 J	7.3 J
Benzo(k)fluoranthene	NL	µg/kg	12 J	14 J	5.3 J	7.4 J	5.7 J
Bis(2-chloroethoxy)methane	NL	µg/kg	170 UJ	170 UJ	160 UJ	160 UJ	150 UJ
Bis(2-chloroethyl)ether	NL	µg/kg	170 UJ	170 UJ	160 UJ	160 UJ	150 UJ
Bis(2-ethylhexyl)phthalate	NL	µg/kg	170 UJ	170 UJ	160 UJ	160 UJ	150 UJ
Butylbenzylphthalate	NL	µg/kg	170 UJ	170 UJ	160 UJ	160 UJ	150 UJ
Caprolactam	NL	µg/kg	170 UJ	170 UJ	160 UJ	160 UJ	150 UJ
Carbazole	NL	µg/kg	170 UJ	170 UJ	160 UJ	160 UJ	150 UJ
Chrysene	1290	µg/kg	23 J	41 J	9.8 J	17 J	12 J
Dibenzo(a,h)anthracene	NL	µg/kg	170 UJ	170 UJ	160 UJ	160 UJ	150 UJ
Dibenzofuran	NL	µg/kg	4.9 J	6.1 J	3.1 UJ	3.7 J	3 UJ
Diethylphthalate	NL	µg/kg	170 UJ	170 UJ	160 UJ	160 UJ	150 UJ
Dimethylphthalate	NL	µg/kg	170 UJ	170 UJ	160 UJ	160 UJ	150 UJ
Di-n-butylphthalate	NL	µg/kg	170 UJ	170 UJ	160 UJ	160 UJ	150 UJ
Di-n-octylphthalate	NL	µg/kg	170 UJ	170 UJ	160 UJ	160 UJ	150 UJ
Fluoranthene	2230	µg/kg	57 J	70 J	18 J	29 J	22 J
Fluorene	536	µg/kg	5.1 J	5.9 J	3.1 UJ	3.8 J	3.7 J
Hexachlorobenzene	NL	µg/kg	170 UJ	170 UJ	160 UJ	160 UJ	150 UJ
Hexachlorobutadiene	NL	µg/kg	170 UJ	170 UJ	160 UJ	160 UJ	150 UJ
Hexachlorocyclopentadiene	NL	µg/kg	170 UJ	170 UJ	160 UJ	160 UJ	150 UJ
Hexachloroethane	NL	µg/kg	170 UJ	170 UJ	160 UJ	160 UJ	150 UJ
Indeno(1,2,3-cd)pyrene	NL	µg/kg	14 J	19 J	6.4 J	11 J	6.6 J
Isophorone	NL	µg/kg	170 UJ	170 UJ	160 UJ	160 UJ	150 UJ
Naphthalene	561	µg/kg	11 J	18 J	4.7 J	7 J	10 J
Nitrobenzene	NL	µg/kg	170 UJ	170 UJ	160 UJ	160 UJ	150 UJ
N-Nitroso-di-n-propylamine	NL	µg/kg	170 UJ	170 UJ	160 UJ	160 UJ	150 UJ
N-Nitrosodiphenylamine	NL	µg/kg	170 UJ	170 UJ	160 UJ	160 UJ	150 UJ
Pentachlorophenol	NL	µg/kg	6.7 UJ	6.6 UJ	6.3 UJ	6.2 UJ	6.1 UJ
Phenanthrene	1170	µg/kg	28 J	41 J	11 J	24 J	21 J
Phenol	NL	µg/kg	170 UJ	170 UJ	160 UJ	160 UJ	150 UJ
Pyrene	1520	µg/kg	41 J	49 J	14 J	27 J	18 J
Total PAH 17	22800	µg/kg	327.4	418.2	123.7	229.6	166.5
TOC	NL	mg/kg	23,300	27,800	24,400	29,200	21,100

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Table B-1
Sediment Sample Analytical Results - SVOCs
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-72	LMR11-72	LMR11-72	LMR11-73	LMR11-73
		Field Sample ID	LMR11-72-006	LMR11-72-024	LMR11-72-035	LMR11-73-006	LMR11-73-024
		Sample Date	8/5/2011	8/5/2011	8/5/2011	8/7/2011	8/7/2011
		Depth Interval (in bss)	0- 6	6- 24	24- 35	0- 6	6- 24
Chemical Name	**PEC[1]**	**Unit**					
1,1'-Biphenyl	NL	µg/kg	160 UJ	120 UJ	120 UJ	160 UJ	180 UJ
1,2,4,5-Tetrachlorobenzene	NL	µg/kg	160 UJ	120 UJ	120 UJ	160 UJ	180 UJ
2,2'-Oxybis(1-chloropropane)	NL	µg/kg	160 UJ	120 UJ	120 UJ	160 UJ	180 UJ
2,3,4,6-Tetrachlorophenol	NL	µg/kg	160 UJ	120 UJ	120 UJ	160 UJ	180 UJ
2,4,5-Trichlorophenol	NL	µg/kg	160 UJ	120 UJ	120 UJ	160 UJ	180 UJ
2,4,6-Trichlorophenol	NL	µg/kg	160 UJ	120 UJ	120 UJ	160 UJ	180 UJ
2,4-Dichlorophenol	NL	µg/kg	160 UJ	120 UJ	120 UJ	160 UJ	180 UJ
2,4-Dimethylphenol	NL	µg/kg	160 UJ	120 UJ	120 UJ	160 UJ	180 UJ
2,4-Dinitrophenol	NL	µg/kg	310 UJ	230 UJ	240 UJ	320 UJ	340 UJ
2,4-Dinitrotoluene	NL	µg/kg	160 UJ	120 UJ	120 UJ	160 UJ	180 UJ
2,6-Dinitrotoluene	NL	µg/kg	160 UJ	120 UJ	120 UJ	160 UJ	180 UJ
2-Chloronaphthalene	NL	µg/kg	160 UJ	120 UJ	120 UJ	160 UJ	180 UJ
2-Chlorophenol	NL	µg/kg	160 UJ	120 UJ	120 UJ	160 UJ	180 UJ
2-Methylnaphthalene	NL	µg/kg	42 J	5.8 J	2.4 UJ	3.2 UJ	3.4 UJ
2-Methylphenol	NL	µg/kg	160 UJ	120 UJ	120 UJ	160 UJ	180 UJ
2-Nitroaniline	NL	µg/kg	310 UJ	230 UJ	240 UJ	320 UJ	340 UJ
2-Nitrophenol	NL	µg/kg	160 UJ	120 UJ	120 UJ	160 UJ	180 UJ
3,3'-Dichlorobenzidine	NL	µg/kg	160 UJ	120 UJ	120 UJ	160 UJ	180 UJ
3-Nitroaniline	NL	µg/kg	310 UJ	230 UJ	240 UJ	320 UJ	340 UJ
4,6-Dinitro-2-methylphenol	NL	µg/kg	310 UJ	230 UJ	240 UJ	320 UJ	340 UJ
4-Bromophenyl-phenylether	NL	µg/kg	160 UJ	120 UJ	120 UJ	160 UJ	180 UJ
4-Chloro-3-methylphenol	NL	µg/kg	160 UJ	120 UJ	120 UJ	160 UJ	180 UJ
4-Chloroaniline	NL	µg/kg	160 UJ	120 UJ	120 UJ	160 UJ	180 UJ
4-Chlorophenyl-phenylether	NL	µg/kg	160 UJ	120 UJ	120 UJ	160 UJ	180 UJ
4-Methylphenol	NL	µg/kg	64 J	120 UJ	120 UJ	160 UJ	180 UJ
4-Nitroaniline	NL	µg/kg	310 UJ	230 UJ	240 UJ	320 UJ	340 UJ
4-Nitrophenol	NL	µg/kg	310 UJ	230 UJ	240 UJ	320 UJ	340 UJ
Acenaphthene	NL	µg/kg	130 J	89 J	2.4 UJ	3.2 UJ	3.4 UJ
Acenaphthylene	NL	µg/kg	72 J	5.5 J	2.4 UJ	3.2 UJ	3.4 UJ
Acetophenone	NL	µg/kg	160 UJ	120 UJ	120 UJ	160 UJ	180 UJ
Anthracene	845	µg/kg	270 J	43 J	2.4 UJ	5.8 J	3.4 UJ
Atrazine	NL	µg/kg	160 UJ	120 UJ	120 UJ	160 UJ	180 UJ
Benzaldehyde	NL	µg/kg	160 UJ	120 UJ	120 UJ	160 UJ	180 UJ
Benzo(a)anthracene	1050	µg/kg	340 J	41 J	2.4 UJ	17 J	3.8 J
Benzo(a)pyrene	1450	µg/kg	270 J	34 J	2.4 UJ	18 J	4.7 J

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Table B-1
Sediment Sample Analytical Results - SVOCs
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-72	LMR11-72	LMR11-72	LMR11-73	LMR11-73
		Field Sample ID	LMR11-72-006	LMR11-72-024	LMR11-72-035	LMR11-73-006	LMR11-73-024
		Sample Date	8/5/2011	8/5/2011	8/5/2011	8/7/2011	8/7/2011
		Depth Interval (in bss)	0- 6	6- 24	24- 35	0- 6	6- 24
Chemical Name	**PEC[1]**	**Unit**					
Benzo(b)fluoranthene	NL	µg/kg	260 J	35 J	2.4 UJ	28 J	8.4 J
Benzo(g,h,i)perylene	NL	µg/kg	140 J	14 J	2.4 UJ	11 J	4 J
Benzo(k)fluoranthene	NL	µg/kg	110 J	14 J	2.4 UJ	7.8 J	3.4 UJ
Bis(2-chloroethoxy)methane	NL	µg/kg	160 UJ	120 UJ	120 UJ	160 UJ	180 UJ
Bis(2-chloroethyl)ether	NL	µg/kg	160 UJ	120 UJ	120 UJ	160 UJ	180 UJ
Bis(2-ethylhexyl)phthalate	NL	µg/kg	160 UJ	120 UJ	120 UJ	160 UJ	180 UJ
Butylbenzylphthalate	NL	µg/kg	160 UJ	120 UJ	120 UJ	160 UJ	180 UJ
Caprolactam	NL	µg/kg	160 UJ	120 UJ	120 UJ	160 UJ	180 UJ
Carbazole	NL	µg/kg	160 UJ	120 UJ	120 UJ	160 UJ	180 UJ
Chrysene	1290	µg/kg	350 J	44 J	4.8 J	18 J	5.4 J
Dibenzo(a,h)anthracene	NL	µg/kg	160 UJ	120 UJ	120 UJ	160 UJ	180 UJ
Dibenzofuran	NL	µg/kg	44 J	4.2 J	2.4 UJ	3.3 J	3.4 UJ
Diethylphthalate	NL	µg/kg	160 UJ	120 UJ	120 UJ	160 UJ	180 UJ
Dimethylphthalate	NL	µg/kg	160 UJ	120 UJ	120 UJ	160 UJ	180 UJ
Di-n-butylphthalate	NL	µg/kg	160 UJ	81 J	120 UJ	160 UJ	180 UJ
Di-n-octylphthalate	NL	µg/kg	160 UJ	120 UJ	120 UJ	160 UJ	180 UJ
Fluoranthene	2230	µg/kg	800 J	95 J	4.6 J	52 J	11 J
Fluorene	536	µg/kg	140 J	56 J	2.4 UJ	3.2 UJ	3.4 UJ
Hexachlorobenzene	NL	µg/kg	160 UJ	120 UJ	120 UJ	160 UJ	180 UJ
Hexachlorobutadiene	NL	µg/kg	160 UJ	120 UJ	120 UJ	160 UJ	180 UJ
Hexachlorocyclopentadiene	NL	µg/kg	160 UJ	120 UJ	120 UJ	160 UJ	180 UJ
Hexachloroethane	NL	µg/kg	160 UJ	120 UJ	120 UJ	160 UJ	180 UJ
Indeno(1,2,3-cd)pyrene	NL	µg/kg	150 J	15 J	2.4 UJ	10 J	3.4 UJ
Isophorone	NL	µg/kg	160 UJ	120 UJ	120 UJ	160 UJ	180 UJ
Naphthalene	561	µg/kg	70 J	6.2 J	2.4 UJ	3.2 UJ	3.4 UJ
Nitrobenzene	NL	µg/kg	160 UJ	120 UJ	120 UJ	160 UJ	180 UJ
N-Nitroso-di-n-propylamine	NL	µg/kg	160 UJ	120 UJ	120 UJ	160 UJ	180 UJ
N-Nitrosodiphenylamine	NL	µg/kg	160 UJ	120 UJ	120 UJ	160 UJ	180 UJ
Pentachlorophenol	NL	µg/kg	6.4 UJ	4.7 UJ	4.8 UJ	6.4 UJ	7 UJ
Phenanthrene	1170	µg/kg	1,000 J	270 J	8.4 J	29 J	7.9 J
Phenol	NL	µg/kg	160 UJ	120 UJ	120 UJ	160 UJ	180 UJ
Pyrene	1520	µg/kg	800 J	100 J	6.2 J	31 J	8.7 J
Total PAH 17	22800	µg/kg	4,988	871.7	39.6	238.9	69.2
TOC	NL	mg/kg	61,100	21,600	12,800	21,000	19,600

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Table B-1
Sediment Sample Analytical Results - SVOCs
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-73	LMR11-74	LMR11-74	LMR11-74	LMR11-74
		Field Sample ID	LMR11-73-042	LMR11-74-006	LMR11-74-024	LMR11-74-048	LMR11-74-048FS
		Sample Date	8/7/2011	8/5/2011	8/5/2011	8/5/2011	8/5/2011
		Depth Interval (in bss)	24- 42	0- 6	6- 24	24- 48	24- 48
Chemical Name	**PEC[1]**	**Unit**					
1,1'-Biphenyl	NL	µg/kg	140 UJ	170 UJ	160 UJ	170 UJ	160 UJ
1,2,4,5-Tetrachlorobenzene	NL	µg/kg	140 UJ	170 UJ	160 UJ	170 UJ	160 UJ
2,2'-Oxybis(1-chloropropane)	NL	µg/kg	140 UJ	170 UJ	160 UJ	170 UJ	160 UJ
2,3,4,6-Tetrachlorophenol	NL	µg/kg	140 UJ	170 UJ	160 UJ	170 UJ	160 UJ
2,4,5-Trichlorophenol	NL	µg/kg	140 UJ	170 UJ	160 UJ	170 UJ	160 UJ
2,4,6-Trichlorophenol	NL	µg/kg	140 UJ	170 UJ	160 UJ	170 UJ	160 UJ
2,4-Dichlorophenol	NL	µg/kg	140 UJ	170 UJ	160 UJ	170 UJ	160 UJ
2,4-Dimethylphenol	NL	µg/kg	140 UJ	170 UJ	160 UJ	170 UJ	160 UJ
2,4-Dinitrophenol	NL	µg/kg	270 UJ	330 UJ	310 UJ	320 UJ	310 UJ
2,4-Dinitrotoluene	NL	µg/kg	140 UJ	170 UJ	160 UJ	170 UJ	160 UJ
2,6-Dinitrotoluene	NL	µg/kg	140 UJ	170 UJ	160 UJ	170 UJ	160 UJ
2-Chloronaphthalene	NL	µg/kg	140 UJ	170 UJ	160 UJ	170 UJ	160 UJ
2-Chlorophenol	NL	µg/kg	140 UJ	170 UJ	160 UJ	170 UJ	160 UJ
2-Methylnaphthalene	NL	µg/kg	150 J	3.3 UJ	6.5 J	7.4 J	5.1 J
2-Methylphenol	NL	µg/kg	140 UJ	170 UJ	160 UJ	170 UJ	160 UJ
2-Nitroaniline	NL	µg/kg	270 UJ	330 UJ	310 UJ	320 UJ	310 UJ
2-Nitrophenol	NL	µg/kg	140 UJ	170 UJ	160 UJ	170 UJ	160 UJ
3,3'-Dichlorobenzidine	NL	µg/kg	140 UJ	170 UJ	160 UJ	170 UJ	160 UJ
3-Nitroaniline	NL	µg/kg	270 UJ	330 UJ	310 UJ	320 UJ	310 UJ
4,6-Dinitro-2-methylphenol	NL	µg/kg	270 UJ	330 UJ	310 UJ	320 UJ	310 UJ
4-Bromophenyl-phenylether	NL	µg/kg	140 UJ	170 UJ	160 UJ	170 UJ	160 UJ
4-Chloro-3-methylphenol	NL	µg/kg	140 UJ	170 UJ	160 UJ	170 UJ	160 UJ
4-Chloroaniline	NL	µg/kg	140 UJ	170 UJ	160 UJ	170 UJ	160 UJ
4-Chlorophenyl-phenylether	NL	µg/kg	140 UJ	170 UJ	160 UJ	170 UJ	160 UJ
4-Methylphenol	NL	µg/kg	140 UJ	59 J	42 J	44 J	33 J
4-Nitroaniline	NL	µg/kg	270 UJ	330 UJ	310 UJ	320 UJ	310 UJ
4-Nitrophenol	NL	µg/kg	270 UJ	330 UJ	310 UJ	320 UJ	310 UJ
Acenaphthene	NL	µg/kg	6.1 J	3.3 UJ	5.6 J	4.9 J	3.5 J
Acenaphthylene	NL	µg/kg	3.1 J	3.3 UJ	6.8 J	7.2 J	5.6 J
Acetophenone	NL	µg/kg	140 UJ	170 UJ	160 UJ	170 UJ	160 UJ
Anthracene	845	µg/kg	8.1 J	3.4 J	13 J	12 J	9.8 J
Atrazine	NL	µg/kg	140 UJ	170 UJ	160 UJ	170 UJ	160 UJ
Benzaldehyde	NL	µg/kg	140 UJ	170 UJ	160 UJ	170 UJ	160 UJ
Benzo(a)anthracene	1050	µg/kg	25 J	5.9 J	27 J	21 J	19 J
Benzo(a)pyrene	1450	µg/kg	27 J	9.1 J	30 J	27 J	23 J

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Table B-1
Sediment Sample Analytical Results - SVOCs
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-73	LMR11-74	LMR11-74	LMR11-74	LMR11-74
		Field Sample ID	LMR11-73-042	LMR11-74-006	LMR11-74-024	LMR11-74-048	LMR11-74-048FS
		Sample Date	8/7/2011	8/5/2011	8/5/2011	8/5/2011	8/5/2011
		Depth Interval (in bss)	24- 42	0- 6	6- 24	24- 48	24- 48
Chemical Name	**PEC[1]**	**Unit**					
Benzo(b)fluoranthene	NL	µg/kg	36 J	11 J	33 J	30 J	26 J
Benzo(g,h,i)perylene	NL	µg/kg	18 J	4.5 J	12 J	11 J	9.9 J
Benzo(k)fluoranthene	NL	µg/kg	16 J	4.4 J	21 J	15 J	11 J
Bis(2-chloroethoxy)methane	NL	µg/kg	140 UJ	170 UJ	160 UJ	170 UJ	160 UJ
Bis(2-chloroethyl)ether	NL	µg/kg	140 UJ	170 UJ	160 UJ	170 UJ	160 UJ
Bis(2-ethylhexyl)phthalate	NL	µg/kg	140 UJ	170 UJ	160 UJ	170 UJ	160 UJ
Butylbenzylphthalate	NL	µg/kg	140 UJ	170 UJ	160 UJ	170 UJ	160 UJ
Caprolactam	NL	µg/kg	140 UJ	170 UJ	160 UJ	170 UJ	160 UJ
Carbazole	NL	µg/kg	140 UJ	170 UJ	160 UJ	170 UJ	160 UJ
Chrysene	1290	µg/kg	34 J	7.1 J	33 J	26 J	20 J
Dibenzo(a,h)anthracene	NL	µg/kg	140 UJ	170 UJ	160 UJ	170 UJ	160 UJ
Dibenzofuran	NL	µg/kg	5.6 J	3.3 UJ	4.4 J	4.2 J	3.3 J
Diethylphthalate	NL	µg/kg	140 UJ	170 UJ	160 UJ	170 UJ	160 UJ
Dimethylphthalate	NL	µg/kg	140 UJ	170 UJ	160 UJ	170 UJ	160 UJ
Di-n-butylphthalate	NL	µg/kg	140 UJ	170 UJ	160 UJ	170 UJ	160 UJ
Di-n-octylphthalate	NL	µg/kg	140 UJ	170 UJ	160 UJ	170 UJ	160 UJ
Fluoranthene	2230	µg/kg	38 J	13 J	58 J	40 J	36 J
Fluorene	536	µg/kg	9.3 J	3.3 UJ	8.5 J	7.6 J	5.9 J
Hexachlorobenzene	NL	µg/kg	140 UJ	170 UJ	160 UJ	170 UJ	160 UJ
Hexachlorobutadiene	NL	µg/kg	140 UJ	170 UJ	160 UJ	170 UJ	160 UJ
Hexachlorocyclopentadiene	NL	µg/kg	140 UJ	170 UJ	160 UJ	170 UJ	160 UJ
Hexachloroethane	NL	µg/kg	140 UJ	170 UJ	160 UJ	170 UJ	160 UJ
Indeno(1,2,3-cd)pyrene	NL	µg/kg	16 J	6.1 J	16 J	14 J	12 J
Isophorone	NL	µg/kg	140 UJ	170 UJ	160 UJ	170 UJ	160 UJ
Naphthalene	561	µg/kg	140 J	9.8 J	13 J	14 J	9 J
Nitrobenzene	NL	µg/kg	140 UJ	170 UJ	160 UJ	170 UJ	160 UJ
N-Nitroso-di-n-propylamine	NL	µg/kg	140 UJ	170 UJ	160 UJ	170 UJ	160 UJ
N-Nitrosodiphenylamine	NL	µg/kg	140 UJ	170 UJ	160 UJ	170 UJ	160 UJ
Pentachlorophenol	NL	µg/kg	5.6 UJ	6.8 UJ	6.4 UJ	6.5 UJ	6.4 UJ
Phenanthrene	1170	µg/kg	55 J	12 J	47 J	39 J	34 J
Phenol	NL	µg/kg	140 UJ	170 UJ	160 UJ	170 UJ	160 UJ
Pyrene	1520	µg/kg	38 J	13 J	65 J	42 J	36 J
Total PAH 17	22800	µg/kg	625.2	107.55	399.8	322.3	269.1
TOC	NL	mg/kg	13,300	22,200	31,500	21,800	29,800

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Table B-1
Sediment Sample Analytical Results - SVOCs
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-74	LMR11-74	LMR11-75	LMR11-75	LMR11-75
		Field Sample ID	LMR11-74-072	LMR11-74-085	LMR11-75-006	LMR11-75-024	LMR11-75-048
		Sample Date	8/5/2011	8/5/2011	8/5/2011	8/5/2011	8/5/2011
		Depth Interval (in bss)	48- 72	72- 85	0- 6	6- 24	24- 48
Chemical Name	**PEC[1]**	**Unit**					
1,1'-Biphenyl	NL	µg/kg	160 UJ	120 UJ	170 UJ	170 UJ	170 U
1,2,4,5-Tetrachlorobenzene	NL	µg/kg	160 UJ	120 UJ	170 UJ	170 UJ	170 U
2,2'-Oxybis(1-chloropropane)	NL	µg/kg	160 UJ	120 UJ	170 UJ	170 UJ	170 U
2,3,4,6-Tetrachlorophenol	NL	µg/kg	160 UJ	120 UJ	170 UJ	170 UJ	170 U
2,4,5-Trichlorophenol	NL	µg/kg	160 UJ	120 UJ	170 UJ	170 UJ	170 U
2,4,6-Trichlorophenol	NL	µg/kg	160 UJ	120 UJ	170 UJ	170 UJ	170 U
2,4-Dichlorophenol	NL	µg/kg	160 UJ	120 UJ	170 UJ	170 UJ	170 U
2,4-Dimethylphenol	NL	µg/kg	160 UJ	120 UJ	170 UJ	170 UJ	170 U
2,4-Dinitrophenol	NL	µg/kg	310 UJ	230 UJ	330 UJ	320 UJ	330 U
2,4-Dinitrotoluene	NL	µg/kg	160 UJ	120 UJ	170 UJ	170 UJ	170 U
2,6-Dinitrotoluene	NL	µg/kg	160 UJ	120 UJ	170 UJ	170 UJ	170 U
2-Chloronaphthalene	NL	µg/kg	160 UJ	120 UJ	170 UJ	170 UJ	170 U
2-Chlorophenol	NL	µg/kg	160 UJ	120 UJ	170 UJ	170 UJ	170 U
2-Methylnaphthalene	NL	µg/kg	4.5 J	11 J	6.9 J	5.7 J	4.4
2-Methylphenol	NL	µg/kg	160 UJ	120 UJ	170 UJ	170 UJ	170 U
2-Nitroaniline	NL	µg/kg	310 UJ	230 UJ	330 UJ	320 UJ	330 U
2-Nitrophenol	NL	µg/kg	160 UJ	120 UJ	170 UJ	170 UJ	170 U
3,3'-Dichlorobenzidine	NL	µg/kg	160 UJ	120 UJ	170 UJ	170 UJ	170 U
3-Nitroaniline	NL	µg/kg	310 UJ	230 UJ	330 UJ	320 UJ	330 U
4,6-Dinitro-2-methylphenol	NL	µg/kg	310 UJ	230 UJ	330 UJ	320 UJ	330 U
4-Bromophenyl-phenylether	NL	µg/kg	160 UJ	120 UJ	170 UJ	170 UJ	170 U
4-Chloro-3-methylphenol	NL	µg/kg	160 UJ	120 UJ	170 UJ	170 UJ	170 U
4-Chloroaniline	NL	µg/kg	160 UJ	120 UJ	170 UJ	170 UJ	170 U
4-Chlorophenyl-phenylether	NL	µg/kg	160 UJ	120 UJ	170 UJ	170 UJ	170 U
4-Methylphenol	NL	µg/kg	66 J	120 UJ	170 UJ	170 UJ	170 U
4-Nitroaniline	NL	µg/kg	310 UJ	230 UJ	330 UJ	320 UJ	330 U
4-Nitrophenol	NL	µg/kg	310 UJ	230 UJ	330 UJ	320 UJ	330 U
Acenaphthene	NL	µg/kg	3.1 UJ	16 J	6.6 J	5.8 J	6.6
Acenaphthylene	NL	µg/kg	4.4 J	11 J	10 J	6.1 J	7
Acetophenone	NL	µg/kg	160 UJ	120 UJ	170 UJ	170 UJ	170 U
Anthracene	845	µg/kg	7.3 J	42 J	17 J	13 J	13
Atrazine	NL	µg/kg	160 UJ	120 UJ	170 UJ	170 UJ	170 U
Benzaldehyde	NL	µg/kg	160 UJ	120 UJ	170 UJ	170 UJ	170 U
Benzo(a)anthracene	1050	µg/kg	16 J	70 J	45 J	30 J	24
Benzo(a)pyrene	1450	µg/kg	20 J	62 J	53 J	32 J	33

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Table B-1
Sediment Sample Analytical Results - SVOCs
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-74	LMR11-74	LMR11-75	LMR11-75	LMR11-75
		Field Sample ID	LMR11-74-072	LMR11-74-085	LMR11-75-006	LMR11-75-024	LMR11-75-048
		Sample Date	8/5/2011	8/5/2011	8/5/2011	8/5/2011	8/5/2011
		Depth Interval (in bss)	48- 72	72- 85	0- 6	6- 24	24- 48
Chemical Name	**PEC[1]**	**Unit**					
Benzo(b)fluoranthene	NL	µg/kg	24 J	66 J	74 J	47 J	32
Benzo(g,h,i)perylene	NL	µg/kg	8 J	28 J	20 J	13 J	11
Benzo(k)fluoranthene	NL	µg/kg	8.9 J	34 J	24 J	18 J	18
Bis(2-chloroethoxy)methane	NL	µg/kg	160 UJ	120 UJ	170 UJ	170 UJ	170 U
Bis(2-chloroethyl)ether	NL	µg/kg	160 UJ	120 UJ	170 UJ	170 UJ	170 U
Bis(2-ethylhexyl)phthalate	NL	µg/kg	160 UJ	120 UJ	170 UJ	170 UJ	170 U
Butylbenzylphthalate	NL	µg/kg	160 UJ	120 UJ	170 UJ	170 UJ	170 U
Caprolactam	NL	µg/kg	160 UJ	120 UJ	170 UJ	170 UJ	170 U
Carbazole	NL	µg/kg	160 UJ	120 UJ	170 UJ	170 UJ	170 U
Chrysene	1290	µg/kg	19 J	78 J	52 J	32 J	26
Dibenzo(a,h)anthracene	NL	µg/kg	160 UJ	120 UJ	170 UJ	170 UJ	170 U
Dibenzofuran	NL	µg/kg	3.1 UJ	8.8 J	11 J	6.7 J	5.8
Diethylphthalate	NL	µg/kg	160 UJ	120 UJ	170 UJ	170 UJ	170 U
Dimethylphthalate	NL	µg/kg	160 UJ	120 UJ	170 UJ	170 UJ	170 U
Di-n-butylphthalate	NL	µg/kg	160 UJ	120 UJ	170 UJ	170 UJ	170 U
Di-n-octylphthalate	NL	µg/kg	160 UJ	120 UJ	170 UJ	170 UJ	170 U
Fluoranthene	2230	µg/kg	28 J	140 J	100 J	64 J	45
Fluorene	536	µg/kg	4.5 J	16 J	9.7 J	7.8 J	8
Hexachlorobenzene	NL	µg/kg	160 UJ	120 UJ	170 UJ	170 UJ	170 U
Hexachlorobutadiene	NL	µg/kg	160 UJ	120 UJ	170 UJ	170 UJ	170 U
Hexachlorocyclopentadiene	NL	µg/kg	160 UJ	120 UJ	170 UJ	170 UJ	170 U
Hexachloroethane	NL	µg/kg	160 UJ	120 UJ	170 UJ	170 UJ	170 U
Indeno(1,2,3-cd)pyrene	NL	µg/kg	10 J	32 J	32 J	20 J	17
Isophorone	NL	µg/kg	160 UJ	120 UJ	170 UJ	170 UJ	170 U
Naphthalene	561	µg/kg	7.6 J	11 J	18 J	9.9 J	9.1
Nitrobenzene	NL	µg/kg	160 UJ	120 UJ	170 UJ	170 UJ	170 U
N-Nitroso-di-n-propylamine	NL	µg/kg	160 UJ	120 UJ	170 UJ	170 UJ	170 U
N-Nitrosodiphenylamine	NL	µg/kg	160 UJ	120 UJ	170 UJ	170 UJ	170 U
Pentachlorophenol	NL	µg/kg	6.2 UJ	4.7 UJ	6.7 UJ	6.5 UJ	6.7 UJ
Phenanthrene	1170	µg/kg	24 J	150 J	68 J	42 J	35
Phenol	NL	µg/kg	160 UJ	120 UJ	170 UJ	170 UJ	170 U
Pyrene	1520	µg/kg	29 J	140 J	85 J	56 J	39
Total PAH 17	22800	µg/kg	218.3	915.8	632.2	409	333.9
TOC	NL	mg/kg	25,200	10,800	29,700	41,700	33,600

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Table B-1
Sediment Sample Analytical Results - SVOCs
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-75	LMR11-75	LMR11-76	LMR11-76	LMR11-76
		Field Sample ID	LMR11-75-048FS	LMR11-75-080	LMR11-76-006	LMR11-76-024	LMR11-76-048
		Sample Date	8/5/2011	8/5/2011	8/5/2011	8/5/2011	8/5/2011
		Depth Interval (in bss)	24- 48	48- 80	0- 6	6- 24	24- 48
Chemical Name	**PEC[1]**	**Unit**					
1,1'-Biphenyl	NL	µg/kg	160 U	170 UJ	200 U	150 U	170 U
1,2,4,5-Tetrachlorobenzene	NL	µg/kg	160 U	170 UJ	200 U	150 U	170 U
2,2'-Oxybis(1-chloropropane)	NL	µg/kg	160 U	170 UJ	200 U	150 U	170 U
2,3,4,6-Tetrachlorophenol	NL	µg/kg	160 U	170 UJ	200 U	150 U	170 U
2,4,5-Trichlorophenol	NL	µg/kg	160 U	170 UJ	200 U	150 U	170 U
2,4,6-Trichlorophenol	NL	µg/kg	160 U	170 UJ	200 U	150 U	170 U
2,4-Dichlorophenol	NL	µg/kg	160 U	170 UJ	200 U	150 U	170 U
2,4-Dimethylphenol	NL	µg/kg	160 U	170 UJ	200 U	150 U	170 U
2,4-Dinitrophenol	NL	µg/kg	320 U	320 UJ	390 U	280 U	330 U
2,4-Dinitrotoluene	NL	µg/kg	160 U	170 UJ	200 U	150 U	170 U
2,6-Dinitrotoluene	NL	µg/kg	160 U	170 UJ	200 U	150 U	170 U
2-Chloronaphthalene	NL	µg/kg	160 U	170 UJ	200 U	150 U	170 U
2-Chlorophenol	NL	µg/kg	160 U	170 UJ	200 U	150 U	170 U
2-Methylnaphthalene	NL	µg/kg	3.2 U	3.9 J	17	2.8 U	3.9
2-Methylphenol	NL	µg/kg	160 U	170 UJ	200 U	150 U	170 U
2-Nitroaniline	NL	µg/kg	320 U	320 UJ	390 U	280 U	330 U
2-Nitrophenol	NL	µg/kg	160 U	170 UJ	200 UJ	150 UJ	170 UJ
3,3'-Dichlorobenzidine	NL	µg/kg	160 U	170 UJ	200 U	150 U	170 U
3-Nitroaniline	NL	µg/kg	320 U	320 UJ	390 U	280 U	330 U
4,6-Dinitro-2-methylphenol	NL	µg/kg	320 U	320 UJ	390 U	280 U	330 U
4-Bromophenyl-phenylether	NL	µg/kg	160 U	170 UJ	200 U	150 U	170 U
4-Chloro-3-methylphenol	NL	µg/kg	160 U	170 UJ	200 U	150 U	170 U
4-Chloroaniline	NL	µg/kg	160 U	170 UJ	200 U	150 U	170 U
4-Chlorophenyl-phenylether	NL	µg/kg	160 U	170 UJ	200 U	150 U	170 U
4-Methylphenol	NL	µg/kg	160 U	170 UJ	43 J	150 U	170 U
4-Nitroaniline	NL	µg/kg	320 U	320 UJ	390 U	280 U	330 U
4-Nitrophenol	NL	µg/kg	320 U	320 UJ	390 U	280 U	330 U
Acenaphthene	NL	µg/kg	3.2 U	6.6 J	6.9	2.9	4
Acenaphthylene	NL	µg/kg	3.2 U	4.8 J	8	3.3	7.2
Acetophenone	NL	µg/kg	160 U	170 UJ	200 U	150 U	170 U
Anthracene	845	µg/kg	11	12 J	13	6.2	11
Atrazine	NL	µg/kg	160 U	170 UJ	200 U	150 U	170 U
Benzaldehyde	NL	µg/kg	160 U	170 UJ	200 U	150 U	170 U
Benzo(a)anthracene	1050	µg/kg	34	24 J	26	11	22
Benzo(a)pyrene	1450	µg/kg	37	31 J	23	11	17

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Table B-1
Sediment Sample Analytical Results - SVOCs
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-75	LMR11-75	LMR11-76	LMR11-76	LMR11-76
		Field Sample ID	LMR11-75-048FS	LMR11-75-080	LMR11-76-006	LMR11-76-024	LMR11-76-048
		Sample Date	8/5/2011	8/5/2011	8/5/2011	8/5/2011	8/5/2011
		Depth Interval (in bss)	24- 48	48- 80	0- 6	6- 24	24- 48
Chemical Name	**PEC[1]**	**Unit**					
Benzo(b)fluoranthene	NL	µg/kg	47	31 J	25	12	18
Benzo(g,h,i)perylene	NL	µg/kg	13	10 J	9.2	4.4	7.5
Benzo(k)fluoranthene	NL	µg/kg	20	11 J	12	4.6	6.6
Bis(2-chloroethoxy)methane	NL	µg/kg	160 U	170 UJ	200 U	150 U	170 U
Bis(2-chloroethyl)ether	NL	µg/kg	160 U	170 UJ	200 U	150 U	170 U
Bis(2-ethylhexyl)phthalate	NL	µg/kg	160 U	170 UJ	200 U	150 U	170 U
Butylbenzylphthalate	NL	µg/kg	160 U	170 UJ	200 U	150 U	170 U
Caprolactam	NL	µg/kg	160 U	170 UJ	200 U	150 U	170 U
Carbazole	NL	µg/kg	160 U	170 UJ	200 U	150 U	170 U
Chrysene	1290	µg/kg	33	25 J	27	13	25
Dibenzo(a,h)anthracene	NL	µg/kg	160 U	170 UJ	200 U	150 U	170 U
Dibenzofuran	NL	µg/kg	7.1	5.1 J	4.1	2.8 U	3.3 U
Diethylphthalate	NL	µg/kg	160 U	170 UJ	200 U	150 U	170 U
Dimethylphthalate	NL	µg/kg	160 U	170 UJ	200 U	150 U	170 U
Di-n-butylphthalate	NL	µg/kg	160 U	170 UJ	200 U	150 U	170 U
Di-n-octylphthalate	NL	µg/kg	160 U	170 UJ	200 U	150 U	170 U
Fluoranthene	2230	µg/kg	58	46 J	42	23	36
Fluorene	536	µg/kg	3.2 U	6.2 J	9.1	3.8	6.2
Hexachlorobenzene	NL	µg/kg	160 U	170 UJ	200 U	150 U	170 U
Hexachlorobutadiene	NL	µg/kg	160 U	170 UJ	200 U	150 U	170 U
Hexachlorocyclopentadiene	NL	µg/kg	160 U	170 UJ	200 U	150 U	170 U
Hexachloroethane	NL	µg/kg	160 U	170 UJ	200 U	150 U	170 U
Indeno(1,2,3-cd)pyrene	NL	µg/kg	20	15 J	11	5.6	9.4
Isophorone	NL	µg/kg	160 U	170 UJ	200 U	150 U	170 U
Naphthalene	561	µg/kg	4.9	7.9 J	25	5.9	10
Nitrobenzene	NL	µg/kg	160 U	170 UJ	200 U	150 U	170 U
N-Nitroso-di-n-propylamine	NL	µg/kg	160 U	170 UJ	200 U	150 U	170 U
N-Nitrosodiphenylamine	NL	µg/kg	160 U	170 UJ	200 U	150 U	170 U
Pentachlorophenol	NL	µg/kg	19 UJ	6.5 UJ	16 U	280 UJ	13 U
Phenanthrene	1170	µg/kg	24	37 J	42	26	44
Phenol	NL	µg/kg	160 U	170 UJ	200 U	150 U	170 U
Pyrene	1520	µg/kg	46	42 J	44	24	40
Total PAH 17	22800	µg/kg	361.4	318.5	344.3	159.5	269.45
TOC	NL	mg/kg	26,400	24,200	29,100	13,900	23,300

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Table B-1
Sediment Sample Analytical Results - SVOCs
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-76	LMR11-76	LMR11-76	LMR11-77	LMR11-77
		Field Sample ID	LMR11-76-072	LMR11-76-096	LMR11-76-120	LMR11-77-006	LMR11-77-024
		Sample Date	8/5/2011	8/5/2011	8/5/2011	8/5/2011	8/5/2011
		Depth Interval (in bss)	48- 72	72- 96	96- 120	0- 6	6- 24
Chemical Name	**PEC[1]**	**Unit**					
1,1'-Biphenyl	NL	µg/kg	160 U	170 U	160 U	210 UJ	150 UJ
1,2,4,5-Tetrachlorobenzene	NL	µg/kg	160 U	170 U	160 U	210 UJ	150 UJ
2,2'-Oxybis(1-chloropropane)	NL	µg/kg	160 U	170 U	160 U	210 UJ	150 UJ
2,3,4,6-Tetrachlorophenol	NL	µg/kg	160 U	170 U	160 U	210 UJ	150 UJ
2,4,5-Trichlorophenol	NL	µg/kg	160 U	170 U	160 U	210 UJ	150 UJ
2,4,6-Trichlorophenol	NL	µg/kg	160 U	170 U	160 U	210 UJ	150 UJ
2,4-Dichlorophenol	NL	µg/kg	160 U	170 U	160 U	210 UJ	150 UJ
2,4-Dimethylphenol	NL	µg/kg	160 U	170 U	160 U	210 UJ	150 UJ
2,4-Dinitrophenol	NL	µg/kg	310 U	330 U	310 U	410 UJ	290 UJ
2,4-Dinitrotoluene	NL	µg/kg	160 U	170 U	160 U	210 UJ	150 UJ
2,6-Dinitrotoluene	NL	µg/kg	160 U	170 U	160 U	210 UJ	150 UJ
2-Chloronaphthalene	NL	µg/kg	160 U	170 U	160 U	210 UJ	150 UJ
2-Chlorophenol	NL	µg/kg	160 U	170 U	160 U	210 UJ	150 UJ
2-Methylnaphthalene	NL	µg/kg	3.7	4.2	3.1 U	4.1 UJ	3.3 J
2-Methylphenol	NL	µg/kg	160 U	170 U	160 U	210 UJ	150 UJ
2-Nitroaniline	NL	µg/kg	310 U	330 U	310 U	410 UJ	290 UJ
2-Nitrophenol	NL	µg/kg	160 UJ	170 UJ	160 UJ	210 UJ	150 UJ
3,3'-Dichlorobenzidine	NL	µg/kg	160 U	170 U	160 U	210 UJ	150 UJ
3-Nitroaniline	NL	µg/kg	310 U	330 U	310 U	410 UJ	290 UJ
4,6-Dinitro-2-methylphenol	NL	µg/kg	310 U	330 U	310 U	410 UJ	290 UJ
4-Bromophenyl-phenylether	NL	µg/kg	160 U	170 U	160 U	210 UJ	150 UJ
4-Chloro-3-methylphenol	NL	µg/kg	160 U	170 U	160 U	210 UJ	150 UJ
4-Chloroaniline	NL	µg/kg	160 U	170 U	160 U	210 UJ	150 UJ
4-Chlorophenyl-phenylether	NL	µg/kg	160 U	170 U	160 U	210 UJ	150 UJ
4-Methylphenol	NL	µg/kg	160 U	170 U	160 U	210 UJ	150 UJ
4-Nitroaniline	NL	µg/kg	310 U	330 U	310 U	410 UJ	290 UJ
4-Nitrophenol	NL	µg/kg	310 U	330 U	310 U	410 UJ	290 UJ
Acenaphthene	NL	µg/kg	7.7	6.4	3.7	4.1 UJ	2.9 UJ
Acenaphthylene	NL	µg/kg	3.1 U	4.8	3.3	4.1 UJ	2.9 UJ
Acetophenone	NL	µg/kg	160 U	170 U	160 U	210 UJ	150 UJ
Anthracene	845	µg/kg	25	12	6.7	4.1 UJ	5 J
Atrazine	NL	µg/kg	160 U	170 U	160 U	210 UJ	150 UJ
Benzaldehyde	NL	µg/kg	160 U	170 U	160 U	210 UJ	150 UJ
Benzo(a)anthracene	1050	µg/kg	35	14	11	5.1 J	15 J
Benzo(a)pyrene	1450	µg/kg	24	14	11	9 J	19 J

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Table B-1
Sediment Sample Analytical Results - SVOCs
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-76	LMR11-76	LMR11-76	LMR11-77	LMR11-77
		Field Sample ID	LMR11-76-072	LMR11-76-096	LMR11-76-120	LMR11-77-006	LMR11-77-024
		Sample Date	8/5/2011	8/5/2011	8/5/2011	8/5/2011	8/5/2011
		Depth Interval (in bss)	48- 72	72- 96	96- 120	0- 6	6- 24
Chemical Name	**PEC[1]**	**Unit**					
Benzo(b)fluoranthene	NL	µg/kg	27	14	11	8.1 J	21 J
Benzo(g,h,i)perylene	NL	µg/kg	7.7	5	4.4	4.6 J	12 J
Benzo(k)fluoranthene	NL	µg/kg	10	5.4	4.8	4.1 UJ	11 J
Bis(2-chloroethoxy)methane	NL	µg/kg	160 U	170 U	160 U	210 UJ	150 UJ
Bis(2-chloroethyl)ether	NL	µg/kg	160 U	170 U	160 U	210 UJ	150 UJ
Bis(2-ethylhexyl)phthalate	NL	µg/kg	160 U	170 U	160 U	210 UJ	150 UJ
Butylbenzylphthalate	NL	µg/kg	160 U	170 U	160 U	210 UJ	150 UJ
Caprolactam	NL	µg/kg	160 U	170 U	160 U	210 UJ	150 UJ
Carbazole	NL	µg/kg	160 U	170 U	160 U	210 UJ	150 UJ
Chrysene	1290	µg/kg	31	14	13	6 J	15 J
Dibenzo(a,h)anthracene	NL	µg/kg	160 U	170 U	160 U	210 UJ	150 UJ
Dibenzofuran	NL	µg/kg	3.5	3.3 U	3.1 U	4.1 UJ	2.9 UJ
Diethylphthalate	NL	µg/kg	160 U	170 U	160 U	210 UJ	150 UJ
Dimethylphthalate	NL	µg/kg	160 U	170 U	160 U	210 UJ	150 UJ
Di-n-butylphthalate	NL	µg/kg	160 U	170 U	160 U	210 UJ	150 UJ
Di-n-octylphthalate	NL	µg/kg	160 U	170 U	160 U	210 UJ	150 UJ
Fluoranthene	2230	µg/kg	90	33	24	9.4 J	26 J
Fluorene	536	µg/kg	12	9.3	3.6	4.1 UJ	2.9 UJ
Hexachlorobenzene	NL	µg/kg	160 U	170 U	160 U	210 UJ	150 UJ
Hexachlorobutadiene	NL	µg/kg	160 U	170 U	160 U	210 UJ	150 UJ
Hexachlorocyclopentadiene	NL	µg/kg	160 U	170 U	160 U	210 UJ	150 UJ
Hexachloroethane	NL	µg/kg	160 U	170 U	160 U	210 UJ	150 UJ
Indeno(1,2,3-cd)pyrene	NL	µg/kg	11	6.6	5.6	4.1 UJ	10 J
Isophorone	NL	µg/kg	160 U	170 U	160 U	210 UJ	150 UJ
Naphthalene	561	µg/kg	7	7.3	8.1	4.1 UJ	6.5 J
Nitrobenzene	NL	µg/kg	160 U	170 U	160 U	210 UJ	150 UJ
N-Nitroso-di-n-propylamine	NL	µg/kg	160 U	170 U	160 U	210 UJ	150 UJ
N-Nitrosodiphenylamine	NL	µg/kg	160 U	170 U	160 U	210 UJ	150 UJ
Pentachlorophenol	NL	µg/kg	32 U	13 U	310 UJ	8.4 UJ	5.8 UJ
Phenanthrene	1170	µg/kg	99	39	20	6.6 J	18 J
Phenol	NL	µg/kg	160 U	170 U	160 U	210 UJ	150 UJ
Pyrene	1520	µg/kg	81	32	25	12 J	28 J
Total PAH 17	22800	µg/kg	476.15	222.65	158.3	79.25	195.6
TOC	NL	mg/kg	23,600	22,400	24,000	24,800	30,200

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Table B-1
Sediment Sample Analytical Results - SVOCs
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-77	LMR11-77	LMR11-77	LMR11-78	LMR11-79
		Field Sample ID	LMR11-77-048	LMR11-77-072	LMR11-77-120	LMR11-78-014	LMR11-79-006
		Sample Date	8/5/2011	8/5/2011	8/5/2011	8/5/2011	8/4/2011
		Depth Interval (in bss)	24- 48	48- 72	72- 120	0- 14	0- 6
Chemical Name	**PEC[1]**	**Unit**					
1,1'-Biphenyl	NL	µg/kg	150 UJ	160 UJ	160 UJ	130 U	190 U
1,2,4,5-Tetrachlorobenzene	NL	µg/kg	150 UJ	160 UJ	160 UJ	130 U	190 U
2,2'-Oxybis(1-chloropropane)	NL	µg/kg	150 UJ	160 UJ	160 UJ	130 U	190 U
2,3,4,6-Tetrachlorophenol	NL	µg/kg	150 UJ	160 UJ	160 UJ	130 U	190 U
2,4,5-Trichlorophenol	NL	µg/kg	150 UJ	160 UJ	160 UJ	130 U	190 U
2,4,6-Trichlorophenol	NL	µg/kg	150 UJ	160 UJ	160 UJ	130 U	190 U
2,4-Dichlorophenol	NL	µg/kg	150 UJ	160 UJ	160 UJ	130 U	190 U
2,4-Dimethylphenol	NL	µg/kg	150 UJ	160 UJ	160 UJ	130 U	190 U
2,4-Dinitrophenol	NL	µg/kg	280 UJ	310 UJ	310 UJ	240 U	370 U
2,4-Dinitrotoluene	NL	µg/kg	150 UJ	160 UJ	160 UJ	130 U	190 U
2,6-Dinitrotoluene	NL	µg/kg	150 UJ	160 UJ	160 UJ	130 U	190 U
2-Chloronaphthalene	NL	µg/kg	150 UJ	160 UJ	160 UJ	130 U	190 U
2-Chlorophenol	NL	µg/kg	150 UJ	160 UJ	160 UJ	130 U	190 U
2-Methylnaphthalene	NL	µg/kg	11 J	17 J	6.4 J	2.4 U	4
2-Methylphenol	NL	µg/kg	150 UJ	160 UJ	160 UJ	130 U	190 U
2-Nitroaniline	NL	µg/kg	280 UJ	310 UJ	310 UJ	240 U	370 U
2-Nitrophenol	NL	µg/kg	150 UJ	160 UJ	160 UJ	130 U	190 U
3,3'-Dichlorobenzidine	NL	µg/kg	150 UJ	160 UJ	160 UJ	130 U	190 U
3-Nitroaniline	NL	µg/kg	280 UJ	310 UJ	310 UJ	240 U	370 U
4,6-Dinitro-2-methylphenol	NL	µg/kg	280 UJ	310 UJ	310 UJ	240 U	370 U
4-Bromophenyl-phenylether	NL	µg/kg	150 UJ	160 UJ	160 UJ	130 U	190 U
4-Chloro-3-methylphenol	NL	µg/kg	150 UJ	160 UJ	160 UJ	130 U	190 U
4-Chloroaniline	NL	µg/kg	150 UJ	160 UJ	160 UJ	130 U	190 U
4-Chlorophenyl-phenylether	NL	µg/kg	150 UJ	160 UJ	160 UJ	130 U	190 U
4-Methylphenol	NL	µg/kg	36 J	160 UJ	160 UJ	130 U	78 J
4-Nitroaniline	NL	µg/kg	280 UJ	310 UJ	310 UJ	240 U	370 U
4-Nitrophenol	NL	µg/kg	280 UJ	310 UJ	310 UJ	240 U	370 U
Acenaphthene	NL	µg/kg	10 J	4.9 J	6.6 J	2.4 U	3.7 U
Acenaphthylene	NL	µg/kg	9 J	6.4 J	5.9 J	2.4 U	3.7 U
Acetophenone	NL	µg/kg	150 UJ	160 UJ	160 UJ	130 U	190 U
Anthracene	845	µg/kg	41 J	18 J	15 J	2.4 U	5.4
Atrazine	NL	µg/kg	150 UJ	160 UJ	160 UJ	130 U	190 U
Benzaldehyde	NL	µg/kg	150 UJ	160 UJ	160 UJ	130 U	190 U
Benzo(a)anthracene	1050	µg/kg	83 J	47 J	28 J	2.4 U	11
Benzo(a)pyrene	1450	µg/kg	78 J	47 J	28 J	2.4 U	13

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Table B-1
Sediment Sample Analytical Results - SVOCs
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-77	LMR11-77	LMR11-77	LMR11-78	LMR11-79
		Field Sample ID	LMR11-77-048	LMR11-77-072	LMR11-77-120	LMR11-78-014	LMR11-79-006
		Sample Date	8/5/2011	8/5/2011	8/5/2011	8/5/2011	8/4/2011
		Depth Interval (in bss)	24- 48	48- 72	72- 120	0- 14	0- 6
Chemical Name	**PEC[1]**	**Unit**					
Benzo(b)fluoranthene	NL	µg/kg	85 J	56 J	36 J	2.4 U	15
Benzo(g,h,i)perylene	NL	µg/kg	47 J	31 J	11 J	2.4 U	5
Benzo(k)fluoranthene	NL	µg/kg	55 J	29 J	16 J	2.4 U	5.8
Bis(2-chloroethoxy)methane	NL	µg/kg	150 UJ	160 UJ	160 UJ	130 U	190 U
Bis(2-chloroethyl)ether	NL	µg/kg	150 UJ	160 UJ	160 UJ	130 U	190 U
Bis(2-ethylhexyl)phthalate	NL	µg/kg	150 UJ	160 UJ	160 UJ	130 U	190 U
Butylbenzylphthalate	NL	µg/kg	150 UJ	160 UJ	160 UJ	130 U	190 U
Caprolactam	NL	µg/kg	150 UJ	160 UJ	160 UJ	130 U	190 U
Carbazole	NL	µg/kg	150 UJ	160 UJ	160 UJ	130 U	190 U
Chrysene	1290	µg/kg	87 J	57 J	31 J	2.4 U	12
Dibenzo(a,h)anthracene	NL	µg/kg	150 UJ	160 UJ	160 UJ	130 U	190 U
Dibenzofuran	NL	µg/kg	16 J	7.5 J	5 J	2.4 U	3.7 U
Diethylphthalate	NL	µg/kg	150 UJ	160 UJ	160 UJ	130 U	190 U
Dimethylphthalate	NL	µg/kg	150 UJ	160 UJ	160 UJ	130 U	190 U
Di-n-butylphthalate	NL	µg/kg	150 UJ	160 UJ	160 UJ	130 U	190 U
Di-n-octylphthalate	NL	µg/kg	150 UJ	160 UJ	160 UJ	130 U	190 U
Fluoranthene	2230	µg/kg	150 J	85 J	67 J	3.4	23
Fluorene	536	µg/kg	13 J	7 J	9.5 J	2.4 U	3.7 U
Hexachlorobenzene	NL	µg/kg	150 UJ	160 UJ	160 UJ	130 U	190 U
Hexachlorobutadiene	NL	µg/kg	150 UJ	160 UJ	160 UJ	130 U	190 U
Hexachlorocyclopentadiene	NL	µg/kg	150 UJ	160 UJ	160 UJ	130 U	190 U
Hexachloroethane	NL	µg/kg	150 UJ	160 UJ	160 UJ	130 U	190 U
Indeno(1,2,3-cd)pyrene	NL	µg/kg	41 J	27 J	15 J	2.4 U	6.8
Isophorone	NL	µg/kg	150 UJ	160 UJ	160 UJ	130 U	190 U
Naphthalene	561	µg/kg	16 J	20 J	24 J	2.4 U	12
Nitrobenzene	NL	µg/kg	150 UJ	160 UJ	160 UJ	130 U	190 U
N-Nitroso-di-n-propylamine	NL	µg/kg	150 UJ	160 UJ	160 UJ	130 U	190 U
N-Nitrosodiphenylamine	NL	µg/kg	150 UJ	160 UJ	160 UJ	130 U	190 U
Pentachlorophenol	NL	µg/kg	5.8 UJ	6.4 UJ	6.3 UJ	240 U	7.6 U
Phenanthrene	1170	µg/kg	110 J	68 J	47 J	2.4 U	18
Phenol	NL	µg/kg	150 UJ	160 UJ	160 UJ	130 U	190 U
Pyrene	1520	µg/kg	150 J	100 J	61 J	3.3	21
Total PAH 17	22800	µg/kg	1,002	627.8	412.4	24.7	159.4
TOC	NL	mg/kg	31,300	41,500	35,400	14,700	29,400

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Table B-1
Sediment Sample Analytical Results - SVOCs
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-79	LMR11-79	LMR11-79	LMR11-80	LMR11-80
		Field Sample ID	LMR11-79-024	LMR11-79-024FS	LMR11-79-054	LMR11-80-006	LMR11-80-024
		Sample Date	8/4/2011	8/4/2011	8/4/2011	8/5/2011	8/5/2011
		Depth Interval (in bss)	6- 24	6- 24	24- 54	0- 6	6- 24
Chemical Name	**PEC[1]**	**Unit**					
1,1'-Biphenyl	NL	µg/kg	180 U	180 U	170 U	150 UJ	150 UJ
1,2,4,5-Tetrachlorobenzene	NL	µg/kg	180 U	180 U	170 U	150 UJ	150 UJ
2,2'-Oxybis(1-chloropropane)	NL	µg/kg	180 U	180 U	170 U	150 UJ	150 UJ
2,3,4,6-Tetrachlorophenol	NL	µg/kg	180 U	180 U	170 U	150 UJ	150 UJ
2,4,5-Trichlorophenol	NL	µg/kg	180 U	180 U	170 U	150 UJ	150 UJ
2,4,6-Trichlorophenol	NL	µg/kg	180 U	180 U	170 U	150 UJ	150 UJ
2,4-Dichlorophenol	NL	µg/kg	180 U	180 U	170 U	150 UJ	150 UJ
2,4-Dimethylphenol	NL	µg/kg	180 U	180 U	170 U	150 UJ	150 UJ
2,4-Dinitrophenol	NL	µg/kg	350 U	350 U	340 U	290 UJ	290 UJ
2,4-Dinitrotoluene	NL	µg/kg	180 U	180 U	170 U	150 UJ	150 UJ
2,6-Dinitrotoluene	NL	µg/kg	180 U	180 U	170 U	150 UJ	150 UJ
2-Chloronaphthalene	NL	µg/kg	180 U	180 U	170 U	150 UJ	150 UJ
2-Chlorophenol	NL	µg/kg	180 U	180 U	170 U	150 UJ	150 UJ
2-Methylnaphthalene	NL	µg/kg	6	8.7	9.1	3.6 J	4.1 J
2-Methylphenol	NL	µg/kg	180 U	180 U	170 U	150 UJ	150 UJ
2-Nitroaniline	NL	µg/kg	350 U	350 U	340 U	290 UJ	290 UJ
2-Nitrophenol	NL	µg/kg	180 U	180 U	170 U	150 UJ	150 UJ
3,3'-Dichlorobenzidine	NL	µg/kg	180 U	180 U	170 U	150 UJ	150 UJ
3-Nitroaniline	NL	µg/kg	350 U	350 U	340 U	290 UJ	290 UJ
4,6-Dinitro-2-methylphenol	NL	µg/kg	350 U	350 U	340 U	290 UJ	290 UJ
4-Bromophenyl-phenylether	NL	µg/kg	180 U	180 U	170 U	150 UJ	150 UJ
4-Chloro-3-methylphenol	NL	µg/kg	180 U	180 U	170 U	150 UJ	150 UJ
4-Chloroaniline	NL	µg/kg	180 U	180 U	170 U	150 UJ	150 UJ
4-Chlorophenyl-phenylether	NL	µg/kg	180 U	180 U	170 U	150 UJ	150 UJ
4-Methylphenol	NL	µg/kg	70 J	75 J	36 J	30 J	150 UJ
4-Nitroaniline	NL	µg/kg	350 U	350 U	340 U	290 UJ	290 UJ
4-Nitrophenol	NL	µg/kg	350 U	350 U	340 U	290 UJ	290 UJ
Acenaphthene	NL	µg/kg	3.5 U	4.8	5.7	2.9 UJ	5.9 J
Acenaphthylene	NL	µg/kg	6.5	8.3	12	3.9 J	3.5 J
Acetophenone	NL	µg/kg	180 U	180 U	170 U	150 UJ	150 UJ
Anthracene	845	µg/kg	8.8	13	18	6.9 J	21 J
Atrazine	NL	µg/kg	180 U	180 U	170 U	150 UJ	150 UJ
Benzaldehyde	NL	µg/kg	180 U	180 U	170 U	150 UJ	150 UJ
Benzo(a)anthracene	1050	µg/kg	22	34	37	24 J	47 J
Benzo(a)pyrene	1450	µg/kg	29	38	41	28 J	40 J

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Table B-1
Sediment Sample Analytical Results - SVOCs
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-79	LMR11-79	LMR11-79	LMR11-80	LMR11-80
		Field Sample ID	LMR11-79-024	LMR11-79-024FS	LMR11-79-054	LMR11-80-006	LMR11-80-024
		Sample Date	8/4/2011	8/4/2011	8/4/2011	8/5/2011	8/5/2011
		Depth Interval (in bss)	6- 24	6- 24	24- 54	0- 6	6- 24
Chemical Name	**PEC[1]**	**Unit**					
Benzo(b)fluoranthene	NL	µg/kg	33	46	51	38 J	45 J
Benzo(g,h,i)perylene	NL	µg/kg	12	17	19	11 J	25 J
Benzo(k)fluoranthene	NL	µg/kg	19	23	21	14 J	25 J
Bis(2-chloroethoxy)methane	NL	µg/kg	180 U	180 U	170 U	150 UJ	150 UJ
Bis(2-chloroethyl)ether	NL	µg/kg	180 U	180 U	170 U	150 UJ	150 UJ
Bis(2-ethylhexyl)phthalate	NL	µg/kg	120 J	180 U	170 U	150 UJ	150 UJ
Butylbenzylphthalate	NL	µg/kg	180 U	180 U	170 U	150 UJ	150 UJ
Caprolactam	NL	µg/kg	180 U	180 U	170 U	150 UJ	150 UJ
Carbazole	NL	µg/kg	180 U	180 U	170 U	150 UJ	150 UJ
Chrysene	1290	µg/kg	29	40	42	24 J	43 J
Dibenzo(a,h)anthracene	NL	µg/kg	180 U	180 U	170 U	150 UJ	150 UJ
Dibenzofuran	NL	µg/kg	4.2	6.7	7.4	5.3 J	6.3 J
Diethylphthalate	NL	µg/kg	180 U	180 U	170 U	150 UJ	150 UJ
Dimethylphthalate	NL	µg/kg	180 U	180 U	170 U	150 UJ	150 UJ
Di-n-butylphthalate	NL	µg/kg	180 U	180 U	170 U	150 UJ	150 UJ
Di-n-octylphthalate	NL	µg/kg	180 U	180 U	170 U	150 UJ	150 UJ
Fluoranthene	2230	µg/kg	51	69	71	46 J	81 J
Fluorene	536	µg/kg	5.6	8.3	9.2	2.9 UJ	8.6 J
Hexachlorobenzene	NL	µg/kg	180 U	180 U	170 U	150 UJ	150 UJ
Hexachlorobutadiene	NL	µg/kg	180 U	180 U	170 U	150 UJ	150 UJ
Hexachlorocyclopentadiene	NL	µg/kg	180 U	180 U	170 U	150 UJ	150 UJ
Hexachloroethane	NL	µg/kg	180 U	180 U	170 U	150 UJ	150 UJ
Indeno(1,2,3-cd)pyrene	NL	µg/kg	16	23	26	17 J	23 J
Isophorone	NL	µg/kg	180 U	180 U	170 U	150 UJ	150 UJ
Naphthalene	561	µg/kg	18	26	21	6.3 J	8 J
Nitrobenzene	NL	µg/kg	180 U	180 U	170 U	150 UJ	150 UJ
N-Nitroso-di-n-propylamine	NL	µg/kg	180 U	180 U	170 U	150 UJ	150 UJ
N-Nitrosodiphenylamine	NL	µg/kg	180 U	180 U	170 U	150 UJ	150 UJ
Pentachlorophenol	NL	µg/kg	7.1 U	7.2 U	6.9 U	6 UJ	5.8 UJ
Phenanthrene	1170	µg/kg	31	47	53	22 J	77 J
Phenol	NL	µg/kg	180 U	180 U	170 U	150 UJ	150 UJ
Pyrene	1520	µg/kg	43	59	63	40 J	86 J
Total PAH 17	22800	µg/kg	335.85	471.8	506.4	292.9	549.4
TOC	NL	mg/kg	27,700	34,300	25,500	32,400	24,600

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Table B-1
Sediment Sample Analytical Results - SVOCs
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-80	LMR11-81	LMR11-81	LMR11-82	LMR11-82
		Field Sample ID	LMR11-80-056	LMR11-81-006	LMR11-81-019	LMR11-82-006	LMR11-82-024
		Sample Date	8/5/2011	8/5/2011	8/5/2011	8/5/2011	8/5/2011
		Depth Interval (in bss)	24- 56	0- 6	6- 19	0- 6	6- 24
Chemical Name	**PEC[1]**	**Unit**					
1,1'-Biphenyl	NL	µg/kg	130 UJ	130 U	110 U	170 U	130 U
1,2,4,5-Tetrachlorobenzene	NL	µg/kg	130 UJ	130 U	110 U	170 U	130 U
2,2'-Oxybis(1-chloropropane)	NL	µg/kg	130 UJ	130 U	110 U	170 U	130 U
2,3,4,6-Tetrachlorophenol	NL	µg/kg	130 UJ	130 U	110 U	170 U	130 U
2,4,5-Trichlorophenol	NL	µg/kg	130 UJ	130 U	110 U	170 U	130 U
2,4,6-Trichlorophenol	NL	µg/kg	130 UJ	130 U	110 U	170 U	130 U
2,4-Dichlorophenol	NL	µg/kg	130 UJ	130 U	110 U	170 U	130 U
2,4-Dimethylphenol	NL	µg/kg	130 UJ	130 U	110 U	170 U	130 U
2,4-Dinitrophenol	NL	µg/kg	260 UJ	260 U	220 U	330 U	250 U
2,4-Dinitrotoluene	NL	µg/kg	130 UJ	130 U	110 U	170 U	130 U
2,6-Dinitrotoluene	NL	µg/kg	130 UJ	130 U	110 U	170 U	130 U
2-Chloronaphthalene	NL	µg/kg	130 UJ	130 U	110 U	170 U	130 U
2-Chlorophenol	NL	µg/kg	130 UJ	130 U	110 U	170 U	130 U
2-Methylnaphthalene	NL	µg/kg	2.6 UJ	2.6 U	2.2 U	3.3 U	2.5 U
2-Methylphenol	NL	µg/kg	130 UJ	130 U	110 U	170 U	130 U
2-Nitroaniline	NL	µg/kg	260 UJ	260 U	220 U	330 U	250 U
2-Nitrophenol	NL	µg/kg	130 UJ	130 UJ	110 UJ	170 U	130 U
3,3'-Dichlorobenzidine	NL	µg/kg	130 UJ	130 U	110 U	170 U	130 U
3-Nitroaniline	NL	µg/kg	260 UJ	260 U	220 U	330 U	250 U
4,6-Dinitro-2-methylphenol	NL	µg/kg	260 UJ	260 U	220 U	330 U	250 U
4-Bromophenyl-phenylether	NL	µg/kg	130 UJ	130 U	110 U	170 U	130 U
4-Chloro-3-methylphenol	NL	µg/kg	130 UJ	130 U	110 U	170 U	130 U
4-Chloroaniline	NL	µg/kg	130 UJ	130 U	110 U	170 U	130 U
4-Chlorophenyl-phenylether	NL	µg/kg	130 UJ	130 U	110 U	170 U	130 U
4-Methylphenol	NL	µg/kg	130 UJ	130 U	110 U	170 U	130 U
4-Nitroaniline	NL	µg/kg	260 UJ	260 U	220 U	330 U	250 U
4-Nitrophenol	NL	µg/kg	260 UJ	260 U	220 U	330 U	250 U
Acenaphthene	NL	µg/kg	2.6 UJ	2.6 U	2.2 U	7.5	2.5 U
Acenaphthylene	NL	µg/kg	2.6 UJ	2.6 U	2.2 U	3.8	2.5 U
Acetophenone	NL	µg/kg	130 UJ	130 U	110 U	170 U	130 U
Anthracene	845	µg/kg	4.7 J	2.6 U	3.6	21	2.5 U
Atrazine	NL	µg/kg	130 UJ	130 U	110 U	170 U	130 U
Benzaldehyde	NL	µg/kg	130 UJ	130 U	110 U	170 U	130 U
Benzo(a)anthracene	1050	µg/kg	17 J	2.6 U	5.3	45	5.2
Benzo(a)pyrene	1450	µg/kg	20 J	2.6 U	2.8	48	7.4

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Table B-1
Sediment Sample Analytical Results - SVOCs
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-80	LMR11-81	LMR11-81	LMR11-82	LMR11-82
		Field Sample ID	LMR11-80-056	LMR11-81-006	LMR11-81-019	LMR11-82-006	LMR11-82-024
		Sample Date	8/5/2011	8/5/2011	8/5/2011	8/5/2011	8/5/2011
		Depth Interval (in bss)	24- 56	0- 6	6- 19	0- 6	6- 24
Chemical Name	**PEC[1]**	**Unit**					
Benzo(b)fluoranthene	NL	µg/kg	21 J	2.6 U	4.1	63	11
Benzo(g,h,i)perylene	NL	µg/kg	11 J	2.6 U	2.2 U	15	3.1
Benzo(k)fluoranthene	NL	µg/kg	8 J	2.6 U	2.2 U	24	3.9
Bis(2-chloroethoxy)methane	NL	µg/kg	130 UJ	130 U	110 U	170 U	130 U
Bis(2-chloroethyl)ether	NL	µg/kg	130 UJ	130 U	110 U	170 U	130 U
Bis(2-ethylhexyl)phthalate	NL	µg/kg	130 UJ	130 U	110 U	170 U	130 U
Butylbenzylphthalate	NL	µg/kg	130 UJ	130 U	110 U	170 U	130 U
Caprolactam	NL	µg/kg	130 UJ	130 U	110 U	170 U	130 U
Carbazole	NL	µg/kg	130 UJ	130 U	110 U	170 U	130 U
Chrysene	1290	µg/kg	15 J	2.6 U	6.4	42	6.1
Dibenzo(a,h)anthracene	NL	µg/kg	130 UJ	130 U	110 U	170 U	130 U
Dibenzofuran	NL	µg/kg	2.6 UJ	2.6 U	2.2 U	8.3	2.5 U
Diethylphthalate	NL	µg/kg	130 UJ	130 U	110 U	170 U	130 U
Dimethylphthalate	NL	µg/kg	130 UJ	130 U	110 U	170 U	130 U
Di-n-butylphthalate	NL	µg/kg	130 UJ	130 U	110 U	170 U	130 U
Di-n-octylphthalate	NL	µg/kg	130 UJ	130 U	110 U	170 U	130 U
Fluoranthene	2230	µg/kg	20 J	2.6 U	11	84	12
Fluorene	536	µg/kg	2.6 UJ	2.6 U	2.2 U	4.3	2.5 U
Hexachlorobenzene	NL	µg/kg	130 UJ	130 U	110 U	170 U	130 U
Hexachlorobutadiene	NL	µg/kg	130 UJ	130 U	110 U	170 U	130 U
Hexachlorocyclopentadiene	NL	µg/kg	130 UJ	130 U	110 U	170 U	130 U
Hexachloroethane	NL	µg/kg	130 UJ	130 U	110 U	170 U	130 U
Indeno(1,2,3-cd)pyrene	NL	µg/kg	9.4 J	2.6 U	2.2 U	24	4.7
Isophorone	NL	µg/kg	130 UJ	130 U	110 U	170 U	130 U
Naphthalene	561	µg/kg	3.3 J	2.6 U	2.2 U	8.5	2.5 U
Nitrobenzene	NL	µg/kg	130 UJ	130 U	110 U	170 U	130 U
N-Nitroso-di-n-propylamine	NL	µg/kg	130 UJ	130 U	110 U	170 U	130 U
N-Nitrosodiphenylamine	NL	µg/kg	130 UJ	130 U	110 U	170 U	130 U
Pentachlorophenol	NL	µg/kg	5.3 UJ	260 UJ	220 UJ	27 UJ	250 U
Phenanthrene	1170	µg/kg	8.5 J	2.6 U	6.7	41	5.3
Phenol	NL	µg/kg	130 UJ	130 U	110 U	170 U	130 U
Pyrene	1520	µg/kg	29 J	3.8	17	65	11
Total PAH 17	22800	µg/kg	173.4	24.6	66.8	506.05	78.45
TOC	NL	mg/kg	11,700	19,400	10,800	16,200	21,700

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Table B-1
Sediment Sample Analytical Results - SVOCs
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-82	LMR11-83	LMR11-83	LMR11-83	LMR11-83
		Field Sample ID	LMR11-82-055	LMR11-83-006	LMR11-83-024	LMR11-83-048	LMR11-83-072
		Sample Date	8/5/2011	8/5/2011	8/5/2011	8/5/2011	8/5/2011
		Depth Interval (in bss)	24- 55	0- 6	6- 24	24- 48	48- 72
Chemical Name	**PEC[1]**	**Unit**					
1,1'-Biphenyl	NL	µg/kg	110 U	180 U	160 U	160 U	150 U
1,2,4,5-Tetrachlorobenzene	NL	µg/kg	110 U	180 U	160 U	160 U	150 U
2,2'-Oxybis(1-chloropropane)	NL	µg/kg	110 U	180 U	160 U	160 U	150 U
2,3,4,6-Tetrachlorophenol	NL	µg/kg	110 U	180 U	160 U	160 U	150 U
2,4,5-Trichlorophenol	NL	µg/kg	110 U	180 U	160 U	160 U	150 U
2,4,6-Trichlorophenol	NL	µg/kg	110 U	180 U	160 U	160 U	150 U
2,4-Dichlorophenol	NL	µg/kg	110 U	180 U	160 U	160 U	150 U
2,4-Dimethylphenol	NL	µg/kg	110 U	180 U	160 U	160 U	150 U
2,4-Dinitrophenol	NL	µg/kg	220 U	340 U	320 U	310 U	280 U
2,4-Dinitrotoluene	NL	µg/kg	110 U	180 U	160 U	160 U	150 U
2,6-Dinitrotoluene	NL	µg/kg	110 U	180 U	160 U	160 U	150 U
2-Chloronaphthalene	NL	µg/kg	110 U	180 U	160 U	160 U	150 U
2-Chlorophenol	NL	µg/kg	110 U	180 U	160 U	160 U	150 U
2-Methylnaphthalene	NL	µg/kg	2.2 U	3.4 U	4.5	3.7	2.8 U
2-Methylphenol	NL	µg/kg	110 U	180 U	160 U	160 U	150 U
2-Nitroaniline	NL	µg/kg	220 U	340 U	320 U	310 U	280 U
2-Nitrophenol	NL	µg/kg	110 U	180 UJ	160 U	160 UJ	150 U
3,3'-Dichlorobenzidine	NL	µg/kg	110 U	180 U	160 U	160 U	150 U
3-Nitroaniline	NL	µg/kg	220 U	340 U	320 U	310 U	280 U
4,6-Dinitro-2-methylphenol	NL	µg/kg	220 U	340 U	320 U	310 U	280 U
4-Bromophenyl-phenylether	NL	µg/kg	110 U	180 U	160 U	160 U	150 U
4-Chloro-3-methylphenol	NL	µg/kg	110 U	180 U	160 U	160 U	150 U
4-Chloroaniline	NL	µg/kg	110 U	180 U	160 U	160 U	150 U
4-Chlorophenyl-phenylether	NL	µg/kg	110 U	180 U	160 U	160 U	150 U
4-Methylphenol	NL	µg/kg	110 U	47 J	69 J	160 U	34 J
4-Nitroaniline	NL	µg/kg	220 U	340 U	320 U	310 U	280 U
4-Nitrophenol	NL	µg/kg	220 U	340 U	320 U	310 U	280 U
Acenaphthene	NL	µg/kg	2.2 U	3.4 U	10	7.5	2.8 U
Acenaphthylene	NL	µg/kg	2.2 U	3.4 U	5.1	3.1 U	2.8 U
Acetophenone	NL	µg/kg	110 U	180 U	160 U	160 U	150 U
Anthracene	845	µg/kg	2.2 U	3.6	48	23	2.8 U
Atrazine	NL	µg/kg	110 U	180 U	160 U	160 U	150 U
Benzaldehyde	NL	µg/kg	110 U	180 U	160 U	160 U	150 U
Benzo(a)anthracene	1050	µg/kg	2.2 U	6.1	99	39	4.9
Benzo(a)pyrene	1450	µg/kg	2.2 U	6.2	76	34	4.5

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Table B-1
Sediment Sample Analytical Results - SVOCs
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-82	LMR11-83	LMR11-83	LMR11-83	LMR11-83
		Field Sample ID	LMR11-82-055	LMR11-83-006	LMR11-83-024	LMR11-83-048	LMR11-83-072
		Sample Date	8/5/2011	8/5/2011	8/5/2011	8/5/2011	8/5/2011
		Depth Interval (in bss)	24- 55	0- 6	6- 24	24- 48	48- 72
Chemical Name	**PEC[1]**	**Unit**					
Benzo(b)fluoranthene	NL	µg/kg	2.2 U	7.6	94	40	4.1
Benzo(g,h,i)perylene	NL	µg/kg	2.2 U	3.4 U	16	12	2.8 U
Benzo(k)fluoranthene	NL	µg/kg	2.2 U	3.4 U	20	16	2.8 U
Bis(2-chloroethoxy)methane	NL	µg/kg	110 U	180 U	160 U	160 U	150 U
Bis(2-chloroethyl)ether	NL	µg/kg	110 U	180 U	160 U	160 U	150 U
Bis(2-ethylhexyl)phthalate	NL	µg/kg	110 U	180 U	160 U	59 J	150 U
Butylbenzylphthalate	NL	µg/kg	110 U	180 U	160 U	160 U	150 U
Caprolactam	NL	µg/kg	110 U	180 U	160 U	160 U	150 U
Carbazole	NL	µg/kg	110 U	180 U	160 U	160 U	150 U
Chrysene	1290	µg/kg	2.2 U	7.2	110	39	6.5
Dibenzo(a,h)anthracene	NL	µg/kg	110 U	180 U	160 U	160 U	150 U
Dibenzofuran	NL	µg/kg	2.2 U	3.4 U	9.7	3.1 U	2.8 U
Diethylphthalate	NL	µg/kg	110 U	180 U	160 U	160 U	150 U
Dimethylphthalate	NL	µg/kg	110 U	180 U	160 U	160 U	150 U
Di-n-butylphthalate	NL	µg/kg	110 U	180 U	160 U	160 U	150 U
Di-n-octylphthalate	NL	µg/kg	110 U	180 U	160 U	160 U	150 U
Fluoranthene	2230	µg/kg	2.6	13	170	69	9.1
Fluorene	536	µg/kg	2.2 U	3.4 U	14	12	2.8 U
Hexachlorobenzene	NL	µg/kg	110 U	180 U	160 U	160 U	150 U
Hexachlorobutadiene	NL	µg/kg	110 U	180 U	160 U	160 U	150 U
Hexachlorocyclopentadiene	NL	µg/kg	110 U	180 U	160 U	160 U	150 U
Hexachloroethane	NL	µg/kg	110 U	180 U	160 U	160 U	150 U
Indeno(1,2,3-cd)pyrene	NL	µg/kg	2.2 U	4.1	23	16	2.8 U
Isophorone	NL	µg/kg	110 U	180 U	160 U	160 U	150 U
Naphthalene	561	µg/kg	2.2 U	10	15	6.8	6.4
Nitrobenzene	NL	µg/kg	110 U	180 U	160 U	160 U	150 U
N-Nitroso-di-n-propylamine	NL	µg/kg	110 U	180 U	160 U	160 U	150 U
N-Nitrosodiphenylamine	NL	µg/kg	110 U	180 U	160 U	160 U	150 U
Pentachlorophenol	NL	µg/kg	4.5 UJ	340 UJ	65 U	6.3 U	5.8 U
Phenanthrene	1170	µg/kg	3	12	130	67	7.5
Phenol	NL	µg/kg	110 U	180 U	160 U	160 U	150 U
Pyrene	1520	µg/kg	2.9	13	150	65	11
Total PAH 17	22800	µg/kg	23.9	94.7	994.3	453.1	66.6
TOC	NL	mg/kg	27,800	22,700	24,800	38,000	18,500

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Table B-1
Sediment Sample Analytical Results - SVOCs
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-83	LMR11-84	LMR11-84	LMR11-84	LMR11-84
		Field Sample ID	LMR11-83-087	LMR11-84-006	LMR11-84-024	LMR11-84-048	LMR11-84-072
		Sample Date	8/5/2011	8/5/2011	8/5/2011	8/5/2011	8/5/2011
		Depth Interval (in bss)	72- 87	0- 6	6- 24	24- 48	48- 72
Chemical Name	**PEC[1]**	**Unit**					
1,1'-Biphenyl	NL	µg/kg	130 U	190 U	190 U	120 U	160 U
1,2,4,5-Tetrachlorobenzene	NL	µg/kg	130 U	190 U	190 U	120 U	160 U
2,2'-Oxybis(1-chloropropane)	NL	µg/kg	130 U	190 U	190 U	120 U	160 U
2,3,4,6-Tetrachlorophenol	NL	µg/kg	130 U	190 U	190 U	120 U	160 U
2,4,5-Trichlorophenol	NL	µg/kg	130 U	190 U	190 U	120 U	160 U
2,4,6-Trichlorophenol	NL	µg/kg	130 U	190 U	190 U	120 U	160 U
2,4-Dichlorophenol	NL	µg/kg	130 U	190 U	190 U	120 U	160 U
2,4-Dimethylphenol	NL	µg/kg	130 U	190 U	190 U	120 U	160 U
2,4-Dinitrophenol	NL	µg/kg	250 U	370 U	360 U	230 U	320 U
2,4-Dinitrotoluene	NL	µg/kg	130 U	190 U	190 U	120 U	160 U
2,6-Dinitrotoluene	NL	µg/kg	130 U	190 U	190 U	120 U	160 U
2-Chloronaphthalene	NL	µg/kg	130 U	190 U	190 U	120 U	160 U
2-Chlorophenol	NL	µg/kg	130 U	190 U	190 U	120 U	160 U
2-Methylnaphthalene	NL	µg/kg	2.5 U	3.7 U	200	42	230
2-Methylphenol	NL	µg/kg	130 U	190 U	190 U	120 U	160 U
2-Nitroaniline	NL	µg/kg	250 U	370 U	360 U	230 U	320 U
2-Nitrophenol	NL	µg/kg	130 U	190 U	190 U	120 U	160 U
3,3'-Dichlorobenzidine	NL	µg/kg	130 U	190 U	190 U	120 U	160 U
3-Nitroaniline	NL	µg/kg	250 U	370 U	360 U	230 U	320 U
4,6-Dinitro-2-methylphenol	NL	µg/kg	250 U	370 U	360 U	230 U	320 U
4-Bromophenyl-phenylether	NL	µg/kg	130 U	190 U	190 U	120 U	160 U
4-Chloro-3-methylphenol	NL	µg/kg	130 U	190 U	190 U	120 U	160 U
4-Chloroaniline	NL	µg/kg	130 U	190 U	190 U	120 U	160 U
4-Chlorophenyl-phenylether	NL	µg/kg	130 U	190 U	190 U	120 U	160 U
4-Methylphenol	NL	µg/kg	130 U	64 J	38 J	36 J	53 J
4-Nitroaniline	NL	µg/kg	250 U	370 U	360 U	230 U	320 U
4-Nitrophenol	NL	µg/kg	250 U	370 U	360 U	230 U	320 U
Acenaphthene	NL	µg/kg	3	3.7 U	25	5.4	8.4
Acenaphthylene	NL	µg/kg	2.7	3.7 U	9.9	3.5	4.9
Acetophenone	NL	µg/kg	130 U	190 U	190 U	120 U	160 U
Anthracene	845	µg/kg	5.3	3.7 U	34	11	16
Atrazine	NL	µg/kg	130 U	190 U	190 U	120 U	160 U
Benzaldehyde	NL	µg/kg	130 U	190 U	190 U	120 U	160 U
Benzo(a)anthracene	1050	µg/kg	9.3	3.8	37	25	72
Benzo(a)pyrene	1450	µg/kg	14	5.8	32	29	61

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Table B-1
Sediment Sample Analytical Results - SVOCs
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-83	LMR11-84	LMR11-84	LMR11-84	LMR11-84
		Field Sample ID	LMR11-83-087	LMR11-84-006	LMR11-84-024	LMR11-84-048	LMR11-84-072
		Sample Date	8/5/2011	8/5/2011	8/5/2011	8/5/2011	8/5/2011
		Depth Interval (in bss)	72- 87	0- 6	6- 24	24- 48	48- 72
Chemical Name	**PEC[1]**	**Unit**					
Benzo(b)fluoranthene	NL	µg/kg	14	9.4	48	42	96
Benzo(g,h,i)perylene	NL	µg/kg	5.8	3.7 U	19	11	19
Benzo(k)fluoranthene	NL	µg/kg	6.5	3.7 U	22	16	29
Bis(2-chloroethoxy)methane	NL	µg/kg	130 U	190 U	190 U	120 U	160 U
Bis(2-chloroethyl)ether	NL	µg/kg	130 U	190 U	190 U	120 U	160 U
Bis(2-ethylhexyl)phthalate	NL	µg/kg	130 U	190 U	190 U	120 U	160 U
Butylbenzylphthalate	NL	µg/kg	130 U	190 U	190 U	120 U	160 U
Caprolactam	NL	µg/kg	130 U	190 U	190 U	120 U	160 U
Carbazole	NL	µg/kg	130 U	190 U	190 U	120 U	160 U
Chrysene	1290	µg/kg	11	5.4	44	32	94
Dibenzo(a,h)anthracene	NL	µg/kg	130 U	190 U	190 U	29 J	160 U
Dibenzofuran	NL	µg/kg	2.5 U	3.7 U	9.9	5.5	11
Diethylphthalate	NL	µg/kg	130 U	190 U	190 U	120 U	160 U
Dimethylphthalate	NL	µg/kg	130 U	190 U	190 U	120 U	160 U
Di-n-butylphthalate	NL	µg/kg	130 U	190 U	190 U	120 U	160 U
Di-n-octylphthalate	NL	µg/kg	130 U	190 U	190 U	120 U	160 U
Fluoranthene	2230	µg/kg	19	11	88	72	130
Fluorene	536	µg/kg	3	3.7 U	23	6.7	13
Hexachlorobenzene	NL	µg/kg	130 U	190 U	190 U	120 U	160 U
Hexachlorobutadiene	NL	µg/kg	130 U	190 U	190 U	120 U	160 U
Hexachlorocyclopentadiene	NL	µg/kg	130 U	190 U	190 U	120 U	160 U
Hexachloroethane	NL	µg/kg	130 U	190 U	190 U	120 U	160 U
Indeno(1,2,3-cd)pyrene	NL	µg/kg	7.2	3.7 U	25	17	25
Isophorone	NL	µg/kg	130 U	190 U	190 U	120 U	160 U
Naphthalene	561	µg/kg	6.5	3.7 U	110	42	160
Nitrobenzene	NL	µg/kg	130 U	190 U	190 U	120 U	160 U
N-Nitroso-di-n-propylamine	NL	µg/kg	130 U	190 U	190 U	120 U	160 U
N-Nitrosodiphenylamine	NL	µg/kg	130 U	190 U	190 U	120 U	160 U
Pentachlorophenol	NL	µg/kg	5.1 U	370 U	59 UJ	24 UJ	65 UJ
Phenanthrene	1170	µg/kg	16	6.6	130	79	150
Phenol	NL	µg/kg	130 U	190 U	190 U	120 U	160 U
Pyrene	1520	µg/kg	20	10	74	59	110
Total PAH 17	22800	µg/kg	145.8	70.5	930.8	498.1	1,229.30
TOC	NL	mg/kg	9,430 J	23,900	34,100	21,600	26,900 J

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Table B-1
Sediment Sample Analytical Results - SVOCs
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-84	LMR11-84	LMR11-84	LMR11-85	LMR11-85
		Field Sample ID	LMR11-84-072DP	LMR11-84-096	LMR11-84-115	LMR11-85-006	LMR11-85-024
		Sample Date	8/5/2011	8/5/2011	8/5/2011	8/5/2011	8/5/2011
		Depth Interval (in bss)	48- 72	72- 96	96- 115	0- 6	6- 24
Chemical Name	**PEC[1]**	**Unit**					
1,1'-Biphenyl	NL	µg/kg	160 U	150 U	31 J	180 U	170 U
1,2,4,5-Tetrachlorobenzene	NL	µg/kg	160 U	150 U	150 U	180 U	170 U
2,2'-Oxybis(1-chloropropane)	NL	µg/kg	160 U	150 U	150 U	180 U	170 U
2,3,4,6-Tetrachlorophenol	NL	µg/kg	160 U	150 U	150 U	180 U	170 U
2,4,5-Trichlorophenol	NL	µg/kg	160 U	150 U	150 U	180 U	170 U
2,4,6-Trichlorophenol	NL	µg/kg	160 U	150 U	150 U	180 U	170 U
2,4-Dichlorophenol	NL	µg/kg	160 U	150 U	150 U	180 U	170 U
2,4-Dimethylphenol	NL	µg/kg	160 U	150 U	150 U	180 U	170 U
2,4-Dinitrophenol	NL	µg/kg	310 U	300 U	290 U	340 U	320 U
2,4-Dinitrotoluene	NL	µg/kg	160 U	150 U	150 U	180 U	170 U
2,6-Dinitrotoluene	NL	µg/kg	160 U	150 U	150 U	180 U	170 U
2-Chloronaphthalene	NL	µg/kg	160 U	150 U	150 U	180 U	170 U
2-Chlorophenol	NL	µg/kg	160 U	150 U	150 U	180 U	170 U
2-Methylnaphthalene	NL	µg/kg	3.1 U	170	490	4.5	3.9
2-Methylphenol	NL	µg/kg	160 U	150 U	51 J	180 U	170 U
2-Nitroaniline	NL	µg/kg	310 U	300 U	290 U	340 U	320 U
2-Nitrophenol	NL	µg/kg	160 U	150 U	150 U	180 UJ	170 UJ
3,3'-Dichlorobenzidine	NL	µg/kg	160 U	150 U	150 U	180 U	170 U
3-Nitroaniline	NL	µg/kg	310 U	300 U	290 U	340 U	320 U
4,6-Dinitro-2-methylphenol	NL	µg/kg	310 U	300 U	290 U	340 U	320 U
4-Bromophenyl-phenylether	NL	µg/kg	160 U	150 U	150 U	180 U	170 U
4-Chloro-3-methylphenol	NL	µg/kg	160 U	150 U	150 U	180 U	170 U
4-Chloroaniline	NL	µg/kg	160 U	150 U	150 U	180 U	170 U
4-Chlorophenyl-phenylether	NL	µg/kg	160 U	150 U	150 U	180 U	170 U
4-Methylphenol	NL	µg/kg	64 J	120 J	95 J	95 J	40 J
4-Nitroaniline	NL	µg/kg	310 U	300 U	290 U	340 U	320 U
4-Nitrophenol	NL	µg/kg	310 U	300 U	290 U	340 U	320 U
Acenaphthene	NL	µg/kg	3.1 U	9	19	3.4 U	3.2 U
Acenaphthylene	NL	µg/kg	3.1 U	3.4	9.3	3.9	3.2 U
Acetophenone	NL	µg/kg	160 U	150 U	62 J	180 U	170 U
Anthracene	845	µg/kg	3.1 U	26	29	9.4	3.2 U
Atrazine	NL	µg/kg	160 U	150 U	150 U	180 U	170 U
Benzaldehyde	NL	µg/kg	160 U	150 U	150 U	180 U	170 U
Benzo(a)anthracene	1050	µg/kg	3.1 U	62	95	29	4.5
Benzo(a)pyrene	1450	µg/kg	3.1 U	66	99	31	4

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Table B-1
Sediment Sample Analytical Results - SVOCs
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-84	LMR11-84	LMR11-84	LMR11-85	LMR11-85
		Field Sample ID	LMR11-84-072DP	LMR11-84-096	LMR11-84-115	LMR11-85-006	LMR11-85-024
		Sample Date	8/5/2011	8/5/2011	8/5/2011	8/5/2011	8/5/2011
		Depth Interval (in bss)	48- 72	72- 96	96- 115	0- 6	6- 24
Chemical Name	**PEC[1]**	**Unit**					
Benzo(b)fluoranthene	NL	µg/kg	3.1 U	90	130	31	5.1
Benzo(g,h,i)perylene	NL	µg/kg	3.1 U	28	49	13	3.2 U
Benzo(k)fluoranthene	NL	µg/kg	3.1 U	33	47	15	3.2 U
Bis(2-chloroethoxy)methane	NL	µg/kg	160 U	150 U	150 U	180 U	170 U
Bis(2-chloroethyl)ether	NL	µg/kg	160 U	150 U	150 U	180 U	170 U
Bis(2-ethylhexyl)phthalate	NL	µg/kg	160 U	150 U	150 U	180 U	170 U
Butylbenzylphthalate	NL	µg/kg	160 U	150 U	150 U	180 U	170 U
Caprolactam	NL	µg/kg	160 U	150 U	150 U	180 U	170 U
Carbazole	NL	µg/kg	160 U	150 U	150 U	180 U	170 U
Chrysene	1290	µg/kg	3.1 U	65	110	29	5.3
Dibenzo(a,h)anthracene	NL	µg/kg	33 J	150 U	92 J	180 U	170 U
Dibenzofuran	NL	µg/kg	3.1 U	16	29 U	3.4 U	3.2 U
Diethylphthalate	NL	µg/kg	160 U	150 U	150 U	180 U	170 U
Dimethylphthalate	NL	µg/kg	160 U	150 U	150 U	180 U	170 U
Di-n-butylphthalate	NL	µg/kg	160 U	150 U	150 U	180 U	170 U
Di-n-octylphthalate	NL	µg/kg	160 U	150 U	150 U	180 U	170 U
Fluoranthene	2230	µg/kg	3.1 U	120	160	50	8.3
Fluorene	536	µg/kg	3.1 U	14	41	4	3.2 U
Hexachlorobenzene	NL	µg/kg	160 U	150 U	150 U	180 U	170 U
Hexachlorobutadiene	NL	µg/kg	160 U	150 U	150 U	180 U	170 U
Hexachlorocyclopentadiene	NL	µg/kg	160 U	150 U	150 U	180 U	170 U
Hexachloroethane	NL	µg/kg	160 U	150 U	150 U	180 U	170 U
Indeno(1,2,3-cd)pyrene	NL	µg/kg	3.1 U	35	53	15	3.2 U
Isophorone	NL	µg/kg	160 U	150 U	150 U	180 U	170 U
Naphthalene	561	µg/kg	3.1 U	120	360	13	10
Nitrobenzene	NL	µg/kg	160 U	150 U	150 U	180 U	170 U
N-Nitroso-di-n-propylamine	NL	µg/kg	160 U	150 U	150 U	180 U	170 U
N-Nitrosodiphenylamine	NL	µg/kg	160 U	150 U	150 U	180 U	170 U
Pentachlorophenol	NL	µg/kg	310 U	60 UJ	59 UJ	28 U	320 UJ
Phenanthrene	1170	µg/kg	3.1 U	130	240	32	6.6
Phenol	NL	µg/kg	160 U	150 U	150 U	180 U	170 U
Pyrene	1520	µg/kg	3.1 U	90	140	52	8.7
Total PAH 17	22800	µg/kg	26.35	1,077	2,086	335.2	69.2
TOC	NL	mg/kg	169,000 J	74,000	52,700	20,400	17,000

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Table B-1
Sediment Sample Analytical Results - SVOCs
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-85	LMR11-85
		Field Sample ID	LMR11-85-048	LMR11-85-074
		Sample Date	8/5/2011	8/5/2011
		Depth Interval (in bss)	24- 48	48- 74
Chemical Name	**PEC[1]**	**Unit**		
1,1'-Biphenyl	NL	µg/kg	190 U	150 U
1,2,4,5-Tetrachlorobenzene	NL	µg/kg	190 U	150 U
2,2'-Oxybis(1-chloropropane)	NL	µg/kg	190 U	150 U
2,3,4,6-Tetrachlorophenol	NL	µg/kg	190 U	150 U
2,4,5-Trichlorophenol	NL	µg/kg	190 U	150 U
2,4,6-Trichlorophenol	NL	µg/kg	190 U	150 U
2,4-Dichlorophenol	NL	µg/kg	190 U	150 U
2,4-Dimethylphenol	NL	µg/kg	190 U	150 U
2,4-Dinitrophenol	NL	µg/kg	370 U	290 U
2,4-Dinitrotoluene	NL	µg/kg	190 U	150 U
2,6-Dinitrotoluene	NL	µg/kg	190 U	150 U
2-Chloronaphthalene	NL	µg/kg	190 U	150 U
2-Chlorophenol	NL	µg/kg	190 U	150 U
2-Methylnaphthalene	NL	µg/kg	3.9	3.7
2-Methylphenol	NL	µg/kg	190 U	150 U
2-Nitroaniline	NL	µg/kg	370 U	290 U
2-Nitrophenol	NL	µg/kg	190 UJ	150 UJ
3,3'-Dichlorobenzidine	NL	µg/kg	190 U	150 U
3-Nitroaniline	NL	µg/kg	370 U	290 U
4,6-Dinitro-2-methylphenol	NL	µg/kg	370 U	290 U
4-Bromophenyl-phenylether	NL	µg/kg	190 U	150 U
4-Chloro-3-methylphenol	NL	µg/kg	190 U	150 U
4-Chloroaniline	NL	µg/kg	190 U	150 U
4-Chlorophenyl-phenylether	NL	µg/kg	190 U	150 U
4-Methylphenol	NL	µg/kg	190 U	150 U
4-Nitroaniline	NL	µg/kg	370 U	290 U
4-Nitrophenol	NL	µg/kg	370 U	290 U
Acenaphthene	NL	µg/kg	3.7 U	2.9 U
Acenaphthylene	NL	µg/kg	3.7 U	2.9 U
Acetophenone	NL	µg/kg	190 U	150 U
Anthracene	845	µg/kg	3.7 U	3.4
Atrazine	NL	µg/kg	190 U	150 U
Benzaldehyde	NL	µg/kg	190 U	150 U
Benzo(a)anthracene	1050	µg/kg	3.9	9.1
Benzo(a)pyrene	1450	µg/kg	3.7 U	13

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Table B-1
Sediment Sample Analytical Results - SVOCs
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-85	LMR11-85
		Field Sample ID	LMR11-85-048	LMR11-85-074
		Sample Date	8/5/2011	8/5/2011
		Depth Interval (in bss)	24- 48	48- 74
Chemical Name	**PEC[1]**	**Unit**		
Benzo(b)fluoranthene	NL	µg/kg	4.2	12
Benzo(g,h,i)perylene	NL	µg/kg	3.7 U	4.5
Benzo(k)fluoranthene	NL	µg/kg	3.7 U	5.1
Bis(2-chloroethoxy)methane	NL	µg/kg	190 U	150 U
Bis(2-chloroethyl)ether	NL	µg/kg	190 U	150 U
Bis(2-ethylhexyl)phthalate	NL	µg/kg	190 U	150 U
Butylbenzylphthalate	NL	µg/kg	190 U	150 U
Caprolactam	NL	µg/kg	190 U	150 U
Carbazole	NL	µg/kg	190 U	150 U
Chrysene	1290	µg/kg	4.7	9.5
Dibenzo(a,h)anthracene	NL	µg/kg	190 U	150 U
Dibenzofuran	NL	µg/kg	3.7 U	2.9 U
Diethylphthalate	NL	µg/kg	190 U	150 U
Dimethylphthalate	NL	µg/kg	190 U	150 U
Di-n-butylphthalate	NL	µg/kg	190 U	150 U
Di-n-octylphthalate	NL	µg/kg	190 U	150 U
Fluoranthene	2230	µg/kg	9.3	14
Fluorene	536	µg/kg	3.7 U	2.9 U
Hexachlorobenzene	NL	µg/kg	190 U	150 U
Hexachlorobutadiene	NL	µg/kg	190 U	150 U
Hexachlorocyclopentadiene	NL	µg/kg	190 U	150 U
Hexachloroethane	NL	µg/kg	190 U	150 U
Indeno(1,2,3-cd)pyrene	NL	µg/kg	3.7 U	5.4
Isophorone	NL	µg/kg	190 U	150 U
Naphthalene	561	µg/kg	11	6.7
Nitrobenzene	NL	µg/kg	190 U	150 U
N-Nitroso-di-n-propylamine	NL	µg/kg	190 U	150 U
N-Nitrosodiphenylamine	NL	µg/kg	190 U	150 U
Pentachlorophenol	NL	µg/kg	370 UJ	290 UJ
Phenanthrene	1170	µg/kg	8.6	9.6
Phenol	NL	µg/kg	190 U	150 U
Pyrene	1520	µg/kg	10	15 J
Total PAH 17	22800	µg/kg	72.25	116.8
TOC	NL	mg/kg	39,900	22,900

Notes and Abbreviations:
Result exceeds PEC
% - Percent
µg/kg - Microgram per kilogram
DP - Duplicate
FS - Field split
ID - Identification
in bss - Inches below sediment surface
J - Estimated value
mg/kg - Milligram per kilogram
NL - Not Listed
PAH - Polycylic Aromatic Hydrocarbon
PEC - Probable Effect Concentration
TOC - Total Organic Carbon
U - Not detected
[1] Consensus-based PEC values (2000)

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Table B-2
Sediment Sample Analytical Results - TAL Metals
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-01	LMR11-01	LMR11-01	LMR11-01	LMR11-02	LMR11-03	LMR11-03
		Field Sample ID	LMR11-01-006	LMR11-01-024	LMR11-01-048	LMR11-01-060	LMR11-02-006	LMR11-03-006	LMR11-03-024
		Sample Date	8/2/2011	8/5/2011	8/5/2011	8/5/2011	8/2/2011	8/3/2011	8/3/2011
		Depth Interval (in bss)	0- 6	6- 24	24- 48	48- 60	0- 6	0- 6	6- 24
Chemical Name	PEC[1]	Unit							
Aluminum	NL	mg/kg	20,700	20,600 J-	13,300 J-	6,140 J-	4,350	10,900	19,000
Antimony	NL	mg/kg	0.33 UJ	0.3 UJ	0.27 UJ	7.3 UJ	0.2 UJ	7.3 UJ	0.3 UJ
Arsenic	33	mg/kg	8.1	9.5 J-	6.1 J-	13.8 J-	2.7	6.3	8.5
Barium	NL	mg/kg	143	154 J-	95.6 J-	38.1 J-	27.4	79.6	124
Beryllium	NL	mg/kg	0.94	0.97 J-	0.023 UJ	0.022 UJ	0.017 U	0.022 U	0.86
Cadmium	4.98	mg/kg	1.6	1.9 J-	1.1 J-	0.013 UJ	0.011 U	1.1	1.8
Calcium	NL	mg/kg	42,100	35,100 J-	34,700 J-	44,500 J-	26,700	45,500	45,000
Chromium	111	mg/kg	30.4	32.1 J-	21.3 J-	11.7 J-	8	17.8	28.8
Cobalt	NL	mg/kg	10.7	11.4 J-	9 J-	10.3 J-	0.05 U	7.4	9.5
Copper	149	mg/kg	37.6	40.1 J-	23.7 J-	16 J-	6.6	24	34.4
Iron	NL	mg/kg	28,500	29,800 J-	19,800 J-	17,200 J-	7,560	17,200	25,400
Lead	128	mg/kg	23.7 J	35.4 J-	16.9 J-	10.7 J-	4.9 J	14.7 J	21.7
Magnesium	NL	mg/kg	12,700	10,200 J-	12,300 J-	19,700 J-	7,290	13,500	14,000
Manganese	NL	mg/kg	430	519 J-	358 J-	279 J-	149	326	423
Mercury	1.06	mg/kg	0.062 J	0.094 J-	0.11 J-	0.024 J-	0.017 J	0.044 J	0.07 J
Nickel	48.6	mg/kg	32.1	36.1 J-	25 J-	21.5 J-	8.3	19.2	29.5
Potassium	NL	mg/kg	3,720	2,920 J-	2,230 J-	1,110 J-	780	1,970	3,350
Selenium	NL	mg/kg	5.6 U	5 UJ	4.5 UJ	4.3 UJ	3.3 U	4.2 U	4.9 U
Silver	NL	mg/kg	0.051 U	0.28 J-	0.057 J-	1.2 UJ	0.95 U	0.039 U	0.21 J
Sodium	NL	mg/kg	1.9 U	1.7 UJ	1.5 UJ	1.5 UJ	1.1 U	1.5 U	1.7 UJ
Thallium	NL	mg/kg	0.22 U	0.2 UJ	0.18 UJ	0.17 UJ	0.13 U	0.17 U	0.2 U
Vanadium	NL	mg/kg	44.6	42.3 J-	31.5 J-	17.8 J-	12.2	27.2	44.7
Zinc	459	mg/kg	131 J	332 J-	73.2 J-	38.4 J-	27.9 J	75.7 J	117

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Table B-2
Sediment Sample Analytical Results - TAL Metals
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-03	LMR11-03	LMR11-04	LMR11-05	LMR11-05	LMR11-06	LMR11-06
		Field Sample ID	LMR11-03-048	LMR11-03-059	LMR11-04-006	LMR11-05-006	LMR11-05-018	LMR11-06-006	LMR11-06-024
		Sample Date	8/3/2011	8/3/2011	8/3/2011	8/4/2011	8/4/2011	8/3/2011	8/3/2011
		Depth Interval (in bss)	24- 48	48- 59	0- 6	0- 6	6- 18	0- 6	6- 24
Chemical Name	PEC[1]	Unit							
Aluminum	NL	mg/kg	20,400	19,900	5,620	10,100	22,200	17,400	24,700
Antimony	NL	mg/kg	0.28 UJ	0.3 UJ	0.2 UJ	0.26 UJ	0.28 UJ	0.49 J	0.39 UJ
Arsenic	33	mg/kg	9.3	8.8	3.6	9.5	11.8	8	9
Barium	NL	mg/kg	149	130	34.3	68.8	139	123	156
Beryllium	NL	mg/kg	0.97	0.89	0.017 U	0.022 U	1.2	0.88	1.1
Cadmium	4.98	mg/kg	2.2	2.6	0.01 U	1.1	2.5	1.4	2
Calcium	NL	mg/kg	42,700	37,600	31,500	204,000	40,900	42,000	38,500
Chromium	111	mg/kg	32	31.6	9.5	15.3	33	27	35
Cobalt	NL	mg/kg	11.4	9.8	0.049 U	0.064 U	11.7	9.8	11.6
Copper	149	mg/kg	37.4	33	8.2	21	35.4	34.3	40.2
Iron	NL	mg/kg	31,200	26,900	9,070	18,600	28,300	25,600	30,800
Lead	128	mg/kg	31.2	26.8	6 J	14.3	27.5	20.7 J	24.6
Magnesium	NL	mg/kg	11,800	11,100	9,300	9,200	12,300	12,600	12,000
Manganese	NL	mg/kg	641	510	185	868	457	436	439
Mercury	1.06	mg/kg	0.11 J	0.081 J	0.019 J	0.04 J	0.063 J	0.056 J	0.072 J
Nickel	48.6	mg/kg	35.1	31.7	10.2	20.3	34.8	28.5	35.5
Potassium	NL	mg/kg	2,880	3,200	1,040	1,850	3,980	3,190	4,480
Selenium	NL	mg/kg	4.7 U	5 U	3.3 U	4.3 U	4.6 U	6.2 U	6.5 U
Silver	NL	mg/kg	0.23 J	0.29 J	0.95 U	1.2 U	0.19 J	0.13 J	0.25 J
Sodium	NL	mg/kg	1.6 UJ	1.7 UJ	1.1 U	1.5 UJ	1.6 UJ	2.1 U	2.2 UJ
Thallium	NL	mg/kg	0.19 U	0.2 U	0.13 U	0.17 U	0.18 U	0.25 U	0.26 U
Vanadium	NL	mg/kg	44.3	45.6	14.7	25.5	48.8	39.4	53.8
Zinc	459	mg/kg	269	124	43 J	76.9	124	120 J	146

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Table B-2
Sediment Sample Analytical Results - TAL Metals
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-06	LMR11-07	LMR11-08	LMR11-08	LMR11-08	LMR11-10	LMR11-10
		Field Sample ID	LMR11-06-052	LMR11-07-006	LMR11-08-006	LMR11-08-024	LMR11-08-052	LMR11-10-006	LMR11-10-024
		Sample Date	8/3/2011	8/3/2011	8/3/2011	8/5/2011	8/5/2011	8/4/2011	8/4/2011
		Depth Interval (in bss)	24- 52	0- 6	0- 6	6- 24	24- 52	0- 6	6- 24
Chemical Name	PEC[1]	Unit							
Aluminum	NL	mg/kg	19,400	9,360	18,800	24,000 J-	22,600 J-	3,330	8,350
Antimony	NL	mg/kg	0.24 UJ	7.1 UJ	0.39 UJ	0.34 UJ	0.28 UJ	6.8 UJ	0.22 UJ
Arsenic	33	mg/kg	8.1	5.6	7.9	9.2 J-	9.3 J-	2.3 J	5.6 J
Barium	NL	mg/kg	133	63	130	156 J-	158 J-	0.07 U	65.5
Beryllium	NL	mg/kg	0.86	0.021 U	0.033 U	1 J-	1 J-	0.02 U	0.019 U
Cadmium	4.98	mg/kg	2.9	0.71	1.4	1.6 J-	1.7 J-	0.012 U	2
Calcium	NL	mg/kg	32,100	52,600	41,600	39,100 J-	35,700 J-	33,700	32,200
Chromium	111	mg/kg	34.6	15.2	27.9	33.8 J-	32.6 J-	7.1	16.2
Cobalt	NL	mg/kg	9.2	7	10.2	11.4 J-	11.4 J-	0.059 U	6.4
Copper	149	mg/kg	34.8	15.9	33.2	38.3 J-	38.3 J-	4.7	18.8
Iron	NL	mg/kg	24,900	14,900	26,300	29,900 J-	29,500 J-	6,710	13,600
Lead	128	mg/kg	33.8	10.2 J	19.8 J	25.2 J-	27.5 J-	4.7 J	14.8 J
Magnesium	NL	mg/kg	9,680	10,900	12,100	12,100 J-	10,800 J-	10,200	10,900
Manganese	NL	mg/kg	440	311	407	481 J-	521 J-	146	239
Mercury	1.06	mg/kg	0.073 J	0.038 J	0.056 J	0.074 J-	0.077 J-	0.011 J	0.038 J
Nickel	48.6	mg/kg	32.7	17.4	29.8	35.1 J-	35.6 J-	7.1	18.1
Potassium	NL	mg/kg	3,140	1,550	3,410	4,280 J-	3,560 J-	10.6 U	1160
Selenium	NL	mg/kg	4 U	4.1 U	6.4 U	5.6 UJ	4.7 UJ	4 U	3.6 U
Silver	NL	mg/kg	0.3 J	0.038 U	0.059 U	0.22 J-	0.2 J-	0.036 U	0.033 U
Sodium	NL	mg/kg	1.4 UJ	1.4 U	2.2 U	1.9 UJ	1.6 UJ	1.4 U	1.2 U
Thallium	NL	mg/kg	0.16 U	0.16 U	0.26 U	0.23 UJ	0.19 UJ	0.16 U	0.14 U
Vanadium	NL	mg/kg	41.4	21.9	41.9	51.5 J-	45.3 J-	10.8	19.5
Zinc	459	mg/kg	200	60.4 J	116 J	130 J-	153 J-	24.6	64

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Table B-2
Sediment Sample Analytical Results - TAL Metals
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-10	LMR11-11	LMR11-11	LMR11-11	LMR11-12	LMR11-13	LMR11-13
		Field Sample ID	LMR11-10-045	LMR11-11-006	LMR11-11-024	LMR11-11-037	LMR11-12-006	LMR11-13-006	LMR11-13-026
		Sample Date	8/4/2011	8/5/2011	8/5/2011	8/5/2011	8/3/2011	8/3/2011	8/3/2011
		Depth Interval (in bss)	24- 45	0- 6	6- 24	24- 37	0- 6	0- 6	6- 26
Chemical Name	PEC[1]	Unit							
Aluminum	NL	mg/kg	6,970	5,210 J-	6,050 J-	4,110 J-	16,000	17,500	13,800
Antimony	NL	mg/kg	0.21 UJ	0.28 UJ	0.2 UJ	7.4 UJ	11.4 UJ	0.24 UJ	0.23 UJ
Arsenic	33	mg/kg	5.1 J	3.8 J-	4.5 J-	3.6 J-	7.7	11.8 J	5.2 J
Barium	NL	mg/kg	45.8	31.3 J-	45.7 J-	29.7 J-	122	116	89.4
Beryllium	NL	mg/kg	0.018 U	0.024 UJ	0.017 UJ	0.022 UJ	0.034 U	0.84	0.65
Cadmium	4.98	mg/kg	0.68	0.014 UJ	0.66 J-	0.014 UJ	1.2	1.6	0.9
Calcium	NL	mg/kg	31,000	33,800 J-	33,600 J-	32,000 J-	45,300	40,600	35,000
Chromium	111	mg/kg	13.4	10 J-	11.3 J-	9.1 J-	24.6	25.5	19.9
Cobalt	NL	mg/kg	5.7	0.068 UJ	4.9 J-	0.064 UJ	10.3	10.1	8.8
Copper	149	mg/kg	12.3	8.5 J-	12.9 J-	9.6 J-	29.8	34.2	20.4
Iron	NL	mg/kg	11,500	8,500 J-	10,300 J-	8,240 J-	25,000	23,700	18,800
Lead	128	mg/kg	10.6 J	7.1 J-	15.9 J-	8 J-	17.6 J	34.6 J	15.3 J
Magnesium	NL	mg/kg	9,870	11,800 J-	9,940 J-	9,200 J-	11,600	12,400	12,400
Manganese	NL	mg/kg	226	167 J-	238 J-	176 J-	548	373	306
Mercury	1.06	mg/kg	0.036 J	0.017 J-	0.031 J-	0.032 J-	0.041 J	0.14	0.07 J
Nickel	48.6	mg/kg	14.3	10.5 J-	12.6 J-	11.6 J-	28.9	28.1	23.4
Potassium	NL	mg/kg	1,040	966 J-	1,030 J-	617 J-	2,680	2,960	2,370
Selenium	NL	mg/kg	3.4 U	4.6 UJ	3.3 UJ	4.3 UJ	6.7 U	4 U	3.8 U
Silver	NL	mg/kg	0.031 U	1.3 UJ	0.94 UJ	1.2 UJ	0.061 U	0.036 U	0.035 U
Sodium	NL	mg/kg	1.2 U	1.6 UJ	1.1 UJ	1.5 UJ	2.3 U	1.4 U	1.3 U
Thallium	NL	mg/kg	0.14 U	0.18 UJ	0.13 UJ	0.17 UJ	0.27 U	0.16 U	0.15 U
Vanadium	NL	mg/kg	18.9	14.7 J-	17.1 J-	12.8 J-	35.3	39.8	32.6
Zinc	459	mg/kg	48	37.5 J-	50 J-	34.7 J-	106 J	103	66.8

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Table B-2
Sediment Sample Analytical Results - TAL Metals
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-14	LMR11-14	LMR11-14	LMR11-15	LMR11-15	LMR11-15	LMR11-15
		Field Sample ID	LMR11-14-006	LMR11-14-024	LMR11-14-045	LMR11-15-006	LMR11-15-006-DP	LMR11-15-024	LMR11-15-024-DP
		Sample Date	8/5/2011	8/5/2011	8/5/2011	8/9/2011	8/9/2011	8/9/2011	8/9/2011
		Depth Interval (in bss)	0- 6	6- 24	24- 45	0- 6	0- 6	6- 24	6- 24
Chemical Name	PEC[1]	Unit							
Aluminum	NL	mg/kg	4,560 J-	11,900 J-	9,120 J-	24,400	22,400	24,400	20,000
Antimony	NL	mg/kg	0.39 J-	7.6 UJ	0.32 J-	9.9 UJ	0.3 UJ	0.32 UJ	0.32 UJ
Arsenic	33	mg/kg	3.2 J-	6.8 J-	8.9 J-	8.6	8.4	9.3	7.9
Barium	NL	mg/kg	35.2 J-	87.1 J-	82.6 J-	159	138	152	114
Beryllium	NL	mg/kg	0.019 UJ	0.023 UJ	0.024 UJ	0.93	0.93	1.1	0.79
Cadmium	4.98	mg/kg	0.012 UJ	1.3 J-	3.1 J-	1.8	1.3	1.6	1.2
Calcium	NL	mg/kg	36,000 J-	36,800 J-	49,800 J-	33,600	37,300	36,200	32,700
Chromium	111	mg/kg	8.4 J-	20.3 J-	29.1 J-	32.3	31	33.9	27.3
Cobalt	NL	mg/kg	0.056 UJ	8 J-	7.4 J-	11.4	10.3 J	11.4 J	9.3 J
Copper	149	mg/kg	10.4 J-	25 J-	32.2 J-	34.8	31.3	36.5	27.4
Iron	NL	mg/kg	8,560 J-	18,200 J-	16,200 J-	29,500	26,100	30,600	24,000
Lead	128	mg/kg	6.6 J-	18.8 J-	30.8 J-	21.6	19 J	23.1 J	16.5 J
Magnesium	NL	mg/kg	10,500 J-	11,500 J-	13,500 J-	10,400	10,600	11,300	10,400
Manganese	NL	mg/kg	190 J-	325 J-	420 J-	512	442 J	536 J	427 J
Mercury	1.06	mg/kg	0.023 J-	0.059 J-	0.098 J-	0.063 J	0.057 J	0.051 J	0.046 J
Nickel	48.6	mg/kg	9.1 J-	22.8 J-	25.9 J-	34.6	29.6 J	34.5 J	27.2 J
Potassium	NL	mg/kg	849 J-	1,880 J-	1,460 J-	4,330	4,450	4,300	3,890
Selenium	NL	mg/kg	3.8 UJ	4.4 UJ	4.7 UJ	5.8 U	4.9 U	5.4 U	5.3 U
Silver	NL	mg/kg	1.1 UJ	0.083 J-	0.18 J-	0.053 U	0.045 U	0.049 U	0.049 U
Sodium	NL	mg/kg	1.3 UJ	1.5 UJ	1.6 UJ	2 UJ	1.7 U	1.8 U	1.8 U
Thallium	NL	mg/kg	0.15 UJ	0.18 UJ	0.19 UJ	0.23 U	0.2 U	0.22 U	0.21 U
Vanadium	NL	mg/kg	14.3 J-	28.1 J-	23 J-	47.1	47.8	50.1	43.7
Zinc	459	mg/kg	31 J-	81.5 J-	88.9 J-	129	106 J	130 J	95.9 J

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Table B-2
Sediment Sample Analytical Results - TAL Metals
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-15	LMR11-15	LMR11-15	LMR11-15	LMR11-16	LMR11-16	LMR11-16
		Field Sample ID	LMR11-15-048	LMR11-15-048-DP	LMR11-15-072	LMR11-15-104	LMR11-16-006	LMR11-16-024	LMR11-16-048
		Sample Date	8/9/2011	8/9/2011	8/9/2011	8/9/2011	8/9/2011	8/9/2011	8/9/2011
		Depth Interval (in bss)	24- 48	24- 48	48- 72	72- 104	0- 6	6- 24	24- 48
Chemical Name	PEC[1]	Unit							
Aluminum	NL	mg/kg	17,600	22,500	11,300	12,500	24,000	27,100	25,900
Antimony	NL	mg/kg	0.24 UJ	0.27 UJ	0.28 UJ	0.27 UJ	11.3 UJ	0.33 UJ	0.34 UJ
Arsenic	33	mg/kg	10	8.9	9.9	11.3	10.7	11.6	16.4
Barium	NL	mg/kg	109	132	77.9	87.8	165	175	167
Beryllium	NL	mg/kg	0.76	0.9	0.024 U	0.023 U	0.96	1.1	0.97
Cadmium	4.98	mg/kg	1.5	1.4	1.3	1.5	2	2.1	2.1
Calcium	NL	mg/kg	55,400	35,600	77,200	64,700	31,600	31,100	36,200
Chromium	111	mg/kg	26.4	30.5	19.9	22	33.1	36.4	35.2
Cobalt	NL	mg/kg	8.9 J	10 J	8 J	8.8 J	12.4	12.6	11.6
Copper	149	mg/kg	30	38.4	26.6	30.4	37.7	39.6	38.2
Iron	NL	mg/kg	23,300	26,000	20,300	20,600	31,800	33,500	31,300
Lead	128	mg/kg	20.8 J	19.6 J	20.4 J	20.4 J	24.1	25.6	29.7
Magnesium	NL	mg/kg	15,600	10,800	24,500	19,700	10,800	11,000	11,100
Manganese	NL	mg/kg	503 J	447 J	511 J	467 J	496	521	550
Mercury	1.06	mg/kg	0.059 J	0.055 J	0.054 J	0.068 J	0.066 J	0.075 J	0.087 J
Nickel	48.6	mg/kg	26.3 J	29.5 J	22.8 J	25.2 J	37.6	38.9	36.3
Potassium	NL	mg/kg	3,170	4,120	1,940	2,300	3,790	4,570	4,360
Selenium	NL	mg/kg	3.9 U	4.4 U	4.7 U	4.5 U	6.6 U	5.5 U	5.6 U
Silver	NL	mg/kg	0.036 U	0.04 U	1.4 U	0.041 U	0.06 U	0.051 U	0.052 U
Sodium	NL	mg/kg	1.3 U	1.5 U	1.6 U	1.6 U	2.3 UJ	1.9 UJ	980 J
Thallium	NL	mg/kg	0.16 U	0.18 U	0.19 U	0.18 U	0.26 U	0.22 U	0.23 U
Vanadium	NL	mg/kg	40.3	47.2	29.8	34.8	46.4	53.9	52.5
Zinc	459	mg/kg	107 J	111 J	80.7 J	83.7 J	139	145	197

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Table B-2
Sediment Sample Analytical Results - TAL Metals
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-16	LMR11-17	LMR11-17	LMR11-18	LMR11-18	LMR11-18	LMR11-19
		Field Sample ID	LMR11-16-072	LMR11-17-006	LMR11-17-021	LMR11-18-006	LMR11-18-024	LMR11-18-048	LMR11-19-006
		Sample Date	8/9/2011	8/4/2011	8/4/2011	8/3/2011	8/5/2011	8/5/2011	8/3/2011
		Depth Interval (in bss)	48- 72	0- 6	6- 21	0- 6	6- 24	24- 48	0- 6
Chemical Name	PEC[1]	Unit							
Aluminum	NL	mg/kg	12,100	3,020	3,880	9,300	8,820 J-	14,700 J-	13,100
Antimony	NL	mg/kg	0.32 UJ	6.2 UJ	0.21 UJ	0.34 UJ	8.2 UJ	9.4 UJ	0.5 J
Arsenic	33	mg/kg	63.2	3.4 J	3.4 J	5.1	7.4 J-	9.5 J-	6.2
Barium	NL	mg/kg	99.8	0.064 U	22.2	69.3	67.9 J-	129 J-	88.4
Beryllium	NL	mg/kg	0.028 U	0.019 U	0.018 U	0.03 U	0.025 UJ	0.028 UJ	0.027 U
Cadmium	4.98	mg/kg	2	0.011 U	0.011 U	0.018 U	1.1 J-	4.6 J-	0.92
Calcium	NL	mg/kg	35,600	30,500	48,700	39,000	39,300 J-	55,200 J-	33,300
Chromium	111	mg/kg	23.6	8.1	7.6	14.8	16.4 J-	44.9 J-	19.9
Cobalt	NL	mg/kg	8.1	0.053 U	0.053 U	0.085 U	7.5 J-	8.8 J-	8.1
Copper	149	mg/kg	27.1	2.8	6.2	18.7	20.9 J-	42.2 J-	19.6
Iron	NL	mg/kg	16,800	7,320	8,010	14,600	15,000 J-	21,000 J-	19,000
Lead	128	mg/kg	29	3.8 J	4.4 J	11.8 J	15.7 J-	40.4 J-	12.8 J
Magnesium	NL	mg/kg	9,970	9,860	14,500	11,000	10,900 J-	12,100 J-	9,710
Manganese	NL	mg/kg	328	148	230	290	294 J-	499 J-	345
Mercury	1.06	mg/kg	0.078 J	0.0052 J	0.0052 J	0.027 J	0.059 J-	0.12 J-	0.029 J
Nickel	48.6	mg/kg	23.1	7.2	8.9	16.5	20 J-	35.4 J-	21.4
Potassium	NL	mg/kg	2,070	415 J	676	1,850	1,360 J-	2,700 J-	2,380
Selenium	NL	mg/kg	0.53 J	3.6 U	3.5 U	5.7 U	4.8 UJ	5.5 UJ	0.49 J
Silver	NL	mg/kg	0.049 U	0.033 U	1 U	1.6 U	1.4 UJ	0.4 J-	0.098 J
Sodium	NL	mg/kg	1700 J	1.2 U	1.2 U	2 U	1.6 UJ	1.9 UJ	1.8 U
Thallium	NL	mg/kg	0.21 U	0.14 U	0.14 U	0.23 U	0.19 UJ	0.22 UJ	0.21 U
Vanadium	NL	mg/kg	31.5	10.4	11.9	24.4	22.6 J-	33.6 J-	29.9
Zinc	459	mg/kg	76.5	18.9	27.5	60.1 J	83.5 J-	126 J-	78.5 J

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Table B-2
Sediment Sample Analytical Results - TAL Metals
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-19	LMR11-20	LMR11-20	LMR11-20	LMR11-20	LMR11-20	LMR11-21
		Field Sample ID	LMR11-19-014	LMR11-20-006	LMR11-20-006FS	LMR11-20-024	LMR11-20-048	LMR11-20-060	LMR11-21-006
		Sample Date	8/3/2011	8/2/2011	8/2/2011	8/5/2011	8/5/2011	8/5/2011	8/3/2011
		Depth Interval (in bss)	6- 14	0- 6	0- 6	6- 24	24- 48	48- 60	0- 6
Chemical Name	PEC[1]	Unit							
Aluminum	NL	mg/kg	6,540 J-	21,000	21,700	22,400 J-	27,800 J-	9,090 J-	11,000
Antimony	NL	mg/kg	0.25 UJ	11.4 UJ	0.43 UJ	0.7 J-	0.64 J-	0.38 J-	0.44 J
Arsenic	33	mg/kg	7.5 J-	8.8	9.1	9.6 J-	10.4 J-	8.7 J-	6.5
Barium	NL	mg/kg	48.3 J-	148	154	158 J-	178 J-	68.8 J-	79.6
Beryllium	NL	mg/kg	0.022 UJ	0.95	0.037 U	1 J-	1.2 J-	0.022 UJ	0.03 U
Cadmium	4.98	mg/kg	0.87 J-	1.6	1.7	1.6 J-	2.2 J-	1.6 J-	1.3
Calcium	NL	mg/kg	60,300 J-	34,600	35,600	38,700 J-	34,700 J-	45,900 J-	35,300
Chromium	111	mg/kg	14 J-	31	32.3	32.5 J-	40.2 J-	21.7 J-	17.7
Cobalt	NL	mg/kg	6.3 J-	11.3	11.5	11.8 J-	12.4 J-	6.7 J-	0.087 U
Copper	149	mg/kg	13.6 J-	36.8	37.9	39.8 J-	42.1 J-	21.1 J-	21.5
Iron	NL	mg/kg	11,500 J-	30,100	30,700	30,300 J-	33,300 J-	14,100 J-	17,000
Lead	128	mg/kg	10.5 J-	23.5 J	24.1 J	25.7 J-	31.5 J-	27.6 J-	12.7 J
Magnesium	NL	mg/kg	15,000 J-	10,700	10,900	11,200 J-	11,100 J-	11,000 J-	9,560
Manganese	NL	mg/kg	285 J-	443	444	511 J-	578 J-	333 J-	338
Mercury	1.06	mg/kg	0.018 J-	0.072 J	0.063 J	0.075 J-	0.074 J-	0.088 J-	0.039 J
Nickel	48.6	mg/kg	16 J-	34.7	35.6	36 J-	40.1 J-	19.8 J-	19.5
Potassium	NL	mg/kg	1,230 J-	3,400	3,650	3,720 J-	4,740 J-	1,730 J-	2,040
Selenium	NL	mg/kg	4.2 UJ	6.6 U	7.2 U	5.8 UJ	5.4 UJ	4.3 UJ	5.8 U
Silver	NL	mg/kg	1.2 UJ	0.061 U	0.066 U	0.27 J-	0.23 J-	0.13 J-	1.7 U
Sodium	NL	mg/kg	1.4 UJ	2.3 U	2.5 U	2 UJ	1.8 UJ	1.5 UJ	2 U
Thallium	NL	mg/kg	0.17 UJ	0.27 U	0.29 U	0.23 UJ	0.21 UJ	0.17 UJ	0.23 U
Vanadium	NL	mg/kg	18.1 J-	43.8	45.6	45.7 J-	57.5 J-	24.5 J-	26.3
Zinc	459	mg/kg	42.3 J-	135 J	138 J	135 J-	171 J-	62.1 J-	75.5 J

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Table B-2
Sediment Sample Analytical Results - TAL Metals
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-22	LMR11-23	LMR11-23	LMR11-23	LMR11-23	LMR11-23	LMR11-23
		Field Sample ID	LMR11-22-006	LMR11-23-006	LMR11-23-024	LMR11-23-048	LMR11-23-072	LMR11-23-096	LMR11-23-115
		Sample Date	8/4/2011	8/11/2011	8/11/2011	8/11/2011	8/11/2011	8/11/2011	8/11/2011
		Depth Interval (in bss)	0- 6	0- 6	6- 24	24- 48	48- 72	72- 96	96- 115
Chemical Name	PEC[1]	Unit							
Aluminum	NL	mg/kg	14,200	21,500 J-	24,800 J-	21,800 J-	19,700 J-	22,900 J-	7,230 J-
Antimony	NL	mg/kg	0.6 J	0.38 UJ	0.36 UJ	0.36 UJ	0.31 UJ	0.22 UJ	0.21 UJ
Arsenic	33	mg/kg	7.6	9.1 J-	10.1 J-	9.2 J-	10.4 J-	9.4 J-	8.1 J-
Barium	NL	mg/kg	92.9	146 J-	161 J-	145 J-	135 J-	144 J-	53.3 J-
Beryllium	NL	mg/kg	0.028 U	0.99 J-	1 J-	0.91 J-	0.83 J-	0.92 J-	0.018 UJ
Cadmium	4.98	mg/kg	1	1.7 J-	1.9 J-	1.7 J-	2.3 J-	2.3 J-	1.2 J-
Calcium	NL	mg/kg	45,100	42,900 J-	39,300 J-	32,500 J-	43,800 J-	28,600 J-	54,300 J-
Chromium	111	mg/kg	21.5	31.6 J-	35.6 J-	31.6 J-	32.3 J-	34 J-	14 J-
Cobalt	NL	mg/kg	8.7	11.2 J-	12.3 J-	10.8 J-	10.4 J-	10.1 J-	5.8 J-
Copper	149	mg/kg	22.3	35.8 J-	39.9 J-	35.2 J-	35.9 J-	35.5 J-	16.6 J-
Iron	NL	mg/kg	20,600	29,700 J-	32,500 J-	29,400 J-	27,200 J-	27,300 J-	12,400 J-
Lead	128	mg/kg	13.5 J	22.9 J-	26.4 J-	23.3 J-	29.3 J-	28.2 J-	15.3 J-
Magnesium	NL	mg/kg	10,000	11,700 J-	12,100 J-	9,740 J-	12,200 J-	9,640 J-	15,500 J-
Manganese	NL	mg/kg	377	481 J-	522 J-	484 J-	542 J-	456 J-	327 J-
Mercury	1.06	mg/kg	0.041 J	0.057 J-	0.068 J-	0.078 J-	0.071 J-	0.067 J-	0.043 J-
Nickel	48.6	mg/kg	23.3	34 J-	37.4 J-	33.7 J-	33.1 J-	34 J-	16.2 J-
Potassium	NL	mg/kg	2,590	3,580 J-	4,160 J-	3,600 J-	3,180 J-	3,590 J-	1,200 J-
Selenium	NL	mg/kg	5.4 U	6.4 UJ	5.9 UJ	6 UJ	5.1 UJ	3.6 UJ	3.6 UJ
Silver	NL	mg/kg	0.057 J	0.17 J-	0.21 J-	0.17 J-	0.16 J-	0.18 J-	0.045 J-
Sodium	NL	mg/kg	1.9 U	2.2 UJ	2 UJ	2.1 UJ	1.8 UJ	1.2 UJ	1.2 UJ
Thallium	NL	mg/kg	0.22 U	0.25 UJ	0.24 UJ	0.24 UJ	0.21 UJ	0.15 UJ	0.14 UJ
Vanadium	NL	mg/kg	33.1	45.8 J-	53.4 J-	45.6 J-	42.7 J-	46.8 J-	19.1 J-
Zinc	459	mg/kg	83.1 J	132 J-	145 J-	133 J-	150 J-	125 J-	52.9 J-

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Table B-2
Sediment Sample Analytical Results - TAL Metals
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-24	LMR11-24	LMR11-24	LMR11-24	LMR11-24	LMR11-25	LMR11-25
		Field Sample ID	LMR11-24-006	LMR11-24-024	LMR11-24-048	LMR11-24-072	LMR11-24-096	LMR11-25-006	LMR11-25-024
		Sample Date	8/4/2011	8/11/2011	8/11/2011	8/11/2011	8/11/2011	8/11/2011	8/11/2011
		Depth Interval (in bss)	0- 6	6- 24	24- 48	48- 72	72- 96	0- 6	6- 24
Chemical Name	PEC[1]	Unit							
Aluminum	NL	mg/kg	5,240	13,400 J-	18,200 J-	20,200 J-	22,800 J-	20,300 J-	26,200 J-
Antimony	NL	mg/kg	5.7 UJ	0.32 UJ	0.26 UJ	0.27 UJ	0.28 UJ	0.33 UJ	0.34 UJ
Arsenic	33	mg/kg	3.2	7.3 J-	10.3 J-	11.2 J-	10.8 J-	10.5 J-	10.8 J-
Barium	NL	mg/kg	35	91.7 J-	127 J-	131 J-	157 J-	146 J-	170 J-
Beryllium	NL	mg/kg	0.017 U	0.028 UJ	0.86 J-	0.92 J-	0.99 J-	0.96 J-	1.2 J-
Cadmium	4.98	mg/kg	0.52	1.2 J-	2.1 J-	2.1 J-	2.1 J-	1.8 J-	1.9 J-
Calcium	NL	mg/kg	28,300	35,200 J-	46,000 J-	50,000 J-	43,700 J-	44,200 J-	35,300 J-
Chromium	111	mg/kg	9.4	21.7 J-	29.3 J-	30.9 J-	33.9 J-	30.7 J-	37.4 J-
Cobalt	NL	mg/kg	0.05 U	8.7 J-	10.1 J-	10.1 J-	11.5 J-	11.5 J-	12.8 J-
Copper	149	mg/kg	8.2	23.8 J-	34.8 J-	36.5 J-	38.4 J-	37.5 J-	41.3 J-
Iron	NL	mg/kg	8,750	19,500 J-	25,800 J-	25,900 J-	30,800 J-	29,300 J-	34,000 J-
Lead	128	mg/kg	5.7 J	16.7 J-	26.2 J-	27.7 J-	28.4 J-	23.8 J-	25.2 J-
Magnesium	NL	mg/kg	8,110	9,560 J-	12,300 J-	14,300 J-	11,600 J-	10,200 J-	10,600 J-
Manganese	NL	mg/kg	193	339 J-	528 J-	535 J-	635 J-	629 J-	599 J-
Mercury	1.06	mg/kg	0.021 J	0.046 J-	0.064 J-	0.068 J-	0.065 J-	0.063 J-	0.067 J-
Nickel	48.6	mg/kg	10.1	24.2 J-	30.9 J-	31.7 J-	36.3 J-	33.8 J-	38.5 J-
Potassium	NL	mg/kg	918	2,210 J-	2,810 J-	3,560 J-	3,500 J-	3,420 J-	4,490 J-
Selenium	NL	mg/kg	3.3 U	5.4 UJ	4.3 UJ	4.5 UJ	4.6 UJ	5.5 UJ	5.7 UJ
Silver	NL	mg/kg	0.06 J	0.062 J-	0.18 J-	0.17 J-	0.26 J-	0.19 J-	0.2 J-
Sodium	NL	mg/kg	1.1 U	1.9 UJ	1.5 UJ	1.6 UJ	1.6 UJ	1.9 UJ	1.9 UJ
Thallium	NL	mg/kg	0.13 U	0.22 UJ	0.17 UJ	0.18 UJ	0.19 UJ	0.22 UJ	0.23 UJ
Vanadium	NL	mg/kg	13.8	30.9 J-	40.2 J-	45 J-	46.4 J-	42.7 J-	54.6 J-
Zinc	459	mg/kg	52.4 J	88.3 J-	126 J-	161 J-	149 J-	125 J-	142 J-

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Table B-2
Sediment Sample Analytical Results - TAL Metals
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-25	LMR11-25	LMR11-25	LMR11-26	LMR11-26	LMR11-26	LMR11-26
		Field Sample ID	LMR11-25-048	LMR11-25-072	LMR11-25-096	LMR11-26-006	LMR11-26-024	LMR11-26-048	LMR11-26-072
		Sample Date	8/11/2011	8/11/2011	8/11/2011	8/10/2011	8/10/2011	8/10/2011	8/10/2011
		Depth Interval (in bss)	24- 48	48- 72	72- 96	0- 6	6- 24	24- 48	48- 72
Chemical Name	PEC[1]	Unit							
Aluminum	NL	mg/kg	24,300 J-	21,500 J-	15,100 J-	15,800 J-	20,200 J-	21,100 J-	21,800 J-
Antimony	NL	mg/kg	0.27 UJ	0.3 UJ	0.27 UJ	0.28 UJ	0.32 UJ	0.35 UJ	0.3 UJ
Arsenic	33	mg/kg	11.2 J-	11.4 J-	16.5 J-	7.7 J-	9.3 J-	9.8 J-	11.3 J-
Barium	NL	mg/kg	158 J-	153 J-	103 J-	111 J-	139 J-	151 J-	148 J-
Beryllium	NL	mg/kg	1 J-	1 J-	0.7 J-	0.78 J-	0.95 J-	1 J-	0.98 J-
Cadmium	4.98	mg/kg	1.9 J-	2.3 J-	2.3 J-	1.2 J-	1.5 J-	1.6 J-	2.3 J-
Calcium	NL	mg/kg	34,600 J-	44,300 J-	52,700 J-	39,500 J-	41,200 J-	40,300 J-	45,700 J-
Chromium	111	mg/kg	34.7 J-	33.8 J-	25.7 J-	23.6 J-	30.5 J-	31.7 J-	34.4 J-
Cobalt	NL	mg/kg	11.8 J-	11.9 J-	9.1 J-	8.7 J-	10.8 J-	11.4 J-	11 J-
Copper	149	mg/kg	40.5 J-	39.6 J-	28.9 J-	30.5 J-	35.2 J-	36.2 J-	40.1 J-
Iron	NL	mg/kg	31,100 J-	30,600 J-	21,900 J-	22,500 J-	28,600 J-	31,100 J-	29,500 J-
Lead	128	mg/kg	31 J-	29 J-	26.1 J-	18.1 J-	25.3 J-	24.2 J-	30.9 J-
Magnesium	NL	mg/kg	10,200 J-	11,200 J-	13,800 J-	10,700 J-	11,700 J-	10,500 J-	12,500 J-
Manganese	NL	mg/kg	542 J-	582 J-	445 J-	381 J-	505 J-	614 J-	598 J-
Mercury	1.06	mg/kg	0.072 J-	0.063 J-	0.058 J-	0.059 J-	0.069 J-	0.075 J-	0.089 J-
Nickel	48.6	mg/kg	35.4 J-	37.1 J-	27.6 J-	25.3 J-	32.2 J-	34.6 J-	34.5 J-
Potassium	NL	mg/kg	3,880 J-	3,200 J-	2,450 J-	2,620 J-	3,300 J-	3,210 J-	3,650 J-
Selenium	NL	mg/kg	4.5 UJ	4.9 UJ	4.5 UJ	4.6 UJ	5.4 UJ	5.8 UJ	4.9 UJ
Silver	NL	mg/kg	0.18 J-	0.27 J-	0.11 J-	0.13 J-	0.2 J-	0.17 J-	0.25 J-
Sodium	NL	mg/kg	1.5 UJ	1.7 UJ	1.5 UJ	1.6 UJ	1.9 UJ	2 UJ	1.7 UJ
Thallium	NL	mg/kg	0.18 UJ	0.2 UJ	0.18 UJ	0.18 UJ	0.22 UJ	0.23 UJ	0.2 UJ
Vanadium	NL	mg/kg	49.4 J-	44.9 J-	35.9 J-	35.6 J-	44.2 J-	45.6 J-	47.1 J-
Zinc	459	mg/kg	281 J-	151 J-	97.7 J-	100 J-	127 J-	143 J-	167 J-

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Table B-2
Sediment Sample Analytical Results - TAL Metals
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-26	LMR11-26	LMR11-27	LMR11-27	LMR11-27	LMR11-27	LMR11-27
		Field Sample ID	LMR11-26-096	LMR11-26-117	LMR11-27-006	LMR11-27-024	LMR11-27-048	LMR11-27-072	LMR11-27-096
		Sample Date	8/10/2011	8/10/2011	8/4/2011	8/11/2011	8/11/2011	8/11/2011	8/11/2011
		Depth Interval (in bss)	72- 96	96- 117	0- 6	6- 24	24- 48	48- 72	72- 96
Chemical Name	PEC[1]	Unit							
Aluminum	NL	mg/kg	10,000 J-	6,980 J-	7,290	17,900	12,700	13,900	10,600
Antimony	NL	mg/kg	0.25 UJ	0.28 UJ	6.3 UJ	0.3 UJ	8 UJ	0.24 UJ	0.25 UJ
Arsenic	33	mg/kg	10.1 J-	8.4 J-	4.4	9.7	9.5	9.8	9.8
Barium	NL	mg/kg	78 J-	55.6 J-	51.7	130	101	102	84.5
Beryllium	NL	mg/kg	0.022 UJ	0.024 UJ	0.019 U	0.79	0.024 U	0.62	0.022 U
Cadmium	4.98	mg/kg	1.7 J-	1.2 J-	0.61	1.8	2.2	1.9	2.3
Calcium	NL	mg/kg	57,200 J-	55,800 J-	28,700	40,400	47,500	44,500	51,000
Chromium	111	mg/kg	18.7 J-	14.9 J-	12.4	28.2	24.3	24.5	23.2
Cobalt	NL	mg/kg	7.6 J-	0.068 UJ	5.9	10.2	8.5	8.6	7.9
Copper	149	mg/kg	25.1 J-	16.6 J-	12.7	33.6	30.7	29	29.8
Iron	NL	mg/kg	17,100 J-	12,400 J-	12,400	26,100	21,200	21,400	17,100
Lead	128	mg/kg	20 J-	15.6 J-	8.3 J	24.4	25	24.1	25.4
Magnesium	NL	mg/kg	15,100 J-	12,800 J-	8,220	10,600	12,300	11,000	12,200
Manganese	NL	mg/kg	453 J-	335 J-	245	552	480	449	427
Mercury	1.06	mg/kg	0.1 J-	0.051 J-	0.025 J	0.06 J	0.056 J	0.052 J	0.065 J
Nickel	48.6	mg/kg	21 J-	16.9 J-	14	31.7 J	27.1 J	27 J	25.6 J
Potassium	NL	mg/kg	1,860 J-	1,410 J-	1,180	2,620 J	1,860 J	2,040 J	1,700 J
Selenium	NL	mg/kg	4.2 UJ	4.6 UJ	3.6 U	5 U	4.7 U	4 U	4.2 U
Silver	NL	mg/kg	0.12 J-	1.3 UJ	0.036 J	0.2 J	0.15 J	0.1 J	0.19 J
Sodium	NL	mg/kg	1.5 UJ	1.6 UJ	1.3 U	1.7 U	1.6 U	1.4 U	1.5 U
Thallium	NL	mg/kg	0.17 UJ	0.18 UJ	0.15 U	0.2 U	0.19 U	0.16 U	0.17 U
Vanadium	NL	mg/kg	30.6 J-	22.6 J-	17.9	36.2	28.4	29.9	25.5
Zinc	459	mg/kg	70.4 J-	49.9 J-	54.6 J	131	99.9	92.4	88.5

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Table B-2
Sediment Sample Analytical Results - TAL Metals
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-27	LMR11-28	LMR11-28	LMR11-29	LMR11-30	LMR11-31	LMR11-32
		Field Sample ID	LMR11-27-115	LMR11-28-006	LMR11-28-034	LMR11-29-006	LMR11-30-006	LMR11-31-006	LMR11-32-006
		Sample Date	8/11/2011	8/10/2011	8/10/2011	8/4/2011	8/4/2011	8/4/2011	8/10/2011
		Depth Interval (in bss)	96- 115	0- 6	6- 34	0- 6	0- 6	0- 6	0- 6
Chemical Name	PEC[1]	Unit							
Aluminum	NL	mg/kg	6,950	14,500 J-	2,100 J-	12,700	16,500	19,000	16,400 J-
Antimony	NL	mg/kg	0.23 UJ	9.5 UJ	0.19 UJ	9.6 UJ	11.6 UJ	0.64 J	0.36 UJ
Arsenic	33	mg/kg	14.4	35.8 J-	13.1 J-	6.7	8.1	10.2	10.1 J-
Barium	NL	mg/kg	64.5	114 J-	0.055 UJ	96.8	120	136	129 J-
Beryllium	NL	mg/kg	0.02 U	0.029 UJ	0.016 UJ	0.029 U	0.035 U	0.039 U	0.031 UJ
Cadmium	4.98	mg/kg	1.6	1.4 J-	0.0098 UJ	1.1	1.2	1.4	1.7 J-
Calcium	NL	mg/kg	71,500	44,800 J-	65,900 J-	42,300	40,000	42,500	44,000 J-
Chromium	111	mg/kg	18	22.5 J-	5.2 J-	20.1	25.6	28.5	26.9 J-
Cobalt	NL	mg/kg	7.4	9.4 J-	0.046 UJ	8.4	9.6	0.11 U	9.7 J-
Copper	149	mg/kg	22	28.6 J-	2.5 J-	25	35.2	33.7	44.8 J-
Iron	NL	mg/kg	14,300	23,900 J-	6,380 J-	20,100	24,800	27,500	24,400 J-
Lead	128	mg/kg	19.2	18.6 J-	3.7 J-	15.7 J	17.6 J	20.7 J	72.7 J-
Magnesium	NL	mg/kg	14,900	13,200 J-	17,700 J-	11,200	10,800	11,800	13,400 J-
Manganese	NL	mg/kg	403	447 J-	254 J-	369	472	440	415 J-
Mercury	1.06	mg/kg	0.054 J	0.043 J-	0.13 UJ	0.045 J	0.041 J	0.066 J	0.32 J-
Nickel	48.6	mg/kg	20.6 J	27.1 J-	6.2 J-	23.2	28.1	31.4	27.8 J-
Potassium	NL	mg/kg	1,230 J	2,470 J-	8.4 UJ	2,200	2,910	3,420	3,000 J-
Selenium	NL	mg/kg	3.9 U	5.6 UJ	3.1 UJ	5.6 U	6.7 U	7.5 U	6.1 UJ
Silver	NL	mg/kg	0.057 J	0.11 J-	0.89 UJ	0.065 J	0.076 J	0.22 J	0.23 J-
Sodium	NL	mg/kg	1.3 U	6,620 J-	1,190 J-	1.9 U	2.3 U	2.6 U	2.1 UJ
Thallium	NL	mg/kg	0.16 U	0.22 UJ	0.12 UJ	0.23 U	0.27 U	0.3 U	0.24 UJ
Vanadium	NL	mg/kg	24.1	28.4 J-	7.7 J-	30.4	36.8	42.6	39 J-
Zinc	459	mg/kg	58.6	109 J-	15.3 J-	90.5 J	106 J	123 J	149 J-

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Table B-2
Sediment Sample Analytical Results - TAL Metals
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-32	LMR11-32	LMR11-32	LMR11-32	LMR11-32	LMR11-33	LMR11-34
		Field Sample ID	LMR11-32-024	LMR11-32-048	LMR11-32-072	LMR11-32-096	LMR11-32-116	LMR11-33-006	LMR11-34-006
		Sample Date	8/10/2011	8/10/2011	8/10/2011	8/10/2011	8/10/2011	8/4/2011	8/4/2011
		Depth Interval (in bss)	6- 24	24- 48	48- 72	72- 96	96- 116	0- 6	0- 6
Chemical Name	PEC[1]	Unit							
Aluminum	NL	mg/kg	15,300 J-	11,700 J-	6,840 J-	5,600 J-	10,600 J-	11,100	13,300
Antimony	NL	mg/kg	0.25 UJ	0.35 UJ	0.27 UJ	0.23 UJ	0.22 UJ	9.3 UJ	10.8 UJ
Arsenic	33	mg/kg	9.7 J-	13.9 J-	11.1 J-	13.7 J-	18.2 J-	9.4	7
Barium	NL	mg/kg	125 J-	122 J-	97.8 J-	74.5 J-	101 J-	79.7	87
Beryllium	NL	mg/kg	0.74 J-	0.03 UJ	0.023 UJ	0.019 UJ	0.55 J-	0.028 U	0.032 U
Cadmium	4.98	mg/kg	1.5 J-	2 J-	7 J-	0.93 J-	1 J-	0.91	1.3
Calcium	NL	mg/kg	38,700 J-	47,100 J-	38,200 J-	32,500 J-	33,100 J-	37,000	31,100
Chromium	111	mg/kg	25.1 J-	24 J-	22.3 J-	11.4 J-	16.8 J-	17.6	20.2
Cobalt	NL	mg/kg	9.3 J-	9.3 J-	8.1 J-	6.1 J-	7.5 J-	0.081 U	0.094 U
Copper	149	mg/kg	50.7 J-	41.9 J-	41.7 J-	35.8 J-	40.9 J-	19.5	21.9
Iron	NL	mg/kg	21,700 J-	21,400 J-	14,400 J-	10,300 J-	17,100 J-	17,200	19,300
Lead	128	mg/kg	62.7 J-	244 J-	126 J-	91.3 J-	78.9 J-	12.9 J	13.1
Magnesium	NL	mg/kg	12,600 J-	12,600 J-	10,300 J-	8,800 J-	8,480 J-	9,910	8,960
Manganese	NL	mg/kg	356 J-	404 J-	310 J-	189 J-	304 J-	314	323
Mercury	1.06	mg/kg	0.13 J-	0.16 J-	0.18 J-	0.7 J-	0.89 J-	0.035 J	0.043 J
Nickel	48.6	mg/kg	27 J-	28.9 J-	22.3 J-	14.3 J-	19.5 J-	19.9	21.9
Potassium	NL	mg/kg	2,670 J-	1,760 J-	1,030 J-	1,000 J-	1,820 J-	1,920	2,440
Selenium	NL	mg/kg	4.2 UJ	5.9 UJ	4.5 UJ	3.8 UJ	3.7 UJ	5.4 U	0.5 U
Silver	NL	mg/kg	0.43 J-	2.1 J-	0.23 J-	0.18 J-	0.75 J-	1.5 U	0.098 J
Sodium	NL	mg/kg	1.4 UJ	2 UJ	1.6 UJ	1.3 UJ	1.3 UJ	1.9 U	2.2 UJ
Thallium	NL	mg/kg	0.17 UJ	0.24 UJ	0.18 UJ	0.15 UJ	0.15 UJ	0.22 U	0.25 U
Vanadium	NL	mg/kg	37.1 J-	29.6 J-	21.9 J-	17.1 J-	25.5 J-	27.7	30.7
Zinc	459	mg/kg	153 J-	275 J-	182 J-	147 J-	186 J-	74.3 J	80.3

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Table B-2
Sediment Sample Analytical Results - TAL Metals
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-35	LMR11-35	LMR11-35	LMR11-35	LMR11-35	LMR11-35	LMR11-35
		Field Sample ID	LMR11-35-006	LMR11-35-024	LMR11-35-024FS	LMR11-35-048	LMR11-35-072	LMR11-35-096	LMR11-35-116
		Sample Date	8/10/2011	8/10/2011	8/10/2011	8/10/2011	8/10/2011	8/10/2011	8/10/2011
		Depth Interval (in bss)	0- 6	6- 24	6- 24	24- 48	48- 72	72- 96	96- 116
Chemical Name	PEC[1]	Unit							
Aluminum	NL	mg/kg	22,000	24,400	22,500	23,200	27,800	29,300	18,400
Antimony	NL	mg/kg	0.32 UJ	0.26 UJ	0.27 UJ	0.29 UJ	0.34 UJ	0.37 UJ	0.31 UJ
Arsenic	33	mg/kg	9.3	11.4	10.8	9.5	11.1	11.7	13.3
Barium	NL	mg/kg	143	164	157	150	168	180	125
Beryllium	NL	mg/kg	0.94	1.1	0.99	1.1	1.1	1.2	0.85
Cadmium	4.98	mg/kg	1.5	2.1	1.9	1.6	1.8	2	2.5
Calcium	NL	mg/kg	42,500	40,900	41,100	36,900	37,200	35,500	52,200
Chromium	111	mg/kg	30.9	36.6	33.8	32.8	38.1	40.9	32.9
Cobalt	NL	mg/kg	10.5 J	11.9 J	11.6 J	11.2 J	12.4 J	12.8 J	9.9 J
Copper	149	mg/kg	38.9	42.8	41.4	38.4	41.9	43.2	38
Iron	NL	mg/kg	27,200	31,900	30,600	29,100	32,700	34,300	24,500
Lead	128	mg/kg	23.8 J	36.4 J	34.5 J	25.6 J	29.2 J	31.9 J	35.2 J
Magnesium	NL	mg/kg	12,200	11,200	11,300	11,400	11,900	10,700	13,600
Manganese	NL	mg/kg	463 J	664 J	600 J	473 J	549 J	615 J	509 J
Mercury	1.06	mg/kg	0.068 J	0.077 J	0.078 J	0.073 J	0.069 J	0.072 J	0.14
Nickel	48.6	mg/kg	31.1 J	37 J	35.8 J	33.4 J	37.1 J	39.2 J	30.8 J
Potassium	NL	mg/kg	4,110	3,930	3,420	4,120	5,080	5,140	3,460
Selenium	NL	mg/kg	5.4 U	4.3 U	4.4 U	4.8 U	5.6 U	6.1 U	5.1 U
Silver	NL	mg/kg	0.049 U	0.04 U	0.04 U	0.23 J	0.26 J	0.27 J	0.22 J
Sodium	NL	mg/kg	1.8 U	1.5 U	1.5 U	1.7 U	1.9 U	2.1 U	1.7 U
Thallium	NL	mg/kg	0.22 U	0.17 U	0.18 U	0.19 U	0.23 U	0.25 U	0.2 U
Vanadium	NL	mg/kg	46.9	49.1	45	48.5	57.9	60.3	40.7
Zinc	459	mg/kg	120 J	295 J	258 J	129 J	147 J	231 J	121 J

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Table B-2
Sediment Sample Analytical Results - TAL Metals
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-36	LMR11-37	LMR11-37	LMR11-37	LMR11-37	LMR11-37	LMR11-38
		Field Sample ID	LMR11-36-006	LMR11-37-006	LMR11-37-024	LMR11-37-048	LMR11-37-048-DP	LMR11-37-072	LMR11-38-006
		Sample Date	8/4/2011	8/10/2011	8/10/2011	8/10/2011	8/10/2011	8/10/2011	8/9/2011
		Depth Interval (in bss)	0- 6	0- 6	6- 24	24- 48	24- 48	48- 72	0- 6
Chemical Name	PEC[1]	Unit							
Aluminum	NL	mg/kg	11,700	23,000	24,000	16,900	23,300 J-	24,600	19,200
Antimony	NL	mg/kg	9 UJ	0.39 UJ	0.31 UJ	0.27 UJ	0.27 UJ	0.25 UJ	0.27 UJ
Arsenic	33	mg/kg	6.2	11	11.4	13.8	12.4 J-	13.3	9
Barium	NL	mg/kg	75	154	163	127	156 J-	148	136
Beryllium	NL	mg/kg	0.027 U	1	1	0.79	1.1 J-	1	0.8
Cadmium	4.98	mg/kg	1.1	1.7	1.8	1.9	1.8 J-	2.1	2
Calcium	NL	mg/kg	43,500	43,500	35,200	38,400	38,000 J-	32,700	45,900
Chromium	111	mg/kg	19.6	33	33.9	27.9	34.4 J-	35.7	27.8
Cobalt	NL	mg/kg	8.2	12.2 J	12.3 J	10.1 J	11.5 J-	10.4 J	10.4
Copper	149	mg/kg	18.2	40.5	41.2	34.5	39.5 J-	37.6	33.1
Iron	NL	mg/kg	17,500	30,600	32,600	27,200	31,300 J-	26,800	27,100
Lead	128	mg/kg	12	24.5 J	26.4 J	25.9 J	31.2 J-	28.1 J	21.7
Magnesium	NL	mg/kg	12,500	12,700	10,800	11,800	11,200 J-	10,900	12,500
Manganese	NL	mg/kg	333	531 J	548 J	623 J	551 J-	404 J	480
Mercury	1.06	mg/kg	0.038 J	0.06 J	0.066 J	0.069 J	0.076 J-	0.074 J	0.065 J
Nickel	48.6	mg/kg	20.2	35.7 J	37.4 J	30.8 J	35.3 J-	33.6 J	30.5
Potassium	NL	mg/kg	2,090	4,110	3,800	2,460	3,680 J-	4,470	3,070
Selenium	NL	mg/kg	5.2 U	6.5 U	5.1 U	4.6 U	4.4 UJ	4.2 U	4.6 U
Silver	NL	mg/kg	0.057 J	0.17 J	0.22 J	0.17 J	0.22 J-	0.17 J	1.4
Sodium	NL	mg/kg	1.8 UJ	2.2 U	1.8 U	1.6 U	1.5 UJ	1.4 U	1.6 UJ
Thallium	NL	mg/kg	0.21 U	0.26 U	0.2 U	0.18 U	0.18 UJ	0.17 U	0.18 U
Vanadium	NL	mg/kg	28.1	47.1	46.1	35.7	49.2 J-	50	40.2
Zinc	459	mg/kg	70.1	132 J	139 J	112 J	250 J-	123 J	121

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Table B-2
Sediment Sample Analytical Results - TAL Metals
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-38	LMR11-38	LMR11-38	LMR11-38	LMR11-38	LMR11-38	LMR11-38
		Field Sample ID	LMR11-38-024	LMR11-38-024-DP	LMR11-38-024FS	LMR11-38-048	LMR11-38-048-DP	LMR11-38-072	LMR11-38-072-DP
		Sample Date	8/9/2011	8/9/2011	8/9/2011	8/9/2011	8/9/2011	8/9/2011	8/9/2011
		Depth Interval (in bss)	6- 24	6- 24	6- 24	24- 48	24- 48	48- 72	48- 72
Chemical Name	PEC[1]	Unit							
Aluminum	NL	mg/kg	11,300	14,500	13,100	22,400	19,600	21,400	26,600
Antimony	NL	mg/kg	0.23 UJ	9.1 UJ	0.25 UJ	0.29 UJ	0.34 UJ	0.28 UJ	10.5 UJ
Arsenic	33	mg/kg	7.1	8.2	7.3	9.9	9.2	10.2	10.8
Barium	NL	mg/kg	86.8	104	99.6	156	127	145	169
Beryllium	NL	mg/kg	0.51 J	0.027 U	0.52 J	0.88	0.03 U	0.83	1
Cadmium	4.98	mg/kg	1.5	1.6	1.6	2.4	1.8	2.4	2.3
Calcium	NL	mg/kg	38,600	46,800	38,400	39,200	41,300	38,200	36,600
Chromium	111	mg/kg	18.3	22.3	20.8	32.1	27.9	31.3	37.1
Cobalt	NL	mg/kg	7.7	8.8	8.4	11.4	9.9	10.9	12.4
Copper	149	mg/kg	23.8	27	25.4	34.4	32.4	35.4	40.1
Iron	NL	mg/kg	18,900	21,300	21,100	31,700	25,200	29,600	33,500
Lead	128	mg/kg	15.5	17.8	17.7	23.1	23.6	25.2	26.2
Magnesium	NL	mg/kg	10,700	13,400	10,400	11,300	12,600	11,400	11,900
Manganese	NL	mg/kg	375	409	403	652	454	542	560
Mercury	1.06	mg/kg	0.046 J	0.069 J	0.053 J	0.071 J	0.068 J	0.067 J	0.081 J
Nickel	48.6	mg/kg	21.7	24.8	24.1	34.2	29.2	33.5	38.2
Potassium	NL	mg/kg	1,670	2,560	2,030	3,520	3,570	3,270	4,490
Selenium	NL	mg/kg	3.9 U	5.3 U	4.2 U	4.8 U	5.7 U	4.6 U	6.1 U
Silver	NL	mg/kg	0.13 J	0.048 U	0.15 J	0.23 J	0.052 U	0.25 J	0.056 U
Sodium	NL	mg/kg	1.3 UJ	1.8 UJ	1.5 UJ	1.6 UJ	2 UJ	1.6 UJ	2.1 UJ
Thallium	NL	mg/kg	0.15 U	0.21 U	0.17 U	0.19 U	0.23 U	0.18 U	0.25 U
Vanadium	NL	mg/kg	25.3	33.4	28.6	46.5	42.5	45	54.4
Zinc	459	mg/kg	84.1	93	93.3	134	113	150	155

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Table B-2
Sediment Sample Analytical Results - TAL Metals
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-39	LMR11-40	LMR11-40	LMR11-40	LMR11-40	LMR11-41	LMR11-42
		Field Sample ID	LMR11-39-006	LMR11-40-006	LMR11-40-024	LMR11-40-048	LMR11-40-084	LMR11-41-006	LMR11-42-006
		Sample Date	8/4/2011	8/10/2011	8/10/2011	8/10/2011	8/10/2011	8/4/2011	8/9/2011
		Depth Interval (in bss)	0- 6	0- 6	6- 24	24- 48	48- 84	0- 6	0- 6
Chemical Name	PEC[1]	Unit							
Aluminum	NL	mg/kg	9,790	9,700 J-	4,290 J-	6,880 J-	5,860 J-	13,100	11,400
Antimony	NL	mg/kg	8.3 UJ	0.22 UJ	0.27 UJ	0.2 UJ	0.21 UJ	8.3 UJ	0.24 UJ
Arsenic	33	mg/kg	5.5	8 J-	4.5 J-	4.5 J-	3.3 J-	7.3	14.2
Barium	NL	mg/kg	68.3	63.4 J-	34.7 J-	54.3 J-	50.5 J-	84.8	89.5
Beryllium	NL	mg/kg	0.025 U	0.019 UJ	0.023 UJ	0.017 UJ	0.018 UJ	0.025 U	0.021 U
Cadmium	4.98	mg/kg	1.1	1.2 J-	0.014 UJ	0.71 J-	0.66 J-	1.4	2.7
Calcium	NL	mg/kg	33,800	36,100 J-	40,300 J-	39,700 J-	36,300 J-	41,400	44,100
Chromium	111	mg/kg	15.7	17.4 J-	8.4 J-	12 J-	10.4 J-	20.7	37.7
Cobalt	NL	mg/kg	7.4	6.2 J-	0.066 UJ	7 J-	6.3 J-	7.8	9.4
Copper	149	mg/kg	17	17.7 J-	8.6 J-	15.5 J-	14 J-	23.3	30.7
Iron	NL	mg/kg	16,400	14,100 J-	10,900 J-	13,700 J-	12,200 J-	18,600	18,500
Lead	128	mg/kg	11.1	17.3 J-	6.5 J-	8.6 J-	7.2 J-	16	33.9
Magnesium	NL	mg/kg	9,770	10,100 J-	11,800 J-	14,900 J-	13,500 J-	11,400	11,700
Manganese	NL	mg/kg	326	247 J-	315 J-	318 J-	264 J-	352	433
Mercury	1.06	mg/kg	0.032 J	0.047 J-	0.022 J-	0.039 J-	0.018 J-	0.045 J	0.11 J
Nickel	48.6	mg/kg	18.5	16.9 J-	11.6 J-	16.5 J-	15.5 J-	21.2	23
Potassium	NL	mg/kg	1,560	1,770 J-	763 J-	1,130 J-	918 J-	2,390	1,820
Selenium	NL	mg/kg	0.39 U	3.7 UJ	4.4 UJ	3.3 UJ	3.5 UJ	4.8 U	4 U
Silver	NL	mg/kg	0.049 J	1.1 UJ	1.3 UJ	0.95 UJ	0.99 UJ	1.4 U	0.037 U
Sodium	NL	mg/kg	1.7 UJ	1.3 UJ	1.5 UJ	1.1 UJ	1.2 UJ	1.7 UJ	1.4 UJ
Thallium	NL	mg/kg	0.19 U	0.15 UJ	0.18 UJ	0.13 UJ	0.14 UJ	0.19 U	0.16 U
Vanadium	NL	mg/kg	23.9	24.7 J-	14.3 J-	19.3 J-	15.7 J-	31.9	26.8
Zinc	459	mg/kg	76.1	57.2 J-	28.3 J-	43.1 J-	40.7 J-	83.4	87.1

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Table B-2
Sediment Sample Analytical Results - TAL Metals
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-42	LMR11-42	LMR11-42	LMR11-42	LMR11-42	LMR11-42	LMR11-43
		Field Sample ID	LMR11-42-024	LMR11-42-048	LMR11-42-048FS	LMR11-42-072	LMR11-42-096	LMR11-42-129	LMR11-43-030
		Sample Date	8/9/2011	8/9/2011	8/9/2011	8/9/2011	8/9/2011	8/9/2011	8/9/2011
		Depth Interval (in bss)	6- 24	24- 48	24- 48	48- 72	72- 96	96- 129	24- 30
Chemical Name	PEC[1]	Unit							
Aluminum	NL	mg/kg	11,200	11,700	18,100	7,620	7,140	7,840	4,860
Antimony	NL	mg/kg	0.26 UJ	8.5 UJ	0.38 UJ	0.26 UJ	7.9 UJ	6.4 UJ	0.2 UJ
Arsenic	33	mg/kg	13.8	23.1	40.5	11.9	13.9	5.1	5.4
Barium	NL	mg/kg	91.6	93.4	140	51.9	58.4	56.7	36.1
Beryllium	NL	mg/kg	0.022 U	0.44 J	0.032 U	0.022 U	0.024 U	0.019 U	0.017 U
Cadmium	4.98	mg/kg	2.2	3.1	6.5	1.1	1.4	0.83	0.85
Calcium	NL	mg/kg	47,000	46,100	62,600	51,600	44,500	47,400	221,000
Chromium	111	mg/kg	28.3	30.7	59.9	14.7	20.9	13.1	9.7
Cobalt	NL	mg/kg	8	8.7	14.2	0.064 U	7	6.7 J	0.05 U
Copper	149	mg/kg	29.3	29.9	49.8	14.7	19.7	13.6	10.8
Iron	NL	mg/kg	18,100	19,200	27,000	12,600	13,900	13,400	8,340
Lead	128	mg/kg	23.5	38.1	124	14.1	15.5	8.8	42.9
Magnesium	NL	mg/kg	12,100	11,400	15,700	15,600	11,300	16,600	14,200
Manganese	NL	mg/kg	397	433	598	299	308	332	376
Mercury	1.06	mg/kg	0.086 J	0.11 J	0.16 J	0.068 J	0.074 J	0.0088 J	0.029 J
Nickel	48.6	mg/kg	21	23.6	33.6	14.3	17.6	17.1 J	9.8
Potassium	NL	mg/kg	2,090	1,910	3,280	1,440	1,180	1,350	1,030
Selenium	NL	mg/kg	4.3 U	5 U	6.3 U	4.3 U	4.6 U	3.7 U	3.4 U
Silver	NL	mg/kg	0.039 U	0.19 J	0.057 U	0.039 U	0.042 U	1.1 U	0.031 U
Sodium	NL	mg/kg	1.5 UJ	1.7 UJ	2.1 UJ	1.5 UJ	1.6 UJ	559	1.2 UJ
Thallium	NL	mg/kg	0.17 U	0.2 U	0.25 U	0.17 U	0.18 U	0.15 U	0.14 U
Vanadium	NL	mg/kg	28.1	27.6	41.9	20	19.9	19.8	14.5
Zinc	459	mg/kg	81.5	92.4	127	54	59.7	46.9 J	34.3

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Table B-2
Sediment Sample Analytical Results - TAL Metals
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-44	LMR11-44	LMR11-44	LMR11-44	LMR11-44	LMR11-44	LMR11-45
		Field Sample ID	LMR11-44-006	LMR11-44-024	LMR11-44-024FS	LMR11-44-048	LMR11-44-072	LMR11-44-096	LMR11-45-006
		Sample Date	8/9/2011	8/9/2011	8/9/2011	8/9/2011	8/9/2011	8/9/2011	8/8/2011
		Depth Interval (in bss)	0- 6	6- 24	6- 24	24- 48	48- 72	72- 96	0- 6
Chemical Name	PEC[1]	Unit							
Aluminum	NL	mg/kg	23,000	21,000	21,800	21,600	9,680	18,500	21,600
Antimony	NL	mg/kg	10.7 UJ	0.32 UJ	0.36 UJ	0.23 UJ	0.21 UJ	0.25 UJ	9 UJ
Arsenic	33	mg/kg	9.9	11.2	11.4	11	19.2	29.1	9.9
Barium	NL	mg/kg	151	147	147	136	65.2	137	139
Beryllium	NL	mg/kg	0.032 U	0.84	1.2	0.9	0.53	0.84	0.79
Cadmium	4.98	mg/kg	1.9	2.2	2.3	2.3	2.1	2.4	2.1
Calcium	NL	mg/kg	36,600	42,600	42,500	33,600	44,800	47,600	40,100
Chromium	111	mg/kg	32.5	32.1	32.8	32.2	21.8	30.3	30.5
Cobalt	NL	mg/kg	11.3	11.1	11	9.8	8.5	9.1	10.7
Copper	149	mg/kg	35	37.3	36.7	32.4	20	38.9	35.5
Iron	NL	mg/kg	29,300	29,600	28,400	26,700	16,000	21,600	27,900
Lead	128	mg/kg	23.2	29.7	29.9	28.1	27.9	38.8	23
Magnesium	NL	mg/kg	11,500	12,000	12,000	10,500	12,500	11,200	12,400
Manganese	NL	mg/kg	484	544	520	581	324	442	481
Mercury	1.06	mg/kg	0.073 J	0.091 J	0.12 J	0.064 J	0.075 J	0.18	0.064 J
Nickel	48.6	mg/kg	34.3	34.2	34.4	31.6	21.9	28.8	32.3
Potassium	NL	mg/kg	4,010	3,230	3,590	3,640	1,700	3,470	3,890
Selenium	NL	mg/kg	6.3 U	5.3 U	5.9 U	3.9 U	3.5 U	4.2 U	5.2 U
Silver	NL	mg/kg	0.057 U	0.048 U	0.054 U	0.035 U	0.032 U	0.039 U	0.23 J
Sodium	NL	mg/kg	2.1 UJ	1.8 UJ	2 UJ	1.3 UJ	1.2 UJ	1.5 UJ	1.8 UJ
Thallium	NL	mg/kg	0.25 U	0.21 U	0.24 U	0.15 U	0.14 U	0.17 U	0.21 U
Vanadium	NL	mg/kg	48.2	44	45.6	45.1	26.1	38.1	46
Zinc	459	mg/kg	137	167	174	118	69.6	129	127

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Table B-2
Sediment Sample Analytical Results - TAL Metals
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-45	LMR11-45	LMR11-45	LMR11-45	LMR11-45	LMR11-46	LMR11-46
		Field Sample ID	LMR11-45-024	LMR11-45-048	LMR11-45-048FS	LMR11-45-072	LMR11-45-096	LMR11-46-006	LMR11-46-024
		Sample Date	8/8/2011	8/8/2011	8/8/2011	8/8/2011	8/8/2011	8/8/2011	8/8/2011
		Depth Interval (in bss)	6- 24	24- 48	24- 48	48- 72	72- 96	0- 6	6- 24
Chemical Name	PEC[1]	Unit							
Aluminum	NL	mg/kg	22,700	26,100	24,900	23,300	24,400	17,100	20,600
Antimony	NL	mg/kg	7.8 UJ	0.28 UJ	0.26 UJ	0.37 UJ	0.27 UJ	0.34 UJ	0.31 UJ
Arsenic	33	mg/kg	10.7	11	11.9	11.3	12.3	9.5	12.5
Barium	NL	mg/kg	158	173	164	162	162	113	134
Beryllium	NL	mg/kg	0.95	1.2	1.1	0.97	1	0.87	0.98
Cadmium	4.98	mg/kg	2.5	2.5	2.6	2.6	2.6	1.5	2.4
Calcium	NL	mg/kg	36,000	34,800	36,900	38,500	36,200	38,800	49,300
Chromium	111	mg/kg	33.2	36.4	34.9	34.6	35.9	26.3	31.5
Cobalt	NL	mg/kg	12.3	12.7	12.1	12.5	13.7	9.7	10.3
Copper	149	mg/kg	40.9	39.4	38.5	38.9	39	30.1 J	36.8 J
Iron	NL	mg/kg	32,900	34,500	33,500	34,200	32,900	23,800	27,200
Lead	128	mg/kg	28.9	26.5	28	30.4	30.7	20.4	30.1
Magnesium	NL	mg/kg	11,700	11,100	11,100	11,100	11,100	10,900	14,400
Manganese	NL	mg/kg	585	604	652	645	609	422	577
Mercury	1.06	mg/kg	0.07 J	0.071 J	0.058 J	0.076 J	0.08 J	0.0011 U	0.0009 U
Nickel	48.6	mg/kg	37.2	38.8	36.9	38.4	39.4	27.8	31.1
Potassium	NL	mg/kg	3,280	3,930	3,730	3,310	3,410	3,090	3,830
Selenium	NL	mg/kg	4.6 U	0.38 U	4.3 U	6.1 U	4.4 U	5.7 U	5.1 U
Silver	NL	mg/kg	0.28 J	0.22 J	0.27 J	0.27 J	0.31 J	0.052 U	0.047 U
Sodium	NL	mg/kg	1.6 UJ	1.6 UJ	1.5 UJ	2.1 UJ	1.5 UJ	2 U	1.8 U
Thallium	NL	mg/kg	0.18 U	0.19 U	0.17 U	0.25 U	0.18 U	0.23 U	0.21 U
Vanadium	NL	mg/kg	45.7	53.1	50.8	48.2	50	39.9	47.6
Zinc	459	mg/kg	150	158	161	173	224	105	130

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Table B-2
Sediment Sample Analytical Results - TAL Metals
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-46	LMR11-46	LMR11-46	LMR11-46	LMR11-47	LMR11-47	LMR11-47
		Field Sample ID	LMR11-46-024FS	LMR11-46-048	LMR11-46-072	LMR11-46-093	LMR11-47-006	LMR11-47-024	LMR11-47-048
		Sample Date	8/8/2011	8/8/2011	8/8/2011	8/8/2011	8/8/2011	8/8/2011	8/8/2011
		Depth Interval (in bss)	6- 24	24- 48	48- 72	72- 93	0- 6	6- 24	24- 48
Chemical Name	PEC[1]	Unit							
Aluminum	NL	mg/kg	16,100	12,100	2,940	4,040	18,700	22,800	12,700
Antimony	NL	mg/kg	0.34 UJ	0.25 UJ	0.24 UJ	0.24 UJ	10.4 UJ	0.27 UJ	0.23 UJ
Arsenic	33	mg/kg	12	9.7	4	4.6	9.7	10.8	7.8
Barium	NL	mg/kg	116	79.9	0.071 U	27.9	126	144	74.6
Beryllium	NL	mg/kg	0.82	0.021 U	0.021 U	0.021 U	0.88	0.97	0.02 U
Cadmium	4.98	mg/kg	2.2	1.8	0.013 U	0.69	1.5	1.9	1.2
Calcium	NL	mg/kg	45,100	51,600	55,800	57,700	37,400	40,200	38,600
Chromium	111	mg/kg	26.5	22	6.5	9.9	27.5	33.5	20.6
Cobalt	NL	mg/kg	9.7	6.9	0.059 U	0.06 U	9.9	10.4	7.1
Copper	149	mg/kg	33.8 J	24 J	6.3 J	9.9 J	32.2 J	36.5 J	18.5 J
Iron	NL	mg/kg	25,500	17,700	7,360	9,070	26,300	28,700	17,200
Lead	128	mg/kg	28	20.5	4.2	8.2	22.5	27.7	14.8
Magnesium	NL	mg/kg	12,500	12,900	11,400	11,200	10,900	11,500	11,200
Manganese	NL	mg/kg	548	419	207	239	449	527	333
Mercury	1.06	mg/kg	0.0009 U	0.0009 U	0.0007 U	0.0007 U	0.0011 U	0.001 U	0.0009 U
Nickel	48.6	mg/kg	29	20.9	7.6	10.9	30	32.4	20
Potassium	NL	mg/kg	2,520	2,400	634	861	3,180	3,960	2,320
Selenium	NL	mg/kg	5.7 U	4.2 U	4 U	4 U	6 U	4.5 U	3.9 U
Silver	NL	mg/kg	0.052 U	0.038 U	1.1 U	0.037 U	0.055 U	0.041 U	0.035 U
Sodium	NL	mg/kg	2 U	1.4 U	1.4 U	1.4 U	2.1 U	1.6 U	1.3 U
Thallium	NL	mg/kg	0.23 U	0.17 U	0.16 U	0.16 U	0.24 U	0.18 U	0.15 U
Vanadium	NL	mg/kg	36.8	31.6	13.6	16.6	41.3	50.4	30.6
Zinc	459	mg/kg	117	81.9	21.6	30.7	123	171	77.6

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Table B-2
Sediment Sample Analytical Results - TAL Metals
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-47	LMR11-47	LMR11-47	LMR11-47	LMR11-48	LMR11-48	LMR11-48
		Field Sample ID	LMR11-47-072	LMR11-47-096	LMR11-47-120	LMR11-47-144	LMR11-48-006	LMR11-48-024	LMR11-48-024FS
		Sample Date	8/8/2011	8/8/2011	8/8/2011	8/8/2011	8/8/2011	8/8/2011	8/8/2011
		Depth Interval (in bss)	48- 72	72- 96	96- 120	120- 144	0- 6	6- 24	6- 24
Chemical Name	PEC[1]	Unit							
Aluminum	NL	mg/kg	18,800	23,200	14,400	15,700	22,300	19,100	20,500
Antimony	NL	mg/kg	0.3 UJ	0.28 UJ	0.22 UJ	0.32 UJ	11.5 UJ	9.5 UJ	0.37 UJ
Arsenic	33	mg/kg	15.4	13.3	16.2	15.8	10.8	10	10.7
Barium	NL	mg/kg	132	160	125	134	158	144	145
Beryllium	NL	mg/kg	0.84	1	0.76	0.79	0.035 U	0.82	0.032 U
Cadmium	4.98	mg/kg	3.3	5	6.4	5.7	2.2	2.2	2.2
Calcium	NL	mg/kg	51,200	38,200	45,700	58,600	48,000	42,300	40,200
Chromium	111	mg/kg	36.7	50.6	44.6	53.1	32.7	28.6	30.4
Cobalt	NL	mg/kg	9.8	11	10.6	9.9	12	11.5	11.1
Copper	149	mg/kg	43.8 J	47.4 J	45.5 J	47.9 J	36.6	35.8	35.7
Iron	NL	mg/kg	26,600	30,000	21,900	25,400	31,900	30,300	30,600
Lead	128	mg/kg	41.3	93.4	59.3	77.7	22.8	23.6	22.2
Magnesium	NL	mg/kg	12,900	11,700	10,400	12,700	12,500	11,600	11,000
Manganese	NL	mg/kg	581	548	485	572	765	573	558
Mercury	1.06	mg/kg	0.001 U	0.0009 U	0.0009 U	0.001 U	0.059 J	0.066 J	0.058 J
Nickel	48.6	mg/kg	34.6	42.6	38.8	39.8	35.3	34.1	33.2
Potassium	NL	mg/kg	3,220	3,880	2,480	2,350	3,910	2,660	3,290
Selenium	NL	mg/kg	4.9 U	0.38 J	3.6 U	0.42 J	6.7 U	5.5 U	6.2 U
Silver	NL	mg/kg	0.045 U	0.043 U	0.033 U	0.048 U	0.17 J	0.23 J	0.2 J
Sodium	NL	mg/kg	1.7 U	1.6 U	1.2 U	1.8 U	2.3 UJ	1.9 UJ	2.1 UJ
Thallium	NL	mg/kg	0.2 U	0.19 U	0.15 U	0.21 U	0.27 U	0.22 U	0.25 U
Vanadium	NL	mg/kg	42.3	50.8	33.5	35	47.9	39.1	42.7
Zinc	459	mg/kg	144	172	131	151	138	137	137

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Table B-2
Sediment Sample Analytical Results - TAL Metals
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-48	LMR11-48	LMR11-49	LMR11-49	LMR11-49	LMR11-49	LMR11-49
		Field Sample ID	LMR11-48-048	LMR11-48-061	LMR11-49-006	LMR11-49-024	LMR11-49-048	LMR11-49-072	LMR11-49-096
		Sample Date	8/8/2011	8/8/2011	8/8/2011	8/8/2011	8/8/2011	8/8/2011	8/8/2011
		Depth Interval (in bss)	24- 48	48- 61	0- 6	6- 24	24- 48	48- 72	72- 96
Chemical Name	PEC[1]	Unit							
Aluminum	NL	mg/kg	25,800	25,000	18,700	20,400	18,600	10,300	4,590
Antimony	NL	mg/kg	0.28 UJ	0.27 UJ	0.39 UJ	0.31 UJ	0.27 UJ	0.25 UJ	0.24 UJ
Arsenic	33	mg/kg	10.5	10.7	10.1	11	11	10.8	6.7
Barium	NL	mg/kg	166	163	130	146	139	85	41.8
Beryllium	NL	mg/kg	1	0.98	0.94	1	0.92	0.021 U	0.02 U
Cadmium	4.98	mg/kg	2.4	2.5	2	2.3	2.6	2.6	1.5
Calcium	NL	mg/kg	45,500	37,800	40,000	41,200	52,400	64,700	51,400
Chromium	111	mg/kg	35.4	34.9	29.4	32.2	31.9	24.9	15.2
Cobalt	NL	mg/kg	11.9	12.2	11.2	11.6	10.7	9	6.3
Copper	149	mg/kg	39.6	39.7	35.5	38.8	39.1	31.6	14.3
Iron	NL	mg/kg	32,400	32,300	29,100	31,500	28,800	20,200	10,500
Lead	128	mg/kg	26.3	26.7	22.6	27.3	32.7	29.5	20.1
Magnesium	NL	mg/kg	12,200	11,900	11,600	11,600	13,300	17,200	11,700
Manganese	NL	mg/kg	600	569	510	575	591	512	306
Mercury	1.06	mg/kg	0.075 J	0.074 J	0.069 J	0.072 J	0.086 J	0.084 J	0.058 J
Nickel	48.6	mg/kg	36.4	36.7	33.2 J	35 J	33.4 J	26.9 J	18.5 J
Potassium	NL	mg/kg	4,540	4,220	2,950	2,960	2,750	1,590	756
Selenium	NL	mg/kg	4.7 U	4.5 U	6.4 U	5.1 U	4.4 U	4.2 U	4 U
Silver	NL	mg/kg	0.26 J	0.26 J	0.059 U	0.047 U	0.041 U	0.038 U	0.036 U
Sodium	NL	mg/kg	1.6 UJ	1.5 UJ	2.2 U	1.8 U	1.5 U	1.4 U	1.4 U
Thallium	NL	mg/kg	0.19 U	0.18 U	0.26 U	0.2 U	0.18 U	0.17 U	0.16 U
Vanadium	NL	mg/kg	53.7	51.8	41.7	43.1	40.4	27.9	17.2
Zinc	459	mg/kg	143	144	130	165	199	98.1	48.4

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Table B-2
Sediment Sample Analytical Results - TAL Metals
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-49	LMR11-50	LMR11-50	LMR11-50	LMR11-50	LMR11-50	LMR11-50
		Field Sample ID	LMR11-49-115	LMR11-50-006	LMR11-50-006-DP	LMR11-50-024	LMR11-50-024-DP	LMR11-50-048	LMR11-50-048-DP
		Sample Date	8/8/2011	8/8/2011	8/8/2011	8/8/2011	8/8/2011	8/8/2011	8/8/2011
		Depth Interval (in bss)	96- 115	0- 6	0- 6	6- 24	6- 24	24- 48	24- 48
Chemical Name	PEC[1]	Unit							
Aluminum	NL	mg/kg	9,620	15,900	18,600	17,300	10,900	8,610	7,620
Antimony	NL	mg/kg	0.21 UJ	0.33 UJ	0.85 J	0.32 UJ	0.91 J	0.24 UJ	0.23 UJ
Arsenic	33	mg/kg	8.9	10.9	11	11.1	8.5	9	11.3
Barium	NL	mg/kg	79.8	132	146	153	100	97	92.9
Beryllium	NL	mg/kg	0.55	0.8	0.91	0.9	0.023 U	0.57	0.72
Cadmium	4.98	mg/kg	2.7	1.4	2.2	2.1	1.9	2	1.8
Calcium	NL	mg/kg	53,200	43,600	46,300 J	50,600	38,900 J	42,900	39,900
Chromium	111	mg/kg	25.8	27.9	35.2	33.6	23.2	21	22.7
Cobalt	NL	mg/kg	8	8.7	10.2	10.4	7	7.5	5.8
Copper	149	mg/kg	27.8	46.2 J	64.6 J	60.1	42.8 J	41.9	63.2
Iron	NL	mg/kg	17,900	24,200	27,000 J	27,700	20,800 J	20,500	17,300
Lead	128	mg/kg	28.8	36.1	41 J	45.8	66.5 J	86.2	306
Magnesium	NL	mg/kg	13,700	13,000	14,000 J	14,200	12,000 J	12,300	10,400
Manganese	NL	mg/kg	454	404	460 J	495	352 J	354	526
Mercury	1.06	mg/kg	0.068 J	0.0013 U	0.11 J	0.14 J	0.17	0.16	1.7
Nickel	48.6	mg/kg	26.1 J	34.4	35.1	35.1 J	22.2	22.9 J	17.6 J
Potassium	NL	mg/kg	1,530	2,870	3,430 J	2,850	1,780 J	1,230	1,140
Selenium	NL	mg/kg	3.5 U	5.5 U	5.9 U	5.3 U	4.5 U	3.9 U	3.8 U
Silver	NL	mg/kg	0.032 U	0.05 U	0.52 J	0.048 U	0.38 J	0.036 U	0.034 U
Sodium	NL	mg/kg	1.2 U	1.9 U	2 U	1.8 U	1.5 U	1.3 U	1.3 U
Thallium	NL	mg/kg	0.14 U	0.22 U	0.23 U	0.21 U	0.18 U	0.16 U	0.15 U
Vanadium	NL	mg/kg	26.2	37.7	41.5 J	37.5	27 J	21.5	17.8
Zinc	459	mg/kg	91.7	198	197 J	193	220 J	145	160

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Table B-2
Sediment Sample Analytical Results - TAL Metals
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-50	LMR11-50	LMR11-50	LMR11-50	LMR11-50	LMR11-51	LMR11-51
		Field Sample ID	LMR11-50-072	LMR11-50-096	LMR11-50-120	LMR11-50-144	LMR11-50-175	LMR11-51-006	LMR11-51-024
		Sample Date	8/8/2011	8/8/2011	8/8/2011	8/8/2011	8/8/2011	8/7/2011	8/7/2011
		Depth Interval (in bss)	48- 72	72- 96	96- 120	120- 144	144- 175	0- 6	6- 24
Chemical Name	PEC[1]	Unit							
Aluminum	NL	mg/kg	8,450	13,500	18,200	17,000	14,600	18,500	20,900
Antimony	NL	mg/kg	0.26 UJ	0.32 UJ	0.31 UJ	0.25 UJ	0.25 UJ	11.2 UJ	0.3 UJ
Arsenic	33	mg/kg	10.1	16.7	13.9	13.8	13.9	9.1	9.3
Barium	NL	mg/kg	103	185	174	181	187	146	148
Beryllium	NL	mg/kg	0.65	0.87	0.96	1	0.84	0.034 U	1.1
Cadmium	4.98	mg/kg	2.3	4.5	4.6	3.7	3.5	1.8	2
Calcium	NL	mg/kg	42,700	44,000	43,800	34,000	33,800	47,700	45,500
Chromium	111	mg/kg	24.6	48.4	36.7	30.5	25.7	27.7	30.3
Cobalt	NL	mg/kg	7.3	10.7	12.1	10.1	9.4	11.3 J	11.2 J
Copper	149	mg/kg	55.6	96.8	79.7	79.8 J	61.9 J	36.4	36.3
Iron	NL	mg/kg	20,200	29,200	41,400	29,600	23,800	28,500	29,000
Lead	128	mg/kg	77.9	205	100	136	97.3	21	23.2
Magnesium	NL	mg/kg	10,800	10,400	11,400	9,510	8,460	10,300	11,500
Manganese	NL	mg/kg	361	538	609	448	403	599	519
Mercury	1.06	mg/kg	0.25	0.41	0.48	1.1	0.85	0.06 J	0.07 J
Nickel	48.6	mg/kg	23.3 J	32.7 J	39.5 J	33.6	27.9	33.1 J	33.4 J
Potassium	NL	mg/kg	1,200	2,130	2,990	2,570	2,410	2,960	3,370
Selenium	NL	mg/kg	4.3 U	5.4 U	5.2 U	4.1 U	4.1 U	6.5 U	5.1 U
Silver	NL	mg/kg	0.039 U	3.3 J+	0.048 U	2.8	0.038 U	0.17 J	0.21 J
Sodium	NL	mg/kg	1.5 U	1.8 U	1.8 U	1.4 U	1.4 U	2.2 U	1.7 U
Thallium	NL	mg/kg	0.17 U	0.21 U	0.21 U	0.17 U	0.17 U	0.26 U	0.2 U
Vanadium	NL	mg/kg	22.2	33.6	40.6	38.1	35.3	37.4	43.2
Zinc	459	mg/kg	174	308	198	268	256	131 J	132 J

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Table B-2
Sediment Sample Analytical Results - TAL Metals
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-51	LMR11-51	LMR11-52	LMR11-52	LMR11-52	LMR11-52	LMR11-52
		Field Sample ID	LMR11-51-048	LMR11-51-075	LMR11-52-006	LMR11-52-024	LMR11-52-048	LMR11-52-048FS	LMR11-52-072
		Sample Date	8/7/2011	8/7/2011	8/8/2011	8/8/2011	8/8/2011	8/8/2011	8/8/2011
		Depth Interval (in bss)	24- 48	48- 75	0- 6	6- 24	24- 48	24- 48	48- 72
Chemical Name	PEC[1]	Unit							
Aluminum	NL	mg/kg	23,800	21,700	12,800	19,000	19,200	15,400	17,600
Antimony	NL	mg/kg	0.27 UJ	0.3 UJ	0.35 UJ	0.33 UJ	0.25 UJ	0.24 UJ	0.23 UJ
Arsenic	33	mg/kg	11.1	9.9	9.5	10.6	11.6	10.4	10.7
Barium	NL	mg/kg	162	142	117	129	133	110	122
Beryllium	NL	mg/kg	1.2	0.94	0.03 U	0.95	0.98	0.8	0.88
Cadmium	4.98	mg/kg	2.4	3.1	1.5	2.4	2.3	2.4	2.8
Calcium	NL	mg/kg	42,900	51,700	43,900	43,600	46,000	45,200	42,700
Chromium	111	mg/kg	34.8	35.1	21.4	32.3	31.8	28.2	31.3
Cobalt	NL	mg/kg	12 J	11 J	9.8	10.9	10.7	9.5	10.1
Copper	149	mg/kg	39.6	37.4	27.7	36.3	38	34.3	38.3
Iron	NL	mg/kg	32,100	26,500	23,000	28,200	27,900	24,200	25,800
Lead	128	mg/kg	29.6	31	17.8	28.7	33.9	27.6	30.2
Magnesium	NL	mg/kg	11,900	12,100	10,400	12,200	12,000	12,400	12,400
Manganese	NL	mg/kg	631	518	404	488	519	478	461
Mercury	1.06	mg/kg	0.076 J	0.088 J	0.058 J	0.087 J	0.073 J	0.085 J	0.077 J
Nickel	48.6	mg/kg	36.7 J	36.7 J	25.8 J	33.2 J	32.5 J	29.9 J	32.6 J
Potassium	NL	mg/kg	3,540	3,580	2,020	3,100	2,950	2,300	2,660
Selenium	NL	mg/kg	4.5 U	5 U	5.8 U	5.5 U	4.1 U	4 U	3.8 U
Silver	NL	mg/kg	0.3 J	0.25 J	0.053 U	0.05 U	0.038 U	0.037 U	0.035 U
Sodium	NL	mg/kg	1.6 U	1.7 U	2 U	1.9 U	1.4 U	1.4 U	1.3 U
Thallium	NL	mg/kg	0.18 U	0.2 U	0.23 U	0.22 U	0.16 U	0.16 U	0.15 U
Vanadium	NL	mg/kg	48.8	45.2	29.8	43.6	42.9	34.5	37.8
Zinc	459	mg/kg	183 J	130 J	99.8	141	298	116	119

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Table B-2
Sediment Sample Analytical Results - TAL Metals
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-53	LMR11-53	LMR11-53	LMR11-53	LMR11-54	LMR11-54	LMR11-54
		Field Sample ID	LMR11-53-006	LMR11-53-024	LMR11-53-048	LMR11-53-073	LMR11-54-006	LMR11-54-006-DP	LMR11-54-024
		Sample Date	8/7/2011	8/7/2011	8/7/2011	8/7/2011	8/8/2011	8/8/2011	8/8/2011
		Depth Interval (in bss)	0- 6	6- 24	24- 48	48- 73	0- 6	0- 6	6- 24
Chemical Name	PEC[1]	Unit							
Aluminum	NL	mg/kg	18,400 J	11,200 J	16,400 J	13,400 J	8,160 J	11,600 J	10,100 J
Antimony	NL	mg/kg	0.37 UJ	0.26 UJ	7.4 UJ	0.2 UJ	0.27 UJ	0.26 UJ	0.23 UJ
Arsenic	33	mg/kg	9.2	7.4	8.7	8	5.6	6.7	6.3
Barium	NL	mg/kg	126	80.1	105	98.8	60.8	91.3	73.1
Beryllium	NL	mg/kg	0.97	0.63	0.75	0.63	0.023 U	0.022 U	0.02 U
Cadmium	4.98	mg/kg	1.7	1.3	1.6	3.1	0.97	1.3	1.1
Calcium	NL	mg/kg	42,900	60,200	54,000	45,800	29,200	40,400	35,000
Chromium	111	mg/kg	28	18.1	25	27.7	14	18.6	16
Cobalt	NL	mg/kg	10.7	7.3	9.2	8.3	0.066 U	8.1	7.6
Copper	149	mg/kg	33	22.3	26.8	32.8	17.4	24.4	19.4
Iron	NL	mg/kg	26,500	17,500	22,400	19,600	13,800	18,200	15,600
Lead	128	mg/kg	19.6	14.8	20.3	27.3	11.1	31.6	12.6
Magnesium	NL	mg/kg	11,500	13,200	12,600	11,100	7,600	9,610	8,980
Manganese	NL	mg/kg	525 J	391 J	419 J	389 J	251 J	337 J	285 J
Mercury	1.06	mg/kg	0.0012 U	0.001 U	0.0009 U	0.0007 U	0.001 U	0.001 U	0.0009 U
Nickel	48.6	mg/kg	30.3	20.3	26.6	27.5	16.4	21.5	18.5
Potassium	NL	mg/kg	3,270 J	1,940 J	2,800 J	2,070 J	1,420 J	1,960 J	1,810 J
Selenium	NL	mg/kg	6.2 U	4.3 U	4.3 U	3.3 U	4.4 U	4.4 U	3.8 U
Silver	NL	mg/kg	0.057 U	0.039 U	0.039 U	0.03 U	0.041 U	0.04 U	0.035 U
Sodium	NL	mg/kg	2.1 U	1.5 U	1.5 U	1.1 U	1.5 U	1.5 U	1.3 U
Thallium	NL	mg/kg	0.25 U	0.17 U	0.17 U	0.13 U	0.18 U	0.17 U	0.15 U
Vanadium	NL	mg/kg	41.2	25.2	35.5	28	19.9	24.9	23.9
Zinc	459	mg/kg	112 J	74.5 J	157 J	113 J	59.8 J	81 J	67.4 J

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Table B-2
Sediment Sample Analytical Results - TAL Metals
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-54	LMR11-54	LMR11-54	LMR11-54	LMR11-54	LMR11-55	LMR11-55
		Field Sample ID	LMR11-54-024-DP	LMR11-54-048	LMR11-54-048-DP	LMR11-54-072	LMR11-54-086	LMR11-55-006	LMR11-55-006-DP
		Sample Date	8/8/2011	8/8/2011	8/8/2011	8/8/2011	8/8/2011	8/7/2011	8/7/2011
		Depth Interval (in bss)	6- 24	24- 48	24- 48	48- 72	72- 86	0- 6	0- 6
Chemical Name	PEC[1]	Unit							
Aluminum	NL	mg/kg	8,000 J	14,700 J	17,100	14,700	13,400	12,500	12,900
Antimony	NL	mg/kg	8.3 UJ	0.25 UJ	0.31 UJ	0.32 UJ	0.25 UJ	9.5 UJ	0.38 UJ
Arsenic	33	mg/kg	6.9	8.4	9	8.1	10.6	8.1	6.8
Barium	NL	mg/kg	60.7	111	124	103	107	96.8	94.2
Beryllium	NL	mg/kg	0.025 U	0.72	0.9	0.78	0.74	0.028 U	0.033 U
Cadmium	4.98	mg/kg	0.93	1.5	1.7	1.8	3.5	1.1	1.1
Calcium	NL	mg/kg	55,300	37,100	49,700	44,700	51,000	39,200	35,700
Chromium	111	mg/kg	13.2	23	28.6	24.4	31.1	20.7	20.4
Cobalt	NL	mg/kg	7.9	10.4	11.5	9.1	9.1	9.4	0.094 U
Copper	149	mg/kg	16.7	28.9	32.5	28.2	37.7	53.3	24.3
Iron	NL	mg/kg	13,500	22,200	27,200	22,200	23,200	22,300	21,800
Lead	128	mg/kg	12.1	23.1	19.7	22.4	35.5	19.4	16.3
Magnesium	NL	mg/kg	18,800	9,220	12,100	12,300	11,300	9,120	9,660
Manganese	NL	mg/kg	280 J	460 J	605	410	518	430	383
Mercury	1.06	mg/kg	0.0009 U	0.0008 U	0.066 J	0.061 J	0.078 J	0.08 J	0.059 J
Nickel	48.6	mg/kg	16.8	26.6	31.1 J	26.9 J	31.5 J	26 J	24.6 J
Potassium	NL	mg/kg	1,530 J	2,560 J	2,880	2,340	1,880	1,840	2,070
Selenium	NL	mg/kg	4.8 U	4.2 U	5.1 U	5.4 U	4.2 U	5.5 U	6.3 U
Silver	NL	mg/kg	0.044 U	0.039 U	0.047 U	0.049 U	0.039 U	0.088 J	1.8 U
Sodium	NL	mg/kg	1.7 U	1.5 U	1.8 U	1.8 U	1.5 U	1.9 U	2.2 U
Thallium	NL	mg/kg	0.19 U	0.17 U	0.21 U	0.21 U	0.17 U	0.22 U	0.25 U
Vanadium	NL	mg/kg	19.7	31	39.1	33.7	30.4	28.8	30.6
Zinc	459	mg/kg	54.8 J	91.8 J	114	106	134	103 J	96.2 J

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Table B-2
Sediment Sample Analytical Results - TAL Metals
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-55	LMR11-55	LMR11-56	LMR11-56	LMR11-56	LMR11-57	LMR11-57
		Field Sample ID	LMR11-55-030	LMR11-55-030-DP	LMR11-56-006	LMR11-56-024	LMR11-56-036	LMR11-57-006	LMR11-57-024
		Sample Date	8/7/2011	8/7/2011	8/7/2011	8/7/2011	8/7/2011	8/6/2011	8/6/2011
		Depth Interval (in bss)	6- 30	6- 30	0- 6	6- 24	24- 36	0- 6	6- 24
Chemical Name	PEC[1]	Unit							
Aluminum	NL	mg/kg	15,800	20,300	16,600	18,400	8,590	13,300	2,890
Antimony	NL	mg/kg	0.31 UJ	0.37 UJ	0.32 UJ	0.33 UJ	7.1 UJ	0.68 J	0.23 J
Arsenic	33	mg/kg	11.1	11.7	8	11.1	12.1	7	1.7
Barium	NL	mg/kg	106	154	265	139	88	96.9	0.058 U
Beryllium	NL	mg/kg	0.75	0.97	0.8	0.88	0.021 U	0.035 U	0.017 U
Cadmium	4.98	mg/kg	1.4	1.9	1.2	1.6	1.6	1.3	0.01 U
Calcium	NL	mg/kg	59,800	57,100	30,700	41,700	57,000	33,800 J	23,300 J
Chromium	111	mg/kg	26.1	32.7	25.3	28.6	22	21.8	6.2
Cobalt	NL	mg/kg	11.7	14.4	9	10.9	7.6	0.1 U	0.049 U
Copper	149	mg/kg	32.3	45.1	29.2	34.1	28.2	26.2 J	4.1 J
Iron	NL	mg/kg	27,100	34,200	24,700	28,300	17,500	20,600 J	5,940 J
Lead	128	mg/kg	21	36.2	20.9	26.1	26.7	16 J	3.2 J
Magnesium	NL	mg/kg	20,400	15,000	8,830	11,600	13,100	9,840 J	8,180 J
Manganese	NL	mg/kg	484	675	423	492	387	358 J	129 J
Mercury	1.06	mg/kg	0.05 J	0.069 J	0.064 J	0.067 J	0.052 J	0.067 J	0.0094 J
Nickel	48.6	mg/kg	31.9 J	39.9 J	27.7 J	32.2 J	22.2 J	24.2	6.5
Potassium	NL	mg/kg	2,590	3,260	2,820	2,910	1,570	2,260 J	472 J
Selenium	NL	mg/kg	5.2 U	6.2 U	5.3 U	5.5 U	4.1 U	6.8 U	3.3 U
Silver	NL	mg/kg	0.12 J	0.21 J	0.16 J	0.14 J	0.099 J	0.14 J	0.94 U
Sodium	NL	mg/kg	1.8 U	2.1 U	1.8 U	1.9 U	1.4 U	2.3 U	1.1 U
Thallium	NL	mg/kg	0.21 U	0.25 U	0.21 U	0.22 U	0.16 U	0.27 U	0.13 U
Vanadium	NL	mg/kg	36.4	48.7	37	42.1	23.9	30.4 J	9.2 J
Zinc	459	mg/kg	111 J	153 J	127 J	144 J	83.4 J	90.4 J	20.6 J

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Table B-2
Sediment Sample Analytical Results - TAL Metals
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-57	LMR11-57	LMR11-58	LMR11-59	LMR11-59	LMR11-59	LMR11-59
		Field Sample ID	LMR11-57-048	LMR11-57-062	LMR11-58-010	LMR11-59-006	LMR11-59-024	LMR11-59-048	LMR11-59-072
		Sample Date	8/6/2011	8/6/2011	8/6/2011	8/6/2011	8/6/2011	8/6/2011	8/6/2011
		Depth Interval (in bss)	24- 48	48- 62	0- 10	0- 6	6- 24	24- 48	48- 72
Chemical Name	PEC[1]	Unit							
Aluminum	NL	mg/kg	6,160	3,720	8,260	14,900	20,900	17,200	20,400
Antimony	NL	mg/kg	0.33 J	7.4 UJ	0.18 UJ	0.49 J	0.29 UJ	0.77 J	0.29 UJ
Arsenic	33	mg/kg	2.6	2.8	6.4	8	9.3	8.1	10.8
Barium	NL	mg/kg	45.1	26.1	64	108	147	115	131
Beryllium	NL	mg/kg	0.018 U	0.022 U	0.44	0.77	0.9	0.88	0.84
Cadmium	4.98	mg/kg	0.64	0.014 U	0.6	1.4 J	1.6 J	1.6 J	1.9 J
Calcium	NL	mg/kg	29,300 J	39,500 J	67,200	51,600	40,300	39,600	45,000
Chromium	111	mg/kg	10.5	7.4	13.8	23.5	30	25.9	32.2
Cobalt	NL	mg/kg	5.1	0.064 U	7.5	8.6	10.4	8.9	9.9
Copper	149	mg/kg	10.5 J	7 J	18	29.5	35.3	30.2	35.6
Iron	NL	mg/kg	11,800 J	8,350 J	17,100	22,200	28,100	23,100	26,900
Lead	128	mg/kg	5.5 J	4 J	8.7	20.2	22.5	22	29.2
Magnesium	NL	mg/kg	9,950 J	11,300 J	15,100	13,600	11,200	11,300	13,500
Manganese	NL	mg/kg	327 J	243 J	363	436	478	446	499
Mercury	1.06	mg/kg	0.0097 J	0.012 J	0.013 J	0.062 J	0.072 J	0.061 J	0.093 J
Nickel	48.6	mg/kg	13.6	10.1	20.8 J	24.3	31.7	26.5	31
Potassium	NL	mg/kg	1,130 J	678 J	2,120	2,740	3,740	3,110	3,470
Selenium	NL	mg/kg	3.4 U	4.3 U	3 U	5.3 U	4.8 U	4.4 U	4.9 U
Silver	NL	mg/kg	0.98 U	1.2 U	0.86 U	0.17 J	0.17 J	0.17 J	0.27 J
Sodium	NL	mg/kg	1.2 U	1.5 U	1 U	1.8 UJ	1.7 UJ	1.5 UJ	1.7 UJ
Thallium	NL	mg/kg	0.14 U	0.17 U	0.12 U	0.21 U	0.19 U	0.18 U	0.19 U
Vanadium	NL	mg/kg	16.9 J	13.2 J	22.7	36.4	45.8	38.2	46.7
Zinc	459	mg/kg	34.9 J	25.4 J	42.6 J	100	125	107	140

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Table B-2
Sediment Sample Analytical Results - TAL Metals
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-59	LMR11-59	LMR11-60	LMR11-60	LMR11-60	LMR11-60	LMR11-60
		Field Sample ID	LMR11-59-096	LMR11-59-116	LMR11-60-006	LMR11-60-024	LMR11-60-048	LMR11-60-048FS	LMR11-60-072
		Sample Date	8/6/2011	8/6/2011	8/6/2011	8/6/2011	8/6/2011	8/6/2011	8/6/2011
		Depth Interval (in bss)	72- 96	96- 116	0- 6	6- 24	24- 48	24- 48	48- 72
Chemical Name	PEC[1]	Unit							
Aluminum	NL	mg/kg	14,600	5,230	19,600	19,200	21,700	24,900	12,100
Antimony	NL	mg/kg	0.3 UJ	6 UJ	0.37 UJ	0.33 UJ	0.31 UJ	0.28 UJ	7.3 UJ
Arsenic	33	mg/kg	12.3	4.4	8.7	9.2	10	10.4	11.4
Barium	NL	mg/kg	94.9	32.8	141	142	147	160	81.9
Beryllium	NL	mg/kg	0.026 U	0.018 U	0.9	1	0.91	1	0.022 U
Cadmium	4.98	mg/kg	1.2	0.57	1.6 J	1.7 J	1.8 J	1.9 J	1.1 J
Calcium	NL	mg/kg	38,600	33,700	54,000	39,300	40,200	36,600	35,300
Chromium	111	mg/kg	21.9	9	28.9	29.2	31.9	35.5	18.9
Cobalt	NL	mg/kg	8.4	0.052 U	10.4	11.1	11	11.3	7.5
Copper	149	mg/kg	25	8.1	34.2	37.5	38	39.3	23.5
Iron	NL	mg/kg	19,900	8,180	27,300	29,300	29,800	31,200	18,300
Lead	128	mg/kg	25.7	8.5	21.8	24.6	27	29.9	28.4
Magnesium	NL	mg/kg	11,700	9,270	12,200	12,000	12,100	11,400	11,200
Manganese	NL	mg/kg	389	179	433	488	532	507	357
Mercury	1.06	mg/kg	0.23	0.27	0.06 J	0.079 J	0.088 J	0.077 J	0.2
Nickel	48.6	mg/kg	23	10	31	33.5	33.5	35.5	20.7
Potassium	NL	mg/kg	2,810	933	3,530	3,020	3,770	4,310	2,100
Selenium	NL	mg/kg	5 U	3.5 U	6.2 U	5.5 U	5.2 U	4.7 U	4.2 U
Silver	NL	mg/kg	0.25 J	1 U	0.16 J	0.16 J	0.24 J	0.37 J	0.24 J
Sodium	NL	mg/kg	1.7 UJ	1.2 UJ	2.1 UJ	1.9 UJ	1.8 UJ	1.6 UJ	1.5 UJ
Thallium	NL	mg/kg	0.2 U	0.14 U	0.25 U	0.22 U	0.21 U	0.19 U	0.17 U
Vanadium	NL	mg/kg	35	15.6	44.1	41.8	48.2	53	29.7
Zinc	459	mg/kg	100	39.2	123	140	142	180	96.4

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Table B-2
Sediment Sample Analytical Results - TAL Metals
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-60	LMR11-61	LMR11-61	LMR11-62	LMR11-62	LMR11-62	LMR11-62
		Field Sample ID	LMR11-60-092	LMR11-61-006	LMR11-61-030	LMR11-62-006	LMR11-62-024	LMR11-62-024DP	LMR11-62-048
		Sample Date	8/6/2011	8/6/2011	8/6/2011	8/6/2011	8/6/2011	8/6/2011	8/6/2011
		Depth Interval (in bss)	72- 92	0- 6	6- 30	0- 6	6- 24	6- 24	24- 48
Chemical Name	PEC[1]	Unit							
Aluminum	NL	mg/kg	19,200	8,880	13,800	19,900	17,200	16,300	11,200
Antimony	NL	mg/kg	0.25 UJ	0.23 UJ	0.22 UJ	10.1 UJ	0.72 J	0.31 UJ	0.24 J
Arsenic	33	mg/kg	16.8	9.9	9.9	9.3	20.5	8.9	6.7
Barium	NL	mg/kg	131	117	114	136	127	117	79.3
Beryllium	NL	mg/kg	0.84	1.3	0.84	0.03 U	0.77	0.78	0.02 U
Cadmium	4.98	mg/kg	1.3 J	0.62	0.86	1.6 J	1.5 J	1.6 J	0.81 J
Calcium	NL	mg/kg	39,200	44,200	99,900	41,500	41,600	43,800	36,100
Chromium	111	mg/kg	26.6	10.5	20.4	30.5	26.8	26.8	17.6
Cobalt	NL	mg/kg	10.1	5.9	10.4	10.3	9.9	9.3	7.6
Copper	149	mg/kg	37	20	25	34.9	45.9	30.4	22.9
Iron	NL	mg/kg	25,700	15,800	24,700	27,900	26,500	24,000	17,900
Lead	128	mg/kg	38.9	29.8	13.8	26.8	62.2	27.2	25.9
Magnesium	NL	mg/kg	12,100	7,390	22,500	12,200	11,800	11,800	11,200
Manganese	NL	mg/kg	448	618	719	483	493	430	321
Mercury	1.06	mg/kg	0.26	0.08 J	0.023 J	0.072 J	0.5	0.08 J	0.17
Nickel	48.6	mg/kg	29.5	15.1 J	29 J	31.7	29.3	27.4	20.1
Potassium	NL	mg/kg	3,370	1,350	3,400	3,470	2,980	2,750	1,820
Selenium	NL	mg/kg	4.2 U	3.9 U	3.6 U	5.9 U	5.3 U	5.2 U	3.9 U
Silver	NL	mg/kg	0.39 J	0.049 J	1 U	0.22 J	0.72 J	0.3 J	0.091 J
Sodium	NL	mg/kg	1.4 UJ	1.3 U	1.2 U	2 UJ	1.8 UJ	1.8 UJ	1.4 UJ
Thallium	NL	mg/kg	0.17 U	0.16 U	0.14 U	0.24 U	0.21 U	0.21 U	0.16 U
Vanadium	NL	mg/kg	43.3	17.5	34.1	44.6	40.6	39.5	28.3
Zinc	459	mg/kg	145	55.4 J	62.2 J	130	171	119	83.9

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Table B-2
Sediment Sample Analytical Results - TAL Metals
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-62	LMR11-62	LMR11-62	LMR11-63	LMR11-63	LMR11-63	LMR11-63
		Field Sample ID	LMR11-62-072	LMR11-62-096	LMR11-62-108	LMR11-63-006	LMR11-63-024	LMR11-63-048	LMR11-63-048FS
		Sample Date	8/6/2011	8/6/2011	8/6/2011	8/8/2011	8/8/2011	8/8/2011	8/8/2011
		Depth Interval (in bss)	48- 72	72- 96	96- 108	0- 6	6- 24	24- 48	24- 48
Chemical Name	PEC[1]	Unit							
Aluminum	NL	mg/kg	4,590	7,170	5,520	19,200	16,800	15,800	13,600
Antimony	NL	mg/kg	6.8 UJ	8 UJ	6.2 UJ	0.28 UJ	0.33 UJ	0.27 UJ	0.23 UJ
Arsenic	33	mg/kg	3.1	4.2	4.3	10	9.2	28.6	32.1
Barium	NL	mg/kg	33.5	54.2	41.8	144	131	163	840
Beryllium	NL	mg/kg	0.02 U	0.024 U	0.019 U	0.95	0.79	0.8	0.68
Cadmium	4.98	mg/kg	0.41 J	0.61 J	0.46 J	1.7	1.7	2.1	3.3
Calcium	NL	mg/kg	34,900	42,100	41,600	42,100	40,300	42,700	39,200
Chromium	111	mg/kg	8.4	11.7	10	30.9	27.8	30.2	27.8
Cobalt	NL	mg/kg	4.9 J	6.3 J	5.2	10.8	9.1	9.2	8.2
Copper	149	mg/kg	7.5	12.5	9.6	39 J	33.8 J	58.6 J	45.3 J
Iron	NL	mg/kg	9,310	12,600	10,700	28,300	22,800	24,700	28,900
Lead	128	mg/kg	4.6	6.5	5.1	35.3	42.1	410	284
Magnesium	NL	mg/kg	10,600	12,600	11,600	12,800	11,700	11,900	11,200
Manganese	NL	mg/kg	238	285	267	487	411	454	441
Mercury	1.06	mg/kg	0.01 J	0.017 J	0.011 J	0.0012 U	0.25	0.46	0.34
Nickel	48.6	mg/kg	10.9	15.8	12.3	32.8	26.7	26.8	23.7
Potassium	NL	mg/kg	791	1,390	1,050	2,990	2,990	2,740	2,310
Selenium	NL	mg/kg	4 U	4.6 U	3.6 U	4.7 U	5.5 U	4.5 U	3.8 U
Silver	NL	mg/kg	1.1 U	1.3 U	1 U	0.043 U	0.05 U	0.041 U	0.034 U
Sodium	NL	mg/kg	1.4 UJ	1.6 UJ	1.2 UJ	1.6 U	1.9 U	1.5 U	1.3 U
Thallium	NL	mg/kg	0.16 U	0.19 U	0.15 U	0.19 U	0.22 U	0.18 U	0.15 U
Vanadium	NL	mg/kg	13.9	20.7	16.9	41.8	39	37.8	35.3
Zinc	459	mg/kg	30.5	44.1	33	141	126	271	714

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Table B-2
Sediment Sample Analytical Results - TAL Metals
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-63	LMR11-63	LMR11-63	LMR11-64	LMR11-64	LMR11-64	LMR11-64
		Field Sample ID	LMR11-63-072	LMR11-63-096	LMR11-63-115	LMR11-88-006	LMR11-88-024	LMR11-88-048	LMR11-88-072
		Sample Date	8/8/2011	8/8/2011	8/8/2011	8/7/2011	8/7/2011	8/7/2011	8/7/2011
		Depth Interval (in bss)	48- 72	72- 96	96- 115	0- 6	6- 24	24- 48	48- 72
Chemical Name	PEC[1]	Unit							
Aluminum	NL	mg/kg	16,800	15,100	5,730	12,000	14,600 J	13,400 J	18,900 J
Antimony	NL	mg/kg	0.26 UJ	0.3 UJ	7.9 UJ	0.24 UJ	0.25 UJ	0.26 UJ	0.34 UJ
Arsenic	33	mg/kg	31.3	33.1	4.3	15	24.5	20	23.9
Barium	NL	mg/kg	165	144	47.3	97.3	127	107	151
Beryllium	NL	mg/kg	0.87	0.8	0.024 U	0.6	0.85	0.69	0.93
Cadmium	4.98	mg/kg	2.3	2.1	0.85	2.6	4.3	2.7	4.4
Calcium	NL	mg/kg	41,100	43,500	44,300	78,400	50,300	50,600	46,600
Chromium	111	mg/kg	26	24.6	10.8	32.3	51.7	59.9	62.8
Cobalt	NL	mg/kg	10.3	10	0.069 U	8.5 J	9.9	8.5	11.1
Copper	149	mg/kg	85.5	70.1	11.8	39.3	53.1	44.8	74.4
Iron	NL	mg/kg	27,900	26,800	12,500	20,000	24,300	22,900	28,300
Lead	128	mg/kg	156	129	7.3	406	79.2	51.7	171
Magnesium	NL	mg/kg	12,200	12,900	12,700	16,200	12,600	12,500	12,500
Manganese	NL	mg/kg	465	481	352	516	547 J	431 J	585 J
Mercury	1.06	mg/kg	0.81	0.75	0.01 J	0.16	0.17	0.29	0.35
Nickel	48.6	mg/kg	30.2	28.2	14.6	24.7 J	31.3	26	35.1
Potassium	NL	mg/kg	2,590	2,420	1,000	2,060	2,310 J	2,140 J	3,360 J
Selenium	NL	mg/kg	0.34 U	0.4 U	4.6 U	4.1 U	4.2 U	4.3 U	5.6 U
Silver	NL	mg/kg	1.2 J	1.3 J	1.3 U	0.56 J	1.3 J+	0.039 U	1.6 J+
Sodium	NL	mg/kg	1.5 UJ	1.7 UJ	1.6 UJ	1.4 U	1.4 U	1,050	1,030
Thallium	NL	mg/kg	0.17 U	0.2 U	0.18 U	0.16 U	0.17 U	0.17 U	0.23 U
Vanadium	NL	mg/kg	38.3	36.7	18.6	27.4	33.9	31.4	43
Zinc	459	mg/kg	273	265	40.2	113 J	161 J	144 J	190 J

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Table B-2
Sediment Sample Analytical Results - TAL Metals
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-64	LMR11-65	LMR11-65	LMR11-66	LMR11-66	LMR11-66	LMR11-66
		Field Sample ID	LMR11-88-088	LMR11-65-006	LMR11-65-024	LMR11-66-006	LMR11-66-024	LMR11-66-048	LMR11-66-048FS
		Sample Date	8/7/2011	8/6/2011	8/6/2011	8/7/2011	8/7/2011	8/7/2011	8/7/2011
		Depth Interval (in bss)	72- 88	0- 6	6- 24	0- 6	6- 24	24- 48	24- 48
Chemical Name	PEC[1]	Unit							
Aluminum	NL	mg/kg	11,800 J	18,400	17,800	18,800	21,600	22,900	22,300
Antimony	NL	mg/kg	0.2 UJ	0.25 UJ	0.3 UJ	0.3 UJ	0.3 UJ	0.28 UJ	0.37 UJ
Arsenic	33	mg/kg	25.9	14.2	17.4	9	9.7	9.9	10.9
Barium	NL	mg/kg	101	127	126	145	164	197	194
Beryllium	NL	mg/kg	0.62	0.81	0.93	0.92	1	1	0.99
Cadmium	4.98	mg/kg	2.9	2.7	4.5	1.9	2.1	2.2	2.1
Calcium	NL	mg/kg	47,000	32,600	47,100	44,100	47,900	39,900	43,300
Chromium	111	mg/kg	63.4	43.2	31	28.8	31.9	33.2	33.6
Cobalt	NL	mg/kg	8.1	9.1	10.3	10.4 J	11.5 J	12 J	11.6 J
Copper	149	mg/kg	45.2	41.1	42	34.9	38.2	41.3	40.3
Iron	NL	mg/kg	19,300	23,600	25,100	26,800	30,800	30,900	29,800
Lead	128	mg/kg	47	54.4	161	26.6	25	28.6	29.1
Magnesium	NL	mg/kg	12,600	9,430	14,900	12,200	12,400	11,900	12,500
Manganese	NL	mg/kg	422 J	438	421	506	552	531	525
Mercury	1.06	mg/kg	0.18	0.16	0.18 J	0.074 J	0.073 J	0.087 J	0.076 J
Nickel	48.6	mg/kg	25.2	28.3	29	31.3 J	34.3 J	35.9 J	34.6 J
Potassium	NL	mg/kg	1,970 J	3,240	3,140	3,080	3,430	3,840	4,110
Selenium	NL	mg/kg	3.4 U	4.2 U	5 U	5 U	5.1 U	4.6 U	6.2 U
Silver	NL	mg/kg	0.031 U	0.76 J	0.61 J	0.17 J	0.32 J	0.21 J	0.26 J
Sodium	NL	mg/kg	1,540	1,570 J	2,730 J	1.7 U	1.7 U	1.6 U	2.1 U
Thallium	NL	mg/kg	0.14 U	0.17 U	0.2 U	0.2 U	0.2 U	0.18 U	0.25 U
Vanadium	NL	mg/kg	27	40.7	40.6	40.8	45.5	45.6	49.7
Zinc	459	mg/kg	136 J	151	154	128 J	138 J	143 J	148 J

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Table B-2
Sediment Sample Analytical Results - TAL Metals
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-66	LMR11-66	LMR11-66	LMR11-67	LMR11-67	LMR11-67	LMR11-67
		Field Sample ID	LMR11-66-072	LMR11-66-096	LMR11-66-117	LMR11-67-006	LMR11-67-024	LMR11-67-048	LMR11-67-077
		Sample Date	8/7/2011	8/7/2011	8/7/2011	8/6/2011	8/6/2011	8/6/2011	8/6/2011
		Depth Interval (in bss)	48- 72	72- 96	96- 117	0- 6	6- 24	24- 48	48- 77
Chemical Name	PEC[1]	Unit							
Aluminum	NL	mg/kg	21,600	15,300	20,800	18,100	17,200	17,400	16,700
Antimony	NL	mg/kg	0.27 UJ	0.31 UJ	0.23 UJ	0.31 UJ	0.26 UJ	0.6 J	0.28 UJ
Arsenic	33	mg/kg	9.9	11.7	11.7	18.4	20.3	17.2	17.8
Barium	NL	mg/kg	156	117	153	140	153	157	145
Beryllium	NL	mg/kg	0.94	0.027 U	0.94	0.87	0.9	1	0.85
Cadmium	4.98	mg/kg	2	3.6	5.3	4.4	4.5	6.2	4.8
Calcium	NL	mg/kg	41,700	45,500	46,700	53,400	46,600	40,800	43,800
Chromium	111	mg/kg	31.2	34	41.4	52.3	53.8	36.1	35.6
Cobalt	NL	mg/kg	10.6 J	10.2 J	11 J	10.3	10.5	11.7	9.8
Copper	149	mg/kg	38.5	44.2	51.5	57.6	64.7	64.7	58.5
Iron	NL	mg/kg	27,900	23,800	26,700	26,300	27,100	29,400	24,800
Lead	128	mg/kg	29.4	67.8	43.7	73.6	98.5	95.2	126
Magnesium	NL	mg/kg	12,700	12,100	11,100	13,300	12,100	11,300	11,700
Manganese	NL	mg/kg	492	486	488	565	533	539	522
Mercury	1.06	mg/kg	0.089 J	0.12 J	0.1 J	0.28	0.42	0.32	0.38
Nickel	48.6	mg/kg	32.2 J	34.2 J	40.8 J	36.1	34.9	35.5	28.6
Potassium	NL	mg/kg	3,720	2,350	3,270	3,410	2,700	2,430	2,870
Selenium	NL	mg/kg	4.5 U	0.5 J	3.9 U	5.2 U	4.3 U	5.2 U	4.6 U
Silver	NL	mg/kg	0.23 J	0.52 J	0.51 J	0.93 J	1.8	1.2 J	1.2 J
Sodium	NL	mg/kg	1.5 U	1.8 U	1.3 U	1.8 UJ	1.5 UJ	1.8 UJ	1.6 UJ
Thallium	NL	mg/kg	0.18 U	0.21 U	0.16 U	0.21 U	0.17 U	0.21 U	0.18 U
Vanadium	NL	mg/kg	46.5	34.5	42.1	42	38.3	38	38.4
Zinc	459	mg/kg	142 J	156 J	162 J	172	220	211	232

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Table B-2
Sediment Sample Analytical Results - TAL Metals
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-68	LMR11-68	LMR11-68	LMR11-68	LMR11-68	LMR11-69	LMR11-70
		Field Sample ID	LMR11-68-006	LMR11-68-024	LMR11-68-048	LMR11-68-072	LMR11-68-096	LMR11-69-006	LMR11-70-006
		Sample Date	8/7/2011	8/7/2011	8/7/2011	8/7/2011	8/7/2011	8/6/2011	8/7/2011
		Depth Interval (in bss)	0- 6	6- 24	24- 48	48- 72	72- 96	0- 6	0- 6
Chemical Name	PEC[1]	Unit							
Aluminum	NL	mg/kg	21,500	22,900	21,000	25,300 J	20,100	7,090	24,900 J
Antimony	NL	mg/kg	0.28 UJ	0.32 UJ	0.31 UJ	0.28 UJ	0.3 UJ	0.3 UJ	0.35 UJ
Arsenic	33	mg/kg	9.4	9.7	10.1	11	12.6	23.3	10.4
Barium	NL	mg/kg	151	186	157	163	157	129	169
Beryllium	NL	mg/kg	0.95	1.1	1	1.1	0.99	0.87	1.1
Cadmium	4.98	mg/kg	1.9	2.1	2.1	2	2.9	1.7	1.9
Calcium	NL	mg/kg	43,900	46,100	35,600	38,200	39,400	106,000	22,700
Chromium	111	mg/kg	30.1	32.6	31.1	35.8	34.8	21.6	34.9
Cobalt	NL	mg/kg	10.9 J	11.9 J	12 J	11.9	11.7 J	12.9	12.6
Copper	149	mg/kg	34.9	38.6	39.4	39.6	47.4	120	37.5
Iron	NL	mg/kg	27,300	30,800	31,200	32,600	30,400	22,800	33,700
Lead	128	mg/kg	22.2	24.3	26	27.8	44.2	419	23.1
Magnesium	NL	mg/kg	12,500	12,200	11,100	11,300	11,500	24,300	9,210
Manganese	NL	mg/kg	504	581	535	587 J	618	600	543 J
Mercury	1.06	mg/kg	0.068 J	0.074 J	0.079 J	0.0009 U	0.12 J	0.22	0.0013 U
Nickel	48.6	mg/kg	30.9 J	35.4 J	36.3 J	36.2	37.9 J	38.9	37.1
Potassium	NL	mg/kg	3,980	3,940	3,090	4,290 J	2,790	1,410	4,040 J
Selenium	NL	mg/kg	4.7 U	5.4 U	5.2 U	4.6 U	5 U	4.9 U	5.8 U
Silver	NL	mg/kg	0.17 J	0.17 J	0.21 J	0.042 U	0.83 J	0.64 J	0.053 U
Sodium	NL	mg/kg	1.6 U	1.8 U	1.8 U	1.6 U	1.7 U	1.7 UJ	2 U
Thallium	NL	mg/kg	0.19 U	0.21 U	0.21 U	0.18 U	0.2 U	0.2 U	0.23 U
Vanadium	NL	mg/kg	46.1	46.5	41.6	54	40.2	23.1	51.3
Zinc	459	mg/kg	123 J	136 J	140 J	142 J	175 J	300	139 J

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Table B-2
Sediment Sample Analytical Results - TAL Metals
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-70	LMR11-70	LMR11-70	LMR11-70	LMR11-70	LMR11-71	LMR11-71
		Field Sample ID	LMR11-70-024	LMR11-70-048	LMR11-70-072	LMR11-70-072FS	LMR11-70-085	LMR11-71-006	LMR11-71-024
		Sample Date	8/7/2011	8/7/2011	8/7/2011	8/7/2011	8/7/2011	8/6/2011	8/6/2011
		Depth Interval (in bss)	6- 24	24- 48	48- 72	48- 72	72- 85	0- 6	6- 24
Chemical Name	PEC[1]	Unit							
Aluminum	NL	mg/kg	25,600 J	21,400 J	18,200 J	19,100 J	23,500 J	23,100	24,400
Antimony	NL	mg/kg	0.31 UJ	0.33 UJ	0.37 UJ	0.35 UJ	0.29 UJ	0.33 UJ	0.35 UJ
Arsenic	33	mg/kg	9.7	9.8	9	10	9.8	8.4	10.5
Barium	NL	mg/kg	165	149	135	154	162	167	166
Beryllium	NL	mg/kg	1.1	0.95	0.9	0.96	1.2	1.1	1.1
Cadmium	4.98	mg/kg	1.9	1.8	1.8	2	2	1.7	1.9
Calcium	NL	mg/kg	32,600	42,800	50,700	49,100	37,000	40,800	35,400
Chromium	111	mg/kg	35.5	31.1	28	29.6	34	33.7	36.1
Cobalt	NL	mg/kg	12.5	11.4	10.8	11.7	11.6	11.7	12.4
Copper	149	mg/kg	38	35.9	37.3	39.6	38	39.8	42.8
Iron	NL	mg/kg	32,500	28,500	27,100	31,100	30,900	31,800	34,400
Lead	128	mg/kg	21.7	21.7	21.7	24.3	23.9	26.6	31.3
Magnesium	NL	mg/kg	10,400	10,800	11,900	11,500	11,000	12,000	11,200
Manganese	NL	mg/kg	657 J	607 J	581 J	665 J	510 J	426	501
Mercury	1.06	mg/kg	0.0011 U	0.0011 U	0.0012 U	0.0011 U	0.001 U	0.085 J	0.09 J
Nickel	48.6	mg/kg	36.3	32.9	31.1	34.3	34.6	35.6 J	38.9 J
Potassium	NL	mg/kg	4,820 J	4,030 J	3,300 J	3,000 J	4,030 J	4,060	3,830
Selenium	NL	mg/kg	5.1 U	5.5 U	6.1 U	5.9 U	4.9 U	5.5 U	5.9 U
Silver	NL	mg/kg	0.047 U	0.051 U	0.056 U	0.054 U	0.045 U	0.2 J	0.28 J
Sodium	NL	mg/kg	1.8 U	1.9 U	2.1 U	2 U	1.7 U	1.9 U	2 U
Thallium	NL	mg/kg	0.2 U	0.22 U	0.25 U	0.24 U	0.19 U	0.22 U	0.24 U
Vanadium	NL	mg/kg	53.1	45.6	40.3	40.2	50.3	50.3	51.6
Zinc	459	mg/kg	130 J	123 J	117 J	134 J	131 J	142 J	213 J

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Table B-2
Sediment Sample Analytical Results - TAL Metals
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-71	LMR11-71	LMR11-71	LMR11-71	LMR11-71	LMR11-71	LMR11-71
		Field Sample ID	LMR11-71-024FS	LMR11-71-048	LMR11-71-072	LMR11-71-096	LMR11-71-120	LMR11-71-144	LMR11-71-161
		Sample Date	8/6/2011	8/6/2011	8/6/2011	8/6/2011	8/6/2011	8/6/2011	8/6/2011
		Depth Interval (in bss)	6- 24	24- 48	48- 72	72- 96	96- 120	120- 144	144- 161
Chemical Name	PEC[1]	Unit							
Aluminum	NL	mg/kg	23,700	22,400	17,500	15,600	20,000	15,900	14,500
Antimony	NL	mg/kg	0.33 UJ	0.32 UJ	0.26 UJ	0.25 UJ	0.26 UJ	0.24 UJ	0.23 UJ
Arsenic	33	mg/kg	9.5	12.4	12	14	14	13.1	10.8
Barium	NL	mg/kg	156	156	147	132	152	122	116
Beryllium	NL	mg/kg	1.1	1	0.88	0.81	0.96	0.73	0.67
Cadmium	4.98	mg/kg	1.8	3.2	3.7	4.5	4.5	3	3.6
Calcium	NL	mg/kg	33,600	40,600	48,300	44,700	47,300	66,400	35,400
Chromium	111	mg/kg	34.4	39.3	36.8	45.6	44.8	37.6	36.8
Cobalt	NL	mg/kg	11.8	11.6	10.7	10.6	11.3	9	8.3
Copper	149	mg/kg	39.8	51.9	59.2	49.1	53.3	43	47.9
Iron	NL	mg/kg	33,000	32,100	28,500	26,200	30,300	25,500	21,000
Lead	128	mg/kg	26.5	60.9	70.9	67.3	62.3	64.6	40.5
Magnesium	NL	mg/kg	11,000	11,600	12,500	12,300	12,100	10,300	8,640
Manganese	NL	mg/kg	454	534	587	502	585	920	358
Mercury	1.06	mg/kg	0.08 J	0.16 J	0.23	0.23	0.21	0.23	0.18
Nickel	48.6	mg/kg	36.7 J	39.6 J	38.2 J	37.9 J	36.6 J	28.1 J	27.9 J
Potassium	NL	mg/kg	3,840	3,420	2,410	2,260	2,940	2,550	2,280
Selenium	NL	mg/kg	5.5 U	5.4 U	4.3 U	4.2 U	4.3 U	3.9 U	3.9 U
Silver	NL	mg/kg	0.21 J	0.45 J	0.41 J	0.72 J	0.56 J	0.53 J	0.66 J
Sodium	NL	mg/kg	1.9 U	1.9 U	1.5 U	1.4 U	1.5 U	1.4 U	1.3 U
Thallium	NL	mg/kg	0.22 U	0.22 U	0.17 U	0.17 U	0.17 U	0.16 U	0.15 U
Vanadium	NL	mg/kg	50.4	48.7	39.2	37.3	43.8	36.1	32
Zinc	459	mg/kg	155 J	183 J	173 J	164 J	175 J	133 J	134 J

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Table B-2
Sediment Sample Analytical Results - TAL Metals
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-72	LMR11-72	LMR11-72	LMR11-73	LMR11-73	LMR11-73	LMR11-74
		Field Sample ID	LMR11-72-006	LMR11-72-024	LMR11-72-035	LMR11-73-006	LMR11-73-024	LMR11-73-042	LMR11-74-006
		Sample Date	8/5/2011	8/5/2011	8/5/2011	8/7/2011	8/7/2011	8/7/2011	8/5/2011
		Depth Interval (in bss)	0- 6	6- 24	24- 35	0- 6	6- 24	24- 42	0- 6
Chemical Name	PEC[1]	Unit							
Aluminum	NL	mg/kg	12,600 J-	3,200 J-	4,270 J-	12,300	20,100	13,800	19,400
Antimony	NL	mg/kg	0.91 J-	5.9 UJ	6.8 UJ	0.28 UJ	0.4 UJ	0.24 UJ	0.83 J
Arsenic	33	mg/kg	19.6 J-	4.2 J-	4.5 J-	9.6	9.6	12.7	13.3
Barium	NL	mg/kg	152 J-	0.061 UJ	29.1 J-	142	305	105	142
Beryllium	NL	mg/kg	0.75 J-	0.018 UJ	0.021 UJ	0.024 U	0.035 U	0.67	0.91
Cadmium	4.98	mg/kg	1.5 J-	0.011 UJ	0.013 UJ	1.1	2.1	1.7	4.5
Calcium	NL	mg/kg	32,900 J-	39,400 J-	45,000 J-	48,300	49,500	47,100	36,600 J
Chromium	111	mg/kg	23.9 J-	8.4 J-	8.3 J-	22	32	21.1	35.7
Cobalt	NL	mg/kg	8.7 J-	5.3 J-	0.059 UJ	8.7	11.2 J	9.1 J	10.8
Copper	149	mg/kg	90.6 J-	6.8 J-	10 J-	28.4	37.5	29.1	49.9 J
Iron	NL	mg/kg	21,500 J-	7,360 J-	9,260 J-	20,800	29,000	23,000	28,700 J
Lead	128	mg/kg	205 J-	7 J-	5.7 J-	25.2	22.6	26.1	74.4 J
Magnesium	NL	mg/kg	9,640 J-	14,500 J-	12,600 J-	12,600	12,600	12,500	10,100 J
Manganese	NL	mg/kg	302 J-	159 J-	222 J-	397	505	461	572 J
Mercury	1.06	mg/kg	5.6 J-	0.055 J-	0.033 J-	0.061 J	0.07 J	0.055 J	0.25
Nickel	48.6	mg/kg	26 J-	9.7 J-	11.8 J-	24.3 J	32.8 J	25.1 J	32.5
Potassium	NL	mg/kg	2,140 J-	850 J-	786 J-	2,080	3,490	2,080	3,130 J
Selenium	NL	mg/kg	4.2 UJ	3.4 UJ	4 UJ	4.7 U	6.7 U	0.33 J	5.3 U
Silver	NL	mg/kg	2.9 J-	0.98 UJ	1.1 UJ	0.13 J	0.19 J	0.25 J	0.9 J
Sodium	NL	mg/kg	1.5 UJ	1.2 UJ	1.4 UJ	1.6 U	2.3 U	1.4 U	1.8 U
Thallium	NL	mg/kg	0.17 UJ	0.14 UJ	0.16 UJ	0.19 U	0.27 U	0.16 U	0.21 U
Vanadium	NL	mg/kg	31 J-	11.4 J-	14 J-	30.6	43.4	33.9	43.3 J
Zinc	459	mg/kg	339 J-	34 J-	27.9 J-	97.2 J	136 J	119 J	180 J

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Table B-2
Sediment Sample Analytical Results - TAL Metals
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-74	LMR11-74	LMR11-74	LMR11-74	LMR11-74	LMR11-75	LMR11-75
		Field Sample ID	LMR11-74-024	LMR11-74-048	LMR11-74-048FS	LMR11-74-072	LMR11-74-085	LMR11-75-006	LMR11-75-024
		Sample Date	8/5/2011	8/5/2011	8/5/2011	8/5/2011	8/5/2011	8/5/2011	8/5/2011
		Depth Interval (in bss)	6- 24	24- 48	24- 48	48- 72	72- 85	0- 6	6- 24
Chemical Name	PEC[1]	Unit							
Aluminum	NL	mg/kg	16,000	24,800	23,500	23,400	10,100	19,700 J-	17,700 J-
Antimony	NL	mg/kg	1.3 J	0.88 J	1.1 J	0.92 J	0.86 J	0.73 J-	1 J-
Arsenic	33	mg/kg	22.8	10.8	20.5	25.2	15.7	18.8 J-	25.4 J-
Barium	NL	mg/kg	136	164	165	179	79.6	143 J-	153 J-
Beryllium	NL	mg/kg	0.84	1.2	1	1.1	0.53	0.9 J-	0.85 J-
Cadmium	4.98	mg/kg	4	2.9	3.3	3.7	1.4	1.8 J-	1.7 J-
Calcium	NL	mg/kg	38,800 J	24,800 J	31,900 J	31,400 J	67,900 J	39,000 J-	43,600 J-
Chromium	111	mg/kg	39.9	36.3	45.9	136	23.5	28.5 J-	25.9 J-
Cobalt	NL	mg/kg	10.6	12.3	11.7	12.4	6.4	10.7 J-	10 J-
Copper	149	mg/kg	66.8 J	42.6 J	61.1 J	92.2 J	36.5 J	46.8 J-	53.2 J-
Iron	NL	mg/kg	28,900 J	31,400 J	31,000 J	32,000 J	16,500 J	28,700 J-	27,000 J-
Lead	128	mg/kg	139 J	38.4 J	97.9 J	118 J	54.3 J	71.3 J-	107 J-
Magnesium	NL	mg/kg	10,400 J	9,550 J	10,400 J	9,960 J	13,900 J	12,800 J-	12,300 J-
Manganese	NL	mg/kg	526 J	594 J	595 J	587 J	343 J	469 J-	471 J-
Mercury	1.06	mg/kg	0.35	0.18	0.35	0.43	0.38	0.69 J-	0.94 J-
Nickel	48.6	mg/kg	33.1	36.7	35	41.5	19.1	31.7 J-	29.5 J-
Potassium	NL	mg/kg	2,230 J	3,830 J	4,050 J	3,700 J	1,810 J	3,440 J-	3,120 J-
Selenium	NL	mg/kg	5.7 U	4.8 U	4.5 U	4.8 U	3.4 U	4.8 UJ	4.4 UJ
Silver	NL	mg/kg	0.92 J	0.29 J	0.7 J	1 J	0.64 J	0.57 J+	0.76 J+
Sodium	NL	mg/kg	2 U	1.7 U	1.5 U	1.7 U	1.2 U	1.6 UJ	1.5 UJ
Thallium	NL	mg/kg	0.23 U	0.19 U	0.18 U	0.19 U	0.13 U	0.19 UJ	0.18 UJ
Vanadium	NL	mg/kg	35.9 J	51.1 J	50.3 J	49.4 J	24.8 J	44.4 J-	40 J-
Zinc	459	mg/kg	245 J	144 J	213 J	248 J	117 J	205 J-	229 J-

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Table B-2
Sediment Sample Analytical Results - TAL Metals
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-75	LMR11-75	LMR11-75	LMR11-76	LMR11-76	LMR11-76	LMR11-76
		Field Sample ID	LMR11-75-048	LMR11-75-048FS	LMR11-75-080	LMR11-76-006	LMR11-76-024	LMR11-76-048	LMR11-76-072
		Sample Date	8/5/2011	8/5/2011	8/5/2011	8/5/2011	8/5/2011	8/5/2011	8/5/2011
		Depth Interval (in bss)	24- 48	24- 48	48- 80	0- 6	6- 24	24- 48	48- 72
Chemical Name	PEC[1]	Unit							
Aluminum	NL	mg/kg	23,000 J-	20,100 J-	17,900 J-	18,300	13,400	22,000	21,500
Antimony	NL	mg/kg	0.27 UJ	0.28 UJ	0.28 UJ	0.34 UJ	0.25 UJ	0.27 UJ	0.67 J
Arsenic	33	mg/kg	24 J-	21 J-	21 J-	45.4 J	20.8 J	27.4 J	13.7
Barium	NL	mg/kg	166 J-	153 J-	140 J-	172	105	167	152
Beryllium	NL	mg/kg	1.2 J-	0.99 J-	0.96 J-	0.94	0.66	1	1
Cadmium	4.98	mg/kg	1.9 J-	1.6 J-	1.6 J-	3.3	1.5	1.9	1.7
Calcium	NL	mg/kg	38,200 J-	40,300 J-	42,500 J-	41,900	33,400	34,500	34,000 J
Chromium	111	mg/kg	32.2 J-	28.9 J-	27.3 J-	44	21.7	31.4	30.2
Cobalt	NL	mg/kg	11.9 J-	11.6 J-	11.5 J-	11.3	8.4	11.3	12.5
Copper	149	mg/kg	50.4 J-	46.2 J-	50.5 J-	73.6	36.8	52.6	40.2 J
Iron	NL	mg/kg	31,100 J-	30,000 J-	29,300 J-	31,000	21,200	31,600	30,100 J
Lead	128	mg/kg	80.9 J-	73.4 J-	63.8 J-	114 J	57 J	89.5 J	35 J
Magnesium	NL	mg/kg	11,900 J-	12,200 J-	12,000 J-	10,800	10,200	11,000	10,400 J
Manganese	NL	mg/kg	495 J-	500 J-	510 J-	567	347	525	623 J
Mercury	1.06	mg/kg	0.66 J-	0.69 J-	0.52 J-	0.59	0.26	0.53	0.28
Nickel	48.6	mg/kg	35.1 J-	33.8 J-	33 J-	35.5	24	34.6	35.2
Potassium	NL	mg/kg	4,100 J-	3,300 J-	2,760 J-	3,040	2,300	3,550	3,260 J
Selenium	NL	mg/kg	4.5 UJ	4.7 UJ	4.7 UJ	5.7 U	4.1 U	4.5 U	4.7 U
Silver	NL	mg/kg	0.76 J+	1.5 J+	0.62 J+	0.053 U	0.037 U	0.041 U	0.34 J
Sodium	NL	mg/kg	1.5 UJ	1.6 UJ	1.6 UJ	2 U	1.4 U	1.6 U	1.6 U
Thallium	NL	mg/kg	0.18 UJ	0.19 UJ	0.19 UJ	0.23 U	0.16 U	0.18 U	0.19 U
Vanadium	NL	mg/kg	50.9 J-	44 J-	39.8 J-	40.4	29.9	46.1	45.6 J
Zinc	459	mg/kg	219 J-	198 J-	188 J-	322	164	245	154 J

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Table B-2
Sediment Sample Analytical Results - TAL Metals
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-76	LMR11-76	LMR11-77	LMR11-77	LMR11-77	LMR11-77	LMR11-77
		Field Sample ID	LMR11-76-096	LMR11-76-120	LMR11-77-006	LMR11-77-024	LMR11-77-048	LMR11-77-072	LMR11-77-120
		Sample Date	8/5/2011	8/5/2011	8/5/2011	8/5/2011	8/5/2011	8/5/2011	8/5/2011
		Depth Interval (in bss)	72- 96	96- 120	0- 6	6- 24	24- 48	48- 72	72- 120
Chemical Name	PEC[1]	Unit							
Aluminum	NL	mg/kg	24,500	20,200	17,800 J-	13,600 J-	12,900 J-	20,400 J-	24,200 J-
Antimony	NL	mg/kg	1 J	0.76 J	0.8 J-	0.81 J-	0.75 J-	0.93 J-	0.8 J-
Arsenic	33	mg/kg	18.7	29.9	9 J-	12.9 J-	18.9 J-	19.9 J-	16 J-
Barium	NL	mg/kg	162	147	127 J-	114 J-	128 J-	161 J-	164 J-
Beryllium	NL	mg/kg	1.1	0.96	0.031 UJ	0.71 J-	0.71 J-	0.98 J-	1.1 J-
Cadmium	4.98	mg/kg	1.8	1.9	1.7 J-	2.6 J-	3.2 J-	2.1 J-	1.7 J-
Calcium	NL	mg/kg	36,400 J	39,200 J	38,800 J-	40,200 J-	49,600 J-	34,800 J-	35,700 J-
Chromium	111	mg/kg	34.6	29.6	28.1 J-	24.2 J-	41 J-	31.4 J-	32.6 J-
Cobalt	NL	mg/kg	12.9	11.4	10.3 J-	8.9 J-	9.1 J-	12.1 J-	12.8 J-
Copper	149	mg/kg	43.7 J	48.8 J	36.5 J-	40.8 J-	55.2 J-	49.7 J-	42.8 J-
Iron	NL	mg/kg	32,400 J	35,200 J	26,800 J-	22,300 J-	22,800 J-	33,000 J-	32,900 J-
Lead	128	mg/kg	44.7 J	70.6 J	26.8 J-	61.8 J-	68.5 J-	71.2 J-	41.1 J-
Magnesium	NL	mg/kg	11,700 J	11,400 J	11,400 J-	12,100 J-	13,300 J-	10,800 J-	11,800 J-
Manganese	NL	mg/kg	573 J	649 J	426 J-	341 J-	417 J-	482 J-	547 J-
Mercury	1.06	mg/kg	0.35	0.71	0.073 J-	0.2 J-	0.41 J-	0.69 J-	0.3 J-
Nickel	48.6	mg/kg	37.4	32.2	31.5 J-	26.1 J-	27.7 J-	36.9 J-	37.6 J-
Potassium	NL	mg/kg	4,250 J	3,440 J	2,920 J-	2,290 J-	2,100 J-	3,080 J-	4,030 J-
Selenium	NL	mg/kg	5.8 U	4.6 U	6.1 UJ	4.2 UJ	4.3 UJ	5.3 UJ	4.3 UJ
Silver	NL	mg/kg	0.54 J	1 J	0.21 J+	0.53 J+	0.6 J+	0.54 J+	0.34 J+
Sodium	NL	mg/kg	2 U	1.6 U	2.1 UJ	1.4 UJ	1.5 UJ	1.8 UJ	1.5 UJ
Thallium	NL	mg/kg	0.23 U	0.18 U	0.24 UJ	0.17 UJ	0.17 UJ	0.21 UJ	0.17 UJ
Vanadium	NL	mg/kg	53.7 J	46.5 J	38.3 J-	31 J-	30.3 J-	42.9 J-	50.5 J-
Zinc	459	mg/kg	180 J	217 J	122 J-	147 J-	163 J-	224 J-	164 J-

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Table B-2
Sediment Sample Analytical Results - TAL Metals
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-78	LMR11-79	LMR11-79	LMR11-79	LMR11-79	LMR11-80	LMR11-80
		Field Sample ID	LMR11-78-014	LMR11-79-006	LMR11-79-024	LMR11-79-024FS	LMR11-79-054	LMR11-80-006	LMR11-80-024
		Sample Date	8/5/2011	8/4/2011	8/4/2011	8/4/2011	8/4/2011	8/5/2011	8/5/2011
		Depth Interval (in bss)	0- 14	0- 6	6- 24	6- 24	24- 54	0- 6	6- 24
Chemical Name	PEC[1]	Unit							
Aluminum	NL	mg/kg	5,220	21,300	21,900	23,700	18,300	9,200 J-	16,700 J-
Antimony	NL	mg/kg	0.25 J	0.3 UJ	0.3 UJ	0.34 UJ	0.29 UJ	0.17 UJ	0.61 J-
Arsenic	33	mg/kg	3.7	23 J	21.7 J	19.3 J	22.8 J	9 J-	14.2 J-
Barium	NL	mg/kg	32.4	179	192	192	153	77.7 J-	130 J-
Beryllium	NL	mg/kg	0.019 U	1.1	1.1	1.1	0.9	0.5 J-	0.88 J-
Cadmium	4.98	mg/kg	0.49 J	5.2	7.2	5.5	2.9	1.5 J-	1.5 J-
Calcium	NL	mg/kg	52,200	28,900	33,900	33,200	33,700	54,200 J-	39,100 J-
Chromium	111	mg/kg	9.3	77.8	55.6	49.5	55.1	16.2 J-	24.9 J-
Cobalt	NL	mg/kg	5.9	10.7	12.2	12	10.5	6.2 J-	10.7 J-
Copper	149	mg/kg	8.3	91.4	102	94.8	68.4	23.3 J-	37.1 J-
Iron	NL	mg/kg	11,000	31,700	35,300	34,200	26,700	15,600 J-	27,400 J-
Lead	128	mg/kg	5.3	109 J	167 J	160 J	143 J	30.8 J-	40.5 J-
Magnesium	NL	mg/kg	12,500	9,230	10,500	10,500	9,700	8,860 J-	11,900 J-
Manganese	NL	mg/kg	225	515	581	532	469	240 J-	411 J-
Mercury	1.06	mg/kg	0.014 J	0.47	0.54	0.44	1.4	0.11 J-	0.25 J-
Nickel	48.6	mg/kg	12.5	37.3	38.6	38.6	31.6	16.8 J-	30.8 J-
Potassium	NL	mg/kg	988	3,500	3,390	3,970	3,160	1,610 J-	2,560 J-
Selenium	NL	mg/kg	3.7 U	5 U	5 U	5.7 U	4.8 U	2.9 UJ	4.5 UJ
Silver	NL	mg/kg	1 U	3.1	2.3	1.7	0.044 U	0.21 J-	0.42 J+
Sodium	NL	mg/kg	1.3 UJ	1.7 U	1.7 U	2 U	1.7 U	1 UJ	1.5 UJ
Thallium	NL	mg/kg	0.15 U	0.2 U	0.2 U	0.23 U	0.19 U	0.12 UJ	0.18 UJ
Vanadium	NL	mg/kg	16.8	46	46.9	52	40.7	22.1 J-	36.6 J-
Zinc	459	mg/kg	40.4	302	331	291	235	91.9 J-	145 J-

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Table B-2
Sediment Sample Analytical Results - TAL Metals
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-80	LMR11-81	LMR11-81	LMR11-82	LMR11-82	LMR11-82	LMR11-83
		Field Sample ID	LMR11-80-056	LMR11-81-006	LMR11-81-019	LMR11-82-006	LMR11-82-024	LMR11-82-055	LMR11-83-006
		Sample Date	8/5/2011	8/5/2011	8/5/2011	8/5/2011	8/5/2011	8/5/2011	8/5/2011
		Depth Interval (in bss)	24- 56	0- 6	6- 19	0- 6	6- 24	24- 55	0- 6
Chemical Name	PEC[1]	Unit							
Aluminum	NL	mg/kg	6,840 J-	6,680	2,880	13,500 J-	10,200 J-	5,030 J-	15,300
Antimony	NL	mg/kg	0.33 J-	0.22 UJ	0.23 UJ	0.31 UJ	0.3 UJ	0.39 J-	0.74 J
Arsenic	33	mg/kg	6.7 J-	4.2 J	3.5 J	7 J-	5.6 J-	3.5 J-	17
Barium	NL	mg/kg	46.7 J-	42.8	0.069 U	86.9 J-	65.1 J-	28 J-	120
Beryllium	NL	mg/kg	0.016 UJ	0.019 U	0.02 U	0.027 UJ	0.026 UJ	0.018 UJ	0.78
Cadmium	4.98	mg/kg	0.68 J-	0.72	0.012 U	1.2 J-	0.75 J-	0.5 J-	4
Calcium	NL	mg/kg	40,900 J-	46,800	48,700	31,900 J-	40,000 J-	46,100 J-	48,900 J
Chromium	111	mg/kg	11.9 J-	12.4	6.9	20.9 J-	16.5 J-	8.8 J-	48.6
Cobalt	NL	mg/kg	6.4 J-	6.5	0.058 U	8 J-	7.8 J-	5.2 J-	9.2
Copper	149	mg/kg	13 J-	12.3	4.7	22.2 J-	15.8 J-	7.6 J-	54.6 J
Iron	NL	mg/kg	13,100 J-	13,000	7,460	18,500 J-	16,400 J-	9,360 J-	24,800 J
Lead	128	mg/kg	13.5 J-	8 J	5.4 J	17.5 J-	23.1 J-	5.1 J-	67.7 J
Magnesium	NL	mg/kg	12,600 J-	14,000	17,000	9,520 J-	12,400 J-	14,900 J-	12,200 J
Manganese	NL	mg/kg	241 J-	307	208	302 J-	322 J-	217 J-	492 J
Mercury	1.06	mg/kg	0.08 J-	0.016 J	0.011 J	0.05 J-	0.062 J-	0.01 J-	0.24
Nickel	48.6	mg/kg	14.9 J-	16.1	8.9	22.1 J-	19.7 J-	10.6 J-	32.2
Potassium	NL	mg/kg	1,130 J-	1,180	453 J	2,540 J-	1,920 J-	1,080 J-	2,720 J
Selenium	NL	mg/kg	3.2 UJ	3.7 U	3.9 U	5.2 UJ	5 UJ	3.4 UJ	4.6 U
Silver	NL	mg/kg	0.075 J+	0.034 U	1.1 U	0.14 J+	1.4 UJ	0.98 UJ	0.79 J
Sodium	NL	mg/kg	1.1 UJ	1.3 U	1.3 U	1.8 UJ	1.7 UJ	1.2 UJ	1.6 U
Thallium	NL	mg/kg	0.13 UJ	0.15 U	0.16 U	0.21 UJ	0.2 UJ	0.14 UJ	0.18 U
Vanadium	NL	mg/kg	18.7 J-	17.8	10.3	31.7 J-	27.8 J-	16.8 J-	35.6 J
Zinc	459	mg/kg	54.6 J-	42.6	21.9	85 J-	57.4 J-	28.5 J-	158 J

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Table B-2
Sediment Sample Analytical Results - TAL Metals
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-83	LMR11-83	LMR11-83	LMR11-83	LMR11-84	LMR11-84	LMR11-84
		Field Sample ID	LMR11-83-024	LMR11-83-048	LMR11-83-072	LMR11-83-087	LMR11-84-006	LMR11-84-024	LMR11-84-048
		Sample Date	8/5/2011	8/5/2011	8/5/2011	8/5/2011	8/5/2011	8/5/2011	8/5/2011
		Depth Interval (in bss)	6- 24	24- 48	48- 72	72- 87	0- 6	6- 24	24- 48
Chemical Name	PEC[1]	Unit							
Aluminum	NL	mg/kg	15,900	9,610	9,200	4,620	11,400 J-	21,800 J-	8,750 J-
Antimony	NL	mg/kg	0.71 J	0.59 J	0.47 J	0.31 J	0.27 UJ	0.31 UJ	0.38 UJ
Arsenic	33	mg/kg	20.2	14.7	9.5	3.2	6.3 J-	9.8 J-	10.9 J-
Barium	NL	mg/kg	130	85	62.7	30.6	83.5 J-	147 J-	73.5 J-
Beryllium	NL	mg/kg	0.86	0.51	0.021 U	0.019 U	0.023 UJ	0.99 J-	0.033 UJ
Cadmium	4.98	mg/kg	4.1	1.8	1.3	0.012 U	1.2 J-	1.9 J-	1.3 J-
Calcium	NL	mg/kg	43,100 J	39,400 J	55,600 J	68,500 J	29,200 J-	39,000 J-	65,800 J-
Chromium	111	mg/kg	53.2	30.5	21	7.7	18 J-	32.2 J-	18.9 J-
Cobalt	NL	mg/kg	10.1	7.5	6.7	5.4	7.1 J-	11.6 J-	0.095 UJ
Copper	149	mg/kg	60.3 J	36.2 J	23.9 J	18.2 J	23.6 J-	39.4 J-	21 J-
Iron	NL	mg/kg	27,700 J	18,400 J	17,300 J	12,700 J	17,900 J-	29,400 J-	21,500 J-
Lead	128	mg/kg	82.8 J	54.9 J	25.1 J	4.6 J	15.8 J-	30.4 J-	22.2 J-
Magnesium	NL	mg/kg	11,700 J	11,100 J	14,600 J	9,020 J	8,490 J-	11,900 J-	15,500 J-
Manganese	NL	mg/kg	511 J	348 J	349 J	565 J	298 J-	471 J-	368 J-
Mercury	1.06	mg/kg	0.31	0.26	0.12 J	0.019 J	0.053 J-	0.084 J-	0.11 J-
Nickel	48.6	mg/kg	33.9	21	18.4	11.4	21 J-	34.8 J-	21.2 J-
Potassium	NL	mg/kg	2,580 J	1,500 J	1,800 J	848 J	1,880 J-	3,890 J-	1,600 J-
Selenium	NL	mg/kg	5.6 U	3.5 U	4 U	3.7 U	4.6 UJ	5.2 UJ	6.4 UJ
Silver	NL	mg/kg	1.2 J	0.47 J	0.31 J	1.1 U	0.11 J+	0.22 J+	0.085 J+
Sodium	NL	mg/kg	1.9 U	1.2 U	1.4 U	1.3 U	1.6 UJ	1.8 UJ	2.2 UJ
Thallium	NL	mg/kg	0.23 U	0.14 U	0.16 U	0.15 U	0.18 UJ	0.21 UJ	0.25 UJ
Vanadium	NL	mg/kg	36.4 J	24.1 J	26.5 J	20.1 J	25.5 J-	46.5 J-	25.3 J-
Zinc	459	mg/kg	198 J	132 J	84.8 J	36 J	82 J-	136 J-	66.4 J-

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Table B-2
Sediment Sample Analytical Results - TAL Metals
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-84	LMR11-84	LMR11-84	LMR11-84	LMR11-85	LMR11-85	LMR11-85
		Field Sample ID	LMR11-84-072	LMR11-84-072DP	LMR11-84-096	LMR11-84-115	LMR11-85-006	LMR11-85-024	LMR11-85-048
		Sample Date	8/5/2011	8/5/2011	8/5/2011	8/5/2011	8/5/2011	8/5/2011	8/5/2011
		Depth Interval (in bss)	48- 72	48- 72	72- 96	96- 115	0- 6	6- 24	24- 48
Chemical Name	PEC[1]	Unit							
Aluminum	NL	mg/kg	10,600 J-	13,100	9,930 J-	12,400	15,100	18,900	18,300
Antimony	NL	mg/kg	0.24 UJ	8.1 UJ	0.28 UJ	0.38 J	0.3 UJ	0.29 UJ	0.32 UJ
Arsenic	33	mg/kg	13 J-	14.8	13.6 J-	15.7	17.8 J	20.8 J	15.4 J
Barium	NL	mg/kg	111 J-	134	107 J-	117	128	150	126
Beryllium	NL	mg/kg	0.64 J-	0.84	0.71 J-	0.89	0.81	0.94	0.95
Cadmium	4.98	mg/kg	2.6 J-	3 J	2.5 J-	2.3 J	3.6	3.8	2
Calcium	NL	mg/kg	36,200 J-	43,000	38,500 J-	34,400	43,300	37,700	70,200
Chromium	111	mg/kg	28.1 J-	32.7	27.3 J-	28.9	50	56.8	33.3
Cobalt	NL	mg/kg	7.3 J-	8.9	7.8 J-	8.4	9.5	10.6	10.7
Copper	149	mg/kg	35.6 J-	38.7	35.6 J-	34.4	51	55.7	40.9
Iron	NL	mg/kg	22,600 J-	28,400	23,700 J-	29,700	23,700	27,500	29,700
Lead	128	mg/kg	29.4 J-	35.3	27.4 J-	30.8	57 J	66.4 J	36.9 J
Magnesium	NL	mg/kg	10,900 J-	10,500	9,100 J-	8,990	11,200	10,800	17,200
Manganese	NL	mg/kg	301 J-	426	312 J-	320	469	481	598
Mercury	1.06	mg/kg	0.16 J-	0.19	0.2 J-	0.23	0.17	0.18	0.15 J
Nickel	48.6	mg/kg	21.5 J-	26.9	23.4 J-	25.4	30.9	33.4	31.7
Potassium	NL	mg/kg	1,930 J-	2,110	1,620 J-	2,130	2,730	3,360	3,830
Selenium	NL	mg/kg	1.2 J-	4.8 U	4.7 UJ	4.3 U	5 U	4.8 U	5.3 U
Silver	NL	mg/kg	0.36 J+	0.36 J	0.35 J+	0.39 J	0.045 U	0.044 U	0.049 U
Sodium	NL	mg/kg	1.4 UJ	1.6 UJ	1.6 UJ	1.5 UJ	1.7 U	1.7 U	1.8 U
Thallium	NL	mg/kg	0.16 UJ	0.19 U	0.19 UJ	0.17 U	0.2 U	0.19 U	0.21 U
Vanadium	NL	mg/kg	26.5 J-	31.8	24.9 J-	31.1	35.3	40.7	44.5
Zinc	459	mg/kg	83.7 J-	107	84.7 J-	103	142	186	128

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Table B-2
Sediment Sample Analytical Results - TAL Metals
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-85
		Field Sample ID	LMR11-85-074
		Sample Date	8/5/2011
		Depth Interval (in bss)	48- 74
Chemical Name	PEC[1]	Unit	
Aluminum	NL	mg/kg	10,500
Antimony	NL	mg/kg	0.31 UJ
Arsenic	33	mg/kg	9.8 J
Barium	NL	mg/kg	76.5
Beryllium	NL	mg/kg	0.027 U
Cadmium	4.98	mg/kg	1.4
Calcium	NL	mg/kg	55,000
Chromium	111	mg/kg	22.6
Cobalt	NL	mg/kg	7.5
Copper	149	mg/kg	24.6
Iron	NL	mg/kg	19,800
Lead	128	mg/kg	28 J
Magnesium	NL	mg/kg	15,700
Manganese	NL	mg/kg	393
Mercury	1.06	mg/kg	0.09 J
Nickel	48.6	mg/kg	20.9
Potassium	NL	mg/kg	1,940
Selenium	NL	mg/kg	5.2 U
Silver	NL	mg/kg	0.047 U
Sodium	NL	mg/kg	1.8 U
Thallium	NL	mg/kg	0.21 U
Vanadium	NL	mg/kg	27.7
Zinc	459	mg/kg	101

Notes:
Result exceeds PEC
DP - Duplicate
FS - Field split
ID - Identification
in bss - Inches below sediment surface
J - Estimated value
J+ - Estimated value, biased high
J- - Estimated value, biased low
mg/kg - milligram per kilogram
NL - Not Listed
PEC - Probable Effect Concentration
U - Not detected
[1] Consensus-based PEC values (2000)

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Table B-3
Sediment Sample Analytical Results - PCBs
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-02	LMR11-12	LMR11-15	LMR11-15	LMR11-16	LMR11-20
		Field Sample ID	LMR11-02-006	LMR11-12-006	LMR11-15-048	LMR11-15-048-DP	LMR11-16-024	LMR11-20-024
		Sample Date	8/2/2011	8/3/2011	8/9/2011	8/9/2011	8/9/2011	8/5/2011
		Depth Interval (in bss)	0- 6	0- 6	24- 48	24- 48	6- 24	6- 24
Chemical Name	**PEC[1]**	**Unit**						
AROCLOR-1016	NL	µg/kg	47 U	82 U	54 U	54 U	64 U	67 UJ
AROCLOR-1221	NL	µg/kg	47 U	82 U	54 U	54 U	64 U	67 UJ
AROCLOR-1232	NL	µg/kg	47 U	82 U	54 U	54 U	64 U	67 UJ
AROCLOR-1242	NL	µg/kg	47 U	82 U	54 U	54 U	64 U	67 UJ
AROCLOR-1248	NL	µg/kg	47 U	82 U	54 U	54 U	64 U	67 UJ
AROCLOR-1254	NL	µg/kg	47 U	82 U	54 U	54 U	64 U	67 UJ
AROCLOR-1260	NL	µg/kg	47 U	82 U	54 U	54 U	64 U	67 UJ
AROCLOR-1262	NL	µg/kg	47 U	82 U	54 U	54 U	64 U	67 UJ
AROCLOR-1268	NL	µg/kg	47 U	82 U	54 U	54 U	64 U	67 UJ
Total PCB	676	µg/kg	0 U	0 U	0 U	0 U	0 U	0 U

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Table B-3
Sediment Sample Analytical Results - PCBs
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-23	LMR11-23	LMR11-24	LMR11-25	LMR11-25	LMR11-26
		Field Sample ID	LMR11-23-006	LMR11-23-024	LMR11-24-048	LMR11-25-006	LMR11-25-048	LMR11-26-024
		Sample Date	8/11/2011	8/11/2011	8/11/2011	8/11/2011	8/11/2011	8/10/2011
		Depth Interval (in bss)	0- 6	6- 24	24- 48	0- 6	24- 48	6- 24
Chemical Name	**PEC[1]**	**Unit**						
AROCLOR-1016	NL	µg/kg	74 U	64 U	58 U	67 U	60 U	58 U
AROCLOR-1221	NL	µg/kg	74 U	64 U	58 U	67 U	60 U	58 U
AROCLOR-1232	NL	µg/kg	74 U	64 U	58 U	67 U	60 U	58 U
AROCLOR-1242	NL	µg/kg	74 U	64 U	58 U	67 U	60 U	58 U
AROCLOR-1248	NL	µg/kg	74 U	64 U	58 U	67 U	60 U	58 U
AROCLOR-1254	NL	µg/kg	74 U	64 U	58 U	67 U	60 U	58 U
AROCLOR-1260	NL	µg/kg	74 U	64 U	58 U	67 U	60 U	58 U
AROCLOR-1262	NL	µg/kg	74 U	64 U	58 U	67 U	60 U	58 U
AROCLOR-1268	NL	µg/kg	74 U	64 U	58 U	67 U	60 U	58 U
Total PCB	676	µg/kg	0 U	0 U	0 U	0 U	0 U	0 U

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Table B-3
Sediment Sample Analytical Results - PCBs
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-27	LMR11-28	LMR11-32	LMR11-32	LMR11-35	LMR11-35
		Field Sample ID	LMR11-27-048	LMR11-28-034	LMR11-32-072	LMR11-32-096	LMR11-35-006	LMR11-35-072
		Sample Date	8/11/2011	8/10/2011	8/10/2011	8/10/2011	8/10/2011	8/10/2011
		Depth Interval (in bss)	24- 48	6- 34	48- 72	72- 96	0- 6	48- 72
Chemical Name	**PEC[1]**	**Unit**						
AROCLOR-1016	NL	µg/kg	52 U	42 U	46 U	46 U	64 U	62 U
AROCLOR-1221	NL	µg/kg	52 U	42 U	46 U	46 U	64 U	62 U
AROCLOR-1232	NL	µg/kg	52 U	42 U	46 U	46 U	64 U	62 U
AROCLOR-1242	NL	µg/kg	52 U	42 U	46 U	46 U	64 U	62 U
AROCLOR-1248	NL	µg/kg	52 U	42 U	46 U	46 U	64 U	62 U
AROCLOR-1254	NL	µg/kg	52 U	42 U	46 U	46 U	64 U	62 U
AROCLOR-1260	NL	µg/kg	52 U	42 U	46 U	46 U	64 U	62 U
AROCLOR-1262	NL	µg/kg	52 U	42 U	46 U	46 U	64 U	62 U
AROCLOR-1268	NL	µg/kg	52 U	42 U	46 U	46 U	64 U	62 U
Total PCB	676	µg/kg	0 U	0 U	0 U	0 U	0 U	0 U

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Table B-3
Sediment Sample Analytical Results - PCBs
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-36	LMR11-37	LMR11-37	LMR11-40	LMR11-48	LMR11-50
		Field Sample ID	LMR11-36-006	LMR11-37-048	LMR11-37-048-DP	LMR11-40-024	LMR11-48-048	LMR11-50-006
		Sample Date	8/4/2011	8/10/2011	8/10/2011	8/10/2011	8/8/2011	8/8/2011
		Depth Interval (in bss)	0- 6	24- 48	24- 48	6- 24	24- 48	0- 6
Chemical Name	**PEC[1]**	**Unit**						
AROCLOR-1016	NL	µg/kg	52 U	60 U	61 U	42 U	60 U	73 U
AROCLOR-1221	NL	µg/kg	52 U	60 U	61 U	42 U	60 U	73 U
AROCLOR-1232	NL	µg/kg	52 U	60 U	61 U	42 U	60 U	73 U
AROCLOR-1242	NL	µg/kg	52 U	60 U	61 U	42 U	60 U	73 U
AROCLOR-1248	NL	µg/kg	52 U	60 U	61 U	42 U	60 U	73 U
AROCLOR-1254	NL	µg/kg	52 U	60 U	61 U	42 U	60 U	73 U
AROCLOR-1260	NL	µg/kg	52 U	60 U	61 U	42 U	60 U	73 U
AROCLOR-1262	NL	µg/kg	52 U	60 U	61 U	42 U	60 U	73 U
AROCLOR-1268	NL	µg/kg	52 U	60 U	61 U	42 U	60 U	73 U
Total PCB	676	µg/kg	0 U	0 U	0 U	0 U	0 U	0 U

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Table B-3
Sediment Sample Analytical Results - PCBs
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-59	LMR11-66	LMR11-70	LMR11-71	LMR11-71	LMR11-75
		Field Sample ID	LMR11-59-024	LMR11-66-024	LMR11-70-024	LMR11-71-024	LMR11-71-024FS	LMR11-75-024
		Sample Date	8/6/2011	8/7/2011	8/7/2011	8/6/2011	8/6/2011	8/5/2011
		Depth Interval (in bss)	6- 24	6- 24	6- 24	6- 24	6- 24	6- 24
Chemical Name	**PEC[1]**	**Unit**						
AROCLOR-1016	NL	µg/kg	63 U	62 UJ	72 UJ	67 UJ	67 UJ	58 UJ
AROCLOR-1221	NL	µg/kg	63 U	62 UJ	72 UJ	67 UJ	67 UJ	58 UJ
AROCLOR-1232	NL	µg/kg	63 U	62 UJ	72 UJ	67 UJ	67 UJ	58 UJ
AROCLOR-1242	NL	µg/kg	63 U	62 UJ	72 UJ	67 UJ	67 UJ	58 UJ
AROCLOR-1248	NL	µg/kg	63 U	62 UJ	72 UJ	67 UJ	67 UJ	58 UJ
AROCLOR-1254	NL	µg/kg	63 U	62 UJ	72 UJ	67 UJ	67 UJ	58 UJ
AROCLOR-1260	NL	µg/kg	63 U	62 UJ	72 UJ	67 UJ	67 UJ	58 UJ
AROCLOR-1262	NL	µg/kg	63 U	62 UJ	72 UJ	67 UJ	67 UJ	58 UJ
AROCLOR-1268	NL	µg/kg	63 U	62 UJ	72 UJ	67 UJ	67 UJ	58 UJ
Total PCB	676	µg/kg	0 U	0 U	0 U	0 U	0 U	0 U

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Table B-3
Sediment Sample Analytical Results - PCBs
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-76	LMR11-79	LMR11-79
		Field Sample ID	LMR11-76-024	LMR11-79-024	LMR11-79-024FS
		Sample Date	8/5/2011	8/4/2011	8/4/2011
		Depth Interval (in bss)	6- 24	6- 24	6- 24
Chemical Name	**PEC[1]**	**Unit**			
AROCLOR-1016	NL	µg/kg	55 U	60 U	61 U
AROCLOR-1221	NL	µg/kg	55 U	60 U	61 U
AROCLOR-1232	NL	µg/kg	55 U	60 U	61 U
AROCLOR-1242	NL	µg/kg	55 U	60 U	61 U
AROCLOR-1248	NL	µg/kg	55 U	60 U	61 U
AROCLOR-1254	NL	µg/kg	55 U	60 U	61 U
AROCLOR-1260	NL	µg/kg	55 U	60 U	61 U
AROCLOR-1262	NL	µg/kg	55 U	60 U	61 U
AROCLOR-1268	NL	µg/kg	55 U	60 U	61 U
Total PCB	676	µg/kg	0 U	0 U	0 U

Notes:

µg/kg - Microgram per kilogram
DP - Duplicate
FS - Field split
ID - Identification
in bss - Inches below sediment surface
J - Estimated value
NL - Not Listed
PCB - Polychlorinated biphenyl
PEC - Probable Effect Concentration
U - Not detected
[1] Consensus-based PEC values (2000)

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Table B-4
Sediment Sample Analytical Results - Pesticides
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-02	LMR11-12	LMR11-15	LMR11-15	LMR11-16
		Field Sample ID	LMR11-02-006	LMR11-12-006	LMR11-15-048	LMR11-15-048-DP	LMR11-16-024
		Sample Date	8/2/2011	8/3/2011	8/9/2011	8/9/2011	8/9/2011
		Depth Interval (in bss)	0- 6	0- 6	24- 48	24- 48	6- 24
Chemical Name	**PEC[1]**	**Unit**					
1,1,1-TRICHLORO-2,2-BIS (P-METHOXPHENYL)-ETHANE	NL		24 U	42 U	28 U	28 U	33 U
4,4'-DDD	28	µg/kg	4.7 U	8.2 U	5.4 U	5.4 U	6.3 U
4,4'-DDE	31.3	µg/kg	4.7 U	8.2 U	5.4 U	5.4 U	6.3 U
4,4'-DDT	62.9	µg/kg	4.7 U	8.2 U	5.4 U	5.4 U	6.3 U
ALDRIN	NL	µg/kg	2.4 U	4.2 U	2.8 U	2.8 U	3.3 U
ALPHA-BHC	NL	µg/kg	2.4 U	4.2 U	2.8 U	2.8 U	3.3 U
ALPHA-CHLORDANE	17.6	µg/kg	2.4 U	4.2 U	2.8 U	2.8 U	3.3 U
BETA-BHC	NL	µg/kg	2.4 U	4.2 U	2.8 U	2.8 U	3.3 U
CAMPHECHLOR	NL	µg/kg	240 U	420 U	280 U	280 U	330 U
DELTA-BHC	NL	µg/kg	2.4 U	4.2 U	2.8 U	2.8 U	3.3 U
DIELDRIN	61.8	µg/kg	4.7 U	8.2 U	5.4 U	5.4 U	6.3 U
ENDOSULFAN I	NL	µg/kg	2.4 U	4.2 U	2.8 U	2.8 U	3.3 U
ENDOSULFAN II	NL	µg/kg	4.7 U	8.2 U	5.4 U	5.4 U	6.3 U
ENDOSULFAN SULFATE	NL	µg/kg	4.7 U	8.2 U	5.4 U	5.4 U	6.3 U
ENDRIN	207	µg/kg	4.7 U	8.2 U	5.4 U	5.4 U	6.3 U
ENDRIN ALDEHYDE	NL	µg/kg	4.7 U	8.2 U	5.4 U	5.4 U	6.3 U
ENDRIN KETONE	NL	µg/kg	4.7 U	8.2 U	5.4 U	5.4 U	6.3 U
GAMMA-BHC (LINDANE)	4.99	µg/kg	2.4 U	4.2 U	2.8 U	2.8 U	3.3 U
GAMMA-CHLORDANE	17.6	µg/kg	12	4.2 U	2.8 U	2.8 U	3.3 U
HEPTACHLOR	NL	µg/kg	2.4 U	2.7 J	2.8 U	2.8 U	3.3 U
HEPTACHLOR EPOXIDE	16	µg/kg	2.4 U	4.2 U	2.8 U	2.8 U	3.3 U

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Table B-4
Sediment Sample Analytical Results - Pesticides
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-20	LMR11-23	LMR11-23	LMR11-24	LMR11-25
		Field Sample ID	LMR11-20-024	LMR11-23-006	LMR11-23-024	LMR11-24-048	LMR11-25-006
		Sample Date	8/5/2011	8/11/2011	8/11/2011	8/11/2011	8/11/2011
		Depth Interval (in bss)	6- 24	0- 6	6- 24	24- 48	0- 6
Chemical Name	**PEC[1]**	**Unit**					
1,1,1-TRICHLORO-2,2-BIS (P-METHOXPHENYL)-ETHANE	NL		34 UJ	38 U	33 U	30 U	34 U
4,4'-DDD	28	µg/kg	6.6 UJ	7.4 U	6.4 U	5.9 U	6.6 U
4,4'-DDE	31.3	µg/kg	6.6 UJ	7.4 U	6.4 U	5.9 U	6.6 U
4,4'-DDT	62.9	µg/kg	6.6 UJ	7.4 U	6.4 U	5.9 U	6.6 U
ALDRIN	NL	µg/kg	3.4 UJ	3.8 U	3.3 U	3 U	3.4 U
ALPHA-BHC	NL	µg/kg	3.4 UJ	3.8 U	3.3 U	3 U	3.4 U
ALPHA-CHLORDANE	17.6	µg/kg	3.4 UJ	3.8 U	3.3 U	3 U	3.4 U
BETA-BHC	NL	µg/kg	3.4 UJ	3.8 U	3.3 U	3 U	1.7 J
CAMPHECHLOR	NL	µg/kg	340 UJ	380 U	330 U	300 U	340 U
DELTA-BHC	NL	µg/kg	3.4 UJ	3.8 U	3.3 U	3 U	3.4 U
DIELDRIN	61.8	µg/kg	6.6 UJ	7.4 U	6.4 U	5.9 U	6.6 U
ENDOSULFAN I	NL	µg/kg	3.4 UJ	3.8 U	3.3 U	3 U	3.4 U
ENDOSULFAN II	NL	µg/kg	6.6 UJ	7.4 U	6.4 U	5.9 U	6.6 U
ENDOSULFAN SULFATE	NL	µg/kg	6.6 UJ	7.4 U	6.4 U	5.9 U	6.6 U
ENDRIN	207	µg/kg	6.6 UJ	7.4 U	6.4 U	5.9 U	6.6 U
ENDRIN ALDEHYDE	NL	µg/kg	6.6 UJ	7.4 U	6.4 U	5.9 U	6.6 U
ENDRIN KETONE	NL	µg/kg	6.6 UJ	7.4 U	6.4 U	5.9 U	6.6 U
GAMMA-BHC (LINDANE)	4.99	µg/kg	3.4 UJ	3.8 U	3.3 U	3 U	3.4 U
GAMMA-CHLORDANE	17.6	µg/kg	3.4 UJ	3.8 U	3.3 U	3 U	3.4 U
HEPTACHLOR	NL	µg/kg	3.4 UJ	3.8 U	3.3 U	3 U	3.4 U
HEPTACHLOR EPOXIDE	16	µg/kg	3.4 UJ	3.8 U	3.3 U	3 U	3.4 U

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Table B-4
Sediment Sample Analytical Results - Pesticides
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-25	LMR11-26	LMR11-27	LMR11-28	LMR11-32
		Field Sample ID	LMR11-25-048	LMR11-26-024	LMR11-27-048	LMR11-28-034	LMR11-32-072
		Sample Date	8/11/2011	8/10/2011	8/11/2011	8/10/2011	8/10/2011
		Depth Interval (in bss)	24- 48	6- 24	24- 48	6- 34	48- 72
Chemical Name	**PEC[1]**	**Unit**					
1,1,1-TRICHLORO-2,2-BIS (P-METHOXPHENYL)-ETHANE	NL		31 U	29 U	28 U	22 U	24 U
4,4'-DDD	28	µg/kg	5.9 U	5.7 U	5.4 U	4.2 U	4.6 U
4,4'-DDE	31.3	µg/kg	5.9 U	5.7 U	5.4 U	4.2 U	4.6 U
4,4'-DDT	62.9	µg/kg	5.9 U	5.7 U	5.4 U	4.2 U	4.6 U
ALDRIN	NL	µg/kg	3.1 U	2.9 U	2.8 U	2.2 U	2.4 U
ALPHA-BHC	NL	µg/kg	3.1 U	2.9 U	2.8 U	2.2 U	2.4 U
ALPHA-CHLORDANE	17.6	µg/kg	3.1 U	2.9 U	2.8 U	2.2 U	2.4 U
BETA-BHC	NL	µg/kg	2.6 J	2.9 U	2.8 U	2.2 U	2.4 U
CAMPHECHLOR	NL	µg/kg	310 U	290 U	280 U	220 U	240 U
DELTA-BHC	NL	µg/kg	3.1 U	2.9 U	2.8 U	2.2 U	2.4 U
DIELDRIN	61.8	µg/kg	5.9 U	5.7 U	5.4 U	4.2 U	4.6 U
ENDOSULFAN I	NL	µg/kg	3.1 U	2.9 U	2.8 U	2.2 U	2.4 U
ENDOSULFAN II	NL	µg/kg	5.9 U	5.7 U	5.4 U	4.2 U	4.6 U
ENDOSULFAN SULFATE	NL	µg/kg	5.9 U	5.7 U	5.4 U	4.2 U	4.6 U
ENDRIN	207	µg/kg	5.9 U	5.7 U	5.4 U	4.2 U	4.6 U
ENDRIN ALDEHYDE	NL	µg/kg	5.9 U	3.4 J	5.4 U	4.2 U	4.6 U
ENDRIN KETONE	NL	µg/kg	5.9 U	5.7 U	5.4 U	4.2 U	4.6 U
GAMMA-BHC (LINDANE)	4.99	µg/kg	3.1 U	2.9 U	2.8 U	2.2 U	2.4 U
GAMMA-CHLORDANE	17.6	µg/kg	3.1 U	2.9 U	2.8 U	2.2 U	2.4 U
HEPTACHLOR	NL	µg/kg	3.1 U	1.9 J	2.8 U	2.2 U	2.4 U
HEPTACHLOR EPOXIDE	16	µg/kg	3.1 U	2.9 U	2.8 U	2.2 U	2.4 U

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Table B-4
Sediment Sample Analytical Results - Pesticides
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-32	LMR11-35	LMR11-35	LMR11-36	LMR11-37
		Field Sample ID	LMR11-32-096	LMR11-35-006	LMR11-35-072	LMR11-36-006	LMR11-37-048
		Sample Date	8/10/2011	8/10/2011	8/10/2011	8/4/2011	8/10/2011
		Depth Interval (in bss)	72- 96	0- 6	48- 72	0- 6	24- 48
Chemical Name	**PEC[1]**	**Unit**					
1,1,1-TRICHLORO-2,2-BIS (P-METHOXPHENYL)-ETHANE	NL		23 U	33 U	32 U	27 U	32 U
4,4'-DDD	28	µg/kg	4.5 U	6.5 U	6.2 U	5.1 U	6.2 U
4,4'-DDE	31.3	µg/kg	4.5 U	6.5 U	6.2 U	5.1 U	6.2 U
4,4'-DDT	62.9	µg/kg	4.5 U	6.5 U	6.2 U	5.1 U	6.2 U
ALDRIN	NL	µg/kg	2.3 U	3.3 U	3.2 U	2.7 U	3.2 U
ALPHA-BHC	NL	µg/kg	2.3 U	3.3 U	3.2 U	2.7 U	3.2 U
ALPHA-CHLORDANE	17.6	µg/kg	2.3 U	3.3 U	3.2 U	2.7 U	3.2 U
BETA-BHC	NL	µg/kg	2.3 U	3.3 U	3.2 U	2.7 U	3.2 U
CAMPHECHLOR	NL	µg/kg	230 U	330 U	320 U	270 U	320 U
DELTA-BHC	NL	µg/kg	2.3 U	3.3 U	3.2 U	2.7 U	3.2 U
DIELDRIN	61.8	µg/kg	4.5 U	6.5 U	6.2 U	5.1 U	6.2 U
ENDOSULFAN I	NL	µg/kg	2.3 U	3.3 U	3.2 U	2.7 U	3.2 U
ENDOSULFAN II	NL	µg/kg	4.5 U	6.5 U	6.2 U	5.1 U	6.2 U
ENDOSULFAN SULFATE	NL	µg/kg	4.5 U	6.5 U	6.2 U	5.1 U	6.2 U
ENDRIN	207	µg/kg	4.5 U	6.5 U	6.2 U	5.1 U	6.2 U
ENDRIN ALDEHYDE	NL	µg/kg	4.5 U	6.5 U	6.2 U	5.1 U	6.2 U
ENDRIN KETONE	NL	µg/kg	4.5 U	6.5 U	6.2 U	5.1 U	6.2 U
GAMMA-BHC (LINDANE)	4.99	µg/kg	2.2 J	3.3 U	3.2 U	2.7 U	3.2 U
GAMMA-CHLORDANE	17.6	µg/kg	2.3 U	3.3 U	3.2 U	2.7 U	3.2 U
HEPTACHLOR	NL	µg/kg	2.3 U	3.3 U	3.2 U	2.7 U	3.2 U
HEPTACHLOR EPOXIDE	16	µg/kg	2.3 U	3.3 U	3.2 U	2.7 U	3.2 U

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Table B-4
Sediment Sample Analytical Results - Pesticides
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-37	LMR11-40	LMR11-48	LMR11-50	LMR11-59
		Field Sample ID	LMR11-37-048-DP	LMR11-40-024	LMR11-48-048	LMR11-50-006	LMR11-59-024
		Sample Date	8/10/2011	8/10/2011	8/8/2011	8/8/2011	8/6/2011
		Depth Interval (in bss)	24- 48	6- 24	24- 48	0- 6	6- 24
Chemical Name	**PEC[1]**	**Unit**					
1,1,1-TRICHLORO-2,2-BIS (P-METHOXPHENYL)-ETHANE	NL		31 U	21 U	31 U	38 U	32 U
4,4'-DDD	28	µg/kg	6.1 U	4.2 U	6 U	7.4 U	6.2 U
4,4'-DDE	31.3	µg/kg	6.1 U	4.2 U	6 U	7.4 U	6.2 U
4,4'-DDT	62.9	µg/kg	6.1 U	4.2 U	6 U	7.4 U	6.2 U
ALDRIN	NL	µg/kg	3.1 U	2.1 U	3.1 U	2 J	3.2 U
ALPHA-BHC	NL	µg/kg	3.1 U	2.1 U	3.1 U	3.8 U	3.2 U
ALPHA-CHLORDANE	17.6	µg/kg	3.1 U	2.1 U	3.1 U	3.8 U	3.2 U
BETA-BHC	NL	µg/kg	3.1 U	2.1 U	3.1 U	3.8 U	2.4 J
CAMPHECHLOR	NL	µg/kg	310 U	210 U	310 U	380 U	320 U
DELTA-BHC	NL	µg/kg	3.1 U	2.1 U	3.1 U	3.8 U	3.2 U
DIELDRIN	61.8	µg/kg	6.1 U	4.2 U	6 U	7.4 U	6.2 U
ENDOSULFAN I	NL	µg/kg	3.1 U	2.1 U	3.1 U	3.8 U	3.2 U
ENDOSULFAN II	NL	µg/kg	6.1 U	4.2 U	6 U	7.4 U	6.2 U
ENDOSULFAN SULFATE	NL	µg/kg	6.1 U	4.2 U	6 U	7.4 U	6.2 U
ENDRIN	207	µg/kg	6.1 U	4.2 U	6 U	7.4 U	6.2 U
ENDRIN ALDEHYDE	NL	µg/kg	6.1 U	4.2 U	6 U	7.4 U	6.2 U
ENDRIN KETONE	NL	µg/kg	6.1 U	4.2 U	6 U	7.4 U	6.2 U
GAMMA-BHC (LINDANE)	4.99	µg/kg	3.1 U	2.1 U	3.1 U	3.8 U	3.2 U
GAMMA-CHLORDANE	17.6	µg/kg	3.1 U	2.1 U	3.1 U	5.1 R	3.2 U
HEPTACHLOR	NL	µg/kg	3.1 U	2.1 U	3.1 U	3.8 U	3.2 U
HEPTACHLOR EPOXIDE	16	µg/kg	3.1 U	2.1 U	3.1 U	3.8 U	3.2 U

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Table B-4
Sediment Sample Analytical Results - Pesticides
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-66	LMR11-70	LMR11-71	LMR11-71	LMR11-75
		Field Sample ID	LMR11-66-024	LMR11-70-024	LMR11-71-024	LMR11-71-024FS	LMR11-75-024
		Sample Date	8/7/2011	8/7/2011	8/6/2011	8/6/2011	8/5/2011
		Depth Interval (in bss)	6- 24	6- 24	6- 24	6- 24	6- 24
Chemical Name	**PEC[1]**	**Unit**					
1,1,1-TRICHLORO-2,2-BIS (P-METHOXPHENYL)-ETHANE	NL		32 UJ	36 UJ	35 UJ	35 UJ	30 UJ
4,4'-DDD	28	µg/kg	6.2 UJ	7.1 UJ	6.7 UJ	6.7 UJ	5.8 UJ
4,4'-DDE	31.3	µg/kg	6.2 UJ	7.1 UJ	6.7 UJ	6.7 UJ	5.8 UJ
4,4'-DDT	62.9	µg/kg	6.2 UJ	7.1 UJ	6.7 UJ	6.7 UJ	5.8 UJ
ALDRIN	NL	µg/kg	3.2 UJ	3.6 UJ	3.5 UJ	3.5 UJ	3 UJ
ALPHA-BHC	NL	µg/kg	3.2 UJ	3.6 UJ	3.5 UJ	3.5 UJ	3 UJ
ALPHA-CHLORDANE	17.6	µg/kg	3.2 UJ	3.6 UJ	3.5 UJ	3.5 UJ	3 UJ
BETA-BHC	NL	µg/kg	1.8 J	3.6 UJ	3.5 UJ	3.5 UJ	3 UJ
CAMPHECHLOR	NL	µg/kg	320 UJ	360 UJ	350 UJ	350 UJ	300 UJ
DELTA-BHC	NL	µg/kg	3.2 UJ	3.6 UJ	3.5 UJ	3.5 UJ	3 UJ
DIELDRIN	61.8	µg/kg	6.2 UJ	7.1 UJ	6.7 UJ	6.7 UJ	5.8 UJ
ENDOSULFAN I	NL	µg/kg	3.2 UJ	3.6 UJ	3.5 UJ	3.5 UJ	3 UJ
ENDOSULFAN II	NL	µg/kg	6.2 UJ	7.1 UJ	6.7 UJ	6.7 UJ	5.8 UJ
ENDOSULFAN SULFATE	NL	µg/kg	6.2 UJ	7.1 UJ	6.7 UJ	6.7 UJ	5.8 UJ
ENDRIN	207	µg/kg	6.2 UJ	7.1 UJ	6.7 UJ	6.7 UJ	5.8 UJ
ENDRIN ALDEHYDE	NL	µg/kg	6.2 UJ	7.1 UJ	6.7 UJ	6.7 UJ	5.8 UJ
ENDRIN KETONE	NL	µg/kg	6.2 UJ	7.1 UJ	6.7 UJ	6.7 UJ	5.8 UJ
GAMMA-BHC (LINDANE)	4.99	µg/kg	3.2 UJ	3.6 UJ	3.5 UJ	3.5 UJ	3 UJ
GAMMA-CHLORDANE	17.6	µg/kg	3.2 UJ	3.6 UJ	3.5 UJ	3.5 UJ	3 UJ
HEPTACHLOR	NL	µg/kg	3.2 UJ	3.6 UJ	3.5 UJ	3.5 UJ	3 UJ
HEPTACHLOR EPOXIDE	16	µg/kg	3.2 UJ	3.6 UJ	3.5 UJ	3.5 UJ	3 UJ

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Table B-4
Sediment Sample Analytical Results - Pesticides
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

		Location ID	LMR11-76	LMR11-79	LMR11-79
		Field Sample ID	LMR11-76-024	LMR11-79-024	LMR11-79-024FS
		Sample Date	8/5/2011	8/4/2011	8/4/2011
		Depth Interval (in bss)	6- 24	6- 24	6- 24
Chemical Name	**PEC[1]**	**Unit**			
1,1,1-TRICHLORO-2,2-BIS (P-METHOXPHENYL)-ETHANE	NL		28 U	31 U	32 U
4,4'-DDD	28	µg/kg	5.5 U	6.1 U	6.2 U
4,4'-DDE	31.3	µg/kg	5.5 U	6.1 U	6.2 U
4,4'-DDT	62.9	µg/kg	5.5 U	6.1 U	6.2 U
ALDRIN	NL	µg/kg	2.8 U	3.1 U	3.2 U
ALPHA-BHC	NL	µg/kg	2.8 U	3.1 U	3.2 U
ALPHA-CHLORDANE	17.6	µg/kg	2.8 U	3.1 U	3.2 U
BETA-BHC	NL	µg/kg	2.8 U	3.1 U	3.2 U
CAMPHECHLOR	NL	µg/kg	280 U	310 U	320 U
DELTA-BHC	NL	µg/kg	2.8 U	3.1 U	3.2 U
DIELDRIN	61.8	µg/kg	5.5 U	6.1 U	6.2 U
ENDOSULFAN I	NL	µg/kg	2.8 U	3.1 U	3.2 U
ENDOSULFAN II	NL	µg/kg	5.5 U	6.1 U	6.2 U
ENDOSULFAN SULFATE	NL	µg/kg	5.5 U	6.1 U	6.2 U
ENDRIN	207	µg/kg	5.5 U	6.1 U	6.2 U
ENDRIN ALDEHYDE	NL	µg/kg	5.5 U	6.1 U	6.2 U
ENDRIN KETONE	NL	µg/kg	5.5 U	6.1 U	6.2 U
GAMMA-BHC (LINDANE)	4.99	µg/kg	2.8 U	3.1 U	3.2 U
GAMMA-CHLORDANE	17.6	µg/kg	2.8 U	3.1 U	3.2 U
HEPTACHLOR	NL	µg/kg	2.8 U	3.1 U	3.2 U
HEPTACHLOR EPOXIDE	16	µg/kg	2.8 U	3.1 U	3.2 U

Notes:
µg/kg - Microgram per kilogram
DP - Duplicate
FS - Field split
ID - Identification
in bss - Inches below sediment surface
J - Estimated value
NL - Not Listed
PEC - Probable Effect Concentration
U - Not detected
[1] Consensus-based PEC values (2000)

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Table B-5
Sediment Sample Analytical Results - Physical Properties
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

	Location ID	LMR11-01	LMR11-01	LMR11-01	LMR11-01	LMR11-02	LMR11-03
	Field Sample ID	LMR11-01-006	LMR11-01-024	LMR11-01-048	LMR11-01-060	LMR11-02-006	LMR11-03-006
	Sample Date	8/2/2011	8/5/2011	8/5/2011	8/5/2011	8/2/2011	8/3/2011
	Depth Interval (in bss)	0- 6	6- 24	24- 48	48- 60	0- 6	0- 6
Chemical Name	**Unit**						
Grain Size							
Gravel	%	0	0	4.4	6.2	0.3	0.4
Sand	%	12.5	2.1	18.3	75.8	86.9	37.1
Silt	%	40.7	31.7	27.5	6.3	3.8	40.5
Clay	%	46.8	66.2	49.8	11.7	9.1	22
Coarse Sand	%	0	0	1.9	16.4	1	0.8
Medium Sand	%	0.4	0.2	5.2	34.8	6.1	0.6
Fine Sand	%	12.1	1.9	11.2	24.6	79.8	35.7
Sieve Size 3 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 2 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 1.5 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 1 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 0.75 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 0.375 inch - Percent Finer	% PASSED	100	100	96.5	99.3	100	100
Sieve Size #4 - Percent Finer	% PASSED	100	100	95.6	93.8	99.7	99.6
Sieve Size #10 - Percent Finer	% PASSED	100	100	93.7	77.4	98.7	98.8
Sieve Size #20 - Percent Finer	% PASSED	99.9	99.9	91.8	56.8	97.4	98.6
Sieve Size #40 - Percent Finer	% PASSED	99.6	99.8	88.5	42.6	92.6	98.2
Sieve Size #60 - Percent Finer	% PASSED	97.5	99.6	85.2	36.6	35.3	97.2
Sieve Size #80 - Percent Finer	% PASSED	95.1	99.2	81.1	24.6	15.9	94.2
Sieve Size #100 - Percent Finer	% PASSED	93.5	99	80	21.5	13.7	90.3
Sieve Size #200 - Percent Finer	% PASSED	87.5	97.9	77.3	18	12.8	62.5
Hydrometer Reading 1 - Percent Finer	% PASSED	75.9	92.1	69.7	16.2	13.5	34.2
Hydrometer Reading 2 - Percent Finer	% PASSED	70.1	86.9	64.7	15.1	12	32
Hydrometer Reading 3 - Percent Finer	% PASSED	61.3	78.3	59.8	13.6	11.3	27.6
Hydrometer Reading 4 - Percent Finer	% PASSED	54.1	74.8	54.8	12.8	10.5	25.3
Hydrometer Reading 5 - Percent Finer	% PASSED	46.8	66.2	49.8	11.7	9.1	22
Hydrometer Reading 6 - Percent Finer	% PASSED	38.1	55.6	41.6	9.8	7.6	17.6
Hydrometer Reading 7 - Percent Finer	% PASSED	26.4	43.5	33.3	7.9	5.3	14.4
TOC							
TOC	mg/kg	25,000	23,600	18,800	11,300	10,900 J	28,600

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Table B-5
Sediment Sample Analytical Results - Physical Properties
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

	Location ID	LMR11-03	LMR11-03	LMR11-03	LMR11-04	LMR11-05	LMR11-05
	Field Sample ID	LMR11-03-024	LMR11-03-048	LMR11-03-059	LMR11-04-006	LMR11-05-006	LMR11-05-018
	Sample Date	8/3/2011	8/3/2011	8/3/2011	8/3/2011	8/4/2011	8/4/2011
	Depth Interval (in bss)	6- 24	24- 48	48- 59	0- 6	0- 6	6- 18
Chemical Name	**Unit**						
Grain Size							
Gravel	%	0.5	0	0.4	1.1	5.5	0
Sand	%	12.5	7.4	32.3	84.9	34.8	12.2
Silt	%	47.5	41.2	32.9	3.6	26.2	32.6
Clay	%	39.5	51.4	34.4	10.4	33.5	55.2
Coarse Sand	%	0.5	0	0.1	1.7	4.1	0
Medium Sand	%	1.2	1.3	1.9	9.7	6.4	1.6
Fine Sand	%	10.8	6.1	30.3	73.5	24.3	10.6
Sieve Size 3 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 2 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 1.5 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 1 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 0.75 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 0.375 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size #4 - Percent Finer	% PASSED	99.5	100	99.6	98.9	94.5	100
Sieve Size #10 - Percent Finer	% PASSED	99	100	99.5	97.2	90.4	100
Sieve Size #20 - Percent Finer	% PASSED	98.8	99.3	98.8	94.4	87.1	99.3
Sieve Size #40 - Percent Finer	% PASSED	97.8	98.7	97.6	87.5	84	98.4
Sieve Size #60 - Percent Finer	% PASSED	96.7	98.3	94	32.8	79.3	97.2
Sieve Size #80 - Percent Finer	% PASSED	95.7	97.9	88.2	16.9	74	95.7
Sieve Size #100 - Percent Finer	% PASSED	94.8	97.5	83.3	15	70.2	94.4
Sieve Size #200 - Percent Finer	% PASSED	87	92.6	67.3	14	59.7	87.8
Hydrometer Reading 1 - Percent Finer	% PASSED	58.3	72.5	50.6	14.1	47.2	76.6
Hydrometer Reading 2 - Percent Finer	% PASSED	53.9	69.2	46.9	14.1	44.2	72.6
Hydrometer Reading 3 - Percent Finer	% PASSED	48.4	62.7	41.9	12.9	40.3	65.9
Hydrometer Reading 4 - Percent Finer	% PASSED	43.9	56.2	38.2	12.3	38.4	60.6
Hydrometer Reading 5 - Percent Finer	% PASSED	39.5	51.4	34.4	10.4	33.5	55.2
Hydrometer Reading 6 - Percent Finer	% PASSED	31.8	43.3	28.2	9.2	27.6	45.8
Hydrometer Reading 7 - Percent Finer	% PASSED	25.1	31.9	22	6.2	20.7	36.4
TOC							
TOC	mg/kg	33,900	46,000	36,200	18,100	16,900	18,000

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Table B-5
Sediment Sample Analytical Results - Physical Properties
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

	Location ID	LMR11-06	LMR11-06	LMR11-06	LMR11-07	LMR11-08	LMR11-08
	Field Sample ID	LMR11-06-006	LMR11-06-024	LMR11-06-052	LMR11-07-006	LMR11-08-006	LMR11-08-024
	Sample Date	8/3/2011	8/3/2011	8/3/2011	8/3/2011	8/3/2011	8/5/2011
	Depth Interval (in bss)	0- 6	6- 24	24- 52	0- 6	0- 6	6- 24
Chemical Name	**Unit**						
Grain Size							
Gravel	%	0	0	0	2.6	0	0
Sand	%	20	2.9	6.4	66.3	12.9	2.8
Silt	%	34.3	36	40.5	10.5	42.7	30.3
Clay	%	45.7	61.1	53.1	20.6	44.4	66.9
Coarse Sand	%	0	0	0	4.4	0.3	0
Medium Sand	%	2.4	0.5	0.9	23.4	1.1	0.3
Fine Sand	%	17.6	2.4	5.5	38.5	11.5	2.5
Sieve Size 3 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 2 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 1.5 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 1 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 0.75 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 0.375 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size #4 - Percent Finer	% PASSED	100	100	100	97.4	100	100
Sieve Size #10 - Percent Finer	% PASSED	100	100	100	93	99.7	100
Sieve Size #20 - Percent Finer	% PASSED	98.5	99.7	99.6	85.6	99.3	99.8
Sieve Size #40 - Percent Finer	% PASSED	97.6	99.5	99.1	69.6	98.6	99.7
Sieve Size #60 - Percent Finer	% PASSED	96	99.3	98.3	44.9	97.2	99.5
Sieve Size #80 - Percent Finer	% PASSED	93.6	99	97.3	34.4	94.8	99.1
Sieve Size #100 - Percent Finer	% PASSED	90.3	98.7	96.6	32	93	98.8
Sieve Size #200 - Percent Finer	% PASSED	80	97.1	93.6	31.1	87.1	97.2
Hydrometer Reading 1 - Percent Finer	% PASSED	70.7	89.1	77.5	28.7	66.1	93.1
Hydrometer Reading 2 - Percent Finer	% PASSED	64.4	82.9	72.6	27.5	61.3	87.9
Hydrometer Reading 3 - Percent Finer	% PASSED	58.2	76.7	66.1	25	54.2	79.1
Hydrometer Reading 4 - Percent Finer	% PASSED	55	68.9	59.6	22.5	49.2	73.9
Hydrometer Reading 5 - Percent Finer	% PASSED	45.7	61.1	53.1	20.6	44.4	66.9
Hydrometer Reading 6 - Percent Finer	% PASSED	37.8	51.7	43.3	16.9	34.9	54.4
Hydrometer Reading 7 - Percent Finer	% PASSED	30	39.2	33.6	12.6	25.3	42.2
TOC							
TOC	mg/kg	35,800	24,400	23,900	7,180	27,700	27,500

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Table B-5
Sediment Sample Analytical Results - Physical Properties
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

	Location ID	LMR11-08	LMR11-10	LMR11-10	LMR11-10	LMR11-11	LMR11-11
	Field Sample ID	LMR11-08-052	LMR11-10-006	LMR11-10-024	LMR11-10-045	LMR11-11-006	LMR11-11-024
	Sample Date	8/5/2011	8/4/2011	8/4/2011	8/4/2011	8/5/2011	8/5/2011
	Depth Interval (in bss)	24- 52	0- 6	6- 24	24- 45	0- 6	6- 24
Chemical Name	**Unit**						
Grain Size							
Gravel	%	0	0	4.1	0.6	NA	0
Sand	%	4	89.3	55	64.7	NA	68.5
Silt	%	25.8	4.6	16.6	17.2	NA	16.9
Clay	%	70.2	6.2	24.3	17.5	NA	14.6
Coarse Sand	%	0	0	1.1	1.2	NA	0.8
Medium Sand	%	0.2	3.3	7.9	16	NA	2.9
Fine Sand	%	3.8	86	46	47.5	NA	64.8
Sieve Size 3 inch - Percent Finer	% PASSED	100	100	100	100	NA	100
Sieve Size 2 inch - Percent Finer	% PASSED	100	100	100	100	NA	100
Sieve Size 1.5 inch - Percent Finer	% PASSED	100	100	100	100	NA	100
Sieve Size 1 inch - Percent Finer	% PASSED	100	100	100	100	NA	100
Sieve Size 0.75 inch - Percent Finer	% PASSED	100	100	100	100	NA	100
Sieve Size 0.375 inch - Percent Finer	% PASSED	100	100	95.9	100	NA	100
Sieve Size #4 - Percent Finer	% PASSED	100	100	95.9	99.4	NA	100
Sieve Size #10 - Percent Finer	% PASSED	100	100	94.8	98.2	NA	99.2
Sieve Size #20 - Percent Finer	% PASSED	99.9	99.3	92.7	94.2	NA	97.9
Sieve Size #40 - Percent Finer	% PASSED	99.8	96.7	86.9	82.2	NA	96.3
Sieve Size #60 - Percent Finer	% PASSED	99.4	84.5	74.3	64	NA	91.8
Sieve Size #80 - Percent Finer	% PASSED	98.4	63	63.4	53.9	NA	83
Sieve Size #100 - Percent Finer	% PASSED	98	44.6	55.7	48	NA	69.6
Sieve Size #200 - Percent Finer	% PASSED	96	10.7	40.9	34.7	NA	31.5
Hydrometer Reading 1 - Percent Finer	% PASSED	92.8	9	35	27.5	NA	22.3
Hydrometer Reading 2 - Percent Finer	% PASSED	87.1	8.5	33.2	24.9	NA	20.9
Hydrometer Reading 3 - Percent Finer	% PASSED	81.5	8	29.6	21.5	NA	18.8
Hydrometer Reading 4 - Percent Finer	% PASSED	75.9	7.6	26.9	18.8	NA	16.7
Hydrometer Reading 5 - Percent Finer	% PASSED	70.2	6.2	24.3	17.5	NA	14.6
Hydrometer Reading 6 - Percent Finer	% PASSED	56.7	5.1	20.7	14.2	NA	11
Hydrometer Reading 7 - Percent Finer	% PASSED	45.4	4.3	15.3	10.8	NA	8.2
TOC							
TOC	mg/kg	22,200	9,830	11,300	16,100	9,010	19,200

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Table B-5
Sediment Sample Analytical Results - Physical Properties
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

	Location ID	LMR11-11	LMR11-12	LMR11-13	LMR11-13	LMR11-14	LMR11-14
	Field Sample ID	LMR11-11-037	LMR11-12-006	LMR11-13-006	LMR11-13-026	LMR11-14-006	LMR11-14-024
	Sample Date	8/5/2011	8/3/2011	8/3/2011	8/3/2011	8/5/2011	8/5/2011
	Depth Interval (in bss)	24- 37	0- 6	0- 6	6- 26	0- 6	6- 24
Chemical Name	**Unit**						
Grain Size							
Gravel	%	0.7	0	0.9	0	0	0
Sand	%	81	27.6	14.8	26.3	78.7	40.4
Silt	%	11.2	33.6	43	36.3	17.2	32.3
Clay	%	7.1	38.8	41.3	37.4	4.1	27.3
Coarse Sand	%	1.1	1	0.1	0	0	0
Medium Sand	%	6.4	8.7	1.7	1.8	1	2.6
Fine Sand	%	73.5	17.9	13	24.5	77.7	37.8
Sieve Size 3 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 2 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 1.5 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 1 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 0.75 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 0.375 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size #4 - Percent Finer	% PASSED	99.3	100	99.1	100	100	100
Sieve Size #10 - Percent Finer	% PASSED	98.2	99	99	100	100	100
Sieve Size #20 - Percent Finer	% PASSED	95.8	96	98.5	99.6	99.7	99.3
Sieve Size #40 - Percent Finer	% PASSED	91.8	90.3	97.3	98.2	99	97.4
Sieve Size #60 - Percent Finer	% PASSED	80.5	84.8	94.6	94.6	97.2	90
Sieve Size #80 - Percent Finer	% PASSED	64.5	73.6	92.6	87.6	86.8	81
Sieve Size #100 - Percent Finer	% PASSED	47.7	73.1	91.2	84.8	67.1	74.4
Sieve Size #200 - Percent Finer	% PASSED	18.3	72.4	84.3	73.7	21.3	59.6
Hydrometer Reading 1 - Percent Finer	% PASSED	13.1	59.6	71.6	59.3	9.2	44.4
Hydrometer Reading 2 - Percent Finer	% PASSED	11.1	55	64.3	54.7	7.7	39.7
Hydrometer Reading 3 - Percent Finer	% PASSED	9.7	46.9	54.6	47.8	7	36.6
Hydrometer Reading 4 - Percent Finer	% PASSED	9.1	41.1	46.2	42	5.6	32
Hydrometer Reading 5 - Percent Finer	% PASSED	7.1	38.8	41.3	37.4	4.1	27.3
Hydrometer Reading 6 - Percent Finer	% PASSED	5.1	29.6	31.6	28.1	2.7	21.1
Hydrometer Reading 7 - Percent Finer	% PASSED	3.8	21.5	23.2	21.3	1.2	15
TOC							
TOC	mg/kg	13,800	34,400	24,200	19,400	11,400	18,500

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Table B-5
Sediment Sample Analytical Results - Physical Properties
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

	Location ID	LMR11-14	LMR11-15	LMR11-15	LMR11-15	LMR11-15	LMR11-15
	Field Sample ID	LMR11-14-045	LMR11-15-006	LMR11-15-006-DP	LMR11-15-024	LMR11-15-024-DP	LMR11-15-048
	Sample Date	8/5/2011	8/9/2011	8/9/2011	8/9/2011	8/9/2011	8/9/2011
	Depth Interval (in bss)	24- 45	0- 6	0- 6	6- 24	6- 24	24- 48
Chemical Name	**Unit**						
Grain Size							
Gravel	%	0	0.8	NA	0	NA	0
Sand	%	21.9	26.7	NA	25.1	NA	22.5
Silt	%	46.1	31.7	NA	21.4	NA	34.5
Clay	%	32	40.8	NA	53.5	NA	43
Coarse Sand	%	0	0.6	NA	1.1	NA	0
Medium Sand	%	2.2	3	NA	6.6	NA	2.6
Fine Sand	%	19.7	23.1	NA	17.4	NA	19.9
Sieve Size 3 inch - Percent Finer	% PASSED	100	100	NA	100	NA	100
Sieve Size 2 inch - Percent Finer	% PASSED	100	100	NA	100	NA	100
Sieve Size 1.5 inch - Percent Finer	% PASSED	100	100	NA	100	NA	100
Sieve Size 1 inch - Percent Finer	% PASSED	100	100	NA	100	NA	100
Sieve Size 0.75 inch - Percent Finer	% PASSED	100	100	NA	100	NA	100
Sieve Size 0.375 inch - Percent Finer	% PASSED	100	100	NA	100	NA	100
Sieve Size #4 - Percent Finer	% PASSED	100	99.2	NA	100	NA	100
Sieve Size #10 - Percent Finer	% PASSED	100	98.6	NA	98.9	NA	100
Sieve Size #20 - Percent Finer	% PASSED	99.6	98	NA	97.4	NA	99.4
Sieve Size #40 - Percent Finer	% PASSED	97.8	95.6	NA	92.3	NA	97.4
Sieve Size #60 - Percent Finer	% PASSED	95	91.2	NA	86.1	NA	93.1
Sieve Size #80 - Percent Finer	% PASSED	92.6	77.6	NA	77.2	NA	85.1
Sieve Size #100 - Percent Finer	% PASSED	89.9	75.5	NA	76.2	NA	83.3
Sieve Size #200 - Percent Finer	% PASSED	78.1	72.5	NA	74.9	NA	77.5
Hydrometer Reading 1 - Percent Finer	% PASSED	53.7	55.6	NA	74.5	NA	66.5
Hydrometer Reading 2 - Percent Finer	% PASSED	48.3	52.6	NA	71	NA	63.1
Hydrometer Reading 3 - Percent Finer	% PASSED	40.2	49.7	NA	65.8	NA	56.4
Hydrometer Reading 4 - Percent Finer	% PASSED	36.1	45.2	NA	60.5	NA	49.7
Hydrometer Reading 5 - Percent Finer	% PASSED	32	40.8	NA	53.5	NA	43
Hydrometer Reading 6 - Percent Finer	% PASSED	23.9	31.9	NA	44.8	NA	34.6
Hydrometer Reading 7 - Percent Finer	% PASSED	17.2	24.5	NA	36	NA	27.9
TOC							
TOC	mg/kg	25,800	15,000 J	32,500 J	24,600 J	14,200 J	26,000

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Table B-5
Sediment Sample Analytical Results - Physical Properties
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

	Location ID	LMR11-15	LMR11-15	LMR11-15	LMR11-16	LMR11-16	LMR11-16
	Field Sample ID	LMR11-15-048-DP	LMR11-15-072	LMR11-15-104	LMR11-16-006	LMR11-16-024	LMR11-16-048
	Sample Date	8/9/2011	8/9/2011	8/9/2011	8/9/2011	8/9/2011	8/9/2011
	Depth Interval (in bss)	24- 48	48- 72	72- 104	0- 6	6- 24	24- 48
Chemical Name	**Unit**						
Grain Size							
Gravel	%	NA	0	0	0	0	0.1
Sand	%	NA	4.4	15.5	2.4	0.6	10.1
Silt	%	NA	59.8	46	32.8	30.6	33.2
Clay	%	NA	35.8	38.5	64.8	68.8	56.6
Coarse Sand	%	NA	0	0	0	0	0.4
Medium Sand	%	NA	0.1	0.3	0.5	0.1	1.3
Fine Sand	%	NA	4.3	15.2	1.9	0.5	8.4
Sieve Size 3 inch - Percent Finer	% PASSED	NA	100	100	100	100	100
Sieve Size 2 inch - Percent Finer	% PASSED	NA	100	100	100	100	100
Sieve Size 1.5 inch - Percent Finer	% PASSED	NA	100	100	100	100	100
Sieve Size 1 inch - Percent Finer	% PASSED	NA	100	100	100	100	100
Sieve Size 0.75 inch - Percent Finer	% PASSED	NA	100	100	100	100	100
Sieve Size 0.375 inch - Percent Finer	% PASSED	NA	100	100	100	100	100
Sieve Size #4 - Percent Finer	% PASSED	NA	100	100	100	100	99.9
Sieve Size #10 - Percent Finer	% PASSED	NA	100	100	100	100	99.5
Sieve Size #20 - Percent Finer	% PASSED	NA	100	99.9	99.7	99.9	99
Sieve Size #40 - Percent Finer	% PASSED	NA	99.9	99.7	99.5	99.9	98.2
Sieve Size #60 - Percent Finer	% PASSED	NA	99.7	99.5	99.4	99.9	97.2
Sieve Size #80 - Percent Finer	% PASSED	NA	99.2	98.5	99	99.9	94.4
Sieve Size #100 - Percent Finer	% PASSED	NA	99	97.4	98.7	99.8	92.9
Sieve Size #200 - Percent Finer	% PASSED	NA	95.6	84.5	97.6	99.4	89.8
Hydrometer Reading 1 - Percent Finer	% PASSED	NA	69	68.8	85.9	93.7	74.5
Hydrometer Reading 2 - Percent Finer	% PASSED	NA	61.1	59.7	83.6	91.2	72.7
Hydrometer Reading 3 - Percent Finer	% PASSED	NA	48.4	50.6	78.9	83.8	67.4
Hydrometer Reading 4 - Percent Finer	% PASSED	NA	40.5	44.5	71.8	76.3	60.2
Hydrometer Reading 5 - Percent Finer	% PASSED	NA	35.8	38.5	64.8	68.8	56.6
Hydrometer Reading 6 - Percent Finer	% PASSED	NA	26.3	29.3	53	56.3	47.7
Hydrometer Reading 7 - Percent Finer	% PASSED	NA	21.5	21.8	41.3	43.9	36.9
TOC							
TOC	mg/kg	22,600	27,300	44,200	27,800	28,400	21,900

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Table B-5
Sediment Sample Analytical Results - Physical Properties
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

	Location ID	LMR11-16	LMR11-17	LMR11-17	LMR11-18	LMR11-18	LMR11-18
	Field Sample ID	LMR11-16-072	LMR11-17-006	LMR11-17-021	LMR11-18-006	LMR11-18-024	LMR11-18-048
	Sample Date	8/9/2011	8/4/2011	8/4/2011	8/3/2011	8/5/2011	8/5/2011
	Depth Interval (in bss)	48- 72	0- 6	6- 21	0- 6	6- 24	24- 48
Chemical Name	**Unit**						
Grain Size							
Gravel	%	4.2	0.2	21.8	2	0	0
Sand	%	36.3	95	61.3	54.9	48.7	30.5
Silt	%	42.8	2.7	12.6	21.9	29.4	40.2
Clay	%	16.7	2.2	4.3	21.2	21.9	29.3
Coarse Sand	%	1.4	2.8	5.1	3.8	0	0
Medium Sand	%	5.2	32.8	21.6	0.6	1.9	1.5
Fine Sand	%	29.7	59.4	34.6	50.5	46.8	29
Sieve Size 3 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 2 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 1.5 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 1 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 0.75 inch - Percent Finer	% PASSED	100	100	87.9	100	100	100
Sieve Size 0.375 inch - Percent Finer	% PASSED	96.5	100	84	100	100	100
Sieve Size #4 - Percent Finer	% PASSED	95.8	99.8	78.2	98	100	100
Sieve Size #10 - Percent Finer	% PASSED	94.4	97	73.1	94.2	100	100
Sieve Size #20 - Percent Finer	% PASSED	93.1	89.2	66.1	94	99.3	99.1
Sieve Size #40 - Percent Finer	% PASSED	89.2	64.2	51.5	93.6	98.1	98.5
Sieve Size #60 - Percent Finer	% PASSED	86.4	29.2	34.9	91.7	92.3	97
Sieve Size #80 - Percent Finer	% PASSED	79.7	6.9	22.6	83.3	81.5	91
Sieve Size #100 - Percent Finer	% PASSED	74.3	5.7	20.6	70.5	73.1	85.1
Sieve Size #200 - Percent Finer	% PASSED	59.5	4.9	16.9	43.1	51.3	69.5
Hydrometer Reading 1 - Percent Finer	% PASSED	33.9	2.9	7.8	29.6	33.4	49.9
Hydrometer Reading 2 - Percent Finer	% PASSED	30.9	2.9	7.1	27	30.5	44.3
Hydrometer Reading 3 - Percent Finer	% PASSED	22.8	2.9	6.4	24.5	26.7	38.7
Hydrometer Reading 4 - Percent Finer	% PASSED	19.8	2.9	5.7	22.9	23.8	33.1
Hydrometer Reading 5 - Percent Finer	% PASSED	16.7	2.2	4.3	21.2	21.9	29.3
Hydrometer Reading 6 - Percent Finer	% PASSED	13.7	1.7	3.6	16.9	17	21.8
Hydrometer Reading 7 - Percent Finer	% PASSED	11.7	1.7	2.9	14.4	12.2	18.1
TOC							
TOC	mg/kg	116,000	20,400	5,510	33,100	19,000	53,600 J

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Table B-5
Sediment Sample Analytical Results - Physical Properties
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

	Location ID	LMR11-19	LMR11-19	LMR11-20	LMR11-20	LMR11-20	LMR11-20
	Field Sample ID	LMR11-19-006	LMR11-19-014	LMR11-20-006	LMR11-20-006FS	LMR11-20-024	LMR11-20-048
	Sample Date	8/3/2011	8/3/2011	8/2/2011	8/2/2011	8/5/2011	8/5/2011
	Depth Interval (in bss)	0- 6	6- 14	0- 6	0- 6	6- 24	24- 48
Chemical Name	**Unit**						
Grain Size							
Gravel	%	0.9	66.1	0	0	0	0
Sand	%	69.7	23.5	4.5	4.9	1.5	1.9
Silt	%	5.9	6.5	27.9	33.7	38.9	36.1
Clay	%	23.5	3.9	67.6	61.4	59.6	62
Coarse Sand	%	0.9	1.2	0	0	0	0
Medium Sand	%	13.2	3.4	0.4	0.6	0.2	0.4
Fine Sand	%	55.6	18.9	4.1	4.3	1.3	1.5
Sieve Size 3 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 2 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 1.5 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 1 inch - Percent Finer	% PASSED	100	74.2	100	100	100	100
Sieve Size 0.75 inch - Percent Finer	% PASSED	100	61.7	100	100	100	100
Sieve Size 0.375 inch - Percent Finer	% PASSED	100	36.7	100	100	100	100
Sieve Size #4 - Percent Finer	% PASSED	99.1	33.9	100	100	100	100
Sieve Size #10 - Percent Finer	% PASSED	98.2	32.7	100	100	100	100
Sieve Size #20 - Percent Finer	% PASSED	95	31.5	99.9	99.8	100	100
Sieve Size #40 - Percent Finer	% PASSED	85	29.3	99.6	99.4	99.8	99.6
Sieve Size #60 - Percent Finer	% PASSED	62.8	22.4	98	97.8	99.6	99.3
Sieve Size #80 - Percent Finer	% PASSED	31.5	17.4	97.1	96.8	99.4	99.1
Sieve Size #100 - Percent Finer	% PASSED	30.1	14.7	96.7	96.5	99.2	98.8
Sieve Size #200 - Percent Finer	% PASSED	29.4	10.4	95.5	95.1	98.5	98.1
Hydrometer Reading 1 - Percent Finer	% PASSED	33.5	5.9	95.1	88	84	85
Hydrometer Reading 2 - Percent Finer	% PASSED	32.6	5.9	89	82.7	80.2	80.9
Hydrometer Reading 3 - Percent Finer	% PASSED	29	4.9	79.8	73.3	72.7	74.6
Hydrometer Reading 4 - Percent Finer	% PASSED	25.3	4.2	73.7	66.7	65.2	66.2
Hydrometer Reading 5 - Percent Finer	% PASSED	23.5	3.9	67.6	61.4	59.6	62
Hydrometer Reading 6 - Percent Finer	% PASSED	19.8	2.9	53.8	50.7	48.3	49.5
Hydrometer Reading 7 - Percent Finer	% PASSED	14.3	2.2	40	36.1	33.2	34.9
TOC							
TOC	mg/kg	26,800	10,500	23,100	19,600	23,800	22,100

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Table B-5
Sediment Sample Analytical Results - Physical Properties
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

	Location ID	LMR11-20	LMR11-21	LMR11-22	LMR11-23	LMR11-23	LMR11-23
	Field Sample ID	LMR11-20-060	LMR11-21-006	LMR11-22-006	LMR11-23-006	LMR11-23-024	LMR11-23-048
	Sample Date	8/5/2011	8/3/2011	8/4/2011	8/11/2011	8/11/2011	8/11/2011
	Depth Interval (in bss)	48- 60	0- 6	0- 6	0- 6	6- 24	24- 48
Chemical Name	**Unit**						
Grain Size							
Gravel	%	0.5	0.4	1	0	0	0
Sand	%	34.8	50.1	51.2	2.5	1	1.1
Silt	%	39.7	21.6	15.7	36.8	39.8	35.7
Clay	%	25	27.9	32.1	60.7	59.2	63.2
Coarse Sand	%	0	0.2	4	0	0	0
Medium Sand	%	2.4	1.5	16.1	0.3	0.1	0
Fine Sand	%	32.4	48.4	31.1	2.2	0.9	1.1
Sieve Size 3 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 2 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 1.5 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 1 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 0.75 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 0.375 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size #4 - Percent Finer	% PASSED	99.5	99.6	99	100	100	100
Sieve Size #10 - Percent Finer	% PASSED	99.5	99.4	95	100	100	100
Sieve Size #20 - Percent Finer	% PASSED	99	98.9	89.4	99.9	99.9	100
Sieve Size #40 - Percent Finer	% PASSED	97.1	97.9	78.9	99.7	99.9	100
Sieve Size #60 - Percent Finer	% PASSED	89.7	95.9	55.7	99.2	99.8	100
Sieve Size #80 - Percent Finer	% PASSED	82.8	73.7	49.9	99	99.8	100
Sieve Size #100 - Percent Finer	% PASSED	78.6	63.3	48.7	98.9	99.8	99.9
Sieve Size #200 - Percent Finer	% PASSED	64.7	49.5	47.8	97.5	99	98.9
Hydrometer Reading 1 - Percent Finer	% PASSED	47.4	42	47.3	92.7	89	91.9
Hydrometer Reading 2 - Percent Finer	% PASSED	41	39	44.1	85.9	82	87.5
Hydrometer Reading 3 - Percent Finer	% PASSED	34.6	33.9	39.4	76.8	73.2	78.7
Hydrometer Reading 4 - Percent Finer	% PASSED	29.8	30.9	35.2	69.8	66.2	69.9
Hydrometer Reading 5 - Percent Finer	% PASSED	25	27.9	32.1	60.7	59.2	63.2
Hydrometer Reading 6 - Percent Finer	% PASSED	18.6	23.8	26.4	49.3	48.6	52.2
Hydrometer Reading 7 - Percent Finer	% PASSED	12.2	17.8	20	37.9	36.3	39
TOC							
TOC	mg/kg	12,700	21,400	25,300	24,300	22,900	23,500

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Table B-5
Sediment Sample Analytical Results - Physical Properties
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

	Location ID	LMR11-23	LMR11-23	LMR11-23	LMR11-24	LMR11-24	LMR11-24
	Field Sample ID	LMR11-23-072	LMR11-23-096	LMR11-23-115	LMR11-24-006	LMR11-24-024	LMR11-24-048
	Sample Date	8/11/2011	8/11/2011	8/11/2011	8/4/2011	8/11/2011	8/11/2011
	Depth Interval (in bss)	48- 72	72- 96	96- 115	0- 6	6- 24	24- 48
Chemical Name	**Unit**						
Grain Size							
Gravel	%	0	0	0.8	0.1	0	0
Sand	%	6.3	7.6	41.5	83.6	38	17.3
Silt	%	39.3	34.4	42.4	5.6	20.7	27
Clay	%	54.4	58	15.3	10.7	41.3	55.7
Coarse Sand	%	0	0	0.4	0.6	0.4	0.1
Medium Sand	%	0.2	0.4	5.2	7.9	2.1	0.5
Fine Sand	%	6.1	7.2	35.9	75.1	35.5	16.7
Sieve Size 3 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 2 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 1.5 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 1 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 0.75 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 0.375 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size #4 - Percent Finer	% PASSED	100	100	99.2	99.9	100	100
Sieve Size #10 - Percent Finer	% PASSED	100	100	98.8	99.3	99.6	99.9
Sieve Size #20 - Percent Finer	% PASSED	99.9	99.9	97.7	97.9	99.1	99.8
Sieve Size #40 - Percent Finer	% PASSED	99.8	99.6	93.6	91.4	97.5	99.4
Sieve Size #60 - Percent Finer	% PASSED	99.7	97.4	86.4	52.4	87.6	95.5
Sieve Size #80 - Percent Finer	% PASSED	99.5	95	83.3	22.9	73.5	89.4
Sieve Size #100 - Percent Finer	% PASSED	99.1	94.5	80.5	18.2	68.1	86.6
Sieve Size #200 - Percent Finer	% PASSED	93.7	92.4	57.7	16.3	62	82.7
Hydrometer Reading 1 - Percent Finer	% PASSED	81.1	82	31.1	15.1	59.4	80.5
Hydrometer Reading 2 - Percent Finer	% PASSED	76.1	77.6	25.9	14.4	55.8	76.3
Hydrometer Reading 3 - Percent Finer	% PASSED	69.4	73.3	22.4	12.9	49.8	68.1
Hydrometer Reading 4 - Percent Finer	% PASSED	61.1	64.6	18.9	11.4	46.2	61.2
Hydrometer Reading 5 - Percent Finer	% PASSED	54.4	58	15.3	10.7	41.3	55.7
Hydrometer Reading 6 - Percent Finer	% PASSED	44.4	47.2	11.8	9.1	33.9	45.8
Hydrometer Reading 7 - Percent Finer	% PASSED	32.8	36.3	9.3	6.9	26.7	34.7
TOC							
TOC	mg/kg	24,800	18,300	13,400	16,200	14,100	22,600

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Table B-5
Sediment Sample Analytical Results - Physical Properties
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

	Location ID	LMR11-24	LMR11-24	LMR11-25	LMR11-25	LMR11-25	LMR11-25
	Field Sample ID	LMR11-24-072	LMR11-24-096	LMR11-25-006	LMR11-25-024	LMR11-25-048	LMR11-25-072
	Sample Date	8/11/2011	8/11/2011	8/11/2011	8/11/2011	8/11/2011	8/11/2011
	Depth Interval (in bss)	48- 72	72- 96	0- 6	6- 24	24- 48	48- 72
Chemical Name	**Unit**						
Grain Size							
Gravel	%	0	0	0	0	0	0
Sand	%	10.2	3.1	2	0.3	4.8	5.4
Silt	%	38.9	37.3	26	31.5	31.8	34.5
Clay	%	50.9	59.6	72	68.2	63.4	60.1
Coarse Sand	%	0	0	0.2	0	0	0
Medium Sand	%	0.5	0.5	0.1	0	0	0.2
Fine Sand	%	9.7	2.6	1.7	0.3	4.8	5.2
Sieve Size 3 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 2 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 1.5 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 1 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 0.75 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 0.375 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size #4 - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size #10 - Percent Finer	% PASSED	100	100	99.8	100	100	100
Sieve Size #20 - Percent Finer	% PASSED	99.9	99.9	99.8	100	100	99.9
Sieve Size #40 - Percent Finer	% PASSED	99.5	99.5	99.7	100	100	99.8
Sieve Size #60 - Percent Finer	% PASSED	98.8	99	99.5	100	100	99.5
Sieve Size #80 - Percent Finer	% PASSED	97.2	98.5	99.5	100	99.8	98.2
Sieve Size #100 - Percent Finer	% PASSED	95.9	98.3	99.4	100	99.3	97.1
Sieve Size #200 - Percent Finer	% PASSED	89.8	96.9	98	99.7	95.2	94.6
Hydrometer Reading 1 - Percent Finer	% PASSED	79	88.3	96.6	93.4	90.2	81
Hydrometer Reading 2 - Percent Finer	% PASSED	73.1	83.2	91.7	89.5	84.4	77.2
Hydrometer Reading 3 - Percent Finer	% PASSED	62.7	74.8	86.8	81.8	76.8	71.5
Hydrometer Reading 4 - Percent Finer	% PASSED	56.8	68	76.9	76	69.1	65.8
Hydrometer Reading 5 - Percent Finer	% PASSED	50.9	59.6	72	68.2	63.4	60.1
Hydrometer Reading 6 - Percent Finer	% PASSED	41.7	49.2	61.8	60.5	55.8	46.8
Hydrometer Reading 7 - Percent Finer	% PASSED	29.9	37.4	47.1	44.9	42.4	35.4
TOC							
TOC	mg/kg	31,100	27,100	23,100	21,300	22,800	19,800

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Table B-5
Sediment Sample Analytical Results - Physical Properties
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

	Location ID	LMR11-25	LMR11-26	LMR11-26	LMR11-26	LMR11-26	LMR11-26
	Field Sample ID	LMR11-25-096	LMR11-26-006	LMR11-26-024	LMR11-26-048	LMR11-26-072	LMR11-26-096
	Sample Date	8/11/2011	8/10/2011	8/10/2011	8/10/2011	8/10/2011	8/10/2011
	Depth Interval (in bss)	72- 96	0- 6	6- 24	24- 48	48- 72	72- 96
Chemical Name	**Unit**						
Grain Size							
Gravel	%	0	0.3	0	0	0	0
Sand	%	20.7	19.7	5.2	2.7	3.3	28.1
Silt	%	44.2	34.1	38	29.9	38.8	38.2
Clay	%	35.1	45.9	56.8	67.4	57.9	33.7
Coarse Sand	%	0	0	0	0	0	0
Medium Sand	%	0.6	2.5	0.5	0.3	0.3	0.9
Fine Sand	%	20.1	17.2	4.7	2.4	3	27.2
Sieve Size 3 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 2 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 1.5 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 1 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 0.75 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 0.375 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size #4 - Percent Finer	% PASSED	100	99.7	100	100	100	100
Sieve Size #10 - Percent Finer	% PASSED	100	99.7	100	100	100	100
Sieve Size #20 - Percent Finer	% PASSED	99.6	98.7	99.8	99.9	99.9	99.6
Sieve Size #40 - Percent Finer	% PASSED	99.4	97.2	99.5	99.7	99.7	99.1
Sieve Size #60 - Percent Finer	% PASSED	98.9	93.7	99.1	99.3	99.5	98.1
Sieve Size #80 - Percent Finer	% PASSED	97.4	91.6	98.6	99	99.3	95.4
Sieve Size #100 - Percent Finer	% PASSED	95.4	89.7	98.1	98.8	99.2	91.6
Sieve Size #200 - Percent Finer	% PASSED	79.3	80	94.8	97.3	96.7	71.9
Hydrometer Reading 1 - Percent Finer	% PASSED	57.9	70.7	83.9	95.9	88.8	58.4
Hydrometer Reading 2 - Percent Finer	% PASSED	52.2	64.5	80.7	89.6	83.7	51.5
Hydrometer Reading 3 - Percent Finer	% PASSED	45.1	56.7	71.2	80.1	73.4	44.7
Hydrometer Reading 4 - Percent Finer	% PASSED	39.4	52.1	63.2	76.9	66.5	39.2
Hydrometer Reading 5 - Percent Finer	% PASSED	35.1	45.9	56.8	67.4	57.9	33.7
Hydrometer Reading 6 - Percent Finer	% PASSED	28	38.2	45.7	56.4	47.6	25.5
Hydrometer Reading 7 - Percent Finer	% PASSED	19.5	28.9	34.5	42.2	35.5	18.7
TOC							
TOC	mg/kg	28,100	23,300 J	22,800	23,300	23,100	24,100

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Table B-5
Sediment Sample Analytical Results - Physical Properties
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

	Location ID	LMR11-26	LMR11-27	LMR11-27	LMR11-27	LMR11-27	LMR11-27
	Field Sample ID	LMR11-26-117	LMR11-27-006	LMR11-27-024	LMR11-27-048	LMR11-27-072	LMR11-27-096
	Sample Date	8/10/2011	8/4/2011	8/11/2011	8/11/2011	8/11/2011	8/11/2011
	Depth Interval (in bss)	96- 117	0- 6	6- 24	24- 48	48- 72	72- 96
Chemical Name	**Unit**						
Grain Size							
Gravel	%	0	0.2	0.7	0	0	0
Sand	%	47.5	67.5	17.6	25.8	28	42.9
Silt	%	33.4	14.5	27.7	29.8	21.5	29.6
Clay	%	19.1	17.8	54	44.4	50.5	27.5
Coarse Sand	%	0	1.2	1.1	0.2	0	0.1
Medium Sand	%	0.9	6.9	2.4	1.5	2.2	0.8
Fine Sand	%	46.6	59.4	14.1	24.1	25.8	42
Sieve Size 3 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 2 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 1.5 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 1 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 0.75 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 0.375 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size #4 - Percent Finer	% PASSED	100	99.8	99.3	100	100	100
Sieve Size #10 - Percent Finer	% PASSED	100	98.6	98.2	99.8	100	99.9
Sieve Size #20 - Percent Finer	% PASSED	99.9	97	97.4	99.1	99.6	99.5
Sieve Size #40 - Percent Finer	% PASSED	99.1	91.7	95.8	98.3	97.8	99.1
Sieve Size #60 - Percent Finer	% PASSED	96.3	56.7	92.9	92.9	91.9	94
Sieve Size #80 - Percent Finer	% PASSED	89.9	35.4	84.8	84	79.3	82.6
Sieve Size #100 - Percent Finer	% PASSED	82.6	33.3	84.1	80.9	76.5	73.6
Sieve Size #200 - Percent Finer	% PASSED	52.5	32.3	81.7	74.2	72	57.1
Hydrometer Reading 1 - Percent Finer	% PASSED	35.4	26.5	75.4	64.9	71.2	42.1
Hydrometer Reading 2 - Percent Finer	% PASSED	31.1	24.6	70.8	60.8	66.4	39.5
Hydrometer Reading 3 - Percent Finer	% PASSED	25.6	22.2	64.6	55.3	61.6	35.5
Hydrometer Reading 4 - Percent Finer	% PASSED	22.3	19.7	58.6	48.5	56.8	32.9
Hydrometer Reading 5 - Percent Finer	% PASSED	19.1	17.8	54	44.4	50.5	27.5
Hydrometer Reading 6 - Percent Finer	% PASSED	13.6	15.8	41.8	34.8	40.8	22.1
Hydrometer Reading 7 - Percent Finer	% PASSED	9.4	11.6	31.2	25.3	29.6	15.4
TOC							
TOC	mg/kg	19,400	11,400	21,500	22,600	25,500	26,100

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Table B-5
Sediment Sample Analytical Results - Physical Properties
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

	Location ID	LMR11-27	LMR11-28	LMR11-28	LMR11-29	LMR11-30	LMR11-31
	Field Sample ID	LMR11-27-115	LMR11-28-006	LMR11-28-034	LMR11-29-006	LMR11-30-006	LMR11-31-006
	Sample Date	8/11/2011	8/10/2011	8/10/2011	8/4/2011	8/4/2011	8/4/2011
	Depth Interval (in bss)	96- 115	0- 6	6- 34	0- 6	0- 6	0- 6
Chemical Name	**Unit**						
Grain Size							
Gravel	%	0	0.2	3.2	0.2	0	1.1
Sand	%	37.6	16.3	89.1	40.3	27.3	11.8
Silt	%	36.4	45.2	4.8	29	27.4	39.7
Clay	%	26	38.3	2.8	30.5	45.3	47.4
Coarse Sand	%	0.2	0.9	6.3	0.3	0.3	0
Medium Sand	%	1.7	2.7	24.8	0.6	3.4	0.4
Fine Sand	%	35.7	12.7	58	39.4	23.6	11.4
Sieve Size 3 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 2 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 1.5 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 1 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 0.75 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 0.375 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size #4 - Percent Finer	% PASSED	100	99.8	96.8	99.8	100	98.9
Sieve Size #10 - Percent Finer	% PASSED	99.8	98.9	90.5	99.5	99.7	98.9
Sieve Size #20 - Percent Finer	% PASSED	99.1	97.7	78.2	99.4	98.9	98.8
Sieve Size #40 - Percent Finer	% PASSED	98.1	96.2	65.7	98.9	96.3	98.5
Sieve Size #60 - Percent Finer	% PASSED	97.3	93.9	36.4	96	84.6	97.2
Sieve Size #80 - Percent Finer	% PASSED	91.4	92.1	16	83.8	75.1	93.9
Sieve Size #100 - Percent Finer	% PASSED	86	90.9	10.8	73.9	74	92.2
Sieve Size #200 - Percent Finer	% PASSED	62.4	83.5	7.7	59.5	72.7	87.1
Hydrometer Reading 1 - Percent Finer	% PASSED	46.5	63.2	4	48.6	69.4	75.2
Hydrometer Reading 2 - Percent Finer	% PASSED	42	59.7	3.6	43.5	63.5	69
Hydrometer Reading 3 - Percent Finer	% PASSED	35.1	52.6	3.2	36.6	56.1	58.8
Hydrometer Reading 4 - Percent Finer	% PASSED	30.6	45.5	2.8	33.2	50.2	51.4
Hydrometer Reading 5 - Percent Finer	% PASSED	26	38.3	2.8	30.5	45.3	47.4
Hydrometer Reading 6 - Percent Finer	% PASSED	19	32.9	2.4	26.2	39.1	39.8
Hydrometer Reading 7 - Percent Finer	% PASSED	12.1	26	1.6	19.4	28.5	29.8
TOC							
TOC	mg/kg	28,400	20,000	4,270	19,700	22,200	27,900

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Table B-5
Sediment Sample Analytical Results - Physical Properties
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

	Location ID	LMR11-32	LMR11-32	LMR11-32	LMR11-32	LMR11-32	LMR11-32
	Field Sample ID	LMR11-32-006	LMR11-32-024	LMR11-32-048	LMR11-32-072	LMR11-32-096	LMR11-32-116
	Sample Date	8/10/2011	8/10/2011	8/10/2011	8/10/2011	8/10/2011	8/10/2011
	Depth Interval (in bss)	0- 6	6- 24	24- 48	48- 72	72- 96	96- 116
Chemical Name	**Unit**						
Grain Size							
Gravel	%	0	0	0	7.2	8.2	0
Sand	%	23	20.5	24.6	62.7	64.1	53.6
Silt	%	37.9	36.9	34.7	16.5	12.3	22
Clay	%	39.1	42.6	40.7	13.6	15.4	24.4
Coarse Sand	%	0	0.3	1.2	5.3	2.6	0.4
Medium Sand	%	1.9	2.1	4.2	14.4	10.3	1.8
Fine Sand	%	21.1	18.1	19.2	43	51.2	51.4
Sieve Size 3 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 2 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 1.5 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 1 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 0.75 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 0.375 inch - Percent Finer	% PASSED	100	100	100	100	96.3	100
Sieve Size #4 - Percent Finer	% PASSED	100	100	100	92.8	91.8	100
Sieve Size #10 - Percent Finer	% PASSED	100	99.7	98.8	87.5	89.2	99.6
Sieve Size #20 - Percent Finer	% PASSED	99.8	99	97.3	82.8	86.5	99.2
Sieve Size #40 - Percent Finer	% PASSED	98.1	97.6	94.6	73.1	78.9	97.8
Sieve Size #60 - Percent Finer	% PASSED	94.5	94.5	90.5	53.6	61.6	84.4
Sieve Size #80 - Percent Finer	% PASSED	91.4	92.1	87	42.9	49.3	67.8
Sieve Size #100 - Percent Finer	% PASSED	88.9	90.2	84.6	38.4	41.9	59.1
Sieve Size #200 - Percent Finer	% PASSED	77	79.5	75.4	30.1	27.7	46.4
Hydrometer Reading 1 - Percent Finer	% PASSED	62.8	67.4	66.2	21.7	23.4	35.3
Hydrometer Reading 2 - Percent Finer	% PASSED	57.6	59.8	58.9	19.7	21.4	32.9
Hydrometer Reading 3 - Percent Finer	% PASSED	48.3	52.1	51.6	17.7	18.4	29.3
Hydrometer Reading 4 - Percent Finer	% PASSED	43	46.4	46.1	14.6	16.4	26.8
Hydrometer Reading 5 - Percent Finer	% PASSED	39.1	42.6	40.7	13.6	15.4	24.4
Hydrometer Reading 6 - Percent Finer	% PASSED	32.6	35	35.2	11.5	12.4	19.4
Hydrometer Reading 7 - Percent Finer	% PASSED	26	29.2	26.1	8.5	9.4	15.8
TOC							
TOC	mg/kg	29,600	33,500	22,900	21,400	66,200	17,700

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Table B-5
Sediment Sample Analytical Results - Physical Properties
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

	Location ID	LMR11-33	LMR11-34	LMR11-35	LMR11-35	LMR11-35	LMR11-35
	Field Sample ID	LMR11-33-006	LMR11-34-006	LMR11-35-006	LMR11-35-024	LMR11-35-024FS	LMR11-35-048
	Sample Date	8/4/2011	8/4/2011	8/10/2011	8/10/2011	8/10/2011	8/10/2011
	Depth Interval (in bss)	0- 6	0- 6	0- 6	6- 24	6- 24	24- 48
Chemical Name	**Unit**						
Grain Size							
Gravel	%	0.4	1.5	0	0	0	0
Sand	%	64.8	47.1	9.4	1.5	1	3.4
Silt	%	12.6	21	35	29.6	27.3	32.2
Clay	%	22.2	30.4	55.6	68.9	71.7	64.4
Coarse Sand	%	0.6	2.8	0	0	0	0
Medium Sand	%	1.5	7.9	0.1	0	0	0.1
Fine Sand	%	62.7	36.4	9.3	1.5	1	3.3
Sieve Size 3 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 2 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 1.5 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 1 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 0.75 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 0.375 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size #4 - Percent Finer	% PASSED	99.6	98.5	100	100	100	100
Sieve Size #10 - Percent Finer	% PASSED	99	95.7	100	100	100	100
Sieve Size #20 - Percent Finer	% PASSED	98.7	92.3	100	100	100	99.9
Sieve Size #40 - Percent Finer	% PASSED	97.5	87.8	99.9	100	100	99.9
Sieve Size #60 - Percent Finer	% PASSED	86.1	75.4	99.7	100	100	99.8
Sieve Size #80 - Percent Finer	% PASSED	54.9	57.3	98.4	100	99.9	99.6
Sieve Size #100 - Percent Finer	% PASSED	43.3	54	97.3	99.9	99.9	99.3
Sieve Size #200 - Percent Finer	% PASSED	34.8	51.4	90.6	98.5	99	96.6
Hydrometer Reading 1 - Percent Finer	% PASSED	32.9	45.8	81.2	96.6	98.6	93.1
Hydrometer Reading 2 - Percent Finer	% PASSED	31.8	41.7	76.1	92.9	94.8	88.3
Hydrometer Reading 3 - Percent Finer	% PASSED	28.6	36.6	68.4	85.5	87.1	78.8
Hydrometer Reading 4 - Percent Finer	% PASSED	26.4	34.5	63.3	80	81.3	70.8
Hydrometer Reading 5 - Percent Finer	% PASSED	22.2	30.4	55.6	68.9	71.7	64.4
Hydrometer Reading 6 - Percent Finer	% PASSED	18.9	25.4	45.3	57.8	58.3	53.2
Hydrometer Reading 7 - Percent Finer	% PASSED	14.6	19.1	35.1	43.1	44.8	40.4
TOC							
TOC	mg/kg	19,700	18,300	36,000	27,700	27,000	27,500

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Table B-5
Sediment Sample Analytical Results - Physical Properties
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

	Location ID	LMR11-35	LMR11-35	LMR11-35	LMR11-36	LMR11-37	LMR11-37
	Field Sample ID	LMR11-35-072	LMR11-35-096	LMR11-35-116	LMR11-36-006	LMR11-37-006	LMR11-37-024
	Sample Date	8/10/2011	8/10/2011	8/10/2011	8/4/2011	8/10/2011	8/10/2011
	Depth Interval (in bss)	48- 72	72- 96	96- 116	0- 6	0- 6	6- 24
Chemical Name	**Unit**						
Grain Size							
Gravel	%	0	0	0	0	0	0
Sand	%	1.1	0.4	36.9	73.9	3.7	2
Silt	%	28.2	25.3	31.4	8.2	32.3	26
Clay	%	70.7	74.3	31.7	17.9	64	72
Coarse Sand	%	0	0	0	0.4	0	0
Medium Sand	%	0.2	0.1	1.5	4.9	0.3	0.1
Fine Sand	%	0.9	0.3	35.4	68.6	3.4	1.9
Sieve Size 3 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 2 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 1.5 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 1 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 0.75 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 0.375 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size #4 - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size #10 - Percent Finer	% PASSED	100	100	100	99.6	100	100
Sieve Size #20 - Percent Finer	% PASSED	99.9	99.9	99.7	98.8	99.8	100
Sieve Size #40 - Percent Finer	% PASSED	99.8	99.9	98.5	94.7	99.7	99.9
Sieve Size #60 - Percent Finer	% PASSED	99.8	99.9	93.2	69.5	99.5	99.7
Sieve Size #80 - Percent Finer	% PASSED	99.7	99.9	82.6	34.4	99.1	99.6
Sieve Size #100 - Percent Finer	% PASSED	99.7	99.9	77.5	28.1	98.8	99.6
Sieve Size #200 - Percent Finer	% PASSED	98.9	99.6	63.1	26.1	96.3	98
Hydrometer Reading 1 - Percent Finer	% PASSED	98.8	99.5	52.2	25.5	91	96.7
Hydrometer Reading 2 - Percent Finer	% PASSED	93.5	96.1	46.8	23.6	86.2	90.6
Hydrometer Reading 3 - Percent Finer	% PASSED	84.7	87.7	41.4	21.7	78.3	84.5
Hydrometer Reading 4 - Percent Finer	% PASSED	79.5	79.4	36	19.8	73.5	79.6
Hydrometer Reading 5 - Percent Finer	% PASSED	70.7	74.3	31.7	17.9	64	72
Hydrometer Reading 6 - Percent Finer	% PASSED	58.4	62.6	25.2	15	52.9	60
Hydrometer Reading 7 - Percent Finer	% PASSED	44.4	47.5	19.8	12.1	40.2	44.8
TOC							
TOC	mg/kg	22,100	25,400	26,700	20,100	22,400	22,700

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Table B-5
Sediment Sample Analytical Results - Physical Properties
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

	Location ID	LMR11-37	LMR11-37	LMR11-37	LMR11-38	LMR11-38	LMR11-38
	Field Sample ID	LMR11-37-048	LMR11-37-048-DP	LMR11-37-072	LMR11-38-006	LMR11-38-024	LMR11-38-024-DP
	Sample Date	8/10/2011	8/10/2011	8/10/2011	8/9/2011	8/9/2011	8/9/2011
	Depth Interval (in bss)	24- 48	24- 48	48- 72	0- 6	6- 24	6- 24
Chemical Name	**Unit**						
Grain Size							
Gravel	%	0	NA	1.7	0	0	NA
Sand	%	1.6	NA	15.9	13.5	25.4	NA
Silt	%	29.7	NA	24.1	35	23	NA
Clay	%	68.7	NA	58.3	51.5	51.6	NA
Coarse Sand	%	0	NA	0.7	0	0	NA
Medium Sand	%	0.1	NA	4	0.5	0.5	NA
Fine Sand	%	1.5	NA	11.2	13	24.9	NA
Sieve Size 3 inch - Percent Finer	% PASSED	100	NA	100	100	100	NA
Sieve Size 2 inch - Percent Finer	% PASSED	100	NA	100	100	100	NA
Sieve Size 1.5 inch - Percent Finer	% PASSED	100	NA	100	100	100	NA
Sieve Size 1 inch - Percent Finer	% PASSED	100	NA	100	100	100	NA
Sieve Size 0.75 inch - Percent Finer	% PASSED	100	NA	100	100	100	NA
Sieve Size 0.375 inch - Percent Finer	% PASSED	100	NA	100	100	100	NA
Sieve Size #4 - Percent Finer	% PASSED	100	NA	98.3	100	100	NA
Sieve Size #10 - Percent Finer	% PASSED	100	NA	97.6	100	100	NA
Sieve Size #20 - Percent Finer	% PASSED	100	NA	96.6	99.7	99.7	NA
Sieve Size #40 - Percent Finer	% PASSED	99.9	NA	93.6	99.5	99.5	NA
Sieve Size #60 - Percent Finer	% PASSED	99.6	NA	88.6	99	99.2	NA
Sieve Size #80 - Percent Finer	% PASSED	99.4	NA	86.4	97.1	97.1	NA
Sieve Size #100 - Percent Finer	% PASSED	99.4	NA	85.4	94.9	90.1	NA
Sieve Size #200 - Percent Finer	% PASSED	98.4	NA	82.4	86.5	74.6	NA
Hydrometer Reading 1 - Percent Finer	% PASSED	96.4	NA	81.4	77.9	73.1	NA
Hydrometer Reading 2 - Percent Finer	% PASSED	92.5	NA	75.3	73.3	68.2	NA
Hydrometer Reading 3 - Percent Finer	% PASSED	84.7	NA	69.2	63.9	63.2	NA
Hydrometer Reading 4 - Percent Finer	% PASSED	76.5	NA	62.8	56.2	54.9	NA
Hydrometer Reading 5 - Percent Finer	% PASSED	68.7	NA	58.3	51.5	51.6	NA
Hydrometer Reading 6 - Percent Finer	% PASSED	57.3	NA	47.6	41.9	41.4	NA
Hydrometer Reading 7 - Percent Finer	% PASSED	45.6	NA	37.1	32.9	31.7	NA
TOC							
TOC	mg/kg	24,500	22,200	19,600	37,700	21,000	24,700

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Table B-5
Sediment Sample Analytical Results - Physical Properties
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

	Location ID	LMR11-38	LMR11-38	LMR11-38	LMR11-38	LMR11-38	LMR11-39
	Field Sample ID	LMR11-38-024FS	LMR11-38-048	LMR11-38-048-DP	LMR11-38-072	LMR11-38-072-DP	LMR11-39-006
	Sample Date	8/9/2011	8/9/2011	8/9/2011	8/9/2011	8/9/2011	8/4/2011
	Depth Interval (in bss)	6- 24	24- 48	24- 48	48- 72	48- 72	0- 6
Chemical Name	**Unit**						
Grain Size							
Gravel	%	0	0	NA	0	NA	0.7
Sand	%	43.6	8.9	NA	2.9	NA	78.6
Silt	%	21.5	35.4	NA	36.2	NA	5.2
Clay	%	34.9	55.7	NA	60.9	NA	15.5
Coarse Sand	%	0	0	NA	0	NA	1.3
Medium Sand	%	0.7	0.2	NA	0	NA	8.7
Fine Sand	%	42.9	8.7	NA	2.9	NA	68.6
Sieve Size 3 inch - Percent Finer	% PASSED	100	100	NA	100	NA	100
Sieve Size 2 inch - Percent Finer	% PASSED	100	100	NA	100	NA	100
Sieve Size 1.5 inch - Percent Finer	% PASSED	100	100	NA	100	NA	100
Sieve Size 1 inch - Percent Finer	% PASSED	100	100	NA	100	NA	100
Sieve Size 0.75 inch - Percent Finer	% PASSED	100	100	NA	100	NA	100
Sieve Size 0.375 inch - Percent Finer	% PASSED	100	100	NA	100	NA	100
Sieve Size #4 - Percent Finer	% PASSED	100	100	NA	100	NA	99.3
Sieve Size #10 - Percent Finer	% PASSED	100	100	NA	100	NA	98
Sieve Size #20 - Percent Finer	% PASSED	99.6	99.9	NA	100	NA	96.2
Sieve Size #40 - Percent Finer	% PASSED	99.3	99.8	NA	100	NA	89.3
Sieve Size #60 - Percent Finer	% PASSED	98.6	99.8	NA	100	NA	58.3
Sieve Size #80 - Percent Finer	% PASSED	94.3	99.5	NA	99.7	NA	28.7
Sieve Size #100 - Percent Finer	% PASSED	83.6	98.4	NA	99.2	NA	22.8
Sieve Size #200 - Percent Finer	% PASSED	56.4	91.1	NA	97.1	NA	20.7
Hydrometer Reading 1 - Percent Finer	% PASSED	51.3	79.3	NA	86.8	NA	22.1
Hydrometer Reading 2 - Percent Finer	% PASSED	49	75.8	NA	82	NA	20.4
Hydrometer Reading 3 - Percent Finer	% PASSED	44.4	68.6	NA	74	NA	18.8
Hydrometer Reading 4 - Percent Finer	% PASSED	38.5	61.4	NA	69.2	NA	17.1
Hydrometer Reading 5 - Percent Finer	% PASSED	34.9	55.7	NA	60.9	NA	15.5
Hydrometer Reading 6 - Percent Finer	% PASSED	29.1	44.9	NA	49.7	NA	13
Hydrometer Reading 7 - Percent Finer	% PASSED	22.3	38	NA	40.3	NA	10.4
TOC							
TOC	mg/kg	18,500	25,700	35,500	26,900	27,000	13,500

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Table B-5
Sediment Sample Analytical Results - Physical Properties
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

	Location ID	LMR11-40	LMR11-40	LMR11-40	LMR11-40	LMR11-41	LMR11-42
	Field Sample ID	LMR11-40-006	LMR11-40-024	LMR11-40-048	LMR11-40-084	LMR11-41-006	LMR11-42-006
	Sample Date	8/10/2011	8/10/2011	8/10/2011	8/10/2011	8/4/2011	8/9/2011
	Depth Interval (in bss)	0- 6	6- 24	24- 48	48- 84	0- 6	0- 6
Chemical Name	**Unit**						
Grain Size							
Gravel	%	2	0.2	0	0.5	3.6	28
Sand	%	66.1	59.9	32.6	66.6	51.1	22.3
Silt	%	16.5	24.8	44.7	22.5	20.5	28.3
Clay	%	15.4	15.1	22.7	10.4	24.8	21.4
Coarse Sand	%	1.7	0.5	0.1	2.1	1.5	1.3
Medium Sand	%	3.4	4.8	1.7	13.8	2.2	2.2
Fine Sand	%	61	54.6	30.8	50.7	47.4	18.8
Sieve Size 3 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 2 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 1.5 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 1 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 0.75 inch - Percent Finer	% PASSED	100	100	100	100	100	75.4
Sieve Size 0.375 inch - Percent Finer	% PASSED	100	100	100	100	97	74.8
Sieve Size #4 - Percent Finer	% PASSED	98	99.8	100	99.5	96.4	72
Sieve Size #10 - Percent Finer	% PASSED	96.3	99.3	99.9	97.4	94.9	70.7
Sieve Size #20 - Percent Finer	% PASSED	95.2	97.8	99.4	93.7	94.3	70
Sieve Size #40 - Percent Finer	% PASSED	92.9	94.5	98.2	83.6	92.7	68.5
Sieve Size #60 - Percent Finer	% PASSED	84.9	83.9	94.6	60.4	86.2	64.1
Sieve Size #80 - Percent Finer	% PASSED	61.1	72.5	87.8	48.3	67.9	59.3
Sieve Size #100 - Percent Finer	% PASSED	48.3	62	83.3	44.2	57.7	56.6
Sieve Size #200 - Percent Finer	% PASSED	31.9	39.9	67.4	32.9	45.3	49.7
Hydrometer Reading 1 - Percent Finer	% PASSED	24.8	28.8	46.4	21.6	36.4	34
Hydrometer Reading 2 - Percent Finer	% PASSED	22	24.6	40.5	17.5	33.5	30.8
Hydrometer Reading 3 - Percent Finer	% PASSED	20.1	20.3	31.6	15.5	30.6	26.9
Hydrometer Reading 4 - Percent Finer	% PASSED	16.3	17.2	25.7	12.4	26.8	23.7
Hydrometer Reading 5 - Percent Finer	% PASSED	15.4	15.1	22.7	10.4	24.8	21.4
Hydrometer Reading 6 - Percent Finer	% PASSED	12.4	11.8	18	9.4	20	16.7
Hydrometer Reading 7 - Percent Finer	% PASSED	9.6	9.8	13.8	6.3	15.1	13.5
TOC							
TOC	mg/kg	12,100	5,150	14,100	21,800	25,500	47,600

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Table B-5
Sediment Sample Analytical Results - Physical Properties
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

	Location ID	LMR11-42	LMR11-42	LMR11-42	LMR11-42	LMR11-42	LMR11-42
	Field Sample ID	LMR11-42-024	LMR11-42-048	LMR11-42-048FS	LMR11-42-072	LMR11-42-096	LMR11-42-129
	Sample Date	8/9/2011	8/9/2011	8/9/2011	8/9/2011	8/9/2011	8/9/2011
	Depth Interval (in bss)	6- 24	24- 48	24- 48	48- 72	72- 96	96- 129
Chemical Name	**Unit**						
Grain Size							
Gravel	%	3.8	1	13.7	32.5	0.3	1.2
Sand	%	48	25.9	27.5	46.7	65.2	63.8
Silt	%	24.1	32.7	23.5	8.1	19.7	18.5
Clay	%	24.1	40.4	35.3	12.7	14.8	16.5
Coarse Sand	%	2.1	1.3	1.5	4.6	1	5.1
Medium Sand	%	6.2	5.8	6.2	14.2	6.3	27.7
Fine Sand	%	39.7	18.8	19.8	27.9	57.9	31
Sieve Size 3 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 2 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 1.5 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 1 inch - Percent Finer	% PASSED	100	100	100	81.2	100	100
Sieve Size 0.75 inch - Percent Finer	% PASSED	100	100	100	81.2	100	100
Sieve Size 0.375 inch - Percent Finer	% PASSED	98.8	100	94.5	72.5	100	100
Sieve Size #4 - Percent Finer	% PASSED	96.2	99	86.3	67.5	99.7	98.8
Sieve Size #10 - Percent Finer	% PASSED	94.1	97.7	84.8	62.9	98.7	93.7
Sieve Size #20 - Percent Finer	% PASSED	92.5	95.6	82.7	57	96.9	82.7
Sieve Size #40 - Percent Finer	% PASSED	87.9	91.9	78.6	48.7	92.4	66
Sieve Size #60 - Percent Finer	% PASSED	81.3	87.8	74	41.4	83.8	54.8
Sieve Size #80 - Percent Finer	% PASSED	65.5	80.9	66.8	30.6	63.5	45.6
Sieve Size #100 - Percent Finer	% PASSED	59.9	78.8	64.6	27.3	55.2	43
Sieve Size #200 - Percent Finer	% PASSED	48.2	73.1	58.8	20.8	34.5	35
Hydrometer Reading 1 - Percent Finer	% PASSED	39.1	65.7	58.8	20.4	24.6	28.3
Hydrometer Reading 2 - Percent Finer	% PASSED	35.6	60.9	54.7	18.4	22.8	24.8
Hydrometer Reading 3 - Percent Finer	% PASSED	31.2	51.3	46.6	16.5	19.3	24.1
Hydrometer Reading 4 - Percent Finer	% PASSED	27.7	46.5	41.5	15.1	17.5	19.3
Hydrometer Reading 5 - Percent Finer	% PASSED	24.1	40.4	35.3	12.7	14.8	16.5
Hydrometer Reading 6 - Percent Finer	% PASSED	19.1	32	27.2	9.8	12.1	13
Hydrometer Reading 7 - Percent Finer	% PASSED	14.8	22.4	19	7.9	9.4	10.2
TOC							
TOC	mg/kg	14,700	37,400	29,900	16,800	38,600	11,700

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Table B-5
Sediment Sample Analytical Results - Physical Properties
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

	Location ID	LMR11-43	LMR11-44	LMR11-44	LMR11-44	LMR11-44	LMR11-44
	Field Sample ID	LMR11-43-030	LMR11-44-006	LMR11-44-024	LMR11-44-024FS	LMR11-44-048	LMR11-44-072
	Sample Date	8/9/2011	8/9/2011	8/9/2011	8/9/2011	8/9/2011	8/9/2011
	Depth Interval (in bss)	24- 30	0- 6	6- 24	6- 24	24- 48	48- 72
Chemical Name	**Unit**						
Grain Size							
Gravel	%	37.7	1.3	0	0	0.4	6.3
Sand	%	52.5	14.2	4.9	5	31.8	66.1
Silt	%	7.1	31.7	34.9	35	16.1	10.2
Clay	%	2.7	52.8	60.2	60	51.7	17.4
Coarse Sand	%	7.4	1	0	0	1.1	5.1
Medium Sand	%	16.5	2.8	0.6	0.6	7.4	21.2
Fine Sand	%	28.6	10.4	4.3	4.4	23.3	39.8
Sieve Size 3 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 2 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 1.5 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 1 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 0.75 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 0.375 inch - Percent Finer	% PASSED	76.6	100	100	100	100	96.9
Sieve Size #4 - Percent Finer	% PASSED	62.3	98.7	100	100	99.6	93.7
Sieve Size #10 - Percent Finer	% PASSED	54.9	97.7	100	100	98.5	88.6
Sieve Size #20 - Percent Finer	% PASSED	48.4	96.7	99.7	99.6	96.3	82.3
Sieve Size #40 - Percent Finer	% PASSED	38.4	94.9	99.4	99.4	91.1	67.4
Sieve Size #60 - Percent Finer	% PASSED	30	93	99.3	99.2	84.1	48.4
Sieve Size #80 - Percent Finer	% PASSED	19.9	88.3	98.5	98.4	74	34.5
Sieve Size #100 - Percent Finer	% PASSED	16.6	87.1	98.2	98.1	71.1	30.8
Sieve Size #200 - Percent Finer	% PASSED	9.8	84.5	95.1	95	67.8	27.6
Hydrometer Reading 1 - Percent Finer	% PASSED	4.4	76	87.1	86.2	67.8	25.5
Hydrometer Reading 2 - Percent Finer	% PASSED	4.4	72.4	81.4	82.9	65.1	23.7
Hydrometer Reading 3 - Percent Finer	% PASSED	3.8	65.3	72.9	73.1	61.1	21.5
Hydrometer Reading 4 - Percent Finer	% PASSED	3.2	58.1	67.3	66.5	57.1	19.2
Hydrometer Reading 5 - Percent Finer	% PASSED	2.7	52.8	60.2	60	51.7	17.4
Hydrometer Reading 6 - Percent Finer	% PASSED	2.1	42.1	48.9	48.5	42.3	13.8
Hydrometer Reading 7 - Percent Finer	% PASSED	2.1	33	37.6	38.6	33	10.2
TOC							
TOC	mg/kg	24,800	24,000	35,400	27,600	27,100	26,200

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Table B-5
Sediment Sample Analytical Results - Physical Properties
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

	Location ID	LMR11-44	LMR11-45	LMR11-45	LMR11-45	LMR11-45	LMR11-45
	Field Sample ID	LMR11-44-096	LMR11-45-006	LMR11-45-024	LMR11-45-048	LMR11-45-048FS	LMR11-45-072
	Sample Date	8/9/2011	8/8/2011	8/8/2011	8/8/2011	8/8/2011	8/8/2011
	Depth Interval (in bss)	72- 96	0- 6	6- 24	24- 48	24- 48	48- 72
Chemical Name	**Unit**						
Grain Size							
Gravel	%	0	0	6.8	0	0	0
Sand	%	28.7	8.3	2	0.4	0.4	1
Silt	%	34.4	35.9	32.7	30.9	34.3	30.6
Clay	%	36.9	55.8	58.5	68.7	65.3	68.4
Coarse Sand	%	0.8	0	0.1	0	0	0
Medium Sand	%	3.4	0.9	0.2	0.1	0	0
Fine Sand	%	24.5	7.4	1.7	0.3	0.4	1
Sieve Size 3 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 2 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 1.5 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 1 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 0.75 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 0.375 inch - Percent Finer	% PASSED	100	100	93.2	100	100	100
Sieve Size #4 - Percent Finer	% PASSED	100	100	93.2	100	100	100
Sieve Size #10 - Percent Finer	% PASSED	99.2	100	93.1	100	100	100
Sieve Size #20 - Percent Finer	% PASSED	98.3	99.6	93	100	100	100
Sieve Size #40 - Percent Finer	% PASSED	95.8	99.1	92.9	99.9	100	100
Sieve Size #60 - Percent Finer	% PASSED	92.5	98.5	92.7	99.8	100	99.9
Sieve Size #80 - Percent Finer	% PASSED	82.3	97.5	92.6	99.8	100	99.9
Sieve Size #100 - Percent Finer	% PASSED	79	96.4	92.4	99.8	99.9	99.9
Sieve Size #200 - Percent Finer	% PASSED	71.3	91.7	91.2	99.6	99.6	99
Hydrometer Reading 1 - Percent Finer	% PASSED	56.4	81.7	79.9	92.2	84.6	91.7
Hydrometer Reading 2 - Percent Finer	% PASSED	51.5	78	76	88.2	82.1	89.9
Hydrometer Reading 3 - Percent Finer	% PASSED	48.3	68.8	68.2	80.4	74.9	82.8
Hydrometer Reading 4 - Percent Finer	% PASSED	41.8	61.4	62.4	74.6	70.1	73.8
Hydrometer Reading 5 - Percent Finer	% PASSED	36.9	55.8	58.5	68.7	65.3	68.4
Hydrometer Reading 6 - Percent Finer	% PASSED	28.7	46.3	48.5	58.6	55.7	57.7
Hydrometer Reading 7 - Percent Finer	% PASSED	22.2	35.2	36.9	45.3	41.3	45.1
TOC							
TOC	mg/kg	19,500	26,900	23,500	33,800	26,500	33,100

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Table B-5
Sediment Sample Analytical Results - Physical Properties
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

	Location ID	LMR11-45	LMR11-46	LMR11-46	LMR11-46	LMR11-46	LMR11-46
	Field Sample ID	LMR11-45-096	LMR11-46-006	LMR11-46-024	LMR11-46-024FS	LMR11-46-048	LMR11-46-072
	Sample Date	8/8/2011	8/8/2011	8/8/2011	8/8/2011	8/8/2011	8/8/2011
	Depth Interval (in bss)	72- 96	0- 6	6- 24	6- 24	24- 48	48- 72
Chemical Name	**Unit**						
Grain Size							
Gravel	%	0	1.5	0	0	0	0
Sand	%	1.8	16.6	11.7	14.1	40.5	91.8
Silt	%	28.7	31.4	36.5	34.2	32.5	5.3
Clay	%	69.5	50.5	51.8	51.7	27	2.8
Coarse Sand	%	0	0.7	0.3	0.5	0.1	0.4
Medium Sand	%	0.4	2	1.2	1.5	1.5	6.4
Fine Sand	%	1.4	13.9	10.2	12.1	38.9	85
Sieve Size 3 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 2 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 1.5 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 1 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 0.75 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 0.375 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size #4 - Percent Finer	% PASSED	100	98.5	100	100	100	100
Sieve Size #10 - Percent Finer	% PASSED	100	97.8	99.7	99.5	99.9	99.6
Sieve Size #20 - Percent Finer	% PASSED	99.9	97.2	99.3	99	99.7	98.9
Sieve Size #40 - Percent Finer	% PASSED	99.6	95.8	98.5	98	98.4	93.2
Sieve Size #60 - Percent Finer	% PASSED	99.1	93	97	96.1	92.1	71
Sieve Size #80 - Percent Finer	% PASSED	98.9	88.1	94.2	92.4	83.6	47.9
Sieve Size #100 - Percent Finer	% PASSED	98.8	85.9	92.7	90.7	76.7	33.9
Sieve Size #200 - Percent Finer	% PASSED	98.2	81.9	88.3	85.9	59.5	8.2
Hydrometer Reading 1 - Percent Finer	% PASSED	91.8	77.1	79.1	78.3	43.6	4.8
Hydrometer Reading 2 - Percent Finer	% PASSED	89.8	72.2	72.7	72.2	39.9	4
Hydrometer Reading 3 - Percent Finer	% PASSED	83.7	63.9	64.6	63.9	35.3	3.6
Hydrometer Reading 4 - Percent Finer	% PASSED	77.6	58.9	59.8	56.5	31.6	3.3
Hydrometer Reading 5 - Percent Finer	% PASSED	69.5	50.5	51.8	51.7	27	2.9
Hydrometer Reading 6 - Percent Finer	% PASSED	59.3	42.4	42.1	41.7	21.4	2.5
Hydrometer Reading 7 - Percent Finer	% PASSED	47.1	30.8	32.5	30.7	16.8	2.1
TOC							
TOC	mg/kg	34,300	43,300	19,700	24,900	28,300	20,300

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Table B-5
Sediment Sample Analytical Results - Physical Properties
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

	Location ID	LMR11-46	LMR11-47	LMR11-47	LMR11-47	LMR11-47	LMR11-47
	Field Sample ID	LMR11-46-093	LMR11-47-006	LMR11-47-024	LMR11-47-048	LMR11-47-072	LMR11-47-096
	Sample Date	8/8/2011	8/8/2011	8/8/2011	8/8/2011	8/8/2011	8/8/2011
	Depth Interval (in bss)	72- 93	0- 6	6- 24	24- 48	48- 72	72- 96
Chemical Name	**Unit**						
Grain Size							
Gravel	%	3.5	0.9	1.6	1.2	0	0
Sand	%	39.8	14.1	6.2	35.2	18.8	3.4
Silt	%	29.1	33.2	33.2	24	32.7	32.3
Clay	%	27.6	51.8	59	39.6	48.5	64.3
Coarse Sand	%	0.7	0	0.4	0.9	0	0
Medium Sand	%	1.7	0.9	0.4	12.3	2.5	0.5
Fine Sand	%	37.4	13.2	5.4	22	16.3	2.9
Sieve Size 3 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 2 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 1.5 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 1 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 0.75 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 0.375 inch - Percent Finer	% PASSED	100	100	98.4	100	100	100
Sieve Size #4 - Percent Finer	% PASSED	96.5	99.1	98.4	98.8	100	100
Sieve Size #10 - Percent Finer	% PASSED	95.8	99.1	98	97.9	100	100
Sieve Size #20 - Percent Finer	% PASSED	95.4	98.7	97.9	96.4	99.4	99.9
Sieve Size #40 - Percent Finer	% PASSED	94.1	98.2	97.6	85.6	97.5	99.5
Sieve Size #60 - Percent Finer	% PASSED	89.6	96.3	96.8	71	93.6	99.1
Sieve Size #80 - Percent Finer	% PASSED	82.2	93.1	95.7	68.5	89.4	98.9
Sieve Size #100 - Percent Finer	% PASSED	75.1	91.1	95	67.2	87.3	98.5
Sieve Size #200 - Percent Finer	% PASSED	56.7	85	92.2	63.6	81.2	96.6
Hydrometer Reading 1 - Percent Finer	% PASSED	47.4	77.9	85.6	60.6	75.7	94.2
Hydrometer Reading 2 - Percent Finer	% PASSED	42.5	70.4	80.6	54.6	68.9	88.9
Hydrometer Reading 3 - Percent Finer	% PASSED	36.3	63	70.7	48.6	62.1	80.1
Hydrometer Reading 4 - Percent Finer	% PASSED	31.3	58	64	44.6	53.6	73.1
Hydrometer Reading 5 - Percent Finer	% PASSED	27.6	51.8	59	39.6	48.5	64.3
Hydrometer Reading 6 - Percent Finer	% PASSED	22.6	41.8	49.1	32.6	38.3	53.7
Hydrometer Reading 7 - Percent Finer	% PASSED	16.4	33.1	37.5	24.6	29.9	41.4
TOC							
TOC	mg/kg	29,600	26,000	22,600	17,300	28,000	29,300

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Table B-5
Sediment Sample Analytical Results - Physical Properties
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

	Location ID	LMR11-47	LMR11-47	LMR11-48	LMR11-48	LMR11-48	LMR11-48
	Field Sample ID	LMR11-47-120	LMR11-47-144	LMR11-48-006	LMR11-48-024	LMR11-48-024FS	LMR11-48-048
	Sample Date	8/8/2011	8/8/2011	8/8/2011	8/8/2011	8/8/2011	8/8/2011
	Depth Interval (in bss)	96- 120	120- 144	0- 6	6- 24	6- 24	24- 48
Chemical Name	**Unit**						
Grain Size							
Gravel	%	0	0	0	0.7	0	0
Sand	%	25.8	7.5	2.8	5.6	7.6	4.8
Silt	%	31.8	48.7	40	36	38.1	33.5
Clay	%	42.4	43.8	57.2	57.7	54.3	61.7
Coarse Sand	%	0.2	0	0.1	0.1	0	0
Medium Sand	%	1.6	0.4	0.6	0.6	0.9	0.4
Fine Sand	%	24	7.1	2.1	4.9	6.7	4.4
Sieve Size 3 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 2 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 1.5 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 1 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 0.75 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 0.375 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size #4 - Percent Finer	% PASSED	100	100	100	99.3	100	100
Sieve Size #10 - Percent Finer	% PASSED	99.8	100	99.9	99.2	100	100
Sieve Size #20 - Percent Finer	% PASSED	99.4	99.9	99.5	98.9	99.7	99.8
Sieve Size #40 - Percent Finer	% PASSED	98.2	99.6	99.3	98.6	99.1	99.6
Sieve Size #60 - Percent Finer	% PASSED	95.8	99.2	99.2	98.2	98.6	99.6
Sieve Size #80 - Percent Finer	% PASSED	86.7	98.2	98.5	96.6	96	98.9
Sieve Size #100 - Percent Finer	% PASSED	78.9	97.2	98.1	96	94.9	98.3
Sieve Size #200 - Percent Finer	% PASSED	74.2	92.5	97.2	93.7	92.4	95.2
Hydrometer Reading 1 - Percent Finer	% PASSED	66	76.7	88.5	84.9	79.8	89.1
Hydrometer Reading 2 - Percent Finer	% PASSED	60.4	69.8	79.6	81.1	75.6	81.2
Hydrometer Reading 3 - Percent Finer	% PASSED	53.5	59.5	70.6	73.3	65	73.4
Hydrometer Reading 4 - Percent Finer	% PASSED	48	52.6	66.2	65.5	58.6	65.6
Hydrometer Reading 5 - Percent Finer	% PASSED	42.4	43.8	57.2	57.7	54.3	61.7
Hydrometer Reading 6 - Percent Finer	% PASSED	34.1	35.4	48.3	49.9	45.9	50
Hydrometer Reading 7 - Percent Finer	% PASSED	25.8	25.1	39.3	38.2	37.4	38.3
TOC							
TOC	mg/kg	31,000	37,800	30,000	39,400	26,600	26,400

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Table B-5
Sediment Sample Analytical Results - Physical Properties
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

	Location ID	LMR11-48	LMR11-49	LMR11-49	LMR11-49	LMR11-49	LMR11-49
	Field Sample ID	LMR11-48-061	LMR11-49-006	LMR11-49-024	LMR11-49-048	LMR11-49-072	LMR11-49-096
	Sample Date	8/8/2011	8/8/2011	8/8/2011	8/8/2011	8/8/2011	8/8/2011
	Depth Interval (in bss)	48- 61	0- 6	6- 24	24- 48	48- 72	72- 96
Chemical Name	**Unit**						
Grain Size							
Gravel	%	0	0	0	0	0	0.4
Sand	%	4.8	8.4	5.1	6.3	30.7	70
Silt	%	30.8	31.4	31.9	39.3	42.7	20.1
Clay	%	64.4	60.2	63	54.4	26.6	9.5
Coarse Sand	%	0	0.6	0.6	0	0.1	1.6
Medium Sand	%	1.5	0.4	0.3	0.1	0.4	2.5
Fine Sand	%	3.3	7.4	4.2	6.2	30.2	65.9
Sieve Size 3 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 2 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 1.5 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 1 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 0.75 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 0.375 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size #4 - Percent Finer	% PASSED	100	100	100	100	100	99.6
Sieve Size #10 - Percent Finer	% PASSED	100	99.4	99.4	100	99.9	98
Sieve Size #20 - Percent Finer	% PASSED	99.4	99.4	99.4	100	99.8	97.7
Sieve Size #40 - Percent Finer	% PASSED	98.5	99	99.1	99.9	99.5	95.5
Sieve Size #60 - Percent Finer	% PASSED	98	97.6	97.9	99.6	97.6	85.7
Sieve Size #80 - Percent Finer	% PASSED	97.2	95.2	96.4	99.2	93.3	71.9
Sieve Size #100 - Percent Finer	% PASSED	96.9	93.8	95.9	98.9	88.7	58.1
Sieve Size #200 - Percent Finer	% PASSED	95.2	91.6	94.9	93.7	69.3	29.6
Hydrometer Reading 1 - Percent Finer	% PASSED	90.5	83.1	89.3	83.8	49.3	16.4
Hydrometer Reading 2 - Percent Finer	% PASSED	86.1	79.3	85.5	76.4	42.8	14.8
Hydrometer Reading 3 - Percent Finer	% PASSED	77.4	71.7	78	67.2	36.3	12.6
Hydrometer Reading 4 - Percent Finer	% PASSED	73.1	64.1	68.6	59.9	30.9	10.3
Hydrometer Reading 5 - Percent Finer	% PASSED	64.4	60.2	63	54.4	26.6	9.5
Hydrometer Reading 6 - Percent Finer	% PASSED	55.7	48.6	51.6	43.2	21.1	8
Hydrometer Reading 7 - Percent Finer	% PASSED	42.6	37.4	40.5	32.3	15.8	5.7
TOC							
TOC	mg/kg	30,300	23,800	21,000	26,500	29,600	19,600

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Table B-5
Sediment Sample Analytical Results - Physical Properties
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

	Location ID	LMR11-49	LMR11-50	LMR11-50	LMR11-50	LMR11-50	LMR11-50
	Field Sample ID	LMR11-49-115	LMR11-50-006	LMR11-50-006-DP	LMR11-50-024	LMR11-50-024-DP	LMR11-50-048
	Sample Date	8/8/2011	8/8/2011	8/8/2011	8/8/2011	8/8/2011	8/8/2011
	Depth Interval (in bss)	96- 115	0- 6	0- 6	6- 24	6- 24	24- 48
Chemical Name	**Unit**						
Grain Size							
Gravel	%	2.6	4.3	NA	0.4	NA	5.6
Sand	%	51.4	17.5	NA	22.4	NA	57.2
Silt	%	24	31	NA	27.6	NA	12.6
Clay	%	22	47.2	NA	49.6	NA	24.6
Coarse Sand	%	1.7	1.7	NA	0.8	NA	3.5
Medium Sand	%	3.2	3.5	NA	4	NA	10.9
Fine Sand	%	46.5	12.3	NA	17.6	NA	42.8
Sieve Size 3 inch - Percent Finer	% PASSED	100	100	NA	100	NA	100
Sieve Size 2 inch - Percent Finer	% PASSED	100	100	NA	100	NA	100
Sieve Size 1.5 inch - Percent Finer	% PASSED	100	100	NA	100	NA	100
Sieve Size 1 inch - Percent Finer	% PASSED	100	100	NA	100	NA	100
Sieve Size 0.75 inch - Percent Finer	% PASSED	100	100	NA	100	NA	100
Sieve Size 0.375 inch - Percent Finer	% PASSED	100	100	NA	100	NA	96.3
Sieve Size #4 - Percent Finer	% PASSED	97.4	95.7	NA	99.6	NA	94.4
Sieve Size #10 - Percent Finer	% PASSED	95.7	94	NA	98.8	NA	90.9
Sieve Size #20 - Percent Finer	% PASSED	95.2	92.5	NA	97.3	NA	87.1
Sieve Size #40 - Percent Finer	% PASSED	92.5	90.5	NA	94.8	NA	80
Sieve Size #60 - Percent Finer	% PASSED	81.8	87.6	NA	90.1	NA	65
Sieve Size #80 - Percent Finer	% PASSED	70.5	85.4	NA	86.5	NA	54.3
Sieve Size #100 - Percent Finer	% PASSED	62.7	84	NA	84.3	NA	48.6
Sieve Size #200 - Percent Finer	% PASSED	46	78.2	NA	77.2	NA	37.2
Hydrometer Reading 1 - Percent Finer	% PASSED	34.5	71.5	NA	72.8	NA	32.5
Hydrometer Reading 2 - Percent Finer	% PASSED	32.3	67.4	NA	67	NA	30.5
Hydrometer Reading 3 - Percent Finer	% PASSED	27.8	59.3	NA	59.8	NA	28.6
Hydrometer Reading 4 - Percent Finer	% PASSED	24.4	53.3	NA	54	NA	26.6
Hydrometer Reading 5 - Percent Finer	% PASSED	22	47.2	NA	49.6	NA	24.6
Hydrometer Reading 6 - Percent Finer	% PASSED	17.5	38.8	NA	42.4	NA	19.7
Hydrometer Reading 7 - Percent Finer	% PASSED	13.1	30.7	NA	33.6	NA	15.8
TOC							
TOC	mg/kg	26,900 J	34,800	37,400	33,700	28,700	25,700

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Table B-5
Sediment Sample Analytical Results - Physical Properties
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

	Location ID	LMR11-50	LMR11-50	LMR11-50	LMR11-50	LMR11-50	LMR11-50
	Field Sample ID	LMR11-50-048-DP	LMR11-50-072	LMR11-50-096	LMR11-50-120	LMR11-50-144	LMR11-50-175
	Sample Date	8/8/2011	8/8/2011	8/8/2011	8/8/2011	8/8/2011	8/8/2011
	Depth Interval (in bss)	24- 48	48- 72	72- 96	96- 120	120- 144	144- 175
Chemical Name	**Unit**						
Grain Size							
Gravel	%	NA	8.2	4.9	0.6	1.8	9
Sand	%	NA	57.4	35	16.4	30.4	17.4
Silt	%	NA	14.7	23.4	40.3	29.4	32.5
Clay	%	NA	19.7	36.7	42.7	38.4	41.1
Coarse Sand	%	NA	4.8	4.5	0.5	2.1	1.9
Medium Sand	%	NA	13.9	10.2	2.2	9.6	4.6
Fine Sand	%	NA	38.7	20.3	13.7	18.7	10.9
Sieve Size 3 inch - Percent Finer	% PASSED	NA	100	100	100	100	100
Sieve Size 2 inch - Percent Finer	% PASSED	NA	100	100	100	100	100
Sieve Size 1.5 inch - Percent Finer	% PASSED	NA	100	100	100	100	100
Sieve Size 1 inch - Percent Finer	% PASSED	NA	100	100	100	100	100
Sieve Size 0.75 inch - Percent Finer	% PASSED	NA	100	100	100	100	100
Sieve Size 0.375 inch - Percent Finer	% PASSED	NA	96.5	100	100	100	92.5
Sieve Size #4 - Percent Finer	% PASSED	NA	91.8	95.1	99.4	98.2	91
Sieve Size #10 - Percent Finer	% PASSED	NA	87	90.6	98.9	96.1	89.1
Sieve Size #20 - Percent Finer	% PASSED	NA	81.7	85.5	98.3	91.8	87.1
Sieve Size #40 - Percent Finer	% PASSED	NA	73.1	80.4	96.7	86.5	84.5
Sieve Size #60 - Percent Finer	% PASSED	NA	58.1	74	94.6	81	81.3
Sieve Size #80 - Percent Finer	% PASSED	NA	48.8	69.4	92.7	77.5	79.1
Sieve Size #100 - Percent Finer	% PASSED	NA	44.1	67	91.4	75.3	77.8
Sieve Size #200 - Percent Finer	% PASSED	NA	34.4	60.1	83	67.8	73.6
Hydrometer Reading 1 - Percent Finer	% PASSED	NA	28.3	55.5	65.8	59	61.1
Hydrometer Reading 2 - Percent Finer	% PASSED	NA	26.2	51.7	60.1	55.6	56.5
Hydrometer Reading 3 - Percent Finer	% PASSED	NA	23.3	44.2	54.3	48.7	50.3
Hydrometer Reading 4 - Percent Finer	% PASSED	NA	21.1	40.4	47.1	44.1	45.7
Hydrometer Reading 5 - Percent Finer	% PASSED	NA	19.7	36.7	42.7	38.4	41.1
Hydrometer Reading 6 - Percent Finer	% PASSED	NA	16	30.4	34.1	29.3	31.8
Hydrometer Reading 7 - Percent Finer	% PASSED	NA	12.4	22.8	24	21.3	22.5
TOC							
TOC	mg/kg	17,000	36,200	48,500	32,200	54,500	39,900

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Table B-5
Sediment Sample Analytical Results - Physical Properties
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

	Location ID	LMR11-51	LMR11-51	LMR11-51	LMR11-51	LMR11-52	LMR11-52
	Field Sample ID	LMR11-51-006	LMR11-51-024	LMR11-51-048	LMR11-51-075	LMR11-52-006	LMR11-52-024
	Sample Date	8/7/2011	8/7/2011	8/7/2011	8/7/2011	8/8/2011	8/8/2011
	Depth Interval (in bss)	0- 6	6- 24	24- 48	48- 75	0- 6	6- 24
Chemical Name	**Unit**						
Grain Size							
Gravel	%	0	0	0	2.9	0	0
Sand	%	31.4	9.8	10.1	1.3	15.5	9.7
Silt	%	28	37.1	34.6	37.6	28.7	35
Clay	%	40.6	53.1	55.3	58.2	55.8	55.3
Coarse Sand	%	0.9	0.6	0	0.1	0	0
Medium Sand	%	1.1	0.6	0.3	0	1.1	0.2
Fine Sand	%	29.4	8.6	9.8	1.2	14.4	9.5
Sieve Size 3 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 2 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 1.5 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 1 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 0.75 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 0.375 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size #4 - Percent Finer	% PASSED	100	100	100	97.1	100	100
Sieve Size #10 - Percent Finer	% PASSED	99.1	99.4	100	97	100	100
Sieve Size #20 - Percent Finer	% PASSED	98.8	99.2	99.9	97	99.3	100
Sieve Size #40 - Percent Finer	% PASSED	98	98.8	99.7	97	98.9	99.8
Sieve Size #60 - Percent Finer	% PASSED	93.9	97.9	99.1	97	97.5	99.1
Sieve Size #80 - Percent Finer	% PASSED	80	95.6	97.3	96.9	94.6	97.8
Sieve Size #100 - Percent Finer	% PASSED	73.8	94	95.7	96.8	91.8	96.4
Sieve Size #200 - Percent Finer	% PASSED	68.6	90.2	89.9	95.8	84.5	90.3
Hydrometer Reading 1 - Percent Finer	% PASSED	63.8	77.9	81.4	80.9	81.1	83.6
Hydrometer Reading 2 - Percent Finer	% PASSED	60.2	74.1	76.2	76.3	76	76.9
Hydrometer Reading 3 - Percent Finer	% PASSED	53.1	66.4	69.2	71.8	67.6	68.6
Hydrometer Reading 4 - Percent Finer	% PASSED	46	60.7	60.5	65	60.9	60.3
Hydrometer Reading 5 - Percent Finer	% PASSED	40.6	53.1	55.3	58.2	55.8	55.3
Hydrometer Reading 6 - Percent Finer	% PASSED	33.3	45.3	46.5	44.5	45.7	45
Hydrometer Reading 7 - Percent Finer	% PASSED	26	33.6	35.9	35.3	35.6	33.3
TOC							
TOC	mg/kg	21,400	19,400	21,100	18,200	18,300	27,700

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Table B-5
Sediment Sample Analytical Results - Physical Properties
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

	Location ID	LMR11-52	LMR11-52	LMR11-52	LMR11-53	LMR11-53	LMR11-53
	Field Sample ID	LMR11-52-048	LMR11-52-048FS	LMR11-52-072	LMR11-53-006	LMR11-53-024	LMR11-53-048
	Sample Date	8/8/2011	8/8/2011	8/8/2011	8/7/2011	8/7/2011	8/7/2011
	Depth Interval (in bss)	24- 48	24- 48	48- 72	0- 6	6- 24	24- 48
Chemical Name	**Unit**						
Grain Size							
Gravel	%	0	0	0	0	17	0
Sand	%	9.5	7.2	8.8	12.7	37.2	27
Silt	%	38.5	34.2	49	29.5	13.5	18.2
Clay	%	52	58.6	42.2	57.8	32.3	54.8
Coarse Sand	%	0	0	0	0	7.2	2.2
Medium Sand	%	0.3	0.2	0.1	1.6	15.9	9.5
Fine Sand	%	9.2	7	8.7	11.1	14.1	15.3
Sieve Size 3 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 2 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 1.5 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 1 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 0.75 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 0.375 inch - Percent Finer	% PASSED	100	100	100	100	95.3	100
Sieve Size #4 - Percent Finer	% PASSED	100	100	100	100	83	100
Sieve Size #10 - Percent Finer	% PASSED	100	100	100	100	75.8	97.8
Sieve Size #20 - Percent Finer	% PASSED	99.9	100	100	99.5	67.8	94.8
Sieve Size #40 - Percent Finer	% PASSED	99.7	99.8	99.9	98.4	59.9	88.3
Sieve Size #60 - Percent Finer	% PASSED	98.4	98.8	99.6	96.6	54.4	80.1
Sieve Size #80 - Percent Finer	% PASSED	96.6	97.6	99.1	93.8	51.5	76.4
Sieve Size #100 - Percent Finer	% PASSED	95.2	96.6	98.6	92	49.8	75
Sieve Size #200 - Percent Finer	% PASSED	90.5	92.8	91.2	87.3	45.8	73
Hydrometer Reading 1 - Percent Finer	% PASSED	78	86.8	75	81.9	43.9	72.3
Hydrometer Reading 2 - Percent Finer	% PASSED	73.6	81.2	64	75.5	41.8	70.6
Hydrometer Reading 3 - Percent Finer	% PASSED	63.6	71.8	53.1	69.1	37.5	63.6
Hydrometer Reading 4 - Percent Finer	% PASSED	56.4	62.4	45.8	62.6	34.3	60
Hydrometer Reading 5 - Percent Finer	% PASSED	52	58.6	42.2	57.8	32.3	54.8
Hydrometer Reading 6 - Percent Finer	% PASSED	42	47	32.8	49.8	26.8	45.7
Hydrometer Reading 7 - Percent Finer	% PASSED	33.3	36	24	36.9	21.4	35.1
TOC							
TOC	mg/kg	22,900	22,500	20,800	34,900	28,200	23,400

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Table B-5
Sediment Sample Analytical Results - Physical Properties
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

	Location ID	LMR11-53	LMR11-54	LMR11-54	LMR11-54	LMR11-54	LMR11-54
	Field Sample ID	LMR11-53-073	LMR11-54-006	LMR11-54-006-DP	LMR11-54-024	LMR11-54-024-DP	LMR11-54-048
	Sample Date	8/7/2011	8/8/2011	8/8/2011	8/8/2011	8/8/2011	8/8/2011
	Depth Interval (in bss)	48- 73	0- 6	0- 6	6- 24	6- 24	24- 48
Chemical Name	**Unit**						
Grain Size							
Gravel	%	0.5	6.4	NA	6.6	NA	2.2
Sand	%	66.1	50.5	NA	49.7	NA	81.8
Silt	%	16	14.6	NA	14.2	NA	8.3
Clay	%	17.4	28.5	NA	29.5	NA	7.7
Coarse Sand	%	3.9	2	NA	3	NA	3.7
Medium Sand	%	21	4.3	NA	7.5	NA	13.6
Fine Sand	%	41.2	44.2	NA	39.2	NA	64.5
Sieve Size 3 inch - Percent Finer	% PASSED	100	100	NA	100	NA	100
Sieve Size 2 inch - Percent Finer	% PASSED	100	100	NA	100	NA	100
Sieve Size 1.5 inch - Percent Finer	% PASSED	100	100	NA	100	NA	100
Sieve Size 1 inch - Percent Finer	% PASSED	100	100	NA	100	NA	100
Sieve Size 0.75 inch - Percent Finer	% PASSED	100	100	NA	100	NA	100
Sieve Size 0.375 inch - Percent Finer	% PASSED	100	97.3	NA	96.4	NA	100
Sieve Size #4 - Percent Finer	% PASSED	99.5	93.6	NA	93.4	NA	97.8
Sieve Size #10 - Percent Finer	% PASSED	95.6	91.6	NA	90.4	NA	94.1
Sieve Size #20 - Percent Finer	% PASSED	88.2	90.2	NA	87.6	NA	88.9
Sieve Size #40 - Percent Finer	% PASSED	74.6	87.3	NA	82.9	NA	80.5
Sieve Size #60 - Percent Finer	% PASSED	56.2	78.3	NA	72.8	NA	66.5
Sieve Size #80 - Percent Finer	% PASSED	47.3	60.5	NA	58.2	NA	49.5
Sieve Size #100 - Percent Finer	% PASSED	42.7	51.2	NA	51.4	NA	36.2
Sieve Size #200 - Percent Finer	% PASSED	33.4	43.1	NA	43.7	NA	16
Hydrometer Reading 1 - Percent Finer	% PASSED	25.6	40.3	NA	41.4	NA	11.4
Hydrometer Reading 2 - Percent Finer	% PASSED	23.9	38.3	NA	39.2	NA	11.4
Hydrometer Reading 3 - Percent Finer	% PASSED	20.7	34.4	NA	36	NA	10.2
Hydrometer Reading 4 - Percent Finer	% PASSED	19	31.5	NA	32.7	NA	9
Hydrometer Reading 5 - Percent Finer	% PASSED	17.4	28.5	NA	29.5	NA	7.7
Hydrometer Reading 6 - Percent Finer	% PASSED	14	24.5	NA	24.1	NA	6.2
Hydrometer Reading 7 - Percent Finer	% PASSED	10.7	18.7	NA	18.6	NA	5
TOC							
TOC	mg/kg	19,800	16,600	22,400	17,500 J	33,400 J	18,100

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Table B-5
Sediment Sample Analytical Results - Physical Properties
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

	Location ID	LMR11-54	LMR11-54	LMR11-54	LMR11-55	LMR11-55	LMR11-55
	Field Sample ID	LMR11-54-048-DP	LMR11-54-072	LMR11-54-086	LMR11-55-006	LMR11-55-006-DP	LMR11-55-030
	Sample Date	8/8/2011	8/8/2011	8/8/2011	8/7/2011	8/7/2011	8/7/2011
	Depth Interval (in bss)	24- 48	48- 72	72- 86	0- 6	0- 6	6- 30
Chemical Name	**Unit**						
Grain Size							
Gravel	%	NA	9.5	0	7.8	NA	16.4
Sand	%	NA	25.2	22.5	34.1	NA	37.6
Silt	%	NA	24.8	31.5	17.8	NA	25.7
Clay	%	NA	40.5	46	40.3	NA	20.3
Coarse Sand	%	NA	1	0	2.6	NA	5.6
Medium Sand	%	NA	2.6	0.5	4.5	NA	10.1
Fine Sand	%	NA	21.6	22	27	NA	21.9
Sieve Size 3 inch - Percent Finer	% PASSED	NA	100	100	100	NA	100
Sieve Size 2 inch - Percent Finer	% PASSED	NA	100	100	100	NA	100
Sieve Size 1.5 inch - Percent Finer	% PASSED	NA	100	100	100	NA	100
Sieve Size 1 inch - Percent Finer	% PASSED	NA	100	100	100	NA	100
Sieve Size 0.75 inch - Percent Finer	% PASSED	NA	100	100	100	NA	100
Sieve Size 0.375 inch - Percent Finer	% PASSED	NA	94	100	96.9	NA	96.3
Sieve Size #4 - Percent Finer	% PASSED	NA	90.5	100	92.2	NA	83.6
Sieve Size #10 - Percent Finer	% PASSED	NA	89.5	100	89.6	NA	78
Sieve Size #20 - Percent Finer	% PASSED	NA	88.6	99.9	87.6	NA	73.2
Sieve Size #40 - Percent Finer	% PASSED	NA	86.9	99.5	85.1	NA	67.9
Sieve Size #60 - Percent Finer	% PASSED	NA	83.2	97.9	79.8	NA	60.9
Sieve Size #80 - Percent Finer	% PASSED	NA	79.8	91.3	70	NA	54.3
Sieve Size #100 - Percent Finer	% PASSED	NA	77.1	85.1	64.3	NA	51.1
Sieve Size #200 - Percent Finer	% PASSED	NA	65.3	77.5	58.1	NA	46
Hydrometer Reading 1 - Percent Finer	% PASSED	NA	55.7	69.7	56.6	NA	28
Hydrometer Reading 2 - Percent Finer	% PASSED	NA	51.2	64.7	53.9	NA	26.3
Hydrometer Reading 3 - Percent Finer	% PASSED	NA	48.2	59.6	48.4	NA	24.5
Hydrometer Reading 4 - Percent Finer	% PASSED	NA	43.7	52.8	43	NA	22.8
Hydrometer Reading 5 - Percent Finer	% PASSED	NA	40.5	46	40.3	NA	20.3
Hydrometer Reading 6 - Percent Finer	% PASSED	NA	34.5	39	33.5	NA	16
Hydrometer Reading 7 - Percent Finer	% PASSED	NA	25.5	28.8	25.3	NA	12.5
TOC							
TOC	mg/kg	20,800	30,700	28,600	26,700	26,200	20,600

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Table B-5
Sediment Sample Analytical Results - Physical Properties
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

	Location ID	LMR11-55	LMR11-56	LMR11-56	LMR11-56	LMR11-57	LMR11-57
	Field Sample ID	LMR11-55-030-DP	LMR11-56-006	LMR11-56-024	LMR11-56-036	LMR11-57-006	LMR11-57-024
	Sample Date	8/7/2011	8/7/2011	8/7/2011	8/7/2011	8/6/2011	8/6/2011
	Depth Interval (in bss)	6- 30	0- 6	6- 24	24- 36	0- 6	6- 24
Chemical Name	**Unit**						
Grain Size							
Gravel	%	NA	1.9	3.3	8.3	0.7	0
Sand	%	NA	20.6	25.5	28.5	42.1	94.5
Silt	%	NA	30.4	20.6	28.8	19.4	2.2
Clay	%	NA	47.1	50.6	34.4	37.8	3.2
Coarse Sand	%	NA	1.8	1.8	3.1	0.2	0.1
Medium Sand	%	NA	3.7	3.1	6.4	2.4	2.1
Fine Sand	%	NA	15.1	20.6	19	39.5	92.3
Sieve Size 3 inch - Percent Finer	% PASSED	NA	100	100	100	100	100
Sieve Size 2 inch - Percent Finer	% PASSED	NA	100	100	100	100	100
Sieve Size 1.5 inch - Percent Finer	% PASSED	NA	100	100	100	100	100
Sieve Size 1 inch - Percent Finer	% PASSED	NA	100	100	100	100	100
Sieve Size 0.75 inch - Percent Finer	% PASSED	NA	100	100	100	100	100
Sieve Size 0.375 inch - Percent Finer	% PASSED	NA	99	97.8	100	100	100
Sieve Size #4 - Percent Finer	% PASSED	NA	98.1	96.7	91.7	99.3	100
Sieve Size #10 - Percent Finer	% PASSED	NA	96.3	94.9	88.6	99.1	99.9
Sieve Size #20 - Percent Finer	% PASSED	NA	94.9	93.6	85.5	98.6	99.7
Sieve Size #40 - Percent Finer	% PASSED	NA	92.6	91.8	82.2	96.7	97.8
Sieve Size #60 - Percent Finer	% PASSED	NA	89.1	88	77.4	84.9	51.5
Sieve Size #80 - Percent Finer	% PASSED	NA	86.4	83.3	73.8	66.3	9.1
Sieve Size #100 - Percent Finer	% PASSED	NA	84.3	79.6	71.4	63.2	6.9
Sieve Size #200 - Percent Finer	% PASSED	NA	77.5	71.2	63.2	57.2	5.5
Hydrometer Reading 1 - Percent Finer	% PASSED	NA	62.5	67.2	53.9	55.3	5
Hydrometer Reading 2 - Percent Finer	% PASSED	NA	59.9	64.2	50	52	4.5
Hydrometer Reading 3 - Percent Finer	% PASSED	NA	54.8	59.6	43.5	46.5	3.7
Hydrometer Reading 4 - Percent Finer	% PASSED	NA	49.7	55.1	39.6	42.2	3.7
Hydrometer Reading 5 - Percent Finer	% PASSED	NA	47.1	50.6	34.4	37.8	3.2
Hydrometer Reading 6 - Percent Finer	% PASSED	NA	38.1	43.1	26.7	31.2	2.8
Hydrometer Reading 7 - Percent Finer	% PASSED	NA	29.1	32.5	20.2	22.5	2
TOC							
TOC	mg/kg	23,200	21,700	19,700	23,200	29,200	6,000

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Table B-5
Sediment Sample Analytical Results - Physical Properties
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

	Location ID	LMR11-57	LMR11-57	LMR11-58	LMR11-59	LMR11-59	LMR11-59
	Field Sample ID	LMR11-57-048	LMR11-57-062	LMR11-58-010	LMR11-59-006	LMR11-59-024	LMR11-59-048
	Sample Date	8/6/2011	8/6/2011	8/6/2011	8/6/2011	8/6/2011	8/6/2011
	Depth Interval (in bss)	24- 48	48- 62	0- 10	0- 6	6- 24	24- 48
Chemical Name	**Unit**						
Grain Size							
Gravel	%	0	0	0	0	0	0
Sand	%	65.6	89.1	18.2	24.1	7.2	8.4
Silt	%	13.9	6.2	29.4	31.1	31.6	35.3
Clay	%	20.5	4.7	52.4	44.8	61.2	56.3
Coarse Sand	%	0	0	2	0	0	0
Medium Sand	%	1.4	0.6	4.6	0.6	0	0.4
Fine Sand	%	64.2	88.5	11.6	23.5	7.2	8
Sieve Size 3 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 2 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 1.5 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 1 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 0.75 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 0.375 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size #4 - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size #10 - Percent Finer	% PASSED	100	100	98	100	100	100
Sieve Size #20 - Percent Finer	% PASSED	99.7	99.8	95.8	99.6	100	99.9
Sieve Size #40 - Percent Finer	% PASSED	98.6	99.4	93.4	99.4	100	99.6
Sieve Size #60 - Percent Finer	% PASSED	67	81.7	90.5	98.7	99.9	99.2
Sieve Size #80 - Percent Finer	% PASSED	45	49.4	88.3	96.5	99.4	98.1
Sieve Size #100 - Percent Finer	% PASSED	40.2	31.5	86.9	92.7	98.5	97.3
Sieve Size #200 - Percent Finer	% PASSED	34.4	10.9	81.8	75.9	92.8	91.6
Hydrometer Reading 1 - Percent Finer	% PASSED	33.9	10.3	73.1	69.5	88.2	82.5
Hydrometer Reading 2 - Percent Finer	% PASSED	29.1	8.5	69.4	63	82.3	77.1
Hydrometer Reading 3 - Percent Finer	% PASSED	26.2	7.2	63.8	57.8	74.9	68.9
Hydrometer Reading 4 - Percent Finer	% PASSED	22.4	6	58	51.3	68.7	63.2
Hydrometer Reading 5 - Percent Finer	% PASSED	20.5	4.7	52.4	44.8	61.2	56.3
Hydrometer Reading 6 - Percent Finer	% PASSED	16.3	3.5	41	36.9	50.8	46.7
Hydrometer Reading 7 - Percent Finer	% PASSED	13.4	2.2	28.1	27.8	38.9	35.8
TOC							
TOC	mg/kg	23,300 J	25,900	26,300	27,900 J	22,000	31,300

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Table B-5
Sediment Sample Analytical Results - Physical Properties
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

	Location ID	LMR11-59	LMR11-59	LMR11-59	LMR11-60	LMR11-60	LMR11-60
	Field Sample ID	LMR11-59-072	LMR11-59-096	LMR11-59-116	LMR11-60-006	LMR11-60-024	LMR11-60-048
	Sample Date	8/6/2011	8/6/2011	8/6/2011	8/6/2011	8/6/2011	8/6/2011
	Depth Interval (in bss)	48- 72	72- 96	96- 116	0- 6	6- 24	24- 48
Chemical Name	**Unit**						
Grain Size							
Gravel	%	0	0.9	6.1	0.9	0	0
Sand	%	16	41.3	75.2	10.9	5.1	2.7
Silt	%	27.2	21.1	4.6	40.7	37.4	37.4
Clay	%	56.8	36.7	14.1	47.5	57.5	59.9
Coarse Sand	%	0.4	0.2	0.4	0.9	0	0
Medium Sand	%	2.2	9	20.5	0.2	0	0.3
Fine Sand	%	13.4	32.1	54.3	9.8	5.1	2.4
Sieve Size 3 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 2 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 1.5 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 1 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 0.75 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 0.375 inch - Percent Finer	% PASSED	100	99.1	95.1	100	100	100
Sieve Size #4 - Percent Finer	% PASSED	100	99.1	93.9	99.1	100	100
Sieve Size #10 - Percent Finer	% PASSED	99.6	98.9	93.5	98.2	100	100
Sieve Size #20 - Percent Finer	% PASSED	99.2	98.2	92.5	98.1	100	99.8
Sieve Size #40 - Percent Finer	% PASSED	97.4	89.9	73	98	100	99.7
Sieve Size #60 - Percent Finer	% PASSED	95.1	81	40	97.9	99.9	99.6
Sieve Size #80 - Percent Finer	% PASSED	92.9	69	26.4	97	99.8	99.5
Sieve Size #100 - Percent Finer	% PASSED	91	65.1	22.4	96.5	99.5	99.3
Sieve Size #200 - Percent Finer	% PASSED	84	57.8	18.7	88.2	94.9	97.3
Hydrometer Reading 1 - Percent Finer	% PASSED	79.1	53.2	21.3	69.6	83.8	85.3
Hydrometer Reading 2 - Percent Finer	% PASSED	75	49.3	20	65.4	78.2	79.6
Hydrometer Reading 3 - Percent Finer	% PASSED	67.8	45.4	18.1	57.2	70.7	71.2
Hydrometer Reading 4 - Percent Finer	% PASSED	62.3	40.6	16.1	53.1	63.2	65.5
Hydrometer Reading 5 - Percent Finer	% PASSED	56.8	36.7	14.1	47.5	57.5	59.9
Hydrometer Reading 6 - Percent Finer	% PASSED	45.8	30.7	12.1	39.2	48	50
Hydrometer Reading 7 - Percent Finer	% PASSED	34.7	23	8.2	29.6	34.9	38.6
TOC							
TOC	mg/kg	20,600	22,100	18,600	18,400	28,100	31,400

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Table B-5
Sediment Sample Analytical Results - Physical Properties
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

	Location ID	LMR11-60	LMR11-60	LMR11-60	LMR11-61	LMR11-61	LMR11-62
	Field Sample ID	LMR11-60-048FS	LMR11-60-072	LMR11-60-092	LMR11-61-006	LMR11-61-030	LMR11-62-006
	Sample Date	8/6/2011	8/6/2011	8/6/2011	8/6/2011	8/6/2011	8/6/2011
	Depth Interval (in bss)	24- 48	48- 72	72- 92	0- 6	6- 30	0- 6
Chemical Name	**Unit**						
Grain Size							
Gravel	%	0	1.3	0	26.3	5	0
Sand	%	6	36	13.9	46	25	11.7
Silt	%	37.1	28.7	45	13.4	25.8	35.9
Clay	%	56.9	34	41.1	14.3	44.2	52.4
Coarse Sand	%	0	1.1	0	9.5	4.3	0
Medium Sand	%	0.2	6.6	0.9	16	6.6	0.2
Fine Sand	%	5.8	28.3	13	20.5	14.1	11.5
Sieve Size 3 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 2 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 1.5 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 1 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 0.75 inch - Percent Finer	% PASSED	100	100	100	93.2	100	100
Sieve Size 0.375 inch - Percent Finer	% PASSED	100	100	100	84	100	100
Sieve Size #4 - Percent Finer	% PASSED	100	98.7	100	73.7	95	100
Sieve Size #10 - Percent Finer	% PASSED	100	97.6	100	64.2	90.7	100
Sieve Size #20 - Percent Finer	% PASSED	99.9	96.2	99.9	56.5	87.5	99.9
Sieve Size #40 - Percent Finer	% PASSED	99.8	91	99.1	48.2	84.1	99.8
Sieve Size #60 - Percent Finer	% PASSED	99.8	82.7	96.2	38.6	79.7	99.8
Sieve Size #80 - Percent Finer	% PASSED	99.5	72.5	94.5	33.1	76.7	99.3
Sieve Size #100 - Percent Finer	% PASSED	99.2	70.5	93.4	31.1	75.1	98.9
Sieve Size #200 - Percent Finer	% PASSED	94	62.7	86.1	27.7	70	88.3
Hydrometer Reading 1 - Percent Finer	% PASSED	79.5	52	63.3	20.5	67.1	74.2
Hydrometer Reading 2 - Percent Finer	% PASSED	76.7	48.4	58.4	19.3	60.6	71.1
Hydrometer Reading 3 - Percent Finer	% PASSED	68.2	43.6	51	18.1	55.7	63.3
Hydrometer Reading 4 - Percent Finer	% PASSED	61.2	38.8	44.8	16.1	52.2	57.1
Hydrometer Reading 5 - Percent Finer	% PASSED	56.9	34	41.1	14.3	44.2	52.4
Hydrometer Reading 6 - Percent Finer	% PASSED	45.6	28	32.3	11.7	37.4	42.9
Hydrometer Reading 7 - Percent Finer	% PASSED	35.8	20.8	23.8	8.7	27.7	32
TOC							
TOC	mg/kg	23,100	19,500	24,900	27,400	24,500	27,100

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Table B-5
Sediment Sample Analytical Results - Physical Properties
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

	Location ID	LMR11-62	LMR11-62	LMR11-62	LMR11-62	LMR11-62	LMR11-62
	Field Sample ID	LMR11-62-024	LMR11-62-024DP	LMR11-62-048	LMR11-62-072	LMR11-62-096	LMR11-62-108
	Sample Date	8/6/2011	8/6/2011	8/6/2011	8/6/2011	8/6/2011	8/6/2011
	Depth Interval (in bss)	6- 24	6- 24	24- 48	48- 72	72- 96	96- 108
Chemical Name	**Unit**						
Grain Size							
Gravel	%	0	NA	0.1	0	0	0.2
Sand	%	11.9	NA	60	90.2	53.2	71.3
Silt	%	27.1	NA	19.6	5.7	29.5	13.4
Clay	%	61	NA	20.3	4.1	17.3	15.1
Coarse Sand	%	0.1	NA	0.2	0	0	0.2
Medium Sand	%	0.7	NA	9.7	2.5	2.4	11.8
Fine Sand	%	11.1	NA	50.1	87.7	50.8	59.3
Sieve Size 3 inch - Percent Finer	% PASSED	100	NA	100	100	100	100
Sieve Size 2 inch - Percent Finer	% PASSED	100	NA	100	100	100	100
Sieve Size 1.5 inch - Percent Finer	% PASSED	100	NA	100	100	100	100
Sieve Size 1 inch - Percent Finer	% PASSED	100	NA	100	100	100	100
Sieve Size 0.75 inch - Percent Finer	% PASSED	100	NA	100	100	100	100
Sieve Size 0.375 inch - Percent Finer	% PASSED	100	NA	100	100	100	100
Sieve Size #4 - Percent Finer	% PASSED	100	NA	99.9	100	100	99.8
Sieve Size #10 - Percent Finer	% PASSED	99.9	NA	99.7	100	100	99.6
Sieve Size #20 - Percent Finer	% PASSED	99.8	NA	98.5	99.9	99.7	98.8
Sieve Size #40 - Percent Finer	% PASSED	99.2	NA	90	97.5	97.6	87.8
Sieve Size #60 - Percent Finer	% PASSED	98.2	NA	71.3	61.4	80.3	43.2
Sieve Size #80 - Percent Finer	% PASSED	95.7	NA	50.2	20.5	71	33.5
Sieve Size #100 - Percent Finer	% PASSED	94.6	NA	46.4	14.9	65.2	31.6
Sieve Size #200 - Percent Finer	% PASSED	88.1	NA	39.9	9.8	46.8	28.5
Hydrometer Reading 1 - Percent Finer	% PASSED	82.2	NA	31.7	8.3	35.2	25.8
Hydrometer Reading 2 - Percent Finer	% PASSED	78.3	NA	29.6	6.8	31.1	23.3
Hydrometer Reading 3 - Percent Finer	% PASSED	72.5	NA	24.6	6	25.6	20.9
Hydrometer Reading 4 - Percent Finer	% PASSED	66.8	NA	22.4	4.9	21.4	18.5
Hydrometer Reading 5 - Percent Finer	% PASSED	61	NA	20.3	4.1	17.3	15.1
Hydrometer Reading 6 - Percent Finer	% PASSED	53.1	NA	15.3	2.9	13.2	11.1
Hydrometer Reading 7 - Percent Finer	% PASSED	39.6	NA	11.8	2.2	9.1	7.8
TOC							
TOC	mg/kg	19,700	22,400	21,900	6,430	26,900	14,500

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Table B-5
Sediment Sample Analytical Results - Physical Properties
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

	Location ID	LMR11-63	LMR11-63	LMR11-63	LMR11-63	LMR11-63	LMR11-63
	Field Sample ID	LMR11-63-006	LMR11-63-024	LMR11-63-048	LMR11-63-048FS	LMR11-63-072	LMR11-63-096
	Sample Date	8/8/2011	8/8/2011	8/8/2011	8/8/2011	8/8/2011	8/8/2011
	Depth Interval (in bss)	0- 6	6- 24	24- 48	24- 48	48- 72	72- 96
Chemical Name	**Unit**						
Grain Size							
Gravel	%	0	11.8	0.4	3.3	0	0
Sand	%	11.2	27.3	26.5	23.9	8.6	15.4
Silt	%	35.4	20.4	28.6	27.7	31.2	35.1
Clay	%	53.4	40.5	44.5	45.1	60.2	49.5
Coarse Sand	%	0.1	1.3	0.5	1	0	0
Medium Sand	%	0.4	2.8	2.7	2.6	0.8	0.6
Fine Sand	%	10.7	23.2	23.3	20.3	7.8	14.8
Sieve Size 3 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 2 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 1.5 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 1 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 0.75 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 0.375 inch - Percent Finer	% PASSED	100	90.5	100	97.2	100	100
Sieve Size #4 - Percent Finer	% PASSED	100	88.2	99.6	96.7	100	100
Sieve Size #10 - Percent Finer	% PASSED	99.9	86.9	99.1	95.7	100	100
Sieve Size #20 - Percent Finer	% PASSED	99.7	85.8	98.4	95	99.6	99.8
Sieve Size #40 - Percent Finer	% PASSED	99.5	84.1	96.4	93.1	99.2	99.4
Sieve Size #60 - Percent Finer	% PASSED	99.1	79.8	87.3	85.1	96.7	95.6
Sieve Size #80 - Percent Finer	% PASSED	98.4	76.8	82.5	81.2	95.6	90.5
Sieve Size #100 - Percent Finer	% PASSED	97.5	74.5	80.2	79.3	94.9	89.1
Sieve Size #200 - Percent Finer	% PASSED	88.8	60.9	73.1	72.8	91.4	84.6
Hydrometer Reading 1 - Percent Finer	% PASSED	77.8	58	66.1	67.5	85.9	75.9
Hydrometer Reading 2 - Percent Finer	% PASSED	73.5	53.9	61	62.2	79	70.1
Hydrometer Reading 3 - Percent Finer	% PASSED	64.9	47.2	53.4	55.6	72.2	61.4
Hydrometer Reading 4 - Percent Finer	% PASSED	62	44.5	48.3	51.6	65.3	53.9
Hydrometer Reading 5 - Percent Finer	% PASSED	53.4	40.5	44.5	45.1	60.2	49.5
Hydrometer Reading 6 - Percent Finer	% PASSED	46	32.5	35.7	35.8	49.9	39.4
Hydrometer Reading 7 - Percent Finer	% PASSED	33.2	25.7	25.5	26.6	36.2	29.2
TOC							
TOC	mg/kg	26,800	40,800	31,800	36,400	46,700 J	36,800

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Table B-5
Sediment Sample Analytical Results - Physical Properties
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

	Location ID	LMR11-63	LMR11-64	LMR11-64	LMR11-64	LMR11-64	LMR11-64
	Field Sample ID	LMR11-63-115	LMR11-88-006	LMR11-88-024	LMR11-88-048	LMR11-88-072	LMR11-88-088
	Sample Date	8/8/2011	8/7/2011	8/7/2011	8/7/2011	8/7/2011	8/7/2011
	Depth Interval (in bss)	96- 115	0- 6	6- 24	24- 48	48- 72	72- 88
Chemical Name	**Unit**						
Grain Size							
Gravel	%	0	12.4	0	13	0.7	7.3
Sand	%	68.1	33.6	12.1	35.4	14	46.1
Silt	%	19.2	22.2	39.4	14.7	32.8	19.2
Clay	%	12.7	31.8	48.5	36.9	52.5	27.4
Coarse Sand	%	0.3	4.5	2	5	0.1	5.3
Medium Sand	%	1	12.7	3.4	11.8	3.1	15.4
Fine Sand	%	66.8	16.4	6.7	18.6	10.8	25.4
Sieve Size 3 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 2 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 1.5 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 1 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 0.75 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 0.375 inch - Percent Finer	% PASSED	100	95.9	100	94	100	98.9
Sieve Size #4 - Percent Finer	% PASSED	100	87.6	100	87	99.3	92.7
Sieve Size #10 - Percent Finer	% PASSED	99.7	83.1	98	82	99.2	87.4
Sieve Size #20 - Percent Finer	% PASSED	99.5	77.5	96.3	78	98.1	81.9
Sieve Size #40 - Percent Finer	% PASSED	98.7	70.4	94.6	70.2	96.1	72
Sieve Size #60 - Percent Finer	% PASSED	92.4	62.4	92.4	58.5	92.5	56.9
Sieve Size #80 - Percent Finer	% PASSED	52.8	59	91.3	55.4	91	52.5
Sieve Size #100 - Percent Finer	% PASSED	46.1	57.5	90.7	54.2	90	50.5
Sieve Size #200 - Percent Finer	% PASSED	31.9	54	87.9	51.6	85.3	46.6
Hydrometer Reading 1 - Percent Finer	% PASSED	22	47.9	74.1	50.2	81.1	37.5
Hydrometer Reading 2 - Percent Finer	% PASSED	20.7	44.2	70.4	47.5	73.4	36.3
Hydrometer Reading 3 - Percent Finer	% PASSED	18.1	39.2	63.1	43.5	65.8	33.8
Hydrometer Reading 4 - Percent Finer	% PASSED	15.4	36.7	55.8	40.9	60.1	31.3
Hydrometer Reading 5 - Percent Finer	% PASSED	12.7	31.8	48.5	36.9	52.5	27.4
Hydrometer Reading 6 - Percent Finer	% PASSED	10.1	25.5	39.4	30.2	42.9	22.5
Hydrometer Reading 7 - Percent Finer	% PASSED	7.4	19.3	30.3	22.2	33.4	16.3
TOC							
TOC	mg/kg	26,700	24,100	25,400	25,200	30,600	20,500

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Table B-5
Sediment Sample Analytical Results - Physical Properties
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

	Location ID	LMR11-65	LMR11-65	LMR11-66	LMR11-66	LMR11-66	LMR11-66
	Field Sample ID	LMR11-65-006	LMR11-65-024	LMR11-66-006	LMR11-66-024	LMR11-66-048	LMR11-66-048FS
	Sample Date	8/6/2011	8/6/2011	8/7/2011	8/7/2011	8/7/2011	8/7/2011
	Depth Interval (in bss)	0- 6	6- 24	0- 6	6- 24	24- 48	24- 48
Chemical Name	**Unit**						
Grain Size							
Gravel	%	0.2	7.1	0	0	0	0
Sand	%	12.4	41.2	11.4	6.7	15.9	9.7
Silt	%	27.8	18.4	38	39.5	37	40.8
Clay	%	59.6	33.3	50.6	53.8	47.1	49.5
Coarse Sand	%	0.5	4.6	1	0	0	0
Medium Sand	%	2.9	12.9	0.8	0.5	0.1	0.1
Fine Sand	%	9	23.7	9.6	6.2	15.8	9.6
Sieve Size 3 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 2 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 1.5 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 1 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 0.75 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 0.375 inch - Percent Finer	% PASSED	100	96.7	100	100	100	100
Sieve Size #4 - Percent Finer	% PASSED	99.8	92.9	100	100	100	100
Sieve Size #10 - Percent Finer	% PASSED	99.3	88.3	99	100	100	100
Sieve Size #20 - Percent Finer	% PASSED	98.6	83.3	98.6	99.9	100	100
Sieve Size #40 - Percent Finer	% PASSED	96.4	75.4	98.2	99.5	99.9	99.9
Sieve Size #60 - Percent Finer	% PASSED	92.7	62.9	97.8	99.2	99.7	99.8
Sieve Size #80 - Percent Finer	% PASSED	91	57.9	97.4	98.8	98.9	99.5
Sieve Size #100 - Percent Finer	% PASSED	90.1	55.9	96.7	98.2	97	98.8
Sieve Size #200 - Percent Finer	% PASSED	87.4	51.7	88.6	93.3	84.1	90.3
Hydrometer Reading 1 - Percent Finer	% PASSED	84.3	48.7	75.9	85.2	69.9	72.5
Hydrometer Reading 2 - Percent Finer	% PASSED	79.7	45.7	72	78.5	65.7	68.3
Hydrometer Reading 3 - Percent Finer	% PASSED	70.4	40.6	64.4	67.5	59.5	62.1
Hydrometer Reading 4 - Percent Finer	% PASSED	64.2	37	56.7	60.5	53.3	57.9
Hydrometer Reading 5 - Percent Finer	% PASSED	59.6	33.3	50.6	53.8	47.1	49.5
Hydrometer Reading 6 - Percent Finer	% PASSED	48.8	26	41	45	36.6	41
Hydrometer Reading 7 - Percent Finer	% PASSED	36.4	19.4	33	35.8	30.2	30.4
TOC							
TOC	mg/kg	17,700	22,000	28,000	26,500	23,800 J	24,500

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Table B-5
Sediment Sample Analytical Results - Physical Properties
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

	Location ID	LMR11-66	LMR11-66	LMR11-66	LMR11-67	LMR11-67	LMR11-67
	Field Sample ID	LMR11-66-072	LMR11-66-096	LMR11-66-117	LMR11-67-006	LMR11-67-024	LMR11-67-048
	Sample Date	8/7/2011	8/7/2011	8/7/2011	8/6/2011	8/6/2011	8/6/2011
	Depth Interval (in bss)	48- 72	72- 96	96- 117	0- 6	6- 24	24- 48
Chemical Name	**Unit**						
Grain Size							
Gravel	%	0	0	0	0.3	0	1.3
Sand	%	4.1	30.8	13.5	24.3	8.9	11
Silt	%	43.7	32.8	40.7	44.5	39.7	31.3
Clay	%	52.2	36.4	45.8	30.9	51.4	56.4
Coarse Sand	%	0	0.2	0.2	0	0	0.5
Medium Sand	%	0	0.7	0.5	1.4	0.8	1.3
Fine Sand	%	4.1	29.9	12.8	22.9	8.1	9.2
Sieve Size 3 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 2 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 1.5 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 1 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 0.75 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 0.375 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size #4 - Percent Finer	% PASSED	100	100	100	99.7	100	98.7
Sieve Size #10 - Percent Finer	% PASSED	100	99.8	99.8	99.7	100	98.2
Sieve Size #20 - Percent Finer	% PASSED	100	99.7	99.6	99.1	99.6	97.9
Sieve Size #40 - Percent Finer	% PASSED	100	99.1	99.3	98.3	99.2	96.9
Sieve Size #60 - Percent Finer	% PASSED	99.9	95.3	98.6	95.7	97.5	93.6
Sieve Size #80 - Percent Finer	% PASSED	99.7	86.5	97.6	92.9	96.2	91.6
Sieve Size #100 - Percent Finer	% PASSED	99.4	80.2	96.2	90.2	95.4	90.7
Sieve Size #200 - Percent Finer	% PASSED	95.9	69.2	86.5	75.4	91.1	87.7
Hydrometer Reading 1 - Percent Finer	% PASSED	74.7	54.1	69.7	55.3	78	80.9
Hydrometer Reading 2 - Percent Finer	% PASSED	70.6	50	66.5	47.5	72.2	75.8
Hydrometer Reading 3 - Percent Finer	% PASSED	66.6	45.9	58.5	39.7	64	69.3
Hydrometer Reading 4 - Percent Finer	% PASSED	60.5	41.8	52.2	34.8	58.3	62.8
Hydrometer Reading 5 - Percent Finer	% PASSED	52.2	36.4	45.8	30.9	51.4	56.4
Hydrometer Reading 6 - Percent Finer	% PASSED	44	29.4	37.7	25	42.1	47.3
Hydrometer Reading 7 - Percent Finer	% PASSED	35.7	22.6	29.7	18.1	29.5	33.1
TOC							
TOC	mg/kg	25,600	24,500	34,900	24,400	27,300	29,400

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Table B-5
Sediment Sample Analytical Results - Physical Properties
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

	Location ID	LMR11-67	LMR11-68	LMR11-68	LMR11-68	LMR11-68	LMR11-68
	Field Sample ID	LMR11-67-077	LMR11-68-006	LMR11-68-024	LMR11-68-048	LMR11-68-072	LMR11-68-096
	Sample Date	8/6/2011	8/7/2011	8/7/2011	8/7/2011	8/7/2011	8/7/2011
	Depth Interval (in bss)	48- 77	0- 6	6- 24	24- 48	48- 72	72- 96
Chemical Name	**Unit**						
Grain Size							
Gravel	%	0	0	0	0	0	0
Sand	%	27.5	9.4	3.3	2.7	5.1	2.8
Silt	%	32.7	40.7	40.6	31.7	32.3	31.8
Clay	%	39.8	49.9	56.1	65.6	62.6	65.4
Coarse Sand	%	0	0	0	0	0	0
Medium Sand	%	3	0.4	0.1	0.3	0.5	0.5
Fine Sand	%	24.5	9	3.2	2.4	4.6	2.3
Sieve Size 3 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 2 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 1.5 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 1 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 0.75 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 0.375 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size #4 - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size #10 - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size #20 - Percent Finer	% PASSED	99.3	99.7	99.9	99.8	99.8	99.8
Sieve Size #40 - Percent Finer	% PASSED	97	99.6	99.9	99.7	99.5	99.5
Sieve Size #60 - Percent Finer	% PASSED	88.8	99.3	99.9	99.6	99.3	99.2
Sieve Size #80 - Percent Finer	% PASSED	82.7	97.8	99.9	99.4	99.1	98.9
Sieve Size #100 - Percent Finer	% PASSED	79.7	96.4	99.7	99.1	98.6	98.7
Sieve Size #200 - Percent Finer	% PASSED	72.5	90.6	96.7	97.3	94.9	97.2
Hydrometer Reading 1 - Percent Finer	% PASSED	61	77.1	84.4	94	87.5	88.1
Hydrometer Reading 2 - Percent Finer	% PASSED	56.6	71.3	78.7	87.9	83.3	84
Hydrometer Reading 3 - Percent Finer	% PASSED	49.9	63.5	71.2	81.9	79.2	77.8
Hydrometer Reading 4 - Percent Finer	% PASSED	44.3	57.7	63.6	73.6	72.9	71.6
Hydrometer Reading 5 - Percent Finer	% PASSED	39.8	49.9	56.1	65.6	62.6	65.4
Hydrometer Reading 6 - Percent Finer	% PASSED	33.1	42	46.4	53.5	50.3	55
Hydrometer Reading 7 - Percent Finer	% PASSED	23	32.2	35.1	27.2	38	42.6
TOC							
TOC	mg/kg	32,800	27,000	23,600	23,800	22,400	23,000

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Table B-5
Sediment Sample Analytical Results - Physical Properties
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

	Location ID	LMR11-69	LMR11-70	LMR11-70	LMR11-70	LMR11-70	LMR11-70
	Field Sample ID	LMR11-69-006	LMR11-70-006	LMR11-70-024	LMR11-70-048	LMR11-70-072	LMR11-70-072FS
	Sample Date	8/6/2011	8/7/2011	8/7/2011	8/7/2011	8/7/2011	8/7/2011
	Depth Interval (in bss)	0- 6	0- 6	6- 24	24- 48	48- 72	48- 72
Chemical Name	**Unit**						
Grain Size							
Gravel	%	18	0	0	0	0	3
Sand	%	76.6	1.7	0.3	4.9	13.2	16.2
Silt	%	4.1	30.4	28.5	34	27.8	31.6
Clay	%	1.3	67.9	71.2	61.1	59	49.2
Coarse Sand	%	15	0	0	0	0	4
Medium Sand	%	40.5	0.7	0.1	0.4	3	1.2
Fine Sand	%	21.1	1	0.2	4.5	10.2	11
Sieve Size 3 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 2 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 1.5 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 1 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 0.75 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 0.375 inch - Percent Finer	% PASSED	95.5	100	100	100	100	100
Sieve Size #4 - Percent Finer	% PASSED	82	100	100	100	100	97
Sieve Size #10 - Percent Finer	% PASSED	67	100	100	100	100	93
Sieve Size #20 - Percent Finer	% PASSED	45.1	99.5	100	99.9	98.8	92.7
Sieve Size #40 - Percent Finer	% PASSED	26.5	99.3	99.9	99.6	97	91.8
Sieve Size #60 - Percent Finer	% PASSED	10.9	99.2	99.9	98.7	95.4	90.1
Sieve Size #80 - Percent Finer	% PASSED	7.1	99	99.9	97.3	93.7	88.6
Sieve Size #100 - Percent Finer	% PASSED	6.4	99	99.9	96.6	92.7	87.4
Sieve Size #200 - Percent Finer	% PASSED	5.4	98.3	99.7	95.1	86.8	80.8
Hydrometer Reading 1 - Percent Finer	% PASSED	2.8	91.4	95.1	94.5	84	72.4
Hydrometer Reading 2 - Percent Finer	% PASSED	2.3	87.5	91.4	87.2	82.1	68.1
Hydrometer Reading 3 - Percent Finer	% PASSED	2.3	79.8	82.4	76.1	72.6	60.7
Hydrometer Reading 4 - Percent Finer	% PASSED	1.8	75.9	76.9	70.6	66.6	55
Hydrometer Reading 5 - Percent Finer	% PASSED	1.3	67.9	71.2	61.1	59	49.2
Hydrometer Reading 6 - Percent Finer	% PASSED	0.8	58.2	58.4	51.9	49.6	39
Hydrometer Reading 7 - Percent Finer	% PASSED	0.3	46.7	45.7	39	38.2	28.9
TOC							
TOC	mg/kg	45,400	23,600	25,500	29,000	37,000	35,800

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Table B-5
Sediment Sample Analytical Results - Physical Properties
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

	Location ID	LMR11-70	LMR11-71	LMR11-71	LMR11-71	LMR11-71	LMR11-71
	Field Sample ID	LMR11-70-085	LMR11-71-006	LMR11-71-024	LMR11-71-024FS	LMR11-71-048	LMR11-71-072
	Sample Date	8/7/2011	8/6/2011	8/6/2011	8/6/2011	8/6/2011	8/6/2011
	Depth Interval (in bss)	72- 85	0- 6	6- 24	6- 24	24- 48	48- 72
Chemical Name	**Unit**						
Grain Size							
Gravel	%	0.2	0	0	0	0	0
Sand	%	7.2	3.3	0.9	1.1	0.5	3.2
Silt	%	28.9	40.8	39	37.3	39.7	35.5
Clay	%	63.7	55.9	60.1	61.6	59.8	61.3
Coarse Sand	%	1.1	0	0	0	0	0
Medium Sand	%	0.7	0.5	0.1	0.2	0	0
Fine Sand	%	5.4	2.8	0.8	0.9	0.5	3.2
Sieve Size 3 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 2 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 1.5 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 1 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 0.75 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 0.375 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size #4 - Percent Finer	% PASSED	99.8	100	100	100	100	100
Sieve Size #10 - Percent Finer	% PASSED	98.7	100	100	100	100	100
Sieve Size #20 - Percent Finer	% PASSED	98.5	99.9	100	99.9	100	100
Sieve Size #40 - Percent Finer	% PASSED	98	99.5	99.9	99.8	100	100
Sieve Size #60 - Percent Finer	% PASSED	97	99.2	99.9	99.7	100	99.8
Sieve Size #80 - Percent Finer	% PASSED	95.7	99	99.8	99.6	100	99.5
Sieve Size #100 - Percent Finer	% PASSED	94.9	98.8	99.6	99.4	99.9	99.1
Sieve Size #200 - Percent Finer	% PASSED	92.6	96.7	99.1	98.9	99.5	96.8
Hydrometer Reading 1 - Percent Finer	% PASSED	87.3	88.9	91.9	90.1	90.2	88.4
Hydrometer Reading 2 - Percent Finer	% PASSED	82.9	81.6	86	84.8	84.5	83.6
Hydrometer Reading 3 - Percent Finer	% PASSED	75.5	72.4	76.8	75.8	73.1	75.7
Hydrometer Reading 4 - Percent Finer	% PASSED	68.1	65.1	65.7	68.7	65.5	67.7
Hydrometer Reading 5 - Percent Finer	% PASSED	63.7	55.9	60.1	61.6	59.8	61.3
Hydrometer Reading 6 - Percent Finer	% PASSED	53.2	44.6	48.7	50.6	48.1	49.9
Hydrometer Reading 7 - Percent Finer	% PASSED	41.4	33.6	35.8	38.1	36.7	40.4
TOC							
TOC	mg/kg	29,000	27,700	21,600	19,800	20,200	23,300

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Table B-5
Sediment Sample Analytical Results - Physical Properties
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

	Location ID	LMR11-71	LMR11-71	LMR11-71	LMR11-71	LMR11-72	LMR11-72
	Field Sample ID	LMR11-71-096	LMR11-71-120	LMR11-71-144	LMR11-71-161	LMR11-72-006	LMR11-72-024
	Sample Date	8/6/2011	8/6/2011	8/6/2011	8/6/2011	8/5/2011	8/5/2011
	Depth Interval (in bss)	72- 96	96- 120	120- 144	144- 161	0- 6	6- 24
Chemical Name	**Unit**						
Grain Size							
Gravel	%	0.2	1.3	2.4	0	0.6	21.4
Sand	%	6.6	26.8	20.9	9.6	26	62.9
Silt	%	42.5	29.7	28.9	35.5	39.2	13.3
Clay	%	50.7	42.2	47.8	54.9	34.2	2.4
Coarse Sand	%	0.1	4.9	2	0.5	1.1	7.5
Medium Sand	%	0.6	10.2	5.9	2.8	3	15.7
Fine Sand	%	5.9	11.7	13	6.3	21.9	39.7
Sieve Size 3 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 2 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 1.5 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 1 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 0.75 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 0.375 inch - Percent Finer	% PASSED	100	100	98.4	100	100	87.9
Sieve Size #4 - Percent Finer	% PASSED	99.8	98.7	97.6	100	99.4	78.6
Sieve Size #10 - Percent Finer	% PASSED	99.7	93.8	95.6	99.5	98.3	71.1
Sieve Size #20 - Percent Finer	% PASSED	99.5	89.4	93.7	98.4	97.5	65.9
Sieve Size #40 - Percent Finer	% PASSED	99.1	83.6	89.7	96.7	95.3	55.4
Sieve Size #60 - Percent Finer	% PASSED	98.5	78.6	84.7	94.4	89.4	38.7
Sieve Size #80 - Percent Finer	% PASSED	97.9	76.5	81.9	93.2	84.1	27.2
Sieve Size #100 - Percent Finer	% PASSED	97.3	75.4	80.3	92.5	81.4	22.4
Sieve Size #200 - Percent Finer	% PASSED	93.2	71.9	76.7	90.4	73.4	15.7
Hydrometer Reading 1 - Percent Finer	% PASSED	79.8	65.9	72.9	85.4	57.7	7.3
Hydrometer Reading 2 - Percent Finer	% PASSED	73.8	61.5	68.2	80.3	51.1	6.2
Hydrometer Reading 3 - Percent Finer	% PASSED	63.1	54.1	62	70.2	44.4	4.1
Hydrometer Reading 4 - Percent Finer	% PASSED	57	46.7	54.1	63.4	37.7	2.9
Hydrometer Reading 5 - Percent Finer	% PASSED	50.7	42.2	47.8	54.9	34.2	2.4
Hydrometer Reading 6 - Percent Finer	% PASSED	40.1	34.6	38.2	44.5	24.3	0.8
Hydrometer Reading 7 - Percent Finer	% PASSED	30.9	27.2	30.3	34.1	14.3	-0.2
TOC							
TOC	mg/kg	27,800	24,400	29,200	21,100	61,100	21,600

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Table B-5
Sediment Sample Analytical Results - Physical Properties
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

	Location ID	LMR11-72	LMR11-73	LMR11-73	LMR11-73	LMR11-74	LMR11-74
	Field Sample ID	LMR11-72-035	LMR11-73-006	LMR11-73-024	LMR11-73-042	LMR11-74-006	LMR11-74-024
	Sample Date	8/5/2011	8/7/2011	8/7/2011	8/7/2011	8/5/2011	8/5/2011
	Depth Interval (in bss)	24- 35	0- 6	6- 24	24- 42	0- 6	6- 24
Chemical Name	**Unit**						
Grain Size							
Gravel	%	1.1	0	0	7.1	0	0.4
Sand	%	67.7	42.2	19.1	55.4	14.9	13.9
Silt	%	26.3	25.2	34.6	10.6	26.3	29.8
Clay	%	4.9	32.6	46.3	26.9	58.8	55.9
Coarse Sand	%	1.6	1	0.9	6.8	0	0.4
Medium Sand	%	7.5	3.6	2.6	16.4	3	1
Fine Sand	%	58.6	37.6	15.6	32.2	11.9	12.5
Sieve Size 3 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 2 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 1.5 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 1 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 0.75 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 0.375 inch - Percent Finer	% PASSED	100	100	100	98.3	100	100
Sieve Size #4 - Percent Finer	% PASSED	98.9	100	100	92.9	100	99.6
Sieve Size #10 - Percent Finer	% PASSED	97.3	99	99.1	86.1	100	99.2
Sieve Size #20 - Percent Finer	% PASSED	94.6	97.8	98.1	79.1	98.9	98.9
Sieve Size #40 - Percent Finer	% PASSED	89.8	95.4	96.5	69.7	97	98.2
Sieve Size #60 - Percent Finer	% PASSED	76.2	91.3	94	57.3	91.4	96.2
Sieve Size #80 - Percent Finer	% PASSED	61.9	83.9	91.6	49.2	87.7	92.3
Sieve Size #100 - Percent Finer	% PASSED	49.9	77.2	89.5	44.9	86.8	90.1
Sieve Size #200 - Percent Finer	% PASSED	31.2	57.8	80.9	37.5	85.1	85.7
Hydrometer Reading 1 - Percent Finer	% PASSED	16.7	48.2	66.2	37.5	85.1	80.8
Hydrometer Reading 2 - Percent Finer	% PASSED	13	45.4	63	36.3	79.5	75.5
Hydrometer Reading 3 - Percent Finer	% PASSED	9.3	41.2	58.1	32.9	73.8	70.2
Hydrometer Reading 4 - Percent Finer	% PASSED	7.1	37	51.2	30.6	66.3	63.1
Hydrometer Reading 5 - Percent Finer	% PASSED	4.9	32.6	46.3	26.9	58.8	55.9
Hydrometer Reading 6 - Percent Finer	% PASSED	2.7	26.8	39.5	22.1	47.7	47
Hydrometer Reading 7 - Percent Finer	% PASSED	1.2	21.2	31.3	15.2	36.5	34.6
TOC							
TOC	mg/kg	12,800	21,000	19,600	13,300	22,200	31,500

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Table B-5
Sediment Sample Analytical Results - Physical Properties
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

	Location ID	LMR11-74	LMR11-74	LMR11-74	LMR11-74	LMR11-75	LMR11-75
	Field Sample ID	LMR11-74-048	LMR11-74-048FS	LMR11-74-072	LMR11-74-085	LMR11-75-006	LMR11-75-024
	Sample Date	8/5/2011	8/5/2011	8/5/2011	8/5/2011	8/5/2011	8/5/2011
	Depth Interval (in bss)	24- 48	24- 48	48- 72	72- 85	0- 6	6- 24
Chemical Name	**Unit**						
Grain Size							
Gravel	%	0	0	0	14.9	25.9	0
Sand	%	2.6	0.7	0.9	73.6	11.3	14.5
Silt	%	32.7	29.8	27	6.1	23.4	39.3
Clay	%	64.7	69.5	72.1	5.4	39.4	46.2
Coarse Sand	%	0	0	0	20.4	1.1	0
Medium Sand	%	0.5	0	0.2	31.9	1.3	0.5
Fine Sand	%	2.1	0.7	0.7	21.3	8.9	14
Sieve Size 3 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 2 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 1.5 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 1 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 0.75 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 0.375 inch - Percent Finer	% PASSED	100	100	100	94.1	84.5	100
Sieve Size #4 - Percent Finer	% PASSED	100	100	100	85.1	74.1	100
Sieve Size #10 - Percent Finer	% PASSED	100	100	100	64.7	73	100
Sieve Size #20 - Percent Finer	% PASSED	99.7	100	99.9	48.3	72.3	99.7
Sieve Size #40 - Percent Finer	% PASSED	99.5	100	99.8	32.8	71.7	99.5
Sieve Size #60 - Percent Finer	% PASSED	99.1	99.8	99.6	18	69.7	98.9
Sieve Size #80 - Percent Finer	% PASSED	98.4	99.5	99.4	14	66.9	98.2
Sieve Size #100 - Percent Finer	% PASSED	98.1	99.4	99.3	12.7	65.7	97.1
Sieve Size #200 - Percent Finer	% PASSED	97.4	99.3	99.1	11.5	62.8	85.5
Hydrometer Reading 1 - Percent Finer	% PASSED	92.8	96.8	99.3	8.1	57.4	72.6
Hydrometer Reading 2 - Percent Finer	% PASSED	89.1	92.9	93.9	7.8	51.9	66.9
Hydrometer Reading 3 - Percent Finer	% PASSED	79.7	85.1	86.6	6.8	47.7	57.5
Hydrometer Reading 4 - Percent Finer	% PASSED	74.1	77.3	77.5	6.1	43.6	50
Hydrometer Reading 5 - Percent Finer	% PASSED	64.7	69.5	72.1	5.4	39.4	46.2
Hydrometer Reading 6 - Percent Finer	% PASSED	51.6	57.8	57.5	4	31	34.8
Hydrometer Reading 7 - Percent Finer	% PASSED	38.5	42.1	41	3	28.4	23.7
TOC							
TOC	mg/kg	21,800	29,800	25,200	10,800	29,700	41,700

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Table B-5
Sediment Sample Analytical Results - Physical Properties
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

	Location ID	LMR11-75	LMR11-75	LMR11-75	LMR11-76	LMR11-76	LMR11-76
	Field Sample ID	LMR11-75-048	LMR11-75-048FS	LMR11-75-080	LMR11-76-006	LMR11-76-024	LMR11-76-048
	Sample Date	8/5/2011	8/5/2011	8/5/2011	8/5/2011	8/5/2011	8/5/2011
	Depth Interval (in bss)	24- 48	24- 48	48- 80	0- 6	6- 24	24- 48
Chemical Name	**Unit**						
Grain Size							
Gravel	%	0	0	12	0.6	0.5	0
Sand	%	3.5	3.8	5.6	11.4	30.1	10.5
Silt	%	32.3	30.9	31	28.9	23.6	30.3
Clay	%	64.2	65.3	51.4	59.1	45.8	59.2
Coarse Sand	%	0	0	1	1.4	1.4	0.4
Medium Sand	%	0.3	0.3	1.1	4.2	9.4	2.4
Fine Sand	%	3.2	3.5	3.5	5.8	19.3	7.7
Sieve Size 3 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 2 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 1.5 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 1 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 0.75 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 0.375 inch - Percent Finer	% PASSED	100	100	89.9	100	100	100
Sieve Size #4 - Percent Finer	% PASSED	100	100	88	99.4	99.5	100
Sieve Size #10 - Percent Finer	% PASSED	100	100	87	98	98.1	99.6
Sieve Size #20 - Percent Finer	% PASSED	99.9	99.9	86.5	96.7	96	99.2
Sieve Size #40 - Percent Finer	% PASSED	99.7	99.7	85.9	93.8	88.7	97.2
Sieve Size #60 - Percent Finer	% PASSED	99.2	99.1	84.9	91.3	78.3	94.9
Sieve Size #80 - Percent Finer	% PASSED	98.8	98.6	84.4	89.9	76	94
Sieve Size #100 - Percent Finer	% PASSED	98.4	98.2	84.1	89.7	75.1	93.3
Sieve Size #200 - Percent Finer	% PASSED	96.5	96.2	82.4	88	69.4	89.5
Hydrometer Reading 1 - Percent Finer	% PASSED	94.9	93.8	78.3	86.8	66.2	83.5
Hydrometer Reading 2 - Percent Finer	% PASSED	87.7	88.5	73.2	81.3	62.8	78.7
Hydrometer Reading 3 - Percent Finer	% PASSED	78.6	79.6	64.8	70.2	57.1	72.2
Hydrometer Reading 4 - Percent Finer	% PASSED	71.4	72.4	58.1	64.6	50.4	64.1
Hydrometer Reading 5 - Percent Finer	% PASSED	64.2	65.3	51.4	59.1	45.8	59.2
Hydrometer Reading 6 - Percent Finer	% PASSED	49.6	50.9	42.8	47.8	36.8	46.3
Hydrometer Reading 7 - Percent Finer	% PASSED	37.1	40.3	31.2	35.5	27.8	34.9
TOC							
TOC	mg/kg	33,600	26,400	24,200	29,100	13,900	23,300

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Table B-5
Sediment Sample Analytical Results - Physical Properties
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

	Location ID	LMR11-76	LMR11-76	LMR11-76	LMR11-77	LMR11-77	LMR11-77
	Field Sample ID	LMR11-76-072	LMR11-76-096	LMR11-76-120	LMR11-77-006	LMR11-77-024	LMR11-77-048
	Sample Date	8/5/2011	8/5/2011	8/5/2011	8/5/2011	8/5/2011	8/5/2011
	Depth Interval (in bss)	48- 72	72- 96	96- 120	0- 6	6- 24	24- 48
Chemical Name	**Unit**						
Grain Size							
Gravel	%	0	0	1.2	NA	33.3	0
Sand	%	4.4	0.6	9.9	NA	15.3	13.5
Silt	%	25.4	26.5	25	NA	15	32.6
Clay	%	70.2	72.9	63.9	NA	36.4	53.9
Coarse Sand	%	0	0	0.5	NA	1.5	0.7
Medium Sand	%	0.8	0.1	1.5	NA	4.2	2.9
Fine Sand	%	3.6	0.5	7.9	NA	9.6	9.9
Sieve Size 3 inch - Percent Finer	% PASSED	100	100	100	NA	100	100
Sieve Size 2 inch - Percent Finer	% PASSED	100	100	100	NA	100	100
Sieve Size 1.5 inch - Percent Finer	% PASSED	100	100	100	NA	100	100
Sieve Size 1 inch - Percent Finer	% PASSED	100	100	100	NA	67.2	100
Sieve Size 0.75 inch - Percent Finer	% PASSED	100	100	100	NA	67.2	100
Sieve Size 0.375 inch - Percent Finer	% PASSED	100	100	100	NA	67.2	100
Sieve Size #4 - Percent Finer	% PASSED	100	100	98.8	NA	66.7	100
Sieve Size #10 - Percent Finer	% PASSED	100	100	98.3	NA	65.2	99.3
Sieve Size #20 - Percent Finer	% PASSED	99.9	100	98.1	NA	63.6	98.2
Sieve Size #40 - Percent Finer	% PASSED	99.2	99.9	96.8	NA	61	96.4
Sieve Size #60 - Percent Finer	% PASSED	98.4	99.7	94.2	NA	57.5	93.7
Sieve Size #80 - Percent Finer	% PASSED	98.2	99.7	92.6	NA	55.5	92.2
Sieve Size #100 - Percent Finer	% PASSED	97.9	99.7	91.6	NA	54.5	91.1
Sieve Size #200 - Percent Finer	% PASSED	95.6	99.4	88.9	NA	51.4	86.5
Hydrometer Reading 1 - Percent Finer	% PASSED	94.5	99.2	88.3	NA	50.3	79.1
Hydrometer Reading 2 - Percent Finer	% PASSED	91	95.7	84.8	NA	47.2	72.4
Hydrometer Reading 3 - Percent Finer	% PASSED	84.1	85.2	74.3	NA	42.6	65.7
Hydrometer Reading 4 - Percent Finer	% PASSED	77.2	81.7	70.8	NA	40.3	59
Hydrometer Reading 5 - Percent Finer	% PASSED	70.2	72.9	63.9	NA	36.4	53.9
Hydrometer Reading 6 - Percent Finer	% PASSED	58.1	58.9	51.6	NA	30.2	43.9
Hydrometer Reading 7 - Percent Finer	% PASSED	44.3	44.9	39.4	NA	24.8	35.5
TOC							
TOC	mg/kg	23,600	22,400	24,000	24,800	30,200	31,300

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Table B-5
Sediment Sample Analytical Results - Physical Properties
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

	Location ID	LMR11-77	LMR11-77	LMR11-78	LMR11-79	LMR11-79	LMR11-79
	Field Sample ID	LMR11-77-072	LMR11-77-120	LMR11-78-014	LMR11-79-006	LMR11-79-024	LMR11-79-024FS
	Sample Date	8/5/2011	8/5/2011	8/5/2011	8/4/2011	8/4/2011	8/4/2011
	Depth Interval (in bss)	48- 72	72- 120	0- 14	0- 6	6- 24	6- 24
Chemical Name	**Unit**						
Grain Size							
Gravel	%	0	0	29.8	0	0	0
Sand	%	3.8	1.6	56	4.6	2.6	7.3
Silt	%	25.4	27.5	5.7	28.6	29	29.4
Clay	%	70.8	70.9	8.5	66.8	68.4	63.3
Coarse Sand	%	0	0	5.4	0	0	0
Medium Sand	%	0.7	0.5	11.3	0.3	0.4	1.2
Fine Sand	%	3.1	1.1	39.3	4.3	2.2	6.1
Sieve Size 3 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 2 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 1.5 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 1 inch - Percent Finer	% PASSED	100	100	88.9	100	100	100
Sieve Size 0.75 inch - Percent Finer	% PASSED	100	100	73.1	100	100	100
Sieve Size 0.375 inch - Percent Finer	% PASSED	100	100	72.3	100	100	100
Sieve Size #4 - Percent Finer	% PASSED	100	100	70.2	100	100	100
Sieve Size #10 - Percent Finer	% PASSED	100	100	64.8	100	100	100
Sieve Size #20 - Percent Finer	% PASSED	99.7	99.7	57.9	99.9	99.7	99.5
Sieve Size #40 - Percent Finer	% PASSED	99.3	99.5	53.5	99.7	99.6	98.8
Sieve Size #60 - Percent Finer	% PASSED	98.9	99.4	46.7	99.2	99.4	97.3
Sieve Size #80 - Percent Finer	% PASSED	98.6	99.3	27.6	98.6	99.1	96
Sieve Size #100 - Percent Finer	% PASSED	98.3	99.1	22.6	98.1	98.8	95.2
Sieve Size #200 - Percent Finer	% PASSED	96.2	98.4	14.2	95.4	97.4	92.7
Hydrometer Reading 1 - Percent Finer	% PASSED	93	95.1	17.3	89.5	97.2	92.4
Hydrometer Reading 2 - Percent Finer	% PASSED	89.6	91.4	14.4	85.2	89.6	85.9
Hydrometer Reading 3 - Percent Finer	% PASSED	82.9	84	12	79.5	82.1	79.4
Hydrometer Reading 4 - Percent Finer	% PASSED	77.8	78.4	10.3	73.9	74.5	71.4
Hydrometer Reading 5 - Percent Finer	% PASSED	70.8	70.9	8.5	66.8	68.4	63.3
Hydrometer Reading 6 - Percent Finer	% PASSED	60.8	59.8	6.2	55.5	56.3	50.1
Hydrometer Reading 7 - Percent Finer	% PASSED	49	46.8	4.4	41.3	41.2	37.4
TOC							
TOC	mg/kg	41,500	35,400	14,700	29,400	27,700	34,300

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Table B-5
Sediment Sample Analytical Results - Physical Properties
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

	Location ID	LMR11-79	LMR11-80	LMR11-80	LMR11-80	LMR11-81	LMR11-81
	Field Sample ID	LMR11-79-054	LMR11-80-006	LMR11-80-024	LMR11-80-056	LMR11-81-006	LMR11-81-019
	Sample Date	8/4/2011	8/5/2011	8/5/2011	8/5/2011	8/5/2011	8/5/2011
	Depth Interval (in bss)	24- 54	0- 6	6- 24	24- 56	0- 6	6- 19
Chemical Name	**Unit**						
Grain Size							
Gravel	%	0.6	1.4	0	6.9	5.2	21.8
Sand	%	5.2	37.5	6.9	47.4	59.9	68.3
Silt	%	33.8	23.3	29.7	13.4	20.9	6
Clay	%	60.4	37.8	63.4	32.3	14	4
Coarse Sand	%	0.4	1.4	0	1.7	2	5.3
Medium Sand	%	1.6	4	0.6	15	15.6	26.2
Fine Sand	%	3.2	32.1	6.3	30.7	42.3	36.8
Sieve Size 3 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 2 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 1.5 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 1 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 0.75 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 0.375 inch - Percent Finer	% PASSED	100	100	100	95.8	98.9	89.4
Sieve Size #4 - Percent Finer	% PASSED	99.4	98.6	100	93.1	94.8	78.2
Sieve Size #10 - Percent Finer	% PASSED	99	97.2	100	91.4	92.8	72.9
Sieve Size #20 - Percent Finer	% PASSED	98.3	95.2	99.8	87.3	88.9	65.2
Sieve Size #40 - Percent Finer	% PASSED	97.4	93.2	99.4	76.4	77.2	46.7
Sieve Size #60 - Percent Finer	% PASSED	96.7	91.7	99	62.8	67.8	30.4
Sieve Size #80 - Percent Finer	% PASSED	96.2	83.9	98	56.5	54.6	17.4
Sieve Size #100 - Percent Finer	% PASSED	95.8	78.3	96.8	53.3	48.2	13.9
Sieve Size #200 - Percent Finer	% PASSED	94.2	61.1	93.1	45.7	34.9	9.9
Hydrometer Reading 1 - Percent Finer	% PASSED	83.3	55.2	89.2	44.2	26.3	6.9
Hydrometer Reading 2 - Percent Finer	% PASSED	80.4	51.2	82.8	40.6	23.5	6.2
Hydrometer Reading 3 - Percent Finer	% PASSED	71.8	44.5	74.7	37.1	20.1	5.8
Hydrometer Reading 4 - Percent Finer	% PASSED	66.1	41.8	69.9	35.9	16.7	4.7
Hydrometer Reading 5 - Percent Finer	% PASSED	60.4	37.8	63.4	32.3	14	4
Hydrometer Reading 6 - Percent Finer	% PASSED	47.2	32.4	51.9	25	11.3	3.2
Hydrometer Reading 7 - Percent Finer	% PASSED	36	25.7	42.2	20.3	8.6	2.5
TOC							
TOC	mg/kg	25,500	32,400	24,600	11,700	19,400	10,800

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Table B-5
Sediment Sample Analytical Results - Physical Properties
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

	Location ID	LMR11-82	LMR11-82	LMR11-82	LMR11-83	LMR11-83	LMR11-83
	Field Sample ID	LMR11-82-006	LMR11-82-024	LMR11-82-055	LMR11-83-006	LMR11-83-024	LMR11-83-048
	Sample Date	8/5/2011	8/5/2011	8/5/2011	8/5/2011	8/5/2011	8/5/2011
	Depth Interval (in bss)	0- 6	6- 24	24- 55	0- 6	6- 24	24- 48
Chemical Name	**Unit**						
Grain Size							
Gravel	%	0.7	0	0.5	11.2	4.3	5.8
Sand	%	56.2	66.9	78.3	18.8	20.6	43.4
Silt	%	16.2	13.9	14.7	28.5	25.9	21.5
Clay	%	26.9	19.2	6.5	41.5	49.2	29.3
Coarse Sand	%	0.5	0.8	1.9	1.6	1.4	2.8
Medium Sand	%	2.1	7.8	19	4	4.2	12.5
Fine Sand	%	53.6	58.3	57.4	13.2	15	28.1
Sieve Size 3 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 2 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 1.5 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 1 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 0.75 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 0.375 inch - Percent Finer	% PASSED	99.3	100	100	92.2	100	98.4
Sieve Size #4 - Percent Finer	% PASSED	99.3	100	99.5	88.8	95.7	94.2
Sieve Size #10 - Percent Finer	% PASSED	98.8	99.2	97.6	87.2	94.3	91.4
Sieve Size #20 - Percent Finer	% PASSED	98.3	96.8	91.4	85.9	92.8	87.5
Sieve Size #40 - Percent Finer	% PASSED	96.7	91.4	78.6	83.2	90.1	78.9
Sieve Size #60 - Percent Finer	% PASSED	69.6	65.2	49.9	78.5	85.3	68.2
Sieve Size #80 - Percent Finer	% PASSED	50.1	50.2	36.4	74.7	80.3	60.7
Sieve Size #100 - Percent Finer	% PASSED	47.6	44.9	31.2	73.3	78.1	57.6
Sieve Size #200 - Percent Finer	% PASSED	43.1	33.1	21.2	70	75.1	50.8
Hydrometer Reading 1 - Percent Finer	% PASSED	38	31.9	13.7	61	69.6	42.2
Hydrometer Reading 2 - Percent Finer	% PASSED	36.3	29.6	11.5	56.1	65.2	39.1
Hydrometer Reading 3 - Percent Finer	% PASSED	32.9	26.1	9.3	51.2	59.4	35.4
Hydrometer Reading 4 - Percent Finer	% PASSED	29.5	22.6	8.1	47.3	55	31.6
Hydrometer Reading 5 - Percent Finer	% PASSED	26.9	19.2	6.5	41.5	49.2	29.3
Hydrometer Reading 6 - Percent Finer	% PASSED	22.6	14.4	4.7	32.7	38.9	24
Hydrometer Reading 7 - Percent Finer	% PASSED	17.5	9.9	3.7	24	28.6	17.1
TOC							
TOC	mg/kg	16,200	21,700	27,800	22,700	24,800	38,000

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Table B-5
Sediment Sample Analytical Results - Physical Properties
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

	Location ID	LMR11-83	LMR11-83	LMR11-84	LMR11-84	LMR11-84	LMR11-84
	Field Sample ID	LMR11-83-072	LMR11-83-087	LMR11-84-006	LMR11-84-024	LMR11-84-048	LMR11-84-072
	Sample Date	8/5/2011	8/5/2011	8/5/2011	8/5/2011	8/5/2011	8/5/2011
	Depth Interval (in bss)	48- 72	72- 87	0- 6	6- 24	24- 48	48- 72
Chemical Name	**Unit**						
Grain Size							
Gravel	%	5.8	24.1	0	4.1	0.5	0.2
Sand	%	49.1	64.5	12	17.3	69.7	37.8
Silt	%	17.8	6.4	36.7	24.3	12.7	29
Clay	%	27.3	5	51.3	54.3	17.1	33
Coarse Sand	%	0.7	7.6	0	0.7	1.9	1
Medium Sand	%	6.9	18.2	0.9	4	16.8	10.2
Fine Sand	%	41.5	38.7	11.1	12.6	51	26.6
Sieve Size 3 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 2 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 1.5 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 1 inch - Percent Finer	% PASSED	100	100	100	100	100	100
Sieve Size 0.75 inch - Percent Finer	% PASSED	100	86.6	100	100	100	100
Sieve Size 0.375 inch - Percent Finer	% PASSED	95.2	80.6	100	96.5	100	100
Sieve Size #4 - Percent Finer	% PASSED	94.2	75.9	100	95.9	99.5	99.8
Sieve Size #10 - Percent Finer	% PASSED	93.5	68.3	100	95.2	97.6	98.8
Sieve Size #20 - Percent Finer	% PASSED	91.9	60.2	99.6	94	92.9	96.2
Sieve Size #40 - Percent Finer	% PASSED	86.6	50.1	99.1	91.2	80.8	88.6
Sieve Size #60 - Percent Finer	% PASSED	71.2	31	98.3	86.4	58.7	77.6
Sieve Size #80 - Percent Finer	% PASSED	60.5	20.4	97.6	84	47	72.9
Sieve Size #100 - Percent Finer	% PASSED	55.7	16.7	96.8	82.7	40.8	70.4
Sieve Size #200 - Percent Finer	% PASSED	45.1	11.4	88	78.6	29.8	62
Hydrometer Reading 1 - Percent Finer	% PASSED	41.8	10.4	72.2	74.4	25.3	49.7
Hydrometer Reading 2 - Percent Finer	% PASSED	39.1	8.8	67	70.7	23.4	45.8
Hydrometer Reading 3 - Percent Finer	% PASSED	33.8	7.3	61.8	63.2	20.3	42
Hydrometer Reading 4 - Percent Finer	% PASSED	29.9	5.7	55.3	59.4	18.4	38.1
Hydrometer Reading 5 - Percent Finer	% PASSED	27.3	5	51.3	54.3	17.1	33
Hydrometer Reading 6 - Percent Finer	% PASSED	22	3.5	40.9	45.6	14.6	26.4
Hydrometer Reading 7 - Percent Finer	% PASSED	15.3	2.7	31.9	34.4	11.6	18.6
TOC							
TOC	mg/kg	18,500	9,430 J	23,900	34,100	21,600	26,900 J

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Table B-5
Sediment Sample Analytical Results - Physical Properties
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

	Location ID	LMR11-84	LMR11-84	LMR11-84	LMR11-85	LMR11-85	LMR11-85
	Field Sample ID	LMR11-84-072DP	LMR11-84-096	LMR11-84-115	LMR11-85-006	LMR11-85-024	LMR11-85-048
	Sample Date	8/5/2011	8/5/2011	8/5/2011	8/5/2011	8/5/2011	8/5/2011
	Depth Interval (in bss)	48- 72	72- 96	96- 115	0- 6	6- 24	24- 48
Chemical Name	**Unit**						
Grain Size							
Gravel	%	NA	7	0.2	1.5	0	0
Sand	%	NA	53.7	44.3	40	28.4	6
Silt	%	NA	18.4	28	22	23.3	39.4
Clay	%	NA	20.9	27.5	36.5	48.3	54.6
Coarse Sand	%	NA	3.2	0.9	0.5	0	0
Medium Sand	%	NA	16.4	8.3	5.8	3.6	0.7
Fine Sand	%	NA	34.1	35.1	33.7	24.8	5.3
Sieve Size 3 inch - Percent Finer	% PASSED	NA	100	100	100	100	100
Sieve Size 2 inch - Percent Finer	% PASSED	NA	100	100	100	100	100
Sieve Size 1.5 inch - Percent Finer	% PASSED	NA	100	100	100	100	100
Sieve Size 1 inch - Percent Finer	% PASSED	NA	100	100	100	100	100
Sieve Size 0.75 inch - Percent Finer	% PASSED	NA	100	100	100	100	100
Sieve Size 0.375 inch - Percent Finer	% PASSED	NA	96	100	100	100	100
Sieve Size #4 - Percent Finer	% PASSED	NA	93	99.8	98.5	100	100
Sieve Size #10 - Percent Finer	% PASSED	NA	89.8	98.9	98	100	100
Sieve Size #20 - Percent Finer	% PASSED	NA	85.2	97	96.5	98.6	99.8
Sieve Size #40 - Percent Finer	% PASSED	NA	73.4	90.6	92.2	96.4	99.3
Sieve Size #60 - Percent Finer	% PASSED	NA	55.6	76.8	83	92	98.3
Sieve Size #80 - Percent Finer	% PASSED	NA	49.6	71.1	70.5	81.9	96.2
Sieve Size #100 - Percent Finer	% PASSED	NA	46.8	68.3	67.2	78.5	95.7
Sieve Size #200 - Percent Finer	% PASSED	NA	39.3	55.5	58.5	71.6	94
Hydrometer Reading 1 - Percent Finer	% PASSED	NA	31.8	45.3	54.1	70.1	91.1
Hydrometer Reading 2 - Percent Finer	% PASSED	NA	29	39	50.2	65.7	81.6
Hydrometer Reading 3 - Percent Finer	% PASSED	NA	26.3	37.7	44.4	59.2	70.8
Hydrometer Reading 4 - Percent Finer	% PASSED	NA	22.9	32.6	39.5	52.7	62.7
Hydrometer Reading 5 - Percent Finer	% PASSED	NA	20.9	27.5	36.5	48.3	54.6
Hydrometer Reading 6 - Percent Finer	% PASSED	NA	16	21.1	29.7	38.5	42.4
Hydrometer Reading 7 - Percent Finer	% PASSED	NA	12.6	16	21.9	28.8	31.7
TOC							
TOC	mg/kg	169,000 J	74,000	52,700	20,400	17,000	39,900

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Table B-5
Sediment Sample Analytical Results - Physical Properties
Lower Maumee River -Maumee River AOC
Toledo, Lucas County, Ohio

	Location ID	LMR11-85
	Field Sample ID	LMR11-85-074
	Sample Date	8/5/2011
	Depth Interval (in bss)	48- 74
Chemical Name	**Unit**	
Grain Size		
Gravel	%	0.7
Sand	%	41.3
Silt	%	27.5
Clay	%	30.5
Coarse Sand	%	0.9
Medium Sand	%	14.2
Fine Sand	%	26.2
Sieve Size 3 inch - Percent Finer	% PASSED	100
Sieve Size 2 inch - Percent Finer	% PASSED	100
Sieve Size 1.5 inch - Percent Finer	% PASSED	100
Sieve Size 1 inch - Percent Finer	% PASSED	100
Sieve Size 0.75 inch - Percent Finer	% PASSED	100
Sieve Size 0.375 inch - Percent Finer	% PASSED	100
Sieve Size #4 - Percent Finer	% PASSED	99.3
Sieve Size #10 - Percent Finer	% PASSED	98.4
Sieve Size #20 - Percent Finer	% PASSED	95.4
Sieve Size #40 - Percent Finer	% PASSED	84.2
Sieve Size #60 - Percent Finer	% PASSED	76.1
Sieve Size #80 - Percent Finer	% PASSED	68.5
Sieve Size #100 - Percent Finer	% PASSED	65.5
Sieve Size #200 - Percent Finer	% PASSED	58
Hydrometer Reading 1 - Percent Finer	% PASSED	51.8
Hydrometer Reading 2 - Percent Finer	% PASSED	47
Hydrometer Reading 3 - Percent Finer	% PASSED	40.2
Hydrometer Reading 4 - Percent Finer	% PASSED	34.4
Hydrometer Reading 5 - Percent Finer	% PASSED	30.5
Hydrometer Reading 6 - Percent Finer	% PASSED	24.7
Hydrometer Reading 7 - Percent Finer	% PASSED	18.9
TOC		
TOC	mg/kg	22,900

Notes:
% - Percent
DP - Duplicate
FS - Field Split
ID - Identification
in bss - Inches below sediment surface
J - Concentration estimated
mg/kg - Milligram per kilogram
NA - Not Analyzed
TOC - Total Organic Carbon

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APPENDIX C
PHOTOGRAPHIC LOG



Site: Lower Maumee River
Photograph No.: 1 **Date:** 08/05/11
Direction: Northeast **Photographer:** Mark Loomis
Subject: Recovery of core at sampling location LMR11-74



Site: Lower Maumee River
Photograph No.: 2 **Date:** 08/06/11
Direction: West **Photographer:** Mark Loomis
Subject: Recovery of core from sampling location LMR11-59

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Site: Lower Maumee River
Photograph No.: 3 **Date:** 08/06/11
Direction: West **Photographer:** Mark Loomis
Subject: Set-up at sampling location LMR11-69



Site: Lower Maumee River
Photograph No.: 4 **Date:** 08/06/11
Direction: East **Photographer:** Mark Loomis
Subject: Collection of core at LMR11-69 near mouth of Swan Creek; poor sediment recovery at this location

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Site: Lower Maumee River
Photograph No.: 5 **Date:** 08/07/11
Direction: Southeast **Photographer:** Mark Loomis
Subject: CSO on north side of grain elevators near sampling location LMR11-73



Site: Lower Maumee River
Photograph No.: 6 **Date:** 08/08/11
Direction: Southeast **Photographer:** Mark Loomis
Subject: CSO on east bank of river south of grain elevators

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Site: Lower Maumee River
Photograph No.: 7 **Date:** 08/08/11
Direction: South **Photographer:** Mark Loomis
Subject: CSO on south bank near sampling location LMR11-50



Site: Lower Maumee River
Photograph No.: 8 **Date:** 08/08/11
Direction: South **Photographer:** Mark Loomis
Subject: Core collected from LMR11-50 near CSO; odor and sheen observed

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Site: Lower Maumee River
Photograph No.: 9 **Date:** 08/08/11
Direction: East **Photographer:** Jonathan Colomb
Subject: Opened core from location LMR11-50



Site: Lower Maumee River
Photograph No.: 10 **Date:** 08/09/11
Direction: South **Photographer:** Mark Loomis
Subject: Libbey Owens Ford glassmaking company from sampling location LMR11-15

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Site: Lower Maumee River
Photograph No.: 11 **Date:** 08/09/11
Direction: South **Photographer:** Mark Loomis
Subject: CSO on south bank near sampling location LMR11-16



Site: Lower Maumee River
Photograph No.: 12 **Date:** 08/09/11
Direction: Not applicable **Photographer:** Mark Loomis
Subject: Sediment core being opened prior to sampling

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Appendix G

Spatial Model Output

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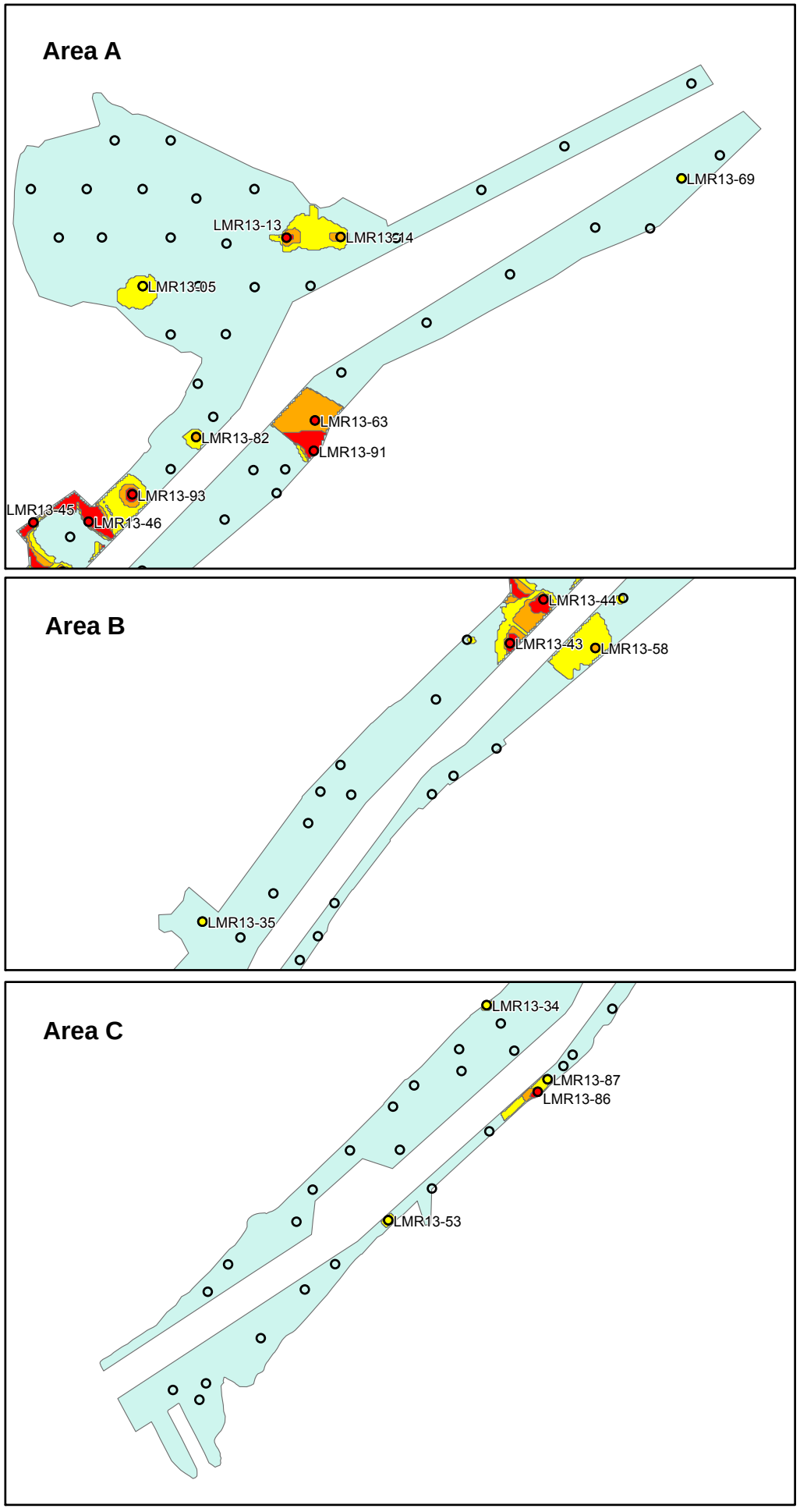


Legend

- Sample location indicating maximum concentration if PEC is exceeded at any depth
- Footprint of model output

Total PCB Concentrations

- ≥ 3x PEC
- ≥ 2x PEC
- ≥ PEC

Note that because the maximum concentration is represented, adjacent samples and model output may be at different depths.

0 1,000 2,000 3,000 4,000

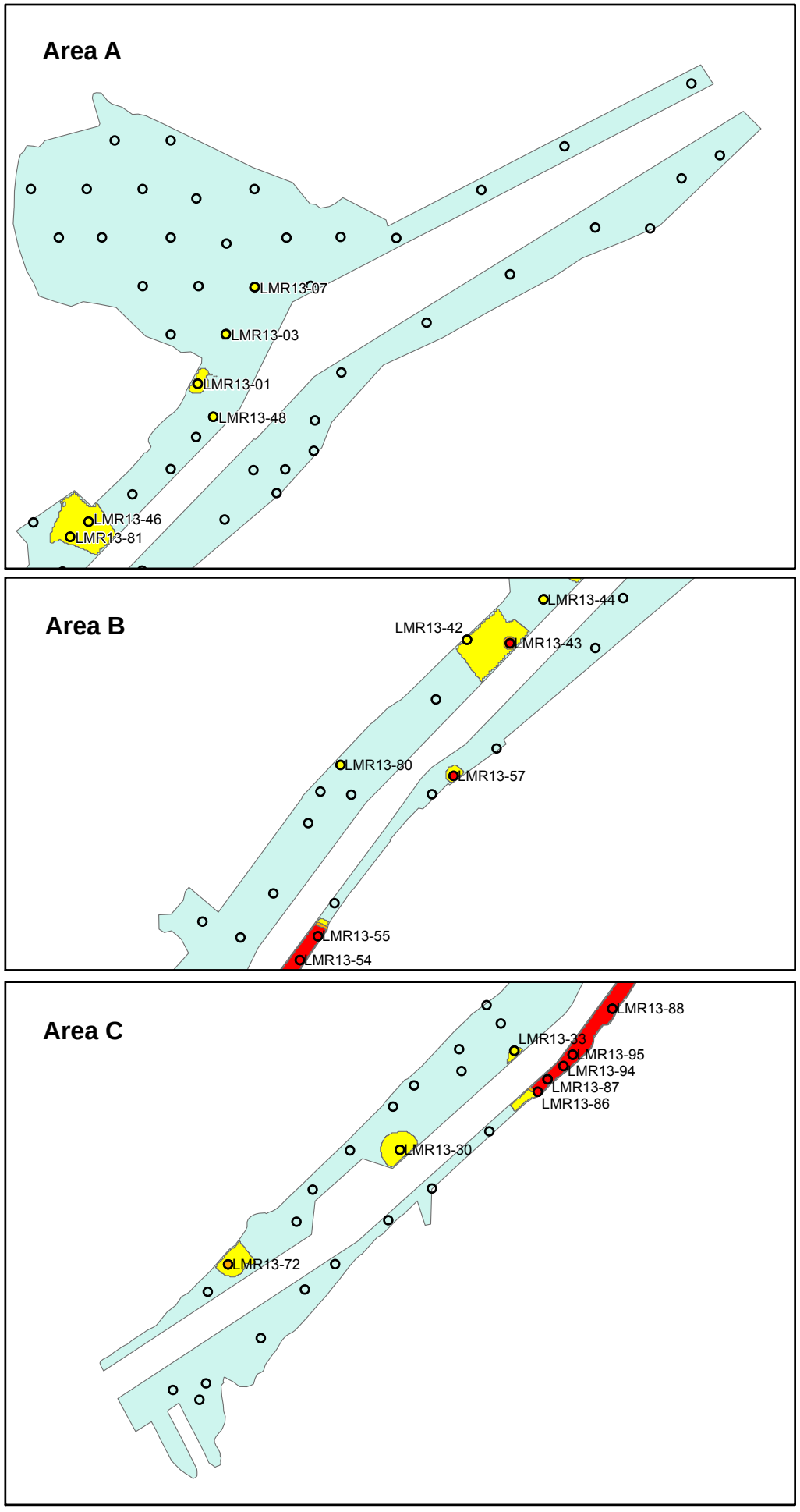
Feet

EA Engineering, Science, and Technology, Inc.

FIGURE F-1

Modeled Total PCB Concentrations

Phase 2 Lower Maumee River



Legend

- Sample location indicating maximum concentration if PEC is exceeded at any depth
- Footprint of model output

Total PAH Concentrations

- ≥ 3x PEC
- ≥ 2x PEC
- ≥ PEC

Note that because the maximum concentration is represented, adjacent samples and model output may be at different depths.

0 1,000 2,000 3,000 4,000

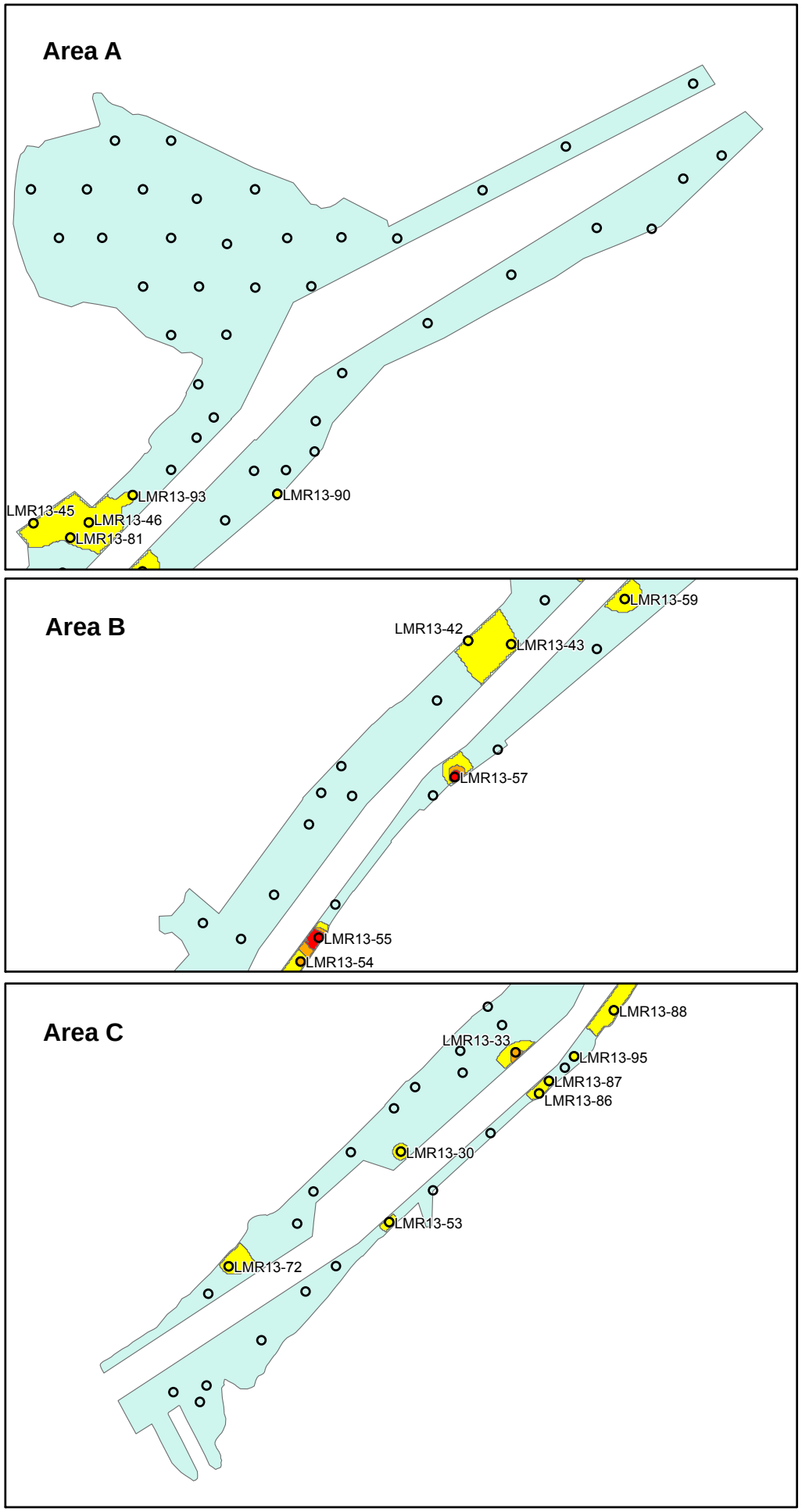
Feet

EA Engineering, Science, and Technology, Inc.

FIGURE F-2

Modeled Total PAH Concentrations

Phase 2 Lower Maumee River



Legend

- Sample location indicating maximum concentration if PEC is exceeded at any depth
- Footprint of model output

Lead Concentrations

- ≥ 3x PEC
- ≥ 2x PEC
- ≥ PEC

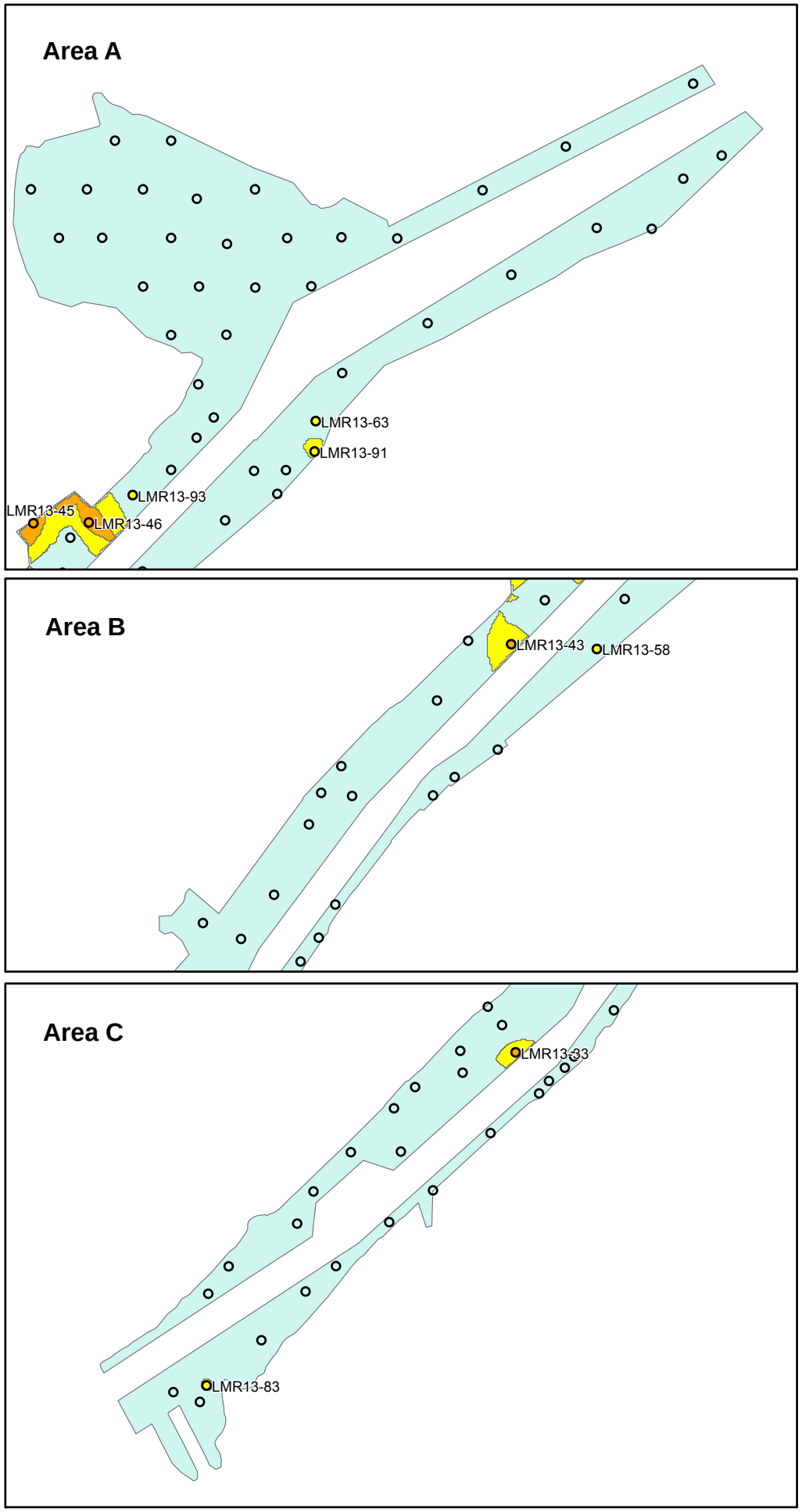
Note that because the maximum concentration is represented, adjacent samples and model output may be at different depths.

0 1,000 2,000 3,000 4,000

Feet

EA Engineering, Science, and Technology, Inc.

FIGURE F-3
Modeled Lead Concentrations
Phase 2 Lower Maumee River



Legend

- Sample location indicating maximum concentration if PEC is exceeded at any depth
- Footprint of model output

Nickel Concentrations

- ≥ 3x PEC
- ≥ 2x PEC
- ≥ PEC

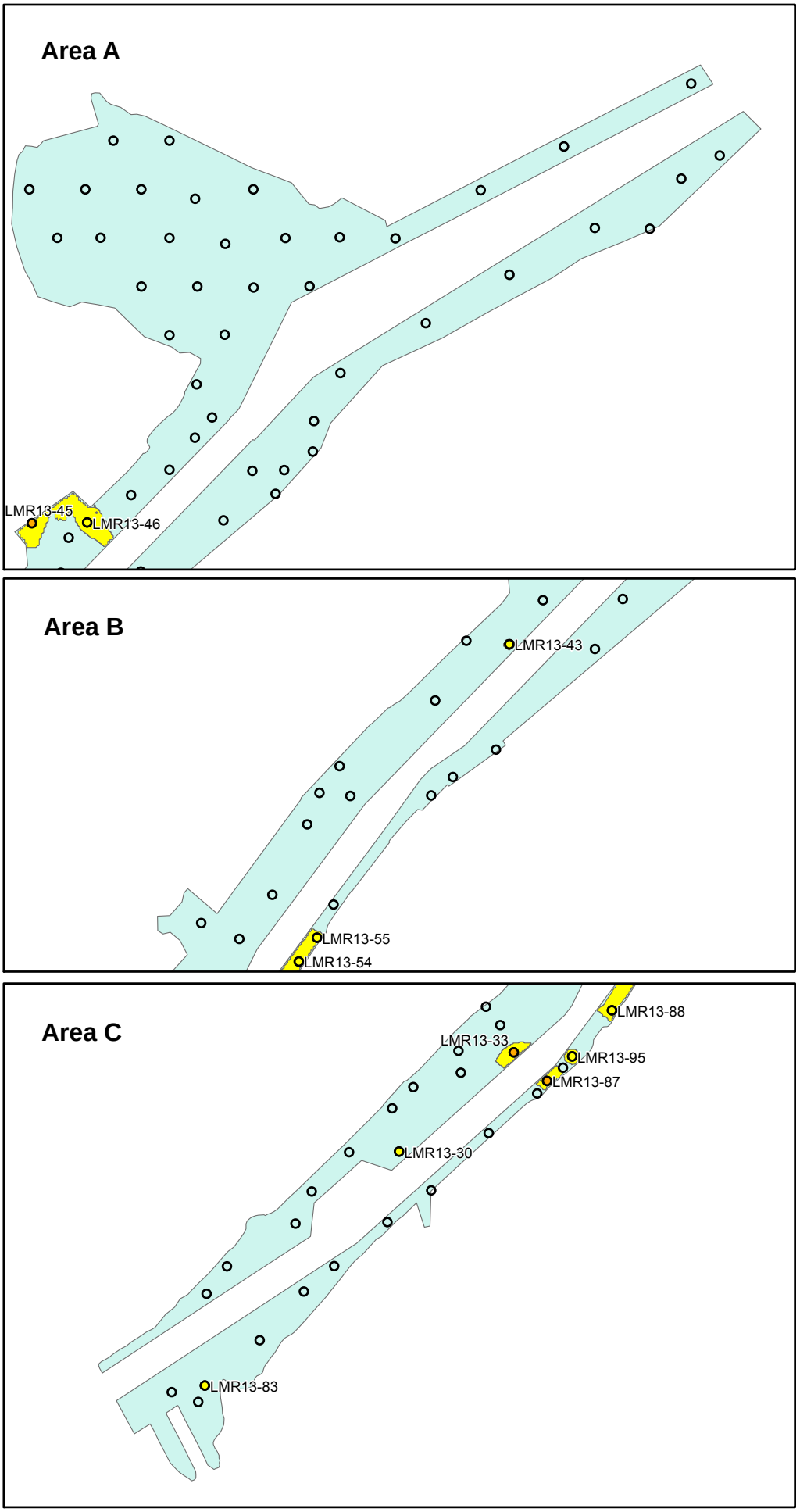
Note that because the maximum concentration is represented, adjacent samples and model output may be at different depths.

0 1,000 2,000 3,000 4,000

Feet

EA Engineering, Science, and Technology, Inc.

FIGURE F-4
Modeled Nickel Concentrations
Phase 2 Lower Maumee River



Legend

Sample location indicating maximum concentration if PEC is exceeded at any depth

Footprint of model output

Zinc Concentrations

≥ 3x PEC

≥ 2x PEC

≥ PEC

Note that because the maximum concentration is represented, adjacent samples and model output may be at different depths.

0 1,000 2,000 3,000 4,000

Feet

EA Engineering, Science, and Technology, Inc.

FIGURE F-5

Modeled Zinc Concentrations

Phase 2 Lower Maumee River